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З Б И Р К А

Н А   К И Н Е М А Т И Ч К И   Д Е Ф И Н И Р А Н И

Ц И Л И Н Д Р И Ч Н И   З А П Ч Е С Т И   П А Р О В И

В К Л У Ч И Т Е Л Н О   И   С О О Д В Е Т Н И Т Е   K, Y и Z   фактори

НЕОПХОДНИ ПРИ ПРЕСМЕТКАТА НА **НОСИВОСТА**

Н А   М А Л И О Т   З А П Ч Е Н И К

П Р И Л О Г   кон кн.5   по **МЕ**

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изменето и дополнето

ИЗДАНИЕ

СКОПЈЕ, март 2008

Во предметната **Збирка** се опфатени 509 запчести парови со **прави** запци со $z = 7\div27$ при $u \approx 1,4\div3$,од кои 402 во комбинации со по две варијанти со **поместување** и една без тоа ($x = 0$), како и 93 запч.парови со **коси** запци со $z = 6\div 25$ при $u \approx 1,5\text{-}3$, во по 5-6 комбинац.на аголот β и коеф.х. Вистина, широк можен **асортиман** за избор во примена.

Сите запчести парови се кинематички дефинирани,а потоа и јакосно определени за модул $m = 1$ mm.Притоа се фиксирани меѓуоскиното растојание а аголот β,широчината b(за запчениците со коси запци),додека другите димензии,коефициенти,фактори со наведената точност,при што аглите α, θ и α_{Fen} (како што е прикажано) во точност на 2 децимала од аголна секунда! Јакосните пресметки се изведени за **цементирани** запченици,кои најчесто се во примена, со избрани вредности за динам.издржливости δ_{Hlim} и δ_{Flim}

Сите кинематички, а особено јакосни пресметки се сп.ISO-станд. од 2006. Примената на варијацијата на коеф.на поместув.х беше со цел да се согледа неговото влијание врз носив.како во однос на Hertz така и на свит. Во таа смисла се воведени и некои нови фактори,пред сè геом.фактор K_g. Како што се гледа од наведен.равенки, овој фактор ги опфака броевите запци z.потоа факторите Y_{FS},$Z_{\varepsilon H\beta}$ како и Z_B^2, во кои имплицитно се вметнати z,х,и др.геом.величини.Во однос на носивоста е воведен факторот K_T, кој освен факторот K_g го опфака материалот,како и степ.на сигурноста S Исто така е воведен и факт. на модулот K_m,во чија крајна пресметка на n е содржан позн.фактор К.Сè тоа,одделно за Hertz-со озн.-Н и за свитк.-F.

Како што се гледа од соодветните равенки,а тоа го покажуваат и резултатите,факторите K_g растат со зголемувањето на бројот запци z,а K_{gH} дури со z^2,но опаѓа соΣz. Сепак, факторот K_{g-H} расте до 5 пати (при $z_1 \approx 23$) во однос на K_g.Што се однесува до влијанието на коефициент.x_1 врз факторот K_{g-F} ситуацијата е следната:Вредноста на K_{g-F} расте со зголемувањето на х $\le 0,6$ при $z = 12$ (за околу 5%). Потоа благо опаѓа и веке при $z = 13$ ($u \approx 3$) се изедначува со онаа на $x_1 = 0,3$. Понатаму при $x_1 = 0,3$,со порастот на бројот запци z_1 до 17 влијанието на x_1 врз факторот K_{g-F} постепено опаѓа и при $z_1 = 18$ се сведува на 1%.Тоа значи дека веке нема смисла од понатамошно поместување,освен од други причини(постигнување некое фиксирано меѓуоскино растојание а,или изедначување на брзините на лизгањето v).Причина за таквата ситуација е фактот што со зголемувањето на коефиц.на поместувањето х,во принцип,опаѓа радиусот на заоблувањето на преодниот дел на профилот на забецот,особено при поголем број запци,што предизвикува прогресивен раст на факт.на концентрацијата Y_S. Во таа смисла,од геометриска гледна точка,се одвива порастот на носивоста во однос на примената на поместување,при напрегнување од свиткув.

Во однос на напрегнување од Hertz-ов притисок,примената на поместувањето е многу покорисна,така,веке при $z = 9$ ефектот од тоа е околу 8%,и расте (до сса 19%) со зголемувањето на бројот запци z_1. Како што веке е наведено,факторот K_{g-H} достигнува повеке од петкратната вредност на K_g Причината за тоа е пак фактот, што со порастот на бројот запци z,расте радиусот на кривината на профилот ρ.На прв поглед,од геометриска гледна точка,многукратна погодност-носивост во однос на Hertz-ово напрегн.

Меѓутоа,сега доаѓа до израз начинот на напрегнувањето.Додека при свиткување,моментот го презема отпорниот момент,што се состои од реална површина-пресекот на коренот на забецот,кај Hertz-овото контактно напрег силата дејствува на елементарна површина,на која се јавува голем напон.

Така, иако динамичката издржливост на Hertz-ов притисок $\delta_{Hlim} = 1300$ N/mm^2 е многукратно поголема во однос на свитк. $\delta_F = 310$ N/mm^2,поради дејството на факторот на еластичноста $Z_E \approx 190\sqrt{\text{N/mm}^2}$,се сведува само на 46,9 N/mm^2.

Одовде произлегува фактот што во однос на Hertz-ов контактен притисок запчениците покажуваат значително помала издржливост при нормални-безударни услови,откоклу во однос на ситкување-кршење.Се разбира,веке со тек на време, поради излижување-особено кај **подобрените** запченици се нарушува кинематиката, се намалува отпорниот момент, па таквите запченици бидуваат загрозени и од кршење, особено при посилни удари.

Така спор. на стр.4 и 5 дефинираните фактори на оптоварувањето-издрж-ливоста K_{T-F} и K_{T-H}, особено од вредноста на нивниот однос $K_{T-F/H}$ ако е поголем од единица, значи дека запчениците се загрозени од Hertz-ов притисок,што кај запчениците со **прави** запци е редовен случај со $z_1 \leq 23$ а кај запчениците со **коси** запци со $z_1 \leq 20$.

Заради илустрација, во приложените табели се наведени и пресметаните вредности,првенствено на факторот на модулот K_{m-H},а заради компараци и за K_{m-F} (а за $z_1 > 23$,одн. $z_1 > 20$) за запчениц.со прави одн.коси запци).

Од табеларниот преглед на пресметаните вредности на фактор.на модулот K_{m-H} при одредено z_1,со зголемувањето на z_2 одн.u,во принцип,вредноста на K_{m-H} благо опаѓа,но побрзо се намалува со зголемувањето на коефиц.x_1 што во согласност со веке наведените констатации,е погодно.Со порастот на бројот запци, почнувајки од $z_1 = 7$ при што K_{m-H} =13,3 (а K_{m-F} = 7,9) вредноста на K_{m-H} опаѓа побрзо од онаа на K_{m-F} и во преодниот број запци $z_1 > 24$, тие постепено се изедначуваат на $K_m \approx 4,7$ (при z_1 =26), и понатаму обата фактора опаѓаат,со тоа што факторот K_{m-F} ја надминува вредн.на K_{m-H}.

Освен тоа,во табелите се наведени и пресметаните вредности на степен. на сигурноста S.Така во преодниот број запци (z_1 =24÷26),при што димен-зионирање како и пресметка на K_{m-H} е извршено во однос на Hertz-ов притисок,а со усвоен S_{Hmin} =1, вредноста на S_F постепено опаѓа од 6,9 за $z_1 = 7$, сѐ до $S_{Fmin} \geq 1,4$, што е сосем задоволително.

Во областа на преодниот број запци,освен во однос на Hertz-овиот прити-сок пресметка е извршена и во однос на свиткување,и тоа како на факто-рот K_m така и на степенот на сигурноста S_H, и тоа за усвоен S_{Fmin} = 1,4. Резултатите од пресметката (означена со F) покажуваат,дека за тој слу-чај,со порастот на коефициентот на поместување $x_1 \leq 0,5$, степенот на си-гурноста S_H нараснува до 1,12 (при z_1 =27, z_2 =72), а факторот на модулот K_{m-F} = 4,36 за x_1 = 0, одн.4,46 за x_1 = 0,5. И ова го потврдува веке стек-натото сознание дека во областа на големиот број запци $z_1 > 24$,при пре-сметката во однос на свиткување,примената на поместување на профилот не само што нема корист,туку повлекува штета-условува поголем модул,на пример,за случајов за сса 2%, волуменот би се зголемил за $1,022^3$,одн.7%.

Од сѐ досега наведено,повторно може да се извлече категоричен заклучок дека во областа на вообичаениот број запци $z_1 \leq 24$, претсметката-димензио-нирање **треба** да се врши според постапката на$_1$ Hertz.Во преодниот број пци зависно од x,z_2,спор.Hertz или во однос на свиткување F. За броевите запци $z_1 \geq 28$,дури и **цементираните** запченици треба да се димензионират однос на свиткување.**Подобрените** запчен.во сите случаи,во однос на Hertz.

Во случај примена на **подобрени** запченици, факторот на модулот K_{m-H} се зголемува за $[(1300/790)^2]^{1/3} = 2,7^{1/3} = 1,39$, одн. за 39%.

Завршната пресметка,на пр.на S или T, **е задолжителна** по двете постапки.

Освен на контактно напрегање-Pitting,како последица на недоволно или ло-шо подмачкување,запците бидуваат изложени и на **заjадување**,англ.Scuffing. герм.Fressverschleiss,опфатено е во ISO 13989-1/2 од 2006.Види во ME, кн.5. од **Стамболиев.** Во последно време се проучува и во ISO се разгледува по-jавата на т.н.micro-Pitting, што се јавува како претходница на Pitting-от.

$$d = \frac{m_n \cdot z}{\cos\beta} \; ; \quad \Sigma z = z_1 + z_2 \; ; \quad u = \frac{z_2}{z_1} \; ; \quad z_n = \frac{z}{(1 - \sin^2\beta \cdot \cos^2\alpha_n) \cdot \cos\beta}$$

$$d_b = d \cdot \cos\alpha_t \; ; \quad p_b = \frac{m_n \cdot \pi}{\cos\beta} \cdot \cos\alpha_t \; ; \quad \cos\alpha_t = \frac{\cos\beta}{\sqrt{\cos^2\beta + \tan^2\alpha_n}} \; ; \quad d_a = d + 2 \cdot h_a$$

$$h_a = (1 + x + k) \cdot m_n \; ; \quad k = \frac{\Sigma z}{2 \cdot \cos\beta} \cdot \left[\frac{\cos\alpha_t}{\cos\alpha_{vt}} - 1 \right] - \Sigma x \; ; \quad \Sigma x = x_1 + x_2$$

$$inv\alpha_{vt} = 2 \cdot \frac{\Sigma x}{\Sigma z} \cdot \tan\alpha_n + inv\alpha_t \; ; \quad inv\alpha_t = \tan\alpha_t - \alpha_t \; ; \quad \alpha_t = \frac{\pi}{180} \cdot \alpha_t^\circ$$

$$\varepsilon_\alpha = \frac{g_\alpha}{p_b} \; ; \quad g_\alpha = \frac{1}{2} \cdot \left[\sqrt{d_{a1}^2 - d_{b1}^2} + \sqrt{d_{a2}^2 - d_{b2}^2} - (d_{b1} + d_{b2}) \cdot \tan\alpha_{vt} \right]$$

$$a_d = \frac{m_n \cdot \Sigma z}{2 \cdot \cos\beta} \; ; \quad a = a_d \cdot \frac{\cos\alpha_t}{\cos\alpha_{vt}} = \frac{m_n \cdot \Sigma z}{2 \cdot \cos\alpha_{vt} \cdot \sqrt{\cos^2\beta + \tan^2\alpha_n}} \; ; \quad \text{одовде}$$

за усвоено a   за утврден агол α_{vt}

$$\cos\alpha_{vt} = \frac{m_n \cdot \Sigma z}{2 \cdot a \cdot \sqrt{\cos^2\beta + \tan^2\alpha_n}} \qquad\qquad \Sigma x = \frac{inv\alpha_{vt} - inv\alpha_t}{2 \cdot \tan\alpha_n} \cdot \Sigma z$$

Распределбата на Σx на x_1 и x_2 е во согланост со DIN 3992.

Во принцип, при редукција, $x_1 \gg x_2$.

Усвоено: $\alpha_n = 20^\circ$; $h_{fP} = 1,25$; $\rho_{fP} = 0,25$; $z_{1min} = 7$; $1 < \varepsilon_\alpha < 2$.

<u>Параметри при претсметк.во однос на цврстината на боковите (pitting)</u>

$$Z_{H\beta}^2 = \frac{2 \cdot \cos\beta_b \cdot \cos\beta}{\cos^2\alpha_t \cdot \tan\alpha_{vt}} \; ;$$

за запченици со прави запци

$$Z_H^2 = \frac{2}{\cos^2 20^\circ \cdot \tan\alpha_{vt}} = \frac{2,265}{\tan\alpha_{vt}}$$

$$Z_\varepsilon^2 = \frac{4 - \varepsilon_\alpha}{3} \cdot (1 - \varepsilon_\beta) + \frac{\varepsilon_\beta}{\varepsilon_\alpha} \; ; \quad Z_\varepsilon^2 = \frac{4 - \varepsilon_\alpha}{3} \; ; \quad \text{за челик } Z_E = 189,78 \sqrt{N/mm^2}$$

за запченици со прави запци и $\alpha_{vt} = 20^\circ$

$$Z_{H\varepsilon}^2 = Z_H^2 \cdot Z_\varepsilon^2 = \frac{2 \cdot (4 - \varepsilon_\alpha)}{3 \cdot \cos^2 20^\circ \cdot \tan\alpha_{vt}} = \frac{0,755 \cdot (4 - \varepsilon_\alpha)}{\tan\alpha_{vt}} \; ; \quad Z_{H\varepsilon}^2 = 2,0743 \cdot (4 - \varepsilon_\alpha)$$

$$M_1^2 = Z_B^2 \geq \frac{\tan^2\alpha_{vt}}{\left[\sqrt{\dfrac{d_{a1}^2}{d_{b1}^2} - 1} - \dfrac{2\pi}{z_1} \right] \cdot \left[\sqrt{\dfrac{d_{a2}^2}{d_{b2}^2} - 1} - (\varepsilon_\alpha - 1) \cdot \dfrac{2\pi}{z_2} \right]} \geq 1$$

<u>Параметри при претсметката во однос на цврстината на **свиткување**</u>

$$E = \frac{\pi}{4} m_n - h_{fP} \cdot \tan\alpha_n - (1 - \sin\alpha_n) \cdot \frac{\rho_{fP}}{\cos\alpha_n} = 0,15538 \; ; \quad \theta = \frac{2 \cdot G}{z_n} \cdot \tan\theta - H$$

$$H = \frac{2}{z_n}\left[\frac{\pi}{2} - \frac{E}{m_n}\right] - \frac{\pi}{3} = \frac{2,8308}{z_n} - \frac{\pi}{3} \; ; \quad G = \frac{\rho_{fP}}{m_n} - \frac{h_{fP}}{m_n} + x = x-1$$

$$\frac{s_{Fn}}{m_n} = z_n \cdot \sin\left(\frac{\pi}{3} - \theta\right) + \sqrt{3}\cdot\left[\frac{G}{\cos\theta} - \frac{\rho_{fP}}{m_n}\right] \; ;$$

$$\frac{\rho_F}{m_n} = \frac{\rho_{fP}}{m_n} + \frac{2.G}{\cos\theta.[z_n.\cos^2\theta - 2G]}$$

$$\frac{h_{Fe}}{m_n} = \frac{1}{2}\left[\,[\cos\gamma_e - \sin\gamma_e \tan\alpha_{Fen}].\frac{d_{en}}{m_n} - z_n\cos\left[\frac{\pi}{3} - \theta\right] - \left[\frac{G}{\cos\theta} - \frac{\rho_{fP}}{m_n}\right]\,\right]$$

$$d_{an} = d_n + d_a - d \; ; \quad \text{за запченици со } \textbf{прави запци} \quad d_{an} = d_a$$

$$d_{en} = 2.\sqrt{\left[\sqrt{\left[\frac{d_{an}}{2}\right]^2 - \left[\frac{d_{bn}}{2}\right]^2} - \frac{m_n.\pi.\cos\alpha_n.(\varepsilon_{\alpha n} - 1)}{\pi.\cos\alpha_n = 2,952131432}\right]^2 + \left[\frac{d_{bn}}{2}\right]^2}$$

за запч.со **прави з.** $d_{en} = d_e$; $d_{bn} = d_b$; $\alpha_{Fen} = \alpha_{Fe}$; $\varepsilon_{\alpha n} = \varepsilon_\alpha$; $\beta = 0$

$$\alpha_{en} = \arccos[\,d_{bn}/d_{en}\,] \; ; \quad \gamma_{en} = \frac{0,5.\pi + 2.x.\tan\alpha_n}{z_n} + inv\alpha_n - inv\alpha_{en}$$

$$\alpha_{Fen} = \alpha_{en} - \gamma_e = \tan\alpha_{en} - inv\alpha_n - \frac{0,5.\pi + 2.x.\tan\alpha_n}{z_n} \; ; \quad inv\alpha_n = 0,01490438$$

$$Y_S = [\,1,2 + 0,13.L\,].q_s^{exp}; \quad exp = \frac{1}{1,21 + \frac{2,3}{L}} \; ; \quad L = \frac{s_{Fn}}{h_{Fe}} \; ; \quad q_s = \frac{s_{Fn}}{2.\rho_F}$$

$$Y_R = 1,49 - 0,471.[\,R_{zk} + 1\,]^{0,1} \quad \text{за } R_{zk} = 10 \; \mu m \quad Y_R = 0,89137$$

Носивост на запчениците со **прави запци**

ГЕОМЕТРИСКИ ФАКТОРИ

$$K_{gH} = \frac{\pi.z_1^2.z_2.[Z_L.Z_R.Z_V]^2}{\Sigma z.Z_{HE}^2.Z_B^2} = 2,659.\frac{z_1^2.z_2}{\Sigma z.Z_{HE}^2.Z_B^2} \; ; \quad K_{gF} = \frac{2.\pi.Y_R.Y_\delta.z_1}{Y_{FS}} = 5,88.\frac{z_1}{Y_{FS}}$$

Притоа, изразите за носивоста T_H во одн.на Hertz, одн.свиткув. T_F гласат:

$$T_{H1} = \frac{P}{n_1} = \frac{K_{T-H}}{K_H}.m_n^2.b \; ; \quad T_{F1} = \frac{P}{n_1} = \frac{K_{T-F}}{K_F}.m_n^2.b \qquad [\,Nm\,]$$

каде што:

$$K_{T-H} = \frac{K_{gH}}{10^6}\left[\frac{\sigma_{Hlim}}{Z_E}\right]^2 = \frac{1,2477}{10^4}.\frac{z_1^2.z_2}{\Sigma z.Z_{HE}^2.Z_B^2} \; ; \qquad Y_{FS} = Y_F.Y_S$$

$$K_{T-F} = \frac{K_{gF}}{10^6}.\frac{\sigma_{Flim}}{S_{Fmin}} = \frac{1,302}{10^3}.\frac{z_1}{Y_{FS}} \qquad \begin{array}{l} K_H = K_A.K_V.K_{H\alpha}.K_{H\beta} \\ K_F = K_A.K_V.K_{F\alpha}.K_{F\beta} \end{array}$$

Како што се гледа, факторите K_g за опфакат само геометријата, а факторите Кт и материалот, што во бројните вредности е влезен за **цементир.запци.**
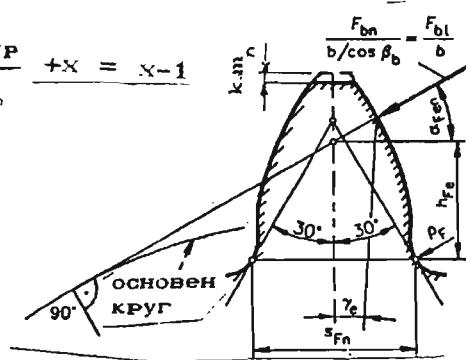
.6 Притоа пресметката е спроведена за **цементир.запченици,со усвоени:**

$Z_L.Z_R.Z_V = 0,92$; $Y_{ST} = 2$; $Y_\delta \approx 1,05$; $K_{F\alpha} \approx K_{H\alpha}$; $K_{F\beta} \approx 0,97.K_{H\beta}$; $S_{Fmin} \geq 1,4$
$$S_{Hmin} \geq 1$$

За **цементирани** запченици: $\delta_{Hlim} = 1300$ N/mm^2 ; $\delta_{Flim} = 310$ N/mm^2

За подобрени запченици: $\delta_{Hlim} = 790$ " ; $\delta_{Flim} = 260$ "

$$K_{T-F/H} = \frac{K_{T-F}}{K_{T-H}} = 10,759.\frac{\Sigma z}{z_1^2.z_2}.\frac{Z_{H\varepsilon}^2.Z_B^2}{Y_{FS}} \quad ; \quad \text{за } \textbf{подобрени} \text{ запченици}$$

факторот K_{T-F} се множи со $\frac{260}{310} = 0,8387$, а K_{T-H} со $[\frac{790}{1300}]^2 = 0,36929$

Како што покажуваат резултатите од обемната анализа на голем број запчести парови-табеларно средени во продолжение,во најчест случај,меродавна е претсметката во однос на Hertz-овиот притисок,освен за цементираните со броеви запци $z_1 \geq 23$, што сепак е реткост во примена.

Така,изразот на факторот на модулот, пресметуван сп.Hertz гласи:
$$K_{m-H} = [K_{T-H}]^{-\frac{1}{3}} = 20.\sqrt[3]{\frac{\Sigma z}{z_1^2.z_2}.Z_{H\varepsilon}^2.Z_B^2}$$

а модулот:
$$m_H = K_{m-H}.\sqrt[3]{\frac{P.K_H}{n_1.\psi}} \quad mm; \quad \text{каде што}$$

$$b = \psi.m_n ; \quad \psi = 7 \div 12 \text{ (ISO)}$$

Во тој случај, изразот за степенот на сигурноста во однос на свиткувањето гласи:

$$S_F = \frac{2\Sigma z}{z_1.z_2}.\frac{Y_R.Y_\delta}{0,97.Y_{FS}}.\frac{Z_{H\varepsilon}^2.Z_B^2}{(Z_L.Z_R.Z_V)^2}.\delta_{Flim}.[\frac{Z_E}{\delta_{Hlim}}]^2 = 15,0628.\frac{\Sigma z}{z_1 z_2}.\frac{Z_{H\varepsilon}^2.Z_B^2}{Y_{FS}}$$

СИМБОЛИ И ТЕРМИНОЛОГИЈА

a   меѓуоскино растојание

b   широчина на запченикот   d   поделбен пречник

d_a темен пречник d_b основен пречник

d_e пречник на дејството на силата во точката D на малиот запченик

h_a височина на главата на забецот на запченикот

h_{Fe} крак на силата што го напаѓа забецот на свиткување

h_{fP} височина на главата на забецот на стандардниот профил

$i = n_1/n_2 =$ преносен однос (n_a - погон.,n_b - гонет)

m_n нормален (стандарден) модул; m модул

$n - sec^{-1}$ зачестеност на цртежите

p_b основен чекор

$q_s = s_{Fn}/2\rho_F$ параметар на засек

s_{Fn} дебелина на забецот во загрозениот пресек

$u = z_2/z_1$ кинематички однос

x   коефициент на поместувањето на профилот

z   број запци; z_n нормален број запци

E   помошен параметар за пресметка на факторот на обликот Y_F

G   "   "   "   "   "   "   "

H   "   "   "   "   "   "   "

K_A погонски фактор

$K_{F\alpha}$ фактор на распред.на оптоварувањето во челната рамн.за свиткув

$K_{F\beta}$ "   "   "   "   по должината на забецот

K_g геометриски фактор

$K_{H\alpha}$ фактор на распред.на оптов.во челн.рамн.за Hertz-ов прит.

$K_{H\beta}$ фактор на распред.на оптов.по долж.на заб.за Hertz-ов притисок

K_m "   "   модулот

K_T "   "   оптоварувањето

K_V "   "   внатрешните динамички сили

L пом.параметар за пресметк.на факторот на концентр.на напон. Y_S

$S_{Fmin} \geq 1,4$ степ.на сигурноста во однос на напонот во коренот на забецот

$S_{Hmin} \geq 1$ степен на сигурноста во однос на Hertz-овиот површ.притисок

T_{F1} Nmm торзион момент во однос на напонот во коренот на забецот

T_{H1} Nmm   "   "   "   "   "   "   на бокот на забецот

Y_F фактор на обликот на забецот

Y_R "   "   рапавоста на преодниот дел на бокот

Y_S "   "   концентрацијата на напоните на пресметуваниот запч.

$Y_{ST} = 2$ "   "   "   "   "   " моделниот запченик

Z_B "   "   напонот во точката B на малиот запченик

Z_E $\sqrt{N/mm^2}$ "   "   еластичноста (единствен фактор со димензија!)

Z_H "   "   обликот на забецот за напон во кинематичкиот пол

$Z_{H\varepsilon}$ "   множител на факторот на обликот Z_H и на спрегнувањето Z_ε

Z_L "   на маслото за подмачкување

Z_R "   "   рапавоста на површината на боковите

Z_V "   "   брзината

Z_ε "   "   спрегнувањето

α_e помош.агол неопходен при пресм.на кракот на мом.на свиткув.h_{Fe}

α_{Fe} агол на дејството на силата во точката D на малиот запченик

α_n "   " стандардниот профил на основната запчеста летва

α_t поделбен нападен агол на профилот во челниот пресек

α_{wt} кинематички "   "   "   "

γ_e помош.агол неопходен при пресм.на кракот на мом.на свитк.h_{Fe}

ε_α степен на спрегнувањето на профилите

ε_β "   "   "   " бочните линии

ρ_F радиус на заоблувањето на преодниот дел на профилот

ρ_{fP} "   "   "   " профилот на главата на заб.на алатот

δ_{Flim} - N/mm² динамичка издржливост на материјалот на свиткување

δ_{Hlim} - N/mm²   "   "   "   "   " Hertz-ов притис.

$\Sigma x = x_1 + x_2$ збир на коефициентите на поместувањето

$\Sigma z = z_1 + z_2$ "   " броевите запци

θ помошен агол за пресметка на факторот на обликот на забецот Y_F

ЗАПЧЕСТИ ПАРОВИ СО П Р А В И ЗАПЦИ

со $z_1 = 7 \div 27$; $z_2 = 11 \div 73$ и $u \approx 1,4 \div 3$; $1,1 < \varepsilon_\alpha < 2$

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z_2	a	α_{vt}	Σx =0,	x =0,'	$d_{\alpha 1}$	ε_α	$Z^2_в$	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
			$z_1 = 7$; H = - 0,642793884						
11	9,5	27°54' 9,90"	,589	,409	9,64	1,113	2,074	31° 0'50,61"	9,163
12	10,-	26°47' 4,10"	,585	,425	9,68	1,124	2,000	31° 8'33,08"	9,198
13	10,5	26°29'54,92"	,581	,431	9,70	1,135	2,000	31°11'34,06"	9,130
15	11,5	25°59'40,06"	,575	,440	9,73	1,153	1,977	31°15'42,88"	9,085
16	12,-	25°16'15,69"	,572	,442	9,74	1,161	1,882	31°16'45,73"	9,062
17	12,4	24°34'48,70"	,445	,415	9,74	1,201	1,902	31° 3'50,60"	8,901
18	12,9	24°25' 4,29"	,444	,414	9,74	1,209	1,910	31° 3'29,10"	8,869
19	13,4	24°16' 0,22"	,442	,412	9,74	1,216	1,915	31° 2' 5,17"	8,841
20	13,9	24° 7'32,43"	,441	,411	9,74	1,222	1,924	31° 0' 1,26"	8,818
22	14,9	23°52'12,00"	,438	,413	9,75	1,232	1,913	31° 2'47,03"	8,788
23	15,4	23°45'13,55"	,437	,412	9,75	1,238	1,918	31° 2'13,25"	8,764
24	15,9	23°38'39,66"	,436	,411	9,75	1,243	1,921	31° 1'41,52"	8,745
25	16,4	23°32'28,23"	,435	,410	9,75	1,247	1,921	31° 1'11,54"	8,729
26	16,9	23°26'37,36"	,434	,414	9,76	1,251	1,907	31° 3' 7,54"	8,723
27	17,4	23°21' 5,39"	,433	,413	9,76	1,255	1,907	31° 4'40,67"	8,707
			$z_1 = 8$; H = - 0,693344342						
11	10.-	26°47' 4,10"	,585	,385	10,60	1,138	1,695	33°49'23,74"	10,04
13	11,-	26°14'10,28"	,578	,378	10,60	1,163	1,742	33°46' 6,33"	9,945
14	11,5	25°59'40,06"	,575	,375	10,60	1,174	1,761	33°44'36,35"	9,903
15	12,-	25°46'15,69"	,572	,372	10,60	1,184	1,774	33°43'16,06"	9,864
17	13,-	25°22'16,41"	,567	,377	10,62	1,207	1,772	33°45'32,57"	9,795
18	13,5	25°11'29,89"	,564	,375	10,62	1,210	1,800	33°44'27,92"	9,784
19	14,-	25° 1'25,68"	,562	.382	10,64	1,216	1,761	33°48' 8,07"	9,779
21	15,-	24°43' 8,41"	,558	,378	10,64	1,231	1,772	33°46'19,20"	9,723
22	15,5	24°34'48,70"	,557	,377	10,64	1,237	1,774	33°45'29,47"	9,700
23	16,-	24°26'57,80"	,555	,375	10,64	1,243	1,800	33°44'42,81"	9,678
25	17,-	24°12'32,96"	,552	,371	10,64	1,255	1,785	33°42'55,30"	9,633
			$z_1 = 9$; H = - 0,732661366						
	11,34	24°17' 2,27"	,376	,304	11,54	1,244	1,605	35°37'28,59"	10,61
13	11,52	55° 9'40,06"	,575	,400	11,65	1,182	1,462	36°21'13,97"	10,94
	11,58	26°47'41,23"	,679	,443	11,69	1,151	1,471	36°41'48,92"	11,09
	11,79	23°34' 8,56"	,315	,304	11,56	1,271	1,543	35°37'28,59"	10,53
14	12,-	25°46'15,69"	,572	,400	11,65	1,189	1,476	36°21'17,90"	10,91
	12,04	26° 9'45,10"	,623	,443	11,72	1,175	1,445	36°41'48,92"	11,03
	12,38	23°22'37,38"	,421	,304	11,53	1,251	1,533	35°37'28,59"	10,57
15	12,5	25°33'49,89"	,569	,400	11,66	1,202	1,481	36°21'26,72"	10,88
	12,6	25°29'54,92"	,698	,443	11,69	1,166	1,506	36°41'48,92"	11,04
	12,85	23°55'19,43"	,384	,304	11,54	1,269	1,515	35°37'28,59"	10,52
16	13,-	25°22'16,41"	,567	,400	11,67	1,211	1,496	36°21'19,14"	10,85
	13,1	26°16'42,30"	,694	,443	11,70	1,175	1,510	36°41'48,92"	11,01
	13,35	23°47'10,50"	,383	,304	11,54	1,277	1,525	35°37'28,59"	10,50
17	13,5	25°11'29,89"	,564	,400	11,67	1,220	1,496	36°21'19,14"	10,82
	13,6	26° 4'22,43"	,691	,443	11,71	1,184	1,513	36°41'48,92"	10,98

Како што се гледа, факторот $Z_в$ за Hertz-ов контактен напон во точката В на малиот запченик-особено со намал можен број запци z_1, има огромно негативно влизание на сите важни параметри. Така, за запч.пар $z_1/z_2 = 7/11$ модулот се зголемува за: $\sqrt[3]{Z^2_в} = \sqrt[3]{1,44^2} = 1,275$, одн. за 28%, а волуменот за два пати.

α_{Fe}	ρ_F =0	S_F	q	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	2.	22

$z_1 = 7$; H = − 0,642793884

α_{Fe}	ρ_F =0	S_F	q	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
39°24'45,57"	,379	1,76	2,33	1,66	1,064	4,524	9,100	4,260	9,014	13,2	6,88
39°45'8,37"	,373	1,78	2,39	1,65	1,080	4,437	9,278	4,301	9,556	13,1	6,61
38°52'20,40"	,371	1,79	2,41	1.61	1,107	4,418	9,318	4,339	9,818	12,9	6,46
38°15'3,91"	,368	1,80	2,44	1,57	1,144	4,343	9,478	4,408	10,19	12,8	6,33
37°56'21,14"	,367	1,80	2,45	1,55	1,159	4,314	9,542	4,540	10,61	12,6	6,13
35°53'16,43"	,377	1,77	2,35	1,46	1,211	4,313	9,542	4,620	10,50	12,7	5,19
35°38'41,03"	,377	1,77	2,34	1,45	1,219	4,313	9,542	4,641	10,58	12,6	5,14
35°17'47,88"	,378	1,77	2,34	1,44	1,244	4,311	9,649	4,662	10,66	12,6	,16
35°0'46,12"	,379	1,76	2,32	1,43	1,237	4,296	9,582	4,683	10,71	12,6	,09
34°34'59,54"	,377	1,77	2,34	1,41	1,255	4,266	9,649	4,723	10,94	12,5	6,01
34°16'53,78"	,378	1,77	2,34	1,39	1,275	4,235	9,719	4,738	10,99	12,5	6,02
34°1'51,65"	,378	1,77	2,34	1,38	1,285	4,217	9,761	4,754	11,05	12,4	6,02
33°49'53,40"	,379	1,77	2,33	1,37	1,293	4,222	9,749	4,771	11,11	12,4	5,?8
33°43'11,23"	,377	1,77	2,35	1,36	1,303	4,186	9,834	4,786	11,25	12,4	5,?5
33°31'10,61"	,377	1,77	2,34	1,35	1,310	4,209	9,780	4,800	11,30	12,4	5,?9

$z_1 = 8$; H = − 0,693344342

α_{Fe}	ρ_F =0	S_F	q	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
36°38'8,10"	,385	1,81	2,36	1,59	1,142	4,365	10,78	4,280	13,58	11,6	5,4?
35°32'49,45"	,387	1,81	2,33	1,53	1,180	4,319	10,89	4,348	13,91	11,5	5,50
35°4'7,56"	,389	1,80	2,32	1,51	1,198	4,283	10,98	4,376	14,05	11,5	5,32
34°38'1,23"	,390	1,80	2,31	1,48	1,214	4,272	11,01	4,404	14,20	11,5	5,28
33°47'21,64"	,388	1,80	2,33	1,45	1,259	4,251	11,07	4,447	14,69	11,3	5,13
33°39'58,82"	,389	1,80	2,32	1,43	1,260	4,212	11,17	4,458	14,85	11,3	5,12
33°34'16,21"	,386	1,81	2,35	1,42	1,277	4,163	11,30	4,526	15,03	11,2	5,12
32°54'58,65"	,387	1,81	2,33	1,39	1,302	4,150	11,34	4,541	15,32	11,2	5,04
32°39'11,98"	,388	1,81	2,33	1,38	1,312	4,131	11,39	4,560	15,43	11,1	5,03
32°23'39,02"	,389	1,80	2,32	1,37	1,322	4,136	11,38	4,578	15,50	11,1	5,00
31°52'26,92"	,390	1,80	2,31	1,34	1,340	4,099	11,48	4,609	15,67	11,1	4,99

$z_1 = 9$; H = − 0,732661366

α_{Fe}	ρ_F =0	S_F	q	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
31°7'18,05"	,413	1,80	2,18	1,39	1,289	4,177	12,67	4,612	17,19	10,7	5,02
34°17'41,95"	,377	1,89	2,50	1,49	1,262	4,107	12,87	4,363	19,96	10,2	4,39
35°42'58,75"	,362	1,93	2,66	1,55	1,244	4,039	13,10	4,259	20,31	10,2	4,39
30°15'2,46"	,413	1,80	2,18	1,35	1,332	4,117	12,86	4,723	17,99	10,6	4,87
34°0'51,62"	,377	1,89	2,50	1,48	1,278	4,070	13 00	4,396	20,20	10,2	4,38
34°34'11,65"	,362	1,93	2,66	1,51	1,277	4,045	13,09	4,342	20,90	10,1	4,27
30°44'31,28"	,413	1,80	2,18	1,37	1,308	4,147	12,76	4,580	19,18	10,4	4,53
33°36'39,66"	,377	1,89	2,50	1,45	1,299	4,036	13,11	4,416	20,58	10,1	4,34
35°8'44,28"	,362	1,93	2,66	1,50	1,282	3,988	13,27	4,292	20,83	10,1	4,34
30°10'17,39"	,413	1,80	2,17	1,35	1,336	4,117	12,86	4,648	19,57	10,3	4,48
33°17'43,99"	,377	1,89	2,50	1,43	1,315	4,021	13,16	4,440	20,95	10,1	4,28
34°51'15,90"	,362	1,93	2,66	1,49	1,290	4,009	13,20	4,319	21,13	10,0	4,25
29°52'17,07"	,413	1,80	2,17	1,33	1,350	4,104	12,90	4,664	19,80	10,2	4,44
32°58'50,84"	,377	1,89	2,50	1,42	1,332	4,004	13,22	4,462	21,10	10,0	4,27
34°33'11,63"	,362	1,93	2,66	1,47	1,306	3,971	13,33	4,345	21,42	9,98	4,24

Степенот на сигурноста се намалува на $\bar{Z}_B^1$ = $1,44^{-1}$ = 0,694; одн. за 30%;

носивоста се сведува на Z_B^{-2} = $1,44^{-2}$ = 0,48; одн. помалку од половина.

Сè тоа во однос на Z_B = 1, односно за напрегнување во кинематичкиот пол C

Се разбира, за други вред. Zв>1 се добиват други-пак неповолни резултати

z_2	a	α_{wt}	Σx $=0,$	x $=0,$	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 9 \; ; \; H = -\,0{,}732661366$$

z_2	a	α_{wt}	Σx $=0,$	x $=0,$	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	14,35	23°32'28,23"	,380	,304	11,55	1,292	1,540	35°37'28,59"	10,45
19	14,5	24°51'59,70"	,560	,400	11,68	1,235	1,503	36°21'19,14"	10,77
	14,6	25°42' 0,91"	,685	,443	11,72	1,200	1,518	36°41'48,92"	10,93
	14,85	23°25'48,82"	,380	,304	11,55	1,299	1,548	35°37'28,59"	10,43
20	15,-	24°43' 8,41"	,558	,400	11,68	1,242	1,503	36°21'19,14"	10,75
	15,1	25°31'50,83"	,683	,443	11,72	1,207	1,525	36°41'48,92"	10,91
	15,35	23°19'33,81"	,379	,304	11,55	1,305	1,553	35°37'28,59"	10,41
21	15,5	24°34'48,70"	,557	,400	11,69	1,248	1,506	36°21'19,14"	10,73
	15,6	25°22'16,41"	,680	,443	11,73	1,214	1,518	36°41'48,92"	10,89
	15,85	23°13'41,01"	,378	,304	11,55	1,311	1,555	35°37'28,59"	10,39
22	16,-	24°26'57,80"	,555	,400	11,69	1,254	1,506	36°21'19,14"	10,71
	16,1	25°13'14,59"	,678	,443	11,73	1,220	1,515	36°41'48,92"	10,87
	16,35	23° 8' 8,51"	,376	,304	11,55	1,316	1,560	35°37'28,59"	10,37
23	16,5	24°19'33,28"	,553	,400	11,69	1,260	1,506	36°21'19,14"	10,69
	16,6	25° 4'42,64"	,676	,443	11,74	1,226	1,513	36°41'48,92"	10,85
	16,85	23° 3'54,60"	,376	,304	11,56	1,322	1,563	35°37'28,59"	10,35
24	17,-	24°12'32,96"	,552	,400	11,70	1,265	1,506	36°21'19,14"	10,68
	17,1	24°56'38,14"	,674	,443	11,74	1,232	1,513	36°41'48,92"	10,84
	17,35	22°57'57,74"	,375	,304	11,56	1,326	1,565	35°37'28,59"	10,34
25	17,5	24° 5'54,91"	,551	,400	11,70	1,270	1,506	36°21'19,14"	10,66
	17,6	24°48'58,91"	,672	,443	11,74	1,238	1,510	36°41'48,92"	10,82
	17,85	22°53'16,59"	,375	,304	11,56	1,331	1,568	35°37'28,59"	10,33
26	18,-	23°59'17,39"	,549	,400	11,70	1,275	1,506	36°21'19,14"	10,64
	18,1	24°41'43,01"	,670	,443	11,75	1,243	1,510	36°41'48,92"	10,80

$$z_1 = 10, \; H = -\,0{,}764114984$$

z_2	a	α_{wt}	Σx $=0,$	x $=0,$	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	12,33	23°51'32,88"	,361	,245	12,43	1,280	1,400	37°12'42,31"	11,41
14	12,5	25°33'49,89"	,569	,400	12,66	1,211	1,334	38°20'32,52"	11,86
	12,63	26°46'13,00"	,737	,499	12,78	1,160	1,323	39° 6'41,74"	12,16
	12,83	23°43'11,70"	,360	,245	12,43	1,290	1,421	37°12'41,31"	11,38
15	13,-	25°22'16,41"	,567	,400	12,67	1,221	1,346	38°20'32,52"	11,83
	13,13	26°32'32,35"	,733	,499	12,79	1,170	1,330	39° 6'41,74"	12,13
	13,33	23°35'25,64"	,359	,245	12,43	1,299	1,428	37°12'42,31"	11,36
16	13,5	25°11'29,89"	,564	,400	12,67	1,230	1,355	38°20'32,52"	11,80
	13,63	26°19'46,03"	,729	,499	12,80	1,180	1,336	39° 6'41,74"	12,10
	13,83	23°28'11,11"	,358	,245	12,43	1,306	1,440	37°12'42,31"	11,33
17	14,-	25° 1'15,68"	,562	,400	12,68	1,239	1,360	38°20'32,52"	11,77
	14,13	26° 7'48,75"	,726	,499	12,81	1,188	1,339	39° 6'41,74"	12,08
	14,33	23°21'25,- "	,357	,245	12,44	1,316	1,450	37°12'42,31"	11,30
18	14,5	24°51'59,70"	,560	,400	12,80	1,247	1,367	38°20'32,52"	11,75
	14,63	25°56'35,89"	,723	,499	12,81	1,196	1,343	39° 6'41,74"	12,05
	14,83	23°15' 4,60"	,356	,245	12,44	1,323	1,457	37°12'42,31"	11,28
19	15.-	24°43' 8,41"	,558	,400	12,68	1,254	1,369	38°20'32,52"	11.73
	15,13	25°46' 3,41"	,721	,499	12,82	1,204	1,343	39° 6'41,74"	12,03

α_{Fe}	ρ_F =0,	s_F	q_s	h_{Fe}	L	Y_{FS}	$K_{g\text{-}F}$	$Z^2_{H\varepsilon}$	$K_{g\text{-}H}$	$K_{m\text{-}H}$	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 9 \; ; \; H = -\,0{,}732661366$$

α_{Fe}	ρ_F=0,	s_F	q_s	h_{Fe}	L	Y_{FS}	$K_{g\text{-}F}$	$Z^2_{H\varepsilon}$	$K_{g\text{-}H}$	$K_{m\text{-}H}$	S_{F1}
29°18'40,39"	,413	1,80	2,18	1,30	1,378	4,073	13,00	4,693	20,22	10,2	4,38
32°27'33,86"	,377	1,89	2,50	1,39	1,361	3,969	13,33	4,504	21,59	9,96	4,21
34° 1'15,48"	,362	1,93	2,66	1,44	1,336	3,955	13,38	4,392	21,92	9,91	4,16
29° 3' 4,03"	,413	1,80	2,18	1,29	1,392	4,036	13,11	4,705	20,40	10,2	4,38
32°13' 7,29"	,377	1,89	2,50	1,37	1,373	3,960	13,36	4,523	21,85	9,92	4,16
33°47'58,88"	,362	1,93	2,66	1,43	1,348	3,917	13,51	4,415	22,06	9,89	4,17
28°49'51,67"	,413	1,80	2,18	1,28	1,399	4,040	13,10	4,719	20,58	10,1	4,34
32° 1' 4,67"	,377	1,89	2,50	1,36	1,391	3,914	13,52	4,542	22,05	9,89	4,18
33°33'31,74"	,362	1,93	2,66	1,41	1,361	3,918	13,51	4,435	22,40	9,84	4,11
28°36'39,29"	,413	1,80	2,18	1,27	1,414	4,022	13,16	4,730	20,78	10,1	4,31
31°48'26,66"	,377	1,89	2,50	1,33	1,418	3,916	13,52	4,560	22,26	9,86	4,14
33°22' 3,74"	,362	1,93	2,66	1,40	1,373	3,899	13,57	4,456	22,64	9,80	4,08
28°25'15,08"	,413	1,80	2,18	1,26	1,424	3,986	13,28	4,742	20,93	10,1	4,32
31°35'48,63"	,377	1,89	2,50	1,34	1,408	3,916	13,52	4,576	22,47	9,83	4,10
33°10'35,67"	,362	1,93	2,66	1,39	1,383	3,840	13,78	4,475	22,87	9,77	4,10
28°12' 2,67"	,413	1,80	2,18	1,25	1,434	3,968	13,34	4,752	21,10	10,0	4,31
31°25'34,57"	,377	1,89	2,50	1,33	1,417	3,896	13,58	4,593	22,65	9,80	4,08
32°58'32,36"	,362	1,93	2,66	1,38	1,395	3,861	13,71	4,493	23,04	9,74	4,05
28° 3' 2,46"	,413	1,80	2,18	1,25	1,443	3,971	13,33	4,764	21,24	10,0	4,27
31°15'55,77"	,377	1,89	2,50	1,32	1,426	3,898	13,58	4,608	22,83	9,77	4,05
32°46'28,98"	,362	1,93	2,66	1,37	1,407	3,861	13,71	4,514	23,23	9,72	4,02
27°52'14,03"	,413	1,80	2,18	1,24	1,452	3,974	13,32	4,773	21,39	9,99	4,24
31° 4'31,06"	,377	1,89	2,50	1,31	1,437	3,858	13,72	4,622	22,99	9,75	4,06
32°36'14,43"	,362	1,93	2,66	1,36	1,417	3,842	13,78	4,527	23,40	9,69	4,01

$$z_1 = 10 \; ; \; H = -0{,}764114984$$

α_{Fe}	ρ_F=0,	s_F	q_s	h_{Fe}	L	Y_{FS}	$K_{g\text{-}F}$	$Z^2_{H\varepsilon}$	$K_{g\text{-}H}$	$K_{m\text{-}H}$	S_{F1}
28°37'35,00"	,432	1,80	2,08	1,34	1,340	4,124	14,26	4,643	23,87	9,63	4,07
32°37'39,27"	,375	1,93	2,58	1,44	1,343	3,933	14,95	4,401	26,42	9,31	3,85
35° 8'44,63"	,342	2,01	2,94	1,52	1,321	3,881	15,15	4,251	27,59	9,18	3,74
28°17'39,67"	,432	1,80	2,08	1,33	1,357	4,071	14,45	4,657	24,11	9,60	4,08
32°18'14,24"	,375	1,93	2,58	1,42	1,362	3,916	15,02	4,424	26,80	9,26	3,82
34°51'27,56"	,342	2,01	2,94	1,50	1,340	3,881	15,15	4,278	28,05	9,12	3,68
27°59'20,32"	,432	1,80	2,08	1,31	1,368	4,076	14,43	4,670	24,54	9,54	4,01
32°13' 1,47"	,375	1,93	2,58	1,40	1,378	3,898	15,09	4,446	27,16	9,22	3,78
34°33'37,96"	,342	2,01	2,94	1,48	1,357	3,841	15,31	4,302	28,46	9,08	3,66
27°41' 0,97"	,432	1,80	2,08	1,29	1,390	4,023	14,62	4,681	24,84	9,50	4,01
31°44'15,93"	,375	1,93	2,58	1,39	1,395	3,859	15,24	4,465	27,58	9,18	3,76
34°20' 7,42"	,342	2,01	2,94	1,47	1,372	3,820	15,39	4,328	28,90	9,03	3,63
27°24'51,21"	,432	1,80	2,08	1,28	1,402	4,028	14,60	4,692	25,13	9,47	3,96
31°29' 9,94"	,375	1,93	2,58	1,37	1,410	3,860	15,23	4,485	27,89	9,14	3,72
34° 6' 4,44"	,342	2,01	2,94	1,45	1,387	3,819	15,40	4,368	29,13	9,01	3,60
27°10'51,02"	,432	1,80	2,08	1,27	1,414	3,992	14,73	4,704	25,42	9,43	3,95
31°16'13,51"	,375	1,93	2,58	1,36	1,423	3,841	15,31	4,503	28,26	9,10	3,69
33°52' 1,46"	,342	2 01	2,94	1,43	1,402	3,798	15,49	4,373	29,66	8,96	3,56

z_2	a	α_{vt}	$\Sigma x = 0,$	$x = 0,$	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 10 \; ; \; H = -\,0{,}764114984$$

z_2	a	α_{vt}	$\Sigma x=0,$	$x=0,$	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
	15,83	23° 3'31,71"	,355	,245	12,44	1,322	1,467	37°12'42,31"	11,25
21	16,–	24°26'57,80"	,555	,400	12,69	1,267	1,376	38°20'32,52"	11,69
	16,13	25°26'45,70"	,715	,499	12,83	1,217	1,346	39° 6'41,74"	11,99
	16,33	22°58'15,28"	,354	,245	12,44	1,343	1,479	37°12'42,31"	11,22
22	16,50	24°19'33,28"	,553	,400	12,69	1,274	1,378	38°20'32,52"	11,67
	16,63	25°17'54,51"	,713	,499	12,83	1,224	1,346	39° 6'41,74"	11,97
	16,83	22°53'16,59"	,353	,245	12,44	1,349	1,481	37°12'42,31"	11,20
23	17,–	24°12'32,96"	,552	,400	12,70	1,279	1,378	38°20'32,52"	11,65
	17,13	25° 9'31,68"	,710	,499	12,84	1,229	1,346	39° 6'41,74"	11,96
	17,33	22°48'34,20"	,353	,245	12,45	1,355	1,486	37°12'42,31"	11,18
24	17,50	24° 5'54,91"	,551	,400	12,70	1,285	1,378	38°20'32,52"	11,64
	17,63	25° 1'34,96"	,709	,499	12,84	1,235	1,346	39° 6'41,74"	11,94
	17,83	22°44' 6,81"	,352	,245	12,45	1,360	1,491	37°12'42,31"	11,17
25	18,–	23°59'37,38"	,549	,400	12,70	1,290	1,381	38°20'32,52"	11,62
	18,13	24°54' 2,35"	,707	,499	12,85	1,240	1,343	39° 6'41,74"	11,92
	18,33	22°39'53,24"	,352	,245	12,45	1,365	1,493	37°12'42,31"	11,15
26	18,50	23°53'38,84"	,548	,400	12,70	1,295	1,381	38°20'32,52"	11,60
	18,63	24°46'52,07"	,705	,499	12,85	1,245	1,341	39° 6'41,74"	11,91
	18,83	22°35'52,44"	,351	,245	12,45	1,370	1,498	37°12'42,31"	11,14
27	19,–	23°47'57,85"	,547	,400	12,71	1,299	1,381	38°20'32,52"	11,59
	19,13	24°40' 2,47"	,703	,499	12,85	1,250	1,341	39° 6'41,74"	11,89
	19,33	22°32' 3,48"	,350	,245	12,45	1,374	1,498	37°12'42,31"	11,13
28	19,50	23°42'33,17"	,546	,400	12,71	1,304	1,381	38°20'32,52"	11,58
	19,63	24°33'32,09"	,701	,499	12,86	1,254	1,339	39° 6'41,74"	11,88
	19,83	22°28'25,50"	,350	,245	12,45	1,378	1,501	37°12'42,31"	11,11
29	20,–	23°37'23,65"	,545	,400	12,71	1,309	1,378	38°20'32,52"	11,57
	20,13	24°27'19,61"	,699	,499	12,86	1,259	1,336	39° 6'41,74"	11,87

$$z_1 = 11 \; ; \; H = -\,0{,}789849763$$

z_2	a	α_{vt}	$\Sigma x=0,$	$x=0,$	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
	13,26	22°53'16,59"	,278	,187	13,34	1,334	1,320	38°30'41,72"	12,19
15	13,50	25°11'29,89"	,565	,400	13,67	1,238	1,252	40° 0'31,29"	12,78
	13,68	26°44'58,25"	,795	,552	13,87	1,168	1,179	41°10'13,05"	13,23
	13,76	22°47' 20,79"	,278	,187	13,34	1,343	1,334	38°30'41,72"	12,16
16	14,–	25° 1'25,68"	,562	,400	13,68	1,248	1,263	40° 0'31,29"	12,76
	14,18	26°32'20,70"	,791	,552	13,88	1,177	1,239	41°10'13,05"	13,20
	14,26	22°41'48,62"	,277	,187	13,34	1,352	1,348	38°30'41,72"	12,13
17	14,50	24°51'59,70"	,560	,400	13,68	1,256	1,270	40° 0'31,29"	12,74
	14,68	26°20'29,70"	,788	,552	13,89	1,186	1,243	41°10'13,05"	13,18
	14,76	22°36'37,80"	,277	,187	13,34	1,359	1,360	38°30'41,72"	12,11
18	15,–	24°43' 8,41"	,558	,400	13,68	1,264	1,277	40° 0'31,29"	12,72
	15,18	26° 9'21,04"	,785	,552	13,89	1,194	1,248	41°10'13,05"	13,16
	15,26	22°31'46,33"	,276	,187	13,34	1,367	1,369	38°30'41,72"	12,09
19	15,50	24°34'48,70"	,557	,400	13,69	1,271	1,281	40° 0'31,29"	12,70
	15,68	25°58'51,00"	,782	,552	13,90	1,201	1,250	41°10'13,05"	13,14
	15,76	22°27'12,46"	,276	,187	13,34	1,374	1,378	38°30'41,72"	12,07
20	16,–	24°26'57,80"	,555	,400	13,69	1,278	1,284	40° 0'31,29"	12,68
	16,18	25°48'56,29"	,779	,552	13,91	1,208	1,250	41°10'13,05"	13,12

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 10 \; ; \; H = -\,0,764114984$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
26°53' 5,12"	,432	1,80	2,08	1,26	1,430	3,996	14,72	4,750	25,86	9,38	3,88
30°51'57,32"	,375	1,93	2,58	1,33	1,449	3,822	15,39	4,538	28,85	9,04	3,63
33°29'19,18"	,342	2,01	2,94	1,41	1,431	3,756	15,66	4,416	30,31	8,89	3,52
26°29'53,01"	,432	1,80	2,08	1,24	1,451	3,942	14,92	4,732	26,13	9,34	3,89
30°38'25,18"	,375	1,93	2,58	1,32	1,463	3,783	15,55	4,553	29,13	9,01	3,64
33°16'53,19"	,342	2,01	2,94	1,40	1,439	3,754	15,67	4,434	30,64	8,86	3,48
26°18' 2,38"	,432	1,80	2,08	1,23	1,461	3,946	14,90	4,737	26,41	9,31	3,84
30°29'18,12"	,375	1,93	2,58	1,31	1,472	3,783	15,55	4,569	29,43	8,98	3,60
33° 8'14,10"	,342	2,01	2,94	1,39	1,450	3,733	15,75	4,454	30,92	8,83	3,47
26° 5'38,27"	,432	1,80	2,08	1,22	1,472	3,928	14,97	4,748	26,60	9,29	3,83
30°11'55,31"	,375	1,93	2,58	1,30	1,482	3,783	15,55	4,583	29,71	8,95	3,56
32°57'25,36"	,342	2,01	2,94	1,38	1,461	3,731	15,76	4,471	31,20	8,81	3,44
25°55'23,74"	,432	1,80	2,08	1,21	1,482	3,931	14,96	4,756	26,79	9,27	3,85
30° 8'46,26"	,375	1,93	2,58	1,29	1,494	3,763	15,63	4,597	29,93	8,93	3,56
32°49'18,38"	,342	2,01	2,94	1,37	1,471	3,711	15,85	4,489	31,50	8,78	3,43
25°45' 9,21"	,432	1,80	2,08	1,21	1,492	3,913	15,03	4,764	26,99	9,24	3,79
29°59' 5,56"	,375	1,93	2,58	1,29	1,504	3,743	15,71	4,610	30,17	8,91	3,55
32°40' 6,95"	,342	2,01	2,94	1,36	1,481	3,708	15,86	4,505	31,79	8,75	3,40
25°34'54,68"	,432	1,80	2,08	1,20	1,501	3,877	15,17	4,771	27,15	9,22	3,84
29°51'32,35"	,375	1,93	2,58	1,28	1,511	3,762	15,63	4,624	30,39	8,88	3,50
32°31'27,68"	,342	2,01	2,94	1,35	1,491	3,708	15,86	4,521	32,01	8,73	3,37
25°26'49,75"	,432	1,80	2,08	1,19	1,508	3,877	15,17	4,778	27,37	9,20	3,77
29°41'16,99"	,375	1,93	2,58	1,27	1,523	3,722	15,80	4,635	30,62	8,86	3,51
32°24'57,96"	,342	2,01	2,94	1,34	1,499	3,705	15,87	4,537	32,26	8,71	3,35
25°18'44,81"	,432	1,80	2,08	1,19	1,516	3,880	15,16	4,785	27,54	9,18	3,75
29°34'49,01"	,375	1,93	2,58	1,26	1,530	3,722	15,80	4,647	30,87	8,84	3,53
32°12'46,43"	,342	2,01	2,94	1,33	1,508	3,785	15,54	4,550	32,52	8,69	3,30

$$z_1 = 11 \; ; \; H = -\,0,789849763$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
26° 1'58,24"	,452	1,79	1,99	1,28	1,404	4,013	16,12	4,768	29,49	8,97	3,77
31° 5' 3,81"	,373	1,97	2,64	1,38	1,425	3,803	17,01	4,433	33,44	8,61	3,51
34°39'45,70"	,325	2,09	3,20	1,50	1,389	3,767	17,17	4,242	37,10	8,31	3,19
25°45'21,03"	,452	1,79	1,99	1,27	1,418	3,978	16,26	4,775	29,93	8,93	3,70
30°57'31,52"	,373	1,97	2,64	1,37	1,433	3,802	17,01	4,451	33,90	8,57	3,42
34°26' 0,46"	,325	2,09	3,20	1,48	1,406	3,723	17,37	4,267	36,07	8,39	3,28
25°28'12,24"	,452	1,79	1,99	1,25	1,434	3,965	16,32	4,782	30,31	8,89	3,67
30°43'50,87"	,373	1,97	2,64	1,36	1,449	3,782	17,10	4,470	34,41	8,52	3,38
34°11'23,58"	,325	2,09	3,20	1,47	1,423	3,720	17,39	4,291	36,62	8,35	3,23
25°14'27,51"	,452	1,79	1,99	1,24	1,447	3,929	16,46	4,788	30,68	8,86	3,65
30°30'16,16"	,373	1,97	2,64	1,35	1,464	3,763	17,19	4,487	35,16	8,49	3,33
33°59'10,14"	,325	2,09	3,20	1,45	1,438	3,717	17,40	4,314	37,10	8,31	3,19
24°59'48,10"	,452	1,79	1,99	1,23	1,460	3,934	16,44	4,792	31,06	8,82	3,60
30°18'27,43"	,373	1,97	2,64	1,33	1,477	3,742	17,29	4,504	35,31	8,45	3,34
33°48'24,54"	,325	2,09	3,20	1,44	1,451	3,693	17,52	4,336	37,60	8,28	3,17
24°46'34,94"	,452	1,79	1,99	1,22	1,472	3,898	16,59	4,797	31,40	8,79	3,60
30° 6'13,82"	,373	1,97	2,64	1,32	1,490	3,722	17,38	4,520	35,78	8,41	3,31
33°37'38,84"	,325	2,09	3,20	1,42	1,465	3,671	17,62	4,357	38,12	8,24	3,15

z_2	a	α_{wt}	$\Sigma x =0,$	$x_1 \overset{?}{=}0,$	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
			$z_1 = 11;\ H = -\ 0{,}789849763$						
	16,26	22°22'54,62"	,275	,187	13,34	1,381	1,386	38°30'43,72"	12,05
21	16,5	24°19'33,28"	,553	,400	13,69	1,284	1,288	40° 0'31,29"	12,66
	16,68	25°39'33,97"	,776	,552	13,91	1,215	1,252	41°10'13,05"	13,10
	17,26	22°15' 1,72"	,274	,187	13,35	1,393	1,400	38°30'43,72"	12,01
23	17,5	24° 5'54,91"	,551	,400	13,70	1,297	1,293	40° 0'31,29"	12,62
	17,68	25°22'16,41"	,771	,552	13,92	1,227	1,252	41°10'13,05"	13,06
	17,76	22°11'24,36"	,274	,187	13,35	1,398	1,407	38°30'43,72"	12,00
24	18,-	24°59'37,38"	,549	,400	13,70	1,302	1,295	40° 0'31,29"	12,60
	18,18	25°14'16,74"	,769	,552	13,93	1,232	1,252	41°10'13,05"	13,05
	18,26	22° 7'58,38"	,274	,187	13,35	1,404	1,411	38°30'43,72"	11,98
25	18,5	23°53'38,54"	,548	,400	13,70	1,308	1,295	40° 0'31,29"	12,59
	18,68	25° 6'40,55"	,766	,552	13,93	1,237	1,250	41°10'13,05"	13,03
	18,76	22° 4'42,92"	,273	,187	13,35	1,409	1,416	38°30'43,72"	11,97
26	19,-	23°47'57,85"	,547	,400	13,71	1,312	1,297	40° 0'31,29"	12,57
	19,18	24°59'26,15"	,764	,552	13,94	1,292	1,248	41°10'13,05"	13,02
	19,26	22° 1'37,18"	,273	,187	13,35	1,413	1,418	38°30'43,72"	11,96
27	19,5	23°42'33,17"	,546	,400	13,71	1,317	1,297	40° 0'31,29"	12,56
	19,68	24°52'32,00"	,762	,552	13,94	1,247	1,248	41°10'13,05"	13,01
	19,76	21°58'40,46"	,273	,187	13,35	1,418	1,423	38°30'43,72"	11,94
28	20,-	23°37'23,65"	,545	,400	13,71	1,321	1,297	40° 0'31,29"	12,55
	20,18	24°45'56,70"	,760	,552	13,94	1,251	1,245	41°10'13,05"	13,00
	20,26	21°55'52,11"	,272	,187	13,35	1,422	1,426	38°30'43,72"	11,93
29	20,5	23°32'28,23"	,544	,400	13,71	1,326	1,297	40° 0'31,29"	12,53
	20,68	24°39'38,99"	,758	,552	13,95	1,256	1,245	41°10'13,05"	12,98
	20,76	21°53'11,55"	,272	,187	13,35	1,426	1,430	38°30'43,72"	11,92
30	21,-	23°27'45,97"	,543	,400	13,72	1,330	1,297	40° 0'31,29"	12,52
	21,18	24°33'37,70"	,757	,552	13,95	1,260	1,323	41°10'13,05"	12,97
	21,26	21°50'38,26"	,272	,187	13,35	1,430	1,433	38°30'43,72"	11,91
31	21,5	23°23'16,01"	,542	,400	13,72	1,334	1,297	40° 0'31,29"	12,51
	21,68	24°27'51,79"	,755	,552	13,95	1,264	1,241	41°10'13,05"	12,96
	21,76	21°48'11,75"	,271	,187	13,35	1,434	1,435	38°30'43,72"	11,90
32	22,-	23°18'57,56"	,541	,400	13,72	1,337	1,295	40° 0'31,29"	12,50
	22,18	24°22'20,27"	,754	,552	13,96	1,267	1,239	41°10'13,05"	12,95
			$z_1 = 12\ ;\ H = -\ 0{,}811295412$						
	14,2	22° 6'38,98"	,210	,128	14,24	1,381	1,270	39°35'48,96"	12,99
16	14,5	24°51'59,70"	,560	,400	14,68	1,263	1,197	41°25'39,34"	13,74
	14,7	26°29'54,92"	,814	,602	14,98	1,183	1,164	42°56'49,97"	14,29
	14,7	22° 2'31,92"	,210	,128	14,24	1,390	1,284	39°35'48,96"	12,96
17	15,-	24°43' 8,41"	,558	,400	14,68	1,272	1,206	41°25'39,34"	13,71
	15,2	26°18'32,18"	,810	,602	14,98	1,192	1,169	42°56'49,97"	14,26
	15,2	21°58'40,46"	,210	,128	14,24	1,398	1,297	39°35'48,96"	12,94
18	15,5	24°34'48,70"	,557	,400	14,69	1,280	1,212	41°25'39,34"	13,69
	15,7	26° 7'48,75"	,807	,602	14,99	1,200	1,173	42°56'49,97"	14,24
	15,7	21°55' 3,15"	,209	,128	14,24	1,405	1,309	39°35'48,96"	12,92
19	16,-	24°26'57,80"	,555	,400	14,69	1,287	1,217	41°25'39,34"	13,67
	16,2	25°57'41,30"	,804	,602	15,00	1,207	1,175	42°56'49,97"	14,22

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 11; \quad H = -789849763$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
24°32'21,76"	,452	1,79	1,98	1,21	1,484	3,902	16,58	4,802	31,74	8,76	3,56
29°55'58,20"	,373	1,97	2,64	1,31	1,503	3,721	17,38	4,536	36,13	8,59	3,28
33°26'23,22"	,325	2,09	3,20	1,41	1,479	3,668	17,64	4,377	38,53	8,21	3,12
24°10'51,06"	,452	1,79	1,98	1,19	1,505	3,866	16,73	4,811	32,33	8,70	3,53
29°33'29,06"	,373	1,97	2,64	1,29	1,529	3,680	17,58	4,562	36,90	8,33	3,24
33° 8'17,25"	,325	2,09	3,20	1,39	1,501	3,642	17,76	4,415	39,37	8,15	3,07
24° 1' 1,96"	,452	1,79	1,98	1,19	1,514	3,870	16,72	4,816	32,57	8,68	3,50
29°24'40,78"	,373	1,97	2,64	1,28	1,538	3,678	17,59	4,576	37,23	8,30	3,22
33° 0'27,28"	,325	2,09	3,20	1,38	1,511	3,638	17,78	4,433	39,75	8,12	3,05
23°49'46,61"	,452	1,79	1,98	1,18	1,525	3,834	16,87	4,819	32,85	8,66	3,50
29°14'25,07"	,373	1,97	2,64	1,27	1,551	3,658	17,68	4,588	37,60	8,28	3,20
32°53' 7,06"	,325	2,09	3,20	1,37	1,521	3,617	17,89	4,451	40,16	8,10	3,03
23°40'29,06"	,452	1,79	1,98	1,17	1,534	3,816	16,95	4,823	33,10	8,63	3,49
29° 7'34,57"	,373	1,97	2,64	1,26	1,559	3,658	17,68	4,601	37,88	8,26	3,18
32°45'16,99"	,325	2,09	3,20	1,36	1,531	3,612	17,91	4,467	40,57	8,07	3,01
23°33' 9,33"	,452	1,79	1,98	1,16	1,541	3,816	16,95	4,828	33,38	8,61	3,46
28°59'16,63"	,373	1,97	2,64	1,25	1,568	3,656	17,69	4,613	38,20	8,23	3,15
32°37'26,91"	,325	2,09	3,20	1,35	1,541	3,591	18,02	4,483	40,87	8,05	3,00
23°23'20,24"	,452	1,79	1,98	1,16	1,550	3,819	16,94	4,830	33,60	8,59	3,43
28°52'26,11"	,373	1,97	2,64	1,25	1,577	3,636	17,79	4,624	38,51	8,21	3,15
32°31'34,58"	,325	2,09	3,20	1,35	1,548	3,607	17,93	4,499	41,22	8,03	2,96
23°16' 0,49"	,452	1,79	1,98	1,15	1,557	3,800	17,02	4,834	33,85	8,57	3,43
28°43'37,76"	,373	1,97	2,64	1,24	1,587	3,634	17,80	4,634	38,80	8,19	3,12
32°23'14,69"	,325	2,09	3,20	1,34	1,559	3,586	18,04	4,512	41,51	8,01	2,96
23° 8' 9,23"	,452	1,79	1,98	1,15	1,551	3,783	17,10	4,837	34,03	8,56	3,42
28°36'47,22"	,373	1,97	2,64	1,24	1,595	3,613	17,90	4,644	39,08	8,17	3,12
32°17'22,30"	,325	2,09	3,20	1,33	1,567	3,581	18,07	4,527	41,83	7,99	2,94
23° 0'49,08"	,452	1,79	1,98	1,14	1,572	3,765	17,18	4,840	34,24	8,54	3,42
28°29'56,66"	,373	1,97	2,64	1,23	1,604	3,613	17,90	4,654	39,33	8,15	3,10
32°11' 0,15"	,325	2,09	3,20	1,32	1,575	3,559	18,18	4,540	42,15	7,97	2,94
22°52'58,21"	,452	1,79	1,98	1,14	1,579	3,786	17,09	4,851	34,39	8,53	3,38
28°25' 3,90"	,373	1,97	2,64	1,22	1,610	3,611	17,91	4,665	39,63	8,13	3,08
32° 6'35,82"	,325	2,09	3,20	1,32	1,581	3,575	18,09	4,555	42,43	7,95	2,90

$$z_1 = 12; \quad H = -0,811295412$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
23°55'52,84"	,472	1,79	1,89	1,24	1,449	3,915	18,03	4,867	35,39	8,44	3,47
30° 6'59,35"	,371	2,00	2,70	1,37	1,461	3,761	18,76	4,459	41,00	8,05	3,12
34° 8'18,29"	,310	2,14	3,46	1,47	1,456	3,667	19,24	4,266	44,05	7,85	2,98
23°39'40,85"	,472	1,79	1,89	1,22	1,464	3,903	18,08	4,867	35,93	8,40	3,43
29°52'41,61"	,371	2,00	2,70	1,34	1,495	3,700	19,07	4,474	41,61	8,00	3,12
33°55'20,81"	,310	2,14	3,46	1,46	1,474	3,662	19,27	4,288	44,80	7,81	2,93
23°25'16,85"	,472	1,79	1,89	1,21	1,478	3,868	18,25	4,868	36,38	8,37	3,42
29°40'11,82"	,371	2,00	2,70	1,33	1,510	3,678	19,18	4,490	42,21	7,96	3,10
33°44'11,18"	,310	2,14	3,46	1,44	1,489	3,635	19,41	4,309	45,46	7,77	2,91
23°13'10,81"	,472	1,79	1,89	1,20	1,489	3,872	18,23	4,869	36,83	8,33	3,37
29°29' 1,45"	,371	2,00	2,70	1,31	1,524	3,658	19,29	4,505	42,82	7,92	3,11
33°34'21,73"	,310	2,14	3,46	1,43	1,502	3,614	19,53	4,331	46,11	7,73	2,88

z_2	a	$\alpha_{v\iota}$	$\Sigma x = 0,$	$x_1 = 0,$	$d_{\alpha 1}$	ε_α	Z^2_B	Θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 12 \; ; \; H = -\,0,811295412$$

z_2	a	$\alpha_{v\iota}$	$\Sigma x = 0,$	$x_1 = 0,$	$d_{\alpha 1}$	ε_α	Z^2_B	Θ	d_{e1}
	16,2	21°51'38,74"	,209	,128	14,24	1,412	1,318	39°35'48,96"	12,898
20	16,5	24°19'33,28"	,553	,400	14,69	1,294	1,223	41°25'39,34"	13,645
	16,7	25°48' 6,85"	,801	,602	15,00	1,214	1,184	42°56'49,97"	14,200
	16,7	21°48'26,11"	,209	,128	14,24	1,419	1,327	39°35'48,96"	12,878
21	17,-	24°12'32,96"	,552	,400	14,70	1,301	1,225	41°25'39,34"	13,625
	17,2	25°39' 2,76"	,799	,602	15,01	1,220	1,177	42°56'49,97"	14,184
	17,2	21°45'24,26"	,209	,128	14,24	1,425	1,336	39°35'48,96"	12,861
22	17,5	24° 5'54,91"	,551	,400	14,70	1,307	1,230	41°25'39,34"	13,608
	17,7	25°30'26,66"	,796	,602	15,01	1,226	1,179	42°56'49,97"	14,167
	17,7	21°42'32,32"	,208	,128	14,24	1,431	1,343	39°35'48,96"	12,845
23	18,-	23°59'37,38"	,549	,400	14,70	1,313	1,232	41°25'39,34"	13,589
	18,2	25°22'16,41"	,794	,602	15,02	1,232	1,179	42°56'49,97"	14,150
	18,7	21°37'15,08"	,208	,128	14,24	1,442	1,355	39°35'48,96"	12,815
25	19,-	23°47'57,85"	,547	,400	14,41	1,324	1,237	41°25'39,34"	13,558
	19,2	25° 7' 6,01"	,789	,602	15,03	1,242	1,177	42°56'49,97"	14,122
	19,2	21°34'48,54"	,208	,128	14,24	1,447	1,362	39°35'48,96"	12,801
26	19,5	23°42'33,17"	,546	,400	14,71	1,329	1,237	41°25'39,34"	13,544
	19,7	25° 0' 2,57"	,787	,602	15,03	1,247	1,177	42°56'49,97"	14,108
	19,7	21°32'28,19"	,207	,128	14,24	1,452	1,367	39°35'48,96"	12,787
27	20,-	23°37'23,65"	,545	,300	14,51	1,348	1,325	40°25'39,34"	13,314
	20,3	25°29'24,01"	,909	,602	14,99	1,227	1,212	42°56'49,97"	14,139
	20,2	21°30'16,23"	,207	,128	14,24	1,456	1,371	39°35'48,96"	12,777
28	20,5	23°32'28,23"	,544	,300	14,51	1,353	1,325	40°25'39,34"	13,300
	20,8	25°22'16,41"	,907	,602	14,99	1,232	1,212	42°56'49,97"	14,125
	20,7	21°28' 9,67"	,207	,128	14,24	1,461	1,376	39°35'48,96"	12,763
29	21,-	23°27'45,97"	,543	,300	14,52	1,358	1,327	40°25'39,34"	13,286
	21,3	25°15'27,14"	,905	,602	15,00	1,236	1,210	42°56'49,97"	14,115
	21,2	21°26' 8,91"	,207	,128	14,24	1,465	1,381	39°35'48,96"	12,752
30	21,5	23°23'16,01"	,542	,300	14,52	1,362	1,327	40°25'39,34"	13,275
	21,8	25° 8'55,04"	,902	,602	15,00	1,240	1,208	42°56'49,97"	14,106
	21,7	21°24'13,54"	,207	,128	14,24	1,469	1,383	39°35'48,96"	12,741
31	22,-	23°18'57,56"	,541	,300	14,52	1,367	1,327	40°25'39,34"	13,261
	22,3	25° 2'39,03"	,900	,602	15,00	1,245	1,206	42°56'49,97"	14,092
	22,2	21°22'23,22"	,207	,128	14,24	1,472	1,388	39°35'48,96"	12,733
32	22,5	23°14'49,89"	,540	,300	14,52	1,371	1,329	40°25'39,34"	13,250
	22,8	24°56'38,14"	,898	,602	15,01	1,249	1,203	42°56'49,97"	14,081

$$z_1 = 13 \; ; \; H = -\,0,829441731$$

z_2	a	$\alpha_{v\iota}$	$\Sigma x = 0,$	$x_1 = 0,$	$d_{\alpha 1}$	ε_α	Z^2_B	Θ	d_{e1}
	15,1	21° 1' 3,82"	,102	,070	15,13	1,440	1,219	40°30'55,69"	13,761
17	15,5	24°34'48,70"	,557	,320	15,53	1,297	1,208	42° 6'22,68"	14,510
	15,8	26°51'35,97"	,938	,618	15,96	1,175	1,156	44°14'29,49"	15,334
	15,6	20°59' 9,03"	,102	,070	15,14	1,447	1,232	40°30'55,69"	13,743
18	16,-	24°26'57,80"	,555	,320	15,53	1,300	1,212	42° 6'22,68"	14,503
	16,3	26°40'27,53"	,934	,618	15,97	1,184	1,162	44°14'29,49"	15,291
	16,1	20°57'21,22"	,102	,070	15,14	1,455	1,243	40°30'55,69"	13,721
19	16,5	24°19'33,28"	,553	,320	15,53	1,308	1,219	42° 6'22,68"	14,481
	16,8	26°29'54,92"	,930	,618	15,98	1,192	1,164	44°14'29,49"	15,269

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^z_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 12 \; ; \; H = - \, 0,811295412$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^z_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
23° 0'34,80"	,472	1,79	1,89	1,19	1,501	3,854	18,31	4,870	37,29	8,30	3,34
29°17'51,07"	,371	2,00	2,70	1,30	1,538	3,656	19,30	4,533	43,16	7,90	3,05
33°24'32,18"	,310	2,14	3,46	1,41	1,516	3,608	19,56	4,351	46,46	7,71	2,87
22°48'28,75"	,472	1,79	1,89	1,18	1,513	3,841	18,37	4,870	37,70	8,27	3,32
29° 6'40,65"	,371	2,00	2,70	1,29	1,551	3,654	19,31	4,532	43,87	7,86	3,00
33°16' 2,82"	,310	2,14	3,46	1,40	1,528	3,602	19,59	4,371	47,35	7,66	2,82
22°37'40,76"	,472	1,79	1,89	1,18	1,523	3,823	18,46	4,871	38,06	8,24	3,30
28°57'18,21"	,371	2,00	2,70	1,28	1,565	3,613	19,53	4,545	44,32	7,83	2,99
33° 7'33,40"	,310	2,14	3,46	1,39	1,539	3,596	19,62	4,390	47,85	7,64	2,79
22°27'22,72"	,472	1,79	1,89	1,17	1,533	3,806	18,54	4,872	38,45	8,21	3,28
28°47'27,24"	,371	2,00	2,70	1,27	1,576	3,611	19,54	4,558	44,81	7,81	2,97
32°59' 3,92"	,310	2,14	3,46	1,38	1,551	3,574	19,74	4,407	48,41	7,61	2,78
22° 8' 4,67"	,472	1,79	1,89	1,15	1,551	3,791	18,61	4,873	39,19	8,16	3,24
28°30' 1,76"	,371	2,00	2,70	1,25	1,598	3,588	19,67	4,581	45,67	7,76	2,93
32°45'13,09"	,310	2,14	3,46	1,36	1,572	3,546	19,90	4,441	49,49	7,55	2,74
21°59' 4,61"	,472	1,79	1,89	1,15	1,560	3,774	18,70	4,873	39,48	8,14	3,23
28°22'27,23"	,371	2,00	2,70	1,25	1,608	3,567	19,78	4,592	46,14	7,73	2,92
32°38' 3,77"	,310	2,14	3,46	1,36	1,582	3,539	19,94	4,457	49,93	7,53	2,72
21°50' 4,67"	,472	1,79	1,89	1,14	1,569	3,756	18,79	4,873	39,81	8,12	3,21
26°34' 9,91"	,406	1,93	2,37	1,23	1,571	3,667	19,25	4,580	43,69	7,87	3,01
32°53'44,12"	,310	2,14	3,46	1,38	1,559	3,568	19,78	4,391	49,80	7,54	2,70
21°43'22,61"	,472	1,79	1,89	1,14	1,576	3,738	18,88	4,875	40,10	8,10	3,21
26°26' 8,03"	,406	1,93	2,37	1,22	1,580	3,647	19,35	4,587	44,11	7,85	2,99
32°46'35,20"	,310	2,14	3,46	1,37	1,570	3,546	19,90	4,407	50,17	7,52	2,70
21°34'22,61"	,472	1,79	1,89	1,13	1,584	3,741	18,86	4,861	40,49	8,07	3,17
26°18' 6,14"	,406	1,93	2,37	1,21	1,590	3,647	19,35	4,596	44,40	7,83	2,97
32°41'41,99"	,310	2,14	3,46	1,36	1,577	3,562	19,81	4,423	50,61	7,50	2,67
21°27'10,62"	,472	1,79	1,89	1,13	1,591	3,741	18,86	4,874	40,64	8,06	3,16
26°11'52,33"	,406	1,93	2,37	1,21	1,598	3,627	19,46	4,605	44,75	7,81	2,96
32°36'48,71"	,310	2,14	3,46	1,35	1,584	3,539	19,94	4,439	51,01	7,48	2,66
21°20'28,56"	,472	1,79	1,89	1,12	1,599	3,723	18,95	4,875	40,94	8,04	3,15
26°31'50,32"	,406	1,93	2,37	1,20	1,607	3,608	19,56	4,613	45,09	7,79	2,95
32°29'39,64"	,310	2,14	3,46	1,35	1,594	3,555	19,85	4,452	51,43	7,46	2,63
21°15' 4,56"	,472	1,79	1,89	1,12	1,604	3,705	19,05	4,877	41,14	8,03	3,15
25°57' 7,35"	,406	1,93	2,37	1,19	1,615	3,606	19,57	4,620	45,34	7,78	2,94
32°24'18,53"	,310	2,14	3,46	1,34	1,602	3,533	19,98	4,465	51,83	7,44	2,62

$$z_1 = 13 \; ; \; H = - \, 0,829441731$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^z_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
21°42'53,90"	,493	1,78	1,81	1,18	1,507	3,823	20,00	5,030	41,54	8,01	3,28
27°55'25,49"	,396	1,97	2,49	1,31	1,506	3,705	20,63	4,461	47,26	7,67	2,97
33°42'48,34"	,305	2,17	3,56	1,48	1,469	3,674	20,81	4,211	52,33	7,41	2,71
21°31'44,65"	,493	1,78	1,81	1,18	1,518	3,811	20,06	5,024	42,15	7,97	3,24
27°51'48,45"	,396	1,97	2,49	1,31	1,511	3,686	20,74	4,484	48,00	7,63	2,94
33°22'36,64"	,305	2,17	3,56	1,45	1,498	3,641	21,00	4,232	53,06	7,38	2,70
21°18'27,11"	,493	1,78	1,81	1,17	1,531	3,793	20,15	5,017	42,78	7,93	3,21
27°39'52,94"	,396	1,97	2,49	1,29	1,525	3,685	20,75	4,496	48,69	7,59	2,90
33°12'21,80"	,305	2,17	3,56	1,44	1,513	3,596	21,26	4,252	53,90	7,34	2,69

z_2	a	α_{vt}	Σx	x $=0,1$	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 13 \; ; \; H = -\,0{,}829441731$$

z_2	a	α_{vt}	Σx	$x=0,1$	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	16,6	20°55'39,76"	0,102	,07	15,14	1,461	1,254	40°30'55,69"	13,705
20	17,-	24°12'32,96"	0,552	,32	15,54	1,316	1,225	42° 6'22,68"	14,458
	17,3	26°19'55,30"	0,927	,62	15,98	1,199	1,169	44°14'29,49"	15,251
	17,1	20°54' 4,13"	0,102	,07	15,14	1,468	1,266	40°30'55,69"	13,687
21	17,5	24° 5'54,91"	0,551	,32	15,54	1,323	1,230	42° 6'22,68"	14,438
	17,8	26°10'26,11"	0,923	,62	15,99	1,206	1,169	44°14'29,49"	15,232
	17,6	20°52'33,81"	0,102	,07	15,14	1,474	1,275	40°30'55,69"	13,671
22	18,-	23°59'37,38"	0,549	,32	15,54	1,330	1,237	42° 6'22,68"	14,418
	18,4	26°39'15,52"	1,050	,62	15,94	1,184	1,208	44°14'29,49"	15,260
	18,1	20°51' 8,39"	0,102	,07	15,14	1,479	1,281	40°30'55,69"	13,657
23	18,5	23°53'38,84"	0,548	,32	15,54	1,337	1,239	42° 6'22,68"	14,399
	18,9	26°29'54,92"	1,046	,62	15,94	1,191	1,208	44°14'29,49"	15,242
	18,6	20°49'47,48"	0,102	,07	15,14	1,485	1,290	40°30'55,69"	13,642
24	19,-	23°47'57,85"	0,547	,32	15,55	1,343	1,243	42° 6'22,68"	14,382
	19,4	26°21' 0,37"	1,043	,62	15,95	1,198	1,208	44°14'29,49"	15,224
	19,1	20°48'30,73"	0,102	,07	15,14	1,490	1,297	40°30'55,69"	13,629
25	19,5	23°42'33,17"	0,546	,32	15,55	1,348	1,245	42° 6'22,68"	14,369
	19,9	26°12'30,09"	1,040	,62	15,96	1,204	1,206	44°14'29,49"	15,209
	20,1	20°46' 8,48"	0,102	,07	15,14	1,499	1,309	40°30'55,69"	13,606
27	20,1	23°32'28,23"	0,544	,32	15,55	1,359	1,250	42° 6'22,68"	14,338
	20,5	25°56'35,89"	1,033	,62	15,97	1,215	1,203	44°14'29,49"	15,182
	20,9	20°45' 2,45"	0,102	,07	15,14	1,504	1,316	40°60'55,69"	13,593
28	21,-	23°27'45,97"	0,543	,32	15,55	1,364	1,250	42° 6'22,68"	14,324
	21,4	25°49' 9,14"	1,030	,62	15,97	1,220	1,203	44°14'29,49"	15,170
	21,1	20°43'59,49"	0,102	,07	15,14	1,508	1,320	40°30'55,69"	13,583
29	21,5	23°23'16,01"	0,542	,32	15,56	1,369	1,252	42° 6'22,68"	14,311
	21,9	25°42' 0,91"	1,028	,62	15,98	1,225	1,201	44°14'29,49"	15,158
	21,6	20°42'59,40"	0,102	,07	15,14	1,512	1,327	40°30'55,69"	13,572
30	22,-	23°18'57,56"	0,541	,32	15,56	1,373	1,252	42° 6'22,68"	14,300
	22,4	25°35'10,06"	1,025	,62	15,99	1,229	1,199	44°14'29,49"	15,148
	22,1	20°42' 1,99"	0,102	,07	15,14	1,515	1,329	40°30'55,69"	13,565
31	22,5	23°14'49,89"	0,540	,32	15,56	1,378	1,254	42° 6'22,68"	14,286
	22,9	25°28'35,55"	1,023	,62	15,99	1,234	1,197	44°14'29,49"	15,135
	22,6	20°41' 7,08"	0,102	,07	15,14	1,519	1,334	40°30'55,69"	13,554
32	23,-	23°10'52,34"	0,539	,32	15,56	1,352	1,254	42° 6'22,68"	14,275
	23,4	25°22'16,41"	1,020	,62	16,00	1,239	1,195	44°14'29,49"	15,123
	23,1	20°40'14,51"	0,102	,07	15,14	1,522	1,339	40°30'55,69"	13,547
33	23,5	23° 7' 4,29"	0,538	,32	15,56	1,386	1,254	42° 6'22,68"	14,264
	23,9	25°16'11,75"	1,018	,62	16,00	1,243	1,192	44°14'29,49"	15,113
	23,6	20°39'24,13"	0,102	,07	15,14	1,526	1,343	40°30'55,69"	13,536
34	24,-	23° 3'25,20"	0,537	,32	15,57	1,390	1,254	42° 6'22,68"	14,253
	24,4	25°10'20,75"	1,016	,62	16,00	1,247	1,190	44°14'29,49"	15,101
	24,1	20°38'35,82"	0,102	,07	15,14	1,529	1,346	40°30'55,69"	13,529
35	24,5	22°59'54,59"	0,537	,32	15,57	1,393	1,254	42° 6'22,68"	14,246
	24,9	25° 4'42,70"	1,013	,62	16,01	1,251	1,190	44°14'29,49"	15,095
	24,6	20°37'49,44"	0,102	,07	15,14	1,532	1,350	40°30'55,69"	13,521
36	25,-	22°56'31,81"	0,536	,32	15,57	1,397	1,257	42° 6'22,68"	14,234
	25,4	24°59'16,73"	1,011	,62	16,01	1,255	1,186	44°14'29,49"	15,083

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 13 \; ; \; H = -\,0{,}829441731$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
21° 8'28,95"	,493	1,78	1,81	1,16	1,540	3,776	20,25	5,013	43,31	7,89	3,18
27°27'57,41"	,396	1,97	2,49	1,28	1,540	3,646	20,97	4,507	49,31	7,66	2,90
33° 3'48,10"	,305	2,17	3,56	1,42	1,526	3,590	21,29	4,273	54,54	7,31	2,66
20°56'51,10"	,493	1,78	1,81	1,15	1,551	3,780	20,22	5,006	43,81	7,84	3,14
27°17'41,53"	,396	1,97	2,49	1,27	1,553	3,645	20,98	4,535	49,76	7,54	2,87
32°54'47,33"	,305	2,17	3,56	1,41	1,539	3,584	21,33	4,292	55,34	7,28	2,63
20°46'52,84"	,493	1,78	1,81	1,14	1,561	3,745	20,41	5,001	44,31	7,83	3,14
27° 6'58,33"	,396	1,97	2,49	1,26	1,567	3,625	21,09	4,529	50,44	7,50	2,85
33° 8'10,15"	,305	2,17	3,56	1,43	1,519	3,613	21,16	4,235	55,22	7,28	2,61
20°38'34,49"	,493	1,78	1,81	1,14	1,570	3,728	20,51	4,997	44,84	7,80	3,12
26°56'42,41"	,396	1,97	2,49	1,25	1,579	3,623	21,10	4,538	51,07	7,47	2,81
32°59'36,32"	,305	2,17	3,56	1,42	1,532	3,606	21,20	4,254	55,88	7,25	2,58
20°28'36,34"	,493	1,78	1,81	1,13	1,579	3,731	20,49	4,991	45,26	7,78	3,08
26°47'38,66"	,396	1,97	2,49	1,24	1,591	3,584	21,33	4,548	51,55	7,45	2,82
32°51' 2,37"	,305	2,17	3,56	1,41	1,545	3,584	21,33	4,271	56,51	7,23	2,57
20°20'17,87"	,493	1,78	1,81	1,12	1,588	3,714	20,59	4,970	45,85	7,75	3,06
26°40'42,29"	,396	1,97	2,49	1,23	1,600	3,602	21,22	4,559	52,07	7,42	2,78
32°44' 8,00"	,305	2,17	3,56	1,40	1,555	3,578	21,37	4,288	57,19	7,20	2,54
20° 5'49,24"	,493	1,78	1,81	1,11	1,602	3,696	20,68	4,979	46,55	7,71	3,03
26°24'14,81"	,396	1,97	2,49	1,22	1,622	3,580	21,31	4,577	53,02	7,38	2,74
32°31' 6,19"	,305	2,17	3,56	1,38	1,575	3,548	21,55	4,322	58,32	7,15	2,52
19°57'30,78"	,493	1,78	1,81	1,11	1,610	3,678	20,78	4,974	46,90	7,69	3,02
26°16'50,90"	,396	1,97	2,49	1,21	1,632	3,560	21,47	4,585	53,55	7,36	2,73
32°25'24,99"	,305	2,17	3,56	1,37	1,583	3,564	21,45	4,338	58,79	7,13	2,49
19°50'52,01"	,493	1,78	1,81	1,10	1,617	3,682	20,77	4,970	47,29	7,67	2,99
26° 9'27,00"	,396	1,97	2,49	1,20	1,641	3,540	21,60	4,593	53,95	7,34	2,73
32°19'43,72"	,305	2,17	3,56	1,36	1,592	3,541	21,59	4,353	59,34	7,11	2,48
19°44'13,25"	,493	1,78	1,81	1,10	1,624	3,682	20,77	4,967	47,56	7,65	2,97
26° 3'42,76"	,396	1,97	2,49	1,20	1,649	3,538	21,61	4,602	54,41	7,32	2,70
32°15'15,89"	,305	2,17	3,56	1,36	1,600	3,534	21,63	4,369	59,85	7,09	2,46
19°39'14,17"	,493	1,78	1,81	1,10	1,628	3,664	20,87	4,965	47,97	7,63	2,96
25°55'51,55"	,396	1,97	2,49	1,19	1,659	3,538	21,61	4,608	54,77	7,30	2,69
32° 9' 0,30"	,305	2,17	3,56	1,35	1,609	3,534	21,63	4,383	60,36	7,07	2,44
19°32'35,40"	,493	1,78	1,81	1,09	1,636	3,646	20,97	4,961	48,29	7,61	2,96
25°50' 7,30"	,396	1,97	2,49	1,18	1,667	3,518	21,73	4,616	55,19	7,28	2,68
32° 3' 0,64"	,305	2,17	3,56	1,34	1,619	3,527	21,68	4,396	60,85	7,05	2,43
19°27'36,28"	,493	1,78	1,81	1,09	1,640	3,646	20,97	4,959	48,56	7,60	2,94
25°44'23,04"	,396	1,97	2,49	1,18	1,675	3,515	21,75	4,621	55,62	7,26	2,66
31°58'32,62"	,305	2,17	3,56	1,34	1,626	3,504	21,82	4,409	61,32	7,03	2,42
19°20'57,55"	,493	1,78	1,81	1,08	1,647	3,649	20,95	4,954	48,85	7,58	2,92
25°37'56,47"	,396	1,97	2,49	1,17	1,683	3,495	21,88	4,630	55,97	7,25	2,66
31°52'46,15"	,305	2,17	3,56	1,33	1,636	3,519	21,72	4,389	62,23	7,00	2,38
19°15'58,48"	,493	1,78	1,81	1,08	1,652	3,649	20,95	4,952	49,08	7,57	2,90
25°34' 6,93"	,396	1,97	2,49	1,17	1,688	3,495	21,88	4,637	56,33	7,23	2,64
31°49'37,58"	,305	2,17	3,56	1,33	1,640	3,496	21,87	4,435	62,07	7,00	2,40
19°10'59,40"	,493	1,78	1,81	1,08	1,657	3,631	21,05	4,949	49,41	7,56	2,90
25°27'55,39"	,396	1,97	2,49	1,16	1,697	3,492	21,90	4,643	56,59	7,22	2,64
31°44'16,02"	,305	2,17	3,56	1,32	1,649	3,496	21,87	4,398	63,30	6,96	2,35

z_2	a	α_{vt}	Σx	x_1 =0 ,	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 13 \; ; \; H = -\,0,829441731$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	25,1	20°37' 4,88"	0,102	,07	15,14	1,529	1,355	40°30'55,69"	13,514
37	25,5	22°53'16,59"	0,536	,32	15,57	1,393	1,257	42° 6'22,68"	14,226
	25,9	24°54' 2,35"	1,011	,62	16,02	1,251	1,184	44°14'29,49"	15,077
	25,6	20°36'22,04"	0,102	,07	15,14	1,532	1,357	40°30'55,69"	13,506
38	26,-	22°50' 8,47"	0,535	,32	15,57	1,397	1,257	42° 6'22,68"	14,217
	26,4	24°48'58,91"	1,009	,62	16,02	1,255	1,182	44°14'29,49"	15,069

$$z_1 = 14 \; ; \; H = -\,0,844955718$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	16,5	20°	0	0	16,00	1,503	1,201	41°14'14,73"	14,517
19	17,-	24°12'32,96"	0,552	0,3	16,50	1,322	1,186	43° 3'30,69"	15,424
	17,3	26°19'55,30"	0,927	0,5	16,75	1,215	1,186	44°24'14,75"	15,993
	17,-	20°	0	0	16,00	1,510	1,212	41°14'14,73"	14,499
20	17,5	23° 5'54,91"	0,551	0,3	16,50	1,330	1,192	43° 3'30,69"	15,402
	17,8	25°10'26,11"	0,923	0,5	16,75	1,223	1,190	44°24'14,75"	15,971
	18,-	20°	0	0	16,00	1,522	1,234	41°14'14,73"	14,469
22	18,5	23°53'38,84"	0,548	0,3	16,50	1,345	1,203	43° 3'30,69"	15,360
	18,8	25°52'50,12"	0,917	0,5	16,77	1,239	1,197	44°24'14,75"	15,929
	18,5	20°	0	0	16,00	1,527	1,243	41°14'14,73"	14,457
23	19,-	23°47'57,85"	0,547	0,3	16,51	1,352	1,208	43° 3'30,69"	15,341
	19,3	25°44'39,40"	0,915	0,5	16,77	1,246	1,199	44°24'14,75"	15,911
	19,-	20°	0	0	16,00	1,532	1,252	41°14'14,73"	14,445
24	19,5	23°42'33,17"	0,546	0,3	16,51	1,358	1,212	43° 3'30,69"	15,325
	19,8	25°36'51,20"	0,912	0,5	16,78	1,253	1,201	44°24'14,75"	15,892
	19,5	20°	0	0	16,00	1,537	1,261	41°14'14,73"	14,433
25	20,-	23°37'23,65"	0,545	0,3	16,51	1,364	1,214	43° 3'30,69"	15,308
	20,3	25°29'24,01"	0,909	0,5	16,78	1,259	1,201	44°24'14,75"	15,877
	20,-	20°	0	0	16,00	1,542	1,270	41°14'14,73"	14,421
26	20,5	23°32'28,23"	0,544	0,3	16,51	1,369	1,217	43° 3'30,69"	15,295
	20,8	25°22'16,41"	0,907	0,5	16,79	1,265	1,201	44°24'14,75"	15,862
	20,5	20°	0	0	16,00	1,546	1,277	41°14'14,73"	14,411
27	21,-	23°27'45,97"	0,543	0,3	16,52	1,374	1,219	43° 3'30,69"	15,282
	21,3	25°15'27,14"	0,905	0,5	16,79	1,271	1,201	44°24'14,75"	15,846
	21,5	20°	0	0	16,00	1,554	1,288	41°14'14,73"	14,392
29	22,-	23°18'57,56"	0,541	0,3	16,52	1,384	1,223	43° 3'30,69"	15,255
	22,3	25° 2'39,03"	0,900	0,5	16,80	1,281	1,201	44°24'14,75"	15,822
	22,-	20°	0	0	16,00	1,558	1,295	41°14'14,73"	14,382
30	22,5	23°14'49,89"	0,540	0,3	16,52	1,389	1,225	43° 3'30,69"	15,241
	22,8	24°56'38,14"	0,898	0,5	16,80	1,286	1,201	44°24'14,75"	15,809
	22,5	20°	0	0	16,00	1,562	1,302	41°14'14,73"	14,373
31	23,-	23°10'52,34"	0,539	0,3	16,52	1,393	1,225	43° 3'30,69"	15,231
	23,3	24°50'51,46"	0,896	0,5	16,81	1,291	1,201	44°24'14,75"	15,796
	23,-	20°	0	0	16,00	1,565	1,304	41°14'14,73"	14,366
32	23,5	23° 7' 4,29"	0,538	0,3	16,52	1,398	1,225	43° 3'30,69"	15,218
	23,8	24°45'18,16"	0,894	0,5	16,81	1,296	1,199	44°24'14,75"	15,782
	23,5	20°	0	0	16,00	1,568	1,311	41°14'14,73"	14,359
33	24,-	23° 3'25,20"	0,537	0,3	16,53	1,402	1,228	43° 3'30,69"	15,207
	24,3	24°34'59,47"	0,892	0,5	16,82	1,300	1,199	44°24'14,75"	15,773

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 13 \; ; \; H = -\,0{,}829441731$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
19° 6' 0,33"	,493	1,78	1,81	1,07	1,662	3,631	21,05	4,947	49,61	7,55	2,89
25°23'23,56"	,396	1,97	2,49	1,16	1,703	3,492	21,90	4,650	56,91	7,21	2,62
31°41' 1,37"	,305	2,17	3,56	1,31	1,654	3,511	21,77	4,411	63,69	6,94	2,33
19° 1' 1,24"	,493	1,78	1,81	1,07	1,667	3,613	21,16	4,944	49,90	7,53	2,89
25°18'24,48"	,396	1,97	2,49	1,15	1,710	3,471	22,02	4,655	57,24	7,19	2,62
31°37'20,61"	,305	2,17	3,56	1,31	1,660	3,488	21,92	4,469	63,41	6,95	2,35

$$z_1 = 14 \; ; \; H = -\,0{,}844955718$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
19°26'37,35"	,518	1,77	1,70	1,14	1,553	3,745	21,98	5,179	48,23	7,62	3,10
26°53'14,93"	,404	1,99	2,46	1,28	1,549	3,626	22,71	4,499	56,24	7,24	2,75
30°49'54,82"	,336	2,12	3,15	1,39	1,521	3,621	22,74	4,248	59,56	7,10	2,60
19°15'49,35"	,518	1,77	1,70	1,13	1,564	3,728	22,09	5,165	48,97	7,54	3,07
26°42'12,32"	,404	1,99	2,46	1,27	1,563	3,606	22,83	4,507	57,04	7,20	2,73
30°40' 6,23"	,336	2,12	3,15	1,38	1,535	3,617	22,76	4,266	60,38	7,07	2,57
18°57'18,50"	,518	1,77	1,70	1,12	1,582	3,715	22,16	5,140	50,20	7,52	3,01
26°21'13,60"	,404	1,99	2,46	1,25	1,592	3,566	23,09	4,525	58,49	7,14	2,69
30°20'28,79"	,336	2,12	3,15	1,35	1,564	3,569	23,07	4,297	61,93	7,01	2,54
18°49'35,63"	,518	1,77	1,70	1,11	1,590	3,698	22,26	5,130	50,80	7,49	2,99
26°11'17,54"	,404	1,99	2,46	1,24	1,605	3,564	23,10	4,533	59,17	7,11	2,66
30°12'12,51"	,336	2,12	3,15	1,34	1,577	3,564	23,10	4,312	62,66	6,98	2,51
18°41'52,78"	,518	1,77	1,70	1,11	1,597	3,681	22,37	5,119	51,35	7,46	2,97
26° 3'19,97"	,404	1,99	2,46	1,23	1,616	3,544	23,23	4,542	59,78	7,09	2,65
30° 3'30,87"	,336	2,12	3,15	1,34	1,590	3,559	23,13	4,326	63,34	6,96	2,49
18°34' 9,93"	,518	1,77	1,70	1,11	1,605	3,681	22,49	5,109	51,85	7,44	2,94
25°54'56,45"	,404	1,99	2,46	1,23	1,628	3,542	23,24	4,550	60,46	7,06	2,62
29°56'21,75"	,336	2,12	3,15	1,33	1,601	3,537	23,28	4,340	64,08	6,93	2,47
18°26'27,07"	,518	1,77	1,70	1,10	1,612	3,685	22,34	5,099	52,31	7,41	2,91
25°48' 5,47"	,404	1,99	2,46	1,22	1,637	3,522	23,37	4,559	61,08	7,04	2,61
29°49'12,57"	,336	2,12	3,15	1,32	1,611	3,532	23,31	4,354	64,77	6,90	2,45
18°20'16,78"	,518	1,77	1,70	1,10	1,618	3,668	22,45	5,090	52,81	7,39	2,89
25°41'14,49"	,404	1,99	2,46	1,21	1,646	3,520	23,39	4,568	61,64	7,02	2,59
29°42' 3,34"	,336	2,12	3,15	1,31	1,623	3,510	23,46	4,367	65,43	6,88	2,44
18° 7'56,21"	,518	1,77	1,70	1,09	1,631	3,650	22,55	5,074	53,77	7,35	2,87
25°27'32,50"	,404	1,99	2,46	1,21	1,666	3,480	23,66	4,583	62,70	6,98	2,57
29°30'24,61"	,336	2,12	3,15	1,31	1,641	3,504	23,50	4,393	66,61	6,84	2,40
18° 1'45,93"	,518	1,77	1,70	1,08	1,637	3,633	22,66	5,065	54,17	7,33	2,85
25°20'15,57"	,404	1,99	2,46	1,19	1,676	3,460	23,79	4,552	63,70	6,94	2,54
29°24'22,57"	,336	2,12	3,15	1,29	1,654	3,498	23,54	4,405	67,16	6,82	2,39
17°55'35,64"	,518	1,77	1,70	1,08	1,643	3,616	22,77	5,057	54,53	7,31	2,84
25°14'57,12"	,404	1,99	2,46	1,19	1,681	3,477	23,68	4,596	63,75	6,94	2,53
29°18'20,50"	,336	2,12	3,15	1,28	1,661	3,476	23,69	4,417	67,67	6,80	2,38
17°50'57,92"	,518	1,77	1,70	1,08	1,647	3,637	22,64	5,051	55,04	7,29	2,80
25° 8' 6,10"	,404	1,99	2,46	1,18	1,693	3,457	23,81	4,601	64,30	6,92	2,52
29°11'53,20"	,336	2,12	3,15	1,28	1,671	3,470	23,73	4,427	68,30	6,78	2,37
17°46'20,20"	,518	1,77	1,70	1,07	1,652	3,619	22,75	5,045	55,33	7,28	2,80
25° 2'21,72"	,404	1,99	2,46	1,18	1,701	3,454	23,83	4,608	64,69	6,91	2,51
29° 7'23,63"	,336	2,12	3,15	1,27	1,678	3,470	23,73	4,439	68,75	6,77	2,38

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$z_1 = 14$; $H = -0{,}844955718$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	24,–	20°	0	0	16,–	1,572	1,316	41°14'14,73"	14,351
34	24,5	22°59'54,53"	0,537	0,3	16,53	1,406	1,228	43° 3'30,69"	15,196
	24,8	24°34'48,70"	0,890	0,5	16,82	1,304	1,197	44°24'14,75"	15,763
	25,–	20°	0	0	16,–	1,578	1,325	41°14'14,73"	14,335
36	25,5	22°53'16,50"	0,535	0,3	16,53	1,412	1,228	43° 3'30,69"	15,180
	25,8	24°25' 4,29"	0,887	0,5	16,83	1,312	1,195	44°24'14,75"	15,744
	25,5	20°	0	0	16,–	1,582	1,329	41°14'14,73"	14,326
37	26,–	22°50' 8,47"	0,535	0,3	16,53	1,416	1,228	43° 3'30,69"	15,170
	26,3	24°20'27,48"	0,886	0,5	16,83	1,316	1,197	44°24'14,75"	15,732
	26,–	20°	0	0	16,–	1,584	1,332	41°14'14,73"	14,321
38	26,5	22°47' 7,07"	0,534	0,3	16,53	1,420	1,230	43° 3'30,69"	15,159
	26,8	24°16' 0,22"	0,884	0,5	16,83	1,319	1,192	44°24'14,75"	15,725
	26,5	20°	0	0	16,–	1,586	1,336	41°14'14,73"	14,316
39	27,–	22°44'12,02"	0,533	0,3	16,53	1,423	1,230	43° 3'30,69"	15,151
	27,3	24°11'42,02"	0,883	0,5	16,84	1,323	1,190	44°24'14,75"	15,716
	27,–	20°	0	0	16,–	1,588	1,339	41°14'14,73"	14,312
40	27,5	22°41'23,00"	0,533	0,3	16,53	1,426	1,230	43° 3'30,69"	15,143
	27,8	24° 7'32,43"	0,881	0,5	16,84	1,326	1,188	44°24'14,75"	15,708
	27,5	20°	0	0	16,–	1,591	1,343	41°14'14,73"	14,305
41	28,–	32°30'39,70"	0,532	0,3	16,54	1,429	1,230	43° 3'30,69"	15,135
	28,3	24° 3'31,02"	0,880	0,5	16,84	1,329	1,188	44°24'14,75"	15,701

$z_1 = 15$; $H = -0{,}85847584$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	18,–	20°	0	0	17,–	1,525	1,175	42°14'53,82"	15,482
21	18,5	23°53'38,84"	0,548	0,3	17,50	1,349	1,160	44° 1' 9,90"	16,367
	18,8	25°52'50,12"	0,917	0,5	17,77	1,244	1,160	45°19'26,01"	16,927
	18,5	20°	0	0	17,–	1,531	1,184	42°14'53,82"	15,467
22	19,–	23°47'57,85"	0,547	0,3	17,51	1,356	1,166	44° 1' 9,90"	16,347
	19,3	25°44'39,40"	0,915	0,5	17,77	1,252	1,162	45°19'26,01"	16,906
	19,–	20°	0	0	17,–	1,537	1,192	42°14'53,82"	15,453
23	19,5	23°42'33,17"	0,546	0,3	17,51	1,363	1,171	44° 1' 9,90"	16,329
	19,8	25°36'51,20"	0,912	0,5	17,78	1,259	1,166	45°19'26,01"	16,888
	19,5	20°	0	0	17,–	1,542	1,201	42°14'53,82"	15,441
24	20,–	23°37'23,65"	0,545	0,3	17,51	1,369	1,175	44° 1' 9,90"	16,313
	20,3	25°29'24,01"	0,909	0,5	17,78	1,265	1,169	45°19'26,01"	16,873
	20,–	20°	0	0	17,–	1,547	1,210	42°14'53,82"	15,429
25	20,5	23°32'28,23"	0,544	0,3	17,51	1,375	1,177	44° 1' 9,90"	16,297
	20,8	25°22'16,41"	0,907	0,5	17,79	1,272	1,169	45°19'26,01"	16,855
	20,5	20°	0	0	17,–	1,551	1,217	42°14'53,82"	15,419
26	21,–	23°27'45,97"	0,543	0,3	17,52	1,381	1,182	44° 1' 9,90"	16,281
	21,3	25°15'27,14"	0,905	0,5	17,79	1,278	1,171	45°19'26,01"	16,840
	21,–	20°	0	0	17,–	1,556	1,223	42°14'53,82"	15,407
27	21,5	23°23'16,01"	0,542	0,3	17,52	1,386	1,182	44° 1' 9,90"	16,268
	21,8	25° 8'55,04"	0,902	0,5	17,80	1,284	1,171	45°19'26,01"	16,824
	21,5	20°	0	0	17,–	1,560	1,230	42°14'53,82"	15,398
28	22,–	23°18'57,56"	0,540	0,3	17,52	1,391	1,186	44° 1' 9,90"	16,255
	22,3	25° 2'39,03"	0,900	0,5	17,80	1,289	1,171	45°19'26,01"	16,812

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$z_1 = 14$; $H = -0{,}844955718$

17°41'42,50"	,518	1,77	1,70	1,07	1,657	3,619	22,75	5,037	55,71	7,26	2,78
24°57' 3,25"	,404	1,99	2,46	1,16	1,709	3,434	23,97	4,614	65,17	6,89	2,51
29° 2'54,03"	,336	2,12	3,15	1,26	1,686	3,448	23,88	4,450	69,31	6,75	2,35
17°30'54,49"	,518	1,77	1,70	1,06	1,667	3,602	22,86	5,024	56,38	7,23	2,76
24°48'39,62"	,404	1,99	2,46	1,15	1,721	3,431	24,00	4,628	66,05	6,86	2,47
28°53'29,55"	,336	2,12	3,15	1,25	1,701	3,441	23,93	4,470	70,27	6,72	2,32
17°24'44,21"	,518	1,77	1,70	1,06	1,673	3,584	22,97	5,016	56,70	7,22	2,76
24°43'21,12"	,404	1,99	2,46	1,15	1,729	3,431	24,00	4,633	66,48	6,84	2,46
28°48' 9,56"	,336	2,12	3,15	1,24	1,710	3,434	23,97	4,479	70,66	6,71	2,31
17°21'39,06"	,518	1,77	1,70	1,05	1,677	3,584	22,97	5,014	57,04	7,20	2,74
24°37'36,73"	,404	1,99	2,46	1,14	1,737	3,410	24,14	4,637	66,78	6,83	2,46
28°44'47,27"	,336	2,12	3,15	1,24	1,716	3,434	23,97	4,490	71,13	6,69	2,30
17°18'33,92"	,518	1,77	1,70	1,05	1,680	3,567	23,08	5,007	57,32	7,19	2,74
24°33'24,91"	,404	1,99	2,46	1,14	1,744	3,427	24,02	4,643	67,16	6,82	2,44
28°40'17,51"	,336	2,12	3,15	1,23	1,723	3,427	24,02	4,498	71,63	6,68	2,28
17°15'28,78"	,518	1,77	1,70	1,05	1,683	3,567	23,08	5,003	57,64	7,18	2,73
24°29'13,07"	,404	1,99	2,46	1,14	1,750	3,407	24,17	4,648	67,53	6,81	2,44
28°36'30,04"	,336	2,12	3,15	1,23	1,729	3,427	24,02	4,508	72,08	6,66	2,27
17°10'51,07"	,518	1,77	1,70	1,05	1,687	3,588	22,95	4,997	57,88	7,17	2,70
24°25' 1,24"	,404	1,99	2,46	1,13	1,756	3,407	24,17	4,653	67,89	6,80	2,42
28°53' 7,69"	,336	2,12	3,15	1,22	1,735	3,427	24,02	4,517	72,39	6,65	2,26

$z_1 = 15$; $H = -0{,}85847584$

19°10'37,85"	,514	1,80	1,75	1,12	1,609	3,619	24,37	5,134	57,85	7,17	2,87
26° 7'20,62"	,399	2,01	2,52	1,25	1,607	3,540	24,92	4,518	66,60	6,84	2,55
29°51' 7,29"	,335	2,14	3,19	1,35	1,580	3,559	24,79	4,289	70,15	6,72	2,41
19° 1'59,45"	,514	1,80	1,75	1,11	1,618	3,602	24,49	5,121	58,68	7,13	2,84
25°58' 5,19"	,399	2,01	2,52	1,24	1,621	3,538	24,94	4,527	66,39	6,81	2,52
29°42' 0,31"	,335	2,14	3,19	1,34	1,595	3,553	24,82	4,302	70,89	6,69	2,38
18°53'21,06"	,514	1,80	1,75	1,11	1,627	3,605	24,47	5,109	59,44	7,10	2,80
25°49'14,39"	,399	2,01	2,52	1,23	1,633	3,518	25,08	4,533	68,24	6,78	2,50
29°33'55,62"	,335	2,14	3,19	1,33	1,608	3,548	24,86	4,316	71,93	6,67	2,35
18°46' 9,06"	,514	1,80	1,75	1,10	1,635	3,588	24,59	5,099	60,11	7,08	2,79
25°41'25,32"	,399	2,01	2,52	1,22	1,644	3,515	25,10	4,542	68,98	6,76	2,48
29°27'17,28"	,335	2,14	3,19	1,32	1,619	3,526	25,02	4,331	72,75	6,64	2,34
18°38'57,05"	,514	1,80	1,75	1,10	1,643	3,588	24,59	5,088	60,74	7,05	2,76
25°33'36,24"	,399	2,01	2,52	1,21	1,656	3,495	25,24	4,549	69,83	6,73	2,46
29°19'12,48"	,335	2,14	3,19	1,31	1,632	3,520	25,06	4,343	73,68	6,61	2,32
18°33'11,46"	,514	1,80	1,75	1,09	1,649	3,570	24,71	5,080	61,39	7,03	2,74
25°25'47,16"	,399	2,01	2,52	1,21	1,668	3,474	25,39	4,556	70,48	6,71	2,45
29°12'34,02"	,335	2,14	3,19	1,30	1,643	3,514	25,10	4,356	74,40	6,59	2,30
18°25' 5,38"	,514	1,80	1,75	1,09	1,657	3,573	24,69	5,070	62,02	7,00	2,71
25°19'24,44"	,399	2,01	2,52	1,20	1,677	3,471	25,41	4,563	71,34	6,68	2,43
29°53'31,53"	,335	2,14	3,19	1,30	1,645	3,514	25,10	4,368	75,21	6,57	2,27
18°20'13,86"	,514	1,80	1,75	1,08	1,663	3,555	24,81	5,061	62,59	6,98	2,70
25°13' 1,73"	,399	2,01	2,52	1,20	1,678	3,471	25,41	4,570	71,88	6,67	2,41
29° 0'19,38"	,335	2,14	3,19	1,28	1,664	3,485	25,31	4,380	75,97	6,55	2,27

z_z	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
			z_1 = 15 ; H = 0,85847584						
	22,-	20°	0	0	17,-	1,564	1,234	42°14'53,82"	15,388
29	22,5	23°14'49,89"	0,540	0,3	17,52	1,396	1,188	44° 1' 9,90"	16,241
	22,8	24°56'38,14"	0,898	0,5	17,80	1,295	1,173	45°19'26,01"	16,797
	23,-	20°	0	0	17,,-	1,571	1,245	42°14'53,82"	15,372
31	23,5	23° 7' 4,29"	0,538	0,3	17,52	1,405	1,190	44° 1' 9,90"	16,218
	23,8	24°45'18,16"	0,894	0,5	17,81	1,304	1,171	45°19'26,01"	16,774
	23,5	20°	0	0	17,-	1,575	1,250	42°14'53,82"	15,362
32	24,-	23° 3'25,20"	0,537	0,3	17,53	1,410	1,197	44° 1' 9,90"	16,204
	24,3	24°39'57,47"	0,892	0,5	17,82	1,309	1,171	45°19'26,01"	16,362
	24,-	20°	0	0	17,-	1,578	1,254	42°14'53,82"	15,355
33	24,5	22°59'54,53"	0,537	0,3	17,53	1,414	1,192	44° 1' 9,90"	16,194
	24,8	24°34'48,70"	0,891	0,5	17,82	1,313	1,171	45°14'26,01"	16,752
	24,5	20°	0	0	17,-	1,581	1,259	42°14'53,82"	15,348
34	25,-	22°56'31,81"	0,536	0,3	17,53	1,418	1,195	44° 1' 9,90"	16,183
	25,3	24°29'51,17"	0,889	0,5	17,82	1,318	1,171	45°19'26,01"	16,739
	25,-	20°	0	0	17,-	1,584	1,263	42°14'53,82"	15,341
35	25,5	22°53'16,59"	0,535	0,3	17,53	1,421	1,195	44° 1' 9,90"	16,175
	25,8	24°25' 4,29"	0,887	0,5	17,83	1,322	1,169	45°19'26,01"	16,730
	25,5	20°	0	0	17,-	1,587	1,268	42°14'53,82"	15,334
36	26,-	22°50' 8,47"	0,535	0,3	17,53	1,425	1,195	44° 1' 9,90"	16,165
	26,3	24°20'27,48"	0,886	0,5	17,83	1,325	1,169	45°19'26,01"	16,722
	26,-	20°	0	0	17,-	1,590	1,272	42°14'53,82"	15,327
37	26,5	22°47' 7,07"	0,534	0,3	17,53	1,428	1,195	44° 1' 9,90"	16,158
	26,8	24°16' 0,22"	0,884	0,5	17,83	1,329	1,166	45°19'26,01"	16,712
	26,5	20°	0	0	17,-	1,592	1,275	42°14'53,82"	15,323
38	27,-	22°44'12,02"	0,533	0,3	17,53	1,432	1,195	44° 1' 9,90"	16,147
	27,3	24°11'42,02"	0,883	0,5	17,84	1,333	1,166	45°19'26,01"	16,703
	27,-	20°	0	0	17,-	1,595	1,279	42°14'53,82"	15,316
39	27,5	22°41'23,00"	0,533	0,3	17,53	1,435	1,197	44° 1' 9,90"	16,139
	27,8	24° 7'32,43"	0,881	0,5	17,84	1,336	1,164	45°19'26,01"	16,695
	27,5	20°	0	0	17,-	1,594	1,281	42°14'53,82"	15,311
40	28,-	22°38'39,70"	0,532	0,3	17,54	1,438	1,197	44° 1' 9,90"	16,131
	28,3	24° 3'31,02"	0,880	0,5	17,84	1,340	1,164	45°19'26,01"	16,685
	28,-	20°	0	0	17,-	1,600	1,286	42°14'53,82"	15,304
41	28,5	22°36' 1,84"	0,532	0,3	17,54	1,441	1,197	44° 1' 9,90"	16,123
	28,3	23°59'37,38"	0,879	0,5	17,84	1,343	1,162	45°19'26,01"	16,677
	28,5	20°	0	0	17,-	1,602	1,288	42°14'53,82"	15,299
42	29,-	22°33'29,15"	0,531	0,3	17,54	1,444	1,197	44° 1' 9,90"	16,116
	29,3	23°55'51,16"	0,878	0,5	17,85	1,346	1,160	45°19'26,01"	16,670
	29,-	20°	0	0	17,-	1,604	1,290	42°14'53,82"	15,295
43	29,5	22°31' 1,37"	0,531	0,3	17,54	1,447	1,195	44° 1' 9,90"	16,109
	29,8	23°52'12,00"	0,876	0,5	17,85	1,349	1,160	45°19'26,01"	16,663
	29,5	20°	0	0	17,-	1,607	1,295	42°14'53,82"	15,288
44	30,-	22°28'38,28"	0,530	0,3	17,54	1,449	1,195	44° 1' 9,90"	16,104
	30,3	23°48'39,56"	0,875	0,5	17,85	1,352	1,158	45°19'26,01"	16,656

Претсметката на цементираните запченици во однос на Hertz-овиот прит, се врши во случаите кога $K_{т-н} < K_{т-F}$.

Претсметката на подобрените запч.во сите случаи се врши според Hertz.

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-h}	K_{m-h}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 15 \; ; \; H = -0,858847584$$

18°14'28,25"	,514	1,80	1,75	1,08	1,670	3,555	24,81	5,053	63,22	6,96	2,67
25° 6'14,38"	,399	2,01	2,52	1,18	1,697	3,448	25,59	4,577	72,51	6,65	2,40
28°53'16,80"	,335	2,14	3,19	1,27	1,675	3,463	25,47	4,391	76,57	6,53	2,27
18° 4'23,46"	,514	1,80	1,75	1,07	1,681	3,538	24,94	5,039	64,24	6,92	2,64
24°54'55,31"	,399	2,01	2,52	1,17	1,715	3,427	25,74	4,589	73,81	6,61	2,38
28°43' 6,83"	,335	2,14	3,19	1,26	1,693	3,457	25,52	4,414	78,02	6,49	2,23
17°58'37,85"	,514	1,80	1,75	1,07	1,688	3,520	25,06	5,030	64,79	6,90	2,63
24°48' 7,94"	,399	2,01	2,52	1,17	1,725	3,424	25,77	4,594	74,09	6,60	2,37
28°37'30,56"	,335	2,14	3,19	1,25	1,702	3,450	25,57	4,424	78,65	6,47	2,21
17°54'18,66"	,514	1,80	1,75	1,06	1,692	3,522	25,04	5,024	65,27	6,89	2,61
24°43'11,59"	,399	2,01	2,52	1,16	1,733	3,403	25,92	4,600	74,99	6,57	2,35
28°33'20,66"	,335	2,14	3,19	1,25	1,710	3,450	25,57	4,435	79,22	6,46	2,20
17°49'57,46"	,514	1,80	1,75	1,06	1,697	3,522	25,04	5,018	67,09	6,87	2,60
24°37'50,61"	,399	2,01	2,52	1,15	1,741	3,420	25,80	4,605	76,59	6,56	2,33
28°27'20,40"	,335	2,14	3,19	1,24	1,720	3,443	25,62	4,444	81,45	6,44	2,19
17°45' 0,23"	,514	1,80	1,75	1,06	1,702	3,505	25,17	5,012	66,14	6,86	2,59
24°33'56,03"	,399	2,01	2,52	1,15	1,748	3,399	25,95	4,612	76,01	6,55	2,33
28°23'10,44"	,335	2,14	3,19	1,24	1,727	3,420	25,79	4,453	80,48	6,42	2,18
17°41'21,06"	,514	1,80	1,75	1,05	1,707	3,505	25,17	5,005	66,55	6,84	2,58
24°28'59,66"	,399	2,01	2,52	1,15	1,755	3,399	25,95	4,617	76,57	6,53	2,31
28°19'39,04"	,335	2,14	3,19	1,23	1,734	3,420	25,79	4,464	80,96	6,41	2,17
17°37' 1,85"	,514	1,80	1,75	1,05	1,712	3,487	25,30	5,000	66,91	6,83	2,57
24°25' 5,06"	,399	2,01	2,52	1,14	1,761	3,378	26,11	4,623	77,08	6,51	2,31
28°15' 5,14"	,335	2,14	3,19	1,23	1,742	3,413	25,85	4,473	81,59	6,39	2,16
17°34' 9,06"	,514	1,80	1,75	1,05	1,714	3,487	25,30	4,995	67,37	6,81	2,56
24°19'44,06"	,399	2,01	2,52	1,14	1,770	3,395	25,98	4,626	77,62	6,50	2,29
28°10'55,09"	,335	2,14	3,19	1,22	1,749	3,413	25,85	4,481	82,07	6,38	2,14
17°29'49,85"	,514	1,80	1,75	1,05	1,719	3,487	25,30	4,990	67,69	6,80	2,55
24°15'49,48"	,399	2,01	2,52	1,13	1,776	3,374	26,14	4,632	78,66	6,49	2,28
28° 7'23,64"	,335	2,14	3,19	1,22	1,756	3,390	26,02	4,491	82,64	6,37	2,14
17°26'57,06"	,514	1,80	1,75	1,05	1,723	3,469	25,43	4,985	68,12	6,79	2,54
24°11'54,87"	,399	2,01	2,52	1,13	1,782	3,374	26,14	4,637	78,40	6,48	2,27
28° 2'49,67"	,335	2,14	3,19	1,21	1,764	3,405	25,91	4,498	83,09	6,35	2,12
17°22'37,85"	,514	1,80	1,75	1,04	1,728	3,489	25,28	4,978	68,43	6,78	2,52
24° 8' 0,27"	,399	2,01	2,52	1,12	1,789	3,353	26,30	4,641	78,86	6,47	2,27
27°59'18,22"	,335	2,14	3,19	1,21	1,770	3,382	26,08	4,507	83,62	6,34	2,12
17°19'45,06"	,514	1,80	1,75	1,04	1,731	3,489	25,28	4,975	68,79	6,77	2,50
24° 4' 5,68"	,399	2,01	2,52	1,12	1,794	3,370	26,18	4,646	79,28	6,45	2,25
27°56'10,61"	,335	2,14	3,19	1,20	1,776	3,382	26,08	4,515	84,18	6,33	2,11
17°16'52,26"	,514	1,80	1,75	1,04	1,734	3,471	25,41	4,970	69,16	6,75	2,50
24° 0'35,66"	,399	2,01	2,52	1,12	1,800	3,349	26,34	4,649	79,86	6,44	2,25
27°52'39,13"	,335	2,14	3,19	1,20	1,782	3,374	26,14	4,523	84,55	6,32	2,11
17°12'33,05"	,514	1,80	1,75	1,04	1,739	3,471	25,41	4,963	69,42	6,75	2,49
23°58' 7,45"	,399	2,01	2,52	1,11	1,804	3,349	26,34	4,655	80,23	6,43	2,24
27°49'31,50"	,335	2,14	3,19	1,20	1,784	3,374	26,14	4,530	85,07	6,30	2,09

Претсметката на цементираните запченици во однос на цврстин.на свит-
кување се врши кога $K_{T-F} < K_{T-H}$ односно за $K_{T-F}/K_{T-H} < 1$.
Тоа е,главно, за $z_1 \geq 22$, зависно од коефициентот на поместувањето x_1.
Меѓутоа,задолжителна е проверката на степенот на сигурноста S_H и S_F.

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 16 \; ; \; H = -\,0{,}870270947$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	18,5	20°	0	0	18,-	1,534	1,136	43° 8'57,27"	16,478
21	19,-	23°47'57,85"	0,547	0,3	18,51	1,360	1,130	44°52'18,65"	17,353
	19,3	25°44'39,40"	0,915	0,5	18,77	1,256	1,132	46° 8'12,70"	17,907
	19,-	20°	0	0	18,-	1,540	1,145	43° 8'57,27"	16,464
22	19,5	23°42'33,17"	0,546	0,3	18,51	1,367	1,136	44°52'18,65"	17,335
	19,8	25°36'51,20"	0,912	0,5	18,78	1,264	1,136	46° 8'12,70"	17,886
	19,5	20°	0	0	18,-	1,545	1,153	43° 8'57,27"	16,452
23	20,-	23°37'23,65"	0,545	0,3	18,51	1,374	1,141	44°52'18,65"	17,316
	20,3	25°29'24,01"	0,909	0,5	18,78	1,271	1,138	46° 8'12,70"	17,868
	20,5	20°	0	0	18,-	1,555	1,169	43° 8'57,27"	16,428
25	21,-	23°27'45,97"	0,543	0,3	18,52	1,386	1,149	44°52'18,65"	17,284
	21,3	25°15'27,14"	0,905	0,5	18,79	1,284	1,145	46° 8'12,70"	17,836
	21,-	20°	0	0	18,-	1,560	1,175	43° 8'57,27"	16,416
26	21,5	23°23'16,01"	0,542	0,3	18,52	1,392	1,151	44°52'18,65"	17,269
	21,8	25° 8'55,04"	0,902	0,5	18,80	1,290	1,145	46° 8'12,70"	17,820
	21,5	20°	0	0	18,-	1,564	1,182	43° 8'57,27"	16,407
27	22,-	23°18'57,56"	0,541	0,3	18,52	1,397	1,153	44°52'18,65"	17,256
	22,3	25° 2'39,03"	0,900	0,5	18,80	1,296	1,147	46° 8'12,70"	17,806
	22,-	20°	0	0	18,-	1,568	1,186	43° 8'57,27"	16,397
28	22,5	23°14'49,89"	0,540	0,3	18,52	1,402	1,158	44°52'18,65"	17,242
	22,8	24°56'38,14"	0,898	0,5	18,80	1,302	1,147	46° 8'12,70"	17,790
	22,5	20°	0	0	18,-	1,572	1,192	43° 8'57,27"	16,388
29	23,-	23°10'52,34"	0,539	0,3	18,52	1,407	1,158	44°52'18,65"	17,229
	23,3	24°50'51,46"	0,896	0,5	18,81	1,306	1,147	46° 8'12,70"	17,781
	23,-	20°	0	0	18,-	1,576	1,197	43° 8'57,27"	16,378
30	23,5	23° 7' 4,29"	0,538	0,3	18,52	1,412	1,160	44°52'18,65"	17,217
	23,8	24°45'18,26"	0,894	0,5	18,81	1,312	1,149	46° 8'12,70"	17,765
	23,5	20°	0	0	18,-	1,580	1,203	43° 8'57,27"	16,369
31	24,-	23° 3'25,20"	0,537	0,3	18,53	1,416	1,162	44°52'18,65"	17,206
	24,3	24°39'57,47"	0,892	0,5	18,82	1,317	1,145	46° 8'12,70"	17,753
	24,5	20°	0	0	18,-	1,586	1,212	43° 8'57,27"	16,355
33	25,-	22°56'31,81"	0,536	0,3	18,53	1,425	1,164	44°52'18,65"	17,183
	25,3	24°29'51,17"	0,889	0,5	18,82	1,326	1,147	46° 8'12,70"	17,731
	25,-	20°	0	0	18,-	1,590	1,217	43° 8'57,27"	16,346
34	25,5	22°53'16,59"	0,535	0,3	18,53	1,429	1,166	44°52'18,65"	17,172
	25,8	24°25' 4,29"	0,887	0,5	18,83	1,330	1,147	46° 8'12,70"	17,722
	25,5	20°	0	0	18,-	1,593	1,221	43° 8'57,27"	16,339
35	26,-	22°50' 8,47"	0,535	0,3	18,53	1,432	1,166	44°52'18,65"	17,165
	26,3	24°20'27,48"	0,886	0,5	18,83	1,334	1,147	46° 8'12,70"	17,711
	26,-	20°	0	0	18,-	1,596	1,223	43° 8'57,27"	16,332
36	26,5	22°47' 7,07"	0,534	0,3	18,53	1,436	1,166	44°52'18,65"	17,155
	26,8	24°16' 0,22"	0,884	0,5	18,83	1,338	1,145	46° 8'12,70"	17,701
	26,5	20°	0	0	18,-	1,598	1,228	43° 8'57,27"	16,327
37	27,-	22°44'12,02"	0,533	0,3	18,53	1,439	1,169	44°52'18,65"	17,147
	27,3	24°11'42,02"	0,883	0,5	18,83	1,342	1,145	46° 8'12,70"	17,691
	27,-	20°	0	0	18,-	1,601	1,230	43° 8'57,27"	16,320
38	27,5	22°41'23,00"	0,533	0,3	18,53	1,443	1,169	44°52'18,65"	17,136
	27,8	24° 7'32,43"	0,881	0,5	18,83	1,345	1,145	46° 8'57,27"	17,685

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 16 \ ; \ H = -\ 0,870270947$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
19°13'14,74"	,511	1,83	1,79	1,12	1,642	3,558	26,45	5,115	66,47	6,84	2,71
25°45'23,76"	,397	2,03	2,56	1,24	1,635	3,495	26,92	4,519	75,66	6,56	2,42
29°17' 3,13"	,333	2,15	3,23	1,34	1,608	3,542	26,56	4,296	79,44	6,45	2,28
19° 5' 8,74"	,511	1,83	1,79	1,11	1,652	3,540	26,58	5,103	67,45	6,81	2,68
25°37' 7,33"	,397	2,03	2,56	1,23	1,647	3,492	26,95	4,527	76,61	6,53	2,40
29° 8' 9,68"	,333	2,15	3,23	1,33	1,623	3,520	26,73	4,308	80,50	6,42	2,26
18°58'23,74"	,511	1,83	1,79	1,10	1,660	3,522	26,71	5,092	68,35	6,78	2,66
25°28'27,38"	,397	2,03	2,56	1,22	1,661	3,471	27,11	4,533	77,64	6,50	2,38
29° 0'37,17"	,333	2,15	3,23	1,31	1,636	3,514	26,78	4,322	81,52	6,39	2,24
18°44'53,74"	,511	1,83	1,79	1,09	1,676	3,507	26,83	5,072	70,03	6,73	2,61
25°13'49,43"	,397	2,03	2,56	1,21	1,684	3,448	27,29	4,548	79,42	6,45	2,34
28°46'52,99"	,333	2,15	3,23	1,30	1,660	3,454	27,24	4,346	83,42	6,38	2,22
18°38' 8,74"	,511	1,83	1,79	1,08	1,690	3,471	27,11	5,061	70,86	6,70	2,61
25° 6'30,43"	,397	2,03	2,56	1,20	1,696	3,444	27,32	4,553	80,39	6,42	2,32
28°40'18,46"	,333	2,15	3,23	1,29	1,671	3,479	27,05	4,358	84,46	6,32	2,18
18°32'44,74"	,511	1,83	1,79	1,08	1,690	3,489	26,97	5,053	71,59	6,68	2,57
25° 0'21,33"	,397	2,03	2,56	1,19	1,705	3,424	27,48	4,560	81,26	6,40	2,30
28°34' 6,74"	,333	2,15	3,23	1,28	1,682	3,472	27,10	4,369	85,29	6,30	2,16
18°27'20,74"	,511	1,83	1,79	1,08	1,697	3,471	27,11	5,045	72,40	6,65	2,55
24°54'10,93"	,397	2,03	2,56	1,18	1,716	3,420	27,52	4,566	81,94	6,38	2,29
28°27'52,55"	,333	2,15	3,23	1,27	1,694	3,450	27,28	4,379	86,24	6,28	2,15
18°21'56,74"	,511	1,83	1,79	1,08	1,703	3,473	27,10	5,036	73,05	6,63	2,53
24°48'12,92"	,397	2,03	2,56	1,18	1,726	3,399	27,68	4,572	82,87	6,36	2,27
28°23'39,49"	,333	2,15	3,23	1,26	1,701	3,465	27,15	4,392	87,08	6,26	2,12
18°16'32,74"	,511	1,83	1,79	1,07	1,710	3,473	27,10	5,028	73,77	6,61	2,50
24°42'14,89"	,397	2,03	2,56	1,17	1,735	3,416	27,55	4,577	83,62	6,34	2,24
28°16'41,97"	,333	2,15	3,23	1,25	1,714	3,443	27,33	4,401	87,78	6,24	2,12
18°11' 8,74"	,511	1,83	1,79	1,07	1,717	3,455	27,24	5,020	74,32	6,59	2,50
24°37'14,38"	,397	2,03	2,56	1,17	1,743	3,395	27,72	4,583	84,30	6,32	2,24
28°11'27,27"	,333	2,15	3,23	1,25	1,723	3,435	27,39	4,411	88,90	6,21	2,10
18° 3' 2,74"	,511	1,83	1,79	1,06	1,727	3,437	27,38	5,007	75,53	6,56	2,47
24°26'15,83"	,397	2,03	2,56	1,15	1,761	3,370	27,92	4,593	85,73	6,29	2,22
28° 1'58,96"	,333	2,15	3,23	1,24	1,741	3,428	27,45	4,430	90,22	6,18	2,07
17°57'38,74"	,511	1,83	1,79	1,06	1,733	3,419	27,52	5,000	76,09	6,54	2,46
24°21'15,29"	,397	2,03	2,56	1,15	1,770	3,370	27,92	4,598	86,31	6,27	2,20
27°58' 6,16"	,333	2,15	3,23	1,23	1,748	3,405	27,63	4,440	90,89	6,17	2,07
17°53'35,74"	,511	1,83	1,79	1,05	1,738	3,438	27,37	4,993	76,63	6,53	2,43
24°17'59,24"	,397	2,03	2,56	1,14	1,776	3,349	28,10	4,605	86,97	6,26	2,20
27°53'27,74"	,333	2,15	3,23	1,22	1,757	3,382	27,82	4,449	91,54	6,15	2,07
17°49'32,73"	,511	1,83	1,79	1,05	1,743	3,420	27,51	4,987	77,25	6,51	2,43
24°12'58,70"	,397	2,03	2,56	1,14	1,784	3,365	27,96	4,608	87,68	6,24	2,17
27°49'12,11"	,333	2,15	3,23	1,22	1,765	3,397	27,70	4,458	92,33	6,13	2,04
17°46'50,74"	,511	1,83	1,79	1,05	1,747	3,420	27,51	4,983	77,68	6,50	2,41
24° 9'19,16"	,397	2,03	2,56	1,14	1,790	3,344	28,14	4,614	88,14	6,23	2,17
27°44'56,46"	,333	2,15	3,23	1,21	1,773	3,374	27,88	4,466	92,94	6,12	2,04
17°42'47,73"	,511	1,83	1,79	1,05	1,752	3,420	27,51	4,989	78,07	6,49	2,40
24° 4'18,63"	,397	2,03	2,56	1,13	1,799	3,344	28,14	4,617	88,79	6,21	2,16
27°42' 1,77"	,333	2,15	3,23	1,21	1,778	3,389	27,76	4,476	93,48	6,11	2,02

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 16 \ ; \ H = -\,0,870270947$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	27,5	20°	0	0	18,-	1,604	1,234	43° 8'57,27"	16,314
39	28,-	22°38'39,70"	0,532	0,3	18,54	1,446	1,169	44°52'18,65"	17,129
	28,3	24° 3'31,02"	0,880	0,5	18,84	1,349	1,143	46° 8'12,70"	17,675
	28,5	20°	0	0	18,-	1,609	1,241	43° 8'57,27"	16,302
41	29,-	22°33'29,15"	0,531	0,3	18,54	1,452	1,169	44°52'18,65"	17,113
	29,3	23°55'51,16"	0,878	0,5	18,85	1,355	1,141	46° 8'12,70"	17,665
	29,-	20°	0	0	18,-	1,611	1,243	43° 8'57,27"	16,298
42	29,5	22°31' 1,37"	0,531	0,3	18,54	1,455	1,169	44°52'18,65"	17,107
	29,8	23°52'12,00"	0,876	0,5	18,85	1,358	1,141	46° 8'12,70"	17,653
	29,5	20°	0	0	18,-	1,613	1,245	43° 8'57,27"	16,293
43	30,-	22°28'38,28"	0,530	0,3	18,54	1,458	1,169	44°52'18,65"	17,099
	30,3	23°48'39,56"	0,875	0,5	18,85	1,361	1,139	46° 8'12,70"	17,646
	30,-	20°	0	0	18,-	1,615	1,248	43° 8'57,27"	16,288
44	30,5	22°26'19,65"	0,530	0,3	18,54	1,460	1,169	44°52'18,65"	17,093
	30,8	23°45'13,55"	0,874	0,5	18,85	1,364	1,139	46° 8'12,70"	17,639
	30,5	20°	0	0	18,-	1,617	1,250	43° 8'57,27"	16,284
45	31,-	22°24' 5,27"	0,529	0,3	18,54	1,463	1,169	44°52'18,65"	17,086
	31,3	23°41'53,67"	0,873	0,5	18,85	1,367	1,136	46° 8'12,70"	17,631
	31,-	20°	0	0	18,-	1,619	1,252	43° 8'57,27"	16,279
46	31,5	22°21'54,96"	0,529	0,3	18,54	1,466	1,169	44°52'18,65"	17,078
	31,8	23°38'39,66"	0,872	0,5	18,86	1,370	1,136	46° 8'12,70"	17,625
	31,5	20°	0	0	18,-	1,621	1,254	43° 8'57,27"	16,275
47	32,-	22°19'48,54"	0,528	0,3	18,54	1,468	1,169	44°52'18,65"	17,073
	32,3	23°35'31,26"	0,871	0,5	18,86	1,372	1,134	46° 8'12,70"	17,620

$$z_1 = 17 \ ; \ H = -\,0,880678394$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	19,5	20°	0	0	19,-	1,548	1,115	43°57'32,68"	17,462
22	20,-	23°37'23,65"	0,545	0,3	19,51	1,376	1,111	45°38' 5,74"	18,327
	20,3	25°29'24,01"	0,909	0,5	19,78	1,275	1,113	46°51'44,21"	18,869
	20,-	20°	0	0	19,-	1,553	1,121	43°57'32,68"	17,450
23	20,5	23°32'28,23"	0,544	0,3	19,51	1,384	1,115	45°38' 5,74"	18,305
	20,8	25°22'16,41"	0,907	0,5	19,79	1,282	1,117	46°51'44,21"	18,852
	20,5	20°	0	0	19,-	1,558	1,130	43°57'32,68"	17,438
24	21,-	23°27'45,97"	0,543	0,3	19,52	1,391	1,121	45°38' 5,74"	18,287
	21,3	25°15'27,14"	0,905	0,5	19,79	1,289	1,119	46°51'44,21"	18,834
	21,-	20°	0	0	19,-	1,563	1,136	43°57'32,68"	17,426
25	21,5	23°23'16,01"	0,542	0,3	19,52	1,396	1,124	45°38' 5,74"	18,274
	21,8	25° 8'55,04"	0,902	0,5	19,80	1,295	1,121	46°51'44,21"	18,819
	21,5	20°	0	0	19,-	1,568	1,143	43°57'32,68"	17,414
26	22,-	23°18'57,56"	0,541	0,3	19,52	1,402	1,128	45°38' 5,74"	18,259
	22,3	25° 2'39,03"	0,900	0,5	19,80	1,302	1,124	46°51'44,21"	18,802
	22,-	20°	0	0	19,-	1,572	1,149	43°57'32,68"	17,405
27	22,5	23°14'49,89"	0,540	0,3	19,52	1,408	1,132	45°38' 5,74"	18,242
	22,8	24°56'38,14"	0,898	0,5	19,80	1,307	1,126	46°51'44,21"	18,790
	22,5	20°	0	0	19,-	1,576	1,154	43°57'32,68"	17,395
28	23,-	23°10'52,34"	0,539	0,3	19,52	1,413	1,134	45°38' 5,74"	18,230
	23,5	24°50'51,46"	0,896	0,5	19,81	1,313	1,126	46°51'44,21"	18,775

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$z_1 = 16$; $H = -0,870270947$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-H}	K_{m-H}	S_{F1}
17°38'44,74"	,510	1,83	1,79	1,04	1,756	3,402	27,66	4,970	78,68	6,47	2,39
23°56'46,44"	,397	2,03	2,56	1,13	1,805	3,323	28,31	4,612	89,56	6,20	2,15
27°37'46,09"	,333	2,15	3,23	1,20	1,786	3,366	27,95	4,483	94,22	6,09	2,02
17°31'59,75"	,510	1,83	1,79	1,04	1,765	3,384	27,80	4,960	79,55	6,45	2,38
23°53'20,01"	,397	2,03	2,56	1,12	1,818	3,318	28,36	4,631	90,48	6,18	2,13
27°31'33,89"	,333	2,15	3,23	1,20	1,798	3,343	28,14	4,500	95,40	6,07	2,01
17°29'17,74"	,510	1,83	1,79	1,04	1,766	3,384	27,80	4,955	80,02	6,43	2,37
23°50' 3,91"	,397	2,03	2,56	1,11	1,823	3,318	28,36	4,635	91,01	6,16	2,12
27°28'16,39"	,333	2,15	3,23	1,19	1,805	3,358	28,02	4,508	95,87	6,06	1,99
17°26'35,75"	,510	1,83	1,79	1,03	1,771	3,384	27,80	4,950	80,47	6,42	2,35
23°46'24,36"	,397	2,03	2,56	1,11	1,829	3,297	28,54	4,638	91,54	6,15	2,12
27°25'21,64"	,333	2,15	3,23	1,19	1,811	3,358	28,02	4,515	96,52	6,04	1,98
17°23'53,73"	,510	1,83	1,79	1,03	1,775	3,385	27,80	4,948	80,86	6,41	2,34
23°43'42,35"	,397	2,03	2,56	1,11	1,834	3,313	28,40	4,644	91,99	6,14	2,10
27°22' 4,13"	,333	2,15	3,23	1,18	1,817	3,335	28,21	4,522	96,96	6,03	1,98
17°21'11,74"	,510	1,83	1,79	1,03	1,778	3,385	27,80	4,943	81,28	6,40	2,33
23°40' 2,80"	,397	2,03	2,56	1,10	1,840	3,292	28,59	4,647	92,47	6,13	2,11
27°18'46,61"	,333	2,15	3,23	1,18	1,824	3,350	28,09	4,529	97,57	6,02	1,96
17°18'29,74"	,510	1,83	1,79	1,03	1,781	3,385	27,80	4,938	81,68	6,39	2,32
23°36'23,24"	,397	2,03	2,56	1,10	1,847	3,292	28,59	4,650	92,95	6,12	2,09
27°15'51,81"	,333	2,15	3,23	1,18	1,829	3,326	28,29	4,535	98,00	6,01	1,97
17°15'47,74"	,510	1,83	1,79	1,03	1,784	3,385	27,80	4,936	82,02	6,38	2,31
23°34' 4,68"	,397	2,03	2,56	1,10	1,851	3,292	28,59	4,654	93,38	6,11	2,08
27°13'55,25"	,333	2,15	3,23	1,17	1,833	3,326	28,29	4,543	98,56	5,99	1,96

$z_1 = 17$; $H = 0,880678394$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-H}	K_{m-H}	S_{F1}
19° 8'24,87"	,507	1,86	1,83	1,11	1,681	3,455	28,94	5,086	76,43	6,53	2,58
25°19'52,48"	,394	2,05	2,60	1,23	1,669	3,465	28,86	4,529	86,16	6,28	2,28
28°38'35,83"	,332	2,16	3,26	1,31	1,647	3,501	28,55	4,315	90,26	6,18	2,15
19° 2' 3,69"	,507	1,86	1,83	1,10	1,689	3,456	28,93	5,076	77,62	6,50	2,54
25°10'27,57"	,394	2,05	2,60	1,22	1,685	3,440	29,06	4,533	87,41	6,25	2,26
28°31'31,63"	,332	2,16	3,26	1,30	1,659	3,494	28,61	4,327	91,40	6,15	2,13
18°55'42,51"	,507	1,86	1,83	1,09	1,698	3,438	29,08	5,065	78,60	6,47	2,52
25° 2'18,89"	,394	2,05	2,60	1,21	1,699	3,420	29,23	4,538	88,39	6,22	2,25
28°24'27,38"	,332	2,16	3,26	1,29	1,673	3,472	28,79	4,338	92,64	6,13	2,12
18°49'21,33"	,507	1,86	1,83	1,09	1,706	3,438	29,08	5,056	79,61	6,44	2,49
24°55'40,78"	,394	2,05	2,60	1,20	1,710	3,416	29,27	4,546	89,55	6,20	2,23
28°18'17,44"	,332	2,16	3,26	1,29	1,684	3,465	28,85	4,354	93,68	6,10	2,10
18°43' 0,16"	,507	1,86	1,83	1,08	1,715	3,420	29,23	5,045	80,60	6,42	2,47
24°49'50,20"	,394	2,05	2,60	1,19	1,720	3,395	29,45	4,551	90,55	6,17	2,22
28°11'13,09"	,332	2,16	3,26	1,28	1,697	3,443	29,04	4,359	94,87	6,08	2,08
18°37'55,21"	,507	1,86	1,83	1,08	1,721	3,421	29,22	5,037	81,47	6,40	2,44
24°42'35,26"	,394	2,05	2,60	1,18	1,733	3,390	29,49	4,555	91,45	6,15	2,20
28° 6'19,32"	,332	2,16	3,26	1,27	1,706	3,435	29,10	4,372	95,81	6,06	2,07
18°32'50,28"	,507	1,86	1,83	1,08	1,728	3,403	29,38	5,028	82,45	6,37	2,43
24°36'59,07"	,394	2,05	2,60	1,18	1,742	3,370	29,67	4,561	92,43	6,13	2,19
28° 0' 9,27"	,332	2,16	3,26	1,26	1,718	3,435	29,10	4,381	96,55	6,04	2,04

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 17 \; ; \; H = -\,0{,}880678394$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	23,-	20°	0	0	19,-	1,580	1,160	43°57'32,61"	17,386
29	23,5	23°7'4,29"	0,538	0,3	19,52	1,418	1,136	45°38'5,74"	18,217
	23,8	24°45'18,26"	0,894	0,5	19,81	1,318	1,128	46°51'44,21"	18,762
	23,5	20°	0	0	19,-	1,584	1,164	43°57'32,61"	17,377
30	24,-	23°3'25,20"	0,537	0,3	19,53	1,422	1,138	45°38'5,74"	18,207
	24,3	24°39'57,47"	0,892	0,5	19,82	1,323	1,128	46°51'44,21"	18,750
	24,-	20°	0	0	19,-	1,588	1,166	43°57'32,61"	17,368
31	24,5	22°59'54,53"	0,537	0,3	19,53	1,427	1,138	45°38'5,74"	18,194
	24,8	24°34'4,87"	0,891	0,5	19,82	1,328	1,128	46°51'44,21"	18,738
	24,5	20°	0	0	19,-	1,591	1,173	43°57'32,61"	17,361
32	25,-	22°56'31,81"	0,536	0,3	19,53	1,431	1,141	45°38'5,74"	18,184
	25,3	24°29'51,17"	0,889	0,5	19,82	1,333	1,130	46°51'44,21"	18,725
	25,-	20°	0	0	19,-	1,595	1,177	43°57'32,61"	17,351
33	25,5	22°53'16,59"	0,535	0,3	19,53	1,435	1,143	45°38'5,74"	18,173
	25,8	24°25'4,29"	0,887	0,5	19,83	1,337	1,128	46°51'44,21"	18,716
	26,-	20°	0	0	19,-	1,601	1,186	43°57'32,61"	17,338
35	26,5	22°47'7,07"	0,534	0,3	19,53	1,443	1,145	45°38'5,74"	18,153
	26,8	24°16'0,22"	0,884	0,5	19,83	1,345	1,128	46°51'44,21"	18,696
	26,5	20°	0	0	19,-	1,604	1,188	43°57'32,61"	17,331
36	27,-	22°44'12,02"	0,533	0,3	19,53	1,446	1,145	45°38'5,74"	18,146
	27,3	24°11'42,02"	0,883	0,5	19,83	1,350	1,128	46°51'44,21"	18,683
	27,-	20°	0	0	19,-	1,606	1,192	43°57'32,61"	17,326
37	27,5	22°41'23,00"	0,533	0,3	19,53	1,450	1,145	45°38'5,74"	18,136
	27,8	24°7'32,43"	0,881	0,5	19,84	1,353	1,128	46°51'44,21"	18,677
	27,5	20°	0	0	19,-	1,609	1,195	43°57'32,61"	17,319
38	28,-	22°38'39,70"	0,532	0,3	19,54	1,453	1,147	45°38'5,74"	18,128
	28,3	24°3'31,02"	0,880	0,5	19,84	1,357	1,128	46°51'44,21"	18,667
	28,-	20°	0	0	19,-	1,612	1,199	43°57'32,61"	17,312
39	28,5	22°36'1,84"	0,532	0,3	19,54	1,456	1,147	45°38'5,74"	18,120
	28,8	23°59'37,38"	0,879	0,5	19,84	1,360	1,126	46°51'44,21"	18,660
	28,5	20°	0	0	19,-	1,614	1,201	43°57'32,61"	17,308
40	29,-	22°33'29,15"	0,531	0,3	19,54	1,460	1,147	45°38'5,74"	18,110
	29,3	23°55'51,16"	0,878	0,5	19,85	1,364	1,126	46°51'44,21"	18,650
	29,-	20°	0	0	19,-	1,617	1,203	43°57'32,61"	17,301
41	29,5	22°31'1,37"	0,530	0,3	19,54	1,463	1,147	45°38'5,74"	18,103
	29,8	23°52'12,00"	0,876	0,5	19,85	1,367	1,126	46°51'44,21"	18,643
	29,5	20°	0	0	19,-	1,619	1,206	43°57'32,61"	17,297
42	30,-	22°28'38,28"	0,530	0,3	19,54	1,465	1,147	45°38'5,74"	18,099
	30,3	23°48'39,56"	0,875	0,5	19,85	1,370	1,124	46°51'44,21"	18,636
	30,-	20°	0	0	19,-	1,621	1,210	43°57'32,61"	17,292
43	30,5	22°26'19,65"	0,530	0,3	19,54	1,468	1,147	45°38'5,74"	18,090
	30,8	23°45'13,55"	0,874	0,5	19,85	1,373	1,124	46°51'44,21"	18,629
	30,5	20°	0	0	19,-	1,623	1,212	43°57'32,61"	17,287
44	31,-	22°24'5,27"	0,529	0,3	19,54	1,471	1,147	45°38'5,74"	18,083
	31,3	23°41'53,67"	0,873	0,5	19,85	1,376	1,122	46°51'44,21"	18,622
	31,-	20°	0	0	19,-	1,625	1,214	43°57'32,61"	17,283
45	31,5	22°21'54,96"	0,529	0,3	19,54	1,474	1,147	45°38'5,74"	18,075
	31,8	23°38'39,66"	0,872	0,5	19,86	1,379	1,122	46°51'44,21"	18,615

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$K_{g\text{-}F}$	$Z^2_{H\varepsilon}$	$K_{g\text{-}H}$	$K_{m\text{-}H}$	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 17 \;;\; H = -\,0{,}880678394$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$K_{g\text{-}F}$	$Z^2_{H\varepsilon}$	$K_{g\text{-}H}$	$K_{m\text{-}H}$	S_{F1}
18°27'45,33"	,507	1,86	1,83	1,07	1,735	3,403	29,38	5,020	83,20	6,35	2,40
24°31'22,76"	,394	2,05	2,60	1,17	1,752	3,386	29,53	4,566	93,37	6,11	2,15
27°54'53,60"	,332	2,16	3,26	1,25	1,728	3,428	29,17	4,391	97,83	6,02	2,03
18°22'40,39"	,507	1,86	1,83	1,07	1,741	3,385	29,54	5,012	84,06	6,33	2,39
24°26'40,27"	,394	2,05	2,60	1,17	1,760	3,365	29,71	4,573	94,21	6,09	2,15
27°49'59,73"	,332	2,16	3,26	1,25	1,738	3,405	29,36	4,401	98,82	6,00	2,02
18°17'35,46"	,504	1,86	1,83	1,06	1,748	3,385	29,54	5,000	85,10	6,30	2,36
24°21' 4,00"	,394	2,05	2,60	1,16	1,770	3,344	29,90	4,577	95,24	6,07	2,14
27°45' 5,83"	,332	2,16	3,26	1,24	1,747	3,397	29,43	4,410	99,78	5,98	2,01
18°13'46,74"	,507	1,86	1,83	1,06	1,753	3,385	29,53	4,997	85,63	6,29	2,35
24°16'21,51"	,394	2,05	2,60	1,15	1,778	3,360	29,75	4,582	96,02	6,05	2,11
27°39'50,09"	,332	2,16	3,26	1,23	1,758	3,397	29,43	4,419	100,5	5,96	1,99
18° 8'41,80"	,507	1,86	1,83	1,06	1,760	3,367	29,69	4,989	86,36	6,27	2,34
24°11'39,02"	,394	2,05	2,60	1,15	1,786	3,339	29,94	4,587	96,76	6,04	2,11
27°36'12,38"	,332	2,16	3,26	1,23	1,765	3,389	29,50	4,429	101,5	5,94	1,98
18° 1' 4,40"	,507	1,86	1,83	1,05	1,770	3,367	29,69	4,976	87,65	6,24	2,31
24° 2'36,47"	,394	2,05	2,60	1,14	1,803	3,334	29,99	4,596	98,30	6,01	2,08
27°27'51,44"	,332	2,16	3,26	1,21	1,781	3,381	29,57	4,446	103,2	5,91	1,95
17°57'15,69"	,507	1,86	1,83	1,05	1,775	3,349	29,85	4,970	88,40	6,22	2,30
23°59'10,21"	,394	2,05	2,60	1,13	1,809	3,313	30,18	4,601	99,09	5,99	2,07
27°22'35,66"	,332	2,16	3,26	1,21	1,792	3,358	29,77	4,453	103,9	5,90	1,95
17°54'43,22"	,507	1,86	1,83	1,04	1,779	3,349	29,85	4,966	88,92	6,21	2,29
23°54'27,70"	,394	2,05	2,60	1,13	1,817	3,313	30,18	4,605	99,87	5,98	2,06
27°19'52,30"	,332	2,16	3,26	1,20	1,797	3,373	29,64	4,462	104,6	5,88	1,93
17°50'54,50"	,507	1,86	1,83	1,04	1,784	3,331	30,02	4,960	89,60	6,20	2,28
23°51' 1,42"	,394	2,05	2,60	1,12	1,824	3,307	30,23	4,610	100,4	5,97	2,05
27°15'52,68"	,332	2,16	3,26	1,20	1,806	3,350	29,85	4,469	105,3	5,87	1,93
17°47' 5,81"	,507	1,86	1,83	1,04	1,789	3,350	29,85	4,953	90,12	6,18	2,26
23°47'35,15"	,394	2,05	2,60	1,12	1,830	3,307	30,23	4,614	101,1	5,95	2,04
27°12'47,52"	,332	2,16	3,26	1,19	1,812	3,350	29,85	4,478	106,2	5,86	1,91
17°44'33,34"	,507	1,86	1,83	1,04	1,792	3,350	29,85	4,950	90,69	6,17	2,24
23°42'52,64"	,394	2,05	2,60	1,12	1,838	3,286	30,42	4,616	101,9	5,94	2,03
27° 8'47,88"	,332	2,16	3,26	1,19	1,820	3,341	29,92	4,484	106,8	5,84	1,91
17°40'44,63"	,507	1,86	1,83	1,03	1,799	3,331	30,02	4,943	91,32	6,16	2,24
23°39'48,79"	,394	2,05	2,60	1,11	1,845	3,286	30,42	4,620	102,5	5,92	2,02
27° 5'42,69"	,332	2,16	3,26	1,19	1,826	3,341	29,92	4,492	107,4	5,83	1,90
17°38'12,16"	,507	1,86	1,83	1,03	1,801	3,331	30,02	4,938	91,89	6,14	2,22
23°37'38,75"	,394	2,05	2,60	1,11	1,848	3,280	30,48	4,626	103,1	5,91	2,01
27° 2'59,11"	,332	2,16	3,26	1,18	1,832	3,318	30,13	4,500	108,2	5,82	1,90
17°35'39,69"	,507	1,86	1,83	1,03	1,804	3,331	30,02	4,936	92,21	6,14	2,22
23°33'50,04"	,394	2,05	2,60	1,11	1,856	3,280	30,48	4,629	103,7	5,90	2,00
26°59'54,05"	,332	2,16	3,26	1,18	1,838	3,332	30,00	4,507	108,8	5,81	1,88
17°33' 7,22"	,507	1,86	1,83	1,03	1,808	3,312	30,18	4,931	92,71	6,13	2,22
23°30'23,75"	,394	2,05	2,60	1,10	1,862	3,259	30,68	4,632	104,3	5,89	2,00
26°56'48,83"	,332	2,16	3,26	1,17	1,844	3,332	30,00	4,513	109,5	5,79	1,87
17°30'34,74"	,507	1,86	1,83	1,03	1,811	3,312	30,18	4,926	93,24	6,11	2,20
23°26'57,46"	,394	2,05	2,60	1,10	1,868	3,259	30,68	4,635	104,9	5,88	1,99
26°54' 5,36"	,332	2,16	3,26	1,17	1,850	3,309	30,21	4,520	110,0	5,79	1,87

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	$d_{\theta 1}$
1	2	3	4	5	6	7	8	9	10

$$z_1 = 17 \; ; \; H = -\,0{,}880678394$$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	$d_{\theta 1}$
	31,5	20°	0	0	19,–	1,627	1,217	43°57'32,61"	17,278
46	32,–	22°19'48,54"	0,528	0,3	19,54	1,476	1,147	45°38' 5,74"	18,071
	32,3	23°35'31,26"	0,871	0,5	19,86	1,382	1,119	46°51'44,21"	18,608
	32,–	20°	0	0	19,–	1,629	1,219	43°57'32,61"	17,274
47	32,5	22°17'45,82"	0,528	0,3	19,54	1,479	1,147	45°38' 5,74"	18,063
	32,8	23°32'28,23"	0,870	0,5	19,86	1,384	1,119	46°51'44,21"	18,603
	32,5	20°	0	0	19,–	1,631	1,221	43°57'32,61"	17,269
48	33,–	22°15'46,65"	0,528	0,3	19,55	1,481	1,147	45°38' 5,74"	18,059
	33,3	23°29'30,33"	0,869	0,5	19,86	1,387	1,117	46°51'44,21"	18,596
	33,–	20°	0	0	19,–	1,633	1,223	43°57'32,61"	17,265
49	33,5	22°13'50,87"	0,527	0,3	19,55	1,483	1,147	45°38' 5,74"	18,054
	33,8	23°26'37,36"	0,868	0,5	19,87	1,389	1,115	46°51'44,21"	18,592
	33,5	20°	0	0	19,–	1,635	1,225	43°57'32,61"	17,261
50	34,–	22°11'58,35"	0,527	0,3	19,55	1,485	1,147	45°38' 5,74"	18,048
	34,3	23°23'49,11"	0,867	0,5	19,87	1,392	1,115	46°51'44,21"	18,584

$$z_1 = 18 \; ; \; H = -\,0{,}889929459$$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	$d_{\theta 1}$
	21,–	20°	0	0	20,–	1,566	1,105	44°41'28,50"	18,435
24	21,5	23°23'16,01"	0,542	0,3	20,52	1,400	1,110	46°19'20,20"	19,279
	21,8	25° 8'55,04"	0,902	0,5	20,80	1,300	1,110	47°30'49,61"	19,817
	21,5	20°	0	0	20,–	1,571	1,111	44°41'28,50"	18,423
25	22,–	23°18'57,56"	0,541	0,3	20,52	1,406	1,105	46°19'20,20"	19,264
	22,3	25° 2'39,03"	0,900	0,5	20,80	1,306	1,103	47°30'49,61"	19,803
	22,–	20°	0	0	20,–	1,575	1,117	44°41'28,50"	18,414
26	22,5	23°14'49,89"	0,540	0,3	20,52	1,412	1,109	46°19'20,20"	19,248
	22,8	24°56'38,14"	0,898	0,5	20,80	1,312	1,105	47°30'49,61"	19,788
	23,–	20°	0	0	20,–	1,584	1,128	44°41'28,50"	18,393
28	23,5	23°17' 4,29"	0,538	0,3	20,52	1,422	1,113	46°19'20,20"	19,223
	23,8	24°45'18,26"	0,894	0,5	20,81	1,324	1,109	47°30'49,61"	19,758
	23,5	20°	0	0	20,–	1,588	1,132	44°41'28,50"	18,383
29	24,–	23° 3'25,20"	0,537	0,3	20,53	1,427	1,115	46°19'20,20"	19,210
	24,3	24°39'54,47"	0,892	0,5	20,82	1,329	1,111	47°30'49,61"	19,746
	24,–	20°	0	0	20,–	1,592	1,138	44°41'28,50"	18,374
30	24,5	22°59'54,53"	0,537	0,3	20,53	1,432	1,117	46°19'20,20"	19,197
	24,8	24°34'48,70"	0,891	0,5	20,82	1,334	1,111	47°30'49,61"	19,734
	24,5	20°	0	0	20,–	1,595	1,141	44°41'28,50"	18,367
31	25,–	22°56'31,81"	0,536	0,3	20,53	1,436	1,119	46°19'20,20"	19,187
	25,3	24°29'51,17"	0,889	0,5	20,82	1,339	1,113	47°30'49,61"	19,722
	25,–	20°	0	0	20,–	1,599	1,145	44°41'28,50"	18,358
32	25,5	22°53'16,59"	0,535	0,3	20,53	1,441	1,121	46°19'20,20"	19,174
	25,8	24°25' 4,29"	0,887	0,5	20,83	1,345	1,113	47°30'49,61"	19,707
	25,5	20°	0	0	20,–	1,602	1,149	44°41'28,50"	18,351
33	26,–	22°50' 8,47"	0,535	0,3	20,53	1,445	1,124	46°19'20,20"	19,164
	26,3	24°20'27,48"	0,886	0,5	20,83	1,348	1,113	47°30'49,61"	19,700
	26,–	20°	0	0	20,–	1,605	1,154	44°41'28,50"	18,344
34	26,5	22°47' 7,07"	0,534	0,3	20,53	1,449	1,124	46°19'20,20"	19,154
	26,8	24°16' 0,22"	0,884	0,5	20,83	1,352	1,113	47°30'49,61"	19,690

$\alpha_{F\theta}$	ρ_F	s_F	q_s	$h_{F\theta}$	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 17 \ ; \ H = -\,0{,}880678394$$

$\alpha_{F\theta}$	ρ_F	s_F	q_s	$h_{F\theta}$	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-H}	K_{m-H}	S_{F1}
17°28' 2,28"	,507	1,86	1,83	1,02	1,815	3,312	30,18	4,921	94,06	6,10	2,19
23°24'47,46"	,394	2,05	2,60	1,10	1,872	3,274	30,53	4,639	105,4	5,87	1,97
26°51' 0,12"	,332	2,16	3,26	1,17	1,857	3,323	30,09	4,526	110,8	5,77	1,85
17°25'29,81"	,507	1,86	1,83	1,02	1,818	3,294	30,35	4,918	94,15	6,09	2,20
23°21'21,11"	,394	2,06	2,60	1,09	1,879	3,253	30,73	4,642	106,0	5,86	1,97
26°49'11,13"	,332	2,16	3,26	1,16	1,861	3,299	30,30	4,533	111,2	5,77	1,86
17°22'57,33"	,507	1,86	1,83	1,02	1,822	3,312	30,18	4,914	94,58	6,09	2,17
23°19'11,05"	,394	2,05	2,60	1,09	1,882	3,253	30,73	4,645	106,5	5,85	1,97
26°46' 5,86"	,332	2,16	3,26	1,16	1,867	3,299	30,30	4,539	111,9	5,75	1,84
17°20'24,86"	,507	1,86	1,83	1,02	1,825	3,312	30,18	4,910	94,99	6,08	2,16
23°17' 1,00"	,394	2,05	2,60	1,09	1,887	3,253	30,73	4,649	107,0	5,84	1,96
26°44'16,84"	,332	2,16	3,26	1,16	1,871	3,299	30,30	4,546	112,5	5,74	1,83
17°17'52,40"	,507	1,86	1,83	1,02	1,828	3,294	30,35	4,906	95,39	6,07	2,17
23°14'28,52"	,394	2,05	2,60	1,08	1,892	3,231	30,94	4,653	107,5	5,83	1,96
26°40'49,86"	,332	2,16	3,26	1,15	1,878	3,290	30,39	4,551	113,0	5,73	1,83

$$z_1 = 18 \ ; \ H = -\,0{,}889929459$$

$\alpha_{F\theta}$	ρ_F	s_F	q_s	$h_{F\theta}$	L	Y_{FS}	K_{g-F}	$Z_{H\varepsilon}^2$	K_{g-H}	K_{m-H}	S_{F1}
18°58'39,56"	,504	1,88	1,87	1,09	1,726	3,385	31,27	5,049	88,27	6,23	2,41
24°47'11,74"	,391	2,07	2,64	1,20	1,719	3,390	31,22	4,539	98,56	6,00	2,16
27°57'49,10"	,330	2,18	3,29	1,28	1,696	3,458	30,61	4,335	103,2	5,91	2,02
18°52'39,56"	,504	1,88	1,87	1,09	1,734	3,367	31,43	5,039	89,48	6,20	2,39
24°40'42,82"	,391	2,07	2,64	1,19	1,731	3,386	31,26	4,544	99,79	5,98	2,13
27°52'21,13"	,330	2,18	3,29	1,28	1,707	3,450	30,68	4,353	104,4	5,89	2,00
18°47'51,57"	,504	1,88	1,87	1,08	1,741	3,367	31,44	5,030	90,59	6,17	2,36
24°33'52,37"	,391	2,07	2,64	1,19	1,743	3,365	31,46	4,548	101,0	5,95	2,12
27°46'35,05"	,330	2,18	3,29	1,27	1,718	3,428	30,88	4,363	105,6	5,87	1,99
18°37' 3,57"	,504	1,88	1,87	1,07	1,756	3,349	31,61	5,012	92,77	6,12	2,32
24°23'18,50"	,391	2,07	2,64	1,17	1,763	3,360	31,50	4,559	103,3	5,91	2,08
27°34'37,62"	,330	2,18	3,29	1,25	1,742	3,397	31,16	4,381	108,0	5,82	1,96
18°32'15,56"	,504	1,88	1,87	1,07	1,764	3,331	31,78	5,003	93,85	6,10	2,31
24°17'40,03"	,391	2,07	2,64	1,17	1,773	3,355	31,55	4,564	104,4	5,89	2,07
27°30' 1,34"	,330	2,18	3,29	1,24	1,752	3,412	31,02	4,391	109,0	5,80	1,94
18°27'27,56"	,504	1,88	1,87	1,06	1,771	3,349	31,61	4,995	94,69	6,08	2,27
24°12'23,08"	,391	2,07	2,64	1,16	1,783	3,334	31,75	4,568	105,5	5,87	2,05
27°25'56,15"	,330	2,18	3,29	1,24	1,761	3,404	31,10	4,400	110,0	5,78	1,92
18°23'51,56"	,504	1,88	1,87	1,06	1,776	3,330	31,78	4,989	95,78	6,06	2,26
24° 7'56,62"	,391	2,07	2,64	1,15	1,791	3,328	31,80	4,573	106,5	5,85	2,03
27°20'27,77"	,330	2,18	3,29	1,23	1,764	3,381	31,31	4,409	111,1	5,77	1,92
18°19' 3,56"	,504	1,88	1,87	1,06	1,783	3,330	31,78	4,980	96,71	6,04	2,24
24° 2'18,12"	,391	2,07	2,64	1,15	1,802	3,328	31,80	4,576	107,4	5,83	2,02
27°14'39,38"	,330	2,18	3,29	1,22	1,783	3,373	31,39	4,415	112,2	5,75	1,90
18°15'27,56"	,504	1,88	1,87	1,05	1,788	3,312	31,96	4,974	97,53	6,02	2,23
23°58'13,17"	,391	2,07	2,64	1,14	1,813	3,323	31,86	4,581	108,3	5,82	2,00
27°11'45,19"	,330	2,18	3,29	1,22	1,789	3,373	31,39	4,426	113,2	5,73	1,89
18°11'51,56"	,504	1,88	1,87	1,05	1,793	3,312	31,96	4,968	98,30	6,01	2,21
23°53'46,68"	,391	2,07	2,64	1,14	1,818	3,302	32,06	4,585	109,3	5,80	2,00
27° 7'59,87"	,330	2,18	3,29	1,21	1,797	3,364	31,47	4,435	114,1	5,72	1,88

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
				$z_1 = 18$; H = - 0,889929459					
	26,5	20°	0	0	20,-	1,606	1,158	44°41'28,50"	18,337
35	27-	22°44'12,02"	0,533	0,3	20,53	1,453	1,126	46°19'20,20"	19,144
	27,3	24°11'42,02"	0,882	0,5	20,83	1,356	1,113	47°30'49,61"	19,681
	27,5	20°	0	0	20,-	1,614	1,164	44°41'28,50"	18,324
37	28-	22°38'39,70"	0,532	0,3	20,54	1,460	1,128	46°19'20,20"	19,126
	28,3	24° 3'31,02"	0,880	0,5	20,84	1,364	1,113	47°30'49,61"	19,662
	28-	20°	0	0	20,-	1,617	1,166	44°41'28,50"	18,317
38	28,5	22°36' 1,84"	0,532	0,3	20,54	1,463	1,128	46°19'20,20"	19,119
	28,8	23°59'37,38"	0,879	0,5	20,84	1,368	1,113	47°30'49,61"	19,652
	28,5	20°	0	0	20,-	1,619	1,169	44°41'28,50"	18,312
39	29,-	22°33'29,15"	0,531	0,3	20,54	1,466	1,128	46°19'20,20"	19,111
	29,3	23°55'51,16"	0,878	0,5	20,85	1,371	1,111	47°30'49,61"	19,645
	29,-	20°	0	0	20,-	1,622	1,173	44°41'28,50"	18,306
40	29,5	22°31' 1,37"	0,531	0,3	20,54	1,469	1,128	46°19'20,20"	19,105
	29,8	23°52'12,00"	0,876	0,5	20,85	1,375	1,111	47°30'49,61"	19,635
	29,5	20°	0	0	20,-	1,624	1,175	44°41'28,50"	18,301
41	30,-	22°28'38,28"	0,530	0,3	20,54	1,472	1,128	46°19'20,20"	19,097
	30,3	23°48'39,56"	0,875	0,5	20,85	1,378	1,111	47°30'49,61"	19,629
	30,-	20°	0	0	20,-	1,626	1,177	44°41'28,50"	18,297
42	30,5	22°26'19,65"	0,530	0,3	20,54	1,475	1,130	46°19'20,20"	19,089
	30,8	23°45'13,55"	0,874	0,5	20,85	1,381	1,109	47°30'49,61"	19,621
	30,5	20°	0	0	20,-	1,629	1,179	44°41'28,50"	18,290
43	31-	22°24' 5,27"	0,529	0,3	20,54	1,478	1,130	46°19'20,20"	19,082
	31,3	23°41'53,67"	0,873	0,5	20,85	1,384	1,109	47°30'49,61"	19,614
	31,	20°	0	0	20,-	1,631	1,182	44°41'28,50"	18,285
44	31,5	22°21'54,96"	0,529	0,3	20,54	1,481	1,130	46°19'20,20"	19,074
	31,8	23°38'39,66"	0,872	0,5	20,86	1,387	1,109	47°30'49,61"	19,608
	32,-	20°	0	0	20,-	1,635	1,186	44°41'28,50"	18,276
46	32,5	22°17'45,52"	0,528	0,3	20,54	1,486	1,130	46°19'20,20"	19,062
	32,8	23°32'28,23"	0,870	0,5	20,86	1,393	1,107	47°30'49,61"	19,593
	32,5	20°	0	0	20,-	1,637	1,188	44°41'28,50"	18,272
47	33,-	22°15'46,65"	0,528	0,3	20,55	1,488	1,130	46°19'20,20"	19,058
	33,3	23°29'10,33"	0,869	0,5	20,86	1,396	1,105	47°30'49,61"	19,586
	33,-	20°	0	0	20,-	1,639	1,190	44°41'28,50"	18,268
48	33,5	22°13'50,57"	0,527	0,3	20,55	1,481	1,130	46°19'20,20"	19,050
	33,8	23°26'37,36"	0,867	0,5	20,87	1,398	1,105	47°30'49,61"	19,582
	33,5	20°	0	0	20,-	1,640	1,192	44°41'28,50"	18,265
49	34,-	22°11'58,35"	0,527	0,3	20,55	1,493	1,130	46°19'20,20"	19,045
	34,3	23°23'49,11"	0,867	0,5	20,87	1,400	1,103	47°30'49,61"	19,577
	34,-	20°	0	0	20,-	1,642	1,195	44°41'28,50"	18,261
50	34,5	22°10' 8,94"	0,526	0,3	20,55	1,495	1,130	46°19'20,20"	19,040
	34,8	23°21' 5,39"	0,866	0,5	20,87	1,403	1,103	47°30'49,61"	19,570
	34,5	20°	0	0	20,-	1,644	1,197	44°41'28,50"	18,256
51	35,-	22° 8'22,53"	0,526	0,3	20,55	1,496	1,130	46°19'20,20"	19,036
	35,3	23°18'26,02"	0,865	0,5	20,87	1,405	1,100	47°30'49,61"	19,565
	35,5	20°	0	0	20,-	1,647	1,199	44°41'28,50"	18,250
53	36,-	22° 4'58,19"	0,525	0,3	20,55	1,501	1,130	46°19'20,20"	19,026
	36,3	23°13'19,65"	0,863	0,5	20,87	1,410	1,100	47°30'49,61"	19,553

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 18 \; ; \; H = -\,0,889929459$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18° 8'15,56"	,504	1,88	1,87	1,05	1,799	3,294	32,14	4,963	99,01	5,99	2,21
23°49'20,18"	,391	2,07	2,64	1,13	1,827	3,302	32,06	4,589	110,0	5,78	1,98
27° 4'14,54"	,330	2,18	3,29	1,21	1,805	3,364	31,47	4,443	115,0	5,70	1,86
18° 1' 3,56"	,504	1,88	1,87	1,04	1,809	3,293	32,14	4,950	100,6	5,96	2,18
23°41'39,20"	,391	2,07	2,64	1,12	1,842	3,296	32,12	4,597	111,8	5,76	1,96
26°56'43,83"	,330	2,18	3,29	1,20	1,821	3,352	31,58	4,458	116,8	5,67	1,84
17°57'27,57"	,504	1,88	1,87	1,04	1,814	3,293	32,14	4,943	101,4	5,95	2,16
23°38'24,71"	,391	2,07	2,64	1,12	1,848	3,274	32,33	4,601	112,7	5,74	1,95
26°52'37,58"	,330	2,18	3,29	1,19	1,830	3,332	31,77	4,475	117,4	5,66	1,83
17°55' 3,56"	,504	1,88	1,87	1,04	1,818	3,275	32,32	4,939	102,1	5,93	2,16
23°35'10,21"	,391	2,07	2,64	1,12	1,854	3,274	32,33	4,605	113,5	5,73	1,94
26°50' 4,18"	,330	2,18	3,29	1,19	1,836	3,332	31,77	4,473	118,6	5,64	1,82
17°51'27,57"	,504	1,88	1,87	1,03	1,823	3,275	32,32	4,933	102,7	5,92	2,14
23°32'17,21"	,391	2,07	2,64	1,12	1,860	3,253	32,54	4,609	114,3	5,71	1,94
26°45'57,90"	,330	2,18	3,29	1,18	1,844	3,323	31,86	4,479	119,4	5,63	1,82
17°49' 3,56"	,504	1,88	1,87	1,03	1,827	3,275	32,32	4,929	103,4	5,91	2,13
23°29' 2,70"	,391	2,07	2,64	1,11	1,866	3,268	32,39	4,613	115,1	5,70	1,92
26°43'24,48"	,330	2,18	3,29	1,18	1,850	3,323	31,86	4,486	120,1	5,62	1,81
17°46'39,57"	,504	1,88	1,87	1,03	1,830	3,256	32,51	4,924	104,0	5,89	2,13
23°25'26,70"	,391	2,07	2,64	1,10	1,873	3,247	32,61	4,616	115,6	5,69	1,92
26°40'30,19"	,330	2,18	3,29	1,17	1,856	3,314	31,95	4,493	121,1	5,60	1,80
17°43' 3,56"	,504	1,88	1,87	1,03	1,835	3,256	32,51	4,919	104,7	5,88	2,12
23°22'12,19"	,391	2,07	2,64	1,10	1,879	3,247	32,61	4,619	116,4	5,68	1,91
26°37'35,89"	,330	2,18	3,29	1,17	1,863	3,314	31,95	4,500	121,7	5,59	1,79
17°40'39,57"	,504	1,88	1,87	1,02	1,839	3,274	32,34	4,914	105,3	5,87	2,09
23°18'57,68"	,391	2,07	2,64	1,10	1,887	3,240	32,67	4,622	117,1	5,67	1,90
26°35' 2,43"	,330	2,18	3,29	1,17	1,869	3,290	32,17	4,506	122,4	5,58	1,79
17°35'51,56"	,504	1,88	1,87	1,02	1,846	3,255	32,52	4,906	106,4	5,85	2,08
23°13'41,04"	,391	2,07	2,64	1,09	1,897	3,240	32,67	4,629	118,4	5,65	1,88
26°29'13,79"	,330	2,18	3,29	1,16	1,881	3,304	32,04	4,518	123,8	5,56	1,76
17°33'27,56"	,504	1,88	1,87	1,02	1,849	3,255	32,52	4,902	107,0	5,84	2,07
23°11'38,15"	,391	2,07	2,64	1,09	1,900	3,218	32,89	4,637	118,9	5,64	1,88
26°26'19,45"	,330	2,18	3,29	1,15	1,888	3,280	32,27	4,523	124,7	5,55	1,76
17°31' 3,57"	,504	1,88	1,87	1,02	1,853	3,255	32,52	4,897	107,5	5,83	2,06
23° 8'23,63"	,391	2,07	2,64	1,08	1,907	3,218	32,89	4,635	119,6	5,63	1,87
26°24'37,11"	,330	2,18	3,29	1,15	1,891	3,280	32,27	4,530	125,2	5,54	1,75
17°29'51,96"	,504	1,88	1,87	1,02	1,855	3,236	32,71	4,895	107,9	5,82	2,06
23° 5'59,63"	,391	2,07	2,64	1,08	1,912	3,233	32,74	4,638	120,2	5,62	1,85
26°22'33,93"	,330	2,18	3,29	1,15	1,896	3,294	32,13	4,537	125,7	5,53	1,74
17°27'27,56"	,504	1,88	1,87	1,01	1,858	3,236	32,71	4,891	108,4	5,81	2,05
23° 3'57,10"	,391	2,07	2,64	1,08	1,916	3,212	32,96	4,641	120,8	5,61	1,86
26°19'39,58"	,330	2,18	3,29	1,14	1,902	3,298	32,09	4,541	126,5	5,52	1,73
17°25' 3,57"	,504	1,88	1,87	1,01	1,862	3,236	32,71	4,888	108,8	5,81	2,05
23° 1'54,58"	,391	2,07	2,64	1,08	1,920	3,212	32,96	4,644	121,3	5,60	1,85
26°17'57,21"	,330	2,18	3,29	1,14	1,907	3,271	32,36	4,548	127,2	5,51	1,73
17°21'27,57"	,504	1,88	1,87	1,01	1,867	3,218	32,90	4,881	109,9	5,79	2,04
22°57'28,07"	,391	2,07	2,64	1,07	1,938	3,205	33,03	4,649	122,4	5,58	1,84
26°12'59,96"	,330	2,18	3,29	1,13	1,918	3,261	32,46	4,555	128,3	5,50	1,72

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	Θ	$d_{\theta 1}$
1	2	3	4	5	6	7	8	9	10

$$z_1 = 19 \; ; \; H = -\,0{,}898206727$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	Θ	$d_{\theta 1}$
	22,-	20°	0	0	21,-	1,578	1,090	45°21'24,28"	19,421
25	22,5	23°14'49,89"	0,540	0,3	21,52	1,415	1,089	46°56'41,50"	20,254
	22,8	24°56'38,14"	0,898	0,5	21,80	1,316	1,089	48°6'8,21"	20,789
	22,5	20°	0	0	21,-	1,582	1,096	45°21'24,28"	19,412
26	23,-	23°10'52,34"	0,539	0,3	21,52	1,421	1,089	46°56'41,50"	20,239
	23,3	24°50'50,51"	0,896	0,5	21,81	1,322	1,089	48°6'8,21"	20,775
	23,-	20°	0	0	21,-	1,587	1,100	45°21'24,28"	19,400
27	23,5	23°7'4,29"	0,538	0,3	21,52	1,426	1,094	46°56'41,50"	20,227
	23,8	24°45'18,20"	0,894	0,5	21,81	1,328	1,092	48°6'8,21"	20,759
	23,5	20°	0	0	21,-	1,591	1,107	45°21'24,28"	19,391
28	24,-	23°3'25,20"	0,537	0,3	21,53	1,431	1,096	46°56'41,50"	20,214
	24,3	24°39'57,47"	0,892	0,5	21,82	1,334	1,094	48°6'8,21"	20,745
	24,-	20°	0	0	21,-	1,595	1,111	45°21'24,28"	19,382
29	24,5	22°59'54,53"	0,537	0,3	21,53	1,436	1,098	46°56'41,50"	20,202
	24,8	24°34'48,70"	0,891	0,5	21,82	1,339	1,096	48°6'8,21"	20,733
	24,5	20°	0	0	21,-	1,599	1,115	45°21'24,28"	19,373
30	25,-	22°56'30,81"	0,536	0,3	21,53	1,441	1,103	46°56'41,50"	20,189
	25,3	24°29'51,17"	0,889	0,5	21,82	1,344	1,096	48°6'8,21"	20,721
	25,-	20°	0	0	21,-	1,602	1,119	45°21'24,28"	19,366
31	25,5	22°53'16,59"	0,535	0,3	21,53	1,446	1,105	46°56'41,50"	20,176
	25,8	24°25'4,29"	0,887	0,5	21,83	1,349	1,098	48°6'8,21"	20,709
	25,5	20°	0	0	21,-	1,606	1,124	45°21'24,28"	19,357
32	26,-	22°50'8,47"	0,535	0,3	21,53	1,450	1,105	46°56'41,50"	20,167
	26,3	24°20'27,48"	0,886	0,5	21,83	1,354	1,098	48°6'8,21"	20,696
	26,-	20°	0	0	21,-	1,609	1,128	45°21'24,28"	19,350
33	26,5	22°47'7,07"	0,534	0,3	21,53	1,454	1,107	46°56'41,50"	20,157
	26,8	24°16'0,22"	0,884	0,5	21,83	1,358	1,100	48°6'8,21"	20,687
	26,5	20°	0	0	21,-	1,612	1,130	45°21'24,28"	19,343
34	27,-	22°44'12,02"	0,533	0,3	21,53	1,458	1,109	46°56'41,50"	20,146
	27,3	24°11'42,02"	0,883	0,5	21,84	1,363	1,100	48°6'8,21"	20,676
	27,-	20°	0	0	21,-	1,615	1,134	45°21'24,28"	19,336
35	27,5	22°41'23,00"	0,533	0,3	21,53	1,462	1,109	46°56'41,50"	20,136
	27,8	24°7'32,43"	0,881	0,5	21,84	1,367	1,100	48°6'8,21"	20,665
	27,5	20°	0	0	21,-	1,618	1,136	45°21'24,28"	19,330
36	28,-	22°38'39,70"	0,532	0,3	21,54	1,465	1,111	46°56'41,50"	20,129
	28,3	24°3'31,02"	0,880	0,5	21,84	1,371	1,100	48°6'8,21"	20,656
	28,-	20°	0	0	21,-	1,621	1,141	45°21'24,28"	19,323
37	28,5	22°36'1,84"	0,532	0,3	21,54	1,469	1,111	46°56'41,50"	20,119
	28,8	23°59'37,38"	0,879	0,5	21,84	1,375	1,100	48°6'8,21"	20,646
	29,-	20°	0	0	21,-	1,626	1,070	45°21'24,28"	19,312
39	29,5	22°31'1,37"	0,531	0,3	21,54	1,475	1,055	46°56'41,50"	20,105
	29,8	23°52'12,00"	0,876	0,5	21,65	1,382	1,049	48°6'8,21"	20,630
	29,5	20°	0	0	21,-	1,629	1,072	45°21'24,28"	19,305
40	30,-	22°28'38,28"	0,530	0,3	21,54	1,479	1,055	46°56'41,50"	20,095
	30,3	23°48'39,56"	0,875	0,5	21,65	1,385	1,048	48°6'8,21"	20,623
	30,-	20°	0	0	21,-	1,631	1,073	45°21'24,28"	19,300
41	30,5	22°26'19,65"	0,530	0,3	21,54	1,482	1,055	46°56'41,50"	20,088
	30,8	23°45'13,55"	0,874	0,5	21,65	1,388	1,048	48°6'8,21"	20,616

α_{Fe}	ρ_F	S_F	q	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F-1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 19 \; ; \; H = -0,898206727$$

α_{Fe}	ρ_F	S_F	q	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F-1}
18°56'11,52"	,500	1,91	1,91	1,08	1,760	3,330	33,55	5,024	99,60	5,98	2,29
24°26'31,36"	,390	2,08	2,67	1,19	1,752	3,355	33,30	4,543	110,4	5,78	2,06
27°29'18,48"	,329	2,19	3,32	1,26	1,734	3,412	32,75	4,357	115,1	5,70	1,94
18°51'38,68"	,500	1,91	1,91	1,08	1,766	3,330	33,55	5,016	100,9	5,96	2,27
24°20'23,48"	,390	2,08	2,67	1,18	1,764	3,334	33,52	4,547	111,9	5,75	2,04
27°23'49,71"	,329	2,19	3,32	1,26	1,738	3,412	32,75	4,366	116,5	5,68	1,91
18°45'57,63"	,500	1,91	1,91	1,07	1,775	3,312	33,74	5,005	102,3	5,93	2,25
24°15'23,80"	,390	2,08	2,67	1,17	1,773	3,350	33,36	4,552	113,1	5,73	2,01
27°18' 0,80"	,329	2,19	3,32	1,25	1,751	3,404	32,83	4,375	117,9	5,65	1,90
18°40'21,09"	,500	1,91	1,91	1,07	1,782	3,293	33,93	4,997	103,4	5,91	2,23
24°10' 3,43"	,390	2,08	2,67	1,17	1,784	3,328	33,57	4,557	114,5	5,71	2,00
27°12'31,97"	,329	2,19	3,32	1,24	1,762	3,381	33,05	4,383	119,2	5,63	1,89
18°36'51,94"	,500	1,91	1,91	1,07	1,784	3,293	33,93	4,989	104,6	5,88	2,21
24° 5' 3,95"	,390	2,08	2,67	1,16	1,793	3,323	33,63	4,561	115,8	5,69	1,98
27° 8'11,32"	,329	2,19	3,32	1,23	1,772	3,396	32,90	4,392	120,5	5,61	1,86
18°32'19,10"	,500	1,91	1,91	1,06	1,796	3,292	33,94	4,980	105,8	5,86	2,18
23°59'43,38"	,390	2,08	2,67	1,15	1,804	3,302	33,84	4,564	116,8	5,67	1,97
27° 3'30,55"	,329	2,19	3,32	1,23	1,781	3,373	33,13	4,401	121,8	5,59	1,85
18°28'54,47"	,500	1,91	1,91	1,06	1,801	3,274	34,13	4,974	106,9	5,84	2,17
23°54'22,99"	,390	2,08	2,67	1,15	1,814	3,280	34,06	4,567	118,0	5,65	1,97
26°58'49,78"	,329	2,19	3,32	1,22	1,791	3,364	33,21	4,409	122,9	5,58	1,84
18°24'21,63"	,500	1,91	1,91	1,05	1,808	3,274	34,13	4,966	107,9	5,82	2,15
23°50'31,50"	,390	2,08	2,67	1,14	1,822	3,296	33,90	4,572	119,3	5,63	1,94
26°54' 8,98"	,329	2,19	3,32	1,21	1,802	3,355	33,30	4,416	124,2	5,56	1,83
18°20'56,99"	,500	1,91	1,91	1,05	1,814	3,255	34,33	4,960	108,9	5,81	2,15
23°46'19,33"	,390	2,08	2,67	1,14	1,829	3,274	34,13	4,576	120,3	5,62	1,93
26°50'36,36"	,329	2,19	3,32	1,21	1,810	3,355	33,30	4,425	125,1	5,54	1,81
18°17'32,37"	,500	1,91	1,91	1,05	1,819	3,255	34,33	4,953	109,8	5,79	2,12
23°42' 7,35"	,390	2,08	2,67	1,13	1,839	3,290	33,97	4,580	121,3	5,60	1,91
26°46'15,61"	,329	2,19	3,32	1,20	1,819	3,332	33,53	4,431	126,3	5,53	1,81
18°14' 7,73"	,500	1,91	1,91	1,04	1,825	3,254	34,34	4,947	110,9	5,77	2,11
23°37'54,97"	,390	2,08	2,67	1,13	1,848	3,268	34,19	4,583	122,4	5,58	1,90
26°42'22,90"	,329	2,19	3,32	1,20	1,828	3,346	33,39	4,439	127,4	5,51	1,79
18°10'43,10"	,500	1,91	1,91	1,04	1,830	3,254	34,34	4,941	111,9	5,75	2,09
23°34'51,01"	,390	2,08	2,67	1,12	1,854	3,268	34,19	4,588	123,3	5,57	1,89
26°38'50,24"	,329	2,19	3,32	1,19	1,836	3,323	33,63	4,446	128,4	5,50	1,78
18° 7'18,47"	,500	1,91	1,91	1,04	1,835	3,254	34,34	4,926	112,9	5,74	2,07
23°30'38,82"	,390	2,08	2,67	1,12	1,862	3,262	34,26	4,590	124,4	5,55	1,88
26°34'57,52"	,329	2,19	3,32	1,19	1,845	3,337	33,48	4,453	129,4	5,48	1,76
18° 1'37,42"	,500	1,91	1,91	1,03	1,844	3,235	34,54	4,916	114,7	5,71	2,05
23°24'51,53"	,390	2,08	2,67	1,11	1,874	3,240	34,49	4,598	126,1	5,53	1,86
26°28'40,30"	,329	2,19	3,32	1,18	1,859	3,314	33,72	4,467	131,3	5,45	1,75
17°58'12,78"	,500	1,91	1,91	1,03	1,850	3,216	34,74	4,910	115,3	5,70	2,05
23°20'39,34"	,390	2,08	2,67	1,11	1,883	3,218	34,72	4,600	127,1	5,51	1,86
26°26'15,80"	,329	2,19	3,32	1,18	1,865	3,304	33,82	4,474	132,3	5,44	1,74
17°55'56,37"	,500	1,91	1,91	1,03	1,854	3,216	34,74	4,906	116,1	5,68	2,04
23°17'35,35"	,390	2,08	2,67	1,10	1,889	3,233	34,56	4,603	128,0	5,50	1,84
26°23'31,24"	,329	2,19	3,32	1,17	1,871	3,304	33,82	4,481	132,3	5,43	1,73

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 19 \; ; \; H = -\,0,898206727$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	30,5	20°	0	0	21,-	1,633	1,153	45°21'24,28"	19,296
42	31,-	22°24' 5,27"	0,529	0,3	21,54	1,484	1,113	46°56'41,50"	20,082
	31,3	23°41'53,67"	0,873	0,5	21,85	1,392	1,098	48° 6' 8,21"	20,606
	31,-	20°	0	0	21,-	1,636	1,156	45°21'24,28"	19,289
43	31,5	22°21'54,96"	0,529	0,3	21,54	1,487	1,115	46°56'41,50"	20,075
	31,8	23°38'39,66"	0,872	0,5	21,86	1,395	1,096	48° 6' 8,21"	20,600
	31,5	20°	0	0	21,-	1,638	1,158	45°21'24,28"	19,285
44	32,-	22°19'48,54"	0,528	0,3	21,54	1,490	1,115	46°56'41,50"	20,068
	32,3	23°35'31,26"	0,871	0,5	21,86	1,397	1,096	48° 6' 8,21"	20,596
	32,-	20°	0	0	21,-	1,640	1,160	45°21'24,28"	19,280
45	32,5	22°17'45,52"	0,528	0,3	21,54	1,493	1,115	46°56'41,50"	20,061
	32,8	23°32'28,23"	0,870	0,5	21,86	1,400	1,096	48° 6' 8,21"	20,589
	32,5	20°	0	0	21,-	1,642	1,162	45°21'24,28"	19,276
46	33,-	22°15'46,65"	0,528	0,3	21,55	1,495	1,115	46°56'41,50"	20,056
	33,3	23°29'10,33"	0,869	0,6	21,86	1,404	1,094	48° 6' 8,21"	20,579
	33,-	20°	0	0	21,-	1,644	1,164	45°21'24,28"	19,271
47	33,5	22°13'50,57"	0,527	0,3	21,55	1,498	1,115	46°56'41,50"	20,049
	33,8	23°26'37,36"	0,868	0,5	21,87	1,406	1,094	48° 6' 8,21"	20,575
	33,5	20°	0	0	21,-	1,646	1,166	45°21'24,28"	19,267
48	34,-	22°11'58,35"	0,527	0,3	21,55	1,500	1,115	46°56'41,50"	20,043
	34,3	23°23'49,11"	0,867	0,5	21,87	1,108	1,094	48° 6' 8,21"	20,570
	34,-	20°	0	0	21,-	1,647	1,166	45°21'24,28"	19,265
49	34,5	22°10' 8,94"	0,526	0,3	21,55	1,502	1,115	46°56'41,50"	20,039
	34,8	23°21' 5,39"	0,866	0,5	21,87	1,411	1,092	48° 6' 8,21"	20,562
	34,5	20°	0	0	21,-	1,649	1,169	45°21'24,28"	19,260
50	35,-	22° 8'22,53"	0,526	0,3	21,55	1,504	1,115	46°56'41,50"	20,034
	35,3	23°18'26,02"	0,865	0,5	21,87	1,414	1,092	48° 6' 8,21"	20,557
	35,-	20°	0	0	21,-	1,651	1,171	45°21'24,28"	19,256
51	35,5	22° 6'38,98"	0,526	0,3	21,55	1,507	1,115	46°56'41,50"	20,037
	35,8	23°15'50,83"	0,864	0,5	21,87	1,416	1,090	48° 6' 8,21"	20,551
	35,5	20°	0	0	21,-	1,653	1,173	45°21'24,28"	19,251
52	36,-	22° 4'58,19"	0,525	0,3	21,55	1,509	1,115	46°56'41,50"	20,022
	36,3	23°13'19,65"	0,863	0,5	21,87	1,418	1,090	48° 6' 8,21"	20,546
	36,-	20°	0	0	21,-	1,654	1,175	45°21'24,28"	19,249
53	36,5	22° 3'22,04"	0,525	0,3	21,55	1,511	1,115	46°56'41,50"	20,017
	36,8	23°10'52,34"	0,862	0,5	21,88	1,420	1,088	48° 6' 8,21"	20,542
	36,5	20°	0	0	21,-	1,656	1,175	45°21'24,28"	19,245
54	37,-	22° 1'44,43"	0,525	0,3	21,55	1,513	1,115	46°56'41,50"	20,013
	37,3	23° 8'28,73"	0,862	0,5	21,88	1,422	1,088	48° 6' 8,21"	20,538
	37,-	20°	0	0	21,-	1,657	1,177	45°21'24,28"	19,243
55	37,5	22° 0'11,27"	0,524	0,3	21,55	1,515	1,115	46°56'41,50"	20,007
	37,8	23° 6' 8,70"	0,861	0,5	21,88	1,424	1,086	48° 6' 8,21"	20,533
	37,5	20°	0	0	21,-	1,659	1,086	45°21'24,28"	19,238
56	38,-	21°58'40,46"	0,524	0,3	21,55	1,517	1,056	46°56'41,50"	20,003
	38,3	23° 3'52,11"	0,860	0,5	21,88	1,426	1,042	48° 6' 8,21"	20,529
	38,5	20°	0	0	21,-	1,660	1,086	45°21'24,28"	19,200
58	39,-	21°55'45,54"	0,524	0,3	21,55	1,519	1,056	46°56'41,50"	19,990
	39,3	22°59'28,76"	0,859	0,5	21,88	1,428	1,041	48° 6' 8,21"	20,520

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 19 \; ; \; H = -\,0{,}898206727$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
17°53'39,95"	,500	1,91	1,91	1,03	1,857	3,234	34,55	4,902	116,9	5,67	2,01
23°15'18,93"	,390	2,08	2,67	1,10	1,894	3,233	34,56	4,608	128,9	5,49	1,83
26°19'38,48"	,329	2,19	3,32	1,16	1,880	3,294	33,92	4,486	134,1	5,42	1,72
17°50'15,31"	,500	1,91	1,91	1,02	1,863	3,215	34,76	4,895	117,7	5,66	2,01
23°12'14,95"	,390	2,08	2,67	1,10	1,901	3,212	34,79	4,611	129,5	5,48	1,83
26°17'13,93"	,329	2,19	3,32	1,16	1,885	3,294	33,92	4,492	135,2	5,40	1,71
17°47'58,89"	,500	1,91	1,91	1,02	1,866	3,215	34,76	4,891	118,4	5,64	2,00
23° 9'10,96"	,390	2,08	2,67	1,09	1,907	3,212	34,79	4,614	130,3	5,47	1,82
26°15'37,56"	,329	2,19	3,32	1,16	1,889	3,294	33,92	4,500	135,9	5,39	1,70
17°45'42,47"	,500	1,91	1,91	1,02	1,870	3,215	34,76	4,888	119,0	5,64	1,99
23° 6' 6,98"	,390	2,08	2,67	1,09	1,913	3,205	34,87	4,616	131,1	5,46	1,81
26°12'52,97"	,329	2,19	3,32	1,15	1,895	3,271	34,16	4,506	136,6	5,38	1,70
17°43'26,05"	,500	1,91	1,91	1,02	1,873	3,196	34,96	4,883	119,7	5,63	1,99
23° 4'11,19"	,390	2,08	2,67	1,09	1,918	3,205	34,87	4,620	131,9	5,45	1,80
26° 9' 0,18"	,329	2,19	3,32	1,15	1,904	3,284	34,02	4,511	137,6	5,37	1,68
17°41' 9,62"	,500	1,91	1,91	1,01	1,877	3,196	34,95	4,879	120,3	5,62	1,98
23° 1' 7,20"	,390	2,08	2,67	1,08	1,924	3,205	34,87	4,622	132,6	5,44	1,79
26° 7'23,77"	,329	2,19	3,32	1,15	1,908	3,261	34,27	4,516	138,3	5,36	1,69
17°38'53,21"	,500	1,91	1,91	1,01	1,881	3,196	34,95	4,875	120,9	5,61	1,97
22°58'50,78"	,390	2,08	2,67	1,08	1,929	3,183	35,11	4,625	133,3	5,43	1,79
26° 5'27,37"	,329	2,19	3,32	1,14	1,913	3,261	34,27	4,523	139,0	5,35	1,68
17°37'45,00"	,500	1,91	1,91	1,01	1,882	3,196	34,95	4,873	121,7	5,59	1,96
22°56'55,00"	,390	2,08	2,67	1,08	1,933	3,197	34,94	4,628	134,0	5,42	1,78
26° 2'42,76"	,329	2,19	3,32	1,14	1,920	3,274	34,12	4,527	139,9	5,34	1,66
17°35'28,58"	,500	1,91	1,91	1,01	1,886	3,177	35,17	4,869	122,3	5,59	1,96
22°54'59,21"	,390	2,08	2,67	1,08	1,937	3,197	34,94	4,632	134,7	5,41	1,77
26° 0'38,15"	,329	2,19	3,32	1,14	1,925	3,250	34,38	4,532	140,6	5,33	1,67
17°33'12,16"	,500	1,91	1,91	1,01	1,890	3,194	34,98	4,864	122,8	5,58	1,94
22°51'55,22"	,390	2,08	2,67	1,07	1,944	3,178	35,16	4,633	135,4	5,40	1,77
25°58' 1,72"	,329	2,19	3,32	1,14	1,930	3,250	34,38	4,538	141,4	5,32	1,66
17°30'55,74"	,500	1,91	1,91	1,01	1,894	3,194	34,98	4,860	123,3	5,57	1,93
22°49'38,79"	,390	2,08	2,67	1,07	1,948	3,178	35,16	4,635	136,0	5,39	1,76
25°56'25,30"	,329	2,19	3,32	1,13	1,935	3,250	34,38	4,543	141,9	5,31	1,65
17°29'47,52"	,500	1,91	1,91	1,01	1,895	3,194	34,98	4,858	123,8	5,56	1,92
22°47'43,01"	,390	2,08	2,67	1,07	1,953	3,178	35,16	4,638	136,6	5,38	1,75
25°54'48,87"	,329	2,19	3,32	1,13	1,938	3,240	34,49	4,549	142,8	5,30	1,64
17°27'31,10"	,500	1,91	1,91	1,00	1,899	3,194	34,98	4,854	124,5	5,55	1,91
22°45'47,22"	,390	2,08	2,67	1,06	1,957	3,168	35,27	4,641	137,2	5,38	1,75
25°53'12,44"	,329	2,19	3,32	1,13	1,940	3,240	34,49	4,554	143,3	5,30	1,64
17°26'22,89"	,500	1,91	1,91	1,00	1,900	3,175	35,19	4,852	124,9	5,55	1,92
22°43'30,80"	,390	2,08	2,67	1,06	1,962	3,168	35,27	4,643	137,8	5,37	1,74
25°51'16,01"	,329	2,19	3,32	1,12	1,947	3,240	34,49	4,559	144,1	5,29	1,63
17°24' 6,47"	,500	1,91	1,91	1,00	1,905	3,175	35,19	4,847	125,4	5,54	1,91
22°41'35,00"	,390	2,08	2,67	1,06	1,966	3,168	35,27	4,645	138,4	5,36	1,74
25°49'39,57"	,329	2,19	3,32	1,12	1,951	3,240	34,49	4,564	144,6	5,28	1,62
17°22'58,26"	,500	1,91	1,91	1,00	1,909	3,156	35,40	4,843	126,6	5,52	1,90
22°38'37,33"	,390	2,08	2,67	1,06	1,970	3,146	35,52	4,632	140,0	5,34	1,73
25°47'23,14"	,329	2,19	3,32	1,12	1,955	3,216	34,74	4,578	145,7	5,27	1,62

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
			$z_1 = 20$; $H = -\,0,905656268$						
	23,5	20°	0	0	22,-	1,593	1,084	45°57'52,15"	20,400
27	24,-	23° 3'25,20"	0,537	0,3	22,53	1,435	1,080	47°30'41,72"	21,218
	24,3	24°39'57,47"	0,892	0,5	22,82	1,338	1,080	48°38'11,85"	21,746
	24,-	20°	0	0	22,-	1,597	1,088	45°57'52,15"	20,391
28	24,5	22°59'54,57"	0,537	0,3	22,53	1,440	1,082	47°30'41,72"	21,206
	24,8	24°34'48,70"	0,891	0,5	22,82	1,343	1,082	48°38'11,85"	21,734
	24,5	20°	0	0	22,-	1,601	1,092	45°57'52,15"	20,382
29	25,-	22°56'31,51"	0,536	0,3	22,53	1,445	1,086	47°30'41,72"	21,193
	25,3	24°29'51,17"	0,889	0,5	22,82	1,349	1,084	48°38'11,85"	21,719
	25,5	20°	0	0	22,-	1,609	1,100	45°57'52,15"	20,364
31	26,-	22°50' 8,47"	0,535	0,3	22,53	1,454	1,090	47°30'41,72"	21,171
	26,3	24°20'27,48"	0,886	0,5	22,83	1,359	1,086	48°38'11,85"	21,695
	26,-	20°	0	0	22,-	1,612	1,105	45°57'52,15"	20,357
32	26,5	22°47' 7,07"	0,534	0,3	22,53	1,458	1,092	47°30'41,72"	21,161
	26,8	24°16' 0,22"	0,884	0,5	22,83	1,364	1,088	48°38'11,85"	21,683
	26,5	20°	0	0	22,-	1,616	1,109	45°57'52,15"	20,348
33	27,-	22°44'12,02"	0,533	0,3	22,53	1,462	1,092	47°30'41,72"	21,151
	27,3	24°11'42,02"	0,883	0,5	22,84	1,368	1,088	48°38'11,85"	21,675
	27,-	20°	0	0	22,-	1,619	1,111	45°57'52,15"	20,341
34	27,5	22°41'23,00"	0,533	0,3	22,53	1,466	1,094	47°30'41,72"	21,141
	27,8	24° 7'32,43"	0,881	0,5	22,84	1,372	1,088	48°38'11,85"	21,665
	27,5	20°	0	0	22,-	1,622	1,115	45°57'52,15"	20,337
35	28,-	22°38'39,70"	0,532	0,3	22,54	1,470	1,096	47°30'41,72"	21,131
	28,3	24° 3'31,02"	0,880	0,5	22,84	1,376	1,088	48°38'11,85"	21,656
	28,-	20°	0	0	22,-	1,625	1,117	45°57'52,15"	20,328
36	28,5	22°36' 1,84"	0,532	0,3	22,54	1,474	1,096	47°30'41,72"	21,121
	28,8	23°59'37,38"	0,879	0,5	22,84	1,380	1,088	48°38'11,85"	21,646
	28,5	20°	0	0	22,-	1,627	1,121	45°57'52,15"	20,323
37	29,-	22°33'29,15"	0,531	0,3	22,54	1,477	1,098	47°30'41,72"	21,114
	29,3	23°55'51,16"	0,878	0,5	22,85	1,384	1,088	48°38'11,85"	21,637
	29,-	20°	0	0	22,-	1,630	1,124	45°57'52,15"	20,316
38	29,5	22°31' 1,37"	0,531	0,3	22,54	1,481	1,098	47°30'41,72"	21,105
	29,8	23°52'12,00"	0,876	0,5	22,85	1,388	1,088	48°38'11,85"	21,627
	29,5	20°	0	0	22,-	1,633	1,126	45°57'52,15"	20,310
39	30,-	22°28'38,28"	0,530	0,3	22,54	1,484	1,100	47°30'41,72"	21,097
	30,3	23°48'39,56"	0,875	0,5	22,85	1,391	1,088	48°38'11,85"	21,620
	30,5	20°	0	0	22,-	1,638	1,132	45°57'52,15"	20,299
41	31,-	22°24' 5,27"	0,529	0,3	22,54	1,490	1,100	47°30'41,72"	21,082
	31,3	23°41'53,67"	0,873	0,5	22,85	1,398	1,088	48°38'11,85"	21,604
	31,-	20°	0	0	22,-	1,640	1,065	45°57'52,15"	20,294
42	31,5	22°21'54,96"	0,529	0,3	22,54	1,493	1,049	47°30'41,72"	21,075
	31,8	23°38'39,66"	0,872	0,5	22,86	1,402	1,043	48°38'11,85"	21,594
	31,5	20°	0	0	22,-	1,642	1,066	45°57'52,15"	20,290
43	32,-	22°19'48,54"	0,528	0,3	22,54	1,496	1,050	47°30'41,72"	21,068
	32,3	23°35'31,26"	0,871	0,5	22,86	1,404	1,042	48°38'11,85"	21,590
	32,-	20°	0	0	22,-	1,644	1,067	45°57'52,15"	20,285
44	32,5	22°17'45,52"	0,528	0,3	22,54	1,499	1,050	47°30'41,72"	21,061
	32,8	23°32'28,23"	0,870	0,5	22,86	1,407	1,042	48°38'11,85"	21,583

α_{vt}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 20 \; ; \; H = -\,0{,}905656268$$

α_{vt}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°50'15,16"	,497	1,93	1,94	1,07	1,797	3,273	35,94	4,985	113,1	5,73	2,16
24° 2'36,91"	,388	2,10	2,70	1,17	1,793	3,317	35,46	4,550	124,4	5,55	1,94
26°57'13,30"	,328	2,20	3,35	1,24	1,770	3,387	34,72	4,376	129,3	5,48	1,83
18°45'55,97"	,497	1,93	1,94	1,07	1,804	3,254	36,15	4,976	114,6	5,71	2,15
23°57'52,72"	,388	2,10	2,70	1,16	1,802	3,296	36,69	4,554	126,0	5,53	1,93
26°53' 6,72"	,328	2,20	3,35	1,23	1,779	3,387	34,72	4,385	130,1	5,46	1,81
18°41'36,77"	,497	1,93	1,94	1,06	1,811	3,235	36,36	4,968	116,0	5,68	2,13
23°52'48,63"	,388	2,10	2,70	1,16	1,813	3,296	36,69	4,557	127,2	5,51	1,91
26°47'35,96"	,328	2,20	3,35	1,23	1,792	3,379	34,81	4,392	132,3	5,44	1,79
18°32'58,36"	,497	1,93	1,94	1,05	1,826	3,234	36,37	4,950	118,6	5,64	2,09
23°44' 5,13"	,388	2,10	2,70	1,14	1,832	3,290	35,75	4,565	129,9	5,47	1,87
26°38'44,01"	,328	2,20	3,35	1,21	1,812	3,370	34,90	4,408	135,1	5,40	1,76
18°29'43,97"	,497	1,93	1,94	1,05	1,831	3,234	36,37	4,946	119,8	5,62	2,07
23°40' 5,83"	,388	2,10	2,70	1,14	1,840	3,283	35,82	4,569	131,2	5,46	1,86
26°34'18,00"	,328	2,20	3,35	1,21	1,822	3,346	35,15	4,415	136,3	5,39	1,76
18°25'24,77"	,497	1,93	1,94	1,05	1,838	3,215	36,59	4,937	121,0	5,61	2,06
23°36' 6,53"	,388	2,10	2,70	1,13	1,848	3,262	36,06	4,572	132,6	5,44	1,85
26°31'16,11"	,328	2,20	3,35	1,20	1,829	3,337	35,24	4,423	137,6	6,37	1,74
18°22'10,36"	,497	1,93	1,94	1,04	1,844	3,215	36,59	4,930	122,3	5,59	2,04
23°32' 7,21"	,388	2,10	2,70	1,13	1,857	3,240	36,30	4,576	133,8	5,42	1,85
26°27'35,54"	,328	2,20	3,35	1,20	1,837	3,337	35,24	4,430	139,0	5,35	1,73
18°20' 0,77"	,497	1,93	1,94	1,04	1,847	3,213	36,61	4,924	123,3	5,57	2,02
23°28' 7,91"	,388	2,10	2,70	1,12	1,865	3,255	36,13	4,579	134,8	5,41	1,83
26°24'14,29"	,328	2,20	3,35	1,19	1,845	3,328	35,34	4,437	140,2	5,34	1,72
18°15'41,56"	,497	1,93	1,94	1,04	1,855	3,213	35,61	4,918	124,4	5,55	2,00
23°24' 8,60"	,388	2,10	2,70	1,12	1,874	3,233	36,38	4,581	136,2	5,39	1,82
26°20'33,73"	,328	2,20	3,35	1,19	1,854	3,304	35,60	4,444	141,4	5,32	1,71
18°13'31,47"	,497	1,93	1,94	1,04	1,859	3,194	36,82	4,914	125,3	5,54	2,00
23°21'14,08"	,388	2,10	2,70	1,12	1,880	3,233	36,38	4,585	137,1	5,38	1,81
26°17'12,43"	,328	2,20	3,35	1,18	1,861	3,304	35,60	4,450	142,6	5,31	1,70
18°10'17,57"	,497	1,93	1,94	1,03	1,864	3,194	36,82	4,907	126,4	5,52	1,98
23°17'34,65"	,388	2,10	2,70	1,11	1,888	3,226	36,45	4,587	138,3	5,36	1,80
26°13'31,84"	,328	2,20	3,35	1,17	1,870	3,294	35,70	4,456	143,8	5,29	1,69
18° 7' 3,16"	,497	1,93	1,94	1,03	1,869	3,194	36,82	4,902	127,4	5,51	1,97
23°14'40,14"	,388	2,10	2,70	1,11	1,895	3,226	36,45	4,591	139,2	5,35	1,78
26°11'15,35"	,328	2,20	3,35	1,17	1,876	3,294	35,70	4,464	144,8	5,28	1,68
18° 1'39,17"	,497	1,93	1,94	1,03	1,878	3,192	36,85	4,892	129,1	5,49	1,94
23° 8'31,22"	,388	2,10	2,70	1,10	1,908	3,219	36,53	4,597	141,3	5,32	1,76
26° 4'58,92"	,328	2,20	3,35	1,16	1,891	3,284	35,81	4,476	146,8	5,26	1,66
17°59'29,56"	,497	1,93	1,94	1,03	1,883	3,192	36,85	4,888	130,0	5,47	1,93
23° 5'36,69"	,388	2,10	2,70	1,10	1,914	3,197	36,78	4,600	142,3	5,31	1,76
26° 1'37,57"	,328	2,20	3,35	1,16	1,900	3,261	36,07	4,480	147,8	5,24	1,66
17°57'19,90"	,497	1,93	1,94	1,02	1,886	3,173	37,07	4,883	130,8	5,46	1,93
23° 2'42,17"	,388	2,10	2,70	1,09	1,921	3,197	36,78	4,603	143,1	5,30	1,75
26° 0' 6,53"	,328	2,20	3,35	1,15	1,903	3,274	35,92	4,488	149,0	5,23	1,64
17°55'10,36"	,497	1,93	1,94	1,02	1,890	3,173	37,07	4,878	131,7	5,45	1,92
22°59'47,64"	,388	2,10	2,70	1,09	1,927	3,176	37,04	4,605	144,0	5,29	1,75
25°57'30,96"	,328	2,20	3,35	1,15	1,910	3,274	35,92	4,493	149,9	5,22	1,63

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
					z_1 = 20 ; H = - 0,905656268				
	32,5	20°	0	0	22,-	1,646	1,138	45°57'52,15"	20,281
45	33,-	22°15'46,65"	0,528	0,3	22,55	1,501	1,103	47°30'41,72"	21,056
	33,3	23°29'10,33"	0,869	0,5	22,86	1,411	1,086	48°38'11,85"	21,574
	33,-	20°	0	0	22,-	1,648	1,141	45°57'52,15"	20,276
46	33,5	22°13'50,57"	0,527	0,3	22,55	1,504	1,103	47°30'41,72"	21,049
	33,8	23°26'37,36"	0,867	0,5	22,87	1,413	1,086	48°38'11,85"	21,569
	33,5	20° "	0	0	22,-	1,650	1,143	45°57'52,15"	20,272
47	34,-	22°11'58,35"	0,527	0,3	22,55	1,506	1,103	47°30'41,72"	21,044
	34,3	23°23'49,11"	0,867	0,5	22,87	1,416	1,086	48°38'11,85"	21,562
	34,-	20°	0	0	22,-	1,652	1,145	45°57'52,15"	20,267
48	34,5	22°10'8,94"	0,526	0,3	22,55	1,509	1,103	47°30'41,72"	21,036
	34,8	23°21'21,39"	0,866	0,5	22,87	1,418	1,084	48°38'11,85"	21,558
	34,5	20°	0	0	22,-	1,654	1,147	45°57'52,15"	20,263
49	35,-	22°8'22,53"	0,526	0,3	22,55	1,511	1,103	47°30'41,72"	21,032
	35,3	23°18'26,02"	0,865	0,5	22,87	1,421	1,084	48°38'11,85"	21,551
	35,5	20°	0	0	22,-	1,657	1,149	45°57'52,15"	20,256
51	36,-	22°4'58,19"	0,525	0,3	22,55	1,514	1,103	47°30'41,72"	21,025
	36,3	23°13'19,65"	0,863	0,5	22,87	1,425	1,082	48°38'11,85"	21,542
	36,-	20°	0	0	22,-	1,659	1,151	45°57'52,15"	20,252
52	36,5	22°3'22,04"	0,525	0,3	22,55	1,517	1,103	47°30'41,72"	21,018
	36,8	23°10'52,34"	0,862	0,5	22,88	1,428	1,082	48°38'11,85"	21,535
	36,5	20°	0	0	22,-	1,661	1,153	45°57'52,15"	20,248
53	37,-	22°1'44,43"	0,525	0,3	22,55	1,519	1,103	47°30'41,72"	21,013
	37,3	23°8'28,73"	0,862	0,5	22,88	1,430	1,080	48°38'11,85"	21,531
	37,-	20°	0	0	22,-	1,662	1,156	45°57'52,15"	20,245
54	37,5	22°0'11,27"	0,524	0,3	22,55	1,521	1,103	47°30'41,72"	21,008
	37,8	23°6'8,70"	0,861	0,5	22,88	1,432	1,080	48°38'11,85"	21,526
	37,5	20°	0	0	22,-	1,664	1,156	45°57'52,15"	20,241
55	38,-	21°58'40,46"	0,524	0,3	22,55	1,523	1,103	47°30'41,72"	21,003
	38,3	23°3'52,11"	0,860	0,5	22,88	1,434	1,077	48°38'11,85"	21,522
	38,	20°	0	0	22,-	1,665	1,158	45°57'52,15"	20,239
56	38,5	21°57'11,91"	0,524	0,3	22,55	1,525	1,050	47°30'41,72"	20,998
	38,8	23°1'38,84"	0,859	0,5	22,88	1,436	1,038	48°38'11,85"	21,517
	38,5	20°	0	0	22,-	1,667	1,076	45°57'52,15"	20,234
57	39,-	21°55'45,54"	0,523	0,3	22,55	1,527	1,050	47°30'41,72"	20,994
	39,3	22°59'28,76"	0,858	0,5	22,88	1,438	1,037	48°38'11,85"	21,513
	39,5	20°	0	0	22,-	1,669	1,077	45°57'52,15"	20,230
59	40,-	21°52'59,03"	0,523	0,3	22,55	1,530	1,049	47°30'41,72"	20,987
	40,3	22°55'17,75"	0,857	0,5	22,88	1,442	1,037	48°38'11,85"	21,503
					z_1 = 21; H = - 0,912396329				
	25,-	20°	0	0	23,-	1,608	1,038	46°31'18,69"	21,379
29	25,5	22°53'16,59"	0,535	0,3	23,53	1,453	1,036	48°1'47,25"	22,186
	25,8	24°25'4,29"	0,887	0,5	23,83	1,358	1,035	49°7'26,64"	22,709
	25,5	20°	0	0	23,-	1,611	1,040	46°31'18,69"	21,372
30	26,-	22°50'8,47"	0,535	0,3	23,53	1,458	1,037	48°1'47,25"	22,174
	26,3	24°20'27,48"	0,886	0,5	23,83	1,363	1,036	49°7'26,64"	22,696

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 20 \; ; \; H = -\,0,905656268$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
17°53' 0,76"	,497	1,93	1,94	1,02	1,893	3,173	37,07	4,875	132,7	5,44	1,90
22°57'57,91"	,388	2,10	2,70	1,09	1,931	3,190	36,87	4,609	144,9	5,28	1,73
25°53'50,04"	,328	2,20	3,35	1,15	1,918	3,250	36,18	4,498	150,8	5,21	1,63
17°50'51,16"	,497	1,93	1,94	1,01	1,898	3,154	37,29	4,879	133,2	5,43	1,91
22°55' 3,37"	,388	2,10	2,70	1,08	1,938	3,190	36,87	4,611	145,8	5,27	1,72
25°52'18,98"	,328	2,20	3,35	1,14	1,923	3,264	36,03	4,504	151,6	5,20	1,62
17°48'41,57"	,497	1,93	1,94	1,01	1,901	3,154	37,29	4,875	133,9	5,42	1,90
22°52'53,78"	,388	2,10	2,70	1,08	1,942	3,168	37,13	4,614	146,7	5,26	1,72
25°49'19,71"	,328	2,20	3,35	1,14	1,929	3,264	36,03	4,509	152,4	5,19	1,61
17°46'31,96"	,497	1,93	1,94	1,01	1,905	3,154	37,29	4,870	134,7	5,41	1,89
22°49'59,24"	,388	2,10	2,70	1,08	1,950	3,182	36,96	4,616	144,8	5,25	1,71
25°48'12,04"	,328	2,20	3,35	1,14	1,933	3,254	36,15	4,516	153,4	5,18	1,60
17°44'22,37"	,497	1,93	1,94	1,01	1,909	3,152	37,32	4,866	135,3	5,40	1,88
22°48' 9,51"	,388	2,10	2,70	1,07	1,953	3,182	36,96	4,619	148,3	5,24	1,70
25°45'16,90"	,328	2,20	3,35	1,13	1,939	3,254	36,15	4,520	154,2	5,17	1,60
17°41' 7,96"	,497	1,93	1,94	1,01	1,915	3,152	37,32	4,860	136,8	5,38	1,86
22°45'14,97"	,388	2,10	2,70	1,07	1,960	3,160	37,22	4,624	149,9	5,22	1,69
25°41'55,48"	,328	2,20	3,35	1,13	1,948	3,229	36,42	4,531	155,9	5,15	1,59
17°38'58,37"	,497	1,93	1,94	1,00	1,918	3,152	37,32	4,856	137,4	5,37	1,85
22°42'20,43"	,388	2,10	2,70	1,07	1,966	3,160	37,22	4,627	150,6	5,21	1,68
25°39'19,60"	,328	2,20	3,35	1,12	1,954	3,243	36,27	4,535	156,6	5,14	1,58
17°36'48,76"	,497	1,93	1,94	1,00	1,921	3,132	37,55	4,852	138,0	5,37	1,85
22°40'30,70"	,388	2,10	2,70	1,06	1,971	3,160	37,22	4,629	151,3	5,20	1,68
25°37'48,49"	,328	2,20	3,35	1,12	1,958	3,243	36,27	4,540	157,6	5,13	1,57
17°35'43,73"	,497	1,93	1,94	1,00	1,924	3,132	37,55	4,850	138,5	5,36	1,85
22°38'21,09"	,388	2,10	2,70	1,06	1,976	3,152	37,32	4,632	152,0	5,20	1,67
25°35'58,14"	,328	2,20	3,35	1,12	1,963	3,243	36,27	4,545	158,2	5,13	1,56
17°33'34,36"	,497	1,93	1,94	1,00	1,928	3,132	37,55	4,846	139,3	5,35	1,84
22°36'31,35"	,388	2,10	2,70	1,06	1,980	3,152	37,32	4,634	152,7	5,19	1,66
25°34'27,02"	,328	2,20	3,35	1,12	1,967	3,219	36,54	4,550	159,1	5,12	1,56
17°32'29,56"	,497	1,93	1,94	1,00	1,929	3,132	37,55	4,843	139,8	5,34	1,83
22°34'21,75"	,388	2,10	2,70	1,06	1,985	3,152	37,32	4,636	153,3	5,18	1,66
25°32'36,67"	,328	2,20	3,35	1,11	1,972	3,219	36,54	4,554	159,7	5,11	1,56
17°30'19,96"	,497	1,93	1,94	1,00	1,934	3,132	37,55	4,839	140,5	5,33	1,82
22°32'32,01"	,388	2,10	2,70	1,05	1,988	3,130	37,57	4,639	153,9	5,17	1,66
25°31' 5,55"	,328	2,20	3,35	1,11	1,976	3,219	36,54	4,559	160,6	5,10	1,55
17°28'10,36"	,497	1,93	1,94	0,99	1,937	3,113	37,78	4,835	141,6	5,32	1,82
22°29'37,46"	,388	2,10	2,70	1,05	1,996	3,130	37,57	4,641	155,5	5,16	1,65
25°27'24,82"	,328	2,20	3,35	1,11	1,985	3,208	36,67	4,567	161,7	5,09	1,54

$$z_1 = 21 \; ; \; H = -\,0,912396329$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°44'23,03"	,493	1,94	1,97	1,06	1,834	3,213	38,44	4,962	127,2	5,51	2,06
23°42'14,92"	,386	2,11	2,73	1,15	1,830	3,262	37,86	4,555	139,1	5,35	1,85
26°29'46,15"	,326	2,21	3,38	1,22	1,808	3,346	36,91	4,394	144,5	5,28	1,74
18°41'22,88"	,493	1,94	1,97	1,06	1,840	3,211	38,46	4,955	128,7	5,49	2,04
23°37'44,73"	,386	2,11	2,73	1,15	1,840	3,276	37,69	4,558	140,7	5,33	1,82
26°25'14,88"	,326	2,21	3,38	1,21	1,819	3,361	36,75	4,401	146,0	5,26	1,71

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 21 \;;\; H = -\,0{,}912396329$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
	26,-	20°	0	0	23,-	1,615	1,086	46°31'18,69"	21,363
31	26,5	22°47' 7,07"	0,534	0,3	23,53	1,462	1,077	48° 1'47,25"	22,164
	26,8	24°16' 0,22"	0,884	0,5	23,83	1,368	1,075	49° 7'26,64"	22,684
	26,5	20°	0	0	23,-	1,618	1,088	46°31'18,69"	21,356
32	27,-	22°44'12,02"	0,533	0,3	23,53	1,466	1,080	48° 1'47,25"	22,154
	27,3	24°11'42,02"	0,883	0,5	23,84	1,373	1,075	49° 7'26,64"	22,673
	27,-	20°	0	0	23,-	1,622	1,092	46°31'18,69"	21,347
33	27,5	22°41'23,00"	0,533	0,3	23,53	1,471	1,082	48° 1'47,25"	22,142
	27,8	24° 7'32,43"	0,881	0,5	23,84	1,377	1,077	49° 7'26,64"	22,663
	27,5	20°	0	0	23,-	1,625	1,096	46°31'18,69"	21,341
34	28,-	22°38'39,70"	0,532	0,3	23,54	1,474	1,084	48° 1'47,25"	22,135
	28,3	24° 3'31,02"	0,880	0,5	23,84	1,381	1,077	49° 7'26,64"	22,654
	28,5	20°	0	0	23,-	1,631	1,103	46°31'18,69"	21,327
36	29,-	22°33'29,15"	0,531	0,3	23,54	1,482	1,086	48° 1'47,25"	22,115
	29,3	23°55'51,16"	0,878	0,5	23,85	1,390	1,080	49° 7'26,64"	22,633
	29,-	20°	0	0	23,-	1,634	1,105	46°31'18,69"	21,320
37	29,5	22°31' 1,37"	0,531	0,3	23,54	1,486	1,086	48° 1'47,25"	22,106
	29,8	23°52'12,00"	0,876	0,5	23,85	1,393	1,080	49° 7'26,64"	22,626
	29,5	20°	0	0	23,-	1,636	1,107	46°31'18,69"	21,316
38	30,-	22°28'38,25"	0,530	0,3	23,54	1,489	1,088	48° 1'47,25"	22,099
	30,3	23°48'39,56"	0,875	0,5	23,85	1,397	1,080	49° 7'26,64"	22,617
	30,-	20°	0	0	23,-	1,639	1,109	46°31'18,69"	21,309
39	30,5	22°26'19,65"	0,530	0,3	23,54	1,492	1,088	48° 1'47,25"	22,091
	30,8	23°45'13,55"	0,874	0,5	23,85	1,401	1,080	49° 7'26,64"	22,607
	30,5	20°	0	0	23,-	1,641	1,111	46°31'18,69"	21,305
40	31,-	22°24' 5,27"	0,529	0,3	23,54	1,495	1,088	48° 1'47,25"	22,084
	31,3	23°41'53,67"	0,873	0,5	23,85	1,404	1,080	49° 7'26,64"	22,600
	31,-	20°	0	0	23,-	1,644	1,115	46°31'18,69"	21,398
41	31,5	22°21'54,96"	0,529	0,3	23,54	1,498	1,090	48° 1'47,25"	22,077
	31,8	23°38'39,66"	0,872	0,5	23,86	1,407	1,080	49° 7'26,64"	22,594
	32,-	20°	0	0	23,-	1,648	1,119	46°31'18,69"	21,289
43	32,5	22°17'45,52"	0,528	0,3	23,54	1,504	1,090	48° 1'47,25"	22,062
	32,8	23°32'28,23"	0,870	0,5	23,86	1,414	1,080	49° 7'26,64"	22,578
	32,5	20°	0	0	23,-	1,650	1,119	46°31'18,69"	21,285
44	33,-	22°15'46,65"	0,528	0,3	23,55	1,507	1,044	48° 1'47,25"	22,055
	33,3	23°29'10,33"	0,869	0,5	23,86	1,418	1,038	49° 7'26,64"	22,568
	33,	20°	0	0	23,-	1,652	1,059	46°31'18,69"	21,280
45	33,5	22°13'50,57"	0,527	0,3	23,55	1,509	1,044	48° 1'47,25"	22,051
	33,8	23°26'37,36"	0,867	0,5	23,87	1,420	1,038	49° 7'26,64"	22,564
	33,5	20°	0	0	23,-	1,654	1,060	46°31'18,69"	21,276
46	34,-	22°11'58,35"	0,527	0,3	23,55	1,512	1,045	48° 1'47,25"	22,043
	34,3	23°23'49,11"	0,867	0,5	23,87	1,422	1,038	49° 7'26,64"	22,559
	34,-	20°	0	0	23,-	1,656	1,061	46°31'18,69"	21,272
47	34,5	22°10' 8,94"	0,526	0,3	23,55	1,516	1,045	48° 1'47,25"	22,038
	34,8	23°21'21,39"	0,866	0,5	23,87	1,424	1,038	49° 7'26,64"	22,554
	34,5	20°	0	0	23,-	1,658	1,062	46°31'18,69"	21,267
48	35,-	22° 8'22,53"	0,526	0,3	23,55	1,517	1,045	48° 1'47,25"	22,031
	35,3	23°18'26,02"	0,865	0,5	23,87	1,428	1,037	49° 7'26,64"	22,545

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 21 \; ; \; H = -\,0{,}912396329$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°37'16,03"	,493	1,94	1,97	1,05	1,847	3,192	38,69	4,947	130,2	5,47	2,02
23°33'57,06"	,386	2,11	2,73	1,14	1,849	3,255	37,94	4,562	144,2	5,31	1,82
26°21' 2,25"	,326	2,21	3,38	1,21	1,829	3,337	37,01	4,408	147,5	5,25	1,71
18°34'10,89"	,493	1,94	1,97	1,05	1,853	3,192	38,69	4,941	131,7	5,45	2,00
23°30' 9,38"	,386	2,11	2,73	1,14	1,857	3,233	38,19	4,565	143,7	5,29	1,81
26°17' 8,24"	,326	2,21	3,38	1,20	1,838	3,328	37,11	4,414	148,7	5,23	1,69
18°30' 4,03"	,493	1,94	1,97	1,05	1,860	3,173	38,92	4,933	133,0	5,43	1,99
23°25'20,00"	,386	2,11	2,73	1,13	1,868	3,248	38,02	4,567	145,1	5,28	1,79
26°13'38,65"	,326	2,21	3,38	1,19	1,847	3,328	37,11	4,422	150,4	5,21	1,68
18°26'58,89"	,493	1,94	1,97	1,04	1,865	3,173	38,92	4,926	134,2	5,41	1,97
23°22'34,03"	,386	2,11	2,73	1,13	1,874	3,226	38,28	4,572	146,3	5,26	1,78
26°10'27,69"	,326	2,21	3,38	1,19	1,855	3,318	37,22	4,429	151,9	5,20	1,67
18°20'48,60"	,493	1,94	1,97	1,04	1,879	3,171	38,95	4,914	136,7	5,38	1,94
23°14'58,69"	,386	2,11	2,73	1,12	1,891	3,219	38,36	4,576	149,1	5,23	1,75
26° 2'45,38"	,326	2,21	3,38	1,18	1,873	3,308	37,33	4,440	154,5	5,17	1,65
18°17'43,34"	,493	1,94	1,97	1,03	1,883	3,171	38,95	4,908	138,0	5,37	1,92
23°11'30,17"	,386	2,11	2,73	1,11	1,899	3,219	38,36	4,578	150,5	5,21	1,74
26° 0'17,47"	,326	2,21	3,38	1,17	1,879	3,284	37,60	4,448	155,8	5,15	1,64
18°15'40,03"	,493	1,94	1,97	1,03	1,886	3,152	39,19	4,904	139,2	5,35	1,92
23° 8'44,26"	,386	2,11	2,73	1,11	1,905	3,197	38,62	4,582	151,5	5,20	1,74
25°57' 6,47"	,326	2,21	3,38	1,17	1,887	3,298	37,44	4,453	157,1	5,14	1,62
18°12'34,89"	,493	1,94	1,97	1,03	1,892	3,152	39,19	4,897	140,4	5,33	1,90
23° 5'39,06"	,386	2,11	2,73	1,10	1,912	3,212	38,45	4,585	152,8	5,19	1,71
25°53'36,83"	,326	2,21	3,38	1,16	1,896	3,274	37,72	4,459	158,3	5,12	1,62
18°10'31,46"	,493	1,94	1,97	1,03	1,895	3,152	39,19	4,893	141,5	5,32	1,89
23° 2'53,89"	,386	2,11	2,73	1,10	1,919	3,190	38,71	4,588	154,1	5,17	1,71
25°51' 8,90"	,326	2,21	3,38	1,16	1,902	3,274	37,72	4,465	159,5	5,11	1,61
18° 7'26,32"	,493	1,94	1,97	1,02	1,901	3,149	39,22	4,887	142,3	5,31	1,88
23° 0' 7,11"	,386	2,11	2,73	1,10	1,925	3,190	38,71	4,591	155,0	5,16	1,70
25°48'59,56"	,326	2,21	3,38	1,16	1,908	3,288	37,56	4,471	160,7	5,10	1,59
18° 3'19,46"	,493	1,94	1,97	1,02	1,909	3,149	39,22	4,879	144,3	5,29	1,85
22°54'35,16"	,386	2,11	2,73	1,09	1,938	3,182	38,81	4,596	157,3	5,14	1,68
25°43' 1,94"	,326	2,21	3,38	1,15	1,927	3,278	37,68	4,481	162,9	5,08	1,58
18° 1'16,03"	,493	1,94	1,97	1,02	1,912	3,130	39,46	4,875	145,5	5,27	1,85
22°51'49,17"	,386	2,11	2,73	1,08	1,945	3,160	39,08	4,598	158,4	5,12	1,68
25°39'32,27"	,326	2,21	3,38	1,14	1,932	3,254	37,96	4,486	164,2	5,06	1,57
17°59'12,60"	,493	1,94	1,97	1,01	1,917	3,130	39,46	4,870	146,4	5,26	1,84
22°50' 4,91"	,386	2,11	2,73	1,08	1,949	3,160	39,08	4,601	159,4	5,11	1,67
25°38' 6,01"	,326	2,21	3,38	1,14	1,936	3,254	37,96	4,495	165,1	5,05	1,57
17°57' 9,18"	,493	1,94	1,97	1,01	1,920	3,130	39,46	4,866	147,3	5,25	1,83
22°46'59,77"	,386	2,11	2,73	1,08	1,956	3,175	38,90	4,603	160,2	5,11	1,65
25°36'21,18"	,326	2,21	3,38	1,14	1,940	3,254	37,96	4,498	166,1	5,04	1,56
17°55' 5,74"	,493	1,94	1,97	1,01	1,924	3,110	39,70	4,862	148,1	5,24	1,83
22°45'15,50"	,386	2,11	2,73	1,08	1,961	3,152	39,17	4,606	161,1	5,09	1,65
25°34'32,62"	,326	2,21	3,38	1,13	1,945	3,243	38,08	4,504	167,0	5,03	1,55
17°53' 2,32"	,493	1,94	1,97	1,01	1,928	3,110	39,70	4,858	148,9	5,23	1,82
22°42'29,51"	,386	2,11	2,73	1,07	1,967	3,152	39,17	4,608	162,1	5,08	1,65
25°31'25,52"	,326	2,21	3,38	1,13	1,953	3,243	38,08	4,507	168,3	5,02	1,54

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$z_1 = 21$; $H = -\ 0,912396329$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
	35,5	20°	0	0	23,-	1,662	1,132	46°31'18,69"	21,258
50	36,-	22° 4'58,19"	0,525	0,3	23,55	1,520	1,092	48° 1'47,25"	22,024
	36,3	23°13'19,65"	0,863	0,5	23,87	1,432	1,073	49° 7'26,64"	22,536
	36,-	20°	0	0	23,-	1,664	1,132	46°31'18,69"	21,254
51	36,5	22° 3'22,04"	0,525	0,3	23,55	1,523	1,092	48° 1'47,25"	22,017
	36,8	23°10'52,34"	0,862	0,5	23,88	1,435	1,073	49° 7'26,64"	22,530
	36,5	20°	0	0	23,-	1,665	1,134	46°31'18,69"	21,252
52	37,-	22° 1'44,43"	0,525	0,3	23,55	1,526	1,092	48° 1'47,25"	22,010
	37,3	23° 8'28,73"	0,862	0,5	23,88	1,437	1,073	49° 7'26,64"	22,526
	37,-	20°	0	0	23,-	1,667	1,136	46°31'18,69"	21,247
53	37,5	22° 0'11,27"	0,524	0,3	23,55	1,528	1,092	48° 1'47,25"	22,005
	37,8	23° 6' 8,70"	0,861	0,5	23,88	1,439	1,071	49° 7'26,64"	22,519
	37,5	20°	0	0	23,-	1,668	1,136	46°31'18,69"	21,245
54	38,-	21°58'40,46"	0,524	0,3	23,55	1,530	1,092	48° 1'47,25"	22,001
	38,3	23° 3'52,11"	0,860	0,5	23,88	1,442	1,071	49° 7'26,64"	22,514
	38,-	20°	0	0	23,-	1,670	1,138	46°31'18,69"	21,241
55	38,5	21°57'11,91"	0,524	0,3	23,55	1,532	1,092	48° 1'47,25"	21,995
	38,8	23° 1'38,84"	0,859	0,5	23,88	1,444	1,071	49° 7'26,64"	22,509
	38,5	20°	0	0	23,-	1,671	1,138	46°31'18,69"	21,239
56	39,-	21°55'45,54"	0,523	0,3	23,55	1,534	1,092	48° 1'47,25"	21,991
	39,3	22°59'28,76"	0,858	0,5	23,88	1,446	1,069	49° 7'26,64"	22,505
	39,-	20°	0	0	23,-	1,672	1,141	46°31'18,69"	21,236
57	39,5	21°54'21,28"	0,523	0,3	23,55	1,535	1,092	48° 1'47,25"	21,989
	39,8	22°57'21,77"	0,858	0,5	23,88	1,448	1,069	49° 7'26,64"	22,500
	39,5	20°	0	0	23,-	1,674	1,143	46°31'18,69"	21,232
58	40,-	21°52'59,03"	0,523	0,3	23,55	1,537	1,092	48° 1'47,25"	21,984
	40,3	22°55'17,78"	0,857	0,5	23,89	1,450	1,067	49° 7'26,64"	22,495
	40,-	20°	0	0	23,-	1,676	1,143	46°31'18,69"	21,228
59	40,5	21°51'38,74"	0,523	0,3	23,56	1,539	1,090	48° 1'47,25"	21,980
	40,8	22°53'16,59"	0,857	0,5	23,89	1,452	1,067	49° 7'26,64"	22,492
	40,5	20°	0	0	23,-	1,677	1,143	46°31'18,69"	21,226
60	41,-	21°50'20,33"	0,522	0,3	23,56	1,541	1,090	48° 1'47,25"	21,974
	41,3	22°51'18,21"	0,856	0,5	23,89	1,453	1,067	49° 7'26,64"	22,490
	41,-	20°	0	0	23,-	1,678	1,145	46°31'18,69"	21,223
61	41,5	21°49' 3,74"	0,522	0,3	23,56	1,542	1,090	48° 1'47,25"	21,973
	41,8	22°49'22,50"	0,855	0,5	23,89	1,455	1,032	49° 7'26,64"	22,485
	41,5	20°	0	0	23,-	1,679	1,071	46°31'18,69"	21,221
62	42,-	21°47'48,90"	0,522	0,3	23,56	1,544	1,044	48° 1'47,25"	21,967
	42,3	22°47'29,39"	0,855	0,5	23,89	1,457	1,032	49° 7'26,64"	22,481

$z_1 = 22$; $H = -\ 0,918523657$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
	26,5	20°	0	0	24,-	1,621	1,035	47° 2' 6,09"	22,362
31	27,-	22°44'12,02"	0,533	0,3	24,53	1,470	1,033	48°30'20,02"	23,157
	27,3	24°11'42,02"	0,883	0,5	24,83	1,377	1,032	49°34'14,17"	23,673
	27,-	20°	0	0	24,-	1,624	1,037	47° 2' 6,09"	22,355
32	27,5	22°41'23,00"	0,533	0,3	24,53	1,474	1,034	48°30'20,02"	23,147
	27,8	24° 7'32,43"	0,881	0,5	24,84	1,381	1,033	49°34'14,17"	23,664

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 21 \; ; \; H = -\,0,912396329$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
17°48'55,46"	,493	1,94	1,97	1,00	1,936	3,127	39,50	4,850	150,4	5,21	1,79
22°39'43,52"	,386	2,11	2,73	1,07	1,974	3,152	39,17	4,613	163,9	5,07	1,63
25°28'14,08"	,326	2,21	3,38	1,12	1,962	3,232	38,21	4,519	170,3	5,00	1,53
17°46'52,03"	,493	1,94	1,97	1,00	1,940	3,107	39,74	4,846	151,4	5,20	1,79
22°36'57,54"	,386	2,11	2,73	1,07	1,980	3,144	39,28	4,616	164,8	5,06	1,62
25°25'46,08"	,326	2,21	3,38	1,12	1,968	3,231	38,21	4,522	171,1	4,99	1,52
17°45'50,31"	,493	1,94	1,97	1,00	1,941	3,107	39,74	4,843	152,1	5,19	1,78
22°34'11,54"	,386	2,11	2,73	1,06	1,986	3,144	39,28	4,616	165,7	5,05	1,61
25°24'19,80"	,326	2,21	3,38	1,12	1,972	3,232	38,21	4,528	171,9	4,99	1,51
17°43'46,89"	,493	1,94	1,97	,999	1,945	3,107	39,74	4,839	152,7	5,19	1,77
22°32' 8,11"	,386	2,11	2,73	1,06	1,992	3,122	39,56	4,619	166,5	5,04	1,62
25°21'57,80"	,326	2,21	3,38	1,12	1,978	3,208	38,50	4,533	173,0	4,98	1,52
17°42'45,17"	,493	1,94	1,97	,999	1,947	3,107	39,74	4,837	153,6	5,18	1,77
22°30'23,83"	,386	2,11	2,73	1,06	1,996	3,122	39,56	4,619	167,4	5,03	1,61
25°20' 6,91"	,326	2,21	3,38	1,11	1,983	3,221	38,34	4,536	173,8	4,97	1,51
17°40'41,74"	,493	1,94	1,97	,997	1,951	3,088	39,99	4,833	154,2	5,17	1,77
22°28'20,41"	,386	2,11	2,73	1,05	2,001	3,136	39,38	4,623	168,1	5,02	1,60
25°18'22,05"	,326	2,21	3,38	1,11	1,988	3,221	38,34	4,540	174,5	4,96	1,50
17°39'40,03"	,493	1,94	1,97	,996	1,952	3,088	39,99	4,831	155,1	5,16	1,76
22°26'36,13"	,386	2,11	2,73	1,05	2,005	3,136	39,38	4,626	168,8	5,02	1,59
25°16'55,72"	,326	2,21	3,38	1,11	1,992	3,196	38,64	4,545	175,5	4,95	1,50
17°38'38,32"	,493	1,94	1,97	,994	1,955	3,088	39,99	4,829	155,6	5,15	1,75
22°25'53,55"	,386	2,11	2,73	1,05	2,007	3,114	39,66	4,628	169,6	5,01	1,59
25°15'10,85"	,326	2,21	3,38	1,11	1,996	1,196	38,64	4,549	176,2	4,95	1,49
17°36'34,89"	,493	1,94	1,97	,993	1,959	3,088	39,99	4,825	156,1	5,15	1,74
22°23'50,14"	,386	2,11	2,73	1,05	2,012	3,114	39,66	4,630	170,3	5,00	1,59
25°13'25,99"	,326	2,21	3,38	1,10	2,001	3,210	38,48	4,555	177,1	4,94	1,48
17°34'31,46"	,493	1,94	1,97	,991	1,962	3,088	39,99	4,821	157,0	5,14	1,74
22°22' 5,84"	,386	2,11	2,73	1,05	2,016	3,114	39,66	4,631	171,3	4,99	1,58
25°11'59,66"	,326	2,21	3,38	1,10	2,005	3,210	38,48	4,557	177,8	4,93	1,47
17°33'29,75"	,493	1,94	1,97	,990	1,964	3,069	40,24	4,819	157,7	5,13	1,74
22°20' 2,42"	,386	2,11	2,73	1,05	2,018	3,114	39,66	4,632	172,1	4,98	1,57
25°11'16,46"	,326	2,21	3,38	1,10	2,007	3,210	38,48	4,562	178,4	4,92	1,47
17°32'28,03"	,493	1,94	1,97	,989	1,966	3,085	40,04	4,817	158,2	5,13	1,72
22°19'19,84"	,386	2,11	2,73	1,04	2,023	3,128	39,49	4,636	172,6	4,98	1,56
25° 9'31,60"	,326	2,21	3,38	1,10	2,012	3,185	38,77	4,566	179,4	4,92	1,47
17°31'26,31"	,493	1,94	1,97	,988	1,969	3,085	40,04	4,814	158,6	5,12	1,72
22°17'16,41"	,386	2,11	2,73	1,04	2,029	3,105	39,77	4,637	173,3	4,97	1,56
25° 8' 5,27"	,326	2,21	3,38	1,09	2,016	3,185	38,77	4,569	180,0	4,91	1,47

$$z_1 = 22 \; ; \; H = -\,0,918523657$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°40'48,88"	,490	1,96	2,00	1,05	1,867	3,168	40,84	4,935	142,4	5,31	1,95
23°24'17,89"	,383	2,12	2,77	1,14	1,865	3,241	39,92	4,558	154,0	5,16	1,76
26° 4'28,68"	,325	2,21	3,40	1,20	1,845	3,318	38,99	4,407	160,4	5,09	1,66
18°37'52,16"	,490	1,96	2,00	1,05	1,873	3,168	40,84	4,929	143,9	5,29	1,93
23°20'40,76"	,383	2,12	2,77	1,13	1,874	3,241	39,92	4,562	156,4	5,15	1,74
26° 1'26,40"	,325	2,21	3,40	1,19	1,854	3,332	38,83	4,415	161,9	5,09	1,63

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	$d_{\theta 1}$
1	2	3	4	5	6	7	8	9	10

$$z_1 = 22 \ ; \ H = -\,0{,}918523657$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	$d_{\theta 1}$
	28,–	20°	0	0	24,–	1,631	1,082	47° 2' 6,09"	22,339
34	28,5	22°36' 1,84"	0,532	0,3	24,54	1,482	1,073	48°30'20,02"	23,128
	28,8	23°59'37,88"	0,879	0,5	24,84	1,390	1,069	49°34'14,17"	23,643
	28,5	20°	0	0	24,–	1,634	1,086	47° 2' 6,09"	22,333
35	29,–	22°33'29,15"	0,531	0,3	24,54	1,486	1,073	48°30'20,02"	23,118
	29,3	23°55'51,16"	0,878	0,5	24,85	1,394	1,069	49°34'14,17"	23,634
	29,–	20°	0	0	24,–	1,637	1,088	47° 2' 6,09"	22,326
36	29,5	22°31' 1,37"	0,531	0,3	24,54	1,490	1,075	48°30'20,02"	23,109
	29,8	23°52'12,00"	0,876	0,5	24,85	1,398	1,069	49°34'14,17"	23,624
	29,5	20°	0	0	24,–	1,640	1,090	47° 2' 6,09"	22,319
37	30,–	22°28'38,25"	0,530	0,3	24,54	1,493	1,075	48°30'20,02"	23,102
	30,3	23°48'39,56"	0,875	0,5	24,85	1,402	1,071	49°34'14,17"	23,616
	30,–	20°	0	0	24,–	1,642	1,092	47° 2' 6,09"	22,315
38	30,5	22°26'19,65"	0,530	0,3	24,54	1,497	1,077	48°30'20,02"	23,092
	30,8	23°45'13,55"	0,874	0,5	24,85	1,406	1,071	49°34'14,17"	23,606
	30,5	20°	0	0	24,–	1,645	1,096	47° 2' 6,09"	22,308
39	31,–	22°24' 5,27"	0,529	0,3	24,54	1,500	1,080	48°30'20,02"	23,085
	31,3	23°41'53,67"	0,873	0,5	24,85	1,409	1,071	49°34'14,17"	23,599
	31,–	20°	0	0	24,–	1,647	1,098	47° 2' 6,09"	22,304
40	31,5	22°21'54,96"	0,529	0,3	24,54	1,503	1,080	48°30'20,02"	23,078
	31,8	23°38'39,66"	0,872	0,5	24,86	1,413	1,071	49°34'14,17"	23,590
	31,5	20°	0	0	24,–	1,650	1,100	47° 2' 6,09"	22,297
41	32,–	22°19'48,54"	0,528	0,3	24,54	1,506	1,080	48°30'20,02"	23,070
	32,3	23°35'31,26"	0,871	0,5	24,86	1,416	1,071	49°34'14,17"	23,584
	32,–	20°	0	0	24,–	1,652	1,103	47° 2' 6,09"	22,293
42	32,5	22°17'45,52"	0,528	0,3	24,54	1,509	1,080	48°30'20,02"	23,063
	32,8	23°32'28,23"	0,870	0,5	24,86	1,419	1,071	49°34'14,17"	23,577
	32,5	20°	0	0	24,–	1,654	1,105	47° 2' 6,09"	22,288
43	33,–	22°15'46,65"	0,528	0,3	24,55	1,512	1,082	48°30'20,02"	23,056
	33,3	23°29'10,33"	0,869	0,5	24,86	1,424	1,071	49°34'14,17"	23,564
	33,5	20°	0	0	24,–	1,658	1,107	47° 2' 6,09"	22,279
45	34,–	22°11'58,35"	0,527	0,3	24,55	1,517	1,082	48°30'20,02"	23,044
	34,3	23°23'49,11"	0,867	0,5	24,87	1,428	1,069	49°34'14,17"	23,556
	34,–	20°	0	0	24,–	1,660	1,109	47° 2' 6,09"	22,275
46	34,5	22°10' 8,94"	0,526	0,3	24,55	1,520	1,082	48°30'20,02"	23,037
	34,8	23°21'21,39"	0,866	0,5	24,87	1,430	1,069	49°34'14,17"	23,552
	34,5	20°	0	0	24,–	1,662	1,111	47° 2' 6,09"	22,271
47	35,–	22° 8'27,53"	0,526	0,3	24,55	1,522	1,040	48°30'20,02"	23,033
	35,3	23°18'26,02"	0,865	0,5	24,87	1,434	1,034	49°34'14,17"	23,542
	35,–	20°	0	0	24,–	1,664	1,055	47° 2' 6,09"	22,266
48	35,5	22° 6'38,98"	0,526	0,3	24,55	1,525	1,040	48°30'20,02"	23,026
	35,8	23°15'50,83"	0,864	0,5	24,87	1,436	1,034	49°34'14,17"	23,538
	35,5	20°	0	0	24,–	1,667	1,056	47° 2' 6,09"	22,260
49	36,–	22° 4'58,19"	0,525	0,3	24,55	1,527	1,040	48°30'20,02"	23,021
	36,3	23°13'19,65"	0,863	0,5	24,87	1,439	1,034	49°34'14,17"	23,531
	36,–	20°	0	0	24,–	1,668	1,057	47° 2' 6,09"	22,257
50	36,5	22° 3'22,04"	0,525	0,3	24,55	1,529	1,040	48°30'20,02"	23,016
	36,8	23°10'52,34"	0,862	0,5	24,88	1,441	1,033	49°34'14,17"	23,527

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 22 \; ; \; H = -\,0{,}918523657$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°30'59,79"	,490	1,96	2,01	1,04	1,886	3,149	41,09	4,914	147,0	5,25	1,90
23°13'26,54"	,383	2,12	2,77	1,12	1,890	3,212	40,28	4,567	159,4	5,11	1,72
25°54' 6,87"	,325	2,21	3,40	1,18	1,871	3,308	39,11	4,427	165,1	5,05	1,61
18°28' 3,06"	,490	1,96	2,01	1,04	1,891	3,130	41,34	4,908	148,3	5,24	1,90
23° 9'49,43"	,383	2,12	2,77	1,12	1,899	3,212	40,28	4,569	161,1	5,09	1,70
25°51' 5,21"	,325	2,21	3,40	1,18	1,879	3,298	39,23	4,433	166,7	5,04	1,60
18°25' 6,34"	,490	1,96	2,01	1,03	1,897	3,146	41,12	4,902	149,8	5,22	1,87
23° 6'30,84"	,383	2,12	2,77	1,11	1,907	3,205	40,37	4,571	162,5	5,08	1,69
25°47'45,54"	,325	2,21	3,40	1,17	1,881	3,298	39,23	4,439	168,3	5,02	1,59
18°22' 9,61"	,790	1,96	2,01	1,03	1,903	3,127	41,38	4,895	151,3	5,20	1,86
23° 3'52,63"	,383	2,12	2,77	1,11	1,914	3,205	40,37	4,575	164,0	5,06	1,68
25°44'43,85"	,325	2,21	3,40	1,17	1,895	3,288	39,35	4,445	169,5	5,01	1,58
18°20'11,80"	,490	1,96	2,01	1,03	1,907	3,127	41,38	4,891	152,6	5,19	1,85
22°59'56,99"	,383	2,12	2,77	1,10	1,923	3,182	40,65	4,576	165,3	5,05	1,68
25°41'24,18"	,325	2,21	3,40	1,16	1,904	3,264	39,64	4,450	171,0	5,00	1,58
18°17'15,07"	,490	1,96	2,01	1,03	1,913	3,127	41,38	4,885	153,7	5,18	1,83
22°57'18,78"	,383	2,12	2,77	1,10	1,929	3,197	40,47	4,579	166,5	5,04	1,66
25°39' 3,40"	,325	2,21	3,40	1,16	1,911	3,278	39,47	4,457	172,3	4,98	1,56
18°15'17,25"	,490	1,96	2,01	1,02	1,916	3,107	41,64	4,881	154,9	5,16	1,83
22°54'40,57"	,383	2,12	2,77	1,10	1,935	3,175	40,75	4,582	167,9	5,03	1,65
25°36' 1,68"	,325	2,21	3,40	1,15	1,919	3,278	39,47	4,461	173,8	4,97	1,55
18°12'20,52"	,490	1,96	2,01	1,02	1,922	3,107	41,64	4,875	156,1	5,15	1,82
22°52' 2,35"	,383	2,12	2,77	1,09	1,942	3,175	40,75	4,584	169,3	5,01	1,64
25°33'40,89"	,325	2,21	3,40	1,15	1,924	3,254	39,76	4,467	175,0	4,96	1,55
18°10'22,71"	,490	1,96	2,01	1,02	1,926	3,123	41,42	4,870	157,3	5,14	1,79
22°49'24,14"	,383	2,12	2,77	1,09	1,949	3,152	41,04	4,586	170,6	5,00	1,64
25°31'20,09"	,325	2,21	3,40	1,15	1,931	3,267	39,60	4,473	176,3	4,94	1,53
18° 8'24,88"	,490	1,96	2,01	1,02	1,930	3,104	41,68	4,866	158,4	5,12	1,79
22°46'45,92"	,383	2,12	2,77	1,08	1,955	3,167	40,86	4,588	171,6	4,99	1,62
25°27' 1,47"	,325	2,21	3,40	1,14	1,943	3,243	39,90	4,476	177,9	4,93	1,53
18° 4'29,21"	,490	1,96	2,01	1,01	1,938	3,104	41,68	4,858	160,8	5,10	1,77
22°42' 9,88"	,383	2,12	2,77	1,08	1,967	3,144	41,15	4,594	174,0	4,97	1,61
25°23'59,71"	,325	2,21	3,40	1,14	1,947	3,256	39,73	4,488	180,1	4,91	1,50
18° 2'31,42"	,490	1,96	2,01	1,01	1,942	3,085	41,94	4,854	161,8	5,09	1,77
22°39'31,66"	,383	2,12	2,77	1,07	1,973	3,158	40,96	4,595	175,2	4,96	1,59
25°22'37,80"	,325	2,21	3,40	1,13	1,954	3,232	40,03	4,493	181,2	4,90	1,50
18° 0'33,61"	,490	1,96	2,01	1,01	1,945	3,085	41,94	4,850	162,7	5,08	1,76
22°37'52,35"	,383	2,12	2,77	1,07	1,977	3,158	40,96	4,598	176,3	4,94	1,58
25°19'18,05"	,325	2,21	3,40	1,13	1,964	3,232	40,03	4,497	182,3	4,89	1,50
17°58'35,79"	,490	1,96	2,01	1,01	1,950	3,085	41,94	4,846	163,6	5,07	1,75
22°35'14,12"	,383	2,12	2,77	1,07	1,983	3,136	41,25	4,599	177,4	4,93	1,58
25°17'56,13"	,325	2,21	3,40	1,13	1,968	3,245	39,87	4,503	183,3	4,88	1,48
17°55'39,07"	,490	1,96	2,01	1,00	1,955	3,065	42,21	4,839	164,6	5,06	1,75
22°33'16,30"	,383	2,12	2,77	1,07	1,988	3,136	41,25	4,602	178,4	4,92	1,57
25°15'17,35"	,325	2,21	3,40	1,12	1,974	3,221	40,17	4,506	184,4	4,87	1,48
17°54'40,16"	,490	1,96	2,01	1,00	1,958	3,081	41,99	4,837	165,4	5,05	1,73
22°31'36,98"	,383	2,12	2,77	1,06	1,993	3,136	41,25	4,604	179,5	4,91	1,57
25°13'55,41"	,325	2,21	3,40	1,12	1,978	3,221	40,17	4,512	185,6	4,86	1,47

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
					$z_1 = 22$; H = − 0,918523657				
	36,5	20°	0	0	24,-	1,669	1,117	47° 2' 6,09"	22,255
51	37,-	22° 1'44,43"	0,525	0,3	24,55	1,531	1,082	48°30'20,02"	23,012
	37,3	23° 8'28,73"	0,862	0,5	24,88	1,444	1,067	49°34'14,17"	23,520
	37,-	20°	0	0	24,-	1,671	1,119	47° 2' 6,09"	22,251
52	37,5	22° 0'11,27"	0,524	0,3	24,55	1,533	1,082	48°30'30,02"	23,007
	37,8	23° 6' 8,70"	0,861	0,5	24,88	1,446	1,067	49°34'14,17"	23,515
	37,5	20°	0	0	24,-	1,673	1,121	47° 2' 6,09"	22,246
53	38,-	21°58'40,46"	0,524	0,3	24,55	1,535	1,082	48°30'20,02"	23,002
	38,3	23° 3'52,11"	0,860	0,5	24,88	1,448	1,065	49°34'14,17"	23,511
	38,-	20°	0	0	24,-	1,674	1,121	47° 2' 6,09"	22,244
54	38,5	21°57'11,91"	0,524	0,3	24,55	1,537	1,082	48°30'20,02"	22,997
	38,8	23° 1'38,84"	0,859	0,5	24,88	1,451	1,065	49°34'14,17"	23,504
	39,-	20°	0	0	24,-	1,677	1,124	47° 2' 6,09"	22,238
56	39,5	21°54'21,28"	0,523	0,3	24,55	1,541	1,082	48°30'20,02"	22,988
	39,8	22°57'21,77"	0,858	0,5	24,88	1,455	1,063	49°34'14,17"	23,495
	39,5	20°	0	0	24,-	1,679	1,126	47° 2' 6,09"	22,233
57	40,-	21°52'59,03"	0,523	0,3	24,55	1,543	1,082	48°30'20,02"	22,983
	40,3	22°55'17,78"	0,857	0,5	24,89	1,457	1,063	49°34'14,17"	23,490
	40,-	20°	0	0	24,-	1,680	1,126	47° 2' 6,09"	22,231
58	40,5	21°51'38,74"	0,523	0,3	24,56	1,545	1,082	48°30'20,02"	22,979
	40,8	22°53'16,59"	0,857	0,5	24,89	1,459	1,063	49°34'14,17"	23,486
	40,5	20°	0	0	24,-	1,681	1,128	47° 2' 6,09"	22,229
59	41,-	21°50'20,33"	0,522	0,3	24,56	1,547	1,082	48°30'20,02"	22,974
	41,3	22°51'18,21"	0,856	0,5	24,89	1,460	1,061	49°34'14,17"	23,484
	41,-	20°	0	0	24,-	1,683	1,128	47° 2' 6,09"	22,225
60	41,5	21°49' 3,74"	0,522	0,3	24,56	1,548	1,082	48°30'20,02"	22,972
	41,8	22°49'22,50"	0,855	0,5	24,89	1,462	1,061	49°34'14,17"	23,480
	41,5	20°	0	0	24,-	1,684	1,130	47° 2' 6,09"	22,223
61	42,-	21°47'48,90"	0,522	0,3	24,56	1,550	1,082	48°30'20,02"	22,967
	42,3	22°47'29,39"	0,855	0,5	24,89	1,464	1,059	49°34'14,17"	23,476
	42,-	20°	0	0	24,-	1,685	1,130	47° 2' 6,09"	22,220
62	42,5	21°46'35,76"	0,522	0,3	24,56	1,552	1,082	48°30'20,02"	22,962
	42,8	22°45'38,77"	0,854	0,5	24,89	1,466	1,029	49°34'14,17"	23,471
	42,5	20°	0	0	24,-	1,686	1,064	47° 2' 6,09"	22,218
63	43,-	21°45'24,26"	0,521	0,3	24,56	1,553	1,040	48°30'20,02"	22,960
	43,3	22°43'50,57"	0,853	0,5	24,89	1,468	1,029	49°34'14,17"	23,466
	43,5	20°	0	0	24,-	1,689	1,065	47° 2' 6,09"	22,212
65	44,-	21°43' 5,96"	0,521	0,3	24,56	1,556	1,040	48°30'20,02"	23,953
	44,3	22°40'21,11"	0,852	0,5	24,90	1,471	1,028	49°34'14,17"	23,460
					$z_1 = 23$; H = − 0,924118174				
	28,-	20°	0	0	25,-	1,633	1,033	47°30'32,98"	23,346
33	28,5	22°36' 1,84"	0,532	0,3	25,54	1,485	1,030	48°56'38,38"	24,133
	28,8	23°59'37,38"	0,879	0,5	25,84	1,394	1,030	49°58'52,47"	24,644
	28,5	20°	0	0	25,-	1,636	1,034	47°30'32,98"	23,340
34	29,-	22°33'29,15"	0,531	0,3	25,54	1,489	1,031	48°56'38,38"	24,123
	29,3	23°55'51,16"	0,878	0,5	25,85	1,398	1,030	49°58'52,47"	24,635

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	Z^2_{Hc}	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 22 \; ; \; H = -\,0{,}918523657$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	Z^2_{Hc}	K_{g-H}	K_{m-H}	S_{F1}
17°53'41,25"	,490	1,96	2,00	1,00	1,959	3,081	41,99	4,835	166,4	5,04	1,72
22°29'57,66"	,383	2,12	2,77	1,06	1,997	3,128	41,37	4,607	180,4	4,91	1,56
25°11'34,56"	,325	2,21	3,40	1,12	1,985	3,210	40,31	4,515	186,6	4,85	1,47
17°51'43,44"	,490	1,96	2,00	,999	1,963	3,081	41,99	4,831	167,2	5,03	1,71
22°27'59,84"	,383	2,12	2,77	1,06	2,002	3,128	41,37	4,609	181,4	4,90	1,55
25° 9'54,68"	,325	2,21	3,40	1,12	1,990	3,210	40,31	4,520	187,5	4,84	1,46
17°49'45,61"	,490	1,96	2,00	,997	1,968	3,062	42,26	4,827	168,0	5,02	1,71
22°26'20,40"	,383	2,12	2,77	1,06	2,006	3,128	41,37	4,611	181,1	4,89	1,55
25° 8'32,73"	,325	2,21	3,40	1,11	1,994	3,210	40,31	4,525	188,7	4,83	1,45
17°48'46,70"	,490	1,96	2,00	,996	1,969	3,062	42,26	4,825	169,0	5,01	1,70
22°24'22,70"	,383	2,12	2,77	1,05	2,011	3,105	41,67	4,613	183,3	4,88	1,55
25° 5'53,93"	,325	2,21	3,40	1,11	2,001	3,210	40,31	4,528	189,6	4,83	1,45
17°45'49,98"	,490	1,96	2,00	,993	1,975	3,062	42,26	4,819	170,6	5,00	1,69
22°21' 4,06"	,383	2,12	2,77	1,05	2,020	3,111	41,59	4,617	185,0	4,87	1,53
25° 2'52,09"	,325	2,21	3,40	1,10	2,009	3,198	40,45	4,536	191,6	4,81	1,44
17°43'52,16"	,490	1,96	2,00	,991	1,980	3,062	42,26	4,814	171,3	4,99	1,68
22°19' 6,24"	,383	2,12	2,77	1,05	2,025	3,111	41,59	4,618	185,9	4,86	1,52
25° 1'12,19"	,325	2,21	3,40	1,10	2,014	3,198	40,45	4,541	192,4	4,80	1,43
17°42'53,25"	,490	1,96	2,00	,990	1,981	3,062	42,26	4,812	172,2	4,98	1,67
22°17'26,91"	,383	2,12	2,77	1,05	2,029	3,096	41,79	4,620	186,7	4,85	1,52
24°59'50,22"	,325	2,21	3,43	1,10	2,018	3,173	40,77	4,544	193,2	4,80	1,44
17°41'54,34"	,490	1,96	2,00	,989	1,983	3,042	42,53	4,810	172,8	4,98	1,68
22°15'29,09"	,383	2,12	2,77	1,04	2,034	3,096	41,79	4,621	187,6	4,84	1,52
24°59' 9,23"	,325	2,21	3,40	1,10	2,020	3,173	40,77	4,550	194,2	4,79	1,43
17°39'56,52"	,490	1,96	2,00	,987	1,987	3,042	42,53	4,806	173,7	4,97	1,67
22°14'48,67"	,383	2,12	2,77	1,04	2,036	3,096	41,79	4,624	188,3	4,84	1,51
24°57'29,33"	,325	2,21	3,40	1,09	2,025	3,186	40,60	4,553	195,0	4,78	1,42
17°38'57,61"	,490	1,96	2,00	,986	1,988	3,058	42,31	4,804	174,2	4,96	1,65
22°12'50,85"	,383	2,12	2,77	1,04	2,041	3,096	41,79	4,625	189,1	4,83	1,51
24°56' 7,34"	,325	2,21	3,40	1,09	2,028	3,186	40,60	4,557	196,0	4,77	1,41
17°37'58,71"	,490	1,96	2,00	,985	1,991	3,058	42,31	4,802	175,1	4,96	1,65
22°11' 1,52"	,383	2,12	2,77	1,04	2,046	3,087	41,91	4,626	189,9	4,82	1,50
24°54'27,44"	,325	2,21	3,40	1,09	2,033	3,186	40,60	4,560	196,7	4,77	1,41
17°36'59,79"	,490	1,96	2,00	,984	1,993	3,058	42,31	4,800	175,5	4,95	1,64
22°10'12,62"	,383	2,12	2,77	1,04	2,048	3,087	41,91	4,629	190,5	4,82	1,50
24°52'47,54"	,325	2,21	3,40	1,09	2,038	3,162	40,92	4,563	197,4	4,76	1,41
17°34' 3,06"	,490	1,96	2,00	,981	1,999	3,038	42,59	4,794	176,8	4,94	1,64
22° 7'34,37"	,383	2,12	2,77	1,03	2,055	3,087	41,91	4,632	191,9	4,81	1,49
24°50'26,62"	,325	2,21	3,40	1,08	2,045	3,174	40,76	4,571	199,1	4,75	≈1,40

$$z_1 = 23 \; ; \; H = -\,0{,}924118174$$

α_{Fe}	ρ_F	S_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	Z^2_{Hc}	K_{g-H}	K_{m-H}	S_{F1}
18°38' 6,52"	,487	1,98	2,03	1,04	1,898	3,123	43,30	4,910	158,2	5,13	1,86
23° 9' 7,38"	,382	2,13	2,79	1,12	1,896	3,205	42,21	4,561	171,3	4,99	1,68
25°42'52,99"	,324	2,22	3,43	1,19	1,863	3,322	40,71	4,420	176,8	4,94	1,57
18°35'17,47"	,487	1,98	2,03	1,04	1,903	3,123	43,30	4,904	160,0	5,11	1,84
23° 6'54,66"	,382	2,13	2,79	1,12	1,905	3,205	42,21	4,564	173,0	4,98	1,66
25°39'59,03"	,324	2,22	3,43	1,18	1,885	3,288	41,14	4,427	178,6	4,92	1,57

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 23 \; ; \; H = -\,0{,}924118174$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	29,–	20°	0	0	25,–	1,639	1,073	47°30'32,98"	23,333
35	29,5	22°31' 1,37"	0,531	0,3	25,54	1,493	1,065	48°56'38,38"	24,114
	29,8	23°52'12,00"	0,876	0,5	25,85	1,403	1,063	49°58'52,47"	24,623
	29,5	20°	0	0	25,–	1,642	1,075	47°30'32,98"	23,326
36	30,–	22°28'38,25"	0,530	0,3	25,54	1,497	1,067	48°56'38,38"	24,105
	30,3	23°48'39,56"	0,875	0,5	25,85	1,406	1,063	49°58'52,47"	24,617
	30,–	20°	0	0	25,–	1,645	1,077	47°30'32,98"	23,320
37	30,5	22°26'19,65"	0,530	0,3	25,54	1,500	1,067	48°56'38,38"	24,097
	30,8	23°45'13,55"	0,874	0,5	25,85	1,410	1,063	49°58'52,47"	24,607
	30,5	20°	0	0	25,–	1,648	1,082	47°30'32,98"	23,313
38	31,–	22°24' 5,27"	0,529	0,3	25,54	1,504	1,069	48°56'38,38"	24,087
	31,3	23°41'53,67"	0,873	0,5	25,85	1,414	1,063	49°58'52,47"	24,600
	31,–	20°	0	0	25,–	1,650	1,084	47°30'32,98"	23,308
39	31,5	22°21'54,96"	0,529	0,3	25,54	1,507	1,069	48°56'38,38"	24,080
	31,8	23°38'39,66"	0,872	0,5	25,86	1,418	1,063	49°58'52,47"	24,589
	31,5	20°	0	0	25,–	1,653	1,086	47°30'32,98"	23,302
40	32,–	22°19'48,54"	0,528	0,3	25,54	1,510	1,071	48°56'38,38"	24,073
	32,3	23°35'31,26"	0,871	0,5	25,86	1,421	1,063	49°58'52,47"	24,582
	32,–	20°	0	0	25,–	1,655	1,088	47°30'32,98"	23,297
41	32,5	22°17'45,52"	0,528	0,3	25,54	1,513	1,071	48°56'38,38"	24,067
	32,8	23°32'28,23"	0,870	0,5	25,86	1,424	1,063	49°58'52,47"	24,576
	32,5	20°	0	0	25,–	1,657	1,090	47°30'32,98"	23,293
42	33,–	22°15'46,65"	0,528	0,3	25,55	1,516	1,071	48°56'38,38"	24,059
	33,3	23°29'10,33"	0,869	0,5	25,86	1,429	1,063	49°58'52,47"	24,566
	33,–	20°	0	0	25,–	1,659	1,092	47°30'32,98"	23,289
43	33,5	22°13'50,57"	0,527	0,3	25,55	1,519	1,073	48°56'38,38"	24,052
	33,8	23°26'37,36"	0,867	0,5	25,87	1,431	1,063	49°58'52,47"	24,559
	33,5	20°	0	0	25,–	1,662	1,094	47°30'32,98"	23,282
44	34,–	22°11'58,35"	0,527	0,3	25,55	1,522	1,073	48°56'38,38"	24,045
	34,3	23°23'49,11"	0,867	0,5	25,87	1,434	1,063	49°58'52,47"	24,552
	34,–	20°	0	0	25,–	1,664	1,047	47°30'32,98"	23,279
45	34,5	22°10' 8,94"	0,526	0,3	25,55	1,524	1,036	48°56'38,38"	24,040
	34,8	23°21'21,39"	0,866	0,5	25,87	1,436	1,031	49°58'52,47"	24,548
	35,–	20°	0	0	25,–	1,668	1,048	47°30'32,98"	23,269
47	35,5	22° 6'35,98"	0,526	0,3	25,55	1,531	1,036	48°56'38,38"	24,024
	35,8	23°15'50,83"	0,864	0,5	25,87	1,442	1,031	49°58'52,47"	24,535
	35,5	20°	0	0	25,–	1,670	1,049	47°30'32,98"	23,265
48	36,–	22° 4'58,15"	0,525	0,3	25,55	1,532	1,036	48°56'53,38"	24,021
	36,3	23°13'19,65"	0,863	0,5	25,87	1,445	1,031	49°58'52,47"	24,527
	36,–	20°	0	0	25,–	1,671	1,050	47°30'32,98"	23,262
49	36,5	22° 3'22,04"	0,525	0,3	25,55	1,534	1,037	48°56'38,38"	24,017
	36,8	23°10'52,34"	0,862	0,5	25,88	1,447	1,031	49°58'52,47"	24,523
	36,5	20°	0	0	25,–	1,673	1,050	47°30'32,98"	23,258
50	37,–	22° 1'44,43"	0,525	0,3	25,55	1,536	1,037	48°56'38,38"	24,013
	37,3	23° 8'28,73"	0,862	0,5	25,88	1,450	1,030	49°58'52,47"	24,517
	37,–	20°	0	0	25,–	1,675	1,051	47°30'32,98"	23,254
51	37,5	22° 0'11,27"	0,524	0,3	25,55	1,539	1,037	48°56'38,38"	24,005
	37,8	23° 6' 8,70"	0,861	0,5	25,88	1,452	1,030	48°58'52,47"	24,512

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 23 \; ; \; H = -\,0{,}924118174$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°32'28,44"	,487	1,98	2,03	1,04	1,909	3,104	43,57	4,897	161,5	5,09	1,84
23° 2'30,33"	,382	2,13	2,79	1,11	1,913	3,197	42,31	4,566	174,6	4,96	1,65
25°35'52,88"	,324	2,22	3,43	1,17	1,895	3,288	41,14	4,431	180,2	4,91	1,55
18°29'39,38"	,487	1,98	2,03	1,03	1,915	3,104	43,57	4,891	163,2	5,07	1,82
22°59' 2,86"	,382	2,13	2,79	1,11	1,921	3,197	42,31	4,567	176,1	4,95	1,64
25°33'56,05"	,324	2,22	3,43	1,17	1,901	3,278	41,27	4,438	181,9	4,89	1,54
18°26'50,35"	,487	1,98	2,03	1,03	1,921	3,101	43,62	4,884	164,8	5,06	1,80
22°56'13,82"	,382	2,13	2,79	1,11	1,928	3,175	42,61	4,571	177,8	4,93	1,63
25°30'45,44"	,324	2,22	3,43	1,16	1,910	3,278	41,27	4,443	183,7	4,88	1,53
18°24' 1,30"	,487	1,98	2,03	1,03	1,927	3,101	43,62	4,879	166,0	5,04	1,79
22°52'46,34"	,382	2,13	2,79	1,10	1,937	3,167	42,71	4,572	179,3	4,92	1,62
25°27'34,83"	,324	2,22	3,43	1,16	1,917	3,267	41,40	4,448	185,3	4,86	1,52
18°22' 8,60"	,487	1,98	2,03	1,02	1,931	3,101	43,62	4,875	167,5	5,03	1,77
22°50'15,21"	,382	2,13	2,79	1,10	1,944	3,167	42,71	4,574	180,9	4,90	1,61
25°24'41,61"	,324	2,22	3,43	1,15	1,926	3,267	41,40	4,453	186,9	4,85	1,51
18°19'19,95"	,487	1,98	2,03	1,02	1,937	3,081	43,90	4,868	169,0	5,01	1,77
22°47'44,06"	,382	2,13	2,79	1,09	1,950	3,167	42,71	4,577	182,2	4,89	1,60
25°22'15,69"	,324	2,22	3,43	1,15	1,933	3,256	41,54	4,458	188,5	4,84	1,50
18°17'26,86"	,487	1,98	2,03	1,02	1,941	3,081	43,90	4,864	170,3	5,00	1,76
22°45'12,93"	,382	2,13	2,79	1,09	1,956	3,158	42,82	4,579	183,7	4,88	1,59
25°20'13,05"	,324	2,22	3,43	1,15	1,939	3,256	41,54	4,464	189,9	4,82	1,49
18°15'34,17"	,487	1,98	2,03	1,02	1,945	3,081	43,90	4,860	171,6	4,99	1,74
22°42'41,79"	,382	2,13	2,79	1,09	1,963	3,158	42,82	4,581	185,2	4,86	1,58
25°17' 2,41"	,324	2,22	3,43	1,14	1,948	3,232	41,85	4,467	191,4	4,81	1,49
18°13'41,48"	,487	1,98	2,03	1,02	1,948	3,062	44,18	4,856	172,8	4,98	1,74
22°40'10,66"	,382	2,13	2,79	1,08	1,970	3,136	43,13	4,583	186,3	4,85	1,58
25°14'48,13"	,324	2,22	3,43	1,14	1,954	3,245	41,68	4,473	192,7	4,80	1,47
18°10'52,43"	,487	1,98	2,03	1,01	1,954	3,062	44,18	4,850	174,3	4,97	1,73
22°37'21,61"	,382	2,13	2,79	1,08	1,976	3,150	42,94	4,584	187,8	4,84	1,56
25°12'16,44"	,324	2,22	3,43	1,13	1,960	3,245	41,68	4,477	194,1	4,79	1,46
18° 8'59,74"	,487	1,98	2,03	1,01	1,958	3,077	43,95	4,846	175,2	4,95	1,71
22°35'46,82"	,382	2,13	2,79	1,08	1,981	3,150	42,94	4,588	189,0	4,83	1,55
25°10'58,50"	,324	2,22	3,43	1,13	1,965	3,221	41,99	4,483	195,3	4,78	1,46
18° 5'14,34"	,487	1,98	2,03	1,01	1,966	3,058	44,24	4,837	177,8	4,93	1,69
22°29'48,18"	,382	2,13	2,79	1,07	1,996	3,128	43,25	4,588	191,8	4,81	1,54
25° 6'29,87"	,324	2,22	3,43	1,12	1,977	3,234	41,82	4,492	197,8	4,76	1,44
18° 3'21,65"	,487	1,98	2,03	1,00	1,970	3,058	44,24	4,833	178,8	4,92	1,68
22°28'51,83"	,382	2,13	2,79	1,07	1,999	3,119	43,37	4,593	192,9	4,80	1,53
25° 3'58,19"	,324	2,22	3,43	1,12	1,985	3,210	42,14	4,496	199,0	4,75	1,44
18° 2'25,53"	,487	1,98	2,03	1,00	1,972	3,058	44,24	4,831	179,7	4,91	1,68
22°27'11,02"	,382	2,13	2,79	1,06	2,003	3,119	43,37	4,595	193,7	4,79	1,52
25° 2'40,21"	,324	2,22	3,43	1,12	1,989	3,210	42,14	4,501	200,1	4,74	1,43
18° 0'32,61"	,487	1,98	2,03	1,00	1,976	3,038	44,52	4,827	181,0	4,90	1,67
22°25'42,22"	,382	2,13	2,79	1,06	2,007	3,119	43,77	4,598	194,9	4,78	1,52
25° 0'25,87"	,324	2,22	3,43	1,11	1,995	3,223	41,97	4,505	201,6	4,73	1,42
17°58'39,90"	,487	1,98	2,03	,999	1,980	3,038	44,52	4,823	182,0	4,89	1,67
22°22'53,17"	,382	2,13	2,79	1,06	2,015	3,096	43,68	4,598	196,1	4,77	1,52
24°58'50,53"	,324	2,22	3,43	1,11	2,000	3,198	42,29	4,510	202,6	4,72	1,42

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 23 \; ; \; H = -\,0,924118174$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	37,5	20°	0	0	25,-	1,677	1,107	47°30'32,98"	23,249
52	38,-	21°58'40,46"	0,524	0,3	25,55	1,541	1,075	48°56'38,38"	24,001
	38,3	23° 3'52,11"	0,860	0,5	25,88	1,454	1,061	49°58'52,47"	24,508
	38,-	20°	0	0	25,-	1,678	1,107	47°30'32,98"	23,247
53	38,5	21°57'11,91"	0,524	0,3	25,55	1,543	1,075	48°56'38,38"	23,996
	38,8	23° 1'38,84"	0,859	0,5	25,88	1,457	1,059	49°58'52,47"	24,500
	38,5	20°	0	0	25,-	1,680	1,109	47°30'32,98"	23,243
54	39,-	21°55'45,54"	0,523	0,3	25,55	1,545	1,075	48°56'38,38"	23,991
	39,3	22°59'28,76"	0,858	0,5	25,88	1,459	1,059	49°58'52,47"	24,497
	39,-	20°	0	0	25,-	1,681	1,109	47°30'32,98"	23,241
55	39,5	21°54'21,28"	0,523	0,3	25,55	1,547	1,075	48°56'38,38"	23,987
	39,8	22°57'21,77"	0,858	0,5	25,88	1,461	1,059	49°58'52,47"	24,492
	39,5	20°	0	0	25,-	1,683	1,111	47°30'32,98"	23,236
56	40,-	21°52'59,83"	0,523	0,3	25,55	1,549	1,075	48°56'38,38"	23,982
	40,3	22°55'17,78"	0,857	0,5	25,89	1,463	1,059	49°58'52,47"	24,487
	40,-	20°	0	0	25,-	1,684	1,113	47°30'32,98"	23,234
57	40,5	21°51'38,74"	0,523	0,3	25,56	1,550	1,075	48°56'38,38"	23,980
	40,8	22°53'16,59"	0,857	0,5	25,89	1,465	1,057	49°58'52,47"	24,483
	40,5	20°	0	0	25,-	1,685	1,113	47°30'32,98"	23,232
58	41,-	21°50'20,33"	0,522	0,3	25,56	1,552	1,075	48°56'38,38"	23,975
	41,3	22°51'18,21"	0,856	0,5	25,89	1,467	1,057	49°58'52,47"	24,479
	41,-	20°	0	0	25,-	1,687	1,115	47°30'32,98"	23,228
59	41,5	21°49' 3,14"	0,522	0,3	25,56	1,554	1,073	48°56'38,38"	23,971
	41,8	22°49'22,50"	0,855	0,5	25,89	1,469	1,055	49°58'52,47"	24,475
	41,5	20°	0	0	25,-	1,688	1,115	47°30'32,98"	23,225
60	42,-	21°47'48,90"	0,522	0,3	25,56	1,556	1,075	48°56'38,38"	23,966
	42,3	22°47'29,39"	0,855	0,5	25,89	1,471	1,055	49°58'52,47"	24,470
	42,-	20°	0	0	25,-	1,689	1,117	47°30'32,98"	23,223
61	42,5	21°46'35,76"	0,522	0,3	25,56	1,557	1,073	48°56'38,38"	23,964
	42,8	22°45'38,77"	0,854	0,5	25,89	1,473	1,055	49°58'52,47"	24,466
	42,5	20°	0	0	25,-	1,691	1,057	47°30'32,98"	23,219
62	43,-	21°45'24,26"	0,521	0,3	25,56	1,559	1,036	48°56'38,38"	23,959
	43,3	22°43'50,57"	0,853	0,5	25,89	1,474	1,026	49°58'52,47"	24,464
	43,-	20°	0	0	25,-	1,692	1,058	47°30'32,98"	23,217
63	43,5	21°44'14,34"	0,521	0,3	25,56	1,560	1,036	48°56'38,38"	23,957
	43,8	22°42' 4,71"	0,853	0,5	25,89	1,476	1,026	49°58'52,47"	24,459
	44,-	20°	0	0	25,-	1,694	1,058	47°30'32,98"	23,212
65	44,5	21°41'59,05"	0,521	0,3	25,56	1,563	1,036	48°56'38,38"	23,950
	44,8	22°38'39,70"	0,852	0,5	25,90	1,479	1,025	49°58'52,47"	24,453
	44,5	20°	0	0	25,-	1,695	1,059	47°30'32,98"	23,210
66	45,-	21°40'53,58"	0,520	0,3	25,56	1,565	1,036	48°56'38,38"	23,945
	45,3	22°37' 0,42"	0,851	0,5	25,90	1,481	1,025	49°58'52,47"	24,448

$$z_1 = 24 \; ; \; H = -\,0,929246482$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	29,5	20°	0	0	26,-	1,644	1,031	47°56'55,19"	24,333
35	30,-	22°28'38,75"	0,530	0,3	26,54	1,500	1,028	49°20'57,81"	25,109
	30,3	23°48'39,56"	0,875	0,5	26,85	1,410	1,027	50°21'36,72"	25,617

$\alpha_{F\theta}$	ρ_F	s_F	q_s	$h_{F\theta}$	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
11	12	13	14	15	16	17	18	19	20	21	22

$$z_1 = 23 \; ; \; H = -\,0{,}924118174$$

$\alpha_{F\theta}$	ρ_F	s_F	q_s	$h_{F\theta}$	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
17°56'47,21"	,487	1,98	2,03	,996	1,984	3,054	44,30	4,819	182,9	4,88	1,65
22°21'18,38"	,382	2,13	2,79	1,06	2,018	3,096	43,69	4,600	197,2	4,76	1,51
24°57'32,25"	,324	2,22	3,43	1,11	2,004	3,198	42,29	4,514	203,7	4,71	1,41
17°55'50,86"	,487	1,98	2,03	,996	1,986	3,054	44,30	4,817	184,0	4,87	1,64
22°19'25,68"	,382	2,13	2,79	1,05	2,023	3,110	43,49	4,602	198,2	4,76	1,49
24°55' 0,85"	,324	2,22	3,43	1,10	2,011	3,211	42,12	4,517	205,1	4,70≈1,40	
17°53'58,18"	,487	1,98	2,03	,994	1,990	3,034	44,58	4,812	184,9	4,87	1,64
22°17'50,88"	,382	2,13	2,79	1,05	2,028	3,110	43,49	4,604	199,2	4,75	1,49
24°53'42,85"	,324	2,22	3,43	1,10	2,015	3,186	42,45	4,521	206,1	4,69	1,40
17°53' 1,82"	,487	1,98	2,03	,993	1,992	3,034	44,58	4,812	185,9	4,86	1,63
22°16'16,07"	,382	2,13	2,79	1,05	2,032	3,087	43,81	4,606	200,2	4,74	1,49
24°52' 7,49"	,324	2,22	3,43	1,10	2,019	3,186	42,45	4,526	207,0	4,69≈1,40	
17°51' 9,13"	,487	1,98	2,03	,990	1,996	3,034	44,58	4,806	186,8	4,85	1,63
22°14'23,37"	,382	2,13	2,79	1,05	2,037	3,087	43,81	4,607	201,3	4,73	1,48
24°50'32,14"	,324	2,22	3,43	1,10	2,024	3,186	42,45	4,530	207,9	4,68^F	1,38
17°50'12,78"	,487	1,98	2,03	,990	1,998	3,034	44,58	4,804	187,4	4,84	1,62
22°13'44,91"	,382	2,13	2,79	1,05	2,039	3,087	43,81	4,610	202,2	4,72	1,48
24°49'14,13"	,324	2,22	3,43	1,10	2,028	3,199	42,28	4,533	209,2	4,67^F	1,38
17°49'16,43"	,487	1,98	2,03	,989	2,000	3,034	44,58	4,802	188,5	4,84	1,61
22°11'52,21"	,382	2,13	2,79	1,04	2,044	3,101	41,45	4,612	203,7	4,72	1,46
24°47'38,77"	,324	2,22	3,43	1,09	2,032	3,174	42,61	4,537	210,1	4,66^F	1,38
17°47'23,73"	,487	1,98	2,03	,987	2,004	3,014	44,87	4,798	189,2	4,83	1,62
22°10'17,40"	,382	2,13	2,79	1,04	2,048	3,078	43,94	4,613	204,4	4,71	1,46
24°46'20,74"	,324	2,22	3,43	1,09	2,037	3,174	42,61	4,541	211,3	4,65^F	1,37
17°46'27,38"	,487	1,98	2,03	,985	2,007	3,014	44,87	4,796	190,1	4,82	1,61
22° 8'24,70"	,382	2,13	2,79	1,04	2,053	3,078	43,94	4,614	204,9	4,70	1,46
24°44'45,38"	,324	2,22	3,43	1,09	2,042	3,174	42,61	4,544	212,2	4,65^F	1,37
17°45'31,04"	,487	1,98	2,03	,984	2,009	3,014	44,87	4,794	190,7	4,82	1,60
22° 7'46,25"	,382	2,13	2,79	1,04	2,055	3,078	43,94	4,617	206,1	4,69	1,45
24°43'10,03"	,324	2,22	3,43	1,09	2,046	3,187	42,44	4,545	213,1	4,64^F	1,36
17°43'38,84"	,487	1,98	2,03	,983	2,012	3,014	44,87	4,790	191,7	4,81	1,59
22° 5'53,55"	,382	2,13	2,79	1,03	2,060	3,078	43,94	4,618	207,0	4,69	1,45
24°42'31,01"	,324	2,22	3,43	1,08	2,048	3,187	42,44	4,552	214,1	4,63^F	1,35
17°42'42,00"	,487	1,98	2,03	,982	2,014	3,029	44,65	4,787	192,3	4,80	1,58
22° 5'15,08"	,382	2,13	2,79	1,03	2,062	3,078	43,94	4,620	207,8	4,68	1,44
24°40'55,63"	,324	2,22	3,43	1,08	2,053	3,162	42,77	4,555	214,9	4,63	1,35
17°40'49,30"	,487	1,98	2,03	,979	2,019	3,010	44,94	4,783	194,1	4,79	1,58
22° 2'43,92"	,382	2,13	2,79	1,03	2,069	3,069	44,08	4,624	209,4	4,67	1,43
24°38'58,58"	,324	2,22	3,43	1,08	2,058	3,162	42,77	4,562	216,8	4,62^F	1,34
17°39'52,95"	,487	1,98	2,03	,978	2,021	3,010	44,94	4,781	194,5	4,78	1,57
22° 0'51,22"	,382	2,13	2,79	1,03	2,074	3,069	44,08	4,624	210,2	4,66	1,43
24°37'23,20"	,324	2,22	3,43	1,08	2,064	3,162	42,77	4,565	217,5	4,61^F	1,34

$$z_1 = 24 \; ; \; H = -\,0{,}929246480$$

$\alpha_{F\theta}$	ρ_F	s_F	q_s	$h_{F\theta}$	L	Y_{FS}	K_{g-F}	$Z^2_{H\varepsilon}$	K_{g-H}	K_{m-H}	S_{F1}
18°36'15,38"	,484	1,99	2,06	1,03	1,926	3,097	45,57	4,887	174,9	4,96	1,77
22°55'10,55"	,380	2,14	2,82	1,12	1,926	3,189	44,26	4,562	188,5	4,84	1,60
25°23'39,20"	,323	2,23	3,47	1,17	1,907	3,291	42,88	4,431	194,4	4,79	1,50

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 24 \ ; \ H = -\ 0,929246482$$

z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	30,-	20°	0	0	26,-	1,647	1,065	47°56'55,19"	24,326
36	30,5	22°26'19,65"	0,530	0,3	26,54	1,504	1,059	49°20'57,81"	25,099
	30,8	23°45'13,55"	0,874	0,5	26,85	1,414	1,055	50°21'36,72"	25,608
	30,5	20°	0	0	26,-	1,650	1,067	47°56'55,19"	24,319
37	31,-	22°24' 5,27"	0,529	0,3	26,54	1,507	1,061	49°20'57,81"	25,092
	31,3	23°41'53,67"	0,873	0,5	26,85	1,418	1,057	50°21'36,72"	25,598
	31,-	20°	0	0	26,-	1,653	1,071	47°56'55,19"	24,313
38	31,5	22°21'54,96"	0,529	0,3	26,54	1,511	1,061	49°20'57,81"	25,083
	31,8	23°38'39,66"	0,872	0,5	26,86	1,422	1,057	50°21'36,72"	25,590
	31,5	20°	0	0	26,-	1,655	1,073	47°56'55,19"	24,308
39	32,-	22°19'48,54"	0,528	0,3	26,54	1,514	1,063	49°20'57,81"	25,076
	32,3	23°35'31,26"	0,871	0,5	26,86	1,426	1,057	50°21'36,72"	25,580
	32,-	20°	0	0	26,-	1,658	1,075	47°56'55,19"	24,302
40	32,5	22°17'45,52"	0,528	0,3	26,54	1,517	1,063	49°20'57,81"	25,069
	32,8	23°32'28,23"	0,870	0,5	26,86	1,429	1,057	50°21'36,72"	25,574
	32,5	20°	0	0	26,-	1,660	1,077	47°56'55,19"	24,297
41	33,-	22°15'46,65"	0,528	0,3	26,55	1,520	1,063	49°20'57,81"	25,062
	33,3	23°29'16,33"	0,869	0,5	26,86	1,433	1,057	50°21'36,72"	25,564
	33,-	20°	0	0	26,-	1,662	1,080	47°56'55,19"	24,293
42	33,5	22°13'50,57"	0,527	0,3	26,55	1,523	1,065	49°20'57,81"	25,055
	33,8	23°26'37,36"	0,867	0,5	26,87	1,436	1,059	50°21'36,72"	25,558
	33,5	20°	0	0	26,-	1,665	1,082	47°56'55,19"	24,286
43	34,-	22°11'58,35"	0,527	0,3	26,55	1,526	1,065	49°20'57,81"	25,047
	34,3	23°23'49,11"	0,867	0,5	26,87	1,439	1,059	50°21'36,72"	25,550
	34,-	20°	0	0	26,-	1,667	1,082	47°56'55,19"	24,282
44	34,5	22°10' 8,94"	0,526	0,3	26,55	1,529	1,065	49°20'57,81"	25,040
	34,8	23°21'21,39"	0,866	0,5	26,87	1,441	1,059	50°21'36,72"	25,546
	34,5	20°	0	0	26,-	1,669	1,084	47°56'55,19"	24,278
45	35,-	22° 8'27,53"	0,526	0,3	26,55	1,531	1,065	49°20'57,81"	25,036
	35,3	23°18'26,02"	0,865	0,5	26,87	1,445	1,057	50°21'36,72"	25,537
	35,-	20°	0	0	26,-	1,671	1,086	47°56'55,19"	24,273
46	35,5	22° 6'35,98"	0,526	0,3	26,55	1,534	1,067	49°20'57,81"	25,029
	35,8	23°15'50,83"	0,864	0,5	26,87	1,447	1,057	50°21'36,72"	25,533
	36,5	20°	0	0	26,-	1,673	1,088	47°56'55,19"	24,269
47	36,-	22° 4'58,19"	0,525	0,3	26,55	1,537	1,067	49°20'57,81"	25,021
	36,3	23°13'19,65"	0,863	0,5	26,87	1,450	1,057	50°21'36,72"	25,526
	36,5	20°	0	0	26,-	1,676	1,090	47°56'55,19"	24,262
49	37,-	22° 1'44,43"	0,525	0,3	26,55	1,541	1,067	49°20'57,81"	25,013
	37,3	23° 8'28,73"	0,862	0,5	26,88	1,455	1,057	50°21'36,72"	25,515
	37,-	20°	0	0	26,-	1,678	1,092	47°56'55,19"	24,256
50	37,5	22° 0'11,27"	0,524	0,3	26,55	1,543	1,067	49°20'57,81"	25,008
	37,8	23° 6' 8,70"	0,861	0,5	26,88	1,458	1,057	50°21'36,72"	25,508
	37,5	20°	0	0	26,-	1,680	1,094	47°56'55,19"	24,254
51	38,-	21°58'40,46"	0,524	0,3	26,55	1,546	1,067	49°20'57,81"	25,001
	38,3	23° 3'52,11"	0,860	0,5	26,88	1,460	1,055	50°21'36,72"	25,504
	38,-	20°	0	0	26,-	1,682	1,094	47°56'55,19"	24,249
52	38,5	21°57'11,91"	0,524	0,3	26,55	1,548	1,067	49°20'57,81"	24,996
	38,8	23° 1'38,84"	0,859	0,5	26,88	1,462	1,055	50°21'36,72"	25,500

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 24 \; ; \; H = -\,0{,}929246482$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18°33'33,38"	,484	1,99	2,06	1,03	1,932	3,077	4,881	4,94	1,77	4,62		
22°51'15,98"	,380	2,14	2,82	1,11	1,936	3,181	4,563	4,82	1,59	4,67		
25°20'36,90"	,323	2,23	3,47	1,17	1,915	3,281	4,436	4,77	1,49	4,72		
18°30'51,38"	,484	1,99	2,06	1,03	1,938	3,077	4,875	4,92	1,75	4,62		
22°49'9,90"	,380	2,14	2,82	1,11	1,942	3,181	4,566	4,81	1,58	4,67		
25°17'34,60"	,323	2,23	3,47	1,16	1,924	3,281	4,441	4,76	1,48	4,72		
18°28'9,38"	,484	1,99	2,06	1,03	1,944	3,058	4,868	4,91	1,75	4,61		
22°45'51,75"	,380	2,14	2,82	1,10	1,951	3,158	4,567	4,79	1,56	4,66		
25°14'49,13"	,323	2,23	3,47	1,16	1,932	3,270	4,446	4,74	1,47	4,71	<1	H
18°26'21,38"	,484	1,99	2,06	1,02	1,948	3,073	4,864	4,90	1,72	4,62		
22°43'26,59"	,380	2,14	2,82	1,10	1,957	3,173	4,569	4,78	1,55	4,66		
25°11'46,81"	,323	2,23	3,47	1,15	1,941	3,270	4,450	4,73	1,46	4,71		
18°23'39,39"	,484	1,99	2,06	1,02	1,954	3,073	4,858	4,88	1,71	4,62		
22°41'1,94"	,380	2,14	2,82	1,09	1,963	3,150	4,572	4,77	1,55	4,65		
25°9'38,49"	,323	2,23	3,47	1,15	1,946	3,245	4,455	4,71	1,46	4,70		
18°21'52,38"	,484	1,99	2,06	1,02	1,957	3,054	4,854	4,87	1,70	4,61		
22°38'37,28"	,380	2,14	2,82	1,09	1,970	3,150	4,574	4,75	1,54	4,65		
25°6'36,16"	,323	2,23	3,47	1,14	1,955	3,259	4,460	4,70	1,44	4,71	1,00	F
18°20'3,38"	,484	1,99	2,06	1,02	1,962	3,054	4,850	4,86	1,69	4,61	<1	H
22°36'12,61"	,380	2,14	2,82	1,09	1,976	3,128	4,576	4,74	1,54	4,64		H
25°4'27,83"	,323	2,23	3,47	1,14	1,959	3,259	4,464	4,69	1,43	4,71	1,00	F
18°17'21,38"	,484	1,99	2,06	1,02	1,968	3,054	4,843	4,84	1,68	4,61	<1	H
22°33'30,61"	,380	2,14	2,82	1,08	1,984	3,141	4,577	4,73	1,52	4,65		H
25°2'2,66"	,323	2,23	3,47	1,14	1,969	3,247	4,469	4,68	1,43	4,70	1,01	F
18°15'33,39"	,484	1,99	2,06	1,01	1,972	3,034	4,839	4,83	1,67	4,60	<1	H
22°31'5,85"	,380	2,14	2,82	1,08	1,991	3,119	4,578	4,72	1,52	4,64		H
25°0'48,32"	,323	2,23	3,47	1,13	1,973	3,247	4,474	4,67	1,42	4,70	1,01	F
18°13'45,38"	,484	1,99	2,06	1,01	1,975	3,034	4,835	4,82	1,66	4,60	<1	H
22°29'35,28"	,380	2,14	2,82	1,08	1,994	3,119	4,581	4,70	1,51	4,64		H
24°57'45,97"	,323	2,23	3,47	1,13	1,982	3,223	4,474	4,66	1,41	4,69	1,01	F
18°11'57,38"	,484	1,99	2,06	1,01	1,980	3,049	4,831	4,81	1,64	4,60	<1	H
22°27'10,62"	,380	2,14	2,82	1,07	2,001	3,133	4,583	4,70	1,49	4,65		H
24°56'31,61"	,323	2,23	3,47	1,12	1,985	3,236	4,483	4,65	≈1,40	4,70	1,02	F
18°10'9,38"	,484	1,99	2,06	1,01	1,984	3,049	4,827	4,80	1,63	4,60	<1	H
22°24'28,62"	,380	2,14	2,82	1,07	2,009	3,110	4,583	4,68	1,49	4,63		H
24°54'6,43"	,323	2,23	3,47	1,12	1,992	3,211	4,487	4,64	1,40	4,68	1,02	F
18°7'27,38"	,484	1,99	2,06	1,00	1,990	3,029	4,821	4,78	1,62	4,59	<1	H
22°21'27,29"	,380	2,14	2,82	1,07	2,017	3,110	4,588	4,66	1,47	4,63		H
24°50'43,69"	,323	2,23	3,47	1,12	2,003	3,211	4,496	4,62	1,38	4,68	1,02	F
18°4'45,38"	,484	1,99	2,06	1,00	1,997	3,029	4,817	4,77	1,61	4,59	<1	H
22°19'39,29"	,380	2,14	2,82	1,06	2,022	3,087	4,591	4,66	1,47	4,62		H
24°48'18,50"	,323	2,23	3,47	1,11	2,010	3,199	4,500	4,61	1,38	4,68	1,02	F
18°3'51,38"	,484	1,99	2,06	,997	1,998	3,029	4,812	4,76	1,60	4,59	<1	H
22°17'14,62"	,380	2,14	2,82	1,06	2,028	3,101	4,591	4,65	1,46	4,63		H
24°47'4,13"	,323	2,23	3,47	1,11	2,014	3,199	4,504	4,60	1,37	4,68	1,03	F
18°2'3,38"	,484	1,99	2,06	,997	2,002	3,010	4,808	4,75	1,60	4,58	<1	H
22°15'26,62"	,380	2,14	2,82	1,06	2,033	3,101	4,593	4,64	1,45	4,63		H
24°45'32,93"	,323	2,23	3,47	1,11	2,018	3,199	4,508	4,59	1,36	4,68	1,03	F

DM = димензионирање, H- сп.Hertz, F- во однос на свиткување

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$z_1 = 24$; $H = -0,929246482$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	38,5	20°	0	0	26,-	1,683	1,096	47°30'32,98"	24,247
53	39,-	21°55'45,54"	0,523	0,3	26,55	1,550	1,067	48°56'38,38"	24,992
	39,3	22°59'28,76"	0,858	0,5	26,88	1,465	1,055	49°58'52,47"	25,498
	39,-	20°	0	0	26,-	1,685	1,098	47°30'32,98"	24,243
54	39,5	21°54'21,28"	0,523	0,3	26,55	1,552	1,067	48°56'38,38"	24,987
	39,8	22°57'21,37"	0,858	0,5	26,88	1,467	1,055	49°58'52,47"	25,488
	39,5	20°	0	0	26,-	1,686	1,098	47°30'32,98"	24,241
55	40,-	21°52'59,83"	0,523	0,3	26,55	1,554	1,067	48°56'38,38"	24,982
	40,3	22°55'17,28"	0,857	0,5	26,89	1,469	1,053	49°58'52,47"	25,484
	40,-	20°	0	0	26,-	1,688	1,100	47°30'32,98"	24,236
56	40,5	21°51'38,74"	0,523	0,3	26,56	1,556	1,067	48°56'38,38"	24,978
	40,8	22°53'16,59"	0,857	0,5	26,89	1,471	1,053	49°58'52,47"	25,480
	40,5	20°	0	0	26,-	1,689	1,100	47°30'32,98"	24,234
57	41,-	21°50'20,33"	0,522	0,3	26,56	1,557	1,069	48°56'38,38"	24,975
	41,3	22°51'18,21"	0,856	0,5	26,89	1,473	1,053	49°58'52,47"	25,475
	41,-	20°	0	0	26,-	1,691	1,103	47°30'32,98"	24,230
58	41,5	21°49'3,74"	0,522	0,3	26,56	1,559	1,067	48°56'38,38"	24,971
	41,8	22°49'22,50"	0,855	0,5	26,89	1,475	1,053	49°58'52,47"	25,471
	41,5	20°	0	0	26,-	1,692	1,103	47°30'32,98"	24,228
59	42,-	21°47'48,90"	0,522	0,3	26,56	1,561	1,067	48°56'38,38"	24,966
	42,3	22°47'29,39"	0,855	0,5	26,89	1,477	1,051	49°58'52,47"	25,467
	42,5	20°	0	0	26,-	1,695	1,105	47°30'32,98"	24,221
61	43,-	21°45'24,66"	0,521	0,3	26,56	1,564	1,067	48°56'38,38"	24,959
	43,3	22°43'50,57"	0,853	0,5	26,89	1,481	1,051	49°58'52,47"	25,458
	43,-	20°	0	0	26,-	1,696	1,107	47°30'32,98"	24,219
62	43,5	21°44'14,34"	0,521	0,3	26,56	1,566	1,067	48°56'38,38"	24,955
	43,9	22°42'4,71"	0,853	0,5	26,89	1,482	1,049	49°58'52,47"	25,456
	43,5	20°	0	0	26,-	1,697	1,107	47°30'32,98"	24,217
63	44,-	21°43'5,96"	0,521	0,3	26,56	1,567	1,067	48°56'38,38"	24,953
	44,3	22°40'21,11"	0,852	0,5	26,89	1,484	1,049	49°58'52,47"	25,451
	44,-	20°	0	0	26,-	1,698	1,107	47°30'32,98"	24,215
64	44,5	21°41'59,05"	0,521	0,3	26,56	1,569	1,067	48°56'38,38"	24,948
	44,8	22°38'39,70"	0,852	0,5	26,90	1,486	1,047	49°58'52,47"	25,447
	44,5	20°	0	0	26,-	1,699	1,109	47°30'32,98"	24,212
65	45,-	21°40'53,58"	0,520	0,3	26,56	1,570	1,067	47°56'38,38"	24,946
	45,3	22°37'0,42"	0,851	0,5	26,90	1,487	1,047	49°58'52,47"	25,445
	45,-	20°	0	0	26,-	1,701	1,109	47°30'32,98"	24,208
66	45,5	21°39'49,50"	0,520	0,3	26,56	1,572	1,067	48°56'38,38"	24,942
	45,8	22°35'23,19"	0,851	0,5	26,90	1,489	1,047	49°58'52,47"	25,441
	45,5	20°	0	0	26,-	1,702	1,111	47°30'32,98"	24,206
67	46,-	21°38'46,76"	0,520	0,3	26,56	1,574	1,067	48°56'38,38"	24,937
	46,3	22°33'47,96"	0,850	0,5	26,90	1,491	1,047	49°58'52,47"	25,436
	46,-	20°	0	0	26,-	1,703	1,111	47°30'32,98"	24,204
68	46,5	21°37'45,32"	0,520	0,3	26,56	1,575	1,067	48°56'38,38"	24,934
	46,8	22°32'14,66"	0,850	0,5	26,90	1,492	1,044	49°58'52,47"	25,434
	46,5	20°	0	0	26,-	1,704	1,111	47°30'32,98"	24,202
69	47,-	21°36'45,15"	0,520	0,3	26,56	1,576	1,065	48°56'38,38"	24,932
	47,3	22°30'43,24"	0,849	0,5	26,90	1,494	1,044	49°58'52,47"	25,430

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 24 \; ; \; H = -\,0{,}929246482$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18° 1' 9,38"	,484	1,99	2,06	,994	2,004	3,010	4,806	4,74	1,60	4,58	0,75	H
22°13'55,94"	,380	2,14	2,82	1,05	2,037	3,078	4,594	4,63	1,45	4,62	≈ 1	H
24°43'24,55"	,323	2,23	3,47	1,10	2,025	3,212	4,511	4,58	1,35	4,68	1,03	F
17°59'21,38"	,484	1,99	2,06	,992	2,008	3,025	4,802	4,73	1,58	4,59	0,96	H
22°12'25,27"	,380	2,14	2,82	1,05	2,042	3,078	4,596	4,62	1,44	4,62	≈ 1	H
24°41'53,35"	,323	2,23	3,47	1,10	2,030	3,187	4,515	4,57	1,35	4,67	1,03	F
17°58'27,38"	,484	1,99	2,06	,991	2,010	3,025	4,800	4,72	1,57	4,59	0,96	H
22°10'37,27"	,380	2,14	2,82	1,05	2,047	3,092	4,598	4,61	1,43	4,62	1	H
24°40'22,15"	,323	2,23	3,47	1,10	2,034	3,187	4,519	4,56	1,35	4,67	1,04	F
17°56'39,38"	,484	1,99	2,06	,989	2,015	3,005	4,796	4,72	1,57	4,58	0,96	H
22° 9' 6,59"	,380	2,14	2,82	1,04	2,052	3,092	4,599	4,60	1,42	4,62	1,01	H
24°39' 7,75"	,323	2,23	3,47	1,09	2,038	3,187	4,523	4,56	1,34	4,67	1,04	F
17°55'45,38"	,484	1,99	2,06	,988	2,017	3,005	4,794	4,71	1,57	4,58	0,96	H
22° 8'12,60"	,380	2,14	2,82	1,04	2,054	3,069	4,602	4,60	1,43	4,61	1,01	H
24°37'36,55"	,323	2,23	3,47	1,09	2,043	3,175	4,526	4,55	1,34	4,67	1,04	F
17°53'57,38"	,484	1,99	2,06	,986	2,020	3,005	4,790	4,70	1,56	4,58	0,96	H
22° 6'41,92"	,380	2,14	2,82	1,04	2,058	3,069	4,603	4,59	1,42	4,61	1,01	F
24°36' 5,35"	,323	2,23	3,47	1,09	2,047	3,175	4,530	4,54	1,33	4,67	1,04	F
17°53' 3,38"	,484	1,99	2,06	,985	2,022	3,005	4,787	4,69	1,55	4,58	0,96	H
22° 4'53,91"	,380	2,14	2,82	1,04	2,063	3,069	4,605	4,58	1,41	4,61	1,01	F
24°34'50,93"	,323	2,23	3,47	1,09	2,051	3,175	4,533	4,53	1,32	4,67	1,04	F
17°50'21,38"	,484	1,99	2,06	,982	2,029	2,985	4,781	4,68	1,55	4,57	0,97	H
22° 2'29,24"	,380	2,14	2,82	1,03	2,071	3,059	4,608	4,57	1,41	4,61	1,01	F
24°31'48,52"	,323	2,23	3,47	1,08	2,060	3,188	4,540	4,52	1,31	4,67	1,05	F
17°49'27,38"	,484	1,99	2,06	,980	2,031	2,985	4,779	4,67	1,54	4,57	0,97	H
22° 0'58,56"	,380	2,14	2,82	1,03	2,075	3,059	4,609	4,56	1,40	4,61	1,02	F
24°31'11,31"	,323	2,23	3,47	1,08	2,062	3,163	4,544	4,51	1,31	4,66	1,05	F
17°48'33,38"	,484	1,99	2,06	,980	2,033	2,985	4,777	4,67	1,54	4,57	0,97	H
22° 0' 4,56"	,380	2,14	2,82	1,03	2,077	3,059	4,612	4,56	1,39	4,61	1,02	F
24°29'40,10"	,323	2,23	3,47	1,08	2,068	3,163	4,547	4,51	1,31	4,66	1,05	F
17°47'39,38"	,484	1,99	2,06	,979	2,035	2,985	4,775	4,66	1,53	4,57	0,97	H
21°58'33,88"	,380	2,14	2,82	1,03	2,082	3,059	4,612	4,55	1,39	4,61	1,02	F
24°28'25,67"	,323	2,23	3,47	1,08	2,072	3,163	4,550	4,50	1,30	4,66	1,05	F
17°46'45,38"	,484	1,99	2,06	,978	2,038	2,985	4,773	4,65	1,52	4,57	0,97	H
21°57'39,88"	,380	2,14	2,82	1,03	2,084	3,059	4,614	4,54	1,38	4,61	1,02	F
24°27'48,45"	,323	2,23	3,47	1,07	2,074	3,163	4,554	4,49	1,30	4,66	1,06	F
17°44'57,38"	,484	1,99	2,06	,976	2,041	3,000	4,769	4,65	1,51	4,58	0,98	H
21°56' 9,20"	,380	2,14	2,82	1,03	2,088	3,036	4,615	4,54	1,39	4,60	1,02	F
24°26'17,24"	,323	2,23	3,47	1,07	2,080	3,175	4,557	4,49	1,29	4,67	1,06	F
17°44' 3,38"	,484	1,99	2,06	,975	2,043	2,980	4,767	4,64	1,51	4,57	0,98	H
21°54'21,20"	,380	2,14	2,82	1,02	2,093	3,049	4,615	4,53	1,38	4,60	1,02	F
24°24'46,01"	,323	2,23	3,47	1,07	2,083	3,150	4,559	4,48	1,29	4,65	1,06	F
17°43' 9,34"	,484	1,99	2,06	,974	2,045	2,980	4,765	4,64	1,51	4,57	0,98	H
21°53'27,19"	,380	2,14	2,82	1,02	2,096	3,049	4,617	4,53	1,37	4,60	1,03	F
24°24' 8,78"	,323	2,23	3,47	1,07	2,085	3,150	4,563	4,48	1,29	4,65	1,06	F
17°42'15,38"	,484	1,99	2,06	,973	2,047	2,980	4,762	4,63	1,50	4,57	0,98	H
21°52'50,51"	,380	2,14	2,82	1,02	2,098	3,049	4,619	4,52	1,36	4,60	1,03	F
24°22'37,57"	,323	2,23	3,47	1,07	2,090	3,150	4,565	4,47	1,29	4,65	1,06	F

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 25 \; ; \; H = -0,933962484$$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	31,-	20°	0	0	27,-	1,655	1,059	48°21'25,82"	25,318
37	31,5	22°21'54,96"	0,529	0,3	27,54	1,514	1,053	49°45'31,12"	26,087
	31,8	23°38'39,66"	0,872	0,5	27,86	1,426	1,051	50°42'39,41"	26,590
	31,5	20°	0	0	27,-	1,658	1,061	48°21'25,82"	25,312
38	32,-	22°19'45,54"	0,528	0,3	27,54	1,517	1,055	49°45'31,12"	26,080
	32,3	23°35'31,26"	0,871	0,5	27,86	1,429	1,051	50°42'39,41"	26,583
	32,-	20°	0	0	27,-	1,660	1,063	48°21'25,82"	25,307
39	32,5	22°17'45,52"	0,528	0,3	27,54	1,521	1,055	49°45'31,12"	26,073
	32,8	23°32'28,23"	0,870	0,5	27,86	1,433	1,051	50°42'39,41"	26,574
	32,5	20°	0	0	27,-	1,663	1,065	48°21'25,82"	25,301
40	33,-	22°15'46,65"	0,528	0,3	27,55	1,524	1,057	49°45'31,12"	26,064
	33,3	23°29'10,33"	0,869	0,5	27,86	1,438	1,053	50°42'39,41"	26,562
	33,-	20°	0	0	27,-	1,665	1,067	48°21'25,82"	25,296
41	33,5	22°13'50,57"	0,527	0,3	27,55	1,527	1,057	49°45'31,12"	26,057
	33,8	23°26'37,36"	0,867	0,5	27,87	1,440	1,053	50°42'39,41"	26,558
	33,5	20°	0	0	27,-	1,667	1,069	48°21'25,82"	25,292
42	34,-	22°11'58,35"	0,527	0,3	27,55	1,529	1,057	49°45'31,12"	26,052
	34,3	23°23'49,11"	0,867	0,5	27,87	1,443	1,053	50°42'39,41"	26,551
	34,-	20°	0	0	27,-	1,670	1,071	48°21'25,82"	25,286
43	34,5	22°10'8,94"	0,526	0,3	27,55	1,532	1,059	49°45'31,12"	26,045
	34,8	23°21'21,39"	0,866	0,5	27,87	1,446	1,053	50°42'39,41"	26,544
	34,5	20°	0	0	27,-	1,672	1,073	48°21'25,82"	25,281
44	35,-	22°8'27,53"	0,526	0,3	27,55	1,534	1,059	49°45'31,12"	26,041
	35,3	23°18'26,02"	0,865	0,5	27,87	1,449	1,053	50°42'39,41"	26,538
	35,-	20°	0	0	27,-	1,674	1,075	48°21'25,82"	25,277
45	35,5	22°6'35,98"	0,526	0,3	27,55	1,537	1,059	49°45'31,12"	26,034
	35,8	23°15'50,53"	0,864	0,5	27,87	1,452	1,053	50°42'39,41"	26,531
	35,5	20°	0	0	27,-	1,676	1,077	48°21'25,82"	25,272
46	36,-	22°4'58,19"	0,525	0,3	27,55	1,540	1,061	49°45'31,12"	26,026
	36,3	23°13'19,65"	0,863	0,5	27,87	1,455	1,053	50°42'39,41"	26,524
	36,-	20°	0	0	27,-	1,678	1,077	48°21'25,82"	25,268
47	36,5	22°3'22,04"	0,525	0,3	27,55	1,543	1,061	49°45'31,12"	26,019
	36,8	23°10'52,34"	0,862	0,5	27,88	1,458	1,053	50°42'39,41"	26,518
	36,5	20°	0	0	27,-	1,680	1,080	48°21'25,82"	25,264
48	37,-	22°1'44,43"	0,525	0,3	27,55	1,545	1,061	49°45'31,12"	26,015
	37,3	23°8'28,73"	0,862	0,5	27,88	1,460	1,053	50°42'39,41"	26,514
	37,-	20°	0	0	27,-	1,681	1,082	48°21'25,82"	25,262
49	37,5	22°0'11,27"	0,524	0,3	27,55	1,548	1,061	49°45'31,12"	26,007
	37,8	23°6'8,70"	0,861	0,5	27,88	1,463	1,051	50°42'39,41"	26,506
	38,-	20°	0	0	27,-	1,685	1,084	48°21'25,82"	25,253
51	38,5	21°57'11,91"	0,524	0,3	27,55	1,552	1,061	49°45'31,12"	25,998
	38,8	23°1'38,84"	0,859	0,5	27,88	1,468	1,051	50°42'39,41"	26,495
	38,5	20°	0	0	27,-	1,687	1,086	48°21'25,82"	25,249
52	39,-	21°55'45,54"	0,523	0,3	27,55	1,554	1,061	49°45'31,12"	25,994
	39,3	22°59'28,76"	0,858	0,5	27,88	1,470	1,051	50°42'39,41"	26,492
	39,-	20°	0	0	27,-	1,688	1,086	48°21'25,82"	25,246
53	39,5	21°54'21,28"	0,523	0,3	27,55	1,556	1,061	49°45'31,12"	25,990
	39,8	22°57'21,77"	0,858	0,5	27,88	1,472	1,051	50°42'39,41"	26,487

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 25 \; ; \; H = -\,0,933962484$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18°34'18,80"	,481	2,01	2,09	1,03	1,956	3,049	4,864	4,80	1,71	4,54	0,92	
22°42'21,96"	,378	2,14	2,82	1,10	1,943	3,181	4,562	4,69	1,52	4,61	0,97	
25° 5'29,83"	,322	2,23	3,47	1,15	1,937	3,270	4,439	4,64	1,44	4,65	1	
18°31'43,28"	,481	2,01	2,09	1,02	1,960	3,049	4,858	4,79	1,69	4,54	0,94	H
22°40'43,28"	,378	2,14	2,82	1,10	1,949	3,181	4,564	4,68	1,51	4,61	≈ 1	
25° 3' 3,25"	,322	2,23	3,47	1,15	1,944	3,245	4,445	4,63	1,44	4,64	1,02	
18°29'59,60"	,481	2,01	2,09	1,02	1,965	3,049	4,854	4,77	1,67	4,54	0,93	
22°37'50,35"	,378	2,14	2,82	1,09	1,955	3,173	4,564	4,66	1,50	4,60	0,98	
25° 0'26,10"	,322	2,23	3,47	1,14	1,952	3,259	4,448	4,62	1,42	4,64	1,01	F
18°27'24,09"	,481	2,01	2,09	1,02	1,971	3,029	4,848	4,76	1,67	3,53	0,93	H
22°34'34,00"	,378	2,14	2,82	1,09	1,964	3,173	4,566	4,65	1,49	4,60	0,98	H
24°56'39,56"	,322	2,23	3,47	1,14	1,963	3,234	4,451	4,60	1,42	4,63	1,01	F
18°25'40,40"	,481	2,01	2,09	1,02	1,975	3,045	4,843	4,74	1,65	4,54	0,94	H
22°32'15,30"	,378	2,14	2,82	1,08	1,971	3,150	4,568	4,64	1,49	4,59	0,99	H
24°55'28,54"	,322	2,23	3,47	1,14	1,967	3,247	4,457	4,59	1,40	4,64	1,01	F
18°23'56,72"	,481	2,01	2,09	1,01	1,979	3,045	4,839	4,73	1,64	4,54	0,94	H
22°30'31,62"	,378	2,14	2,82	1,08	1,975	3,164	4,572	4,62	1,47	4,60	0,99	H
24°53' 9,34"	,322	2,23	3,47	1,13	1,974	3,223	4,462	4,58	1,40	4,63	1,02	F
18°21'21,20"	,481	2,01	2,09	1,01	1,984	3,025	4,833	4,72	1,63	4,53	0,94	H
22°28'12,79"	,378	2,14	2,82	1,08	1,982	3,141	4,571	4,61	1,47	4,59	0,99	H
24°51' 6,47"	,322	2,23	3,47	1,13	1,980	3,223	4,467	4,57	1,39	4,63	1,02	F
18°19'37,52"	,481	2,01	2,09	1,01	1,989	3,025	4,829	4,71	1,62	4,53	0,94	H
22°26'46,05"	,378	2,14	2,82	1,08	1,986	3,141	4,576	4,60	1,46	4,59	≈ 1	H
24°49' 3,59"	,322	2,23	3,47	1,13	1,986	3,236	4,470	4,56	1,37	4,63	1,02	F
18°17'53,84"	,481	2,01	2,09	1,01	1,993	3,025	4,825	4,70	1,61	4,53	0,95	H
22°24'27,34"	,378	2,14	2,82	1,07	1,992	3,141	4,575	4,59	1,45	4,59	≈ 1	H
24°47' 0,70"	,322	2,23	3,47	1,12	1,993	3,211	4,475	4,55	1,37	4,62	1,03	F
18°16'10,16"	,481	2,01	2,09	1,00	1,997	3,005	4,821	4,68	1,61	4,52	0,75	H
22°21'51,82"	,378	2,14	2,82	1,07	2,000	3,133	4,579	4,58	1,44	4,58	1	H
24°44'41,37"	,322	2,23	3,47	1,12	2,000	3,211	4,478	4,54	1,37	4,62	1,03	F
18°14'26,48"	,481	2,01	2,09	1,00	2,001	3,005	4,817	4,67	1,59	4,52	0,95	H
22°19'33,31"	,378	2,14	2,82	1,06	2,005	3,133	4,581	4,57	1,43	4,58	1	H
24°42'38,61"	,322	2,23	3,47	1,11	2,006	3,199	4,482	4,53	1,36	4,61	1,03	F
18°12'42,81"	,481	2,01	2,09	1,00	2,005	3,020	4,812	4,66	1,58	4,53	0,96	H
22°18' 6,24"	,378	2,14	2,82	1,06	2,011	3,133	4,581	4,56	1,42	4,58	1,01	F
24°41'27,54"	,322	2,23	3,47	1,11	2,010	3,199	4,487	4,52	1,35	4,61	1,03	F
18°11'50,97"	,481	2,01	2,09	,999	2,007	3,020	4,810	4,65	1,57	4,53	0,96	H
22°15'30,71"	,378	2,14	2,82	1,06	2,019	3,110	4,581	4,55	1,42	4,57	1,01	F
24°39' 8,33"	,322	2,23	3,47	1,11	2,018	3,199	4,490	4,50	1,34	4,61	1 ,04	
18° 8'23,60"	,481	2,01	2,09	,995	2,015	3,000	4,802	4,63	1,56	4,52	0,96	H
22°12'20,15"	,378	2,14	2,82	1,05	2,028	3,124	4,585	4,53	≈1,40	4,58	1,02	F
24°35'38,05"	,322	2,23	3,47	1,10	2,029	3,187	4,497	4,61	1,33	4,61	1,04	F
18° 6'39,92"	,481	2,01	2,09	,993	2,019	3,000	4,798	4,62	1,55	4,52	0,97	H
22°10'53,29"	,378	2,14	2,82	1,05	2,032	3,101	4,587	4,52	1,40	4,57	1,02	F
24°34'26,96"	,322	2,23	3,47	1,10	2,032	3,187	4,502	4,48	1,32	4,61	1,04	F
18° 5'48,08"	,481	2,01	2,09	,992	2,022	3,000	4,796	4,61	1,54	4,52	0,97	H
22° 9'26,40"	,378	2,14	2,82	1,05	2,036	3,101	4,589	4,51	1,39	4,57	1,02	F
24°32'59,59"	,322	2,23	3,47	1,10	2,037	3,187	4,506	4,47	1,32	4,61	1,05	F

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 25 \; ; \; H = -\,0{,}933962484$$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	39,5	20°	0	0	27,-	1,690	1,088	48°21'25,82"	25,242
54	40,-	21°52'59,83"	0,523	0,3	27,55	1,558	1,061	49°45'31,12"	25,985
	40,3	22°55'17,28"	0,857	0,5	27,89	1,474	1,049	50°42'39,41"	26,482
	40,-	20°	0	0	27,-	1,691	1,088	48°21'25,82"	25,240
55	40,5	21°51'48,74"	0,523	0,3	27,56	1,560	1,061	49°45'31,12"	25,980
	40,8	22°53'16,59"	0,857	0,5	27,89	1,477	1,049	50°42'39,41"	26,476
	40,5	20°	0	0	27,-	1,693	1,090	48°21'25,82"	25,236
56	41,-	21°50'20,33"	0,522	0,3	27,56	1,562	1,061	49°45'31,12"	25,975
	41,3	22°51'18,21"	0,856	0,5	27,89	1,479	1,049	50°42'39,41"	26,471
	41,-	20°	0	0	27,-	1,694	1,090	48°21'25,82"	25,233
57	41,5	21°49' 3,74"	0,522	0,3	27,56	1,564	1,061	49°45'31,12"	25,971
	41,8	22°49'22,50"	0,855	0,5	27,89	1,481	1,049	50°42'39,41"	26,467
	41,5	20°	0	0	27,-	1,696	1,092	48°21'25,82"	25,229
58	42,-	21°47'48,90"	0,522	0,3	27,56	1,566	1,061	49°45'31,12"	25,966
	42,3	22°47'29,39"	0,855	0,5	27,89	1,483	1,047	50°42'39,41"	26,463
	42,-	20°	0	0	27,-	1,697	1,092	48°21'25,82"	25,227
59	42,5	21°46'35,76"	0,522	0,3	27,56	1,568	1,061	49°45'31,12"	25,962
	42,8	22°45'38,77"	0,854	0,5	27,89	1,485	1,047	50°42'39,41"	26,458
	43,-	20°	0	0	27,-	1,699	1,096	48°21'25,82"	25,223
61	43,5	21°44'14,34"	0,521	0,3	27,56	1,571	1,061	49°45'31,12"	25,955
	43,8	22°42' 4,71"	0,853	0,5	27,89	1,487	1,044	50°42'39,41"	26,455
	43,5	20°	0	0	27,-	1,701	1,096	48°21'25,82"	25,218
62	44,-	21°43' 5,96"	0,521	0,3	27,56	1,573	1,061	49°45'31,12"	25,950
	44,3	22°40'21,11"	0,852	0,5	27,90	1,490	1,044	50°42'39,41"	26,447
	44,-	20°	0	0	27,-	1,702	1,096	48°21'25,82"	25,216
63	44,5	21°41'59,05"	0,521	0,3	27,56	1,574	1,061	49°45'31,12"	25,948
	44,8	22°38'39,70"	0,852	0,5	27,90	1,492	1,044	50°42'39,41"	26,444
	44,5	20°	0	0	27,-	1,703	1,098	48°21'25,82"	25,214
64	45,-	21°40'53,58"	0,520	0,3	27,56	1,576	1,061	49°45'31,12"	25,643
	45,3	22°37' 0,42"	0,851	0,5	27,90	1,493	1,044	50°42'39,41"	26,442
	45,-	20°	0	0	27,-	1,704	1,098	48°21'25,82"	25,212
65	45,5	21°39'49,50"	0,520	0,3	27,56	1,577	1,061	49°45'31,12"	25,942
	45,8	22°35'23,19"	0,851	0,5	27,90	1,495	1,042	50°42'39,41"	26,437
	45,5	20°	0	0	27,-	1,705	1,098	48°21'25,82"	25,210
66	46,-	21°38'46,76"	0,520	0,3	27,56	1,579	1,061	49°45'31,12"	25,937
	46,3	22°33'47,96"	0,850	0,5	27,90	1,497	1,042	50°42'39,41"	26,433
	46,-	20°	0	0	27,-	1,707	1,100	48°21'25,82"	25,206
67	46,5	21°37'45,32"	0,520	0,3	27,56	1,580	1,061	49°45'31,12"	25,934
	46,8	22°32'14,66"	0,850	0,5	27,90	1,498	1,042	50°42'39,41"	26,431
	46,5	20°	0	0	27,-	1,708	1,100	48°21'25,82"	25,203
68	47,-	21°36'45,15"	0,520	0,3	27,56	1,581	1,061	49°45'31,12"	25,933
	47,3	22°30'43,24"	0,849	0,5	27,90	1,500	1,040	50°42'39,41"	26,426
	47,-	20°	0	0	27,-	1,709	1,100	48°21'25,82"	25,201
69	47,5	21°35'46,20"	0,519	0,3	27,56	1,583	1,061	49°45'31,12"	25,928
	47,8	22°29'13,63"	0,849	0,5	27,90	1,501	1,040	50°42'39,41"	26,424
	47,5	20°	0	0	27,-	1,710	1,103	48°21'25,82"	25,199
70	48,-	21°34'48,44"	0,519	0,3	27,56	1,584	1,061	49°45'31,12"	25,926
	48,3	22°27'45,78"	0,848	0,5	27,90	1,503	1,040	50°42'39,41"	26,420

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 25 \; ; \; H = -\,0{,}933962484$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18° 4' 4,40"	,481	2,01	2,09	,991	2,025	2,980	4,792	4,61	1,54	4,51	0,96	H
22° 7'42,73"	,378	2,14	2,82	1,05	2,041	3,101	4,590	4,50	1,38	4,57	1,02	F
24°31'32,21"	,322	2,23	3,47	1,09	2,042	3,175	4,510	4,46	1,31	4,60	1,05	F
18° 3'12,56"	,481	2,01	2,09	,989	2,028	2,980	4,790	4,60	1,53	4,51	0,97	H
22° 6'15,84"	,378	2,14	2,82	1,04	2,046	3,092	4,595	4,50	1,38	4,56	1,02	F
24°29'29,28"	,322	2,23	3,47	1,09	2,048	3,175	4,512	4,45	1,31	4,60	1,05	F
18° 1'28,88"	,481	2,01	2,09	,987	2,032	2,980	4,785	4,59	1,53	4,51	0,97	H
22° 4'32,16"	,378	2,14	2,82	1,04	2,051	3,092	4,593	4,49	1,37	4,56	1,03	F
24°28' 1,90"	,322	2,23	3,47	1,09	2,053	3,175	4,516	4,45	1,30	4,60	1,05	F
18° 0'37,04"	,481	2,01	2,09	,986	2,035	2,980	4,783	4,58	1,52	4,51	0,98	H
22° 3' 5,29"	,378	2,14	2,82	1,04	2,055	3,092	4,594	4,48	1,35	4,56	1,03	F
24°26'34,51"	,322	2,23	3,47	1,09	2,057	3,163	4,519	4,44	1,30	4,60	1,05	F
17°58'53,36"	,481	2,01	2,09	,984	2,038	2,995	4,779	4,58	1,49	4,51	0,98	H
22° 1'21,61"	,378	2,14	2,82	1,04	2,060	3,092	4,595	4,47	1,36	4,56	1,03	F
24°25'23,40"	,322	2,23	3,47	1,08	2,061	3,163	4,522	4,43	1,29	4,60	1,06	F
17°58' 1,53"	,481	2,01	2,09	,983	2,040	2,975	4,777	4,57	1,51	4,50	0,98	H
21°59'54,73"	,378	2,14	2,82	1,03	2,064	3,069	4,596	4,47	1,36	4,55	1,03	F
24°23'56,02"	,322	2,23	3,47	1,08	2,066	3,163	4,526	4,42	1,28	4,60	1,06	F
17°56'17,84"	,481	2,01	2,09	,981	2,044	2,975	4,773	4,55	1,49	4,50	0,78	H
21°57'36,00"	,378	2,14	2,82	1,03	2,071	3,082	4,600	4,45	1,35	4,56	1,04	F
24°22'44,90"	,322	2,23	3,47	1,08	2,069	3,163	4,535	4,41	1,27	4,60	1,07	F
17°54'34,16"	,481	2,01	2,09	,979	2,049	2,975	4,769	4,55	1,49	4,50	0,99	H
21°55'52,32"	,378	2,14	2,82	1,03	2,076	3,082	4,600	4,44	1,34	4,56	1,04	F
24°20'25,68"	,322	2,23	3,47	1,08	2,078	3,150	4,539	4,40	1,27	4,59	1,07	F
17°53'42,32"	,481	2,01	2,09	,978	2,051	2,975	4,767	4,54	1,48	4,50	0,99	H
21°55'17,27"	,378	2,14	2,82	1,03	2,078	3,082	4,603	4,44	1,33	4,56	1,04	F
24°19'14,56"	,322	2,23	3,47	1,07	2,081	3,150	4,539	4,40	1,27	4,59	1,07	F
17°52'50,48"	,481	2,01	2,09	,977	2,053	2,975	4,765	4,54	1,47	4,50	0,99	H
21°53'33,60"	,378	2,14	2,82	1,02	2,083	3,059	4,603	4,43	1,33	4,55	1,04	F
24°18'39,00"	,322	2,23	3,47	1,07	2,083	3,150	4,543	4,39	1,26	4,59	1,07	F
17°51'58,64"	,481	2,01	2,09	,976	2,054	2,955	4,762	4,53	1,47	4,49	0,99	H
21°52'58,55"	,378	2,14	2,82	1,02	2,084	3,059	4,605	4,43	1,33	4,55	1,04	F
24°17'11,58"	,322	2,23	3,47	1,07	2,088	3,150	4,546	4,38	1,26	4,59	1,07	F
17°51' 6,81"	,481	2,01	2,09	,975	2,057	2,955	4,761	4,52	1,47	4,49	0,99	H
21°51'14,86"	,378	2,14	2,82	1,02	2,090	3,072	4,606	4,42	1,32	4,55	1,05	F
24°15'44,19"	,322	2,23	3,47	1,07	2,092	3,125	4,548	4,38	1,26	4,58	1,07	F
17°49'23,13"	,481	2,01	2,09	,973	2,061	2,955	4,756	4,52	1,47	4,49	0,99	H
21°50'23,03"	,378	2,14	2,82	1,02	2,093	3,072	4,608	4,42	1,32	4,55	1,05	F
24°15' 8,62"	,322	2,23	3,47	1,07	2,095	3,137	4,552	4,38	1,25	4,58	1,07	F
17°48'31,28"	,481	2,01	2,09	,972	2,064	2,955	4,754	4,51	1,46	4,49	0,99	H
21°49'47,98"	,378	2,14	2,82	1,02	2,094	3,072	4,610	4,41	1,31	4,55	1,05	F
24°13'41,22"	,322	2,23	3,47	1,06	2,100	3,137	4,554	4,36	1,24	4,58	1,08	F
17°47'39,45"	,481	2,01	2,09	,971	2,066	2,969	4,752	4,50	1,45	4,50	1,00	H
21°48' 4,30"	,378	2,14	2,82	1,02	2,100	3,049	4,610	4,40	1,32	4,54	1,05	F
24°13' 5,65"	,322	2,23	3,47	1,06	2,102	3,137	4,558	4,36	1,24	4,58	1,05	F
17°46'47,60"	,481	2,01	2,09	,970	2,068	2,969	4,750	4,50	1,44	4,50	1,00	H
21°47'29,25"	,378	2,14	2,82	1,02	2,101	3,049	4,612	4,40	1,31	4,54	1,05	F
24°11'38,24"	,322	2,23	3,47	1,06	2,106	3,137	4,560	4,35	1,24	4,58	1,08	F

z₂	a	α_vt	Σx	x₁	d_α1	ε_α	Z_B²	θ	d_e1
1	2	3	4	5	6	7	8	9	10

$$z_1 = 26 \; ; \; H = -\,0{,}938519641$$

z₂	a	α_vt	Σx	x₁	d_α1	ε_α	Z_B²	θ	d_e1
	33,-	20°	0	0	28,-	1,667	1,057	48°44'17,53"	26,302
40	33,5	22°13'50,57"	0,527	0,3	28,55	1,530	1,048	50° 4'30,69"	27,061
	33,8	23°26'37,36"	0,867	0,5	28,87	1,444	1,045	51° 2'12,66"	27,559
	33,5	20°	0	0	28,-	1,670	1,059	48°44'17,53"	26,295
41	34,-	22°11'58,35"	0,552	0,3	28,55	1,533	1,050	50° 4'30,69"	27,053
	34,3	23°21'21,39"	0,867	0,5	28,87	1,447	1,046	51° 2'12,66"	27,551
	34,-	20°	0	0	28,-	1,672	1,061	48°44'17,53"	26,291
42	34,5	22°10' 8,94"	0,526	0,3	28,55	1,536	1,051	50° 4'30,69"	27,046
	34,8	23°21'21,39"	0,866	0,5	28,87	1,449	1,047	51° 2'12,66"	27,547
	34,5	20°	0	0	28,-	1,674	1,063	48°44'17,53"	26,286
43	35,-	22° 8'27,53"	0,526	0,3	28,55	1,538	1,052	50° 4'30,69"	27,042
	35,3	23°18'26,02"	0,865	0,5	28,87	1,453	1,047	51° 2'12,66"	27,538
	35,-	20°	0	0	28,-	1,676	1,065	48°44'17,53"	26,282
44	35,5	22° 6'35,98"	0,526	0,3	28,55	1,541	1,052	50° 4'30,69"	27,035
	35,8	23°15'50,53"	0,864	0,5	28,87	1,456	1,048	51° 2'12,66"	27,532
	35,5	20°	0	0	28,-	1,678	1,067	48°44'17,53"	26,278
45	36,-	22° 4'58,19"	0,525	0,3	28,55	1,544	1,054	50° 4'30,69"	27,028
	36,3	23°13'19,65"	0,863	0,5	28,87	1,459	1,049	50° 2'12,66"	27,525
	36,-	20°	0	0	28,-	1,680	1,069	48°44'17,53"	26,273
46	36,5	22° 3'22,04"	0,525	0,3	28,55	1,547	1,054	50° 4'30,69"	27,021
	36,8	23°10'52,34"	0,862	0,5	28,88	1,462	1,047	51° 2'12,66"	27,518
	36,5	20°	0	0	28,-	1,682	1,069	48°44'17,53"	26,269
47	37,-	22° 1'44,43"	0,525	0,3	28,55	1,549	1,055	50° 4'30,69"	27,017
	37,3	23° 8'28,73"	0,862	0,5	28,88	1,465	1,048	51° 2'12,66"	27,512
	37,-	20°	0	0	28,-	1,684	1,071	48°44'17,53"	26,264
48	37,5	22° 0'11,17"	0,524	0,3	28,55	1,552	1,056	50° 4'30,69"	27,009
	37,8	23° 6' 8,70"	0,861	0,5	28,88	1,467	1,048	51° 2'12,66"	27,507
	37,5	20°	0	0	28,-	1,686	1,073	48°44'17,53"	26,260
49	38,-	21°58'40,46"	0,524	0,3	28,55	1,554	1,056	50° 4'30,69"	27,005
	38,3	23° 3'52,11"	0,860	0,5	28,88	1,470	1,048	51° 2'12,66"	27,501
	38,-	20°	0	0	28,-	1,688	1,073	48°44'17,53"	26,256
50	38,5	21°57'11,91"	0,524	0,3	28,55	1,556	1,057	50° 4'30,69"	27,000
	38,8	23° 1'38,84"	0,859	0,5	28,88	1,472	1,048	51° 2'12,66"	27,496
	38,5	20°	0	0	28,-	1,689	1,075	48°44'17,53"	26,254
51	39,-	21°55'45,54"	0,523	0,3	28,55	1,558	1,057	50° 4'30,69"	26,996
	39,3	22°59'28,76"	0,858	0,5	28,88	1,475	1,049	51° 2'12,66"	27,490
	39,5	20°	0	0	28,-	1,693	1,077	48°44'17,53"	26,245
53	40,-	21°52'59,63"	0,523	0,3	28,55	1,563	1,058	50° 4'30,69"	26,984
	40,3	22°55'17,78"	0,857	0,5	28,89	1,479	1,047	51° 2'12,66"	27,481
	40,-	20°	0	0	28,-	1,694	1,080	48°44'17,53"	26,243
54	40,5	21°51'38,74"	0,523	0,3	28,56	1,565	1,056	50° 4'30,69"	26,980
	40,8	22°53'16,59"	0,857	0,5	28,89	1,482	1,047	51° 2'12,66"	27,474
	40,5	20°	0	0	28,-	1,696	1,080	48°44'17,53"	26,239
55	41,-	21°50'20,33"	0,522	0,3	28,56	1,567	1,056	50° 4'30,69"	27,975
	41,3	22°51'16,59"	0,856	0,5	28,89	1,484	1,047	51° 2'12,66"	27,470
	41,-	20°	0	0	28,-	1,697	1,082	48°44'17,53"	26,237
56	41,5	21°49' 3,74"	0,522	0,3	28,56	1,568	1,056	50° 4'30,69"	26,972
	41,8	22°49'22,50"	0,855	0,5	28,89	1,486	1,047	51° 2'12,66"	27,465

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\mathcal{E}}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 26 \ ; \ H = -\,0{,}938319641$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\mathcal{E}}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18°31'28,68"	,478	2,02	2,11	1,02	1,984	3,020	4,839	4,64	1,62	4,47	0,94	н
22°29' 9,84"	,376	2,16	2,87	1,09	1,988	3,124	4,563	4,54	1,46	4,52	0,99	н
24°46'52,52"	,320	2,24	3,50	1,14	1,971	3,236	4,450	4,50	1,37	4,57	1,02	F
18°28'59,14"	,478	2,02	2,11	1,01	1,991	3,020	4,833	4,62	1,62	4,47	0,95	н
22°26'40,30"	,376	2,16	2,87	1,08	1,995	3,124	4,564	4,53	1,47	4,52	≈ 1	н
24°44'38,84"	,320	2,24	3,50	1,13	1,979	3,236	4,455	4,49	1,38	4,57	1,02	F
18°27'19,45"	,478	2,02	2,11	1,01	1,995	3,000	4,829	4,62	1,60	4,46	0,95	н
22°24'27,09"	,376	2,16	2,87	1,08	2,002	3,124	4,566	4,52	1,44	4,52	1	F
24°43'30,84"	,320	2,24	3,50	1,13	1,983	3,236	4,460	4,48	1,35	4,57	1,02	F
17°25'39,77"	,478	2,02	2,11	1,01	1,999	3,000	4,825	4,60	1,59	4,46	0,95	н
22°23' 3,71"	,376	2,16	2,87	1,08	2,006	3,101	4,568	4,50	1,44	4,51	1	F
24°40'43,16"	,320	2,24	3,50	1,13	1,991	3,224	4,463	4,46	1,35	4,57	1,03	F
18°24' 0,07"	,478	2,02	2,11	1,01	2,003	3,015	4,821	4,59	1,57	4,47	0,96	н
22°20'50,49"	,376	2,16	2,87	1,07	2,013	3,114	4,570	4,49	1,42	4,51	1,01	F
24°38'45,31"	,320	2,24	3,50	1,12	1,997	3,224	4,467	4,45	1,34	4,57	1,04	F
18°22'20,37"	,478	2,02	2,11	1,01	2,007	3,015	4,817	4,58	1,56	4,47	0,96	н
22°18'20,96"	,376	2,16	2,87	1,07	2,020	3,092	4,570	4,48	1,42	4,50	1,01	F
24°36'31,61"	,320	2,24	3,50	1,12	2,004	3,199	4,471	4,44	1,34	4,55	1,04	F
18°20'40,68"	,478	2,02	2,11	1,00	2,012	2,995	4,812	4,57	1,56	4,46	0,96	н
22°16' 7,74"	,376	2,16	2,87	1,07	2,026	3,092	4,571	4,47	1,41	4,50	1,01	F
24°34'33,76"	,320	2,24	3,50	1,11	2,011	3,212	4,475	4,43	1,32	4,56	1,04	F
18°19' 0,99"	,478	2,02	2,11	1,00	2,015	2,995	4,808	4,56	1,55	4,46	0,97	н
22°14'44,37"	,376	2,16	2,87	1,06	2,030	3,105	4,573	4,46	1,40	4,51	1,02	F
24°32'35,90"	,320	2,24	3,50	1,11	2,017	3,212	4,478	4,42	1,31	4,56	1,05	F
18°17'21,30"	,478	2,02	2,11	,999	2,020	2,995	4,804	4,55	1,53	4,46	0,97	н
22°12'14,83"	,376	2,16	2,87	1,06	2,038	3,082	4,574	4,45	1,40	4,50	1,02	F
24°31'12,05"	,320	2,24	3,50	1,11	2,022	3,187	4,482	4,41	1,32	4,55	1,05	F
18°15'41,61"	,478	2,02	2,11	,997	2,024	2,975	4,800	4,54	1,54	4,45	0,97	н
22°10'51,45"	,376	2,16	2,87	1,06	2,042	3,082	4,576	4,44	1,39	4,50	1,02	F
24°29'14,18"	,320	2,24	3,50	1,10	2,028	3,200	4,486	4,40	1,30	4,56	1,05	F
18°14' 1,91"	,478	2,02	2,11	,995	2,028	2,975	4,796	4,53	1,52	4,45	0,99	н
22° 9'11,76"	,376	2,16	2,87	1,05	2,047	3,082	4,578	4,43	1,38	4,50	1,02	F
24°27'50,32"	,320	2,24	3,50	1,10	2,033	3,200	4,491	4,39	1,30	4,56	1,06	F
18°13'12,06"	,478	2,02	2,11	,994	2,030	2,975	4,794	4,52	1,52	4,45	0,98	н
22° 7'48,36"	,376	2,16	2,87	1,05	2,061	3,072	4,579	4,42	1,38	4,49	1,02	F
24°25'52,44"	,320	2,24	3,50	1,10	2,039	3,175	4,493	4,39	1,30	4,54	1,05	F
18° 9'52,69"	,478	2,02	2,11	,990	2,039	2,969	4,785	4,50	1,50	4,44	0,98	н
22° 3'55,46"	,376	2,16	2,87	1,05	2,063	3,072	4,581	4,41	1,36	4,49	1,03	F
24°23' 4,71"	,320	2,24	3,50	1,09	2,048	3,188	4,501	4,37	1,29	4,55	1,06	F
18° 9' 2,84"	,478	2,02	2,11	,989	2,040	2,969	4,783	4,49	1,49	4,44	0,98	н
22° 2'32,05"	,376	2,16	2,87	1,04	2,067	3,072	4,582	4,40	1,35	4,49	1,03	F
24°21' 6,82"	,320	2,24	3,50	1,09	2,055	3,163	4,503	4,36	1,28	4,54	1,06	F
18° 7'23,14"	,478	2,02	2,11	,987	2,044	2,969	4,779	4,48	1,48	4,44	0,99	н
22° 0'52,39"	,376	2,16	2,87	1,04	2,072	3,049	4,583	4,39	1,35	4,48	1,03	F
24°19'42,96"	,320	2,24	3,50	1,09	2,059	3,163	4,507	4,35	1,27	4,54	1,06	F
18° 6'33,29"	,478	2,02	2,11	,987	2,046	2,969	4,777	4,48	1,48	4,44	0,99	н
22° 0'18,55"	,376	2,16	2,87	1,04	2,074	3,062	4,588	4,38	1,34	4,49	1,04	F
24°18'19,08"	,320	2,24	3,50	1,09	2,064	3,175	4,510	4,34	1,26	4,54	1,07	F

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$$z_1 = 26 \; ; \; H = -\,0{,}938319641$$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	41,5	20°	0	0	28,-	1,699	1,083	48°44'17,53"	26,232
57	42,-	21°47'48,90"	0,522	0,3	28,56	1,578	1,058	50° 4'30,69"	26,968
	42,3	22°47'29,39"	0,855	0,5	28,89	1,488	1,046	51° 2'12,66"	27,462
	42,-	20°	0	0	28,-	1,700	1,083	48°44'17,53"	26,230
58	42,5	21°46'35,76"	0,522	0,3	28,56	1,572	1,056	50° 4'30,69"	26,964
	42,8	22°45'38,77"	0,854	0,5	28,89	1,490	1,046	51° 2'12,66"	27,457
	42,5	20°	0	0	28,-	1,701	1,084	48°44'17,53"	26,228
59	42,-	21°45'24,26"	0,521	0,3	28,56	1,574	1,057	50° 4'30,69"	26,959
	42,3	22°43'20,57"	0,853	0,5	28,89	1,492	1,043	51° 2'12,66"	27,452
	43,-	20°	0	0	28,-	1,703	1,085	48°44'17,53"	26,224
60	43,5	21°44'14,34"	0,521	0,3	28,56	1,576	1,057	50° 4'30,69"	26,955
	43,8	22°42' 4,71"	0,853	0,5	28,89	1,494	1,046	51° 2'12,66"	27,448
	43,5	20°	0	0	28,-	1,704	1,086	48°44'17,53"	26,222
61	44,-	21°43' 5,96"	0,521	0,3	28,56	1,578	1,057	50° 4'30,69"	26,950
	44,3	22°40'21,11"	0,852	0,5	28,90	1,495	1,043	51° 2'12,66"	27,446
	44,-	20°	0	0	28,-	1,705	1,087	48°44'17,53"	26,219
62	44,5	21°41'59,05"	0,521	0,3	28,56	1,579	1,057	50° 4'30,69"	26,948
	44,8	22°38'39,70"	0,852	0,5	28,90	1,497	1,043	51° 2'12,66"	27,442
	44,5	20°	0	0	28,-	1,707	1,088	48°44'17,53"	26,215
63	45,-	21°40'53,58"	0,520	0,3	28,56	1,580	1,057	50° 4'30,69"	26,945
	45,3	22°37' 0,42"	0,851	0,5	28,90	1,499	1,043	51° 2'12,66"	27,438
	45,-	20°	0	0	28,-	1,708	1,088	48°44'17,53"	26,213
64	45,5	21°39'49,50"	0,520	0,3	28,56	1,582	1,057	50° 4'30,69"	26,941
	45,8	22°35'23,19"	0,851	0,5	28,90	1,501	1,043	51° 2'12,66"	27,433
	46,-	20°	0	0	28,-	1,710	1,090	48°44'17,53"	26,209
66	46,5	21°37'45,32"	0,520	0,3	28,56	1,585	1,057	50° 4'30,69"	26,934
	46,8	22°32'14,66"	0,850	0,5	28,90	1,504	1,042	51° 2'12,66"	27,427
	46,5	20°	0	0	28,-	1,711	1,091	48°44'17,53"	26,207
67	47,-	21°36'45,15"	0,520	0,3	28,56	1,586	1,057	50° 4'30,69"	26,932
	47,3	22°30'43,24"	0,850	0,5	28,90	1,506	1,042	51° 2'12,66"	27,423
	47,-	20°	0	0	28,-	1,711	1,091	48°44'17,53"	26,207
68	47,5	21°35'46,20"	0,519	0,3	28,56	1,588	1,057	50° 4'30,69"	26,927
	47,8	22°29'13,63"	0,849	0,5	28,90	1,507	1,041	51° 2'12,66"	27,421
	47,5	20°	0	0	28,-	1,712	1,092	48°44'17,53"	26,204
69	48,-	21°34'48,44"	0,519	0,3	28,56	1,589	1,057	50° 4'30,69"	26,926
	48,3	22°27'45,78"	0,848	0,5	28,90	1,509	1,041	51° 2'12,66"	27,416
	48,-	20°	0	0	28,-	1,714	1,093	48°44'17,53"	26,200
70	48,5	21°33'51,82"	0,519	0,3	28,56	1,590	1,057	50° 4'30,69"	26,923
	48,8	22°26'19,65"	0,848	0,5	28,91	1,510	1,038	51° 2'12,66"	27,414
	48,5	20°	0	0	28,-	1,715	1,094	48°44'17,53"	26,198
71	49,-	21°32'58,32"	0,519	0,3	28,56	1,592	1,057	50° 4'30,69"	26,918
	49,3	22°24'55,18"	0,847	0,5	28,91	1,512	1,038	51° 2'12,66"	27,410
	49,-	20°	0	0	28,-	1,716	1,094	48°44'17,53"	26,196
72	49,5	21°32' 1,92"	0,519	0,3	28,56	1,593	1,056	50° 4'30,69"	26,916
	49,8	22°23'32,32"	0,847	0,5	28,91	1,513	1,038	51° 2'12,66"	27,408
	49,5	20°	0	0	28,-	1,717	1,095	48°44'17,53"	26,194
73	50,-	21°31' 8,56"	0,518	0,3	28,56	1,594	1,056	50° 4'30,69"	26,914
	50,3	22°22'11,04"	0,846	0,5	28,91	1,514	1,037	51° 2'12,66"	27,405

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 26 \; ; \; H = -\,0{,}938319641$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18° 4'53,61"	,478	2,02	2,11	,984	2,051	2,969	4,773	4,47	1,47	4,44	0,99	H
21°58'39,16"	,376	2,16	2,87	1,04	2,080	3,062	4,588	4,38	1,34	4,49	1,04	F
24°17'17,03"	,320	2,24	3,50	1,08	2,068	3,175	4,514	4,34	1,25	4,54	1,07	F
18° 4' 3,76"	,478	2,02	2,11	,983	2,053	2,949	4,771	4,46	1,47	4,43	0,99	H
21°57'15,78"	,376	2,16	2,87	1,04	2,084	3,062	4,589	4,37	1,33	4,49	1,04	F
24°15'47,16"	,320	2,24	3,50	1,08	2,073	3,150	4,517	4,33	1,26	4,53	1,07	F
18° 3'13,92"	,478	2,02	2,11	,982	2,055	2,949	4,769	4,45	1,46	4,43	0,99	H
21°55'36,08"	,376	2,16	2,87	1,03	2,089	3,039	4,589	4,36	1,32	4,48	1,04	F
24°14'23,27"	,320	2,24	3,50	1,08	2,078	3,150	4,520	4,32	1,25	4,53	1,07	F
18° 1'34,23"	,478	2,02	2,11	,980	2,059	2,949	4,765	4,45	1,46	4,43	≈ 1	H
21°54'12,70"	,376	2,16	2,87	1,03	2,093	3,039	4,590	4,35	1,33	4,48	1,04	F
24°12'59,40"	,320	2,24	3,50	1,08	2,082	3,163	4,523	4,32	1,24	4,54	1,08	F
18° 0'44,38"	,478	2,02	2,11	,979	2,061	2,949	4,763	4,44	1,45	4,43	≈ 1	H
21°52'33,01"	,376	2,16	2,87	1,03	2,098	3,052	4,591	4,35	1,31	4,48	1,05	
24°12'25,37"	,320	2,24	3,50	1,07	2,084	3,163	4,525	4,31	1,24	4,54	1,08	
17°59'54,53"	,478	2,02	2,11	,978	2,064	2,964	4,761	4,43	1,44	4,44	1	
21°51'59,47"	,376	2,16	2,87	1,03	2,100	3,052	4,593	4,34	1,31	4,48	1,05	
24°11'17,29"	,320	2,24	3,50	1,07	2,088	3,137	4,530	4,30	1,24	4,53	1,08	
17°58'14,84"	,478	2,02	2,11	,976	2,067	2,964	4,756	4,42	1,43	4,44	1,01	
21°51' 9,62"	,376	2,16	2,87	1,03	2,104	3,029	4,596	4,33	1,31	4,47	1,05	
24° 9'53,41"	,320	2,24	3,50	1,07	2,093	3,137	4,532	4,29	1,23	4,53	1,08	
17°57'24,99"	,478	2,02	2,11	,975	2,070	2,944	4,754	4,42	1,43	4,43	1	
21°49'46,23"	,376	2,16	2,87	1,02	2,108	3,029	4,596	4,33	1,31	4,47	1,05	
24° 8'29,53"	,320	2,24	3,50	1,07	2,098	3,137	4,535	4,29	1,23	4,53	1,08	
17°55'45,30"	,478	2,02	2,11	,973	2,074	2,944	4,750	4,41	1,42	4,43	1,01	
21°47'16,68"	,376	2,16	2,87	1,02	2,115	3,029	4,598	4,31	1,29	4,47	1,06	
24° 6'16,68"	,320	2,24	3,50	1,06	2,104	3,150	4,541	4,28	1,21	4,53	1,09	
17°54'55,45"	,478	2,02	2,11	,972	2,076	2,944	4,748	4,40	1,42	4,43	1,01	
21°46'43,14"	,376	2,16	2,87	1,02	2,117	3,029	4,600	4,31	1,29	4,47	1,06	
24° 5' 7,71"	,320	2,24	3,50	1,06	2,109	3,124	4,543	4,27	1,22	4,52	1,09	
17°54'55,45"	,478	2,02	2,11	,972	2,076	2,944	4,748	4,40	1,41	4,43	1,01	F
21°45' 3,46"	,376	2,16	2,87	1,02	2,123	3,019	4,600	4,30	1,29	4,47	1,06	
24° 4'33,67"	,320	2,24	3,50	1,06	2,111	3,124	4,547	4,27	1,21	4,52	1,09	
17°54' 5,60"	,478	2,02	2,11	,970	2,079	2,944	4,746	4,39	1,40	4,43	1,01	
21°44'29,91"	,376	2,16	2,87	1,02	2,124	3,019	4,602	4,30	1,29	4,47	1,06	
24° 3' 9,78"	,320	2,24	3,50	1,06	2,116	3,124	4,549	4,26	1,21	4,52	1,09	
17°52'25,92"	,478	2,02	2,11	,969	2,083	2,944	4,742	4,38	1,40	4,43	1,02	
21°43' 0,06"	,376	2,16	2,87	1,02	2,126	3,019	4,604	4,29	1,28	4,47	1,06	
24° 2'35,73"	,320	2,24	3,50	1,06	2,118	3,124	4,552	4,25	1,20	4,52	1,10	
17°51'36,07"	,478	2,02	2,11	,968	2,085	2,923	4,740	4,38	1,40	4,42	1,02	
21°42' 0,37"	,376	2,16	2,87	1,01	2,132	3,019	4,604	4,29	1,28	4,47	1,06	
24° 1'11,83"	,320	2,24	3,50	1,06	2,123	3,137	4,556	4,25	1,19	4,52	1,10	
17°50'46,22"	,478	2,02	2,11	,967	2,087	2,923	4,738	4,37	1,40	4,42	1,02	
21°41'26,82"	,376	2,16	2,87	1,01	2,134	3,019	4,605	4,28	1,27	4,47	1,07	
24° 0'37,79"	,320	2,24	3,50	1,05	2,125	3,137	4,557	4,26	1,19	4,52	1,10	
17°49'56,37"	,478	2,02	2,11	,966	2,089	2,923	4,736	4,37	1,39	4,42	1,02	
21°40'36,98"	,376	2,16	2,87	1,01	2,137	3,019	4,607	4,28	1,27	4,47	1,07	
23°59'47,94"	,320	2,24	3,50	1,05	2,128	3,111	4,561	4,24	1,19	4,51	1,10	

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z^2_B	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10
				$z_1 = 27$; H = $-$ 0,972352156					
	34,-	20°	0	0	29,-	1,674	1,053	49° 5'39,25"	27,296
41	34,5	22°10' 8,94"	0,526	0,3	29,55	1,539	1,045	50°24' 5,14"	28,049
	34,8	23°21'21,39"	0,866	0,5	29,87	1,453	1,042	51°20'24,78"	28,547
	34,5	20°	0	0	29,-	1,676	1,054	49° 5'39,25"	27,291
42	35,-	22° 8'27,53"	0,526	0,3	29,55	1,542	1,046	50°24' 5,14"	28,043
	35,3	23°18'26,02"	0,865	0,5	29,87	1,457	1,043	51°20'24,78"	28,538
	35,-	20°	0	0	29,-	1,679	1,056	49° 5'39,25"	27,285
43	35,5	22° 6'35,98"	0,526	0,3	29,55	1,545	1,047	50°24' 5,14"	28,036
	35,8	23°15'50,53"	0,864	0,5	29,87	1,460	1,044	51°20'24,78"	28,532
	35,5	20°	0	0	29,-	1,681	1,058	49° 5'39,25"	27,280
44	36,-	22° 4'58,19"	0,525	0,3	29,55	1,547	1,048	50°24' 5,14"	28,031
	36,3	23°13'19,65"	0,863	0,5	29,87	1,463	1,044	51°20'24,78"	28,525
	36,-	20°	0	0	29,-	1,683	1,059	49° 5'39,25"	27,276
45	36,5	22° 3'22,04"	0,525	0,3	29,55	1,550	1,049	50°24' 5,14"	28,024
	36,8	23°10'52,34"	0,862	0,5	29,88	1,466	1,043	51°20'24,78"	28,518
	36,5	20°	0	0	29,-	1,685	1,061	49° 5'39,25"	27,272
46	37,-	22° 1'44,43"	0,525	0,3	29,55	1,553	1,049	50°24' 5,14"	28,018
	37,3	23° 8'28,73"	0,862	0,5	29,88	1,469	1,044	51°20'24,78"	28,512
	37,-	20°	0	0	29,-	1,687	1,062	49° 5'39,25"	27,267
47	37,5	22° 0'11,27"	0,524	0,3	29,55	1,555	1,050	50°24' 5,14"	28,013
	37,8	23° 6' 8,70"	0,861	0,5	29,88	1,472	1,044	51°20'24,78"	28,505
	37,5	20°	0	0	29,-	1,689	1,064	49° 5'39,25"	27,263
48	38,-	21°58'40,46"	0,524	0,3	29,55	1,556	1,050	50°24' 5,14"	28,006
	38,3	23° 3'52,11"	0,860	0,5	29,88	1,474	2,044	51°20'24,78"	28,501
	38,-	20°	0	0	29,-	1,690	1,065	49° 5'39,25"	27,261
49	38,5	21°57'11,91"	0,524	0,3	29,55	1,560	1,051	50°24' 5,14"	28,001
	38,8	23° 1'38,48"	0,859	0,5	29,88	1,477	1,044	51°20'24,78"	28,494
	38,5	20°	0	0	29,-	1,692	1,066	49° 5'39,25"	27,257
50	39,-	21°55'45,54"	0,523	0,3	29,55	1,562	1,052	50°24' 5,14"	27,997
	39,3	22°59'28,76"	0,858	0,5	29,88	1,480	1,045	51°20'24,78"	28,487
	39,-	20°	0	0	29,-	1,694	1,067	49° 5'39,25"	27,252
51	39,5	21°54'21,28"	0,523	0,3	29,55	1,564	1,052	50°24' 5,14"	27,993
	39,8	22°57'21,77"	0,858	0,5	29,88	1,482	1,045	51°20'24,78"	28,483
	39,5	20°	0	0	29,-	1,696	1,069	49° 5'39,25"	27,248
52	40,-	21°52'59,63"	0,523	0,3	29,55	1,566	1,052	50°24' 5,14"	27,988
	40,3	22°55'17,78"	0,857	0,5	29,89	1,484	1,043	51°20'24,78"	28,478
	40,-	20°	0	0	29,-	1,697	1,070	49° 5'39,25"	27,246
53	40,5	21°51'38,74"	0,523	0,3	29,56	1,569	1,051	50°24' 5,14"	27,981
	40,8	22°53'16,59"	0,857	0,5	29,89	1,486	1,043	51°20'24,78"	28,475
	41,-	20°	0	0	29,-	1,700	1,072	49° 5'39,25"	27,239
55	41,5	21°49' 3,74"	0,522	0,3	29,56	1,573	1,051	50°24' 5,14"	27,972
	41,8	22°49'22,50"	0,855	0,5	29,89	1,491	1,044	51°20'24,78"	28,463
	41,5	20°	0	0	29,-	1,702	1,073	49° 5'39,25"	27,235
56	42,-	21°47'48,90"	0,522	0,3	29,56	1,574	1,051	50°24' 5,14"	27,969
	42,3	22°47'23,39"	0,855	0,5	29,89	1,493	1,043	51°20'24,78"	28,460
	42,-	20°	0	0	29,-	1,703	1,074	49° 5'39,25"	27,233
57	42,5	21°46'35,76"	0,522	0,3	29,56	1,576	1,052	50°24' 5,14"	27,965
	42,8	22°45'38,77"	0,854	0,5	29,89	1,495	1,043	51°20'24,78"	28,455

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 27 \; ; \; H = -\,0{,}942352156$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18°32'39,94"	,475	2,03	2,14	1,01	2,004	3,010	4,825	4,52	1,56	4,41	0,96	H
22°21'31,52"	,374	2,17	2,89	1,08	2,007	3,114	4,560	4,43	1,42	4,46	1,01	F
24°35'24,73"	,319	2,25	3,52	1,13	1,987	3,224	4,453	4,39	1,33	4,51	1,04	F
18°31' 3,93"	,475	2,03	2,14	1,01	2,009	2,990	4,821	4,51	1,56	4,40	0,96	H
22°19'23,37"	,374	2,17	2,89	1,08	2,012	3,105	4,561	4,42	1,41	4,45	1,01	F
24°32'43,55"	,319	2,25	3,52	1,13	1,996	3,237	4,456	4,38	1,32	4,52	1,05	F
18°28'39,94"	,475	2,03	2,14	1,01	2,014	2,990	4,814	4,50	1,54	4,40	0,97	H
22°17'15,23"	,374	2,17	2,89	1,07	2,019	3,105	4,562	4,41	1,40	4,45	1,02	F
24°30'50,35"	,319	2,25	3,52	1,12	2,002	3,212	4,460	4,37	1,32	4,50	1,05	F
18°27' 3,93"	,475	2,03	2,14	1,01	2,019	2,990	4,810	4,49	1,53	4,40	0,97	H
22°15'39,23"	,374	2,17	2,89	1,07	2,024	3,105	4,565	4,39	1,38	4,45	1,02	F
24°28'41,75"	,319	2,25	3,52	1,12	2,009	3,212	4,464	4,36	1,31	4,50	1,05	F
18°25'27,93"	,475	2,03	2,14	1,00	2,023	2,990	4,806	4,47	1,52	4,40	0,97	H
22°13'31,09"	,374	2,17	2,89	1,07	2,031	3,082	4,565	4,38	1,38	4,44	1,02	F
24°26'48,55"	,319	2,25	3,52	1,11	2,016	3,200	4,468	4,34	1,30	4,50	1,05	F
18°23'51,94"	,475	2,03	2,14	1,00	2,027	2,969	4,802	4,46	1,52	4,39	0,97	H
22°11'19,33"	,374	2,17	2,89	1,06	2,037	3,095	4,566	4,37	1,37	4,45	1,03	F
24°24'55,34"	,319	2,25	3,52	1,11	2,021	3,200	4,471	4,33	1,29	4,50	1,06	F
18°22'15,94"	,475	2,03	2,14	,999	2,032	2,969	4,798	4,45	1,51	4,39	0,98	H
22° 9'46,95"	,374	2,17	2,89	1,06	2,042	3,095	4,568	4,36	1,36	4,45	1,03	F
24°22'46,74"	,319	2,25	3,52	1,11	2,029	3,200	4,474	4,32	1,28	4,50	1,06	F
18°20'39,94"	,475	2,03	2,14	,997	2,035	2,984	4,794	4,44	1,49	4,39	,98	H
22° 7'38,80"	,374	2,17	2,89	1,06	2,048	3,072	4,568	4,35	1,36	4,44	1,03	F
24°21'41,52"	,319	2,25	3,52	1,10	2,033	3,188	4,479	4,32	1,28	4,49	1,06	F
18°19'51,93"	,475	2,03	2,14	,996	2,037	2,984	4,792	4,43	1,48	4,39	0,99	H
22° 6' 2,81"	,374	2,17	2,89	1,06	2,054	3,086	4,568	4,34	1,35	4,44	1,04	F
24°19'32,91"	,319	2,25	3,52	1,10	2,039	3,188	4,482	4,31	1,27	4,49	1,06	F
18°18'15,93"	,475	2,03	2,14	,995	2,041	2,964	4,787	4,42	1,48	4,38	0,99	H
22° 4'42,66"	,374	2,17	2,89	1,05	2,058	3,086	4,572	4,33	1,34	4,44	1,04	F
24°17'39,69"	,319	2,25	3,52	1,10	2,047	3,188	4,484	4,31	1,29	4,49	1,06	F
18°16'39,94"	,475	2,03	2,14	,992	2,046	2,964	4,783	4,41	1,47	4,38	0,99	H
22° 3'22,51"	,374	2,17	2,89	1,05	2,062	3,062	4,574	4,33	1,34	4,43	1,04	F
24°16'19,08"	,319	2,25	3,52	1,10	2,051	3,175	4,488	4,29	1,26	4,49	1,07	F
18°15' 3,94"	,475	2,03	2,14	,990	2,050	2,964	4,779	4,40	1,46	4,38	0,99	H
22° 1'46,52"	,374	2,17	2,89	1,05	2,067	3,062	4,575	4,32	1,33	4,43	1,04	F
24°14'58,46"	,319	2,25	3,52	1,09	2,056	3,175	4,492	4,28	1,25	4,49	1,07	F
18°14'15,94"	,475	2,03	2,14	,989	2,052	2,964	4,777	4,39	1,45	4,38	≈ 1	H
21°59'38,37"	,374	2,17	2,89	1,04	2,074	3,062	4,575	4,30	1,32	4,43	1,04	F
24°13'53,23"	,319	2,25	3,52	1,09	2,059	3,175	4,496	4,27	1,24	4,49	1,08	F
18°11'51,94"	,475	2,03	2,14	,986	2,059	2,944	4,771	4,38	1,45	4,37	≈ 1	H
21°56'42,21"	,374	2,17	2,89	1,04	2,084	3,052	4,577	4,29	1,31	4,43	1,05	F
24°10'23,99"	,319	2,25	3,52	1,08	2,072	3,163	4,501	4,25	1,24	4,48	1,08	F
18°10'15,93"	,475	2,03	2,14	,984	2,063	2,958	4,767	4,37	1,43	4,38	1	H
21°55'54,22"	,374	2,17	2,89	1,04	2,087	3,052	4,580	4,28	1,30	4,43	1,05	
24° 9'18,74"	,319	2,25	3,52	1,08	2,075	3,163	4,505	4,25	1,23	4,48	1,08	
18° 9'27,94"	,475	2,03	2,14	,983	2,065	2,958	4,765	4,36	1,42	4,38	1,01	F
21°54'34,07"	,374	2,17	2,89	1,04	2,091	3,052	4,581	4,27	1,30	4,43	1,05	
24° 7'58,12"	,319	2,25	3,52	1,08	2,080	3,163	4,508	4,24	1,22	4,48	1,09	

DM – димензионираање, претсметка; F – на свиткување, H – по Hertz

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
1	2	3	4	5	6	7	8	9	10

$z_1 = 27$; $H = -0,942352156$

z_2	a	α_{wt}	Σx	x_1	d_{a1}	ε_α	Z_B^2	θ	d_{e1}
	42,5	20°	0	0	29,-	1,705	1,075	49° 5'39,25"	27,229
58	43,-	21°45'24,26"	0,521	0,3	29,56	1,578	1,052	50°24' 5,14"	27,960
	43,3	22°43'50,57"	0,853	0,5	29,89	1,497	1,043	51°20'24,38"	28,451
	43,-	20°	0	0	29,-	1,706	1,076	49° 5'39,25"	27,226
59	43,5	21°44'14,34"	0,521	0,3	29,56	1,580	1,052	50°24' 5,14"	27,956
	43,8	22°42' 4,71"	0,853	0,5	29,89	1,499	1,043	51°20'24,38"	28,446
	43,5	20°	0	0	29,-	1,707	1,077	49° 5'39,25"	27,224
60	44,-	21°43' 5,96"	0,521	0,3	29,56	1,582	1,052	50°24' 5,14"	27,951
	44,3	22°40'21,11"	0,852	0,5	29,90	1,501	1,040	51°20'24,38"	28,442
	44,-	20°	0	0	29,-	1,708	1,078	49° 5'39,25"	27,222
61	44,5	21°41'59,05"	0,521	0,3	29,56	1,583	1,052	50°24' 5,14"	27,949
	44,8	22°38'39,70"	0,852	0,5	29,90	1,503	1,041	51°20'24,38"	28,438
	44,5	20°	0	0	29,-	1,710	1,079	49° 5'39,25"	27,218
62	45,-	21°40'53,58"	0,520	0,3	29,56	1,585	1,053	50°24' 5,14"	27,945
	45,3	22°37' 0,42"	0,851	0,5	29,90	1,504	1,040	51°20'24,38"	28,436
	45,-	20°	0	0	29,-	1,711	1,080	49° 5'39,25"	27,216
63	45,5	21°39'49,50"	0,520	0,3	29,56	1,586	1,052	50°24' 5,14"	27,943
	45,8	22°35'23,19"	0,851	0,5	29,90	1,506	1,040	51°20'24,38"	28,432
	45,5	20°	0	0	29,-	1,712	1,080	49° 5'39,25"	27,214
64	46,-	21°38'46,76"	0,520	0,3	29,56	1,588	1,052	50°24' 5,14"	27,938
	46,3	22°33'47,96"	0,850	0,5	29,90	1,508	1,040	51°20'24,38"	28,430
	46,-	20°	0	0	29,-	1,713	1,081	49° 5'39,25"	27,212
65	46,5	21°37'45,32"	0,520	0,3	29,56	1,589	1,052	50°24' 5,14"	27,935
	46,8	22°32'14,66"	0,850	0,5	29,90	1,509	1,040	51°20'24,38"	28,425
	46,5	20°	0	0	29,-	1,714	1,082	49° 5'39,25"	27,209
66	47,-	21°36'45,15"	0,520	0,3	29,56	1,591	1,052	50°24' 5,14"	27,931
	47,3	22°30'43,24"	0,849	0,5	29,90	1,511	1,040	51°20'24,38"	28,421
	47,-	20°	0	0	29,-	1,716	1,083	49° 5'39,25"	27,205
67	47,5	21°35'46,20"	0,519	0,3	29,56	1,592	1,052	50°24' 5,14"	27,929
	47,8	22°29'13,63"	0,849	0,5	29,90	1,513	1,037	51°20'24,38"	28,416
	47,5	20°	0	0	29,-	1,717	1,083	49° 5'39,25"	27,203
68	48,-	21°34'48,44"	0,519	0,3	29,56	1,594	1,053	50°24' 5,14"	27,925
	48,3	22°27'45,78"	0,848	0,5	29,90	1,514	1,038	51°20'24,38"	28,415
	48,-	20°	0	0	29,-	1,718	1,084	49° 5'39,25"	27,201
69	48,5	21°33'51,82"	0,519	0,3	29,56	1,595	1,052	50°24' 5,14"	27,922
	48,8	22°28'19,65"	0,848	0,5	29,91	1,516	1,036	51°20'24,38"	28,410
	48,5	20°	0	0	29,-	1,719	1,085	49° 5'39,25"	27,199
70	49,-	21°32'56,33"	0,519	0,3	29,56	1,596	1,052	50°24' 5,14"	27,920
	49,3	22°24'55,18"	0,847	0,5	29,91	1,517	1,036	51°20'24,38"	28,408
	49,-	20°	0	0	29,-	1,720	1,086	49° 5'39,25"	27,197
71	49,5	21°31' 8,56"	0,519	0,3	29,56	1,598	1,051	50°24' 5,14"	27,916
	49,8	22°23'32,32"	0,847	0,5	29,91	1,518	1,036	51°20'24,38"	28,407
	49,5	20°	0	0	29,-	1,721	1,086	49° 5'39,25"	27,194
72	50,-	21°30'16,23"	0,518	0,3	29,56	1,599	1,051	50°24' 5,14"	27,913
	50,3	22°22'11,04"	0,846	0,5	29,91	1,520	1,036	51°20'24,38"	28,401

Како што се гледа,почнувајки од $z_1 > 24$ доминира претсметката во однос на свиткување F, а од $z_1 > 29$,претсметката треба да се одвива исклучиво по постапката F.

Така,

$$K_{m-F} = 10 \sqrt[3]{\frac{1000 \cdot Y_{FS}}{2\pi z_1} \cdot \frac{S_{Fmin}}{Y_R \cdot Y_\delta \cdot \delta_{Flim}}} =$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
11	12	13	14	15	16	17	18	19	20	21	22	23

$$z_1 = 27 \; ; \; H = -\,0{,}942352156$$

α_{Fe}	ρ_F	s_F	q_s	h_{Fe}	L	Y_{FS}	$Z^2_{H\varepsilon}$	K_{m-H}	S_{F1}	K_{m-F}	S_{H1}	DM
18° 7'51,94"	,475	2,03	2,14	,981	2,069	2,938	4,761	4,35	1,42	4,37	1,01	
21°52'58,06"	,374	2,17	2,89	1,03	2,096	3,029	4,582	4,27	1,30	4,42	1,05	
24° 6'37,49"	,319	2,25	3,52	1,08	2,084	3,163	4,511	4,23	1,22	4,48	1,09	
18° 7' 3,93"	,475	2,03	2,14	,980	2,072	2,938	4,758	4,35	1,42	4,37	1,01	
21°51'37,91"	,374	2,17	2,89	1,03	2,100	3,042	4,583	4,26	1,29	4,42	1,06	
24° 5'16,87"	,319	2,25	3,52	1,07	2,089	3,150	4,514	4,23	1,22	4,47	1,09	
18° 6'15,93"	,475	2,03	2,14	,979	2,074	2,938	4,756	4,34	1,41	4,37	1,01	
21°50' 1,91"	,374	2,17	2,89	1,03	2,108	3,042	4,583	4,25	1,28	4,42	1,06	
24° 3'56,24"	,319	2,25	3,52	1,07	2,094	3,150	4,516	4,22	1,21	4,47	1,09	
18° 5'27,94"	,475	2,03	2,14	,978	2,076	2,938	4,754	4,33	1,40	4,37	1,01	
21°49'29,76"	,374	2,17	2,89	1,03	2,108	3,042	4,586	4,25	1,28	4,42	1,06	
24° 2'50,98"	,319	2,25	3,52	1,07	2,098	3,150	4,519	4,21	1,20	4,47	1,10	
18° 3'51,93"	,475	2,03	2,14	,976	2,080	2,938	4,750	4,32	1,40	4,37	1,02	
21°47'53,76"	,374	2,17	2,89	1,03	2,111	3,042	4,586	4,24	1,27	4,42	1,07	
24° 2'18,36"	,319	2,25	3,52	1,07	2,100	3,150	4,523	4,20	1,20	4,47	1,10	
18° 3' 3,94"	,475	2,03	2,14	,975	2,082	2,938	4,748	4,32	1,39	4,37	1,02	
21°47'21,60"	,374	2,17	2,89	1,03	2,114	3,019	4,589	4,23	1,28	4,41	1,07	
24° 0'57,71"	,319	2,25	3,52	1,07	2,104	3,124	4,526	4,20	1,20	4,46	1,10	
18° 2'15,94"	,475	2,03	2,14	,974	2,084	2,917	4,746	4,31	1,39	4,36	1,02	
21°45'45,60"	,374	2,17	2,89	1,02	2,119	3,019	4,589	4,23	1,27	4,41	1,07	
24° 0'29,13"	,319	2,25	3,52	1,07	2,106	3,124	4,528	4,19	1,20	4,46	1,10	
18° 1'27,94"	,475	2,03	2,14	,973	2,086	2,917	4,744	4,30	1,39	4,36	1,02	F
21°44'57,60"	,374	2,17	2,89	1,02	2,126	3,032	4,591	4,22	1,26	4,42	1,07	
23°59' 4,45"	,319	2,25	3,52	1,06	2,112	3,137	4,532	4,19	1,17	4,47	1,10	
18° 0'39,94"	,475	2,03	2,14	,972	2,089	2,917	4,742	4,30	1,38	4,36	1,02	
21°43'37,44"	,374	2,17	2,89	1,02	2,127	3,032	4,591	4,22	1,25	4,42	1,07	
23°57'43,81"	,319	2,25	3,52	1,06	2,116	3,137	4,534	4,18	1,18	4,47	1,10	
17°59' 3,94"	,475	2,03	2,14	,970	2,093	2,932	4,738	4,29	1,37	4,37	1,02	
21°42'49,44"	,374	2,17	2,89	1,02	2,129	3,032	4,593	4,21	1,25	4,42	1,07	
23°56'23,17"	,319	2,25	3,52	1,06	2,121	3,111	4,536	4,17	1,18	4,46	1,10	
17°58'15,94"	,475	2,03	2,14	,968	2,095	2,932	4,736	4,29	1,36	4,37	1,03	
21°41'29,28"	,374	2,17	2,89	1,02	2,133	3,008	4,593	4,20	1,25	4,41	1,07	
23°55'50,54"	,319	2,25	3,52	1,06	2,122	3,111	4,540	4,17	1,18	4,46	1,11	
17°57'27,94"	,475	2,03	2,14	,968	2,097	2,932	4,734	4,28	1,36	4,37	1,03	
21°40'41,28"	,374	2,17	2,89	1,01	2,136	3,008	4,594	4,20	1,25	4,41	1,08	
23°54'29,89"	,319	2,25	3,52	1,06	2,128	3,123	4,541	4,16	1,17	4,46	1,11	
17°56'39,93"	,475	2,03	2,14	,967	2,099	2,932	4,731	4,28	1,36	4,37	1,03	
21°39'53,29"	,374	2,17	2,89	1,01	2,139	3,008	4,596	4,19	1,24	4,41	1,08	
23°53'57,25"	,319	2,25	3,52	1,05	2,130	3,123	4,545	4,15	1,17	4,46	1,11	
17°55'51,93"	,475	2,03	2,14	,966	2,101	2,911	4,729	4,27	1,36	4,36	1,03	
21°38'33,12"	,374	2,17	2,89	1,01	2,143	3,021	4,596	4,18	1,23	4,41	1,08	
23°53'24,61"	,319	2,25	3,52	1,05	2,131	3,123	4,549	4,15	1,16	4,46	1,12	
17°55' 3,94"	,475	2,03	2,14	,965	2,105	2,911	4,727	4,27	1,35	4,36	1,03	
21°37'45,13"	,374	2,17	2,89	1,01	2,146	3,021	4,597	4,18	1,23	4,41	1,08	
23°51'48,60"	,319	2,25	3,52	1,05	2,138	3,123	4,550	4,14	1,16	4,46	1,12	

$$= 9{,}16 \cdot \sqrt[3]{\dfrac{Y_{FS}}{z_1}} \; ; \quad m_F = K_{m-F} \cdot \sqrt[3]{\dfrac{P \cdot K}{n_1 \cdot \psi}} \; ; \quad \text{СТЕПЕНОТ на СИ- ГУРНОСТ} \quad S_H = 0{,}3096 \cdot \sqrt{\dfrac{z_1 \cdot z_2}{\Sigma z}} \cdot \dfrac{Y_{FS}}{Z^2_{H\varepsilon} \cdot Z^2_B} \geq 1$$

МОДУЛОТ

специфични равенки

$$\cos\alpha_t = \frac{\cos\beta}{\sqrt{\cos^2\beta + \tan^2\alpha_n}} = \frac{\cos\beta}{K} \; ; \; \text{за} \quad \cos^2\beta + \tan^2\alpha_n = 1 \; ; \; \alpha_t = \beta$$

одовде $\beta = 21°20'39,20'' = \alpha_t$

$$\cos\beta_b = K.\cos\alpha_n \; ; \quad d_b = \frac{m_n.z}{K} \; ; \quad \text{за} \quad K = 1 \quad d_b = m_n.z \; ; \; d = m_n.z$$

$$d_{bn} = d_n.\cos\alpha \; ; \quad d_{an} = d_n + d_a - d \; ; \quad \varepsilon_{\alpha n} = \frac{\varepsilon_\alpha}{\cos^2\beta_b} = \frac{\varepsilon_\alpha}{K^2.\cos^2\alpha_n}$$

Како номинален агол на забецот β се избрани следните вредности:

β номин.	11	15	19	21	25	30
избран:	10°44'13,32"	14°58'27,52"	18°59'29,23"	21°20'39,2"	25°	30°
z_n/z	1,05	1,1	7/6=1,166667	1,21587	1,31	1,482
d_b (за $m_n=1$)		< z		z	> z	

Аголни величини на избраните агли

$\beta°$ ном.	K	K^2	K^3	α_t	$\cos\alpha_t$	$inv\alpha_t$
0	1,06418	1,132474	1,2051540	20°0'0,00"	0,93969262	0,014904379
11	1,04774	1,097766	1,1501770	20°19'38,82"	0,93772550	0,015675049
15	1,03233	1,065711	1,1001685	21°38'40,66"	0,93578770	0,016447766
19	1,01320	1,026572	1,0401209	21°3'10,25"	0,93324863	0,017481173
21	1,00000	1,000000	1,0000000	21°20'39,20"	0,93141059	0,018246166
25	0,97666	0,953868	0,9316065	21°52'48,84"	0,92796870	0,019714618
30	0,93940	0,882474	0,8289973	22°47'45,37"	0,92189200	0,022413688

$\beta°$ nom	$\frac{\sin\beta}{\pi}$	$\frac{\beta°}{120}$	$A_{н\beta}$
30	0,159155	0,250000	1,7990296
25	0,134524	0,208333	1,9318465
21	0,115855	0,177869	2,0177838
19	0,103587	0,158262	2,0673179
15	0,082247	0,124786	2,1403220
11	0,059302	0,089475	2,2001445

$$Z_{н\beta}^2 = 2.\cos\alpha_n.\frac{K^3}{\cos\beta.\tan\alpha_{vt}} = \frac{A_{н\beta}}{\tan\alpha_{vt}}$$

препорачл.: $b/h > 3$; $(7 < b \le 12).m_n$

за

$$\varepsilon_\beta > 1 \quad Z_\varepsilon^2 = \frac{1}{\varepsilon_\alpha} \; ; \quad Z_{\varepsilon н\beta}^2 = Z_\varepsilon^2.Z_{н\beta}^2$$

$$\varepsilon_\beta = b.\frac{\sin\beta}{\pi} \; ; \quad Y_\beta = 1 - \varepsilon_\beta\frac{\beta°}{120}$$

за $\varepsilon_\alpha > 1$ и при $\varepsilon_\beta < 1$ $Z_в = M_1 - \varepsilon_\beta(M_1 - 1) \ge 1$, при $\varepsilon_\beta > 1$ $Z_в = 1$

Претходно изведените равенки за одделни параметри за запченците со прави запци,за запченците со коси запци се модифицираат како што следува:

$$K_{m-н} = 20.\sqrt[3]{\frac{\Sigma z}{z_1^2.z_2}.Z_{\varepsilon н\beta}^2.Z_в^2.\cos^2\beta} \; ; \quad K_н = K_A.K_v.K_{нα}.K_{н\beta} \; ; \quad m_{n-н} = K_{m-н}.\sqrt[3]{\frac{P.K_н}{n_1.\psi}}$$

Така пресметаниот модул $m_{nн}$ се заокружува на првата поблиска стандардна вредност,па сега претходно избраниот фактор ψ се ко- когира како што следува:

$$\psi = \frac{8015}{m_n^3}.\frac{\Sigma z}{z_1^2.z_2}.\frac{P.K_н}{n_1}.Z_{\varepsilon н\beta}^2.Z_в^2.\cos^2\beta$$

$b = \psi.m_n = $ цел број

За така пресметаниот модул во однос на Hertz-овиот притисок при $S_н = 1$, изразот за степенот на сигурност во однос на свиткување во коренот на забецот го добива следниот облик:

$$S_F = 15,0628.\frac{\Sigma z}{z_1.z_2}.\frac{Z_{\varepsilon н\beta}^2.Z_в^2.\cos\beta}{Y_{FS}.Y_\beta} \ge 1,4$$

а носивоста

Факторот на носивоста $K_{т-н} = \frac{1,2477}{10^4.\cos^2\beta}.\frac{z_1.z_2}{\Sigma z.Z_{\varepsilon н\beta}^2.Z_в^2} \; ; \quad T_н = \frac{P}{n_1} = \frac{K_{т-н}}{K_н}.m_n^2.b$

Во однос на свиткување, изразот на факторот на модулот гласи: 73

$$K_{m-F} = 9,16 \cdot \sqrt[3]{\frac{Y_{FS} \cdot Y_\beta \cdot \cos\beta}{z_1}} \quad ; \quad \text{и се разбира} \quad m_{nF} = K_{m-F} \cdot \sqrt[3]{\frac{P \cdot K_F}{n_1 \cdot \psi}} \quad [\text{mm}]$$

Со стандардиз.на m_n $\qquad \psi = \frac{768}{m_n^3} \cdot \frac{P \cdot K_F}{z_1 \cdot n_1} \cdot Y_{FS} \cdot Y_\beta \cdot \cos\beta ; \quad b = \psi \cdot m_n = $ цел број
се коригира факт. ψ

Во продолжение се отвора дискусија за влијанието на аголот β на факторите K_{m-F} и K_{m-H}. Од наведените равенки се изземаат факторите Z_ε, Y_{FS} и Z_β кои многу периферно зависат и од аголот β, па се споредуваат само следните изрази: $Z_{H\beta}^2 \cdot \cos^2\beta$ и $Y_\beta \cdot \cos\beta$; одн. $Z_{H\beta}^2 \cdot \cos\beta$ и Y_β

Изразот за факторот на аголот и на обликот на забецот $Z_{H\beta}$, дефиниран сп. ISO гласи:

$$Z_{H\beta}^2 = 2 \cdot \cos\alpha_n \cdot \frac{[\cos^2\beta + \tan^2\alpha_n]^{3/2}}{\cos\beta \cdot \tan\alpha_{vt}}$$

Така,дефинитивно може да се напишат следните споредбени изрази:

$$Z_{H\beta c}^2 = 2 \cdot \cos\alpha_n \cdot \frac{[\cos^2\beta + \tan^2\alpha_n]^{3/2}}{\tan\alpha_{vt}} \quad \text{и}$$

$$Y_\beta = 1 - \varepsilon_\beta \frac{\beta^\circ}{120} ; \quad \varepsilon_\beta = \frac{b \cdot \sin\beta}{m_n \cdot \pi}$$

$$H_\beta = Z_{H\beta c}^2 / Z_{H\beta}^2$$

Левата страна на горниов израз (н) за $\beta = 0^\circ$ има вредност $2,265/\tan\alpha_{vt}$, што одговара на дијаграмот за $Z_{H\beta}$ даден на сл.6.75 во кн.5 по МЕ од Д.С Бидејки во $Z_{H\beta}$ се содржи и влијанието на аглите α_n и α_{vt},и за да се спореди со Y_β ќе се врши промена само на аголот β,прикажано во сл.преглед

β°	0	11	15	19	21	25	30
$\cos\beta \cdot \tan\alpha_{vt} \cdot Z_{H\beta}^2$	2,265	2,162	2.068	1,955	1,879	1,751	1,558
H_β	1	0,954	0,913	0,863	0,830	0,773	0,688
Y_β	1	0,942	0,876	0,857	0,832	0,795	0,750

Вредностите за Y_β се земени како просечни од табел.подат.во збирката. Како што се гледа од горниов приказ, во областа на почесто применливото подрачје на аголот $\beta < 22^\circ$ вредностите на факторот Y_β нешто се помали од оние на H_β,што е поповолно за сите фактори во однос на свиткувањето.По натаму ситуацијата се менува.Факторот $H_\beta < Y_\beta$,со што порастот на аголот β попозитивно влијае на сите параметри кои се однесуваат на Hertz-ов пр. Вистина аголот β има извесно минимално-имплицитно влијание и врз факторот Y_F (преку норм.број запци z_n,па и d),а и врз факторот Z_ε (преку ε_ε) Во продолжение ке биде разгледано конкретното парцијално влијание на аголот β врз неколку карактеристични параметри за двете пресметк.поставки. Така,за пресметка на запчениците во однос на Hertz, парцијалните изрази за одделни величини гласат:

$$m_{nH} \equiv \sqrt[3]{Z_{H\beta}^2 \cdot \cos^2\beta} ; \qquad S_F \equiv \frac{Z_{H\beta}^2 \cdot \cos\beta}{Y_\beta}$$

со изразот за m_{nH} пресметан е S_F на свиткување

$$T_H \equiv \frac{1}{Z_{H\beta}^2 \cos^2\beta}$$

Во однос на свиткување:

$$m_{nF} = \sqrt[3]{Y_\beta \cdot \cos\beta} ; \qquad S_H = \sqrt{\frac{Y_\beta}{Z_{H\beta}^2 \cdot \cos\beta}}$$

со изразот за m_{nF} пресметан е S_H на Hertz-ов прит.

$$T_F \equiv \frac{1}{Y_\beta \cdot \cos\beta}$$

Со соодветна бројна замена од табелите, се добива:

β°	0	11	15	19	21	25	30		11	15	19	21	25	30
m_H	1	,979	,959	,934	,896	,888	,841	m_F	,975	,946	,932	,919	,896	,866
S_H	1	,993	,995	,996	1,00	1,01	1,04	S_F	1,01	1,01	1,01	,997	,972	,917
T_H	1	1,07	1,13	1,23	1,29	1,43	1,68	T_F	1,08	1,16	1,23	1,29	1,39	1,54

Како што се гледа, модулот се намалува до 16% Степенот на сигурноста S_H благо расте до 4%, а S_F од приближно непромене нета вредност (≈ 1),дури по $\beta \geq 21^\circ$ опага и за $\beta = 30^\circ$ дури за преку 8%. Сепак,најголем позитивен ефект (само) од зголемувањето на аголот β (до 30°) постигнува носивоста, и тоа T_H речиси за 70%,а и T_F за преку 50%.

74 / β	z_2	a	α_{vt}	Σx	x_1	d_{a1}	ε_α	b	ε_β	θ	K_{FX}
1	2	3	4	5	6	7	8	9	10	11	12

$z_1 = 6$; $x = b/d_1 = $ **1,01**; 1,208 ; 1,397 ; 1,497 (пост.меѓу лежишта

30	11	10,2	27°29'24,16"	,424	,320	9,49	1,003	7,0	1,11	35°30' 5,83"	25524
25	14	11,6	28° 2' 1,68"	,645	,368	9,20	1,021	8,0	1,08	33°18'46,87"	21326
21	17	12,9	26°56'27,91"	,625	,371	9,04	1,044	9,0	1,04	31°40' 9,53"	18481
19	20	14,3	26°12' 5,20"	,518	,419	9,05	1,098	9,5	0,98	31° 5'21,78"	16598

$z_1 = 7$; $x = b/d_1 = $ **0,866** ; **0,971**; **1,131** ; **1,189**; (пост.меѓу лежишта

30	12	11,4	27°29'24,16"	,473	,322	10,64	1,021	7,0	1,11	38°25'13,83"	21878
25	15	12,7	27°31'16,02"	,634	,355	10,29	1,053	7,5	1,01	36°22'18,98"	18366
21	18	14,0	26°45'55,01"	,652	,375	10,12	1,095	8,5	0,99	34°50'18,69"	15866
19	22	15,9	25°19'58,41"	,629	,396	10,07	1,135	8,8	0,91	34° 3'55,09"	14272

$z_1 = 8$; $x = b/d_1 = $ **0,758**; **0,793** ; **0,931** ; **1,064**; (пост.меѓу лежишта

30	13	12,6	27°29'24,16"	,523	,324	11,79	1,036	7,0	1,11	40°41'51,47"	19143
25	17	14,3	26°29'22,47"	,560	,359	11,44	1,153	7,0	0,94	38°52'18,17"	16218
21	21	16,1	25°45'36,61"	,586	,384	11,25	1,144	8,0	0,93	37°43' 2,05"	14103
19	25	18,0	25°12'49,76"	,604	,408	11,17	1,172	9,0	0,93	37° 7'18,45"	12553

$z_1 = 9$; $x = b/d_1 = $ 0,674; **0,755;0,828;0,893;1,073**;(пост.меѓу лежишта

30	14	13,8	27°29'24,16"	,573	,336	12,96	1,048	7,0	1,11	42°35'39,11"	17016
25	19	16,0	26°22'27,74"	,608	,360	12,54	1,119	7,5	1,01	40°51'49,67"	14431
21	23	17,7	25°19' 1,64"	,569	,381	12,33	1,175	8,0	0,93	39°46'55,97"	12433
19	28	20,1	24°42'49,91"	,581	,406	12,24	1,207	8,5	0,88	39°15'32,88"	11203
15	32	21,8	24°22' 3,41"	,631	,423	12,06	1,235	10-	0,82	38°20' 8,29"	8896

$z_1 = 10$; $x = b/d_1 = $ 0,606;0,680; **0,745;0,804;0,966**;(пост.меѓу лежишта

30	16	15,6	27°29'24,16"	,648	,379	14,18	1,059	7,0	1,11	44°20'11,38"	15315
25	19	16,6	26°34'21,23"	,664	,386	13,68	1,121	7,5	1,01	42°40' 9,11"	12992
21	23	18,3	25°37'32,18"	,642	,399	13,42	1,176	8,0	0,93	41°37'44,12"	11215
19	27	20,1	24°42'49,91"	,581	,408	13,30	1,222	8,5	0,88	41° 2' 3,90"	10083
15	31	21,8	24°22' 3,41"	,631	,440	13,13	1,247	10-	0,82	40°18'35,56"	8006

$z_1 = 11$; $x = b/d_1 = $ 0,551; 0,577; 0,635; 0,688; **0,878** (меѓу лежишта

30	17	16,7	26°49'23,61"	,580	,405	15,42	1,088	7,0	1,11	45°45'17,26"	14006
25	21	18,2	25°49'29,46"	,594	,404	14,86	1,157	7,0	0,94	44°10'47,37"	11863
21	25	19,9	25°14'27,37"	,626	,411	14,53	1,201	7,5	0,87	43° 8'42,66"	10228
19	29	21,7	24°32'33,91"	,593	,413	14,38	1,243	8,0	0,83	42°32'55,52"	9179
15	34	23,8	23°41' 4,21"	,546	,448	14,21	1,266	10-	0,82	41°54'21,24"	7317

$z_1 = 12$; $x = b/d_1 = $ 0,505; 0,529; 0,582; 0,630; **0,805** (меѓу лежишта

30	19	18,4	26°16' 4,99"	,539	,384	16,55	1,118	7,0	1,11	46°40'10,42"	12901
25	23	19,8	25°10'55,50"	,527	,401	15,97	1,192	7,0	0,94	45°16'21,71"	10933'
21	28	22,0	24°37'11,92"	,567	,423	15,65	1,235	7,5	0,87	44°26'12,79"	9423
19	32	23,8	24°10'15,53"	,572	,443	15,50	1,263	8,0	0,83	44° 0'41,55"	8439
15	37	25,9	23°36'21,36"	,576	,467	15,28	1,235	10-	0,82	43°20'37,28"	6711

$z_1 = 13$; $x = b/d_1 = $ 0,466; 0,488; 0,502; 0,582; **0,706** (меѓу лежишта

30	19	19,0	26°18'26,80"	,564	,369	17,67	1,126	7,0	1,11	47°29' 1,77"	11905
25	23	20,4	25°23'10,01"	,581	,395	17,05	1,194	7,0	0,94	46°13'36,01"	10074
21	28	22,5	24°80 26,33"	,524	,425	16,74	1,255	7,0	0,81	45 2° 45,52"	8718
19	33	24,9	24°15'50,80"	,619	,454	16,57	1,270	8,0	0,83	45° 9'21,23"	7384
15	40	28,0	23°32'20,22"	,607	,482	16,34	1,313	9,5	0,78	44°33'58,63"	6198

$x = b.\cos\beta/z_1$; $x > 1,2$ не се препорачува; $b = \psi.m_n$; $\psi = 6,75 \div 10 \div$ (12)

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
13	14	15	16	17	18	19	20	21	22	23	24	25

$z_1 = 6$; H= -0,728802565;H=-0,687035821; H= -0,659159127;H=-0,642793884

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
10,37	29°37'46,01"	,41	1,81	2,20	1,30	,750	4,04	3,447	1,00	9,62	3,82	6,95
9,59	33°14'55,00"	,39	1,79	2,28	1,41	,792	4,21	3,553	1,00	9,75	3,46	7,29
9,13	35°7'38,26"	,39	1,75	2,23	1,47	,822	4,41	3,803	1,00	9,98	3,32	7,56
8,28	35°4'17,65"	,38	1,78	2,37	1,42	,844	4,62	3,830	1,01	10,0	3,06	7,79

$z_1 = 7$; H= -0,774287563;H=-0,738487497; H= -0.714593188;H=-0,700565836

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
11,81	28°21'34,39"	,40	1,88	2,34	1,27	,750	3,82	3,386	1,00	8,70	3,49	6,48
10,79	30°43'36,54"	,39	1,85	2,36	1,34	,792	4,00	3,521	1,00	8,85	3,18	6,80
10,18	31°52'38,99"	,39	1,87	2,42	1,36	,825	3,96	3,657	1,01	9,00	3,15	6,94
10,00	33°56'37,28"	,38	1,88	2,48	1,44	,856	4,04	3,876	1,03	9,16	3,11	7,09

$z_1 = 8$; H= -0,808401312;H=-0,777076254;H= -0,756168733;H=-0,743894801

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
13,26	27°24'32,69"	,40	1,94	2,44	1,25	,750	3,67	3,337	1,00	7,97	3,19	6,12
11,77	26°38'55,83"	,39	1,92	2,47	1,16	,804	3,53	3,380	1,00	8,00	2,99	6,27
11,28	29°43'46,24"	,38	1,91	2,50	1,28	,835	3,80	3,678	1,05	8,34	2,95	6,57
10,93	30°17'19,50"	,37	1,91	2,56	1,28	,852	3,78	3,773	1,07	8,42	2,95	6,64

H=-0,83493423;H=-0,80708973;H=-0,78850527;H=-0,7775951;H=-0,76125556

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
14,74	26°48'33,18"	,39	1,99	2,56	1,23	,750	3,56	3,299	1,00	7,38	2,94	5,82
13,24	27°45'38,90"	,38	1,97	2,55	1,24	,792	3,62	3,482	1,00	7,47	2,71	6,05
12,42	28°16'0,87"	,38	1,95	2,57	1,23	,835	3,64	3,907	1,05	7,88	2,93	6,23
12,01	28°41'48,31"	,37	1,96	2,63	1,22	,861	3,63	3,889	1,07	7,86	2,78	6,32
11,47	29°38'31,46"	,37	1,95	2,65	1,24	,897	3,68	4,279	1,09	8,20	2,93	6,48

H=-0,85616056;H=-0,83110051;H=-0,8143745;H=-0,80455535;H=-0,78984976

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
16,26	26°34'53,92"	,37	2,06	2,75	1,21	,750	3,46	3,264	1,00	6,83	2,67	5,57
14,61	27°38'35,70"	,37	2,02	2,71	1,24	,792	3,54	3,445	1,02	7,07	2,61	5,80
13,68	28°4'25,45"	,37	2,01	2,71	1,23	,835	3,54	3,601	1,05	7,23	2,57	5,96
13,15	27°58'3,80"	,38	2,00	2,64	1,21	,861	3,50	3,734	1,07	7,32	2,54	6,03
12,59	29°9'30,24"	,36	2,00	2,79	1,23	,897	3,57	3,886	1,07	7,43	2,50	6,19

H=-0,87352756;H=-0,8507457;H=-0,83554023;H=-0,82660464;H=-0,81324502

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
17,34	26°0'58,44"	,36	2,10	2,91	1,17	,750	3,37	3,270	1,00	6,44	2,53	5,35
15,88	26°48'14,50"	,36	2,07	2,85	1,19	,804	3,41	3,469	1,03	6,67	2,46	5,58
14,86	27°16'49,20"	,36	2,05	2,81	1,20	,845	3,45	3,620	1,05	6,80	2,39	5,74
14,29	27°14'42,80"	,37	2,04	2,74	1,18	,869	3,43	3,820	1,07	6,94	2,45	5,82
13,62	27°58'32,62"	,35	2,04	2,88	1,18	,897	3,46	3,952	1,06	7,00	2,36	5,94

H=-0,88800006;H=-0,86711669;H=-0,85317834;H=-0,8449957;H=-0,83274106

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
19,11	24°57'6,99"	,37	2,11	2,89	1,14	,750	3,29	3,260	1,00	6,06	2,34	5,15
17,10	25°44'2,95"	,36	2 09	2,87	1,15	,804	3,32	3,472	1,02	6,27	2,30	5,37
16,02	26°24'35,61"	,36	2,08	2,90	1,16	,845	3,37	3,630	1,05	6,41	2,24	5,54
15,47	26°50'49,58"	,35	2,08	2,95	1,16	,869	3,37	3,742	1,05	6,45	2,19	5,62
14,95	29°26'17,75"	,35	2,08	3,00	1,29	,897	3,40	4,041	1,03	6,59	2,11	5,81

H=-0,90024602;H=-0,88096906;H=-0,86810289;H=-0,86054971;H=-0,8492377

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	$Z_{\varepsilon\beta}^2$	Z_B^2	K_{m-H}	S_{F1}	K_{mF}
20,56	24°30'44,50"	,37	2,12	2,89	1,12	,750	3,25	3,232	1,00	5,79	2,24	5,00
18,40	25°24'50,66"	,36	2,11	2,90	1,15	,804	3,29	3,532	1,02	6,03	2,24	5,21
17,21	25°51'5,47"	,36	2,10	2,96	1,14	,845	3,29	3,653	1,04	6,12	2,16	5,35
16,65	26°33'39,72"	,35	2,11	3,03	1,15	,869	3,32	3,707	1,05	6,13	2,06	5,44
15,84	27°10'49,08"	,34	2,11	3,10	1,15	,902	3,33	3,886	1,05	6,21	2,01	5,55

K_{Fx} е фактор на аксиалната сила, подробности види на стр.80.

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
1	2	3	4	5	6	7	8	9	10	11	12

$z_1 = 14$; $\varkappa = b/d_1 = 0,433$; $0,453$; $0,466$; $0,507$; $0,621$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	20	20,1	25°47'54,10"	,500	,35	18,81	1,152	7,0	1,114	48°10'52,25"	11102
25	25	22,0	24°49'53,88"	,516	,39	18,16	1,226	7,0	0,942	47° 2'53,15"	9397
21	29	23,6	24°21'13,44"	,552	,42	17,81	1,265	7,0	0,811	46°24'20,72"	8094
19	36	27,0	23°57'18,86"	,599	,46	17,65	1,293	7,5	0,777	46° 7'37,47"	7245
15	43	30,1	23°28'58,22"	,638	,49	17,40	1,326	9,0	0,740	45°37'11,98"	5758

$z_1 = 15$; $\varkappa = b/d_1 = 0,433$; $0,453$; $0,466$; $0,473$; $0,580$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	22	21,8	25°33'44,29"	,462	,33	19,94	1,177	7,5	1,194	48°46'56,41"	10397
25	26	23,1	24°40'48,06"	,511	,41	19,32	1,238	7,5	1,009	47°57'29,91"	8782
21	31	25,2	24° 7' 8,55"	,538	,46	18,96	1,280	7,5	0,869	47°24'47,36"	7569
19	38	28,6	23°51'53,63"	,612	,48	18,75	1,303	7,5	0,777	47° 4'31,16"	6767
15	46	32,2	23°25'50,95"	,669	,51	18,47	1,337	9,0	0,740	46°35'29,70"	5376

$z_1 = 16$; $\varkappa = b/d_1 = 0,433$; $0,453$; $0,466$; $0,473$; $0,543$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	23	22,9	24°58'45,75"	,401	,29	21,02	1,202	8,0	1,273	49°11' 9,11"	9781
25	27	24,2	24°32'29,11"	,505	,37	20,35	1,258	8,0	1,076	48°24'28,25"	8242
21	33	26,8	23°54'38,10"	,525	,42	19,96	1,304	8,0	0,927	47°52'57,38"	7107
19	41	30,7	23°37' 0,98"	,593	,45	19,75	1,331	8,0	0,829	47°35'51,52"	6356
15	49	34,2	22°59'45,81"	,588	,48	19,46	1,372	9,0	0,740	47° 8' 1,39"	5057

$z_1 = 17$; $\varkappa = b/d_1 = 0,433$; $0,453$; $0,466$; $0,473$; $0,511$; $0,636$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	25	24,6	24°40'11,72"	,365	,25	22,10	1,224	8,5	1,353	49°31'48,90"	9228
25	30	26,4	24°17'49,53"	,496	,34	21,38	1,279	8,5	1,143	48°48'49,55"	7772
21	35	28,4	23°43'27,01"	,512	,39	20,97	1,325	8,5	0,985	48°19'28,62"	6699
19	39	30,1	23°20'53,44"	,511	,41	20,76	1,355	8,5	0,880	48° 3'15,32"	5995
15	43	31,6	23° 7'37,85"	,577	,45	20,43	1,380	9,0	0,740	47°37'11,48"	4755
11	52	35,7	22°43'38,66"	,619	,47	20,18	1,412	11-	0,652	47°14'51,78"	3431

$z_1 = 18$; $\varkappa = b/d_1 = 0,409$; $0,428$; $0,440$; $0,473$; $0,510$; $0,600$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	26	25,8	24°48'27,73"	,413	,23	23,22	1,227	8,5	1,353	49°59'59,71"	8706
25	31	27,5	24°11'19,88"	,491	,29	22,39	1,294	8,5	1,143	49° 7'30,29"	7347
21	37	30,0	23°33'23,27"	,499	,33	21,94	1,347	8,5	0,985	48°36'50,87"	6335
19	42	32,2	23° 8'28,34"	,496	,35	21,70	1,380	9,0	0,932	48°19'16,01"	5670
15	46	33,6	22°41'51,09"	,498	,40	21,38	1,417	9,5	0,781	47°56'15,96"	4505
11	55	37,6	22° 6' 8,60"	,469	,44	21,16	1,463	11-	0,652	47°40'47,87"	3255

$z_1 = 19$; $\varkappa = b/d_1 = 0,410$; $0,429$; $0,441$; $0,473$, $0,508$; $0,569$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	28	27,5	24°32'23,99"	,378	,21	24,34	1,246	9,0	1,432	50°22'27,94"	8266
25	33	29,1	23°49' 9,96"	,430	,27	23,46	1,319	9,0	1,211	49°31'13,88"	6980
21	39	31,6	23°24'17,19"	,486	,31	22,97	1,365	9,0	1,043	48° 1'19,65"	6008
19	43	33,2	22°50'35,79"	,433	,33	22,72	1,404	9,5	0,984	48°44'11,95"	5384
15	49	35,6	22°18'34,52"	,421	,37	22,37	1,448	10-	0,822	48°20'14,87"	4280
11	58	39,6	21°53'11,92"	,429	,41	22,13	1,480	11-	0,652	48° 5'57,42"	3089

$z_1 = 20$; $\varkappa = b/d_1 = 0,390$; $0,408$; $0,442$; $0,449$; $0,483$; $0,540$

β	z₂	a	α_vt	Σx	x₁	d_a1	ε_α	b	ε_β	θ	K_FX
30	31	29,8	24°22' 9,13"	,367	,19	25,46	1,263	9,0	1,432	50°43'13,97"	7863
25	35	30,7	23°29' 1,94"	,370	,22	24,49	1,344	9,0	1,211	49°47'32,84"	6648
21	41	33,1	22°51'39,55"	,366	,27	23,99	1,399	9,5	1,101	49°19'49,36"	5731
19	45	34,7	22°25'20,43"	,339	,29	23,71	1,435	9,5	0,984	49° 1'53,10"	5130
15	51	37,1	22° 2'32,61"	,364	,33	23,35	1,473	10-	0,822	48°41' 9,28"	4073
11	61	41,6	21°41'23,61"	,390	,38	23,09	1,504	11-	0,652	48°27'17,09"	2938

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d_en	α_Fen	ρ_F	s_Fn	q_s	h_Fe	Y_β	Y_FS	Z²_cHQ	Z²_B	K_m-H	S_F1	K_mF
13	14	15	16	17	18	19	20	21	22	23	24	25

H=-0,91074256; H=-0,89284252; H=-0,88089537; H=-0,87388169; H=-0,863377

21,96	23°47' 4,17"	,37	2,13	2,88	1,11	,750	3,22	3,231	1,00	5,52	2,12	4,86
19,63	24°37'27,34"	,36	2,12	2,92	1,13	,804	3,27	3,432	1,00	5,64	1,99	5,07
18,41	25°27'54 39"	,35	2,12	3,00	1,13	,856	3,27	3,626	1,03	5,81	1,98	5,23
17,78	25°58'55,01"	,35	2,13	3,05	1,12	,877	3,25	3,732	1,05	5,84	1,94	5,29
16,94	26°47'37,83"	,34	2,14	3,19	1,13	,908	3,29	3,890	1,05	6,91	1,88	5,41

H=-0,91983956; H=-0,90313286; H=-0,89198218; H=-0,8854361; H=-0,8756323

23,36	23° 7'14,00"	,37	2,14	2,87	1,08	,750	3,16	3,219	1,00	5,25	1,99	4,72
20,97	24°32'37,64"	,35	2,15	3,05	1,10	,792	3,18	3,396	1,00	5,39	1,94	4,89
19,66	25°23'23,84"	,34	2,16	3,16	1,11	,845	3,22	3,595	1,01	5,50	1,85	5,06
18,98	25°50'46,00"	,34	2,16	3,21	1,11	,877	3,23	3,723	1,03	5,54	1,79	5,16
18,05	26°34' 2,98"	,33	2,16	3,29	1,12	,908	3,26	3,873	1,05	5,70	1,77	5,27

H=-0,92779943; H=-0,9121369; H=-0,90168314; H=-0,89554618; H=-0,8863551

24,71	22°19'31,94"	,38	2,13	2,78	1,07	,750	3,13	3,213	1,00	5,04	1,89	4,60
22,18	23°45'51,72"	,36	2,15	2,96	1,09	,792	3,17	3,363	1,00	5,16	1,82	4,78
20,76	24°28'31,04"	,35	2,15	3,06	1,09	,835	3,19	3,534	1,00	5,22	1,73	4,92
20,03	24°53'43,43"	,34	2,16	3,13	1,09	,869	3,19	3,705	1,02	5,28	1,69	5,01
19,03	25°28'39,77"	,34	2,16	3,21	1,09	,908	3,20	3,868	1,04	5,38	1,67	5,13

H=-0,934823; H=-0,92008; H=-0,91024; H=-0,904467; H=-0,895817; H=-0,8886

26,08	21°38' 6,78"	,40	2,13	2,69	1,05	,750	3,08	3,200	1,00	4,82	1,79	4,49
23,38	23° 0'29,20"	,38	2,14	2,88	1,07	,792	3,15	3,346	1,00	4,92	1,69	4,67
21,88	23°43'29,02"	,37	2,15	2,99	1,07	,825	3,16	3,466	1,00	4,99	1,63	4,79
21,10	24° 8'26,61"	,37	2,15	3,06	1,07	,861	3,17	3,617	1,01	5,07	1,61	4,89
19,27	24°56'11,01"	,36	2,16	3,13	1,09	,908	3,20	3,825	1,05	5,25	1,65	5,02
18,75	25°22'50,09"	,35	2,16	3,19	1,09	,942	3,21	4,002	1,05	5,30	1,54	5,12

H=-0,941066; H=-0,927144; H=-0,91785; H=-0,912396; H=-0,90423; H=-0,8974

27,54	21°29' 5,08"	,40	2,14	2,70	1,05	,750	3,07	3,244	1,00	4,67	1,73	4,40
24,58	22°20'16,79"	,38	2,13	2,77	1,07	,792	3,12	3,398	1,00	4,78	1,65	4,57
22,96	22°50'56,84"	,37	2,14	2,85	1,06	,825	3,13	3,446	1,01	4,81	1,56	4,68
22,11	23° 6'50,74"	,37	2,14	2,90	1,06	,861	3,17	3,617	1,01	4,84	1,51	4,76
21,01	23°47'45,04"	,36	2,14	3,00	1,06	,902	3,15	3,788	1,02	4,99	1,53	4,89
20,16	24° 9'33,28"	,35	2,16	3,11	1,04	,942	3,13	4,009	1,03	5,08	1,53	4,98

H=-0,946652; H=-0,93346; H=-0,924659; H=-0,91949; H=-0,91175; H=-0,90530

28,95	21° 4'35,99"	,40	2,14	2,68	1,04	,750	3,03	3,304	1,00	4,52	1,68	4,30
25,81	21°47'43,42"	,39	2,13	2,74	1,05	,792	3,08	3,390	1,00	4,60	1,57	4,47
24,11	22°21'54,58"	,38	2,14	2,82	1,05	,822	3,10	3,486	1,01	4,65	1,52	4,58
23,20	22°32'19,04"	,37	2,14	2,86	1,04	,844	3,09	3,508	1,02	4,68	1,48	4,64
22,00	23° 1'24,83"	,36	2,14	2,94	1,04	,897	3,10	3,750	1,02	4,79	1,46	4,77
21,14	23°36'22,52"	,35	2,15	3,05	1,03	,942	3,11	3,943	1,02	4,85	1,46	4,88

H=-0,95168; H=-0,93915; H=-0,930786; H=-0,925876; H=-0,91852; H=-0,91239

30,36	20°41'35,31"	,40	2,14	2,67	1,02	,750	3,00	3,348	1,00	4,36	1,60	4,21
27,00	21° 8'40,62"	,40	2,13	2,66	1,03	,792	3,04	3,360	1,01	4,44	1,51	4,38
25,20	21°35'53,21"	,39	2,13	2,74	1,02	,822	3,04	3,492	1,02	4,52	1,49	4,47
24,24	21°45'30,32"	,38	2,13	2,81	1,02	,844	3,06	3,506	1,02	4,52	1,42	4,54
23,00	22°21'49,94"	,37	2,14	2,87	1,02	,897	3,06	3,816	1,02	4,76	1,44	4,67
22,09	22°55'55,90"	,36	2,15	2,98	1,02	,942	3,07	4,071	1,03	4,76	1,42	4,78

β	z_2	a	α_vt	Σx	x_1	d_{a1}	ε_α	b	ε_β	θ	K_{FX}
1	2	3	4	5	6	7	8	9	10	11	12

$z_1 = 21$; $\varkappa = b/d_1 = 0,410$; $0,421$; $0,450$; $0,483$; $0,515$

β	z_2	a	α_vt	Σx	x_1	d_{a1}	ε_α	b	ε_β	θ	K_{FX}
25	32	29,5	23° 6'25,71"	,267	,19	25,54	1,361	9,5	1,278	50° 4'24,79"	6349
21	37	31,4	22°32'48,35"	,272	,24	25,01	1,416	9,5	1,101	49°39'11,77"	5470
19	43	34,1	22° 9' 5,07"	,264	,27	24,74	1,453	10-	1,036	49°23'58,31"	4895
15	53	38,6	21°47'35,55"	,307	,31	24,34	1,496	105	0,864	49° 1'48,64"	3886
11	64	43,6	21°30'34,99"	,352	,35	24,06	1,527	11-	0,652	48°47'59,32"	2802

$z_1 = 22$; $\varkappa = b/d_1 = 0,391$; $0,402$; $0,430$; $0,483$; $0,514$

β	z_2	a	α_vt	Σx	x_1	d_{a1}	ε_α	b	ε_β	θ	K_{FX}
25	34	31,0	22°21'36.52"	,106	,14	26,55	1,402	9,5	1,278	50°15'15,60"	6094
21	39	33,0	22°26'44,18"	,260	,21	26,02	1,432	9,5	1,101	49°53'54,98"	5226
19	45	35,7	22° 9'27,24"	,278	,24	25,73	1,492	10-	1,036	49°40'33,86"	4673
15	56	40,7	21°50'26,65"	,338	,28	25,32	1,507	11-	0,905	49°20'29,54"	3708
11	67	45,6	21°20'38,62"	,314	,32	25,01	1,551	115	0,682	49° 3'59,35"	2677

$z_1 = 23$; $\varkappa = b/d_1 = 0,394$; $0,405$; $0,411$; $0,483$; $0,491$

β	z_2	a	α_vt	Σx	x_1	d_{a1}	ε_α	b	ε_β	θ	K_{FX}
25	35	32,1	22°19'44,87"	,103	,10	27,56	1,402	10-	1,345	50°28'31,39"	5830
21	41	34,6	22°21'12,33"	,249	,17	27,02	1,447	10-	1,159	50° 7'21,51"	5002
19	47	37,3	22° 9'47,50"	,292	,21	26,72	1,475	10-	1,036	49°55'18,96"	4469
15	58	42,2	21°37' 5,39"	,283	,25	26,30	1,529	115	0,905	49°36'26,04"	3553
11	70	47,7	21°29'56,21"	,382	,29	25,96	1,557	115	0,682	48°20' 9,56"	2558

$z_1 = 25$; $\varkappa = b/d_1 = 0,381$; $\varkappa = b/d_1 = 0,464$

β	z_2	a	α_vt	Σx	x_1	d_{a1}	ε_α	b	ε_β	θ	K_{FX}
25	38	34,8	22° 3'28,88"	,044	,03	29,64	1,440	105	1,412	50°52' 0,04"	5374
15	51	39,6	21°38'10,27"	,270	,19	28,24	1,541	12-	0,987	50° 7'17,47"	3268

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	Z²_{cu(β)}	Z²_b	K_{m-F}	S_{H1}	K_{mH}
13	14	15	16	17	18	19	20	21	22	23	24	25

H=-0,9442942 ; H=-0,93632943 ; H=-0,93165365 ; H=-0,92465099 ; H=-0,91881544

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	Z²_{cu(β)}	Z²_b	K_{m-F}	S_{H1}	K_{mH}
28,23	20°43'36,94"	,41	2,13	2,58	1,03	,792	3,01	3,412	1,00	4,39+	1,54	4,29
26,33	21° 8'26,80"	,39	2,13	2,70	1,01	,822	3,02	3,431	1,00	4,39	1,00	4,39
25,35	21°24'28,03"	,39	2,14	2,75	1,01	,842	3,00	3,494	1,01	4,44	1,01	4,40
24,02	21°49'33,47"	,38	2,14	2,82	1,01	,892	3,03	3,890	1,02	4,57	1,01	4,55
23,06	22°21'46,83"	,37	2,15	2,92	1,00	,942	3,04	4,052	1,02	4,69	1,03	4,58

H=-0,9489716 ; H=-0,94136889 ; H=-0,93690564 ; H=-0,93022128 ; H=-0,92465099

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	Z²_{cu(β)}	Z²_b	K_{m-F}	S_{H1}	K_{mH}
29,37	19°50'53,90"	,42	2,11	2,50	,993	,792	2,95	3,348	1,00	4,22*	1,46	4,20
27,47	20°44'27,35"	,40	2,12	2,63	1,01	,822	3,00	3,410	1,01	4,31	1,02	4,26
26,42	20°53'19,13"	,40	2,13	2,69	,995	,842	2,99	3,526	1,01	4,36	1,03	4,28
25,06	21°28'24,34"	,38	2,14	2,77	1,00	,887	3,03	3,850	1,03	4,49	1,03	4,40
24,01	21°44'25,41"	,38	2,14	2,84	,991	,939	3,00	4,011	1,03	4,59	1,05	4,44

H=-0,95324232 ; H=-0,94597014 ; H=-0,94170094 ; H=-0,93530721 ; H=-0,9299791

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	Z²_{cu(β)}	Z²_b	K_{m-F}	S_{H1}	K_{mH}
30,62	19°35'32,57"	,43	2,11	2,44	1,00	,792	2,93	3,353	1,01	4,13	1,00	4,12
28,60	20°18'39,42"	,41	2,12	2,55	1,01	,822	2,98	3,391	1,01	4,24	1,04	4,13
27,54	20°39'15,10"	,40	2,12	2,63	1,01	,842	2,98	3,522	1,02	4,29	1,05	4,17
26,07	20°58'33,97"	,39	2,13	2,72	,990	,887	2,98	3,921	1,03	4,40	1,03	4,30
25,00	21°24' 1,78"	,38	2,14	2,78	,994	,939	3,02	3,973	1,03	4,53	1,08	4,30

H = - 0,960760126 ; H = - 0,944258436

d_{en}	α_{Fen}	ρ_F	s_{Fn}	q_s	h_{Fe}	Y_β	Y_{FS}	Z²_{cu(β)}	Z²_b	K_{m-F}	S_{H1}	K_{mH}
33,06	18°37'30,79"	,45	2,10	2,33	,996	,792	2,86	3,311	1,01	3,98	1,04	3,88
28,16	20°25'23,07"	,41	2,09	2,55	1,00	,877	3,01	3,514	1,03	4,28	1,10	4,00

КОМПАРАТИВЕН ПРЕГЛЕД
НА 10 ДВОЈКИ ЗАПЧЕСТИ ПАРОВИ СО ПРАВИ И КОСИ ЗАПЦИ
со приказ на главните параметри на оптоварувањето

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z_1	$\beta°$	z_2	a	x_1	Z_B^2	Y_β	Y_{FS}	$Z_{\varepsilon H\beta}^2$	K_{m-H}	S_F	d_{a1}^*	смал. V_β/V_0	$K_{TH}\cdot10^4$	$K_{TH}/\beta70$
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
6	19	20	14,3	,419	1,010	,844	4,620	3,830	10,0	3,06	90,5	54	10,-	2,-
7	0		13,9	,411	1,924	-	4,296	4,683	12,6	6,09	122,7	100	5,-	1,-
10	15	31	21,8	,440	1,070	,897	3,570	3,886	7,43	2,50	97,6	76	24,3	1,32
11	0		21,5	,400	1,297	-	3,613	4,654	8,15	3,10	111,8	100	18,5	1,-
12	19	32	23,8	,443	1,050	,869	3,370	3,742	6,45	2,19	100,0	77	37,2	1,23
14	0		23,5	.300	1,225	-	3,457	4,601	6,92	2,52	114,3	100	30,2	1,-
13	25	23	20,4	,395	1,020	,804	3,290	3,532	6,03	2,24	102,8	71	45,5	1,11
17	0		20,5	,300	1,115	-	3,440	4,533	6,25	2,26	121,9	100	41,-	1,-
14	21	29	23,6	,420	1,030	,856	3,270	3,626	5,81	1,98	103,5	75	50,8	1,16
17	0		23,5	,300	1,136	-	3,386	4,566	6,11	2,15	119,3	100	43,8	1,-
18	19	42	32,2	,350	1,010	,861	3,170	3,617	4,87	1,51	105,7	76	86,6	1,19
21	0	41	31,5	,300	1,090	-	3,190	4,591	5,16	1,70	121,5	100	72,7	1,-
19	21	39	31,6	,310	1,010	,822	3,100	3,486	4,65	1,52	106,8	73	99,2	1,17
23	0		31,5	,300	1,069	-	3,167	4,574	4,90	1,61	125,1	100	84,9	1,-
20	11	61	41,6	,380	1,030	,942	3,070	4,071	4,76	1,42	109,9	88	92,9	1,15
21	0		41,5	,300	1,090	-	3,128	4,636	4,98	1,56	117,3	100	81,-	1,-
20	15	51	37,1	,330	1,020	,897	3,060	3,816	4,66	1,44	108,8	81	98,7	1,17
22	0		37,0	,300	1,082	-	3,128	4,607	4,91	1,56	120,5	100	84,6	1,-
23	21	41	34,6	,170	1,010	,822	2,980	3,391	4,24*	1,04+	114,6	73	131,3*	1,14
28	0	43	36,0	,300	1,042	-	3,095	4,559	4,40*	1,03+	134,4	100	117,8	1,-

Забелешки: За последниот пар запци факт.на модулот е пресмет.во однос на свиткув.,а степенот на сигурност се однесува на Hertz-ов прит.

Во прикажаните (10) групи запчести парови,броѕчената вредност на z_1 со $\beta = 0$ одговара на групниот z_1 како z_n за соодветниот аг.β. На пример, $z_1 = 12$ ($\beta = 19°$) одговара како $z_n = z_1 = 14$ со $\beta = 0$.

* пресметано во однос на свиткување; + пресмет. во однос на Hertz.

Волуменот V е изразен со d_{a1}^2; $(=d_{a1}^* \cdot K_{m-H})^2$; d_{a1}^* е за $m_n = 1$ mm)

Оптоварувањето:

$$T_H = \frac{1,2477}{10^4 \cdot \cos^2\beta} \cdot \frac{z_1^2 \cdot z_2}{\Sigma z} \cdot \frac{m_n^3}{Z_{\varepsilon H\beta}^2 \cdot Z_B^2} \cdot \frac{\psi}{K_H} \quad ; \quad T_F = \frac{1,302 \cdot z_1}{10^3 \cdot \cos\beta} \cdot \frac{m_n^3}{Y_{FS} \cdot Y_\beta} \cdot \frac{\psi}{K_F}$$

$$V = d_{a1}^2 \cdot b = d_{a1}^2 \cdot m_n \cdot \psi \; ; \; b = \psi \cdot m_n \; ; \; \psi = 7 \div 10 \; (12) - \text{според ISO.}$$

Како што се гледа,волуменот V како и оптоварувањето T растат со m_n^3.

Притоа, равенката на факторот на оптоварувањето гласи:

$$K_{TH} = \frac{1,2477}{10^4 \cdot \cos^2\beta} \cdot \frac{z_1^2 \cdot z_2}{\Sigma z} \cdot \frac{1}{Z_{\varepsilon H\beta}^2 \cdot Z_B^2} \quad ; \qquad a \qquad T_H = K_{TH} \frac{m_n^3 \cdot \Psi}{K_H}$$

За сите запчести парови (освен за последната двојка) модулот е пресметан во однос на Hertz-овиот притисок,со степен на сигурност $S_H = 1$.Притоа оптоварув.на двата члена од двојката е иста -согласно со изразот за T_H.

Меѓутоа,поради факторот на оптоварув.K_{TH} -(кол.15),од чистогеом.гледна точка,заедно со одн.V_β/V_0(кол.13),запчен.со коси запци имаат значителна предност:постигнуваат помал модул m_n ,аналогно и соодв.помал волум.,особено при најмал број запци–6,при што волуменот,речиси,е преполовен 54%. За таков случај факторот Z_B^2 за запчениците со коси е неспоредливо помал во однос со прави запци,и со згол.на z, Z_B^2 е сведен, речиси на 1,01÷1,03.

Освен помал волумен,запчениците со коси запци,во споредба со прави запци поднесуваат и поголемо оптоварување. Така,според податоците во колоната 15, оптоварливоста K_{TH}/K_{THO} расте во просек за околу 18%, а при најмалиот број запци (z_1= 6) дури за двапати, одн.при z_1= 10 за 32%.

Од на претходната страна наведените табеларни податоци, недвосмислено произлегува заклучокот дека во областа на најчесто применуваниот број запци z ≤ 23,каде што погодува претсметката да се одвива по постапката на Hertz,упатно е да се применуваат првенствено запчениците со коси за пци од повеќе причини,и тоа:за ист број запци z_1,односно z_n постигнуваат помал модул, соодветно на тоа и помал волумен,тежина, веројатно и цена. Така,првенствено зависно од аголот β,а и од броевите запци,намалувањето на волуменот се движи околу 25%, а при најмалиот збир Σz=26–дури за 46%! Освен тоа, и оптоварливоста (кол.15) на запч.со коси запци е поголема. Помалиот модул повлекува помал меѓузабен простор,одн.материал што треба да се изглода – значи покусо време за изработка.Помал модул секогаш осигурува поголема точност и квалитет,што дозволува потешки работни услови–пред сё, поголема периферна брзина–денес често поставувано барање.

Некогаш се сметаше дека запчениците со коси запци условуваат нешто потешка и поскапа изработка. Меѓутоа, денес,при постоење на високо-квалитетни и спец.автоматизирани CNC алатни машини, тој проблем е надминат.

Една од неизбежната негативна страна на запчениците со коси запци е појавата на аксијалната сила $F_x = F_t\,tg\beta$.Меѓутоа,овој недостаток,но и сите добри страни на запчениците со коси запци,се во пораст со зголемувањето на аголот β,што укажува,овој агол да се избира во умерени гран.(до $21°$).

Во продолжение ќе биде изведена равенката за аксијалната сила за наведените запченици со коси запци, од презентираниот број запчести парови. Така,поаѓајќи од рав.6.02 за номиналната сила F_t вклучувајќи ги и познатите K-фактори за премин во меродавна сила (рав.6.35, одн.6.38; кн.5), следува:

$$F_x = F_t\cdot tg\beta = 318310\cdot\frac{P}{n_1\cdot d_1}\,tg\beta = \frac{10^6}{\pi}\cdot\frac{P\cdot\cos\beta}{n_1\cdot m_n\cdot z_1}\cdot\frac{\sin\beta}{\cos\beta}\quad [N]\ \text{одн.}$$

$$F_x = K_{FX}\frac{P}{n_1\cdot m_n}\qquad \text{каде што}$$

а вредностите за

$$K_{FX}= \frac{10^6}{z_1}\cdot\frac{\sin\beta}{\pi}\ ;\qquad \frac{\sin\beta}{\pi}\quad \text{види во таб.на стр.72.}$$

Пресметаните вредности на факторот K_{FX} (за m_n = 1 mm) се наведени во колоната 12 за секој број запци z_1 и односниот агол β.

Притоа,силната P се наведува во kW, а зачестен.на вртежите n_1 во sec^{-1}.

Како што се гледа, факторот на центрифугалната сила K_{FX} опаѓа со зголемувањето на бројот запци z_1,одн.пречникот d, а благо расте со зголемувањето на аголот β, што е и главен недостаток на запч.со коси запци.

Пресметк.на силата Fx се однесува на веќе димензиониран запч.со мод.m_n.