

Heim Mass Calculator 1989 by Javier Mazzone
 Software used Mathcad, version 14.0.0.163 [revision 702091438]
 v1.0 2009-11-12
 Script 1989 version b (57 pages)

$$\begin{aligned}
 h_b &= 1.0545887 \times 10^{-34} & c &= 2.99792458 \times 10^8 & \text{KG2MEV} &= 5.609545 \times 10^{29} \\
 \gamma &= 6.6732 \times 10^{-11} & R &= 376.73037659 & K\alpha &= 0.9999879 & \frac{1}{\alpha} &= 137.03603953 \\
 i &:= 0..14 & \mu &= 2.25902187 \times 10^{-31} & \epsilon &= -1
 \end{aligned}$$

$$M(T_{1,i,0}, T_{1,i,1}, T_{1,i,2}, n(T_{1,i,0}, m(T_{1,i,0}, p(T_{1,i,0}, l\sigma(T_{1,i,0}, l a_1(T_{1,i,c}, a_2(T_{1,i,c}, a_3(T_{1,i,0}, T_{1,i,1}, T_{1,i,2} \text{WN0}(T_{1,i,0}, T_{1,i,1}, T_{1,i,2}$$

548.80053892	18	22	17	14	28	33	48.65020478	9905.00602463
497.72346652	18	5	5	2	22	17	98.29474094	9332.35821061
493.71471451	17	26	30	28	16	31	7.26890935	8857.95768621
0.51100391	0	0	0	0	35	11	89.96774194	38.70293897
0.51617097	0	0	0	1	34	28	77.11059908	38.51308636
105.65958413	11	6	11	6	1	23	7.26890935	2830.26323296
139.5685019	12	9	2	3	25	0	95.62488479	3514.46295282
134.96016773	12	3	6	4	22	2	-0.03225806	3419.16218078
1115.60083593	1	3	0	-11	13	45	-0.03333333	16827.97669238
1672.17675468	4	4	-1	-15	47	3	69.73881857	23157.61439275
939.57424092	0	0	-2	17	0	36	101.15	14828.61091953
938.28047058	0	0	0	0	0	23	84.22944039	14792.56299378
1321.29449655	2	7	-17	2	26	25	15.61504719	18998.73467029
1314.90329344	2	6	-1	6	26	22	71.62409767	18990.08936297
1197.3055526	2	-6	-5	-8	21	47	94.49556334	18183.3029723

$$i := 15..20$$

$$M(T_{1,i,0}, T_{1,i,1}, T_{1,i,2}, n(T_{1,i,0}, m(T_{1,i,0}, p(T_{1,i,0}, l\sigma(T_{1,i,0}, l a_1(T_{1,i,c}, a_2(T_{1,i,c}, a_3(T_{1,i,0}, T_{1,i,1}, T_{1,i,2} \text{WN0}(T_{1,i,0}, T_{1,i,1}, T_{1,i,2}$$

1192.47906505	2	-7	-14	-2	21	46	83.86257745	18179.5972907
1189.37521234	2	-7	-12	10	21	30	26.15371703	18124.03125772
1229.99644943	2	-1	-16	-15	23	22	22.6433584	18448.51702782
1235.17632656	2	-1	-5	-1	23	41	93.76289308	18515.78761928
1234.61096578	2	-1	-1	-6	23	27	82.92386511	18467.56082197
1234.48028396	2	1	11	-6	21	27	69.73881857	18115.38381347

i := 0..2

$$T(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) \cdot 10^8 : \varphi_2(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) \quad y(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) =$$

2.3381948295300576·10 ⁻¹¹
0.00887665648637683
1.237098275287239

5.0661201
-12.73395845
-40.78574084

2.62731223·10 ⁻⁹
0.25356917
184.84508113

i := 5..10

$$T(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) \cdot 10^8 : \varphi_2(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) \quad y(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) =$$

219.9423626520221
2.6028287769260117
8.401636144362742·10 ⁻⁹
0.02577990256908487
0.01317649005494889
9.173358629565024·10 ¹⁰

2.57120917
-2.32863274
-5.12094075
0
-137.03603953
11.16885474

1086.93017266
17.08389281
3.70003761·10 ⁻⁸
0.06178705
0.09369551
1228.02192051

i := 12..20

$$T(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) \cdot 10^8 : \varphi_2(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) \quad y(T_{i,0}, T_{i,1}, T_{i,2}, T_{i,3}, T_{i,4}) =$$

0.01653051619618455
0.02961950397906979
0.01481726916355988
4.29079942421418·10 ⁻⁷
0.00800714207233035
-0
-0
-0
-0

23.44132327
90.44613386
-2.01125286
11.78154012
-6.00947748
-520.30313618
-1072.52098631
-595.90428409
-783.34302804

0.10666705
0.20184737
0.06836882
2.11633901·10 ⁻⁶
0.04603481
0
0
0
0