$$\Omega = \int_S \frac{\boldsymbol{r} \cdot d\boldsymbol{\sigma}}{r^3} \tag{1}$$

$$\Omega = 2\pi\ (1 - \cos(\alpha)) \tag{2}$$

$$\frac{(x + c)^2}{a^2} + \frac{y^2}{b^2} = 1 \tag{3}$$

$$\Upsilon_n = \left[1 + \left(\frac{-\sigma_n \cdot \left(\frac{c_n}{a_n^2} \cos\phi \right) + \sqrt{\left(\frac{c_n^2 \cos^2\phi}{a_n^2} \right) + \left(\frac{\cos^2\phi}{a_n^2} + \frac{\sin^2\phi}{b_n^2} \right) \cdot \left(1 - \frac{c_n^2}{a_n^2} \right)}}{\left(\frac{\cos^2\phi}{a_n^2} + \frac{\sin^2\phi}{b_n^2} \right)} \right)^2 \right]^{-\frac{1}{2}} \quad (4)$$

$$\Omega_{mk} = 2\pi\left(1 - \sum_{i=1}^{n} \int_{-\Phi_{1i}}^{\Phi_{2i}} \Upsilon_i d\phi\right) \tag{5}$$

$$\Omega_{(total)} = \sum_{m=1}^{M} [\sum_{k=1}^{K} ((-1)^{m+1} \times \Omega_{mk})] \quad (6)$$

$$T = a_x.b_y - b_x.a_y \tag{7}$$

$$\begin{aligned} p &= [\ a_x.\cos(\beta) - b_x.\cos(\alpha)\ ]/T \\ q &= [\ b_x.a_z - a_x.b_z\ ]/T \end{aligned} \tag{8}$$

$$
\begin{aligned}
l &= \frac{\cos\alpha}{a_x} - \frac{p.a_y}{a_x} \\
m &= \frac{a_z}{a_x} + \frac{q.a_y}{a_x}
\end{aligned}
\tag{9}
$$

$$
\begin{aligned}
a &= m^2 + q^2 + 1 \\
b &= 2pq - 2lm \\
c &= l^2 + p^2 - 1
\end{aligned}
\tag{10}
$$

$$\Delta = b^2 - 4ac \tag{11}$$

$$\begin{aligned} i_{(1)z} &= \frac{-b - \sqrt{\Delta}}{2a} \\ i_{(1)x} &= l - m.i_{(1)z} \\ i_{(1)y} &= p + q.i_{(1)z} \end{aligned} \tag{12}$$

$$
\begin{aligned}
i_{(2)z} &= \frac{-b + \sqrt{\Delta}}{2a} \\
i_{(2)x} &= l - m.i_{(2)z} \\
i_{(2)y} &= p + q.i_{(2)z}
\end{aligned}
\tag{13}
$$

$$
\begin{aligned}
s &= \cos(2\alpha) + \cos(2\delta) \\
a &= \frac{\sin(2\alpha)}{s} \\
b &= \sqrt{\frac{2(\sin^2(\alpha))}{s}} \\
c &= \frac{\sin(2\delta)}{s}
\end{aligned}
\tag{14}
$$

$$
\begin{aligned}
p &= \frac{c_e}{a_e^2}\cos\phi \\
q &= \left(\frac{\cos\phi}{a_e}\right)^2 + \left(\frac{\sin\phi}{b_e}\right)^2 \\
s &= p^2 + q.\left(1 - \left(\frac{c_e}{a_e}\right)^2\right) \\
\eta &= \frac{\sqrt{s} - \sigma.p}{q} \\
\Upsilon &= \frac{1}{\sqrt{1+\eta^2}}
\end{aligned}
\tag{15}
$$

$$
\Omega = 2\pi - \phi_o + \Omega_o - \sum_{n=1}^{N} \int_{-\Phi_{1n}}^{\Phi_{2n}} \Upsilon_n \, d\Phi \tag{16}
$$