- $\vec{v}_0 = \left(\frac{1}{3}, \frac{1}{3}, \frac{1}{3}\right)$
- $\vec{v} = \frac{(a,b,c)}{a+b+c}$
- $\vec{r} = \vec{v} - \vec{v}_0 = \frac{(2a-b-c, 2b-a-c, 2c-b-a)}{3(a+b+c)}$
- $\vec{r}_0 = (1,0,0) - \left(\frac{1}{3}, \frac{1}{3}, \frac{1}{3}\right) = \left(\frac{2}{3}, -\frac{1}{3}, -\frac{1}{3}\right)$
- $\rho = |\vec{r}| = \sqrt{\frac{2}{3}\left(\frac{(a+b+c)^2 - 3(ab+bc+ca)}{(a+b+c)^2}\right)}$
- $\theta = \arccos\left(\frac{\vec{r}\cdot\vec{r}_0}{|\vec{r}||\vec{r}_0|}\right) = \arccos\left(\frac{2a-b-c}{2\sqrt{(a+b+c)^2 - 3(ab+bc+ca)}}\right)$