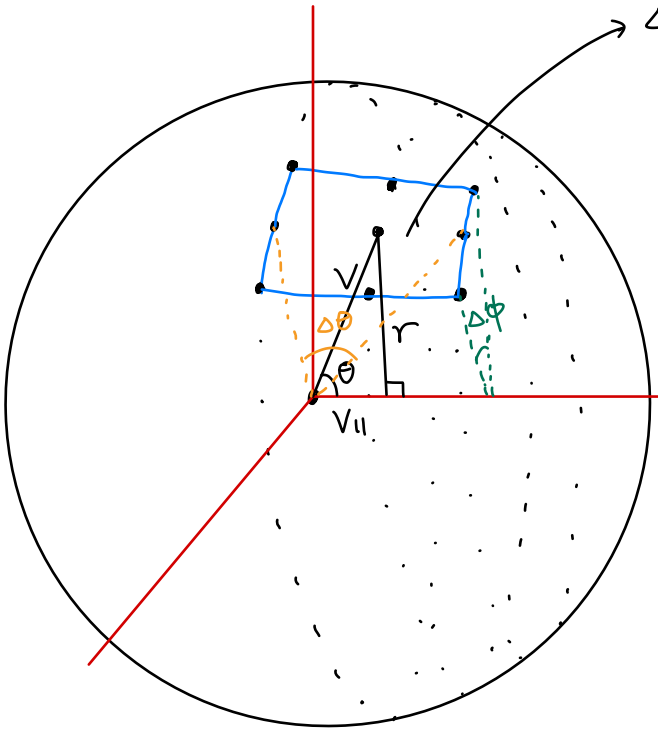

$\Delta A = 2V\Delta\theta \cdot 2V\sin\theta\,\Delta\phi$

$= 4V^2\sin\theta\,\Delta\theta\,\Delta\phi$

define: weight (w) so that the local density of weighted particle is constant

$\Rightarrow \vec{B}$ const $=$ density $= \dfrac{\Delta A}{\#\cdot w} = \dfrac{4V^2\sin\theta\,\Delta\theta\,\Delta\phi}{4\cdot w}$

$= \dfrac{V^2\sin\theta\,\Delta\theta\,\Delta\phi}{w}$

$\Rightarrow w =$ const. $V^2\sin\theta\,\Delta\theta\,\Delta\phi$

$=$ const $\sin\theta \quad \dfrac{\Delta\cos\theta}{\sin\theta} \quad 2\cdot\dfrac{2\pi r}{\#\,\text{gyro}}$

$=$ const. $r\cdot\Delta\cos\theta$

$=$ const $\cdot\, r\cdot 2\cdot\dfrac{2}{\#\,\text{pitch}}$.

$=$ const. $r\cdot$

$\sqrt{1-\left(\dfrac{V}{V_\parallel}\right)^2}$ $\quad r(\theta)$

$\quad r(\text{pitch})$