

The Parker Wind Model (isothermal)

$$\frac{1}{v} \frac{dv}{dr} = \frac{2c^2}{r} \left(1 - \frac{r_c}{r}\right); \quad c^2 = \frac{2kT}{m_p}; \quad r_c = \frac{GM_\odot}{2c^2}$$

Solutions of the form

$$\frac{v^2}{c^2} - 2 \ln \frac{v}{c} = 4 \ln \frac{r}{r_c} + 4 \frac{r_c}{r} + \text{constant}$$

