

1. Introduction & Motivation

2. Atmosphere model

(a) Two-layer model - inner convective + outer radiative

i. describe analytical solution assuming ideal gas + no self-gravity?

(b) Basic equations

(c) Boundary conditions + disk model

(d) Real EOS (tables + table extension, most content of 'EOSnotes')

(e) Virial theorem, energy budget, how to estimate cooling time

3. Numerical method

(a) Assumptions

(b) Shooting method description

4. Results & Analysis

(a) Plots: P-T, M-T, M-R etc.; Luminosity plots

(b) Critical core mass

i. M_{crit} vs. r plots, explain, comparison with polytropes

ii. M_{crit} vs. r for different disk assumptions?

5. Summary & Conclusions

(a) Caveats (neglecting self-gravity of radiative region, assumption of constant luminosity)

(b) Future prospects: 2D extension