GANDALF school

Using GANDALF via Python. Scripts & analysis

Giovanni Rosotti, David Hubber
Richard Booth, James Dale, Judith Ngoumou

- Run a boss bodenheimer test (file bbtest.dat) and load the simulation in python. You can also run it directly through python if you want.
- Do a particle plot of the density versus the distance from the center
- Make a movie of the rendered density map
- Plot the angular velocity as a function of a distance from the center (hint: the angular velocity can be computed with a simple formula). Compare the plot at the beginning of the simulation and at the end. What do you notice?
- Plot the track of a given particle in the simulation (hint: you can do that using the time_plot function)
- Save the previous plot using the savefig function
- Plot the total gas mass as a function of time (hint: you can do this in several ways, but the easiest is again using time_plot and writing your own function that retrieves the mass)
- Choose a time frame and plot the rotational velocity around one of the two stars as a function of the distance from the star. Does it follow a keplerian curve? (hint: you need to provide your own function to do this)