USERS GUIDE

NOTE: Usage of most python scripts with be in header in the files themselves.

# Codes

bashscript

AHF1024.sh - Shell script to run AHF on 1024 cubed runs (you will need to modify for different runs)

AHFxdec.sh - Shell script to run AHF on 512 cubed runs with xdec (you will need to modify for different runs).

findbighalos.sh - Shell script, when in AHF directory it will find the 3 largest halos in each halos file and print to screen.

finbighalos\_units.sh - Same as above but it will multiply the positions by 1000 to get positions in parsecs.

finbighaloswsubstruct.sh - Same as above but first column will tell you how much substructure

DensityProfileCode

read\_snapshot.py - Python script to read a gadget snapshot, given a halo center, it will generate a density profile and tabulate the data in physical units. For usage type: python read\_snapshot

graphmultipleDPdatanew - Python script that can graph up to 4 density profiles. Enter ‘python graphmultipleDPdatanew.py’ for usage. Sys.argv ‘s are either 0 or 1, enter some other number or letter to get options. If confused or doesn’t work contact michael.

python

Mmassfunction.py - Creates a M dn/dM mass function. With tabulated data. Check header in file for more info on usage.

newmassfunction.py - Creates a M^2 dn/dM mass function.

densitygraph.py - Creates a quick and dirty visualization of halo centers in your box. Only sys.argv is the AHF halo file. Staring down the z-axis.

comparemassfunct.py -Quick and dirty way of comparing M^2 mass functions of halo catalogues. Labels need to be changed manually.

multiplemassfunction.py - Pretty way of graphing multiple mass functions. Everything is hardcoded in. You will most likely to contact Michael if you want to use this.\

NFWfit.py - Still in progress, Can generate NFW fits. TO BE UPDATED. ASK MICHAEL.

Other codes have more specific use.

Substructure

sortsubstructure.py - Python script to find the substructure in a host halo. 3 sys.argv: sys.argv[1] is the halo file, sys.argv[2] is halo number (you have to check the halo file for the number), sys.argv[3] is the outfile (substructure will be written to be outfile).

# AHF

AHF.input - Input file for AHF, check sample AHF.input file in any AHF directory. File can vary a lot from output to output. Check documentation (and my directories) for details. Contact Michael for details.