

Plan for CTA395 research

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1 General Info

We are studying the 21 cm cosmological signal via computer simulations and analysis of data from the GBT experiment

2 Targets and tasks

2.1 Achieved

- Created account at CITA
- Created account at Github
- Downloaded and got comfortable at using VIM
- Set up the Analysis-IM
- Downloaded CAMB and produced matter power spectrum
- Read about the Dicke radiometer equation

2.2 Future

- Find a good reference of the hyperfine structure
- Make a movie of real data cube
- Make own data cube with noise realization based on radiometer equation
- Read about the Millennium simulations
- Populate halos and galaxies into simulation volume and calculate their power spectrum
- Compare results to the theory and use it in analysis of GBT

3 Plot

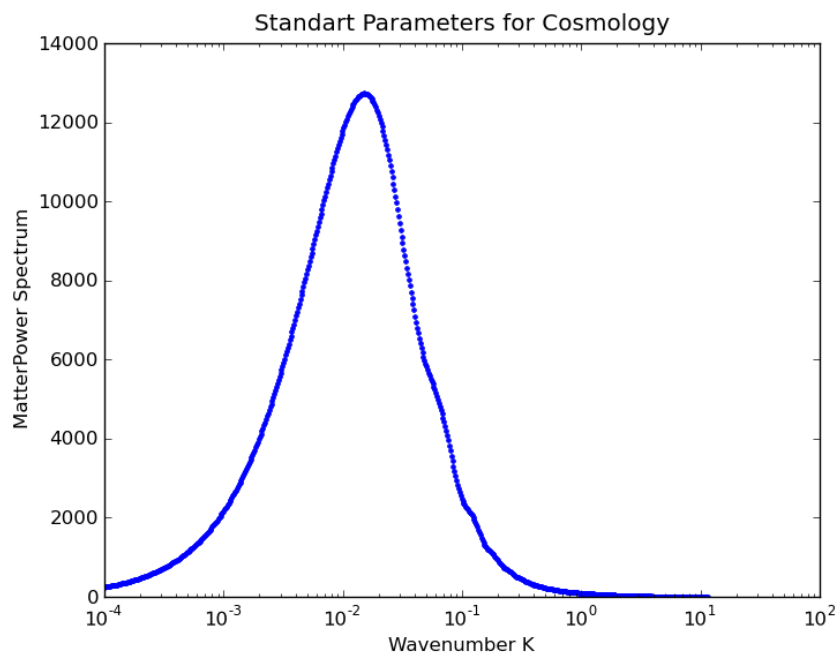


Figure 1: Matter power spectrum