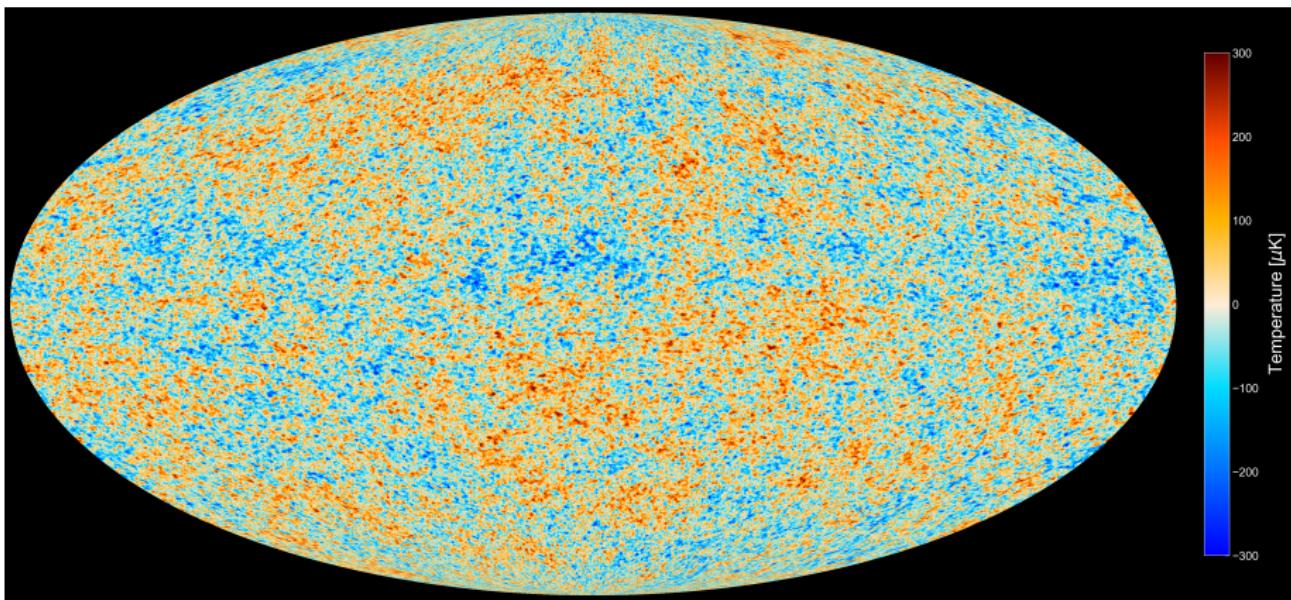


Power spectrum of the Cosmic Microwave Background radiation

Balázs Pál¹

¹Eötvös Loránd University

Data Science Laboratory, October 2020



Theoretical considerations

- Black-body radiation with average colour temperature of 2.725 K
- Study is somewhat analogous to the H atom

Project goals

Simulation

- Simulate map of the CMB
- Explore spectra of generated map
- Simulate noise from different effects

Analysis of measurements

- Reverse engineer power spectrum
- Filter noise as much as possible
- Estimate cosmological parameters

Datasets used

Simulation

- Power spectrum

Analysis of measurements

- Planck