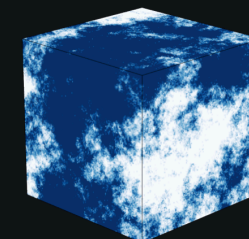


maria



Maria Goes NIFTy

Simulation, Gaussian Process-Based Reconstruction and Denoising of (Sub-)Millimetre Single-Dish Telescope Data

J. Würzinger, J. van Marrewijk, T.W. Morris, R. Fuchs, T. Mroczkowski, L. Heinrich



Brookhaven
National Laboratory

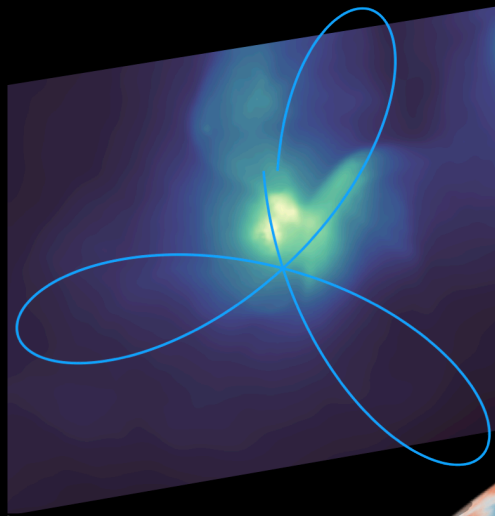


Yale University

Maria:

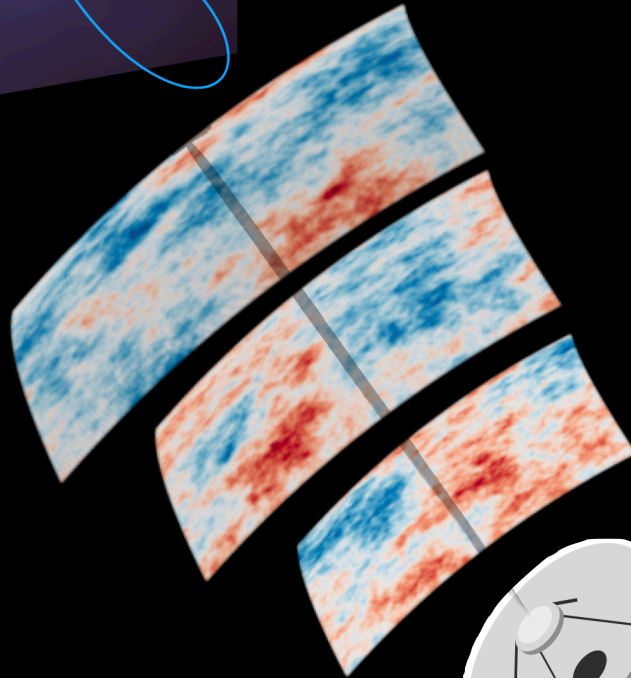
A novel simulator for forecasting single-dish (sub-)mm observations

Input Sky



Scanning strategy

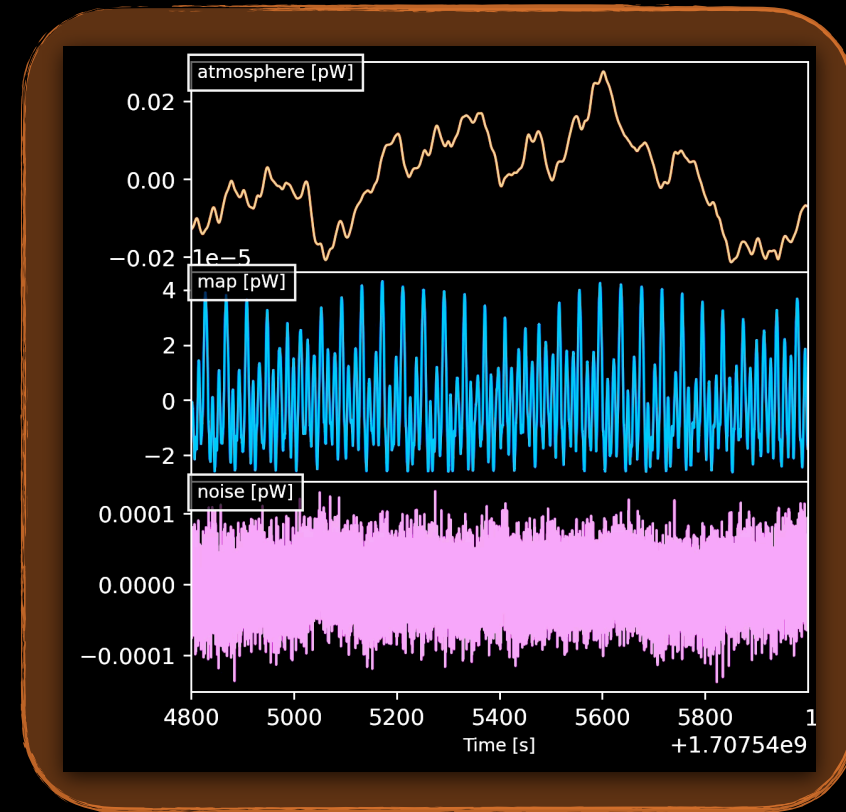
Simulated
Evolving
Atmosphere



Telescope & Array
Design



Simulated
Measurement



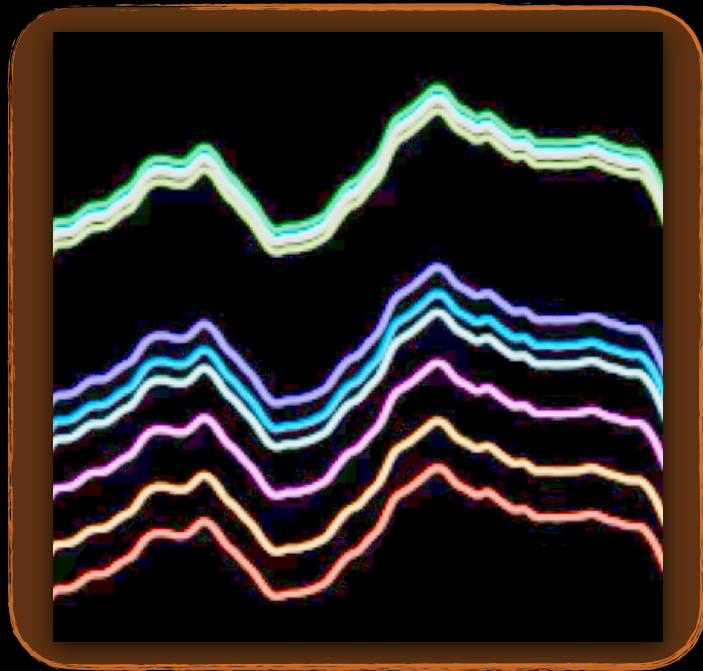
One Problem:

The Atmosphere

Disentangle **atmosphere**, **map** & **noise**

Reconstruction over 10 orders of magnitude in power & 3 in frequency

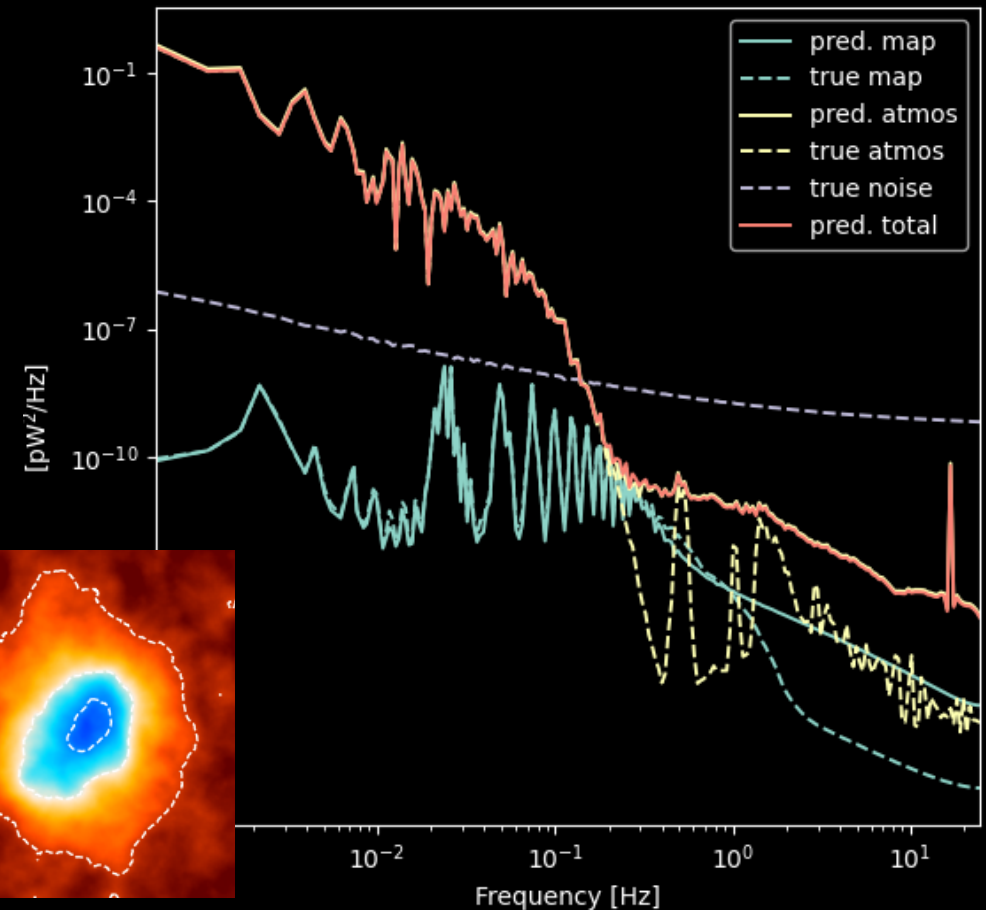
Time series



Reconstr.



Powerspectrum



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