





# Extreme Gravity Institute



**Neil Cornish**

- Gravitational Wave Astronomy



**Amy Reines**

- Black Hole hunter



**Anne Lohfink**

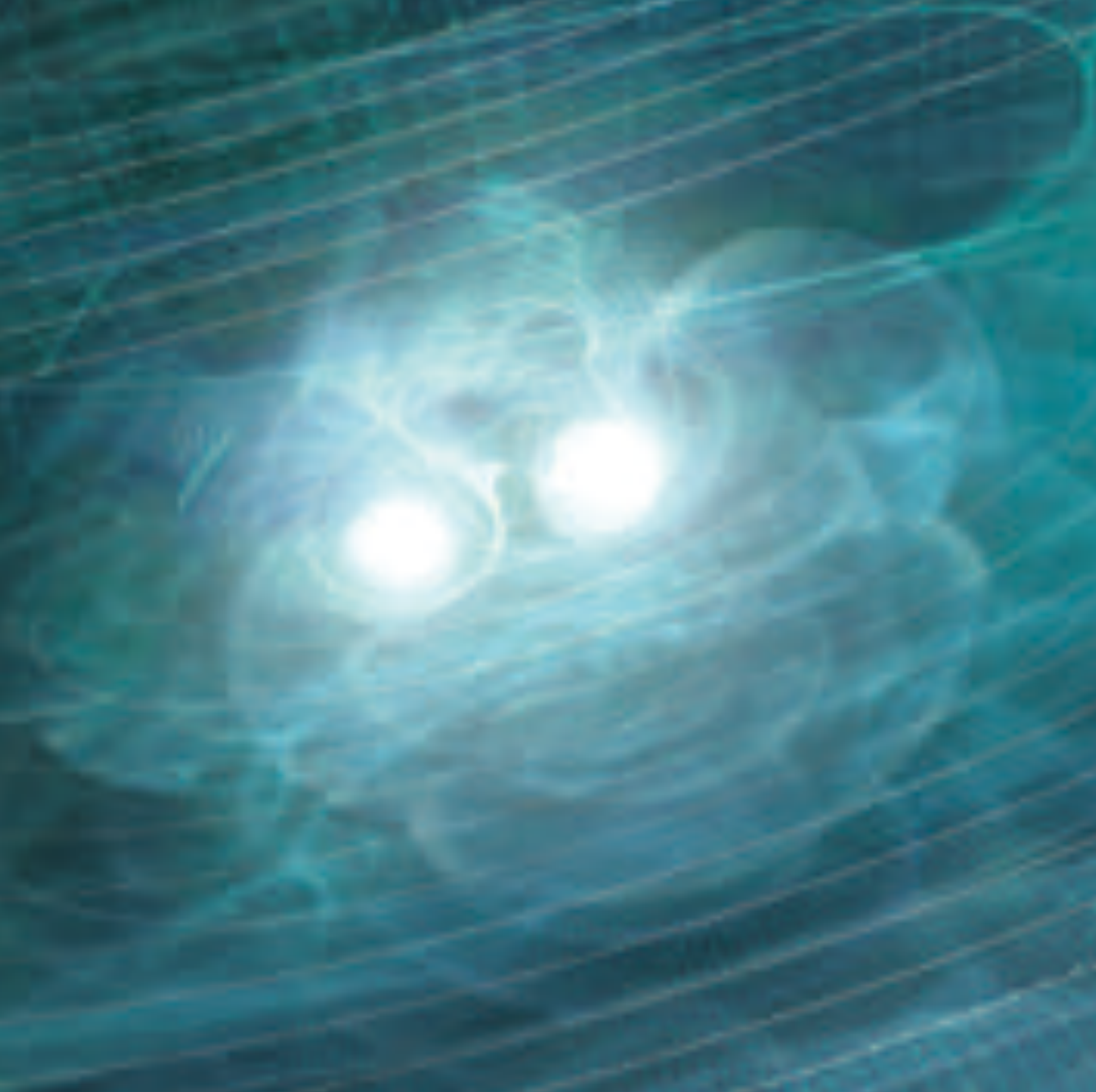
- Black Hole accretion disk & jets



**Bennett Link**

- Neutron star structure

- LIGO Scientific Collaboration
  - NANOGrav Collaboration
  - LISA Science Study Team & Consortium
- 
- Bayesian Inference (BayesWave, BayesHopper)
  - Waveform modeling
  - Astrophysical Inference
  - Tests of general relativity using GWs



# Montana State Gravity Group: Postdocs & Students

## Postdocs

Remya Nair



Cosmology  
Testing GR

Matthew Digman



Cosmology  
LISA

Bence Becsy



NanoGrav  
LIGO

## Grad students

Toral Gupta



Neutron Stars  
Testing GR

Kevin Schuman



LISA  
Black Hole detection

## Undergrad

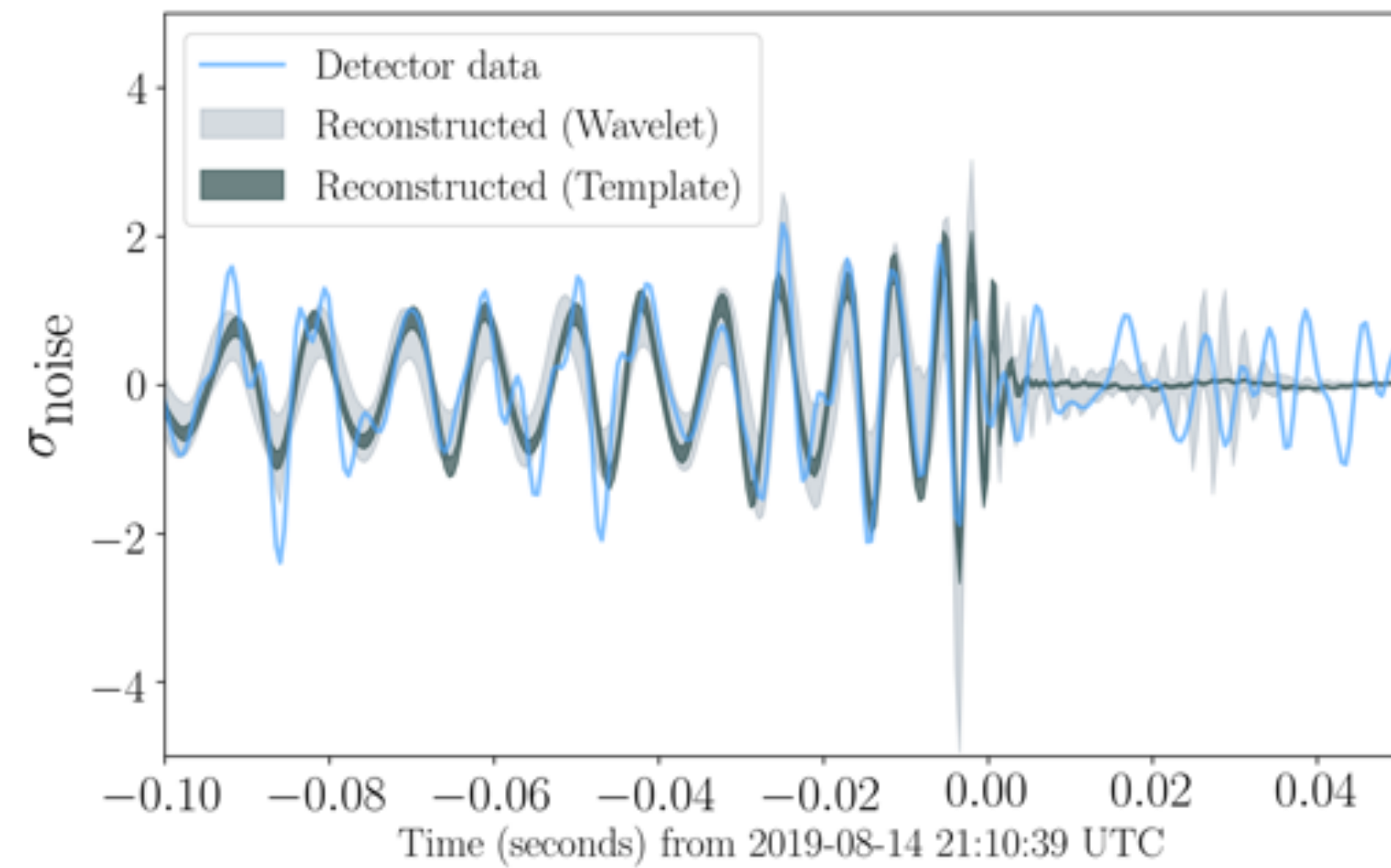
Jaxen Godfrey



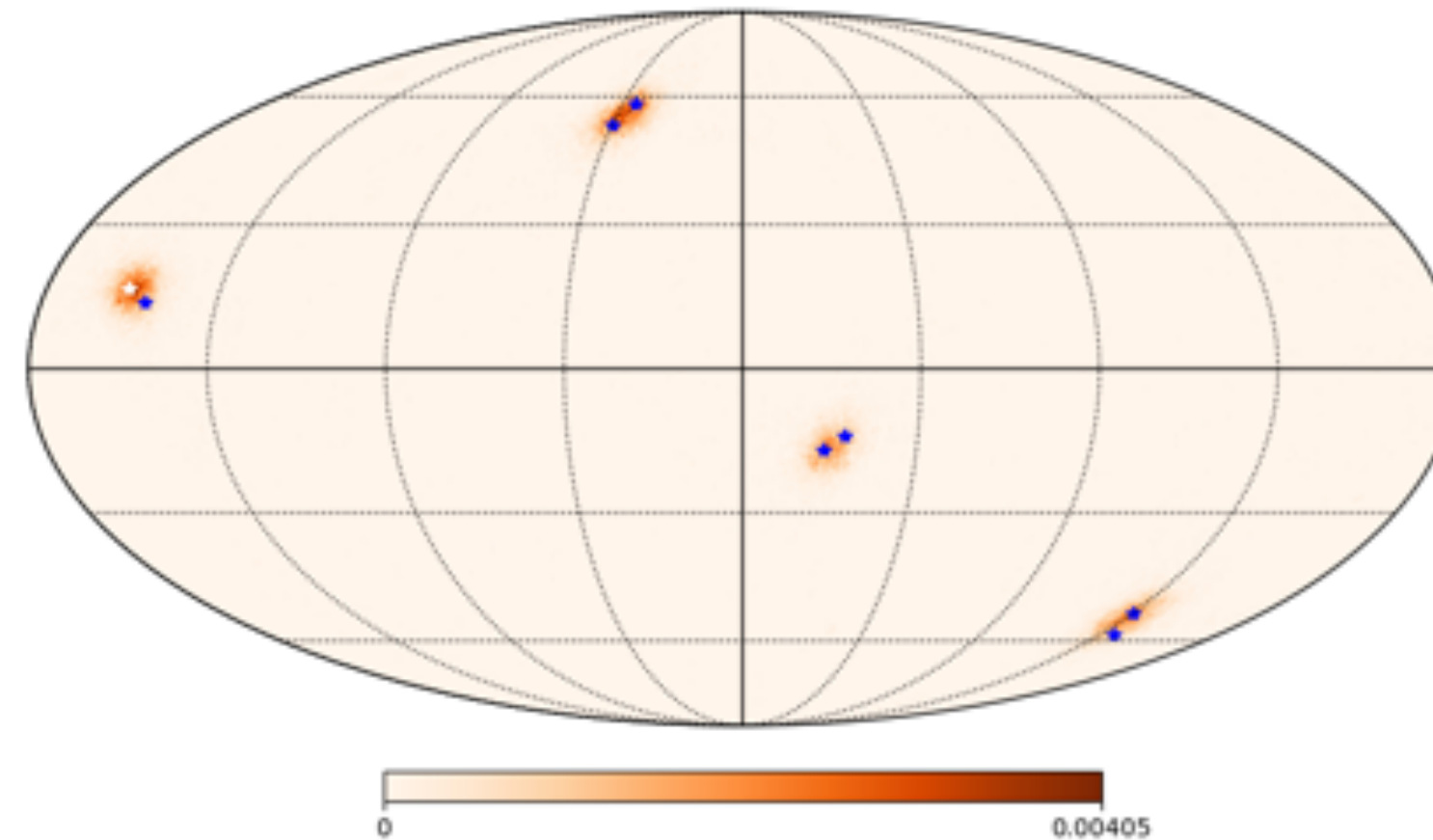
Gravitational Lensing of  
Gravitational Waves

# Montana State Gravity Group: Recent Highlights

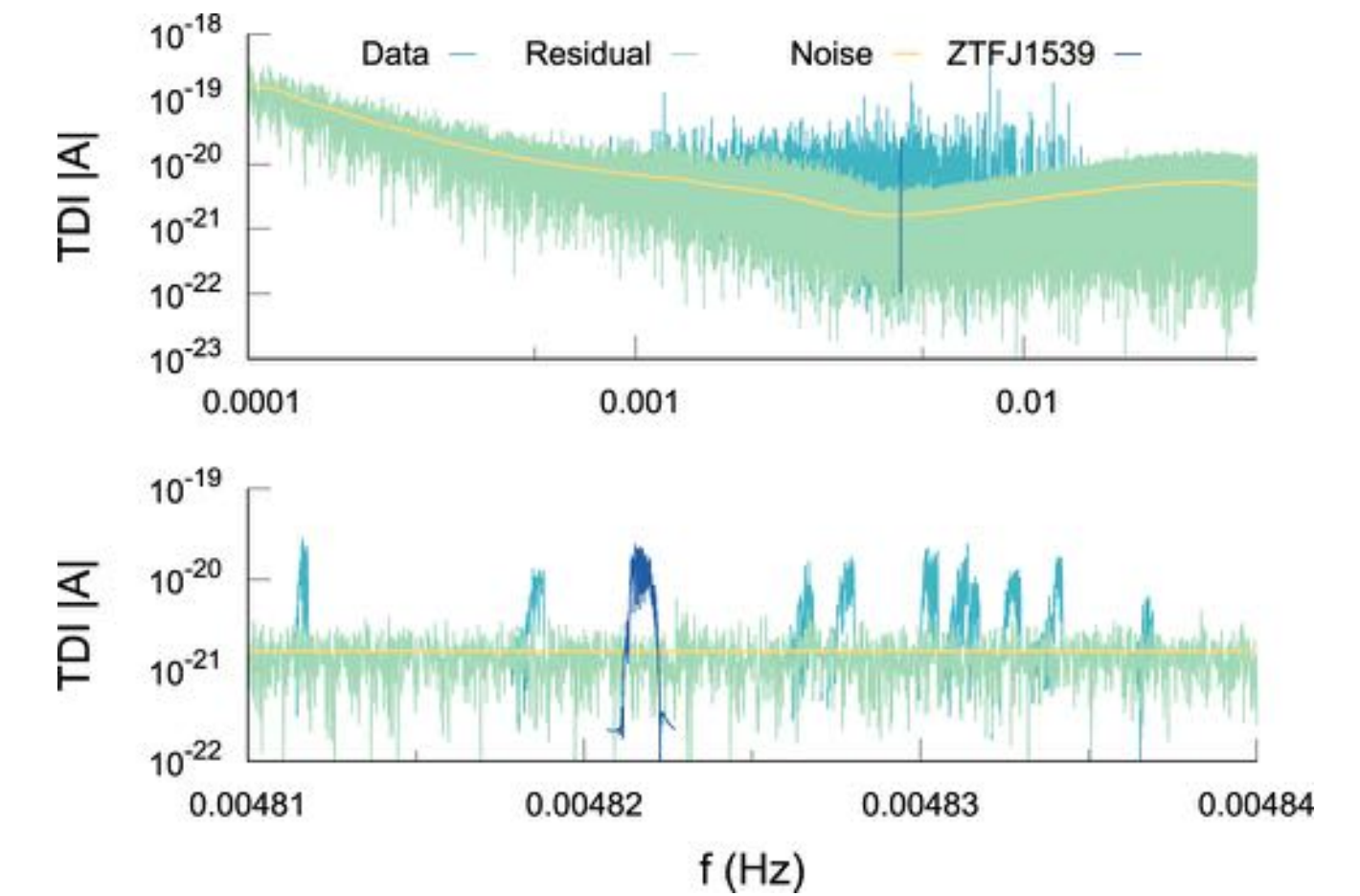
BayesWave reconstruction of GW190814:  
Gravitational Waves from the Coalescence of a 23 Solar  
Mass Black Hole with a 2.6 Solar Mass Compact Object



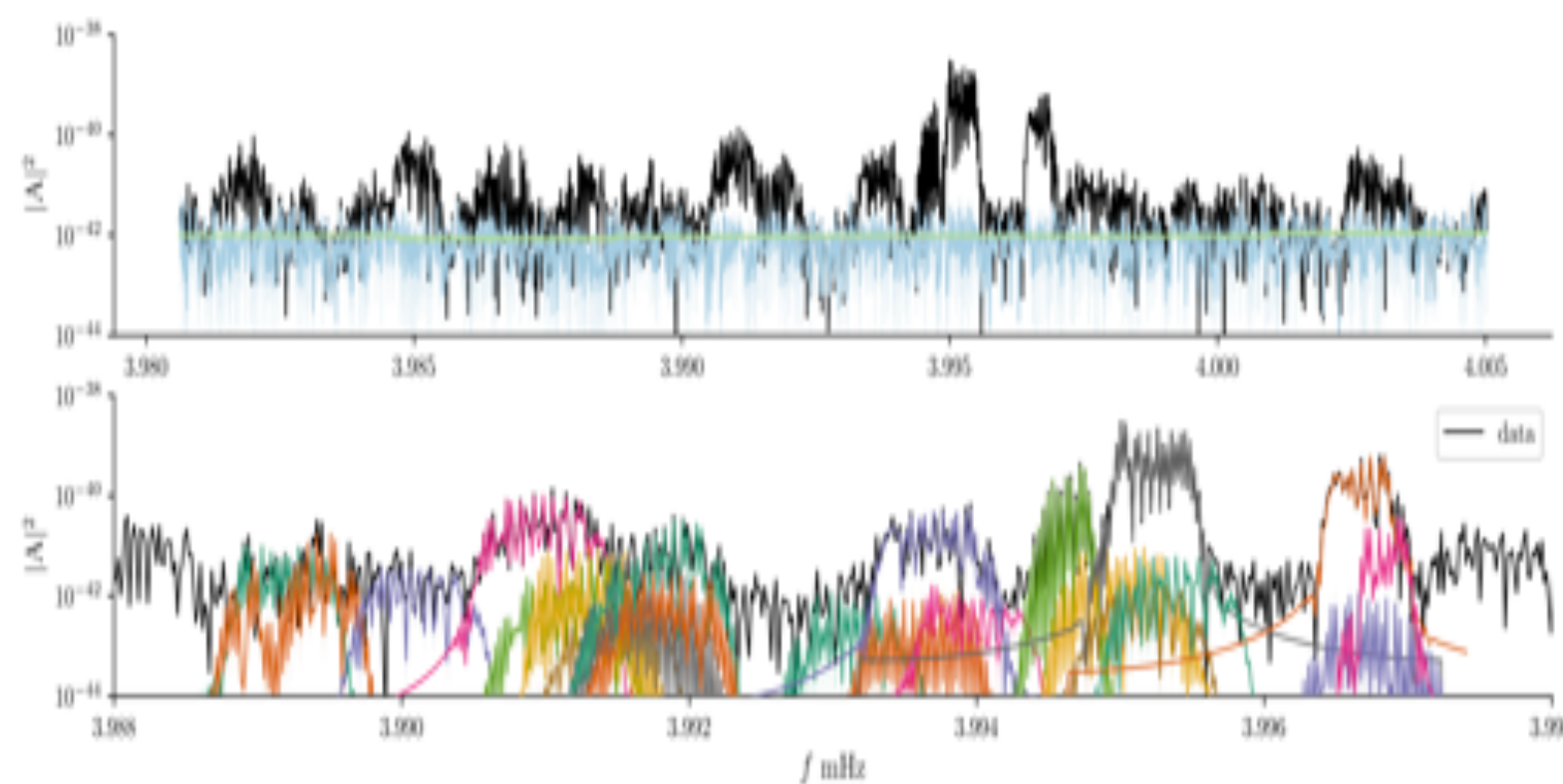
Hunting Black Holes with LISA  
DOI: [10.1103/PhysRevD.101.124008](https://doi.org/10.1103/PhysRevD.101.124008)



Prospects for Gravitational Wave  
Measurement of ZTF J1539+5027  
DOI: [10.3847/2041-8213/ab385f](https://doi.org/10.3847/2041-8213/ab385f)



Detecting and characterizing UCBs with LISA  
DOI: [10.1103/PhysRevD.101.123021](https://doi.org/10.1103/PhysRevD.101.123021)



BayesHopper  
DOI: [10.1088/1361-6382/ab8bbd](https://doi.org/10.1088/1361-6382/ab8bbd)



Time to leave the frequency domain -  
Wavelet domain GW analysis

