

WGIB

Mock LISA Data Challenges

Neil Cornish

Mock LISA Data Challenge Taskforce

Taskforce Co-chairs:

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Data Generation & Distribution:

John Baker & Keith Arnaud

General Taskforce:

Matt Benacquista, Curt Cutler, Shane Larson,
Ed Porter, B. Sathyaprakash, Jean-Yves Vinet

MLDC Round I

- Round I data sets released June 2006
- Separate challenges for GB, BBH, EMRIs
- Ten collaborations responded by Dec 3
- Answer keys released Dec 4
- Preliminary assessment completed Dec 12
- F2F with participants Dec 16
- Dedicated session at GWDAW next week

MLDC Round 1: 10 Entries

AEI: Prix, Whelan

Ames: Thompson, Thirumalainambi

APC: Plagnol, Auger, Halloin, Petiteau, Jeannin

Goddard: Cannizzo, Camp

GLIG: Bloomer, Clark, Christensen, Hendry,
Messenger, Meyer, Pitkin, Roeber, Stoeer,
Toher, Umstaetter, Veitch, Vecchio, Woan

Krolak: Krolak

JPL-Caltech: Brown, Crowder, Cutler, Mandel,
Sutton, Vallisneri

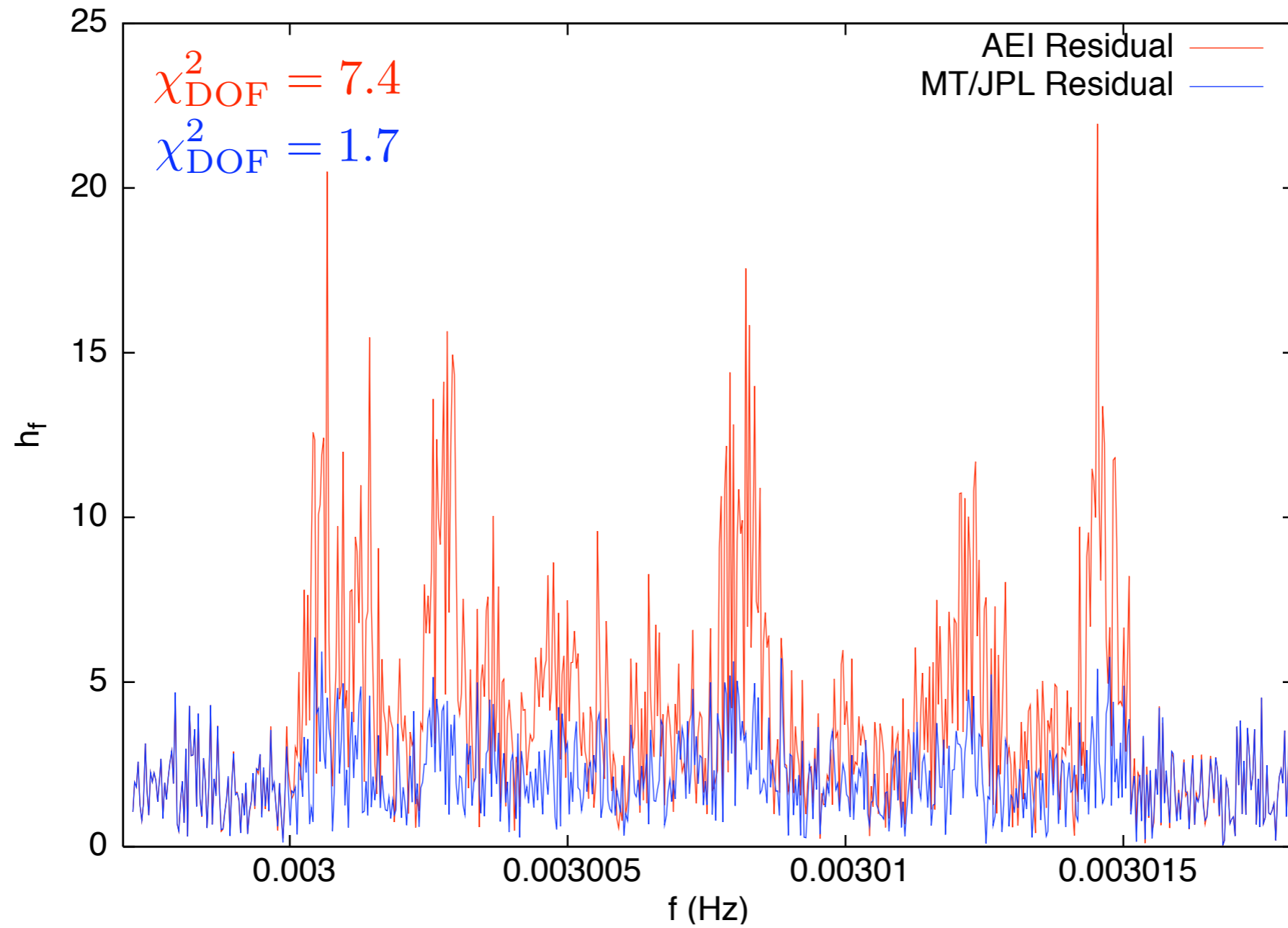
MT-AEI: Cornish-Porter

MT-JPL: Cornish-Crowder

UTB: Nayak, Hayama, Mohanty

MLDC Round I

Collaboration	Isolated Galactic Binaries					Overlapping Galactic Binaries		Massive Black Hole Binaries	
	I.1.1a	I.1.1b	I.1.1c	I.1.2	I.1.3	I.1.4	I.1.5	I.2.1	I.2.2
AEI	●	●	●	●	●	●	●		
Ames	●	●		●	●				
APC	●								
Goddard								●	
GLIG			●						
Krolak	●	●	●		●				
JPL-Caltech								●	
MT-AEI								●	●
MT-JPL	●	●	●	●	●	●	●		
UTB	●	●	●	●	●	●			



$$\chi^2_{\text{DOF}} = \frac{(s - h_{\text{fit}} | s - h_{\text{fit}})}{N - D}$$

Report on the first round of the Mock LISA Data Challenges

The Mock LISA Data Challenge Task Force:

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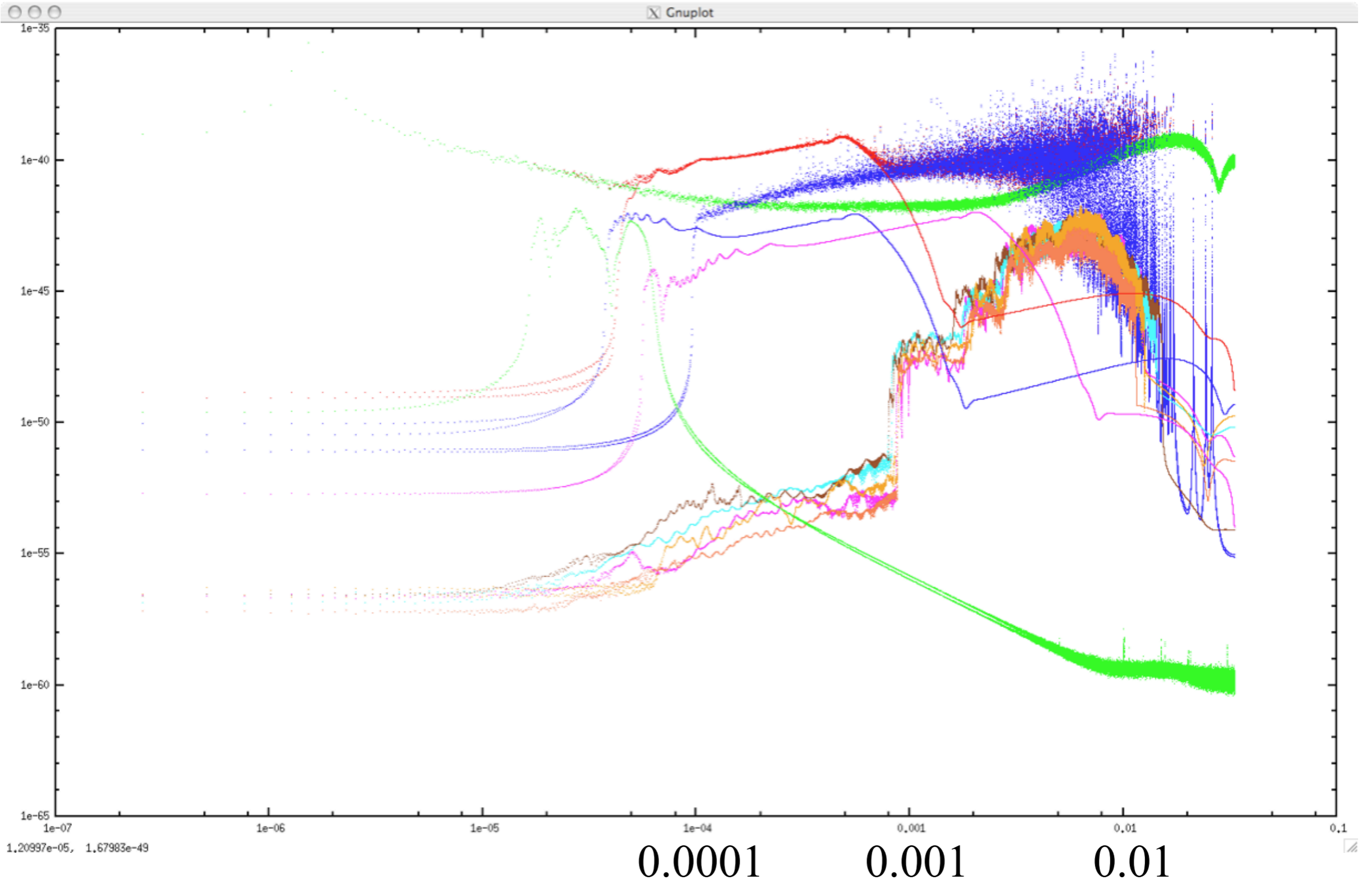
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MLDC Round 2

- Focus on Global Fitting
- Release Dec 06, Results June 15, 07
- Round 1 EMRI Results due with Round 2
- Just 2 Challenge Data Sets
 - 2.1 - Galactic Binaries (26 M)
 - 2.2 - Galactic Binaries (26M) + 4-6 BBH + 5 EMRIs
- Stationary, Gaussian Noise, no Gaps/
Disturbances



MLDC Round 2

- Request Early Results on Training Data
- Anticipate at least one Complete, High Fidelity Entry, hope for several
- Timing, content, energy for Round 3 uncertain