

Lasti Update

July 25, 2007

LIGO-G070566-00-Z

Rich Mittleman



Over the Last Few Months

- BSC Internal Seismic Isolation (ISI)
- Quadruple Pendulum Noise Prototype Assembly
- Triple-Quad Cavity



Other Work

 Bolt Friction and strength measurements

Sharon Rapoport

 Initial Ligo Test mass standoffs

David Kelley

Gregg Harry

Rai Weiss

 Sas Test

Alberto Stochino

Riccardo DeSalvo

Virginio Sannibale

Dave Ottaway

Dennis Coyne

 Baffle Scattering Measurements

Cassi Hunt

Mike Zucker

 Pondermotive Experiment

Thomas Corbitt

Jim Bodiya

Chris Wipf

Nick Smith

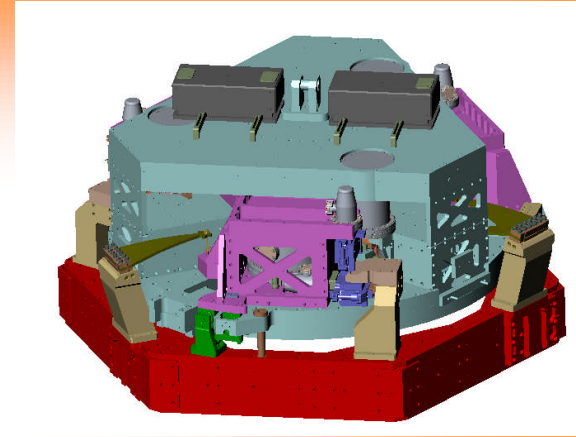
Sarah Ackley

Nergis Mavalvala

Moving Offices



BSC-ISI PROGRESS



- All Major parts are back from Italy
mostly clean and mostly undamaged
- Livingston has provide a full complement of
sensor pod, which are currently being tested
- Assembled All Three Stages
- Hoping to be installing the springs this week

Assembly Crew



Myron MacInnis



Stefany Foley



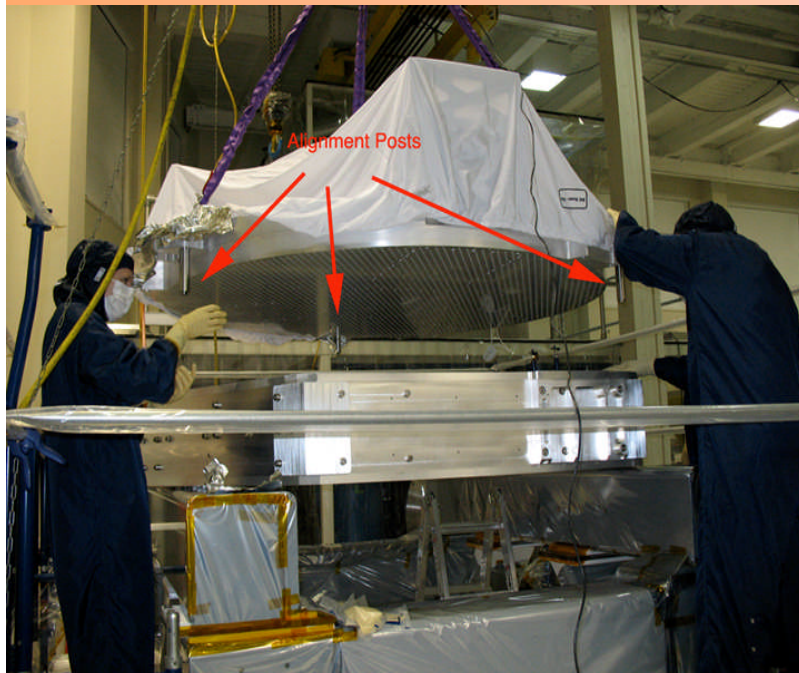
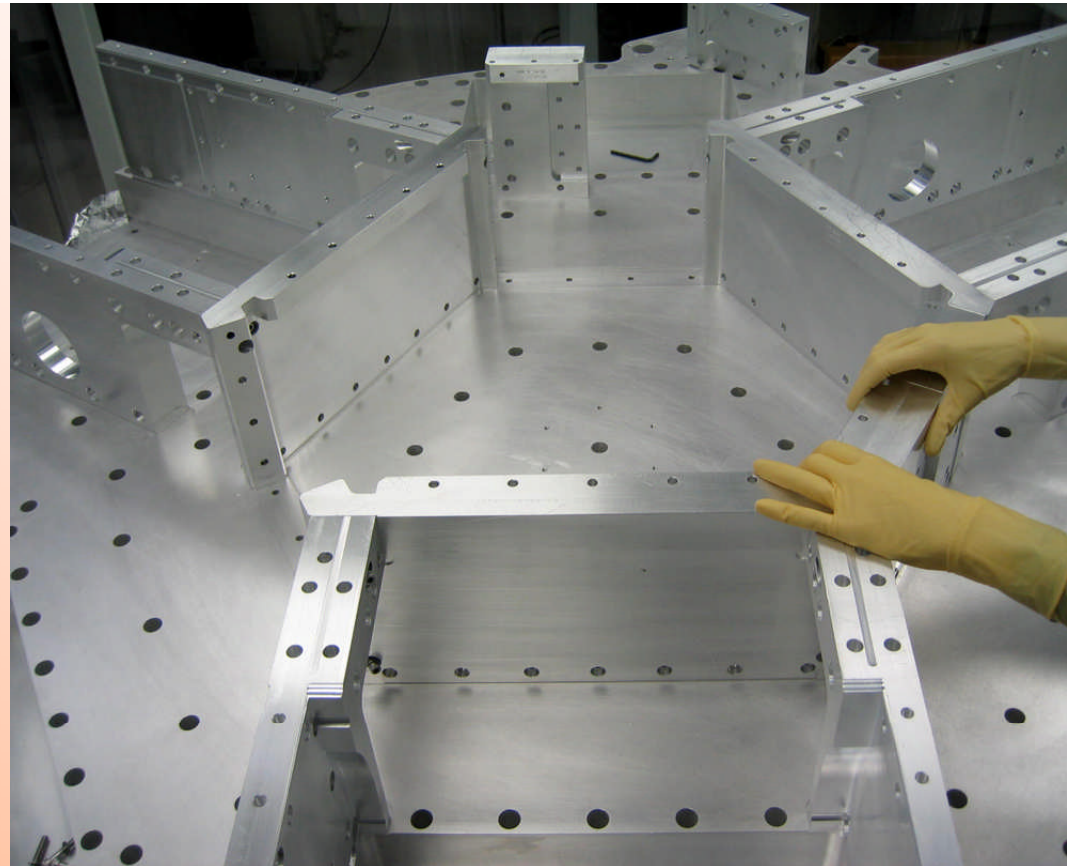
Ken Mason



Bob Laliberte



Sharon Rapoport



Hugh Radkins



Corey Gray

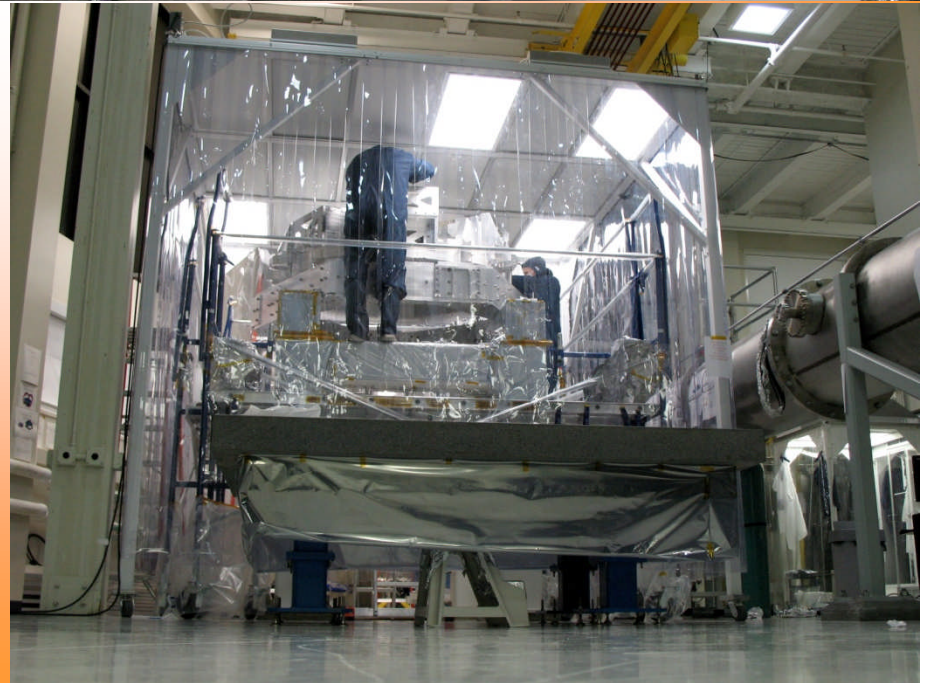
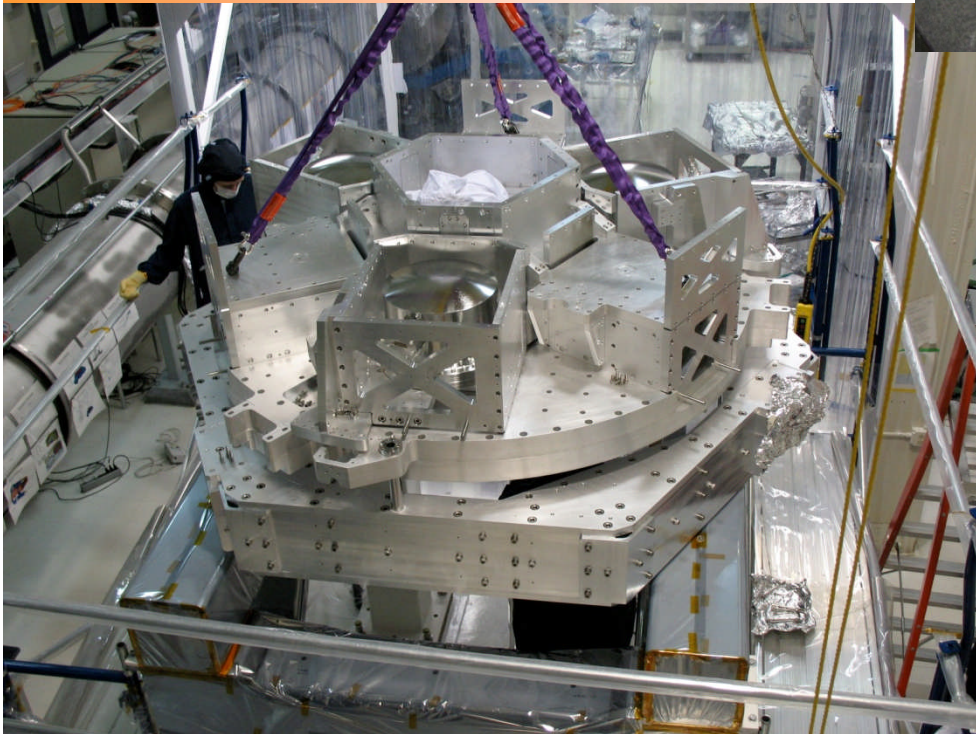
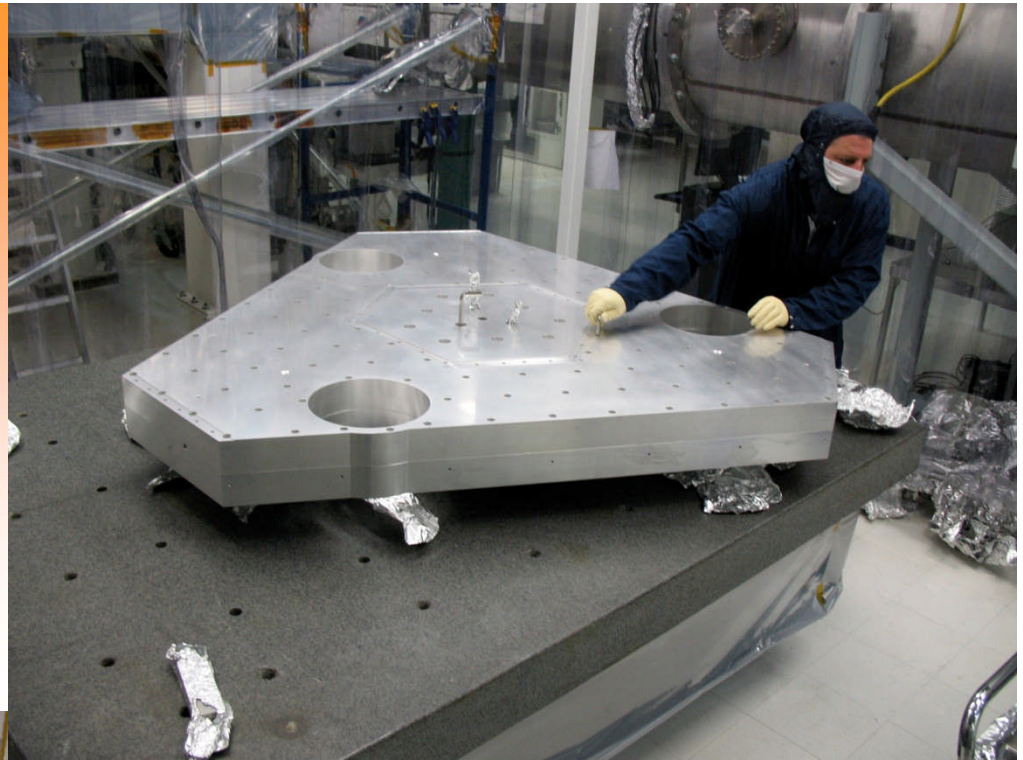


Joe Hanson



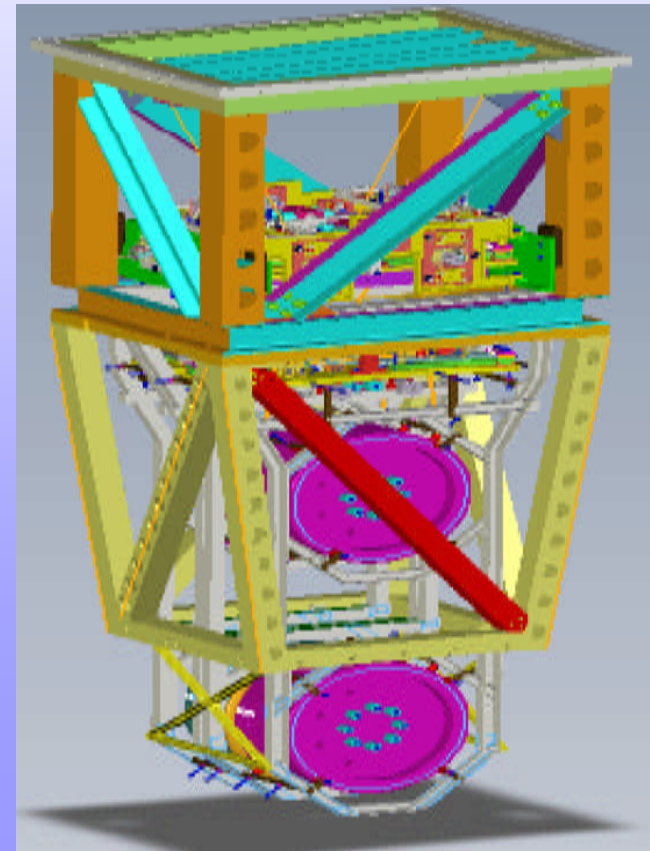
Brian O' Reilly

Assembly Pictures



QUADRUPLE PENDULUM PROGRESS

- *A whole lot of heli-coiling*
- *Most of the masses have been assembled*



Quad Assembly

Crew

Grahmn Woan

Jim Hayler

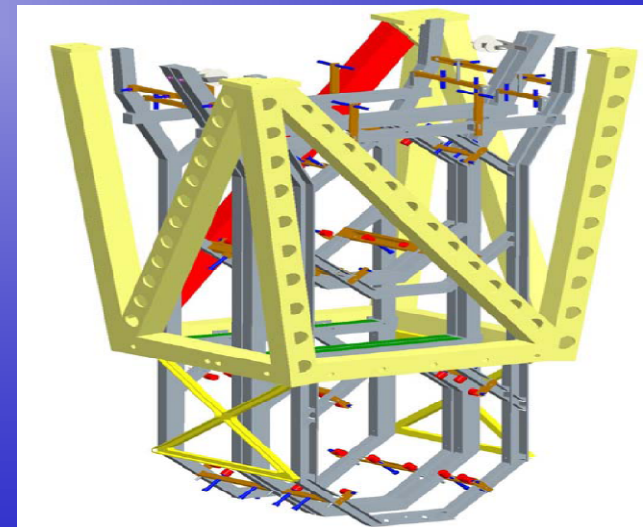
Joe O'Dell

Ian Wilmut

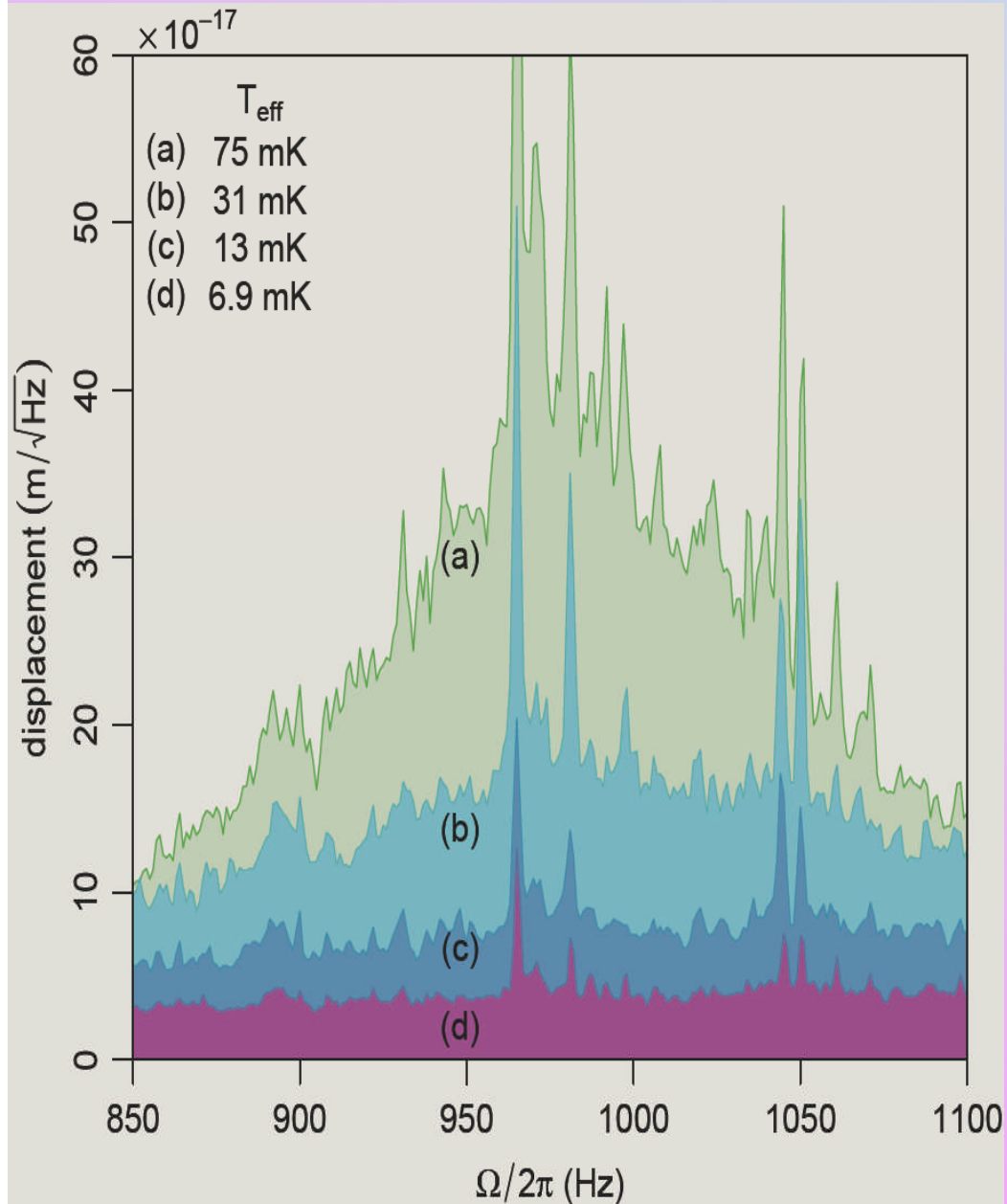
Brett Shapiro



*Planning on
erecting
the gazebo and
hanging
The masses next
week*



PonderMotive Squeezing

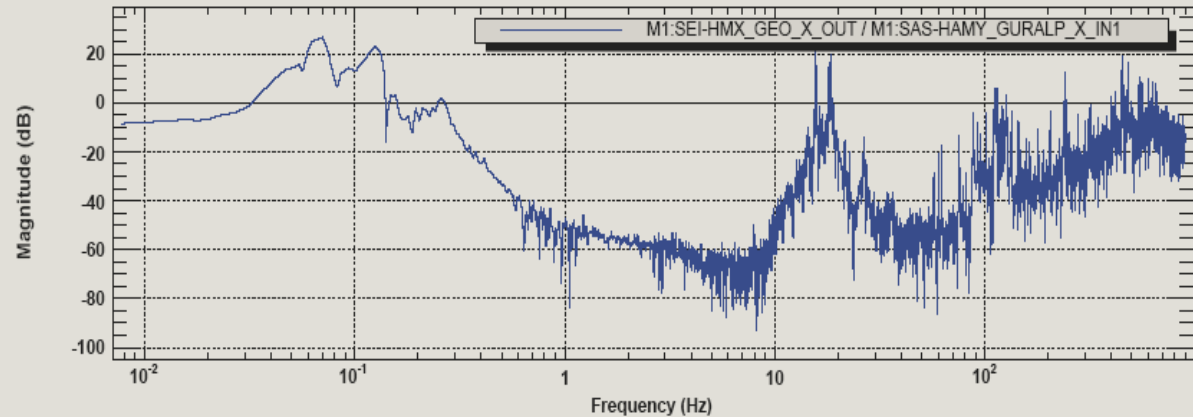


Looking
Forward to
having their
own vacuum
system

SAS

Alberto Stochino is
defending his thesis
this week

Transfer function - X

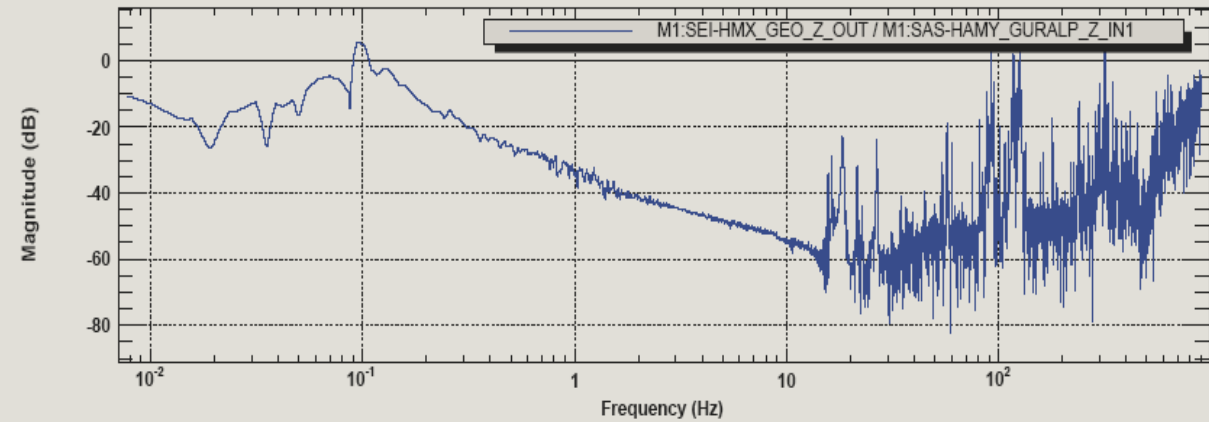


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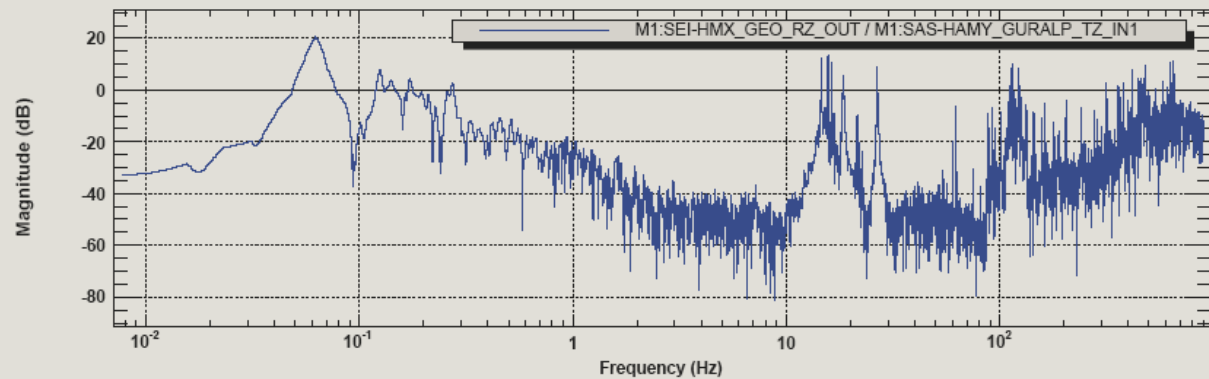
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BW=0.0117178

Transfer function - Z



Transfer function - TZ



T0=02/04/2007 07:04:30

Avg=9/Bin=11L

BW=0.0117178

Cavity Work

The controls-quad (in the BSC), mode cleaner triple (in the X-end Ham) is now locking reliably. We have used feedback to the frequency input of the laser and the test mass of the triple. We have turned the ESD on and seen movement of the test mass.



Matt Evans



Lisa Barsotti



Fabrice Matichard



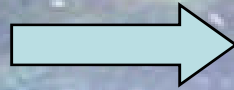
Brett Shapiro



Ian Duke

Looking Ahead

ISI Assembly
Quad Assembly
(Metal Test mass)



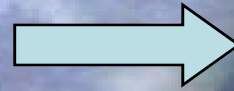
Early August

ISI + Quad into BSC



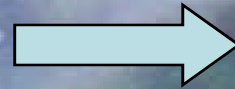
October

Glass Optic and Fibers



November

Glass ETM into BSC



December

Experiments/Tests



- Electro Static Drive (ESD)
- Ring Heater
- Locking & Control
- Violin Mode Damping
- ISI Commissioning
- Optic Modes and Damping
(Parametric excitation)
- Baffle Fit Check
- Uv charging

Further into the future

- Convert to ITM configuration
- Install HAM-ISI
- Install Recycling suspension
- Advanced Ligo TCS test