

## *State of the LIGO Lab*



*Stan Whitcomb*

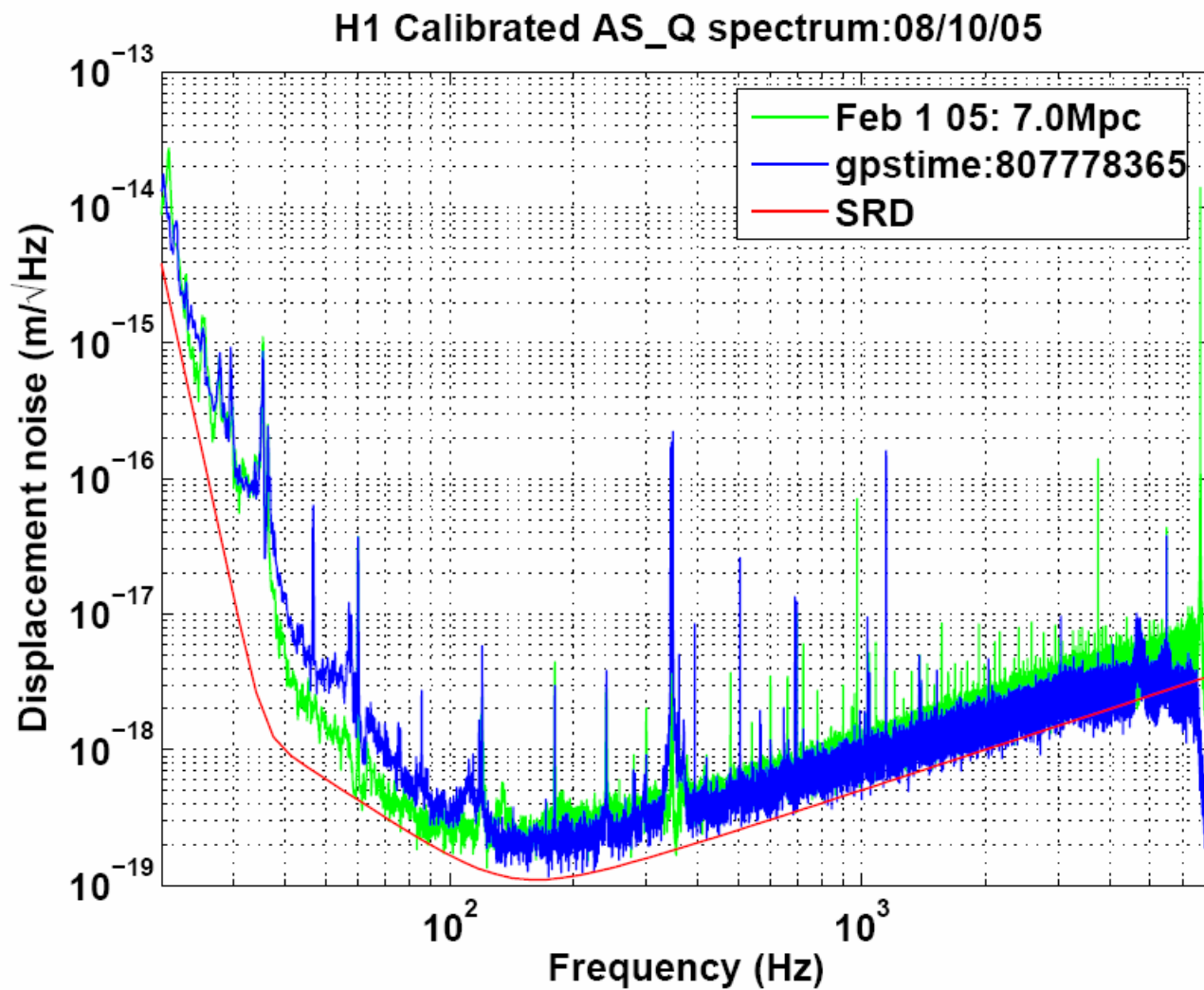
LSC meeting

Hanford

15 August 2005



# Progress: Commissioning



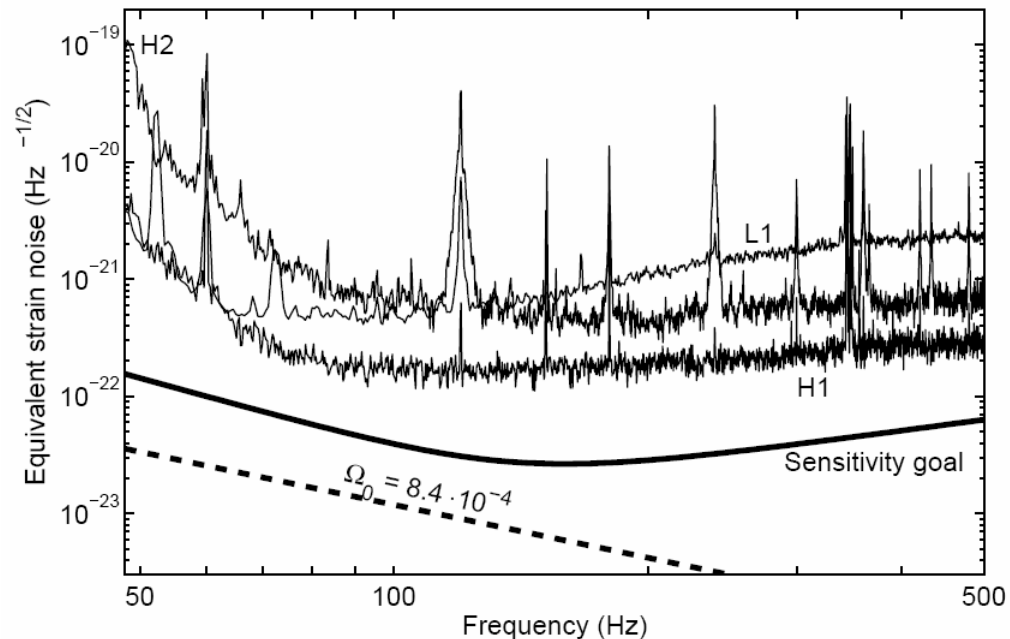


## Progress: Duty Cycle

Run	S3	S4
L1	21.8%	74.5%
H1	69.3%	80.5%
H2	63.4%	81.4%
Triple	15.8%	56.9%

- Five papers submitted since the March LSC meeting
  - » Four Phys Rev D, one Phys Rev Letters
- Analysis well along for S4 data
- Mechanisms for reviewing and approving results working well

Stochastic Limit  
from S3 Data





## *Progress: Collaborations*

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- LIGO-GEO
  - » Fully integrated analysis and running
  - » Advanced LIGO partnership
- LIGO-TAMA
  - » S2-DT8 papers finalized, future joint analyses under discussion
  - » Exchange of sapphire data and experience with LCGT
  - » LCGT presentation by Kazuaki Kuroda this afternoon
- LIGO-Virgo
  - » Data analysis effort starting to come together
  - » Virgo presentation by Benoit Mours this afternoon
- GWIC fostering all interferometer study group
- Acoustic detectors
  - » LIGO-Allegro
  - » LIGO-Auriga
  - » IGEC restarting—possible mechanism for joint Interferometer-bar analyses



## *Progress: Advanced LIGO*

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- Talk by David Shoemaker



## *Up-dates: LIGO Organization*

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- Implementing an integrated structure for LIGO, encompassing Laboratory and LSC
  - » LIGO Directorate (LIGO Director, LSC Spokesperson, LIGO Lab Deputy Director) structure functioning well
  - » Mechanism for delegating AdvLIGO responsibility to LSC in beta-test
- Extension of LIGO Oversight Committee to LSC still in progress
  - » Elected LSC Technical representatives
  - » Applications for Major Stakeholders passed to Oversight Committee chair
- Updating LSC structure
  - » Revised charter and by-laws for LSC in progress
  - » Plan to replace existing LSC-Lab MOUs with up-dated version
- New LSC MOU review process
  - » LSC committee met to assess progress and plans for need, realism, completeness, and overlap
  - » General agreement that the process is promising



## *Update: LIGO Director Search*

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## *Directions: S5*

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- S5 goal is NSB condition for AdvLIGO funding
  - » “at least a year’s data of coincident operation at the science goal sensitivity ”
- Run Committee guiding timing and preparations
  - » Staggered start to S5
  - » Possible disruption to day-time operations at LLO through much of 2005 due to construction on site
  - » L1 start Oct 21
  - » H2 start Nov 4
  - » H1 schedule still uncertain—recovery from Test Mass replacement
- Performance goals for S5
  - » H1, L1 over 10 Mpc inspiral range, H2 over 5 Mpc
  - » Overall “Science content” ~ 100 times S4