



Introduction to Detector Characterization Sessions

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DMT Monitors

Good News:

- Several new monitors
- Many improved monitors
- Enhanced infrastructure

DMT Monitors (status in E5)

DMT Monitors	Scientists	Log File Output	Trend Frame Output	Database Triggers Generated	Run by Process Manager	DMT Viewer Interface	Real-time HTML Summary	Histogram Display (avail Aug)
Line Noise	B. Allen, A. Ottewill E. Daw, S. Klimenko	Yes Yes	Yes Yes	Yes	Yes	Yes Yes		
Seismic Noise	E. Daw	Yes	Yes		Yes	Yes		
Correlations	B. Allen, A. Ottewill	Yes		Yes		Stand-alone		
Bilin. Couplings	S. Penn	Yes			Yes	Stand-alone		
Band-lim. RMS	E. Daw	Yes	Yes		Yes	Yes		
Non-Gauss. Noise	L.S. Finn, G. Gonzalez, & P. Sutton	Yes				Yes + GUI		
Power Spect. Trans.	S. Mohanty							
Servo Monitor	D. Chin, K. Riles	Yes		Yes	Yes	Yes		
Event Catalog	J. Sylvestre	Yes			Yes	(GUI)	Yes	
Glitches	M. Ito	Yes		Yes	Yes	Yes		Yes
Mag Field Trans	R. Frey, R. Rahkola	Yes			Yes			
Earthquakes	R. Frey, R. Rahkola	Yes		Yes	Yes		(Yes)	
Lock Transitions	D. Chin, K. Riles	Yes		Yes	Yes	Yes	Yes	
Power Mains	D. Sigg	Yes	Yes		Yes	Yes	Yes	
GPS Time Ramp	S. Marka	Yes	Yes		Yes	Yes		
PSL Glitches	R. Savage, J. Zweizig	Yes		Yes	Yes			
Bit Checking	J. Zweizig	Yes		Yes	Yes	Yes	Yes	
Slice Checking	J. Zweizig	Yes		Yes	Yes		(Yes)	
Frame Checking	J. Zweizig	Yes		Yes	Yes			

DMT Infrastructure	Scientists	Online Code	Integrated
Oper. State Conds.	D. Chin, K. Riles	Yes	Yes
Time-Freq Plots	S. Mohanty J. Sylvestre P. Sutton	Yes Yes Yes	Yes
Wavelet Tools	S. Klimenko	Yes	Yes
IIR Filters	E. Daw	Yes	Yes
Histograms	M. Ito	Yes	Yes

(Red = New since March 2001)

DMT Monitors

Bad News:

- Many improvements didn't actually work in E5
- Some monitors have no visible output or have only logfile output
- Some monitors poorly documented
- Configuration files not tuned / up to date

Engineering Run Investigations

Good News:

- Lots of E2 reports presented at March LSC meeting and written up
- Lots of E3/E4 reports tomorrow
- E5 investigations underway

Engineering Run Investigations

E2 Final Reports:

E2 Investigation Subject	Scientists	Final Report (DCC#)
Lock losses	W. Butler, D. Chin, R. Gustafson, M. Ito, K. Riles*	T000133-00-Z
Seismic Noise	E. Daw*, R. Schofield, D. Ugolini	T010080-00-H
Correlations	N. Christensen*, A. Ottewill	T010038-00-Z
Stationarity	E. Daw, P. Saulson, R. Schofield*	G010159-00-Z
Calibration Stability	M. Landry*, L. Matone, B. Mours, P. Shawhan	Pending
Non-Gaussianity	S. Penn*, V. Sannibale, S. Scott	G010132-00-Z
Angular fluctuations	B. Bhawal, G. Gonzalez*, D. Ottaway, T. Summerscales	DCC# Pending
Impulses & Transients	R. Frey, R. Rahkola, R. Savage*	T010049-00-W
Bursts & Chirps	M. Ito, R. Rahkola, J. Sylvestre*	T010046-00-D
Tidal Modelling	M. Barton, F. Raab, H. Radkins, D. Strom*	G010106-00-Z
Timing Precision	S. Marka, D. Sigg*, A. Takamori	Pending
Data Integrity	J. Zweizig*	Pending
Line Noise	R. Coldwell, R. Flaminio, S. Klimentko*, S. Scott, A. Sintes, B. Whiting	T010018-00-D
Data Compression	S. Klimentko, B. Mours*	T010033-00-E
Frequency Noise	R. Adhikari*, P. Fritschel, D. Shoemaker, J. Sylvestre, H. Yamamoto, M. Zucker	DCC# Pending

LIGO-G010270-00-00-Z

Engineering Run Investigations

E3/E4 Investigations:

Investigation	Scientists
Seismic noise	CIT: P. Charlton* Louisiana Tech: D. Greenwood, N. Simicevic
Cross-correlations with GW channel	Carleton: N. Christensen* Dublin: A. Ottewill Syracuse: S. Penn
Inter-site environmental correlations	AEI-Potsdam: S. Mohanty LHO: M.Landry* Oregon: R. Rahkola, R. Schofield*
Catalog environmental disturbances	AEI-Potsdam: S. Mohanty MIT: J. Sylvestre Oregon: M. Ito, R. Rahkola, R. Schofield* Syracuse: S. Penn, P. Saulson
Calibration stability	Annecy/CIT: B. Mours CIT: S. Marka, L. Matone LHO: M. Landry* LSU: W. Johnson

Engineering Run Investigations

E3/E4 Investigations:

Angular fluctuations	Penn State: G. Gonzalez*, T. Summerscales
Tidal model	LHO: H. Radkins, F. Raab* Oregon: D. Strom
Lock losses	Michigan: D. Chin, R. Gustafson, K. Riles* Oregon: M. Ito Rochester: W. Butler
Timing precision	CIT: S. Marka LHO: D. Sigg*
Data integrity	CIT: P. Shawhan, J. Zweizig*
Data merging	Penn State: G. Gonzalez, P. Sutton CIT: P. Shawhan*
Line noise	AEI-Potsdam: S. Mukherjee Florida: R. Coldwell, S. Klimenko*, B. Whiting
Frequency noise	CIT: L. Matone, A. Vicere MIT: R. Adhikari* Wisconsin: D. Brown

Engineering Run Investigations

Bad News:

- Not all E2 teams completed written reports
- Some E3/E4 efforts thin in reality (leader = “team”)
- Some E5 teams seem thin too

More Issues

- Seismic noise at Livingston
(see E3/E4 reports & Weiss/Coles/Greenwood talks)
- Making use of DMT triggers & other detector characterization info in LDAS
(small group will meet Thursday afternoon)
- Evaluating triggers (efficiency, false alarms, deadtime)
-> Need help from En teams and upper limits groups

More Issues

- As always, need more people at sites
-> E5 turnout at Hanford disappointing!
- Defining reference spectra and setting control room alarms based on deviations and transients
(see Marka talk)
- Running DMT monitors BETWEEN engineering runs!