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Introduction to Detector Characterization Sessions

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General Remarks

- Nice to see completed (E2) and ongoing (E3) detector-focussed investigations
- Lots of real data to look at now and lots of real problems to understand (and fix!)
- Many software tools proving useful

- Upper Limits groups should give good focus and guidance in deciding what to record

  (trends, meta-database entries, etc.)
  - » **Will need good communication to make this work**

But Tool Development Not Nearly Done!

- Need better integration of existing DMT monitors into online system:
  - » Trend and other periodic output for performance characterization
  - » Database triggers for transients
  - » Interface to DMT viewer
  - » Some monitors may merit dedicated GUI drivers for experts
  - » **Make monitors truly useful!**

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Fill These Columns!

DMT Monitors	Scientists	Online code available	Log File Output	Trend Frame Output	Database Triggers Generated	Run by Process Manager	DMT Viewer Interface
Line Noise	B. Allen, A. Ottewill S. Klimenko A. Sintes	Yes Yes*	Yes Yes	 Yes			
Seismic Noise	E. Daw	Yes*	Yes	Yes		Yes	Yes
Correlations	B. Allen, A. Ottewill	Yes*	Yes				
Bilin. Couplings	S. Penn	Yes*	Yes			Yes	
Band-lim. RMS	E. Daw	Yes*	Yes	Yes		Yes	Yes
Non-Gauss. Noise	L.S. Finn, G. Gonzalez						
Power Spect. Trans.	S. Mohanty						
Servo Monitor	D. Chin, K. Riles	Yes*	Yes		Yes	Yes	
Event Catalog	J. Sylvestre	Yes*	Yes			Yes	(GUI)
Adapt. Trans. Det.	E. Chassande-Mottin						
Impulse Recog.	M. Ito	Yes*	Yes		Yes	Yes	
Mag Field Trans	R. Frey, R. Rahkola	Yes*	Yes			Yes	
Lock Transitions	D. Chin, K. Riles	Yes*	Yes		Yes	Yes	
Power Mains	D. Sigg	Yes*	Yes	Yes		Yes	
GPS Time Ramp	S. Marka	Yes*	Yes			Yes	Yes
PSL Glitches	R. Savage, J. Zweizig	Yes*	Yes		Yes	Yes	
Data Integrity	J. Zweizig	Yes*	Yes		Yes	Yes	Yes

DMT Tools	Scientists	Online Code available	Integrated
Oper. State Conds.	D. Chin, K. Riles	Yes*	Yes
Time-Freq Plots	S. Mohanty J. Sylvestre	Yes Yes*	 Yes
Wavelet Tools	S. Klimenko	Yes*	Yes

*Used in E2 and/or E3 engineering run & subsequent analysis

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More Needs

- Need more thought/work on providing / accessing calibration / spectrum / data quality to analysis

  (see D. Sigg talk on Saturday)
- Need more interactive exploratory tools in control room and offline

  (operators and upper limits groups clamoring for more info and flexibility)

  See P. Shawhan & D. Sigg talks tomorrow
- Need more scientists visiting sites to develop tools and make existing tools more useful

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Finally...

- E2 final written reports are due now!
- Please obtain a LIGO Document Control Center (DCC) number and submit the final PDF document to the archive
- Also, please store all figures and original text document (latex, word, framemaker, etc) in your dedicated subdirectory on Hanford blue web site
- A dedicated web page with links to all final E2 reports will also be established

  (missing reports will be highlighted and negligent E2 team leaders subject to public flogging)