

# Detector Characterization Issues -- S2 Analysis & S3 Planning

**Keith Riles (University of Michigan)  
Daniel Sigg (LIGO–LHO)**

***LIGO Scientific Collaboration Meeting  
Hannover University  
August 20, 2003***

# S2 Analysis

---

- **S2 investigation teams very active / productive**
  - Many reports at this meeting
- **Much improved communication with search groups**
  - Quite effective glitch collaboration with burst / inspiral groups
- **Data quality repository seems to be serving its purpose**

**In general, things seem to be working better than for S1**

# S2 Analysis

---

## **BUT...**

- **Investigations / reports taking longer than hoped**
- **Delays tolerable only because search groups held up by finalization of S1 analyses**
- **Can't assume this pattern will hold for S3**

**Need to be quicker for S3 (more later)**

# Looking ahead to S3 - Schedule

- **Mini-E-runs (single-site 6-hour evening runs):**  
**Sat Sept 13 at Hanford and Sat Sept 20 at Livingston**
- **Hardware/software freeze →**  
~Oct 1 – Start routine running of DMT monitors  
→ Figures of merit once again prominently displayed
- **Maxi-E-run: (1-week final shakedown at both sites):**  
**Fri Oct 17 (evening) – Fri Oct 24 (early morning)**
- **Tinkering to fix / improve hardware / software**  
**Fri Oct 24 – Thur Oct 30**
- **Science Run S3**  
**Fri Oct 31 – Mon Jan 5 (+ 1 month?)**

# Looking ahead to S3 - Scimons

---

## Plan for S3 same as for S2:

- 24/7 shift staffing at both sites – 1 expert
- Three 8-hour shifts / day
- Training slots available for new persons
- But should have larger pool of experts now
  - » More equitable burden on groups
- Allocation based once again on FTE counts
  - » Please send updated FTE counts to Irena
- Will solicit request for group constraints / preferences with prompt response requested
  - » Will accommodate requests within reason and where possible

# Looking ahead to S3 – Feedback

---

**Devoting one week to maxi-E-run to shake down software  
and to evaluate detector performance**

**Cannot use “tinkering week” well without that evaluation:**

- **DMT diagnostics**
- **S3 investigations**
- **Search group quick-looks**

**Be Prepared!**

# Looking ahead to S3 – DMT world

---

## Old monitors:

- **Need to be resurrected and retuned – main purpose of mini-E-runs in September**

**DMT authors expected to participate**

- **Final tuning will likely be needed during maxi-E-run**
- **Post-S3 goal: identify key monitors / FOM's for commissioning and make robust against IFO changes**

## New monitors:

- **Time is running short for completion!**
- **Some promises made after S2 in danger of breakage...**
- **Please bear down to get things ready**

# One more issue- DMT evolution

As reported yesterday, new ITR proposal approved with funding for 2.25 FTE's to assist in DMT infrastructure development  
( 1.25 @ PSU, 0.75 @ MIT, 0.25 @ UWM )

We are now discussing how best to make use of this new resource, but tentative strawman plan:

- Support linux porting of DMT with auto-installation tools
- Support “gridification”, i.e., automated remote submission of jobs and i/o handling at tier 2 centers (good progress already @ PSU)
- Support small number of linux nodes at each observatory with immediate access to recent full data



# One more issue- DMT evolution

---

**More input requested:**

**What else would you like to see in gridified DMT system?**

**Examples:**

- » **Full support of GDS tree (DTT & other existing tools)**
- » **New graphical tools**
- » **Other new infrastructure that could help at the sites?**

**New ITR funding presents opportunity for significant development**

**Think about how we can take advantage of it**

**Send e-mail to John & Keith**

# This meeting

---

**Lots of activity:**

**Presentations**

**(detchar, detchar/asis)**

**Looking forward to interesting reports!**