

Report From Joint Run Planning Committee

R. Passaquieti & F. Raab

*- LSC / VIRGO Collaboration Meeting -
-23rd July 2007 –*

LIGO-G070542-00-Z



Join Run Planning Committee (JRPC) Activity

- Committee members and co-chairs appointed by 13Mar07
- Luncheon meeting in March 19-22 LSC/VIRGO meeting in Baton Rouge
- Received charge 2Apr07:
 - » Settle the S5-VSR1 joint running coordination
 - » Investigate post-S5 to S6 operating scenarios
- Bi-weekly JRPC telecons:
 - » were held on 13Apr07, 27Apr07, 11May07 and 15June07.
 - » Most run coordination issues has been discussed and settled
 - » Investigations from DAC has been triggered
 - » Progress has been made on scenarios
- 1st plenary session JRPC report by F. Raab in May 21-25May07 LSC/VIRGO meeting in Cascina.



Consensus on Joint S5/VSR1 Run Coordination

- LIGO has an S5 run coordinator, Vern Sandberg
- Hanford, Livingston and GEO have local run coordinators, which rotate on a schedule determined by each local site
- In Virgo R. Passaquieti act as VSR1 run coordinator
- Virgo is invited to attend the LIGO S5 Run Coordination Telecon, at 19:15 UTC, together with representatives of all LSC working groups and LIGO-Lab and GEO run managers



Consensus on S5/VSR1 Run Interruptions

- The Virgo “science mode” interruptions schedule, during VSR1, follows the scheme adopted by LIGO:
 - » MAINTENANCE: 4-hr weekly time window.
 - » H1, H2 and L1 synchronize maintenance each Tuesday from 08:00 to 12:00 PT ;
 - » European detectors synchronize each Wednesday from 09:00 to 13:00 CET
 - » **Criterion: to optimize coverage**
 - » COMMISSIONING: up to 25 hours/month at each site
 - » coordinated by LIGO and Virgo run coordinators
 - » **Criterion: to optimize amount of time with 2-3 of the large detectors operating in coincidence, while providing a good degree of coverage**



Consensus on Calibrations & Hardware Injections

- Long time-consuming calibration checks are done as part of “commissioning” time allotment
 - » LIGO & Virgo do not expect to need such calibration time during the 4 months beginning May 18
- Hardware injections will be done during “science mode”, with appropriate flags recorded; not expecting to consume much integrated time
- Simultaneous hardware injections are highly desired by analysis groups but will not be required before the end of S5
 - » Virgo requires major modifications to real-time software.
 - » People from the collaboration are interested to know how time sets are checked



Post-S5 to S6 operating scenarios

- DAC was asked to consider GEO-only coverage
 - » Consensus: triggered GEO-only paper would be publishable only if Supernova is extremely nearby (optimistic estimate: range within about 1kpa, detection efficiency from about a few/thous. to about 30 %)
- A subcommittee was formed to investigate and bring a preliminary recommendation to full committee (R. Adhikari (chair), M. Punturo, K. Riles, A. Vicerè, B. Willke).

Subcommittee consensus:

- » highest priority: enhance rapidly the sensitivities of the largest interferometers.
 - » secondary priority: provide the best coverage possible.
 - » some science/engineering running desired by large detectors in 08.
 - » preliminary schedule developed on this consensus view.
 - » Request to DAC to discuss the significance of any benefits and downsides of delaying the enhancement of one of the larger detectors (see DAC presentation for preliminary results)
- F. Raab, K. Riles and E. Goetz are providing plan to run H2 in astrowatch with students.
 - » Preliminary considerations
 - » A shift schedule of 2 shifts per day, requires 6 students minimum (if no SciMons).
 - » A shift schedule of 1 shift per day, requires 4 students minimum (if no SciMons).



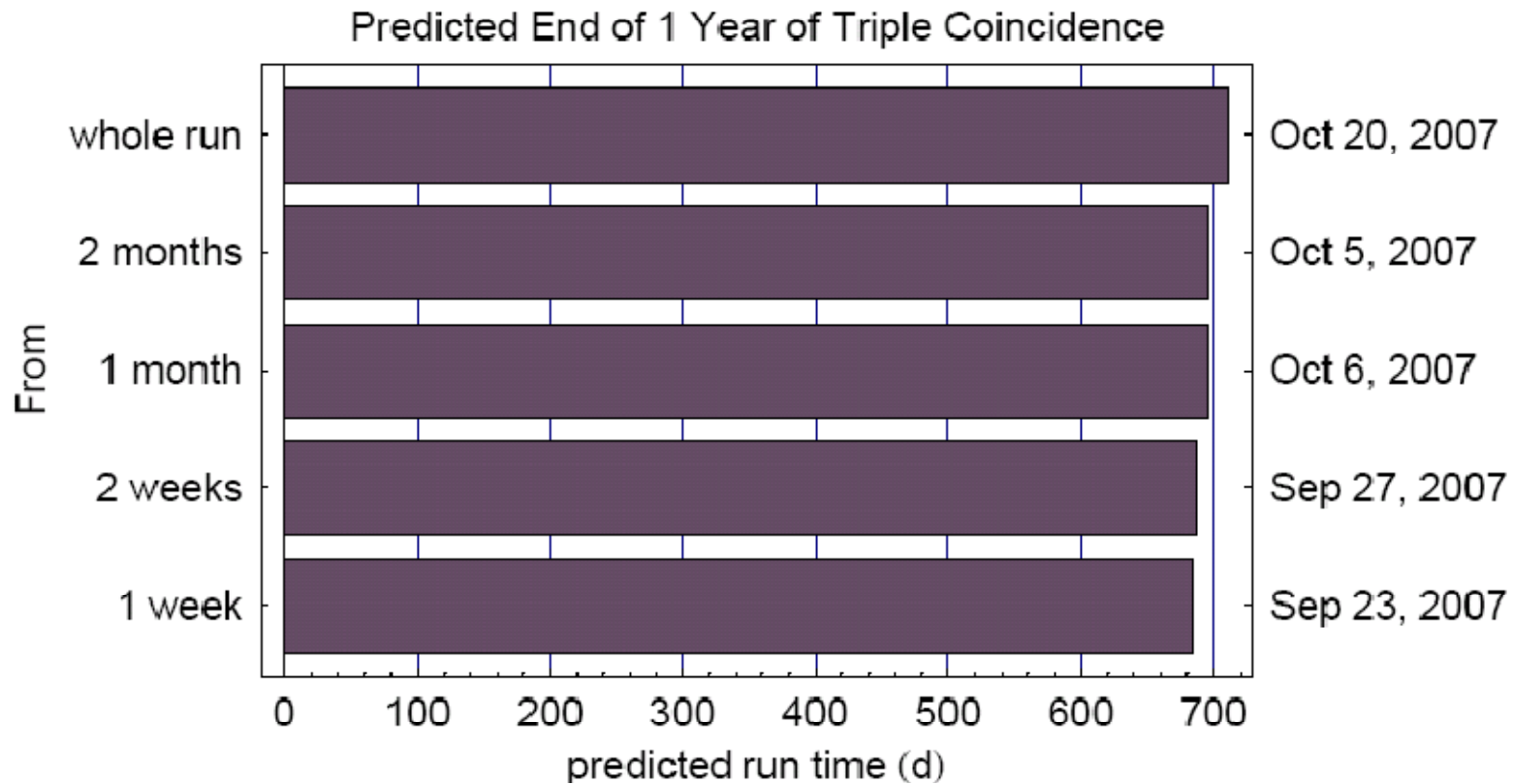
Procedure to end S5

- Significant time required to release detectors after S5
 - » Required calibration checks
 - » Documentation work
 - » Post-run commissioning
- F. Raab has proposed a planning schedule to LSC Operations Committee (LSC-OC):
 - » end S5 science running with 1 year of triple coincidence by **30Sep07**;
 - » use the **following three weeks for post-S5** measurements and documentation;
 - » **start venting for eLIGO by 4th week of October.**



Latest Predictions for End of 1 Year of Triple Coincidence

According to the last projections, by D. Sigg, the 1-yr LIGO triple-coincidence could be potentially achieved by end of September 2007





Preliminary schedule as presented at 21-25May07
 LSC/VIRGO meeting in Cascina ([last updates](#))

	GEO	Virgo	H1/L1	H2	TAMA
Summer 07 ? (30Sept07)		S5	S5 Need 1 yr coincident data	S5	Join S5 (?)
Dec 07	running	offline	offline	Astrowatch	
late 08	some short engineering or science runs				
June 09	Start GEO HF work at S6 start	start S6 With LIGO	start S6	start S6	
Feb 2011	GEO HF	Adv Virgo	Adv LIGO	Adv LIGO	LCGT R&D