



Online Inspiral Search Monitor

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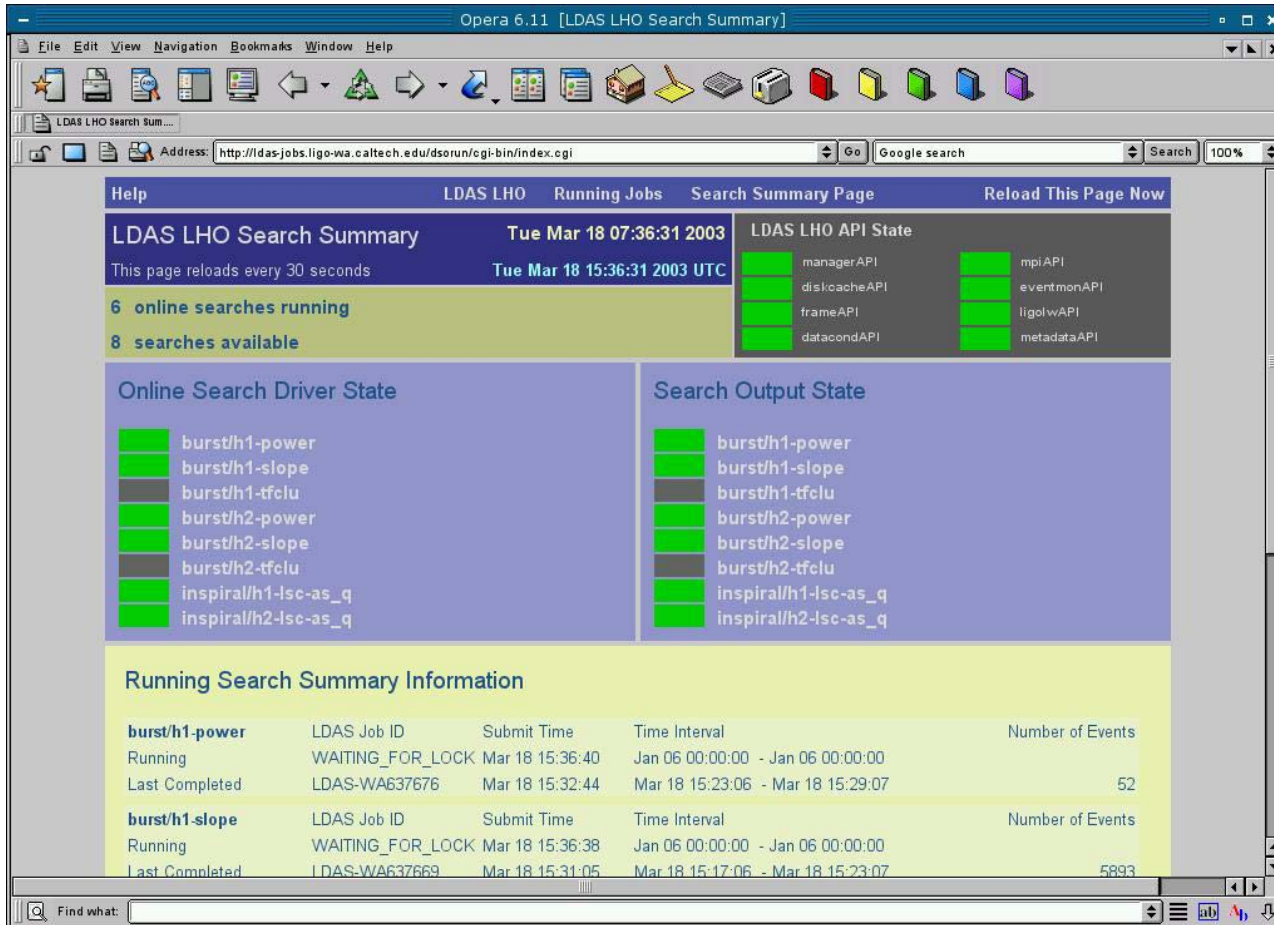
LIGO Scientific Collaboration
Inspiral Working Group

LIGO-G030135-00-Z

Online Inspiral Search Monitor

- Filters online science mode data through bank of 40 inspiral templates
- Processes 1024 seconds of science mode data
- Uses senseMon calibration frames to calibrate data
- Produces rate and maximum distance plots
- Generates inspiral triggers for veto studies

Online Search Monitoring Tool

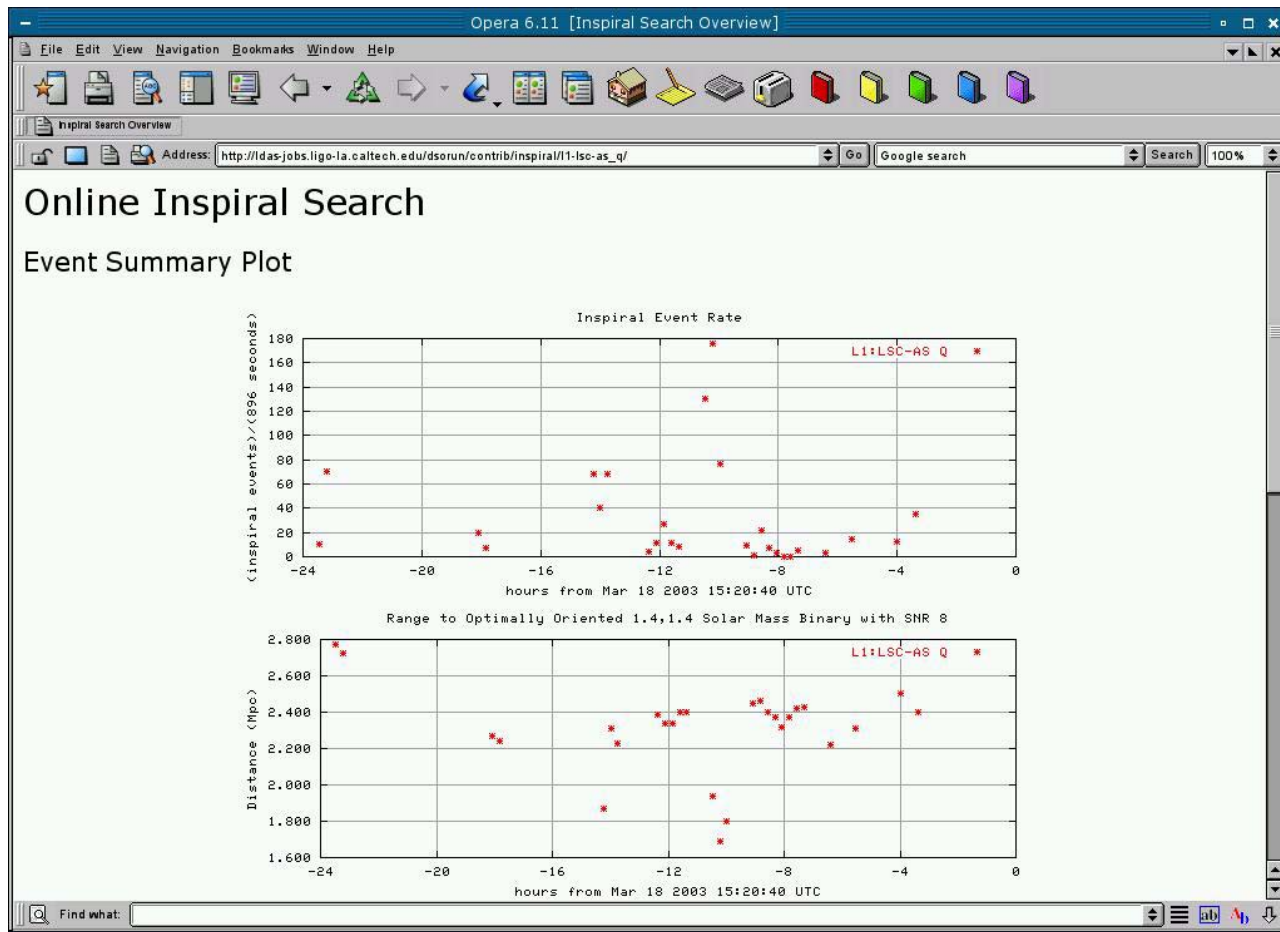


The screenshot shows the LDAS LHO Search Summary web application in a browser window. The page displays the following information:

- LDAS LHO Search Summary**: Tue Mar 18 07:36:31 2003. This page reloads every 30 seconds. Tue Mar 18 15:36:31 2003 UTC.
- 6 online searches running**
- 8 searches available**
- LDAS LHO API State**:
 - managerAPI (green)
 - mpiAPI (green)
 - dislcoacheAPI (green)
 - eventmonAPI (green)
 - frameAPI (green)
 - ligolwAPI (green)
 - datacondAPI (green)
 - metadataAPI (green)
- Online Search Driver State**:
 - burst/h1-power (green)
 - burst/h1-slope (grey)
 - burst/h1-tfclu (grey)
 - burst/h2-power (green)
 - burst/h2-slope (grey)
 - burst/h2-tfclu (grey)
 - inspiral/h1-lsc-as_q (green)
 - inspiral/h2-lsc-as_q (green)
- Search Output State**:
 - burst/h1-power (green)
 - burst/h1-slope (grey)
 - burst/h1-tfclu (grey)
 - burst/h2-power (green)
 - burst/h2-slope (grey)
 - burst/h2-tfclu (grey)
 - inspiral/h1-lsc-as_q (green)
 - inspiral/h2-lsc-as_q (green)
- Running Search Summary Information**:

	LDAS Job ID	Submit Time	Time Interval	Number of Events
burst/h1-power				
Running	WAITING_FOR_LOCK	Mar 18 15:36:40	Jan 06 00:00:00 - Jan 06 00:00:00	
Last Completed	LDAS-WA637676	Mar 18 15:32:44	Mar 18 15:23:06 - Mar 18 15:29:07	52
burst/h1-slope				
Running	WAITING_FOR_LOCK	Mar 18 15:36:38	Jan 06 00:00:00 - Jan 06 00:00:00	
Last Completed	LDAS-WA637669	Mar 18 15:31:05	Mar 18 15:17:06 - Mar 18 15:23:07	5893

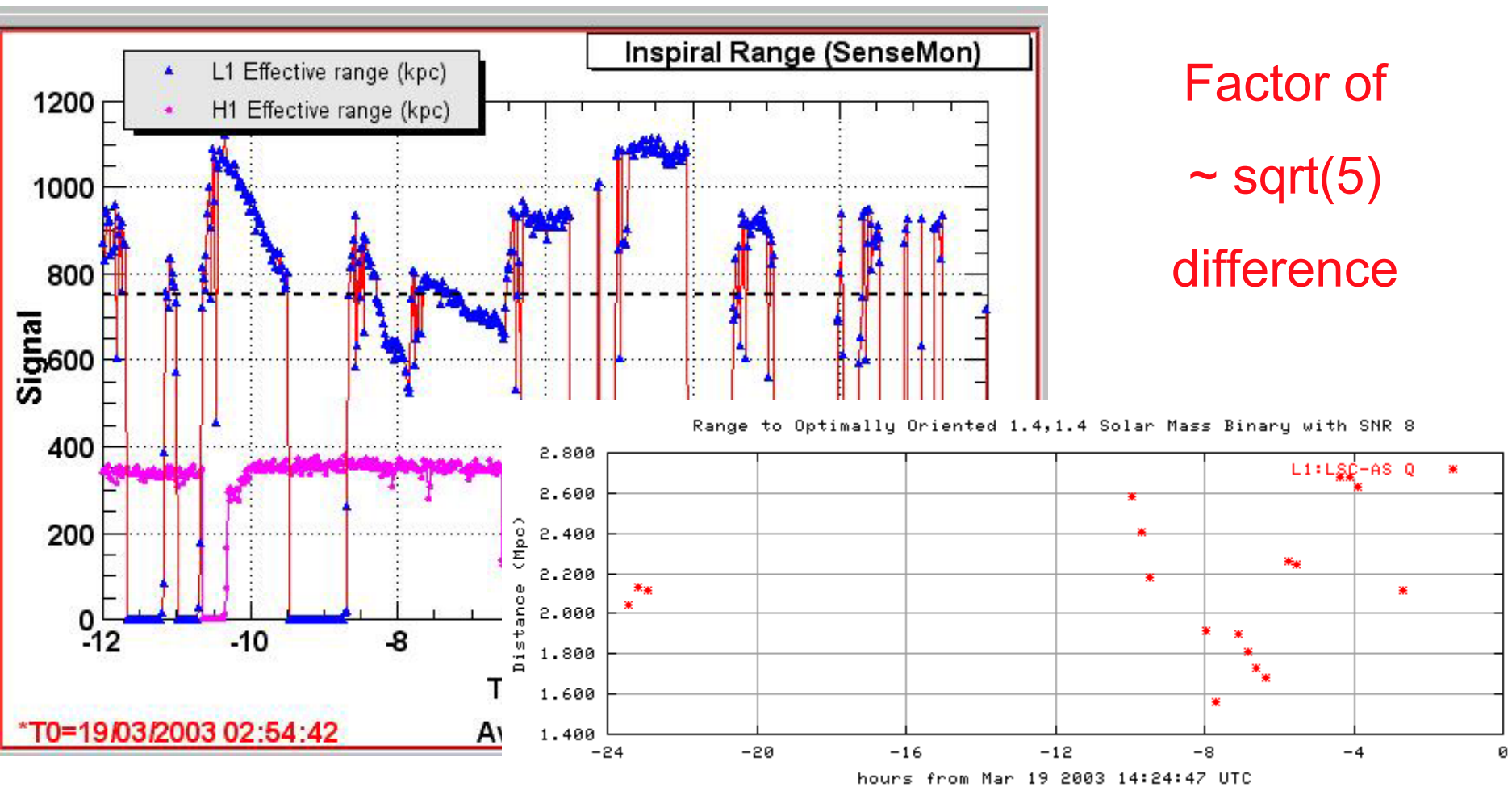
Online Inspiral Monitor Plots



Distance Plots

- Generates plot of maximum distance that the IFO can see to a 1.4,1.4 solar mass binary of SNR 8
- SenseMon averages over all directions
- Good agreement between SenseMon and inspiral code
- Quantitative and qualitative agreement

Comparison of Distance Plots



Factor of
 $\sim \sqrt{5}$
 difference

Future developments

- Further study of glitch rates needed...
- IUL group will be studying inspiral triggers from playground as part of S2 analysis
- Feedback from scimons?
- Integration of inspiral monitor into existing tools for better visibility