



ASIS Status Report

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Coincidence Methods/Upper Limits

Not entirely clear how to use coincidence methods. For upper limit work there are many reasonable choices.

- Inspiral: use event lists over some threshold, followed by coherent analysis
- Stochastic Background: will use correlation analysis
 - » (anti)correlated noise might result in a bound that is too weak!
- Pulsar
 - » Known sources: consistency between different detectors
 - » Unknown sources: TBD
- Burst Sources: under discussion

What kinds of conclusions should we aim for?

- » Statements about astrophysical systems?
- » Statements about particular waveforms?
- » Statements about instrumental output?



Status of Search Software

- LAL library is growing quickly
 - » 29 packages, 130,000 lines of code & documentation, 500+ page manual
 - » CVS archive opened for developers since around April
 - » Major contributions from many research groups
 - » Substantial traffic on lal-discuss mailing list
 - » LAL wrapper library contains “complete” shared object libraries for inspiral, stochastic background, excess power, and time/frequency searches. These integrate LAL code with LDAS
 - » Runs on many platforms: (x86 and AXP) Linux, Solaris, Irix, True64
- Next six months: extensive use, testing and development of this code on LIGO “E” and “S” data.



LAL Library Release 0.8 (Release 0.9 in September)

The image displays a grid of eight thumbnail pages from the LAL Library Release 0.8 documentation. The top row contains four 'Contents' pages (labeled Pg. 1, Pg. 2, Pg. 3, and Pg. 4) and a 'Preface' page (labeled Pg. 5). The bottom row contains four more 'Contents' pages (labeled Pg. 5, Pg. 6, Pg. 7, and Pg. 8) and a 'Preface' page (labeled Pg. 9). Each page shows a list of topics with corresponding page numbers, some of which are highlighted in red. The 'Preface' page contains introductory text about the LAL library and its development.

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Future Role of ASIS within LSC

- Last three years: focus on LSC data analysis coding/software effort
- Focus for the next few years: science runs
 - » Scientific testing and validation of existing code
 - » Completion of LAL library, maturation of LDAS interface
 - » Exploitation of Grid Computing resources
 - GriPhyN is building Tier II centers at UWM, Penn State
 - Longer term: DTF (Distributed Terascale Facility) will provide 6 Tflops of networked computing
 - » Address scientific questions (spins in binary systems, merger waveforms, SN & collapse waveforms)
- Umbrella organization for specific search groups