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?
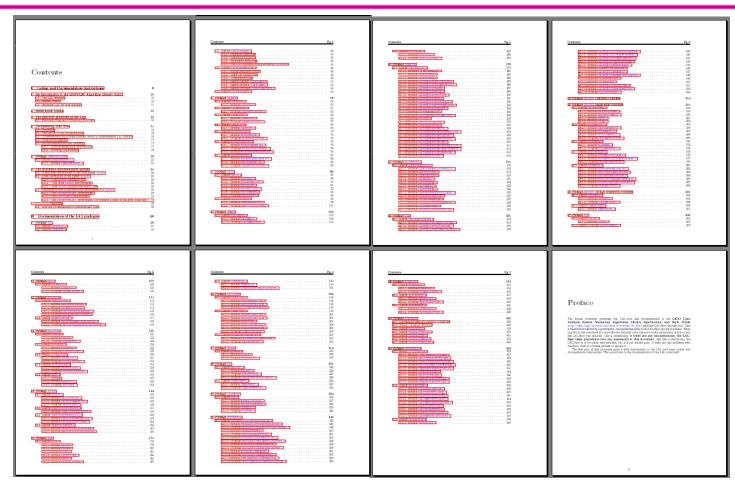 - » Statements about instrumental output?

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)

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**