LAL: Status of Unmodeled Burst Search Algorithms

LIGO Scientific Collaboration

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burstsearch in LAL

- Continuing development PRB (Flanagan originally)
- Windowed FFT based time-frequency transforms
- Tiling of plane according to
  - » Max and min time durations
  - » Max and min freq bandwidths
- Likelihood based detection (Anderson, PB, Creighton, Flanagan)

- Exists and works in LAL-0.7
- Documentation exists in LSD
- Bugs: test program incorrectly tests status structure

timefreq in LAL

- Continuing development Eric Chassande-Mottin
- Time-frequency transform methods
  - » Wigner-Ville
  - » Pseudo-smoothed Wigner-Ville,
  - » Spectrogram,
  - » Reassigned spectrogram

- Exists and works in LAL-0.7
- Documentation exists (not in LSD)
- Bugs: Documentation is not included in LSD

tracksearch in LAL

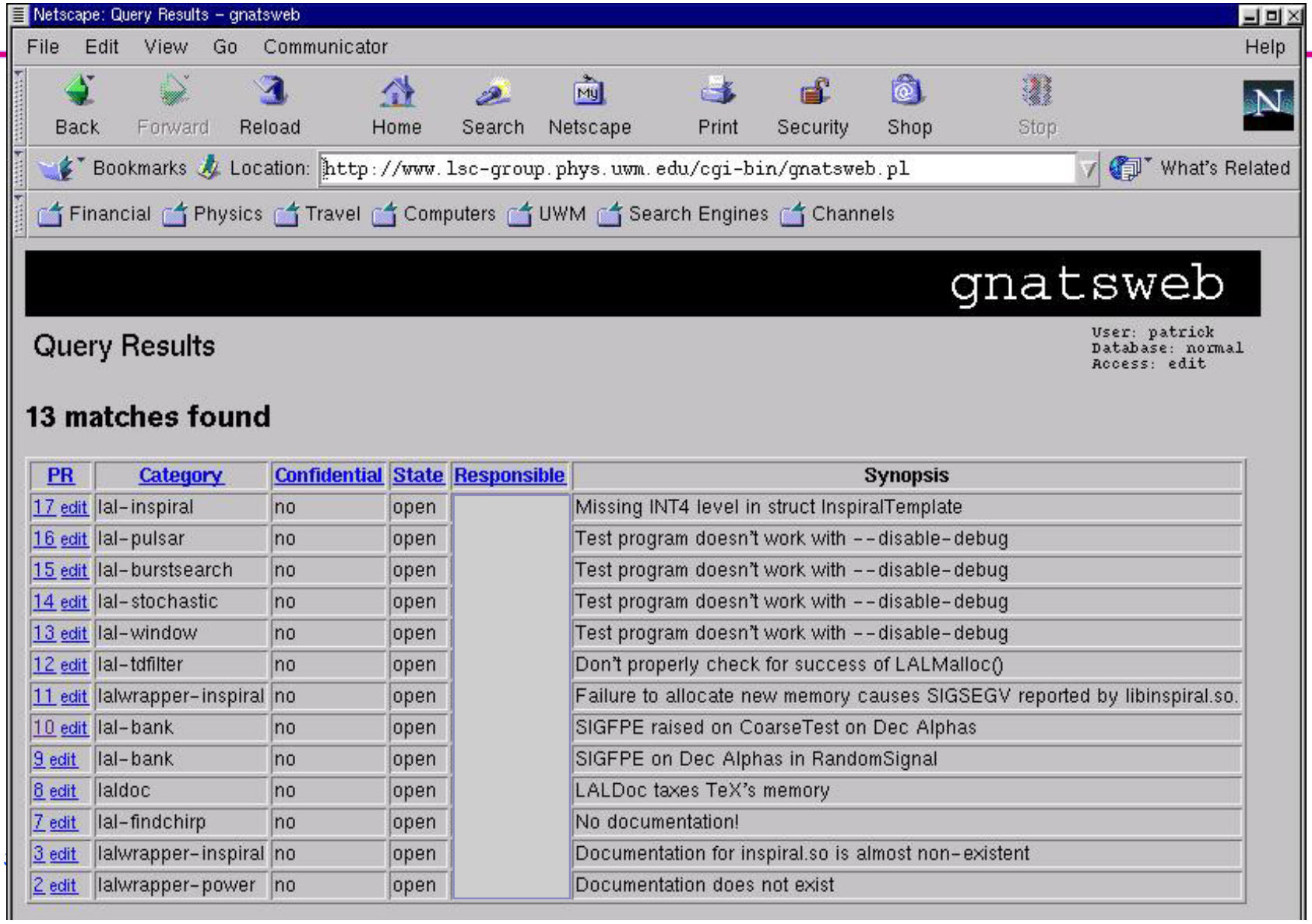
- Continuing development S. Balasubramanian
- Applies a burst search technique to time-frequency planes
  - » Explored in literature by Anderson and Balasubramanian
  - » Uses image processing method to find curvilinear features
  - » Second derivative hysteresis threshold technique

- Exists and works in LAL-0.7
- Documentation exists (not in LSD)
- Bugs: Documentation is not included in LSD

power.so in LALwrapper

- PRB
- Executes the excess power burst search in LDAS
  - » it is prototype code
- Development will continue next week for first release of LALwrapper (coming soon …….)
- Bugs:
  - » incorrectly computes gps time of events
  - » documentation does not exist in laldoc format

LAL/LALwrapper Bug Tracking



Netscape: Query Results – gnatsweb

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: http://www.lsc-group.phys.uwm.edu/cgi-bin/gnatsweb.pl What's Related

Financial Physics Travel Computers UWM Search Engines Channels

gnatsweb

Query Results

User: patrick
Database: normal
Access: edit

13 matches found

PR	Category	Confidential	State	Responsible	Synopsis
17 edit	lal-inspiral	no	open		Missing INT4 level in struct InspiralTemplate
16 edit	lal-pulsar	no	open		Test program doesn't work with --disable-debug
15 edit	lal-burstsearch	no	open		Test program doesn't work with --disable-debug
14 edit	lal-stochastic	no	open		Test program doesn't work with --disable-debug
13 edit	lal-window	no	open		Test program doesn't work with --disable-debug
12 edit	lal-tdfilter	no	open		Don't properly check for success of LALMalloc()
11 edit	lalwrapper-inspiral	no	open		Failure to allocate new memory causes SIGSEGV reported by libinspiral.so.
10 edit	lal-bank	no	open		SIGFPE raised on CoarseTest on Dec Alphas
9 edit	lal-bank	no	open		SIGFPE on Dec Alphas in RandomSignal
8 edit	laldoc	no	open		LALDoc taxes TeX's memory
7 edit	lal-findchirp	no	open		No documentation!
3 edit	lalwrapper-inspiral	no	open		Documentation for inspiral.so is almost non-existent
2 edit	lalwrapper-power	no	open		Documentation does not exist