

Access to Data from the LIGO Engineering Runs

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Data, Data, Data

LIGO engineering runs produce several types of data...

Raw

RDS (selected channels of raw data)

Second-trend

Minute-trend

...which are stored in various places

CDS Network Data Server

LDAS systems at observatories

RAID disks on fortress & decatur

HPSS robotic tape archive at Caltech

Tools, Tools, Tools

See LIGOTOOLS “Frequently Asked Questions” page

View / process remote data (from Network Data Server)

Diagnostic Test Tools

Data Viewer

View / process data on local disk (on fortress, decatur, etc.)

Diagnostic Test Tools

Standalone DMT monitor

Data Viewer

ROOT with DMT library

Matlab

ROOT with Frame library

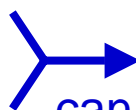
FAQ write-ups needed

Retrieve data to local disk

getFrames

lidax

guild



can retrieve from HPSS archive, LDAS, and certain RDS datasets on fortress / decatur

can retrieve from LDAS

Analyze data with LDAS

Data Availability

- E1-E5:** Raw and second-trend data is retrievable from archive using `getFrames` or `lidak`
(Part of E5 RDS data still exists on fortress & decatur RAID disks)
Minute-trend data is remotely viewable with Data Viewer, and retrievable from archive using `getFrames` or `lidak`
- E6:** Raw and second-trend data are currently not available
Minute-trend data is remotely viewable with Data Viewer
- E7:** Raw data is retrievable from LDAS using `getFrames`, `lidak`, `guild`
RDS frames have been created on LDAS disks (cross-mounted to fortress & decatur) but are **not yet remotely retrievable or usable by LDAS jobs**
Second-trend data is not currently available
Minute-trend data is remotely viewable with Data Viewer
- Retrievable data is listed under the “Universal Dataset Names (UDNs), time ranges, channel lists, and links to servers” link on the LIGOTOOLS home page

Recommendations for Retrieving Data

If you want to look at data with DTT or Data Viewer:

Use `getFrames` *with* the “-1” option

This forces the output to be in the form of one-second-long frame files, which is the form required by DTT / Data Viewer (see LIGOTOOLS FAQ)

If you want to look at data with any other tool:

It is generally preferable to use `getFrames` *without* the “-1” option, to minimize the number of files

If the data is coming from the HPSS archive or from LARS-served datasets on fortress & decatur, you will get a single file containing multiple frames

If the data is coming from LDAS, you will get multiple 16-second-long frames

`lidax` may be handy in special cases

`guild` lets you check what data is available from LDAS

Upcoming Changes

Soon, the E7 raw data will be deleted from LDAS disks

E7 RDS data will remain on disk, and will be made available for analysis by LDAS jobs and for retrieval by `getFrames`, `lidax`, and `guild`

LARS will be upgraded to serve the E6 & E7 data in the archive for retrieval by `getFrames` and `lidax`

We still have no good viewer for old second-trend data

Much of the basic infrastructure exists to do this (in multiple ways!)

Trend data generated by DMT monitors is inaccessible

This has been identified as a priority

DAQ system is being modified to serve these out to Data Viewer

Will need to archive DMT trend data for later retrieval