

Welcome to the Machine Learning Workshop data page

This website: <http://setiathome.berkeley.edu/~mattl/ml>

General notes about the data formats:

- All the data files below are in the guppi_raw format (ending in .raw) or filterbank (ending in .fil).
- The guppi data will have either 2-bit or 8-bit samples (noted in the headers, if not also the filename).
- More information about these data formats: <https://github.com/UCBerkeleySETI/breakthrough/blob/master/GBT/waterfall.md>

The .fil files come as a set of four files - containing all 32-bit values except as noted:

- *.gpuspec.0000.fil : ~3Hz frequency bin resolution, ~18 second sample time (SETI)
 - *.gpuspec.0001.fil : ~366MHz frequency bin resolution, 349 us sample time (Pulsar)
 - *.gpuspec.0002.fil : ~3Khz frequency bin resolution, ~1 second sample time ("in between")
 - *.gpuspec.8.0000.fil : 8-bit version of the Pulsar product (current pulsar detection tools can only handle 8-bit data)
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W3:

L-band data collected on three BL compute nodes: blc02, blc03, blc05. Each node is 187.5 MHz of data.

https://storage.googleapis.com/ml_workshop/blc02_guppi_57501_75569_W3_0009.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/blc02_guppi_57501_75569_W3_0009.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/blc02_guppi_57501_75569_W3_0009.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/blc02_guppi_57501_75569_W3_0009.gpuspec.8.0001.fil
https://storage.googleapis.com/ml_workshop/blc03_guppi_57501_75569_W3_0009.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/blc03_guppi_57501_75569_W3_0009.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/blc03_guppi_57501_75569_W3_0009.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/blc03_guppi_57501_75569_W3_0009.gpuspec.8.0001.fil
https://storage.googleapis.com/ml_workshop/blc05_guppi_57501_75569_W3_0009.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/blc05_guppi_57501_75569_W3_0009.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/blc05_guppi_57501_75569_W3_0009.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/blc05_guppi_57501_75569_W3_0009.gpuspec.8.0001.fil

Voyager1:

X-band data from the one BL compute node (187.5 MHz within which Voyager1 is seen) - .raw file (about 25 seconds):

https://storage.googleapis.com/ml_workshop/blc3_2bit_guppi_57386_VOYAGER1_0004.0000.raw

And the full set of .fil files from a similar 5-minute observation:

https://storage.googleapis.com/ml_workshop/blc3_2bit_guppi_57386_VOYAGER1_0002.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/blc3_2bit_guppi_57386_VOYAGER1_0002.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/blc3_2bit_guppi_57386_VOYAGER1_0002.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/blc3_2bit_guppi_57386_VOYAGER1_0002.gpuspec.8.0001.fil

Pulsar:

L-band data from a recent pulsar observation. Raw data from the center four nodes: blc02, blc03, blc04, blc05 - .raw files (about 25 seconds each):

https://storage.googleapis.com/ml_workshop/blc02_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.0000.raw
https://storage.googleapis.com/ml_workshop/blc03_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.0000.raw
https://storage.googleapis.com/ml_workshop/blc04_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.0000.raw
https://storage.googleapis.com/ml_workshop/blc05_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.0000.raw

And the full set of .fil files generated from a 5-minute observation, all 8 compute nodes spliced together into one continuous band (1500 MHz total):

https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.8.0001.fil

Also, for fun, a set of pulsar-searching results from the "prepfold" tool:

https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.8.0001_PSR_J2113+4644.pfd
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.8.0001_PSR_J2113+4644.pfd.bestprof
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44265_DIAG_PSR_J2113+4644_0002.gpuspec.8.0001_PSR_J2113+4644.pfd.ps

Stars:

L-band data of a couple HIP stars - HIP122724 and HIP111612 - full set of .fil files from 5-minute observations of each, all 8 compute nodes spliced together into one continuous band (1500 MHz total):

https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44685_HIP112724_0003.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44685_HIP112724_0003.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44685_HIP112724_0003.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_44685_HIP112724_0003.gpuspec.8.0001.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_45040_HIP111612_0004.gpuspec.0000.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_45040_HIP111612_0004.gpuspec.0001.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_45040_HIP111612_0004.gpuspec.0002.fil
https://storage.googleapis.com/ml_workshop/spliced_blc0001020304050607_guppi_57540_45040_HIP111612_0004.gpuspec.8.0001.fil