# J0950 UV Spectroscopy

**Wednesday, April 13, 2022**

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Download the HST spectra for J0950:
Proposal ID: 16765
https://archive.stsci.edu/proposal_search.php?mission=hst&id=16765

I requested all of the calibrated data.

How do you sftp with your credentials (because the data are proprietary)? https://archive.stsci.edu/ftp.html

Downloading the data:
(python37) Jess@Shasta:py> python download_data.py
getting lepa01010_asn.fits
getting lepa01010_log.txt
getting lepa01010_trl.fits
getting lepa01010_x1dsum.fits
getting lepa01010_x1dsum1.fits
getting lepa01010_x1dsum2.fits
getting lepa01010_x1dsum3.fits
getting lepa01010_x1dsum4.fits
getting lepa01fnq_flt.fits
getting lepa01fnq_log.txt
getting lepa01fnq_spt.fits
getting lepa01fnq_trl.fits
getting lepa01fpq_corrtag_a.fits
getting lepa01fpq_corrtag_b.fits
getting lepa01fpq_flt_a.fits
getting lepa01fpq_flt_b.fits
getting lepa01fpq_lampflash.fits
getting lepa01fpq_log.txt
getting lepa01fpq_spt.fits
getting lepa01fpq_trl.fits
getting lepa01fpq_x1d.fits
getting lepa01frq_corrtag_a.fits
getting lepa01frq_corrtag_b.fits
getting lepa01frq_flt_a.fits
getting lepa01frq_flt_b.fits
getting lepa01frq_lampflash.fits
getting lepa01frq_log.txt
getting lepa01frq_spt.fits
getting lepa01frq_trl.fits
getting lepa01frq_x1d.fits
getting lepa01ftq_corrtag_a.fits
getting lepa01ftq_corrtag_b.fits

getting lepa01ftq_flt_a.fits
getting lepa01ftq_flt_b.fits
getting lepa01ftq_lampflash.fits
getting lepa01ftq_log.txt
getting lepa01ftq_spt.fits
getting lepa01ftq_trl.fits
getting lepa01ftq_x1d.fits
getting lepa01fvq_corrtag_a.fits
getting lepa01fvq_corrtag_b.fits
getting lepa01fvq_flt_a.fits
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getting lepa01fvq_trl.fits
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getting lepa01fxq_corrtag_b.fits
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getting lepa01fxq_flt_b.fits
getting lepa01fxq_lampflash.fits
getting lepa01fxq_log.txt
getting lepa01fxq_spt.fits
getting lepa01fxq_trl.fits
getting lepa01fxq_x1d.fits

Extract the COS spectra:

- Create hst_targets.dat.
  - 019  0.2144  09:50:36.75    +51:28:38.1
- Run pro/extract_uvspec.pro
  - For each *xd1sum.fits file, create a 3-column (wave, flux, err) data file (.dat) and corresponding header (.hdr).
  - This is throwing errors:
    - Warning: Dialog style must be XmDIALOG_MODELESS.
    - Error: attempt to add non-widget child "dsm" to parent "idl" which supports only widgets
  - I followed this and it fixed it:
    - https://michaelgalloy.com/2016/11/11/problems-with-xquartz-2-7-11-on-macos.html
    - sudo mv /opt/X11/lib/libXt.6.dylib{,.bak}
    - sudo cp /opt/X11/lib{/flat_namespace,}/libXt.6.dylib
  - (python37) Jess@Shasta:uvspec_j0950> idl
  - IDL Version 7.0, Mac OS X (darwin i386 m32). (c) 2007, ITT Visual Information Solutions

    - Installation number: 20111111.
    - Licensed for use by: TEAM TBE
    -
    - What is crack-a-lacking Jessie?
    - % Compiled module: BOOYEAH.
    - IDL> .r pro/extract_uvspec
    - % Compiled module: ANG_SEP.
    - % Compiled module: EXTRACT_UVSPEC.
    - IDL> extract_uvspec,/hardcopy
- The 2ca_2cu.x conversion isn't working right now, but I think that's fine.

Create spec_obs.lis, which tells the corresponding optical files.

Give up and run ./pro/quick_look.pro to make a quick stack of the raw spectra.