

Enhanced EXES Data Products and Tools

Some EXES data benefit from additional processing beyond that provided by the EXES pipeline. Each topic below is accompanied by a readme that provides details about the additional processing and the data products or tools.

Improved sky line cancellation for high-res observations of the 587.032 cm⁻¹/17 μm H₂S(1) line

- Readme (readme_s1.docx)
- Data Access [data are in the H2S1 directory, in subdirectories by source]

Target	RA/Dec (J2000)	Flight
IC 443 B	6:17:16.1 +22:25:15	862
IC 443 C	6:17:42.37 +22:21:16.88	860
IC 443 C	6:17:42.37 +22:21:16.88	861
IC 443 C	6:17:42.37 +22:21:16.88	862
IC 443 G	6:16:43.6 +22:32:37	860
IC 443 G	6:16:43.6 +22:32:37	861
3c391	18:49:22.56 -00:57:17.25	860
r Oph p1	16:25:54.25 -24:19:13.0	830
r Oph p2	16:25:52.0 -24:19:15.5	836
NGC 7023 p1	21:02:09.0 +68:09:05.0	831
NGC 7023 p2	21:02:07.5 +68:09:03.5	831
DR 21	20:39:01.4 +42:23:53	836
DR 21	20:39:01.4 +42:23:53	837

[each target name links to a page with the FITS file and the ascii file for that target/flight
OR add a column that contains a link to the FITS and ascii files]

Combined Spectra of Titan

- Readme (readme_titan.docx)
- Data Access [data are in the titan directory]

Plan ID	Wavenumbers	Flight(s)	Data File
83_0203	400.4-404.2 cm ⁻¹	747, 749	titan_403cm-1_combined.dat
83_0203	469.3-475.8 cm ⁻¹	747, 749, 799	titan_472cm-1_combined.dat
83_0203	617.5-624.2 cm ⁻¹	744	titan_621cm-1_corrected.dat
86_0006	743.5-750.3 cm ⁻¹	198	titan_746cm-1.dat

[entries in the Data File column directly download the .dat files]

Removing Baselines from Cross-Dispersed, Multi-Order 1D EXES Spectra

- Readme (Baseline_README.docx)
- Jupyter notebook (COMbaselineremoval.ipynb)
- Sample data

- IRC+10216, 805 cm^{-1} [irc10216_hilo_805cm-1.tar]
- IRC+10216, 850 cm^{-1} [irc10216_hilo_805cm-1.tar]

Generating Custom Wavemaps

- Readme (CustomWavemap_README.docx)
- Jupyter notebook (customWavemap.ipynb)
- Sample data
 - IRC+10216, 805 cm^{-1} [irc10216_hilo_805cm-1.tar; note: same file as above]
 - IRC+10216, 850 cm^{-1} [irc10216_hilo_805cm-1.tar; note: same file as above]