Codename	Bands	Absorbers	Continua	Tolerance	Sources	NaN-clean	SOCRATES	Date	Platform	Creator	Notes
Legacy	318	H2O, CO2, O3, N2O, CO, CH4, O2, NO, SO2, NO2, NH3, HNO3, N2, H2, He, OCS	CO2, CH4, O2, N2, H2, He	1.00E-02	HITRAN	TRUE	2002	2021	Linux Intel	Tim Lichtenberg	Legacy spectral file used in Lichtenberg+2021
Oak	318	H2O	H2O	1.00E-02	HITRAN	TRUE	2306	2023-07-10	Linux Intel	Harrison Nicholls	Water-only spectral file from HITRAN. To be used for benchmarking.
Idwal	318	H2O	H2O	1.00E-02	HITRAN	FALSE	2211	2023-07-11	Linux Intel	Harrison Nicholls	Made redundant by Oak. They only differ by SOCRATES version.
Balmora	318	H2O	H2O	1.00E-02	HITRAN	FALSE	2306	2023-07-19	Mac ARM	Tim Lichtenberg	Made redundant by Oak. They only differ by creation platform.
Triangle	318	H2O, H2, CO2	H2O, H2, CO2	1.00E-02	HITRAN	TRUE	2306	2023-07-11	Linux Intel	Harrison Nicholls	Test
Mallard	318	H2O, H2, CO2, CO, CH4, O2, N2, He	H2O, CO2, CH4, O2, N2, H2, He	1.00E-02	HITRAN	TRUE	2306	2023-07-13	Linux Intel	Harrison Nicholls	HITRAN file with useful opacities
Reach	318	H2O, CO2, O3, N2O, CO, CH4, O2, NO, SO2, NO2, NH3, HNO3, N2, H2, He, OCS	H2O, CO2, CH4, O2, N2, H2, He	1.00E-02	HITRAN	TRUE	2306	2023-07-19	Linux Intel	Harrison Nicholls	Same as above but with more opacities
Vivec	318	H2O, CO2, O3, N2O, CO, CH4, O2, NO, SO2, NO2, NH3, HNO3, N2, H2, He, OCS	H2O, CO2, CH4, O2, N2, H2, He	1.00E-02	HITRAN	FALSE	2306	2023-07-25	Mac Intel	Tim Lichtenberg	Same as above, but compiled on MacOS
Alduin	432	H2O	H2O	1.00E-02	EXOMOL	TRUE	2306		Linux Intel	Ryan Boukrouche	Script exists to generate this file, but it is not currently available
Kynesgrove	318	O2	O2-O2	5.00E-04	DACE	TRUE	2403	2024-03-14	Linux Intel	Harrison Nicholls	Created for validation of DACE xsec data against SOCRATES' own LbL calculations used in Mallard.
Frostflow	4096	H2O	H2O	5.00E-03	DACE	TRUE	2403	2024-03-20	Linux Intel	Harrison Nicholls	Very high resolution. Intended for benchmarking.
Frostflow	256	^	^	^	^	^	^	^	^	^	High resolution.
Frostflow	48	^	^	^	^	^	^	^	^	^	Medium resolution.
Frostflow	16	^	^	^	^	^	^	^	^	^	Low resolution. Intended for debugging.
Dayspring	4096	H2O, H2, CO2, CO, CH4, N2	H2O-H2O, H2-CH4, H2-H2, N2-H2, N2-N2, N2-H2O, CO2-CO2, CO2-H2, CO2-CH4	1.00E-02	DACE	TRUE	2403	2024-04-30	Linux Intel	Harrison Nicholls	Very high resolution. Intended for benchmarking.
Dayspring	256	^	^	^	^	^	^	^	^	^	High resolution.
Dayspring	48	^	^	^	^	^	^	^	^	^	Medium resolution.
Dayspring	16	^	^	^	^	^	^	^	^	^	Low resolution. Intended for debugging.
Honeyside	4096	H2O, H2, CO2, CO, CH4, N2, NH3, SO2, N2O, O3, HCN, H2S	H2O-H2O, H2-CH4, H2-H2, H2-N2, N2-N2, N2-H2O, CO2-CO2, CO2-H2, CO2-CH4	1.00E-02	DACE	TRUE	2403	2024-07-07	Linux Intel	Harrison Nicholls	Very high resolution. Intended for benchmarking.
Honeyside	256	^	^	^	^	^	^	^	^	^	High resolution.
Honeyside	48	^	^	^	^	^	^	^	^	^	Medium resolution.
Honeyside	16	^	^	^	^	^	^	^	^	^	Low resolution. Intended for debugging.
Rocks	256	O2, SiO, SiO2	O2-O2	?	DACE	TRUE	2407.2	2025-05-15	Linux Intel	Alex McGinty	High resolution file used for comparison with JWST observations of rock-vapour atmospheres.
Rocks	128	H2, H2O, O2, SiO, SiO2	H2O-H2O, H2-H2, O2-O2	?	DACE	TRUE	2407.02	2025-05-15	Linux Intel	Alex McGinty	Rock vapours and key volatiles.
Rocks	64	H2, H2O, O2, SiO, SiO2	H2O-H2O, H2-H2, O2-O2	?	DACE	TRUE	2407.02	2025-05-15	Linux Intel	Alex McGinty	Rock vapours and key volatiles (low resolution).