Tools to quantify the spectral information: PAHFIT

ERS 1288 (PDRs4All) Community Telecons in Support of JWST Cycle 2 Proposals

Telecon #3 of 3

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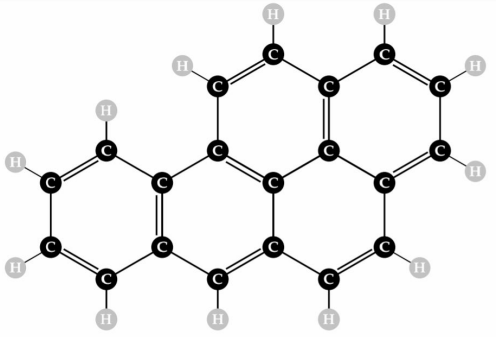
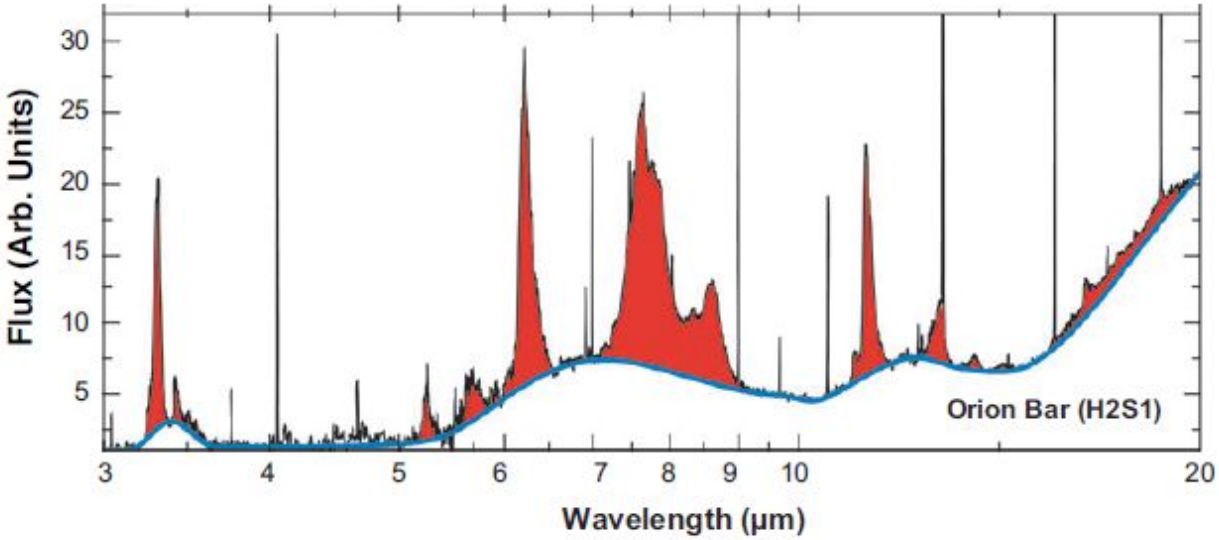
PAHs are everywhere!



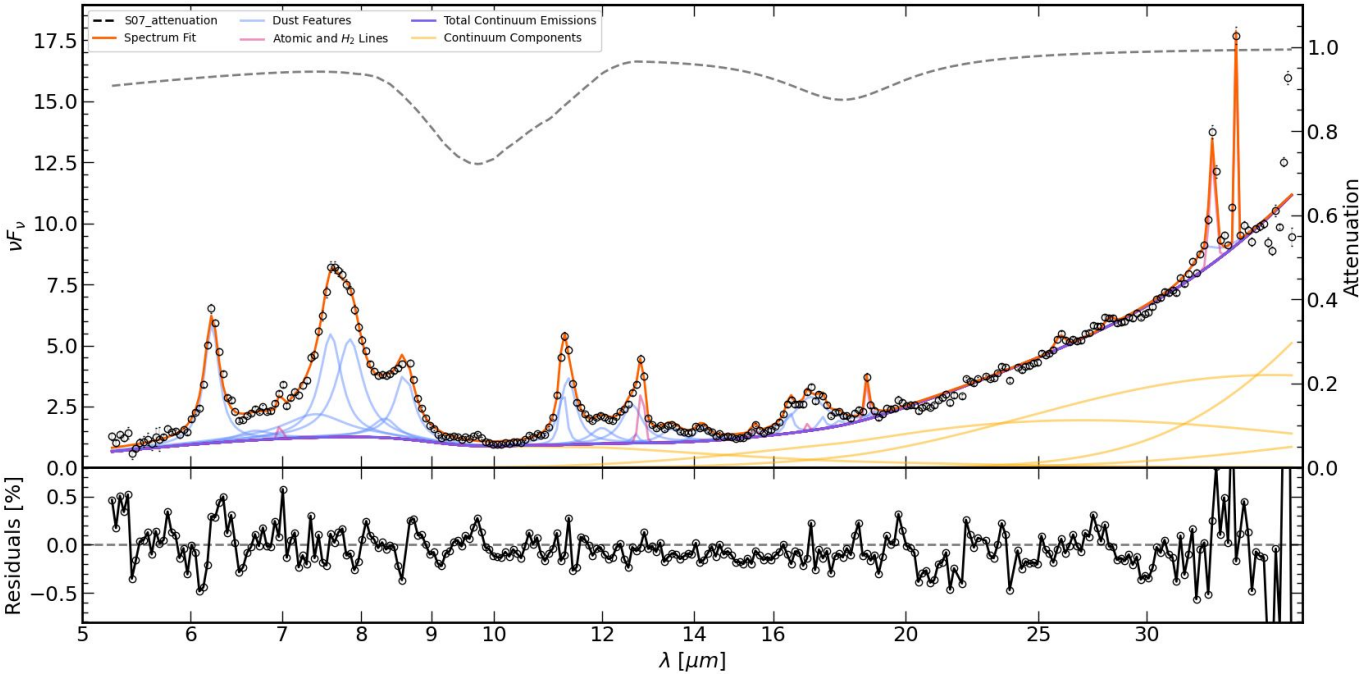


Peeters et al. 2002

- PAHs account for ~15% of the cosmic carbon and ~20% of the total IR power of the Milky Way.
- PAHs set the temperature in the neutral ISM (e.g. protoplanetary disk surfaces) and probe the star formation rate in galaxies.

PAHFIT - A spectral decomposition tool

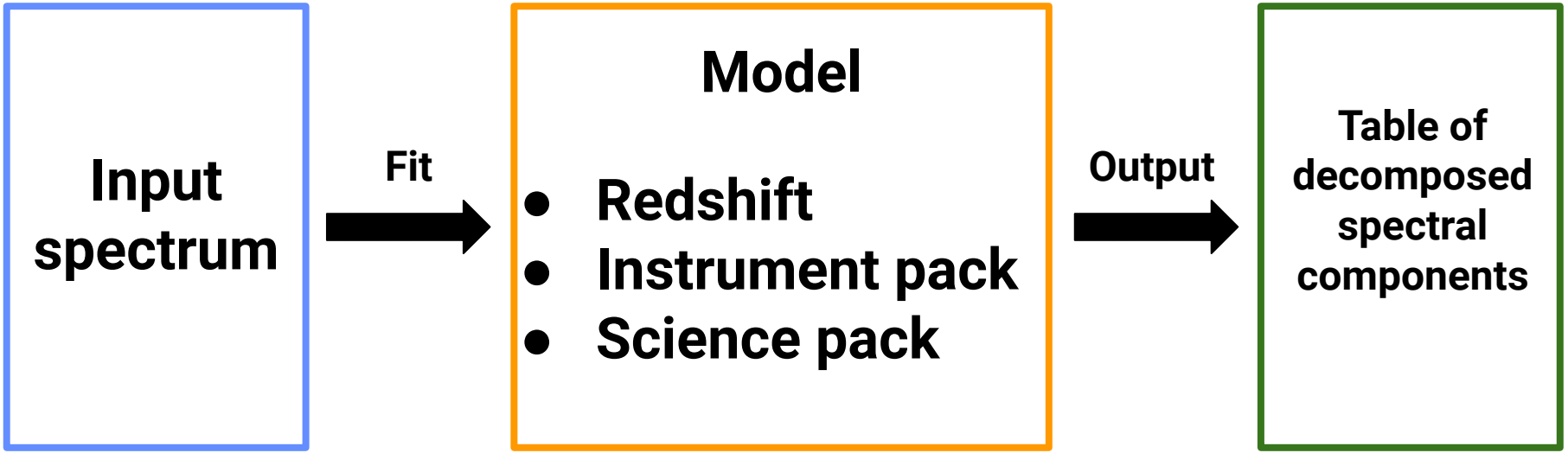
- PAHFIT is a tool for decomposing spectra of PAH emission sources.
- Developed by JD Smith (Smith et al. 2007).
- PAHFIT is easily customizable: We can easily add or remove the spectral components.



PAHFIT - Spectral Components

Component	Underlying Model
Starlight emission	Blackbody
Dust Continuum	Modified Blackbody
PAH emission features	Drude
Unresolved emission lines	Gaussian
Attenuation	Power law + Silicate features
Absorption features	Drude

PAHFIT - Flow chart



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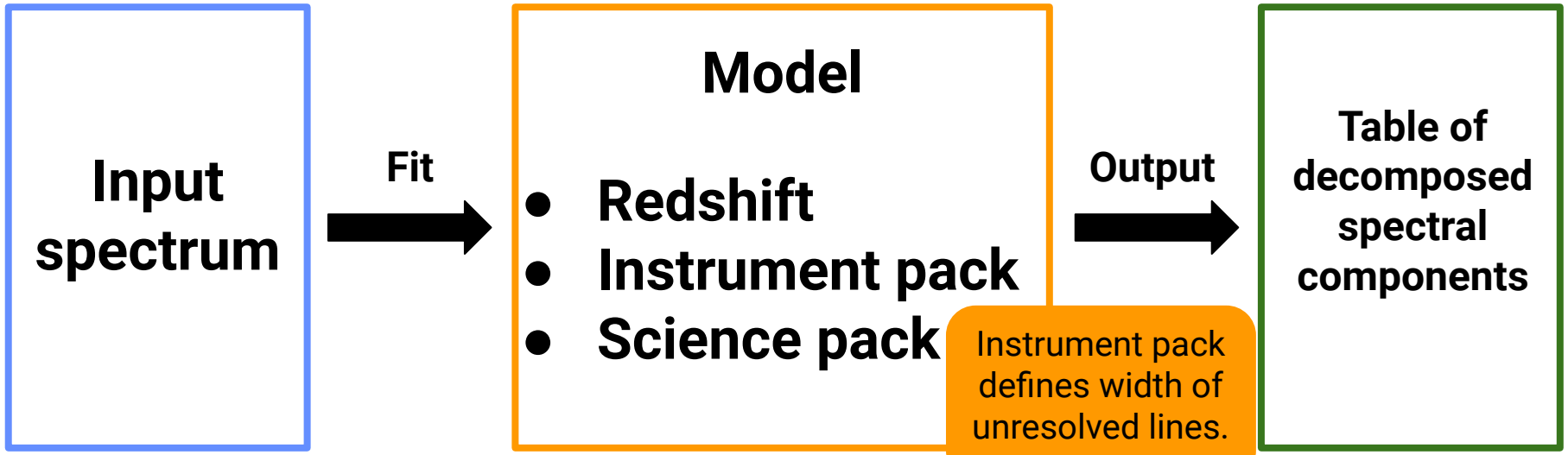

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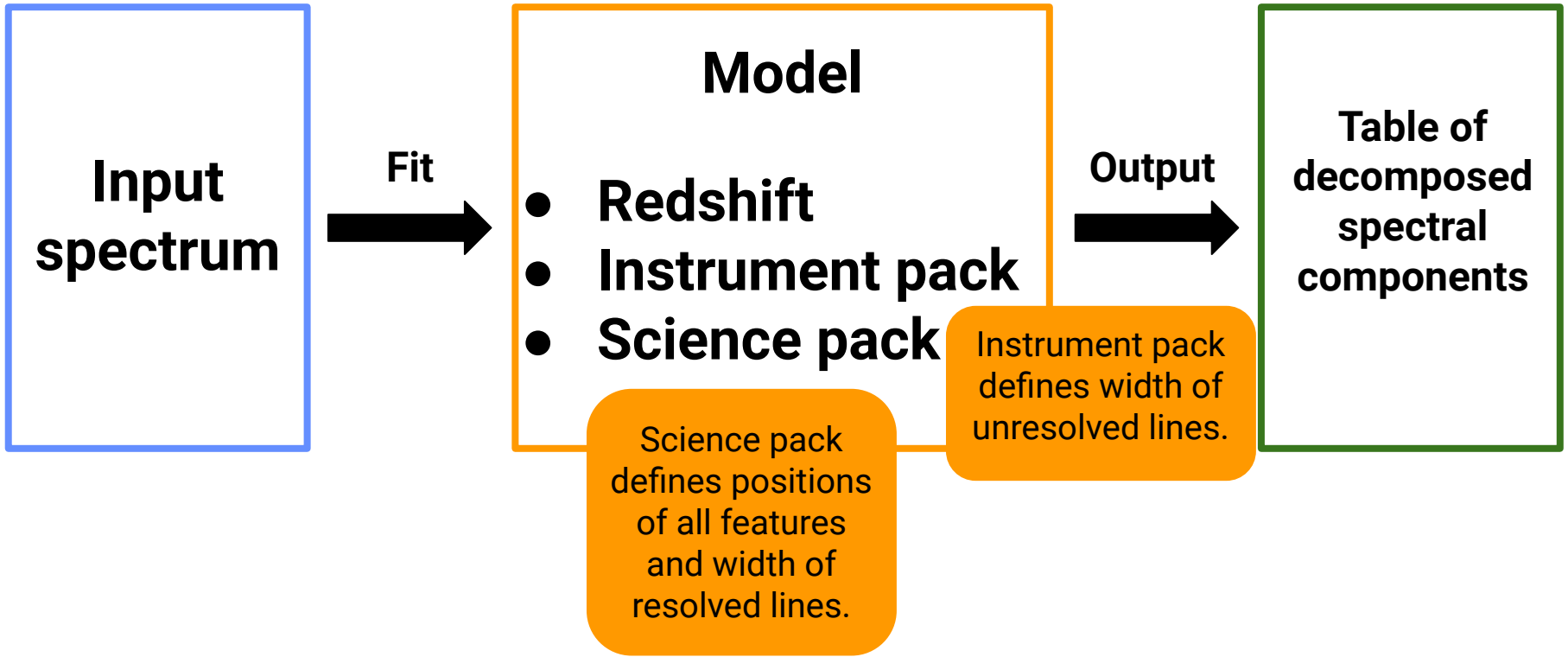

PAHFIT - Active Development

Github: https://github.com/PAHFIT/pahfit

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