# Exoplanetary Systems modelling
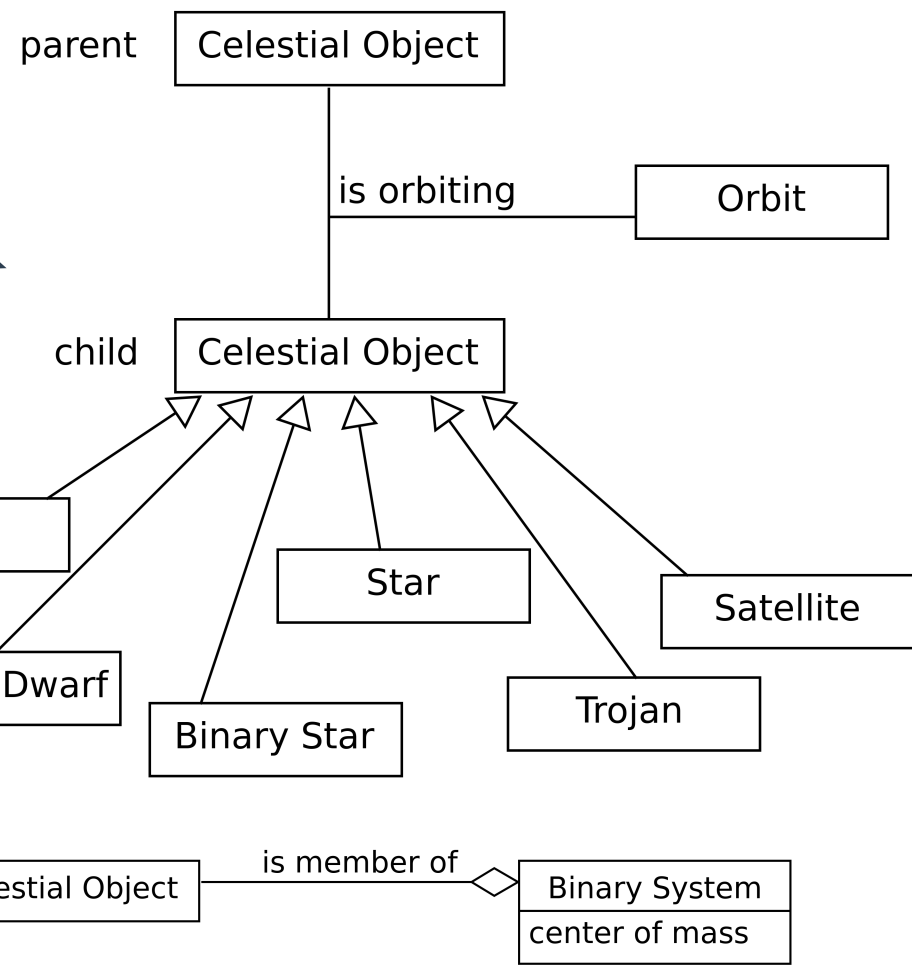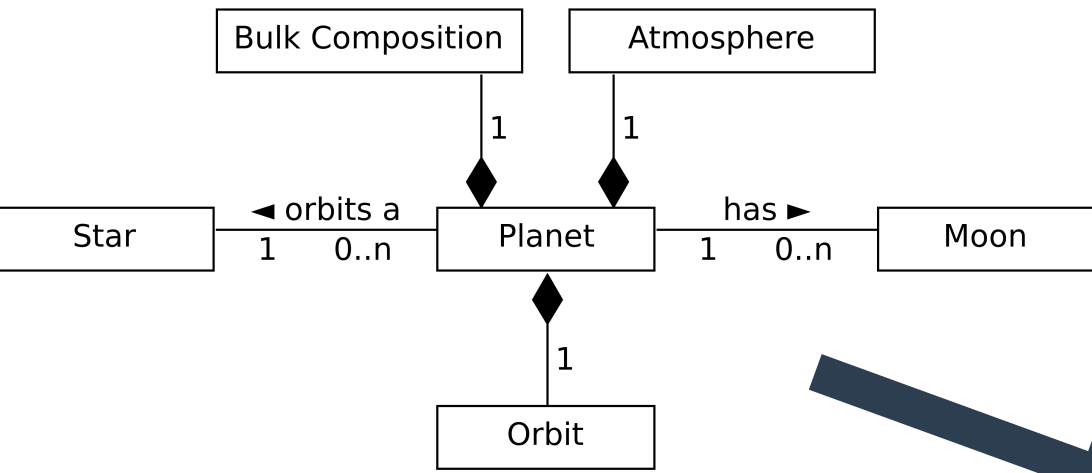# &
# Structured/Morphologically complex objects

# catalog/source DM requirements

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# Exoplanetary Systems DM attempt

- **Stellar Host details**
- **Planet as a source**
- **Orbit modelling**

# Exoplanetary Systems DM requirements

- **Sources at two/three levels**
  - Stellar components
  - Planets
  - The stellar system
    - Combination of the two

  → RA, Dec & name
  primary identification of a system and its components
  (stellar_id + planet_letter)

- **Specific details to properly characterize the stellar host**
  - Spectral type, physical parameters, activity indexes, host multiplicity
  - Annotations for binary/multistar scenario would be an improvement
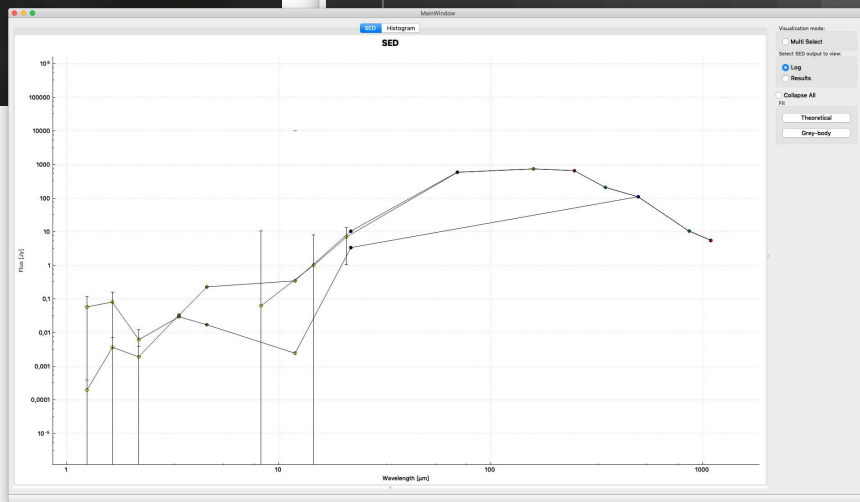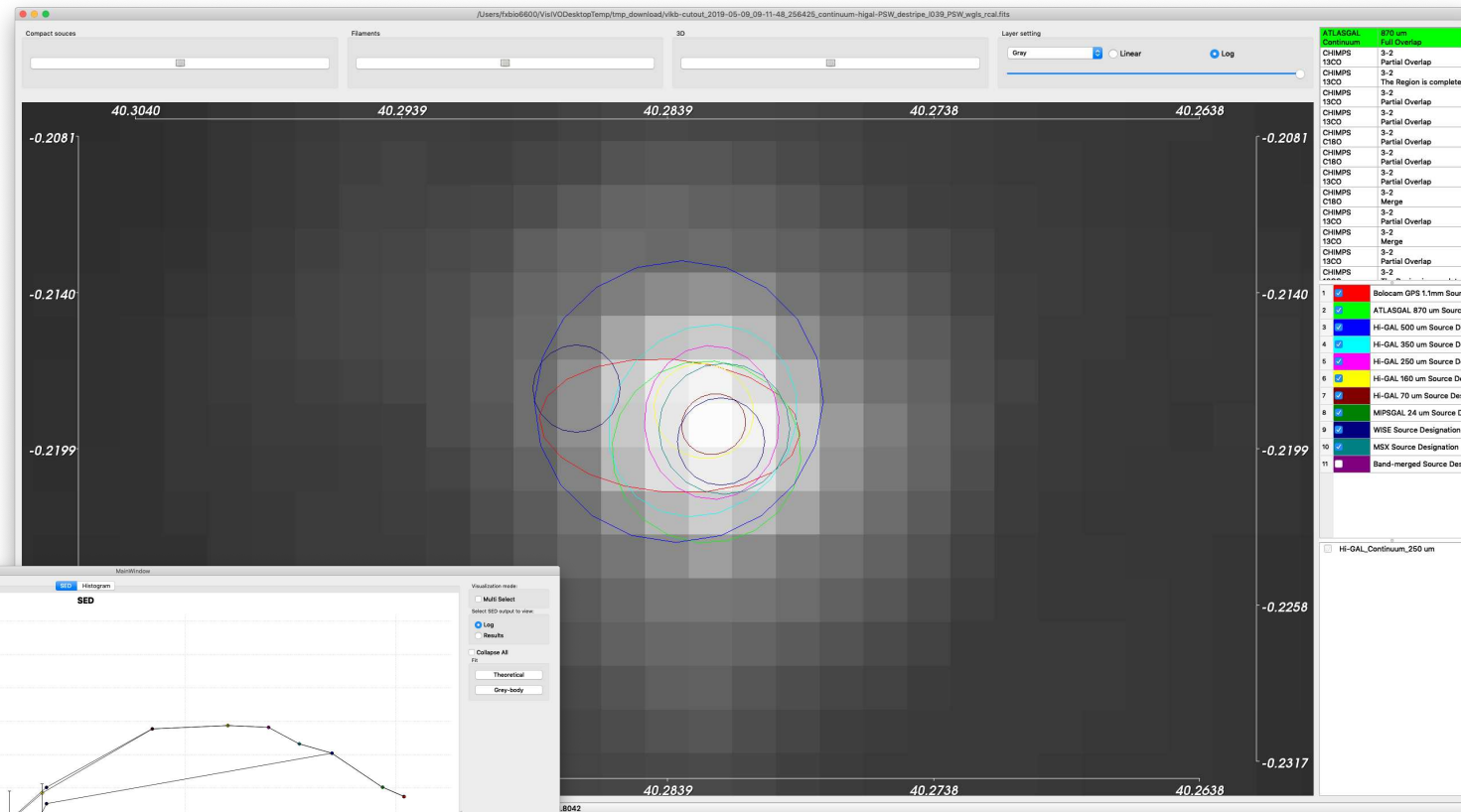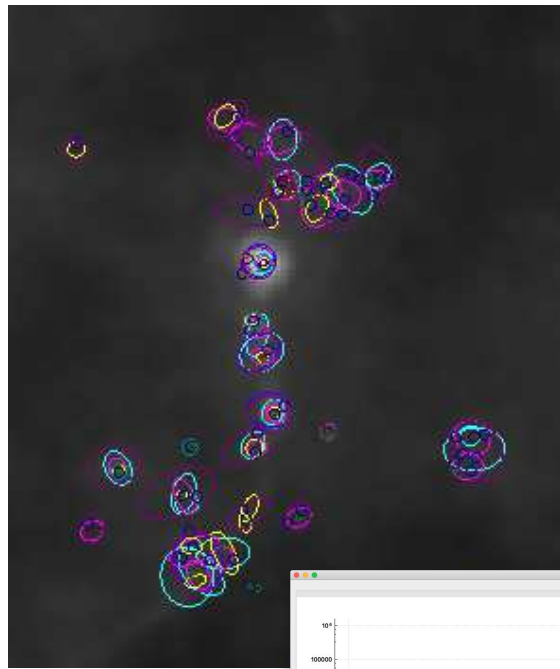    - Currently available catalogues are dis-homogeneous

- **Planet (as a source): status level**
  - Candidates, confirmed, rejected, …
  - Analogous in classification: is it a Jovian or a Brown Dwarf?
  - Status and classification is curation but requires metadata/model to allow interoperability

- **Stellar system**
  - Decomposition should be taken into account
  - Matter for the exoplanets data model? (involves orbital details)

# MW multi-band merged compact sources



**Vitello et al. (https://doi.org/10.1088/1538-3873/aac5d2)**
**"Vialactea Visual Analytics Tool for Star Formation Studies of the Galactic Plane"**

# MW morphologically complex structures