Data Model Working Group

Closing Remarks

IVOA Interop Valletta, Malta

 Started off with some very informative Science based contributions from High Energy perspective:

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 - How to link the complex IRFs? With <u>DataLink</u>?

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 - Check whether the Observation Model draft, the Dataset Model and the Dataset Metadata Model draft are compliant for the VHE data releases

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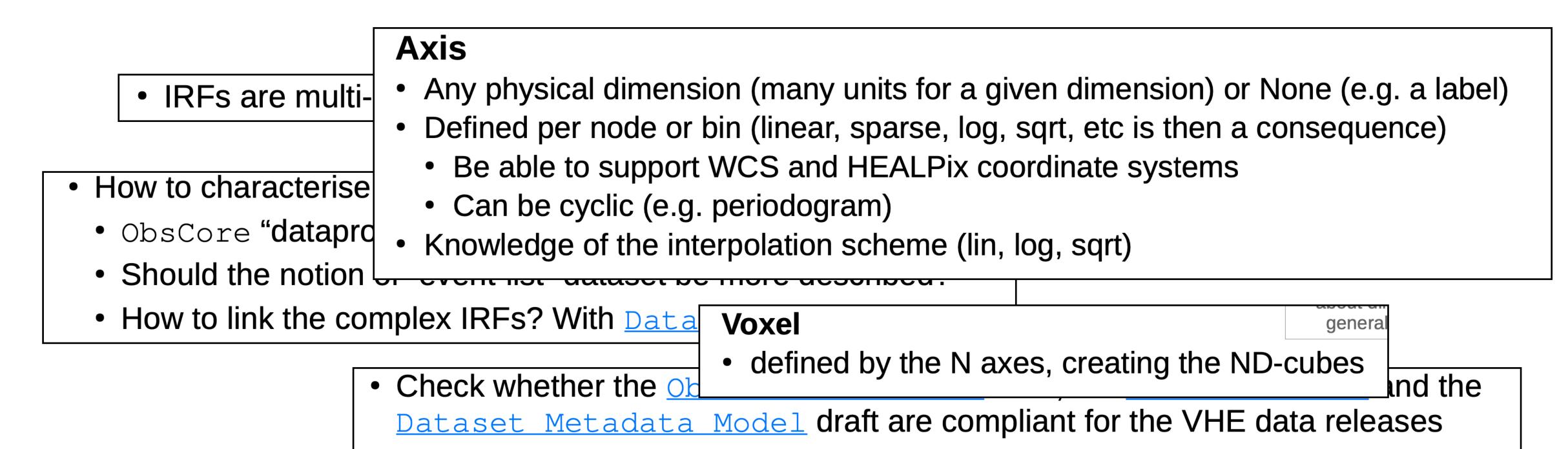
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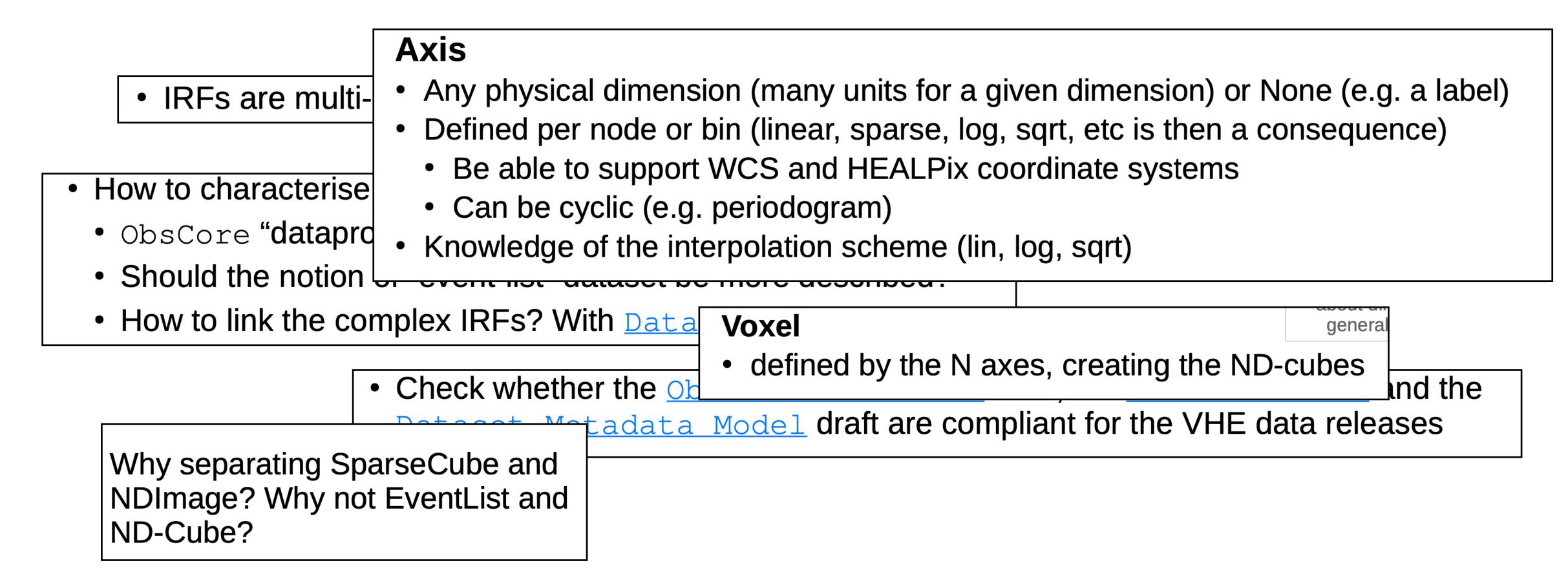
Axis

- Any physical dimension (many units for a given dimension) or None (e.g. a label)
- Defined per node or bin (linear, sparse, log, sqrt, etc is then a consequence)
 - Be able to support WCS and HEALPix coordinate systems
 - Can be cyclic (e.g. periodogram)
- Knowledge of the interpolation scheme (lin, log, sqrt)
- How to link the complex IRFs? With <u>DataLink</u>?
 - Check whether the <u>Observation Model</u> draft, the <u>Dataset Model</u> and the <u>Dataset Metadata Model</u> draft are compliant for the VHE data releases

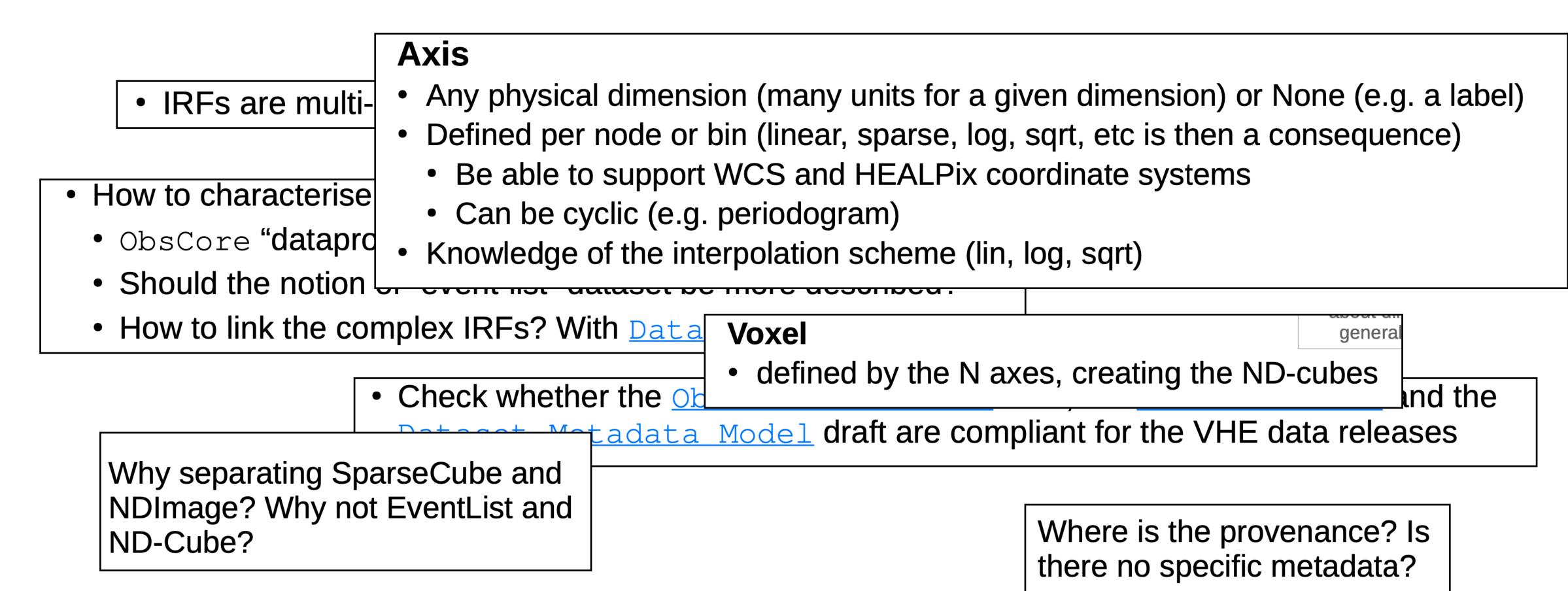
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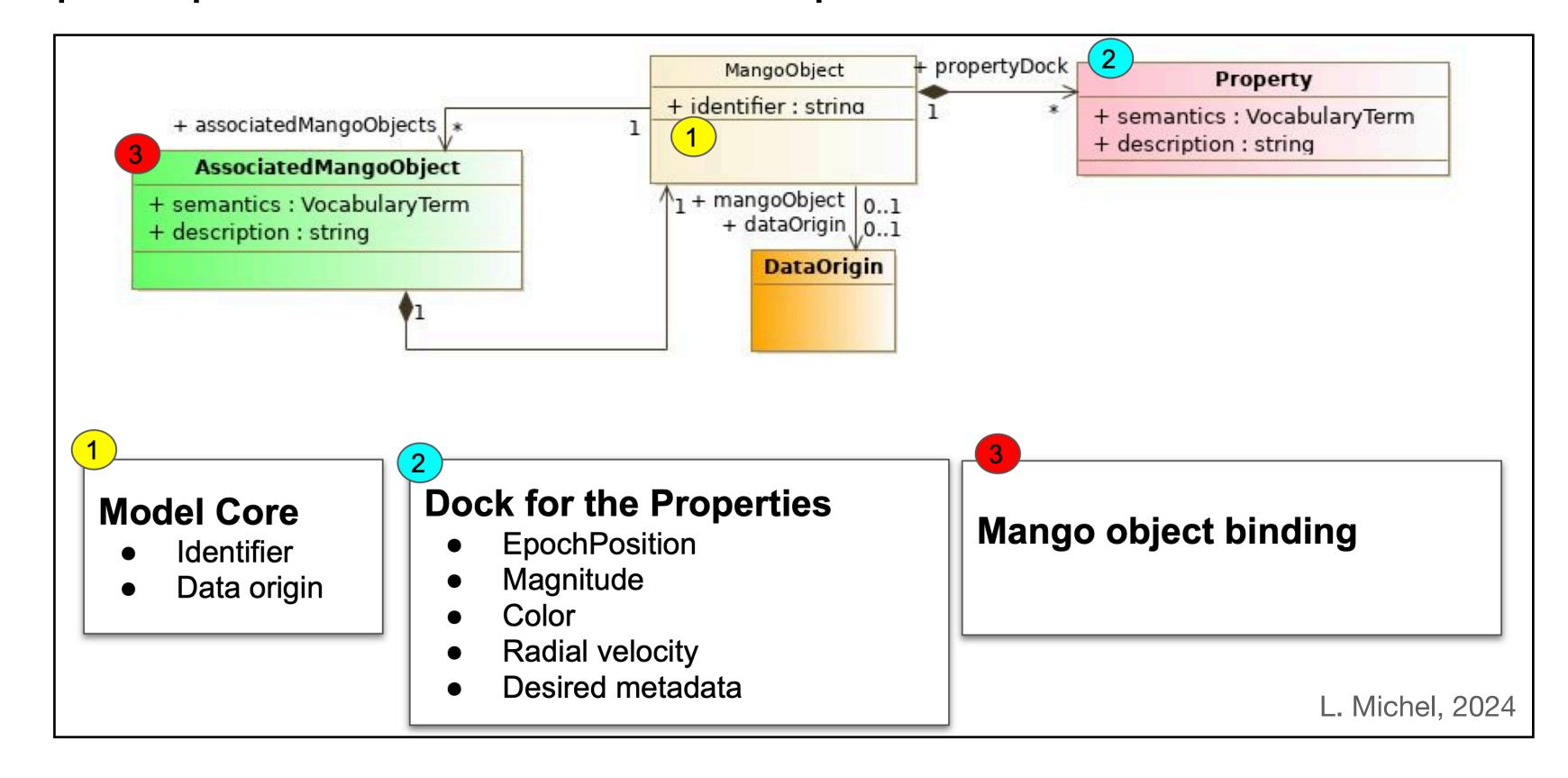
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- ObsCore defines spectrum as "Any dataset for which spectral coverage is the primary attribute"
- Great! Chandra PHA spectra meet this definition!
 - However, the IVOA data product types vocabulary defines *spectrum* as "Flux or magnitude as a function of spectral coordinates"
- Level 7 HEA would benefit greatly from a way to represent the presence of multiple observable axes
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VO-DML 1.1: proposed set of changes

- VO-DML:
 - VODML-ID syntax to become normative
 - Add "natural key" concept for Object Relational Mapping
 - Make some less useful information in MODEL optional
 - Update to how elements are organized for a more 'natural order'
 - Q: do minor version updates get their own namespace?
- Base ivoa types model:
 - intldentifier, stringldentifier
 - ivorn
 - period?, shape?

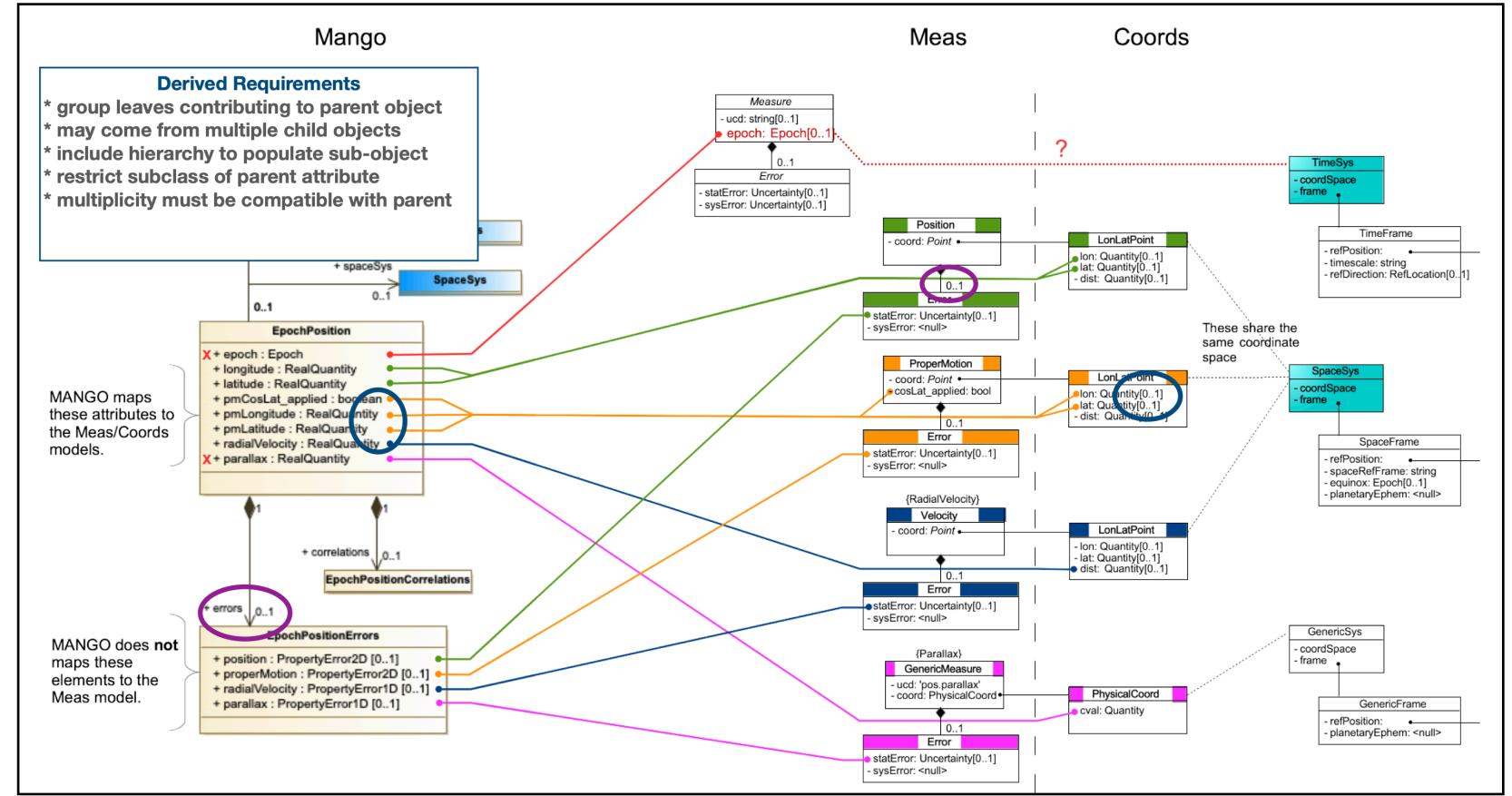
Mango: model updates

- Nice overview of Mango state, and description of components
- Including open questions / discussion topics



Handling model overlap in domain space

 Progress report on characterizing a relational mapping for models which overlap in domain space.. to maintain consistency of definition.



CAOM - integration status and discussion

- Progress report on changes made and planned for CAOM 2.5 for integration into IVOA model ecosystem.
 - Highlighting areas needing discussion on how to proceed
 - Describing CAOM components and where they overlap with existing models
 - Findings from comparing compatibility with proposed ObsCore radio extension elements
- Followed by brief discussion on specific items and HE data compatibility.

ObsCore - Radio Extension

- Very good discussion, both on the technical questions, and on the lessons learned on the process by which these exetensions are build.
- I think we've come closer to concensus on the path forward.

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Did we achieve or goals?

- Move model enhancements forward:
 - Absolutely! We have some work to do, but the list is well defined.
- Make headway on how to integrate/define models at different levels for different clients.
 - We've improved overall understanding, and had some great conversations that are encouraging about the direction of this project.

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Thanks to all the contributors!

Contact

- Email List: dm@ivoa.net
- IVOA Slack Channel: #data-models
- Git Repositories: https://github.com/ivoa-std/<model>