

Array 2D Structures

Filling Out the Array 2D Image Data Structure

The `<Array_2D_Image>` is a specialization of the `Array_2D` class. Use it for data that is primarily intended for visual display, or for analysis by image processing tools.

For an `Array_2D_Image`, follow the instructions for [Filling Out the Array_2D Data Structure](#), with the following additional constraints/requirements:

- Use `<Array_2D_Image>` and `</Array_2D_Image>` rather than `<Array_2D>` and `</Array_2D>`
- In the `<Axis_Array>` classes, one *must* have an `<axis_name>` of `Line`, and the other *must* have an `<axis_name>` of `Sample`
- You absolutely *must* include a `<Display_Settings>` class for this object in the `<Discipline_Area>` of the label. The `<Display_Settings>` class comes from the `Display Discipline Dictionary`. See [Filling Out the Display Dictionary Class](#) for more information.

Filling Out the Array 2D Spectrum Data Structure

The `<Array_2D_Spectrum>` class is a specialization of the `Array_2D` class. It exists to codify and enable validation of spectrum-specific requirements and hooks for software support that will be able to take advantage of assumptions and structures made for this data type.

For an `Array_2D_Spectrum`, follow the instructions for [Filling Out the Array_2D Data Structure](#), with the following additional constraints/requirements:

- Use `<Array_2D_Spectrum>` and `</Array_2D_Spectrum>` rather than `<Array_2D>` and `</Array_2D>`.
- You *must* include a `<Display_Settings>` class from the Display Discipline Dictionary in the `<Discipline_Area>` of your label to describe the proper way to display the spectrum. If you disagree, contact your SBN consultant for an argument. See [Filling Out the Display Dictionary Class](#) for more information.
- You absolutely *must* include the `<Spectral_Characteristics>` class, with the appropriate subclasses, in the `<Discipline_Area>` of your label to describe the spectral characteristics of your spectrum data object. If you disagree, contact your SBN consultant for an argument. See [Filling Out the Spectral Dictionary Class](#) for more information.

Filling Out the Array 2D Map Data Structure

The `<Array_2D_Map>` class is a specialization of the `Array_2D` class. It exists on the assumption that PDS will develop map-specific requirements and software support that will be able to take advantage of assumptions and structures made for this data type.

For an `Array_2D_Map`, follow the instructions for [Filling Out the Array_2D Data Structure](#), with the following additional constraints/requirements:

- Use `<Array_2D_Map>` and `</Array_2D_Map>` rather than `<Array_2D>` and `</Array_2D>`.

- You absolutely **must** include the `<Display_Settings>` class from the Display Discipline Dictionary in your `Discipline_Area` to describe the correct way to display your map object. See [Filling Out the Display Dictionary Class](#) for more information.
- You should also make use of the Cartography Discipline Dictionary classes, as appropriate.