

## Multi-dimensional Access minimal requirements:

- Data Discovery (Query)
  - A service shall be able to receive queries regarding its data collection(s) from a client, with the client placing one or more of the following constraints:
    - RA,Dec
    - Frequency/wavelength
    - Polarization states
    - Spatial size
    - Angular resolution
    - Integration time
    - Time of observation
  - A service shall return to the client a list of observations, and the corresponding metadata for each observation, meeting the user-imposed constraints. In the event that the user places no constraints, the entire list of observations, and the corresponding metadata for each data set, shall be returned. In the event that no data meet the user's constraints, the service shall indicate the absence of any matches.
- Data Access
  - Once a user has the list of observations that satisfy the constraints, they select all or a subset of the observations and:
    - Download the complete science data for each of the selected observations (the service shall return the complete multi-dimensional science data and metadata for each selected observation) or;
    - Download simple cutouts of the science data for each of the selected observations (the service shall be able to extract and return a user-specified subset of the complete multi-dimensional science data and metadata for each selected observation).
- Simple Cutout
  - For a simple cutout, the user-specified subset is restricted to be a contiguous interval within each dimension of the multi-dimensional science data. The user should \*not\* be allowed to specify subsets with "gaps" or resampling or anything like that.
    - Spatial: a circle (a coordinate and a radius)
    - Energy: one interval (from energy1 to energy2)
    - Time: one interval (from time1 to time2)
    - Polarization: a list