Radio astronomy in the VO

- Inputs from LOFAR / Astron / JIVE. (we miss SKA and ALMA)
- Inputs from CDS (Katharina) , INAF (Marco) and Nançay (Baptiste)
- Discovery and Access of Science data
  - experimented by LOFAR and astron also planned for APERTIF and older Westerborck data.
    - First implementations using DACHS worked and are now registered.
    - Jive doesn't have science data
    - HiPS for targeted data also makes sense but no plan to implement that at LOFAR at the moment.
    - CDS exeprimenetd that for moment maps.
    - Access : Full retrieval at the moment.
  - INAF experimenting SODA
  - SODA services could be useful for APERTIF in the future

Radio Astronomy in the VO

- Discovery and access of visibility data
  - Use case JIVE =
    - Coarse grain discovery of Visibility data with ObsTAP (DACHS implementation.) Could work well. To be experimented
    - Provide processing on the ESCAPE Platform through Jupiter Notebooks
    - Store parameters used in the processing for further reprocessing
    - Possibility to change some of them if science result not satisfactory.

Radio Astronomy in the VO

- Discovery and access of visibility data
  - Finer description. Two possibilities
    - Additional metadata columns for visibility description experimented at ASTRON/JIVE
      - Extra free columns in Obscore or propose a standard extension ?
    - Related metadata features (uv coverage, beam plot, etc.) linked via DataLink
    - Related instrumental configuration : antennas, etc..
- Things above May help for advanced search

Radio Astronomy in the VO

- WP5/WP4 (platform)
    - JIVE visibility use case pefect for that (going on)
- Provenance
    - Jive visibility use case (calibration of visibility data) perfect for that
    - Instrumental provenance will require a model extension
- Other things
    - Some tricks in discovery ---> RadioInThe VO IG
    - Staging → experiment UWS
    - SKA regional center , AENEAS feedback → coudl have interest in SODA, platform