Virtual observatory tools and amateur radio observations supporting scientific analysis of Jupiter radio emissions

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In the frame of the preparation of the NASA/JUNO and ESA/JUICE (Jupiter Icy Moon Explorer) missions, and the development of a planetary sciences virtual observatory (VO), we are proposing a new set of tools directed to data providers as well as users, in order to ease data sharing and discovery. We will focus on ground based planetary radio observations (thus mainly Jupiter radio emissions), trying for instance to enhance the temporal coverage of jovian decametric emission. The data service we will be using is EPN-TAP, a planetary science data access protocol developed by Europlanet-VESPA (Virtual European Solar and Planetary Access). This protocol is derived from IVOA (International Virtual Observatory Alliance) standards. The Jupiter Routine Observations from the Nancay Decameter Array are already shared on the planetary science VO using this protocol, as well as data from the Iitate Low Frquency Radio Antenna, in Japan. Amateur radio data from the RadioJOVE project is also available. The attached figure shows data from those three providers. We will first introduce the VO tools and concepts of interest for the planetary radioastronomy community. We will then present the various data formats now used for such data services, as well as their associated metadata. We will finally show various prototypical tools that make use of this shared datasets.