



# Apps session IVOA

**1.5 session**

**on Standards (VOTable, Hips, MOC)**

**on Portals and Apps**

Pierre Le sidaner  
Adrian Damian





| Speaker           | Title   | Materials             | Time   |
|-------------------|---|-----------------------|--------|
| Thomas Boch       | <b>HiPS2MOC, generating MOC from constraints on <a href="#">HiPS</a> values.</b><br><br>This new service allows one to generate the MOC corresponding to a set of constraints on the <a href="#">HiPS</a> tiles values. For instance, one can easily ask for questions like "what is the coverage of GALEX NUV pixels with a flux greater than 10 Jy/steradian?" or "give me the MOC of Mars locations with an elevation greater than 6000 meters (using MOLA DEM <a href="#">HiPS</a> data) ?  |                       | 8 + 5  |
| Markus Demleitner | <b>VO at the Limit: Writing a Client for Global TAP Queries</b><br><br>Have you ever tried to write code for something like "Give me all proper motions for objects in the vicinity of $(\alpha, \delta)$ ? Well, I have, and I would like to present and discuss my conclusions from this effort with you.   | <a href="#">notes</a> | 12 + 3 |
| Henrik Norman     | <b>ESASky 7 featuring FITS support, projections, and a Time-Series Visualiser</b><br><br>Projections, FITS, and <a href="#">HiPS</a> FITS, are now available in ESASky, thanks to Aladin Lite 3. You can also continue where you left off with the new User Area. Save and restore sessions, upload your own data, and customise the layout to get the most out of ESASky.<br><br>In addition, we recently released a multi-mission, multi-object Time-Series Visualiser. It lets you quickly combine and inspect time-series data from different missions and observations. This first release will soon have even more features and support an ever-increasing number of missions. Continued IVOA standardisation of time-series data is greatly appreciated! |                       | 12 + 3 |
| Laurent Michel    | <b>MIVOT updates</b><br><br>I will review the status of the various tools related to the MANGO/MIVOT ecosystem (services, validator, <a href="#">PyVO</a> ...)  |                       | 12 + 3 |
| Mario Juric       | <b>HATS: Hierarchical Adaptive Tiling Scheme (nee <a href="#">HiPSCat</a>)</b><br><br>We'll briefly discuss the progress on HATS, a Parquet-based partitioned format for distribution of very large sky catalogs. Since the Sydney presentation, we have completed the work on shuffle-free cross-matching, worked on improving the compatibility with <a href="#">HiPS</a> , and the ecosystem of tools and datasets has grown. We're also working towards being ready to deploy early Rubin datasets in HATS mid next year  |                       | 12 + 3 |
| Brigitta Sipőcz   | <b>Downstream testing with notebooks</b>  |                       | 12 + 3 |



## Applications Session 2: Saturday November 16, 2024 @ 16:00-17:30 (Session #1) Room Aula Magna

| Speaker                       | Title   | Materials           | Time  |
|-------------------------------|---|---------------------|-------|
| Mark Taylor                   | <b>VOTable Metadata for Parquet</b><br><br>Parquet is becoming an important format for bulk data storage and processing, but it lacks rich metadata. There has been some work on combining it with VOTable to make up for that. I will review existing proposals and implementations and suggest next steps towards standardisation.  | <a href="#">pdf</a> | 20 +5 |
| Pierre Fernique & Thomas Boch | <b>HiPS generation news</b><br><br>We'll present recent developments and improvements to Hipsgen - the CDS <a href="#">HiPS</a> generator tool: iterative generation, contrast adjustment, alternative storage, etc. We'll also present future developments notably <a href="#">HiPS</a> -3D, as well as alternatives to Hipsgen  |                     | 20 +5 |
| Trey Roby                     | <b>Firefly expanding use of VO</b><br><br>Over the last year Firefly has added some significant new features. Some of these are VO related and show our direction with VO standards. I will give an overview of these and some of the future challenges. <ul style="list-style-type: none"><li>• Service Descriptors: Better handling cutouts, making a more integrated service def UIs</li><li>• Parquet: Reading and writing of Parquet including the proposed <code>parquet.votable</code>, which incorporates VOTable metadata.</li><li>• Healpix &amp; <a href="#">HiPS</a> solving problems: Firefly is extending its use of healpix and <a href="#">HiPS</a> for tabular overlays</li><li>• TAP and the Upload challenge: extensive use of capabilities</li><br/><li>• Future: plans for additional use of MOCs</li><li>• Future: <a href="#">SiAv2</a>, using MAXREC=0</li><li>• Bonus: the importance of UI looking modern</li></ul> |                     | 15 +5 |