



## **Apps session IVOA**

2 sessions on Standards (VOTable, Hips, MOC) on Portals and Apps

> Pierre Le sidaner Adrian Damian



	Applications	Session 1: Friday November 15, 2024 @ 16:00-17:30 (Session #1) Room Aula Magna		
100	Speaker	Title Title	Materials	Time
	Thomas Boch	HiPS2MOC, generating MOC from constraints on HiPS values.		8 + 5
		This new service allows one to generate the MOC corresponding to a set of constraints on the HiPS 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 HiPS data)?		
	Markus	VO at the Limit: Writing a Client for Global TAP Queries	notes	12 +
	Demleitner	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.		3
	Henrik	ESASky 7 featuring FITS support, projections, and a Time-Series Visualiser		12 +
	Norman	Projections, FITS, and HiPS 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.		3
		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!		
	Laurent Michel	MIVOT updates		12 + 3
	Mario Juric	I will review the status of the various tools related to the MANGO/MIVOT ecosystem (services, validator, PyVO)		12 +
	Wario Sario	HATS: Hierarchical Adaptive Tiling Scheme (nee HiPSCat)		3
		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 <u>HiPS</u> , 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		
	Brigitta Sipőcz	Downstream testing with notebooks		12 + 3



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	ion 2: Saturday November 16, 2024 @ 16:00-17:30 (Session #1) Room Aula Magna		
Speaker	Title Title	Materials	Time
Mark Taylor	VOTable Metadata for Parquet	pdf	20 +5
	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.		
Pierre Fernique & Thomas Boch	HiPS generation news		20 + 5
	We'll present recent developments and improvements to Hipsgen - the CDS <u>HiPS</u> generator tool: iterative generation, contrast adjustment, alternative storage, etc. We'll also present future developments notably <u>HiPS</u> -3D, as well as alternatives to Hipsgen		
Trey Roby	Firefly expanding use of VO		15 + 5
	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.		
	Service Descriptors: Better handling cutouts, making a more integrated service def UIs		
	<ul> <li>Parquet: Reading and writing of Parquet including the proposed parquet.votable, which incorporates VOTable metadata.</li> </ul>		
	<ul> <li>Healpix &amp; HiPS solving problems: Firefly is extending its use of healpix and HiPS for tabular overlays</li> </ul>		
	TAP and the Upload challenge: extensive use of capabilities		
	Future: plans for additional use of MOCs		
	Future: SiAv2, using MAXREC=0		
	Bonus: the importance of UI looking modern		