

VESPA workshops

(and PADC VO seminars project)

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VESPA in Europlanet

- **VESPA is essentially a set of 2 WP in the latest Europlanet contracts** (EU-funded)

Europlanet 2020 RI (2015-2019)

Europlanet 2024 RI (2020-2024) <=

- **About developing and spreading a data access / distribution system for Solar System data**

All data services use EPN-TAP, and are queried via the VESPA portal

Content is provided through:

- VESPA participants internal projects
- Direct collaborations with external teams
- Other Europlanet WP (including pro-am networks)
- An annual call to the community <=

VESPA in Europlanet 2024 RI



Europlanet VESPA: Data services connected via EPN-TAP / field

Open

Open in test | upgrade required

Drafted

Scheduled 2024 (selection)

• New or upgraded in 2021/22

• New content in 2021/22

Atmospheres

- Titan profiles - CIRS (Cassini, LESIA)
- Venus spectroscopy - VIRTIS (VEx, LESIA)
- Mars & Venus Climate Databases (modeling, LMD)
 - GEM_Mars (modeling, IASB-BIRA)
- Venus profiles - SPICAV/SOIR (VEx, IASB-BIRA)
- Mars profiles - SPICAM (MEx, LATMOS)
 - All MEx derived atmospheric products (via MEx IDS)
 - Venus cloud products (LATMOS)
 - ExoMars/NOMAD (BIRA-IASB)

Small bodies

- M4ast (ground based spectroscopy, IMCCE)
- 1P/Halley spectroscopy (IKS / Vega-1, LESIA)
- BaseCom (Nançay Obs, LESIA)
 - TNOs are cool (Herchel & Spitzer + compilation, LESIA & LAM & Utinam)
- SBNAF (from H2020 prog, Konkoly Obs)
- MP3C: Small body properties (OCA)
 - Vesta & Ceres spectroscopy - VIR/DAWN (IAPS)
- DynAstVO: NEO refined parameters (IMCCE)
- MPCorb: Small bodies orbital cat (MPC/Heidelberg)
 - Rosetta ground-based support (Edinburgh)
 - 67P illumination config (IRAP)
 - Meteor_showers predictions (IMCCE)
 - Occultations predictions, ast & sat (IMCCE)
 - LuckyStar, occultations (ERC prog, LESIA)
 - Natural satellites db (IMCCE)
- VizieR asteroid spectra (CDS / LESIA)

Solid spectroscopy

- SSHADE ices & minerals spectro (IPAG & network)
 - Planetary Spectral Library (DLR)
 - PDS spectral library (LESIA)
 - Berlin Reflectance Spectral Lib (DLR)
 - Hoserlab (Winnipeg U)

Surfaces

- CRISM WCS service (MRO, Jacobs U)
- Mars craters (Jacobs U, + update by GEOPS)
- USGS planetary maps WMS (Jacobs U)
- PlanMap: geol maps (H2020 prog, Jacobs U)
 - M3 WMS service (Chandrayaan-1, Jacobs U)
- HRSC nadir images, WMS (MEx, Frei Univ)
- OMEGA cubes and maps (MEx, IAS)
- VIMS satellites, w/geometry (Cassini, LPG)
- Mars topo preTharsis (GEOPS)
 - Global spectral param of Mercury (DLR)

Magnetospheres / radio

- APIS (HST/Cassini, LESIA)
- NDA (Jupiter & Sun radio, LESIA/CDN)
- AMDA (CDPP / IRAP)
 - MAG data (VEx, IWF Graz)
- MASER & related services (LESIA)
 - RadioJove (LESIA & US amateur network)
 - Iitate HF data of Jupiter (Tohoku Univ, Jap)
 - UTR-2 Juno ground support (Kharkiv)
 - MDISC & JASMIN (modeling, UCL)
 - Cluster & Themis data (IAP, Prague)
 - IMPEX models (from FP7 prog, IWF Graz)
- Hisaki (Tohoku Univ., Jap)
 - Transplanet (CDPP / IRAP)
- LOFAR Jupiter (CBK/PAS, Warsaw)
 - Magnetic field simus (LMSU)
 - ASPERA & MARSIS atm obs (MEx, Iowa U)

Solar

- HELIO AR & 1T3 solar features (FP7 prog, LESIA)
- Bass2000 (LESIA)
 - Radio Solar db (Nançay, LESIA)
- CLIMSO (Pic du Midi, IRAP)
- IPRT/AMATERAS (Tohoku Univ, Jap)
 - Gaia-DEM (SDO, IAS)
 - EIT_syn (SoHO, IAS)
 - e-Callisto (Windisch, Sw)

Generic / interdisciplinary

- BDIP (LESIA)
- PVOL (UPV/EHU & amateur network)
 - Telescopic planetary spectra collection (LESIA)
- PSA complete archive (ESA)
- HST planetary data (LESIA, to CADC archive)
 - Catalogues of planetary maps (Budapest)
- VizieR_planets: Planetary Science catalogues (CDS)
 - Gas absorption cross-sections (Granada)
 - Planets then satellites properties (LESIA/IMCCE)
 - Nasa dust catalogue (IAPS)
 - Stellar spectra, support for observations (LESIA)
 - DARTS (JAXA - currently via PDAP)
 - ESA sky planetary data (ESA)
 - Interface with VAMDC (TBD)

Exoplanets

- Encyclopedia of exoplanets (LUTH/LESIA)
 - Catalogue of exo disks (LESIA)
 - Interface with DACE (Geneva)
 - ARTECS climate simulations (AOTS/INAF)
 - Atmospheric studies (UCL)
- Exotopo: exoplanet surface simulations (GEOPS)

VESPA workshops - EPN2020

(pardon any omission)

Toulouse, 2016:

- Selected: abs_cs (IAA-CSIC, Spain); MCD (LMD, Fr); UTR-2-JUNO-ground (Kharkiv, Ukr)
- Invited: PSA (ESA / ESAC)
- Internal: PVOL (EHU, Spain); MDISK (UCL, UK); SOIR (IASB-BIRA, Be); VVEx (ObsParis, Fr); AMDA (IRAP, Fr), etc

Graz, 2017:

- Selected: Marsis (INAF, It); mp3c (OCA, Fr); Cassini CIRS (CalTech, US); Rosetta spectral lib (DLR, Ge)
- Invited: PSA (ESA / ESAC); Jupiter radio services (CBK-PAN, Pol)
- Internal: Illu67P (IRAP, Fr); PlanetServer_CRISM (Bremen, Ge); iPecMan data (IAS, Czech)

Prague, 2018:

- Selected: OMEGA & Gaia-DEM (IAS, Fr); Therm spec lib (DLR, Ge); Mars-Ex atm (Iowa U, US); SBNAF (Konkoli, Hun)
- Invited: radio services (LMSU, Ru);
- Internal: SSHADE (IPAG, Fr); MCD (LMD, France); iPecMan data (IAS, Czech)

Rome, 2019:

- Selected: Planetary maps (Hun); mineral spec lib (Uni Winnipeg, Can); e-callisto (IDS, Sw)
- Invited: radio services (LMSU, Ru)
- Internal: SSHADE (IPAG, Fr); MCD (LMD, Fr); iPecMan data (IAS, Czech); various alert projects (IRAP, Fr)

VESPA workshops - EPN2024

(pardon any omission)

Combined on-line, 2020-21 (was Toulouse and Bremen):

- Selected: SPHERE asteroids (LAM, Fr); MOVIS asteroids (Bucharest, Rom); PDS/PPI (CalTech, US); sunspots db (ROB, Be)
- Invited: MP3C (OCA, Fr); EPN services (VU, Ned); ML services (LMSU, Ru + IWF, Aut)
- Internal: ARTECS (OATS, It); Solar services (ObsParis, Fr); Polarbase planets (IRAP, Fr), etc

Graz, 2022:

- TBC - Europlanet pro-am networks should be present, as well as laboratory activities

Warsaw, 2023:

- TBC

VESPA workshops

Organisation

Open call + organisation of (in-person) workshop

Application: science case + status of data and database

Ideally 4 teams selected + internal contributions (from VESPA and other Europlanet WP)

Requires some effort to get people involved

Day 1: general presentation of VO / VESPA / service projects

Day 2: starting service design + install DaCHS on VM / Docker

Day 3: implementation

Day 4: review, tests

Day 5 (optional): further subjects

<https://voparis-wiki.obspm.fr/display/VES/2021-vespa-implementation-workshop>

Invite Markus! => opportunity to update / improve existing services

Post-workshop activity is important

VESPA workshops

Evaluation

- Demanding! (for organizers)
 - Especially to identify projects and to get people involved (very few spontaneous applications)
 - => Need to couple this with presentations / discussions in conferences + mailing list
- Extremely rewarding
 - 4-days exclusive activity
 - Also helps building connections between people and teams / fields
 - Both science and technique oriented — you do learn things
 - In Europlanet 2024, this is the only travelling budget we got => need to take advantage of this
 - Produces tutorials and material that can be reused:
 - <https://voparis-wiki.obspm.fr/display/VES/2021-vespa-implementation-workshop>
- Finalization?
 - Almost never during the workshop
 - Need to keep pushing long after the workshop
 - Some projects prove nearly impossible to finalize, but clearly identifies data handling issues
 - Need to produce and publish at least a report
 - May work in the long run, after a false start

PADC seminars

Request from a Tunisian astro group to have a series of on-line VO seminars (for users)

We (Z. Meliani and PADC direction) will set up a programme

Will rely on / use existing tutorials from IVOA or ESCAPE

Videos will be recorded for future occasions

Will probably be in French, though ;(

This year IVOA session for new-comers provides a good basis, perhaps a bit too detailed