EPN-TAP Services

Published services can be reached from the VESPA portal service result page

Implementation notes: Data service maintenance section

Service definition files are preserved here (log in first): https://voparis-gitlab.obspm.fr/vespa/dachs/services

Short Name	Name	Description	Location	Status	To do (v1 or v2)	Comments	Version_2 / updates	Gitlab backup?
Atmospheres								
Titan_profiles	Vertical Profiles in Titan Middle Atmosphere	Atmospheric profiles of Titan from Cassini/CIRS	PADC/LESIA	**ONLINE**	Check descriptions Enlarge contents Remove duplicates! TAP parameters reviewed Rewrite with mixin (required to fix coord UCDs) Correct existing file names Added new series of profiles from C. Mathé Update of older files scheduled ~ mid 2020 - refined inversion method, either as replacement or addition, TBD	New data provided end 2019 Formerly called Titan	Updated to v2 in 2016, to be tested again Mixin version installed Jan 2020 Enlarged with new data, May 2021 (x2.5 content)	voparis-gitlab — beware that the older Titan service is also present there!
VVEx	VIRTIS on Venus-Express: standard dataset	Access to spectral cubes. Venus-Express legacy nb of granules : ~ 50,000 calibrated/geometry files + possibly derived products (maps, profiles, etc)	PADC/LESIA	**ONLINE**	Complete data description with geometry, enlarge to the complete dataset. Intended as a demonstrator of both EPN-TAP access to the PSA, and data handling / distribution system in a PI team for an experiment in operation phase (would replace the Otarie/ION system in Meudon for data access). In the mid-term, this could include derived products, which are not in the PSA. ? May start with Marcq et al paper 2023, need to recover the major results.	• v1 addressing part of nominal mission, limited nb of parameters + some inconsistencies • First v2 version for nominal mission (2016), param from archive INDEX. • June 2020 version: uses the mixin and get data from the PI database. One part of geometry missing, still to be recovered entirely (from LESIA db) Also need to work on footprints — MOC added in 2022 (in coverage param) Prospects: • May include cruise phase, which is not in the PSA? That would require to make the files available somewhere (could be the PSA guest area?) • Cut-out service to extract individual spectra from cubes?		voparis-gitlab (should be reorganized in branches)

VVEx+	Enhanced VIRTIS dataset on Venus-Express	Will provide access to individual spectra. Venus-Express legacy (after discussion: same service as above, not a separated one). Possible issue: this would include ~ 10E9 entries. Ingestion via DaCHS is nearly impossible (3h for 5E6 spectra), must be copied directly from db.	PADC/LESIA	PLANNED	Enlarge the above service to also provide description of VIRTIS/VEx individual spectra with geometry parameters. Access may be a script extracting the corresponding data from the cubes (possibly in APERICubes, TBC). This will have a noticeable added value wrt a similar service from the PSA, only possible in the PI team.	Big issue with ingestion time - this is prohibitive with DaCHS. Need to import table through postgres?		voparis-gitlab
abs_cs	Absorption cross sections	Absorption cross sections for gaseous species of atmospheric interest	IAA-CSIC Granada	ONLINE	Finalize, declare, add data + setup special access script (output selected species in a single table)	Still DaCHS v1	First model in v2 from Toulouse 2016 VESPA workshop	
SOIR	SOIR/SPICAV/VEx	UV / IR observations of Venus - vertical profiles	Royal Belgian Institute for Space Aeronomy / Planetary Aeronomy	ONLINE	Convert profiles to VOtable, easier to handle and visualize.	Convert to mixin version	First model in v2 from Toulouse 2016 VESPA workshop Updated for DaCHS2 in 2021	voparis-gitlab
SPICAM	SPICAM / MEx	Vertical profiles of Mars May be coupled with ACRI-ST project in EPN2024, including a visu tool on a web page.	LATMOS	ONLINE	Number of issues identified afterwards, including extra table not integrated. 2021 update to be reviewed	First simple / complete datalink example. Provides links to MCD simulation + ascii version of the profile. Convert to DaCHS2	v2 direct from Toulouse 2016 workshop. Update from Prague workshop, 2018. New update 2021, with direct links to simulation; v2 compliant.	voparis-gitlab
SPICAV	SPICAV / VEx	Vertical profiles of Venus	LATMOS	PLANNED	From updated SPICAM service	Planed at LATMOS by Chloé in 2020, but data weren't ready - delayed		
mcd	Mars Climate Database	Sampled version through EPN-TAP	PADC + LMD	ONLINE	First version on sampled data, access to vertical profiles only, reviewed. Issues fixed later on	Add daily cycles and maps (in another service)? Add more scenarios. In a second step, direct access through workflow will be studied (OK via datalink) Profiles contain all species/dust (to limit the # of granules) Convert to DaCHS2 Issue with access time to be solved	v2 installed from Toulouse 2016 VESPA workshop Update from Prague workshop, 2018. New update in 2021; DaCHS v2 compliant, more scenarios + datalink	voparis-gitlab
Mars_dust	maps of opacity from Mars Climate Database	Sampled version through EPN-TAP	PADC + LMD	ONLINE	First version on sampled data, access to vertical profiles only, reviewed. Issues fixed later on	Fix issue with Ls vs Martian sols in cubes	In 2021; DaCHSv2 compliant	voparis-gitlab
VCD	Venus Climate Database	Sampled version through EPN-TAP	PADC + LMD	ONLINE	First version on sampled data, access to vertical profiles only, reviewed. DaCHS2 compliant	Profiles only Less granules, no Ls sampling. Scenarios for UV flux and cloud albedo patterns	In 2021; DaCHSv2 compliant	voparis-gitlab
GEM_Mars		Another Mars GCM	IASB-BIRA, Trompet	ONLINE	vertical profiles	Difficulty with ingestion through DaCHS		voparis-gitlab

OMEGA / MEx atm db		Simulation of atmospheric spectra in same conditions. Quality to be addressed first.	LESIA, Melchiori	IDEA	Exhume data, if possible	Only covers beginning of mission. Science value to be assessed first		
Titan GCM db				IDEA	Oct 2016: P. Rannou suggests to contact S. Lebonnois for his more modern 3D code. Alt, 2020: the team is building a db of precomputed profiles - could be distributed as a data service	Only available as a code for the time being, no interface. May be a candidate for integration on a code-on-line platform.		
VIMS_satellites		VIMS/Cassini calibrated cubes, satellites only Catalogue of cubes with description, thumbnails, links to PDS raw and ISIS3 calibrated cubes + possibly geotiff format	Benoît Seignovert (LPG/GeoPlanet + PADC)	ONLINE	From csv files, with link to web site pages.	Installed in ObsParis for maintenance reasons, grabs data in Nantes	Indicated by P. Rannou at EPSC 2018, OK from C. Sotin	voparis-gitlab
Small bodies								
BaseCom	The Nançay Cometary Database	Radio observation of comets from Nançay	PADC/LESIA S. Erard with J. Crovisier	ONLINE	Restructure with mixin, clean up, check parameters and UCDs (not yet published) Deep review in spring 2019: spectra, thumbnails, granule list (remove duplicates & identify upper limits when no detection) Big update, 2021: • All fits & thumbs rebuilt from txt files, in velocity • removed low level data • Cleaned up upper limits • added recent observations (15 yr of data)	• Still uses the initial parsing system of all files and tables, all further steps now integrated in a single IDL routine producing a csv file • freq_min and max to be cleaned up — but two spectral ranges added, hence… Pending review with science team, but should be OK • Add ephemeris in table?	Updated to EPN-TAP v2 Needs update to DaCHS 2.5	voparis-gitlab
M4ast	Modeling for Asteroids	Asteroid spectroscopy	PADC / IMCCE	ONLINE	Check descriptions, update VOtable format / script, add thumbnails 2019: Update with new content Add import script on crontab Other small things to fix, in particular VOtable conversion script	• March 2019: rebuilt with mixin + restored data loss. • March 2019: frozen in July 2015 - the source database seems inactive in Aug. 2022. Additional spectra are now fed into spectro_asteroids	updated to v2.	voparis-gitlab

NASA dust catalog	INAF-IAPS RDB NASA dust catalogue TAP service	NASA's Cosmic dust catalogs 15 and 18	IAPS, Rome	RETIRED	Restructure, Check descriptions, Update server. Added thumbnails and spectra when available. Update presentation web page, the current one is missing! • Data and thumbnails out of reach (July 2019)?	Must be reinstalled on OATS DaCHS server Need to clean up registry: (2 declarations of the same service in the registry) + Revive associated data (images & spectra) Still an active project at OATs in June 2023 — but images are out of reach (in Rome)	v2 linked to the portal after Prague workshop, registered properly in July 2018, removed later (Rome server is down) Should move to OATs	
IKS	IR spectroscopy of comet Halley	IR spectroscopy of 1P/Halley (IKS / Vega-1)	PADC/LESIA	ONLINE	Check descriptions, add phase angle Add thumbnails To be rebuild with mixin & grammar Improve thumbnails!	Descriptors updated April 2016, new web page Sept 2017. Updated to mixin /grammar, Dec 2017, then small updates	First v2 test case (old way).	voparis-gitlab
TNOsarecool	TNOs are cool	Compilation of TNOs properties + Herschel/Spitzer observations	PADC/LESIA	ONLINE	Make it consistent with M4ast, MPCOrb and DynAstVO. Check some parameters	Classes of small bodies still to be refined	v2 direct	voparis-gitlab
Illu67P	Illumination maps of 67P /C-G	Shows the comet illumination for a given lat/lon of the Sun in the comet frame. Next step: shows the comet illumination for a given time	IRAP + Imperial College, London. A. Beth	ONLINE	Finalize, add data, declare. Identify correct dataproduct _type, see if extra param are required for sub-observer point. Handle 3D format?		Directly in v2 from Toulouse 2016 VESPA workshop	
67P units	Description of morphologic units from OSIRIS images	Identify latest version		IDEA	Difficulty related to coord - lon /lat won't work, Cartesian required (or Quak)	Main info is s_region contours, won't work in Cartesian coord. Use for unit characterization, e.g. thermal properties		
DynAstVO		Minor Planet parameters and orbits, with daily computation (NEO only)	IMCCE / PADC	ONLINE	Add computed orbits as spice files, open in Cosmographia or similar. Enlarge to other objects (MBA)? Register Updated in Aug 2018 (missing param, updates, kernels)	Spice kernels are usable in Cosmographia (manually on user's end) and 3Dview (if they are installed on the server part)	Directly in v2 from computation results	voparis-gitlab
MPC	Minor Planets Center	Asteroid orbital and physical parameters (MPCOrb.dat table)	MPC / IAU, + Heidelberg/Paris	ONLINE	Provide epn_core view on existing TAP service in Heidelberg Check if monthly updates still active • Check parameters + change encoding of names (with no number) Fix date format	First experiment with EPN-TAP2 mixin Being updated in 2024.	Make consistent with other small bodies services	https://voparis-gitlab.obspm.fr/vespa/dachs/services/heidelberg-univ-heidelberg-germany/dc.zah.uni-heidelberg.de/mpc

CEMLS	Cometary emission line catalogue	Comet line catalogue, from observations	IAPS, Rome	RETIRED	Provides band list with reference. Make it SLAP or LineList compliant?	Disappeared at the end of EPN2020, no recovery scheduled		
BDIC	Base de Données d'Images Cométaires		PADC/LESIA, F. Henry	PLANNED	To be adapted from updated BDIP v2			
SBNAF	Small Bodies Near and Far	Catalogue of asteroids properties and fluxes, from IR observations (H2020 programme) Initially ~ 60,000 obs (several /target) 2019: 170,000 measurements	Konkoly Obs	ONLINE	To be reviewed and finalized Restarted in 2019 from outputs of the native web interface	Make it interoperable with TNOsarecool service + other observational services in EPN-TAP (M4ast, TNOsarecool, DynAstVO…)	VESPA 2018 Prague workshop Finalized Feb 2020 (in EPN2024)	voparis-gitlab (under PADC /planeto for some reason)
Origins	ANR project (France)	~ 150 spectra of asteroids	PADC/LESIA, S. Fornassier	PLANNED	Build the table Get data files, adjust M4ast conversion routine Should be very similar to M4ast	• Check if content is included in the Mahlke et al 2022 paper (in spectro_asteroids)	Internal to LESIA, 2021	
Comets	Base de données des observateurs de comètes	Amateur site (high level) with > 16000 images (+ some spectra included). Includes db and submission system	PADC/LESIA, N. Biver	IDEA	Simply write an EPN-TAP view with daily updates from existing db? Other similar db to be studied too.	Web version operational (http://lesia.obspm.fr/comets) Al so includes links to sdd.jpl and MPC ephemeris and properties + db of observers (29 contributors). Basic table is a concatenation of target tables? Includes images + derived quantities and references.		
http://neareathobjects.nau.edu TBC	NEO thermal fluxes / albedos	Spitzer thermal-infrared fluxes of near-Earth asteroid from ExploreNEOs, NEOSurvey, and NEOLegacy (~2000 asteroids). Seems to be this https://arxiv.org/pdf/1906.07284.pdf (TBC)	Northern Arizona Uni, or Lowell Obs?	IDEA	existing site with SQL interface		In wish list, from M. Mommert ~2017	
herss://cobs.si/	Comet Observation database	Table of amateur observations, long and rich	jure.zakrajsek@obscv.si	IDEA			Contacted us at EPSC 2018	
PDS SoHO		Images of Sun grazing comets from the SoHO spacecraft / LASCO instrument The main idea is to test a service with fits images only, and handling in VO tools. This one is a simple test case.		IDEA	Start from fits dataset in PDS SBN. First check if pointing, etc available (W CS may not be relevant, but helio distance?)		Suggested by A Raugh, AGU 2018.	
MP3C	EPN-TAP access to existing MP3C tables	Small bodies catalogue integrated from sparse on-line db, includes color, spectral types and other things - best values only	OCA Nice, M. Delbo / N. Bruot	ONLINE	Relies on TAPlib - interface study by PLS in July 2017; then crashed due to local system and lack of resources. Redesigned in Jan 2022 on DaCHS	13 tables with TAP interface. Try and build a use case from those? Common key is name / SSODnet. 2021: focus on best value table target_name to be converted to IAU values, otherwise ready - with small fixes to some columns	Graz workshop, 2017, then 2020-21 on-line workshop	voparis-gitlab
SPHERE ? — TBC	VLT-SPHERE		LAM / CESAM, P. Vernazza and L. Jorda	PLANNED	Processed images and shape models of large asteroids from the VTL	Some 10s of fits images + derived 3D shape models	VESPA 2020-21 on-line workshop	
MOVIS	VISTA-VHS		AIRA / Bucarest, M. Popescu	DRAFT	NIR flux from VISTA-VHS Just a draft, but could be finalized, TBC	NIR color tables + classification results	VESPA 2020-21 on-line workshop	voparis-gitlab
TNO spectra		VLT large program from ~2005	LESIA, Barucci	IDEA	Find calibrated spectra in LESIA, evaluate	• Check if content is included in the Mahlke et al 2022 paper (in spectro_asteroids)		

Small Main-Belt Asteroid Spectroscopic Survey	SMASS	Binzel et al VNIR spectra of asteroids http://smass.mit.edu/smass.html Spectra have been collected and reprocessed in the Mahlke et al 2022 paper, and included in spectro_asteroids	MIT with support from PADC? Check if included in MP3C	**IDEA** — actually included in spectro_asteroids	Based on M4ast, very similar data Coupled with "MIT-UH-IRTF Joint Campaign for NEO Spectral Reconnaissance" on the same site. Plots /thumbnails have to be regenerated individually in PNG.	Little local resources	Suggested by Mirel Birlan, discussed in 2018	
† Earn	Earn	Physical properties of (some) NEOs http://earn.dlr.de/nea/table1_new.html **Closed:** this page no longer exists, the db has been integrated into ESRIN NEO Space Situational Awareness service: http://neo.ssa.esa.int/neo-home (may be accessed through MP3C?) 2020: deprecated, data now included in NEOROCKS and NEOCC	Paris or Rome?	_	Includes a (spectral) taxonomy type. Some duplication of MPC parameters (can be filtered out?) Regularly updated on-line. Related somehow to the NEOshield-2 EU program	Table is easy to enter (note that Binary objects, noted B in 1rst column, have 2 entry lines; only the first one is relevant). Each object has a detailed page with extensive biblio that cannot be included in the table - should be linked with external_link parameter)		
NEOROCKS	NEOROCKS H2020 prg	ASI project to provide ASI and ESA data. See presentation at EPSC2020 then PSIDA 2021.	ASI SSDC	**DRAFT**	Limited to physical properties TAP server (CADC) available, used for astro data. Epn_core table drafted under DaCHS, may migrate later.	Very autonomous dev	VESPA 2023 Graz workshop	voparis-gitlab
NEOCC	NEOCC db	Service of ESA's Planetary Defence Office (PDO) https://neo.ssa.esa.int/	ESA / ESRIN	**DRAFT**	2 services considered: - best determination for each object - all determinations, with history Link to raw images		VESPA 2023 Graz workshop	voparis-gitlab
DAMIT	DAMIT db, 3d shape model from light curves	https://astro.troja.mff.cuni.cz/projects/damit/	Charles Univ, Prague	**DRAFT**	Only rotational parameters and link to shape model	Find a convenient format for shape model, meshlab is a plotting tool of choice	VESPA 2023 Graz workshop, installed on a test server in Prague	voparis-gitlab

FRIPON	FRIPON detection network	Database from the FRIPON system. May include detection images, trajectories, orbits, sample analyses, and possibly GRAVE radar periodograms (also used for atmosphere / aerosols studies)	Will be installed in Paris / PADC, curated by IMCCE (data from Marseille)	**PLANNED**	Test case for fireball detection networks Identified content: - table of events /detection /objects - will include detection from multi or single camera (those for cross-detection with other networks) - include external_link to web site page with detailed info Other data may include (short-term): - VOevent alarm system - meteor showers on Earth: orbits, etc		Discussed at EPSC 2018. Further discussion June 2021	
VIRTIS comet ary phase	VIRTIS Rosetta	Just provide images and plots of operations / acquisition? This would be a different demonstrator of EPN-TAP service in support to an experiment in operation: ▪ granules = MTPs or STPs. Link to ancillary images / plots (SE material) - wait for regeneration of overall geometry (in EPN2024)? ▪ granules = files. Link to synthetic surface-related images (BR material) The file service can be adapted from VVEx service; wait for final dataset to be accommodated on the PSA?	LESIA / PADC	**IDEA**	An ST-MOC would be very helpful. Requires s_region first Extension to individual spectra has a major added value, but same pb as VEx: huge number of records, ingestion via DaCHS is too slow.			
VIRTIS or Rosetta outreach products	VIRTIS Rosetta	Compilation of images, illustrations… available for public outreach. Demonstrator for future experiments	LESIA / PADC	**IDEA**				
LuckyStar	LuckyStar	Stellar occultations by asteroids and satellites, ERC programme. Provides measurements of radii, shapes, albedo, density. Include a compilation of other measurements.	In Brasil? Or LESIA / PADC	**DRAFT**	To be installed in Brasil ? Draft based on Xcel output on Brasilian site. Parsing needs improvement for updates + apparently the table is not complete, TBC		Hand-made, to be discussed with the team	voparis-gitlab
spectro_asteroids	spectra of asteroids	Compilation of asteroid spectra from public librairies (similar to spectro_planets), linked to VizieR repo. Does not include GAIA spectra, accessible under TAP.	LESIA / PADC	**ONLINE**	From several VizieR catalogues, granules are individual spectra (not always /easily accessible from VizieR tables, and not searchable from there) Routine to include ephemeris in table embedded in q.rd, implemented but not used yet. Drafted addition of HST asteroids spectra, TBC	Link to VizieR fits when available, basic VOtable version computed otherwise; thumbnails computed. EPNCore parameters retrieved from papers when needed (available tables are often not the ones describing the observations) • Nov 2022: Added the Mahlke et al 2022 paper, collecting most quality spectra available to date — timing is not available in published version, see with team if this completed at some point		voparis-gitlab
Surfaces								

Mars_craters	Mars craters database	Robbin's crater database	JacobsUni	ONLINE	Completed to entire dataset finalize s_region for plots in Aladin Check descriptions Check s_region again (they have changed)	Reworked by Markus, 2020. Test service for MOC footprints To be completed with revised version from GEOPS	v2 direct, with mixin	voparis-gitlab
Mars_craters_Lagain	Mars craters database, Lagain et al 2020	Robbin's crater database revised	JacobsUni	ONLINE	Still needs adjustments for consistency with Mars_craters	Revised version of bd at GEOPS, paper submitted to Icarus (2019). Untimely published, then removed until publication of paper. Restored 2021	v2 direct, with mixin	voparis-gitlab
Mars_craters_hires		Craters with diam > 40 m from HIRISE images, equatorial regions only	JacobsUni?	IDEA	17M craters! Need to check access speed	Try and synch with publication, end 2019?		
USGS_WMS	Planetary maps from USGS	EPN-TAP access to WMS server	JacobsUni	ONLINE	Check data access Check descriptions	Model for GIS-VO bridge (WMS)	v2 direct, with mixin	voparis-gitlab
planetServer_CRISM	CRISM/MRO cubes	Imaging spectroscopy of Mars, WMS access (planetServer version)	JacobsUni	ONLINE	Check data access Check descriptions Description agreed with PDS geosciences, 2019 Completed to entire dataset (again) Remove wvl parameter ? Add a file via datalink	Model for GIS-VO bridge (WCS) and QGIS plugins (working in May 2017) Changed name according to review board request, 2019 (formerly CRISM)	v2 direct with mixin from Toulouse 2016 workshop, then updated	voparis-gitlab
hrsc3nd	HRSC/MEx nadir images of Mars	HiRes imaging of Mars, WMS access > 4000 images, nadir only, complete coverage @10 m resolution	Frei Univ, Berlin (Sebastian Walter)	ONLINE	Provide coefficient for calibration in radiance and reflectance Provide min /max viewing angles ?	Uses mixin + PDS grammar	From Roscoff 2017 surface workshop	
planetServer_M3	M3 / CHANDRAYAAN-1 cubes	Imaging spectroscopy of the Moon, WMS access (planetServer version)	JacobsUni	DRAFT	Finalize, ingest (many) data Description agreed with PDS geosciences node, 2019	Changed name according to review board request, 2019 (formerly M3) Off-line after publication, TBC	Partial version on-line, Jan 2018. Then unpubished because of a server issue, unclear (on planetServerside?)	voparis-gitlab
Planmap	Geological maps from the Planmap H2020 programme	Maps with annotations, often in pdf, with contours and rasters.	JacobsUni	ONLINE	Final review. Need to identify data products			voparis-gitlab
Pangaea-X	Pangaea-X 2017 data	Various measurements on planetary analogue environment	JacobsUni	DRAFT	Finalize, ingest other data		First assessment with drone images, model for TA field campaign data.	
AMADEE18	Analogue mission to Mars in Oman	Analogue mission to Mars in Oman. Field study, should be ~ similar to Pangaea-X	gernot.groemer@oewf.org nina.sejkora@oewf.org	IDEA			Contact at EPSC 2018 through A. Frigeri. Declined workshop in 2019	
omega_cubes	Imaging spectroscopy of Mars	OMEGA/MEx spectral cubes in calibrated format. Non-PDS files (IDL binaries)	IAS/PSUP	ONLINE	Review details, optimize format		VESPA 2018 Prague workshop	
omega_maps	Mineralogy spectroscopy of Mars	Mineralogical maps from OMEGA analysis, fits format	IAS/PSUP	ONLINE	Review details Optimize format	HiPS version of OMEGA maps available from Aladin tree	VESPA 2018 Prague workshop	
Dawn VIR	Imaging spectroscopy of Vesta and Ceres	Dawn/VIR spectral cubes of Vesta and Ceres (data only, no geometry available)	IAPS/Rome + ASI	DRAFT	Review details Identify ivoID of provider	Provides labels through datalink		

Lunar craters	Largest lunar crater db with simulation	From Öhman 2015? - only an abstract Simulations / computations, rather than observations	PADC	DRAFT	(exercice in DaCHS for François)	Waiting for original providers to agree on publication Most parameters are apparently not high quality enough to be published, TBC but th is still provides a list of lunar craters with size		voparis-gitlab (on voparis-tap-sandbox)
Lunar craters		Catalogues from published papers are available at USGS: - Robins https://astrogeology.usgs.gov/search/map/Moon/Research/Craters/lunar_crater_database_robbins_2018 - apparently more complete - TBC: https://astrogeology.usgs.gov/search/map/Moon/Research/Craters/GoranSalamuniccar_MoonCraters	LESIA / PADC	IDEA	Pick up the best one			
Various db from Brown University		see here http://www.planetary.brown.edu/html_pages/data.htm		IDEA	Provide as list of catalogues?			
IRS / Mariner 6 /7 obs of Mars		Spectroscopy of Mars https://www.lpi.usra.edu/science/kirkland/IRS/Recovery1/handout.html		IDEA	Convert data files to integrated VOTables & add to PDS3 native format (like IKS)	Older/historical dataset… but seems unique and only distributed on a personal web site. Then, it's PDS3…		
ISM / Phobos-2		Imaging spectroscopy of Mars https://www.ias.u-psud.fr/ism/		IDEA	PDS3 labels to be split?	Older/historical dataset… but only distributed on a lab web site (IAS). Then, it's homemade PDS3…		
Mars Pre-Tharsis	Mars topo simulations	Simulated maps	GEOPS (installed on IPSL / ESPRI)	ONLINE	In 2021; v2 compliant	Only 2 maps		voparis-gitlab
Catalogue of planetary maps	Historical maps of all kinds	https://planetarymapping.wordpress.com/ => http://planetarymapping.elte.hu http://www.europlanet-eu.org/european-planetary-mapping-a-worldwide-historical-view-of-our-solar-system/		DRAFT	From an Xcel file, parsing is difficult but feasible. Include extra images and photographs. To be finalized	Many different formats, including archived web pages; each entry has many images.	Forwarded by Nigel after EPSC 2018 Press notice. • Selected for Rome workshop, 2019	
Mars geology	Limits of units on Mars	From Tanaka latest global map? https://pubs.usgs.gov/sim/3292/ See file SIM3292_Global_Geology.shp - but we want it split in connected units (they are actually contacts, or overlayed surfaces)	JacobsUni?	IDEA	Actual info is s_region contours + region properties. Granules should be connected units to make it efficient		Use case = in association with crater databases, for dating	voparis-gitlab? There is a placeholder called mars_geological_map under PADC /planeto
MASCS-VNIR	MESSENGER observations	Spectral db from MESSENGER MASCS Deliverable in EPN2024	DLR, d'Amore	DRAFT	Draft with spectra included in epn_core table, OK with TOPCAT - *very* heavy	Unclear what is the difference wrt to MeSS service at ESA…		voparis-gitlab
CIGaR	Coal Ignition Geophysical Research	Underground thermal profiles on Earth	IGF-PAN/ Warsaw, Poland. Ciechowska	DRAFT	Conversion to VOtable		VESPA 2023 Graz workshop	voparis-gitlab
AMMy	Abandoned mine mystery	Electric resistivity and magnetic profiles on Earth	FVW / Warsaw, Poland. Zawadzki	DRAFT			VESPA 2023 Graz workshop	voparis-gitlab
MeSS		Relational db of (selected) spectra from MESSENGER / MASCS, from ESA / LESIA collab	S. Besse, A. Doressoundiram, O. Barraud	IDEA	Initially proposed by C. Lantz (related to IAS service on Simbio-SYS), descoped later by the team. Should be open anyway within end 2024.			
Mercury craters		Published db, in support of BepiColombo. From Herrick, R. R. et al. (2018), Supporting info (2 tables of craters, 1 for pairing) ~ 30,000 craters	LESIA?	IDEA	use same columns as Mars_craters			

Mercury hollows		Published db, in support of BepiColombo. From Thomas et al., 2014a), supplementary material: https://ars-els-cdn-com.ezproxy.obspm.fr/content/image/1-s2.0-S0019103513004909-mmc1.txt	LESIA?	IDEA	Not very large, but can be completed in the future. No boundaries / contours in this paper			
Solid spectroscopy								
crism_speclib	PDS spectral lib	Laboratory spectroscopy of mineral samples, in support of CRISM/MRO, on PDS Geosciences node Originally named pds_speclib, renamed at PDS geoscience request	PADC / LESIA, Erard	ONLINE	Define (spectral) extension to describe minerals. Can be enlarged with other open mineral spectroscopy db - either in the same service or separately, this is mostly a political decision • Big issue with grain size, source is hill-formed	To be studied with SSHADE & DLR emission database & external contributors. Uses mixin/CSV grammar Beware that the database is now deprecated on PDS side, replaced by the complete RELAB database • Changed name at PDS geoscience request, 2023 (formerly pds_speclib)	Draft from Graz 2017 VESPA workshop. Assessment for other lab spectroscopy services.	voparis-gitlab
BRSL	Berlin Reflectance Spectral Library	Laboratory spectroscopy of mineral samples in support of VIRTIS/Rosetta	DLR, Kappel / Henckel	DRAFT	Finalize, review Publish (policy issue at DLR)	Uses mixin/CSV grammar	Draft from Graz 2017 VESPA workshop. Assessment for other lab spectroscopy services.	voparis-gitlab (perhaps not the latest version, TBC)
PSL	Planetary Spectroscopy Laboratory	Laboratory spectroscopy of mineral samples in support of MERTIS/BepiColombo, and more (in emission)	DLR, Helbert / Maturilli	DRAFT	Publish (policy issue at DLR)	Potantially the first Europanet TA database Uses mixin/CSV grammar. Uses DaCHS Docker version	VESPA 2018 Prague workshop	
SSHADE		Spectroscopy of ices and minerals. A set of ~ 20 evolving databases (including GhoSST). Alternative access to SSHADE service from VESPA interface. Focus first on reflectance spectra?	Grenoble, IPAG	ONLINE	Spectro / sample descriptors required. Need to check /request new UCDs.	First Europanet TA database published. Regular update required - connection to primary db. Make it usable in CASSIS and SPLAT-VO (OK for spectra)	Draft from VESPA 2018 Prague workshop, finalized end of programme	voparis-gitlab
HOSERLab / Planetary Spectrophotometer Facility	pspecf	Large spectral library (in XLS files)	Ed Cloutis, Winnipeg Univ.	DRAFT	Parse Xcel files: metadata, then spectra To be finalized - try on 1 pyroxene file, this is inferno ;(		Contacted at EPSC2018. Rome 2019 workshop	voparis-gitlab (under PADC /planeto for some reason)
Magnetospheres / radio								
AMDA	CDPP AMDA DataBase	AMDA Planetary Plasma database	CDPP, Toulouse	ONLINE UP : DRAFT	check server Check descriptions, Check data type handling (returns results for spectrum, but only dynamic_spectrum included?) Add param saying if data are in the magnetosphere, solar wind, or both	Regular connection to APIS	Updated to v2 Support for long time series (HAPI interface) Redesigned Dec 2022	

APIS	Auroral Planetary Imaging and Spectroscopy	Aurorae images/spectra data base (HST)	PADC, Paris	ONLINE	Check descriptions ? access_url should point to spectra, not to images of spectra (spectra are under native_access_url)	Reference for EPN-TAP extension to auroral data. Get data selection from Hisaki service, reformatted (Nov 2017) New data from Cassini UVIS, oct 2019	updated to v2, then refreshed (no mixin)	voparis-gitlab
NDA	Nancay Decameter Array observation database	Jupiter decametric radio observations from Nançay. Part of JUNO-Ground-Radio Observation Support. Solar data added in 2021	Nançay	ONLINE UP : DRAFT	Check descriptions update target name	Daily updates. (formerly JupiterDAM then NDA, then RoutineJupiter) Extended to solar data, March 2021 ~ 2x content (but nb of granules reduced with datalink)	Updated to v2, to be tested Something to fix about datalink Dec 2022: Added NewRoutine and Mefisto data	
RadioJove	Amateur radio observations of Jupiter		PADC	RETIRED	Finalize, check descriptions Populate	Initial (draft) version has been unpublished in 2021 because of sparse content; should be reinstalled on the US side	Updated to v2 Will be replaced by several services from PDS/PPI	voparis-gitlab
MDISC		Access to UCL Magnetodisc model output.	UCL, London	ONLINE	Add radius as parameter Add new simulations?	Distribute data both in matlab and netCDF format Work on tool connection for reading / visu	First model in v2 from Toulouse 2016 VESPA workshop	voparis-gitlab
JASMIN		Access to UCL Jovian thermosphere model	UCL, London	ONLINE	Check service			voparis-gitlab
Kronos	Cassini radio data		PADC	DRAFT		Part of MASER services Name to be changed		
IMPEx_EPN20	Db from IMPEX simulation tree	FP7 programme To be replaced by LatHyS	Graz, IWF	RETIRED	Resurrect, update Fix data access! - some data at FMI were removed (actually not accessible)	Enlargement in AMDA studied during Graz meeting Retired in 2022 after server crash	updated to v2 Will be replaced by Lathys service in LATMOS	
LatHyS	More Impex data	Hybrid simulation db (used to prepare BepiColombo mission)	LATMOS, Modolo / Cecconi	DRAFT	Restarted in 2022, to be finalized in fall 2023			voparis-gitlab
VExMAG_EPN20	Dataset from MAG/Venus-Express	Venus-Express legacy Dataset is included in the PSA	Graz, IWF	RETIRED	Resurrect, update	• Content is entirely included in PSA, no additional info in this early draft • Retired in 2022 after server crash — was duplicating the PSA anyway	updated to v2 from Toulouse 2016 VESPA workshop	
Iitate HF	Iitate Radio Telescope HF data of Jupiter	Part of JUNO-Ground-Radio Observation Support	Iitate / Tohoku Univ, Japan	ONLINE	Fix issue with server & updates Fix formatting issues	Data is updated every night, after daily observation (formerly called Iitate)	Updated to v2, being tested New update in 2023	
Hisaki	Hisaki E-UV observations of Jupiter, Venus and more	From Hisaki JAXA mission, Exceed instrument	Tohoku Univ, Japan	ONLINE	Finalize, add calibrated data APIS extension compliance (May 2017) Some non-compliances corrected (Dec 2017) But some remain	Regularly synchronized with APIS (from Nov 2017) Updated by periods; latest ones not accessible (proprietary)	Test service, v2 direct	
KHTM	MHD instabilities at 67P/C-G		IAPS, Rome, Ivanovski	DRAFT	Adapt coordinate system to something more std		First model in v2 from Toulouse 2016 VESPA workshop	
PSWS_Transplanet	Transplanet	A Transplanet model of magnetosphere-ionosphere coupling at Earth, Mars, and Jupiter (simulation runs)	IRAP, Toulouse	ONLINE	To be populated? (last data are from 2015)		From PSWS WP, 6/2017	
cpstasm	cpstasm	Earth magnetosphere measurements by CLUSTER, corr elation matrix. Cluster data in CDF format, to be processed with iPECMAN tool. Requires new UCD to be defined (spectral matrix). Output (also CDF) to be visualized in Autoplot. Das2 protocol to be added on top	IAP, Prague	ONLINE	Reviewed & published		VESPA Prague workshop 2018, finalized during Rome 20 19 workshop	

THMSM	thmsm	Spectral matrix data from the Earth magnetosphere obtained by the THEMIS satellites. Same interface as cpstasm	IAP, Prague	ONLINE	Reviewed & published		From cpstasm service, after Rome 2019 workshop	
Mex_Marsis_ne	MarsExpress / MARSIS	MARSIS radar measurements, atmosphere only	U. of Iowa, SwRI	DRAFT		Handle times series with Autoplot and das2server (with changing resolution)	VESPA 2018 Prague workshop	
ASPERA	MarsExpress / ASPERA data		U. of Iowa, SwRI	DRAFT		Handle times series with Autoplot and das2server (with changing resolution)	VESPA 2018 Prague workshop	
PDS PPI — name TBD	MESSENGER and Maven data	Selection of data collections from PDS PPI	UCLA + U. of Iowa, SwRI	PLANNED		Dec 2022: 168 services drafted! - check impact on portal etc…	Started during VESPA 2020-21 on-line workshop	
LOFAR-FR606	Coordinated Decametric observations from LOFAR station in Nançay (nb FR606)	Part of JUNO-Ground-Radio Observation Support	Nançay	PLANNED				
LOFAR_Jupiter	LOFAR observations of Jupiter,	Measurements under 2 different polarization directions ▪ there is also a lofar_jupiter_raw.epn_core table on the server - what is this?	CBK-PAN, Poland Lukasz Tomasik, Barbara Matyjasiak, pozoga	ONLINE	netcdf files	To be renamed pl610_dynamic_spectra_jupiter	Graz & Prague workshops 2017/18	voparis-gitlab
RWCalerts	Space weather test service	Forecast of Solar-geophysical activity and propagation conditions to Earth	CBK-PAN, Poland Lukasz Tomasik, Barbara Matyjasiak, pozoga	DRAFT	VOevents	Early try, probably non compliant	Graz & Prague workshops 2017/18	
Ionosondes		Warsaw ionogrammes scaled by Autoscala software.	CBK-PAN, Poland Lukasz Tomasik, Barbara Matyjasiak, pozoga	ONLINE				voparis-gitlab
kharkiv	UTR-2-JUNO-ground (to be enlarged to other instruments on site)	Coordinated Decametric observations from Ukraine T-shaped Radiotelescope-2. Part of JUNO-Ground-Radio Observation Support	Institute of radio astronomy NASU / RINANU. Kharkiv, Ukraine	DRAFT	Workaround solution for public data installed in Japan, still not functional. File formatting issue (TBC) Still distributing raw binary data files (4000+ files, 2GB each), no previews yet.	(to be enlarged to other instruments than UTR2 on Kharkiv site)	First model in v2 from Toulouse 2016 VESPA workshop. Updated May 2017 with mixin /custom grammar	
coronasf		Coronas-F satellite measurements (time series in cdf) - charged particle fluxes in the Earth's magnetosphere from orbit.	LMSU/SINP Moscow	DRAFT	Files load in TOPCAT		VESPA 2018 Prague workshop	
Mag models		Magnetosphere models of Mercury and Saturn, using IMPEx architecture	LMSU/SINP Moscow	DRAFT			VESPA 2018 Prague workshop	
LWA1	Coordinated Decametric observations from Long Wavelength Array 1	Part of JUNO-Ground-Radio Observation Support	Owens Valley, New Mexico, USA	PLANNED				
MASER	Set of services and tools for radio astronomy /planetary	Initial data services: voyager_pra: restoration of Voyager Planetary Radio Astronomy data ExPRES: simulations Cassini-Jupiter: Cassini/RPWS data products Stereo_waves Wind_waves TfCat RadioJove (above)	ObsParis, LESIA, Cecconi	ONLINE		First 3 services reviewed and published, more to come	March 2019	voparis-gitlab
ILOFAR	From Irish LOFAR antena	data are not available otherwise Also related TFcat service	DIAS / Ireland	DRAFT			VESPA 2023 Graz workshop	voparis-gitlab
Exoplanets								
Encyclopedia of Extra-Solar Planets	Encyclopedia of Extra-Solar Planets	Compilation of published data	PADC	ONLINE	EPN-TAP descriptors reviewed (April 2017) Further improvement in July 2018, with links to detailed information on web site	Reference for EPN-TAP extension to exoplanets and celestial objects Check with exoplanets DM to come. Updated to v2, TAP output checked. Need to rebuild with mixin and DaCHS2		voparis-gitlab
Exotopo		Simulations of topography of Exoplanets (maps)	GEOPS (installed on IPSL / ESPRI)	ONLINE				voparis-gitlab
Exoclock	Exoclock	Ground based transits, support to ARIEL mission	UCL, A. Kokori	PLANNED				

Exoplanets Transit Database	ETD	Web site in Prague, including amateur data. We've been contacted at EPSC 2020	Prague, Filip Walter	IDEA	Need to study the situation first of all			
TauREx	Retrieved atmospheric composition	Data from publications, available on github + VizieR: https://github.com/QuentChangeat/HST_WFC3_Population https://cdsarc.cds.unistra.fr/viz-bin/cat/J/ApJS/260/3#	UCL / Ingo Waldmann	PLANNED	Info available, to be formatted			
ARTECS	db of climate simulations	Deliverable in EPN2024 (D6.8)	INAF-OATs, Ivanoski	ONLINE	Some small fixes to be done after publication		VESPA 2023 Graz workshop	voparis-gitlab
Solar physics								
HFC1T3	Heliophysics Feature Catalog type 3 radio bursts	Solar feature catalogues (from HELIO program)	PADC	ONLINE	Check descriptions and links, fixes required		Updated to v2, tested	voparis-gitlab
HFC1AR	Heliophysics Feature Catalog active regions	Solar feature catalogues (from HELIO program)	PADC	ONLINE	Check descriptions and links, fixes required	UCD of HFC1 must be reviewed	Updated to v2, added footprints (MOC)	voparis-gitlab
HFC1FIL	Heliophysics Feature Catalog ?	Solar feature catalogues (from HELIO program)	PADC	IDEA				
SPASE	SPASE registry	List of SPASE services	PADC	DRAFT				voparis-gitlab
IPRT	IPRT /AMATERAS Iitate Planetary Radio Telescope Solar Data	Solar radio observations	Iitate / Tohoku Univ, Japan	ONLINE	Populate? (expected regular updates, TBC) Fix issue with server	(Formerly called ppar c_r)	v2 direct, to be tested	
CLIMSO		Images of the photosphere and low corona with two coronagraphs (on H-, He I, Fe XIII) and two telescopes (on H-, Ca II)	IRAP, Toulouse	ONLINE	Evolving data content, runs smoothly	Need to rebuild with mixin and DaCHS2	First model in v2 from Toulouse 2016 VESPA workshop, then updated	voparis-gitlab
BASS2000	BASS2000 (Paris)		PADC	ONLINE	Upgrade required (July 2019) Updated to DaCHS2, 2021	Regular updates, OK	First draft in May 2017. Published May 2018	voparis-gitlab
GAIA-DEM		Solar images from SDO Fits images (compressed internally, won't load in SAOimage /ds9) - maps with a specific projection (HPC)	IAS/MEDOC	ONLINE	Published under DaCHS v1	Cross study of GAIA-DEM with BASS2000 and related services, TBD	Started at VESPA 2018 Prague workshop, advanced draft in April 2019, updated and published 2021 Additional content in 2022	voparis-gitlab
eit_syn		Synoptic maps of the corona in the extreme-UV (EUV), built from series of SoHO/EIT observations	IAS/MEDOC	ONLINE	Draft for DaCHS v1 Issue with waveband vs messenger?	Reviewed 2021, approved by team		voparis-gitlab
name TBD	Sunspots Coronal holes	2 services at Royal Obs of Belgium	ROB	PLANNED	One with 2 tables, TBD		VESPA 2020-21 on-line workshop, started in advance	
Radio Solar Database => nrh & orfees	Nançay Radio Solar Database	From Nançay data, split in separated services. Will start with NRH and ORFEES services in Nançay	PADC / NDC	DRAFT	Design VO interface. Make it consistent with other projects in the field Existing draft for NRH and ORFEES, 2022	Being reviewed (4 /2022)		Currently on https://gitlab.obspm.fr/DB/vo-nrh to be moved

eCallisto	eCallisto	World-wide network of Solar radio spectrographs	Windisch (Switzerland), Csillaghy	DRAFT	Issue with support of some million rows from DaCHS through the portal - async access is recommended in this case - TBC Issue with datalink under DaCHS2, TBC		VESPA 2019 Rome workshop	voparis-gitlab
RHESSI	RHESSI	Solar Spectroscopy imager from a NASA mission, 2002-2018	Windisch (Switzerland), Csillaghy	DRAFT	Using local mirror of data			voparis-gitlab
IRIS_Obs	Interface Region Imaging Spectrograph	Interface Region Imaging Spectrograph. NASA mission, 2014+	Windisch (Switzerland), Csillaghy	DRAFT	Q regarding data access.			voparis-gitlab
THEMIS	THEMIS observatory data	Archive of solar data from THEMIS telescope in Canary Islands. Fits files available here: http://voparis-srv-paris.obspm.fr/vo/themis/	PADC	IDEA	Study extraction of metadata from headers, and format compliance. Check if format is consistent along time. Check completeness of dataset	Older version (in Tarbes) used a tricky DM, check if this may be adapted to EPN-TAP	Legacy data in Paris, 2020	
Coronal holes Sunspot drawings Sunspot groups	3 solar services	3 solar services: Spoca provides automated detections from images	ROB / Brussels, Delouille	DRAFT	In review, 2023		From 2021 on-line VESPA workshop	voparis-gitlab
Chrotel Gris Lars	3 solar services	3 solar services from the ESCAPE programme	KIS / Freiburg	DRAFT	First setup with Markus, almost clean but small fixes required (already published in the IVOA registry)	Installed on GitLab Feb 2024	Finalize during 2024 Warsaw workshop ?	voparis-gitlab
Generic / interdisciplinary								
BDIP	Base de Données d'Images Planétaires	Historical planetary images in Meudon (ground-based)	PADC / LESIA (Drossart, Henry, Cecconi)	ONLINE	Rearrange data products (jpeg vs fits), add previews, + check descriptions (from local db) Compute pointing (mostly phase) + Fix image orientation? Enlarge contents (other existing digitized images)	Phase angle can be retrieved from Miriade, other parameters more difficult (time of day not always available) Orientation is more difficult, should be reconstructed from images.	Updated to v2, to be tested. Sept 2017: rebuilt with mixin / grammar, queries LESIA database in SQL during ingestion.	voparis-gitlab
Planets	Main characteristics of planets	From IAU / Allen reference data, very simple and short table - adapted to tutorials, as it provides a very simple example. Beware that different versions coexist for this reason	PADC / LESIA	ONLINE	Declare properly in registry (issue with referenceURL field) To be enlarged with satellites info (see below)?	(In Feb 2016) best model for UCDs / param (with IKS) & q.rd file. Test service, updated to v2 in 2016. Updated to mixin /grammar Dec 2017 Add datalink to Miriade? (OK in test, Jan 2018) - could be at the moment of query.		voparis-gitlab

MoonsProp	Extension of planets service to natural satellites	Table of orbital / rotational characteristics, from Satellites info compiled and maintained by IMCCE	PADC / IMCCE	ONLINE	Milestone 79 in EPN2024	• Need to check name / definition of new EPN-TAP parameters, in particular rotational ones which are also used by other services • Updates could be performed from a web page, like DynAstVO (much less frequent though)	Drafted at time of 2023 Graz workshop	voparis-gitlab
PVOL		Amateur imaging of giant planets + Mars/Venus	Planetary Sciences Group, UPV/EHU, Bilbao	ONLINE	SQL trigger to handle new data coming in. Finalize EPN-TAP access Register	Fixed issue with corrections after ingestion	First model in v2 from Toulouse 2016 VESPA workshop	
spectro_planets	Planetary spectra	Low res, global spectra of planets and satellites. References for ground observations, provide only 1 or 2 typical spectra/object (from selected archives). Includes historical data of interest	LESIA, Erard	ONLINE	Identify sources; currently THN library + USGS + IRTF + JSNU + occasional LESIA data Convert files to documented VOtable, not fits (for use in CASSIS) - this is tricky in some cases Collect complete info from original papers Add ephemeris from Miriade in the table (or datalink to Miriade)?	See interoperability with Planets service. Spectral calibration unchanged, not homogeneous - but solar spectra provided also 2020: several alt versions including ephemeris data in table		voparis-gitlab (should be reorganized in branches)
Polarbase_planets (name TBD)	Planetary spectra	Excerpt from Polarbase, from Narval & ESPaDOnS instruments at Pic du Midi (targets intended to provide solar spectra)	IRAP, Glorian	PLANNED	Very similar to spectro_planet in scope		Proposed by Jean-Michel Glorian, Jan 2020. Started during VESPA 2020-21 on-line workshop Up in Dec 2022	
IRTF_Orton	IR telescopic images of Jupiter	Images from IRTF, Hawaii, in support of Juno	PADC/LESIA, Cecconi	DRAFT	Get metadata from fits headers, call Miriade to compute ephemeris Finalize?	Can be used as template for collections of poorly documented observations, will retrieve ephemeris parameters on the fly	V2 draft version	
† Cassini rings	Cassini CIRS ring data	Assessment study of EPN-TAP services and VESPA infrastructure for Cassini derived data services to come. Final implementation depending on strategy at mission level	JPL (Connell, Brooks)	RETIRED		Was an assessment study at JPL, dropped in 2018	From Graz workshop, 2017	
Juno images	From Juno spacecraft camera	No geometry available?	U. of Iowa, SwRI	DRAFT		Content already available in PVOL, with geometry? TBC	VESPA 2018 Prague workshop	
PSA	ESA's Planetary Science Archive	Complete archive published early 2018. Currently distribute files & labels in a zip with dataset documentation. Only ~ 6 Mfiles among 18 in 2018 (Rosetta RPC filtered out - this slowed down the first draft, and provided no usable information) Difficult on ESA side to retrieve description parameters: PDS/EPN-TAP correspondance is very much dataset dependent.	Madrid, ESAC	ONLINE	Get parameters from files /datasets? Identify a better way to access detached labels (datalink?). Fix modification date		v2 direct started in 2016. Uses ESA non-DaCHS server (TAP library), apparently with modifications (new fct ivo_hashlist_has not available)	

HST_planeto	HST planetary data	Data of planets, dwarf planets and satellites (no asteroids) from HST. Calibrated & derived products. Data and thumbnails at CADC	PADC & CADC	ONLINE UP : DRAFT	Data selection is tricky… Target name, instrument & detector name, obs type are controled and fixed Data description still to be improved? (multiple targets, etc) + path to files is obscure… • Add asteroid spectra? May be included in spectro_asteroids	Includes ephemeris data via datalink Daily updates.	Fom Victoria Interop meeeting, 2018 Redesigned 2021	voparis-gitlab
JWST_planeto	JWST planetary data	Use the same CAOM data model as HST		IDEA	Should be easy from CADC with CAOM description, TBC (but something to tweak)	May be merged with HST, TBC		
VizieR planeto	VizieR catalogues = B /Planets	Table linking Solar System-related catalogues in VizieR (query to a web service returning one or more VOtables). Initially 1400+ tables identified from keywords, regularly growing (~ 200 more /year)	CDS & ObsParis	ONLINE	• Access tricky to handle in the portal: "B /planet", requires specific handling mode • Check description & parameters, complete a minima for publication Solved issue: Support for lower cases and hash-list in Vollt server. Remaining issue with value list handling	Will only provide access to existing tables - but most of them when displayed on VizieR include links to additional data files (not always). So this service will be best accessed through the portal. • Need to agree upon an update procedure (will require manual check of description)	First draft 2019. Extended description of catalogues started May 2021, completed Nov 2022	voparis-gitlab (under Vollt, not DaCHS! + initial name = B /Planets_epn_core) CSV only (no rd file)
CDPP alerts	Solar wind predictions	Server of VOevents from PSWS	IRAP/CDPP, ObsParis	DRAFT	Missing parameters in VOevent standard - needs to specify where the event orginates from • Name to be changed	Pb with events versus conditions - format TBC	VESPA 2018 Prague workshop	
CDPP alerts - detection	Fireballs, etc	Server of VOevents from PSWS	IRAP/CDPP, ObsParis	DRAFT	Missing parameters in VOevent standard - needs to specify where the event orginates from • Name to be changed	Pb with events versus conditions - format TBC	VESPA 2018 Prague workshop	
meteor_showers	Predictions, on planets	Server of VOevents from PSWS. From simulations of ejection of cometary material + propagation in Solar System	ObsParis, Vaubaillon	ONLINE	Reviewed. Finalized during Rome 2019 workshop. Check format of VOevents.		from PSWS. Reviewed during Rome 2019 workshop	

Herschel	ESA's Herschel archive for Solar System objects	Extract from global archive? Only standard products, ie raw and pipeline (TBC) Alternative is to connect the complete ESAsky catalogue - SSOs are identified from ephemeris search, not from catalogue entries	Madrid, ESAC	DRAFT	EPN-TAP parameters ~identified - restrained in this case	(To be done on their side) Evaluation by Baptiste: easy to do but requires optimization of target identification + data files are not standard fits cubes - how should they be handled?	Assessment study, Jan 2020	
PARSEC	Europlanet 2024 telescope network	Archives from 25 small telescopes open to amateur observations, in NA2	Adam Mickiewicz University, Pozna, Poland	ONLINE	Use astrometry.net to retrieve WCS (available from Dachs?) Then use Skybot to identify solar system targets?	Functional draft with 2 telescopes in Jan 2024, ~ 4500 images with WCS	VESPA 2023 Graz workshop	voparis-gitlab
T1m Pic du Midi, images			IMCCE, Colas	IDEA	Would still be very nice! First need to make fits headers uniform. Distribute raw images and make it a collaborative service accepting submission of calibrated products? May require to hire a post-doc to check & process everything • But get data first of all! • Other parameters probably required, e.g. camera orientation in focal plane	Ephemeris can be called during ingestion	Use with EPN-TAP2 mixin (fits grammar) & call ephemeris from q.rd	
Opposition of Mars 1994		Processed images from Pic du Midi: calibrated & projected	LESIA, Erard	IDEA	May be used as a first demo of complete T1m service			
Opposition of Mars 1999, HST	HST images from J. Bell	PDS GeoSciences Node has a dataset of 1999-2001 opposition images and cubes in fits + geometry & projected versions. More elaborated version than the HST archive/HST_planets service, reformatted: projected and include i/e angles. Fits files, provided with PDS labels. ~ 500 images, each in cylindrical and orthographic projection + cubes grouping series of 12 related images for each projection & incidence/emission angles.	LESIA	IDEA	Demo for use of images + coordinates planes (include only cubes?) Congruence with HST_planets	Should be included in HST_planets? Pb: file extensions are not "fits", so they won't open automatically		
Titan ground based observations		Historical work from the 90s only?	LESIA, Henry	IDEA	First, recover data on old machines (from M. Combes). + Also see with Athena if she has derived data to distribute	On-going recovery project at ObsParis		
spectro_stars	Stellar spectra	Vis / NIR from IRTF Vis from ESO	ObsParis	ONLINE	Also include Kurucz simulations ?	Support for observations, use with pipeline to scale magnitudes. Include links to Simbad whenever possible Issue with special characters in stars names + not well filled description tables in original websites	was specstar	on voparis-gitlab: https://voparis-gitlab.obspm.fr/vespa/dachs/services/padc/voparis-tap-sandbox/specstar
† Planetary images from OHP student's obs?				IDEA		Not favorite: unprocessed, sparse, and planetary content is limited		
Paris library drawings				IDEA		Outreach only		

(TBC)	?	Database of images and simulated data to test processing methods	IPAG, Sylvain Douté	IDEA	Data exist, to be completed	Think about new data		
(TBC)	?	List of codes available on-line for Planetary Science	Paris ???	IDEA	Could be based on IDIS resource list from FP7 - has to be cleaned up and modernized though. Can be TAP, but not EPN-TAP. • Or instead, use github of OpenPlanetary (ideally, that should be in the IPDA registry…)	Potential issue with maintenance. Would help for computing on demand system		
missions_ipda	Space mission dataset	Database of datasets available, interfacing the IPDA web site (static pages): https://atmos.nmsu.edu/data_and_services/atmospheres_data/IPDA/ipda_mission.html	ObsParis, Erard	DRAFT	Would be more useful in this form. Draft limited to Mars missions.	The issue is with irregular format in static tables (plus many links in some instances), and maintenance of content.		on voparis-gitlab
Europlanet data	various produced in EPN WP	Link to various repositories: Zenodo (Europlanet, EPN-VESPA, EPN-ML communities), B2SHARE (VESPA community), some on github (UCL Taurus, EPN-ML, MASER, etc). Check if GMAP and ML assets are included. Access_url = Zenodo page with DOI, no access to finer structure	ObsParis	IDEA	Retrieve a machine readable list + metadata from Zenodo (doable), then format. Github to be handled manually?			