

Access to PAZ as ESA's Third Party mission

Terms of Applicability

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1 General

Within the Third Party Mission scheme, ESA provides to Earth Observation users data from non-ESA missions, so-called Third Party Missions, to complement the data from ESA EO missions and to support and build up the scientific user community for those data in Europe.

A Third Party Mission (TPM) is a mission

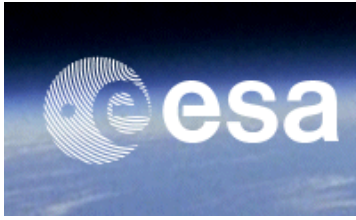
- that is operated by any legal body, governmental or non-governmental entity other than ESA or
- for which ESA assumes some formal responsibility towards the mission operator or to which ESA contributes financially, usually through sharing of Ground Segment facilities or operations cost or
- for which ESA assumes a data distribution responsibility, usually towards European Users, but sometimes towards a worldwide user community for a subset of the geographic coverage of this mission.

The implementation of a new Third Party Mission follows a Selection Procedure approved by the Program Board on Earth Observation in 2004. This procedure evaluates a yearly list of Third Party Candidate Missions according to a set of criteria (e.g. European User benefits and excellence, accessibility etc.). In order to gain access to the TPM data, ESA establishes co-operation schemes with the owners/operators of the Third Party Missions. In these co-operation schemes, one option foresees to provide ground segment support to the TPM owner/operator in exchange for access to the TPM data (e.g. share acquisition or archiving facilities or support respective operations).

PAZ Spanish Satellite, developed under control and supervision of Hisdesat, is part of the Third Party Program since 2020.

Within the ESA CAT-1 TPM Scheme, Hisdesat offers the ESA CAT-1 community:

- Delivery to Category-1 Users located in the territory of ESA Member States (including Canada), in the European Commission Member States and in China as part of the Dragon cooperation programme of on-demand PAZ Level 1B products (archiving and/or new tasking products) for category-1 use
- Access to USP web portal at www.geos.hisdesat.es for PAZ data discovery (by Area of interest and Date) and ordering submission



2 Data Accessibility Conditions

The data available as part of the ESA TPM are the following:

Mode	ID	Scene Size (W x L)	Resolution (up to)	Polarisation
High Resolution SpotLight	HS	10 x 5 km ²	1 m	Single or Double
SpotLight	SL	10 x 10 km ²	2 m	Single or Double
StripMap	SM	30 x 50 km ²	3 m	Single or Double
ScanSAR	SC	100 x 150 km ²	18,5 m	Single

Available spatial resolutions:

- Spatially Enhanced products (SE)
- Radiometrically Enhanced products (RE)

Available geometric projections:

- Single Look Slant Range Complex (SSC) : azimuth – slant range (time domain).
- Multi Look Ground Range Detected (MGD): azimuth – ground range (without terrain correction)
- Geocoded Ellipsoid Corrected (GEC): map geometry with ellipsoidal corrections only (no terrain correction performed)
- Enhanced Ellipsoid Corrected (EEC): map geometry with terrain correction, using a DEM

The different options can be combined as per below table:

	SSC	RE			SE		
		MGD	GEC	EEC	MGD	GEC	EEC
SM-S	✓	✓	✓	✓	✓	✓	✓
SM-D	✓	✓	✓	✓	✓	✓	✓
SC	✗	✓	✓	✓	✗	✗	✗
SL-S	✓	✓	✓	✓	✓	✓	✓
SL-D	✓	✓	✓	✓	✓	✓	✓
HS-S	✓	✓	✓	✓	✓	✓	✓
HS-D	✓	✓	✓	✓	✓	✓	✓

Archive products

- Products are considered “archive data” only if the data is in the archive for more than 30 days after the acquisitions date.
- Delivery of products is done only with ‘Standard’ priority: within a maximum of 3 working days from the date of order submission. If during the order submission the ‘Fast’ or ‘Urgent’ priority is selected, the priority is moved back to ‘Standard’ by the Hisdesat operator

Tasking products

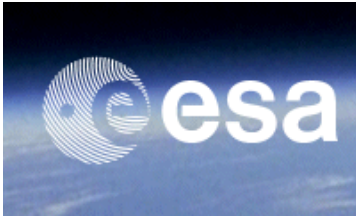
- Recent products (within 30 days after the acquisition) are recognized as “tasking products”. If a user intends to ask for recent products, the order consumes the quota for tasking products.
- Tasking ordering option: order for new acquisition to be finalized and sent to Hisdesat at least 3 days before submission deadline¹
- Products delivery: within 30 hours from data downlink in PAZ Ground Station if Rapid orbit file is selected for the processing, 4 days with Science orbit file.

¹ Two submission deadlines every day at 8:30h and 21:30h UTC



3 Data users

- Access to data can be provided by ESA located in the territory of ESA Member States (including Canada), in the European Commission Member States and in China as part of the Dragon cooperation programme, but the Spanish Regulations can introduce further limitation or even rejection of the order (In this case HISDESAT will interact with users to find the best possible solution)
- No geographic restrictions on Area of Interests (AOI) unless ESA defines otherwise. But the Spanish Regulations can introduce further limitation or even rejection of the order (In this case HISDESAT will interact with users to find the best possible solution)



4 Assignment and usage of quota

Project Proposal submission and evaluation

A user requesting access to PAZ products in the frame of the TPM shall submit a project proposal to ESA. During the project submission, the user shall specify his need as

- Mode
 - High Resolution SpotLight (HS)
 - SpotLight (SL)
 - StripMap (SM)
 - ScanSAR (SC)
- Number of products (split in archive and new acquisition)

For evaluation of the project, which includes new tasking data, the provision of Time of Interest and Area of Interest are not mandatory but encouraged to allow a preliminary feasibility analysis of the order request.

PAZ products are considered “archive data” only if the data is in the archive for more than 30 days after the acquisitions date. So, if a user intends to order recent products (within 30 days after the acquisition), the number of recent products has to be requested as new acquisition products.

During the evaluation process, the scientific content of a submitted project proposal is evaluated by ESA and Hisdesat against the data requirements of the PI and a respective quota will be assigned to the project.

Order submission and data delivery

If the Project is accepted by ESA, an individual account for the project is activated on USP. The PI shall be contacted by HISDESAT to confirm the USP user account will be used or will be instructed about the registration procedure: at the same time, also the external IP address used for connection to USP shall be requested since the USP website is not fully public.. The USP account shall be charged with credits corresponding to the allocated quota; the USP catalogue shall be used to submit the order for both archive and new tasking data, to monitor the status evolution of the order and to download the product when available..

The ordered products can change with respect to the original proposal provided that the new request is within the original assigned credits (e.g. if a Project has a quota per specific data type, the Project can exchange such quota for other data types if the total quota is not exceeded).

The quota shall be consumed within a year from assignment. After the validity period of 1 year, ESA reserves the right to remove the credits or to extend the end date.

As soon as the requested data are available, the PI is notified by email about the data availability in his own repository: the products can be downloaded from the USP interface or supplied via ftp or sftp, picked up from Hisdesat repository or pushed on PI own server. The retention time for data download is 20 days.