

Access to SPOT, Pleiades and Pleiades-Neo as ESA's Third Party Mission

Terms of Applicability

Date: 11October 2024

Rev. 1 Iss. 15

Document type: Technical Note



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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.

Since 2015, the SPOT (1 to 7), Pleiades and Pleiades Neo Satellite Systems are part of the Third Party Missions Program.

Within the ESA CAT-1 TPM Scheme, ESA offers to the CAT-1 user community the following service provided by Airbus DS:

- On demand access to the entire SPOT 6/7, Pleiades and Pleiades Neo satellite imagery archive, for all ESA Member States and ESA Cooperating/Associate States and China (only if the user participates in a Dragon project)

- On demand access to new SPOT 6, Pleiades and Pleiades Neo data (satellite tasking) for worldwide areas with particular emphasis on European Countries

- Activities to be performed by Airbus DS to provide satellite data for ESA and/or ESA approved science and Application development users in the territory of ESA Member States and ESA Cooperating/Associate States and China (only if the user participates in a Dragon project)

- Access to products from the SPOT 6/7, Pleiades and Pleiades Neo satellites in Primary and Ortho processing production levels.

- Standard Delivery of products within 5 days after proper order submission (or sensing time for programming orders) to the data provider.

- SPOT 6, Pleiades and Pleiades Neo programming delivered according to the standard tasking service.

- Access to [OneAtlas](#) Living Library for SPOT 6/7 , Pleiades and Pleiades Neo (PNEO) data streaming and data download.

2 Data Accessibility Conditions

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

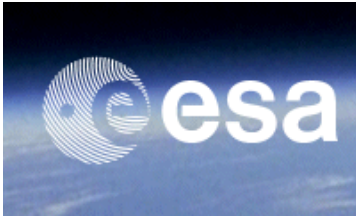
	Acquisition	Spectral Bands and resolution	Resolution	Processing levels	Acquisition mode
SPOT 6 & 7	Archive & Tasking (SPOT 7 only archive)	<ul style="list-style-type: none"> Panchromatic Pansharpened.3-band Pansharpened 4-band Multispectral 4-band Bundle: Panchromatic + Multispectral 4-band (co-registered) 	<ul style="list-style-type: none"> PAN: 1.5m MS: 6 m 	<ul style="list-style-type: none"> Primary (Level 1A/1B) 	<ul style="list-style-type: none"> Mono Stereo Tristereero
				<ul style="list-style-type: none"> Ortho (Level 3) 	<ul style="list-style-type: none"> Mono
PLEIADES 1A & 1B	Archive & Tasking	<ul style="list-style-type: none"> Panchromatic Pansharpened.3-band Pansharpened 4-band Multispectral 4-band Bundle: Panchromatic + Multispectral 4-band (co-registered) 	<ul style="list-style-type: none"> PAN: 50 cm MS: 2 m 	<ul style="list-style-type: none"> Primary (Level 1A/1B) 	<ul style="list-style-type: none"> Mono Stereo Tristereero
				<ul style="list-style-type: none"> Ortho (Level 3) 	<ul style="list-style-type: none"> Mono
PLEIADES NEO	Archive & Tasking	<ul style="list-style-type: none"> Panchromatic Pansharpened.3-band Pansharpened 4-band Multispectral 4-band Bundle: Panchromatic + Multispectral 4-band (co-registered) 	<ul style="list-style-type: none"> PAN: 30 cm MS: 1.2 m For HD15: <ul style="list-style-type: none"> PAN 15cm, MS 60cm) 	<ul style="list-style-type: none"> Primary (Level 1A/1B) 	<ul style="list-style-type: none"> Mono Stereo Tristereero HD15 (Mono image resampled by using machine learning model)
				<ul style="list-style-type: none"> Ortho (Level 3) 	<ul style="list-style-type: none"> Mono

The OneAtlas Living Library subscription allows to access Pansharpened or Bundle orthorectified products in download or streaming mode; the user can use both download and streaming of data from different satellites. As a reference, the below table reports the maximum volume of data can be accessed, considering only one type of consumption (e.g. only download of Pleiades images)

package	Download			Streaming		
	PNEO	Pleiades	Spot	PNEO	Pleiades	Spot
subscription package 1	230 km ²	430 km ²	1.500 km ²	500 km ²	2.000 km ²	7.500 km ²
subscription package 2	654 km ²	1.214 km ²	4.250 km ²	1.417 km ²	5.666 km ²	21.250 km ²
subscription package 3	1.161 km ²	2.156 km ²	7.545 km ²	2.515 km ²	10.060 km ²	37.723 km ²

Access to SPOT and Pleiades Archive and New acquisitions

- The SPOT 6/7 and Pleiades available data consist of Panchromatic, Pan-Sharpended, Multispectral and Bundle products, in MONO, STEREO and TRISTEREO acquisition modes (stereo and tristereo requests are subject to Airbus feasibility study).
- The ortho-products are automatically generated, based on SRTM database or Reference3D when available. The projection is UTM, datum WGS84. Available in MONO acquisition mode only.
- Archive data and new images tasked according to the OnePlan tasking service accessible through [OneAtlas](#) portal. In case of Stereo and Tristero archive orders, [Geostore](#) portal has to be used.
- For archived products, the minimum order area is 25 km²; for new acquisitions, the minimum order area is 100 km². for each Area, the minimum extension is 5 km in any direction
- For new acquisitions, the acquisition timeframe is estimated accurately for each option through a dedicated feasibility study delegated to Airbus DS and to be agreed with users. As a consequence, the orders for new tasking data shall be submitted early enough before the sensing, at least 3 working days before the beginning of the acquisition, to allow Airbus DS to complete the feasibility analysis.
- As of 17 March 2023, only archive data are available for SPOT 7.



Access to Pleiades Neo Archive and New acquisitions

- The Pleiades Neo available data consist of Primary (level 1A) geometric processing level in MONO, STEREO and TRISTEREO acquisition modes or ortho (level 3) geometric processing level in MONO acquisition mode.
- Moreover, also Pleiades Neo HD15 products are available, Bundle primary or Pansharpened ortho: the enhanced resolution (15cm for panchromatic, 60cm for Multispectral) is obtained by using a machine learning model that increase the sharpness and fineness of details without introducing any fake data.
- All data, archive and new tasking images, are accessible through the [OneAtlas](#) portal; new images can be tasked according to One Plan service.
- For archived products, the minimum order area is 25 km² (minimum 5 km in any direction). For new acquisitions, the minimum order area is 100 km² (minimum 5 km in any direction).
- For new acquisitions, the acquisition timeframe is estimated accurately for each option through a dedicated feasibility study delegated to Airbus DS and to be agreed with users. As a consequence, the orders for new tasking data shall be submitted early enough before the sensing, at least 3 working days before the beginning of the acquisition, to let Airbus DS to complete the feasibility analysis

Access to OneAtlas Living Library

- SPOT 6/7, Pleiades and Pleiades Neo optical data (Pansharpend and bundle band combination, Ortho processing level) are available in streaming mode and for download, responding to selection criteria based on cloud cover and acquisition angle
 - ✓ A curation of SPOT images for a complete global coverage, with no cloud cover and less than 30° acquisition angle
 - ✓ Daily acquisitions of Pleiades data fresher than 18 months, with max. 15% cloud cover & 30° acquisition angle
 - ✓ Pleiades Neo premium less-than-18-months-old imagery selection (2% cloud cover & 30° acquisition angle)
 - ✓ Selection of SPOT and Pleiades archive over North America, Asia, Australia and Europe, over urban areas with a population of 300,000 or more and over thematic hotspots (airport, shale gase sites, agriculture areas,...)
- The OneAtlas Living Library is accessible via portal at <https://oneatlas.airbus.com> or via API (WMTS Simple Profile /WMS, information on API connection available under <https://api.oneatlas.airbus.com/>)
- Search functionality – access to image preview in reduced resolution (so called “quick looks”) and metadata of relevant images available in the Airbus cloud-based library. Search results are returned as a GeoJSON (or CSW XML in a later version). Search is based on parameters (such as resolution, acquisition date, satellite constellation, incidence angle, cloud cover, and segment ID) and on AOI (which can be uploaded in a GeoJSON KML, KMZ or SHP format or drawn on [OneAtlas](#) portal; geographic coordinates can also be used to define the AOI).
- View functionality – access to all individual images available in Airbus cloud-based library, in a format that is optimized for screen display/viewing with on-the-fly orthorectification (8 bits, 3 bands products in a Geographic or WebMercator projection, JPEG and PNG format).
- The users will be able to monitor their consumption in near real time. Tile consumption is not counted for streaming above 10m resolution and therefore not deducted from the user subscription.
- Analytics toolbox is not part of the offer

3 Data users

- Access to data is restricted to ESA and/or ESA approved science and application development users (PIs, and Co-PIs if any) located in the territory of ESA Member States and ESA Cooperating/Associate States
- Even users from China participating in a Dragon project are eligible for this ESA Third Party Mission but Airbus DS reserves the rights, in its sole discretion, to accept or reject the proposal (evaluation done on case by case basis)
- No geographic restrictions on Area of Interests (AOI) unless ESA defines otherwise;
- Airbus DS reserves the right, at its sole discretion, to reject the project proposal if the Area of Interest crosses over a red zone, a region with restrictions and potential limitations for the sensing data access.
- Access to SPOT, Pleiades and Pleiades Neo data is subject to further Airbus DS control and orders may be rejected for security reasons.



4 Assignment and usage of quota

Assignment of quota

For the traditional data provision (Spot, Pleiades and Pleiades Neo data ordering), during the project submission, the user shall specify his need as:

- the number of square kilometers for SPOT 6/7, Pleiades and Pleiades Neo, split in archive and new acquisitions. For each product type, the Minimum Order Size (minimum extension of each AOI composing the order) is 25km² for archive and 100km² for new acquisition
- the Acquisition mode (MONO, STEREO or TRISTEREO). Default mode is MONO; STEREO and TRISTEREO Data Acquisition modes are available for new acquisitions subjected to feasibility study
- In case of request for MONO new acquisition images, the number of observation of the same area has to be specified: only one observation, from 2 to 5 observations, 6 or more observations
- For Pleiades Neo, HD15 products are available

For OneAtlas Living Library, the user shall specify his need as

- Type of subscription package (see above table for the relevant data volume)

After ESA evaluation, if the project is approved, a quota is granted to the PI allowing getting:

- A number of square kilometers for SPOT 6/7, Pleiades and Pleiades Neo, split in archive and new acquisitions
- Confirmation of the OneAtlas Living Library subscription package

Usage of quota

During the evaluation process, the scientific content of a submitted project proposal is evaluated against the data requirements of the PI and a respective quota will be assigned to the project. The PI (and Co-PIs if any) is allowed to order the products corresponding to the quota through the [OneAtlas](#) portal. Only for SPOT and Pleiades STEREO and TRISTEREO archived data, the orders have to be placed in [Geostore](#) portal.

To allow the orders to be placed in the [OneAtlas](#) portal, a Premier account is assigned to the PI (and Co-PIs if any) and loaded with enough spendable credits in order to get the products corresponding to the quota assigned to the project. The PI will be provided by Airbus with the Premier account credentials and the instructions to proceed with the order in their own environment.

PIs (and Co-PIs if any) are responsible to consume the credits assigned to the project in the [OneAtlas](#) portal within the validity period of 1 year. After the validity period of 1 year, ESA reserves the right to re absorb them. Modification of product type the can be accepted after project acceptance on the condition of not exceeding the original credit assignment.

Data delivery

- All SPOT, Pleiades and Pleiades Neo products but SPOT and Pleiades Stereo and Triestero archive data are available for retrieval from the [OneAtlas](#) portal in 'My Data' area.
- SPOT and Pleiades Stereo and Triestero archive data are delivered on [Geostore](#) portal
- Products download from Living Library are available on [OneAtlas](#) portal
- Products are delivered free of charge in the limit of the quota approved by ESA
- Products are available on FTP server for download for a 1 month

OneAtlas Living Library

To allow the usage of data streaming/download packages on [OneAtlas](#) Living Library, an account is assigned to the PI (and the same also to Co-PIs, if any) charged with the allocated volume. The PI will be provided by Airbus with the credentials for the [OneAtlas](#) Living Library access.

The account shall be active for a duration of 1 year as from the user activation request.