



JECAM/GEOGLAM Science Meeting  
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# Summary of Mission Capacity to Meet JECAM/GEOGLAM needs



- Name of Agency/Data Provider: **CNES**
- Data Provider Role/Interest in Agricultural Monitoring and Research Programs:
  - CNES is the French government agency responsible for shaping and implementing France's space policy.
  - CNES supports research activities, from new instrument/EO mission concepts to methodologies for using the data.
  - CNES also supports the development of applications in different fields. Agriculture at different scales is seen as a major user of EO data, now and in the future.

# Summary of Mission Capacity to Meet JECAM/GEOGLAM needs

- Current Mission Portfolio for Crop Monitoring:

- **Pléiades**: 2 satellites in orbit. Daily access to every point on Earth

- Field of View: 20km
- Ground resolution:
  - Panchromatic 70 cm
  - Multispectral: 2.80 m blue, green, red and near infrared
- Stereoscopic capability
- Acquisition of a 120 km x 120 km image mosaic in the same orbit



- **SPOT World Heritage**:

- Reprocessing of the SPOT 1 to SPOT 5 archive for acquisitions older than 5 years: ortho-images, calibrated, top of the atmosphere reflectance
- Ground resolution: 20m (Spot 1->4) and 10m (Spot-5)
- Free access
- Gradual reprocessing, starting with 100 000 images. All data available by 2017 or 2018
- SPOT-6 and SPOT-7: might be also available, on-going discussion with Airbus D&S

# PLEIADES 1A



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# Take 5 experiment

Spot-4 on a five days orbit

CNES experiment, contributions  
of ESA, JRC, NASA, CCRS



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445 users from more than 20 countries

Usefull links :

News : <http://www.cesbio.ups-tlse.fr/multitemp/>

Download : <http://spirit.cnes.fr/take5/>

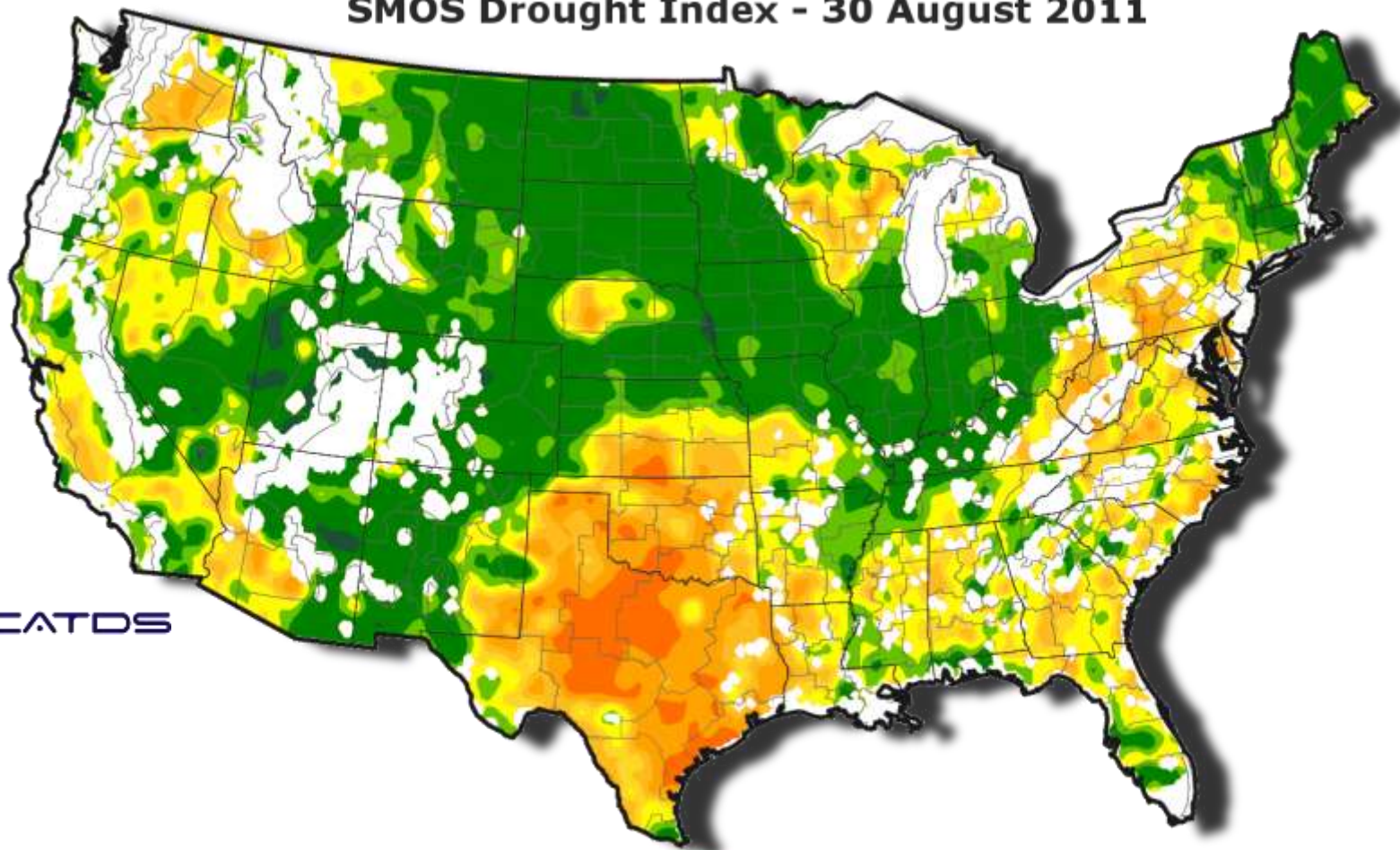
THEIA web site <http://www.theia-land.fr/>

<http://www.catds.fr/>

<https://earth.esa.int/web/guest/-/how-to-obtain-data-7329>

[http://www.cesbio.ups-tlse.fr/SMOS\\_blog/](http://www.cesbio.ups-tlse.fr/SMOS_blog/)

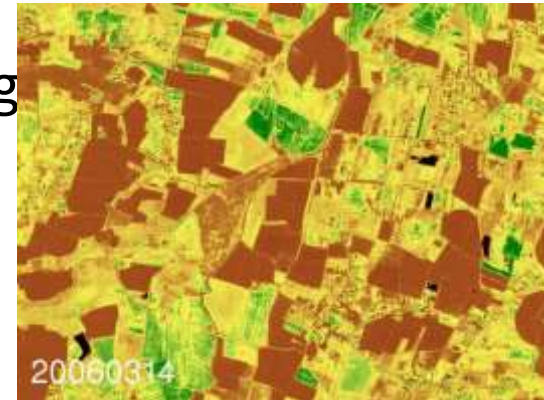
### SMOS Drought Index - 30 August 2011





# Summary of Mission Capacity to Meet JECAM/GEOGLAM needs

- Current Mission Portfolio for Crop Monitoring
  - **Venus** mission due to be launched early 2016
    - Resolution: 5m (L1) - 10m (L2, L3)
    - Field of View: 27 km
    - 12 spectral bands from 412 to 910 nm
    - Geometric revisit frequency: 2 days  $\Rightarrow$  1 useful product per 10 days
    - Systematic acquisition: 100 sites
    - 2 stereoscopic bands with a low angle difference : cloud and surface altitudes
    - Constant viewing angle : minimization of directional effects, easier images registration
- $\Rightarrow$  A major improvement of geometric and radiometric quality of the images products results from the acquisition of time series at constant view angle



**A call for proposal of sites will be launched this summer**

# Data Sharing in the Context of the JECAM/GEOGLAM Request



- Data policy in context of **JECAM/GEOGLAM**
  - Can data be shared among the sites and/or broader GEO community?
  - **SPOT World Heritage** (archive)
    - Free access through a web site soon available
  - **PLEIADES:**
    - Data provision to be requested to CNES (next slide). Data acquired for JECAM will be made available for free provided a license is signed. Data can be exchanged between licensed users.
- Can previously acquired data over these sites be made available?
  - Yes (details on next slide)
- Can a catalog of previous acquisitions over JECAM/GEOGLAM sites be made available?
  - <http://sirius.spotimage.com/PageSearch.aspx>
  - <http://www.astrium-geo.com/en/4871-browse-and-order>

# Data Request and Distribution Proc



- Review of the process for data planning and acquisition over JECAM/GEOGLAM sites:
  - **SPOT World Heritage** (archive)
    - In order to have its sites of interest on the top priorities for reprocessing, it is suggested that the JECAM makes a coordinated demand, CNES prefers to process large volumes of data (e.g. 1000 scenes)
    - Demands for non JECAM sites are also eligible, priority to international projects
    - Free
  - **PLEIADES:**
    - JECAM should prepare a document presenting arguments, justifications and needs
    - The number of images provided (archive or specific tasking) will depend on budgetary constraints
- Point of Contact:

Steven Hosford : [steven.hosford@cnes.fr](mailto:steven.hosford@cnes.fr)

# Research Opportunities

- Are there research funding opportunities that JECAM/GEOGLAM sites can apply for?
  - Yes, but CNES funding limited to French research teams
  - Other opportunities exist, e.g. :
    - Horizon 2020: EU Research and Innovation programme €80 billion of funding available over 7 years (2014 to 2020)
    - European Development Fund (EDF)
    - Bilateral cooperation
- (if so) Description of funding opportunity:
  - CNES: research proposal in April every year

# SPOT-4 Take 5 experiment

**SPOT4-Take5 workshop in CNES Toulouse, France  
November 18-19, 2014**

Registration: email to [sylvia.sylvander@cnes.fr](mailto:sylvia.sylvander@cnes.fr) before September the 15th.

Please also mention if you intend to give a talk, and provide a title. Sylvia Sylvander will contact you for organization details.

A **Special Issue** is also organized in the MDPI remote sensing journal. The deadline for submitting papers is February 28th, 2015 :

[http://www.mdpi.com/journal/remotesensing/special\\_issues/spot4](http://www.mdpi.com/journal/remotesensing/special_issues/spot4)

Hoping to meet you soon in Toulouse

# SPOT-5 Take 5 experiment ?

**We are now pushing for a SPOT-5 Take experiment which could work from April to August 2015**

**10 m resolution, 5 days orbit, green, red, near infrared SWIR channels**

**Interest of JECAM community ?**

**If yes, we might request your support, through for instance letters of interest**

**Process for sites selection not yet decided: we are first waiting for the decision to perform the SPOT-5 Take 5 experiment**

**Possibility/interest for acquisition of other satellite data over the same sites ? (Sentinel 1, .....**