

CNES ??



Centre National d'Etudes Spatiales (CNES)

Space Agency and Office

Founded in 1961, the Centre National d'Etudes Spatiales (CNES) is the **government agency** responsible for shaping and implementing France's space policy in Europe.

Its task is to invent the space systems of the future, bring space technologies to maturity and guarantee France's independent access to space.

4 strategic priorities

Geared to the key challenges of the coming decade. We are serving all public policies supported by the space sector. These priorities are laid out in the CNES-government contract for 2022-2025, under the banner "New Spaces".



Strengthen our strategic independence



Sustain a competitive space ecosystem



Extend our scientific excellence



Work towards a sustainable world

+100 space projects

Currently led by CNES in 5 key domains.

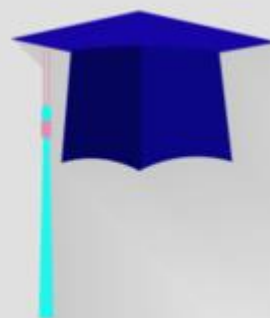


45 Nations

we are working with around the world.



2,400 employees



100 doctoral

and post-doctoral research grants awarded every year to French and foreign students.



€37

Mean yearly per-capita amount that France devotes to space, the world's 2nd largest space budget.



2,566 million euros

Budget for 2022, including France's contribution to ESA of €1,184m.

CNES by the numbers



>40 firms

Receive support every year from CNES to develop and diversify the French and European space ecosystem, including new entrants and start-ups in the space sector.

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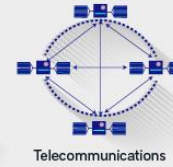
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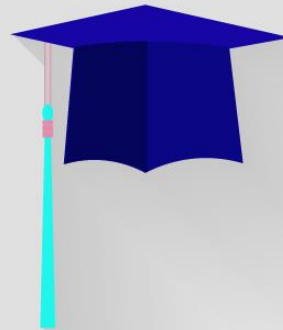


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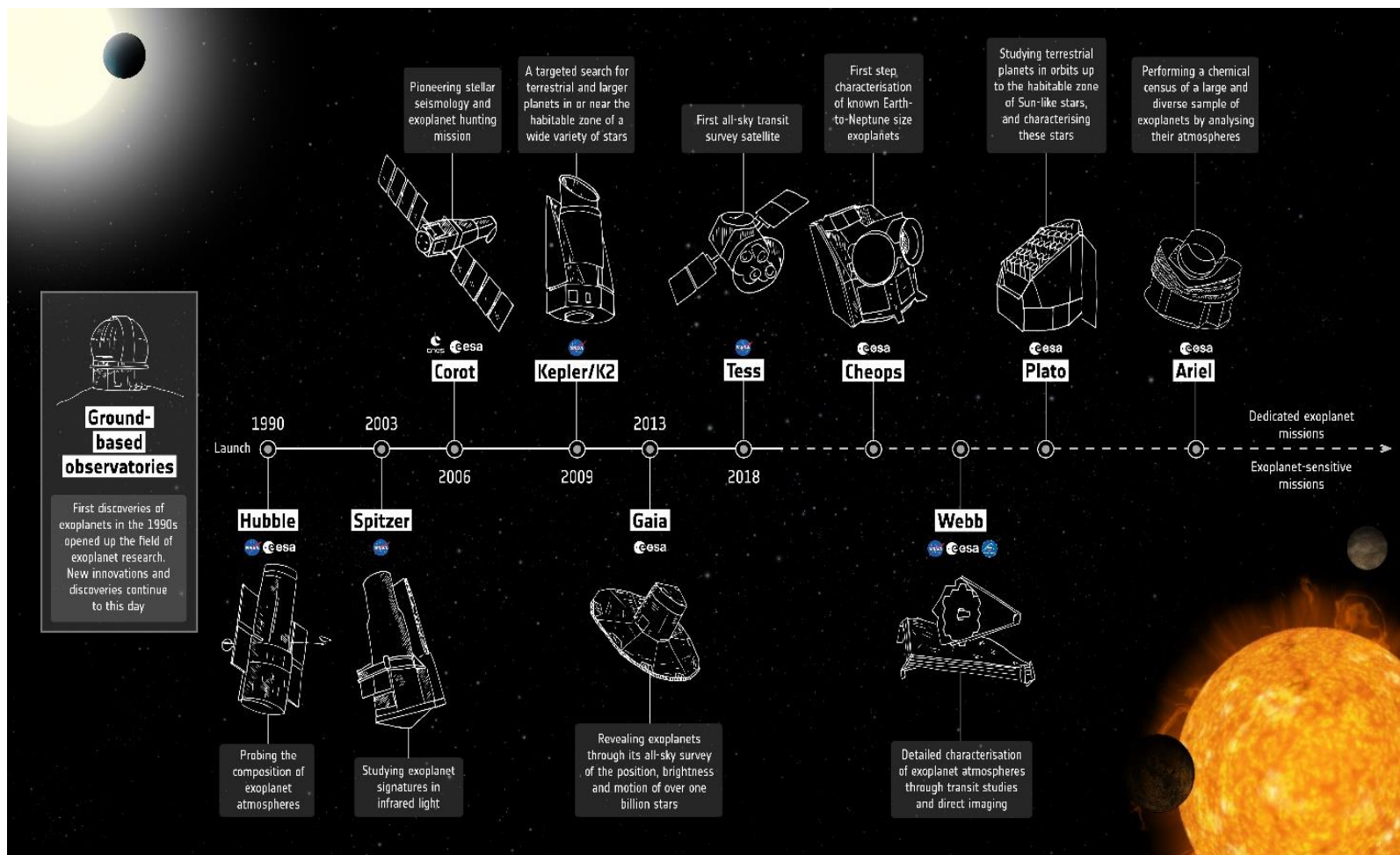


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CNES by the numbers

Exoplanets / CNES : We are IN



COROT
CNES responsibility

GAIA
Participation. Data treatment

CHEOPS
Participation. Pipeline

JWST
Participation. MIRI

NGRST (Roman)
Participation. Data treatment

PLATO
Participation. Payload and science

ARIEL
Participation. IR Spectrometer AIRS



FRENCH RESPONSIBILITIES ON ARIEL

EXTRACT FROM MLA :

CNES will develop, integrate, verify and deliver the following hardware and associated payload software elements:

- **AIRS instrument** optical module to be delivered to the UK Space Agency;
- **AIRS DCU**, to be delivered to UKSA;

CNES, as part of the AMC SGS, will:

- **Contribute** to the management and systems engineering of the IOSDC;
- **Contribute** to algorithms, software definition and data processing of the SGS and to the observations and scheduling.

FRENCH ORGANIZATION FOR ARIEL



JOINT EFFORT / CO-FUNDING :



CNES : French contributions : Project management. Expertise support.

CEA : Co-PI. Responsible for AIRS development.

IAS : AIRS optical, thermal and mechanical, and provide optical elements.

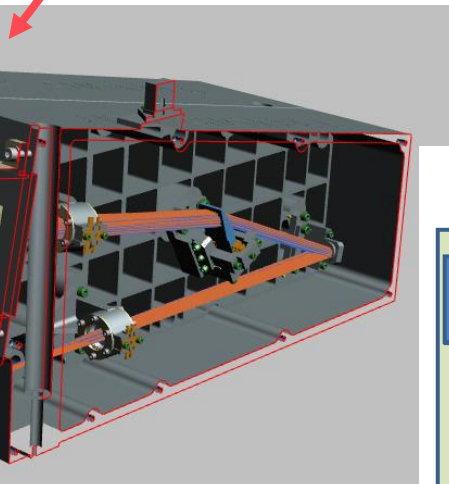
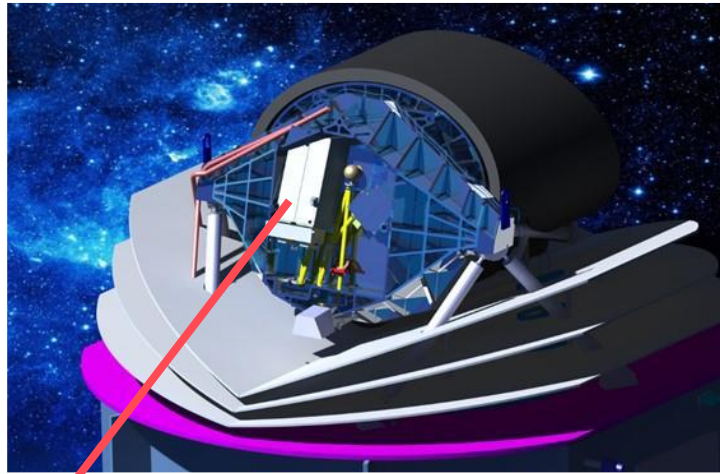
LESIA : AIRS calibration activities

AIRS

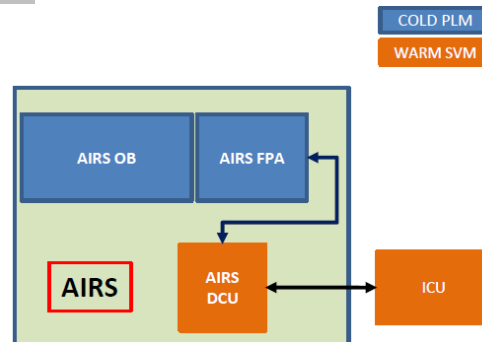
IAP : Co-PI. Involved in pipeline activities, IOSDC, Ariel School.

INSU Laboratories involved in science activities, working groups, data treatment...

CNES IN ARIEL



AIRS

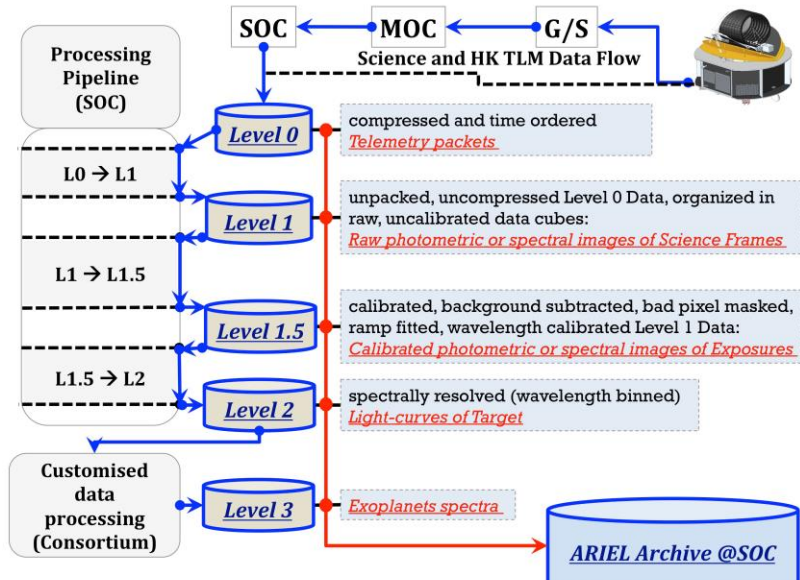


Ariel Infra-Red Spectrometer

AIRS

- **Funding OK until Phase E1 (end of commissioning)**
 - Co-funding for CEA activities
 - Joint Effort with IAS and LESIA
- **Support in some areas of expertise when needed**
 - EEE, Materials, Process
 - Detection
 - Radiations
 - Contamination
- **Co-chairing reviews with RAL**
- **Participation to the ESA steering committee**

CNES IN ARIEL



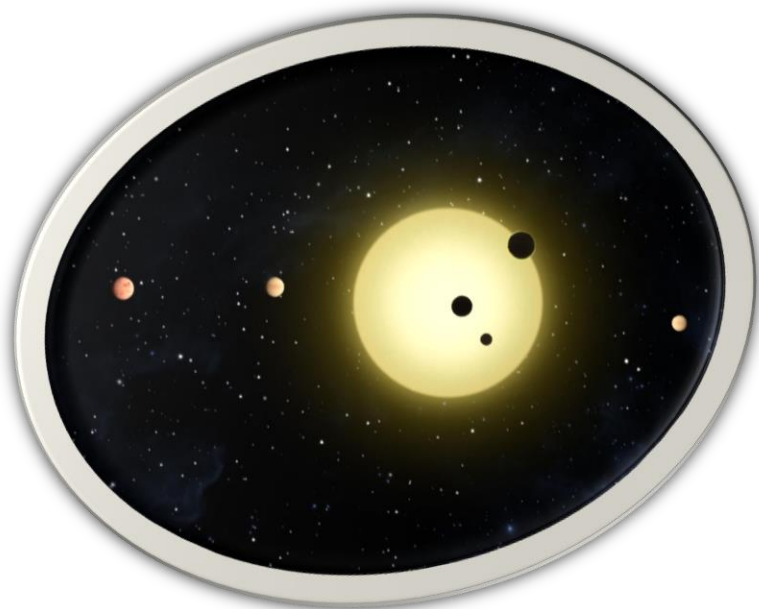
GROUND SEGMENT

- AIRS End to end simulations for a large contribution to the pipeline : Co-funding with CEA
- Funding for French labs participations to the Science Ground Segment activities IAP, CEA, IAS, LESIA

Machine Learning group CNES/Labs to learn, experiment and integrate the best methods to data treatment.



CNES IN ARIEL



SCIENCE

- Active participation to AMC working groups
- Funding to support labs in Ariel science working groups
- Ariel Schools
- PhDs and Post Docs



CNES is your partner to prepare the future.

Let's see together beyond Ariel's launch !



CONTACTS

Project Management for Ariel's french contributions :

Pascale Danto, CNES, Toulouse

pascale.danto@cnes.fr

Exoplanet and exobiology expert :

Christian Mustin, CNES, Paris Les Halles

christian.mustin@cnes.fr



Thank you