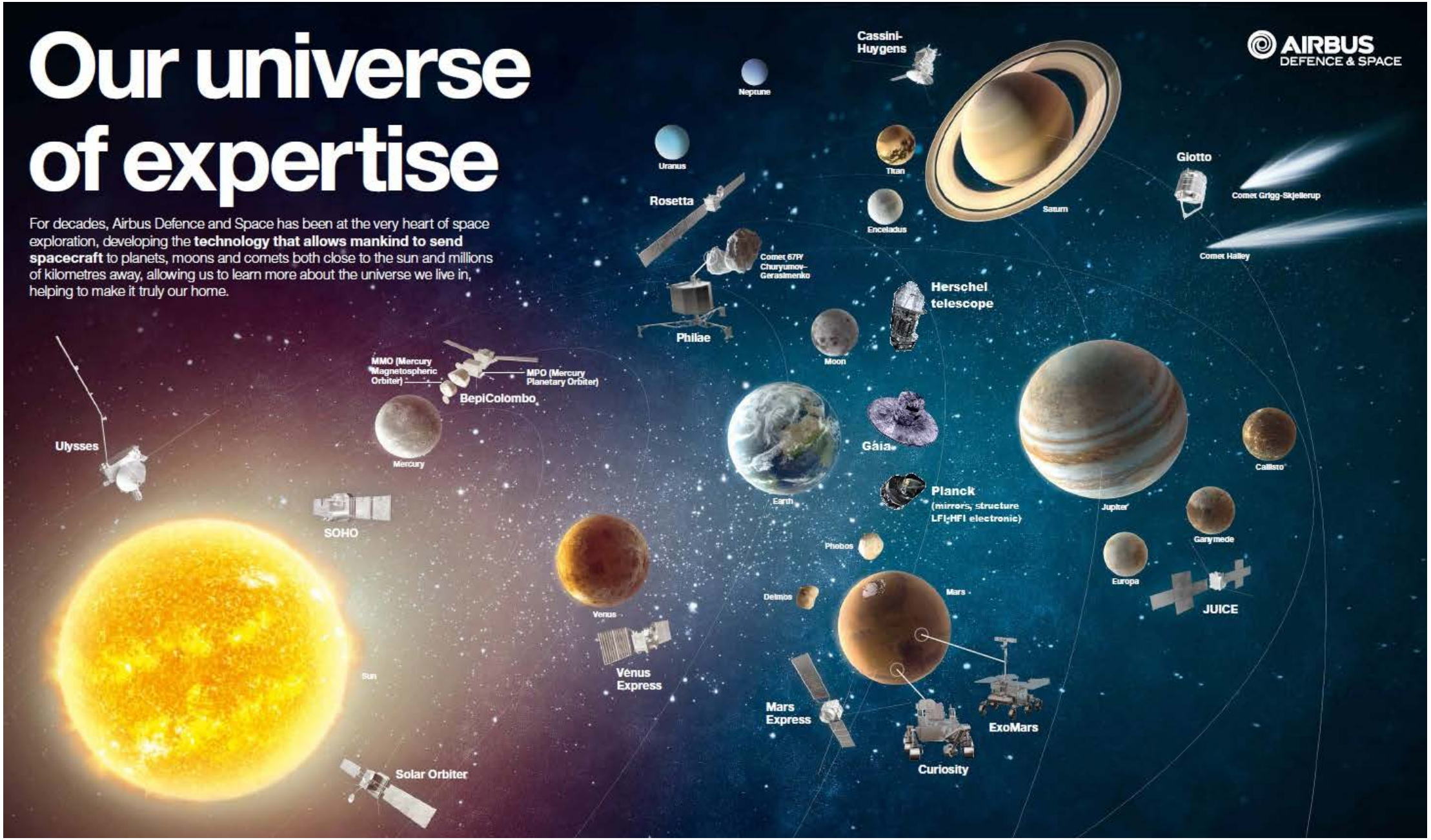
Gaia

the Airbus perspective

Benjamin Massart
24 April 2017

AIRBUS



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An Airbus-lead european spacecraft

- 16 countries
- up to 400 colleagues involved in industry at the same time
- more than 50 companies in Europe and US

• 2000	ESA selection
• 2002-2005	study
• 2006-2013	development
• 2013 Dec 19	launch
• 2014 Jan-Jul	commissioning
• 2014 Aug – now	mission

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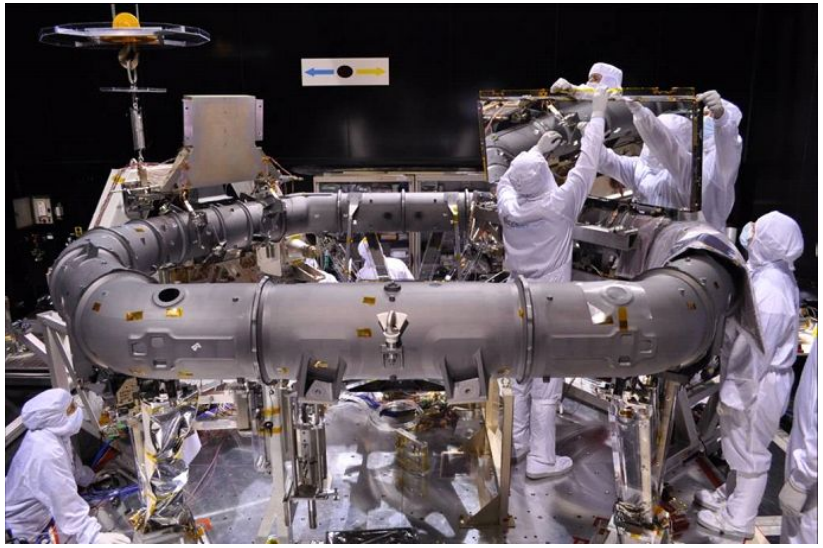
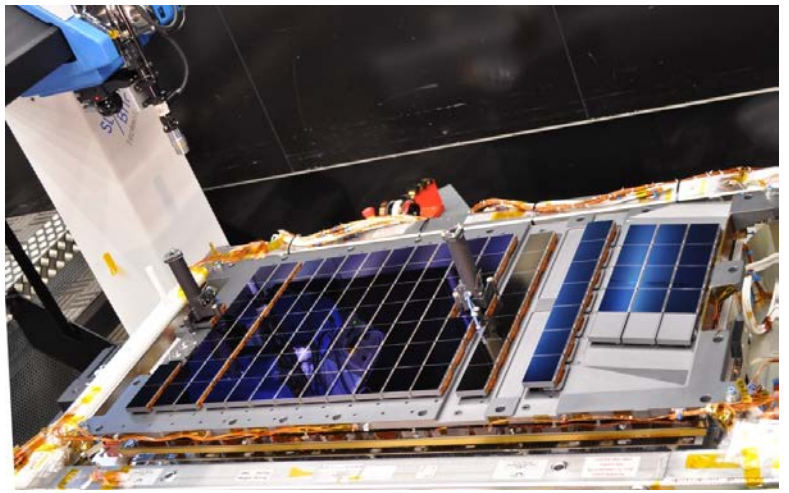
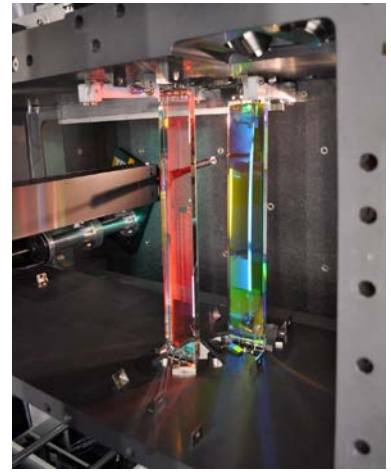
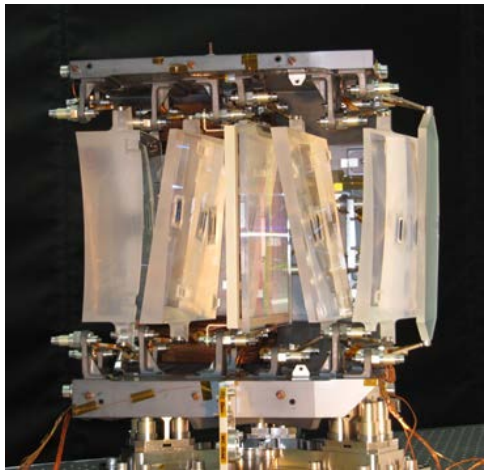
A gigapixel Focal Plane Assembly









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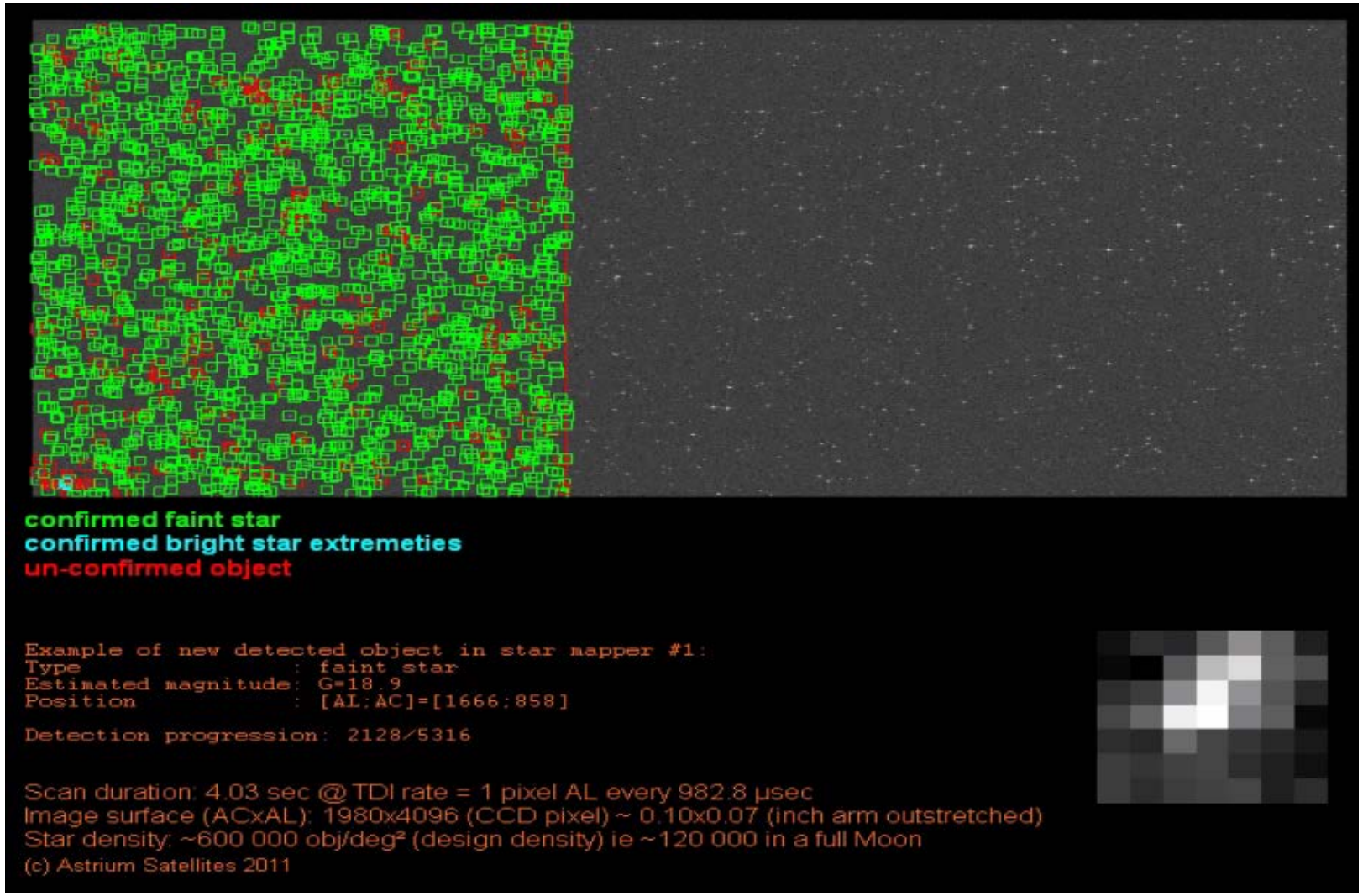
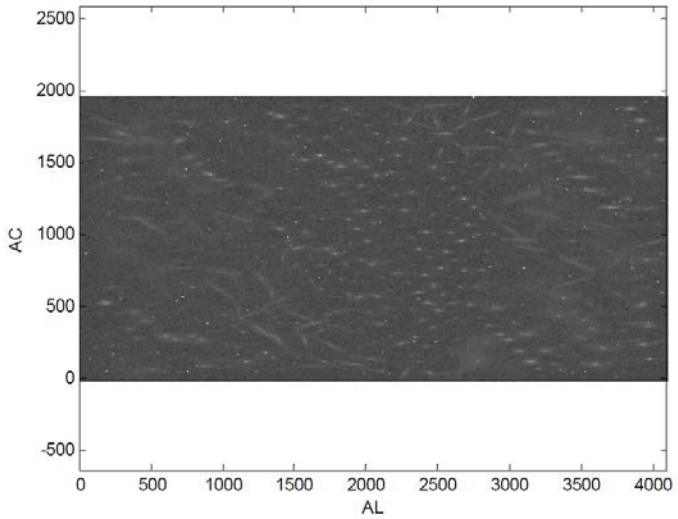
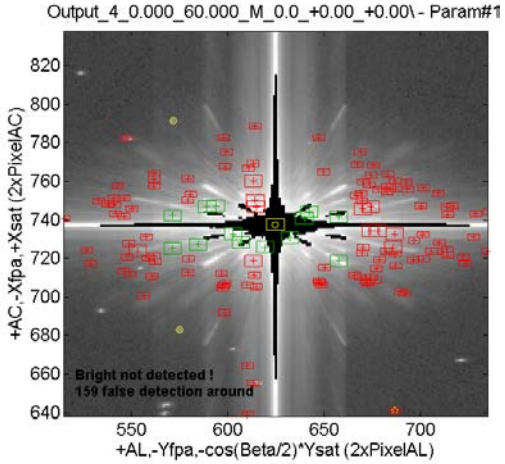
up to 10 000 stars detected and confirmed every second







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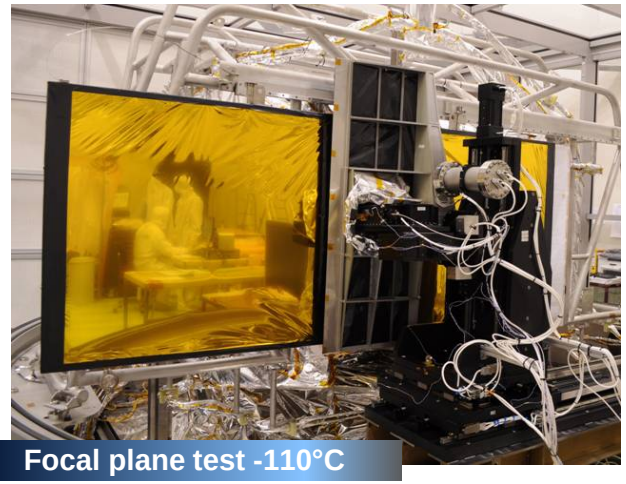
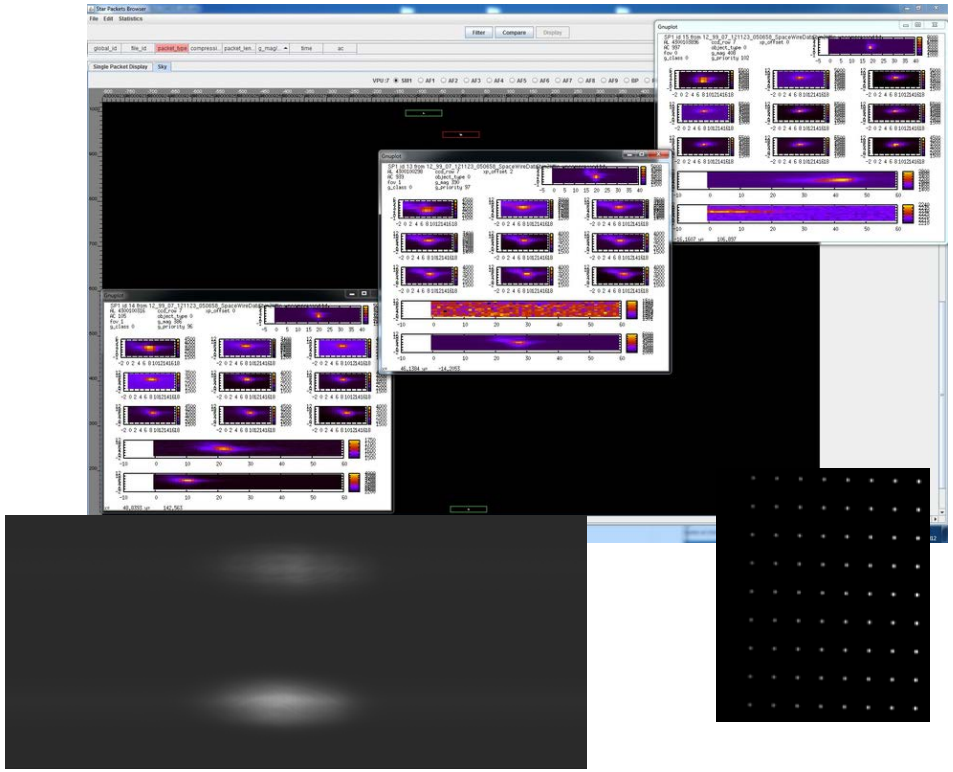
Spacecraft testing campaigns



Focal plane test -110°C

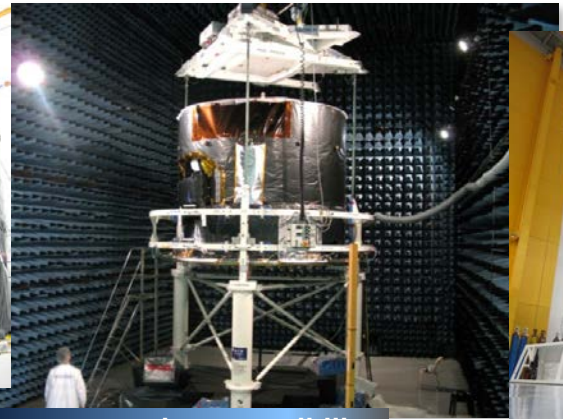
PLM test -110°C



Mass properties

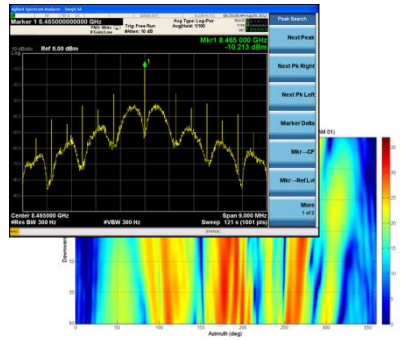
Vibration tests

Acoustic tests



Electromagnetic compatibility

Propulsion systems tests



Final functional tests

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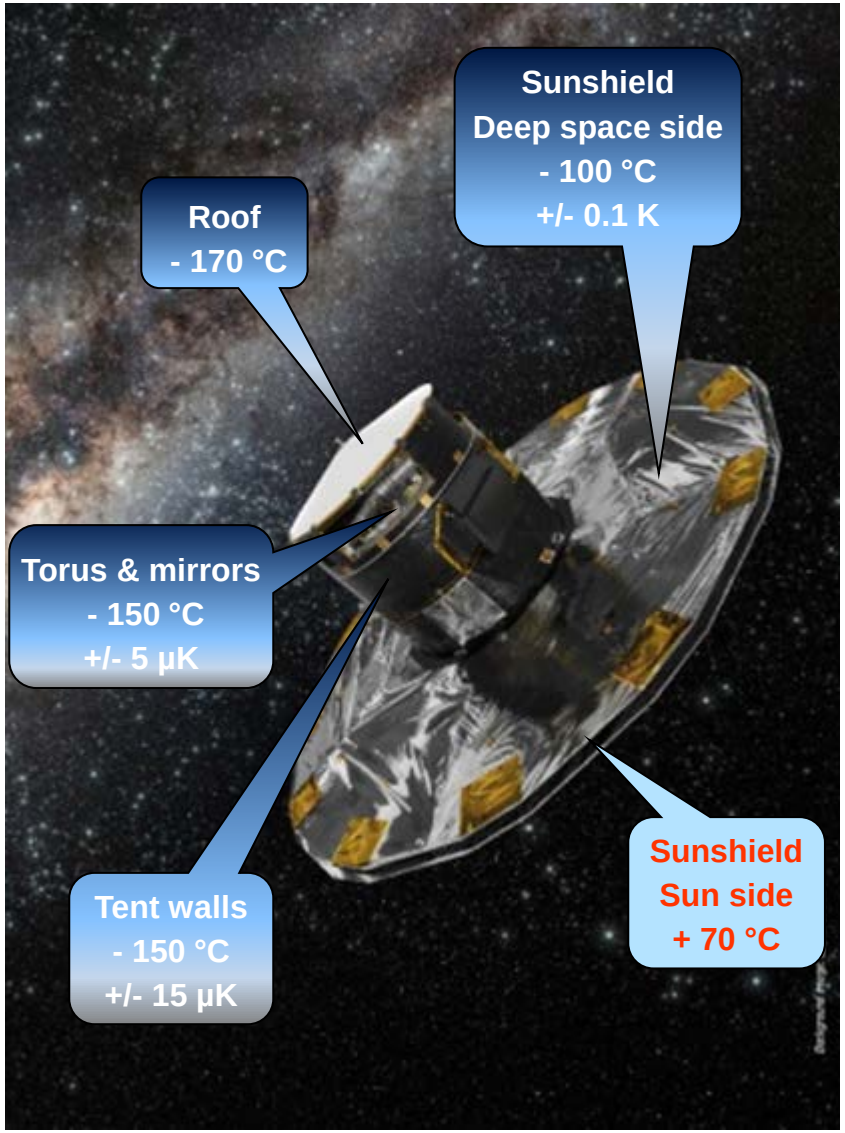
A high thermal isolation performance



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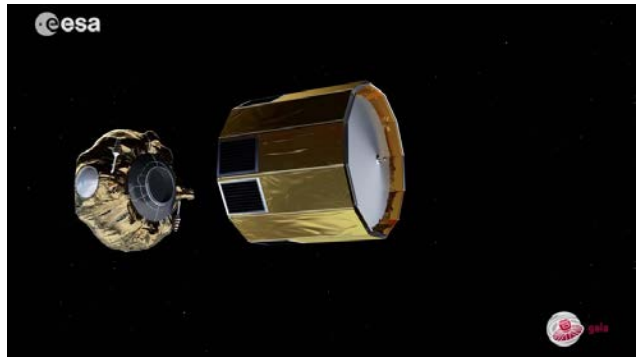
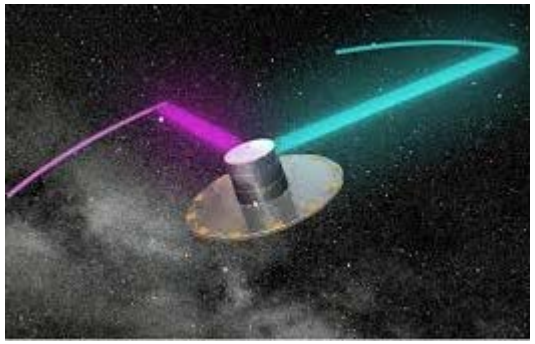
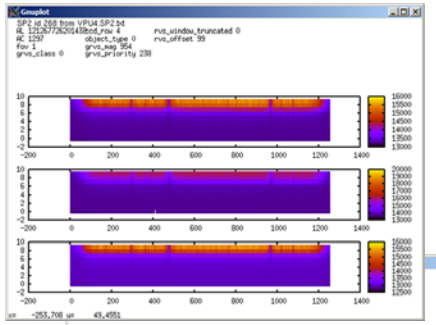
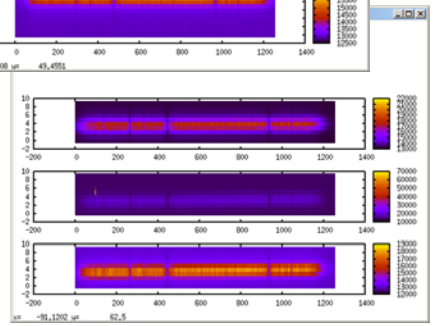
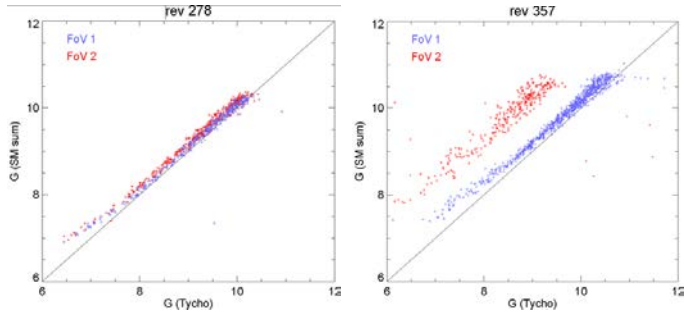
Launch and commissioning

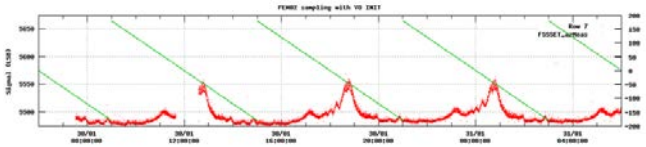


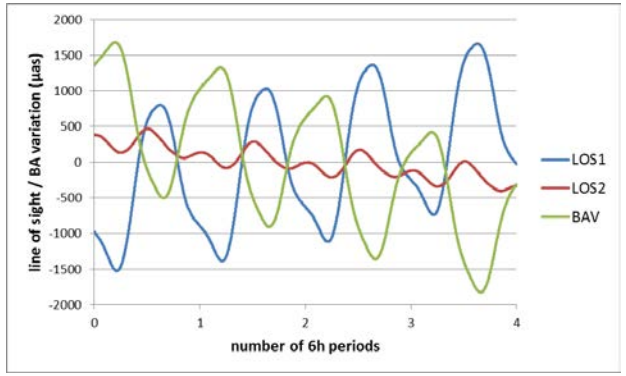












CURRENT DATE AND TIME	2017-04-20T12:01:14 (TCB)
MISSION STATUS	
Satellite distance from Earth (in km)	1,515,499
Number of days having passed since 25 July 2014	1000
OPERATIONS DATA (collected since 2014/07/25)	
Volume of science data collected (in GB)	35,875
Number of object transits through the focal plane	69,607,439,997
Number of astrometric CCD measurements	686,130,479,970
Number of photometric CCD measurements	146,594,518,272
Number of spectroscopic CCD measurements	13,681,558,860
Number of object transits through the RVS instrument	4,320,531,390

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Thank you

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