



DORIS

DORIS Missions & system news



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DORIS MISSIONS

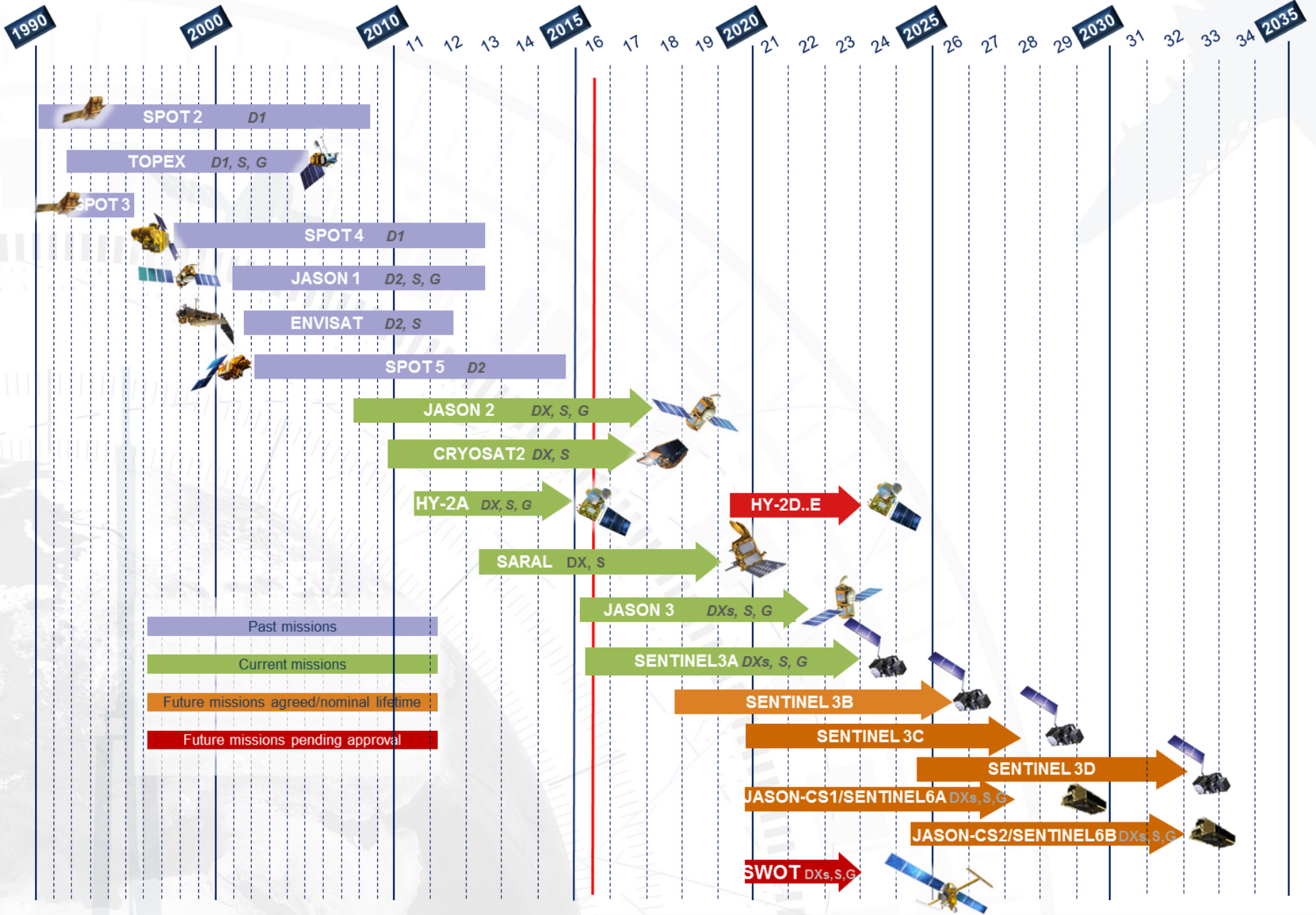
Today 6 satellites contribute to IDS / 13 missions have contributed since 1990

- **SENTINEL 3A (GMES):** 814km, 98.6° February 16th 2016 → 2023 (DGXXS+LRA+GPS)
- **JASON3 :** 1336 km, 66° January 17th 2016 → 2021 (DGXXS+LRA+GPS)
- **SARAL (CNES/ISRO):** 800km, 98.5° February 2013 → 2018 (DGXX+LR)
- **HY2-A (CNSA, NSOAS):** 960km, 99° August 2011 → (DGXX+LRA+GPS)
- **CRYOSAT-2 (ESA):** 717 km, 92° April 2010 → end 2017 (DGXX + LRA)
- **JASON2 (NASA/CNES):** 1336 km, 66° June 2008 → 2017 (DGXX+LRA+GPS)

SPOT5 (CNES) was deorbited in October 2015 after 13,5 years of services

Many future missions

- Sentinel 3B: 2018 (7 years)
 - Sentinel 3C, 3D 2020, 2025 (7 years)
- HY2-D, HY2-E 2020, 2021 (3 years)
- JASON-CS1/ SENTINEL 6A (Eumetsat/NOAA) end 2020 (7 years)
 - Jason-CS2/SENTINEL 6B 2025 (7 years)
- SWOT* (NASA/CNES) : 970km, 78° post 2020 (3 years)
- GRASP (NASA Earth Venture Mission-2) 2020
 - TriG/SLR/VLBI
 - Orbit: 925 – 1400 km, 100.2 deg., sun-synchronous
- E-GRASP/Eratosthenes (ESA Earth Explorer-9 mission) : Phase 0 **2024**
 - Payload: GNSS/DORIS/SLR/VT/μSTAR/T2L2
 - Orbit: 6450 – 7800 km, 117.5 deg.
 - Or 933 – 7200 km, 116 deg., sun-synchronous



On board instruments:
D1, D2, DX, DXs: DORIS/versions, **S:**SLR, **G:**GNSS

Fourth generation Beacon B4G

- Designed to be operational up to 2030
 - New electronic (with up to-date components)
 - Better masks clearance expected thanks to longer distance between beacon and antenna (up to 50 m)
- Schedule :
 - Kick off of development in March 2016
 - First production units: October 2017
 - Pre-production units: May 2018
 - First production units: April 2019

Last news on DORIS DATA

- **Jason3:** reached its final orbit on February 12th, the DORIS DATA have been available since February 17th (cycle1) :
 - DORIS RINEX only (NO DORIS2.2)
 - Onboard GPS software was upgraded on March 16 → Data Gap from 2016/03/15 to 2016/03/17
- **Sentinel3A:** reached its final orbit on March 2, 2016 and all DORIS data are available from then (disseminated in April)
- **Hy-2A was moved to a geodetic Orbit on 23rd March 2016**
 - new orbit is now about 2 km higher
 - → data gap from March 15th to March 24th
- **Jason2:** On April 5th 2016, update of the onboard PROTEUS GPS software → data gap from 2016/04/05 to 2016/04/06



Service International DORIS

<http://ids-doris.org>

www.cnes.fr

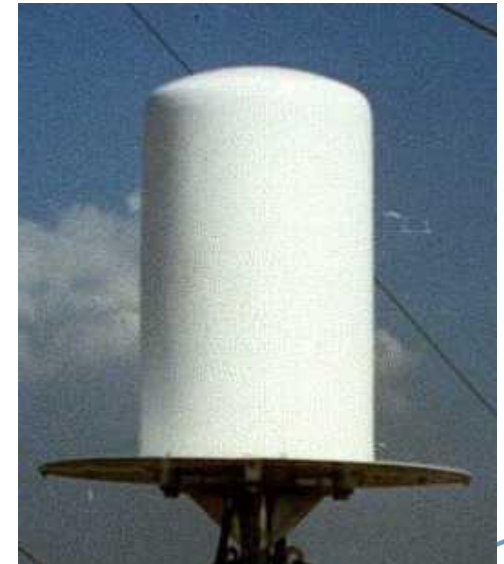
Radio frequency characterization of ALCATEL DORIS ground antenna

❑ Objective :

- ❑ Define the phase center and the dispersion of ALCATEL Antennas,
- ❑ determine the impact on the phase law.

❑ Five Alcatel ground antenna have been characterized at CNES compact antenna test range (CATR).

- ❑ Data still have to be studied to determine the impact on the phase laws.
- ❑ → Results will be presented in October (IDS Workshop LaRoche)



Alcatel Antenna

