Sentinel & Copernicus

Pacific Islands GIS&RS User Conference 2015

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Wolf Forstreuter, SPC-GSD

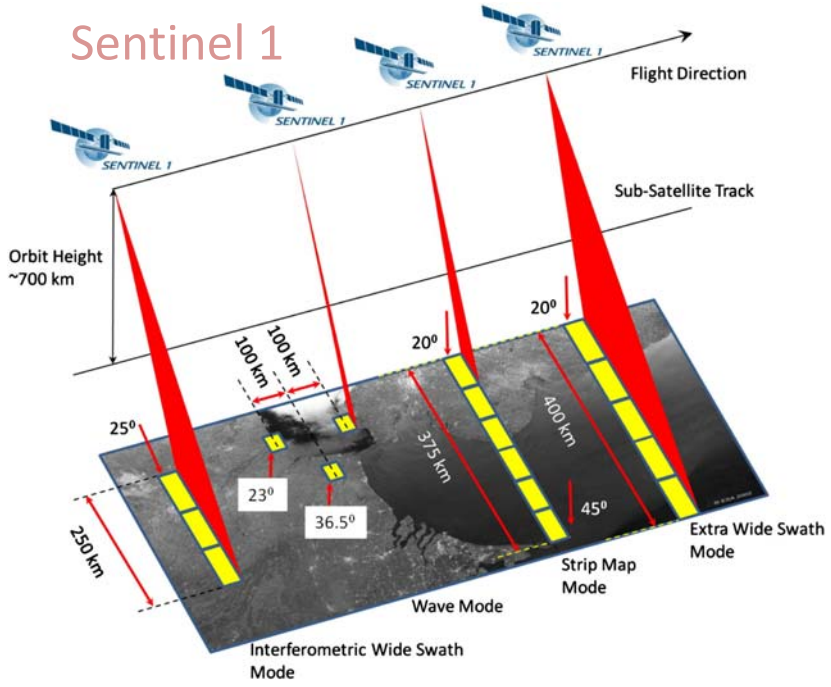
For Frank Martin Seifert ESA

Sentinel 1

and ENVISAT

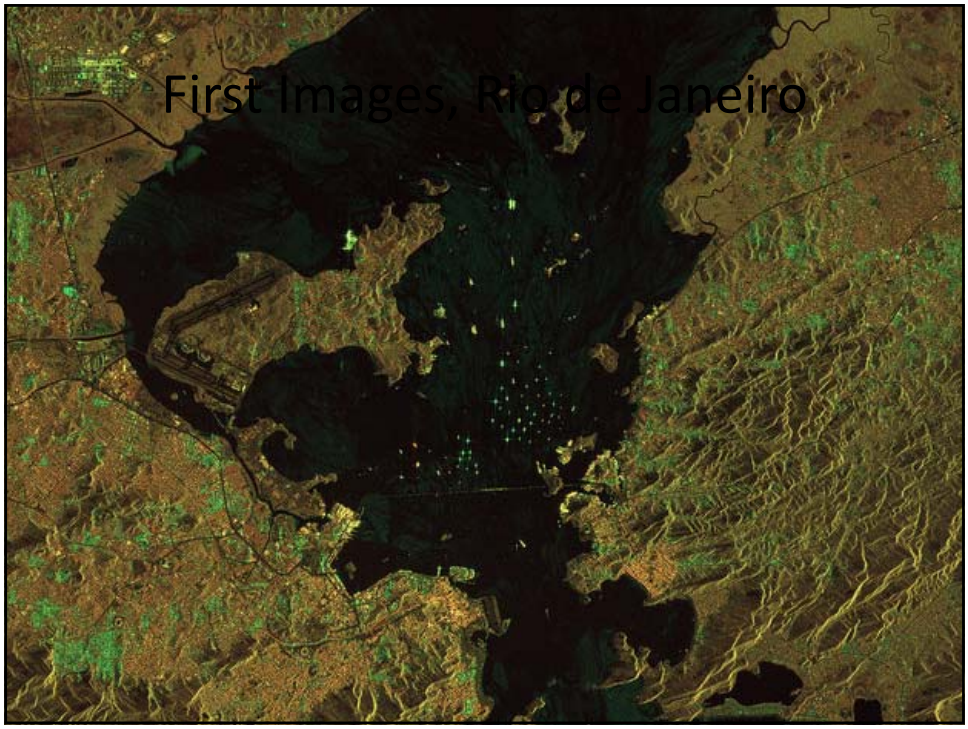
3. Radar captures day and night and through clouds

Sentinel 1



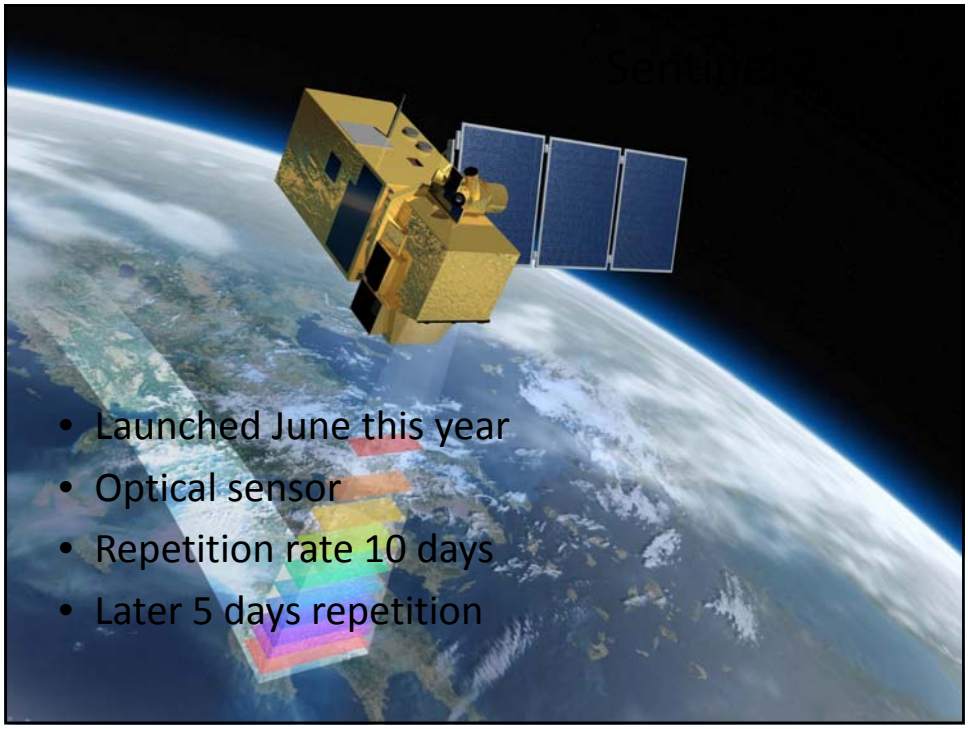
Sentinel 1 Applications

- Flood mapping
- Land use / forest mapping (?)
- (Interferometry)
- (DSM generation)
- (Shipping vessel detection)
- (Mapping of oil spills)



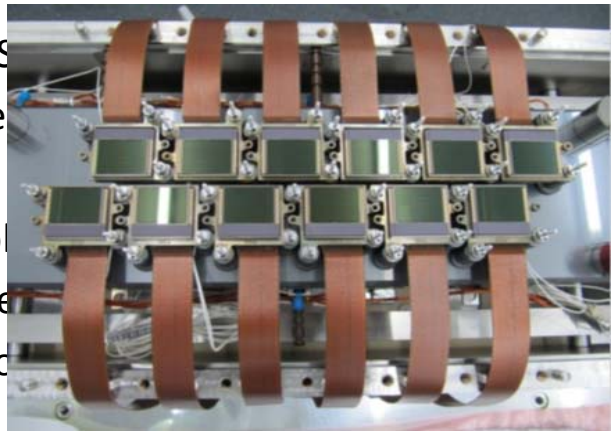
What's New?

- High repetition rate, currently 12 days recording same area
- Next year Sentinel 1B, 180 degree in same orbit -> 6 days repetition
- Data for free !



The Sensor

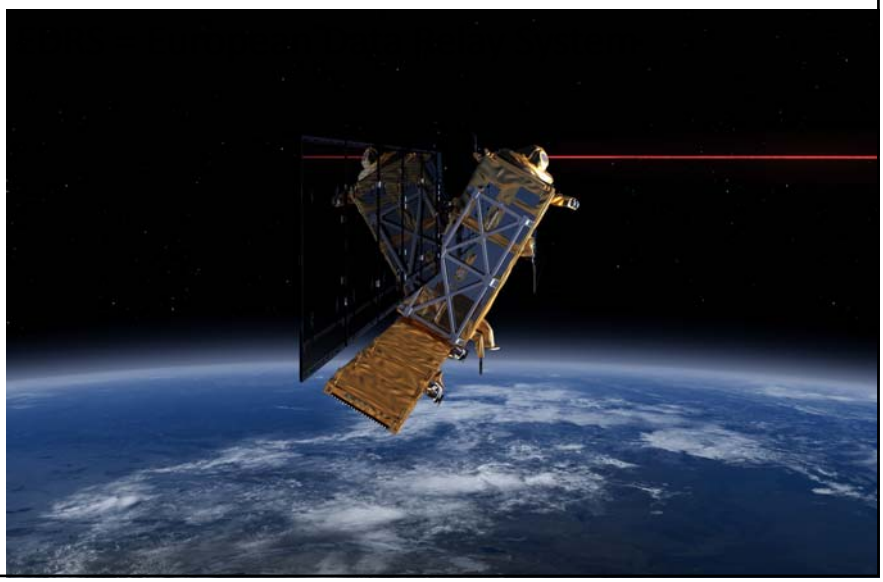
- Multi S
- 13 spe
- 4 visibl
- 6 red-e
- 3 atmo

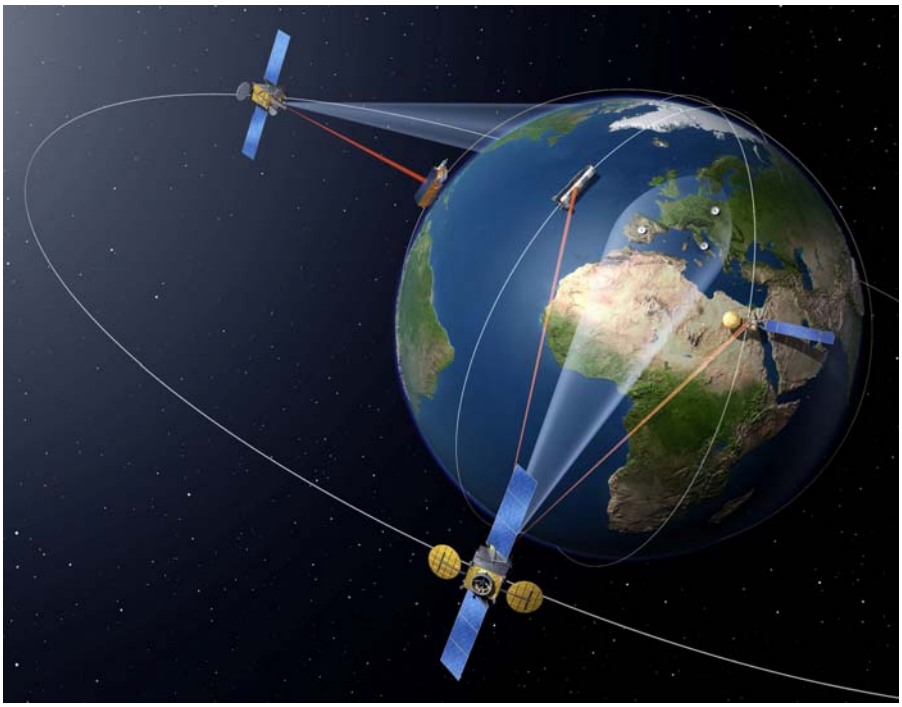


Again, “What’s New” ?

- Both (all four) satellites are part of Copernicus a environmental monitoring programme
- Part is the satellite program with:
  - Sentinel 1 (A + B)
  - Sentinel 2 (A + B)
  - Sentinel 3 (A + B)
  - Sentinel 5 (+ 5p)
  - Sentinel 6

SpaceDataHighway





EDRS

- Sentinel in ~ 800 km height records
- No need to download to receiving station ….. and
- No need to store on-board storage facility such other satellites
- Laser transmission to relay satellite 45,000 km away
- From relay satellite directly to ground antenna

Advantage

- Laser fast, allows large amount of data 6 Terabytes / day
- Data availability a few hours after recording