

La Agencia Espacial Argentina

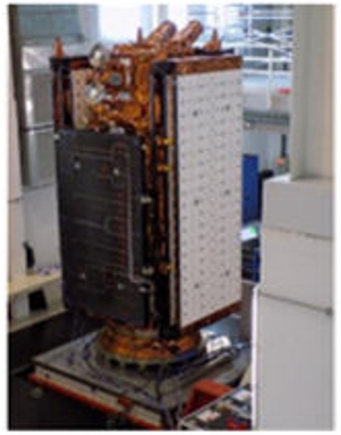
Comisión Nacional de
Actividades Espaciales

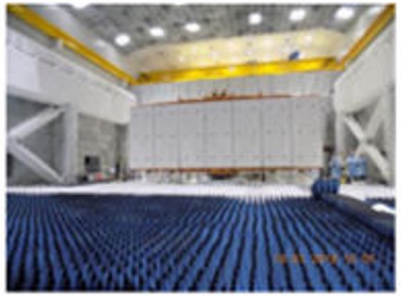
CONAE SAR Activities and Plans

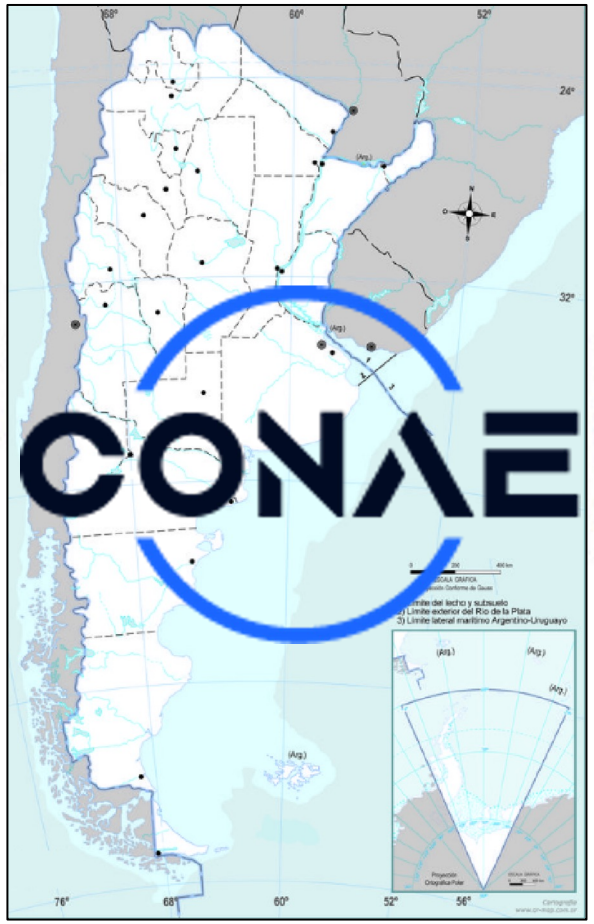
Laura Frulla

CONAE´s Main Activities

SATELLITES

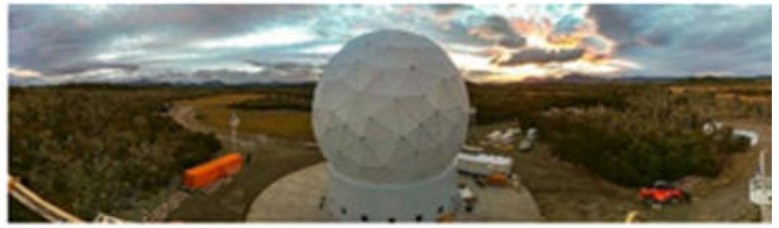






GROUND STATIONS





ACCESS TO SPACE



PROCESS & DISTRIBUTION OF SPACE BASED INFORMATION



EDUCATION & CAPACITY BUILDING



Ground Stations

Teófilo Tabanera Space Center

-31.525, -64.463







-54.510, -67.116

Tierra del Fuego Ground Station



- Satellite operation
- Satellite monitoring and command
- Support for international missions





-77.875, -34.627

Ground Station in Antartica



Education and Capacity Building

Magister programs (Space Systems, Satellite Instruments, Spatial Information Applications)

Ph.D. Program on Geomatic and Space Systems

University degree on Applied Geomatics

Program for training kids

Special short training courses for users (different topics)

- standard
- ad-hoc

- hybrid,on-line, in-person
- remote sensing/image processing

Mario Gulich Institute

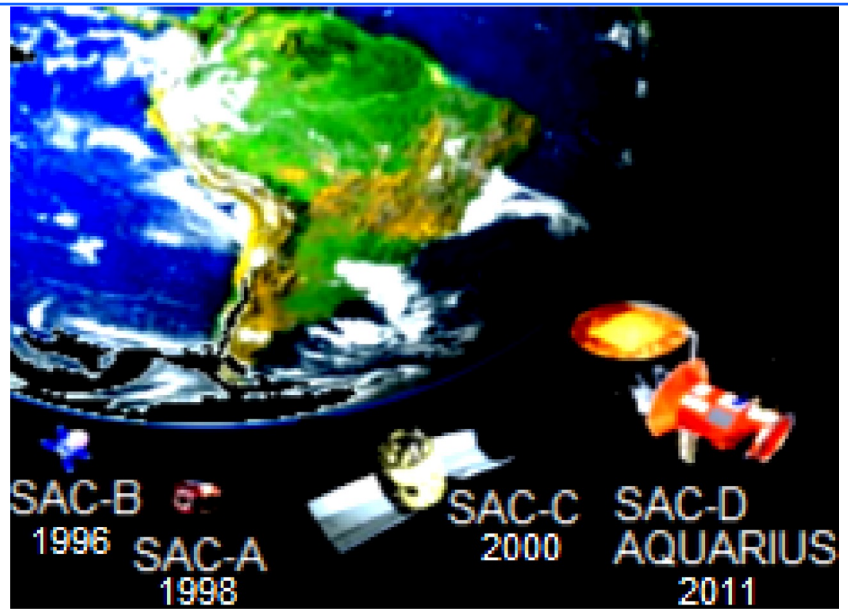




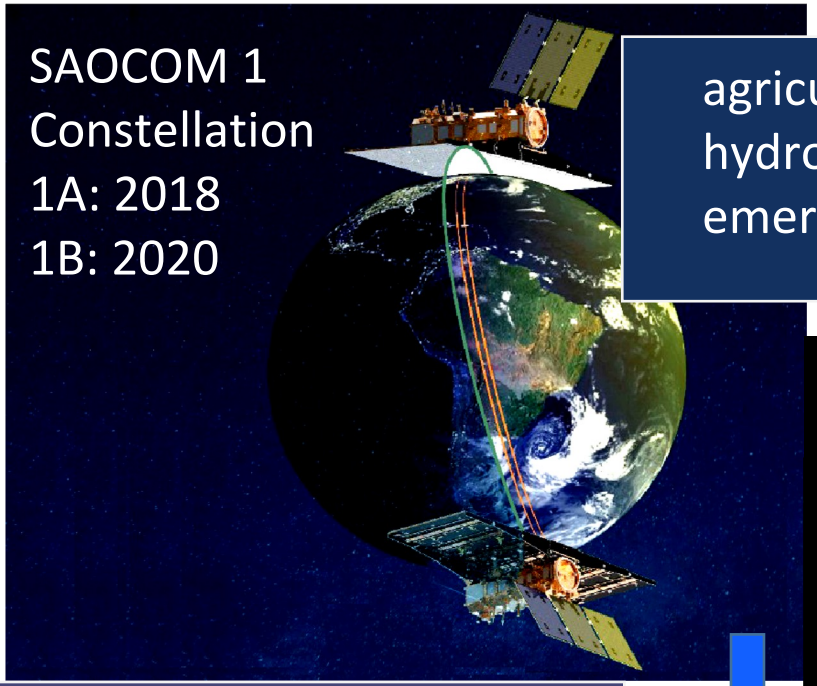


https://ig.conae.unc.edu.ar/

Satellite Missions

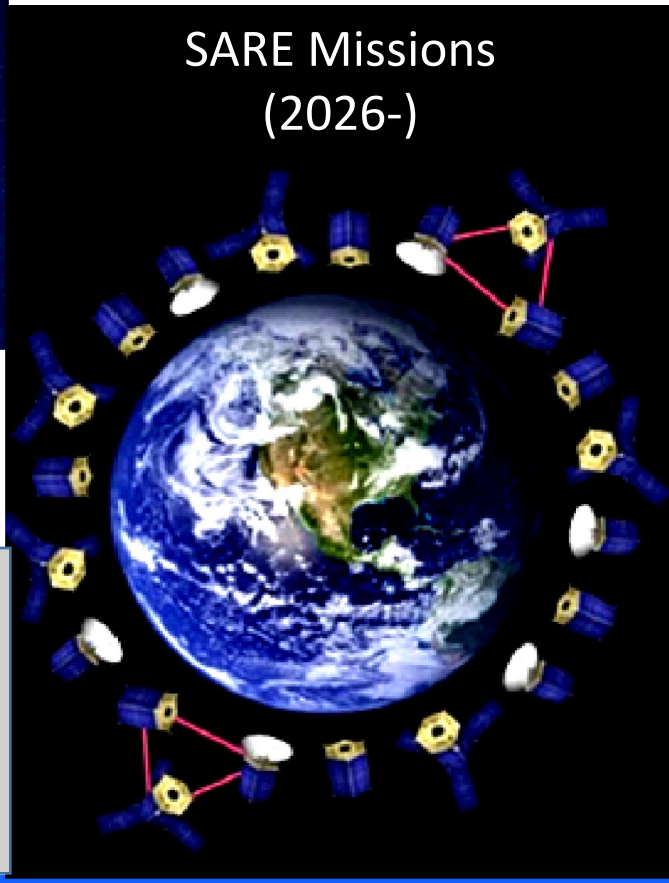


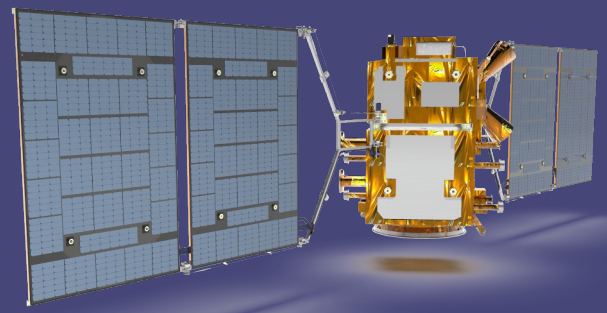
SAOCOM 1
Constellation
1A: 2018
1B: 2020



agriculture / soil moisture
hydrology / floods
emergencies

SARE Missions
(2026-)



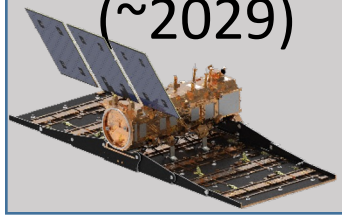


SABIA-Mar Mission
2027

ocean/ocean color, primary productivity,
marine ecosystems and habitats, fishery

land/vegetation, land use, inland waters, flooded areas

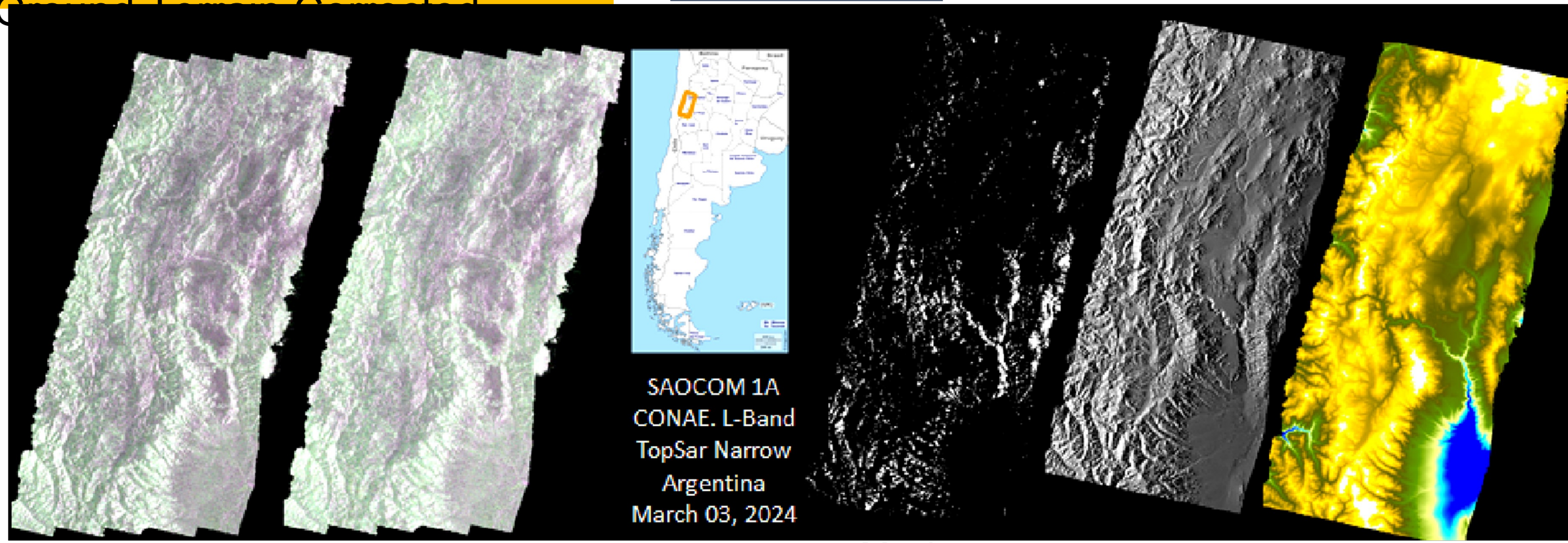
SAOCOM 2
(~2029)



SAOCOM 1 Mission – Level 1 Products

L1A, Single Look Complex
L1B, Detected Image
L1C, Ground Ellipsoid Corrected
L1D, Ground Terrain Corrected

SAOCOM TN ARD Outputs



R:SIGMA0_HH
B:SIGMA0_HV
G:SIGMA0_VV

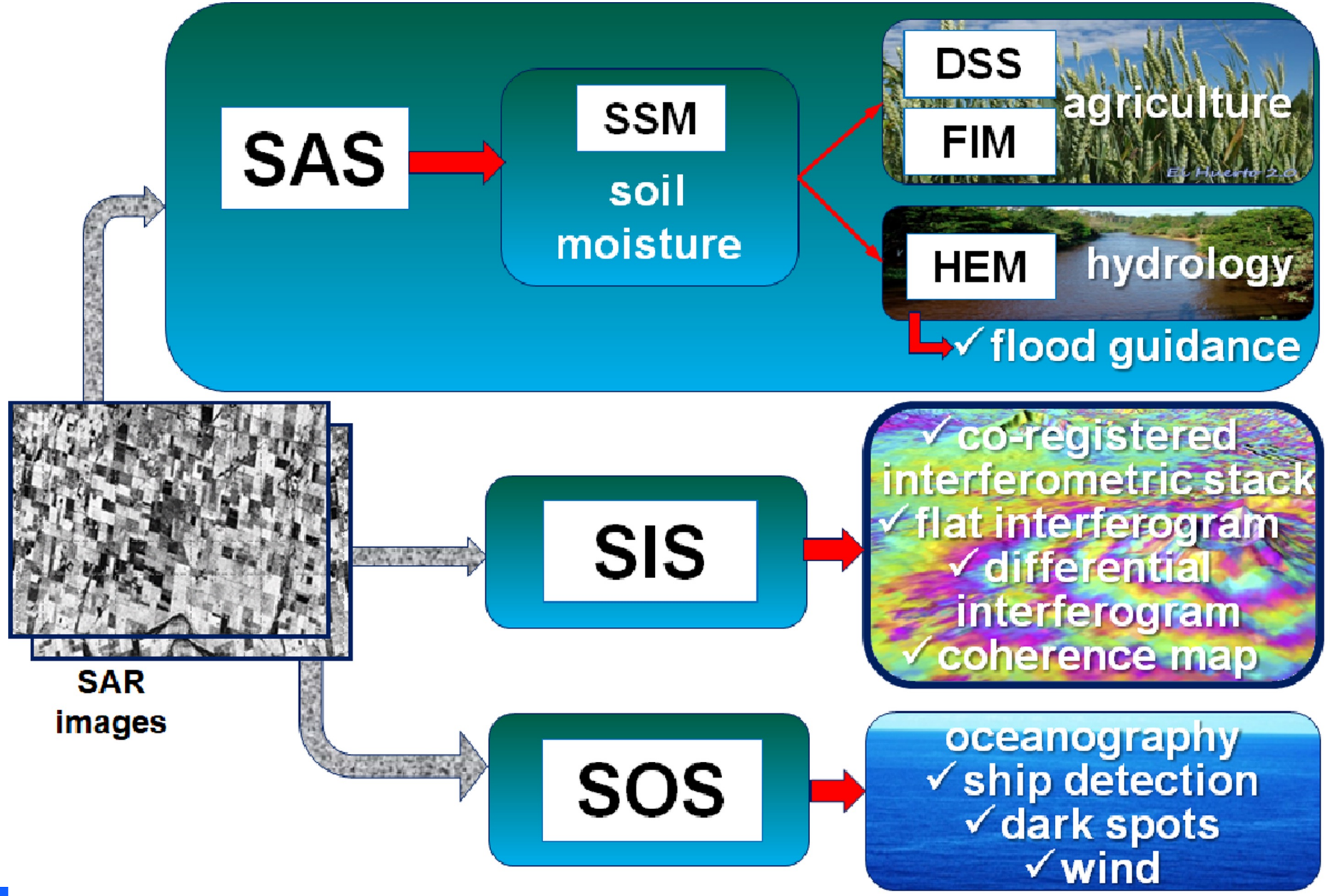
R:GAMMA0_HH
B:GAMMA0_HV
G:GAMMA0_VV

Mask

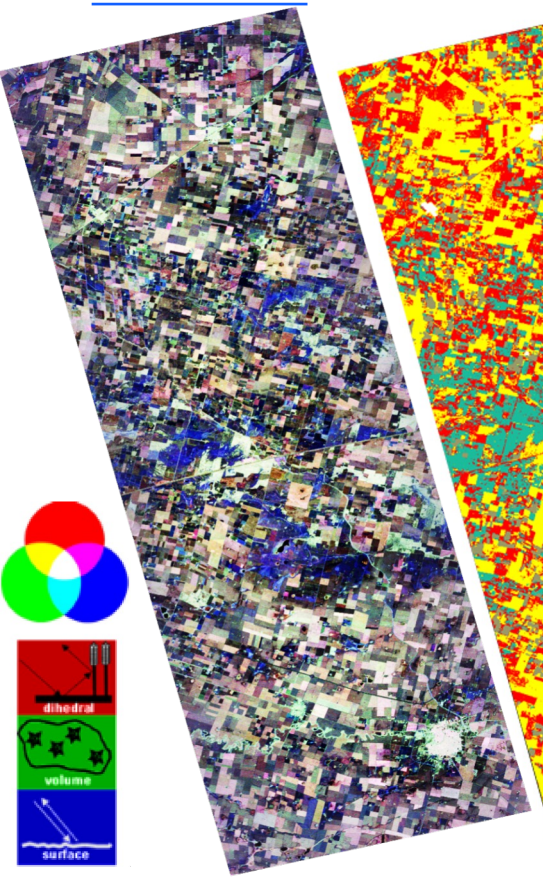
Local Incidence Angle

DEM

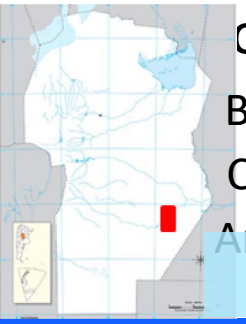
SAOCOM 1 Mission – Level 2 and Derivative Products



Some Available Products - Level 2 and Derivative (Agriculture)



Pauli

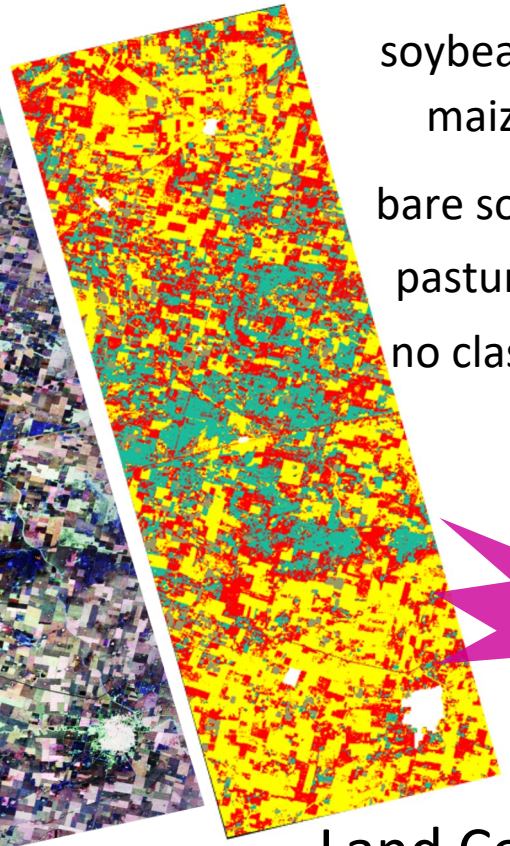


osition

Bell-Ville

Córdoba

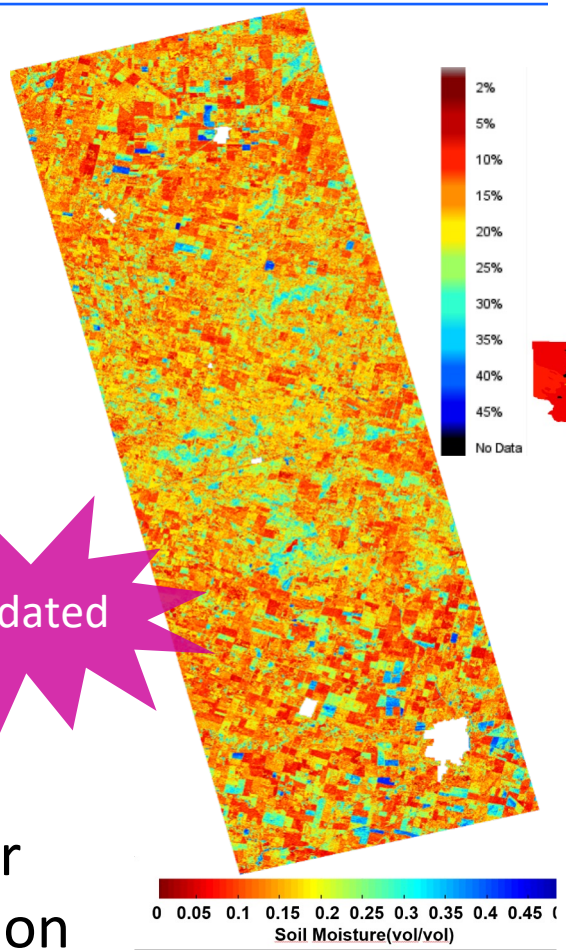
Argentina



Land Cover Classification

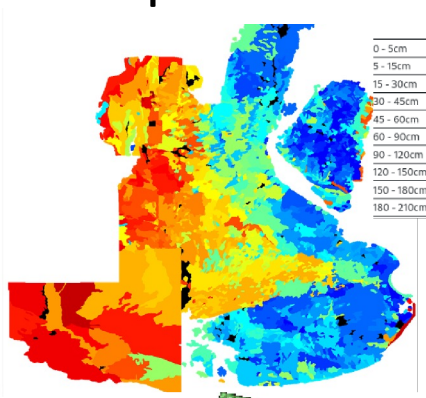
vegetation water content

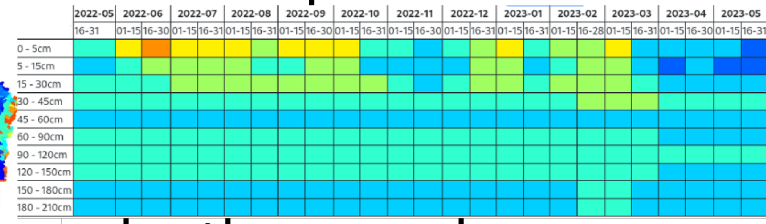
validated



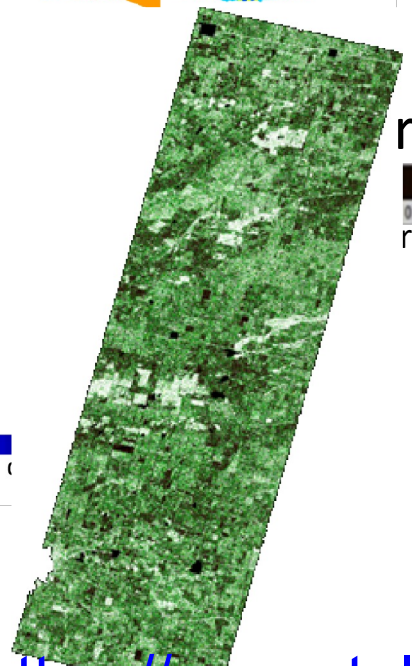
Soil Moisture Map (150-800 m)

soil profile moisture map

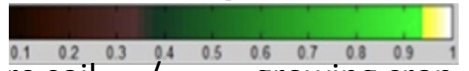




depth per cycle (0-210 cm, steps of 5 cm)



radar vegetation index



yield and anomaly maps (soybean, wheat, maize, sunflower, sugar cane)

fusarium prediction maps (wheat)

SAOCOM CATALOGUE

https://geocatalogos.conae.gov.ar/geonetwork/srv/spa/catalog.search#/search

Some Available Products - Level 2 and Derivative (Mosaics)



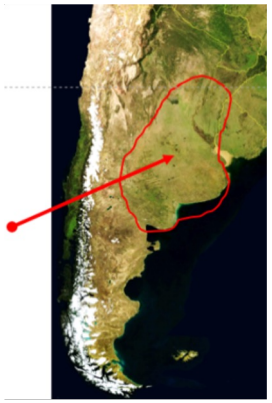
https://geoportal.conae.gov.ar/mapstore/visor-saocom.html#/viewer/openlayers/mosaico_saocom_2022

https://catalogos.conae.gov.ar/catalogo/catalogoGeoServiciosOGC.html#temas

SAOCOM Mission Acquisition Strategy

Baseline Mission
(fixed acquisitions)

- soil moisture (Pampas)



- SAR calibration:
  - rain forest
  - specific point targets
  - doldrums



Foreground Mission
(variable acquisitions)

- users

Background Mission
(useful data base)

(changes without jeopardizing the initial data base)

- Argentina: new user needs
- biomass
- polar zones
- rest of the world
  - StripMap DP (biomass)
  - TOPSAR Narrow QP (rest)
- regions of WG on Disasters interest with dedicated acquisitions

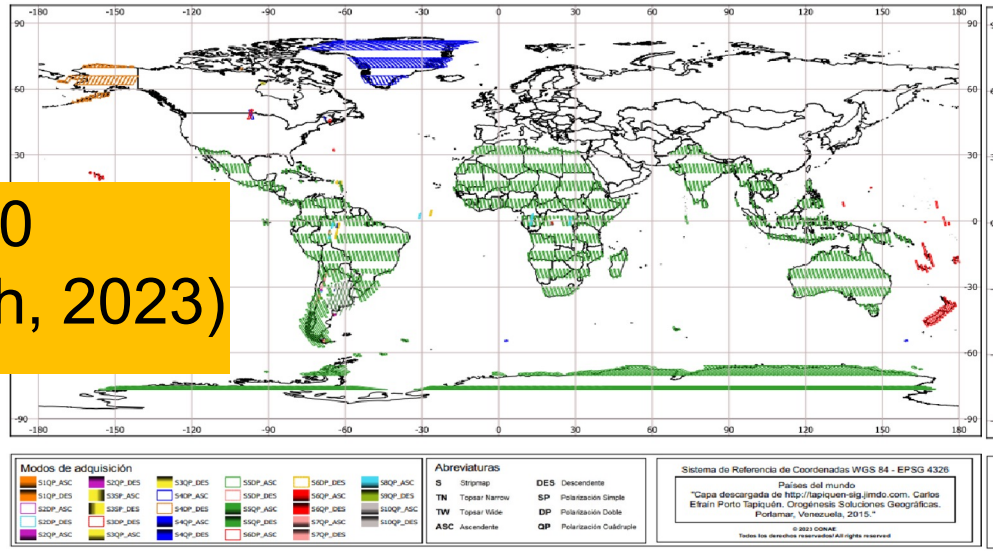
- https://www.argentina.gob.ar/misiones-satelitales/planes-de-adquisiciones-saocom-1



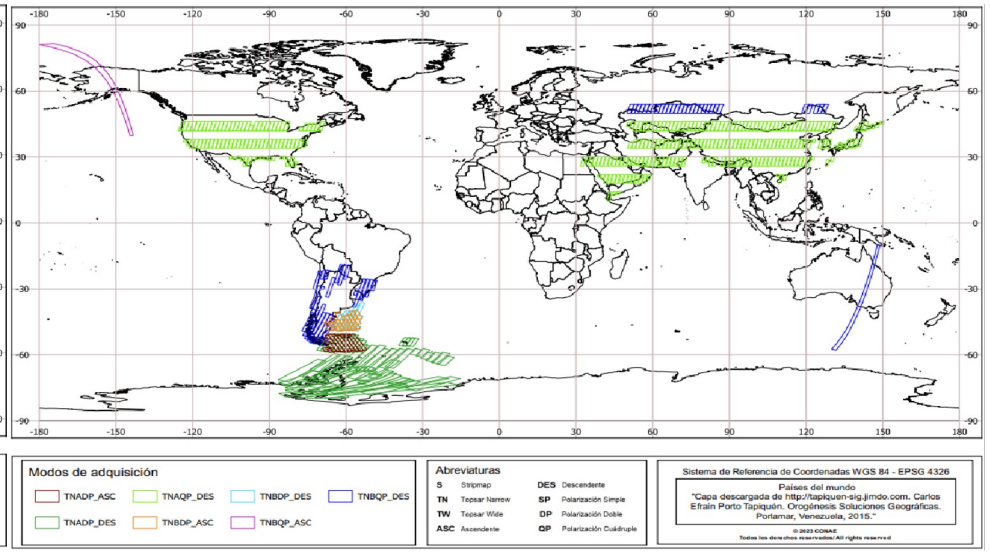
Integrated Mission Acquisition Strategy-IMAS

Example for Cycle 10
(May 25th – June 9th, 2023)

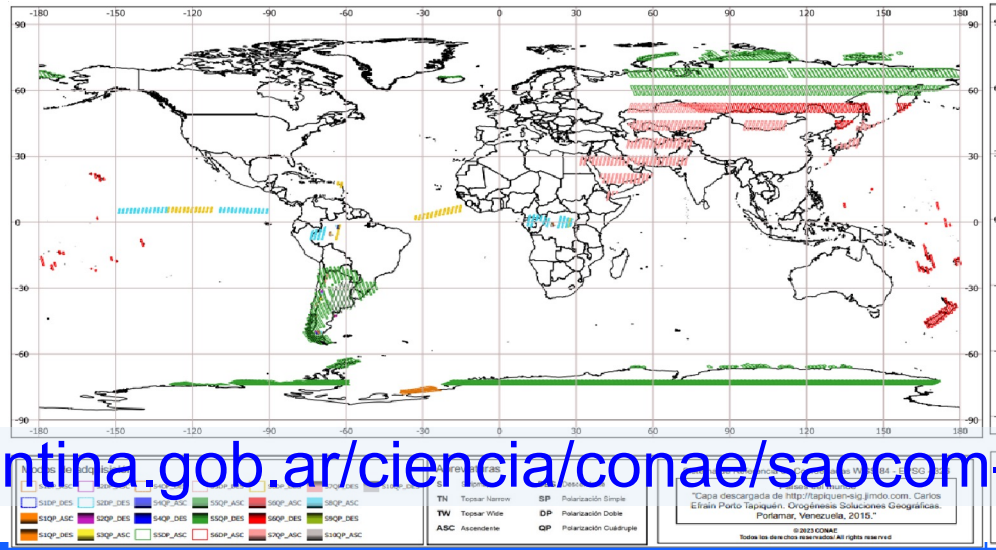
SAOCOM 1A, STRIPMAP



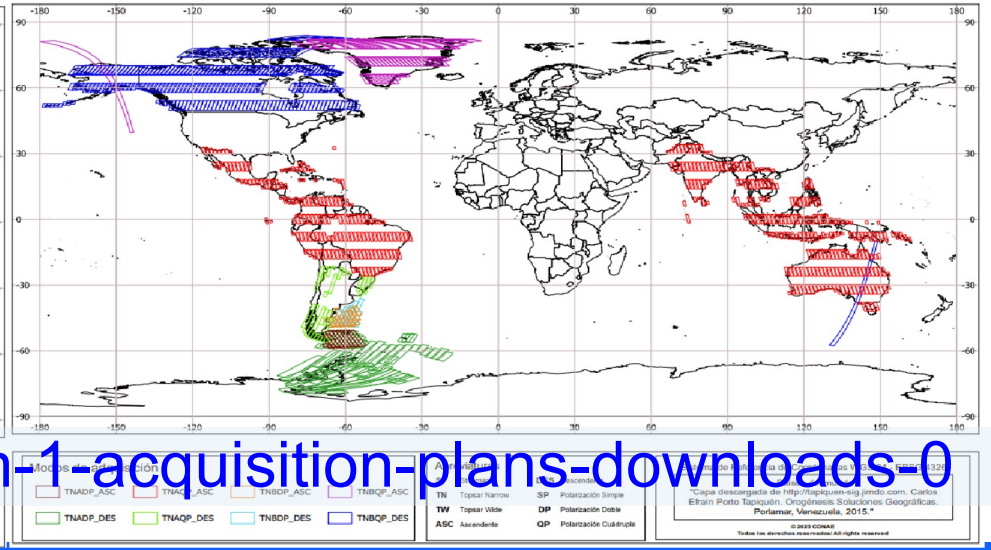
SAOCOM 1A, TOPSAR NARROW



SAOCOM 1B, STRIPMAP



SAOCOM 1B, TOPSAR NARROW



https://www.argentina.gob.ar/ciencia/conae/saocom-1-acquisition-plans-downloads-0

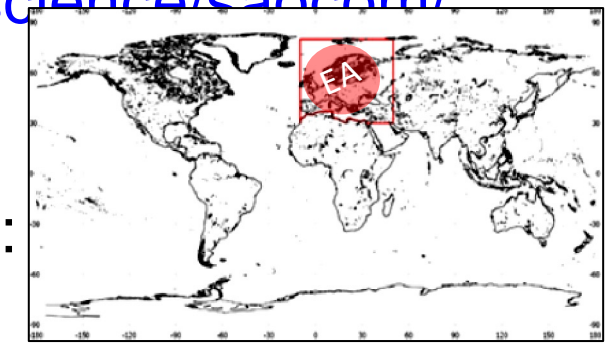
SAOCOM Data Access(1/3)

3 possibilities:

1. Catalogue

- inside ASI exclusivity area (ASI-CONAE cooperation):

  https://www.asi.it/en/earth-science/saocom/



- outside ASI exclusivity area:

  u_inter@conae.gov.ar

SAOCOM Catalogue can be navigated freely to identify already existing data:

https://catalog.saocom.conae.gov.ar/catalog/#/

Upon registration the quicklooks can be seen

agreement
project
→ Licence to Use

SAOCOM Data Access(2/3)

2. One click

		non-commercial users		commercial users	
PERMISSIONS	REGIONS	argentines and residents	foreigns	argentines and residents	foreigns
archived: - L1, L2 download - L1 reprocess - interferometric products	Argentina	via One-click, checking that the area is within Argentina			
- L1, L2 download - L1 reprocessing - interferometric products - acquisition request	abroad (ASI AoE excluded)	atencion.usuario@conae.gov.ar (under some cooperation type)	atencion.usuario@conae.gov.ar (under some cooperation type)	via VENG www.saocom.com.ar (free access)	via VENG www.saocom.com.ar (comercial agreement)

https://registro.conae.gov.ar/registracion/view/

SAOCOM Data Access(3/3)

3. Announcements of Opportunities

3. AO for SAOCOM ESA/CONAE
Promotion of Utilization and Mission Applications and Science (PUMAS)

Initiative under Earthnet's Third Party Missions Programme

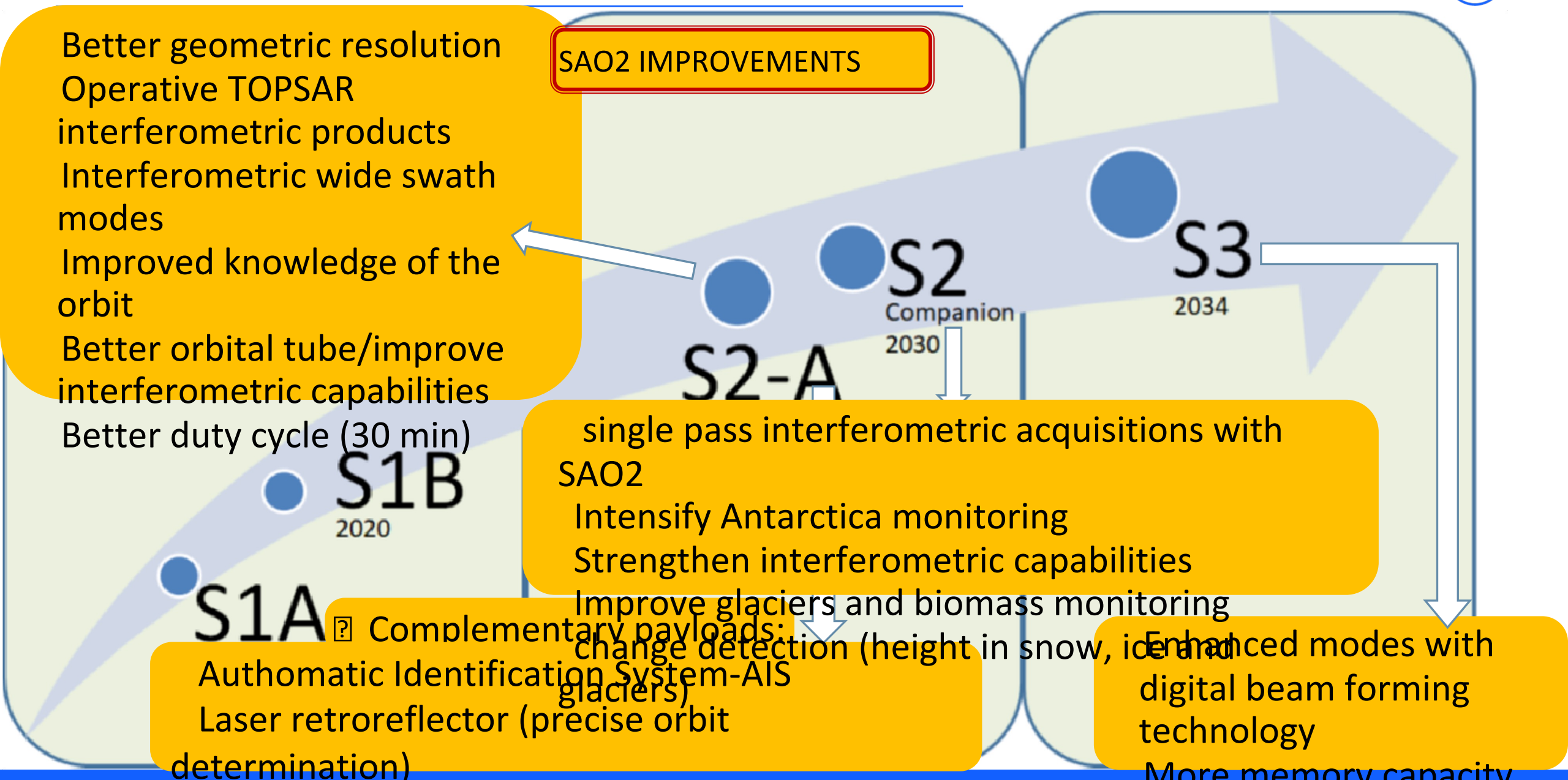
For science and application developments (EO)

The call has been renewed regularly since 2023

Data available: ESA (EO), Copernicus and SAOCOM (Quota < 40 images, outside AoE)

- https://www.argentina.gob.ar/ciencia/conae/misiones-satelitales/ao-iniciativa-puma-esa-conae
- https://earth.esa.int/eogateway/announcement-of-opportunity/saocom

Fuiture Missions (SAOCOM continuity)



¡Muchas Gracias!

lfrulla@conae.gov.ar