

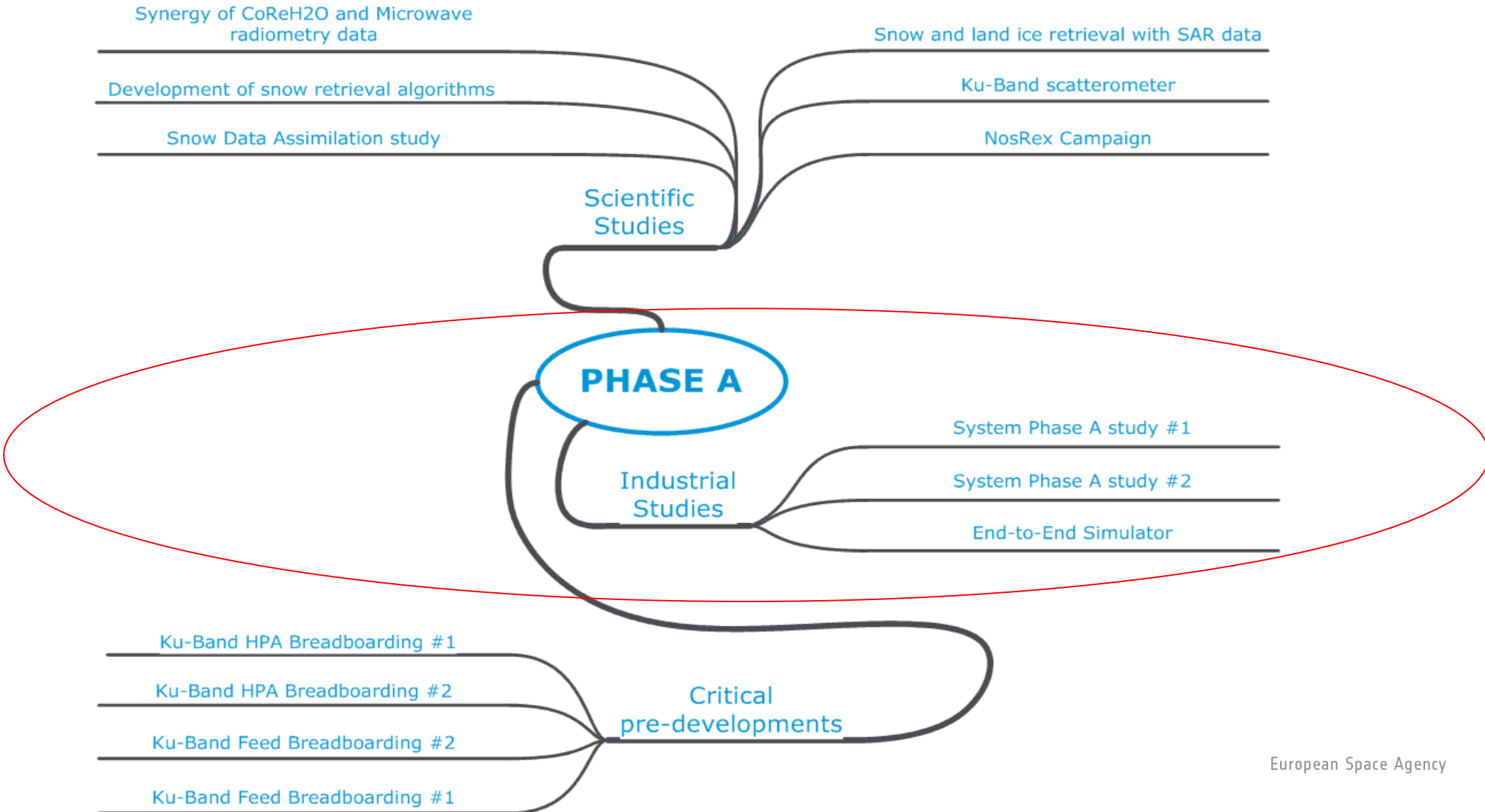
# SYSTEM OVERVIEW



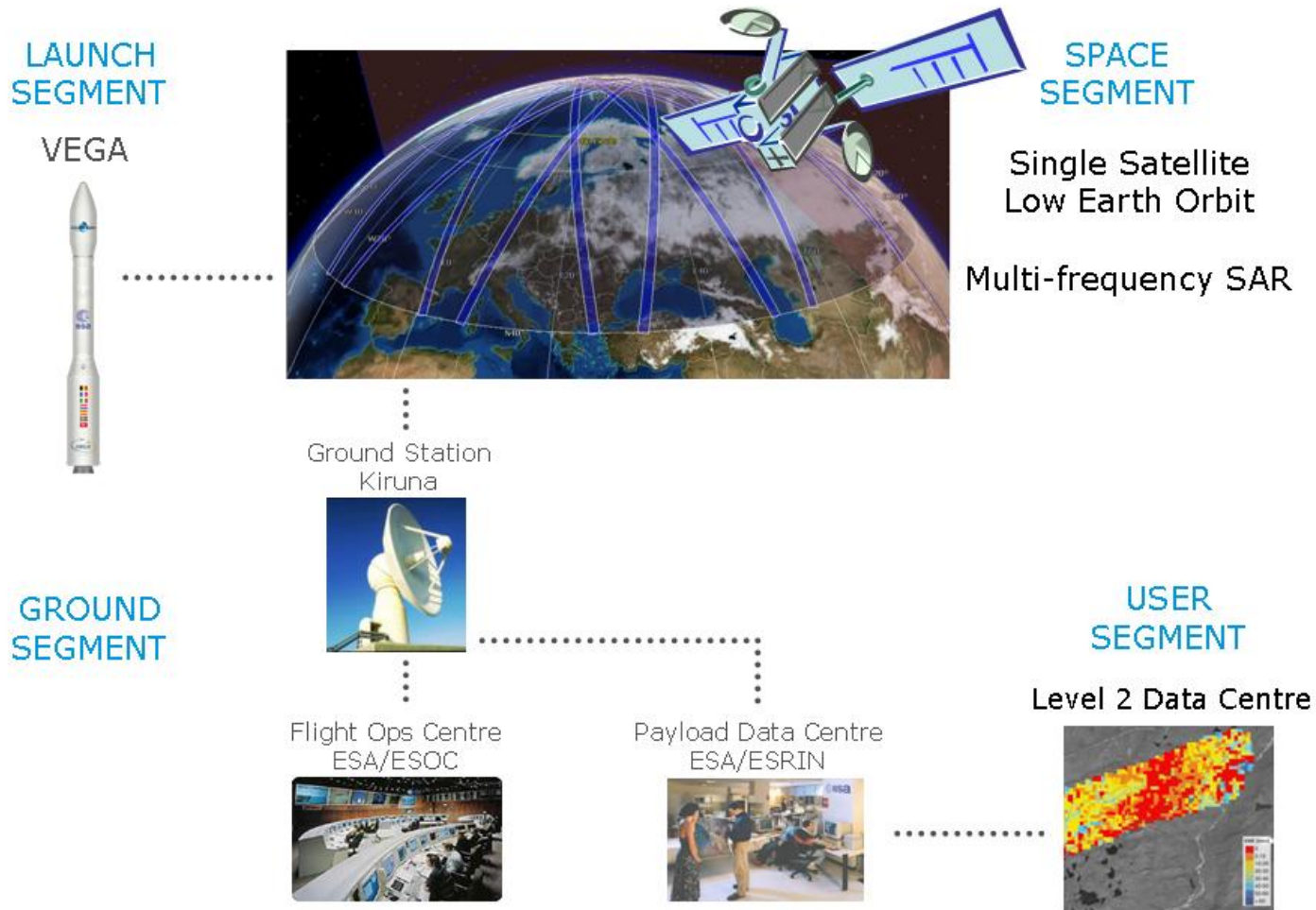
by A. Lécuyot, et al. – ESA/EOP

1. Phase A Activities
2. System Architecture & Mission Profile
3. Programmatic
4. Satellite, Ground Segment, and launcher
5. User Segment
6. Conclusion

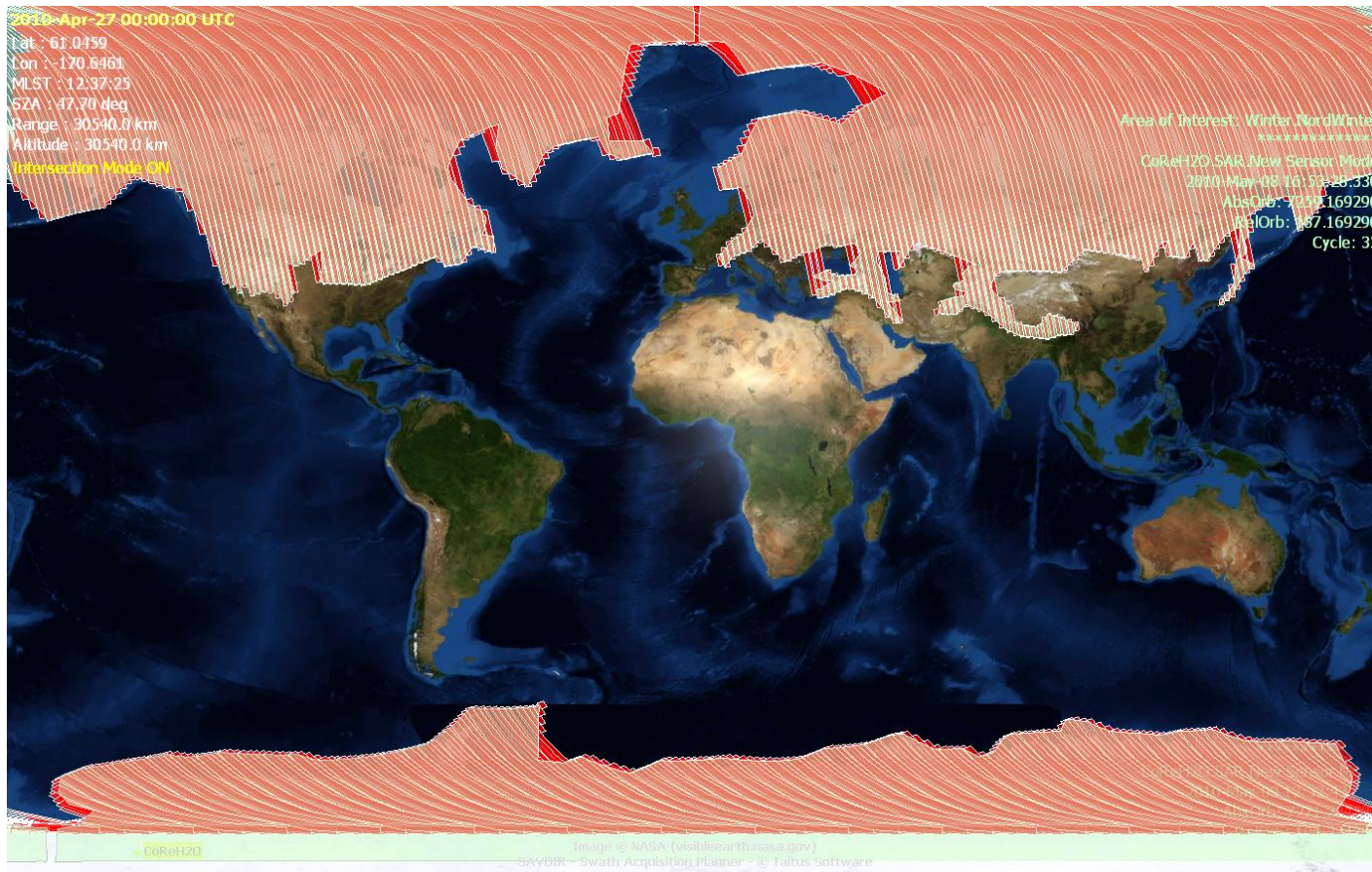
# PHASE A ACTIVITIES



# SYSTEM ARCHITECTURE



# MISSION PROFILE



## CONSTRAINTS

System targeted for 220 M€ cost at 2007 e.c. for the space & launch segments

Launch targeted in 2016/2017

## FEASIBILITY

First use of Ku-band radar and dual-frequency SAR in a payload

Critical elements identified in the payload chain (High Power Amplifiers, feed, High power Switch)

Pre-developments started for the Payload critical elements

Schedule and technical feasibility compatible with constraints

## Typical LEO Earth Observation Satellite

Sun-Synchronous Orbit (450-700 km)

1 Ton Launch Mass

1.5 to 2 kW Average Power Consumption

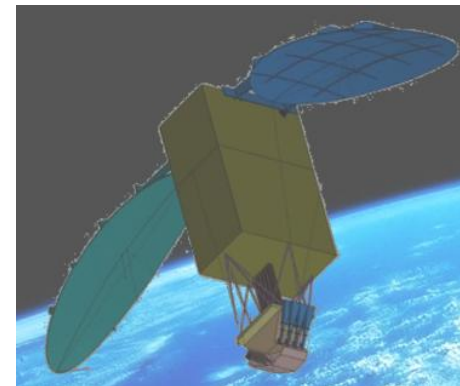
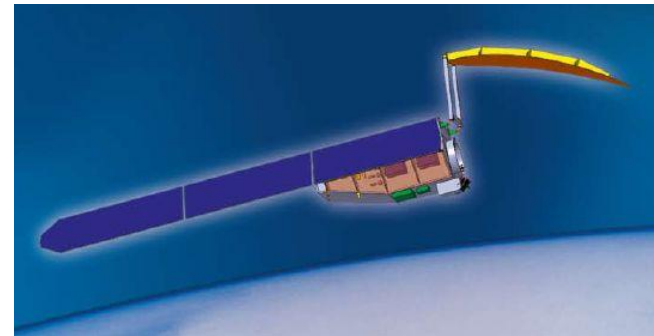
## Standard Platform

3-axis stabilised attitude and orbit control

~1.5 Tb Memory, 460 Mbps Downlink

ESA-Compatible Equipment and Software

Standard structural and thermal concepts



> TWO DESIGNS OF PHASE 0 WITH ONE OR TWO REFLECTORS



# GROUND & LAUNCH SEGMENT



> ESA - KIRUNA STATION AND ESOC FLIGHT OPS CENTRE



> ESA - VEGA BASELINE (1<sup>st</sup> LAUNCH 2010)

# USER SEGMENT

