

A very small introduction to

# GLORIA small satellite program

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# Gloria small satellite

- On track of the GLORY mission from NASA (similar objectives, instrumentation)
- Cubesat Cluster – 6 cubesats plans
- Open project → community participation
- **STATUS : MISSION CONCEPT REVIEW**

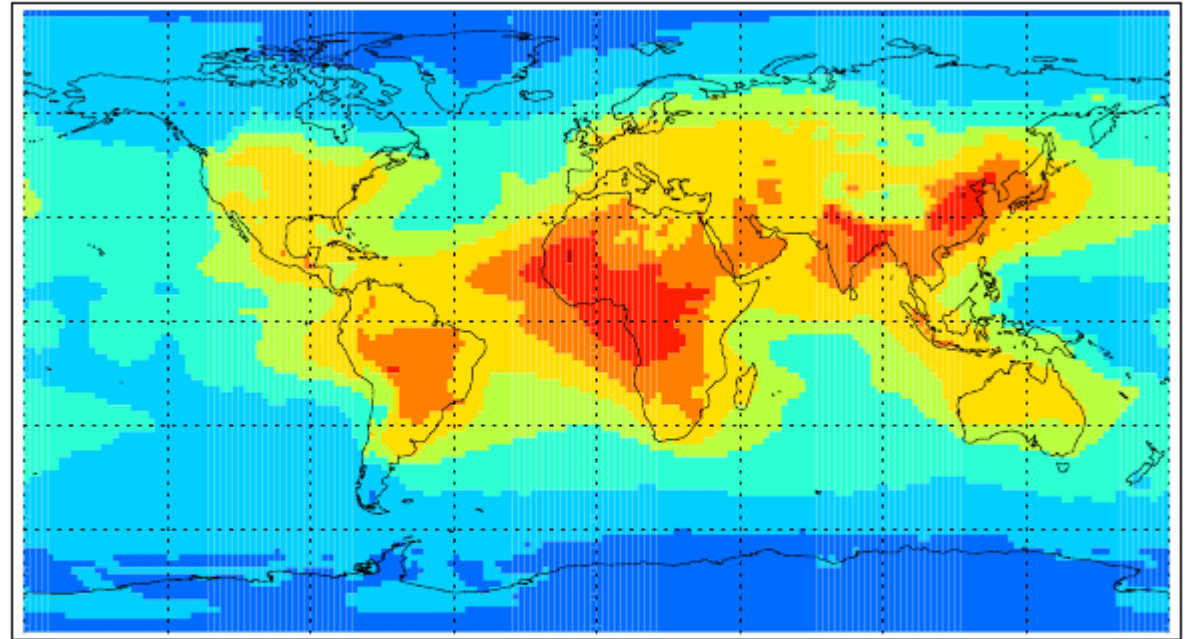
# Objective: Aerosols

→ Climatic impact

→ Vector

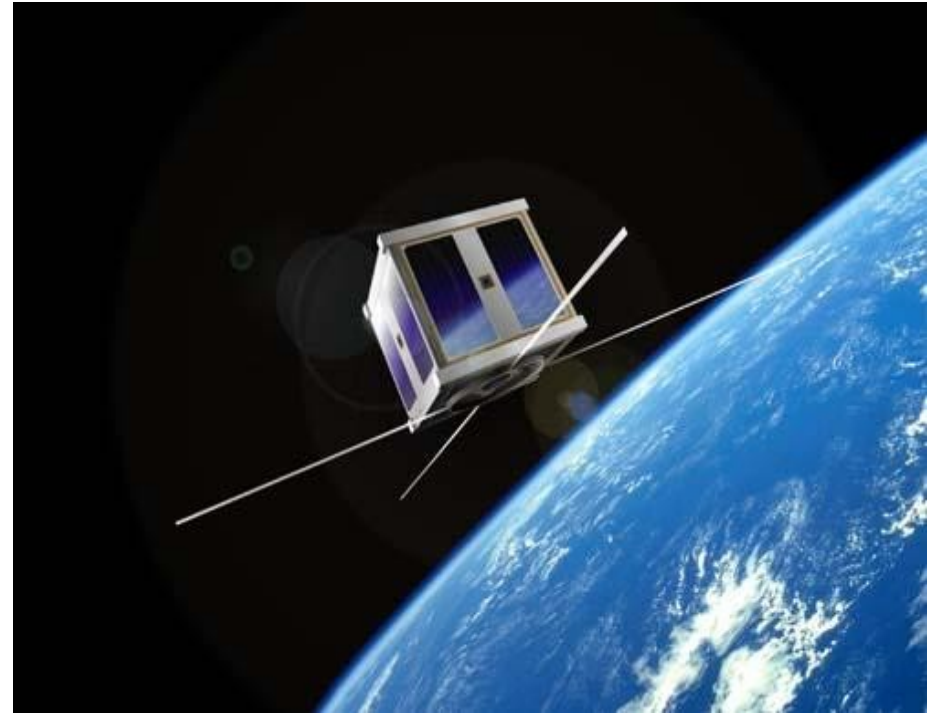
→ Target:  
Urban planners,  
Climate experts

Aerosol Absorption Clear-Sky:  $2.12 \text{ W m}^{-2}$



# Constraints: Cubesats

- $(10 \text{ cm})^3$  volume
- 1.33 Kg mass
- Low Earth Orbit
- ~ 200 kb of downlink for each pass



- Off-the-shelf components
- Piggyback launch → lesser launch cost

# Observation : Plan

- 4D aerosol concentration profile
- Identification of species
- Energy distribution
- 4D aerosol dispersion profile

## To sum up ..

- Practical application, long and short term
- Outreach to the community
- Organizing cooperation from the very beginning stage.
  - Balloon Launch tomorrow at 1100
  - **Das Labor from Bochum**
    - Magnetic field sensor integrated in an incredible short time.
- For more information:  
<http://www.bit.ly/gloria-cubesat>