

Atmospheric Composition Constellation

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Ongoing Activities

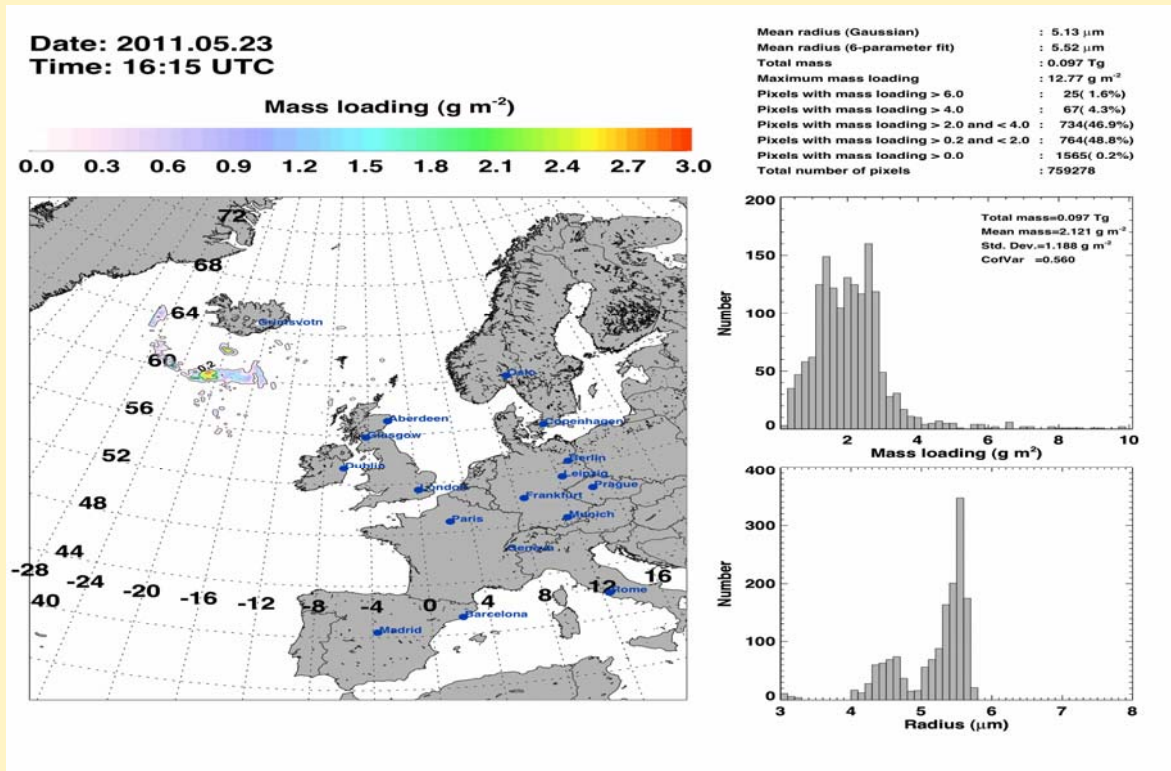
- Geostationary Air Quality White Paper

Final review completed - document is available at
http://www.ceos.org/images/ACC/AC_Geo_Position_Paper_v4.pdf. Request
for endorsement of paper's recommendations.

- Volcanic Ash

International Workshop timely organised in response to the Icelandic
Eyjafjoll eruption during 2010, report available at:
http://earth.eo.esa.int/workshops/Volcano/files/STM_280_ash101124.pdf
first global/international volcanic ash alert service available since early
2011 at <http://sacs.aeronomie.be>, information on current Icelandic
eruption of Grimsvotn:
http://www.esa.int/esaCP/SEM3WUMSNG_index_0.html

Grimsvotn Eruption



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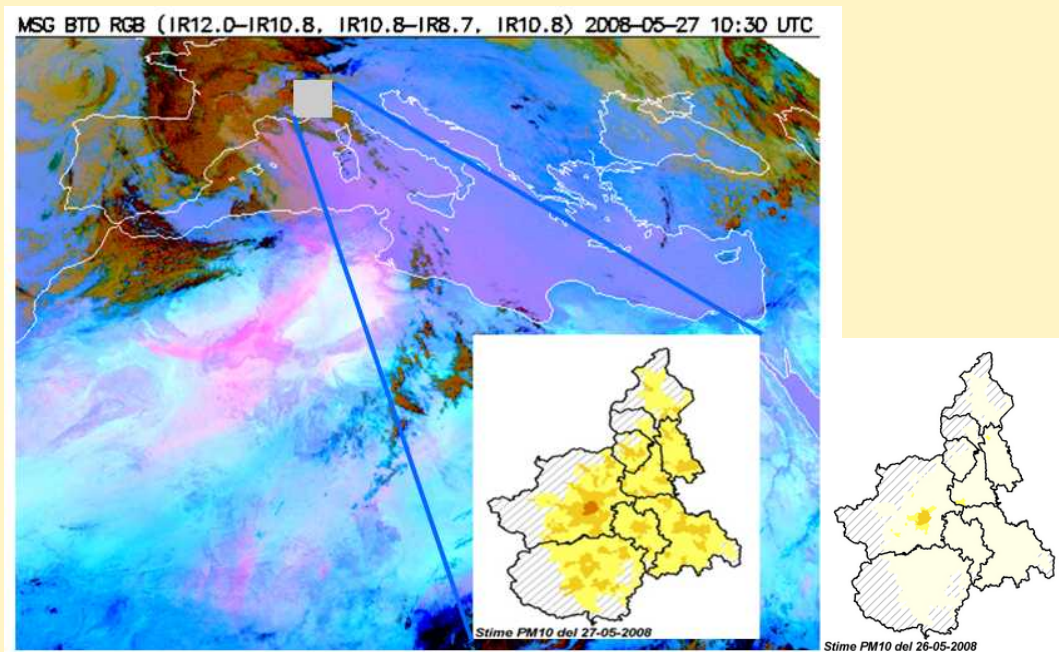
Geostationary AQ Constellation White Paper Recommendations

- Several countries and space agencies are currently planning to launch geostationary satellites in the 2017-2022 time frame to obtain air quality measurements.
- A single geostationary satellite can view only a portion of the globe.
- These missions share a fundamental common objectives yet individually are restricted to regional relevance. If this constellation framework succeeds, a global perspective will be provided that will be otherwise impossible to achieve.
- An integrated observing system for atmospheric composition is key to abatement strategies for air quality as laid down in various international protocols and conventions.
- This ACC community activity has developed a **position paper**; it is not to be viewed as an implementation plan.

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A concrete Example for Italy

Exceedance of Particulate Matter threshold explained



Exceedances attributable to natural sources
Directive 2008/50/CE: use satellite images to show the transport/origin

Interpolated PM10 concentrations derived from regional AQ network; Yellow < 20 $\mu\text{g}/\text{m}^3$, dark yellow < 75 $\mu\text{g}/\text{m}^3$
source: ARPA Piemonte

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Geostationary AQ Constellation

White Paper Recommendations

Near Term (1-3 years)

1. CEOS agencies to coordinate one or two key people to be part of mission science or advisory teams with a focus on common science and collaborative data products.
2. ACC to organize a workshop focused on air quality Observing System Simulation Experiments (OSSE) activities. CEOS to encourage and enable participation from relevant member agencies.
3. ACC to coordinate an SBA value assessment of air quality observations leveraging recent GCOS and GEO UIC efforts.

Geostationary AQ Constellation White Paper Recommendations (2)

Longer Term

4. Agree on an open data policy for AQ-relevant data and support the establishment of common cal/val standards, working with WGCV.
5. Organize an ACC workshop on AQ model intercomparison.
6. Undertake best efforts to overlap AQ missions by at least one year.
7. Support best use of complementary satellite measurements (e.g. meteorological geostationary satellites, polar orbiting satellites).

Near-Term Plans

- Support GCOS IP ACC-relevant actions (with links to GEO tasks, e.g. CL-09-03c)
- Harmonized ECV Production
 - ACC-7 Workshop (21-22 June, Washington, DC area)
 - Initial focus on total ozone
- AQ White Paper
 - Define next steps for collaboration
- Collaboration with Carbon Task Force