



Consiglio Nazionale delle Ricerche
Dipartimento Terra e Ambiente

Le prospettive internazionali dell'osservazione dell'atmosfera dallo spazio

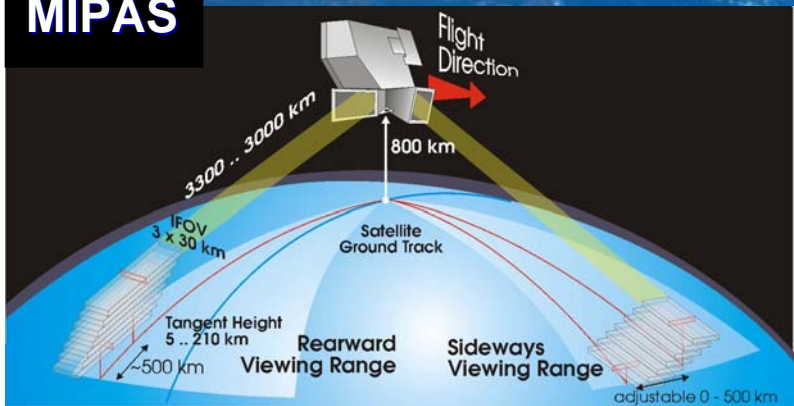
Bruno Carli
Responsabile del
Progetto "Osservazione della Terra" del CNR

TEMI DI RICERCA

- Composizione dell'atmosfera
- Qualità dell'aria
- Gas serra
- Nubi
- Precipitazioni
- Radiazione

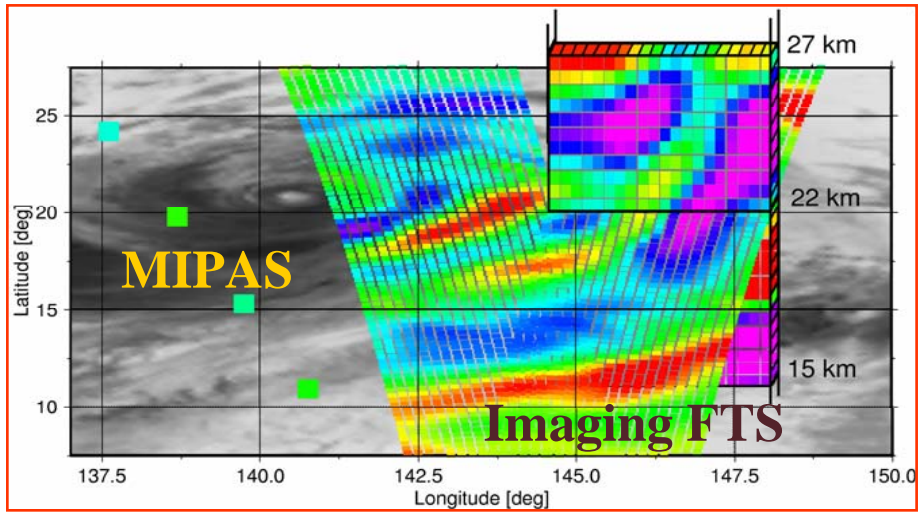
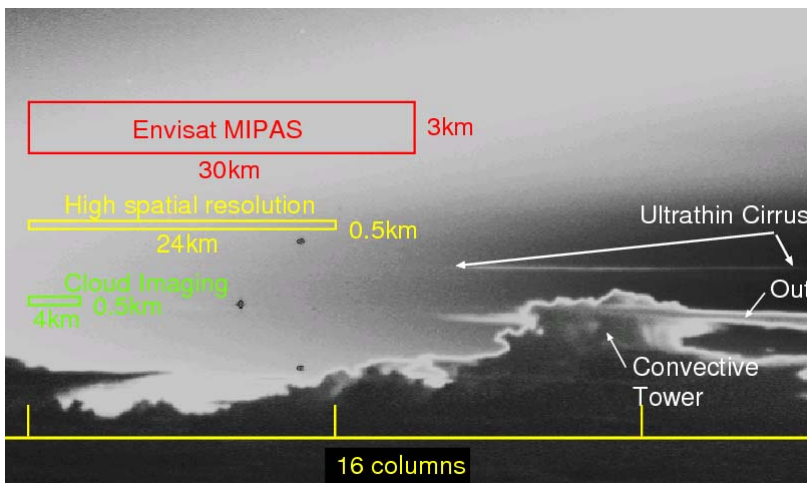
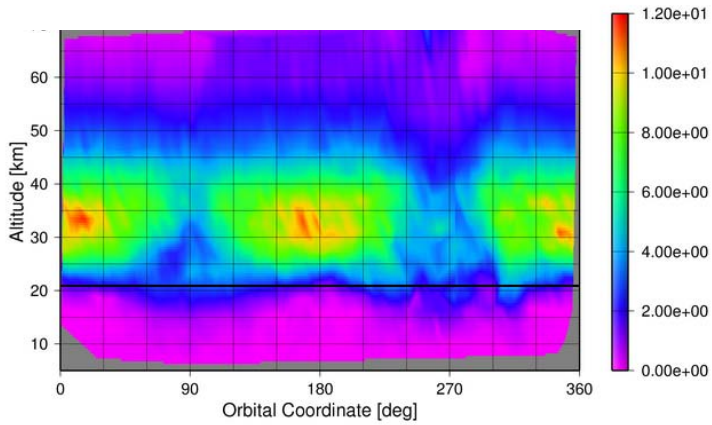
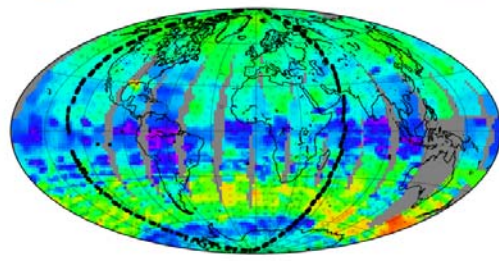


MIPAS

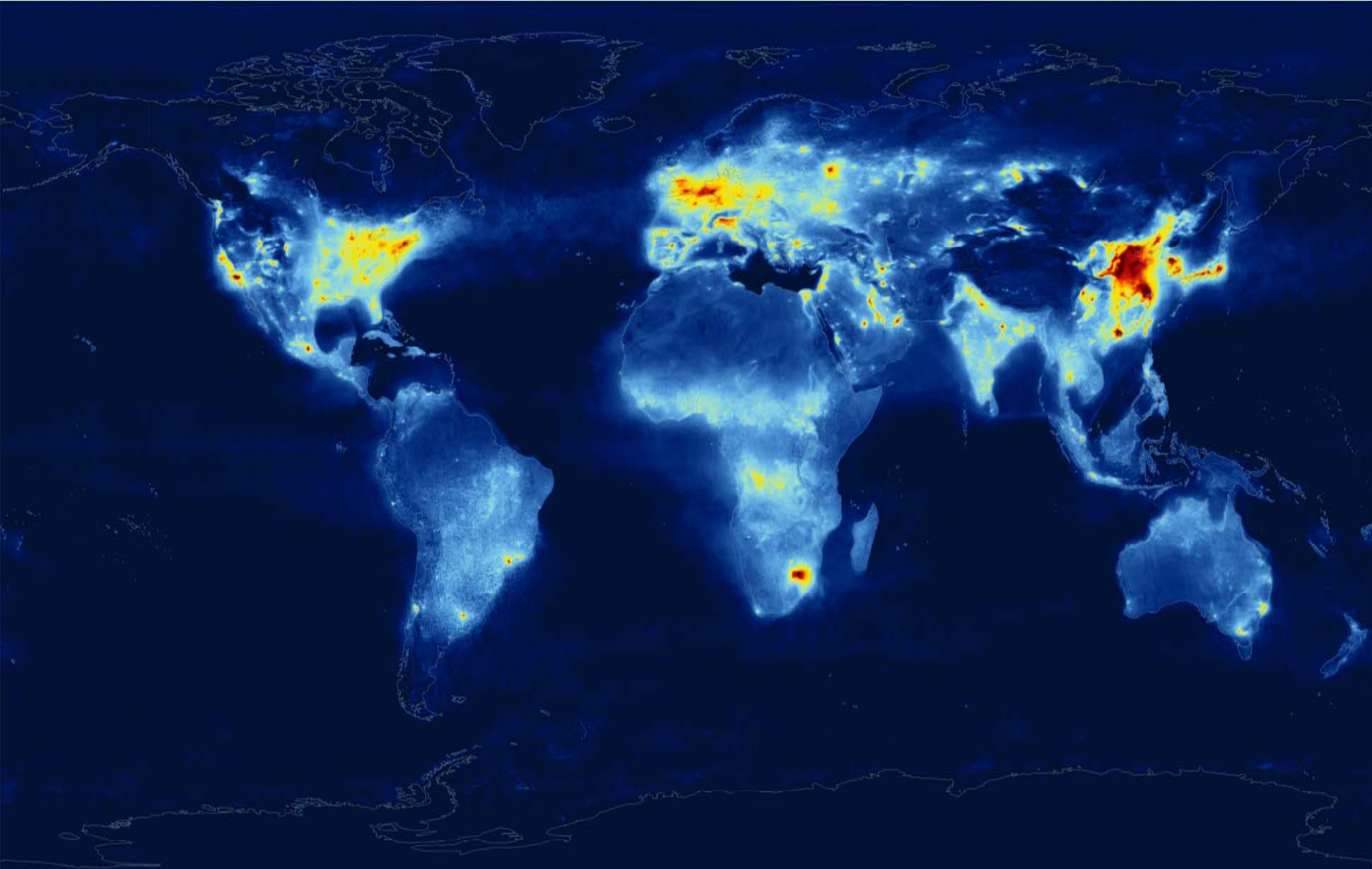


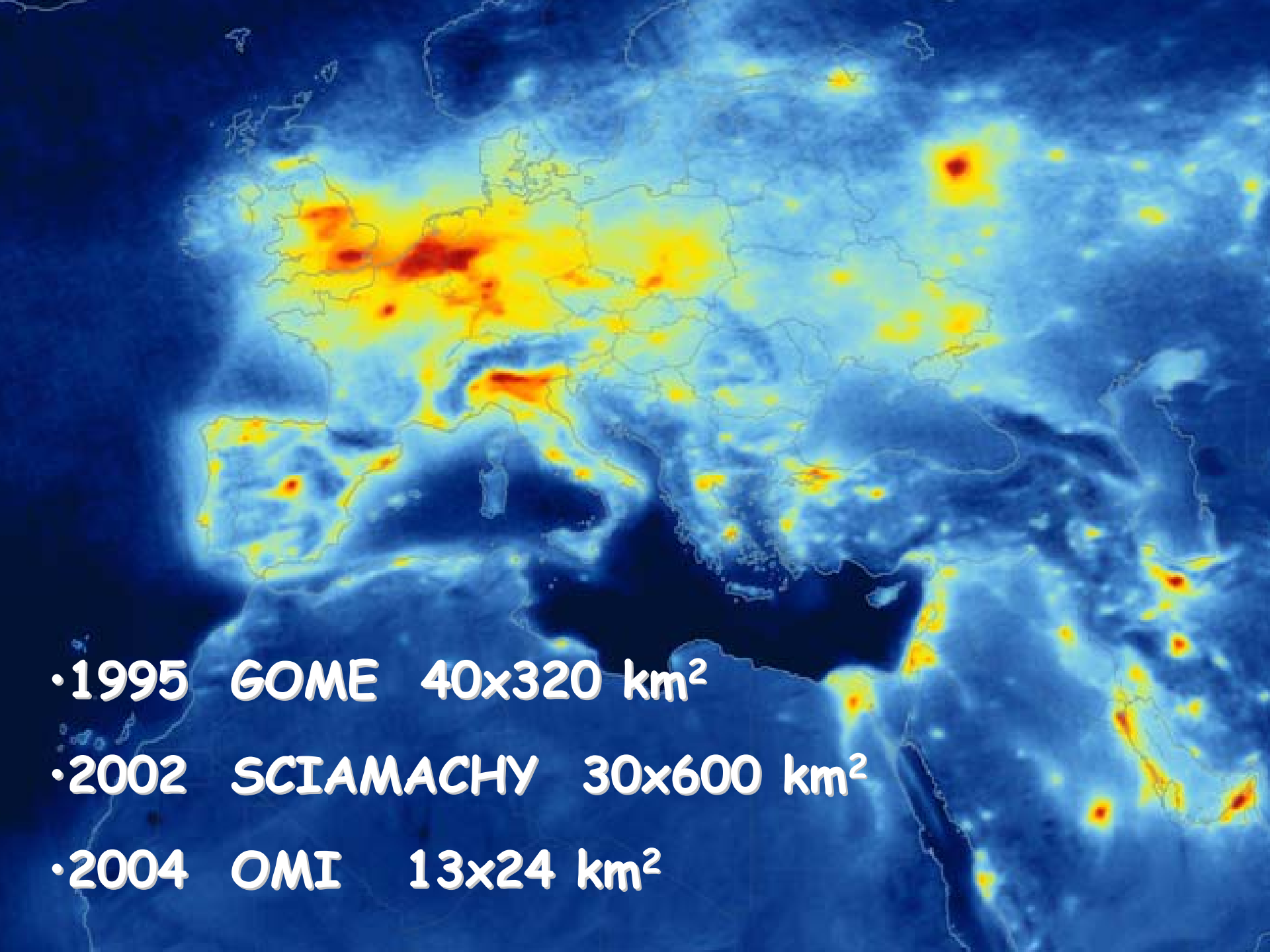
irnc

ENVISAT



QUALITA' DELL'ARIA





•1995 GOME 40x320 km²

•2002 SCIAMACHY 30x600 km²

•2004 OMI 13x24 km²

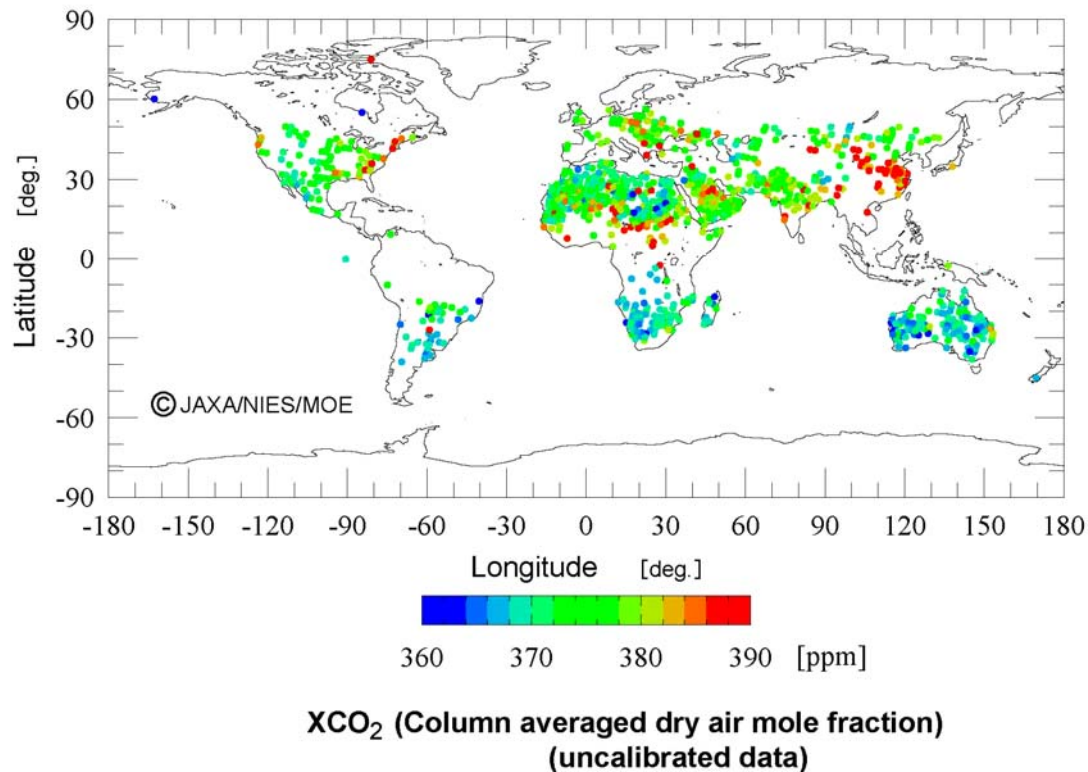
GAS SERRA



Greenhouse Gases Observing SATellite (GOSAT)

Obiettivo: **Monitoraggio della distribuzione della concentrazione di biossido di carbonio e metano (determinazione di sorgenti e pozzi).**

Lanciato il 23 gennaio 2009.



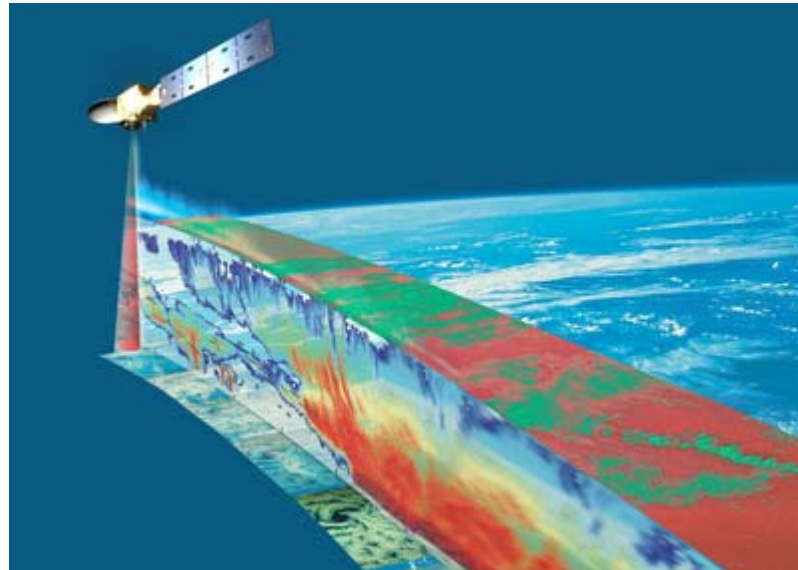
NUBI ED AEROSOLS



EarthCARE

Obiettivo: **Quantificazione della interazione aerosol-nubi radiazione**

Lancio previsto: 2013.





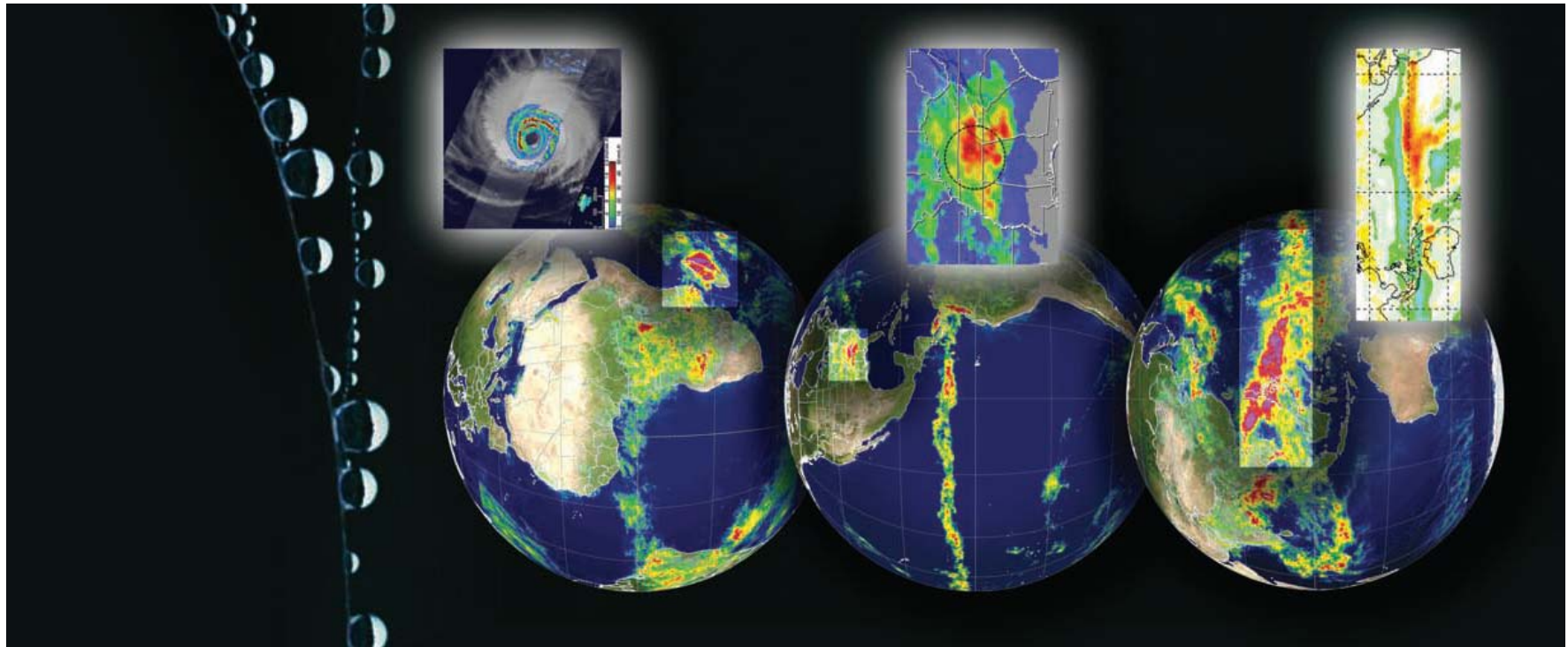
PRECIPITAZIONI



Global Precipitation Measurement (GPM) Mission

Obiettivo: **Studiare le precipitazioni globali (pioggia, neve, ghiaccio)**

Lancio previsto: 2013.



RADIAZIONE

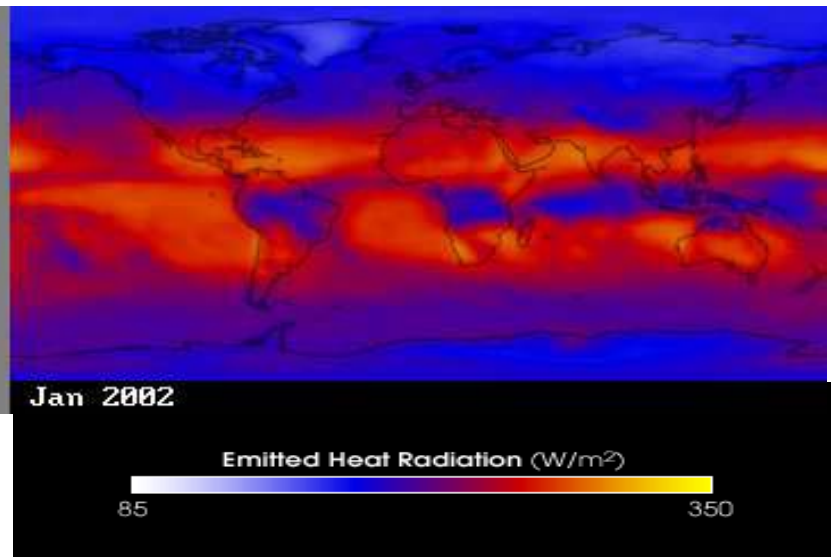
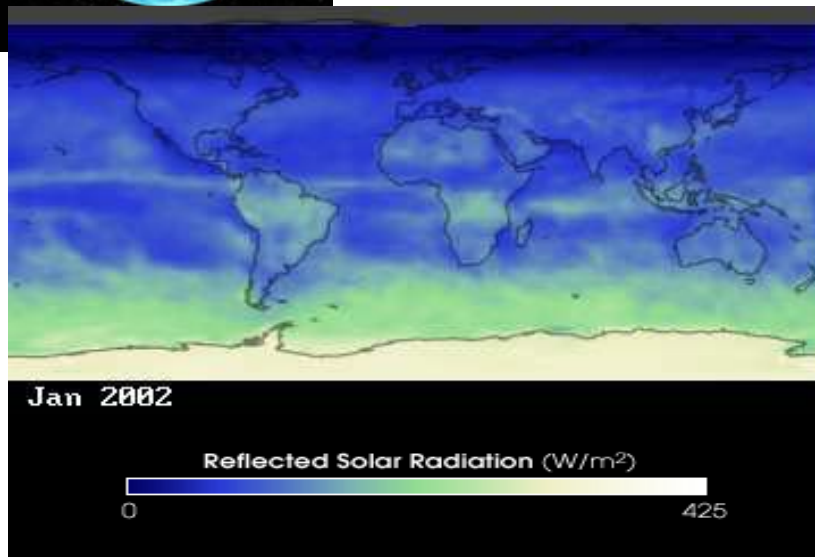


GERB

Geostationary Earth Radiation Budget Experiment

Obiettivo: **Monitoraggio del bilancio radiativo**

Lanciato: gennaio 2004.



- Proposta CLIMRAD per radiometria, spettralmente risolta

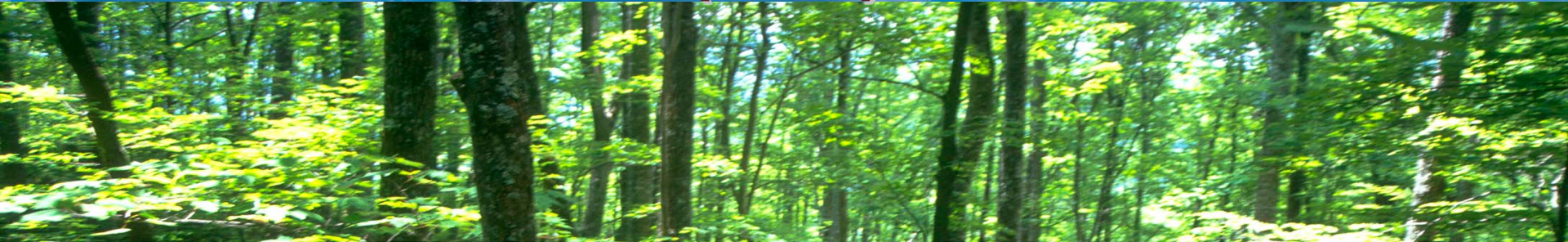
Temi non trattati per mancanza di tempo :

- La dinamica
- Le osservazioni meteorologiche

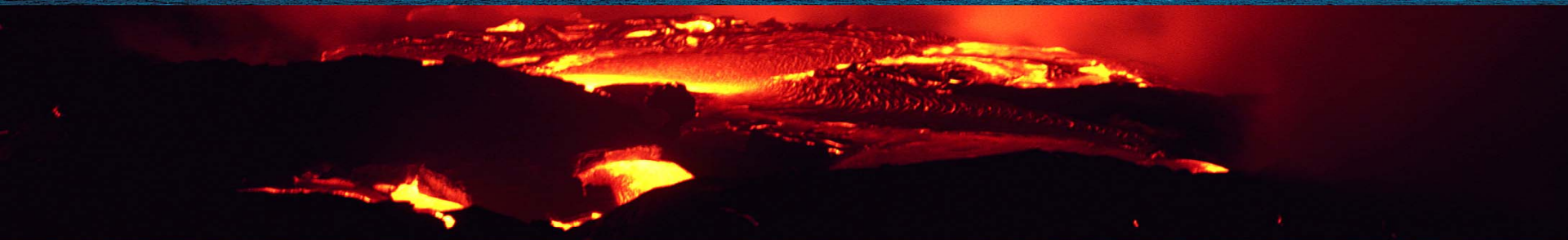
LE OPPORTUNITA'

- Proposte per ESA Earth Explorer 9
- Proposte per l' ISS
- L'aereo stratosferico Global Hawk

ESA call for Earth Explorer proposals (EE8)



Deadline for letter of intent 1/12/2009



Call for Ideas for experiments for global climate change studies from the International Space Station



**Deadline for submission of ideas
extended to 18/1/2010.**



NASA Global Hawk

Endurance	> 30 hours
Range	>11,000 nmi
Service Ceiling	65,000 ft
Airspeed (55K+ ft)	335 KTAS
Payload	1,500 lb
Length	44 ft
Wingspan	116 ft



CNR-ASI WHITE BOOK FOR THE SCIENTIFIC USE OF THE GH