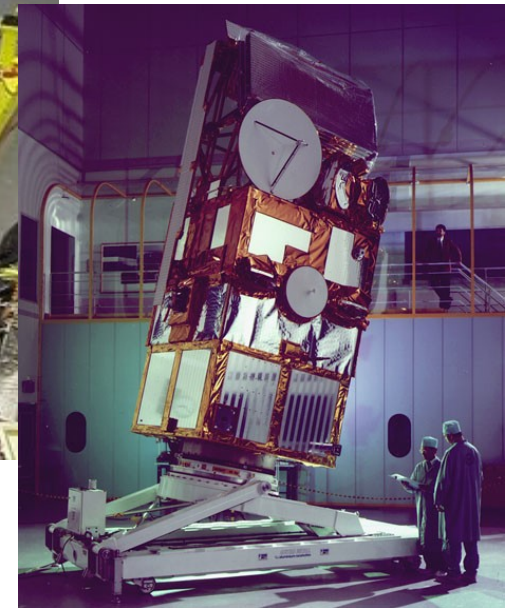




ISAMS, HIRDLS, and ATSR



Fredric W Taylor, Oxford University

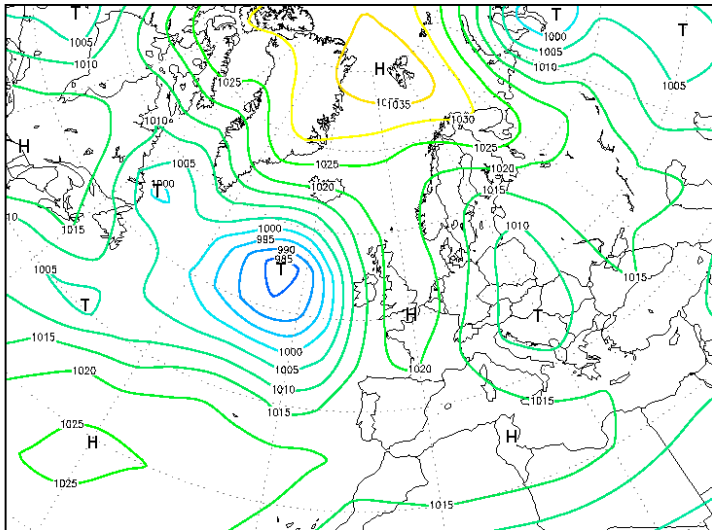
Celebration of 50 years of RAL in Space

Thursday 21st June 2012

Weather forecasting: Obtaining Data



11 January, 1954



1949

1975



Nimbus: The Selective Chopper and Pressure Modulator Radiometers

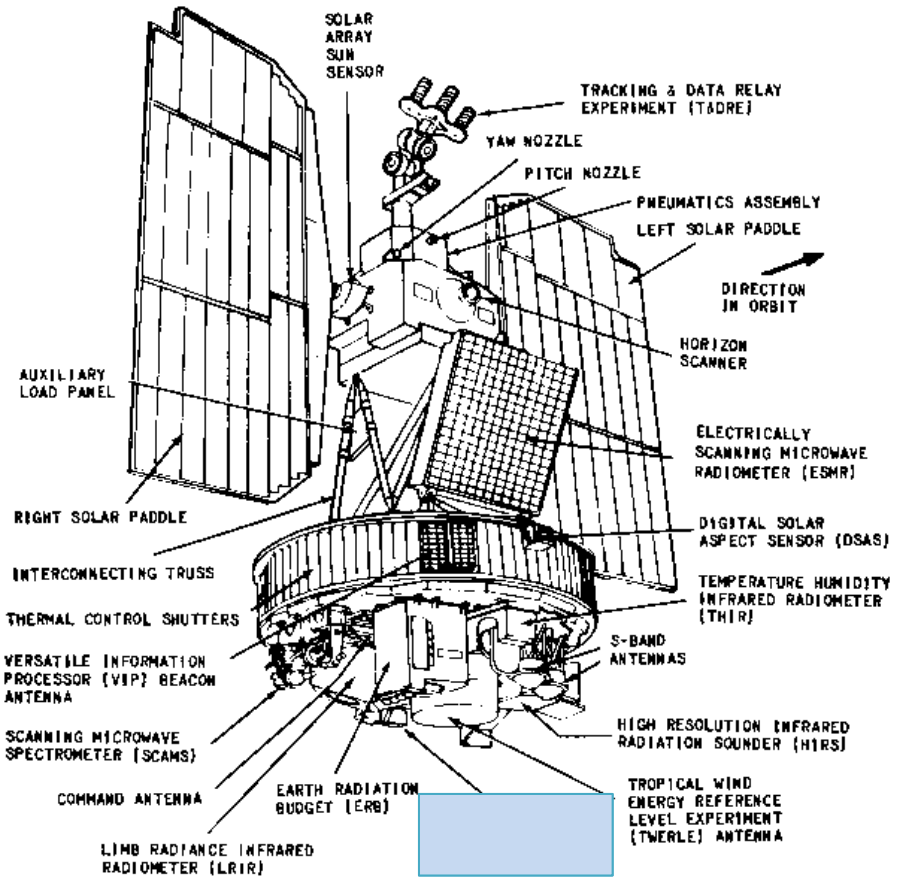
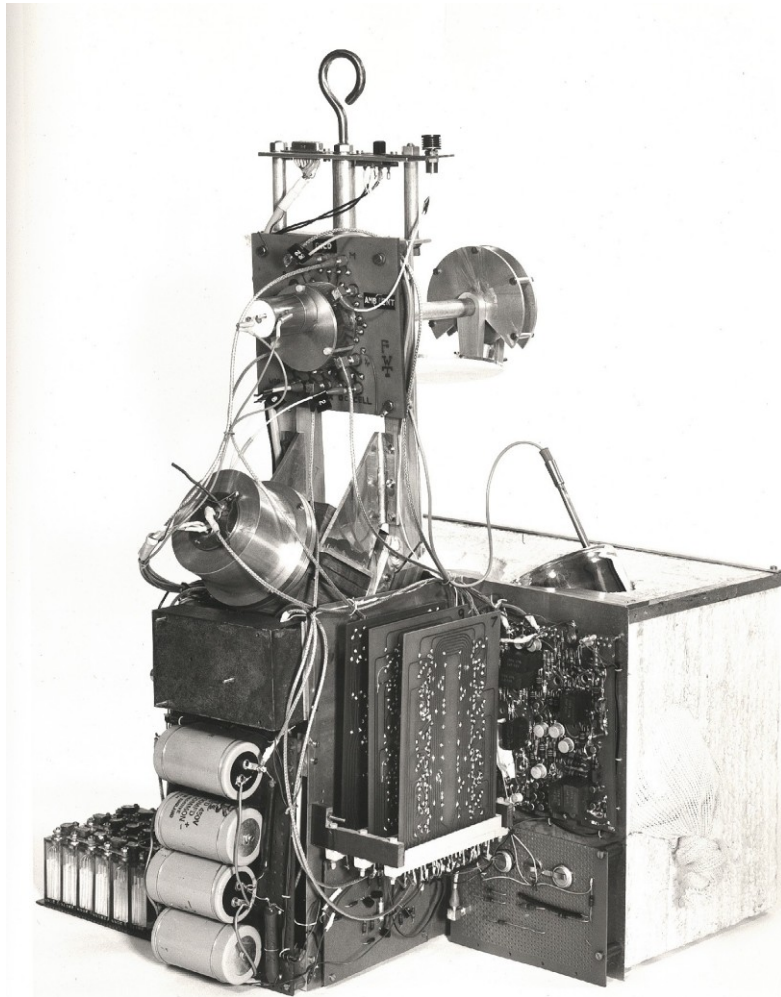
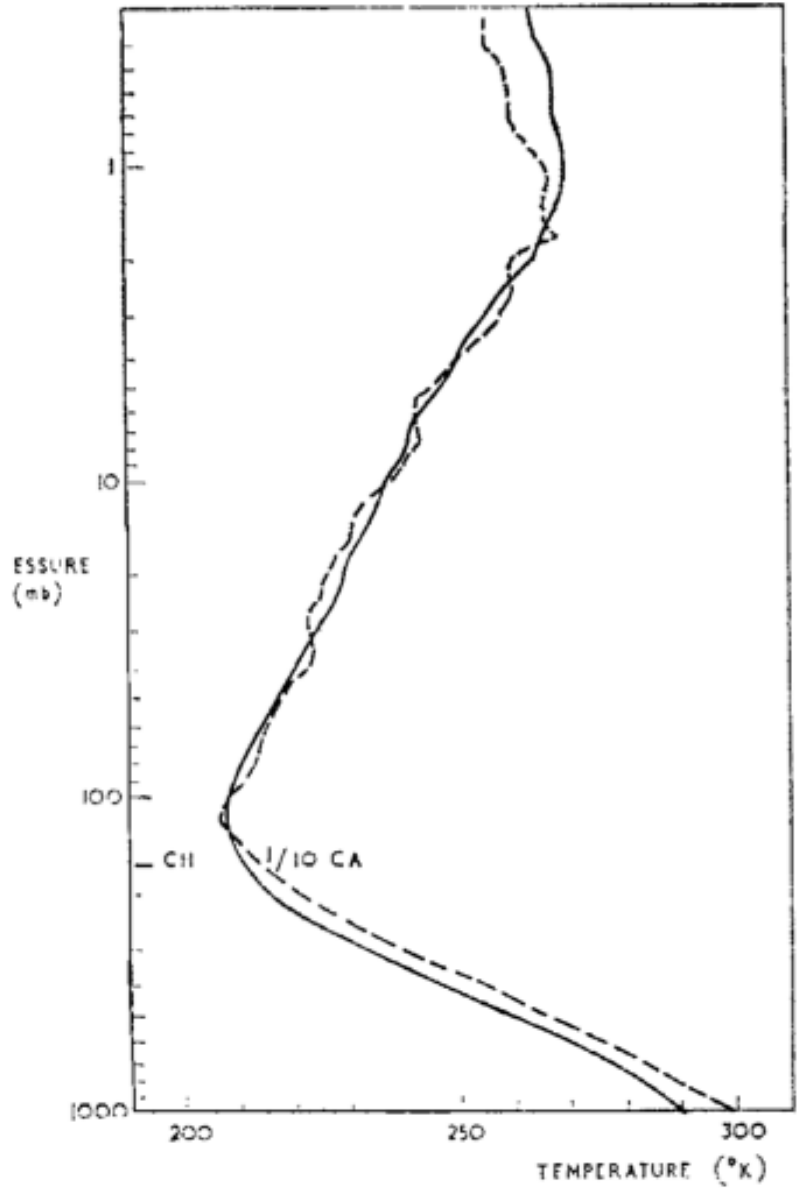
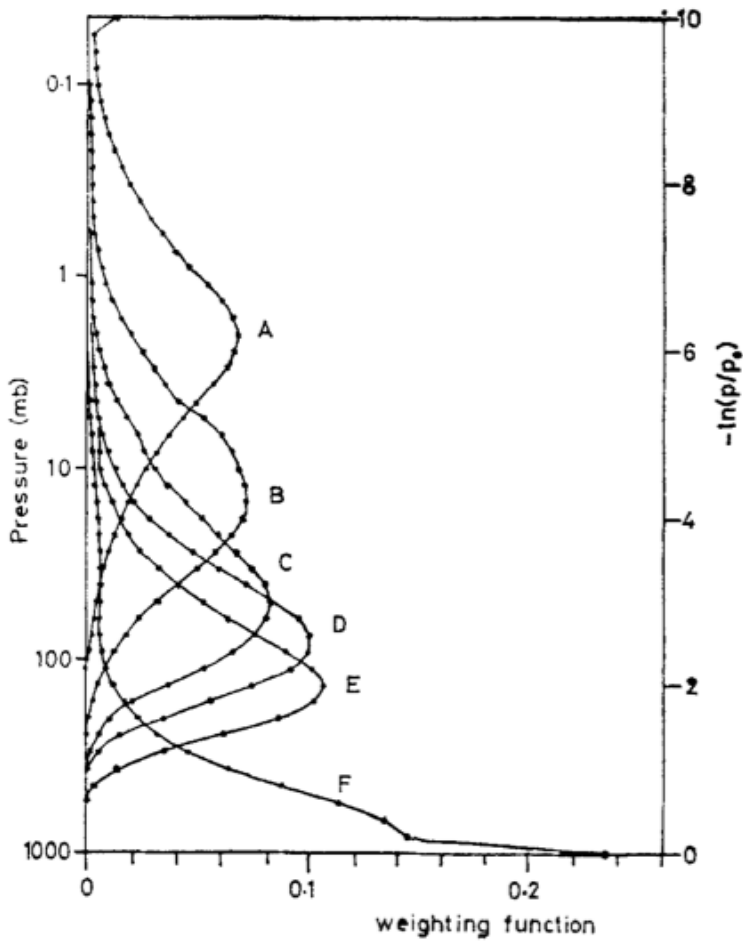


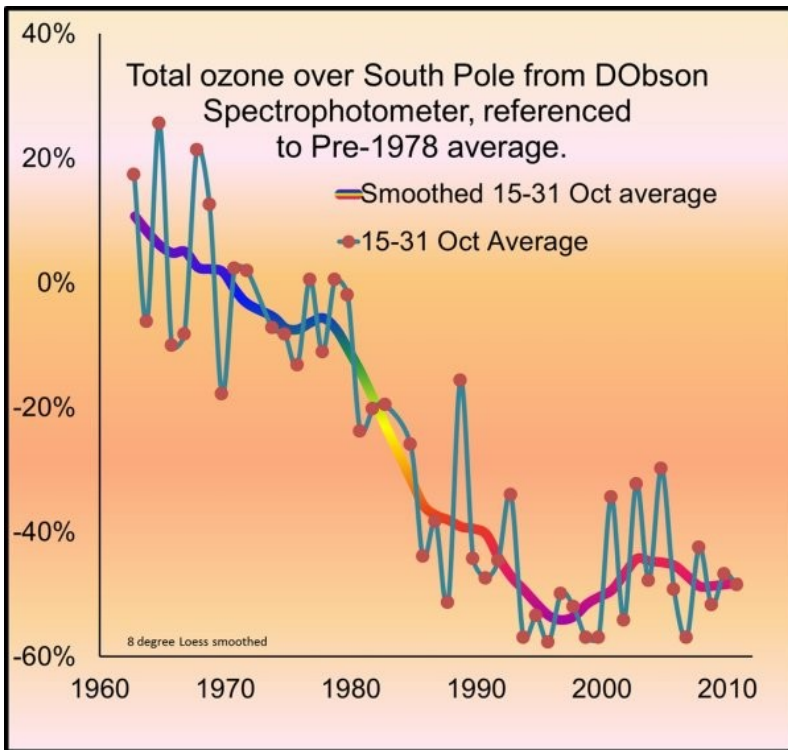
Figure 1-7. Nimbus 6 Satellite

Weather forecasting: Temperature profiles

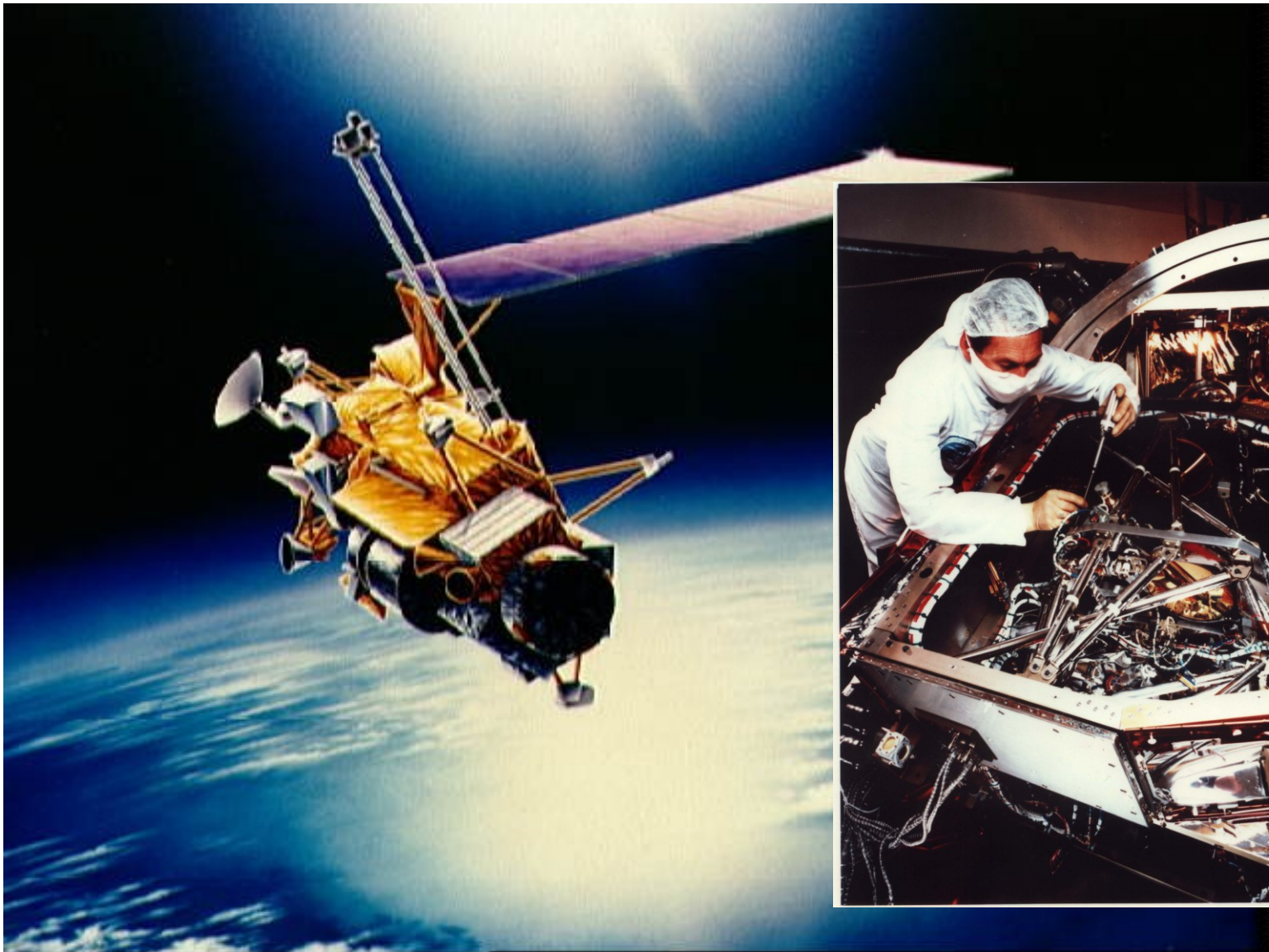


(a)

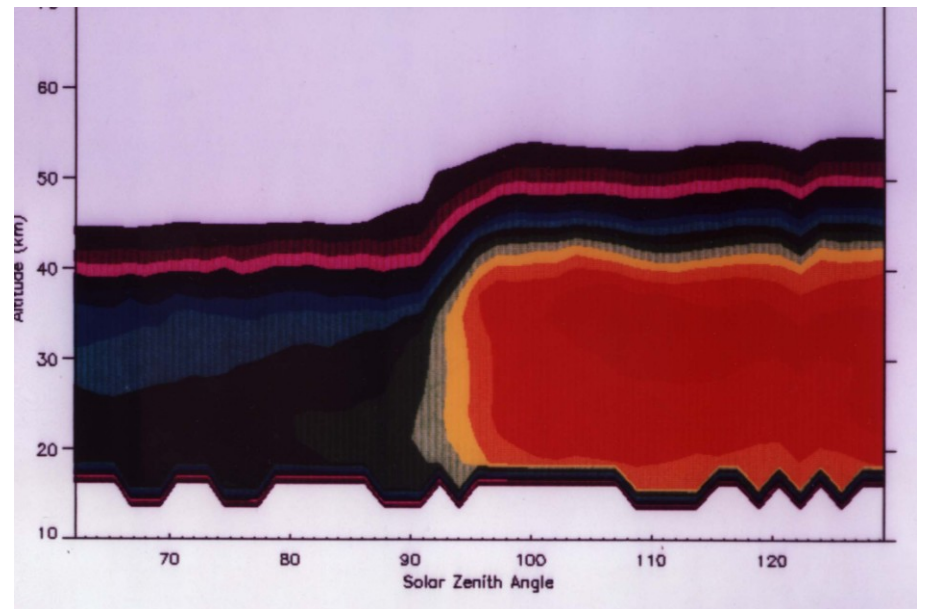
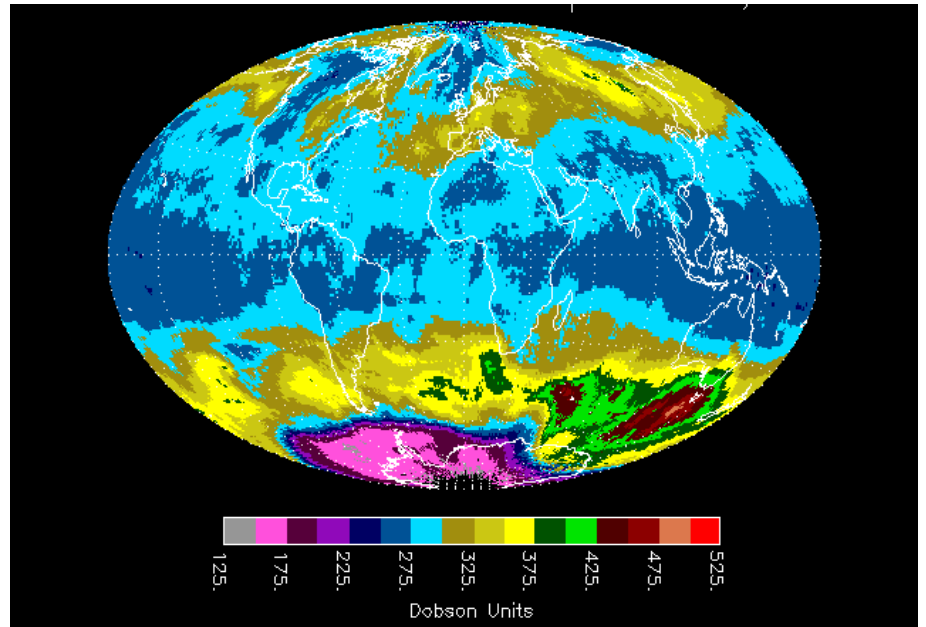
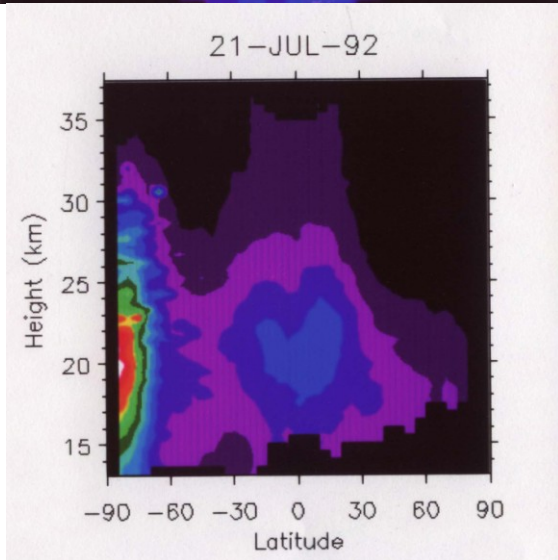
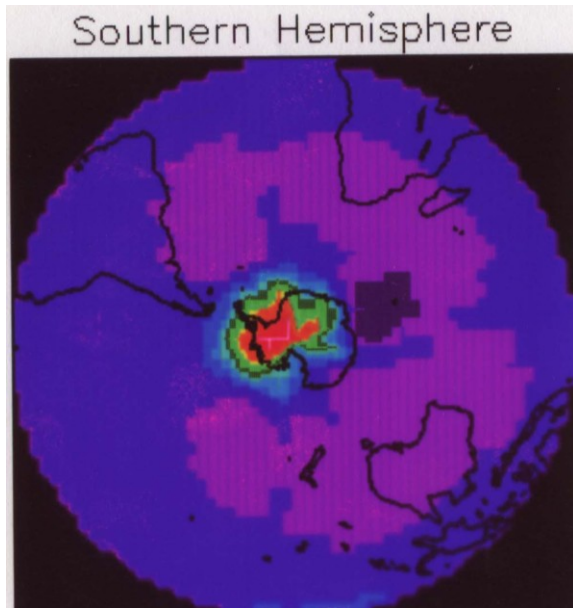
Atmospheric Ozone: The Depletion Crisis



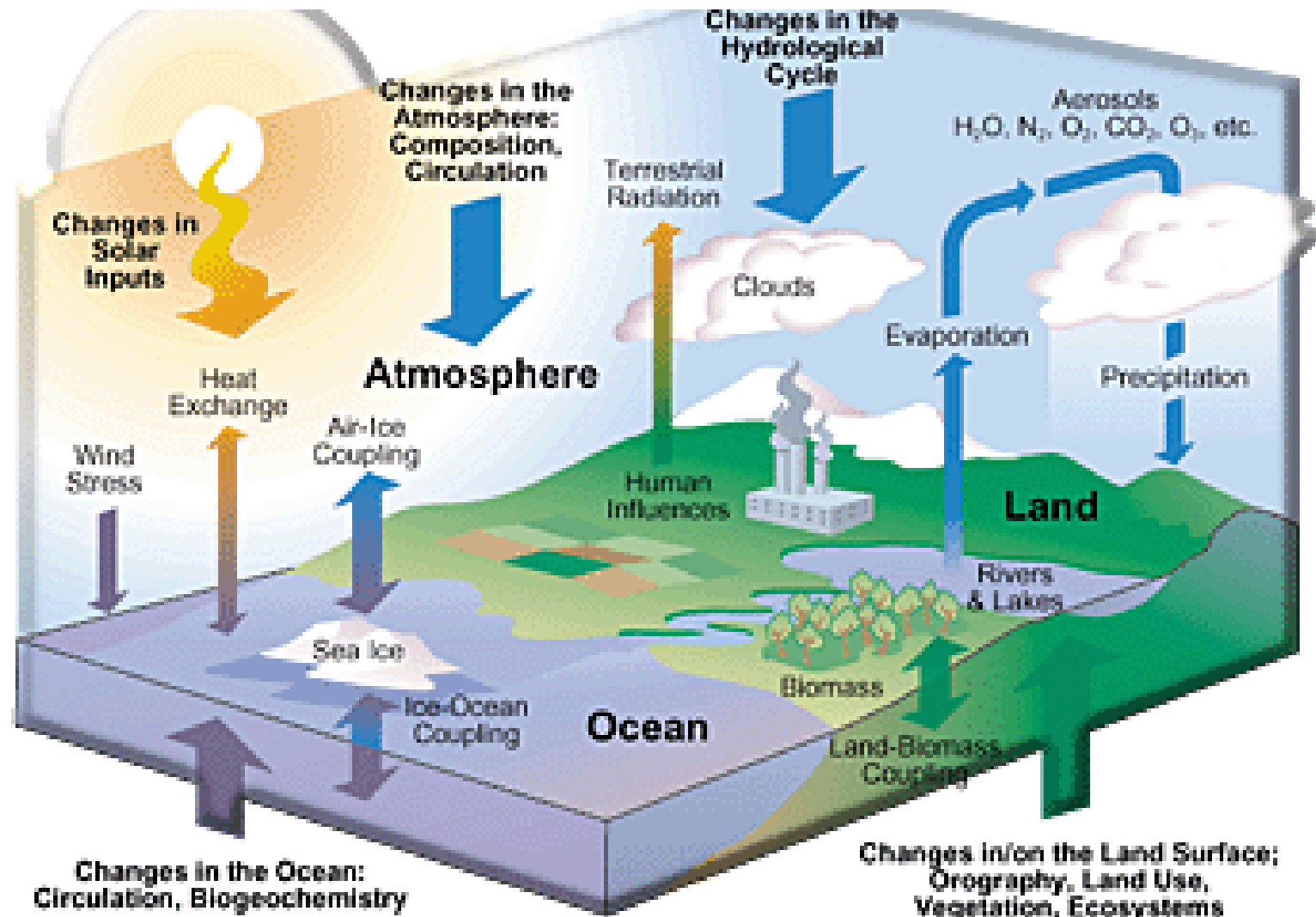
Upper Atmosphere Research Satellite:
The Improved Stratospheric and Mesospheric Sounder



Ozone, trace gases and Chemistry Measurements



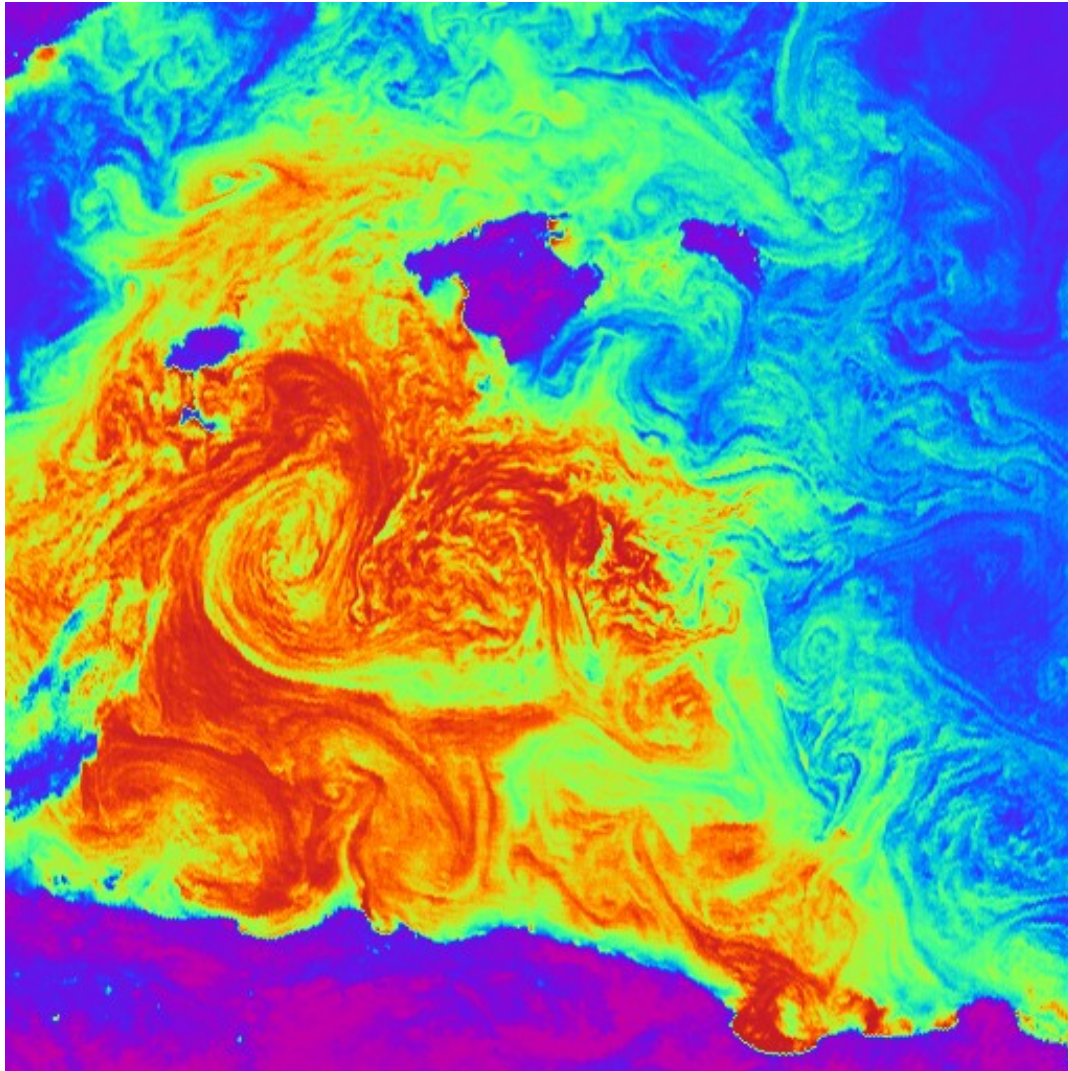
Climate Change: The Role of the Oceans



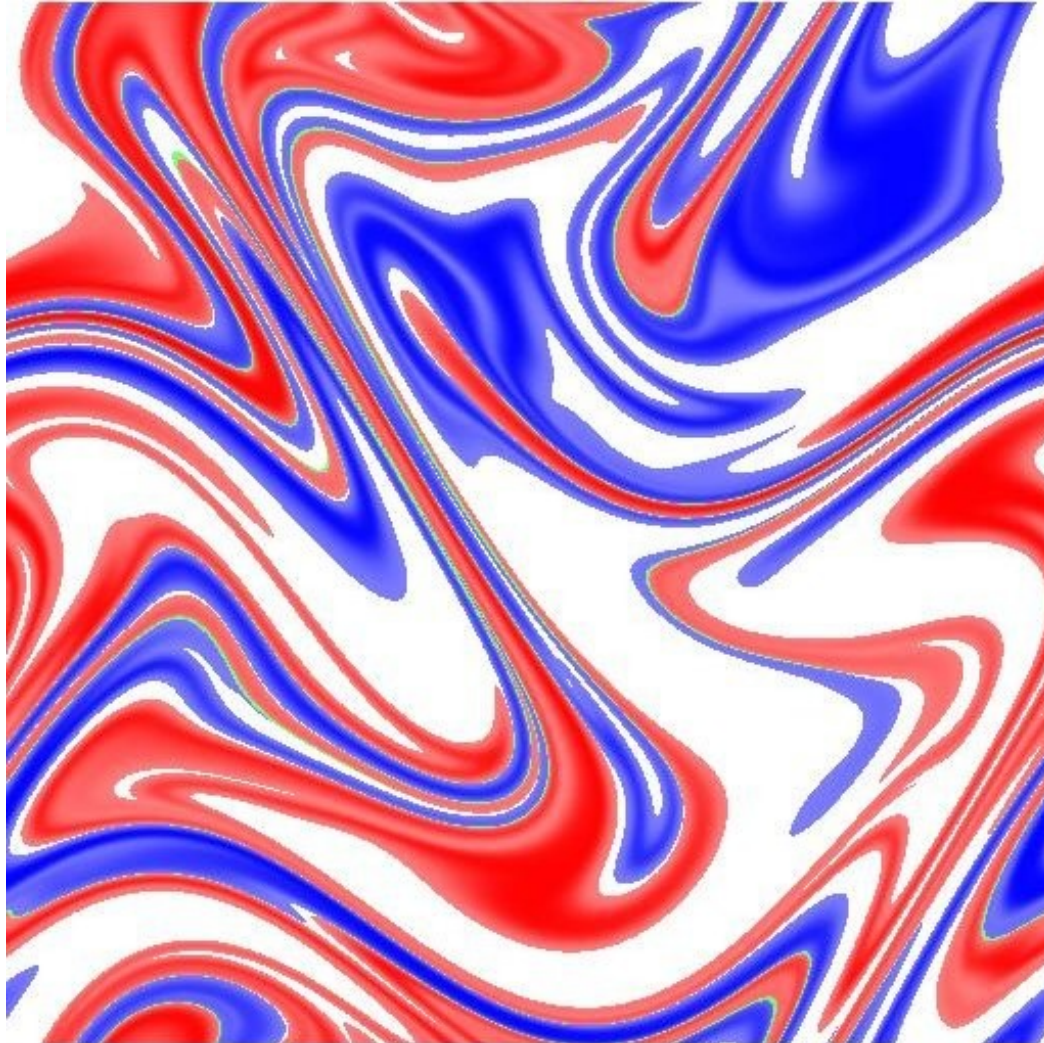
European Research Satellite ERS-1: The Along-Track Scanning Radiometer



ATSR Data on Ocean temperatures and currents

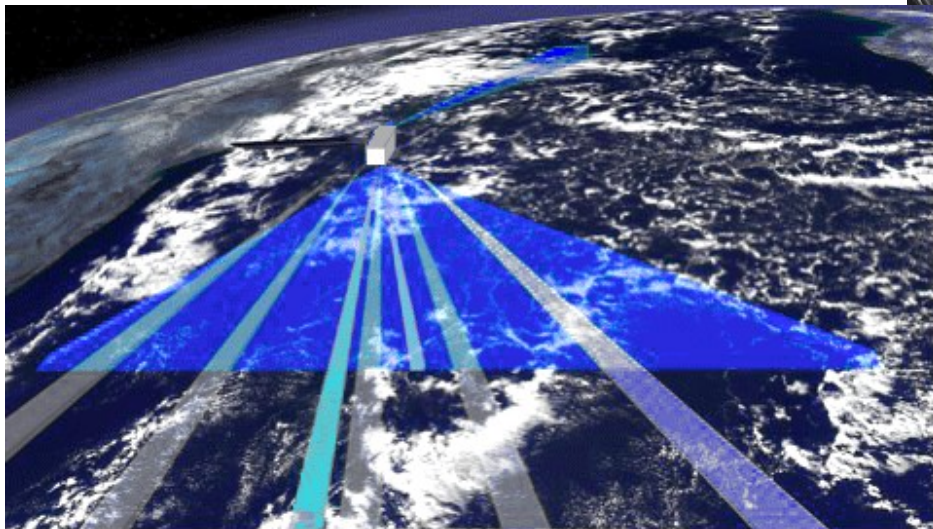
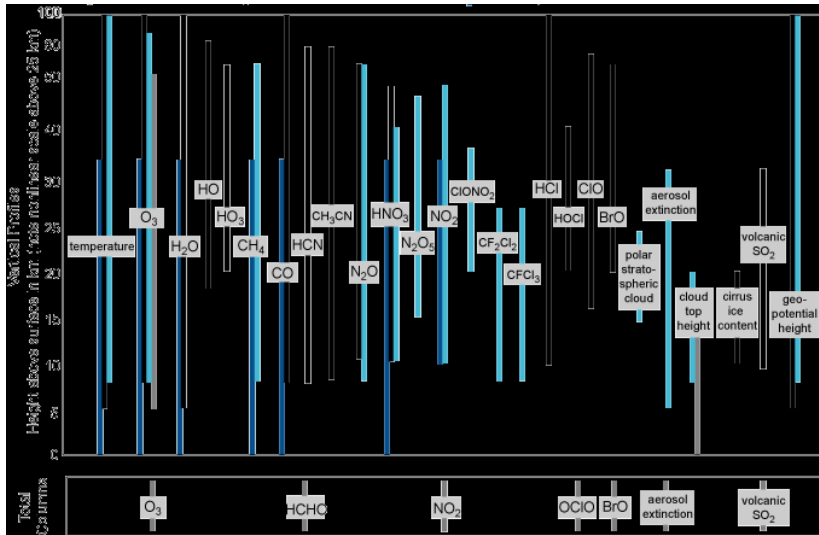


Climate Physics: The Role of Atmospheric Dynamics



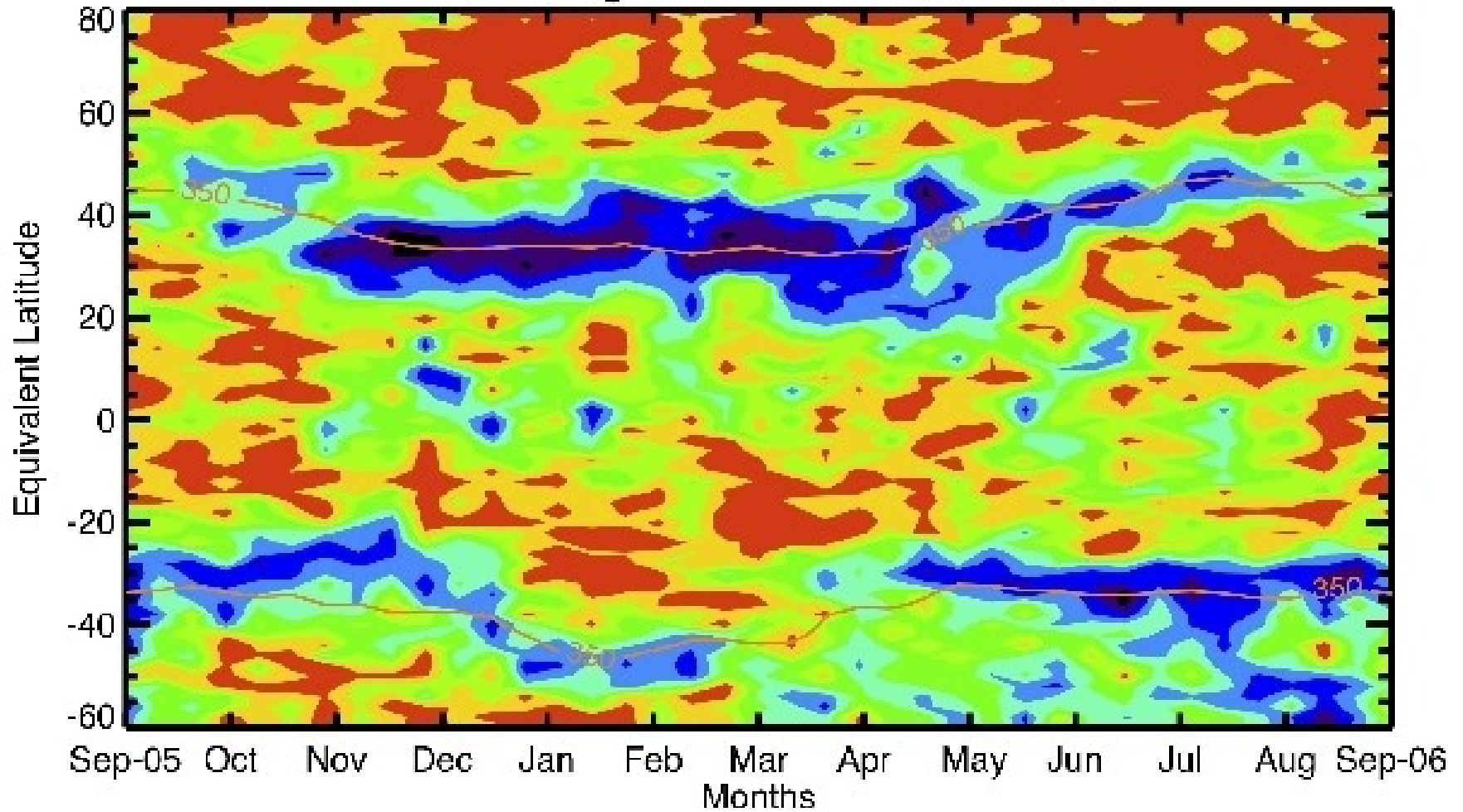
P Haynes, DAMTP, Cambridge

Earth Observing System: The *High Resolution Dynamics Limb Sounder*

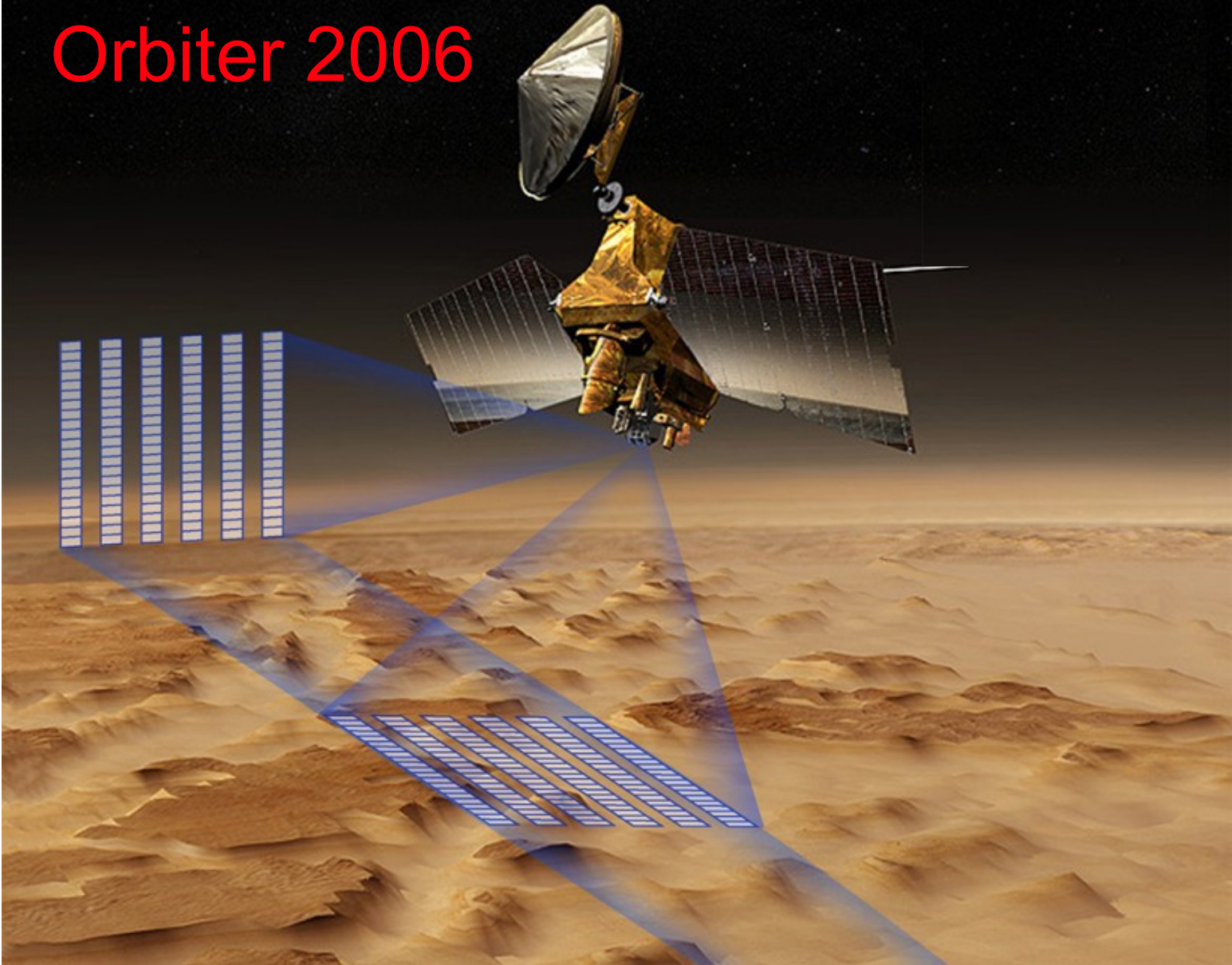


Climate Change: The Role of Atmospheric Dynamics

Line-mixing OZONE HIRDLS 350K



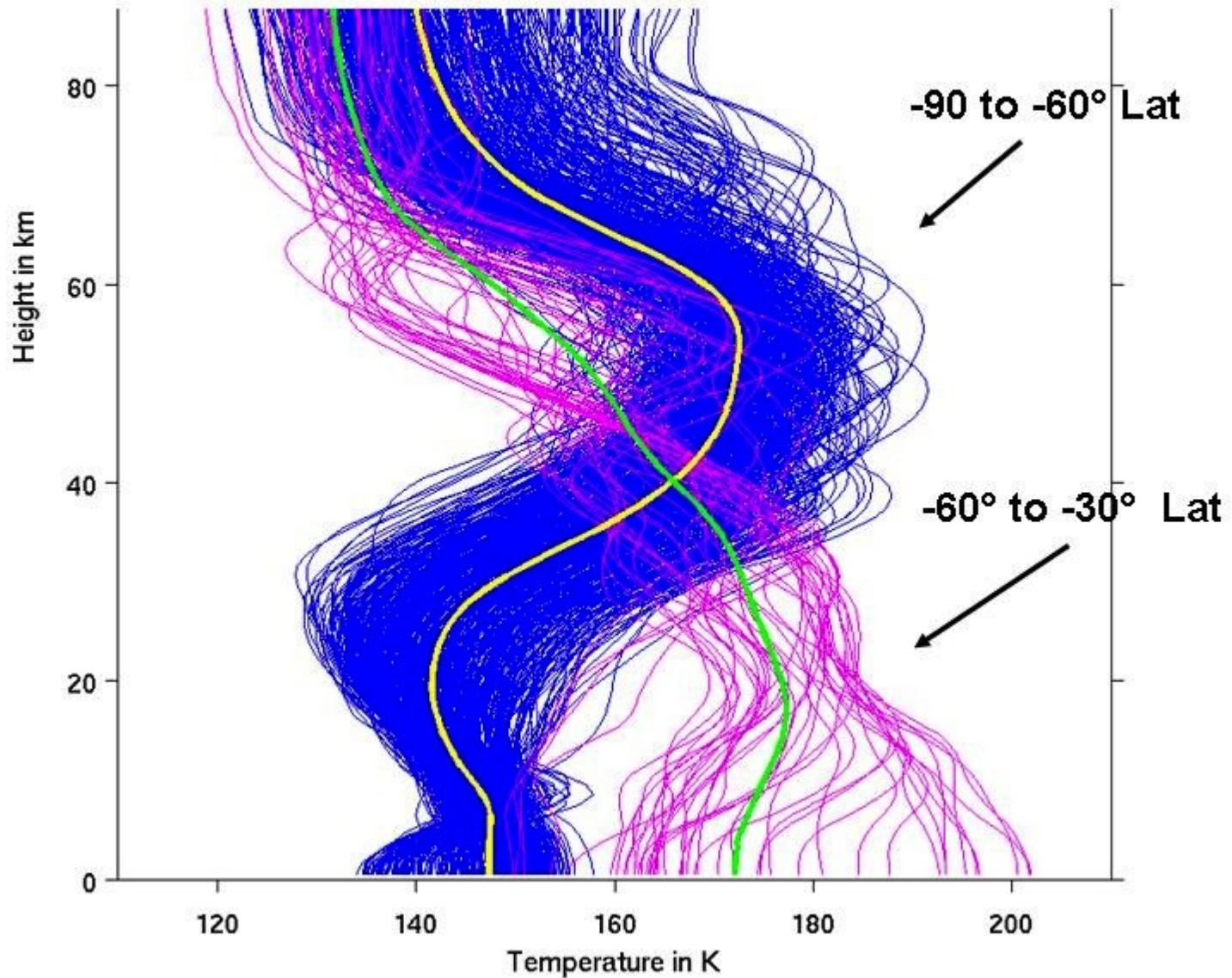
Mars Reconnaissance Orbiter 2006



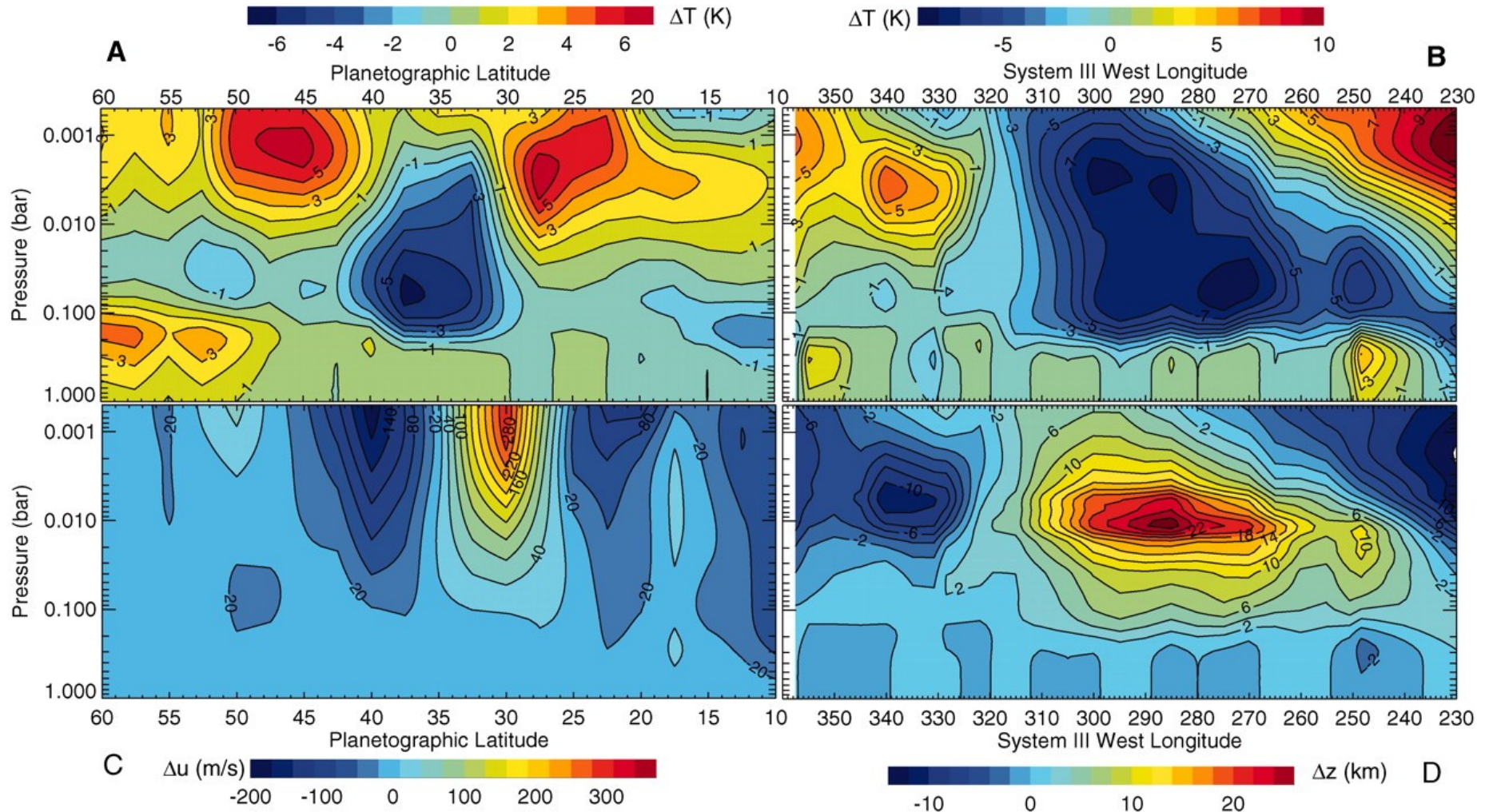
MCS Retrievals of Temperature

Clear Atmosphere

Southern Winter Pole

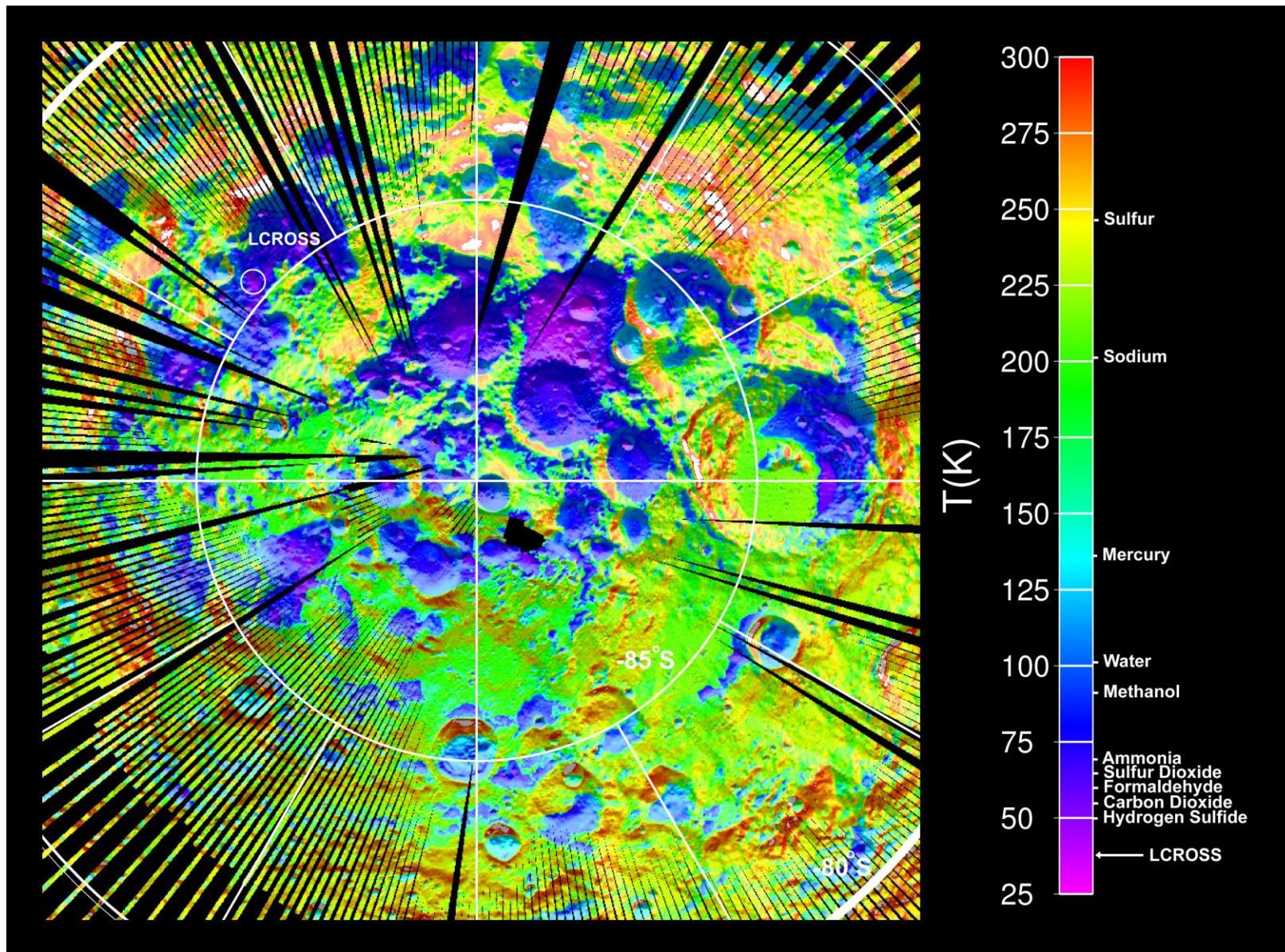


Fletcher et al., Thermal Structure and Dynamics of Saturn's Northern Springtime Disturbance, *Science*, 17 June 2011



October 21, 2010: South Pole of the Moon from LRO

Diviner results indicate presence of widespread ice on the Moon



RAL, Universities, Industry, Agencies

Infrared Science and Technology in Space

NIMBUS 4-7: Weather Forecasting: Global Temperature Profiles

ISAMS: Trace gases and the Chemistry of Ozone Depletion

ATSR: The Role of the Oceans Climate Change

HIRDLS: Climate Physics: Coupled Chemistry and Dynamics

Six Planets, two moons and a comet:

Climate Processes and Origins

