RMetS Wednesday Meeting – 21st January 2009

On Wednesday the 21st January I attended a meeting at the Imperial College London on the new METOP satellite, a new tool for measuring the atmosphere.

The first speaker was Dr Dieter Klaes from EUMETSAT. He gave an overview of what the EPS/METOP system did and what instruments for measuring the atmosphere were onboard. METOP is Europe's first polar-orbiting satellite dedicated to operational meteorology and the space component of the EUMETSAT Polar System (EPS). Each satellite launched has a life span of about 5 years, METOP-A was launched on 19th October 2006 so has 3 years left in orbit. In 2012 METOP-B will be launched to carry on the work of METOP-A. There are a new generation of European instruments onboard which offer improved remote sensing capabilities to both meteorologists and climatologists. The system offers polar satellite imagery and global views which will help the forecast models tremendously. The talk gave a great introduction into how the satellite worked and what instruments were on it.

Dr Peter Bauer from ECMWF talked about the METOP data which can be used for medium range forecasting. The METOP satellite data comprises data from weather instruments which have proven to be crucial in forecasting global numerical weather prediction. Miss Fiona Hilton from the Met Office looked at the use of IASI (Infrared Atmospheric Sounding Interferometer) data in the Met Office forecast model. In 2007 the IASI demonstrated a positive impact on forecasts approximately twice as large as that shown by AIRS (Atmospheric Infrared Sounder). So the input of the data from IASI would be a great advantage to the Met office Modelling system.

During the break I got to see the GEO group's live satellite feed, which came from a satellite dish on the roof of the Imperial College. It was fantastic to see a live image of the earth with one large Atlantic system waiting to plough across the UK.

The meeting began again with my favourite talk of the whole day by Dr Rose Munro from EUMETSAT. She was talking about the GOME-2 and IASI data being used to monitor ozone, reactive trace gases and greenhouse gases. The presentation was full of animations, my favourite being a volcanic SO_2 cloud moving across Russia and into China and then following wind patterns back to India. The instruments could also measure column amounts of CO, CH_4 and CO_2 in addition to a number of other trace species. I fully understood nearly everything in this presentation, and learnt a great deal from the talk.

The final talk I attended was by Dr Simon Keogh from the Met Office and he spoke of the METOP ASCAT data. ASCAT is an active radar instrument which measure's backscatter from the Earths surface. The backscatter can then be used to determine sea ice and soil moisture, but what particularly interested me was the fact that the satellite could measure wind speed and direction over the oceans which is a great help for shipping forecasts and search and rescue teams.
Overall, the day was a great success and I learnt a lot about the METOP satellite and how it worked. Hopefully I'll be able to use data from the satellite one day in my own work.

Will Copeland