

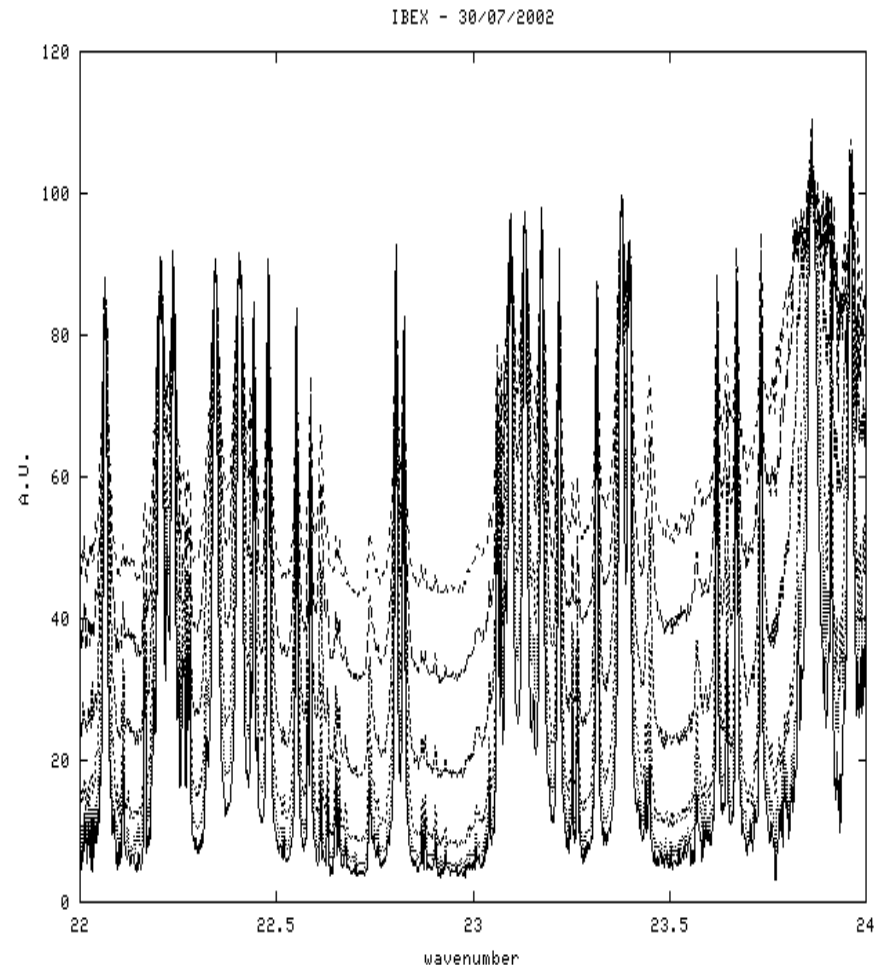
# Ibex – Balloon Experiment – A0399

## Results

Despite the shortcomings described before it has been possible to record at float altitude (38 km) 8 calibrated sequences with tangent altitudes ranging from 38 to 15 km. The number of spectra in each sequence range from 11 to 15 (value change because of change in float altitude; some of the spectra had to be discarded)

A sample of the spectra is shown on the right; here we display results for the region measured by detector 1 in the 22-24  $\text{cm}^{-1}$  region

Results from detector 2 (not shown here) are of poorer quality and we are still trying to 'clean' them



# Ibex – Balloon Experiment – AO399

## Aim of the experiment

Measurements of minor atmospheric constituents over the Mediterranean region in correlation with Envisat overpasses and M55 flights

## Why from Sicily ?

Trapani launch base offers long duration flights (~24h) as well as technical support (mechanical workshop, local net for telemetry downlink etc.) Flights end in Spain and are nearly at constant latitude

## Shortcomings

A sudden failure just before the flight prevented to launch on the 1<sup>st</sup> choice day for which correlation with both satellite and M55 were possible

No other good date for intercomparison could be found within time window defined by the end launch campaign

During the flight the telemetry uplink broke (commands could not be sent any more) and the dewar batteries (bad batch?) stopped working at about half of the flight.

After the recovery and before coming back home the truck with the instrument went on fire -> no more IBEX



# Ibex – Balloon Experiment – AO399

## Summarizing ...

- Several hours of data recorded at float altitude ( $38 \text{ km} \pm 1$ ) with tangent altitude down to 15 km
- Data recorded over a path with constant latitude and with a  $\sim 10^\circ$  span in longitude
- Azimuth and limb scan direction well under control, rms of fluctuations being of the order of  $\sim 1'$
- Cooperation with other groups (M55) proved very important to sort out last minutes bugs in the instruments and the software (overpass table)
- Because of a delay in the flight (electronics problem and then weather conditions) we could not measure in topmost days when two overpasses were possible.
- In the day of flight a marginal overpass was still possible but to get it a gondola reorientation was required; failure in the uplink (commands) and in the detector batteries prevented this possibility
- Therefore the superposition balloon satellite has been obtained only in 'space' but with a  $\sim 24 \text{ h}$  delay.

# Ibex – Balloon Experiment – A0399



A few images of the campaign in Trapani

Please note that at Trapani fish is excellent !!!