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Limb products – metadata issues

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Limb data

Typically (limb emission data)

- Radiance measured at several altitudes
- L1B products contain spectra/radiances
- Retrieval algorithm converts combinations of spectra/radiances into L2 product – e.g. profiles of temperature, O3, H2O, CH4...

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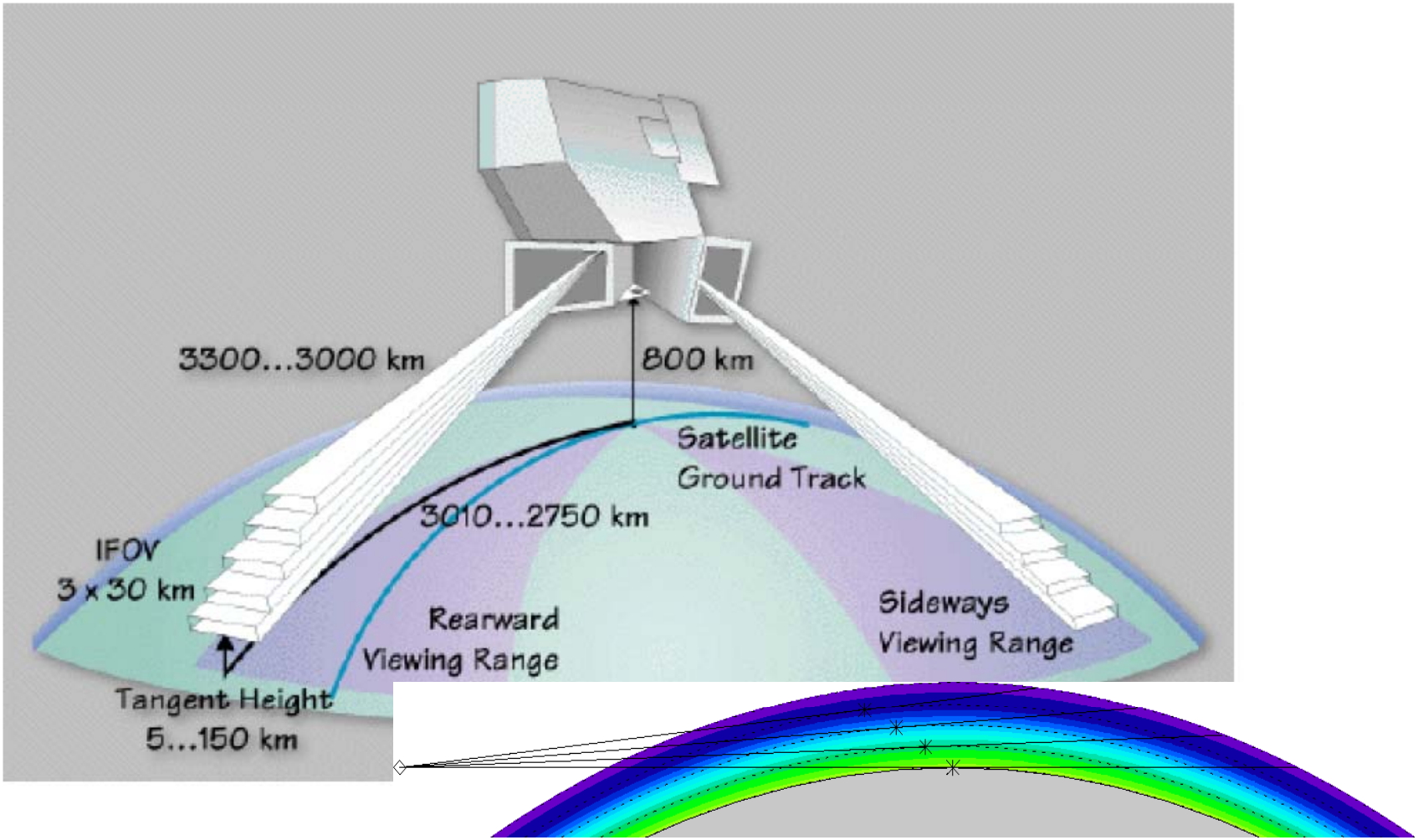
Envisat - MIPAS example



Envisat - MIPAS example

(Sections of) Spectra processed to obtain vertical profiles:

L1b product contains multiple spe

Level 1b Calibrated radiance spectrum

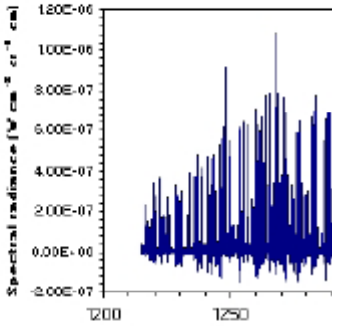
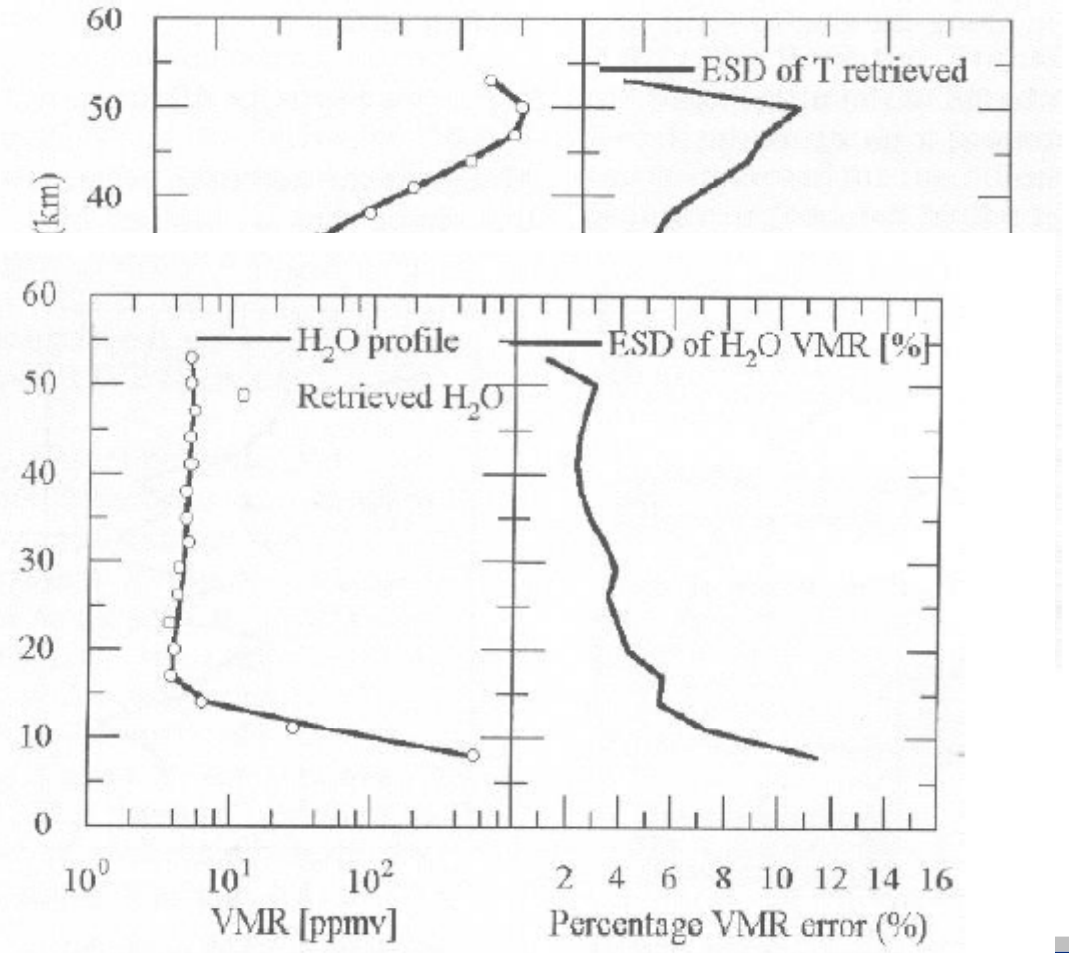


Figure 1.11 Spectrum (MI



From: MIPAS Product Handbook

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Things to consider

- Profiles are not necessarily vertical
- Vertical grids are not always constant
- Linking profiles to spectra/radiances (not always 1:1 link)
- x,y,z coordinates of measurements and profile points

Questions

- What is the scope of the metadata definition?
  - L1B and L2 data? L3 data?
  - Combined limb/nadir data products? (e.g. SCIAMACHY)
  - Limb occultation data? (e.g. GOMOS, ACE)
  - NASA instruments? (e.g. TES, HiRDLS, MLS)
  - 1D retrievals/2D retrievals ?