Validation of SCIAMACHI total ozone column measurements by ground-based microwave observations of ozone at Kiruna, Mount Zugspitze, and Mérida

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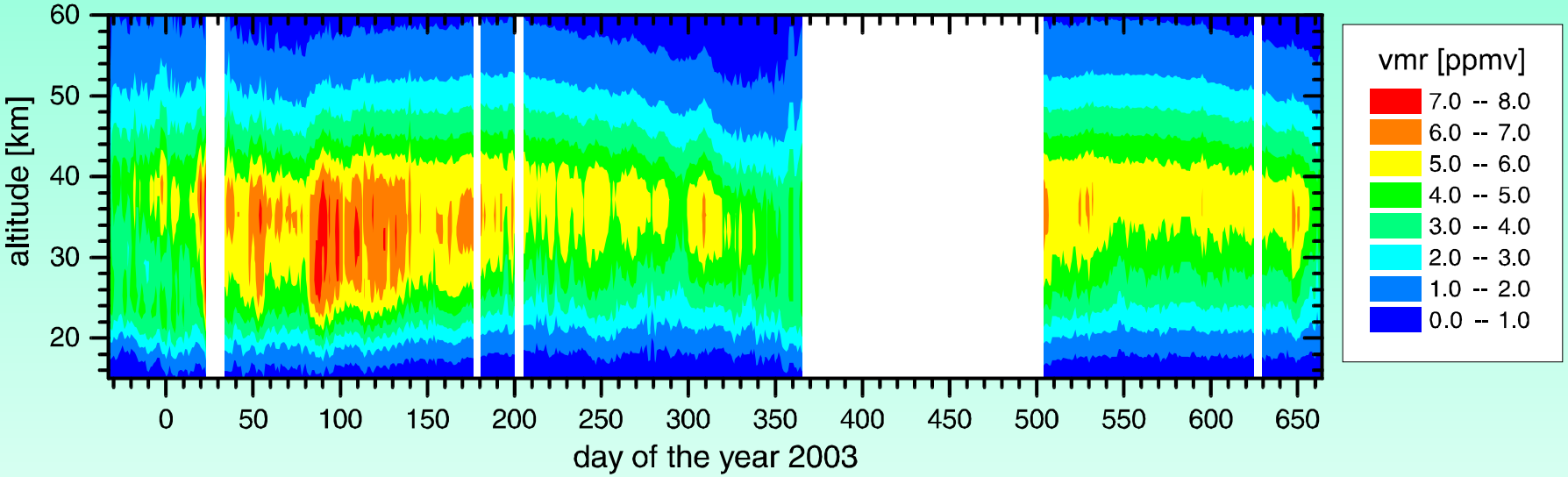
The sites of our ground-based measurements

Ozone over Kiruna (67.84°N, 20.41°E, 425 m asl) between 28 November 2002 and 24 October 2004 as measured by KIMRA

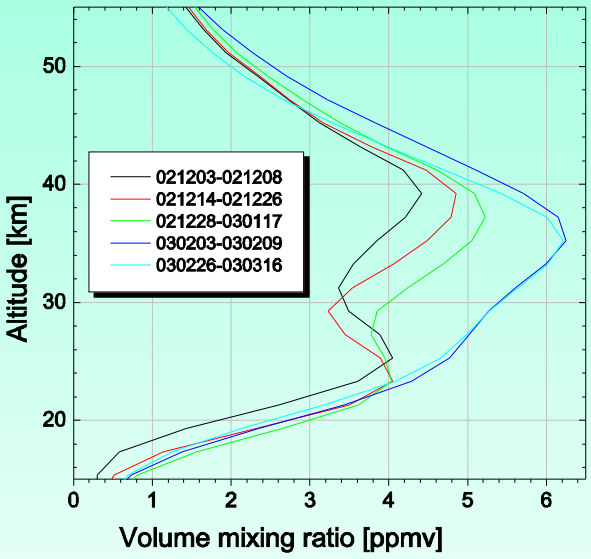


U. Raffalski, G. Hochschild, G. Kopp, and J. Urban

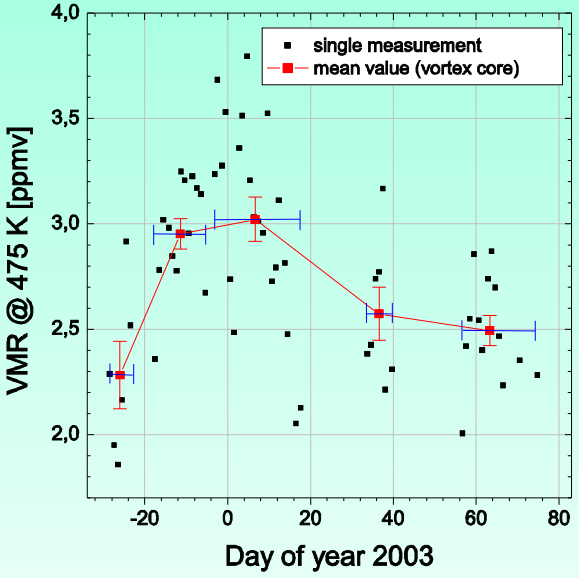
"Evolution of stratospheric ozone during winter 2002/2003 as observed by a ground-based millimetre wave radiometer at Kiruna, Sweden"

submitted to Atmospheric Chemistry and Physics

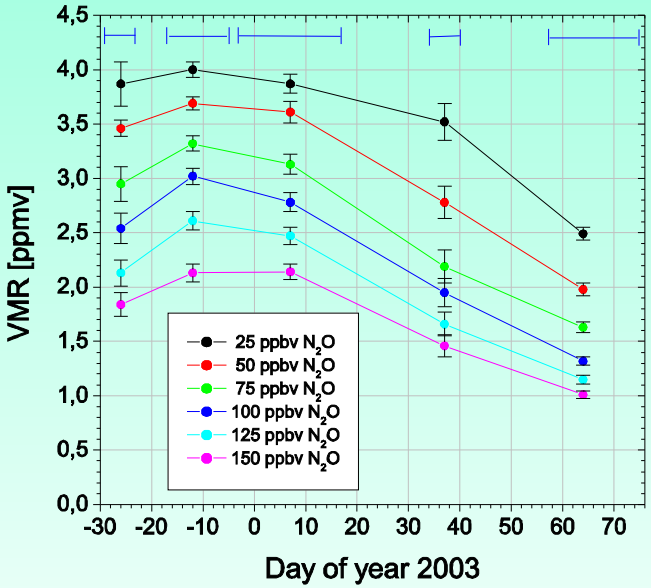
Mean ozone profiles



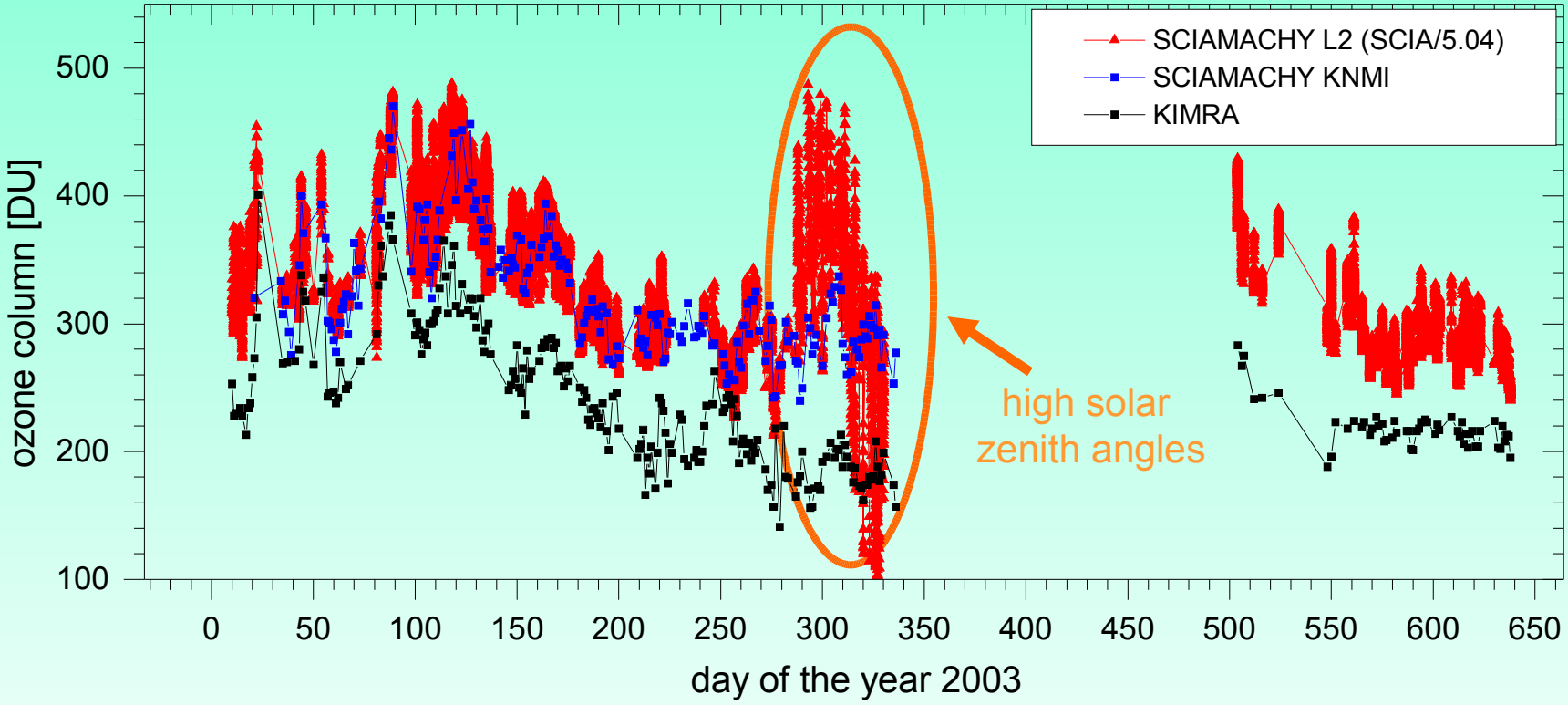
Ozone @ 475 K



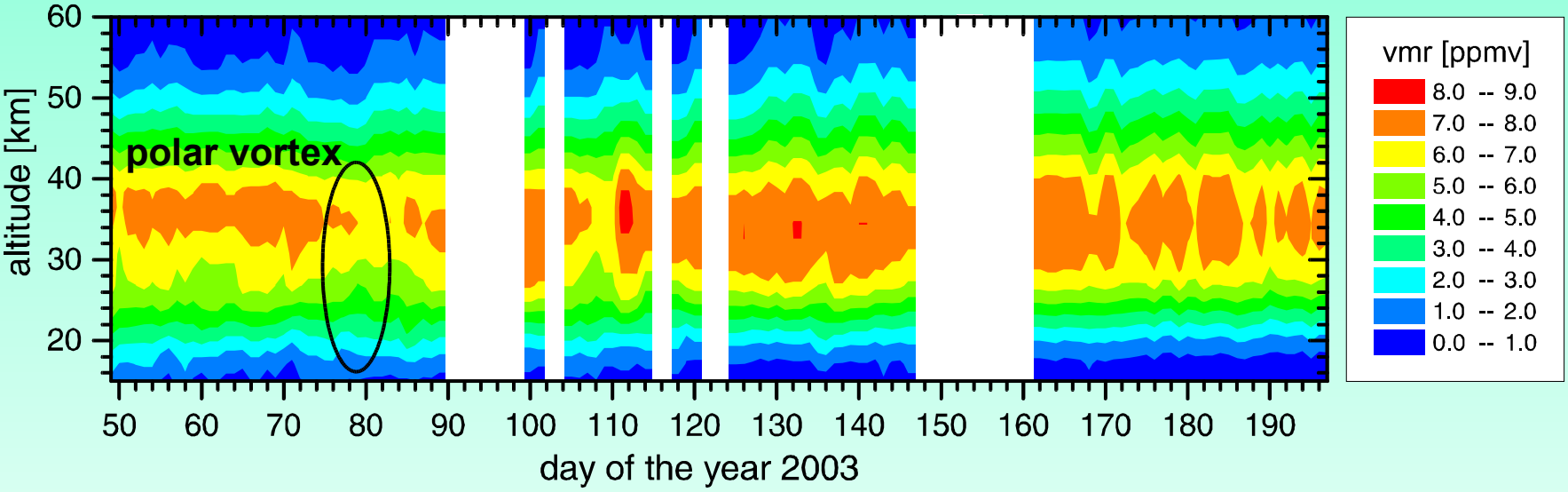
Ozone on ODIN/SMR N_2O isopleths



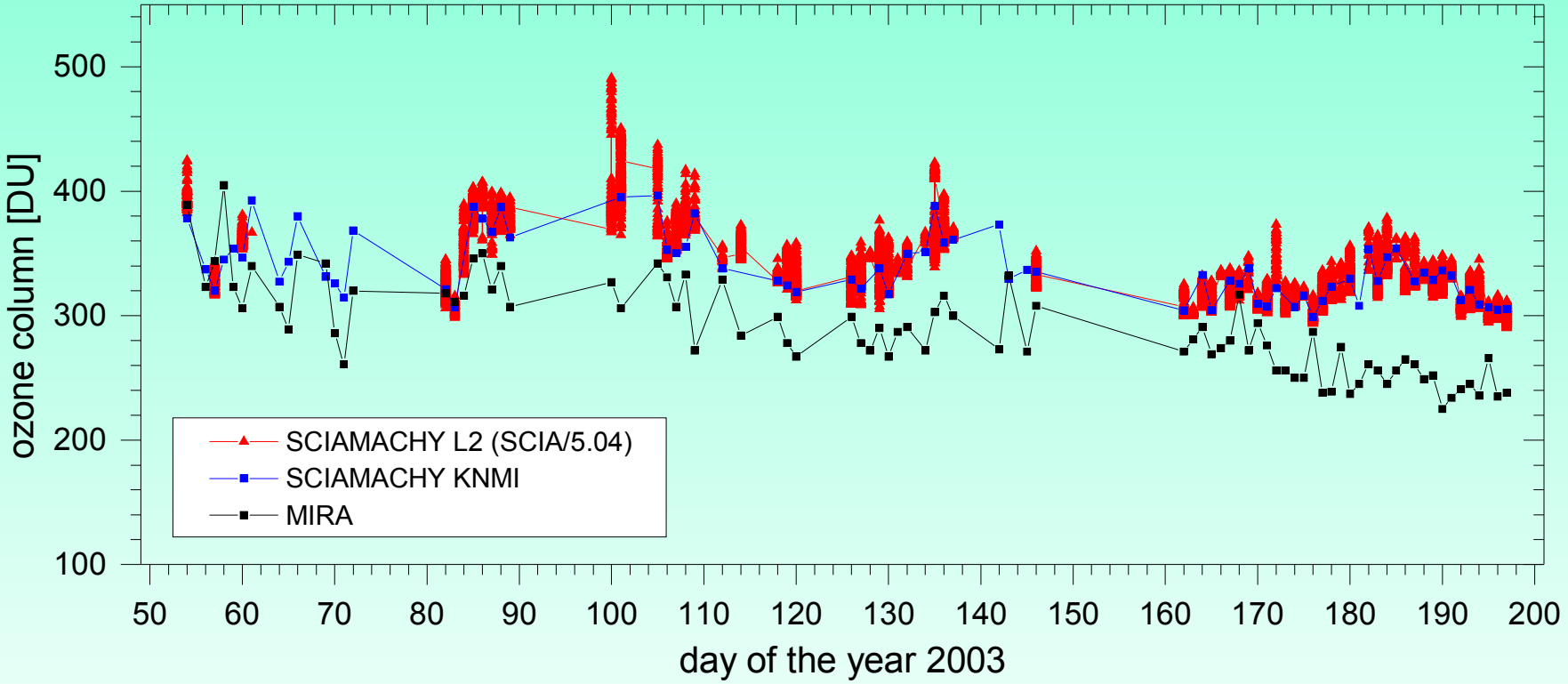
Ozone column densities over Kiruna as measured by SCIAMACHY and KIMRA



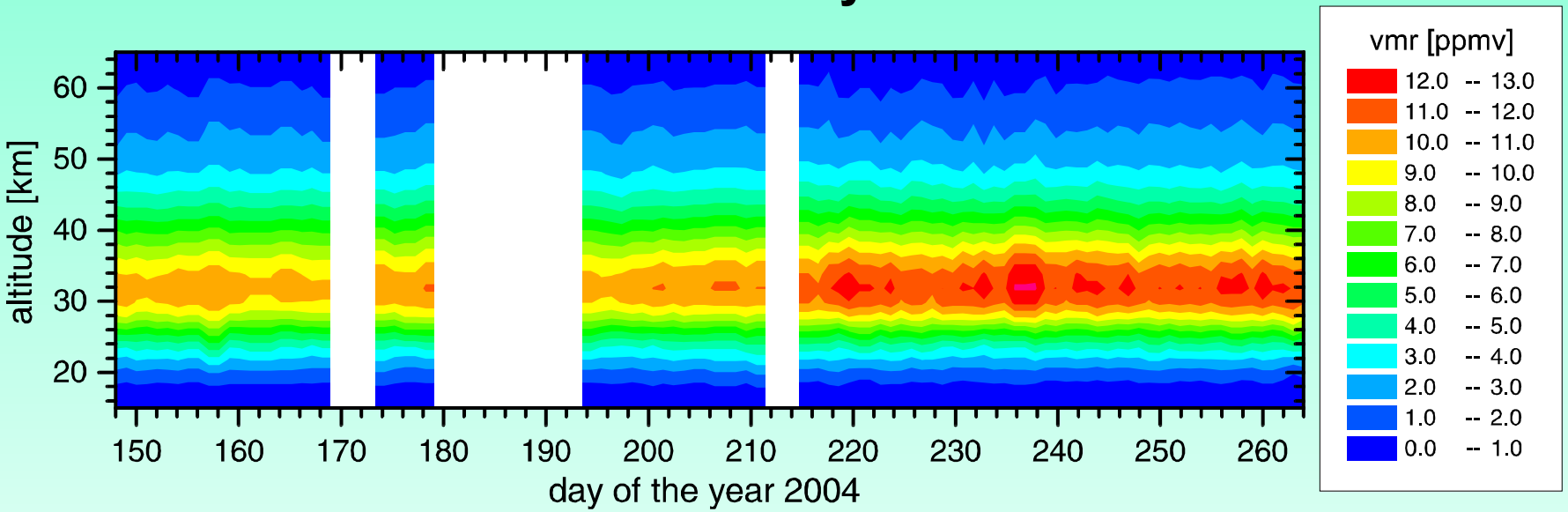
Ozone over Mount Zugspitze (47.4°N, 11°E, 2650 m asl) between 18 February and 16 July 2003 as measured by MIRA 2



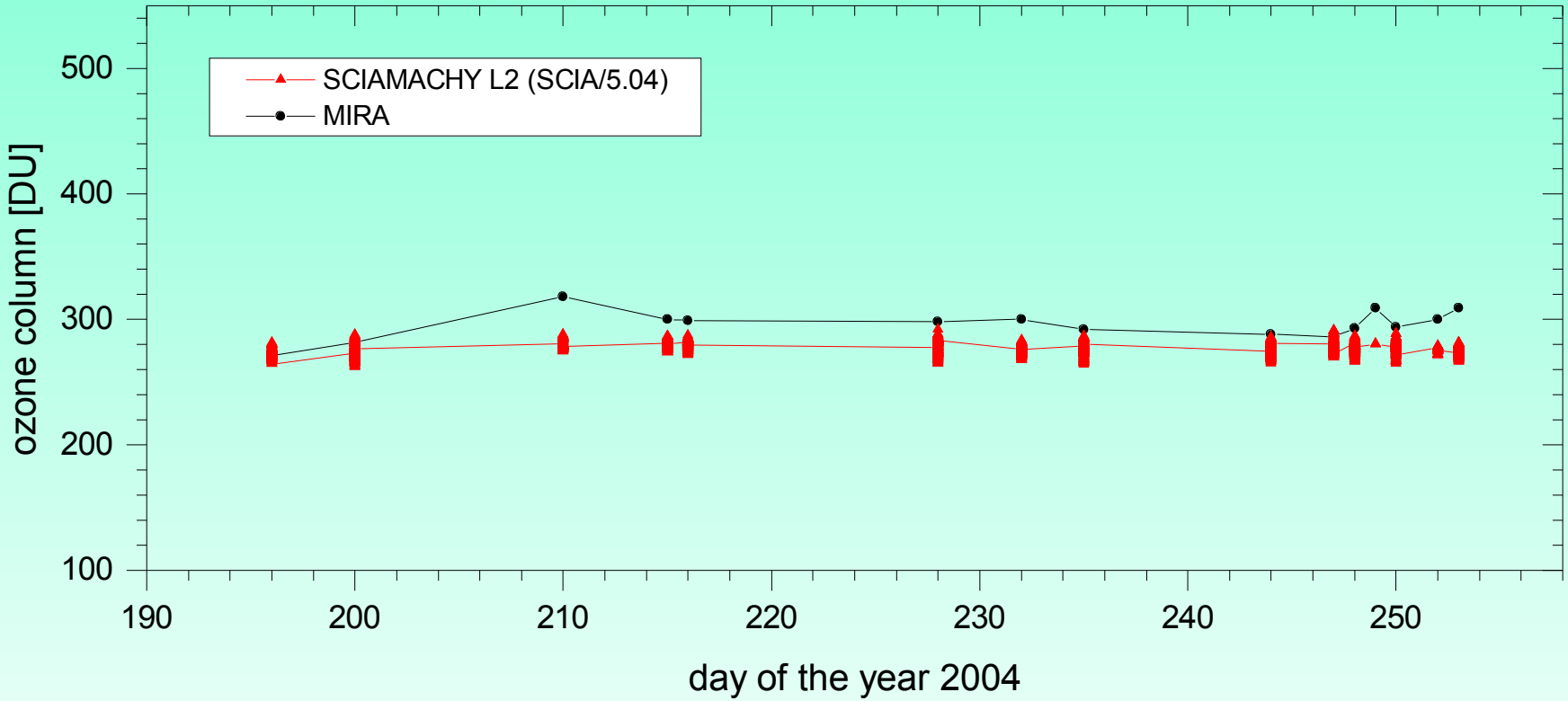
Ozone column densities over Mount Zugspitze as measured by SCIAMACHY and MIRA 2



Ozone over Pico Espejo (8°N, 71°W, 4765 m asl) between 27 May and 19 September 2004 as measured by MIRA 2



Ozone column densities over Pico Espejo as measured by SCIAMACHY and MIRA 2



Summary

- **ground-based measurements of ozone vertical profiles and columns for several months at a polar, mid-latitude, and tropical sites**
- **microwave and SCIAMACHY ozone columns in general evolve quite parallel**
- **problems in Arctic SCIALMACHY L2 (SCIA/5.04) data under high solar zenith angles**