



## **50 years of balloon borne ozone profile measurements at Uccle, Belgium**

Deniz Poyraz, Roeland Van Malderen, Hugo De Backer, Dirk De Muer, Andy Delcloo, Willem Verstraeten, Alexander Mangold, Veerle De Bock, and Quentin Laffineur

Royal Meteorological Institute of Belgium, Observations, Belgium (deniz.poyraz@meteo.be)

Since 1969, 3 times a week, ozonesondes have been launched at the mid-latitude station Uccle (Brussels, Belgium), with only some major gaps in the years 1983-1984. One important instrumental/operating procedure change took place: the replacement of the Brewer-Mast ozone sensors by the Electrochemical Concentration Cell ozone sensors manufactured by En-Sci in 1996. This change was well documented by an analysis of tandem soundings with both sensors. Therefore this time series forms a very homogeneous dataset. Moreover, total ozone measurements are available from Dobson and Brewer spectrophotometer measurements at the same site since 1971 and 1983, respectively.

In this contribution, we highlight the importance of the long-term time series of frequent ozonesonde launches at Uccle for vertical ozone concentration trend analysis, satellite ozone retrieval validation, evaluation of sensor drift of satellites, and for process studies by giving some applications of each of them. We also compare the data with ozonesonde data from a nearby site (De Bilt), with independent surface ozone data at Uccle, and with aircraft ascent and descent data at Brussels airport.