

## **Note on Payerne Ozone sounding data**

The long series of Payerne ozone sounding series has relied on the Brewer-Mast (BM) sondes from 1968 up to August 2002. After a period of test for an alternate system, the operational instrument was changed to the Electrochemical Concentration Cell (ECC) sonde on September 2002. The period of test consist mainly of dual flight of an ECC and a BM attached under the same balloon, the full dataset consists of more than 150 such dual flights. A first analysis of the data is summarised in the MeteoSwiss series publication “Veröffentlichungen“ (*SONDEX/OZEX Campaigns of dual ozonesondes flights: report on the data analysis* by R. Stübi in Veröffentlichungen MeteoSchweiz, Nr. 65, and July 2002) and a publication is in preparation.

The main conclusion of the report is that the transition from BM to ECC should not produce a break in the long term series since the measured differences are not significant for most of the profile, except above about 30 km. This result is obtained with the standard treatment for the BM and the most commonly used data processing for ECC sondes. The quality of the data should be improved in terms of reproducibility since ECC are clearly superior to BM in this respect.

The ENSCI instruments are used in Payerne with a 0.5% KI-concentration solution. The pump efficiency correction profile in use is the one proposed in the 1994 ENSCI recommendations. The profiles data are NOT normalised to an independent total ozone measurement but nevertheless the total ozone value is given together with the normalisation factor.

Any comments from data users who suspect an effect of that transition from BM to ECC is welcome at MeteoSwiss.

Best regards,

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