
User guide for the GROSOM calibration routine

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Summary

This document contains a comprehensive description of the new GROSOM (GROMOS and SOMORA) calibration routine. It should support new user of the calibration routine by describing the concept of the routine, the functions and the underlying choices and methods applied during the calibration. It could also help to include new instruments within the same calibration framework.

This report also provides some examples of processing and highlights some of the changes introduced with respect to the old calibration routines of GROMOS and SOMORA.

The complete reprocessing of the raw data from these two instruments will be the subject of a future report and is not presented here. This future work will also contains a thorough identification of suspicious calibrated data periods for both instruments.

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1 Introduction

The GROund-based Millimeter-wave Ozone Spectrometer (GROMOS) and the Stratospheric Ozone Monitoring Radiometer (SOMORA) are the only two Swiss radiometers measuring ozone profiles in the middle atmosphere (see Fig. 1).

GROMOS is operated by the Institute of Applied Physics at the University of Berne while SOMORA is operated by the Federal Office of Meteorology and Climatology MeteoSwiss in Payerne.

Both instruments are part of the Network for the Detection of Atmospheric Composition Change NDACC and operates continuously since 1994 (GROMOS) and 2000 (SOMORA).

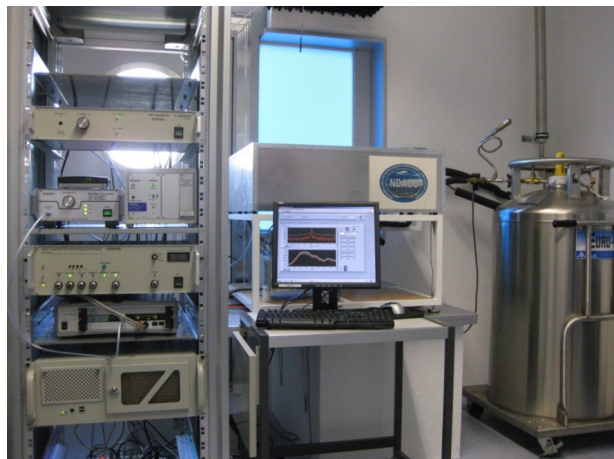
long-term measurements very valuable for trends

Problems, see leonie

In November 2019, MCH and IAP decided



(a) GROMOS in Berne (IAP)



(b) SOMORA in Payerne (MeteoSwiss)

Figure 1: Pictures of the two radiometers

2 Using the routine

2.1 new subsection

3 Routine description

4 Comparison with the previous routine

5 Conclusion