Universität Bern
Institut für Angewandte Physik
Sidlerstrasse 5
3012 Bern
Schweiz

Telefon: +41 (0)31 631 89 11
Telefax: +41 (0)31 631 37 65
E-Mail: IAPemail@iap.unibe.ch
WWW: http://www.iap.unibe.ch/

UNIVERSITÄT BERN

Seminar über Microwavephysics and Atmospheric Physics

Referent: Oliver Stähli, Institute of Applied Physics, University of Bern

Titel: Temperature profiles from the ground to the stratopause with TEMPERA

With the new Temperature Radiometer TEMPERA it is possible to measure temperature profiles from ground to about 50 km. This instrument was built at our Institute and since 2012 it is measuring continuously in our lab on the roof. TEMPERA operates in the frequency range from 51 to 57 GHz in the oxygen-emission region of the microwave spectrum. The spectral analysis is done with a filterbank with 12 channels for the troposphere and with a digital FFT spectrometer which measures two oxygen-emission lines around 53 GHz with 32000 channels for the stratosphere. In the measured spectra the influence of the zeeman effect can be seen. In the presentation I firstly present the motivation and the design of TEMPERA. The second part consists of a short theory of the temperature retrieval. Following this I will show the results over the first half year of 2012 which are also compared with radiosonde and satellite data (MLS). Finally I will give an outlook for future work.

Zeit: Freitag, 30.11.2012, 10:15 Uhr

Ort: **Hörsaal A97**, Gebäude exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz