

# Agenda of NDACC microwave radiometry workshop

## (Location: Kuppelsaal, Main University Building, University of Bern)

**Tuesday, January 8th**

**Topic: Overview of microwave radiometry activities within NDACC.  
Emphasis on radiometry, instrumental aspects, etc.**

**Aim: Everybody knows who is doing what, where and how**

**Full day: Presentations of individual participants**

08:30 - 08:50	Welcome, logistics, etc.	N. Kämpfer
08:50 - 09:20	Activities at IAP, Bern	N. Kämpfer and team
09:20 - 09:40	Activities at MeteoSwiss	E. Maillard
09:40 - 10:00	Water vapor radiometry in the US and NZL	G. Nedoluha, M. Gomez
10:00 - 10:40	Coffee and tea	
10:40 - 11:00	CIO radiometry on Hawaii and Scott Base	G. Nedoluha
11:00 - 11:20	NDACC microwave activities in Japan	A. Mizuno, T. Nagahama
11:20 - 11:40	Water vapor and ozone at Seoul	J.J.Oh, S. Ka
11:40 - 12:00	Activities in Canada	K. Walker, N. Ryan
12:00 - 14:00	Lunch	
14:00 - 14:20	Activities at Ny Alesund	M. Palm

14:20 - 14:40	Activities at Alomar	P. Hartogh
14:40 - 15:00	Activities at Kiruna	U. Raffalski
15:00 - 15:20	Activities at Onsala	P. Forkman
15:30 - 16:00	Coffee and tea	
16:00 - 16:20	Activities at Thule	G. Muscari
16:20 - 16:40	NO, O3, and CO observations using the BAS microwave radiometer at Troll station and Halley, Antarctica	D. Newnham, P. Espy
16:40 - 17:00	Ozone radiometry in the US and NZL	A. Parrish
17:00 - 17:20	Any other activities	

### Wednesday, January 9th

**Topic: Specific instrumental aspects**  
**Aim: In depth discussion of key questions**  
**Full day: Some devoted talks, contributions from team**

#### **A) Frontend issues: Optics, Antennas, Baseline avoidance etc.**

08.30 - 08.50	State of the art modeling of optics	A. Murk
08.50 - 09.10	STEAM-R, a multibeam receiver for limb sounding	M. Renker
09.10 - 10.30	Discussion and short presentations from team members (be prepared to contribute with one or two viewgraphs where applicable)	
10:30 - 11:00	Coffee and tea	

#### **B) Calibration issues: Loads (noise diodes, hot loads, cold loads, cryo loads), balancing concepts etc.**

11:00 - 11:20	Characterization of calibration loads	A. Murk, S. Fernandez
11.20 - 12.30	Discussion and short presentations from team members (be prepared to contribute with one or two viewgraphs where applicable)	
12:30 - 14:00	Lunch	
14:00 - 15:00	Continuation of work from the morning	

### C) Spectrometers: FFT, Autocorrelators, Chirp, SDR, etc.

15.00 - 15.20	New developments in FFT-spectrometers	A. Murk
15.20 - 15.30	SDR (Software Defined Radios) as an alternative?	A. Murk
15.30 - 15.50	Chirp Transform Spectrometers	P. Hartogh
15:50 - 16.20	Coffee and tea	
16:20 - 17.30	Discussion and short presentations from team members (be prepared to contribute with one or two viewgraphs where applicable)	
19:00	Joint dinner	

**Thursday, January 10th**

**Topic: Retrieval issues**

**Aim: In depth discussion of key questions**

**Full day: Some devoted talks, contributions from team. Visit of labs.**

08:30 - 09:00	ARTS / QPACK	P. Ericksson
09:00 - 09:20	Retrieval of H <sub>2</sub> O from the tropo- to the mesosphere	G. Nedoluha

09:20 - 09:40	How to incorporate multiple integration times into a single dataset	O. Christensen
09:40 - 10:00	Tuning the retrieval: treat or cheat	K. Hocke, S. Studer
10:00 - 10:30	Coffee and tea	
10:30 - 12:00	Discussion of special issues like tropospheric correction, baseline correction, sideband ratio, etc.	
12:00 - 14:00	Lunch	
	Whole afternoon visit of labs at IAP	

## Friday, January 11th

**Topic: Science and related issues**

**Aim: In depth discussion of key questions**

**Full day: Some devoted talks, contributions from team**

08:30 - 08:50	Diurnal variability of ozone. Report from the ISSI team meeting in December	K. Hocke
08:50 - 09:10	Diurnal variability of H <sub>2</sub> O and comparison with WACCM	D. Scheiben
09:10 - 09:30	Diurnal variation of stratospheric O <sub>3</sub> during Polar day above the Arctic	M. Palm
09:30 - 09:50	Measurements of mesospheric CO above Kiruna, and its interpretation using the SD-WACCM model	M. Palm
09:50 - 10:10	O <sub>3</sub> to map the vertical structure of planetary waves in the middle atmosphere	C. Straub
10:10 - 10:50	Coffee and tea	
10:50 - 11:10	How to report data (data formats, HDF, GEOMS,..)	I. Boyd

11:10 - 11:30	Inventory of existing data sets	C. Straub, I. Boyd
11:30 - 11:50	Upcoming campaigns	all
11:50 - 12:10	Joint research topics	all
12:10 - 12:30	Conclusions and outlook, next meeting	N. Kämpfer