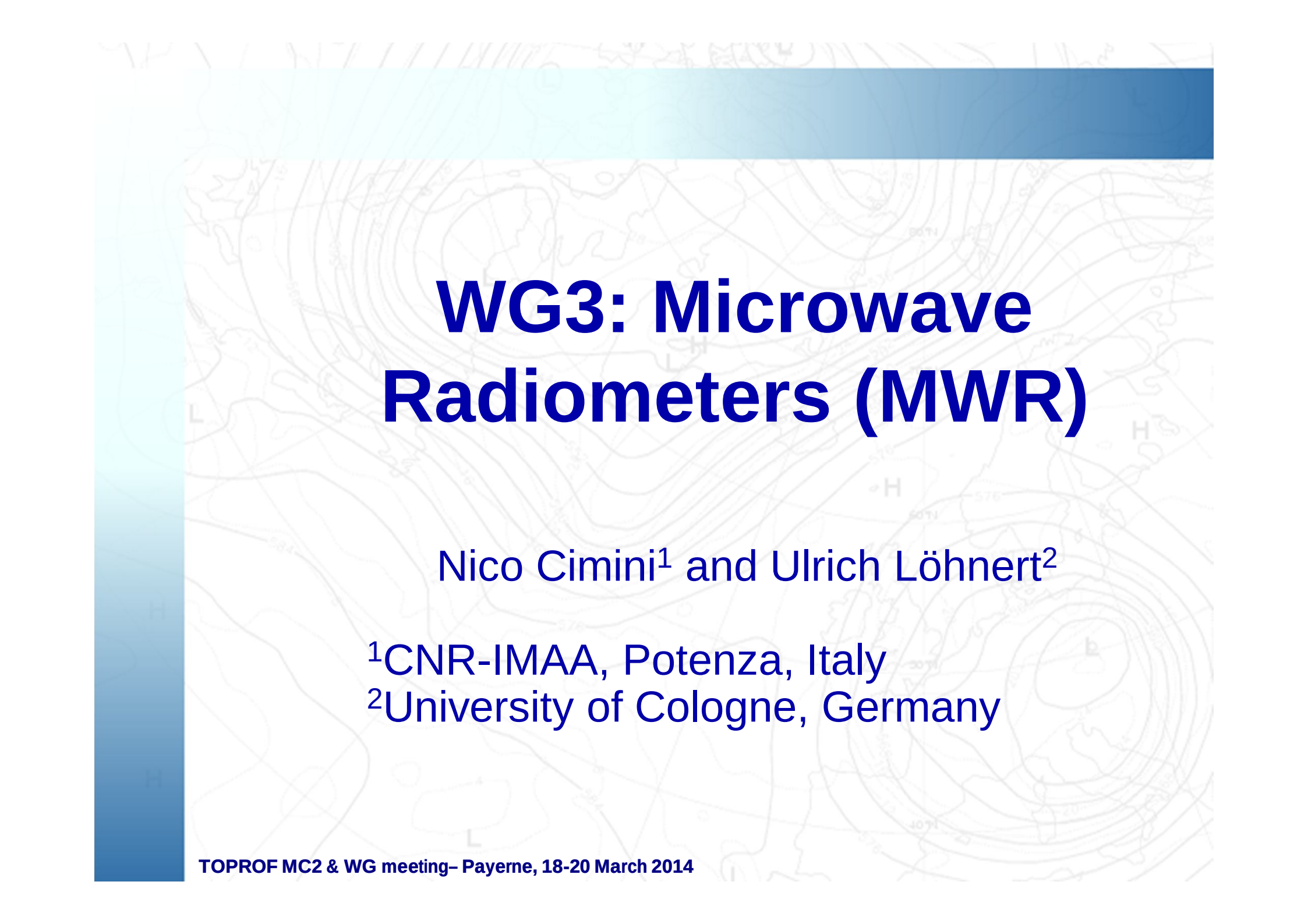




WG3: Microwave Radiometers (MWR)

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WG3 MWR

- **Overarching goal:** Exploit MWR into NWP DA
- **Objective:** Pursue the development of a sustainable network of European MWR
- **Heritage:** COST Action ES0702 (EG-CLIMET) + MWRnet
- **Tasks:**
 1. Establish protocols for providing QC MWR data (+ uncertainties)
 2. Coordinate the data processing chain (e.g. harmonised network)
 3. Engage NWP DA community (requirements, tools)

Task 1

Establish protocols for providing QC MWR data (+ uncertainties)

Sub-tasks:

1. Review protocols for calibration, scanning, and maintenance
2. Assess total uncertainty (Tb and retrievals)
3. Develop QC procedure

Task leader: TBD

Participants: Ulrich Löhnert, Nico Cimini,...

Possible participants: Harald Czekala, Bernhard Pospichal, Maria Cadeddu, Nik Kampfer, others?...

Task 2

Coordinate the data processing chain (e.g. harmonised network)

Sub-tasks:

1. Establish a common data format
2. Establish a common retrieval method
3. Establish common data life cycle (in near real time)

Task leader: TBD

Participants: Nico Cimini, Ulrich Löhnert, ...

Possible participants: Ulrich Löhnert, Harald Czekala, Julita Biszczuk, Lucas Alados Arboledas, María José Granados Muñoz, Daniele Bortoli, Balint Varga, others?...

Task 3

Engage NWP DA community

Sub-tasks:

1. Develop a trusted forward model for DA (e.g. RTTOV)
2. Develop tools for NWP DA of MWR Tb (e.g. O-B stats for T&H, LWP)
3. Quantify the impacts of T&H and Tb DA

Task leader: TBD

Participants: Nico Cimini, Ulrich Löhnert, Francesco De Angelis, Fabio Madonna,...

Possible participants: Olivier Caumont, Pauline Martinet, others?

WG3 – Where do we stand?

Task 1

- Review of best practices (MWRnet reports)
- Instrument error covariance analysis (at different sites)

Task 2

- Recommendations for data/metadata and retrievals (MWRnet reports)

Task 3

- Initial tests for MWR retrievals DA into NWP
 - performances are often limited by poor calibration, improper maintenance, and loose quality control
- Selection for a trusted forward model (RTTOV, currently for satellite MWR)
 - Initial modifications have been made (S. Kneifel, P. Rayer, U. Löhnert)
 - Activities recently resumed (F. De Angelis, N. Cimini)

WG3 – plans for STSM and SWG (2014)

Thank you! Join WG3, it's free for today!

- SWG (~5 people):

- SWG1: Common error characteristics of network instruments

- o Define "core" members/operators

- SWG2: Implementation of common format at "core" operators

- o Consult with DA people for their requirements

- STSM (1 person/visit):

- STSM1: Visit UKMO for finalizing GB-RTTOV (TBD)

- STSM2: Visit a NWSs (MétéoFrance, DWD,...) for reviewing requirements for MWR DA (TBD)

Back-up slides

MWRnet <http://cetemps.aquila.infn.it/mwrnet>

- MWRnet started in March 2009
 - Website: <http://cetemps.aquila.infn.it/mwrnet>
- MWRnet includes different kinds of MWRs
 - single-channel T profilers
 - dual channel IWV + LWP radiometers
 - multichannel T & WV profilers
- MWRnet momentarily based on voluntary efforts
 - No “national” network or support
 - No coordination and/or infrastructure support
- Some activities were supported by COST ES0702 EG-CLIMET

MWRnet <http://cetemps.aquila.infn.it/mwrnet>

MWRnet - An International Network of Ground-based Microwave Radiometers



Home

Information

- What is MWRnet?
- News
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- Contacts

Community

- How to join
- Members
- The network
- MWRnet library
- Reports
- Software

Last update: 16 December 2011

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