

# First Announcement

## 3<sup>rd</sup> Workshop CGMS International Cloud Working Group



**23 - 25 September 2020**, Darmstadt, Germany  
Financially supported by EUMETSAT

### **Program Committee**

*Andrew Heidinger (co-chair), Karl-Göran Karlsson (co-chair), Dong Wu (Rapporteur), and  
Bertrand Fougnie (local organizer)*

### **CGMS Advisory Panel**

*Kerry Meyer (NASA, USA), Heikki Pohjola (WMO, Switzerland), Sung-Rae Chung (KMA Korea), Lu  
Feng (CMA, China), Andrew Heidinger (NOAA, USA), N. Puviarasan (IMD, India), Rob Roebeling  
(EUMETSAT, Germany), Alexei Rublev (Roshydromet, Russia), and Daisaku Uesawa (JMA, Japan)*



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## 3<sup>rd</sup> Workshop CGMS International Cloud Working Group

From 23 - 25 September 2020 the 3<sup>rd</sup> Workshop of the International Cloud Working Group (ICWG) will be held in Darmstadt, Germany. The workshop aims at enhancing cloud retrieval schemes and their applicability and a better characterization of their validity. A new feature for this workshop will be a session discussing spaceborne lightning sensors and their applications. We invite experts working with cloud parameter retrieval schemes from passive imagers, passive microwave, and lidar and radar observations, and lightning sensor applications to participate in the workshop and to contribute to the workshop's cloud parameter inter-comparison and validation activities. More information on registration and submitting abstracts will follow in the second announcement.

### Background

The 3<sup>rd</sup> Workshop of the International Cloud Working Group (ICWG) within the Coordinated Group for Meteorological Satellites (CGMS) is a continuation of four earlier workshops that were organized under the name of Cloud Retrieval Evaluation Workshops (CREWs), and two subsequent Workshops of the ICWG. The four earlier Workshops were held in Norrköping, Sweden (2006), Locarno, Switzerland (2009), Madison, USA (2011), and Grainau, Germany (2014). The 1<sup>st</sup> Workshop of the ICWG was held in Lille, France (2016) and the 2<sup>nd</sup> Workshop of the ICWG was held in Madison, USA (2018). During these workshops, algorithms for cloud parameter retrievals were discussed and a common database with cloud parameter retrievals from different product providers was set-up. This database comprises cloud parameter retrievals from SEVIRI, MODIS, AVHRR, POLDER and/or AIRS for a number of "golden days". A very important integral part of these past workshops were the discussions on inter-comparison and validation studies done with the data from the common database. In this way knowledge was gained on the behavior of the different retrieval schemes over different cloud conditions.

The main recommendations of the latest ICWG Workshop in Madison, USA, were as follows:

- To continue operating conically-scanning passive MW sensors in an early afternoon orbit as well as in a dusk/dawn orbit in order to maintain this unique long-term series;
- To establish a topical group on the collaboration with the International Precipitation Working Group (IPWG);
- To encourage the continuation of A-train-like observations (passive+active) in the future;
- To consider introduction of multi-sensor (satellite and ground-based measurements) applications for convective Nowcasting when developing and updating product requirements;
- Participate in the comparison of techniques to be used in the International Satellite Cloud Climatology Project Next Generation project (ISCCP-NG) under the direction of the GEWEX Data and Analysis Panel;

- To extend the Golden Day database with GOES 16/17 data (in coordination with IWWG) and with possible inclusion of simultaneous measurements from the Aeolus wind profiler Aladin;
- To consider (if funding allows) introducing automatic data submission and data evaluation in the future for the inter-comparison of cloud datasets;

### 3<sup>rd</sup> Workshop of the ICWG

In the framework of ICWG-3, we will create semi-permanent Sub-Working Groups that provide the focus and continuity necessary for addressing past and future recommendations and key research topics. Each Sub-Working Group will be led by a chair and a rapporteur (still to be chosen). At the biennial meeting, the Sub-Working Group chairs will present their results, discuss the focal points to be addressed in breakout sessions, and report on these focal points at the plenary final discussion. The Sub-Working Groups may address different topics at each workshop. The Sub-Working Groups will encapsulate the Topical Groups that were established at previous meetings. New Topical Groups are welcomed. Proposed new Topical Groups are listed in bold below. The semi-permanent Sub-Working Groups with their scope definitions, and the Topical Groups that are active during the time frame 2018-2020, are listed below:

- **Algorithms:** *including single and multiple sensor retrievals, such as , synergistic use of cloud products from microwave and visible infrared imager, radiative transfer modelling, methods to propagate and provide uncertainty estimates, cloud detection advances*
  - *Cloud Detection, including detection of Arctic/Antarctic clouds (Karl-Goran Karlsson)*
  - *Use of Combined Sensors for Cloud Retrievals (Bryan Baum)*
  - *Microwave Cloud Remote Sensing (Ralf Bennartz)*
- **Assessments:** *including assessment of level-2 products from polar orbiting and geostationary satellites for comparison days 13 June 2008, 19 August 2015, 21 July 2016 and 6 October 2018 – the latter being the GOES-16 day with AEOLUS data shared with IWWG*
  - *Golden Day Data and Analysis Tools (Andi Walther)*
  - *Assessment of level-2 Cloud Parameter Retrievals (Yong-Sang Choi)*
  - *Post-A-Train assessment methods (Phil Watts)*
- **Climate Applications:** *including assessments of level-3 climate data records of cloud parameters, aggregation methods, link to international activities*
  - *Cloud Parameter Data Records for Climate Studies (Martin Stengel)*
  - *Assessment and Discussion of Plans for ISCCP-NG (Brian Kahn)*
- **Weather Applications:** *including the use of cloud products in numerical weather prediction, atmospheric motion winds, precipitation retrievals, severe weather and other applications of high spatial and temporal resolution cloud products from advanced geostationary imagers*
  - *Severe Weather Applications (Mike Pavolonis)*
  - *Cloud Height for Atmospheric Motion Vector Applications (Andrew Heidinger)*
  - *Interaction and collaboration with the Precipitation working group (IPWG)*
- **Lightning Applications:** *including introduction to theory and technology, presentation of results from GOES-16/17 data and discussion of methods for linking lightning data to Nowcasting and Severe Weather applications*
  - *Lightning observation from space (Jochen Grandell)*
  - *Applications in Nowcasting, NWP & Climate (NOAA)*
  - *Product development for end-user applications (Scott Rudlosky)*

The ICWG-3 workshop is organized and financially supported by EUMETSAT. The workshop will be held from 23 - 25 September 2020 in Darmstadt, Germany.

More information on the 3<sup>rd</sup> Workshop of the ICWG can be found on the ICWG Wiki:

<https://www.eventsforce.net/icwg-3>

### **Submission of Data for the Assessments**

There will be no general assessment done for ICWG3. We encourage topical groups to conduct their own assessments. The library of ICWG/CREW Golden Days data and tools are available. The Intercomparison Team is willing to assist in their use. Information on submitting data for the assessments will follow in a separate mail.

### **Submission of Abstracts**

More information on submitting abstracts will follow in the second announcement.

### **Registration**

More information on registering will follow in the second announcement.

### **Accommodation and Conference Venue**

General information is given at the ICWG-3 website but more detailed information on accommodations will follow in the second announcement.

## **Further Information**

### **CGMS Advisory Panel**

Kerry Meyer (NASA, USA); Stefan Bojinski (WMO, Switzerland); Sung-Rae Chung (KMA Korea); Lu Feng (CMA, China); Andrew Heidinger (NOAA, USA); N. Puviarasan (IMD, India); Rob Roebeling (EUMETSAT, Germany); Alexei Rublev (Roshydromet, Russia); Daisaku Uesawa (JMA, Japan)

### **Co-Chairs:**

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### **Rapporteur to CGMS:**

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### **Local organization:**

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### **Location:**

Place: : Darmstadt, Germany  
Dates: : 23-25 September 2020