

# **GHRSST XIX**

# Darmstadt, Germany 4 – 8 June 2018

Agenda rev4 – 28<sup>th</sup> May 2018



Meeting hosted by:



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## Welcome to GHRSST XIX from the Science Team Chair

This year we are pleased to welcome everyone to EUMETSAT headquarters in Darmstadt, Germany, for the 19<sup>th</sup> GHRSST Science Team meeting. EUMETSAT has been involved with GHRSST for many years, and together with our EUMETSAT Ocean and Sea-ice Satellite Application Facility (OSI SAF) colleagues in Lannion, SST products are available from our mandatory missions such as Metop-AVHRR / IASI, MSG-SEVIRI. More recently, through the European Commission's Copernicus programme, SST products from Sentinel-3 SLSTR are now available.

Darmstadt is known as a "City of Science", with other major scientific institutions and companies located here such as the European Space Agency's Operations Centre (ESOC), the pharmaceutical company Merck, and a well-known technical university. There are also many nice restaurants and cafes, and I hope you enjoy your time here.

During the last year we have seen the launch of NOAA-20 on 18<sup>th</sup> November 2017, the first spacecraft of NOAA's new generation of polar-orbiting satellites. This also gives continuity to the successful observations from the VIIRS sensor on Suomi-NPP. The second Sentinel-3 satellite, Sentinel-3B was successfully launched on 25<sup>th</sup> April 2018, and commissioning activities have now begun. It will give a greater coverage of dual-view sea surface temperature from the SLSTR instruments. GCOM-C1 was launched by JAXA in December 2017, giving a 250 m resolution split window capability. September 2017 saw the launch of FY-3D and we look forward to hearing more details from CMA this week. We also look forward to the upcoming launch of Metop-C on 21<sup>st</sup> September 2018 as well as the the launches of HY-1C and HY-2B, also later in 2018.

We have many interesting contributions this week including presentations on applications, analysis, air-sea interactions and Cal/Val, including further information on SST relating to MODIS, GOES-R, Himawari and MSG. This year we also have a dedicated session on Sentinel-3 to give you latest information of the mission, validation results, user applications and tools, following the operational SLSTR SST data release in July 2017. We also have several presentations and contributions on SST from passive microwave radiometers. There is still an uncertain outlook for microwave satellite missions with a global coverage capability, so we look forward to important updates from JAXA and ESA on future potential continuity and capability.

Similar to last year, we have sessions for "interactive presentations" where you are free to choose a poster or other alternative technique for your presentations. This is also the first year of the newly formed Task Teams, and it is important to discuss in plenary the start of these activities and organise planning for next year.

At this year's meeting we have 86 attendees. It is great to see so many new participants and also continuing participation from previous contributors and Science Team members. As usual, we have many opportunities for networking and building collaborations, and I urge you to use this time wisely to meet each other and discuss what we have learnt and explore new ideas. I am looking forward to meeting you all in Darmstadt and I'm sure it will be an exciting, fruitful meeting.

Have a great week!

Agolanell

Anne O'Carroll (Chair of the GHRSST Science Team)

# 1. Organisation

### 1.1. Oral Presentations

Presentation should be made according to the time allotted in the Agenda; please allow a few minutes for questions. The suggested slide size for PPTX files is 16:9.

Each presenter is requested to provide an **extended abstract** of their presentation (four pages' maximum) **by the end of the meeting, or by 29**<sup>th</sup> **June 2018 at the latest** for inclusion in the GHRSST Proceedings. This will help get the Proceedings published efficiently and quickly after the meeting ends. Format: Microsoft Word using the <u>template provided</u> to be sent to the GPO (<u>gpa@ghrsst.com</u>), with 'G-XIX extended abstract' in the subject.

### **1.2. Interactive Presentations**

Interactive presentations can be given in many formats – you have the choice of how you wish to present. We encourage you to think creatively!

You will be provided with space to display your material:

- Size of display: 90cm wide x 120cm high (A0 size), portrait.
- By the end of the meeting, please provide a .pdf file of your display for inclusion in the 'Resources' page of the G-XIX meeting on the GHRSST website. **Files must not exceed 1.5 MB**, and need to be delivered to the GPO (gpa@ghrsst.com) with 'Interactive presentation' in the subject.

If you wish to use any visual aids in your display, e.g. a social media app, a TED-like video, or a handson demonstration, you must arrange the required hardware yourself <u>but please coordinate with the</u> <u>Project Office before the meeting</u>.

Please display any printed material on Monday between 12:00 PM and before 4:PM <u>in the order</u> <u>shown</u> later in the agenda. Interactive presentations as well as posters will be carried out in the Atrium.

The timings for the interactive session are available in **Section 6** and indicate the times you are expected to be giving your presentation – please try to stick to the schedule.

Please check when your presentation is scheduled for (either on Monday 4<sup>th</sup> June from 16:00 to 18:00 or on Tuesday 5<sup>th</sup> June from 16:00 to 18:00).

Please remember to remove any printed material no later than Friday morning. Any remaining material will be disposed of.

### 1.3. Session Chairs

The main tasks of a session chair are to briefly introduce each speaker, keep the presentations to the time allowed, and lead/moderate the discussion. The chair should work closely with the rapporteur to prepare a **short summary of the session**.

Summary reports should be suitable for publication in the Proceedings (<u>template provided</u>) and are to be delivered to the GPO (<u>gpa@ghrsst.org</u>) with 'GXIX Report, Session xxx' in the subject before the end of the meeting if possible, and no later than 29<sup>th</sup> June 2018.

### 1.4. Rapporteurs

The purpose of the rapporteurs is to capture important information during the session for the follow-up of the meeting by the GPO and Science Team. In preparing your session reports, you should avoid making lengthy summaries of the presentations and discussions.

Please concentrate on issues which relate directly to the objectives of the workshop, the mandate of GHRSST and the future development of GHRSST ocean products and services and provide a general overview of the main session outcomes/ conclusions.

A template for your session report is available <u>here</u>.

# 2. Agenda (Draft)

# 2.1. Sunday 3<sup>rd</sup> June 2018.

See section 4 for further details.

# 2.2. Monday 4<sup>th</sup> June 2018

### Monday, 4<sup>th</sup> June 2018

Council/STG Rooms

08:00-09:00

**Registration (Reception)** 

| <u>Plenary Session I: Introduction</u><br>Chair: Anne O'Carroll Rapporteur: Gary Corlett |                                |                      |
|--|--------------------------------|----------------------|
| 09:00-<br>09:10  | Welcome to G-XIX from EUMETSAT | Cristian Bank        |
| 09:10-<br>09:30  | Overview of EUMETSAT           | Dieter Klaes         |
| 09:30-<br>09:50  | EUMETSAT SST Activities        | Anne O'Carroll       |
| 09:50-<br>10:10  | EUMETSAT OSI-SAF               | Stéphane Saux Picart |
| 10:10-<br>10:30  | CMEMS                          | Rosalia Santoleri    |

10:30-11:00

Tea/Coffee Break (Atrium)

| <u>Plenary Session II: Review of activities since G-XVIII</u><br>Chair: Eileen Maturi Rapporteur: Tim Nightingale |                                     |                |
|---|-------------------------------------|----------------|
| 11:00-<br>11:10   | G-XIX: Logistics                    | Gary Corlett   |
| 11:10-<br>11:20 Update on GHRSST  |                                     | Gary Corlett   |
| 11:20-<br>11:30   | GHRSST Connection with CEOS: SST-VC | Anne O'Carroll |

### Monday, 4<sup>th</sup> June 2018

#### Council/STG Rooms

| 11:30-<br>11:40 | GHRSST system Components: GDAC               | Ed Armstrong         |
|-----------------|--|----------------------|
| 11:40-<br>11:50 | GHRSST system Components: EU GDAC            | Jean-François Piollé |
| 11:50-<br>12:00 | GHRSST system Components: LTSRF              | Xuepeng Zhao         |
| 12:00-<br>12:10 | GHRSST system Components: SQUAM<br>and iQUAM | Alexander Ignatov    |
| 12:10-<br>12:20 | RDAC Update: ABoM                            | Helen Beggs          |
| 12:20-<br>12:30 | RDAC Update: CMC                             | Dorina Surcel Colan  |
| 12:30-<br>12:40 | RDAC Update: JAXA                            | Misako Kachi         |
| 12:40-<br>12:50 | RDAC Update: JMA                             | Toshiyuki Sakurai    |
| 12:50-<br>13:00 | RDAC Update: Met Office                      | Simon Good           |

13:00-14:00

Lunch (Canteen)

|                 | <u>Chair: Prasanjit Dash Rapporteur: Misako Kachi</u> |                   |  |
|-----------------|---|-------------------|--|
| 14:00-<br>14:10 | RDAC Update: NASA                                     | Ed Armstrong      |  |
| 14:10-<br>14:20 | RDAC Update: NAVO                                     | Bruce McKenzie    |  |
| 14:20-<br>14:30 | RDAC Update: NOAA/NESDIS/STAR 1                       | Alexander Ignatov |  |
| 14:30-<br>14:40 | RDAC Update: NOAA/NESDIS/STAR 2                       | Eileen Maturi     |  |
| 14:40-<br>14:50 | RDAC Update: NOAA/NCEI                                | Xuepeng Zhao      |  |

### Monday, 4<sup>th</sup> June 2018

Council/STG Rooms

| 14:50-<br>15:00 | RDAC Update: RSS  | Chelle Gentemann |
|-----------------|-------------------|------------------|
| 15:00-<br>15:10 | Report from CMA   | Sujuan Wang      |
| 15:10-<br>15:20 | Report from ESA   | Craig Donlon     |
| 15:20-<br>15:30 | Report from MISST | Chelle Gentemann |

#### 15:30-16:00 Tea/Coffee Break (Atrium)

| 16:00-<br>16:20 | Report from ECMWF | Hao Zuo |
|-----------------|-------------------|---------|
| 16:20-<br>16:30 | Disc              | cussion |

| 16:30-<br>18:30 | Poster Session I (Atrium)              |  |
|-----------------|--|--|
|                 | See Section 6 for further information. |  |

| 18:30-<br>20:00 | Icebreaker (Canteen)                   |  |
|-----------------|--|--|
|                 | See Section 4 for further information. |  |

## 2.3. Tuesday 5<sup>th</sup> June 2018

### Tuesday 5<sup>th</sup> June 2018

**Council/STG Rooms** 

08:30-09:00

Registration (Reception)

| <u>Plenary Session III: Analysis of SST</u><br><u>Chairs: Dorina Surcel Colon Rapporteur: Simon Good</u> |   |             |
|--|---|-------------|
| 09:00-<br>09:20  | Sea Surface Temperature Analysis<br>within the NCEP GFS                                     | Xu Li       |
| 09:20-<br>09:40  | A new ensemble optimal interpolation<br>SST analysis system at the Bureau of<br>Meteorology | Helen Beggs |
| 09:40-<br>10:00  | Variational bias correction of Satellite<br>Sea Surface Temperature observations            | James While |
| 10:00-<br>10:30  | Open discussion led by session chair  |             |

10:30-11:00

Tea/Coffee Break (Atrium)

#### Plenary Session IV: Applications of SST

Chair: Craig Donlon Rapporteur: Ioanna Karagli

| 11:00-<br>11:20 | Skin-subskin SST differences using a<br>collocated nine-year Aqua<br>MODIS/AMSR-E record in support of<br>wave breaking studies | Haifeng Zhang |
|-----------------|---|---------------|
| 11:20-<br>11:40 | A new synergetic approach for the determination of the sea-surface currents in the Mediterranean Sea                            | Daniele Ciani |

## Tuesday 5<sup>th</sup> June 2018

Council/STG Rooms

| 11:40-<br>12:00 | Exploring Internal Wave signature on remote sensing infrared SST observations. | Cristina González-Haro |
|-----------------|--|------------------------|
| 12:00-<br>12:30 | Open discussion led by session chair   |                        |

| 12:40 Group Photograph (Atrium) |
|---------------------------------|
|---------------------------------|

| 12:40- | Lunch (BBQ at rear of Canteen) |
|--------|--------------------------------|
| 14:00  |                                |

#### Plenary Session V: Air-Sea Interaction

#### Chair: Rosalia Santoleri Rapporteur: Peter Minnett

| 14:00-<br>14:20 | Improved diurnal variability forecast of<br>ocean surface temperature through<br>community model development       | Ioanna Karagali   |
|-----------------|--|-------------------|
| 14:20-<br>14:40 | The Lampedusa Cal/Val site: assessing<br>heat fluxes and high frequency SST<br>estimates in the Mediterranean Sea. | Salvatore Marullo |
| 14:40-<br>15:00 | Ensemble SST and air-sea heat flux estimate  | Hiroyuki Tomita   |
| 15:00-<br>15:30 | Open discussion led by session chair   |                   |

#### 15:30-16:00 Tea/Coffee Break (Atrium)

| 16:00-<br>18:00 | Poster Session II (Atrium)             |  |
|-----------------|--|--|
|                 | See Section 6 for further information. |  |

# 2.4. Wednesday 6<sup>th</sup> June 2018

### Wednesday 6<sup>th</sup> June 2018

Council/STG Rooms

08:30-09:00

Registration (Reception)

| <u>Plenary Session VI: Calibration/Validation</u><br>Chair: Werenfrid Wimmer Rapporteur: Lei Guan |  |                  |  |  |
|---|--|------------------|--|--|
| 09:00-<br>09:20   | Inter-calibration of HY-1B/COCTS<br>Thermal Infrared Channels with<br>MetOp-A/IASI                           | Mingkun Liu      |  |  |
| 09:20-<br>09:40   | Using Saildrone autonomous in situ<br>data for satellite validation and<br>research into upper ocean physics | Chelle Gentemann |  |  |
| 09:40-<br>10:00   | Inference from distributions of<br>difference in sea surface temperature<br>validation data                  |                  |  |  |
| 10:00-<br>10:30   | Open discussion led by session chair   |                  |  |  |

10:30-11:00

Tea/Coffee Break (Atrium)

| Plenary Session VII: SLSTR                      |  |                |  |  |
|---|--|----------------|--|--|
| Chairs: Anne O'Carroll Rapporteur: Igor Tomazic |  |                |  |  |
| 11:00-<br>11:15                                 | The Sentinel-3 Tandem Mission  | Craig Donlon   |  |  |
| 11:15-<br>11:30                                 | Monitoring and evaluation of SST<br>products in the EUMETSAT METIS<br>framework: a year of S3A SLSTR data<br>and preparation for S3B | Prasanjit Dash |  |  |

### Wednesday 6<sup>th</sup> June 2018

### Council/STG Rooms

| 11:30-<br>11:45 | An open-source cal/val environment and its application to Sentinel-3A SLSTR                              | Jean-François Piollé |
|-----------------|--|----------------------|
| 11:45-<br>12:00 | Independent validation of Sentinel 3A<br>SLSTR sea surface temperature<br>products                       | Gary Corlett         |
| 12:00-<br>12:15 | Sentinel-3 SLSTR SST Validation using a<br>Fiducial Reference Measurements<br>(FRM) Service              | Werenfrid Wimmer     |
| 12:15-<br>12:30 | Assessment of SLSTR L2P SST data as<br>input to the CMEMS MED L3S/L4 multi-<br>sensor operational system | Rosalia Santoleri    |
| 12:30-<br>13:00 | Open discussion led by session chair   |                      |

| 13:00- | Lunch (Canteen) |
|--------|-----------------|
| 14:00  | Lunch (Canteen) |

| 15:00-<br>17:00 | GHRSST Team Building              |  |  |
|-----------------|-----------------------------------|--|--|
|                 | See section 5 for further details |  |  |

| 18:30-<br>22:00 | GHRSST Dinner                     |  |  |  |
|-----------------|-----------------------------------|--|--|--|
|                 | See section 5 for further details |  |  |  |

## 2.5. Thursday 7<sup>th</sup> June 2018

#### Thursday 7<sup>th</sup> June 2018

**Council/STG Rooms** 

08:30-09:00

Registration (Reception)

| <u>Plenary Session VIII: SST Products</u><br><u>Chair: Helen Beggs Rapporteur: Jacob Hoeyer</u> |   |                      |  |  |
|---|---|----------------------|--|--|
| 09:00-<br>09:20   | OSI SAF Sea Surface Temperature reprocessing of MSG/SEVIRI archive. | Stéphane Saux Picart |  |  |
| 09:20-<br>09:40   | ACSPO hourly SST Products from GOES-<br>R/ABI & Himawari-8/AHI      | Irina Gladkova       |  |  |
| 09:40-<br>10:00   | Matthew Pennybacker   |                      |  |  |
| 10:00-<br>10:30   | Open discussion led by session chair                                |                      |  |  |

10:30-11:00 Tea/Coffee Break (Atrium)

### Plenary Session IX: Tools and Services

Chair: Jean-François Piollé Rapporteur: Stéphane Saux Picart

| 11:00-<br>11:20 | Progress with the NOAA ACSPO Regional<br>Monitor for SST (ARMS) System       | Alexander Ignatov |
|-----------------|--|-------------------|
| 11:20-<br>11:40 | Ocean Science Data Analytics using<br>Apache Science Data Analytics Platform | Thomas Huang      |
| 11:40-<br>12:00 | Improving search relevancy for oceanographic data discovery                  | Ed Armstrong      |

## Thursday 7<sup>th</sup> June 2018

| 12:00-<br>12:30 | Open discussion led by session chair |
|-----------------|--------------------------------------|
|                 |                                      |
| 12.20           |                                      |

| 12:30- | Discussion on GHRSST Training & Planning for G-XX |
|--------|---|
| 13:00  |   |

| 13:00-<br>14:00 | Lunch (Canteen) |
|-----------------|-----------------|
|-----------------|-----------------|

|                 | Task Teams Session I:  |
|-----------------|--|
| 14:00-<br>15:30 | 14:00 to 15:00: Evolution of R/GTS (led by Jean-François Piollé)   |
|                 | 15:00 to 15:30 GHRSST Product Levels (led by Jean-François Piollé) |

| 15:30- | Tea/Coffee Break (Atrium) |
|--------|---------------------------|
| 16:00  | Tea/Conee Break (Atrium)  |

|                 | Task Teams Session II:                                       |
|-----------------|--|
|                 | 16:00 to 16:25: Cloud masking (led by Gary Corlett)          |
| 16:00-<br>18:00 | 16:25 to 16:50: Spatial resolution (led by Peter Cornillon)  |
|                 | 16:50 to 17:15: High latitude SSTs (led by Chelle Gentemann) |
|                 | 17:15 to 17:40: SSES and L4 (led by Andy Harris)             |
|                 | 17:40 to 18:00: New topics                                   |
|                 | Climatologies (led by Helen Beggs)                           |
|                 | Ocean Obs '19 (led by Anne O'Carroll)                        |
|                 |  |

| 21:00 | Advisory Council |
|-------|------------------|

### Thursday 7<sup>th</sup> June 2018

Meeting of the GHRSST Advisory Council

For further information, please contact: Jacob Hoeyer (Light meal and refreshments will be provided in the meeting room)

### 2.6. Friday 8<sup>th</sup> June 2018

#### Friday 8<sup>th</sup> June 2018

#### Council/STG Rooms

08:30-09:00

Registration (Reception)

| <u>Plenary Session X: Retrieval of SST</u><br><u>Chair: Andy Harris Rapporteur: Sandra Castro</u> |   |                         |  |
|---|---|-------------------------|--|
| 09:00-<br>09:20   | Improving Satellite Retrieved Infrared<br>Sea Surface Temperatures in Aerosol<br>Contaminated Regions | Bingkun Luo             |  |
| 09:20-<br>09:40   | Use of 3.9 µm channel for daytime sea surface temperature retrieval                                   | Prabhat Koner           |  |
| 09:40-<br>10:00   | Optimal Estimation of Sea Surface<br>Temperature from AMSR-E  | Pia Nielsen-Englyst     |  |
| 10:00-<br>10:30   | Open discussi   | on led by session chair |  |

10:30-11:00

Tea/Coffee Break (Atrium)

#### **Closing Session**

Chair: Anne O'Carroll Rapporteur: Gary Corlett

| 11:00-<br>11:15 | Report from AC Meeting | Jacob Hoeyer      |
|-----------------|------------------------|-------------------|
| 11:15-<br>12:00 | Task Team plann        | ing for next year |

### Friday 8<sup>th</sup> June 2018

|                 | Council/STG Rooms          |  |
|-----------------|----------------------------|--|
|                 |                            |  |
| 12:15-<br>12:45 | Review of action items/AOB |  |
| 12:45-<br>13:00 | Wrap-up/closing remarks    |  |

### Close of GHRSST XIX

| 13:00-<br>14:00                               | Lunch (Canteen)   |
|---|---|
| 14:00<br>18:00                                | CEOS SST-VC   |
| Meeting of the CEOS SST Virtual Constellation |   |
|   | For further information, please contact:  |
|   | Kenneth Casey (NOAA) or Anne O'Carroll (EUMETSAT)<br>(Webex details will follow closer to the date) |

## 3. Meeting details

Full details of the meeting can be found on the meeting webpage:

https://www.ghrsst.org/meetings/19th-international-ghrsst-science-team-meeting-ghrsst-xix/

### 3.1. Meeting venue

The meeting will be held in Darmstadt at the premises of the <u>European Organisation for the</u> <u>Exploitation of Meteorological Satellites</u> (EUMETSAT) at Eumetsat Allee 1, 64295 Darmstadt, Germany.

EUMETSAT operates a system of meteorological satellites that observe the atmosphere and ocean and land surfaces – 24 hours a day, 365 days a year. This data is supplied to the National Meteorological Services of the organisation's Member in Europe, as well as other users worldwide.

### 3.2. Meeting registration

All participants must register in advance **no later than 15<sup>th</sup> May 2018** to attend the meeting. There is no registration fee to attend the meeting.

### 3.3. Lunches and coffee breaks

Lunches will be available in the canteen and is included in registration. The back of the canteen is reserved for GHRSST attendees and lunch vouchers will be distributed upon your arrival.

Tea/Coffee and cold drinks will be served in the Atrium outside the meeting room every morning and every afternoon.

## 4. Events

### 4.1. Sunday 3<sup>rd</sup> June 2018 – Networking Opportunities

Sunday 3<sup>rd</sup> June is the last day of Schlossgrabenfest 2018, which takes place in the centre of Darmstadt. For those who wish to join and meet up with other attendees and ward off any jet-lag, we will meet up outside the Ratskeller in Marktplatz from 16:00 onwards and maybe wander around the festival or just stay at the Rastkeller for drinks and food.

For further details please go to <a href="http://www.schlossgrabenfest.de/2018/">http://www.schlossgrabenfest.de/2018/</a>

### 4.2. Monday 4<sup>th</sup> June 2018 - Icebreaker

The Icebreaker will take place in EUMETSAT canteen at 18:30-20:00. Finger food and drinks will be provided to ensure a smooth networking event. The terrace will be open if weather permits.

### 4.3. Wednesday 6<sup>th</sup> June 2018 – GHRSST Team Building (15:00 – 17:00)

The GHRSST Team Building event on Wednesday afternoon will be a tour of a local brewery, including an option to sample some of the produce. This will be held at the *Braustübl & Grohe Brauhaus* in Darmstadt (Goebelstraße 7), which is just a short walk from EUMETSAT and the recommended hotels. **Non-alcoholic beer and soft drinks will also be available.** The tour is an excellent opportunity to continue discussions. However, if you have any concerns/questions then please contact the <u>GHRSST</u> <u>Project Office</u>.

### 4.4. Wednesday 6<sup>th</sup> June 2018 – GHRSST Dinner (18:30 – 22:00)

The GHRSST dinner will be held at Frankenstein Castle (Burg Frankenstein), 64367 Mühltal. Transport will be available to take participants to the castle after the Team Building at 17:15, returning at 22:00. This will allow 30 min for a walk around the castle grounds before dinner, which will start at 18:30.



# **5. Local Information**

### 5.1. Darmstadt



Darmstadt is located just 30 km south of Frankfurt am Main in Hesse. The city enjoys a reputation as a 'City of Science' thanks to the many public and private scientific research establishments located there, not to mention the Headquarters of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and the European Space Agency Operations Centre (ESA/ESOC).

Darmstadt is not only a "city of science", but also a city of art and culture. Home to top researchers, musicians, engineers and artists for centuries, today's Darmstadt is the product of a unique fusion between artistic traditions and technological advancement. The pedestrianised area in the city centre offers numerous restaurants, shopping and relaxation possibilities. Just a short trip out of town is the beautiful Odenwald mountain range a haven for nature lovers and outdoor enthusiasts and also home to the famous Bergstrasse, one of the best wine regions in Germany.

For more information visit <u>http://www.darmstadt-tourismus.de/en.html</u>

### 5.2. How to reach Darmstadt

The meeting will be held at the premises of the European Organisation for the Exploitation of Meteorological Satellites (<u>EUMETSAT</u>) at Eumetsat Allee 1, 64295 Darmstadt, Germany. The nearest principle airport is Frankfurt International Airport (FRA).

You can reach Darmstadt from Frankfurt International Airport using:

• AIR-Liner Bus

AIR-Liner Bus links Darmstadt Railway station and Frankfurt Airport (single fare 8.60 €). Services leave regularly and take 30 minutes. For the bus schedule please check <u>here</u>.

At Frankfurt Airport, AIR-Liner stops at:

Terminal 1 – bus stop: Nr 14 – arrival level

Terminal 2 – bus stop: Exit E8

• Taxi

Taxi TAM offers a preferential rate of 38 €.

Tel: +49 6151 44 7 22 or +49 170 380 47 22

#### 5.3. Visa requirements

Travelling to Germany has never been more organized and stress-free. Due to Schengen Agreement reached in 1985 among the majority of the EU member states, the citizens of the designated countries are allowed to travel visa free among the Schengen territories, meanwhile non Schengen countries can enter the whole Schengen territory with one unified document known as the Schengen Visa.

Nevertheless, if we refer to the globe, citizens of certain countries are OBLIGED to obtain a Schengen Visa in order to enter the Schengen Zone, consequently Germany meanwhile there are countries which are entitled to travel visa-free in this area even though they are not part of the Schengen Agreement.

For more details please visit: <u>http://www.germany-visa.org/germany-visa-requirements/</u>

Should you require an Invitation letters for visa request support, please contact the Local Organising Committee at <u>ghrsst@eumetsat.int</u>

#### 5.4. Hotel information

A list of hotels in Darmstadt located within walking distance to EUMETSAT HQ is provided below.

- Best Western Plaza (Am Kavalleriesand 6, 64295 Darmstadt, Tel.: +49 6151 7377500)
- Maritim Hotel (Rheinstraße 105, 64295 Darmstadt; Tel.: +49 6151 8780)
- Intercity Hotel Darmstadt (Poststraße 12, 64293 Darmstadt; Tel.: +49 6151 906910)
- Hotel IBIS Budget (Kasinostrasse 4 64293 Darmstadt; Tel. +49 6151 39 73 720)
- B&B Hotel Darmstadt Zweifalltorweg 4; 64293 Darmstadt; Tel.: +49 6151/967 20)
- Hotel PRINZ HEINRICH (Bleichstrasse 48 64293 Darmstadt; Tel. +49 6151 813 70)
- Welcome Hotel Darmstadt (Karolinenplatz 4 64289 Darmstadt; Tel. +49 6151 3914 483)
- RAMADA-TREFF Page Hotel (Eschollbrücker Str. 16 64295 Darmstadt; Tel. +49 6151 385 0)
- Commundo Tagungshotel Hilperthstraße 27 64295 Darmstadt; Serviceline: + 8000 8330330)

#### 5.5. Local transport

• Local Taxi

Taxi Planet +49 6151353152

Kala Taxi +49 615121923

#### • Bus and tram

For all important information you need for travelling by bus and tram - from timetables right through to ticket purchases – please visit <u>http://www.rmv.de/en/</u>.

The nearest tram stop to EUMETSAT is MOZARTTURM (out of EUMETSAT main gate turn left onto Am Kavalleriesand and then cross over Rheinstrasse and turn left).

• Bike

In addition to public transport and taxis, you can also use bicycles – or even e-bikes – to get around Darmstadt.

For details please check: <u>https://www.callabikeinteraktiv.de/de/staedte/darmstadt</u>. There is a "Call a Bike" station for bicycles close to the Central Train Station, 10min walk from EUMETSAT.

#### 5.6. Recommended places to eat

• **Ratskeller** (German kitchen, very good beer, typical german dishes, good place to take in the ambiance of the market square)

Marktplatz 8, 64283 Darmstadt

+49 61 51 26444

• **Braustübl** (Traditional German restaurant near to the station, 10 minutes walk from EUMETSAT)

Goebelstrasse 7, 64293 Darmstadt

+49 61 51 876587

• Vapiano (Modern mixture of an Italian and fast food type of restaurant, near to the train station, 10 minutes walk from EUMETSAT)

Rheinstraße 103, 64295 Darmstadt, Germany

+49 61 51 6675666

• Restaurant Lemongrass (Thai cuisine, just a few minute walk from EUMETSAT)

Mina-Rees-Str. 5a, D-64295 Darmstadt

+49 61 51 5003872

• Yang Ji Sushi and More (Sushi and fresh Korean cuisine in the city centre)

Adelungstraße 11, 64283 Darmstadt

+ 49 61 51 3528554

• **das krü** (The restaurant serves up its own and sometimes very different interpretations of a range of dishes from Germany, Austria and the Mediterranean countries. It listed amongst "the best 500 restaurants in Germany for everyday".)

Ludwigstraße 8, 64283 Darmstadt

+49 61 51 272441

• **Zoo-Bar-Restaurant** (The restaurant combines international inspiration with seasonal domestic ingredients to create unmatchable dining experiences.)

An der Stadtkirche 17-19, 64283 Darmstadt

+49 61 51 4923535

#### 5.7. Useful links

• Darmstadt Tourist Information Centre

http://www.darmstadt-tourismus.de/en/shop/the-darmstadt-shop.html

• City of Darmstadt map

https://www.darmstadt.de/fileadmin/Bilder-Rubriken/Darmstadt\_erleben/touristeninfo/Faltplan\_Sehenswuerdigkeiten\_2010.pdf

• Darmstadt Marketing

http://www.darmstadt-tourismus.de/en/

# **6. Interactive presentations**

Please set up your presentation as soon as you arrive in the EUMETSAT Atrium and please remember to take everything with you at the end of the meeting.

Displays should be A0 Portrait in size (90cm wide x 120cm high).

Please display in the order given in the table below:

| Nr | Presenter            | Title  | Group |
|----|----------------------|--|-------|
| 1  | Emmanuelle<br>Autret | The sea surface temperature ODYSSEA L4 product (1982-2017) over the Iberia-Biscay-Ireland Regional Seas  | А     |
| 2  | Helen Beggs          | A new 2 km SST atlas of the Australian regional seas (SSTAARS)   | В     |
| 3  | Marouan Bouali       | On the use of NLSST and MCSST products for the study of spatio-temporal trends in ocean thermal gradients  | С     |
| 4  | Brahim Boussidi      | The need for the measurement spatial response function for optimal deconvolution of AMSR-E SSTs  | D     |
| 5  | Chuqun Chen          | The property of temperature profile of water surface layer detected by instrument, the Buoyant Equipment for Skin Temperature (best)                             | А     |
| 6  | Caroline Cox         | Retrieval of radiatively consistent Sea Surface Temperature under aerosol conditions using an optimal estimation scheme across the visible and infrared.         | В     |
| 7  | Prasanjit Dash       | Towards an Enterprise Monitor for simultaneous monitoring of multiple ocean parameters: SST, salinity, height, wind and colour                                   | С     |
| 8  | Craig Donlon         | The Copernicus Microwave Imaging Radiometer (CIMR) Mission   | D     |
| 9  | Lydia Gates          | The Marine Climate Data Centre of Deutscher Wetterdienst in Hamburg  | А     |
| 10 | Lucile Gaultier      | New discovery and analysis tools for multisensor exploitation  | В     |
| 11 | Irina Gladkova       | ACSPO Regional Monitor for SST: ARMS v2.1  | С     |
| 12 | Lei Guan             | Comparison of SUOMI NPP VIIRS SST with shipboard skin SST measurements in the Northwest Pacific  | D     |
| 13 | Tsutomu Hihara       | Bias correction of satellite SST for ocean assimilation product using LETKF  | А     |
| 14 | Jacob Høyer          | Consistency between Sea Surface Temperature and Sea Ice products in Arctic and Antarctic   | В     |
| 15 | Jacob Høyer          | Construction of an SST Climate Data Record from Passive Microwave measurements   | С     |
| 16 | Alexander<br>Ignatov | In situ SST Quality Monitor version2 (iQuam2)  | D     |
| 17 | Alexander<br>Ignatov | Exploring MERRA-2 global meteorological and aerosol reanalyses for<br>improved brightness temperature simulations and SST retrievals in the<br>NOAA ACSPO system | A     |
| 18 | Alexey Kaplan        | Near-Lagrangian Platform (Drifting Buoy) + Near-Conservative Variable (SST) = ?  | В     |
| 19 | loanna Karagali      | The increasing importance of SST for wind energy applications  | С     |
| 20 | Jaegwan Kim          | Improvement for Operational SST Observed by the COMS at KMA  | D     |
| 21 | Prabhat Koner        | Ocean micro-skin temperature profile retrieval from M-AERI measurement   | А     |

| Nr | Presenter               | Title  | Group |
|----|-------------------------|--|-------|
| 22 | Yukio Kurihara          | SST Data from SGLI onboard the Shikisai Satellite  |       |
| 23 | Wen-Hao Li              | Differences in Three Unique High Resolution VIIRS Sea Surface<br>Temperature Datasets  |       |
| 24 |                         | Withdrawn  |       |
| 25 | Bingkun Luo             | Coastal diurnal warming – a study of the Great Barrier Reef  |       |
| 26 | Bingkun Luo             | Accuracy assessment of MERRA-2 temperature and humidity profiles over the tropical ocean using AEROSE Observations                                       |       |
| 27 | Bingkun Luo             | Comparison of Sentinel-3a/SLSTR and MSG/SEVIRI derived diurnal warming estimates with CMEMS drifting buoy data   |       |
| 28 | Eileen Maturi           | NOAA's New High-Resolution Sea Surface Temperature Blended Analyses  |       |
| 29 | David Meldrum           | Towards improved drifter SST: a collaboration between the satellite community and the Data Buoy Co-operation Panel                                       |       |
| 30 | Peter Minnett           | Simultaneous Retrievals of Sea-surface Temperature and Column Water Vapor from MODIS measurements with Optimal Estimation                                |       |
| 31 | Peter Minnett           | Sea-Surface Temperature Fields from MODIS and VIIRS – an Update  | С     |
| 32 | Peter Minnett           | Improved cloud mask for NASA sea-surface temperature products from MODIS and VIIRS   |       |
| 33 | Nodoka Ono              | Three-Way Error Analysis between GCOM-W, Himawari-8, and In Situ SurfaceTemperature Observations   |       |
| 34 | Gang Pan                | Seasonal variability of Sea Surface Temperature gradients in the south coast of Sri Lanka  |       |
| 35 | Kyung-Ae Park           | Sea Surface Temperature Algorithm of Geo-KOMPSAT-2A/Advanced Meteorological Imager   |       |
| 36 | Kyung-Ae Park           | Sea Surface Current Retrieval Algorithm of Geo-KOMPSAT-2A/Advanced Meteorological Imager   |       |
| 37 | Matthew<br>Pennybacker  | Update in NOAA SST Quality Monitor 2 (SQUAM2)  |       |
| 38 | Matthew<br>Pennybacker  | Towards Second VIIRS SST Reanalysis (RAN2)   |       |
| 39 | Boris Petrenko          | Training regression SST algorithms for geostationary sensors against analysis L4 SST fields  |       |
| 40 | Jean-François<br>Piollé | A tool for the quantitative assessment of long time series of satellite SST  |       |
| 41 | Swathy Sunder           | Exploring Machine Learning Techniques to Estimate Cloud Free Daily Sea<br>Surface Temperatures (SST) from MODIS Aqua across South Eastern<br>Arabian Sea |       |
| 42 | Igor Tomazic            | Sentinel-3 SLSTR Cal/Val Activities for Sea Surface Temperature<br>Measurements  |       |
| 43 | Jorge Vazquez           | A review of the importance of high resolution SSTs: Application to a Coastal Upwelling Region  |       |
| 44 | Jorge Vazquez           | CEOS Ocean Variables Enabling Research and Applications for GEO:<br>COVERAGE   |       |

| Nr | Presenter    | Title   | Group |
|----|--------------|---|-------|
| 45 | Gary Wick    | Subpixel Variability and Quality Assessment of Satellite Sea Surface<br>Temperature Data Using a Novel High Resolution Multistage Spectral<br>Interpolation Technique | A     |
| 46 | Xuepeng Zhao | ng Zhao Transition of Global Satellite Pathfinder SST Climate Data Record Production System to NOAA/NCEI for Operational Production                                   |       |

To help with viewing of presentations we ask you present your material according to your assigned group in column four according to:

- Group A: 16:00 to 17:00 on Monday
- <u>Group B</u>: 17:00 to 18:00 on Monday
- Group C: 16:00 to 17:00 on Tuesday
- **<u>Group D</u>**: 17:00 to 18:00 on Tuesday

If you are viewing and not presenting then this means you should ideally <u>only view the active</u> <u>presentations</u> as the presenter will not be in attendance otherwise.

Presentations will remain until Friday lunchtime so will have time to look at them in more detail during the breaks as well the interactive sessions.

# 7. Contacts

#### EUMETSAT

Julija Mataityte Anne-Marie Andrieux <u>ghrsst@eumetsat.int</u>

#### **GHRSST Project Office**

Silvia Bragaglia-Pike gpa@ghrsst.org

Gary Corlett gpc@ghrsst.org

#### More useful links

G-XIX at EUMETSAT: <u>https://www.eventsforce.net/eumetsat/frontend/reg/thome.csp?pageID=513&eventID=3</u>

GHRSST website: <a href="http://www.ghrsst.org">http://www.ghrsst.org</a>

# 8. Summary of deadlines

| • | Short abstracts submission:                | 10 <sup>th</sup> April 2018                 |
|---|--|---|
| • | Notification of speakers and posters:      | 27 <sup>th</sup> April 2018                 |
| • | Registration deadline:                     | 15 <sup>th</sup> May 2016                   |
| • | Meeting dates:                             | 4 <sup>th</sup> - 8 <sup>th</sup> June 2016 |
| • | Plenary and breakout session reports:      | 29 <sup>th</sup> June 2018                  |
| _ | Estevel al al alette et fau Dua as adia as | 20 <sup>th</sup> I                          |

• Extended abstract for Proceedings: 29<sup>th</sup> June 2018