EUMETSAT/ECMWF NWP-SAF satellite data assimilation training

Introduction to training

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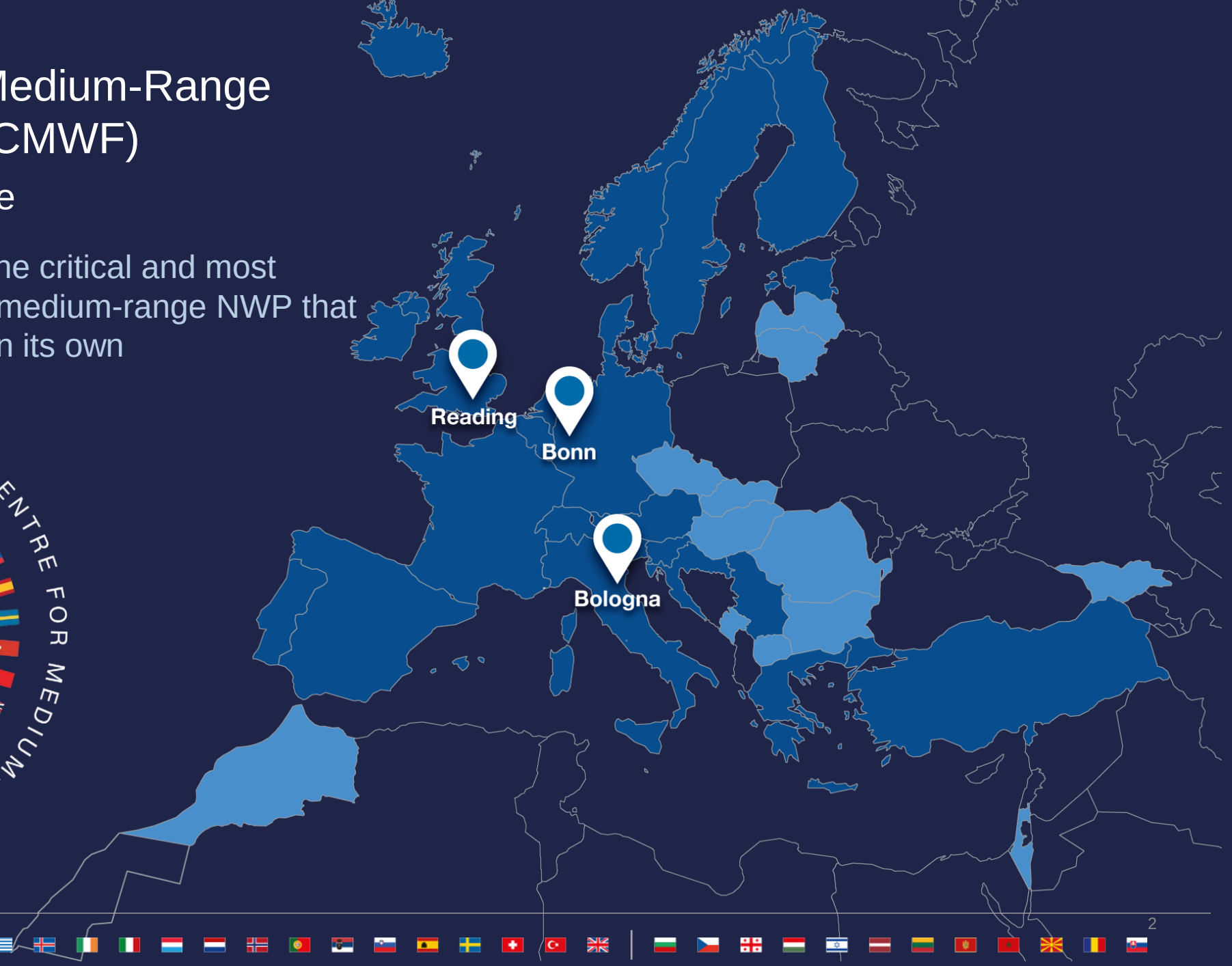
EUMETSAT NWP SAF NUMERICAL WEATHER PREDICTION

ECMWF | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS

European Centre for Medium-Range Weather Forecasts (ECMWF)

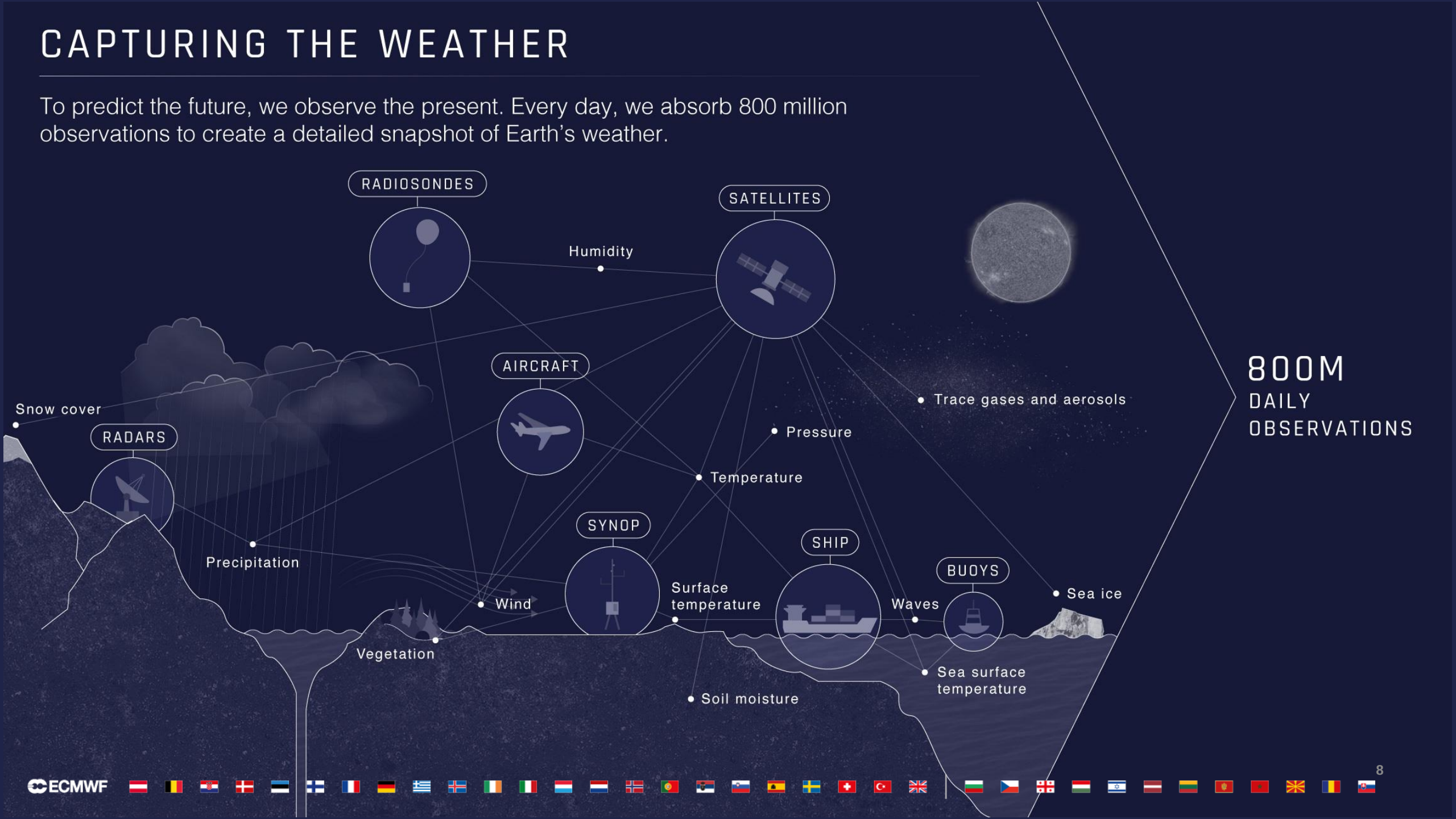
Three sites: one unique role

ECMWF's role is to address the critical and most difficult research problems in medium-range NWP that no one country could tackle on its own



CAPTURING THE WEATHER

To predict the future, we observe the present. Every day, we absorb 800 million observations to create a detailed snapshot of Earth's weather.



EUMETSAT/ECMWF NWP-SAF Satellite Data Assimilation

11-15 March 2024

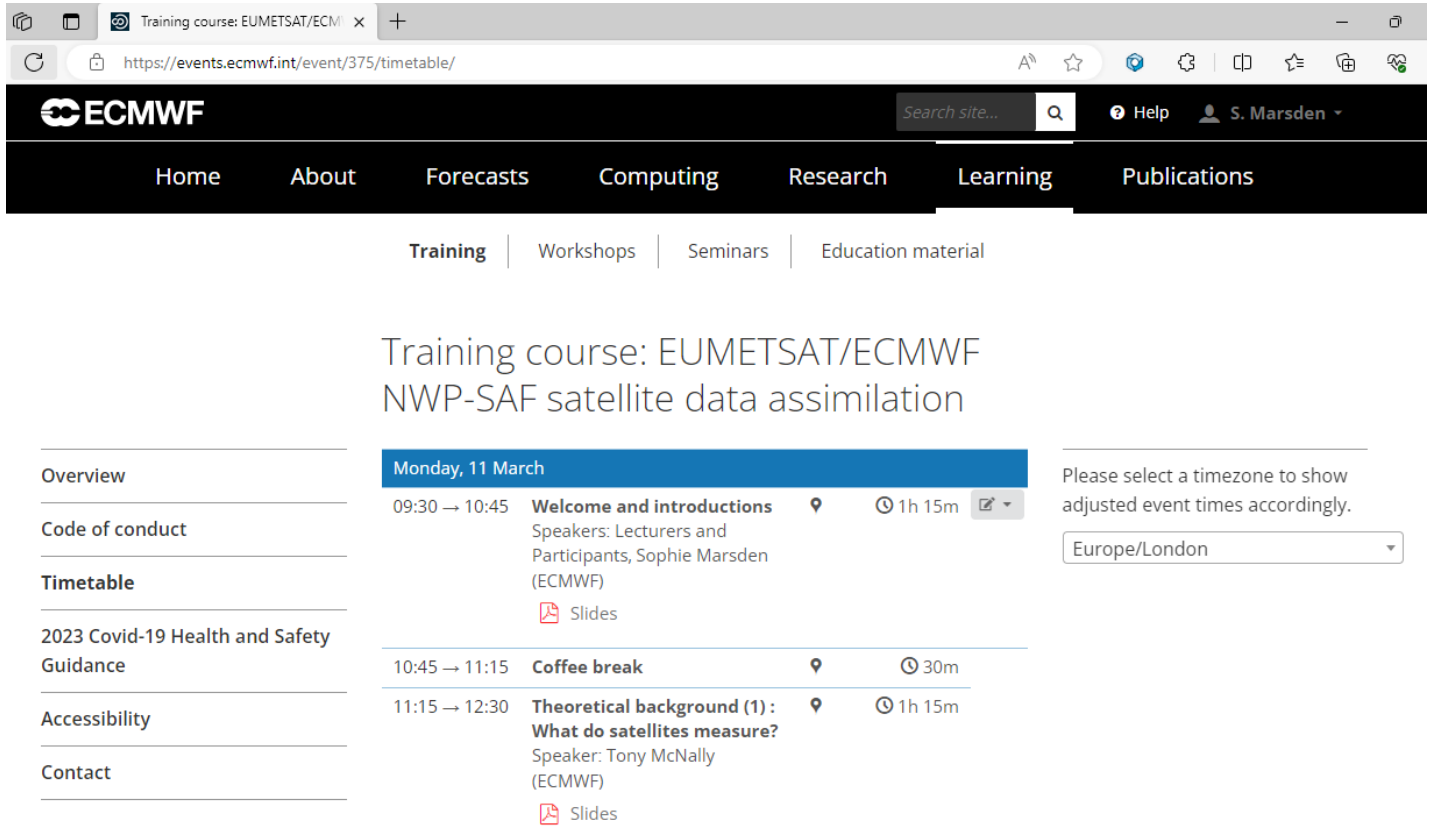
	Monday 11 March	Tuesday 12 March	Wednesday 13 March	Thursday 14 March	Friday 15 March
09:30-10:45	Welcome and introductions **Sophie Marsden, Students, Lecturers**	The detection and assimilation of clouds in infrared radiances **Chris Burrows**	GNSS Radio Occultation: principles and NWP use **Katrin Lonitz**	Satellite information on the land surface **Patricia de Rosnay**	Satellite wind information on the ocean surface (Scatterometer & Altimeter) **Giovanna De Chiara**
10:45-11:15			***Coffee break***		
11:15-12:30	Theoretical background (1) What do satellites measure? **Tony McNally**	The infrared spectrum: measurement, modelling and information content **Chris Burrows**	GNSS Radio Occultation: extended applications **Sean Healy**	Microwave applications: clear sky temperatures, cloud and rain detection and assimilation **Alan Geer**	Wind information from satellites (Atmospheric Motion Vectors) **Francis Warrick**
12:30-13:30			***Lunch break***		
13:30-14:45	Theoretical background (2) Data assimilation algorithms, key elements and inputs **Tony McNally**	Future evolution of satellite observing systems **Stephen English**	Bias correction methods for satellite data and observation monitoring **Niels Bormann**	Satellite Data Assimilation of Atmospheric Composition **Melanie Ades**	Final Discussion, Q&A **Panel of lecturers**
14:45-15:00			***Coffee break***		
15:00-16:15	The microwave spectrum: measurement, modelling and information content **Alan Geer**	Wind information from Aeolus **Michael Rennie**	Observation errors for satellite data assimilation **Niels Bormann**	Background errors for satellite data assimilation **Tony McNally**	
16:15-16:30			***Comfort break***		
16:30-17:30	Q&A for the first day **Tony McNally** **Welcome drink**	Practical: implementation of Radiative Transfer for operational NWP, **Marco Matricardi & Tony McNally**		Practical: implementation of radiance data assimilation	

Group Photo

Icebreaker

Certificate of attendance & course material

- Presentations will be available via course website:
  - https://events.ecmwf.int/event/375/timetable/
- Certificate of attendance awarded at end of course



General Housekeeping

Access to Centre

- Please sign in/out each day at reception

Personal belongings

- Do not leave any personal belongings at ECMWF outside office hours.
- We recommend that you do not leave valuables unattended in the classroom or any other part of the building.
- ECMWF will not take any responsibility for items lost at the premises.

Smoking

- Smoking is not allowed inside the building. Please ask at Reception Desk and you will be directed to the outside smoking area.

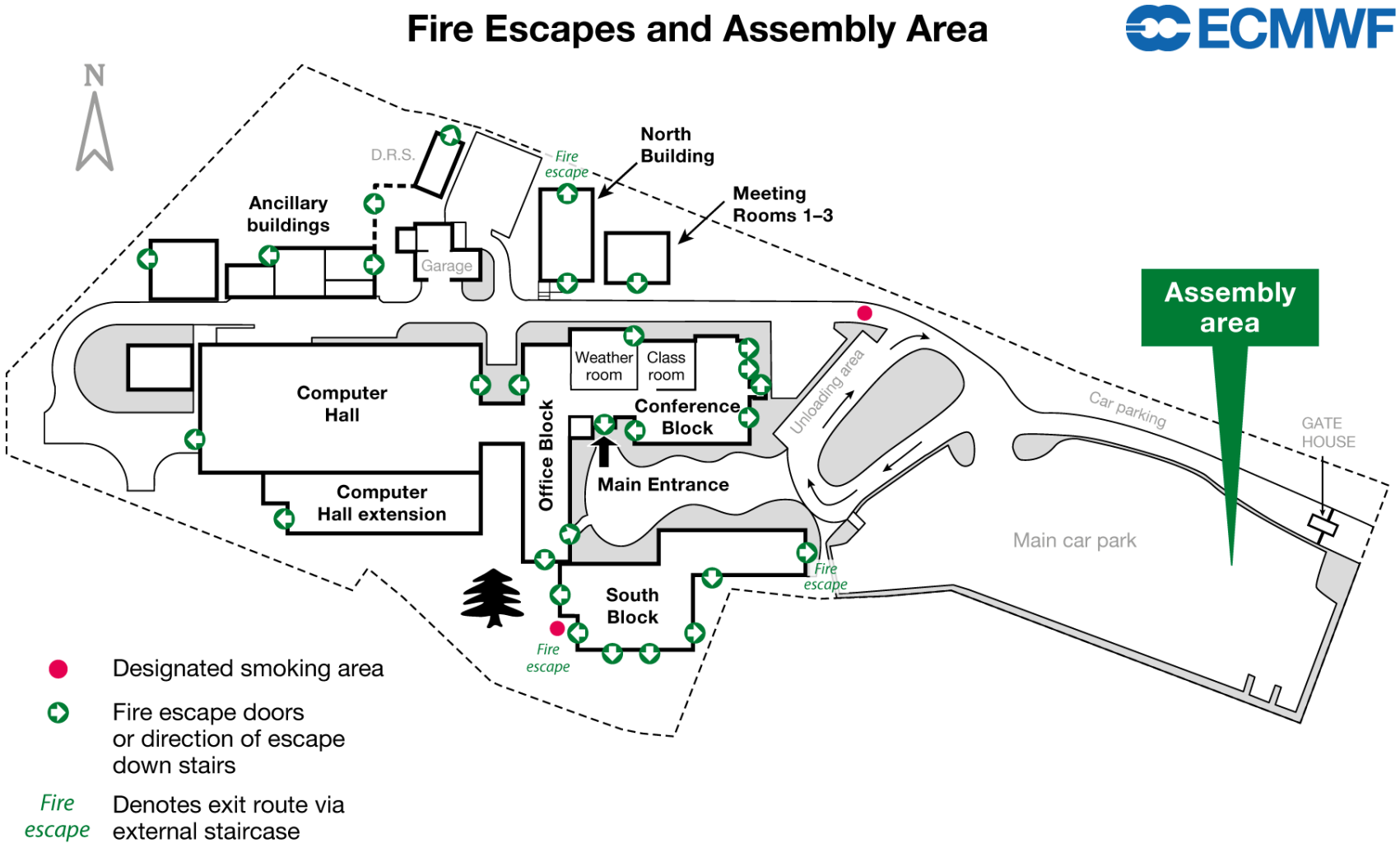
Enquiries

- If you have any questions, please contact the Reception Desk who will liaise with the course organisers.

Make the most of the training!

- There are no stupid questions!

General Housekeeping



Visitor WiFi

Follow these steps to use the visitor WiFi.

1. From the list of available SSIDs, select "ECMWF-Visitors-Self-Register“
2. Enter your details in the appropriate boxes on the registration screen and press the Register button.
3. You will be redirected to a page that informs you of a successful registration and provides your personal Access key.
4. Select "ECMWF-Visitors" from the list of available SSIDs and enter the Access key to connect.

Restaurant

- The restaurant provides the following daily services:
  - Light breakfast from 08:00
  - Lunch: hot counter choices, salads, sandwiches, soup and desserts.

- Please speak to the restaurant staff if you have any special dietary requirements.

- The restaurant can only accept chip and pin and contactless card payments.

- Coffee/tea will be supplied during the breaks as specified on the programme.


Good luck with the training!