

	DAY_1. Sunday 25th June	DAY_2. Monday 26th June	DAY_3. Tuesday 27th June	DAY_4. Wednesday 28th June	DAY_5. Thursday 29th June
	Arrival and welcome	Airborne turbulence measurements and flight strategies	Airborne measurements of aerosols and clouds	Flight 1 and WG activity (*)	Flight 2 and WG activity (*)
9:00-10:30		Welcome EUFAR. General info on training course, and research site. Self- introduction of the EUFAR trainers, and SAFIRE members. Plan for training course and outline of the programme [FC] Self-introduction of participants and scientific Working Groups (WG) supervisors, divide participants into 4 scientific WGs (4 groups of 5 participants). [FC]	9:00-10:15 Visit to the ATR42 Briefing with the aircraft crew. Groups 1 and 2 (10 students). [Safire Staff] Lecture 4a: Flight operations, aircraft limitations and flight procedures. Flight safety and working rules onboard. Groups 3 and 4 (10 students) [Safire Staff]	8:00 Meteo and Flight 1. Departure to experimental site. Equipment and site preparation (flight targets) 9:00 Group work for other WGs	8:00 Meteo and Flight 2. Departure to experimental site. Equipment and site preparation (flight targets) 9:00 Group work for other WGs
10:30-11:00		Coffee break	Coffee break	Coffee break	Coffee break
11:00-12:30		Lecture 1: Introduction to atmospheric turbulence. (Definitions of turbulence, Reynolds averaging, Turbulent Kinetic Energy equation, introduction to Kolmogorov theory, elementary information on atmospheric turbulence). [SM]	Lecture 5: EGADS Tool for Data Analysis and Visualization [OH]	Group work for other WGs	Group work for other WGs
12:30-14:00		Lunch	Lunch	Lunch	Lunch
14:00-15:00	14:00 departure from the Dublin international Airport by shuttle bus	Lecture 2: The structure of marine/coastal boundary layers and some flight sampling strategies [IF]	Lecture 4b: Flight operations, aircraft limitations and flight procedures. Flight safety and working rules onboard. Group 1 and 2 [Safire Staff] 14:00 – 15:15 Visit to the ATR42 Briefing with the aircraft crew. Groups 3 and 4 (10 students)	Lecture 7: Flux estimation, scalar budgeting techniques, and atmospheric chemistry [IF] Marine Aerosols and their impact on climate 2 [TBA]	Lecture 9: Estimation of turbulence properties from airborne measurements. (Focus on TKE and TKE dissipation rate, and scaling) [SM]
15:00-15:30		Coffee break	Coffee break	Coffee break	Coffee break
15:30-16:30		Lecture 3: Airborne measurements of aerosols and clouds 1 [FC]	Lecture 6: Processing core parameters of the ATR42 [BP]	Lecture 8: How to manage quick looks and high-frequency data [BP]	Lecture 10: More on data files and analysis tools [BP]
16:30-18:30	17:30-18:30 Registration and room allocation. Ice breaking refreshment	Lecture 4: 16:30 to 17:30 Aircraft modifications and possible measurements on board the ATR42 [Safire Staff] Lecture 5: 17:30 to 18:30 Real Time Data display onboard Quick-looks [Safire Staff]	16:30 to 19:00 Student activity 1: Allocation of group science projects. Design of flight experiments. Flight objectives and sampling strategies. Data base management.	Student activity 2: Measured data analysis &/or tutorials with analysis tools. Brief report of flight 1 from associated WG.	Student activity 3: Measured data analysis &/or tutorials with analysis tools. Brief report of flight 2 from associated WG.
18:30-19:00			Tutorial 1: Sample exercise of turbulent data analysis [IF & BP] REPORTING 1: Each scientific working group reports on sampling strategy and flight plan [for each WG, one rapporteur]		
19:00-20:00	Dinner	Dinner	Dinner	Dinner	Dinner

	DAY_6 Friday 30th June	DAY_7. Saturday 1st July	DAY_8. Sunday 2nd July	DAY_9. Monday 3rd July	DAY_10. Tuesday 4th July
	Flight 3 and WG activity (*)	Flight 4 and WG activity (*)	Airborne data processing	Visit to MaceHead Atmospheric Research Station	Student presentations
9:00-10:30	8:00 Meteo and Flight 3. Departure to experimental site. Equipment and site preparation (flight targets). 9:00 Group work for other WGs	8:00 Meteo and Flight 4. Departure to experimental site. Equipment and site preparation (flight targets). 9:00 Group work for other WGs	Lecture 15: Coastal meteorology 2. Air Sea Land interactions [MM]	7:30 Departure from Shannon to Mace Head Atmospheric Research Station	FINAL REPORTING Scientific Working Group I: Presentation Scientific Working Group II: Presentation Scientific Working Group III: Presentation
10:30-11:00	Coffee break	Coffee break	Coffee break		Coffee break
11:00-12:30	Group work for other WGs	Group work for other WGs	Lecture 16: Remote vs ground measurements of aerosols and their impact on climate [DC]		11:00 to 11:30 Scientific Working Group IV: Presentation 11:30 to 12:00 Conclusions
12:30-14:00	Lunch	Lunch	Lunch	Packed lunch at the site	12:15 -13:15 Lunch
14:00-15:00	Lecture 11: Flux estimations [IF]	Lecture 13: Marine Aerosols [DC]	Student activity 6: Measured data analysis &/or tutorials with analysis tools. Student presentations preparation.		13:30 Departure to Dublin international airport by shuttle bus
15:00-15:30	Coffee break	Coffee break	Coffee break		
15:30-16:30	Lecture 12: Airborne measurements of aerosols and clouds 2 [FC]	Lecture 14: 15:30-17:00 Coastal meteorology 1 . Concepts and equations [MM]	FREE AFTERNOON		
16:30-18:30	Student activity 4: Measured data analysis &/or tutorials with analysis tools. Brief report of flight 3 from associated WG.	Student activity 5 17:00-18:30: Measured data analysis &/or tutorials with analysis tools. Brief report of flight 4 from associated WG.			
18:30 -19:00					
19:00-20:00	Dinner	Dinner	Dinner	18:30 Estimated arrival in Shannon Special Dinner	

(*) Depending on weather forecast and on the flight goals, the flight can be moved to the afternoon. Then, the afternoon program will be moved to the morning.

Trainers

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OH – Olivier Henry - Meteo France, Toulouse, France, olivier.henry@meteo.fr	EUFAR trainer
TBA	SAFIRE staff (8 people)
TBA	VITO staff/EUFAR Office