8th International Training School on
CONVECTIVE AND VOLCANIC CLOUDS (CVC)
detection, monitoring and modelling
2-8 October 2023

Keynote lecturers	Lecturers
Roy Gordon Grainger (Univ. Oxford, United Kingdom) ***Dorinel Visoiu*** (ROMATSA, Romania) ***Marcello Miglietta*** (ISAC-CNR, Italy)	*Riccardo Biondi* (Univ. of Padova, Italy) *Tatjana Bolic* (Univ. of Westminster, UK) *Hugues Brenot* (BIRA, Belgium) *Alejandro Cervantes* (Univ. de la Rioja, Spain) *Stefano Corradini* (INGV, Italy) *Pascal Hedelt* (DLR, Germany) *Federica Pardini* (INGV, Italy) *Mario Montopoli* (CNR, Italy) *Antonio Parodi* (CIMA Foundation, Italy) *Matteo Picchiani* (ASI) *Giuseppe Salerno* (INGV, Italy) *Simona Scollo* (INGV, Italy) *Martin Setvak* (CHMI, Czech Republic) *Cecilia Tirelli* (CNR, Italy) *Mark Woodhouse* (University of Bristol, UK)

Local organizing committee	Local Organization
Riccardo Biondi (Univ. of Padova, Italy) *Giuseppe Salerno* (INGV, Italy) *Simona Scollo* (INGV, Italy) *Cecilia Tirelli* (IFAC-CNR, Italy)	Island Of Meetings by ER srls Phone: +39 3931302769 Email: info@islandofmeetings.com www.islandofmeetings.com

Program

	Monday 2 Oct	Tuesday 3 Oct	Wednesday 4 Oct	Thursday 5 Oct	Friday 6 Oct	Saturday 7 Oct	Sunday 8 Oct*
Early morning		Etna Field Trip (+)			Field Measurements (20)		
08.20-09.10	G. Grainger (1)		M. Setvak^ (8)	A. Parodi (13)		D. Visoiu (23)	R. Biondi (26)
09.20-10.10	G. Grainger (2)		M. Setvak^ (8)	Lab Severe Weather (14)		D. Visoiu (23)	R. Biondi (26)
	Coffee break		Coffee break	Coffee break		Coffee break	Coffee break
10.30-11.20	M. Miglietta (3)		M. Woodhouse (9)	Lab Severe Weather (14)		T. Bolic (24)	C. Tirelli (27)
11.30-12.20	M. Miglietta (4)		Lab Volc. Plumes Modeling (10)	H. Brenot (15)		T. Bolic (24)	C. Tirelli (27)
Lunch 12.30							
14.00-14.50	P. Hedelt (5)		Lab Volc. Plumes Modeling (10)	H. Brenot (16)	Data Analysis (21)	Students Presentations (25)	A. Cervantes (28)
15.00-15.50	P. Hedelt (5)		F. Pardini (11)	G. Salerno (17)	Data Analysis (21)	Students Presentations (25)	A. Cervantes (29)
	Coffee break		Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
16.10-17.00	M. Montopoli (6)		Lab Volc. Clouds Modelling (12)	S. Scollo (18)	Data Analysis (21)	Students Presentations (25)	M. Picchiani (30)
17.10-18.00	M. Montopoli (7)		Lab Volc. Clouds Modelling (12)	S. Corradini (19)	Data Presentation (22)	Students Presentations (25)	M. Picchiani (31)
Dinner 20.00							

Field Trip and Measurements	**Student´s time**	**Labs**
Keynotes	**Lectures**	**Meals**

*Schedule of Sunday 8 October
08:00 – 09:30 Biondi
09:40 – 11:10 Tirelli
11:20 – 12:50 Cervantes
12:50 – 13:50 Lunch
13:50 – 15:20 Picchiani
15:35 Shuttle to the Airport

^Online lecture for personal problem

(1) Hazardous volcanic clouds: state of the art, challenges and future *(G. Grainger)*
(2) Volcanic clouds monitoring from satellite in the TIR spectral range *(G. Grainger)*
(3) Atmospheric convection *(M. Miglietta)*
(4) Theory and atmospheric soundings Lab (*M. Miglietta*)
(5) Volcanic clouds monitoring from satellite in the UV spectral range *(P. Hedelt)*
(6) Volcanic clouds monitoring in the MW spectral range *(M. Montopoli)*
(7) Convective clouds monitoring in the MW spectral range *(M. Montopoli)*
(8) Deep convection from satellite (*M. Setvak*)
(9) Volcanic Plume modelling *(M. Whoodhouse)*
(10) Volcanic Plume modelling Lab *(M. Whoodhouse)*
(11) Volcanic Cloud dispersion modelling *(F. Pardini)*
(12) Volcanic Cloud dispersion modelling Lab *(F. Pardini)*
(13) Numerical Weather prediction models *(A. Parodi)*
(14) NWP Lab *(A. Parodi)*
(15) GNSS for weather forecasting *(H. Brenot)*
(16) Volcanic monitoring using ground based UV systems *(H. Brenot)*
(17) Volcanic monitoring using ground based UV systems *(G. Salerno)*
(18) Volcanic monitoring using ground based VIS systems *(S. Scollo)*
(19) Volcanic monitoring using ground based TIR systems *(S. Corradini)*
(20) In situ measurements of the Etna plume by using TIR and UV cameras
(21) Data analysis of the measurements acquired during the field campaign
(22) Data presentation of the measurements acquired during the field campaign
(23) Provision of early warnings on convective and volcanic clouds for aviation – current practices and future challenges *(D. Visoiu)*
(24) Decision support tools for ATM (T. Bolic)

(25) Students' oral presentations:
14:00 M. Colombier – 14:25 C. Lange – 15:00 C. Vossen – 15:25 H. Baltaci – 16:00 V. M. Jimenez Escudero – 16:25 M. Sebisch, S. Chopra & S. Bierbauer
17:00 Poster session
(26) The use of GNSS Radio Occultations for "extreme clouds" detection and monitoring *(R. Biondi)*
(27) Synergistic use of atmospheric data: the Complete Data Fusion method *(C. Tirelli)*
(28) Machine learning techniques (*A. Cervantes*)
(29) Machine learning techniques for convective clouds detection and retrieval Lab (*A. Cervantes*)
(30) Machine learning techniques (*M. Picchiani*)
(31) Machine learning techniques for volcanic clouds detection and retrieval Lab (*M. Picchiani*)

(+) Excursion to the Etna's summit central craters