3rd course on "Climate science at high latitudes: eScience for linking Arctic measurements and modeling"

15. - 24.10.2019 at Abisko Scientific Research Station, Sweden

Coordination**:** Paul Zieger (SU), Michael Schulz (UiO/MetNo), and Katja Lauri (UHEL)

Course Program:

	Monday 14.10.	**Tuesday 15.10.**	**Wednesday 16.10.**	**Thursday 17.10.**	**Friday 18.10.**	**Saturday 19.10.**	**Sunday 20.10.**
8:00 - 9:00		Arrival at Abisko 11:14	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
9:00 - 10:30			Aerosol, clouds & climate (Urs) & Assigning the groups	Arctic observations (Paul Z.)	Satellite observations in the Arctic (Paul G.) & Introduction to GitHub (Anne)	Group work	Free day with excursion or hike (individually organized)
10:30 - 11:00			Fika break	Fika break	Fika break	Fika break	
11:00 - 12:30			Aerosol & cloud modelling (Ilona)	Climate models (Michael)	Group work	Group work	(Lunch as packet)
12:30 - 13:30		Lunch	Lunch	Lunch	Lunch	Lunch	
13:30 - 15:00		Introduction to the course, self-introduction of participants & grouping of students	Working with Jupyter and data visualization (Sara)	Research at Abisko (Keith Larsson, Uni Umeå)	Group work	Group work	
15:00 - 15:30		Fika break	Fika break	Fika break	Fika break	Fika break	
15:30 - 17:30		Talk on learning (Katja) & Getting started with Jupyter & Python (Diego)	Group work	Getting started with PyAerocom (Jonas)	Group work	Intermediate group presentations and science discussion	
18:00 - 19:00		Dinner	Dinner	Dinner	Dinner	Dinner	Dinner
19:00 - 20:00	Night Train from Stockholm 18:11	Hacky hour & Ice breaker	Free working time	Free working time & Hacky hour	Free working time	Free working time	Free

	Monday 21.10.	Tuesday 22.10.	Wednesday 23.10.	Thursday 24.10.	Friday 25.10.
8:00 - 9:00	Breakfast	Breakfast	Breakfast	Breakfast	Arrival at Stockholm 9:45
9:00 - 10:30	Model-measurement evaluation (Maria) & Info on the report requirements (Paul, Michael) & Tricks for publishing with jupyter (Anne)	Improving your code (Anne) & Group work	Group work	Student presentations	
10:30 - 11:00	Fika break	Fika break	Fika break	Fika break	
11:00 - 12:30	Group work	Group work	Group work	Summary and feedback & Good-bye Departure of Oslo crew	
12:30 - 13:30	Lunch	Lunch	Lunch	Lunch	
13:30 - 15:00	Group work	Group work	Group work		
15:00 - 15:30	Fika break	Fika break	Fika break	Last fika break	
15:30 - 17:30	Group work	Group work	Student presentations	Departure with Night Train at 16:38	
18:00 - 19:00	Dinner	Dinner	Dinner		
19:00 - 20:00	Free working time	Free working time	Student presentations & Good-bye Party		

Obs: Changes in the program might occur on short notice.

Lectures:

1. Introduction to Jupyter Notebook (incl. tips & tricks) [Diego]
2. Efficient usage of scripting, github and python for research [Anne]
3. Visualization of data (incl. tips & tricks and mapping of data) [Sara]
4. Reading and collocation of data using pyaerocom [Jonas]

5. Remote sensing of Aerosols and Clouds in the Arctic [Paul G.]
6. Introduction to GCM's & AeroCom + CMIP [Michael]
7. The NOAA network on gas and aerosol monitoring + The AeroCom in-situ project [Maria]
8. Aerosol and cloud modelling [Ilona]
9. Arctic aerosols and clouds - Observations from Svalbard [Paul Z.]
10. How to organize the course report [Paul Z. and Michael]
11. Talk on Learning [Katja]
12. General intro into aerosols, clouds and climate [Urs]

Teachers and assistants:

Stockholm University

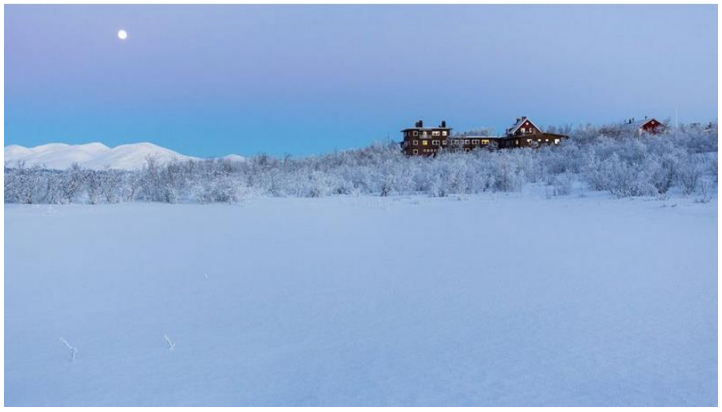
1. Paul Zieger
2. Paul Glantz
3. Ilona Riipinen
4. Maria Burgos
5. Urs Baltensperger (Paul Scherrer Institute, Switzerland / on sabbatical at SU)

University of Oslo & MetNo

6. Michael Schulz
7. Jonas Gliss
8. Anne Fouilloux
9. Sara Blichner

University of Helsinki

10. Katja Lauri
11. Diego Aliaga
12. Lisa Beck
13. Olga Garmash
14. Xucheng He (Lance)
15. Ksenia Tabakova



The Abisko Research Station (photo: Lars Lehnert)

Course website: https://www.aces.su.se/research/projects/course-series-on-climate-science-at-high-latitudes/ and https://nordicesmhub.github.io/NEGI-Abisko-2019/intro