IS-ENES – WP2

D2.3 –ENES First Prototype Summer School on Earth System Modelling

Abstract:

In 2012, the European Network for Earth System Modelling, (ENES) carried out its first "European Earth System and Climate Modelling School" (E2SCMS). This was made possible by the Infrastructure Project for ENES (IS-ENES), which is funded by the EC. The school took place on the Greek island of Kos from June 1 to 11 2012. The school educated 32 young researchers from all over Europe in Earth system modelling by providing a series of lectures on the Earth system and models for it, and, concurrently, giving them introductions and hands-on experiences in running up-to-date ESMs. A totally new property of the school was the fact that two comprehensive Coupled Earth System Models - the UK NCAS model and the MPI-ESM - were used for the school. The school was viewed to be very successful by most participants.

The article describes the school in more detail.

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Project Acronym:	**IS-ENES**		
Project Co-ordinator:	**Dr Sylvie JOUSSAUME**		

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0.1	2013/03/01			First version by R. Budich
0.2	2013/03/28			Revisions by S. Joussaume
1.0	2013/04/03			Revisions by R. Budich

Objectives of the School

The Earth's climate is a complex natural system, Earth System models (ESMs) are complex pieces of software. Young scientists working in the field of Earth System Modelling are regularly educated in fields like meteorology or oceanography - or physics or economy, fields even farther away from Earth System Sciences - where ESMs are best introduced superficially. A focused, coordinated teaching approach to Earth System modelling is missing in many countries throughout Europe, especially where large ESM institutions are missing. Many early career scientists have to acquaint themselves to the ESM of their - or their advisors - choice by „training on the job", i.e. applying a model not very well known to them to a specific scientific question. Literature studies and knowledge exchange with colleagues and superiors on the job and/or during workshops and conferences accompany this occupation.

The larger ESM institutions have seen the problem of „Teaching Earth System Modelling" already for a longer time, and established systems like the International Max Planck Research School on Earth System Modelling at Max-Planck-Institute for Meteorology (MPI-M) in Hamburg (http://www.earthsystemschool.mpg.de/) or summer schools like the National Centre for Atmospheric Sciences (NCAS) Climate modelling schools (an example can be found under http://www.ncas.ac.uk/index.php/en/climate-modelling-summer-school#).

Such summer schools share a typical structure: A series of lectures on the realms coupled in ESMs (Atmosphere, Ocean, Land, Ice, etc.), the matter cycles (Water, Carbon etc.), the complete model, but possibly also numerics, software engineering or hardware and other IT aspects, as well as more general aspects of the Earth system (political, societal etc.) is combined with hands-on tutorials on the model: Sitting in a computer lab, participants are introduced to the software structure, scripts to run and control the model, tools to analyse, interpret and compare their output, and are then guided to parameterise and initiate a model run in a way enabling them to work on assignments answering typical questions in Earth System modelling (see examples below).

But these summer schools so far were mainly addressed to students of a single institution, and not so much to the larger European community - despite the fact that they were mainly depending on the ESM in question, and not the institution organising it.

Another observation is crucial in this context: ESM scientists, independent of their career status, today need to compare ESMs and their results, as it is obvious from the numerous Model Inter-comparison Projects, which are a unique feature and crucial part of this field of science, as can be seen not only from the CMIP5/IPCC process.

So within the IS-ENES context the idea came up to transfer the concept of successful ESM summer schools as described above, held and organised by single institutions on a single model, to a larger audience, namely early career ESM scientists throughout Europe, especially from smaller countries, in a series of summer schools, employing not only one specific, but rather a few ESMs, and compare these models during the schools.

Within the IS-ENES consortium the institutions working on this idea were MPI-M and AA. They developed the idea to also involve NCAS, not member of the consortium, but a close affiliate and befriended institution to many of the ISENES institutions, and a partner in ENES[1].

Both NCAS and MPI-M have quite some experience running single institution/model schools already (see e.g. the NCAS reference above or http://issmes.enes.org), whereas AA was volunteering to provide the search for a suitable facility and represent the „smaller country" / neutral ground aspect of the endeavour. NCAS and MPI-M were able to provide summer school versions of their models and environments installed on the High Performance Computing system of the German Climate Computing Centre DKRZ. In order not to introduce too much complexity into the set-up, it was decided to restrict the number of models to two, in this first prototype case.

1 NCAS now is also a partner in the IS-ENES2-consortium.

Not only since the effort to run even a single school on a single model is quite high already, but also to attract interesting candidates for such a school such a „more than one model“ activity needs some external support, and has to be tested first, at least once. So a prototype called First “European Earth System and Climate Modelling School” (E2SCMS) was set up and supported by the EC via the IS-ENES project.

This deliverable describes E2SCMS in more detail.

Teaching and Training: The Agenda

As described above, such a school on Earth System modelling needs to supply teaching, and training.

The teaching has to cover the realms and „sub-models“, and at least the more important matter cycles treated in the Earth System Model(s) in question. So a lecture on each realm was combined with an introduction into the software package representing this realm, for both of the models employed, HADGEM and MPI-ESM1 in this case.

For the training, the following consideration is important: Due to their numerical properties and performance, the models in question need to run on HPC facilities. Since the assignments for the school need to cover topics relevant in climate sciences, the data sets produced should cover at least a few decades of model time, preferably more than 100 model years. The models provided have a performance of about 30 - 50 years per real time day, so they need to run for two to three days in order to produce enough data for an analysis interesting for the participants. Given the length of the typical summer school (1 - 2 weeks) and the time needed to interpret the results (including to understand the assignment, find out the relevant parameters, build a hypothesis, understand and employ the analysis tools, check data against the hypothesis, prepare presentation of results, which also sums up to 1 - 2 weeks) it is obvious that the training has to be organised in a way that enables the participants to send off their job script on the HPC facility on day 1 of the school. This needs also quite a large number of technical and scientific advisors to help participants to come up to speed, and provide knowledge and hints to tackle the assignments. The assignments for a multi-model summer school pose a special challenge: In order to compare the models in a meaningful way, the assignments have to be set-up in a way that both models can tackle them. The list of assignments is also attached.

As can be seen from the agenda (next page), it fitted the requirements described above quite well. It also contains quite a number of attractive evening lectures on side aspects of Earth Systems sciences and their application. The list of teachers and tutors shows that, due to the sufficient funding provided be the IS-ENES grant, it was possible to attract quite an impressive selection of well reputed advisors.

E2SCMS: European Earth System and Climate Modelling School

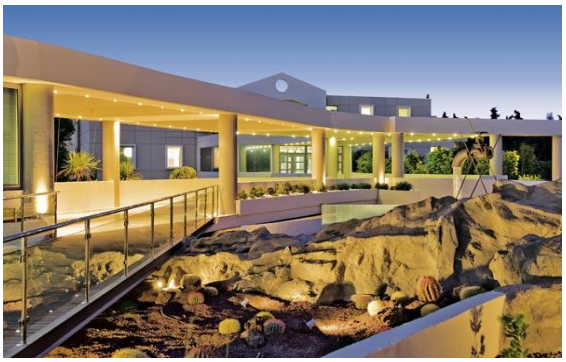
June 1 - 11 2012, Kos, Greece

Agenda, Status 2012-06-11:

Time	Fr June 1	Saturday June 2	Sunday June 3	Monday June 4	Tuesday June 5	Wednesday June 6	Thursday June 7	Friday June 8	Saturday June 9	Sunday June 10	Mo June 11
		Reg.Desk@KICC open	Earth System Processes and Dynamics in joint presentations						Hands on		Depar-ture: Check-out until 12:00
09:00-10:30		**Welcome** - Overview Summer School - building student teams - Introduction to facilities - use of laptops remote access	**Atmospheric Physics:** Jürgen Bader, MPI-M	**Ocean Physics:** Dave Marshall*, Oxford University	**Energy and Water Cycles:** Pier Luigi Vidale, NCAS	**Land physics and biology:** Thomas Hickler, Universität Frankfurt	**Ocean physics and BGC:** Inga Hense, Universität Hamburg	**Cryosphere:** Andrew Shepherd, Universtiy of Leeds	**Analysis of simulation results**	**Analysis of simulation results**	
10:30-11:00		**Coffee Break**									
		Hands on*	Introduction to HadGEM2 and MPI-ESM components in joint presentations						Hands on		
11:00-12:30	Arrival: Check-in from 14:00	**Starting Simulation Experiments**	**Atmospheric composition and processes:** **MPI-ESM:** M. Giorgetta MPI-M **HC-Model:** Alex Archibald, Cambridge University	**Oceanic composition and processes:** D. Stevens, UEA U. Mikolajewicz, MPI-M	**Radiation and convection:** Ian Boutle, MetOffice M. Giorgetta, MPI-M	**Land - energy, water and carbon:** A. Verhoef, U Reading, e-Lecture C. Reick, MPI-M	**Ocean - salinity, nutrients, carbon:** Robert Marsh, NOC, Southampton Tatiana Ilyina, MPI-M	**Glaciers, Ice sheets, sea ice:** Yevgeny Aksenov, CPOM, UCL U. Mikolajewicz, MPI-M	**Analysis of simulation results**	**Analysis of simulation results**	
12:30-14:00		**Lunch**									
		Hands on							Hiking	**Hands on**	
14:00-15:30		**Starting Simulation Experiments (continued)**	at free disposition	**Checking Simulation Experiments**	**Analysis of simulation results**	**Analysis of simulation results**	**Analysis of simulation results**	**Analysis of simulation results**		**Analysis of simulation results**	
15:30-16:00		**Coffee Break**		**Coffee Break**						**Coffee Break**	
16:00-18:00	Check In, Registration desk @ KICC open, lower level	**Students formulate hypotheses on expected simulation results**		**Tutorial: From data to graphics**	**Analysis of simulation results**	at free dispositon	Open Discussion: Students give a first overview on simulation results to discuss them with all course members (students + teachers). Only pencil and chalk allowed!	**Analysis of simulation results**		**Final student presentations**	
18:00-19:00		at free disposition		at free disposition			at free disposition			at free disposition	
19:00-20:30	**Icebreaker, Veranda of Kypriotis (Follow the signs, please!)**	**Dinner**	**Greek Night with Dinner:** Bus will leave at 19:00 sharp from Hotel, and at 23:00 from destination	**Dinner**						**Farewell Party**	
		After Dinner Talk		**Poster session**	at free dispositon	at free dispositon	After Dinner Talks		at free dispositon		
20:30-22:00		**Earth System Modeling and High Performance Computing:** P. Adamidis, DKRZ					T.b.a.: Thomas Hickler, Universität Frankfurt;	**Humans in the Earth System:** Virginia Murray, Health Agancy (UK)			
22:00 - 22:30											

Tutors are	NCAS	MPI-M	DKRZ
	Nicholas Klingaman	Veronika Gayler	Thomas Jahns
	Reinhard Schiemann	Karl-Herrmann Wieners	Panos Adamidis
	Andrew Turner	Helmut Haak	
		Walter Sauf	
		Reiner Schnur	

Facilities



One key aspect, if not attraction, of summer schools is that they normally take place in a kind of confined, „cloister"-like atmosphere. This is difficult for schools involving hands-on training, due to the technical installation needed. In this case, to foster the European aspect of the endeavour, it was decided to have the school in some other place than the centres involved. For E2SCMS the idea to go to some remote place in a small EU country came up very early, and the Greek team set out to find something appropriate: Remote, confined, but technically advanced.

At the same time the location to be found has to fulfil some technical requirements: A lecture hall for about 60 people, a separate computer class room with about 16, better 32 terminals, and some separate smaller rooms for discussions of working groups are necessary. Furthermore, a fast network link to the HPC installation - and to the internet at large for research and for the daily needs of the participants - are prerequisite, as are presentation and printing facilities. Accommodation and food and beverage needs also have to be fulfilled.

The combination of these requirements led to the selection of the Kipriotis Village Resort on the Greek island of Kos. Whereas this location, as a large conference hotel mainly serving events for medical doctors, fulfilled the requirements mentioned above, it had the disadvantage that the travel to the island was more expensive than previously estimated due to the fact that the date of the school the organisers could agree upon hit the main holiday season of Kos starting earlier than in the rest of Europe. Also the flights for many of the participants were longer than previously estimated due to the same reason: Favourable flights were booked by tourists much earlier than most participants even received their admission, or could fix their participation due to their business.

Announcement and Selection Process

The selection process for the facilities took quite some time. So the first announcement of the summer school was made in February 2012 via the CLIMLIST mailing list, which is read around the world in the community. Furthermore, announcement were made via the is-enes and other well-known mailing lists as well as in the participating institutions. The deadline for the application was set to end of February 2012.

A complete set of application documents had to consist of:

I. A Letter of Motivation presenting the scientific motivation for the application, including information concerning the applicants' research interests and modelling skills.

II. A Curriculum Vitae (CV / Resume) including current occupation and contact information (e-mail and postal).

III. A description of the applicants modelling experience: The applicant was asked to list computing knowledge (e.g. UNIX, use of supercomputers), experience with mathematical models, and statistical and data analysis tools.

IV. A reference letter: The referee was asked to e-mail the reference letter as pdf file directly to office.imprs@zmaw.de.

The selection process was executed jointly by NCAS and MPI-M staff, in cooperation with the ENES-Board, the handling was done by the IMPRS office in Hamburg. The applications were evaluated based upon the 4 criteria mentioned above by the staff of NCAS and MPI-M, and recommendation lists were produced. They were discussed in a joint telco, and then merged into a single list which was forwarded to the ENES-Board for approval. Based on this approval, admissions were issued.

Participants

60 applications from around the world were received for 32 places in the school. 32 students, of which 15 were female, were selected, from 13 EU and 7 non-EU countries. More information can be found in the table above. Admissions were announced end of March.

Number of Applicants			**Number of applicants from .... countries**		**Number of participants from ... Institutions**		
total	Competitive applications						
60	female	male	EU	Non-EU	EU	Non-EU	Organising
	18	33	48	12	27	5	4

The School

Participants were accommodated in 2 person apartments, including full board. Meals were served in the according facilities of Kypriotis, the lecture and computer rooms were located in the Kypriotis International Conference Centre KICC (see right) right next to the general facilities. So no time was lost in commuting. The little leisure time left could be spent in the pool or in the Mediterranean.

After the morning lectures, participants spent most of their time working on and discussing their assignments. For this, the participants were distributed into 8 groups of 4 each, where 4 assignments were available, see list below. All assignments were tackled with the two models available.

Students were working on laptops which were flown in from MPI-M - it was unfortunately not possible to rent them locally in sufficient specification and numbers, despite heroic attempts by the AA team. The network connection to DKRZ choked at times, especially during black-outs and a little earth quake we experienced, but functioned rather well at large.

Nevertheless the effort to set up such a class room in a remote location lead the team to the conclusion that schools like this need to be taking place in well-equipped labs, taking into account the fact that the cloister-like atmosphere cannot be given then.

In most of the evenings, lectures concluded the days.

By the end of the week, the single most important event was the presentation of the findings of the different groups. The presentations are available here:https://verc.enes.org/community/schools/e2scms/upload-area/student-presentations.

Evaluation by Participants

Unfortunately, a systematic evaluation of the school was not planned in advance. So a lime survey server (http://www.limesurvey.org/en) was set-up during the last days of the school, asking for input from all participants. The server could not re-established for public use after the school for different reasons So the time for answering the survey was very limited, which is why only about 10 participants answered the survey: The survey is by no mains anywhere near to representative.

Nevertheless, at large the school can be viewed as a success, also from the students perspective. Probably the most important criticism in our view is, that the lectures in the mornings and the assignments should , mutually and amongst each other, be better adjusted and coordinated.

Results and Conclusion

E2SCMS was held successfully in the rather remote location Kos in Greece, employing local (Laptops of MPI-M in the conference centre KICC) and remote (HPC computer at DKRZ, Hamburg, Germany) resources, with 60 applicants and 32 participants and a team of 29 advisors, teachers and staff. About 40.000 cpu-

hours were used, producing about 20 TB of data, which were successfully analysed and interpreted by the student teams. A website[2] is available showing agenda, lectures and results.

There now is available a rather large fund of experience, both from this school and from those carried out by NCAS and MPI-M. These experiences can easily be transferred to other models and centres; advise is available upon request from reinhard.budich@mpimet.mpg.de.

The EC-Earth community is fostering a European modeling system, and also hosting hands-on courses on the usage of their model. So the team running E2SCMS decided to team up with EC-Earth -team team to prepare the next ENES summerschool, this time with the three models Unified Model, MPI-ESM1 and EC-Earth. It is planned for the summer of 2014, probably in Barcelona, Spain, at the Barcelona Super Computing Centre, as part of IS-ENES2.

2 https://verc.enes.org/community/schools/e2scms

Material and References

List of participants

Last Name	First Name	Institut	Origin	function
Students				
Acevedo	Walter	FU Berlin	Columbia	student
Archibald	Alex	NCAS	UK	student
Arteaga	Lionel	GEOMAR	Venezuela	student
Bancalà	Severin	GEOMAR	Italy	student
Becker	Nico	FU Berlin	Germany	student
Bozkurt	Deniz	MPI-M	Turkey	student
Cao	Zhiyu, Jeff	U of Cambridge	China	student
Delandmeter	Phillippe	UC Louvain	Belgium	student
Ekiçi	Altug	MPI-BGC	Turkey	student
Ely	Caroline	U of Reading	UK	student
Forrest	Matthew	Uni Frankfurt	UK	student
Goris	Nadine	Uni Bergen	Germany	student
Großhauser	Martin	U of Innsbruck	Austria	student
Güttler	Ivan	U of Zagreb and DHMZ	Croatia	student
Hajdu	Laslo	U of Cambridge	Hungary	student
Hawcroft	Matt	U of Reading	UK	student
Ibello	Valeria	Marine Sci., METU	Turkey	student
Jardons	Fernanda	IPSL	Argentina	student
Kemppinen	Krista	U of Cambridge	Finland	student
Koutouris	Panagiotis	MPI-BGC	Greece	student
McKiver	William	CMCC	Ireland	student
Meyer	Angela	ETH	Germany	student
Mi	Yanjiao	FU Amsterdam	China	student
Piazza	Marie	CERFACS	France	student
Roberts	Julia	MetOffice	UK	student
Ruprich-Robers	Yohan	CERFACS	France	student
Szabo	Peter	Min. of Environment	Hungary	student
Turner	Emma	U of Belgrade	Serbia	student
Volpi	Danila	IC3	Catalonia	student
Vujadinovic	Mirjam	U of Belgrade & SEEVCCC	Croatia	student
Vukovic	Ana	SEEVCCC	Serbia	student
Willeit	Matteo	PIK	Italy	student
In Charge				
Adamidis	Panos	DKRZ	Greece	teacher
Aksenov	Yevgeny	NOC, Southhampton	Russia	teacher
Archibald	Alex	U of Cambridge	UK	teacher
Bader	Jürgen	MPI-M	Germany	teacher
Boutle	Ian	MetOffice	UK	teacher
Budich	Reinhard	MPI-M	Germany	organization
Gayler	Veronika	MPI-M	Germany	tutor
Giorgetta	Marco	MPI-M	Switzerland	teacher
Gruber	Angela	MPI-M	Austria	organization
Haak	Helmut	MPI-M	Germany	tutor
Hense	Inga	Uni Hamburg	Germany	teacher
Hickler	Thomas	Uni Frankfurt	Germany	teacher
Ilyna	Tatiana	MPI-M	Russia	teacher
Jahns	Thomas	DKRZ	Germany	tutor
Klingaman	Nicholas	NCAS	UK	tutor
Marsh	Bob	NOC, Southhampton	UK	teacher
Marshall	Dave	U of Oxford	UK	teacher
Mikolajewicz	Uwe	MPI-M	Germany	teacher
Murray	Virginia	Nat' Health, UK	UK	teacher
Reick	Christian	MPI-M	Germany	teacher
Sauf	Walter	MPI-M	Germany	tutor
Schiemann	Reinhard	NCAS	Germany	tutor
Schnur	Reiner	MPI-M	Germany	tutor
Shepherd	Andrew	Leeds University	UK	teacher
Stevens	David	U of East Anglia	UK	teacher
Turner	Andrew	NCAS	UK	tutor
Verhoef	Anne	NCAS	Netherlands	teacher (via Telco)
Vidale	Pier Luigi	NCAS	Italy	teacher
Wieners	Kalle	MPI-M	Germany	tutor

List of assignment

E2SCMS, Kos, 2012

Summerschool Assignments

During the summer school each group (=2 students) performs and analyzes one simulation experiment. In total we have 16 groups performing 4 different types of experiments, i.e. 4 groups are running the same type of experiment, 2 groups using MPI-ESM and 2 groups using HadGEM2. **It will be your task to explain what happens in these experiments.**

Short experiment descriptions

You find more hints on how to setup the experiments in the recipe handouts.

Soil respiration
In this experiment the consequences of an abrupt increase of slowly decomposable leaf litter is analyzed. One can think of this as if the litter had been somehow poisoned so that only extremely specialized bacteria or fungi are able to consume the litter. In the experiment this is simulated by prolonging the residence time of carbon in the soil compartment before it is respired to the atmosphere.
Ocean Mixing
In this experiment the effect of an increased vertical mixing in the ocean is examined.
Ocean Albedo
In this experiment the effect of an increased sea water albedo is examined.
Flat Earth
This experiment tests the effect of mountains, high plateaus etc., i.e. of surface elevations on the climate. Surface elevations are represented by the surface geopotential, which is seen by the resolved flow, and by surface parameters describing the sub grid-scale surface features. These parameters are used by the so-called sub grid-scale surface orography parameterization, which computes a drag on the flow above mountains or blocks the low level flow, if conditions apply. In this experiment the geopotential and the parameters describing the unresolved orography are set to zero, resulting in a "flat Earth" (though the surface roughness remains unchanged).

Schedule

You will **start the experiments** in the early afternoon on Saturday June 2. The late afternoon session is for **formulating hypotheses** on what you expect to happen in the experiments. Please write down your expectations, and **hand them in** at the end of the session. At the end of the week we will compare your final understanding with the expectations you had before analyzing the experiments. On Monday afternoon you will have a **first look at the simulation results**. The following days, you will analyze the results during the hands-on sessions at the following days. On Thursday after coffee break we will perform a **round-table discussion** on the results obtained so far. In this session the students are asked to present their results obtained so far **without use of any electronic media (!)** so that we can discuss them. Presentation should be jointly by the 4 groups running the same experiment. Sunday afternoon, you will give a **final presentation** on your explanations of the experiment outcomes. Please note that all groups working on the same experiment type from both models will have to **present their results jointly in a single talk**. So please start early comparing results with the respective partner groups!

05/30/12

Groups of participants:

Laptops/ tables	Columns				
Rows	2			1	
Seat	1	2		3	4
	Soil Respiration Experiments				
	a				
1	Model: MPI-ESM Account: m230001 Experiment: sus0002 Computer: sumil009 **Participant: Roberts, Julia**	Model: MPI-ESM Account: m230001 Experiment: sus0002 Computer: sumil009 **Participant:Kontouris, Panagiotis**	aisle	Model: UM Account: m230009 Experiment: xhemc Computer: sumil008 UKAccount: lap-08 **Participant: Jardon, Fernanda**	Model: UM Account: m230009 Experiment: xhemc Computer: sumil008 UKAccount: lap-08 **Participant: Acevedo, Walter**
	b				
2	Model: UM Account: m230010 Experiment: xhemc Computer: sumil010 UKAccount: lap-10 **Participant: Douvis Kostas**	Model: UM Account: m230010 Experiment: xhemc Computer: sumil010 UKAccount: lap-10 **Participant: Piazza, Marie**	aisle	Model: MPI-ESM Account: m230002 Experiment: sus0008 Computer: sumil007 **Participant: Turner, Emma**	Model: MPI-ESM Account: m230002 Experiment: sus0008 Computer: sumil007 **Participant:Willeit, Matteo**
	Ocean Mixing Experiments				
	a				
3	Model: MPI-ESM Account: m230003 Experiment: sus0003 Computer: sumil011 **Participant: Cao, Jeff**	Model: MPI-ESM Account: m230003 Experiment: sus0003 Computer: sumil011 **Particip.:Delandmeter, Philippe**	aisle	Model: UM Account: m230011 Experiment: xhhba Computer: sumil006 UKAccount: lap-06 **Participant: Bozkurt, Deniz**	Model: UM Account: m230011 Experiment: xhhba Computer: sumil006 UKAccount: lap-06 **Participant: Arsaga, Lionel**
	b				
4	Model: UM Account: m230012 Experiment: xhhba Computer: sumil012 UKAccount: lap-12 **Participant: Haidu, Lazlo**	Model: UM Account: m230012 Experiment: xhhba Computer: sumil012 UKAccount: lap-12 **Participant: Volpi, Danila**	aisle	Model: MPI-ESM Account: m230004 Experiment: sus0009 Computer: sumil005 **Participant:Meyer, Angela**	Model: MPI-ESM Account: m230004 Experiment: sus0009 Computer: sumil005 **Participant: McKiver, William**
	Ocean Albedo Experiments				
	a				
5	Model: MPI-ESM Account: m230005 Experiment: sus0005 Computer: sumil013 **Participant: Archibald, Alex**	Model: MPI-ESM Account: m230005 Experiment: sus0005 Computer: sumil013 **Participant:Mi, Jianjao**	aisle	Model: UM Account: m230013 Experiment: xhguy Computer: sumil004 UKAccount: lap-04 **Participant: Kemppinen, Krista**	Model: UM Account: m230013 Experiment: xhguy Computer: sumil004 UKAccount: lap-04 **Participant: R.-Robert, Yohan**
	b				
6	Model: UM Account: m230014 Experiment: xhguy Computer: sumil014 UKAccount: lap-14 **Participant: Szabo, Peter**	Model: UM Account: m230014 Experiment: xhguy Computer: sumil014 UKAccount: lap-14 **Participant: Großhauser, Martin**	aisle	Model: MPI-ESM Account: m230006 Experiment: sus0011 Computer: sumil003 **Participant: Ibello, Valeria**	Model: MPI-ESM Account: m230006 Experiment: sus0011 Computer: sumil003 **Participant:Becker, Nico**
	Flat Earth Experiments				
	a				
7	Model: MPI-ESM Account: m230007 Experiment: sus0006 Computer: sumil015 **Participant: Forrest, Matthew**	Model: MPI-ESM Account: m230007 Experiment: sus0006 Computer: sumil015 **Participant: Ely, Caroline**	aisle	Model: UM Account: m230016 Experiment: xhfak Computer: sumil016 UKAccount: lap-16 **Participant: Hawcroft, Matt**	Model: UM Account: m230016 Experiment: xhfak Computer: sumil016 UKAccount: lap-16 **Particip.: Vujadinovic, Mirjam**
	b				
8	Model: UM Account: m230015 Experiment: xhfak Computer: sumil001 UKAccount: lap-01 **Participant: Güttler, Ivan**	Model: UM Account: m230015 Experiment: xhfak Computer: sumil001 UKAccount: lap-01 **Participant: Vukovic, Ana**	aisle	Model: MPI-ESM Account: m230008 Experiment: sus0012 Computer: sumil001 **Participant: Goris, Nadine**	Model: MPI-ESM Account: m230008 Experiment: sus0012 Computer: sumil001 **Participant: Bancala, Severin**

Here is the link to the website that contains the presentations:
https://verc.enes.org/community/schools/e2scms/upload-area