## **3610 Space Physics**

## **University of Oslo (UiO) Norwegian Centre for Space-related Education (NAROM)**



Organisers: University of Oslo (UiO), in cooperation with Norwegian Centre for Space-related Education (NAROM)

<u>Time:</u> Tuesday 10 November - Friday 13 November 2009

<u>Place:</u> Andøya Rocket Range, Andøya, Northern Norway

<u>Target group/numbers:</u> 6 students from the University of Oslo (3610 - Space Physics)

<u>Lectures:</u> Lectures will be given to all participants (see program for details).

<u>Lodging and meals:</u> All participants stay at the Rocket Range Hotel in two-bed rooms.

All meals are served by staff personnel at the Rocket Range or other locations.



LECTURERS / MANAGEMENT / STAFF					
Title	Surname	Forename	Ref.	Organization	
Educational Manager	Antonsen	Jøran	JA	NAROM	Camp management
PHD student	Bekkeng	Tore André	TAB	UiO	Lecture
Housekeeper/Service Supplier	Chinsen	Phim	PC	Andøya Rocketrange	Accommodations
Housekeeper/Service Supplier	Ellingsen	Janne	JE	Andøya Rocketrange	Accommodations
Housekeeper/Service Supplier	Grande	Tone	TGr	Andøya Rocketrange	Accommodations
Physicist	Gulbrandsen	Njål	NG	NAROM	Lecture
Reception/secretary	Hanssen	Anita	AH	NAROM	NAROM Reception
Professor II	Hoppe	Ulf-Peter	UPH	UiT / FFI	Lecturer
Professor	Moen	Jøran	JM	UiO	Lecturer
Housekeeper/Service Supplier	Olsen-Thune	Monica	MOT	Andøya Rocket Range	Accommodation/food
Administration officer	Raabye	Tone	TRa	Andøya Rocketrange	Main reception
Chef	Rydningen	André	AR	Andøya Rocketrange	Accommodations
Educational Consultant	Strømdal	Hege-Merethe	HMS	NAROM	Camp management

	0. November		_	
Time	Activity	Responsible	Place	Notes
1400	Participants arrive , Checking in	AH	Reception	Transport from the airport
	Lunch (Baguettes)		Dining-room	
1430 - 1515	Welcome - Presentation of ARR/NAROM	NAROM	Conference room A	
	Practical information			
1515 – 1630	Guided tour of ARR	NAROM	Ferdinand	
1630 – 1730	Dinner		Dining-room	
1730 – 1815	Lecture: "Optical instruments"	JM	Ferdinand	
1815	Transport to Andenes	AH	ARR	Transport
1830	Guided tour at HISNAKUL and the Northern light centre	SSp???	HISNAKUL	
2000	Pizza evening at Riggen???	AH		
-	Transport back to ARR	AH		Call taxi at 76 14 12 00
	Auroral observations & Project work Introduction	JM/	Ferdinand	



Wednesday 11. November				
Time	Activity	Responsible	Place	Notes
0800 - 0845	Breakfast		Dining-room	
0845 - 0855	Morning meeting		NIKE	
0855 - 0940	Introduction to the ICI sounding rocket program	JM	Conference room A	
0945 - 1030	The Instrumentation of the ICI payload	TAB	Conference room A	
1030 - 1045	Coffee, tea and fruit		Dining-room	
1045 - 1130	Lecture: "Radars"	JM	Ferdinand	
1145 - 1230	Lecture: "Reconnection, substorms, current systems, and ionospheric	JM	Ferdinand	
	convection"			
1230 - 1315	Lunch		Dining-room	
1315 - 1400	Lecture: "Reconnection, substorms, current systems, and ionospheric	JM	Ferdinand	
	convection"			
1415– 1500	Lecture: Cubesat	JM	NIKE	
1515 - 1630	Project work	JM/NG		
1630 - 1730	Dinner		Dining-room	
1730 - 1900	Auroral observations continue/Work on ancillary data	JM/NG	Ferdinand	
1900 - 1945	Introduction to plotting of All-sky-images	NG	Ferdinand	
2030	Evening meal		Dining-room	
	Auroral observations continue/Work on ancillary data	NG	Ferdinand	Weather dependent



THURSDAY	12. November			
Time	Activity	Responsible	Place	Notes
0800 - 0845	Breakfast		Dining-room	
0845 - 0855	Morning meeting		Conference room A, B	
0855 - 0900	Safety brief	JA	Conference room A, B	
0900 - 0930	Prepare for the rocket operation	JM	USOC	
0930 - 1000	Pre-flight meeting	ARR	Conference room A, B	
1000 - 1200	Rocket operation	ARR	USOC	
1200 - 1230	Balloon launch???	AsE	ARR BTM	
1230 - 1315	Lunch		Dining - room	
1315 - 1345	Post flight meeting	ARR	Conference room A, B	
1345 - 1515	Lab: "Magnetometer"	NG/JM	USOC	
1515 - 1630	Project work – process data	NG/JM	NIKE	
1630 - 1730	Dinner		Dining-room	
1730 - 1815	Lecture: "ALOMAR instrumentation – lidar, radar, passive ground-based"	UPH	Conference room A	
1830 - 2030	Project work – draft report	Students	NIKE	
2030	Evening meal		Dining-room	
	Project work - draft report	Students	NIKE	



RIDAY 13. NOVEMBER				
Time	Activity	Responsible	Place	Notes
0800 - 0845	Breakfast - check out before 0900		Dining-room	
0845	Departure for ALOMAR	AH	ARR	Transport
0900 - 1000	Tour of ALOMAR	ALOMAR	ALOMAR	
1015	Departure for ARR	AH	ALOMAR	Transport
1030 - 1045	Coffee and tea break with fruit		Dining-room	
1045 - 1300	Finish the project reports –prepare 10-15 min presentations	Students/JM/NG	NIKE	
1300 - 1345	Lunch		Dining room	
1345 - 1430	Submit project reports/Group presentations	Students/JM/NG	NIKE	
1430 - 1500	Field course evaluation		Ferdinand	
1500 - 1530	Coffee/tea and waffles		Dining room	
1545??	Transport to airport	AH	ARR	Transport