SUMMER SCHOOL "ASTROCHEMISTRY: FROM SPACE TO EARTH"

WEEK 1

Time	Lecture title	Teacher
Monday, August 29		
13:00-13:45	Welcome	
13:45-14:00	Welcome Speech	C. Ceccarelli
14:00-15:00	Hands-on groups formation	
15:00-16:00	Introduction to astrochemical processes	I. Sims
16:00-16:30	Coffee break	
16:30-17:30	Laboratory experiments for astrochemistry, overview	I. Sims
17:30-18:30	From interstellar clouds to star forming regions I	E. Bergin
Tuesday, August 30		
09:00-10:00	From interstellar clouds to star forming regions II	E. Bergin
10:00-11:00	Overview of methods of theoretical chemistry I	Y. Ellinger
11:00-11:30	Coffee break	
11:30-12:30	Gas phase kinetics, dynamics and photodissociation I	I. Sims
12:30-14:00	Lunch break	
14:00-15:00	From protoplanetary disks to planets and comets I	E. Bergin
15:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Wednesday, August 31		
09:00-10:00	From protoplanetary disks to planets and comets II	E. Bergin
10:00-11:00	Overview of methods of theoretical chemistry II	Y. Ellinger
11:00-11:30	Coffee break	
11:30-12:30	Gas phase kinetics, dynamics and photodissociation II	I. Sims
12:30-14:00	Lunch break	
14:00-15:00	Gas phase kinetics, dynamics and photodissociation III	I. Sims
15:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Thursday, September 1		

09:00-10:00	Basic principles of astrochemical models II	S. Viti
10:00-11:00	Electronic structure and PES for gas phase astrochemistry	Y. Ellinger
11:00-11:30	Coffee break	
11:30-12:30	Basic principles of radiative transfer and applications I	J. Black
12:30-14:00	Lunch break	
14:00-15:00	Overview of methods of nuclear dynamics I	S. Althorpe
15:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Friday, September 2		
09:00-10:00	Basic principles of astrochemical models II	S. Viti
10:00-11:00	Overview of methods of nuclear dynamics II	S. Althorpe
11:00-11:30	Coffee break	
11:30-12:30	Basic principles of radiative transfer and applications II	J. Black
12:30-14:00	Lunch break	
14:00-15:00	Rate constant computations for gas phase astrochemistry	S. Althorpe
15:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	

WEEK 2

Time	Lecture title	Teacher
Monday, September 5		
09:00-10:00	Millimetre/radio observations and data reduction	P. Hily-Blant
10:00-11:00	IR spectroscopy observations and data reduction	E. Dartois
11:00-11:30	Coffee break	
11:30-12:30	Gas spectroscopic techniques I	L. Dore
12:30-14:00	Lunch break	
14:00-15:00	Solid-state reactions I	F. Dulieu
15:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Tuesday, September 6		
09:00-10:00	Solid-state reactions II	F. Dulieu

10:00-11:00	Techniques of iced molecular identification	E. Dartois
11:00-11:30	Coffee break	
11:30-12:30	Gas spectroscopic techniques I	L. Dore
12:30-14:00	Lunch break	
14:00-15:00	Techniques of gaseous molecules identifications	P. Hily-Blant
15:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Wednesday, September 7		
09:00-10:00	Irradiation and bombardment of ices I	M-E. Palumbo
10:00-11:00	Molecular dynamic for solid state astrochemistry I	H. Cuppen
11:00-11:30	Coffee break	
11:30-12:30	Molecular dynamic for solid state astrochemistry II	H. Cuppen
12:30-14:00	Lunch break	
14:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Thursday, September 8		
09:00-10:00	Irradiation and bombardment of ices I	M-E. Palumbo
10:00-11:00	Kinetic Monte Carlo approaches for solid state chemistry	H. Cuppen
11:00-11:30	Coffee break	
11:30-12:30	Scientific writing: proposals and applications	
12:30-14:00	Lunch break	
14:00-18:00	Hands-on activity	
16:00-16:30	Coffee break	
Friday, September 9		
09:00-11:00	Students presentations	
11:00-11:30	Coffee break	
11:30-12:30	Students presentations	