

23 January 2024

9:00 – 9:30 Welcome

9:30 – 10:00 “Overview of SUL4LIFE data: GEMS, ECHOS” Asuncion Fuente

10:00 – 10:20 “Grain chemistry in protoplanetary discs: the case of AB Aur” Pablo Rivière

10:20 – 10:40 “The sulphur depletion problem in molecular clouds: The H<sub>2</sub>S case”  
David Navarro-Almaida

10:40 – 11:30 Coffee break and discussion

11:30 – 12:00 “Overview of the MIOP program PRODIGE” Jaime Pineda

12:00 – 12:20 “Infalling Streamers and Disk Impact Zones of Embedded Protostars” Dominique Segura-Cox

12:20 – 12:40 “Sulfur chemistry in a massive proto-cluster” Caroline Gieser

12:40 – 13:00 “A quest for S-bearing refractory species” Álvaro Sánchez-Monge

13:00 – 14:30 Lunch

14:30- 15:00 “Substellar Science with the Euclid Space Mission” (SUBSTELLAR),” Eduardo Martín Guerrero

15:00 – 16:30 Discussion

24 January 2024

9:00 – 9:30 "Reactive reaction dynamics: application to sulfur chemistry in cold molecular clouds"  
Octavio Roncero

9:30 – 9:50 "Machine learning to represent the PES of gas phase reactions." Pablo del Mazo

9:50 - 10:20 "'Formation of CH<sub>3</sub>SH from CS on grain surfaces of different nature. A computational mechanistic approach'" Albert Rimola

10:20 – 10:40 "Adsorption of Neutral and Charged Sulfur Bearing Species onto Olivine Nanoclusters" Jessica Perrero

10:40 – 11:00 "Computed binding energies, diffusion barrier and frequencies distributions of significant S-bearing species at interstellar icy grains" Vittorio Baricoso

11:00 – 11:30 Coffe break

11:30 – 12:00 "Numerical simulations of star formation" Benoit Commercon (online)

12:00 -- 12:20 "Grain growth during the protostellar collapse" Ugo Lebreuilly (online)

12:20 – 12:40 "Grain growth and its chemical impact in the First Hydrostatic Core phase" David Navarro Almáida

12:40 – 13:00 "Cosmic Ray Induced Desorption of Interstellar Ices and its impact on sulfur chemistry" Olli Sipilä

13:00 – 14:30 Lunch time

14:30-- 15:00 "Astrochemical models of interstellar ices: History matters" Angèle Taillard

15:00 – 15:20 "A fast neural emulator for interstellar chemistry" Andrés Asensio

15:30 – 16:30 Discussion

20:30 Conference dinner

## 25 January 2024

09:00 – 09:30 “Sulfur chemistry in icy mantles” Guillermo Muñoz Caro and Cristóbal González Díaz

09:30-- 09:50 “Ice origins of OCS” Rafael Martín Doménech

09:50 – 10:10 "Formation of sulfur chains in the ice" Héctor Carrascosa

10:10 – 10:30 “VUV Photodesorption of H<sub>2</sub>S-bearing ices” Yu-Jung Chen

10:30 – 10:50 “Formation of sulfur chains and rings in laboratory and its implication for the ISM/comets” Stephanie Cazaux

10:50 – 11:30 Coffee break

11:30 – 11:40 “Formation of sulfur-bearing COMs in molecular clouds" Ko-Ju Chuan

11:40 – 12:00 “Molecular Structure of Interstellar Sulfur Species and DFT-simulated IR Spectra” Bruno Escribano

12:00 – 13:30 Discussion: linking experiments with chemical models

13:30 – 15:00 Lunch time

15:00 – 16:00 ALMA+JWST observations, ice composition, gas phase (Angèle and Rafa)