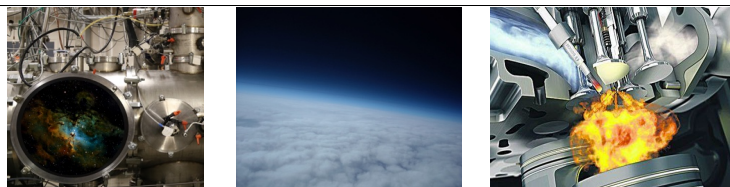


1st QUADMARTS Workshop, Caltech, Nov. 12-13, 2018



KECK INSTITUTE FOR SPACE SCIENCE

Monday November 12		
8h00	Welcome	Mitchio & Sébastien
Topic 1	Photo-ionization and mass spectrometric methods	Session Chair: Nils Hansen (Sandia National Laboratories)
8h15 (40'+10')	Coupling mass spectrometry with spectroscopy to study complex reactions in real time	David Osborn (Sandia National Laboratories)
9h05 (15'+5')	Radical-radical reactions to form PAHs: Towards photoionization spectroscopy with a new four wave-mixing VUV tabletop radiation source	Barney Ellison (University of Colorado)
9h25 (15'+5')	Spectroscopic tools to detect and characterize complex combustion mixtures	Tim Zwiér (Purdue University)
9h45 (30')	Coffee break	
Topic 2	New laser and cavity spectroscopy methods	Session chair : Christa Fittschen (Université de Lille 1)
10h15 (40'+10')	Quantitative molecular spectroscopy with optical cavities	Samir Kassi (Université Grenoble-Alpes)
11h05 (15'+5')	Intercomparison of laser-induced fluorescence at low pressure (FAGE) and cavity ring down spectroscopy (CRDS) methods for the quantitative detection of HO ₂ and CH ₃ O ₂ radicals in an atmospheric chamber.	Dwayne Heard (University of Leeds)
11h25 (15'+5')	Pulsed Laval flow apparatus with laser induced fluorescence and cw-cavity-ringdown spectroscopy	Shameema Thawoos (University of Missouri)
11h45 (15'+5')	Exploring ammonia gas phase chemistry	Yu Song (Université de Lorraine)
12h05-13h00	Lunch	
13h (90')	Breakout sessions Topics 1 & 2	Discussion Leaders : ` Laurent Nahon/Robert Georges
14h30 (30')	Breakout sessions 1 & 2 restitutions (plenary)	

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15h00 (30')	Coffee break	
	Theoretical methods	Session chair : Craig Taatjes (Sandia National Laboratories)
15h30 (40'+10')	Modern transition state theory	Stephen Klippenstein (Argonne National Laboratory)
16h20 (40'+10')	Tutorial of the ring-polymer molecular dynamics approach to kinetics	Hua Guo (University of New Mexico)
19h00	Dinner	El Portal Restaurant (Mexican)
Tuesday November 13		
Topic 3	Chirped pulse microwave spectroscopy	Session Chair: Brian Drouin (NASA Jet Propulsion Laboratory)
8h15 (40'+10')	Chirped-pulse millimeter-wave spectroscopy: from hardware design to quantum state-resolved chemical dynamics	Kirill Prozument (Argonne National Laboratory)
9h05 (15'+5')	Cryogenic buffer gas cooling coupled with chirped pulse microwave diagnostics as a highly sensitive tool for complex mixture analysis.	Jessica Porterfield (Harvard University)
9h25 (15'+5')	Multichannel Product Branching Fractions Probed by Chirped-Pulse Fourier Transform MW/mm-wave Spectroscopy in a Pulsed Uniform Flow	Nueshan Dias (University of Missouri)
9h45 (30')	Coffee break	
Topic 4	Frequency Combs	Session Chair: Geoff Blake (California Institute of Technology)
10h15 (40'+10')	Direct cavity-enhanced frequency comb spectroscopy	Marissa Weichman (University of Colorado)
11h05 (15'+5')	Optical frequency comb Fourier transform infrared spectroscopy with precision beyond the Voigt profile	Lucille Rutkowski (Université de Rennes 1)
11h25 (15'+5')	Interband cascade frequency comb lasers in the mid-IR	Mahmood Bagheri (NASA Jet Propulsion Laboratory)
11h45-13h00	Lunch	
13h (90')	Breakout sessions topics 3 & 4	Discussion Leaders: Ian Sims/Mitchio Okumura
14h30 (30')	Breakout sessions 3 & 4 restitutions (plenary)	
15h00-15h30	Concluding remarks and perspectives	Mitchio & Sébastien