

TSRC Workshop – Telluride, CO (USA) – January 6-10 2020

The Molecular Underpinnings of Astrophysics

Workshop will be held at
Ah Haa School for the Arts
300 South Townsend Street

Organizers:

François Lique (Université du Havre – France, francois.lique@univ-lehavre.fr)

Millard Alexander (University of Maryland – USA, mha@umd.edu)

David Neufeld (The Johns Hopkins University, neufeld@jhu.edu)

Sunday, January 5

05:00 - 07:00 PM

Registration and informal gathering, Phoenix Bean, 221 W Colorado Avenue followed by bar-food dinner at Phoenix Bean

Monday, January 6

Breakfast, Ah Haa School for the Arts, 7:30 - 8:15 AM
Registration/Check-in for later comers

Session MM (Morning), Ah Haa School for the Arts

Chair: F. Lique

08:15 - 08:30 AM

Opening remarks

08:30 - 09:15 AM

I. Sims, *Chirped pulse mm-wave and pulsed laser studies of gas phase molecular collisions for astrochemical and astrophysical applications*

09:15 - 10:00 AM

C. Vastel, *Seeds of Life in Space from NOEMA to ALMA*

10:00 - 10:30 AM

Coffee break

Chair: J. Klos

10:30 - 11:15 AM

F. Lique, *Collisional excitation of CO induced by H₂O and CO molecules*

Session ME (Evening), Ah Haa School for the Arts

Chair: I. Sims

03:15 - 04:00 PM

R. Fortenberry, *Astrochemistry without carbon or with only carbon*

04:00 - 04:45 PM

H. Lewandowski, *Isomer specific ion-molecule reactions*

04:45 - 05:15 PM

Coffee break

05:15 - 06:00 PM

W. Campbell, *An example study of a laboratory interstellar medium: H₂O + C⁺*

Dinner, 6:30 PM. Oak The New Fat Alley BBQ, in the Camel's Garden hotel at the base of the Gondola, 250 W San Juan Ave, 970-728-3985

Tuesday, January 7

Breakfast, Ah Haa School for the Arts, 7:30 - 8:15 AM

Session TuM (Morning), Ah Haa School for the Arts

Chair: R. Fortenberry

08:15 - 09:00 AM

Arnaud Belloche, *Molecular complexity in the interstellar medium*

09:00 - 09:45 AM

M. Alexander, *Spin-orbit branching in the predissociation of OH and SH*

Session TuE (Evening), Ah Haa School for the Arts

Chair: C. Vastel

04:30 - 5:15 PM

J. Klos, *Spin-Orbit transitions induced by collisions in the Interstellar Medium: Group IV and VI atoms*

05:15 - 6:00 PM

J. Zhang, *Photodissociation of small hydride free radicals*

Dinner, 6:30 PM. Smugglers Brew Pub, 225 S Pine St, Telluride, 970-728-5620

Wednesday, January 8

Breakfast, Ah Haa School for the Arts, 7:30 - 8:15 AM

Session WM (Morning), Ah Haa School for the Arts

Chair: A. Belloche

08:15 - 09:00 AM

P. Dagdigan, *Collisional Excitation of Asymmetric Tops in the Interstellar Medium: H₂S and HCO*

09:00 - 09:45 AM

A. Karska, *Hot water in star-forming regions*

Session WE (Evening), Ah Haa School for the Arts

Chair: J. Zhang

04:30 - 5:15 PM

L. Dodson, *Cryogenic spectroscopy and reactions of molecular ions*

05:15 - 6:00 PM

D. Neufeld, *Discovery of the helium hydride cation (HeH⁺) in a planetary nebula*

Conference dinner, Dinner, 6:30 PM. Village Table, Sunshine Plaza, Mountain Village, 970-728-1117

Thursday, January 9

Breakfast, Ah Haa School for the Arts, 7:30 - 8:15 AM

Session ThM (Morning), Ah Haa School for the Arts

Chair: L. Dodson

08:15 - 09:00 AM

M. Weichman, *Rotationally-resolved infrared spectroscopy of the C₆₀ fullerene*

09:00 - 09:45 AM

S. Kokoouline,

10:00 - 10:30 AM

Coffee break

Chair: S. Kokoouline

10:30 - 11:15 AM

K. Szalewicz, *Intermolecular interaction potentials for astrophysics*

Session ThE (Evening), Ah Haa School for the Arts

Chair: D. Neufeld

04:00 - 04:45 PM

T. Stoecklin, *Rigid-bender close-coupling treatment of the inelastic collisions of H₂O with He and p-H₂*

04:45 - 05:30 PM

E. Herbst, *Cosmic ray radiolysis: A new mechanism to produce COMs.*

05:30 - 06:00 PM

Discussion and concluding remarks

6:30 - 8:00 PM, Floradora Saloon, 103 W. Colorado Ave., 970 728-8884

Session ThE (Evening), New Sheridan Bar

Off-the-wall idea session and get together

Friday, January 10:

Informal Breakfast, Ah Haa School for the Arts, 7:30 AM