



IRTG CoCo Annual Convent/ Kick-off Meeting July 27th-31st, 2015 / UBC Vancouver



Program Overview

	Monday, July 27	Tuesday, July 28	Wednesday, July 29	Thursday, July 30	Friday, July 31	
09:00	Arrival	A 1. Interactions and Collisions Dynamics between Atoms, Molecules and Surfaces : M.Mudrich M.Vashishta (MLS102)	B2. Controlled Energy Transport in Cold Ensembles: R.Krems J.Sous J.Klatt A.Ruf (MLS102)	Hike to Panorama Ridge	B1. Electronic and Vibrational Relaxation Dynamics and Energy Transfer. D.Jones J.v.Vangerow L.Bruder M.Bohlen (MLS102)	
10:30		Coffee Break (MLS101)				Coffee Break (MLS101)
10:45		A 1. Interactions and Collisions Dynamics between Atoms, Molecules and Surfaces : J.Grzesiak W.Gunton S.Fuchs (MLS102)	B2. Controlled Energy Transport in Cold Ensembles: M.Litinskaya J.Cantin T.Brünnner (MLS102)		Coffee Break (MLS101)	
11:00		Lunch (MLS101)			A2. T.Schätz (MLS102)	A2. Interactions of Atoms and Molecules with Ions in Traps and in Plasmas: E.Grant (MLS102)
11:45			Lunch (MLS101)			Lunch (MLS101)
12:00		B 3. Control and Study of Quantum Rotors in Strongly Correlated Environments: V.Milner M.Bitter A.Korobenko (MLS102)			Lunch (MLS101)	
12:30			Coffee Break (MLS101)			A2. Interactions of Atoms and Molecules with Ions in Traps and in Plasmas: A.Lambrecht J.Schmidt H.Sadgehi M.Walter (MLS102)
13:00		B1. B.v. Issendorff (MLS102)			Project specific organization (PIs only) (MLS102)	
13:30			Project specific organization (PIs only) (MLS102)			Coffee Break (MLS101)
14:00		PAC Meetings S.Fuchs; J.Grzesiak (PIs office)			Project specific organization (PIs and PhDs) (MLS102)	
14:30			Break			Break
15:00		PAC Meetings J.Klatt; A.Ruf (PIs office)			Dinner (Biercraft)	
15:30			Postersession and Dinner (MLS101)			Dinner
16:00		Soccer				
16:15			Free time			
16:30						
17:00						
17:15						
17:30						
17:45						
19:00						
20:00						

Program: Monday, July 27th, 2015

2:00 pm

Image movie recording

3:30 pm

Lab tours / Individual discussions

Program: Tuesday, July 28th, 2015

MSL 102

09.00 – 09.30

Takamasa Momose, Frank Stienkemeier: Introductory remarks

A1. Interactions and Collisions Dynamics between Atoms, Molecules and Surfaces

09.30 – 10.15

Overview Topic – Marcel Mudrich "New trends in cold reactions"

10.15 – 10.35

Manish Vashishta "AC and DC Stark deceleration and trapping of polar molecules"

10.35 – 10.55

Coffee break (MSL101)

10.55 – 11.15

Jonas Grzesiak "Towards Imaging of Cold Penning Reactions Using a Li-MOT"

11.15 – 11.35

Will Gunton "Anomalous Behavior of Dark States and Autler-Townes Splitting in 6Li "

11.35 – 11.55

Sebastian Fuchs "Driven ensembles of cold atoms and molecules near surfaces - from Macroscopic QED to Dicke Physics"

11.55 – 12.55

Lunch break (catering) (MSL101)

B3. Control and Study of Quantum Rotors in Strongly Correlated Environments

13.00 – 13.45

Overview topic - Valery Milner "Molecular superrotors: control and study of molecules in extreme rotation states"

13.45 – 14.05

Martin Bitter "Extreme rotational excitation with long sequences of intense femtosecond pulses"

14.05 – 14.25

Aleksey Korobenko "Molecular stopwatches, cogwheels and 'spinflakes': studying the dynamics of molecular superrotors"

14.25 – 14.40

Coffee break (MSL101)

14.40 – 15.20

Overview Topic - Bernd v. Issendorff "Size-selected clusters as model systems"

Discussion of project specific organization (Supervision Strategy, Exchange Program)

- 15.20 – 16.15 **Christiane Földner (Proposal and Discussion - issues should be discussed with all PIs)**
- 16.15 – 17.15 **PhD advisory committee meetings (UBC PIs office)**
Sebastian Fuchs (S. Buhmann/ R. Krems)
Jonas Grzesiak (M. Mudrich/ T. Momose)
- 17.15 - 20:00** **Dinner (catering) + poster (MSL101)**

Program: Wednesday, July 29th, 2015

MSL 102

B2. Controlled Energy Transport in Cold Ensembles

- 09.00 – 09.45 **Overview Topic - Roman Krems**
Part I: "Anderson localization, polarons and quantum walk of interacting excitations of ultracold atoms and molecules"
Part II: "Gaussian Process model for collision dynamics of complex molecules"
- 09.45 – 10.05 John Sous "New Paradigms in Polaron and Bipolaron Physics"
- 10.05 – 10.25 Juliane Klatt "Quantum Friction in Different Regimes"
- 10.25 – 10.45 Alexander Ruf "Charge transfer in organic Van der Waals hetero complexes"

10.45 - 11.05 **Coffee break (MLS101)**

- 11.05 – 11.45 **Overview Topic - Marina Litinskaya** "Negative refraction of light in gases"
- 11.45 – 12.05 Joshua Cantin "Quantum Percolation and Anderson Localization"
- 12:05 – 12.25 Tobias Brünner "Many-particle quantum walk with interactions"

A2. Interactions of Atoms and Molecules with Ions in Traps and in Plasmas

- 12.25 – 13.10 **Overview Topic - Tobias Schätz** "Trapping Ions in Atoms and Molecules Optically - TIAMO"

13.10 – 14.10 **Lunch break (catering) + poster (MLS101)**

- 14.10 – 14.30 Alexander Lambrecht "An experimental setup for optical trapping of ions and atoms"
- 14.30 – 14.50 Julian Schmidt "Prospects for cold-collision experiments with ions and atoms"
- 14.50 – 15.10 Hossein Sadgehi "Classical measures of Rydberg gas evolution to ultracold plasma"
- 15.10 – 15.50 **Overview Topic - Michael Walter** "Electronic structure at 0K"

15.50 – 16.10 **Coffee break (MLS101)**

Discussion of project specific instruments (Seminars, Workshops; Supervision Strategy, Summer Schools)

- 16.10 – 17.15 **Christiane Földner (Proposal and Discussion** issues should be discussed with **all PIs and all PhD students)**
- 17.15 – 18.15 **PhD advisory committee meetings (UBC PIs office)**
Juliane Klatt (S. Buhmann/ M. Lintinskaya/ R. Krems)
Alexander Ruf (F. Stienkemeier/ V. Milner)

19.00 - 21.00 **Get Together Dinner @ BierCraft**

Program: Thursday, July 30th, 2015
(Panorama Ridge)

Departure 6.00 am

Hike

Program: Friday, July 31st, 2015

MSL 102

B1. Electronic and Vibrational Relaxation Dynamics and Energy Transfer

09.00 – 09.45	Overview Topic - David Jones "Coupled Spatio-temporal characterization of organic photovoltaics"
09.45 – 10.05	Johannes v. Vangerow "Time resolved photoion/electron imaging spectroscopy of Rubidium atoms attached to Helium nanodroplets"
10.05 – 10.25	Lukas Bruder "Phase-modulated electronic wave-packet interferometry of atomic and molecular gas-phase samples"
10.25 – 10.45	Matthias Bohlen "Towards a variable setup for production and characterization of organic-doped Helium nanodroplets"

10.45 – 11.05 *Coffee break (MLS101)*

11.05 – 11.50	Overview Topic - Ed Grant "Quantum many-body localization in a strongly coupled ultracold plasma"
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Concluding remarks (John Hepburn or Takamasa Momose/Frank Stienkemeier)

12.00 – 13.00 *Lunch break (catering) + poster (MLS101)*

13.00 – 14.00	PhD advisory committee meetings (UBC PIs office) Matthias Bohlen (F. Stienkemeier/ Sarah Burke/ David Jones) Tobias Brünner (A. Buchleitner/ R. Krems)
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Lab tours / Individual discussions

<i>Poster</i>	<i>Title</i>
Martin Bitter	Extreme rotational excitation with long sequences of intense femtosecond pulses
Matthias Bohlen	Towards a variable setup for production and characterization of organic-doped Helium nanodroplets
Lukas Bruder	Phase-modulated electronic wave-packet interferometry of atomic and molecular gas-phase samples
Tobias Brünner	Many-particle quantum walk with interactions
Joshua Cantin	Quantum Percolation and Anderson Localization
Sebastian Fuchs	Driven ensembles of cold atoms and molecules near surfaces - from Macroscopic QED to Dicke Physics
Jonas Gresziak	Towards Imaging of Cold Penning Reactions Using a Li-MOT
Will Gunton	Anomalous Behavior of Dark States and Autler-Townes Splitting in 6Li
Juliane Klatt	Quantum Friction in Different Regimes
Aleksey Korobenko	Molecular stopwatches, cogwheels and 'spinflakes': studying the dynamics of molecular superrotors
Alexander Lambrecht	Ultracold collisions of an Ion in an optical dipole trap
Marina Litinskaya	Collective excitations of polar molecules in optical lattices
Valery Milner	Molecular Superrotors
Alexander Ruf	Charge transfer in organic Van der Waals hetero complexes
Hossein Sadgehi	Classical measures of Rydberg gas evolution to ultracold plasma
Julian Schmidt	Advances in optical trapping of Barium ions
John Sous	New Paradigms in Polaron and Bipolaron Physics
Manish Vashishta	AC and DC Stark deceleration and trapping of polar molecules
Bernd v. Issendorff	Angle resolved photoelectron spectroscopy on simple metal clusters
Johannes v.Vangerow	Time resolved photoion/electron imaging spectroscopy of Rubidium atoms attached to Helium nanodroplets
Michael Walter	Molecular interactions within hydrogen matrices

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UBC Map

