



Remote Atmospheric Magnetometry Workshop April 25 & 26, 2014 (Friday and Saturday)

Workshop Location:

The Westin Georgetown
2350 M Street N.W.
Washington, DC 20037
Phone: 202-429-0100
Hotel Reservations: 888-627-8406
www.westingeorgetown.com
½ mile North of the Foggy Bottom Metro Station

Presenters:

As no one has ever made a remote magnetic measurement in the atmosphere, I appreciate you presenting work for the group to consider in its discussions. Invitations have mostly been sent by recommendation so I hope you will find an encouraging audience. To help the group assess the merit of a future MURI on this topic, please try to speculate as much as possible on concepts for such measurements and ground your speculation in research results if available. Hopefully this will facilitate informed brainstorming discussions during our sessions and over the breaks.

If I can keep a copy of your talk for reference, please plan on using CD-ROMs to transfer your talk for your presentation (as the Navy does not use thumb drives). I can bring CDs.



Draft Agenda



Friday - April 25, 2014

- 8:30 – 9:00 Registration / Breakfast Bites
- 9:00 – 9:20 Welcome and Overview
- Steve Potashnik, Office of Naval Research
- 9:20 – 10:10 Overview of Optical Magnetometry Techniques
- Dima Budker, UC Berkeley & Helmholtz Institute, Mainz
- Brian Patton, UC Berkeley & Technical University of Munich
- 10:10 – 10:30 REMAS Historic Highlights
- Jon Davis, NAVAIR
- 10:30 – 11:00 Coffee Break
- 11:00 – 11:40 High Gain Backward Lasing in Air
- Arthur Dogariu, Princeton University
- 11:40 – 12:20 Detecting Localized Trace Species in Air Using Radar Resonance-Enhanced Multi-photon Ionization
- Dick Miles, Princeton University
- 12:20 – 2:00 Lunch Buffet & Discussions
- 2:00 – 2:45 Remote Nonlinear Optical Magnetometry
- Phil Sprangle, University of Maryland
- 2:45 – 3:15 Backward Lasing in Rubidium
- Alexandre Akoulchine, Swinburne University of Technology
- 3:15 – 3:45 Remote Magnetometry with Mesospheric Sodium
- Tom Kane, Fasortronics
- 4:00 Coffee Break
- 6:00 Dinner at La Chaumiere
(½ mile walk into Georgetown)



Draft Agenda



- 8:00 – 9:00 **Breakfast Bites**
- 9:00 – 9:45 **TAMU Sky Lasing Projects**
- Gombojav O. Ariunbold, Texas A&M University
- 9:45 – 10:15 **Two-photon Spectroscopy Utilizing Sky Lasing.**
- Dmitri Voronine, Texas A&M University
- 10:15 – 10:45 **Ultrafast Nonlinear Light-Matter Coupling associated with Filamentation**
- Pavel Polynkin, The University of Arizona
- 10:45 – 11:15 **Coffee Break**
- 11:15 – 11:40 **Magnetic Detection and Noise Limitations**
- Lloyd Bobb, Applied Science Corporation
- 11:40 **Community's Consensus Opinion on Remote Atmospheric Magnetometry**
- Steve Potashnik, ONR

Adjourn

Currently Anticipated Participants

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