

**1<sup>st</sup> Workshop on Harsh-Environment Mass Spectrometers**  
**February 21-23, 1999; St. Petersburg, FL**

**Program**

Sunday, February 21

7:00 p.m. Informal reception at Moon over Water Restaurant, St. Petersburg

Monday, February 22

- 8:50 a.m. Opening remarks  
*Peter Betzer, Chair, Department of Marine Science, USF*
- 9:00 Mass Spectrometer on an Autonomous Underwater Vehicle (AUV)"  
*Tim Short, USF*
- 9:20 "Mass Spectrometers aboard US Navy Submarines: Will  
Yesterday's Solutions Solve Tomorrow's Problems?"  
*John Callahan, NRL*
- 9:40 "ICP-Mass Spectrometer: Extended At-Sea Trials"  
*Alan Volpe, LLNL*
- 10:00 Break- *Refreshments Provided*
- 10:20 "The Road to Miniaturizing Vacuum Pumps"  
*Woody Weed, SNL*
- 10:40 "Mass Spectrometry in Harsh Environments: The Use & Abuse of  
MS Techniques"  
*David Koppelaar, PNNL*
- 11:00 Lunch Break
- 1:00 p.m. "Miniature Time-of-Flight Mass Analyzers for Remote Sensing of  
Biochemical Agents"  
*Tim Cornish, APL*
- 1:20 "Miniature Mass Spectrometer-Based Sampling System for In Situ  
Measurement of Dissolved Gas, Solutes and Proteins present  
in Marine Waters"  
*Steven Smith, JPL*

- 1:40 "A Transportable Ion Trap Secondary Ion Mass Spectrometer for Munitions Assessment"  
*John Olson, INEEL*
- 2:00 Break
- 2:20 "Quadrupole Ion Traps: Miniaturization and Mass Spectrometer Arrays"  
*Ethan Badman, Purdue Univ.*
- 2:40 "Current and Future Applications of Mass Spectrometric Analyses in Non-Traditional Environments"  
*Chuck Wilkerson, LANL*
- 3:00 Break
- 3:30 We will provide dinner Monday evening for those willing to brave a cruise on the Research Vessel (R/V) Suncoaster, owned by the Florida Institute of Oceanography and routinely used by the USF Department of Marine Science. The trip into Tampa Bay begins at 3:30 p.m. and we should return by around 7:00 p.m. Excursion and Dinner

Tuesday, February 23

- 9:00 a.m. "Underwater MS: Making more Scents"  
*David Fries, USF*
- 9:20 "A Mini-Ion Cyclotron Resonance Mass spectrometer with Portable Potential"
- 9:40 "Laser Time-of-Flight Mass Spectrometry for Planetary Exploration"  
*Will Brinckerhoff, APL*
- 10:00 Break
- 10:20 "Fourier Transform Non-Destructive Detection in Quadrupole Ion Traps"  
*Garth Patterson, Purdue Univ.*

- 10:40 "Mass Spectrometric Profiling of the Lower Atmosphere: Go Fly a Kite"  
*Steve Balsley, Sandia*
- 11:00 "Ruggedized Time-of-Flight Mass Spectrometer for Trace Gas Analysis"  
*Marc Gonin, University of Houston/ IonWerks*
- 11:20 "Closing Remarks..."  
David Fries and Tim Short, USF