Monday, May 21, 2018

Session: Planetary Circulations & Turbulence, Chair: Baylor Fox-Kemper (Brown U.)

8:50am Lars Bildsten (KITP) Welcome
8:55am Baylor Fox-Kemper (Brown U.) Introduction: A brief summary of KITP boundary layer program so far
9:00am Peter Sullivan (NCAR / UCAR) Temperature fronts in stable boundary layers
9:45am Jim McWilliams (UCLA) Oceanic boundary layer frontogenesis & wave interactions

Morning Break

11:00am Keith Julien (CU Boulder) Investigations of rapidly rotating, stratified & nonhydrostatic flows
11:45am Leif Thomas (Stanford) Symmetric Instability (SI)-Turbulence: A Unique Form of BL Turbulence

Lunch Break

2:00pm Krista Soderlund (U. Texas) Convective Dynamics of Icy Ocean Worlds
2:45pm Yong Hu (LaRC) Ocean & atmos. BL measurements from existing & future space based lidar

Afternoon Break

Session: Ocean Biophysics, Chair: Dimitris Menemenlis (JPL)

4:00pm Laure Resplandy (Princeton) Carbon export in the ocean: gravitational, mixed-layer & subduction pumps
Tuesday, May 22, 2018

Session: Clouds & Convection, Chair: Brad Marston (Brown U.)

9:00am Chris Bretherton (U. Washington) Physical processes and pattern formation in cloudy boundary layers
9:45am Tapio Schneider (Caltech) Unifying the modeling of BLs, convection, clouds & driving it with data

10:30am Morning Break

11:00am Joao Teixeira (JPL) Subtropical Turbulence and Clouds: From LES to Climate Models
11:45am Jonathan Mitchell (UCLA) Stratus and stable layers in the Solar System (boundaries optional)

12:30pm Lunch Break

2:00pm Sergej Zilitinkevich (Helsinki) Revision of conventional theory of turbulence in essentially stratified flows

Session: Cryospheric Boundary Layers, Chair: Andy Thompson (Caltech)

2:45pm Dimitris Menemenlis (JPL) Don't let your PBL scheme be rejected by brine!

3:30pm Afternoon Break

4:00pm G. Manucharyan (Caltech) Submesoscale sea ice-ocean interactions in marginal ice zones
4:45pm Ian Eisenman (UCSD) Iceberg dynamics in glacial and modern oceans

5:30pm Reception

6:00pm Special Events Dinner

8:00pm Shuttle to BWSCI

Wednesday, May 23, 2018

Session: Climate Linkages, Chair: Brodie Pearson (Brown U.)
Tuesday, May 22, 2018

Session: Oceanic, Atmospheric, and Cryospheric Dynamics, Chair: George Philander (Princeton)

9:00am George Philander (Princeton)  
The Precarious Present: Is Global Warming Inhibiting an Incipient Ice Age?

9:45am Surendra Adhikari (Caltech)  
Solitary Waves of Glacial Mass Loss Detected in Greenland Crustal Motion

10:30am  
Morning Break

11:00am Paul Kushner (U. Toronto)  
Which burners heat up the Arctic atmosphere?

11:45am Simona Bordoni (Caltech)  
Role of BL dynamics in large-scale Hadley circulations & convergence zones

12:30pm  
Lunch Break

2:00pm  
FREE AFTERNOON  **Shuttle Available to BWSCI**

Thursday, May 24, 2018

Session: Interdisciplinary, Chair: Qing LI (Brown U.)

9:00am Wes Patterson (JHU/APL)  
Exploring Europa: Jupiter's Ocean World

9:45am Frank Bryan (NCAR)  
Mesoscale Air-Sea Interaction

10:30am  
Morning Break

11:00am Juan Restrepo (OSU)  
Defining a Trend in A Time Series: Can We Tell How Warm it's Getting?

11:45am Hussein Aluie (U. Rochester)  
Energy Pathways & Cascades in both Scale and Space: Ocean Applications

12:30pm  
Lunch Break

2:00pm Tom Dunne (UCSB)  
On the geophysical aspects of the local debris flows

2:45pm  
Afternoon Break

Session: Diversity & Retention in Earth & Planetary Sciences, Chair: D. Halkides (ESR)

3:00pm George Philander (Princeton)  
The Hedgehog and the Fox A Nelson Mandela Perspective on Global Warming

3:45pm Ashanti Johnson (Cirrus Acad)  
Diversity & retention of underrepresented groups in STEM & Earth Sciences
Friday, May 25, 2018

Session: Ocean Mixing, Chair: Shafer Smith (Courant Institute)

9:00am Andy Thompson (Caltech) Evolution & arrest of a turbulent stratified oceanic bottom BL over a slope

9:45am Stephen Belcher (U. Reading) The OSMOSIS Project

10:30am Morning Break

11:00am
11:45am Discussion

12:30pm Lunch Break

2:00pm CONFERENCE ENDS - SHUTTLE TO BWSCI *Also available to SB Airport and SB Airbus, Goleta location (See Registration Desk BEFORE FRIDAY to sign up.)