**Joint IASC/IGAC Workshop, University of Colorado, Boulder**

**Arctic Air Pollution – Advancing Understanding in the Next Decade**

**February 3rd-5th, 2015**

**Meeting Location: Aspen Rooms (Room 285/287/289) at the University Memorial Center (UMC) at the University of Colorado Boulder.  The Aspen Rooms are located on the 2nd Floor-far East side across from the Glenn Miller Ballroom**

*8:30 Snacks and Coffee, Collect Name Tags & Printed Material*

**Introduction – Setting the Scene**

Session chairs: Kathy Law (LATMOS/CNRS), Sandy Starkweather (CIRES/NOAA)

9:00 Brief introductions

9:30 Workshop Goals

9.45 Keynote: Findings from the AMAP BC/ozone expert group report on short-lived pollutant impacts on climate – Trish Quinn (NOAA/PMEL)

*10:15 Coffee*

**Theme 1: Key Science Questions (requiring collaborative efforts)**

Session Chairs: Sandy Starkweather (CIRES/NOAA)/ Kathy Law/ (LATMOS/CNRS)

10:35 Survey results – Jennie Thomas/Kathy Law (LATMOS/CNRS)

10:40 Long-range transport of pollution to the Arctic - Louisa Emmons (NCAR)

11:00 Local Arctic air pollution – Jennie Thomas (LATMOS/CNRS)

11:20 Interactions of pollutants with natural cycles – Greg Huey (Georgia Tech.)

11:50 Introduction/Training to the World Café Process – Sandy Starkweather (CIRES/NOAA)

*12:00 Lunch*

1:20 **Theme 1 – World Café Process – Key Science Questions**

Table chairs: Maryann Fidel, Jacques Pelon, Chuck Brock, Trish Quinn (4 groups of 8/9 people)

Rapporteurs: Sarah Monks, James Hannigan, Julia Burkhart, Yanzu Zhang

*3:15 Coffee*

3:45 Report Back from Theme 1 and discussion (Note takers: Lucy Carpenter (U. York), Marianne Lund (CICERO))

*4:45 Adjourn and reconvene at Social Icebreaker, Zolo Grill by 5:30*

**February 4, 2015**

*8:30 Snacks and Coffee*

**Theme 2: Advances and Needs in Technology and Models**

Session Chairs: Sangeeta Sharma, Knut von Salzen (Env. Canada)

9:00 Survey results –Sangeeta Sharma/Knut von Salzen (Env. Canada)

9:15 Observational advances and needs – Chuck Brock (NOAA)

9:30 Aerosol scavenging/deposition – Jo Browse (U. Leeds)

9.45 Observational opportunities in local communities – Maryann Fidel (U. Alaska)

*10:00 Coffee*

10:15 Theme 2 – World Café Process – Advancements in Technology, Networks and Models

Table chairs: Kim Strong, Jennie Thomas, Knut von Salzen, Christine Weidinmyer

Rapporteurs: Heiko Bozem, John Backman, Andreas Herber, Betsy Andrews

*12:15 Lunch*

1:30 Report Back from Theme 2 and discussion (Note takers: John Burkhart (U. Oslo), Louisa Emmons (NCAR))

2:30 **Theme 3: Building Collaborative Efforts for the Next Decade**

Chairs: Sandy Starkweather/Kathy Law

2:30 Survey results – Sandy Starkweather (CIRES/NOAA)

2:40 POLARCAT - a good model? – Kathy Law (LATMOS/CNRS)

2:50 Role for observational networks – Sandy Starkweather (CIRES/NOAA

3:00 Russian perspectives – TBD

3:10 Future Earth + IGAC Initiatives – Megan Melamed (IGAC)

3:20 MOSAiC, YOPP – potential for collaboration – Mathew Shupe (CIRES/NOAA)

*3:30 Coffee*

3:45 Theme 3 World Café Process – Building Collaborative Efforts for the Next Decade

Table chairs: Tim Bates, Tom Ryerson, Louisa Emmons, Greg Huey

Rapporteurs: Carolina Cavazos-Guerra, Marianne Lund, Lucy Carpenter, Jennifer Murphy

*5:30 Adjourn*

*18.30 Group dinner (self-paying)*

*End Day 2*

**February 5, 2015**

*8:30 Snacks and Coffee*

9:00 Report Back from Theme 3 and discussion

*10:15 Coffee*

**Workshop Conclusions and Next Steps**

**Session chairs: Sandy Starkweather/Kathy Law/organizing committee**

10:30 Recaps from note takers Themes 1 and 2

11:00 Framing the Whitepaper (Briefing Note), who’s the audience? where to publish?

11:30 Discussion about short & long-term goals, writing assignments, sections

12:00 Taking this initiative further (next steps, timeline, name, funding opportunities)

***12:45 Workshop Closes***

**Workshop Themes - Background Information**

**General:**

Why does the topic of Arctic air pollution matter? Who and what are impacted by atmospheric pollution? Do they (e.g. residents, decision makers, etc.) have the information they need?

Which impacts to focus attention on?

What can we expect to change over the next 10 years?

Who should be working together and how – current and future collaborative efforts?

Theme 1: **Key Science Questions**

**Aim of session:** To establish major scientific issues given the current state of knowledge.

What is missing from the survey results?

What processes need special attention (short and long-term)?

What key species and/or process require special attention (including international and collaborative efforts)?

Which issues are driven by societal needs/benefits?

Theme 2: **Advances and Needs in Technology and Models**

**Aim of session:** To identify key observational/model needs and developments required to improve scientific knowledge over the next 10 years.

What observations or instrument developments are needed (platforms, new instruments, sites, coordinated campaigns, satellite data etc)? Which key advancements are top of the list?

What types of modeling approaches/developments are needed and within which types of frameworks? Which key advancements are top of the list?

Are there regional hotspots that would benefit from collaborative action?

What opportunities (e.g. joint experiment designs) exist making use of existing or planned efforts like AMAP, IASOA, PEEX, MOSAiC, YOPP?

Theme 3: **Building Collaborative Efforts for the Next Decade**

**Aim of session:** To examine current status and potential for expanding collaborative science as part of a new initiative on Arctic Air Pollution

How would progress on Theme 1 and 2 issues benefit from an overarching conceptual framework (initiative)? What might it look like?

How can we build on existing hotspots for collaboration? (survey results)  What’s working well?

How can we best interface our science with social, regulatory or other issues that could help frame/organize our thinking?  (i.e. would problem-orientation help?)

How would a new initiative on Arctic Air Pollution distinguish itself?  What specific value would it add? How could it be supported?