WCRP/SPARC Local Workshop
October 19-20, 2017
Korea Polar Research Institute, Incheon, Korea

Thursday, October 19

Welcome and Session 1 (Chair: Baekmin Kim)

8:30 Registration
9:00 Opening and Logistics
9:05 Welcoming Remark (President of KOPRI)
9:10 In-Sik Kang: Stratospheric Influence on Predictability Enhancement in Late Winter
(Keynote speech)
9:40 Alexey Karpechko: Predictability of Sudden Stratospheric Warmings in the ECMWF extended range forecast system
9:55 Harry Hendon: Impacts and predictability of Antarctic stratosphere-troposphere coupling during Austral Spring-Summer
10:10 Yuna Lim: The influence of QBO on MJO prediction skill in the subseasonal-to-seasonal (S2S) Models
10:25 PHOTO & COFFEE BREAK

Session 2 (Chair: Kaoru Sato)

11:15 Andrew Charlton-Perez: Stratosphere-Troposphere coupling: A Regime View
11:30 Kanghyun Song: The ENSO-SSW relationship
11:45 Patrick Martineau: Lower-stratospheric control of the frequency of sudden stratospheric warming events
12:00 Judith Perlwitz: What determines the strength of the QBO-Stratospheric Polar Vortex Connection?
12:15 LUNCH
Session 3 (Chair: Gufran Beig)

13:30 Hye-Yeong Chun: Small-Scale Convective Gravity Waves: Contributions to the Large-Scale Circulations in the Middle Atmosphere (invited)

13:50 Min-Jee Kang: Momentum flux of convective gravity waves derived from an off-line gravity wave parameterization: Spatiotemporal variations at source level

14:05 Byeong-Gwon Song: Gravity Wave Activities in the Upper Mesosphere at King Sejong Station, Antarctica (62.22°S, 58.78°W) and Their Correlation with the Jet Stream in the Lower Atmosphere

14:20 Yueyue Yu: A stochastic Model with a Low-Frequency Amplification Feedback for the Stratospheric Northern Annular Mode

14:35 Anu Xavier: Extreme Rainfall Events Modulation by Monsoon Low Level Jet

14:50 COFFEE BREAK

Session 4 (Chair: Mijeong Park)

15:20 Yan Xia: On the climate impacts of upper tropospheric and lower stratospheric ozone

15:35 Gufran Beig: Trends in temperature of the middle atmosphere and its linkage to stratosphere ozone recovery

15:50 Larry Thomason: SAGE III on the International Space Station

16:05 Ha-Rim Kim: Changes in robust atmospheric circulation and its impact on poleward moisture transport into the Arctic during winter,

Poster Session (16:30-18:30)

Welcome Dinner: 19:00-

Friday, October 20

Session 5 (Chair: Seok-Woo Son)

9:00 Jinro Ukita: A Stratospheric Pathway for the Arctic-Midlatitude Climate Linkage (invited)

9:20 Su-Jong Jeong: Accelerating rates of Arctic carbon cycling revealed by long-term atmospheric CO2 measurements (invited)

9:40 Seungmok Paik: Attributing causes of 2015 record minimum sea-ice extent in the Sea of Okhotsk

9:55 Mee-Hyun Cho: Flaring Black Carbon Impacts on Arctic Climate

10:10 COFFEE BREAK
**Session 6 (Chair: Joowan Kim)**

10:45  Wen Chen: Role of stratosphere-troposphere interaction on the winter cold extremes in East Asia (invited)

11:05  Hye-Jin Kim: Eurasian winter temperature change and its association with Arctic sea ice loss

11:20  Jiankai Zhang: Persistent Shift of the Arctic Polar Vortex towards the Eurasian Continent in Recent Decades and its climatic impact

11:35  Chang-Eui Park: Emergence of aridification can be reduced by limiting the global warming to 1.5°C

11:50  Laura Pan: Atmospheric Composition and the Asian Monsoon: Recent Progresses and Collaboration Opportunities

12:05  LUNCH

**Session 7 (Chair: Changhyun Yoo)**

13:30  Jinwon Kim: Effects of atmospheric river landfalls on the precipitation characteristics in the Western US (invited)

13:50  Joowan Kim: Thermal characteristics of the tropical tropopause layer in CMIP5 models

14:05  Mijeong Park: Fate of pollution emitted during the 2015 Indonesian Fire Season

14:20  Fahim Khokhar: An assessment of SLCP trends over Pakistan

14:35  Joo-Hong Kim: Thermal evolution of late summer melt ponds

14:50  ADJOURN

**Poster Session**

1. Hemanth Kumar - Cross tropopause flux observed at sub-daily scales over south India monsoon regions

2. Shipra Jain - Occurrence of persistently low tropopause temperature and ozone over the Asian monsoon region as observed from Aura satellite

3. Vazhathottathil Madhu - Solar activity and associated changes in column ozone based on chemistry climate model simulation

4. Dibas Shrestha – Variability of Tropopause over South Asian Monsoon Region

5. Jin-Haeng Lee - Differences in the tropical convective activities during different phases of quasi biennial oscillation (QBO)

6. Myung-II Jung - Possible impact of tropospheric ozone and methane on the recent Arctic warming

7. Lei Song - The Relationship between the Variation of High Latitude Stratospheric Planetary Wavenumber 1 and the Cold Anomalies over Eastern China
8. **Feiyang Wang** - Effect of Madden-Julian Oscillation Occurrence Frequency on the Interannual Variability of Northern Hemisphere Stratospheric Wave Activity in Winter

9. **Ji-Hee Yoo** - Characteristics of inertia-gravity waves revealed in rawinsondes at Jang Bogo Station, Antarctica (74°37′S, 164°13.7′E)

10. **Chao Wang** - A definition of the dynamical tropopause based on the Gaussian curvature of isentropic potential vorticity

11. **Hyesun Choi** - Reexamination on the type classification of Stratospheric Sudden Warming

12. **Hataek Kwon** - A numerical simulation of strong wind event at King Sejong Station, Antarctica.

13. **Ja-Young Hong** - The characteristics and impacts of extreme Atlantic windstorms on Arctic warming

14. **Sang-Yoon Jun** - Dynamical core in atmospheric model does matter in the simulation of Arctic climate changes?

15. **Seok-Woo Son** - Does coupled ocean enhance ozone-hole-induced Southern Hemisphere circulation changes?

16. **Xuan Chen** - Shifting urban heat island clock in Megacity: a case study of Hong Kong

17. **Jinlong Huang** – The Precondition for Arctic Stratospheric Polar Vortex displacement Events

18. **Manuela Keguep** - Contribution to the aerial carbon sequestration assessment in the mangroves of Djirnda and Joal- Fadiouth (regions of Thiès and Fatick, Senegal- West Africa)

19. **Mohan Kumar Das** - Numerical Simulation and Dynamical Downscaling of South Asian Monsoon precipitation

20. **Lev Labzovskii** - The contribution of large urban areas to local CO2 anomalies retrieved from OCO-2 and GOSAT spaceborne observations

21. **Sujung Lee** - Analysis of the characteristics of Korean precipitation variability in a changing climate

22. **Jin-Sil Hong** - Understanding the mechanisms leading to pure Extreme heat and Tropical night in Korea.

23. **Ho Thi Ngoc Huyen** - Long-term change of the tropical cyclone tracks and potential impacts over the southern region of Vietnam

24. **Lufeng Huang** - The impact of urbanization in Beijing area to local ecosystem

25. **Suqin Duan** - On the utility (or futility) of using stable water isotopes to study convection

26. **Lan Dai** - Linking meteorological drivers of spring-summer drought regimes to agricultural drought risk in China

27. **Jung Choi** - Regional climate response to aerosol versus greenhouse gas forcing

28. **Iman Rousta** - Assessment of SST variabilities in association with Climate Change

29. **Seunghwon Hyun** - Understanding a role of internal variability on the increase of global mean surface temperature in a warming scenario.

30. **Yan Chen** - Impacts of urban air conditioning on urban heat island over the northern hemisphere in summer

31. **Jaeyoung Hwang** - A Climatology of Northern Hemisphere Blocking in CESM Large Ensemble simulations

32. **Stefanie Kremser** – Developing observational data sets for assessing and validating climate models

33. **Shiyan Zhang** – Change in trend of Hadley circulation after 2000