Tuesday, August 8

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Welcome</td>
<td>Mike Patterson (US CLIVAR), Sonya Legg (Princeton U.)</td>
</tr>
<tr>
<td>08:25</td>
<td>International CLIVAR</td>
<td>Annalisa Bracco (Georgia Tech)</td>
</tr>
<tr>
<td>08:50</td>
<td>Agency manager engagement</td>
<td>Eric Lindstrom (NASA), Sandy Lucas (NOAA), Eric Itsweire (NSF), Renu Joseph (DOE)</td>
</tr>
<tr>
<td>09:30</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:00</td>
<td>Special session: Advances &amp; challenges in understanding &amp; predicting climate teleconnections</td>
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<tr>
<td>10:00</td>
<td>Introduction</td>
<td>Emanuele Di Lorenzo (Georgia Tech), Dan Vimont (U. Wisconsin)</td>
</tr>
<tr>
<td>10:05</td>
<td>High-latitude teleconnection to tropical mean climate: Observations vs. models</td>
<td>Alyssa Atwood (Georgia Tech/U. California-Berkeley)</td>
</tr>
<tr>
<td>10:25</td>
<td>Teleconnections &amp; regional impacts under anthropogenic forcing</td>
<td>Daniel Swain (U. California-Los Angeles)</td>
</tr>
<tr>
<td>10:45</td>
<td>ENSO diversity, teleconnections and impacts</td>
<td>Antonietta Capotondi (NOAA Earth System Research Lab.)</td>
</tr>
<tr>
<td>11:05</td>
<td>Methods to quantify uncertainty in coupled climate models teleconnections</td>
<td>Samantha Stevenson (NCAR)</td>
</tr>
<tr>
<td>11:25</td>
<td>Facilitated discussion</td>
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<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:15</td>
<td>Panel breakout sessions (see Panel agendas below)</td>
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<tr>
<td>15:15</td>
<td>Break</td>
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<tr>
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<tr>
<td>17:00</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>17:45</td>
<td>Special session: Polar ocean &amp; sea ice interactions</td>
<td>Sonya Legg (Princeton U.)</td>
</tr>
<tr>
<td>17:45</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>17:50</td>
<td>Recent changes in Arctic sea ice and ocean circulation</td>
<td>Ron Kwok (NASA Jet Propulsion Lab.)</td>
</tr>
<tr>
<td>18:10</td>
<td>An Arctic Ocean in transition</td>
<td>Julienne Stroeve (U. College London/ National Snow and Ice Data Center)</td>
</tr>
<tr>
<td>18:30</td>
<td>Improving our understanding of Antarctic sea ice with NASA’s Operation IceBridge and upcoming ICESat-2 mission</td>
<td>Alek Petty (U. Maryland/NASA Goddard Space Flight Center)</td>
</tr>
<tr>
<td>19:10</td>
<td>Facilitated discussion</td>
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<tr>
<td>19:45</td>
<td>Adjourn</td>
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### Wednesday, August 9

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker/Source</th>
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<tbody>
<tr>
<td>07:30</td>
<td>Check-in/Breakfast</td>
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<tr>
<td>08:00</td>
<td>Plenary Session: Coupled data assimilation &amp; reanalysis</td>
<td></td>
</tr>
<tr>
<td>08:00</td>
<td>Introduction</td>
<td>Tony Lee (NASA Jet Propulsion Lab.)</td>
</tr>
<tr>
<td>08:05</td>
<td>What we need from observations and modelers to make coupled data assimilation the new standard for prediction and reanalysis</td>
<td>Steve Penny (U. Maryland/NOAA National Centers for Environmental Prediction)</td>
</tr>
<tr>
<td>08:35</td>
<td>Facilitated discussion</td>
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<tr>
<td>09:45</td>
<td>Break</td>
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<td>10:00</td>
<td>Break</td>
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</tr>
<tr>
<td>10:30</td>
<td>Panel breakout reports (20 mins/each)</td>
<td>Panel co-chairs</td>
</tr>
<tr>
<td>11:30</td>
<td>Conclusions and next steps</td>
<td>Sonya Legg (Princeton U.)</td>
</tr>
<tr>
<td>12:00</td>
<td>Summit adjourns</td>
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<tr>
<td>12:15</td>
<td>SSC Post-Summit Meeting</td>
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<tr>
<td>1:45</td>
<td>SSC meeting adjourns</td>
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### POS Panel Breakout Session
#### Tuesday, August 8

<table>
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<tr>
<th>Time</th>
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<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:15</td>
<td>POS Panel business</td>
<td>Renellys Perez (U. Miami/NOAA AOML), Emanuele Di Lorenzo (Georgia Tech)</td>
</tr>
<tr>
<td></td>
<td>• Summary of POS and past year’s accomplishments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Introductions of new and existing panel members</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Overview of agenda and discussions</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Teleconnections</td>
<td>Co-chairs: Emanuele Di Lorenzo (Georgia Tech), Samantha Stevenson (NCAR)</td>
</tr>
<tr>
<td>14:00</td>
<td>Recent observed changes or insights in teleconnection dynamics</td>
<td>Alyssa Atwood (Georgia Tech/U. California-Berkeley)</td>
</tr>
<tr>
<td>14:20</td>
<td>Advancing the representation of teleconnections in climate models</td>
<td>Samantha Stevenson (NCAR)</td>
</tr>
<tr>
<td>14:40</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Observational and synthesis requirements for characterizing contemporary sea level rise and predictability</td>
<td>Co-chairs: Aneesh Subramanian (Scripps), Shane Elipot (U. Miami), John Nielsen-Gammon (Texas A&amp;M)</td>
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**Joint POS and PPAI Session**

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<tbody>
<tr>
<td>15:30</td>
<td>Reports from the WCRP/IOC sea level 2017 conference</td>
<td>Nadya Vinogradova (Cambridge Climate Institute)</td>
</tr>
<tr>
<td>15:50</td>
<td>Global perspective</td>
<td>Eric Leuliette (NOAA NESDIS)</td>
</tr>
<tr>
<td>16:10</td>
<td>Regional and coastal perspective</td>
<td>Mark Merrifield (U. Hawaii)</td>
</tr>
<tr>
<td>16:30</td>
<td>Stakeholder perspective</td>
<td>Matt Campo (Rutgers U.)</td>
</tr>
<tr>
<td>16:50</td>
<td>Discussion</td>
<td></td>
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### Wednesday, August 9

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:00</td>
<td>High-latitude circulation, ocean-sea ice interface</td>
<td>Co-chairs: Jamie Morison (U. Washington), Janet Sprintall (Scripps)</td>
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**Joint POS & PSMI Session**

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</thead>
<tbody>
<tr>
<td>10:00</td>
<td>Southern Ocean SOCCOM review</td>
<td>Alison Gray (U. Washington)</td>
</tr>
<tr>
<td>10:15</td>
<td>Biogeochemistry in the Southern Ocean</td>
<td>Taka Ito (Georgia Tech)</td>
</tr>
<tr>
<td>10:30</td>
<td>Arctic Ocean effects on global climate</td>
<td>Jamie Morison (U. Washington)</td>
</tr>
<tr>
<td>10:45</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Atlantic Meridional Overturning Circulation</td>
<td>Co-chairs: Renellys Perez (U. Miami/NOAA AOML), Greg Foltz (NOAA AOML), Victoria Coles (U. Maryland)</td>
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**Joint POS & PSMI Session**

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<tbody>
<tr>
<td>11:00</td>
<td>What we’ve learned from the AMOC observational network about AMOC processes and its role in weather and climate</td>
<td>Shane Elipot (U. Miami)</td>
</tr>
<tr>
<td>11:20</td>
<td>What we’ve learned from AMOC modeling efforts about AMOC processes and its role in weather and climate</td>
<td>Rong Zhang (NOAA GFDL)</td>
</tr>
<tr>
<td>11:40</td>
<td>Discussion</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Co-chairs</td>
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</tr>
<tr>
<td>12:00</td>
<td>Lunch</td>
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</tr>
<tr>
<td>13:30</td>
<td>Health of the climate observing system, Part 1</td>
<td>Co-chairs: Carol Anne Clayson (WHOI), Fred Bingham (U. North Carolina-Wilmington)</td>
</tr>
<tr>
<td>13:30</td>
<td>Tropical ocean</td>
<td>Renellys Perez (U. Miami/NOAA AOML)</td>
</tr>
<tr>
<td>13:50</td>
<td>Subtropical ocean</td>
<td>Carol Anne Clayson (WHOI), Fred Bingham (U. North Carolina-Wilmington)</td>
</tr>
<tr>
<td>14:10</td>
<td>Polar ocean</td>
<td>Jamie Morison (U. Washington)</td>
</tr>
<tr>
<td>14:30</td>
<td>Coastal ocean</td>
<td>Victoria Coles (U. Maryland)</td>
</tr>
<tr>
<td>14:50</td>
<td>Discussion</td>
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</tr>
<tr>
<td>15:15</td>
<td>Break</td>
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</tr>
<tr>
<td>15:30</td>
<td>Health of the climate observing system, Part 2</td>
<td>Co-chairs: Kyla Drushka (U. Washington), Alison Macdonald (WHOI)</td>
</tr>
<tr>
<td>15:30</td>
<td>Atmospheric, troposphere/stratosphere interactions</td>
<td>Yolande Serra (U. Washington)</td>
</tr>
<tr>
<td>15:50</td>
<td>Air-sea interface from satellite observations</td>
<td>Kyla Drushka (U. Washington), Carol Anne Clayson (WHOI)</td>
</tr>
<tr>
<td>16:10</td>
<td>Surface mixed layer and upper ocean</td>
<td>Greg Foltz (NOAA AOML)</td>
</tr>
<tr>
<td>16:30</td>
<td>Intermediate and deep ocean</td>
<td>Gregory Johnson (NOAA PMEL)</td>
</tr>
<tr>
<td>16:50</td>
<td>Discussion</td>
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<td>17:30</td>
<td>Break</td>
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**Thursday, August 10**

<table>
<thead>
<tr>
<th>Time</th>
<th>POS Panel business (recap &amp; future directions)</th>
<th>Co-chairs: Renelys Perez (U. Miami/NOAA AOML), Emanuele Di Lorenzo (Georgia Tech)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Discussion of important themes from the breakout sessions</td>
<td></td>
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<tr>
<td>08:00</td>
<td>Identify recommendations and actions items for the next year</td>
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<tr>
<td>10:00</td>
<td>Break (return to plenary)</td>
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</tbody>
</table>
### PSMI Panel Breakout Sessions
#### Tuesday, August 8

<table>
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<tbody>
<tr>
<td>13:15</td>
<td>PSMI Panel business</td>
<td>Kris Karnauskas (U. Colorado-Boulder), Maria Flatau (Naval Research Lab.)</td>
</tr>
<tr>
<td>14:00</td>
<td>Teleconnections <strong>Joint PSMI &amp; PPAI session</strong></td>
<td>Co-chairs: Kris Karnauskas (U. Colorado-Boulder), Simon Wang (Utah State U.), Muyin Wang (U. Washington/NOAA PMEL)</td>
</tr>
<tr>
<td>14:00</td>
<td>Summary of Arctic-Midlatitude workshop/white paper</td>
<td>Judah Cohen (AER)</td>
</tr>
<tr>
<td>14:15</td>
<td>Discussion</td>
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<tr>
<td>14:25</td>
<td>Global warming influence on extreme events</td>
<td>Daniel Swain (U. California-Los Angeles)</td>
</tr>
<tr>
<td>14:33</td>
<td>Tropical impact - ENSO signature</td>
<td>Antonietta Capotondi (NOAA ESRL)</td>
</tr>
<tr>
<td>14:40</td>
<td>Discussion</td>
<td></td>
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<td>10:00</td>
<td>High-latitude circulation, ocean-sea ice interface</td>
<td>Co-chairs: Jamie Morison (U. Washington), Janet Sprintall (Scripps)</td>
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<td></td>
<td><strong>Joint POS &amp; PSMI session (see POS agenda for details)</strong></td>
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<tr>
<td>11:00</td>
<td>Atlantic Meridional Overturning Circulation <strong>Joint POS &amp; PSMI session (see POS agenda for details)</strong></td>
<td>Co-chairs: Renellys Perez (U. Miami/NOAA AOML), Greg Foltz (NOAA AOML), Victoria Coles (U. Maryland)</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:30</td>
<td>Tropical Pacific Observing Systems (TPOS) 2020</td>
<td>Co-chairs: Kris Karnauska (U. Colorado-Boulder), Maria Flatau (Naval Research Lab.)</td>
</tr>
<tr>
<td>13:30</td>
<td>TPOS2020 and process studies</td>
<td>Billy Kessler (NOAA PMEL)</td>
</tr>
<tr>
<td>14:00</td>
<td>Discussion</td>
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<tr>
<td>15:15</td>
<td>Break</td>
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<tr>
<td>15:30</td>
<td>Decadal variability: 5-year-ahead scale for water and other sectors <strong>Joint PSMI &amp; PPAI session</strong></td>
<td>Co-chairs: Rob Burgman (Florida International U.), Kevin Reed (Stony Brook U.)</td>
</tr>
<tr>
<td>15:30</td>
<td>Decadal climate prediction in CMIP6</td>
<td>Rob Burgman (Florida International U.)</td>
</tr>
<tr>
<td>15:45</td>
<td>Decadal variability and potential predictability in the Atlantic</td>
<td>Rong Zhang (NOAA GFDL)</td>
</tr>
<tr>
<td>16:00</td>
<td>Pacific decadal variability</td>
<td>Emanuele Di Lorenzo (Georgia Tech)</td>
</tr>
<tr>
<td>16:15</td>
<td>High-resolution climate modeling: A tool to study extreme weather on decadal timescales</td>
<td>Kevin Reed (Stony Brook U.)</td>
</tr>
<tr>
<td>16:30</td>
<td>The role of ocean eddies in decadal predictability in the North Atlantic</td>
<td>Ben Kirtman (U. Miami)</td>
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<tr>
<td>08:00</td>
<td>Stratosphere</td>
<td>Chair: Maria Flatau (Naval Research Lab.)</td>
</tr>
<tr>
<td>08:00</td>
<td>Introduction</td>
<td>Maria Flatau (Naval Research Lab.)</td>
</tr>
<tr>
<td>08:05</td>
<td>Using the stratosphere for extended range prediction</td>
<td>John McCormack (Naval Research Lab.)</td>
</tr>
<tr>
<td>08:35</td>
<td>Stratospheric observations, processes, and reanalysis</td>
<td>Craig Long (NOAA CPC)</td>
</tr>
<tr>
<td>09:05</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>09:30</td>
<td>Panel wrap-up</td>
<td>Kris Karnauska (U. Colorado-Boulder), Maria Flatau (Naval Research Lab.)</td>
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<td>10:00</td>
<td>Break (return to plenary)</td>
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## PPAI Panel Breakout Session

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<tr>
<td>13:15</td>
<td>PPAI Panel business</td>
<td>Simon Wang (Utah State U.), Emily Becker (NOAA CPC)</td>
</tr>
<tr>
<td>14:00</td>
<td>Teleconnections&lt;br&gt;&lt;br&gt;<em>Joint PSMI &amp; PPAI Session (see PSMI agenda for details)</em></td>
<td>Co-chairs: Kris Karnauskas (U. Colorado-Boulder), Simon Wang (Utah State U.), Muyin Wang (U. Washington/NOAA PMEL)</td>
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<td>Break</td>
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<tr>
<td>15:30</td>
<td>Observational and synthesis requirements for characterizing contemporary sea level rise and predictability&lt;br&gt;&lt;br&gt;<em>Joint POS and PPAI Session (see POS agenda for details)</em></td>
<td>Co-chairs: Aneesh Subramanian (Scripps), Shane Elipot (U. Miami), John Nielsen-Gammon (Texas A&amp;M)</td>
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<tr>
<td>10:00</td>
<td>Subseasonal-to-seasonal session, Part 1: extremes and predictability</td>
<td>Co-chairs: Chris Castro (U. Arizona), Andy Wood (NCAR)</td>
</tr>
<tr>
<td>10:00</td>
<td>S2S Task Force</td>
<td>Paul Dirmeyer (George Mason U.)</td>
</tr>
<tr>
<td>10:20</td>
<td>Current and future S2S modeling strategies</td>
<td>Surajana Saha (NOAA NCEP)</td>
</tr>
<tr>
<td>10:40</td>
<td>Discussion</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Statistical modeling of climate-extreme linkages</td>
<td>Balaji Rajagopalan (U. Colorado-Boulder)</td>
</tr>
<tr>
<td>11:20</td>
<td>Predictability of flooding extremes</td>
<td>Marty Ralph (Scripps)</td>
</tr>
<tr>
<td>11:40</td>
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<tr>
<td>13:30</td>
<td>Subseasonal-to-seasonal, Part 2: climate-ocean linkage with fishery and marine ecosystems</td>
<td>Chair: Enrique Curchitser (Rutgers U.)</td>
</tr>
<tr>
<td>13:30</td>
<td>Seasonal climate predictions for marine resource management: progress and challenges</td>
<td>Charlie Stock (NOAA GFDL)</td>
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<td>Discussion</td>
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<td>15:30</td>
<td>Decadal variability: 5-year-ahead scale for water and other sectors&lt;br&gt;&lt;br&gt;<em>Joint PSMI &amp; PPAI Session (see PSMI agenda for details)</em></td>
<td>Co-chairs: Rob Burgman (Florida International U.), Kevin Reed (Stony Brook U.)</td>
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<tr>
<td>17:30</td>
<td>Break</td>
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<tr>
<td>Time</td>
<td>Topic</td>
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<td>08:00</td>
<td>CMIP6 horizon</td>
<td>Chair: Scott Weaver (EDF)</td>
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<td>08:00</td>
<td>NA-CORDEX: Overview and data availability</td>
<td>Chris Castro (U. Arizona)</td>
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<tr>
<td>08:15</td>
<td>The Vulnerability, Impacts, Adaptation, and Climate Services (VIACS) Advisory Board for CMIP6: A bridge between modeling and applications</td>
<td>Alex Ruane (NASA GISS)</td>
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<td>08:30</td>
<td>Decadal prediction aspects of CMIP6</td>
<td>Rob Burgman (Florida International U.)</td>
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<td>08:45</td>
<td>The half a degree additional warming, prognosis, and projected impacts (HAPPI): Background and experiment design</td>
<td>Scott Weaver (Environmental Defense Fund)</td>
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<td>09:00</td>
<td>Discussion</td>
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<td>09:30</td>
<td>Panel wrap-up</td>
<td>Simon Wang (Utah State U.), Emily Becker (NOAA CPC)</td>
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<td>10:00</td>
<td>Break (return to plenary)</td>
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Agenda Addendum

Plenary Sessions

Advances & challenges in understanding & predicting climate teleconnections
Chairs: Emanuele Di Lorenzo, Dan Vimont

- Which observations and modeling approaches are required to establish robust relationship between teleconnection dynamics and changes in mean state (e.g. decadal and climate change)?
- How predictable are the impacts of teleconnections (e.g. ENSO) on regional and coastal systems (e.g. extreme events, droughts, marine heatwaves)? Are these impacts being influenced by global climate change?
- Which approaches and methods are best suited to diagnose teleconnection dynamics and impacts in climate models, and perform comparisons to observations?

Polar ocean & sea ice interactions
Chair: Sonya Legg
Rapporteur: Janet Sprintall

Broad Questions:
- How well does the existing/planned observing network capture sea-ice/ocean interactions? What observing system improvements might be needed?
- What are the important processes in sea-ice/ocean interactions? What is the relative role of atmospheric v. oceanic processes in sea-ice variability? How well are these processes understood/represented in current models? What process studies might be needed to fill gaps in our understanding?
- How does ocean/sea-ice/atmosphere interaction influence predictability of sea-ice and/or boundary layer fluxes? Which sea-ice metrics show sensitivity to ocean/ice/atmosphere interactions?

Data assimilation & reanalysis
Chair: Tony Lee
Rapporteur: Aneesh Subramanian

Broad Questions:
- What are the observational needs and gaps for coupled assimilation and the related prediction?
- What the most critical improvement needed for the forward coupled models?
- What aspects of data assimilation need to be improved for coupled assimilation?
POS Panel Breakout Sessions

Climate Teleconnections
Chairs: Emanuele Di Lorenzo, Samantha Stevenson
Rapporteur: Renellys Perez

Broad Questions:
• Which observations and modeling approaches are required to establish robust relationship between teleconnection dynamics and changes in mean state (e.g., decadal and climate change)?
• How predictable are the impacts of teleconnections (e.g., ENSO) on regional and coastal systems (e.g., extreme events, droughts, marine heatwaves)? Are these impacts being influenced by global climate change?
• Which approaches and methods are best suited to diagnose teleconnection dynamics and impacts in climate models, and perform comparisons to observations?

Expected Outcomes:
• Assessment of observations relevant to constrain teleconnections
• Understanding of model performance regarding teleconnection processes
• Recommendations on future community experiments/improvements to observational network

POS/PPAI joint session: Observational and synthesis requirements for characterizing contemporary sea level rise and predictability
Chairs: Aneesh Subramanian, Shane Elipot, John Nielsen-Gammon
Rapporteur: Samantha Stevenson

Broad Questions:
• What are the observational gaps for characterizing global, regional, and coastal contemporary sea level rise?
• What are the lesser known dynamical processes affecting global and regional sea level? How do these processes affect our ability to model and predict global and regional sea level rise?
• What type of information (in terms of forecasts or observations (nowcasts)) would be most useful for stakeholders in terms of inputs for decision making?

Expected Outcomes:
• Highlights from sea level conference 2017
• Observational gaps for characterizing global, regional and coastal contemporary sea level rise
• Lesser known processes affecting our ability to model and predict global sea level rise, hence future requirements
**POS/PSMI joint session: High-latitude circulation, ocean-sea ice interface**

Chairs: Jamie Morison, Janet Sprintall
Rapporteur: Kyla Drushka

**Broad Questions:**
- What changes are we noticing in high-latitude ocean circulation?
- What is the role of the ocean in ice sheet loss and contribution to global sea level?
- How does the polar ocean contribute to carbon uptake now and into the future?

**Expected Outcomes:**
- An improved understanding of the importance the two-way connections between the high latitude sea ice, ocean circulation, and atmospheric circulation and global climate. What observational gaps are there?
- Variables and time/ space scales that might better inform model development of the high latitude processes.

**POS/PSMI joint session: Atlantic Meridional Overturning Circulation**

Chairs: Renellys Perez, Victoria Coles, Gregory Foltz
Rapporteur: Fred Bingham

**Broad Questions:**
- What have we learned from the AMOC observational network about AMOC mechanisms and water mass pathways?
- What are key fields to compare across the AMOC observational network to assess connectivity of AMOC across the Atlantic? How long do we need to observe them to see coherent signals between the different regimes (subtropical South Atlantic, tropical Atlantic, subtropical North Atlantic, subpolar North Atlantic)?
- Are we using the right metrics and fingerprints to understand the link between AMOC, weather and climate variability?
- Where are the models (and reanalyses) able to correctly simulate AMOC processes, and where are they not? What are the key shortcomings that need to be addressed in models?
- What are models and longer-term observations telling us about the link between AMOC, weather and climate?

**Expected Outcomes:**
- Identify observational gaps in the AMOC observational network
- Recommendations for model improvements needed to more realistically simulate AMOC
Health of the climate observing system, part 1
Chairs: Carol Anne Clayson, Fred Bingham
Rapporteur: Alison Macdonald

Broad Questions:
• What is the status of the current system?
• What elements are there?
• How robust is in terms of funding and technology?
• Where might it be expanded and what might be gained?
• What are the gaps?
• What are some unobserved key weather/climate processes that could be addressed with an expanded observing system, and what would we need for this?

Expected Outcomes:
• Identify gaps in the global observational network
• Identify areas that are vulnerable to funding cuts
• Examining interactions between the elements

Health of the climate observing system, part 2
Chairs: Kyla Drushka, Alison Macdonald
Rapporteur: Aneesh Subramanian

Broad Questions:
• What measurements are being and/or should be made?
• Are there links/dependencies with other observing system components (e.g., for calibration/validation, filling in spatial/temporal gaps, or for data assimilation or model validation)?
• What are the current or potential future gaps in the observing system?

Expected Outcomes:
• Identify gaps in the global observational network
• Identify links in the global observational network
• Identify vulnerable programs
PSMI Panel Breakout Sessions

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Chairs: Jamie Morison, Janet Sprintall
Rapporteur: Kyla Drushka

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• What changes are we noticing in high-latitude ocean circulation?
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• How does the polar ocean contribute to carbon uptake now and into the future?

Expected Outcomes:
• An improved understanding of the importance the two-way connections between the high latitude sea ice, ocean circulation, and atmospheric circulation and global climate. What observational gaps are there?
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• What are models and longer-term observations telling us about the link between AMOC, weather and climate?

Expected Outcomes:
• Identify observational gaps in the AMOC observational network
• Recommendations for model improvements needed to more realistically simulate AMOC
**Tropical Pacific Observing Systems (TPOS) 2020**  
Co-chairs: Kris Karnauskas, Maria Flatau

**Broad Question:**  
- What physical processes will be most important over the next decade (e.g., for model development, or to devise effective ongoing sampling strategies that will depict the processes from sustained monitoring)?

**PSMI/PPAI joint session: Decadal variability: 5-year-ahead scale for water and other sectors**  
Co-chairs: Rob Burgman, Kevin Reed  
Rapporteur: Scott Weaver

**Broad Questions:**  
- What is the current skill of CMIP6-class models for decadal predictability?  
- What advancements are being made to improve this skill (in both atmosphere and ocean models)?  
- Is the current state-of-the-art skill sufficient for informing relevant public and private sectors?

**Stratosphere**  
Chair: Maria Flatau

**Broad Questions:**  
- What is the impact of stratospheric circulations on climate/extended weather prediction?  
- How good are models in predicting stratospheric circulations?  
- What processes are critical for these predictions?  
- What are the data/understanding gaps that should be addressed to represent these processes?  
- Are there any field projects current and planned that address these questions?
PPAI Panel Breakout Sessions

POS/PPAI joint session: Observational and synthesis requirements for characterizing contemporary sea level rise and predictability
Chairs: Aneesh Subramanian, Shane Elipot, John Nielsen-Gammon
Rapporteur: Samantha Stevenson

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• What are the observational gaps for characterizing global, regional, and coastal contemporary sea level rise?
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Expected Outcomes:
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• What is the current skill of CMIP6-class models for decadal predictability?
• What advancements are being made to improve this skill (in both atmosphere and ocean models)?
• Is the current state-of-the-art skill sufficient for informing relevant public and private sectors?

CMIP6 horizon
Chair: Scott Weaver
Rapporteur: Andy Wood

Broad question:
• How does PPAI connect with and utilize CMIP6 data, including the new decadal prediction project, HiResMIP, and CORDEX?