

# S2S Updates

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# International S2S Panel

- Andy Robertson (Lamont/Columbia U.) and Frederic Vitart (ECMWF) co-chairs
- Main web site hosted out of Korea: <http://s2sprediction.net/>
- Several subprojects – two with crossover relevance to monsoons subproject:
  - MJO subproject has some overlap - e.g., main focus on Maritime Continent (MC) connects to AA monsoon (Duane Walliser)

# New S2S Teleconnections Subproject

- Focus on extratropical-tropical interactions
- leader: Cristiana Stan
- Certain monsoons more relevant than others in this regard (e.g., NA)
- Proposed YTMIT
  - virtual field experiment called Year of Tropical-Midlatitude Interactions and Teleconnections
  - mid 2017-2019 to coincide with YOPP and YMC.
  - The goal is primarily an intensive research period (including e.g. coordinated numerical experiments and diagnostics), and funding agencies will be approached soon. It has been suggested to coordinate this activity with WGSIP teleconnections project – **opening for us too?**

# Monsoon Subproject of S2S

- Not much has happened for the S2Smonsoon subproject, reports Harry Hendon.
- Paper with Andrew Marshall on assessing predictions of Australian monsoon rainfall at intraseasonal leads using their model, which could be a model for what could be done using the rest of the S2S models.
- Harry has made it known he like to hand over leadership of this subproject to someone on one of our Working Groups who could be more proactive.
- I have a note (Feb 2016) that he is in contact with members of AA (Aurel) and SA/NA (Alice) working groups about regional monsoon studies, including getting the code for indices, metrics, etc.

# S2S Database - Models and Specs

	Time range	Resolution	Ens. Size	Frequency	Re-forecasts	Rfc length	Rfc frequency	Rfc size	Volume per cycle	Volume of reforecast per update
<b>BoM (ammc)</b>	d 0-60	T47L17	33	2/week	fix	1981-2010	6/month	33		6 TB
<b>CMA (babj)</b>	d 0-45	T106L40	4	daily	fix	1994-April 2014	daily	4		
<b>EC (cwao)</b>	d 0-35	0.6x0.6 L40	21	weekly	on the fly	past 15y	weekly	4		
<b>ECMWF (ecmf)</b>	d 0-46	T639/319 L62	51	2/week	on the fly	past 20 years	2/week	11		
<b>ISAC-CNR</b>	d 0-32	0.75x0.56 L54	40	weekly	fix	1981-2010	6/month	1		
<b>HMCR</b>	d 0-63	1.1x1.4 L28	20	weekly	fix	1981-2010	weekly	10		
<b>JMA (rjtd)</b>	d 0-34	T159L60	50	2/week	fix	1979-2010	3/month	5	3.8 Gb	900 Gb
<b>KMA (rksl)</b>	d 0-60	N216L85	4	daily	on the fly	1996-2009	4/month	3		
<b>Meteo-France (lfpw)</b>	d 0-60	T255L91	51	monthly	fix	1993-2014	monthly	15		6.75 Go/start date
<b>NCEP (kwbc)</b>	d 0-44	T126L64	16	daily	fix	1999-2010	day	4		
<b>UKMO (egrr)</b>	d 0-60	N216L85	4	daily	on the fly	1996-2009	4/month	3		

# S2S Database

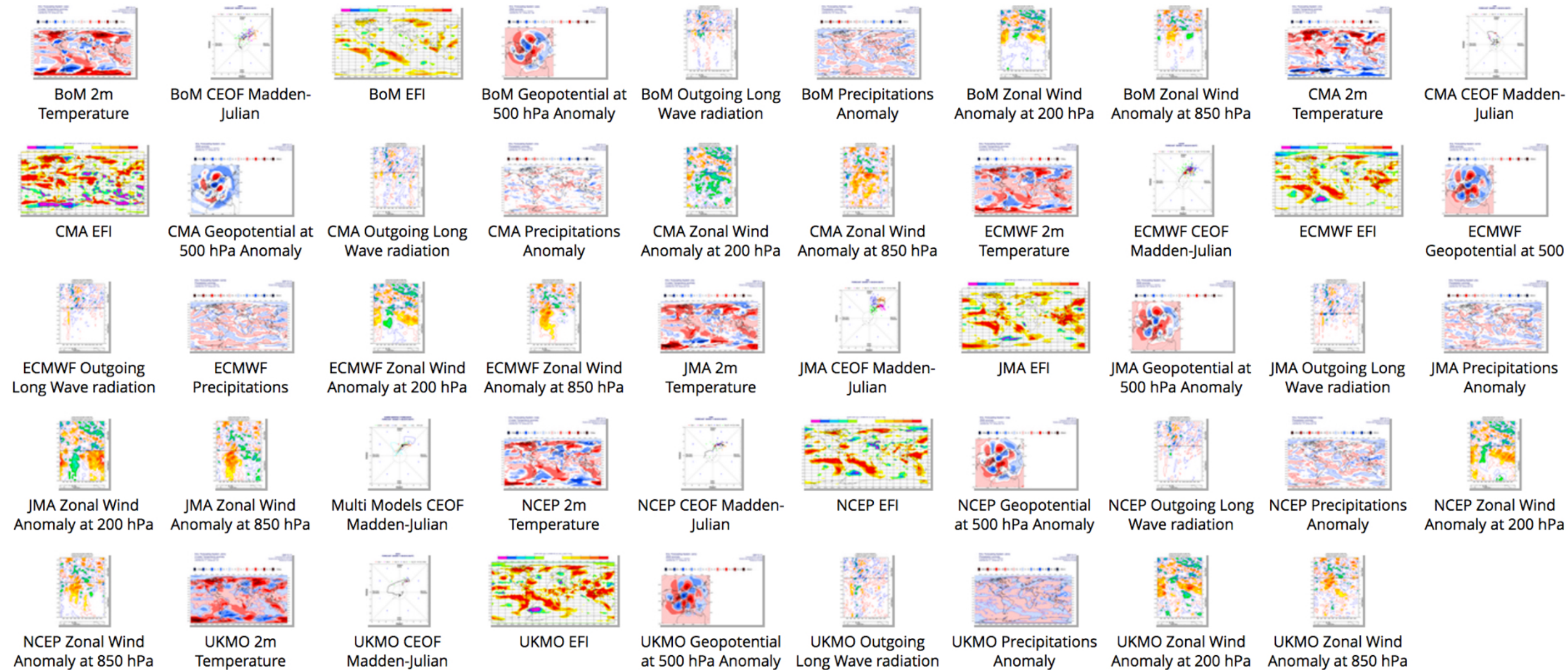
- Now 10 models out of 11 in some form - content varies greatly though
- Web page to generate near-real-time S2S forecast plots (maps and indices): <http://www.ecmwf.int/en/research/projects/s2s/charts/s2s/>
  - 6 S2S models available on the plot page (BoM, CMA, NCEP, UKMO, ECMWF, JMA) every Thursday starting from 7 January 2016.

# Sub-seasonal to seasonal forecast

49 matching items

No filters currently applied

Please visit the S2S Product page in ECMWF at <http://www.ecmwf.int/en/research/projects/s2s/charts/s2s/>



# S2S Extremes Workshop 2016

## *Workshop on Sub-Seasonal to Seasonal Predictability of Extreme Weather and Climate*



**INITIATIVE ON**  
Extreme Weather and Climate  
COLUMBIA UNIVERSITY



**Tuesday, December 6 – Wednesday, December 7, 2016**

**Monell Building**

**Columbia University at Lamont-Doherty Earth Observatory Campus  
61 Route 9W, Palisades, NY 10964-8000**



# Workshop on S2S Extremes

## Confirmed Speakers

Duane Waliser, JPL

Michael Tippett, Columbia

Gabriel Vecchi, GFDL

Frederic Vitart, ECMWF

Paul Roundy, SUNY Albany

Michael Ventrice, [Weather.com](http://Weather.com)

Arun Kumar, NCEP-CPC

Kathy Pegion, COLA

Hyemi Kim, SUNY Stony Brook

Charles Jones, UCSB

Michelle L'Heureux, NCEP-CPC

## Abstract Submission

**Deadline:** Oct 15, 2016

Contributed poster presentations are welcome on all aspects of S2S predictability, prediction and early warning product development related to extremes. Submissions are accepted via email: [s2s.extremes@iri.columbia.edu](mailto:s2s.extremes@iri.columbia.edu).

# S2S Book

- Title: Sub-seasonal to Seasonal Prediction - Bridging the gap between weather and climate forecasts
- Elsevier is the publisher - Andy Robertson & Frederic Vitart submitted the book proposal
- Final deadline is Jan 1, 2018, with half the chapters due on Oct 1, 2017.
- Only one chapter explicitly address monsoons: “Seamless prediction of monsoon onset and active/break phases” – A. K. Sahai

# New NOAA S2S Prediction Task Force

- PM: Heather Archambault
- Membership: PIs of funded S2S projects (2016-2019)
- Mission: “Subseasonal to Seasonal (S2S) Prediction Task Force to advance NOAA’s and the Nation’s capability to model and predict sources of S2S predictability. The ultimate goal of this initiative is to help close the gap in prediction skill and products between traditional weather and seasonal lead times.”

# Terms of Reference

- The MAPP Program Management has selected one lead scientist and three co-leads for the Task Force.
- MAPP Program management oversees Task Force activities, working with the leads.
- All PIs supported through the MAPP FY16 S2S research competition are expected to participate in the Task Force, as described in their proposals. Otherwise, participation in the Task Force is by invitation.
- Most of the Task Force work will be conducted remotely via telecons or virtual meetings, or through meetings of opportunity.

# PIs

	co-Is	Title	Lead Inst.
1	Barnes, Libby (TF lead)	Eric Maloney	Forecasting North Pacific Blocking and Atmospheric River Probabilities: Sensitivity to Model Physics and the MJO CSU
2	Camargo, Suzana	Adam Sobel (Columbia), Cha-Ying Lee (IRI)	The relationship of tropical cyclones to MJO and ENSO in the S2S database LDEO
3	Chang, Edmund (TF co-lead)	Minghua Zhang, Hyemi Kim, Wanqiu Wang (CPC)	Understanding the Sources of Subseasonal Predictability of Extratropical Cyclone Activity and Improving Their Representation in Forecast Systems Stony Brook
4	DeMott, Charlotte	Nick Klingaman (Reading)	Collaborative Research: Assessing Oceanic Predictability Sources for MJO Propagation CSU
5	Ford, Trent	Paul Dirmeyer (GMU)	North American Heat Wave Predictability: Assessing the Role of Land Surface Initialization on S2S and NMME Model Forecasts SIU
6	Furtado, Jason	Michele L-Heureux, Adam Allgood (CPC), Libby Barnes (CSU)	Investigating the Underlying Mechanisms and Predictability of the MJO/NAM Linkage in the NMME Phase-2 Models Oklahoma
7	Guo, Zhichang	Paul Dirmeyer (TF co-lead)	Improving subseasonal to seasonal forecast skill of North American precipitation and surface air temperature using a multi-model strategy GMU

# Pls cont'd

8	Hoover, Brent	Matt Newman (ESRL)	Prediction, Sensitivity, and Dynamics of Subseasonal To Seasonal Phenomena Diagnosed Through Linear Inverse Models, Their Adjoint, and Numerical Weather Prediction Models	Wisconsin
9	Kumar, Arun	Wanqiu Wang, Jieshun Zhu	Exploring Pathways to improve MJO Predictions	CPC
10	Andrea Lang (co-lead)		A categorical assessment of forecast skill, uncertainty and biases in extended-range ensemble forecasts of stratospheric regime changes	Albany
11	Perlwitz, Judy	Jadwiga Richter (NCAR), Lantao Sun (CIRES), Julio Bacmeister (NCAR)	Role of stratospheric processes in predicting ENSO-NAO connections on subseasonal time scale	ESRL
12	Szunyogh, Istvan		Investigation of the Effects of Oceanic Mesoscale Eddies on the Midlatitude Storm Tracks and Their Predictability	Texas A&M
13	Wang, Shuguang	Adam Sobel, Michael Tippett	Madden Julian Oscillation -- the Maritime Continent barrier and seamless verification	Columbia
14	Wang, Zhuo	Melinda Peng (NRL), Stan Benjamin (ESRL)	Variability of Rossby Wave Breaking and its Impacts on the Large-scale Circulation and Extreme Weather: Implications for S2S Prediction and Predictability	Illinois

# Others invited to TF

- Climate Test Bed (CTB) PIs (rotating list, as new short-term (1-2 year) CTB projects funded each year)
- SubX (Subseasonal eXperiment, formerly NMME2) PIs (list not yet formally released – also 3-year projects) – Ben Kirtman will be TF lead, parallels International S2S in many ways but NA models only, (hopefully) more staunch about output variables (also daily).
- All from the NOAA Modeling, Analysis, Prediction and Projection (MAPP) element of the Climate Project Office (CPO), Office of Atmospheric Research (OAR)

# S2S TF Near-term future

- Kick-off meeting in December the day before the S2S-Extremes Workshop at IRI in New York.
- Monthly telecons per CPO style (first was on Wednesday).
- They are very interested in connecting with other relevant and interested efforts, national and international.