VYUZITI METEOROLOGIE PRI OBCHODOVANI S ENERGETICKYMI KOMODITAMI

Ladislav Brezina, 9.3.2016

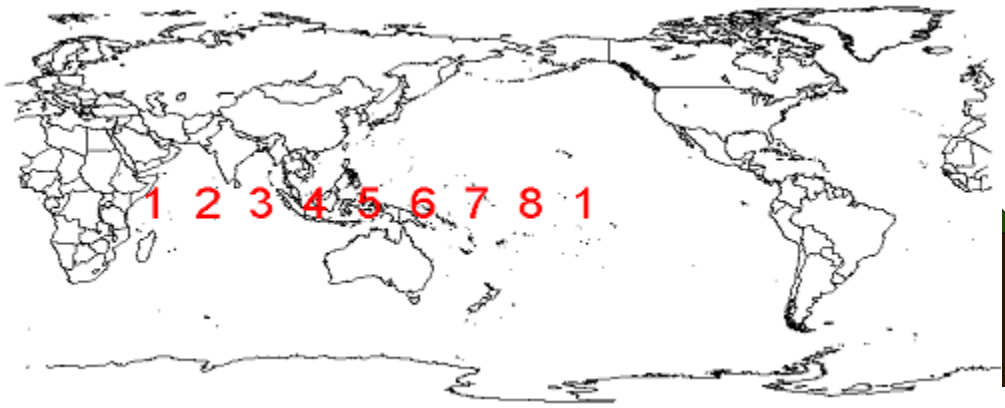
Ezpada

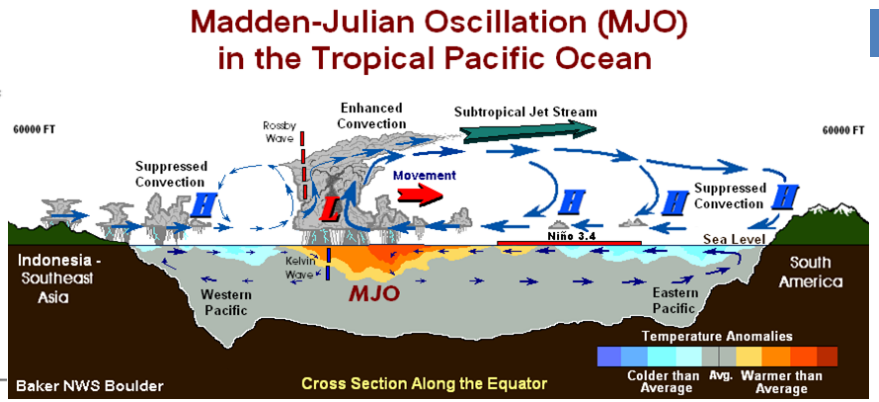
- Zalozena 2004, registrovana ve Svycarsku
- Pobocky – Praha, Zug a Mnichov
- Cca. 70 zamestnancu
- Hlavni cinnosti je obchod s energetickymi komoditami
- V soucasne dobe hledame 2 Junior Meteorology do kancelare v Praze
- Kontakt: ladislav.brezina@ezpada.com

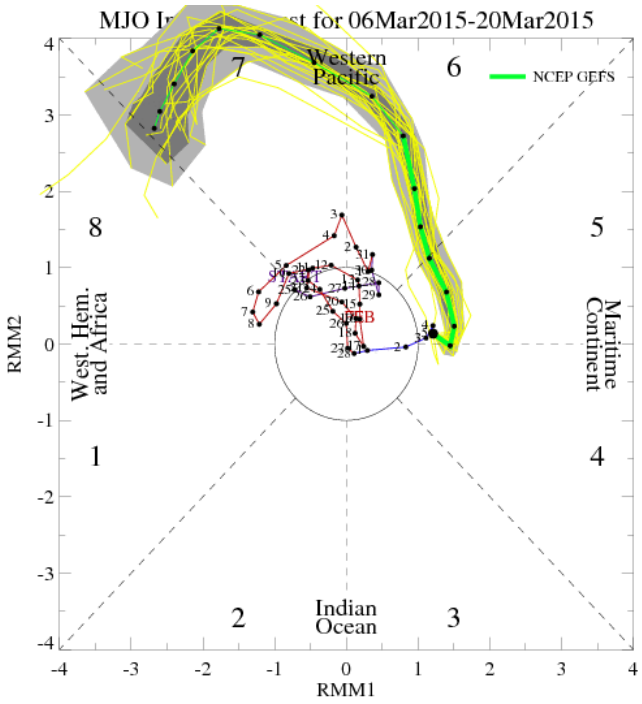
TÝDENNÍ A MĚSÍČNÍ PŘEDPOVĚDI POČASÍ

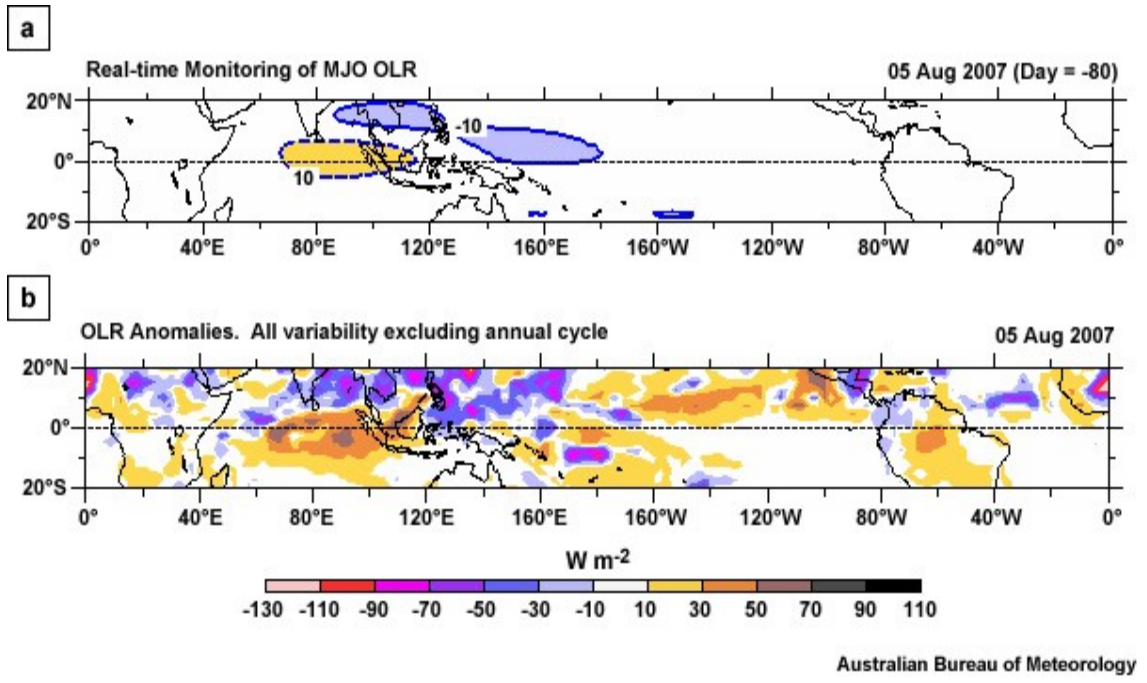
Vliv teleconnections na kvalitu dlouhodobých předpovědí

MJO

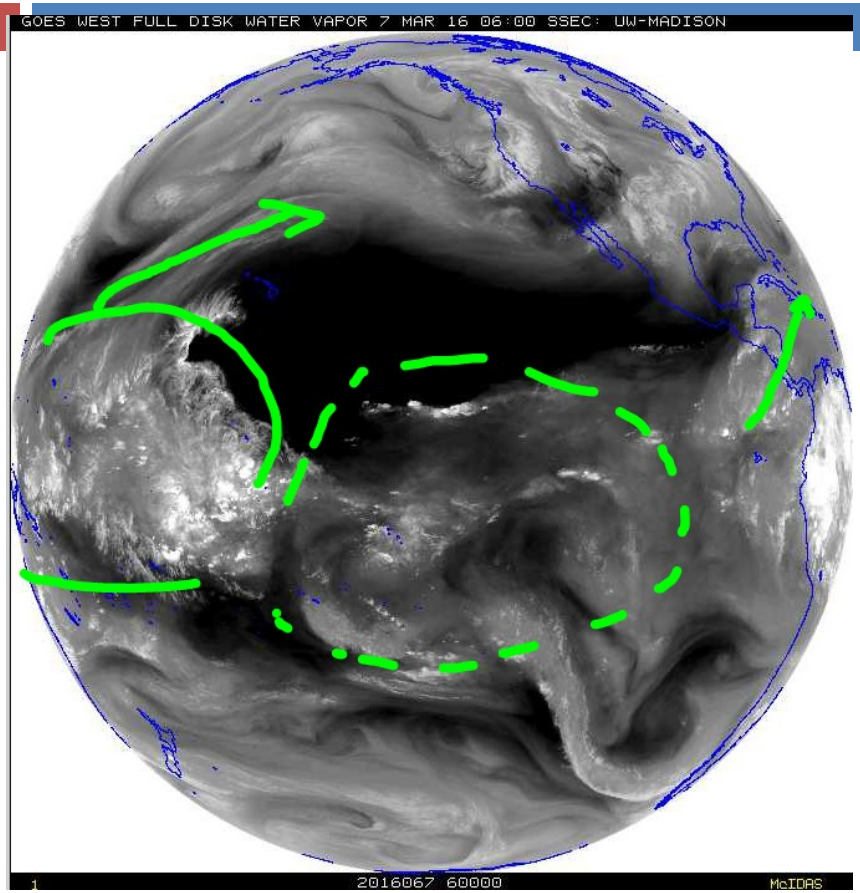

1 2 3 4 5 6 7 8 1

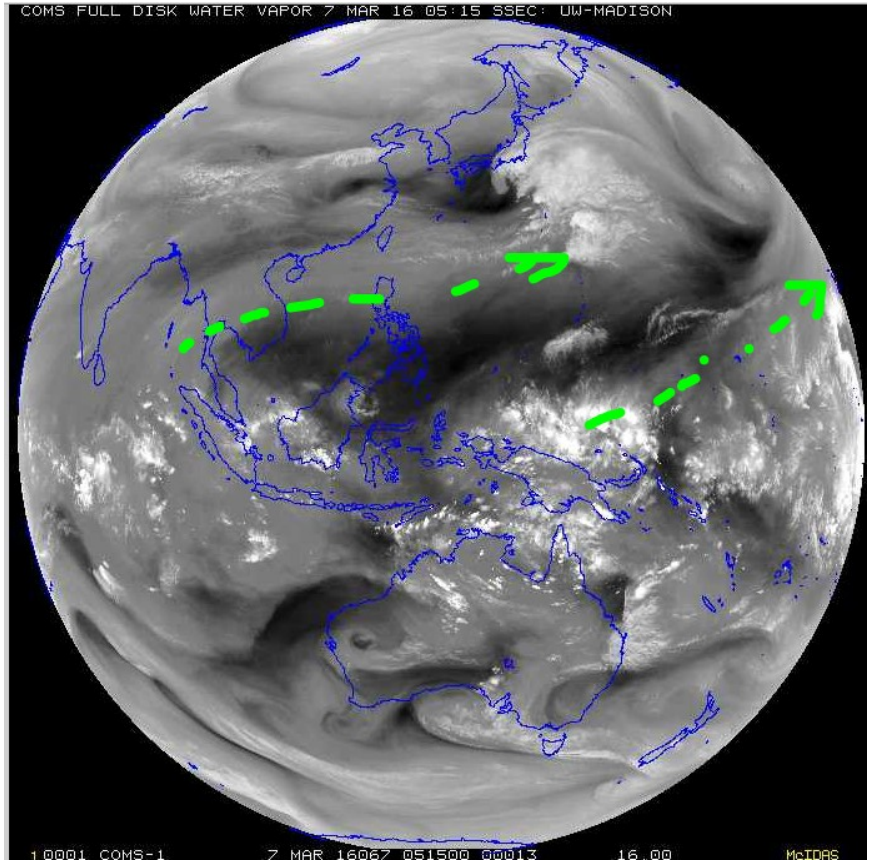

Madden-Julian Oscillation (MJO)
in the Tropical Pacific Ocean
60000 FT
60000 FT
Enhanced Convection
Subtropical Jet Stream
Rossby Wave
Suppressed Convection
Movement
Suppressed Convection
Niño 3.4
Sea Level
Indonesia - Southeast Asia
Kelvin Wave
MJO
Western Pacific
Eastern Pacific
South America
Temperature Anomalies
Colder than Average
Avg.
Warmer than Average
Baker NWS Boulder
Cross Section Along the Equator


for 06Mar2015-20Mar2015
NCEP GEFS
Western Pacific
West. Hem. and Africa
Maritime Continent
Indian Ocean
RMM1
RMM2


a
Real-time Monitoring of MJO OLR
05 Aug 2007 (Day = -80)
20°N
0°
20°S
-10
10
0°
40°E
80°E
120°E
160°E
160°W
120°W
80°W
40°W
0°
b
OLR Anomalies. All variability excluding annual cycle
05 Aug 2007
W m-2
-130 -110 -90 -70 -50 -30 -10 10 30 50 70 90 110
Australian Bureau of Meteorology

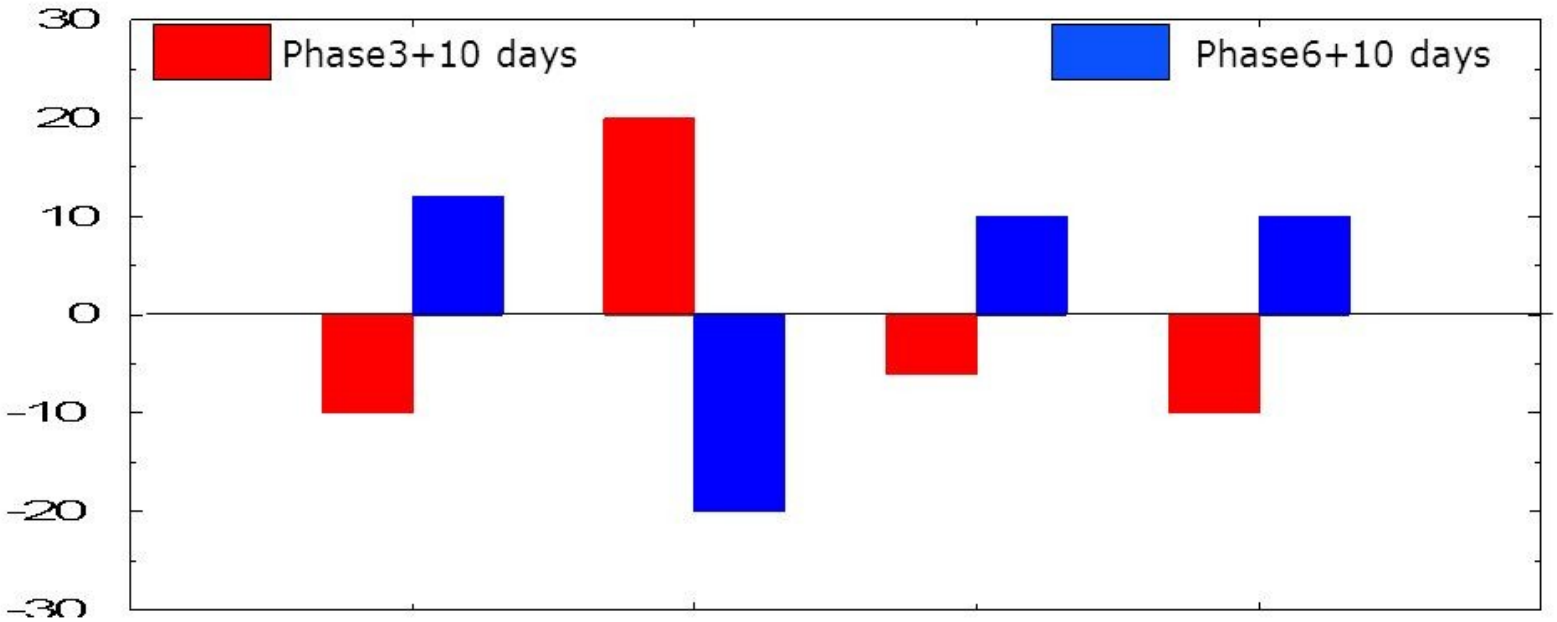
MJO

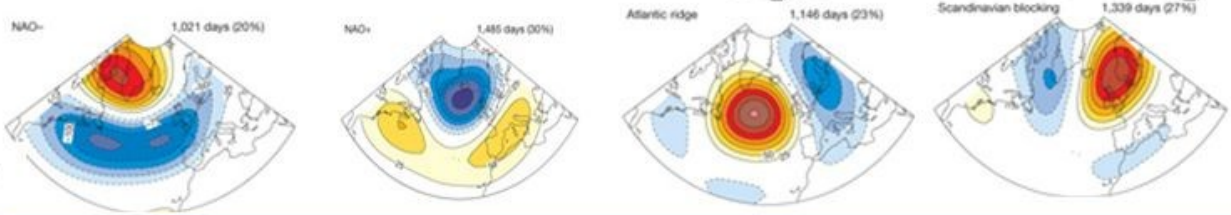

GOES WEST FULL DISK WATER VAPOR 7 MAR 16 06:00 SSEC: UW-MADISON
1
2016067 60000
McIDAS


COMS FULL DISK WATER VAPOR 7 MAR 16 05:15 SSEC: UW-MADISON
10001 COMS-1
7 MAR 16067 051500 00013
16.00
McIDAS

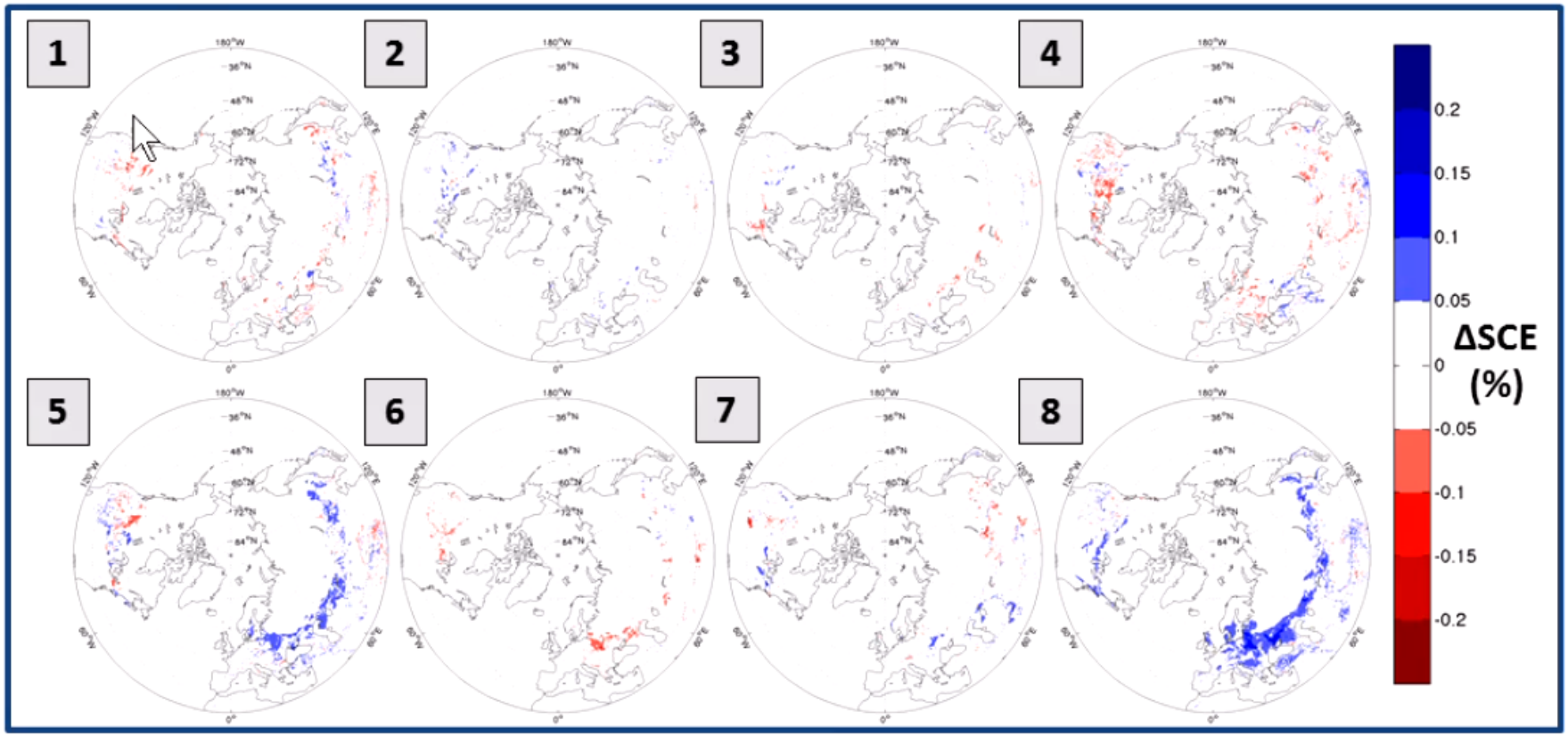
MJO vs NAO

Impact on weather regimes in hindcasts

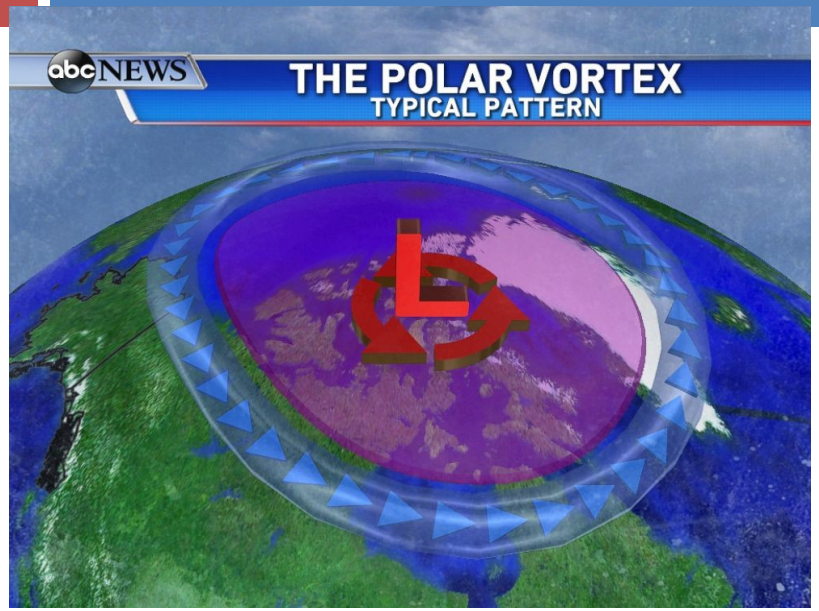


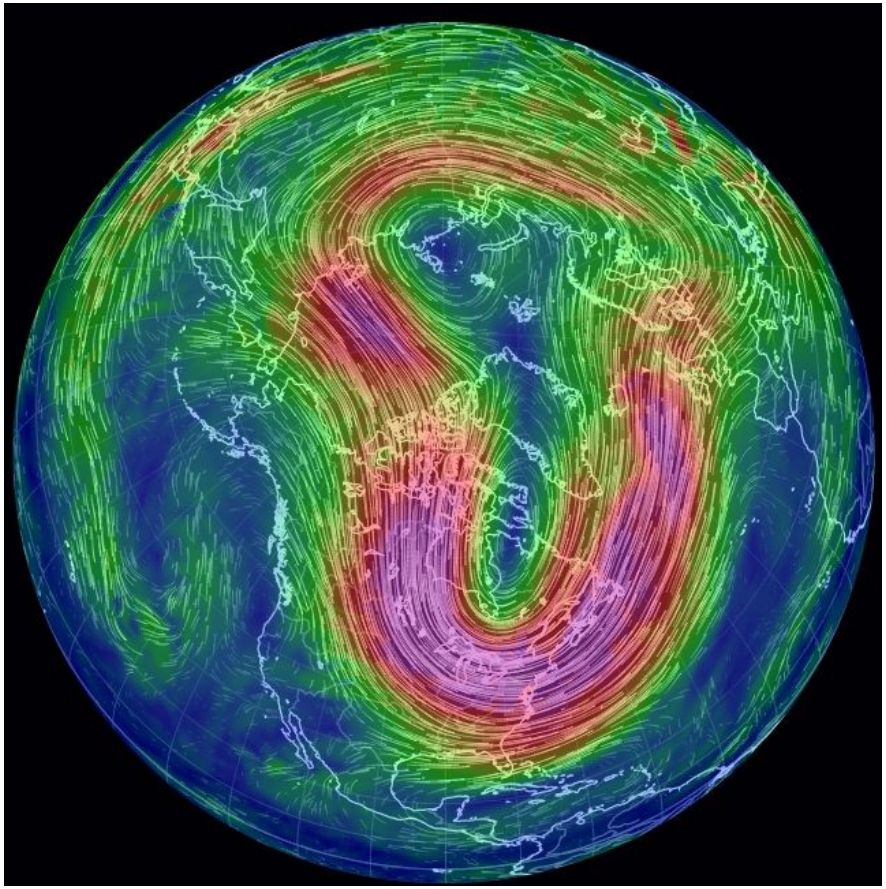


Impact of MJO on pan-Arctic terrestrial snow



Sudden Stratospheric warming





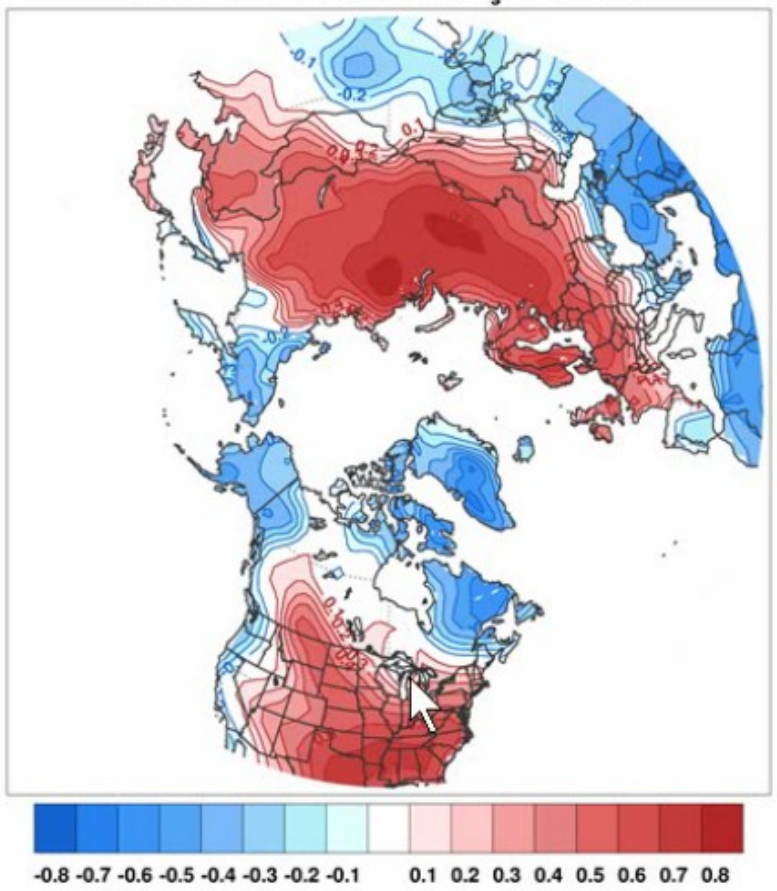
Outline (extratropical NH perspective)

- ENSO is the cornerstone of winter seasonal forecasting, yet it provides little skill of Northern Hemisphere land-surface temperatures
- Troposphere-stratosphere coupling and the Arctic Oscillation show much greater potential for skillful prediction of winter land surface temperatures.
- Analysis of troposphere–stratosphere coupling puts the limit of predictability in October.

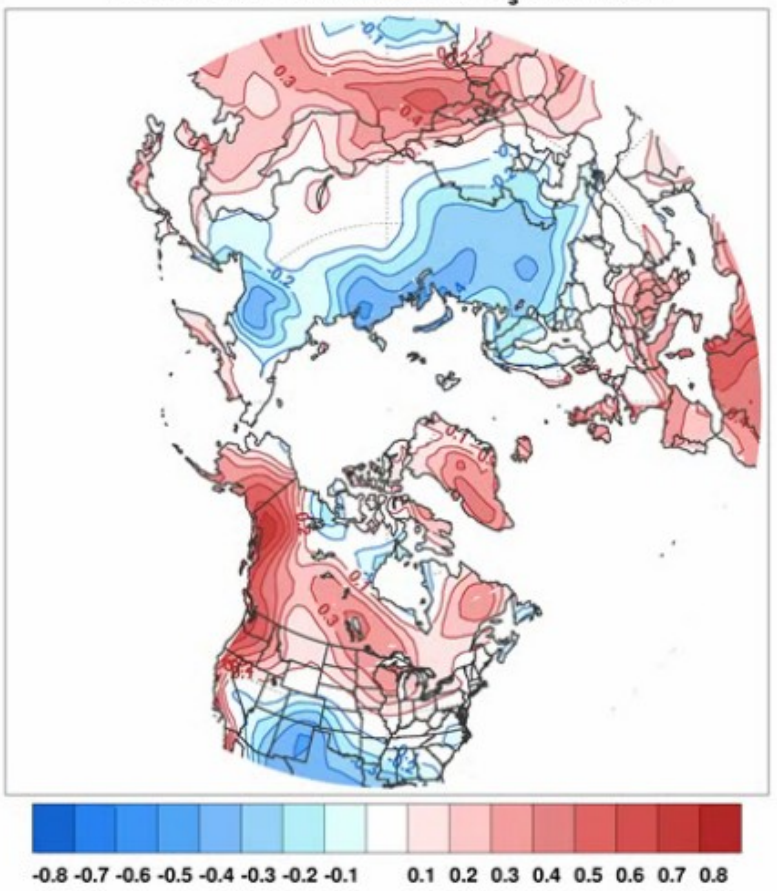
© Atmospheric and Environmental Research, Inc. (AER), 2013.

Correlations with surface temperature

Corr of DJF AO and DJF T_s 1997-2010



Corr of DJF ENSO and DJF T_s 1997-2010

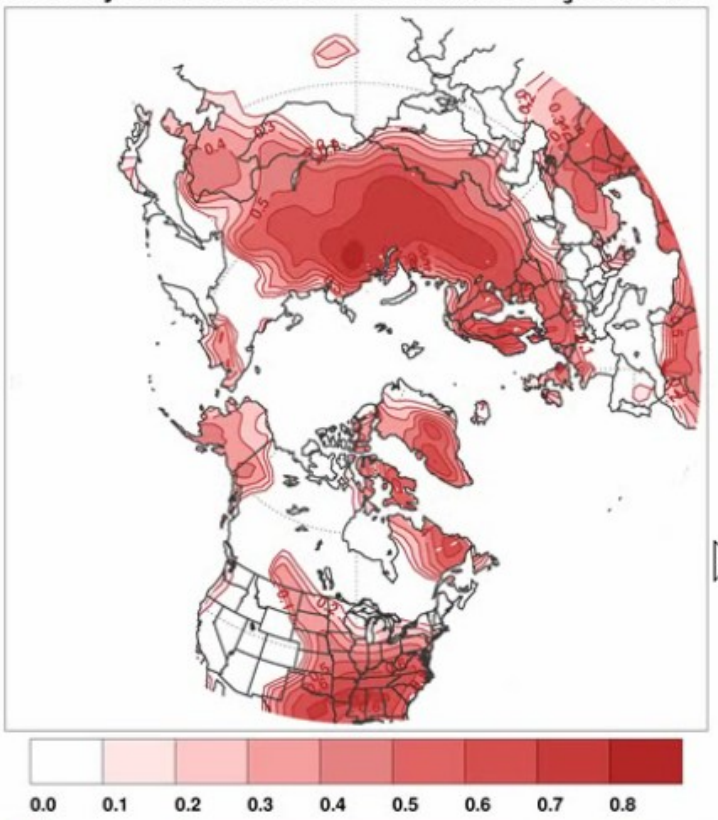


aer
Atmospheric and Environmental Research

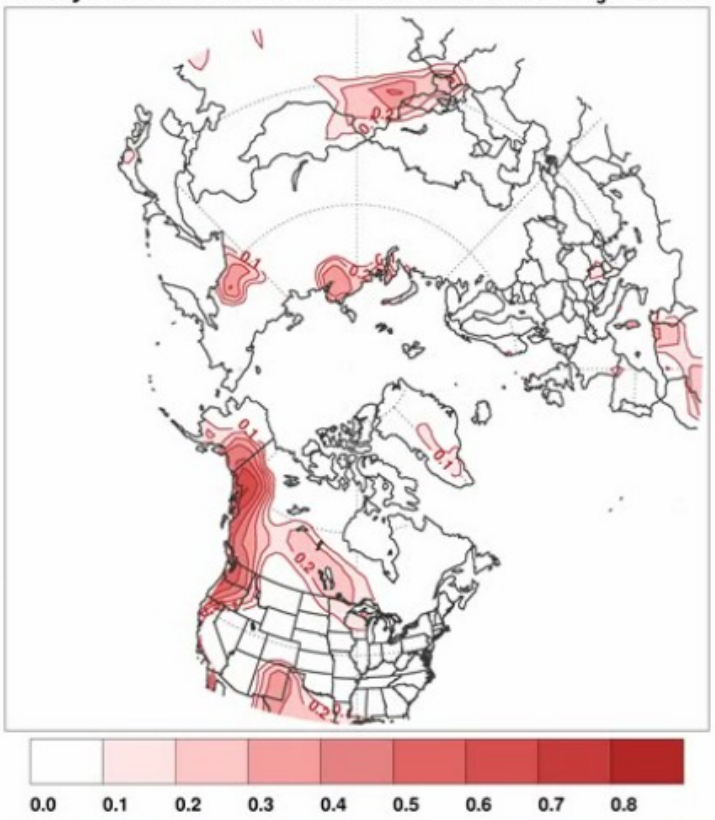
© Atmospheric and Environmental Research, Inc. (AER), 2013.

Anomaly correlations of cross validated hindcasts

Anomaly Correlation of AO Index and DJF T_s 1997-2010



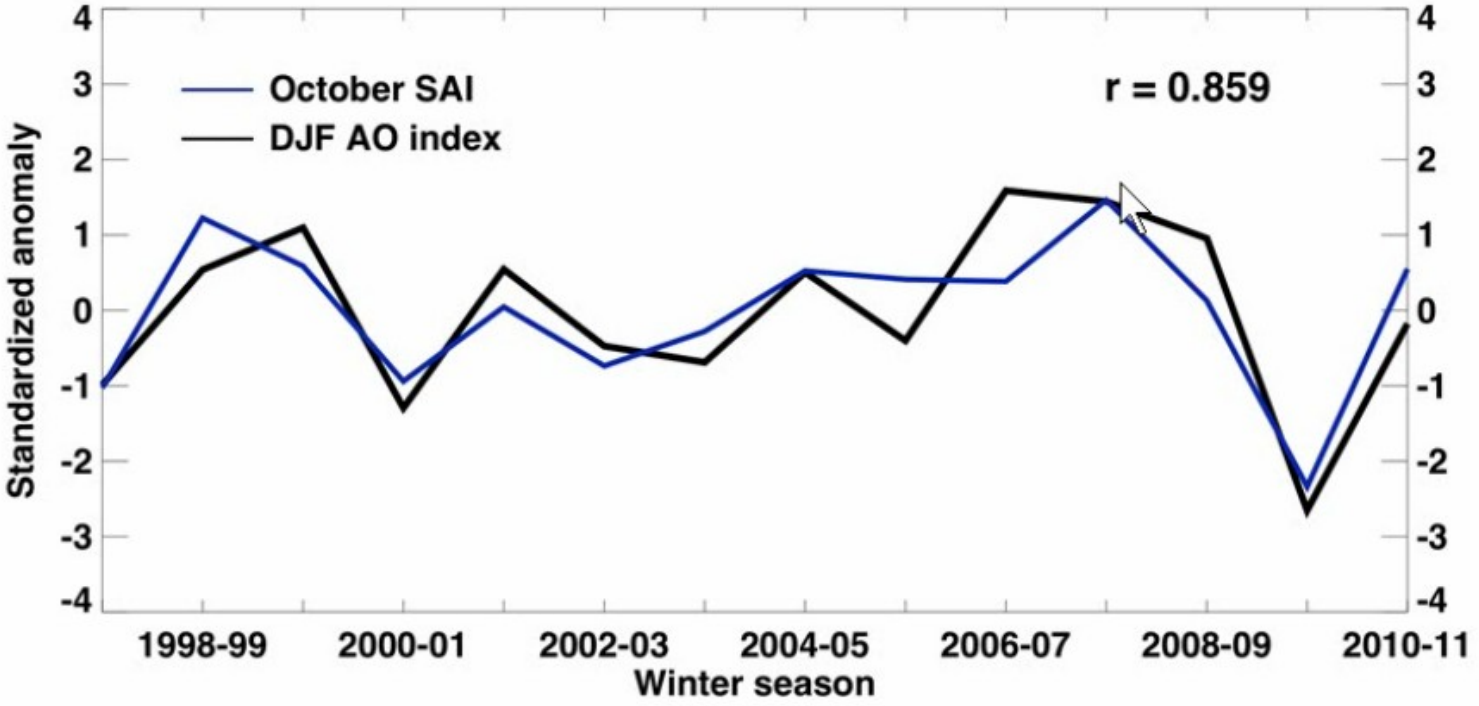
Anomaly Correlation of Nino 3.4 Index and DJF T_s 1997-2010



aer
Atmospheric and Environmental Research

© Atmospheric and Environmental Research, Inc. (AER), 2013.

Snow Advance Index (SAI)

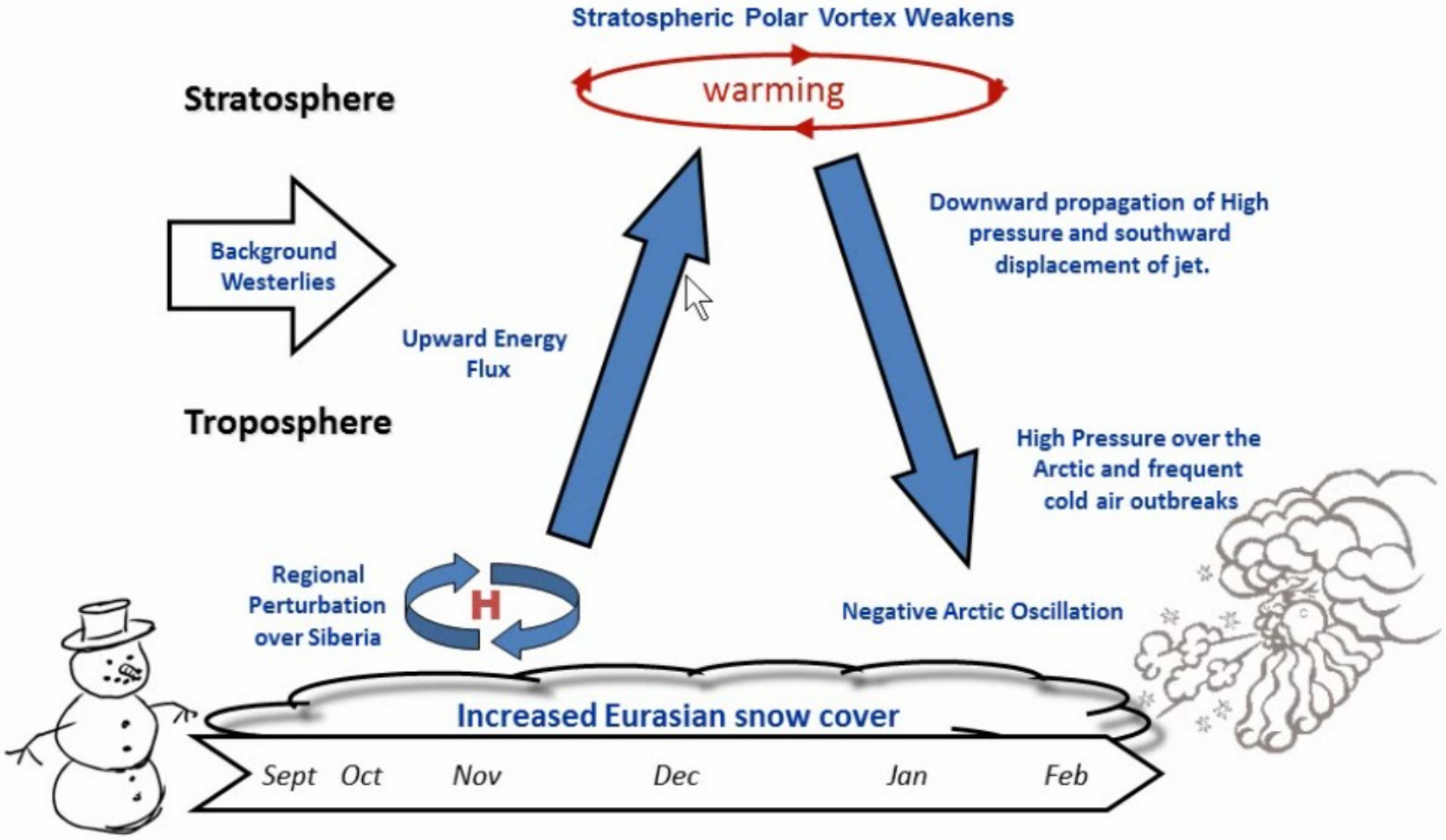


- Uses daily values
- Limited to equatorward of 60°N
- Measures rate of change of snow cover

Cohen and Jones (2011)

© Atmospheric and Environmental Research, Inc. (AER), 2013.

Snow Forced Cold Signal



aer
Atmospheric and Environmental Research

© Atmospheric and Environmental Research, Inc. (AER), 2013.