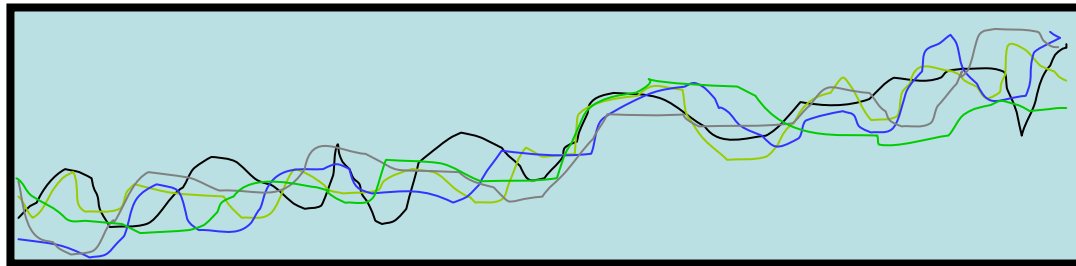
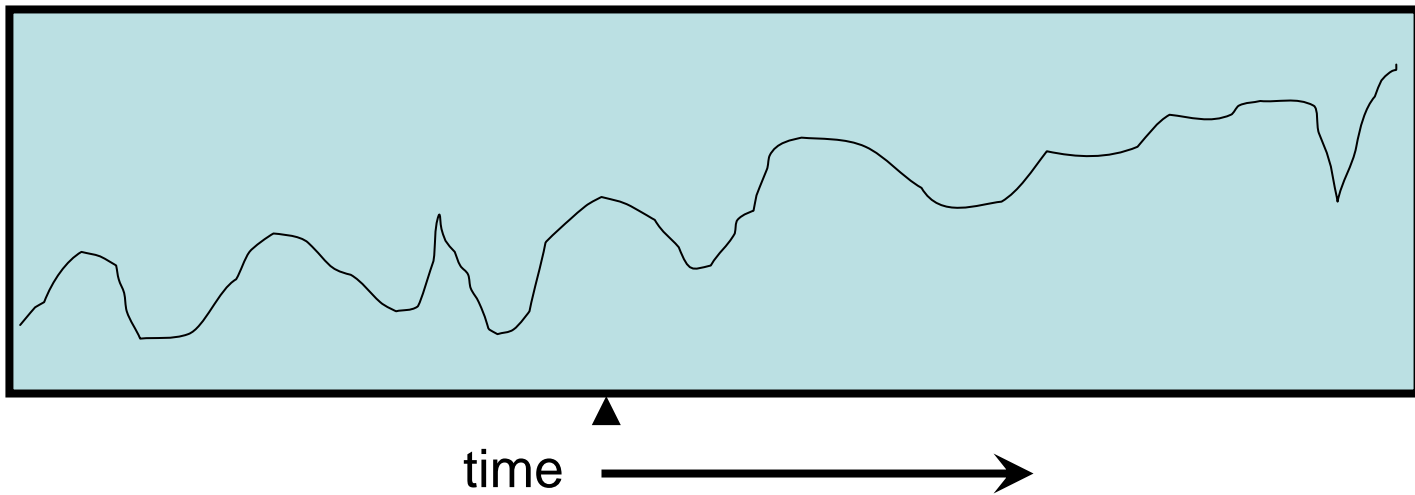


A First Look at the New CVWG/CCWG Climate Change Ensemble Experiment

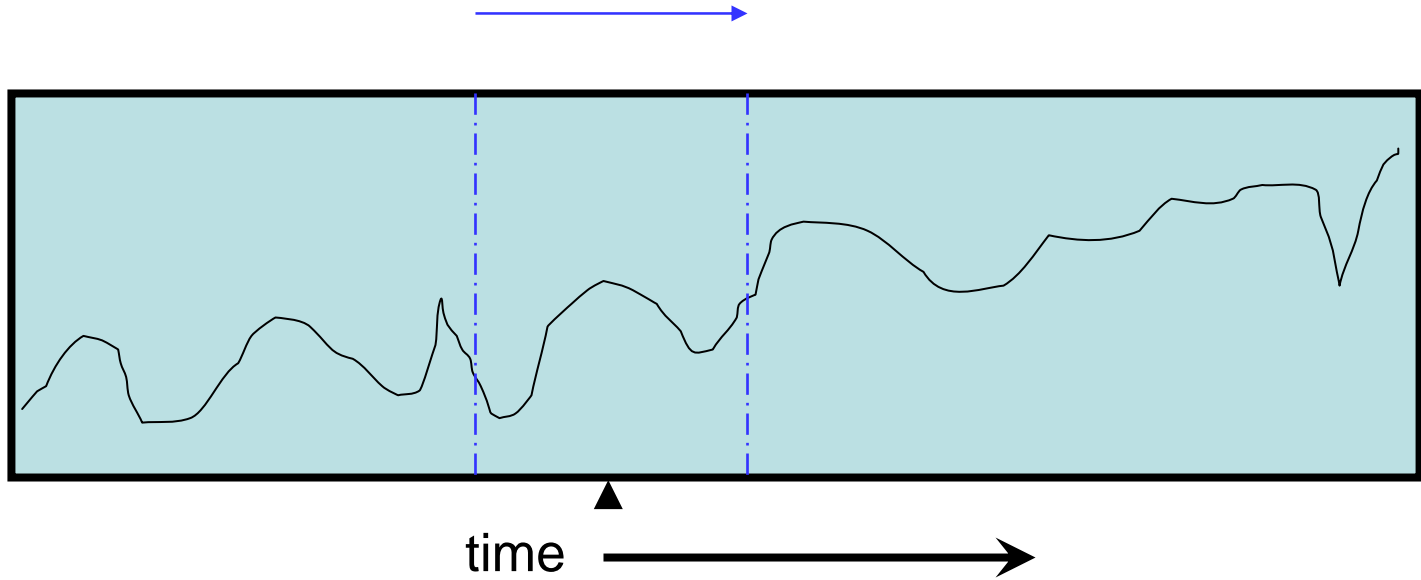


time 

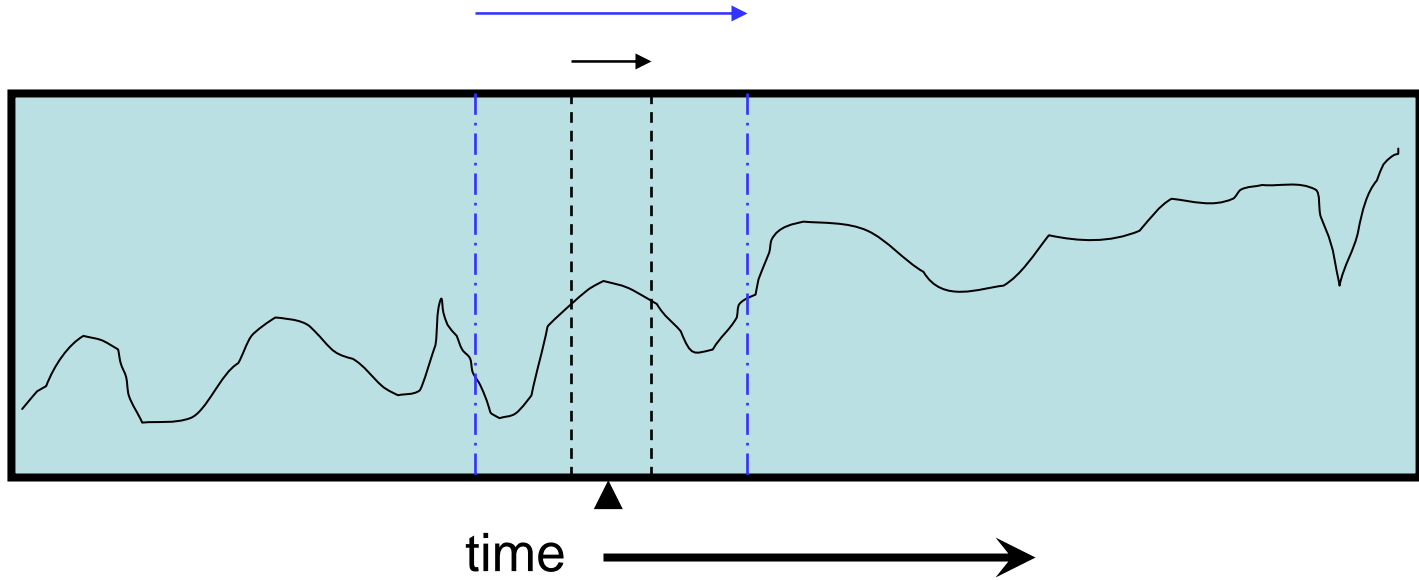
Definition of Climate and Climate Change



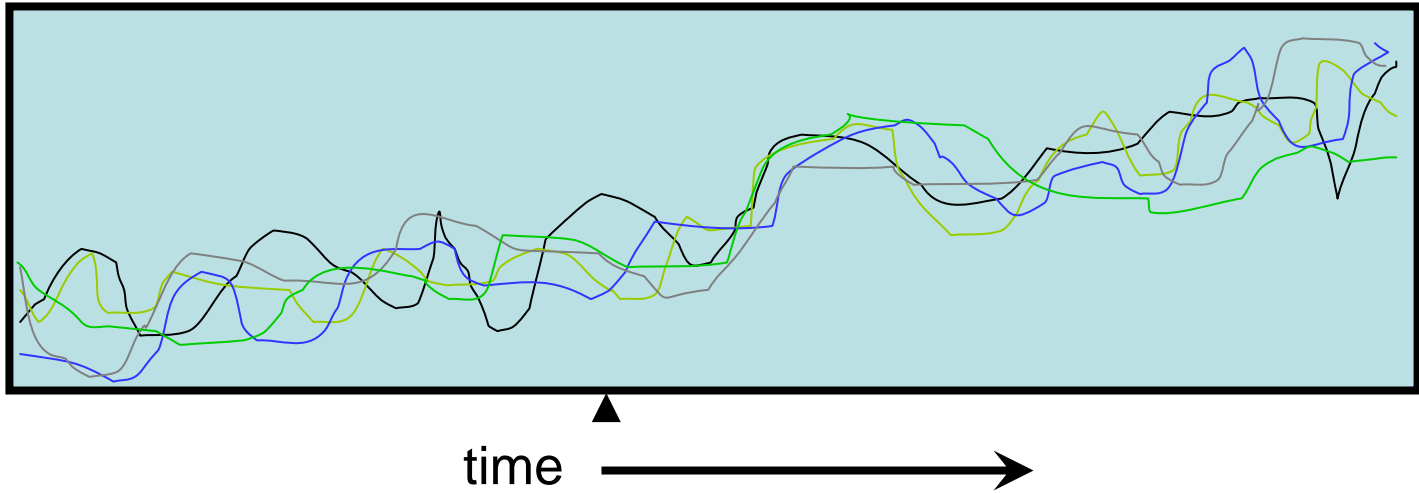
Definition of Climate and Climate Change



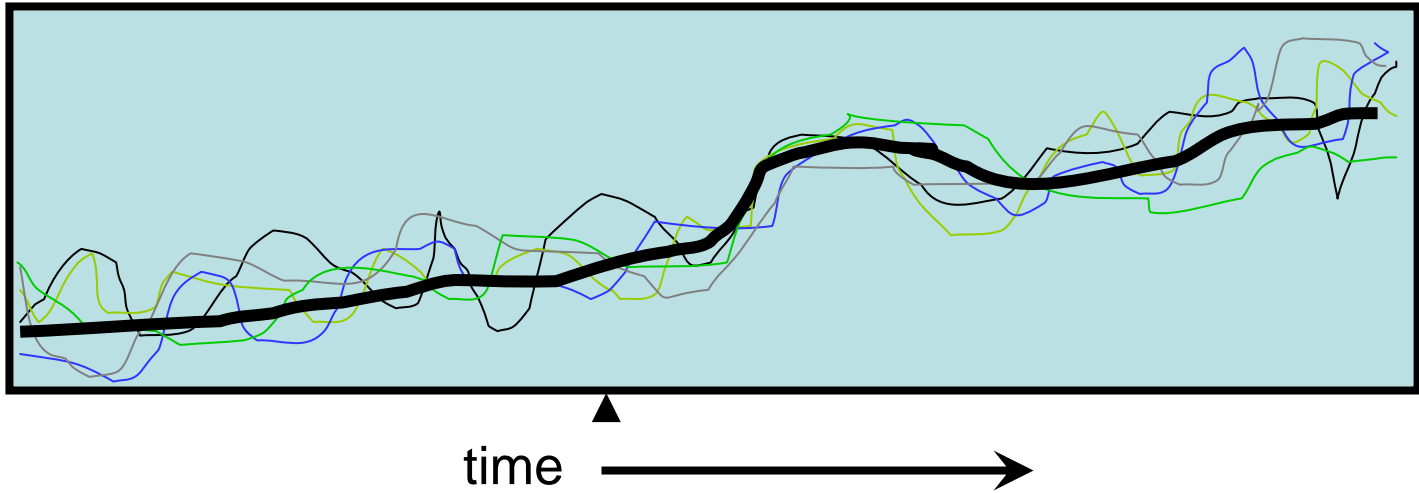
Definition of Climate and Climate Change



Definition of Climate and Climate Change



Definition of Climate and Climate Change



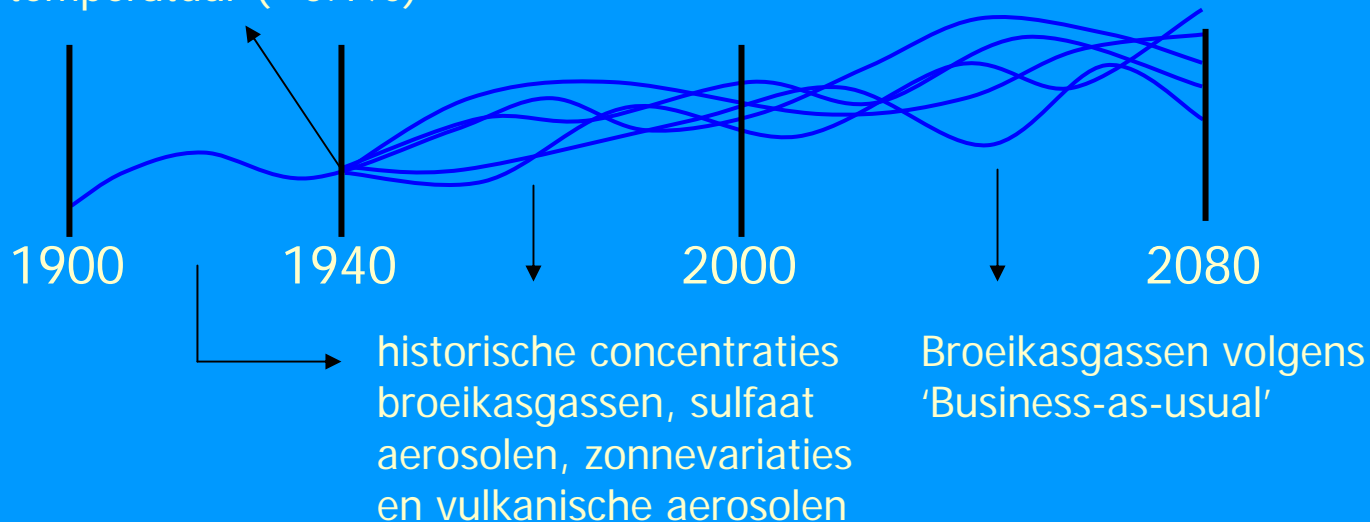
CCSM1.4

Beschrijving experiment

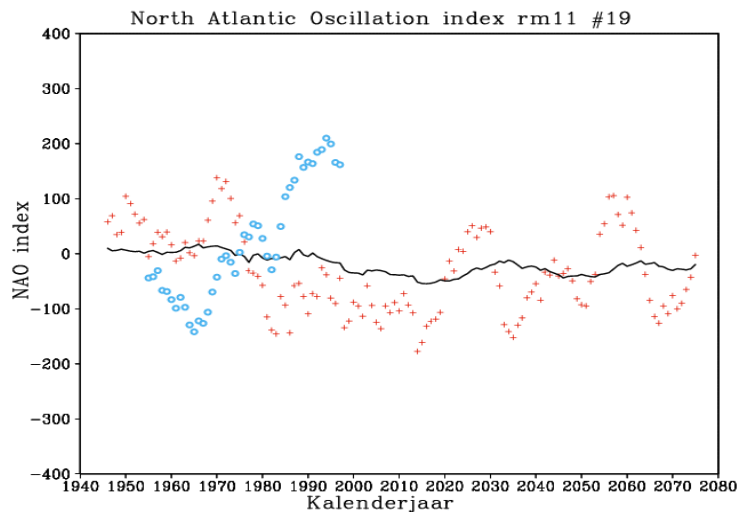
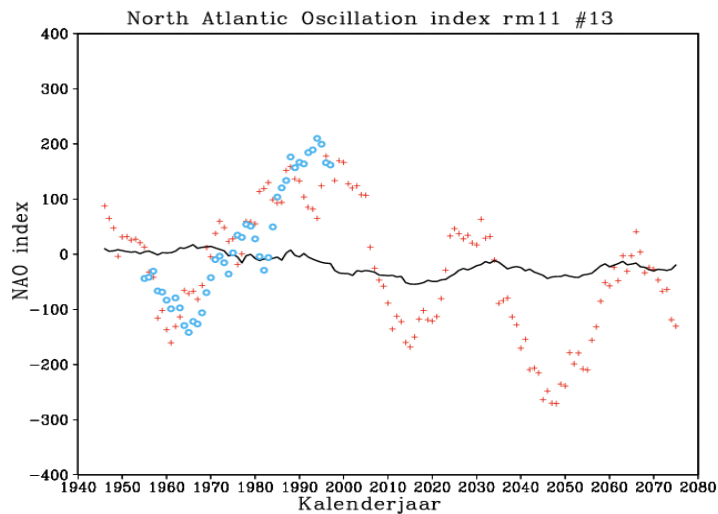
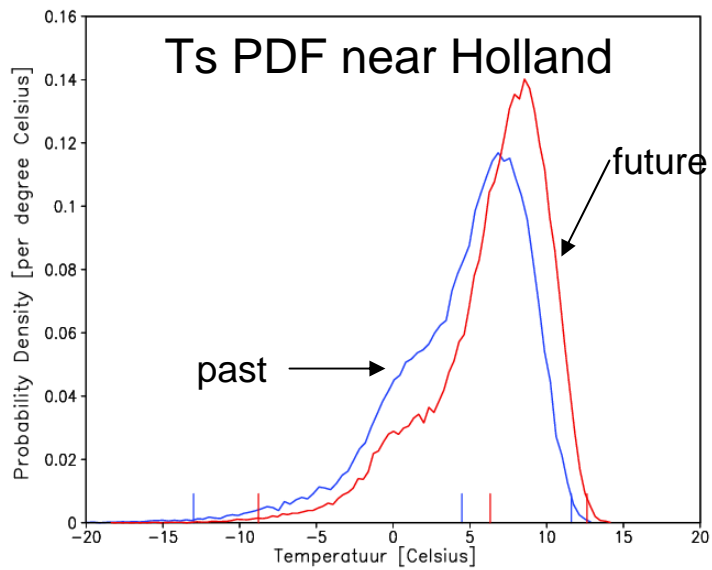
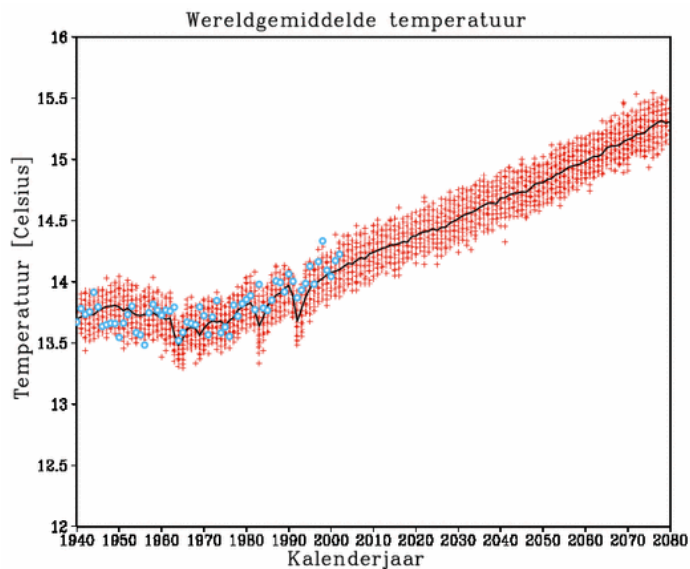
“Simuleer met een gekoppeld klimaatmodel het aardse klimaat een groot aantal keren met kleine verstoringen in de begincondities”

stochastische verstoringen
in temperatuur (<0.1%)

62 simulaties

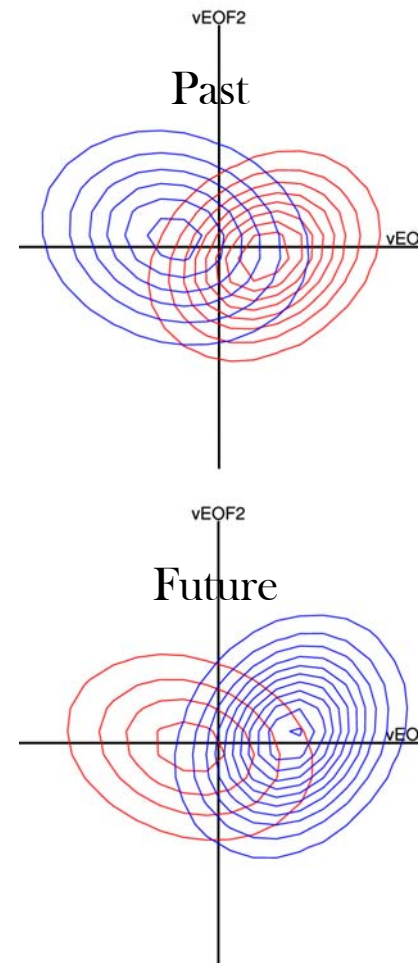


DUTCH CHALLENGE EXPERIMENT 1940-2080 NAO



Modes of Variability

PDFs



CVWG & CCWG EXPERIMENT

CCSM3.0

T42

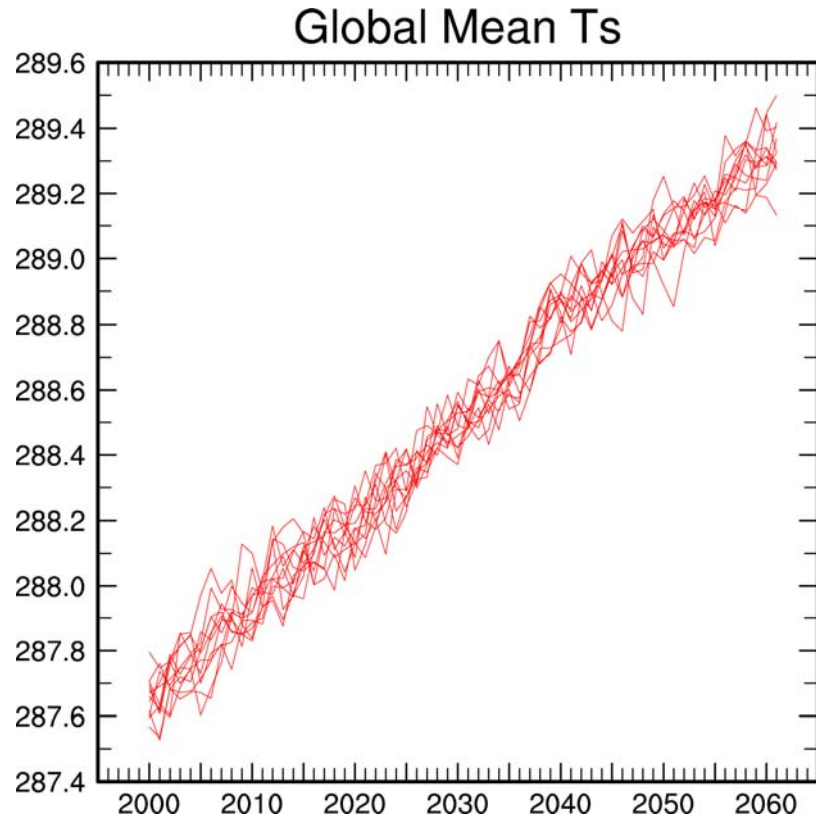
A1b scenario

2000-2061

~30 member ensemble
(currently 16 completed)

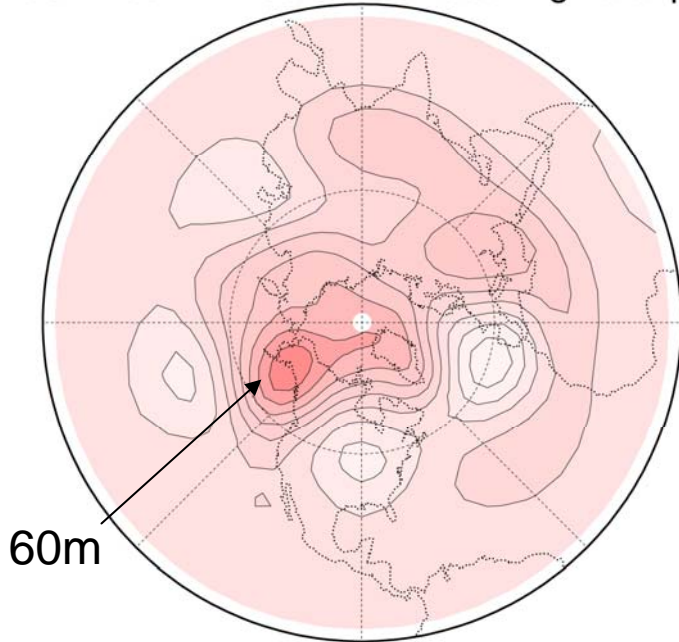
Initiate from C20C, each with
same ocean, land & ice state,
but different atmospheric
state

Haiyan Teng



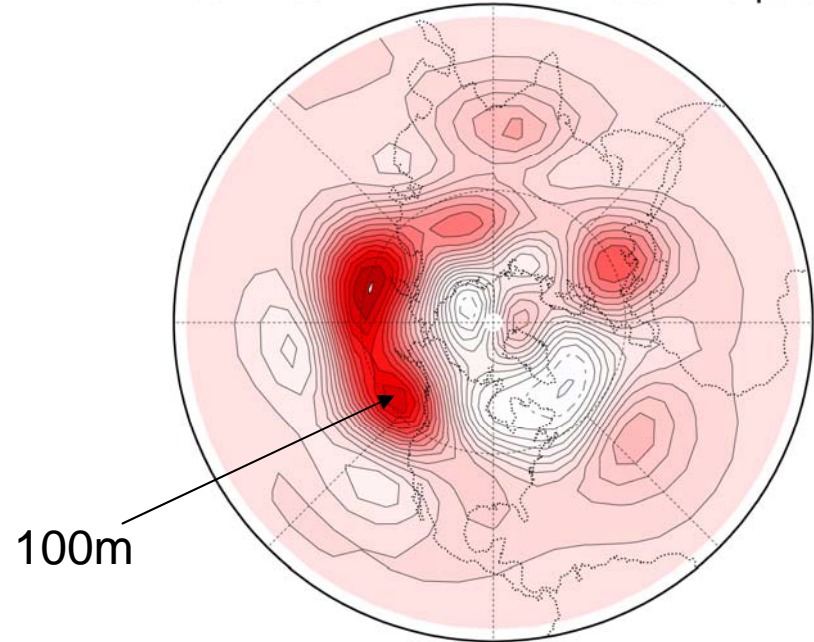
h500

mean
CVWG h500 D-J-F
2052-2061 minus 2000-2009 avg 16 expts



CONTOUR FROM 200 TO 600 BY 50 (x.1)

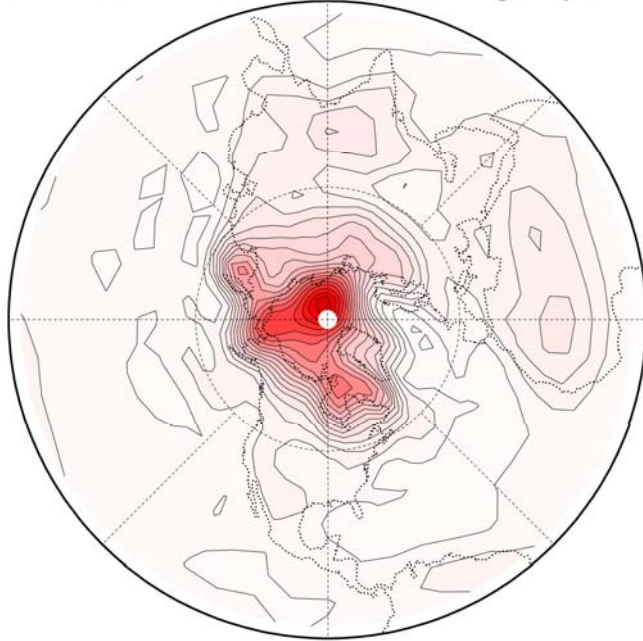
mean
CVWG h500 D-J-F
2052-2061 minus 2000-2009 expt 5



CONTOUR FROM -5 TO 105 BY 5 (x1)

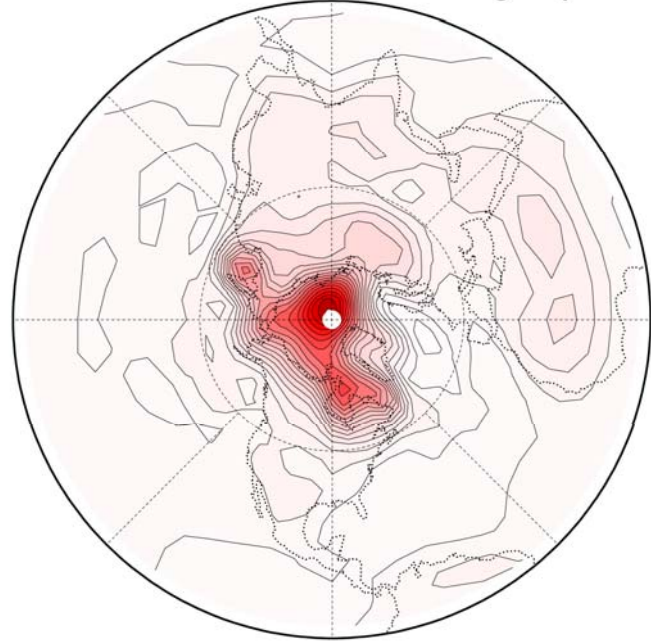
Ts

mean
CVWG Ts D-J-F
2052-2061 minus 2000-2009 avg expts 1- 8



CONTOUR FROM 50 TO 950 BY 50 (x.01)

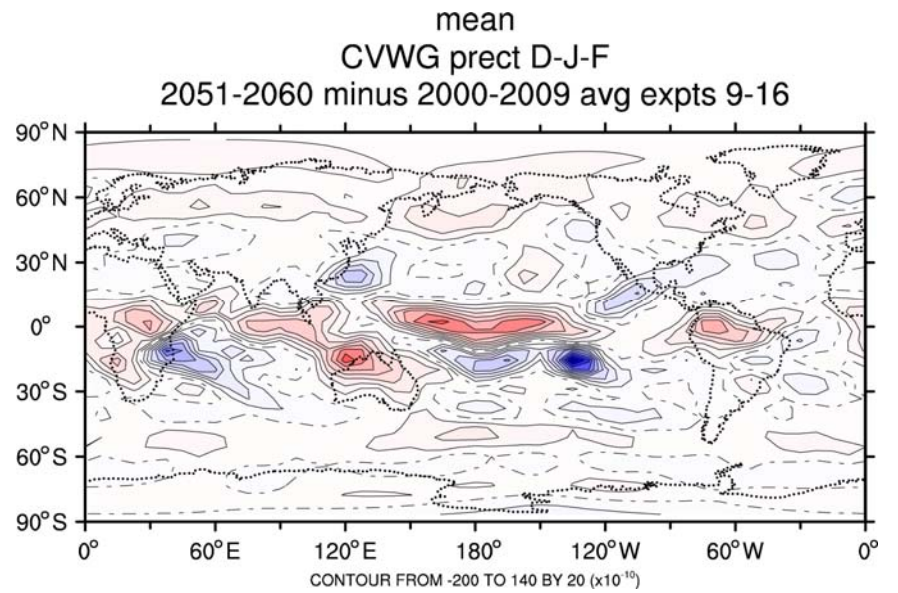
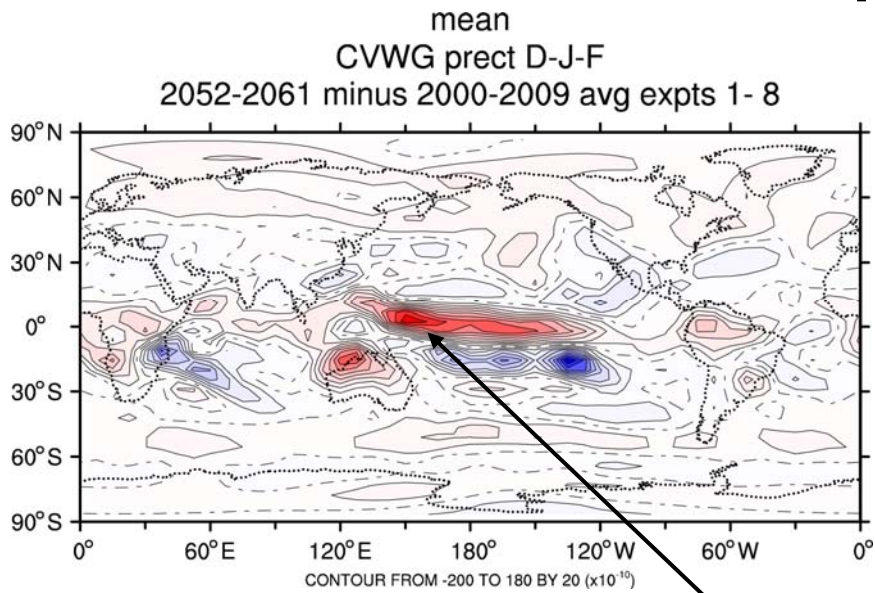
mean
CVWG Ts D-J-F
2052-2061 minus 2000-2009 avg expts 9-16



CONTOUR FROM 5 TO 105 BY 5 (x.1)

0.5C

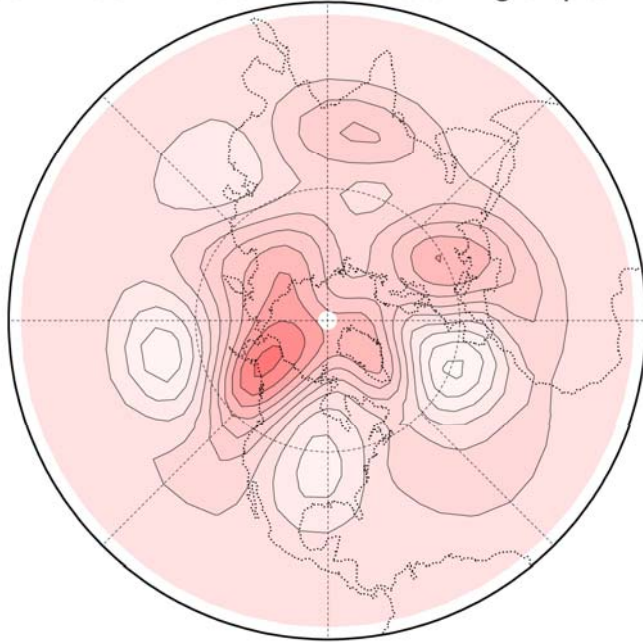
prect



1.7 mm/day

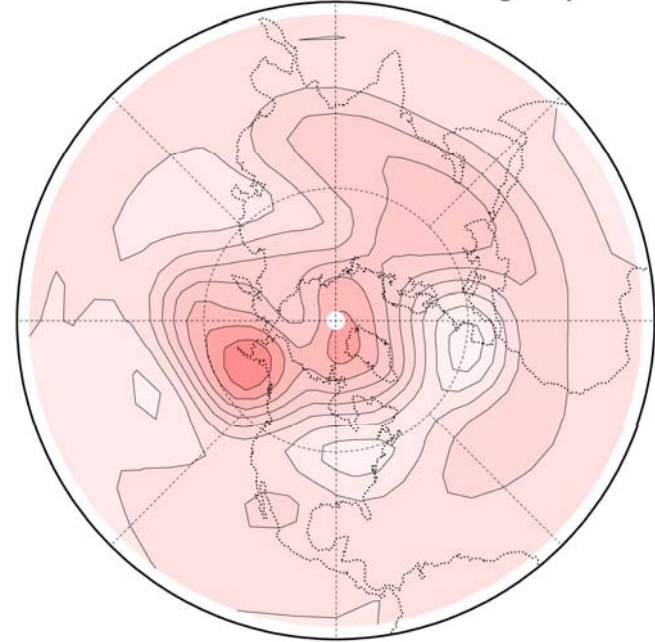
h500

mean
CVWG h500 D-J-F
2052-2061 minus 2000-2009 avg expts 1- 8



CONTOUR FROM 150 TO 650 BY 50 (x.1)

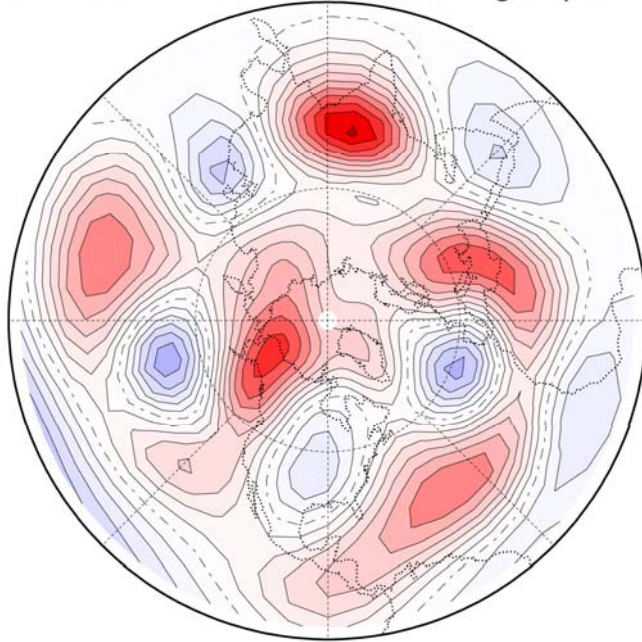
mean
CVWG h500 D-J-F
2052-2061 minus 2000-2009 avg expts 9-16



CONTOUR FROM 200 TO 600 BY 50 (x.1)

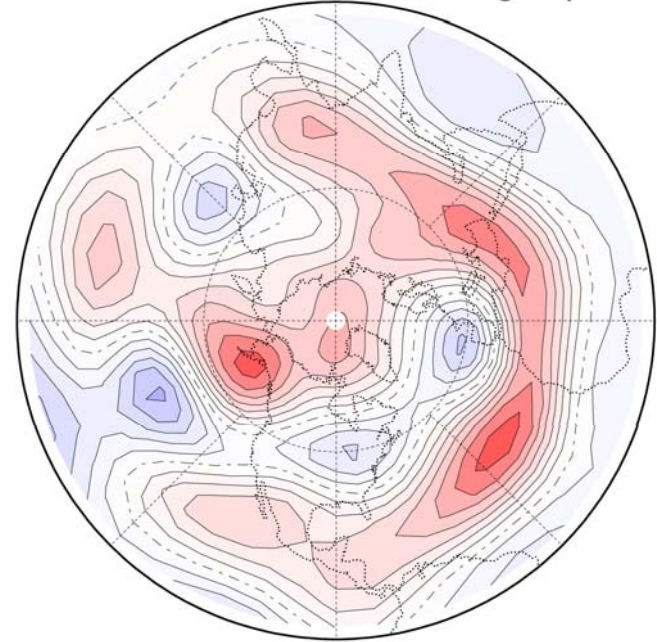
psi300

mean
CVWG psi300 D-J-F
2052-2061 minus 2000-2009 avg expts 1- 8



CONTOUR FROM -200 TO 400 BY 40 ($\times 10^4$)

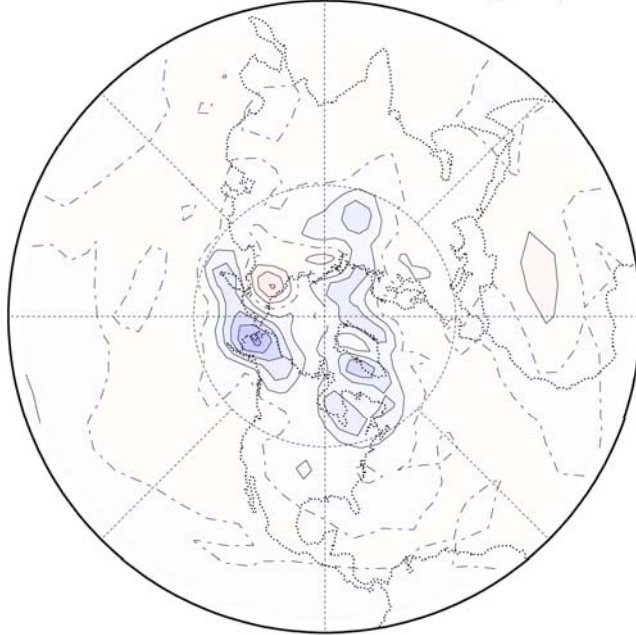
mean
CVWG psi300 D-J-F
2052-2061 minus 2000-2009 avg expts 9-16



CONTOUR FROM -200 TO 280 BY 40 ($\times 10^4$)

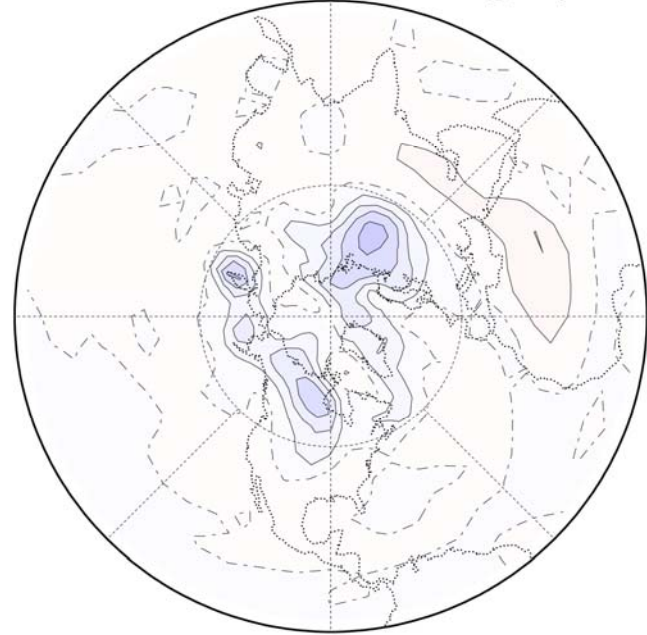
Ts

std dev
CVWG Ts D-J-F
2052-2061 minus 2000-2009 avg expts 1- 8



CONTOUR FROM -125 TO 75 BY 25 (x.01)

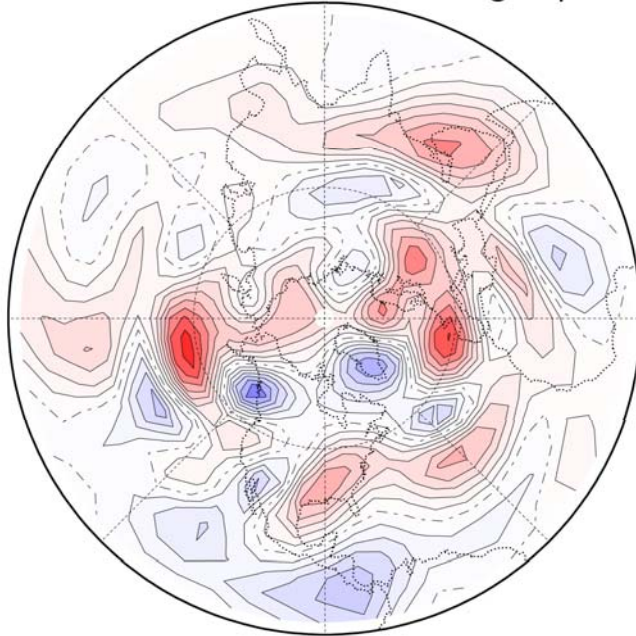
std dev
CVWG Ts D-J-F
2052-2061 minus 2000-2009 avg expts 9-16



CONTOUR FROM -100 TO 50 BY 25 (x.01)

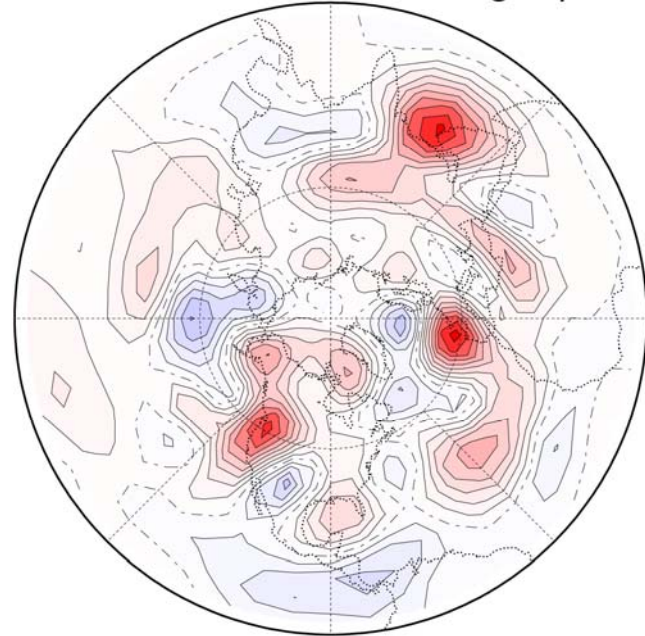
psi300

std dev
CVWG psi300 D-J-F
2052-2061 minus 2000-2009 avg expts 1- 8



CONTOUR FROM -120 TO 160 BY 20 ($\times 10^4$)

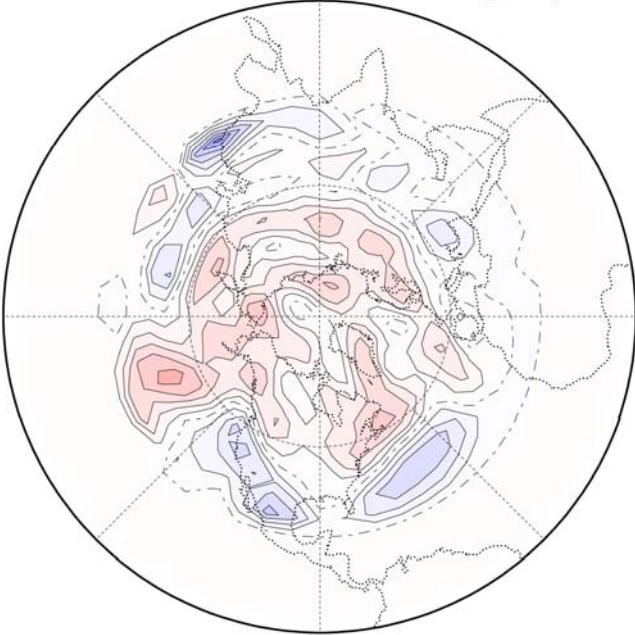
std dev
CVWG psi300 D-J-F
2052-2061 minus 2000-2009 avg expts 9-16



CONTOUR FROM -100 TO 180 BY 20 ($\times 10^4$)

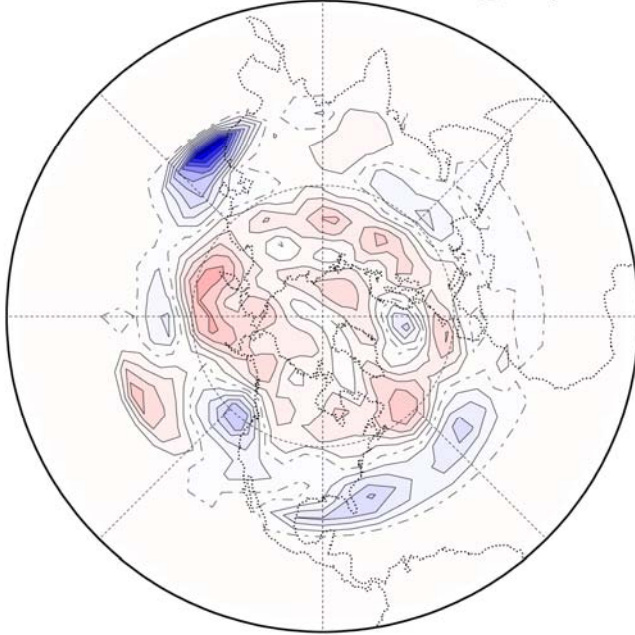
Extratropical prec

extratropical mean
CVWG precet D-J-F
2052-2061 minus 2000-2009 avg expts 1- 8



CONTOUR FROM -600 TO 500 BY 100 ($\times 10^{11}$)

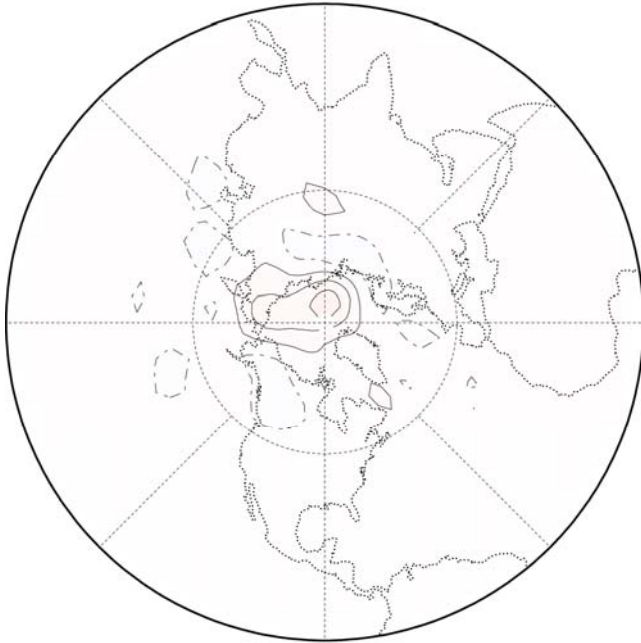
extratropical mean
CVWG precet D-J-F
2052-2061 minus 2000-2009 avg expts 9-16



CONTOUR FROM -100 TO 50 BY 10 ($\times 10^{15}$)

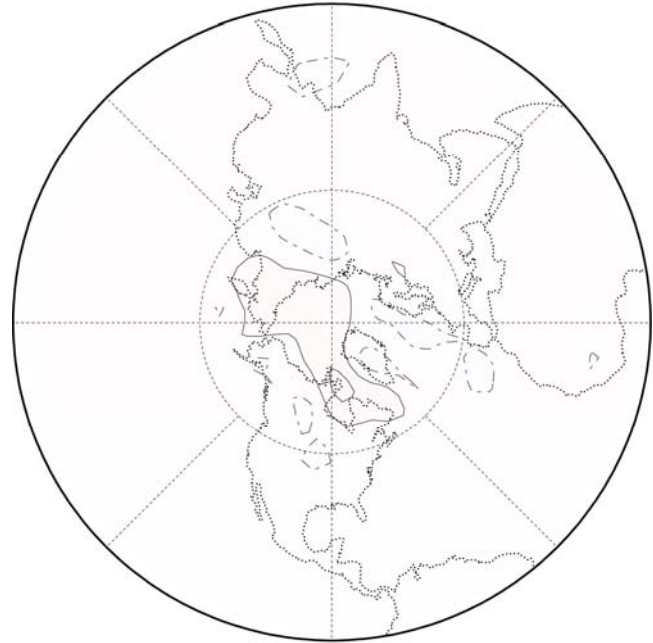
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2005-2014 minus 2000-2009



CONTOUR FROM 0 TO 150 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2005-2014 minus 2000-2009

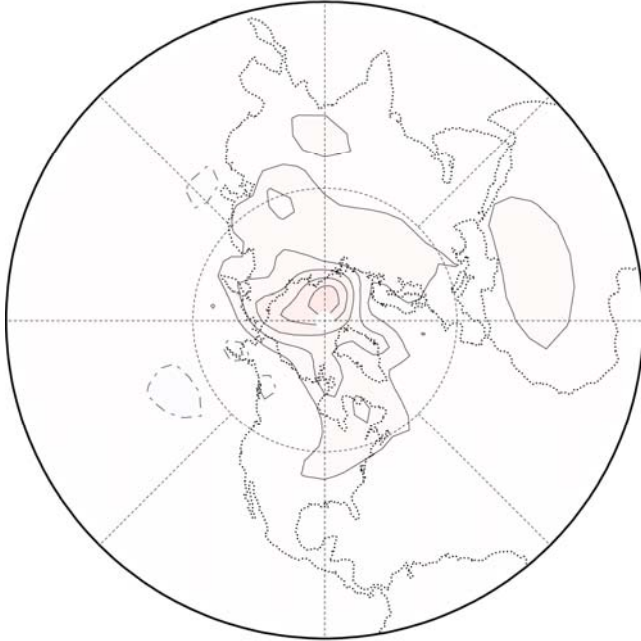


CONTOUR FROM 0 TO 100 BY 50 (x.01)

0.5C

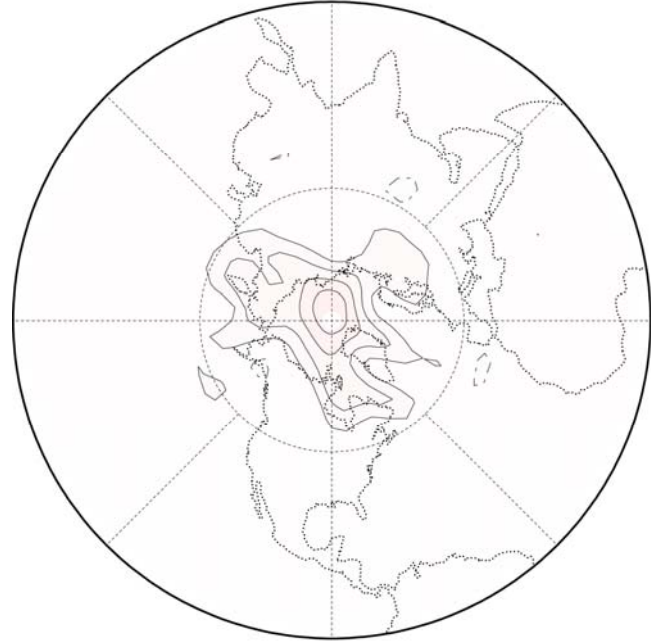
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2010-2019 minus 2000-2009



CONTOUR FROM 0 TO 250 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2010-2019 minus 2000-2009

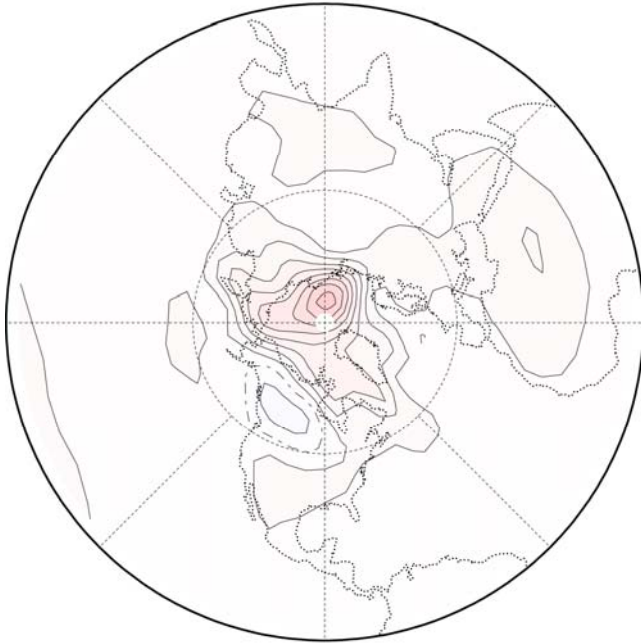


CONTOUR FROM 0 TO 200 BY 50 (x.01)

0.5C

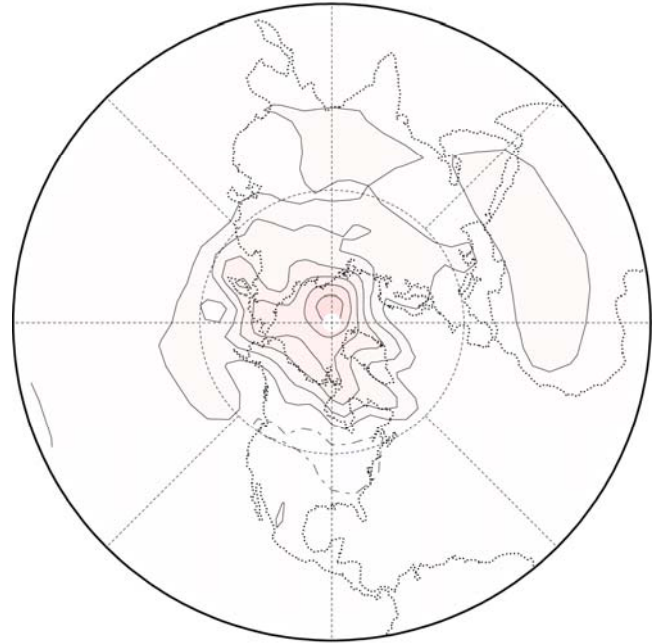
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2015-2024 minus 2000-2009



CONTOUR FROM -50 TO 400 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2015-2024 minus 2000-2009

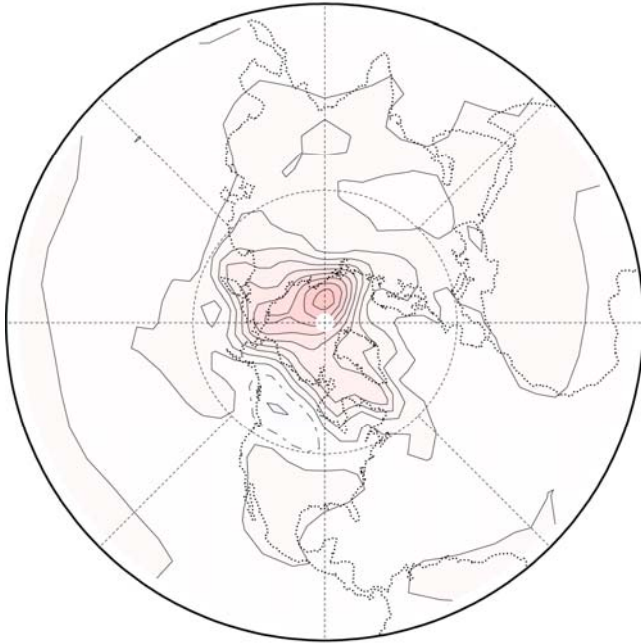


CONTOUR FROM 0 TO 300 BY 50 (x.01)

0.5C

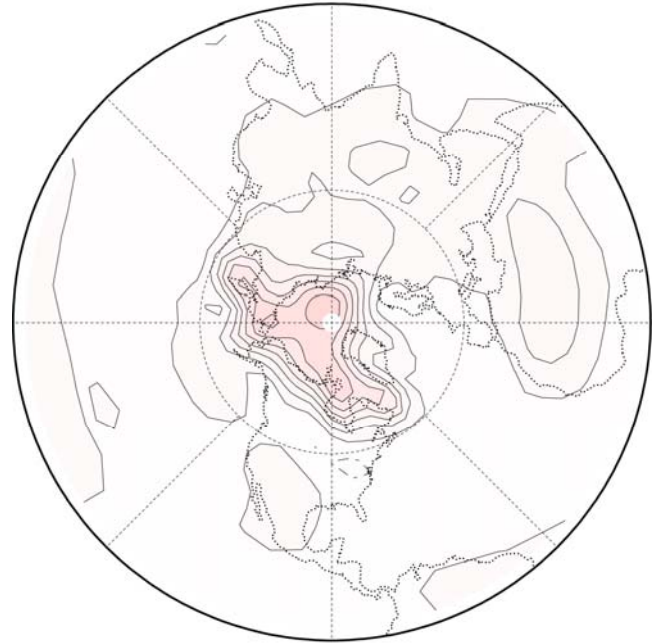
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2020-2029 minus 2000-2009



CONTOUR FROM -50 TO 450 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2020-2029 minus 2000-2009

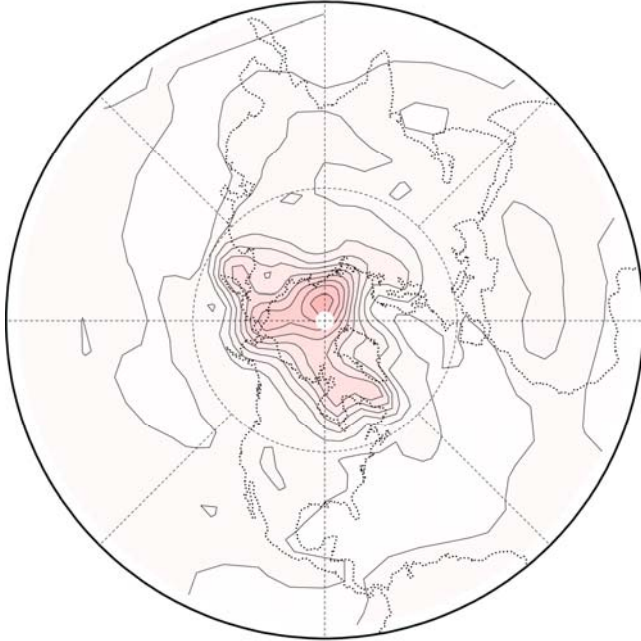


CONTOUR FROM 0 TO 350 BY 50 (x.01)

0.5C

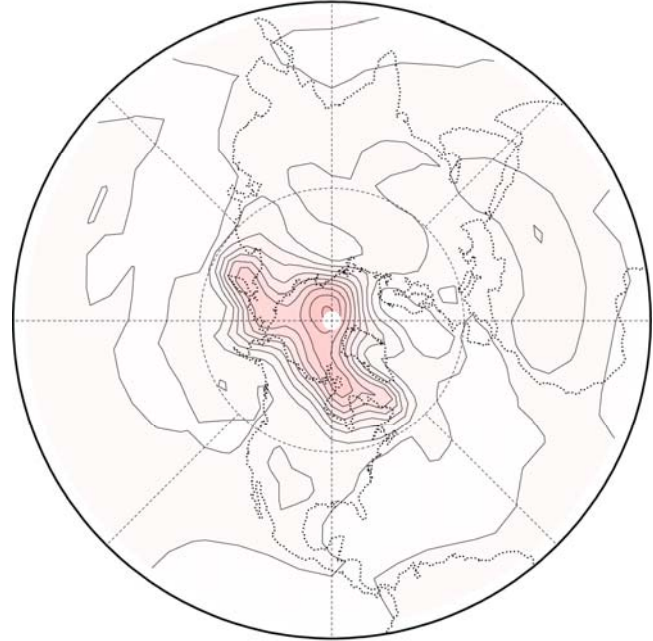
Ts

mean
CVWG Ts D-J-F avg expts 1- 8
2025-2034 minus 2000-2009



CONTOUR FROM 50 TO 500 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2025-2034 minus 2000-2009

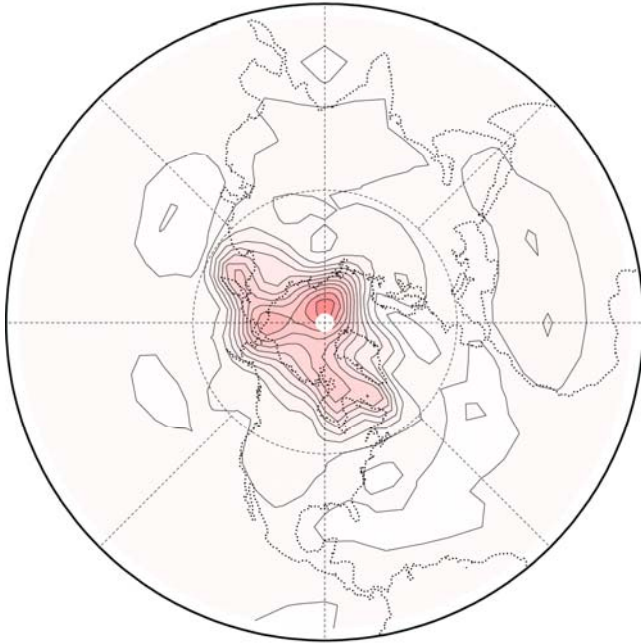


CONTOUR FROM 50 TO 500 BY 50 (x.01)

0.5C

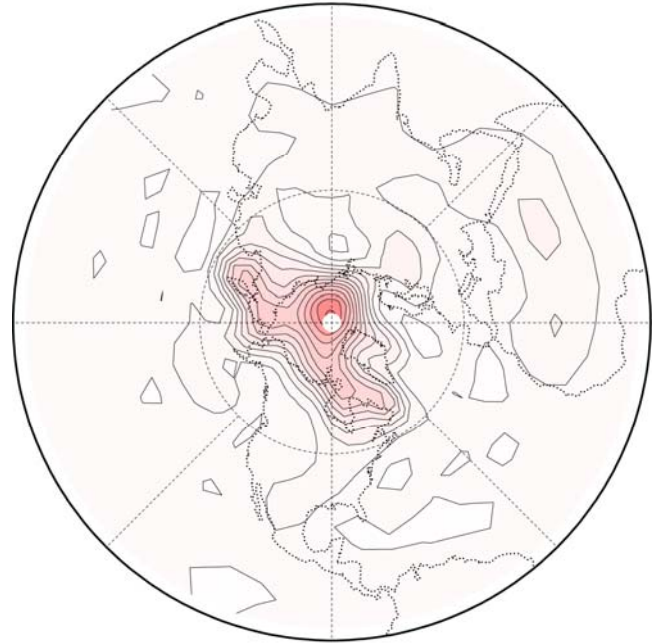
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2030-2039 minus 2000-2009



CONTOUR FROM 50 TO 600 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2030-2039 minus 2000-2009

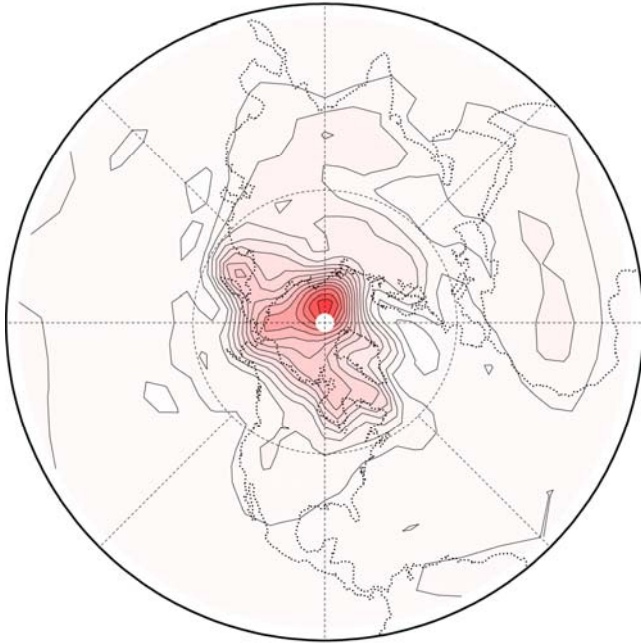


CONTOUR FROM 50 TO 650 BY 50 (x.01)

0.5C

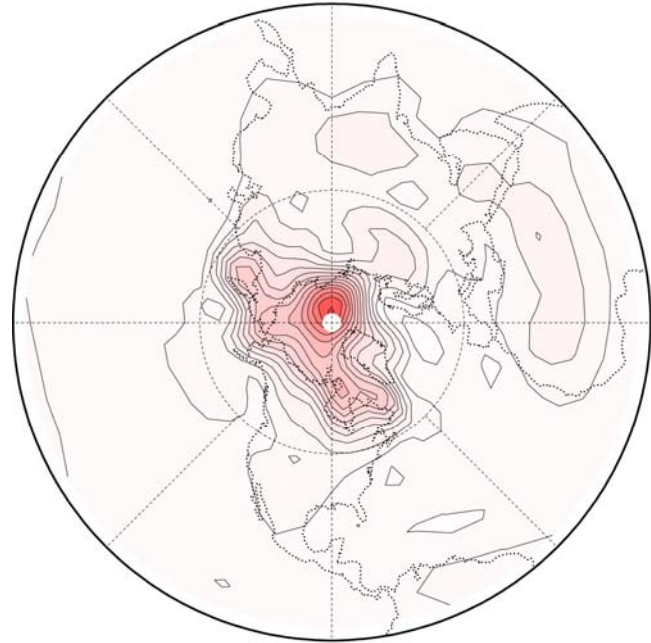
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2035-2044 minus 2000-2009



CONTOUR FROM 50 TO 750 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2035-2044 minus 2000-2009

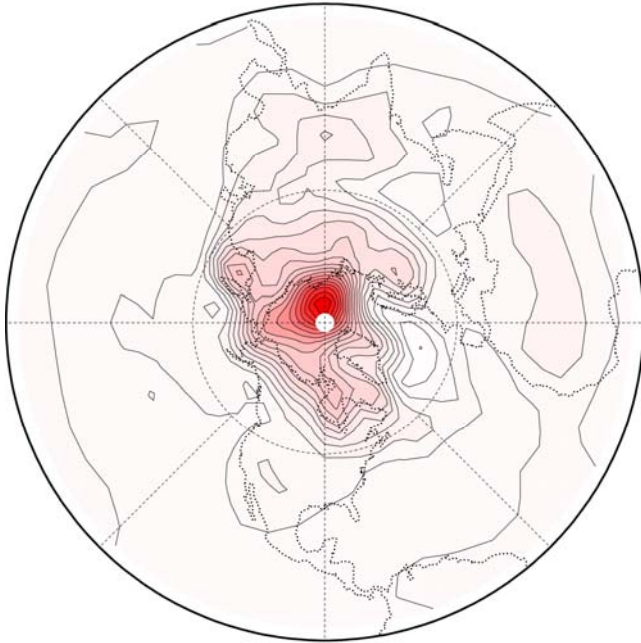


CONTOUR FROM 50 TO 750 BY 50 (x.01)

0.5C

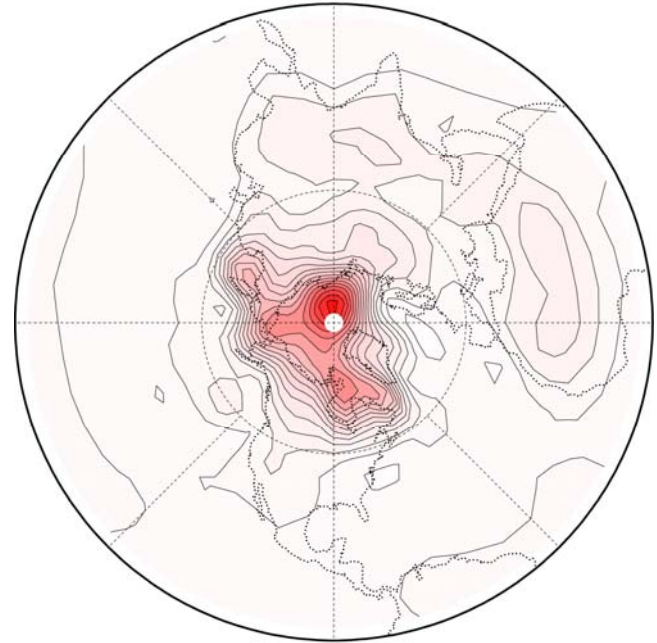
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2040-2049 minus 2000-2009



CONTOUR FROM 0 TO 900 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2040-2049 minus 2000-2009

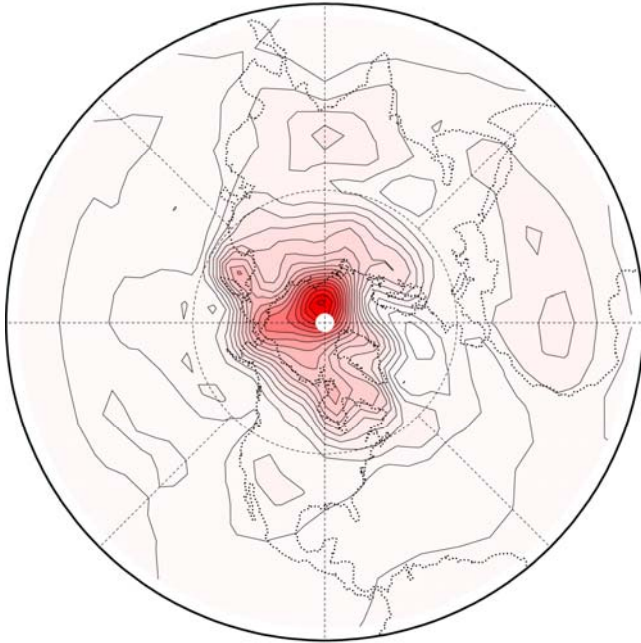


CONTOUR FROM 50 TO 850 BY 50 (x.01)

0.5C

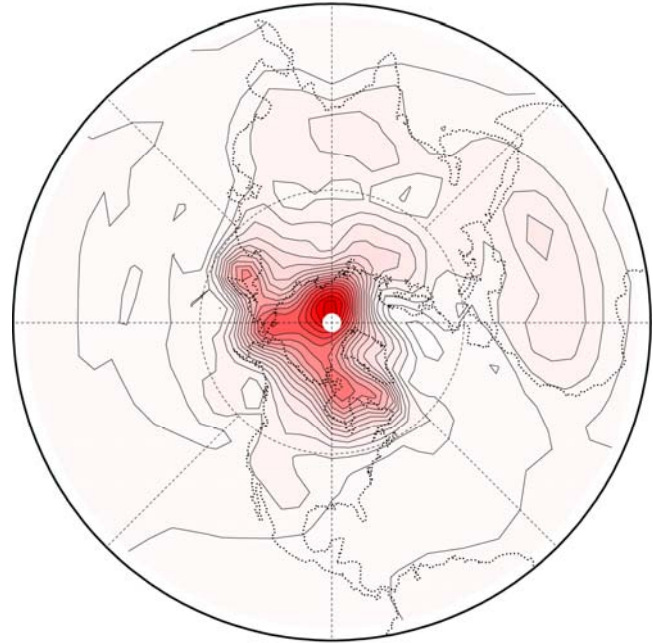
Ts

mean
CVWG Ts D-J-F avg expts 1-8
2045-2054 minus 2000-2009



CONTOUR FROM 50 TO 950 BY 50 (x.01)

mean
CVWG Ts D-J-F avg expts 9-16
2045-2054 minus 2000-2009

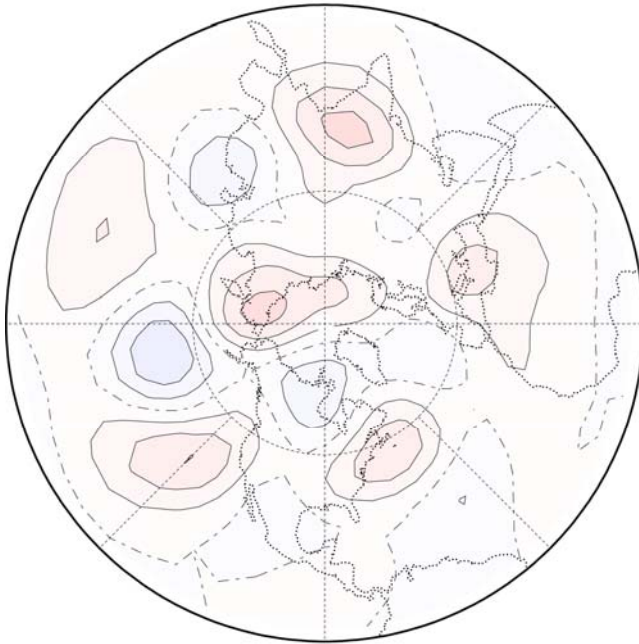


CONTOUR FROM 5 TO 95 BY 5 (x.1)

0.5C

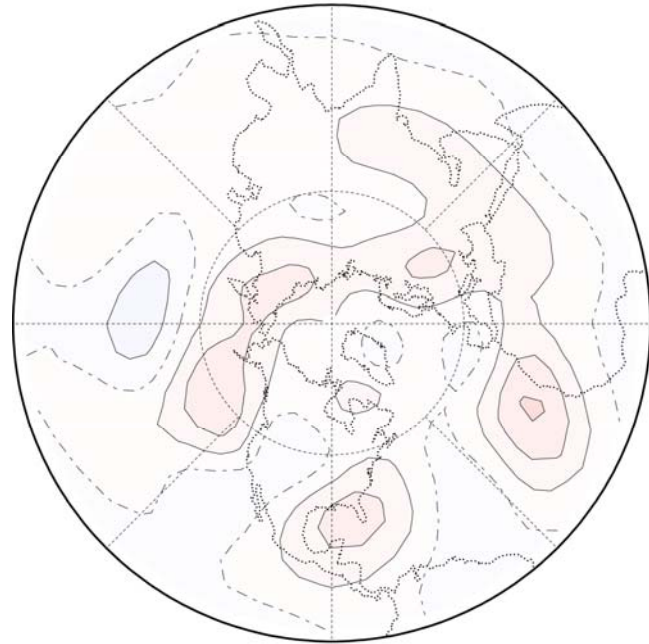
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2005-2014 minus 2000-2009



CONTOUR FROM -80 TO 120 BY 40 ($\times 10^5$)

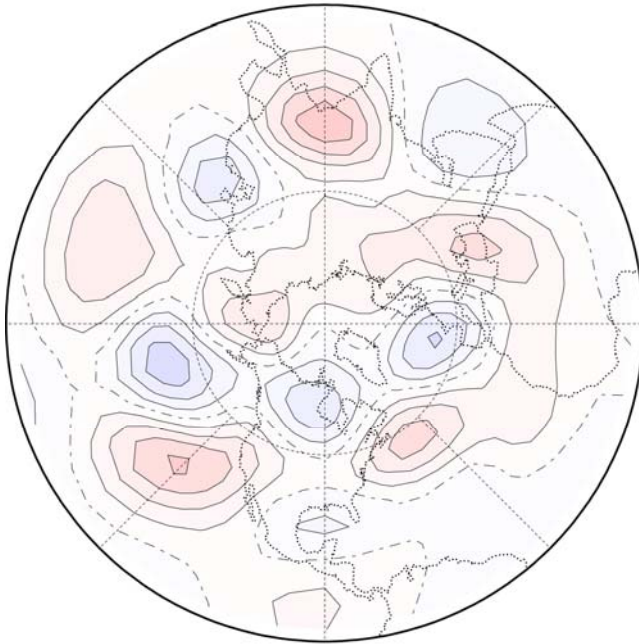
mean
CVWG psi300 D-J-F avg expts 9-16
2005-2014 minus 2000-2009



CONTOUR FROM -40 TO 120 BY 40 ($\times 10^5$)

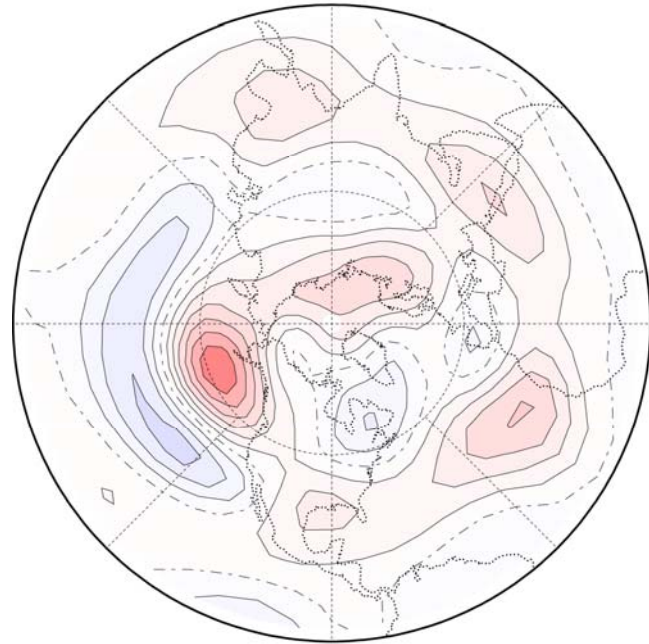
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2010-2019 minus 2000-2009



CONTOUR FROM -120 TO 160 BY 40 (x10⁶)

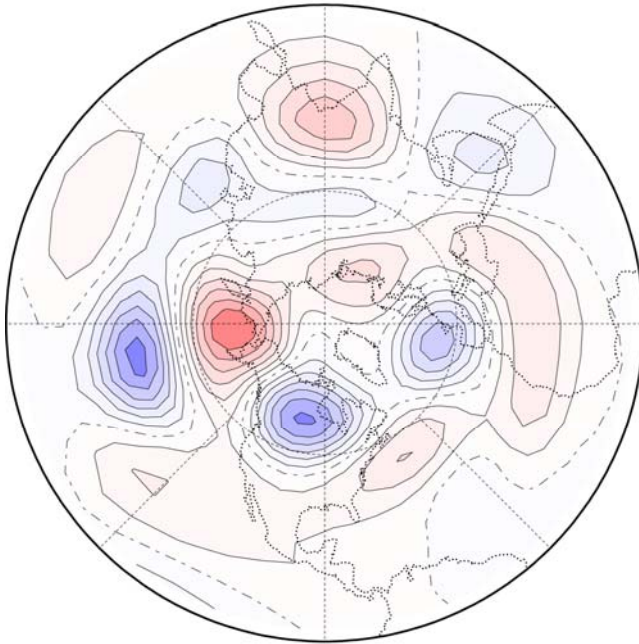
mean
CVWG psi300 D-J-F avg expts 9-16
2010-2019 minus 2000-2009



CONTOUR FROM -120 TO 240 BY 40 (x10⁶)

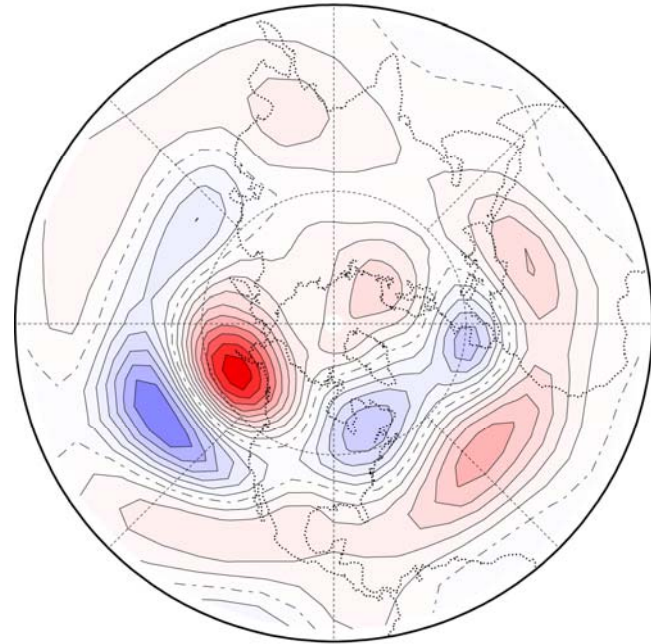
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2015-2024 minus 2000-2009



CONTOUR FROM -240 TO 240 BY 40 ($\times 10^6$)

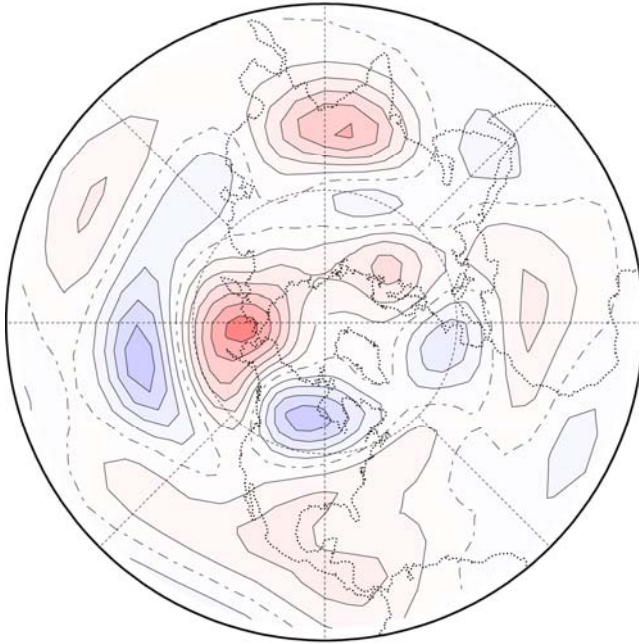
mean
CVWG psi300 D-J-F avg expts 9-16
2015-2024 minus 2000-2009



CONTOUR FROM -240 TO 360 BY 40 ($\times 10^6$)

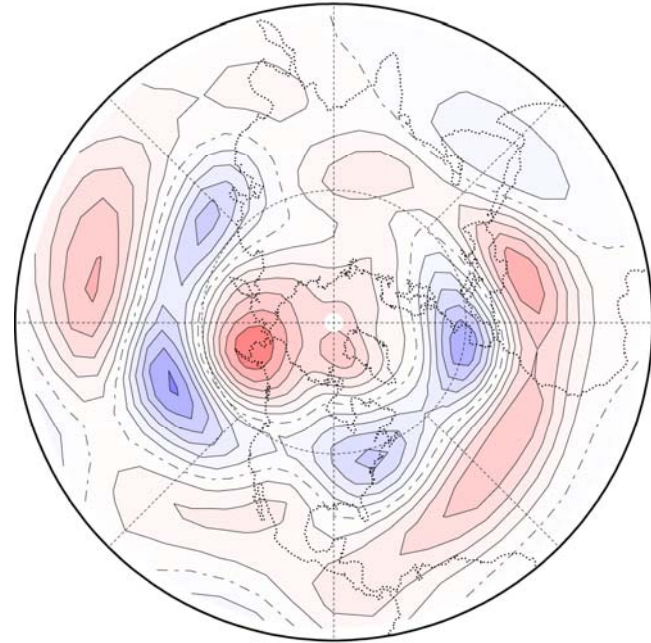
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2020-2029 minus 2000-2009



CONTOUR FROM -160 TO 240 BY 40 (x10⁶)

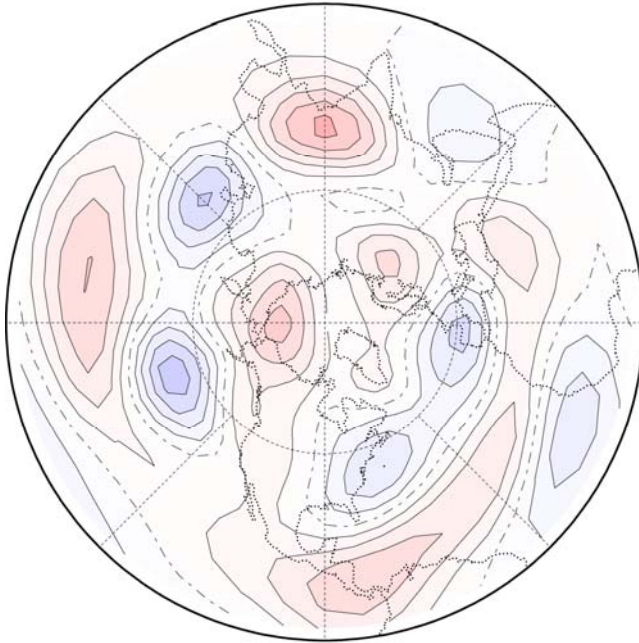
mean
CVWG psi300 D-J-F avg expts 9-16
2020-2029 minus 2000-2009



CONTOUR FROM -240 TO 240 BY 40 (x10⁶)

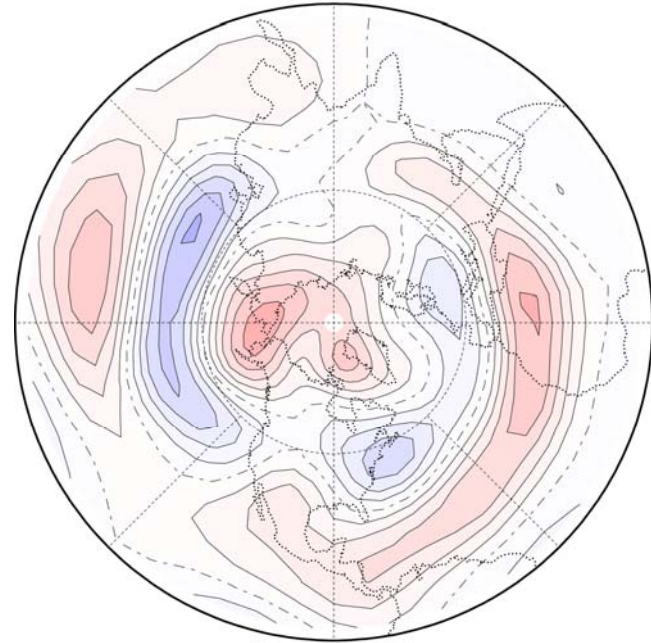
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2025-2034 minus 2000-2009



CONTOUR FROM -160 TO 200 BY 40 (x10⁶)

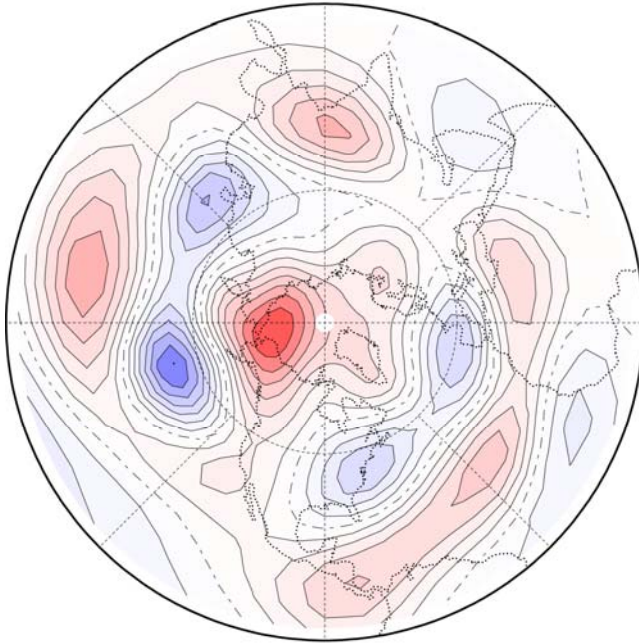
mean
CVWG psi300 D-J-F avg expts 9-16
2025-2034 minus 2000-2009



CONTOUR FROM -200 TO 200 BY 40 (x10⁶)

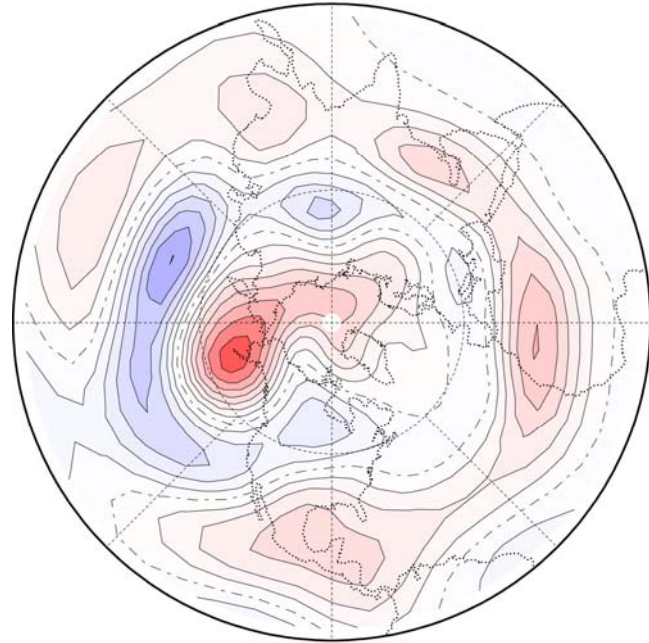
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2030-2039 minus 2000-2009



CONTOUR FROM -280 TO 280 BY 40 (x10⁶)

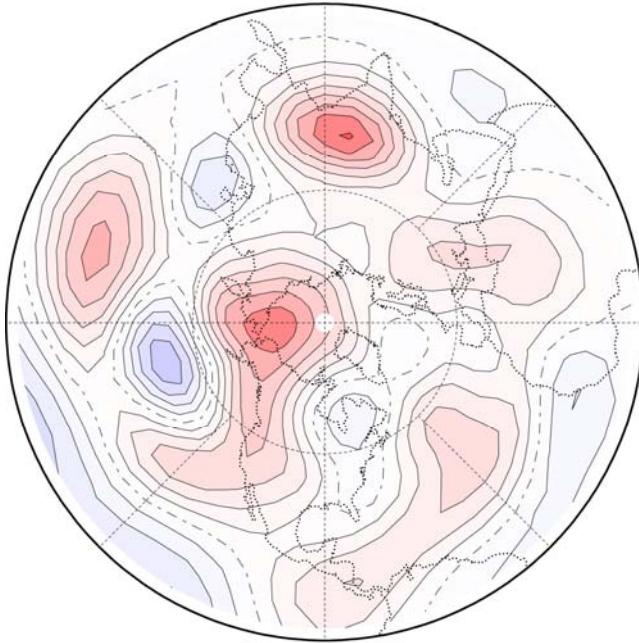
mean
CVWG psi300 D-J-F avg expts 9-16
2030-2039 minus 2000-2009



CONTOUR FROM -240 TO 280 BY 40 (x10⁶)

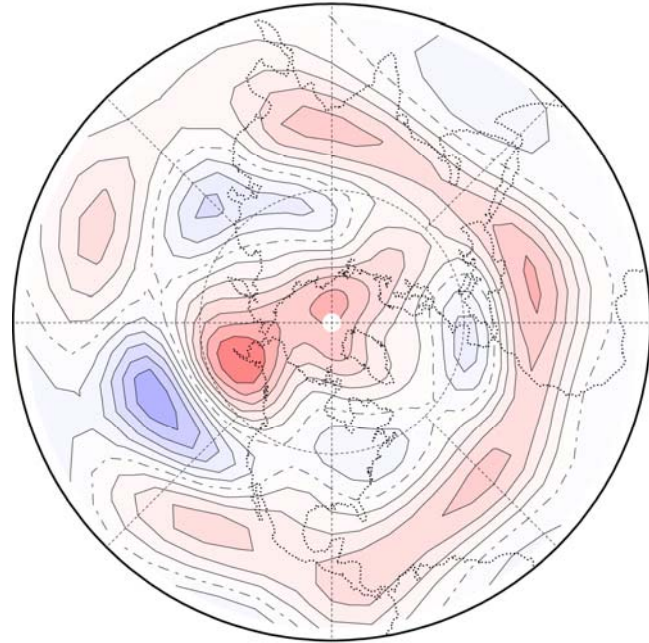
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2035-2044 minus 2000-2009



CONTOUR FROM -160 TO 280 BY 40 (x10⁶)

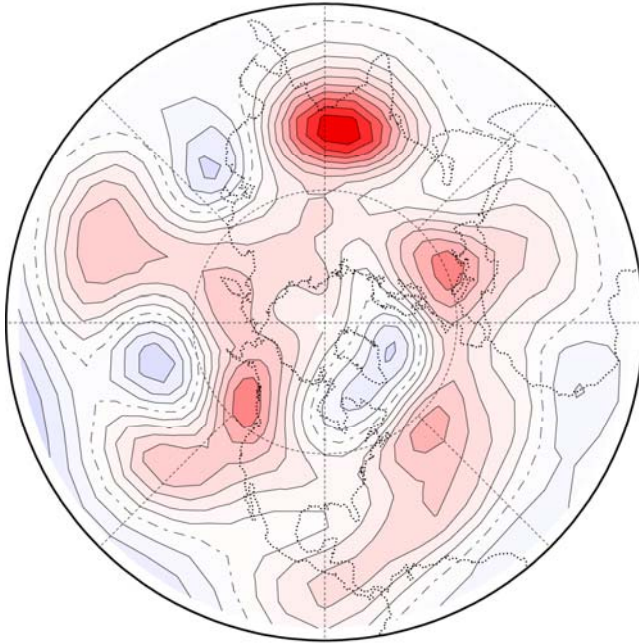
mean
CVWG psi300 D-J-F avg expts 9-16
2035-2044 minus 2000-2009



CONTOUR FROM -200 TO 240 BY 40 (x10⁶)

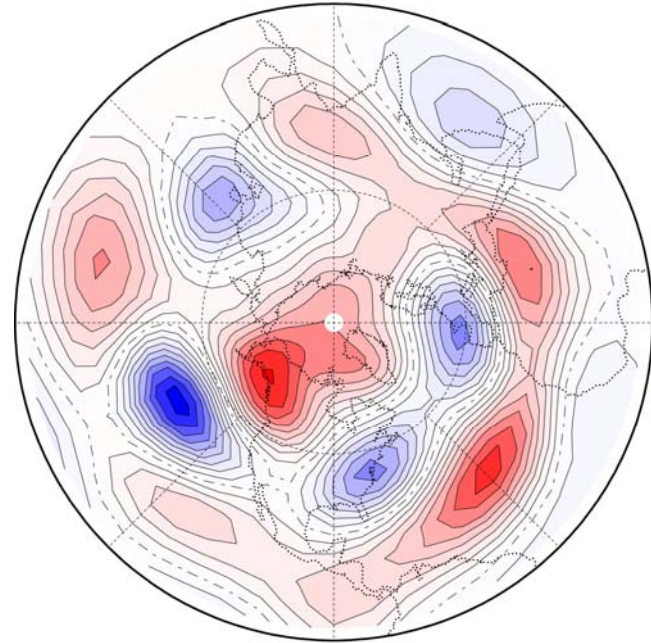
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2040-2049 minus 2000-2009



CONTOUR FROM -120 TO 360 BY 40 (x10⁶)

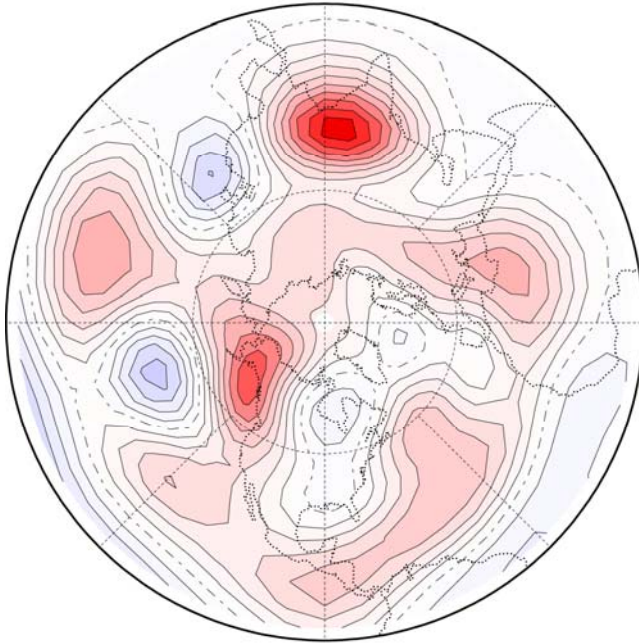
mean
CVWG psi300 D-J-F avg expts 9-16
2040-2049 minus 2000-2009



CONTOUR FROM -360 TO 360 BY 40 (x10⁶)

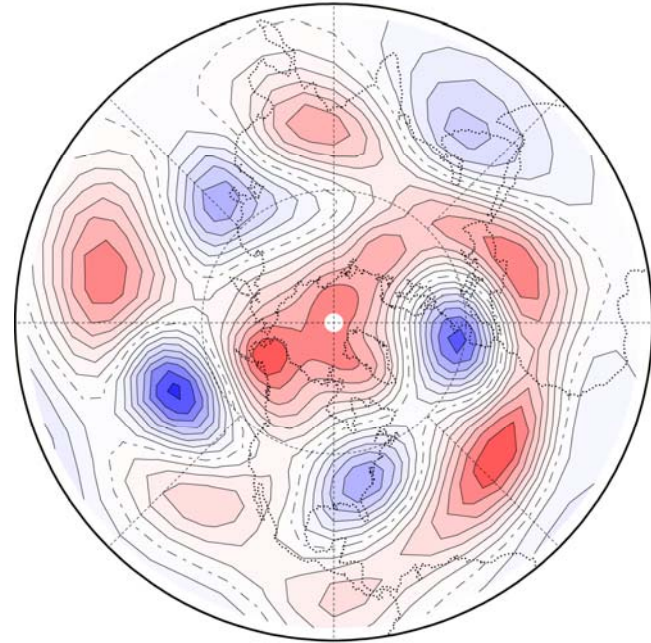
psi300

mean
CVWG psi300 D-J-F avg expts 1- 8
2045-2054 minus 2000-2009



CONTOUR FROM -160 TO 360 BY 40 (x10⁶)

mean
CVWG psi300 D-J-F avg expts 9-16
2045-2054 minus 2000-2009



CONTOUR FROM -320 TO 280 BY 40 (x10⁶)