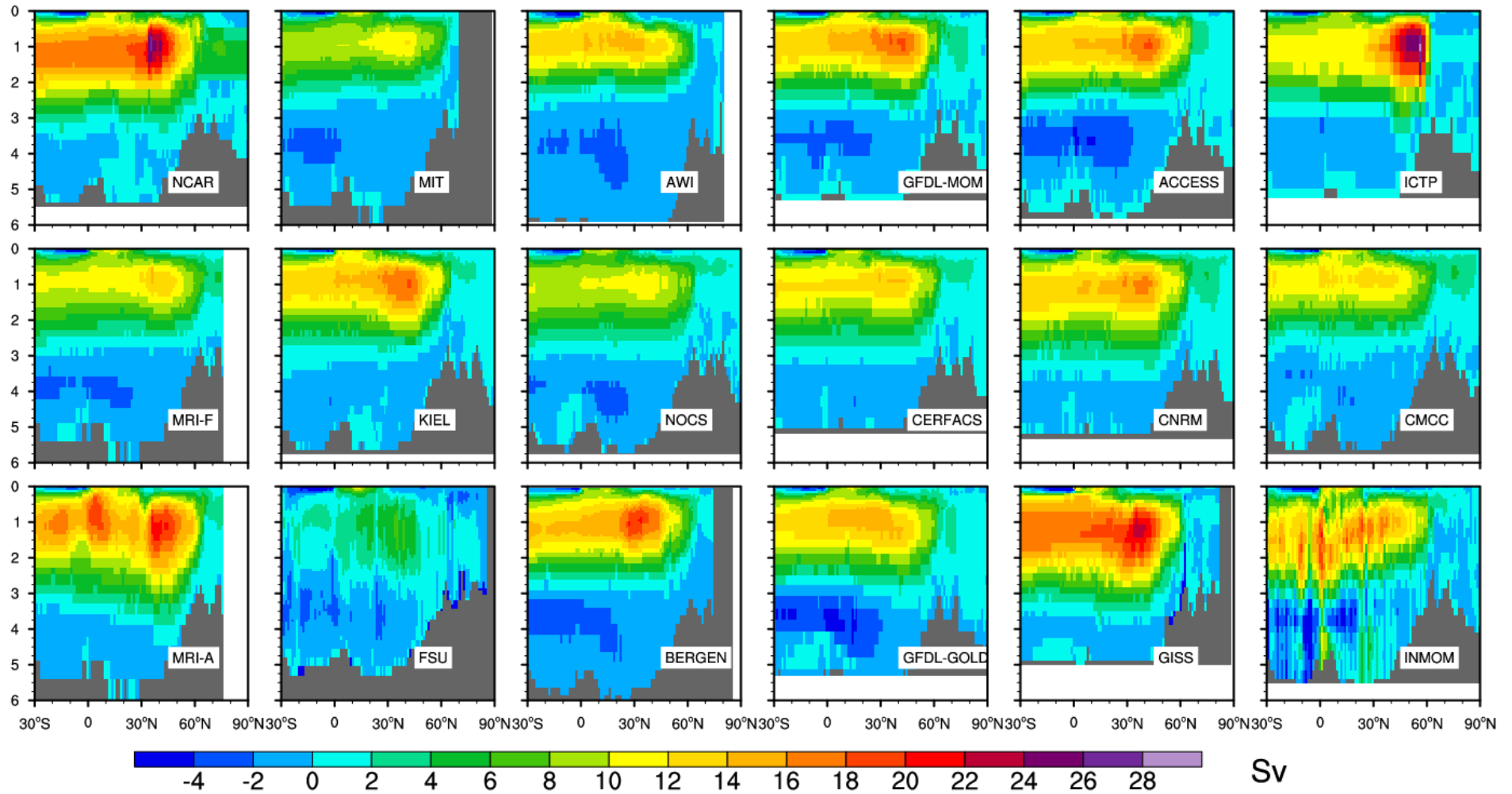


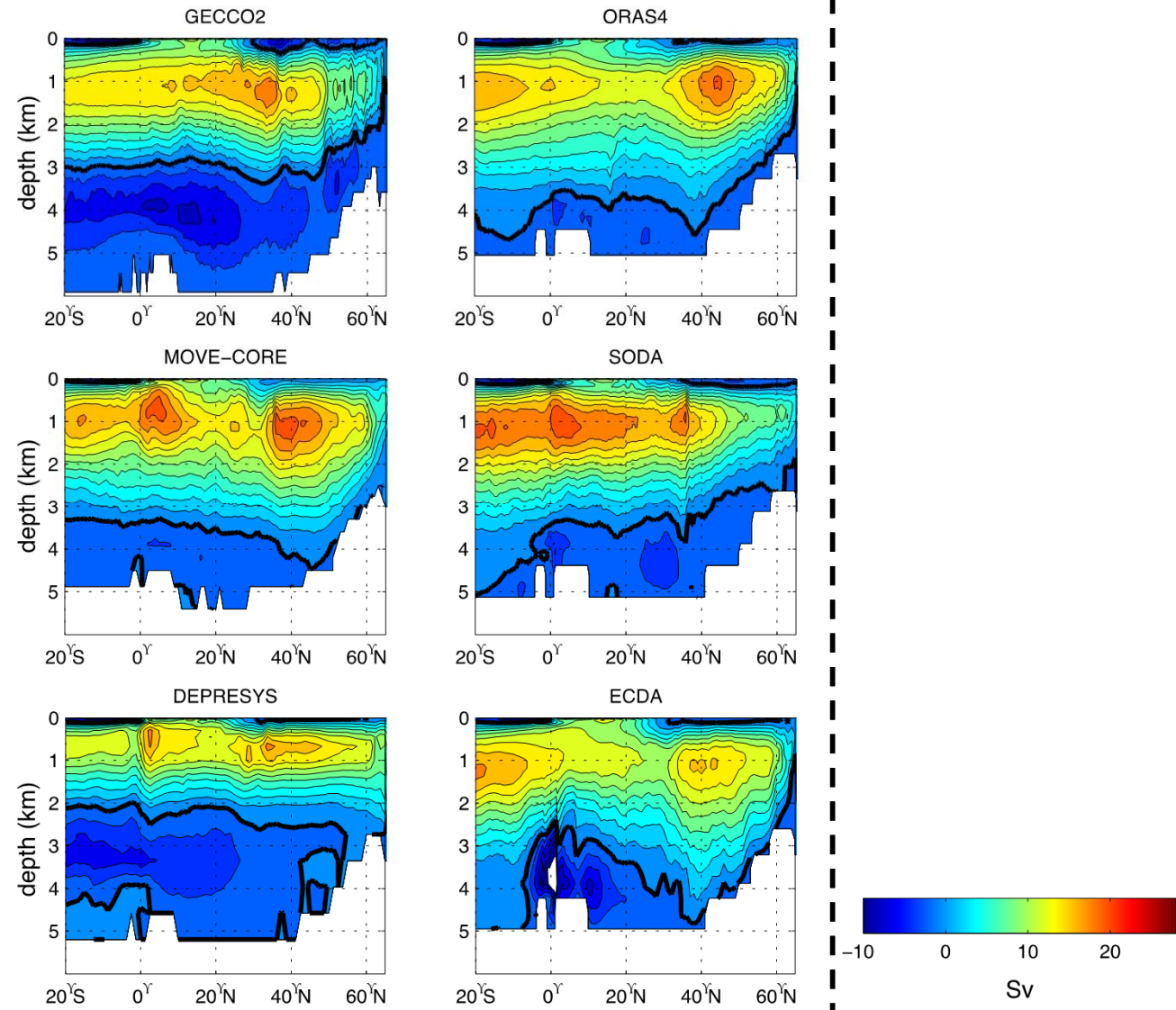
CORE-II

## AMOC Mean (1988-2007) in Depth Space



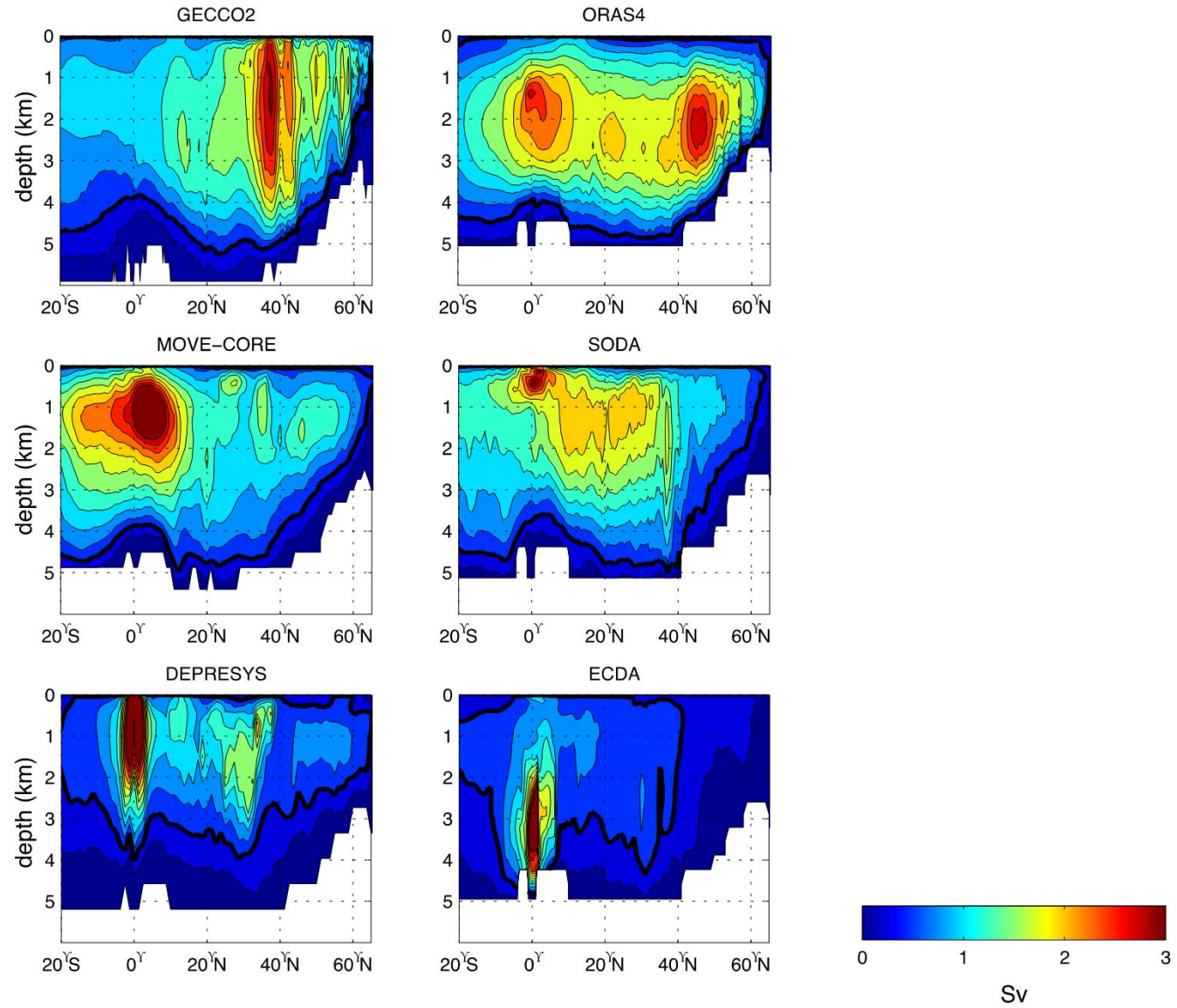
Danabasoglu et al. (2014)

# AMOC time mean (1961-2007)



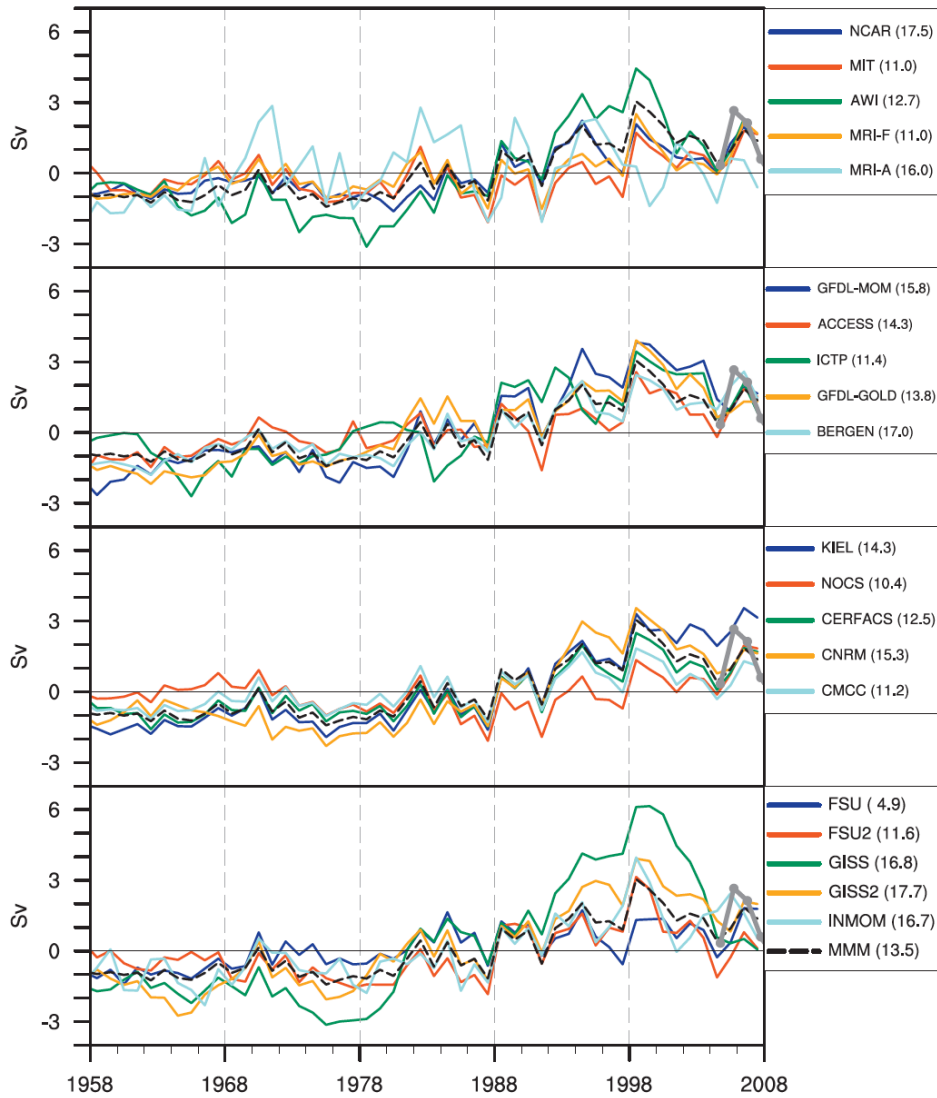


# AMOC Standard Deviation (1961-2007)

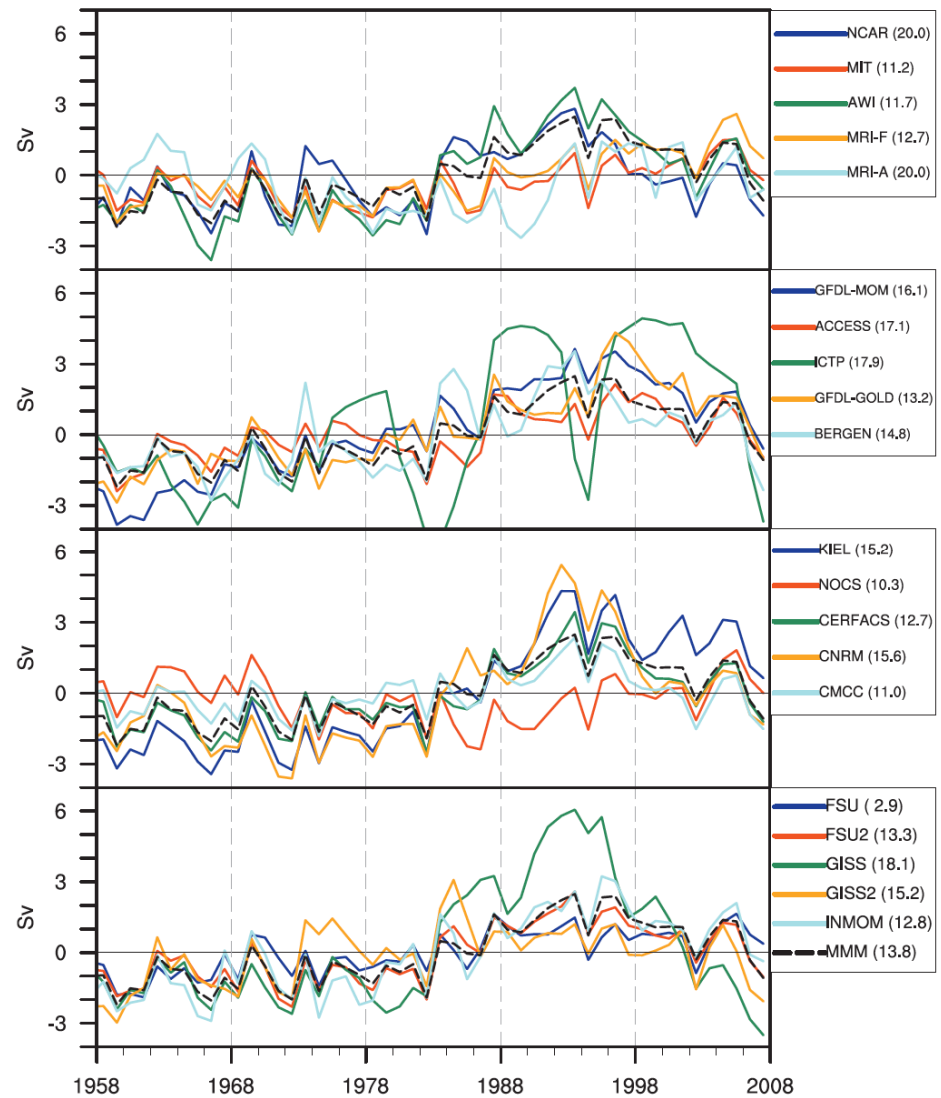


# CORE-II AMOC Maximum Transport Anomaly Time Series

## 26.5°N



## 45°N

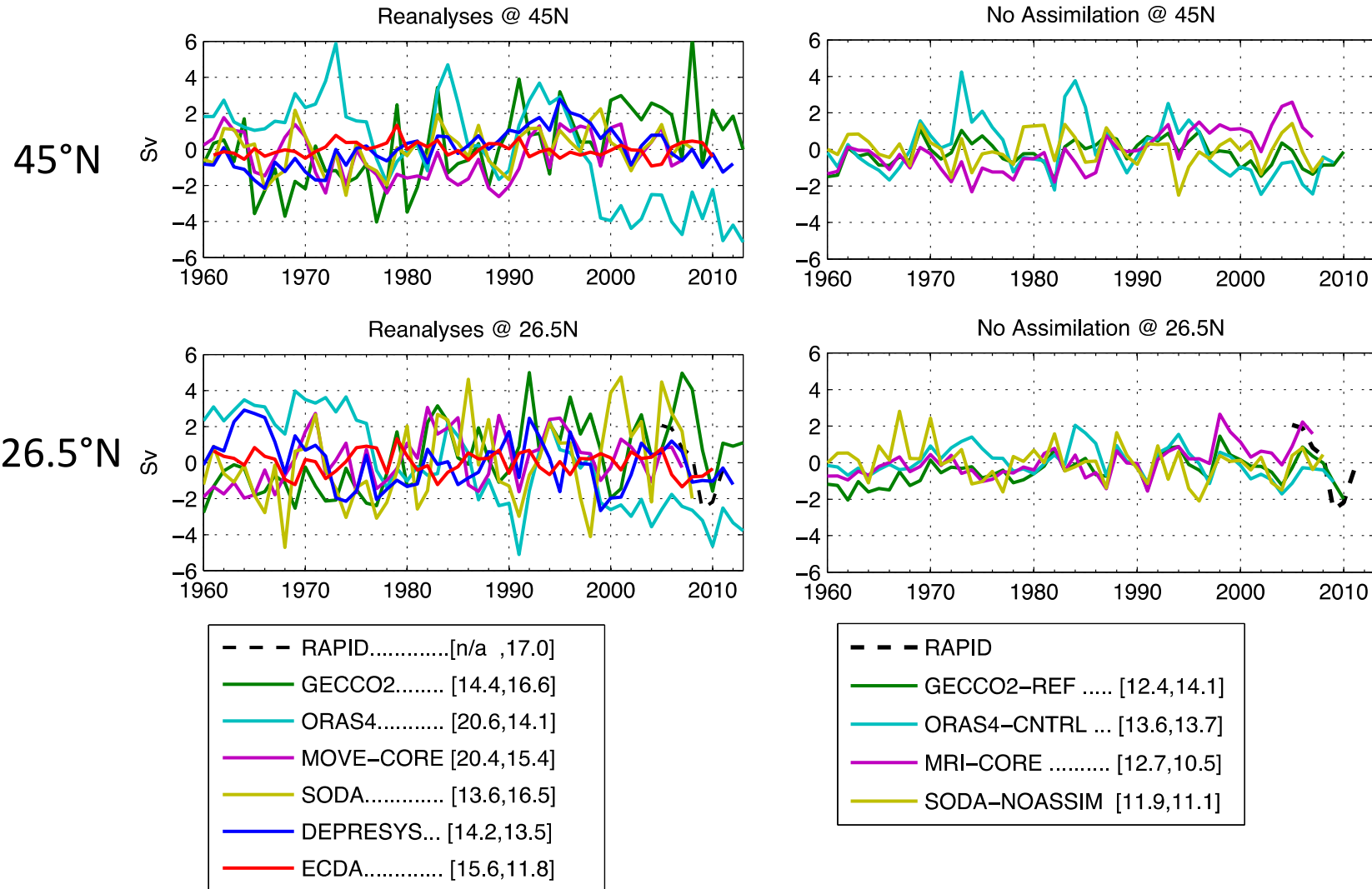


Danabasoglu et al. (2016)



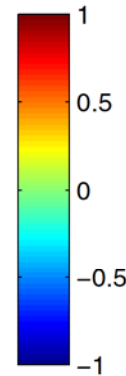
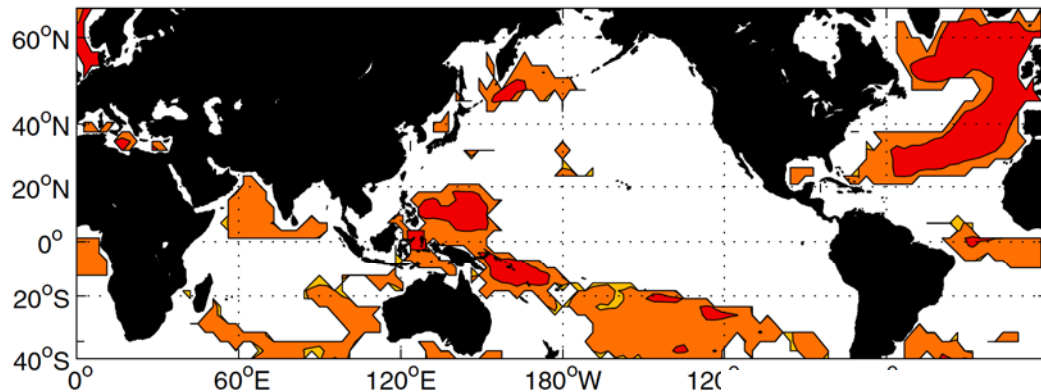
Reanalysis

# Annual-Mean AMOC variability at 1000 m Depth



# Average Anomaly Correlation Coefficients for SST

2-5 yr lead

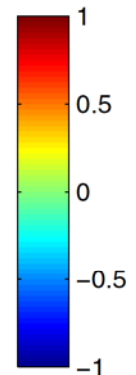
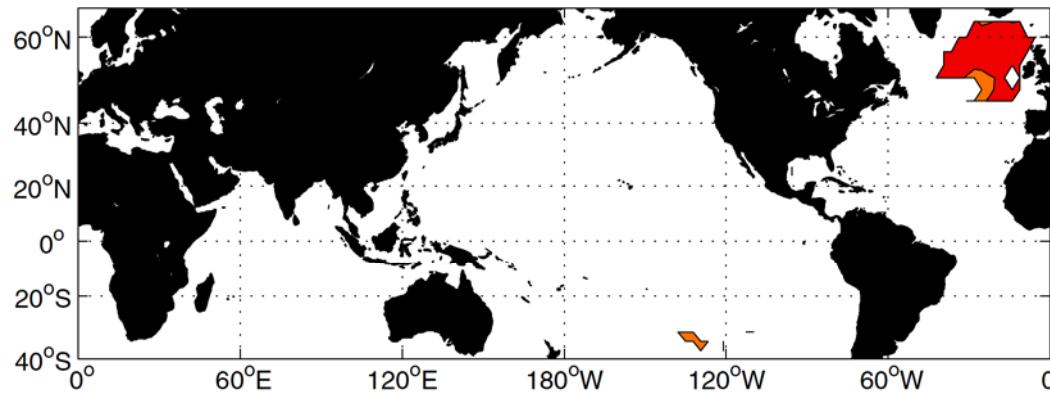
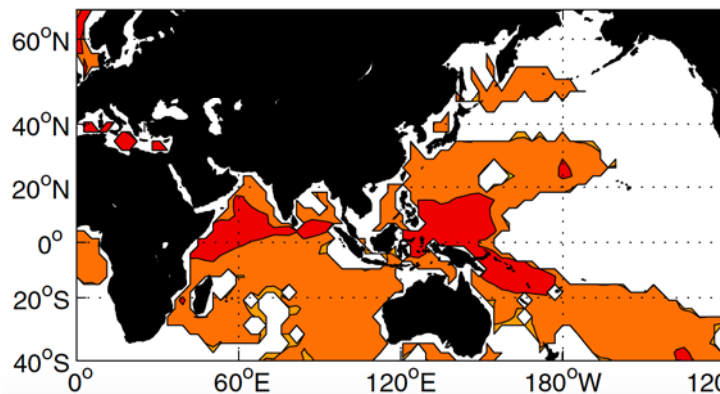


HDInit forecasts

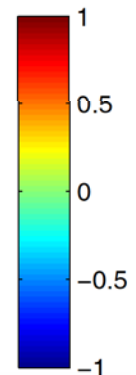
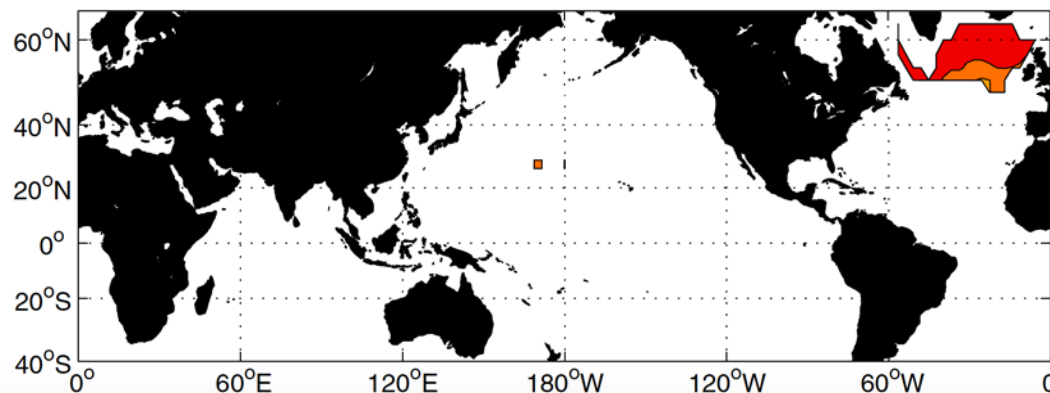
> the 'no-skill' statistical reference forecast at the 90 % confidence level

2-5 yr lead

6-9 yr lead



6-9 yr lead

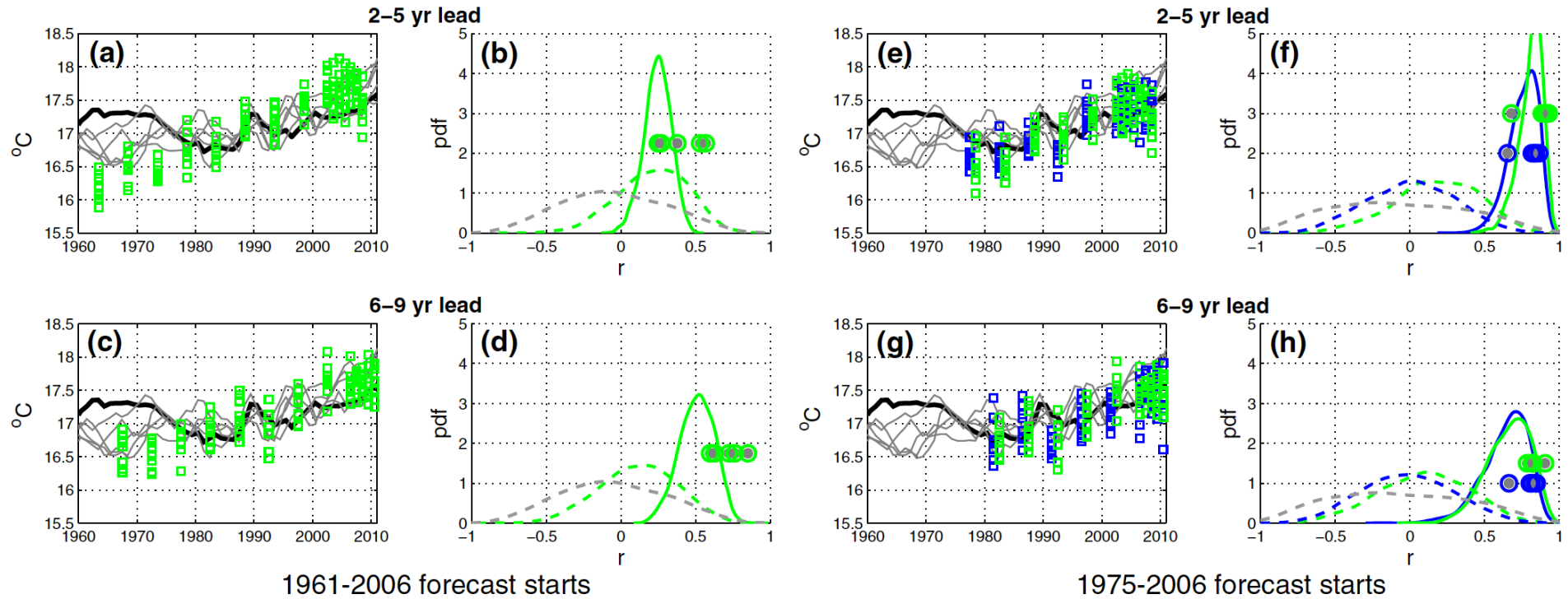


AND > the uninitialized run at a 90 % confidence

Karspeck et al. (2015)

# SST Hindcasts and Skill

## NORTH PACIFIC



HDInit and DAInit

Solid black: HADISST

Gray: NoInit (20C)

Gray dashed: no-skill

Green dashed: LIM

Gray-green: NoInit



## Groups that have Contributed AMOC Reanalyses from 1960 – 2007 (or longer)

GROUP	METHOD	INSITU T/S	ALT	SST	NoAssim Control run?	Atm forcing	DP INIT?
<b>GECCO2 (U. Hamburg)</b>	4DVAR	YES	YES	YES	YES	[NCEP]*	YES
<b>ORAS4 (ECMWF)</b>	NEMOVAR 3DVar	YES	YES	YES	YES	ERA- 40/ERA-I	YES
<b>MOVE-CORE (MRI)</b>	3DVar	YES	NO	NO	YES	CORE II IAF	NO
<b>SODA (TAMU / U.Maryland)</b>	OI	YES	NO	YES	YES	20-CR	YES
<b>DePreSys (UKMET)</b>	Coupled nudging to OI product	YES	NO	YES	NO	N/A	YES
<b>ECDA3.2 (GFDL)</b>	coupled EaKF	YES	INDIRECTLY	YES	NO	[NCEP]*	YES

Karspeck et al. (2016)

## Groups that have Contributed AMOC Reanalyses from 1960 – 2007 (or longer)

GROUP	METHOD	INSITU T/S	ALT	SST	NoAssim Control run?	Atm forcing	DP INIT?
GECCO2-REF (U. Hamburg)	4DVAR	YES	YES	YES	YES	NCEP	YES
ORAS4-CNTRL (ECMWF)	NEMOVAR 3DVar	YES	YES	YES	YES	ERA- 40/ERA-I	YES
MRI-CORE (MRI)	3DVar	YES	NO	NO	YES	CORE II IAF	NO
SODA-NOASSIM (TAMU / U.Maryland)	OI	YES	NO	YES	YES	20-CR	YES

Four groups also contributed “No Assimilation” simulations to help understand the role of data constraints.