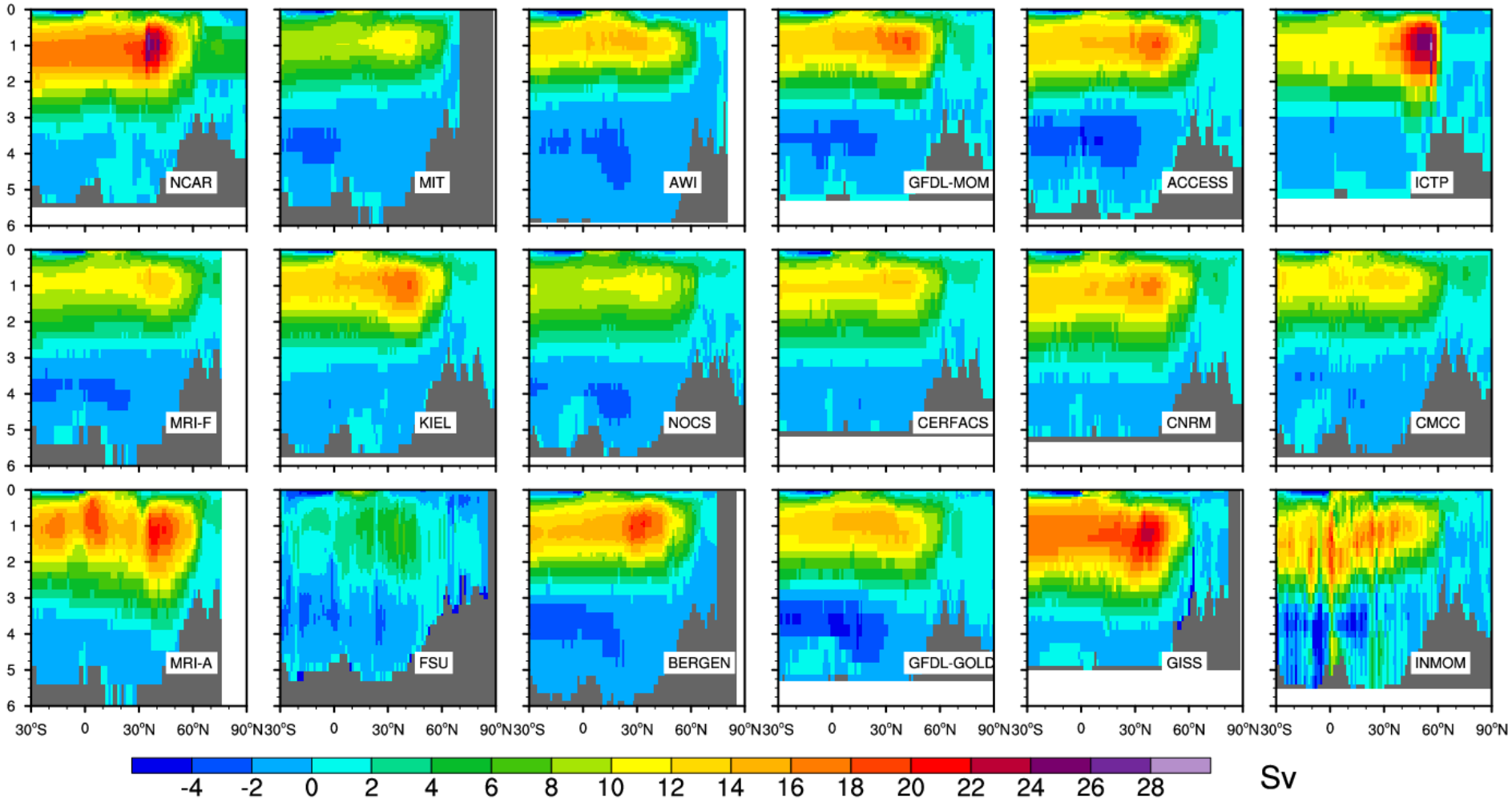
CORE-II

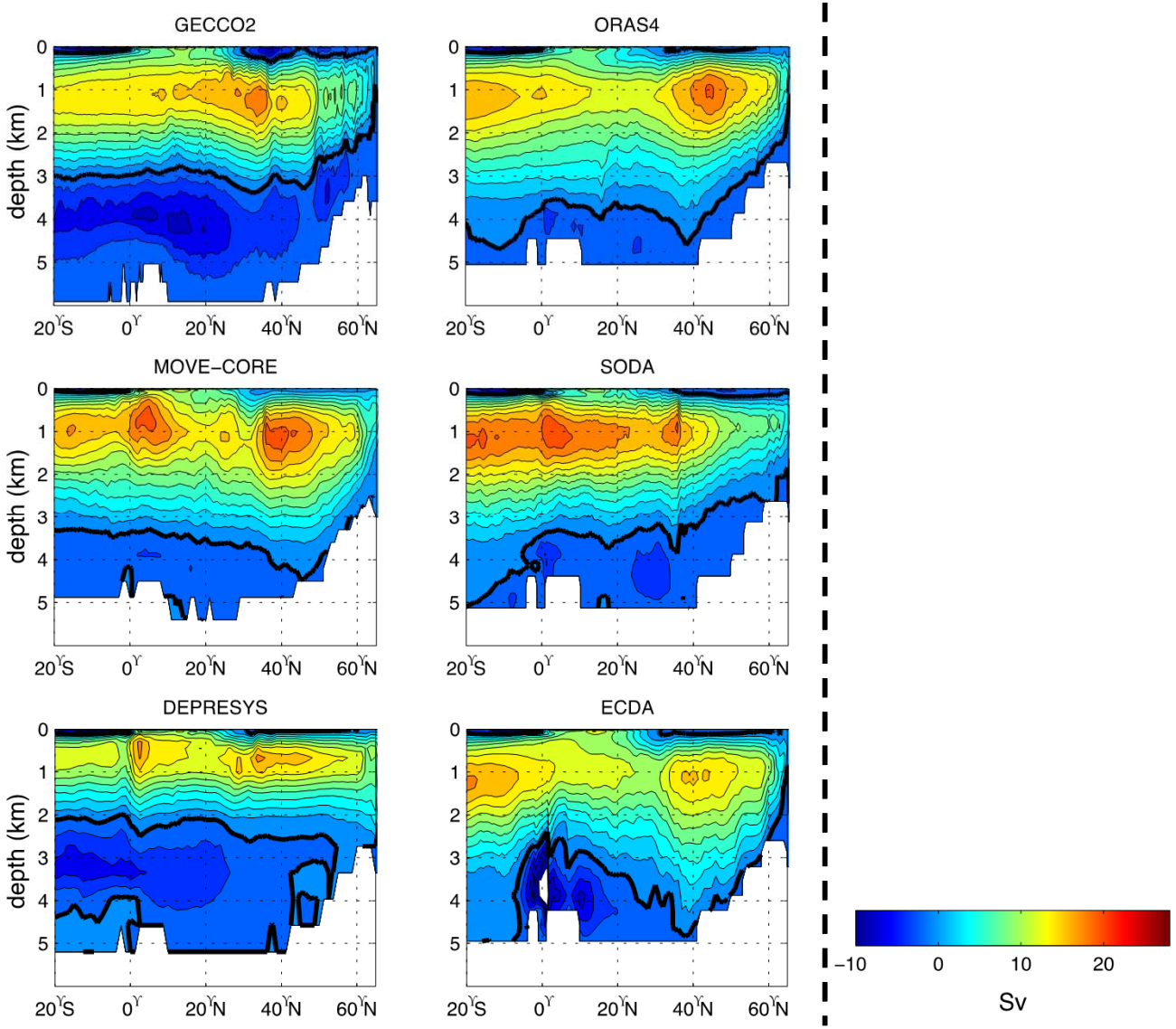
AMOC Mean (1988-2007) in Depth Space



Danabasoglu et al. (2014)

Reanalysis

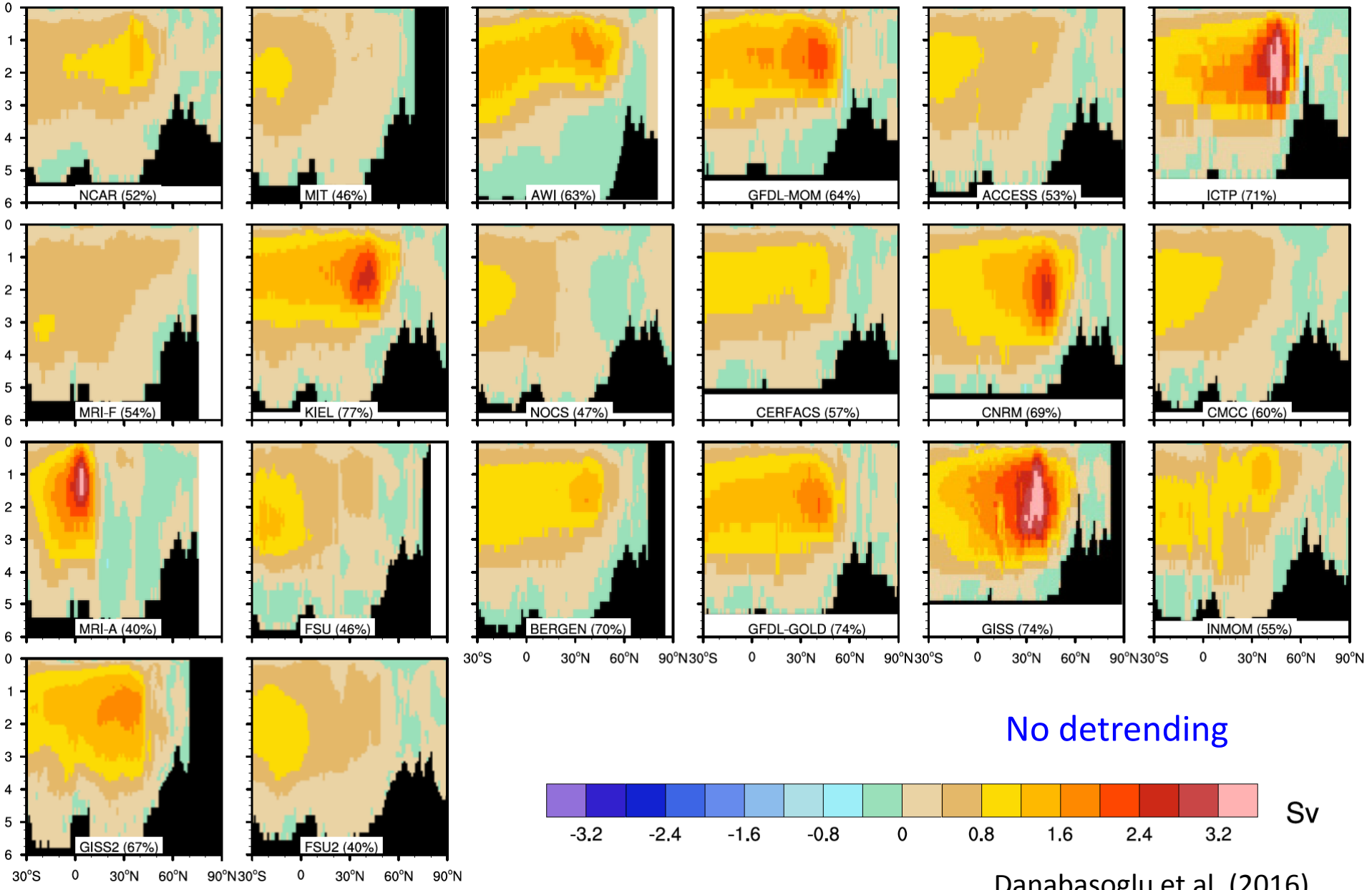
AMOC time mean (1961-2007)



Karspeck et al. (2016)

CORE-II

AMOC EOF1

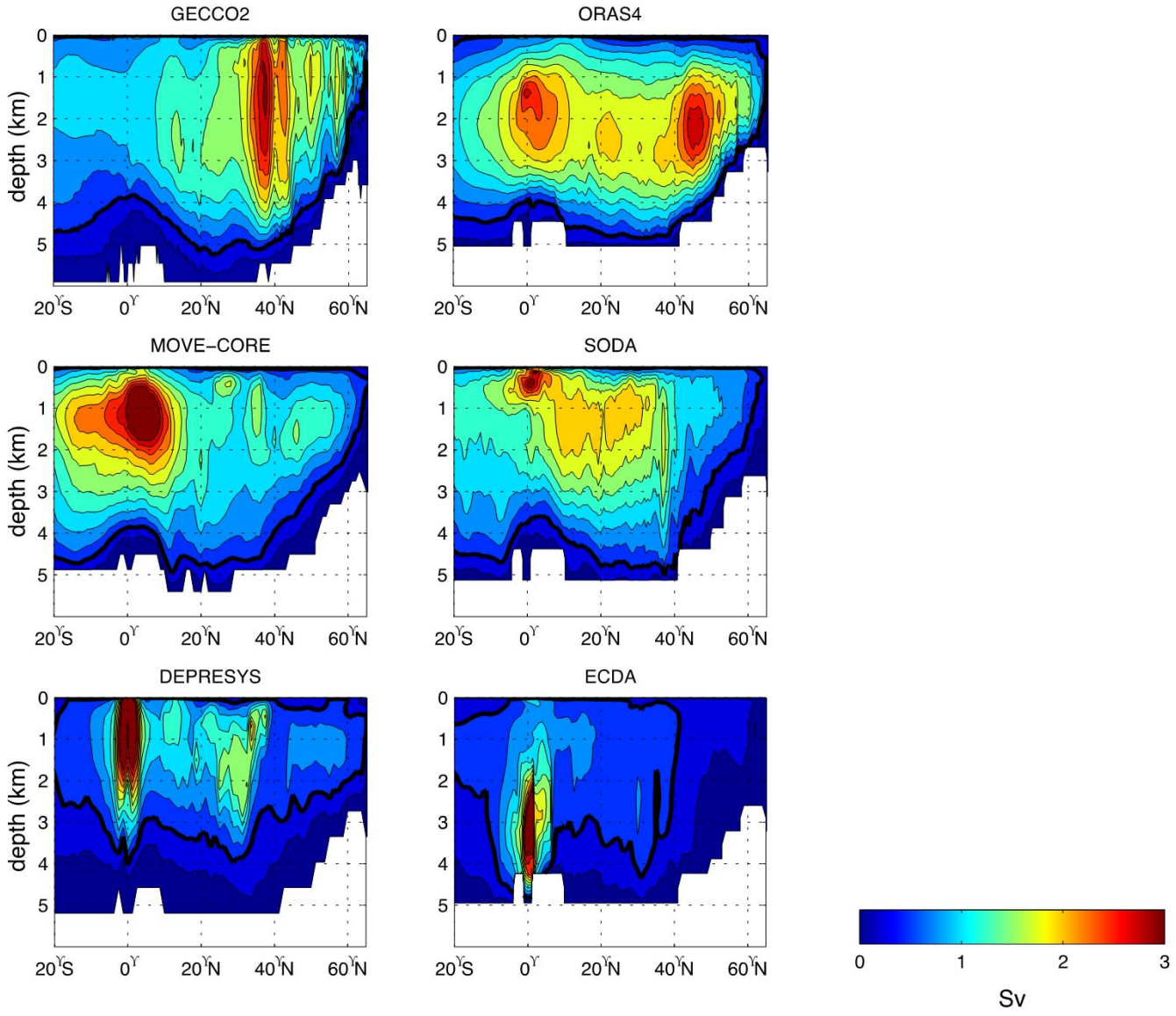


No detrending

Danabasoglu et al. (2016)

Reanalysis

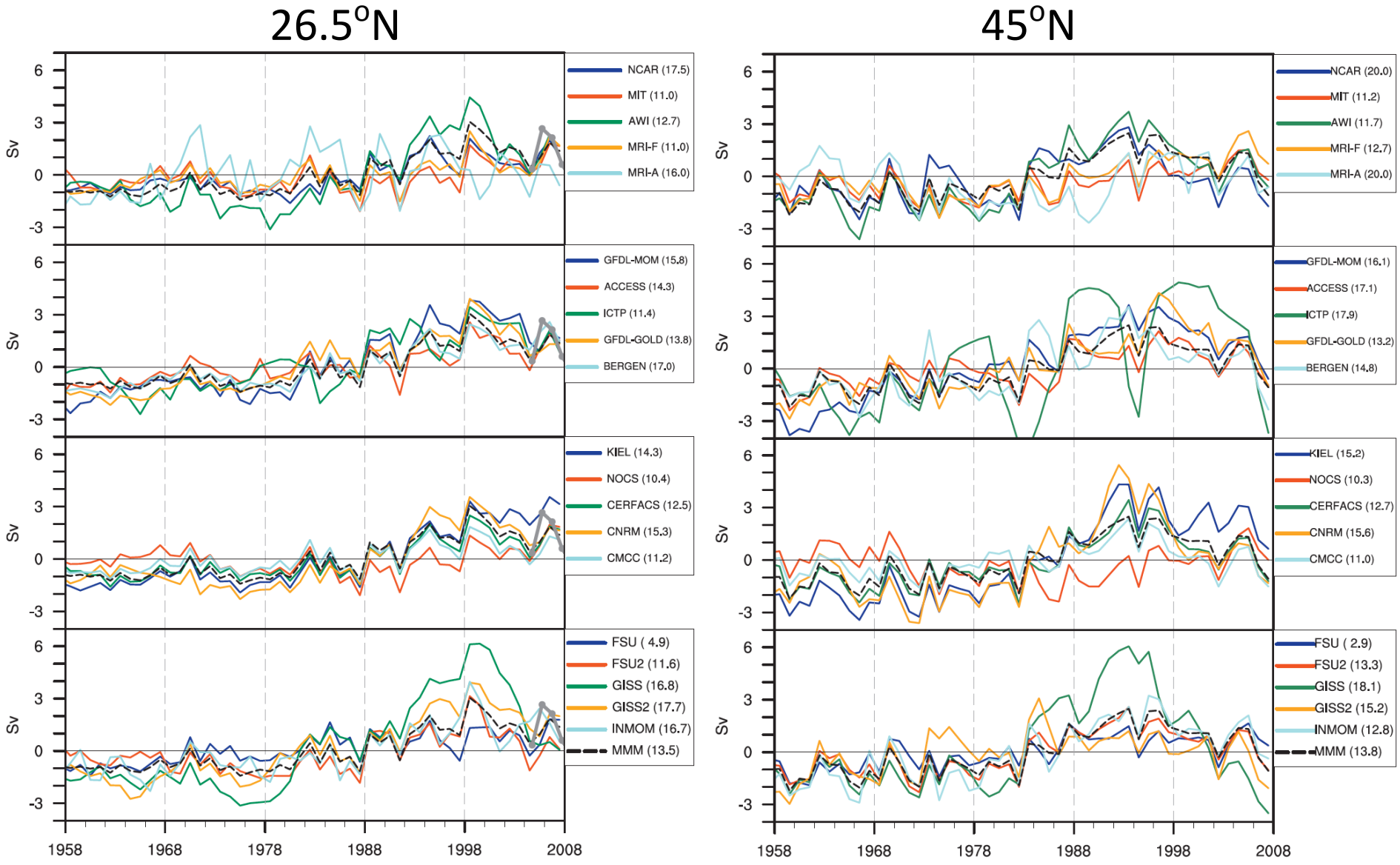
AMOC Standard Deviation (1961-2007)



Karspeck et al. (2016)

CORE-II

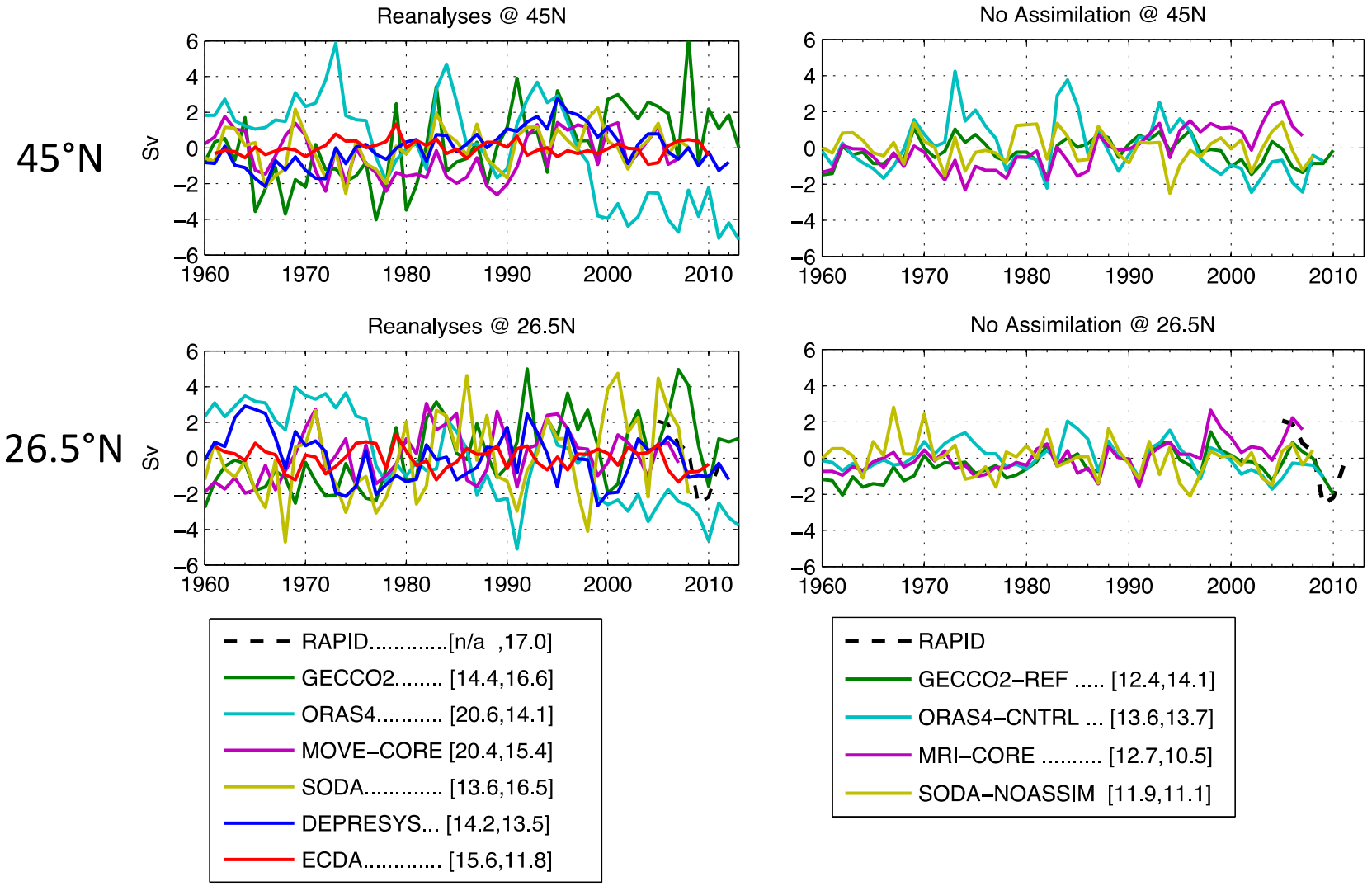
AMOC Maximum Transport Anomaly Time Series



Danabasoglu et al. (2016)

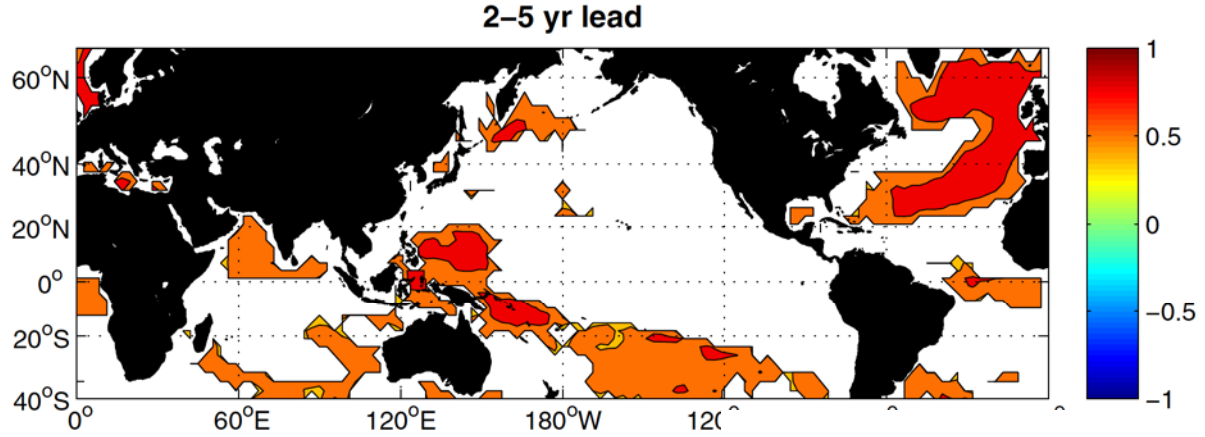
Reanalysis

Annual-Mean AMOC variability at 1000 m Depth



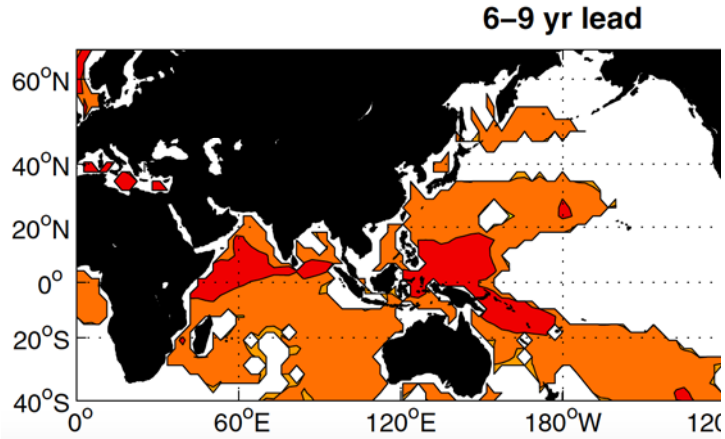
Karspeck et al. (2016)

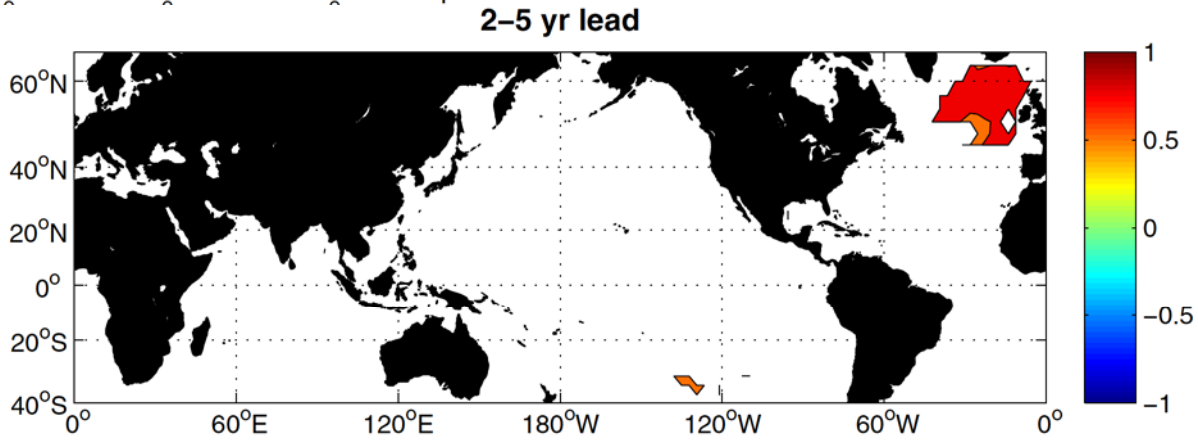
Average Anomaly Correlation Coefficients for SST

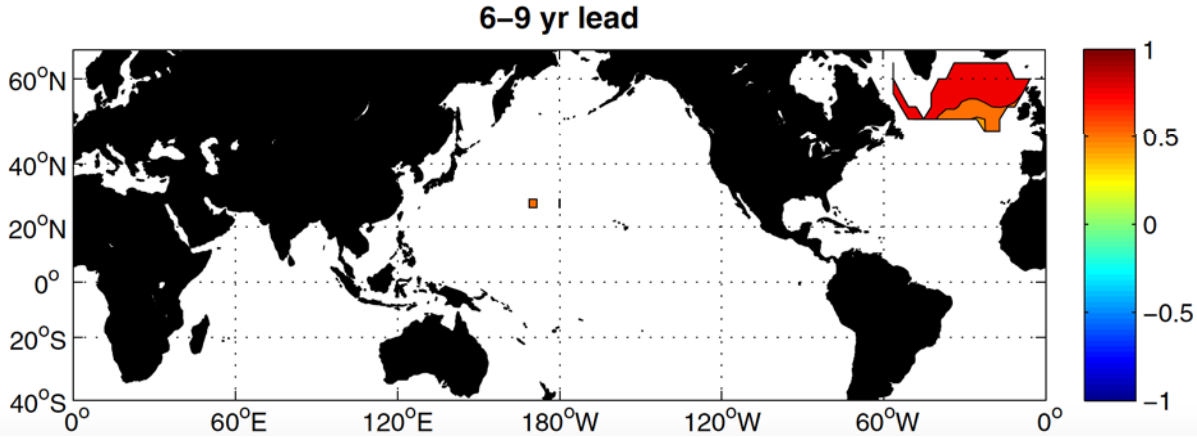


HDInit forecasts

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



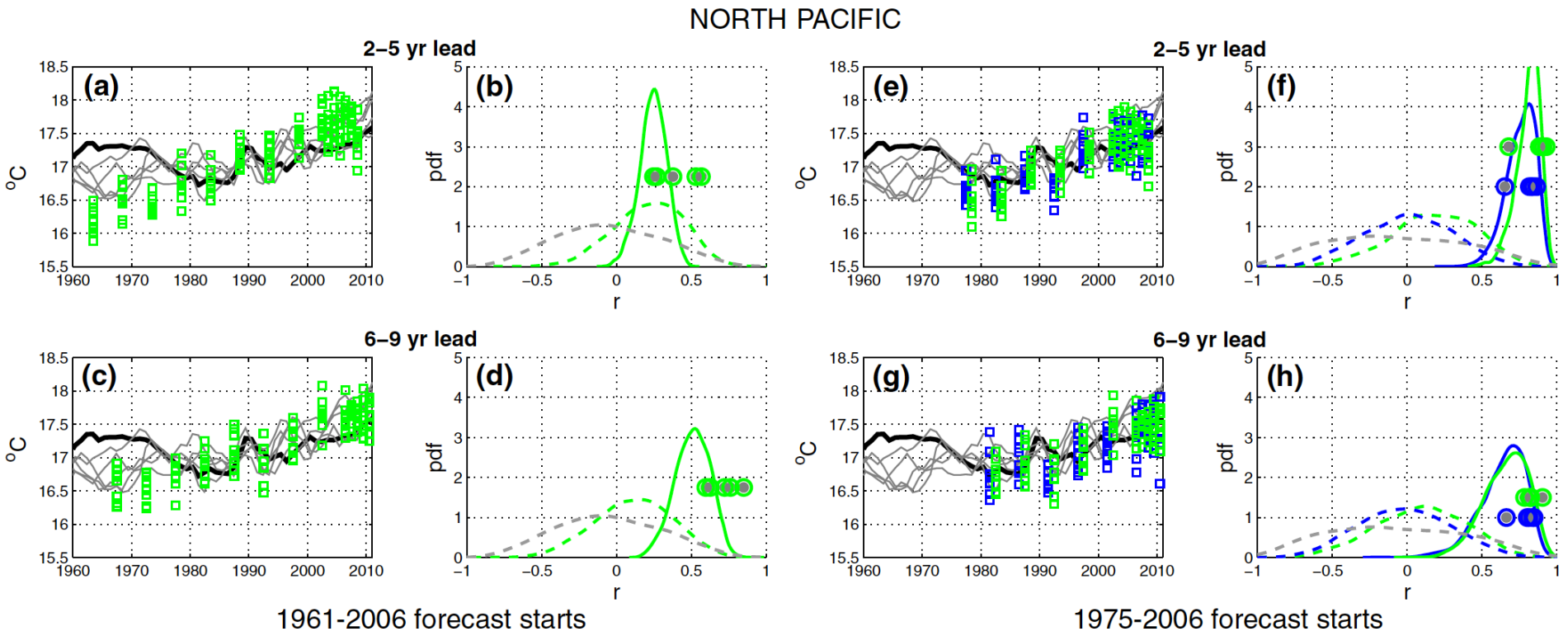




AND > the uninitialized run at a 90 % confidence

Karspeck et al. (2015)

SST Hindcasts and Skill



HDInit and DAInit
Solid black: HADISST
Gray: NoInit (20C)

Gray dashed: no-skill
Green dashed: LIM
Gray-green: Noinit

Karspeck et al. (2015)

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 (U. Hamburg)	4DVAR	YES	YES	YES	YES	[NCEP]*	YES
ORAS4 (ECMWF)	NEMOVAR 3DVar	YES	YES	YES	YES	ERA-40/ERA-I	YES
MOVE-CORE (MRI)	3DVar	YES	NO	NO	YES	CORE II IAF	NO
SODA (TAMU / U.Maryland)	OI	YES	NO	YES	YES	20-CR	YES
DePreSys (UKMET)	Coupled nudging to OI product	YES	NO	YES	NO	N/A	YES
ECDA3.2 (GFDL)	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.

Karspeck et al. (2016)