

Frost Impressions



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ACCESS-S2

The Australian Bureau of Meteorology's current seasonal prediction system ACCESS-S1 in October 2021. Same model configuration:

- Global Atmosphere 6.0 (GA6) N216 (~60km) 85 levels.
- Global Land 6.0 N216 4 levels.
- Global Ocean 5.0 $1/4^\circ$ 75 levels.
- Global Sea Ice 6.0 (CICE 4.1) $1/4^\circ$ 5 ice categories.

Initial conditions (hindcast):

S1: ERA-interim + Met Office FOAM (includes sea ice)

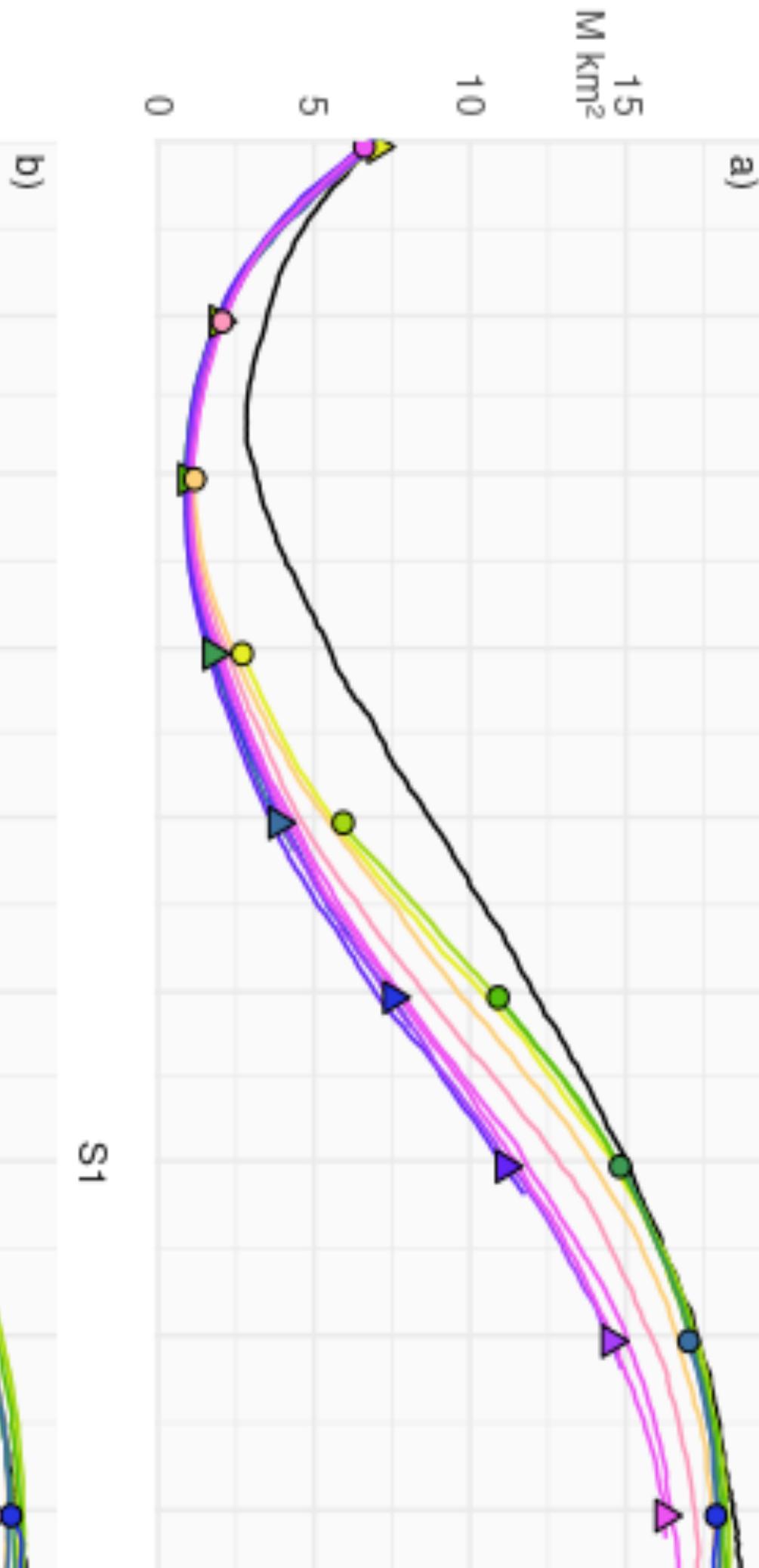
S2: ERA-interim + BOM analysis (doesn't include sea ice)

Results

S2

S1

a)



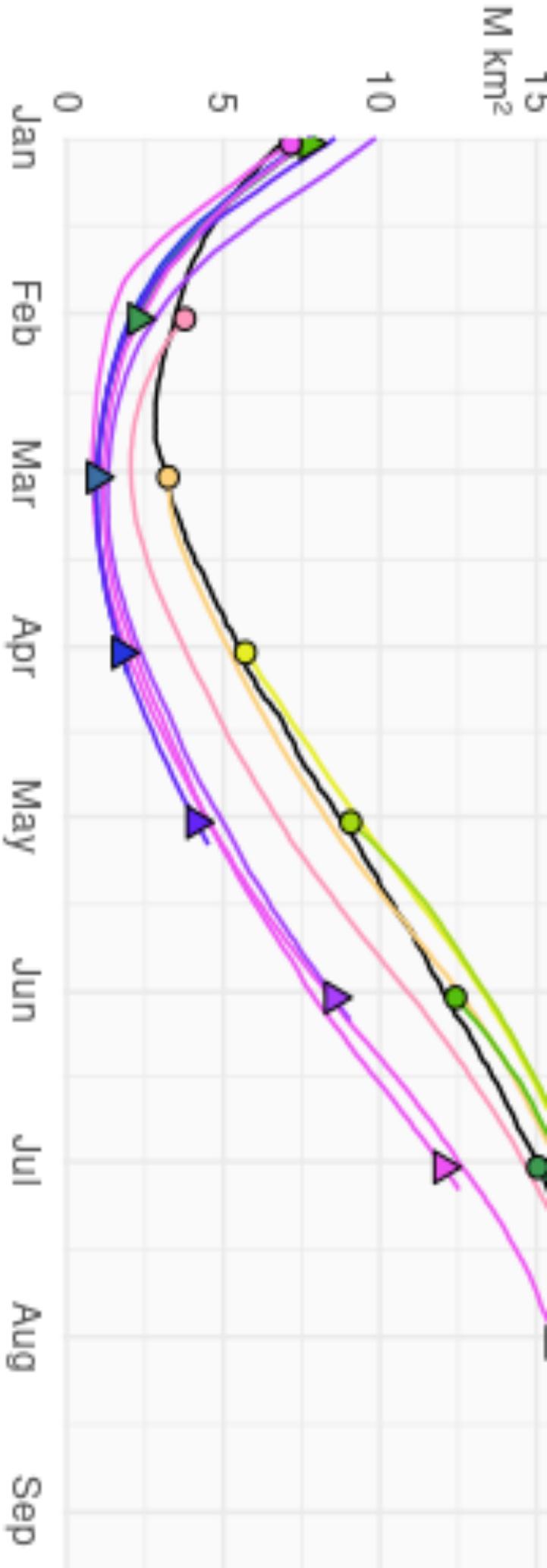


Figure 1: Median sea ice extent for all hindcasts initialised the first of the month. ACCESS-S2 and ACCESS-S1 in colours representing the start month. It median sea ice extent of NSIDC CDR.

RMSE

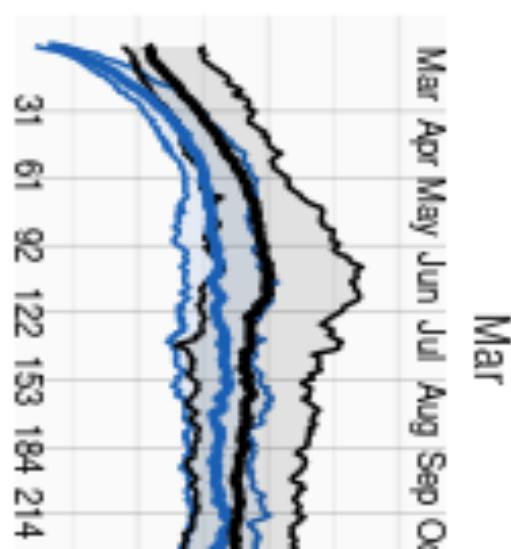
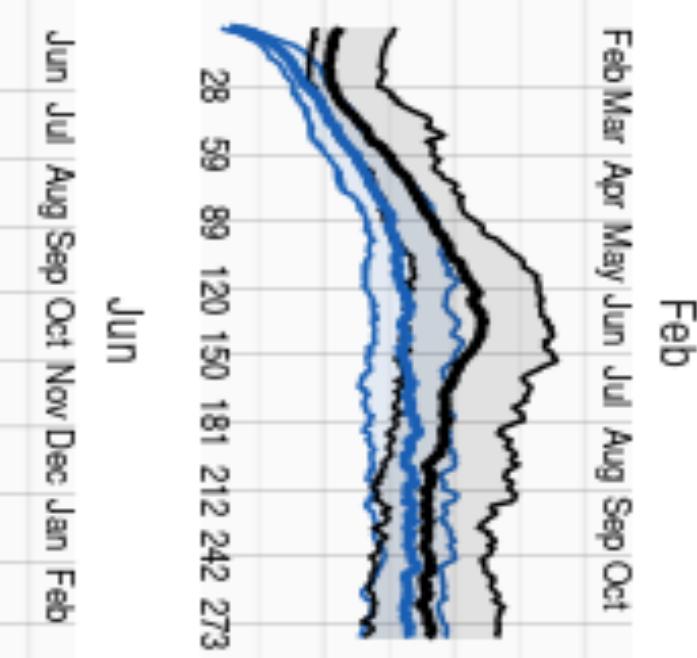
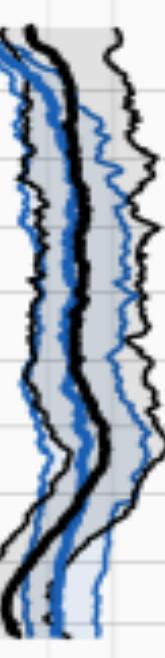
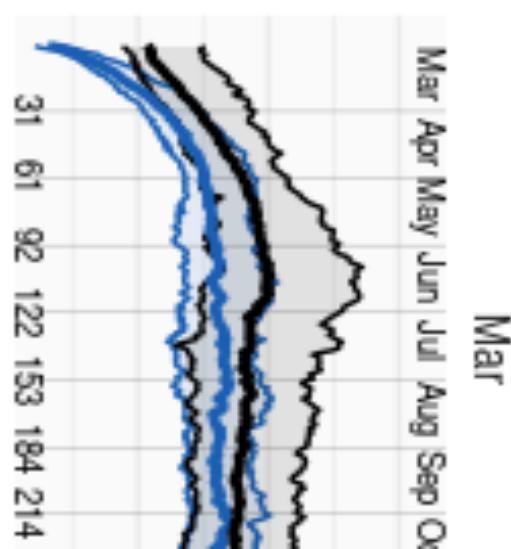
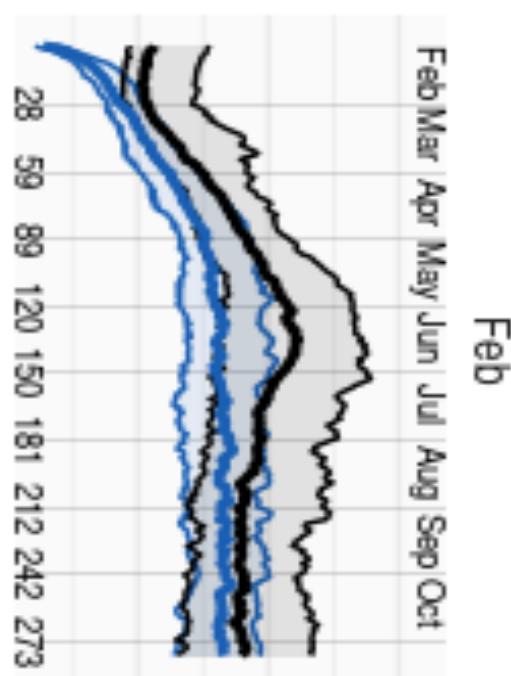
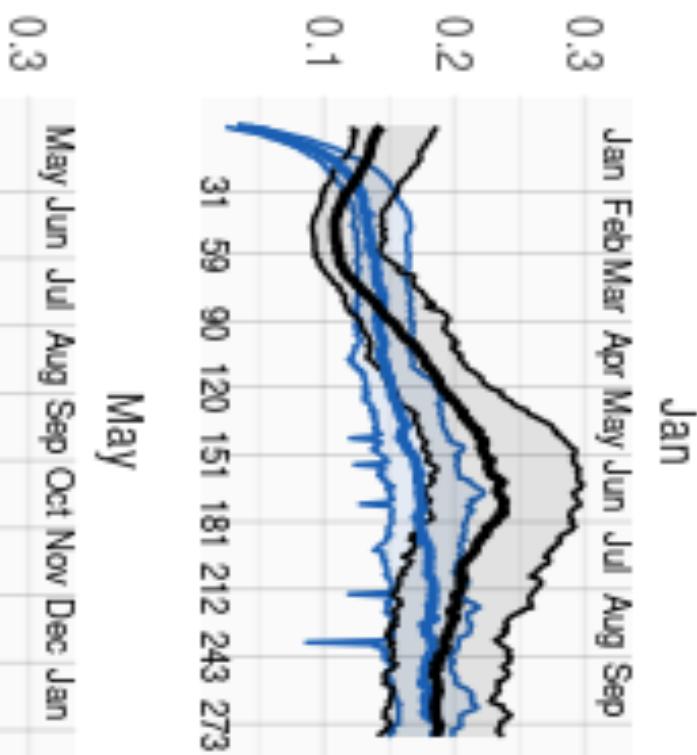
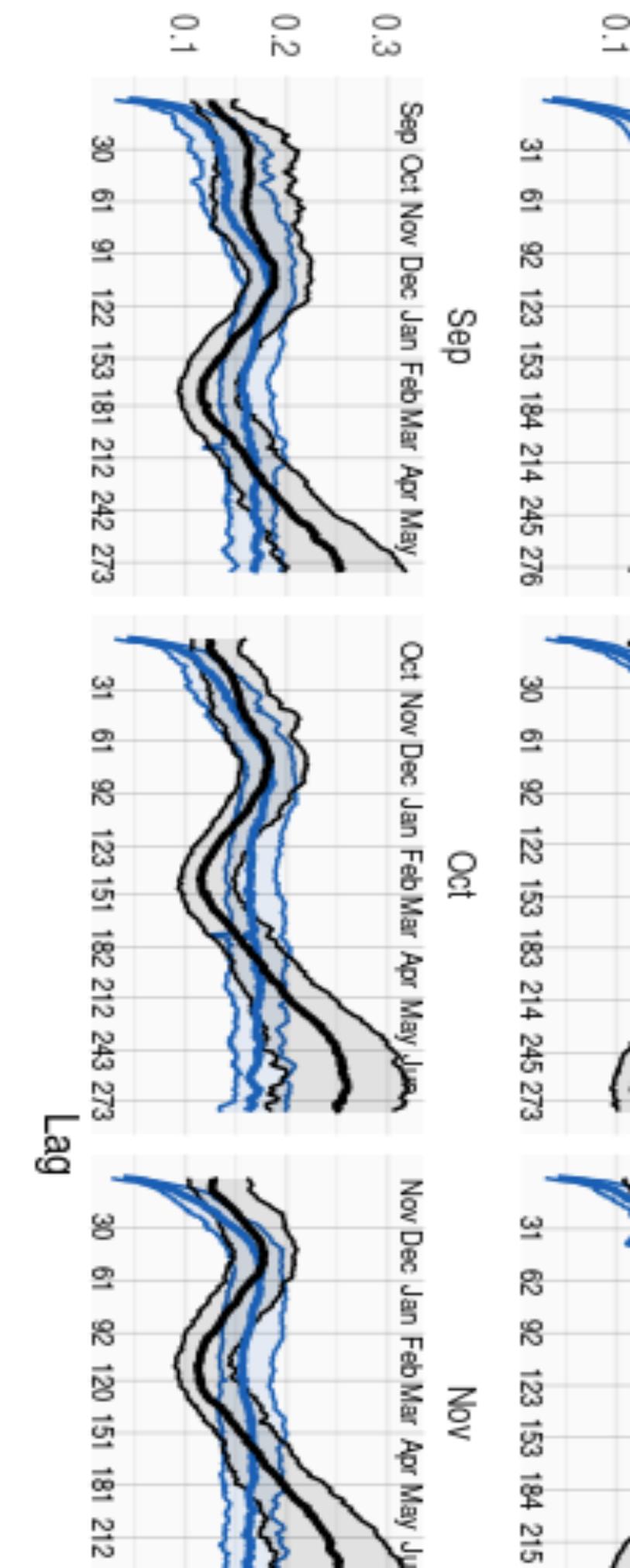


Figure 1: Median and 95% coverage of sea ice concentration as a function of forecast lag for all forecast initialise month compared with a reference forecast of persistence



f ACCESS-S2 Antarctic Sea Ice

a.
|A). Buenos Aires, Argentina.

Data

diction system. Replaced
ACCESS-S2 and S1 hindcasts (1981–20
1st of every month.

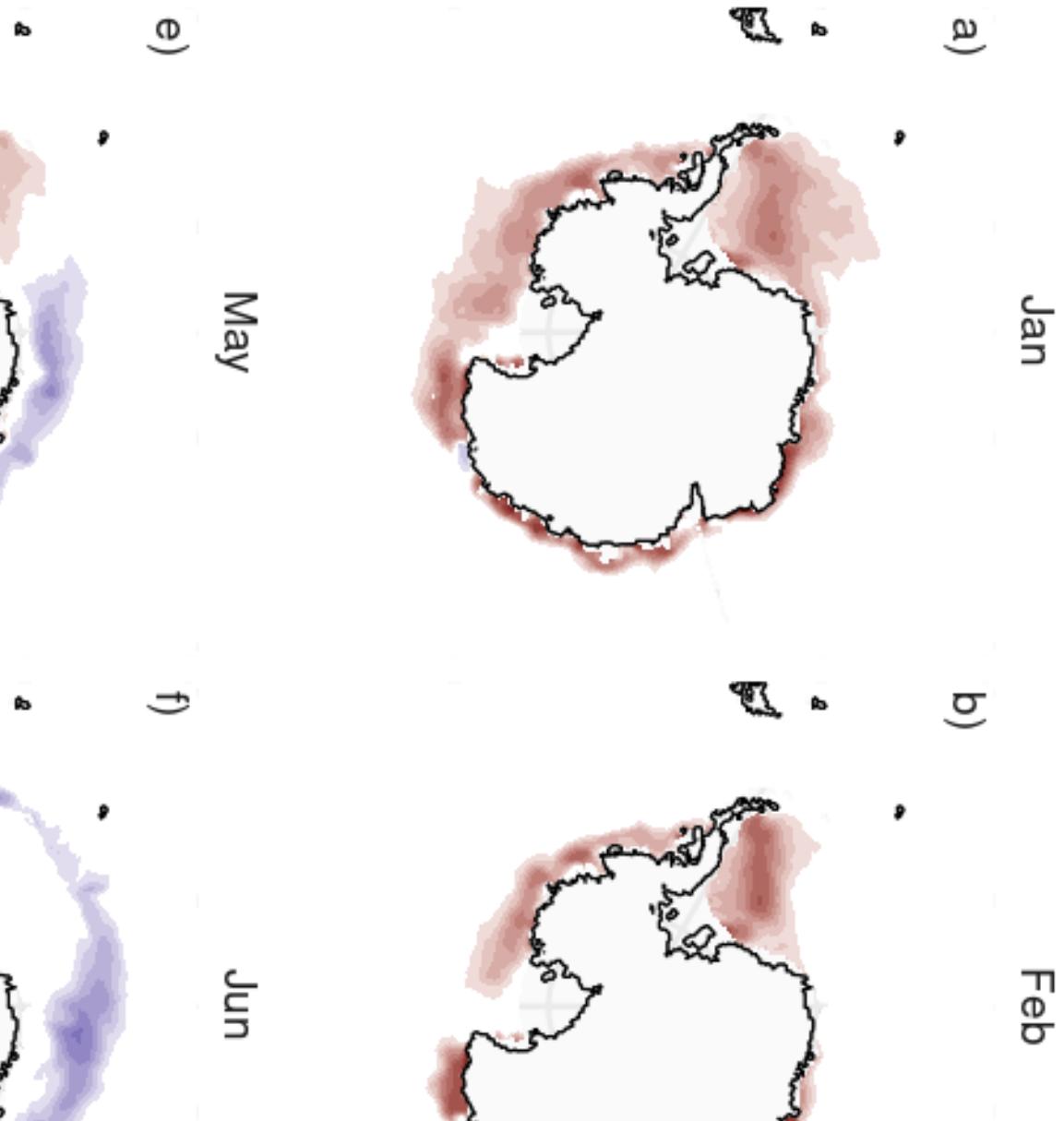
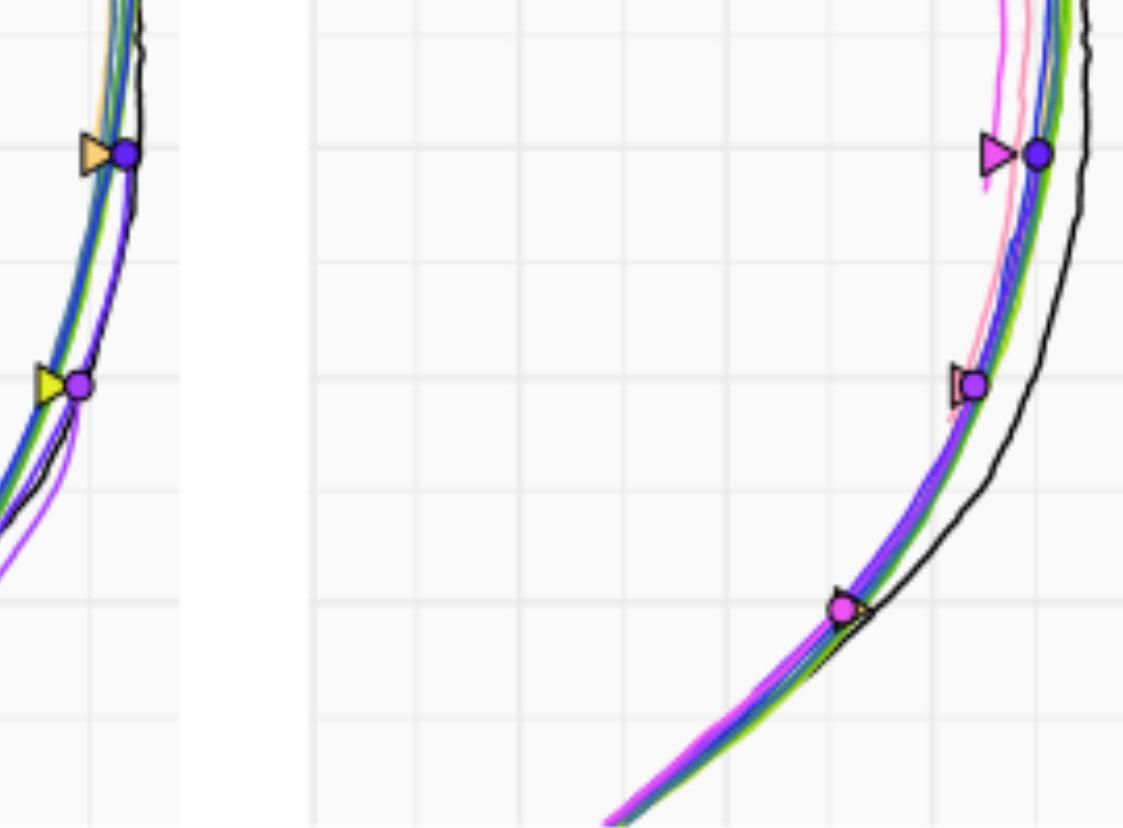
Observations: NSIDC CDRv4 sea ice co

MetricS

Sea Ice Extent: Area covered with at le

RMSE: Root Mean Squared Error of sea

IIE (Integrated Ice Edge Error): Area
presence or absence of sea ice (conce



the month for
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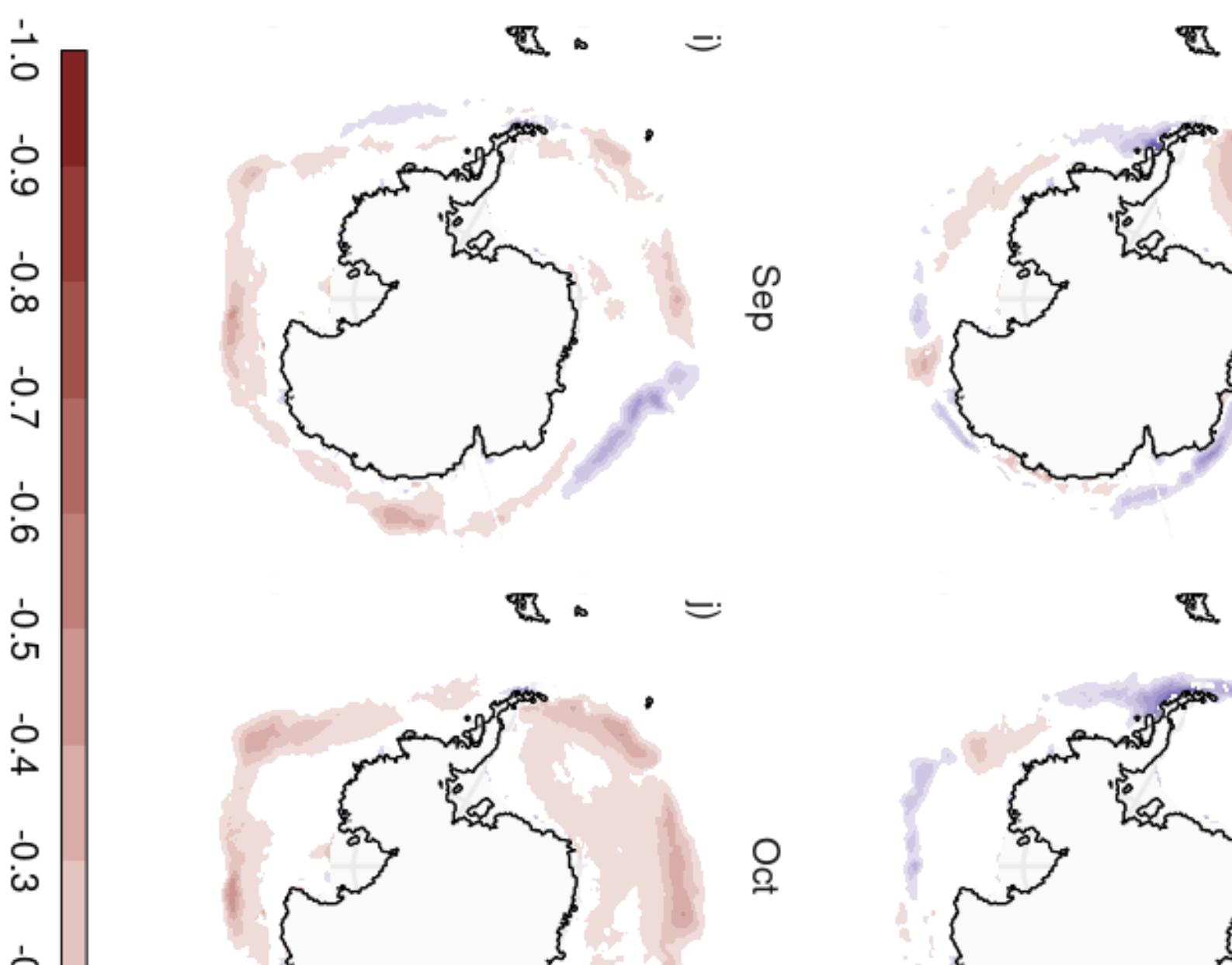
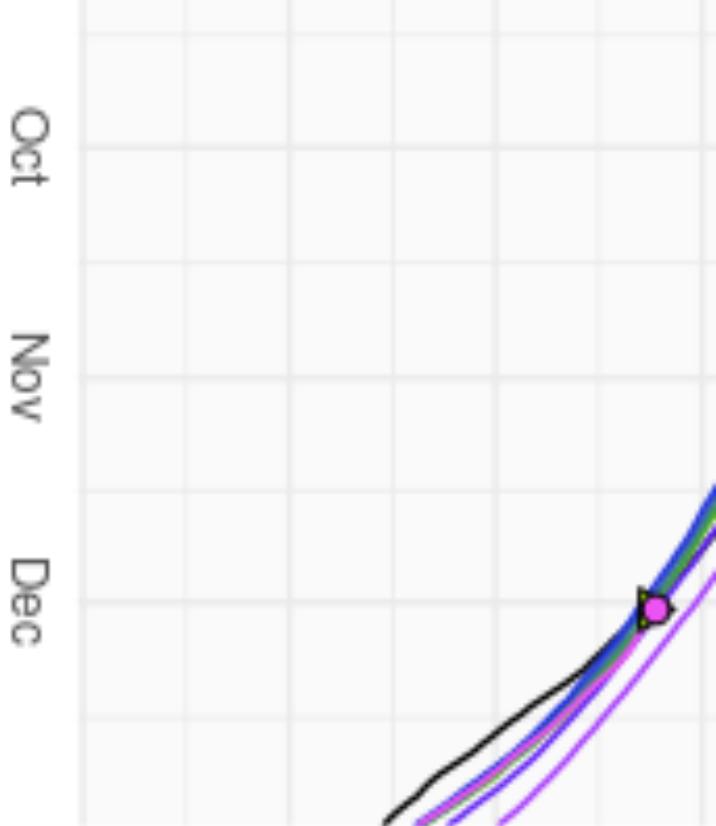
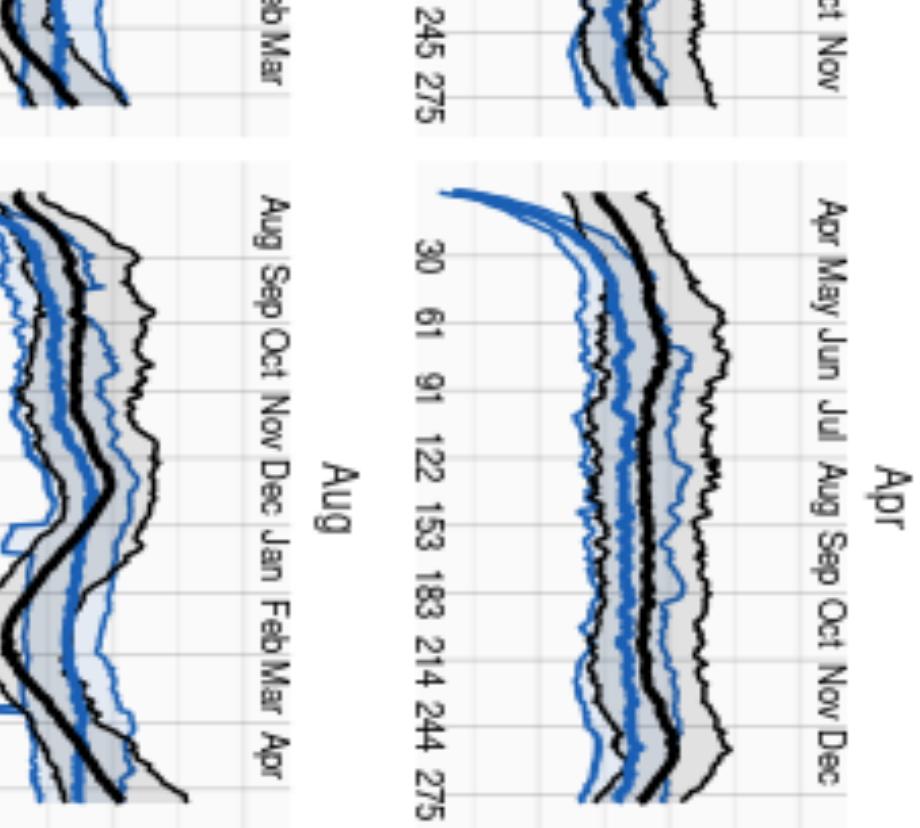
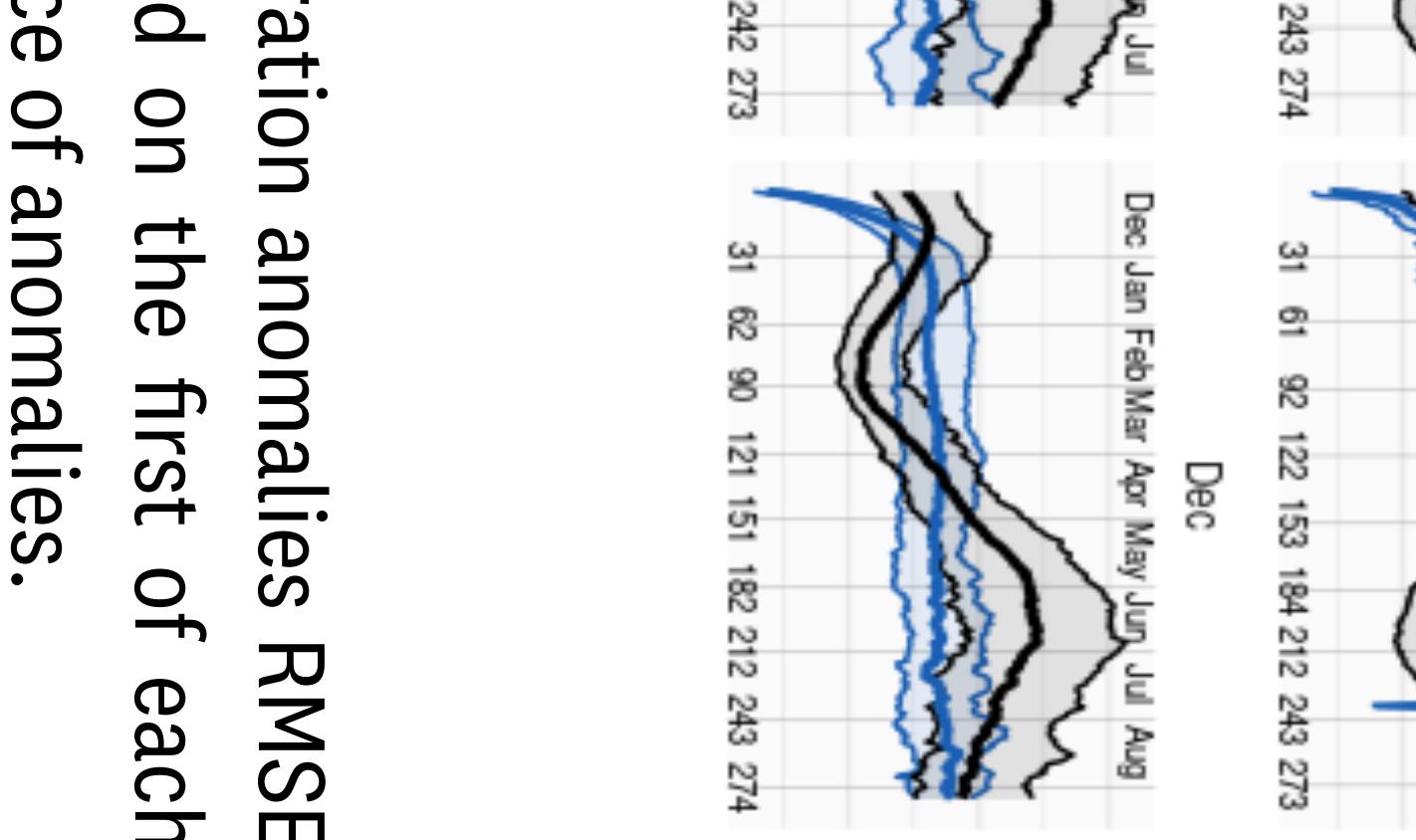


Figure 1: ACCESS-S2 sea ice concentration





'ation anomalies RMSE
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ce of anomalies.

The Forecast



Securing Antarctica's
Environmental Future

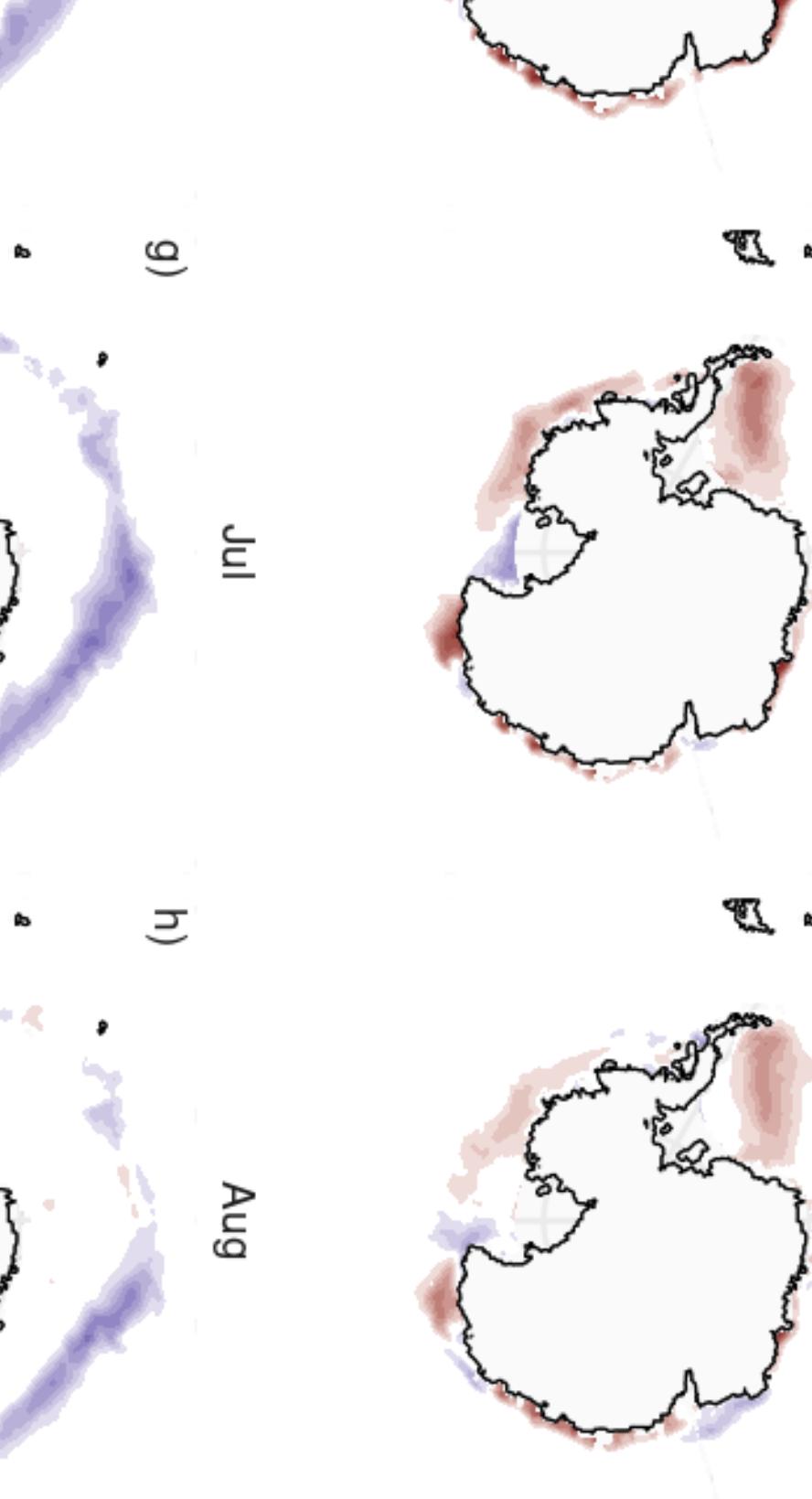
elio.campitelli@monash.edu

14 and 1990–2012, respectively). Initialised at the concentrations.

east 15% sea ice.

a ice concentration anomalies.

in which model and observations disagree on the
ntration >15%).



c)

Mar

d)

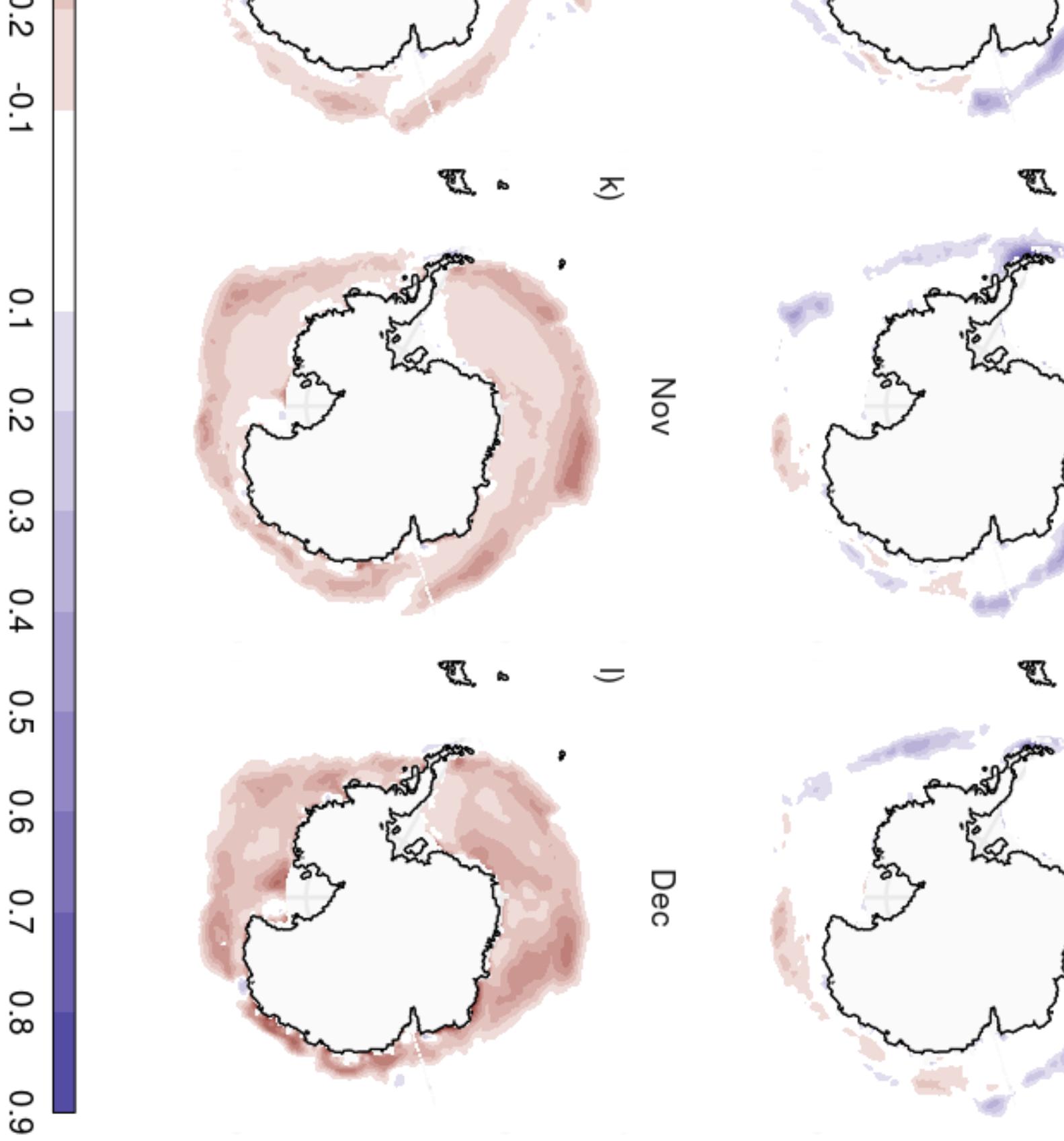
Apr

g)

Jul

h)

Aug



entrainment bias with NSIDC sea ice concentration.

