

Fig. S3a: Modeled times series of transport of Cant across 25° N, the OVIDE section and Nordic sills over the period 2003-2011 diagnosed in online (monthly resolution) and across 36° N, the OVIDE section and Nordic sills over the period 1959-2011 diagnosed in offline (annual resolution). Red continuous lines represent the smoothen times series by a moving average (window: 12 months for the period 2003-2011 and 10 years for the period 1959-2011)

Transport of Cant across a section (PgC yr⁻¹)

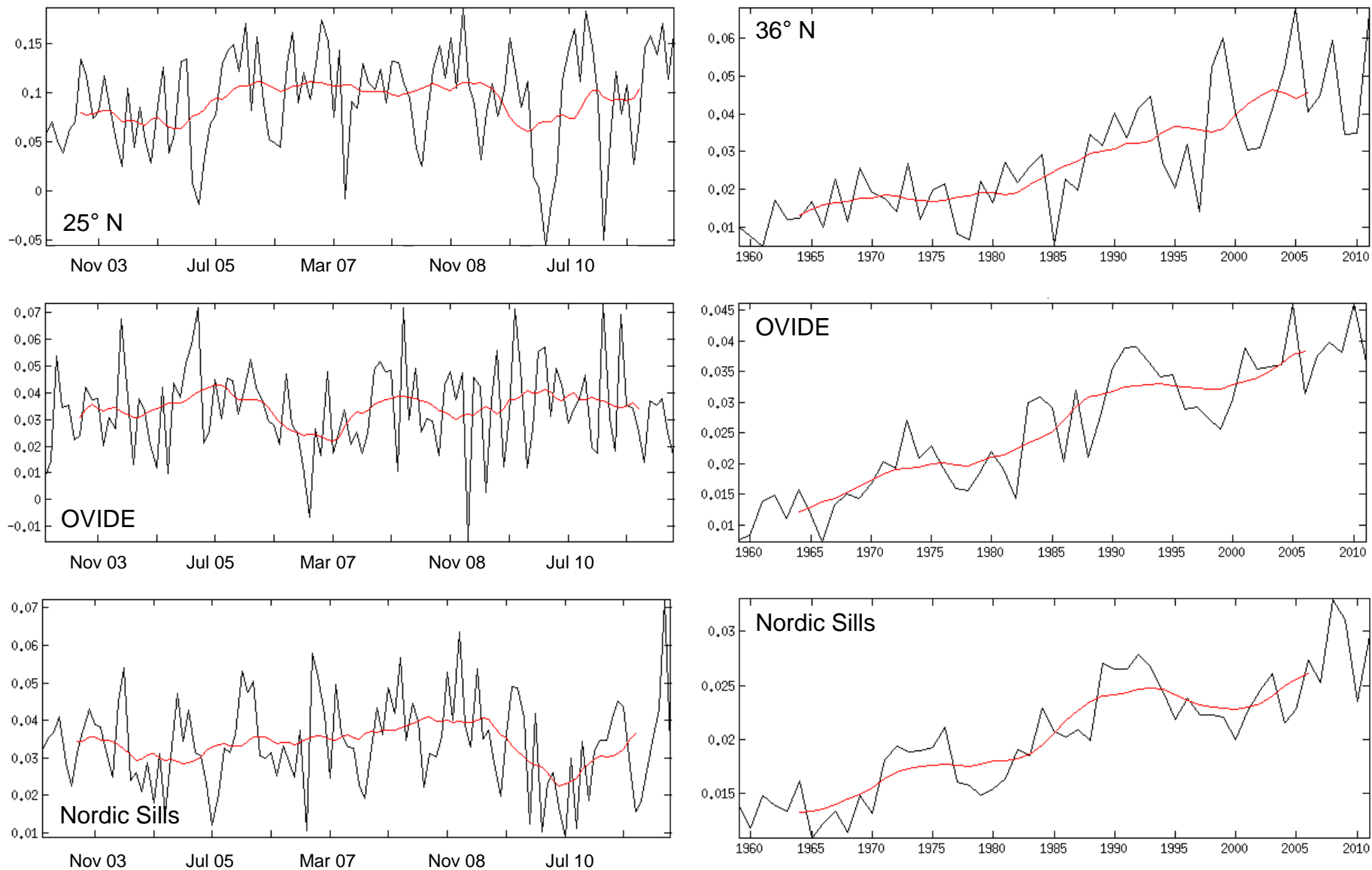


Fig. S3b: Modeled times series of air to sea anthropogenic CO₂ fluxes for the three boxes studied in the paper diagnosed either in online over the period 2003-2011 (monthly resolution; region from 25° N to Nordic sills) or in offline over the period 1959-2011 (annual resolution; region from 36° N to Nordic sills). Red continuous lines represent the smoothen times series by a moving average (window: 12 months for the period 2003-2011 and 10 years for the period 1959-2011)

Air to sea anthropogenic CO₂ fluxes(PgC yr⁻¹)

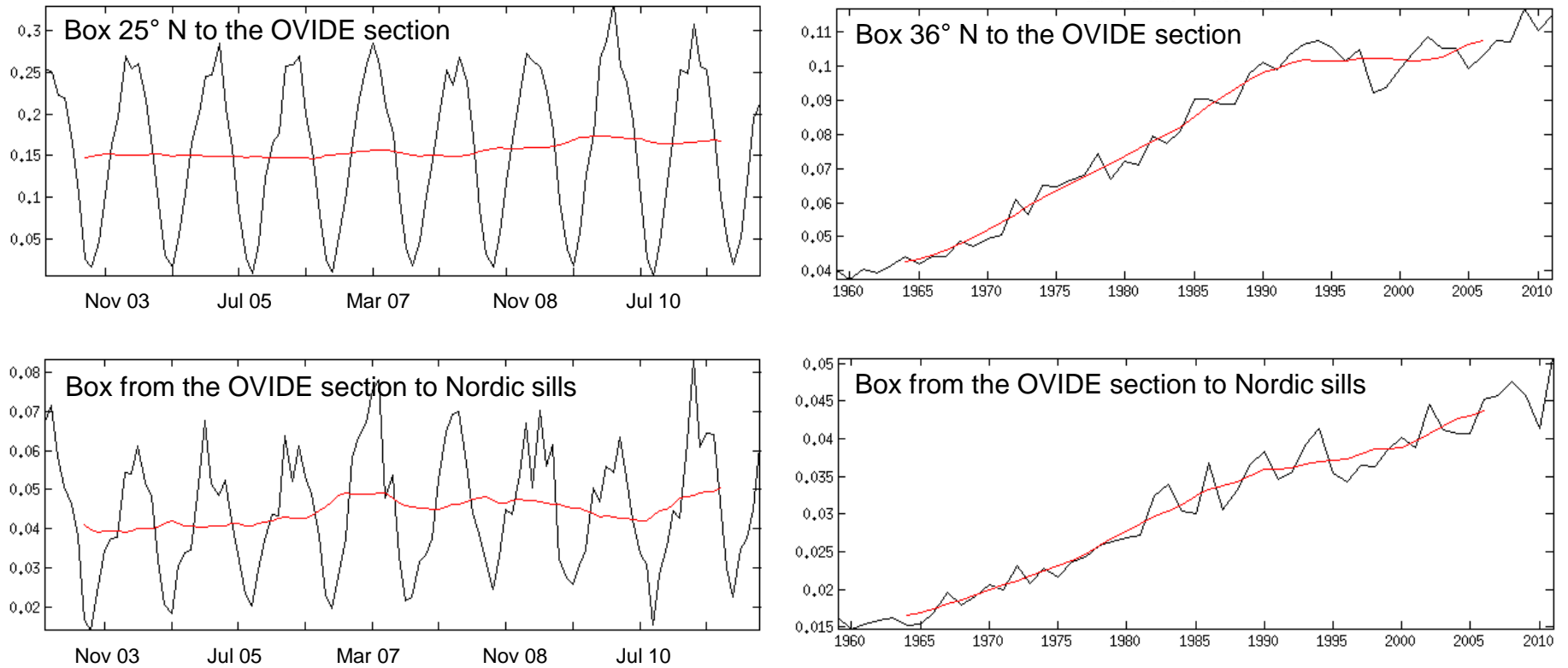


Fig. S3c: Modeled times series of time rate of change in Cant for the three boxes studied in the paper diagnosed either in online over the period 2003-2011 (monthly resolution; region from 25° N to Nordic sills) or in offline over the period 1959-2011 (annual resolution; region from 36° N to Nordic sills). Red continuous lines represent the smoothen times series by a moving average (window: 12 months for the period 2003-2011 and 10 years for the period 1959-2011)

Time rate of change in Cant (PgC yr^{-1})

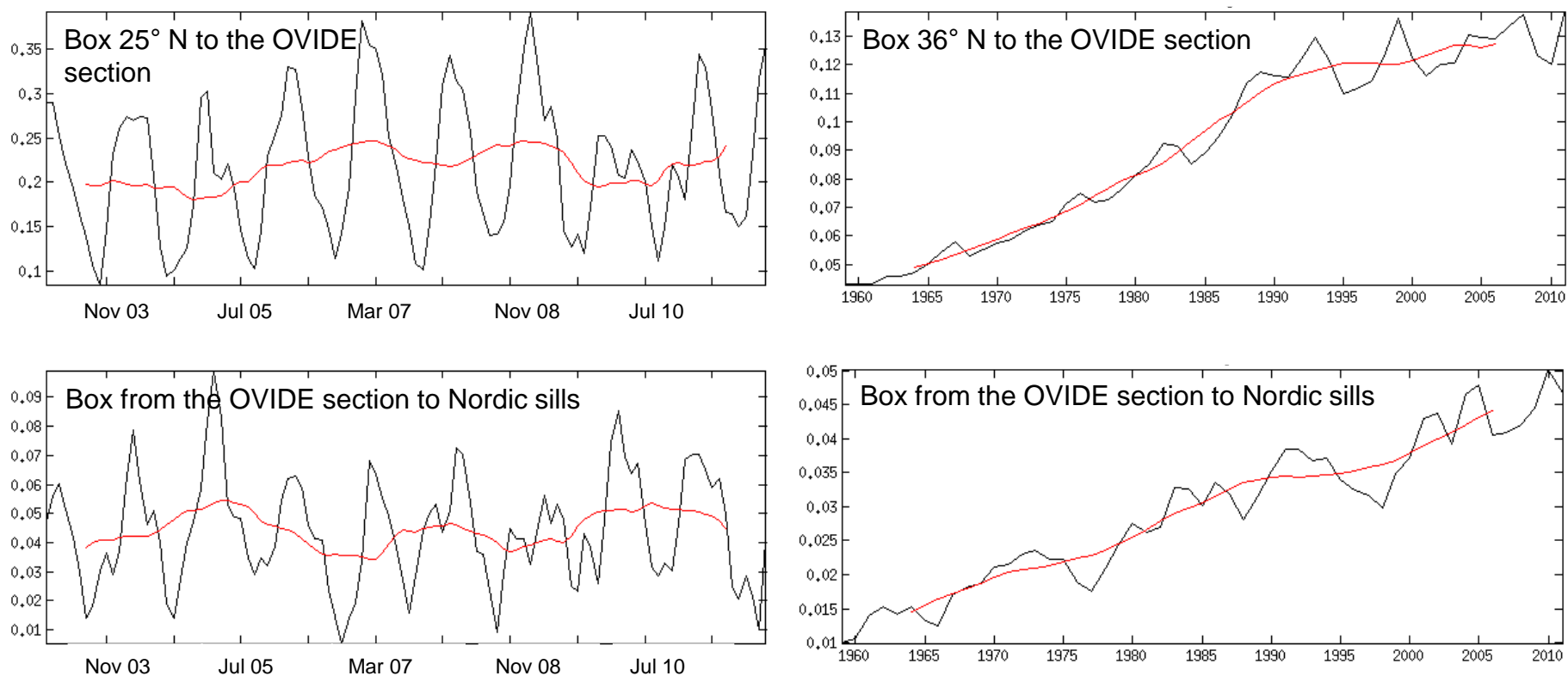


Fig. S3d: Modeled times series of transport divergence of Cant (incoming minus outgoing mT_{cant}) for the three boxes studied in the paper diagnosed either in online over the period 2003-2011 (monthly resolution; region from 25° N to Nordic sills) or in offline over the period 1959-2011 (annual resolution; region from 36° N to Nordic sills). Red continuous lines represent the smoothen times series by a moving average (window: 12 months for the period 2003-2011 and 10 years for the period 1959-2011)

Transport divergence of Cant (PgC yr⁻¹)

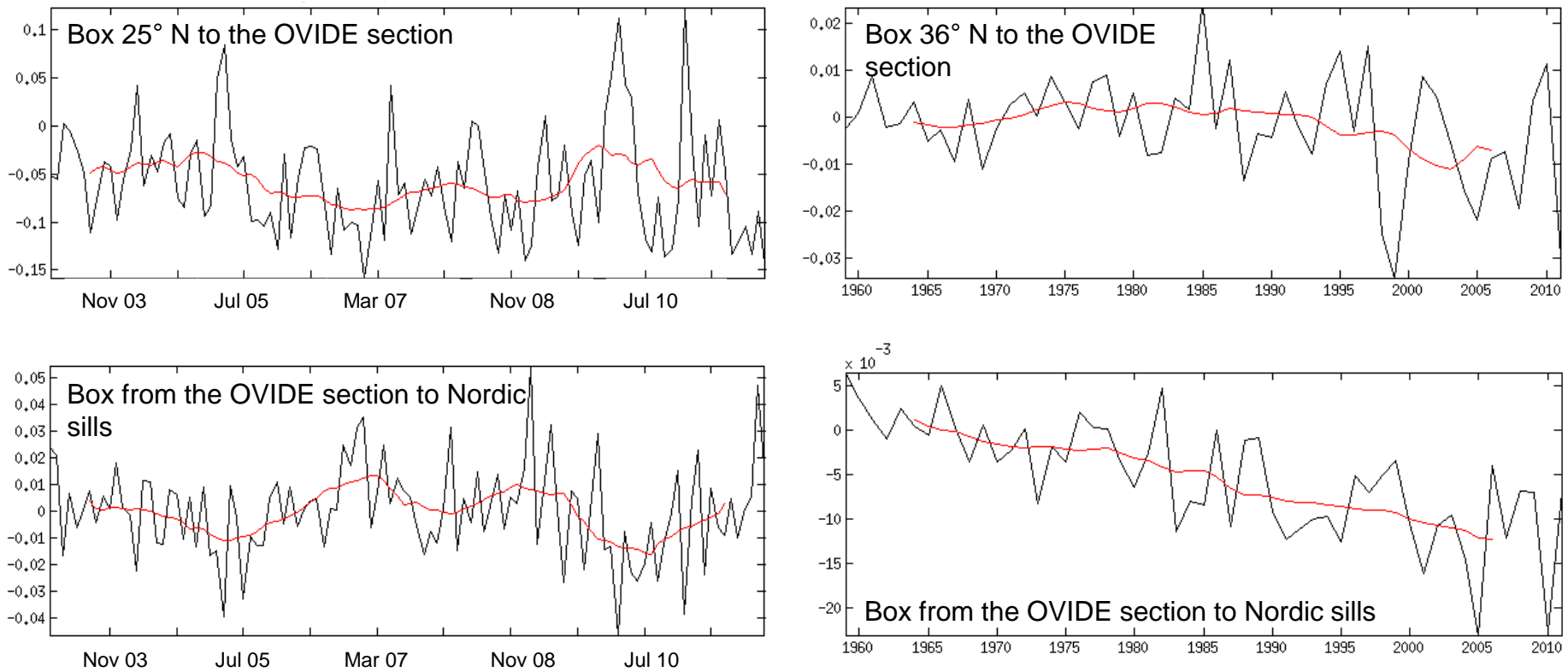


Fig. S3e: Modeled times series of MOC magnitude and heat transport across 36° N and OVIDE section over the period 1959-2011. Red continuous lines represent the smoothen times sieries by a moving average (window: 10 years)

