

1 Northern section

The first part of the simulation (POLGYR) has a salinity bias in the upper 500 m. This is something that is corrected in the second part (ROCKALL) presumably due to the surface salinity restoring that was activated.

Except for this bias, the stratification in the simulations and the different datasets is in good agreement.

Clearly the climatological data cannot resolve the structure of the anticyclone well, presumably due to a lack of in-situ data (we can quantify this by looking at the number of profiles used in WOA for example).

The CTD data and the model in 2011 (and in previous years below 500 m) are remarkably similar. That is a good assessment that we can use the simulation to investigate the dynamics of the RT anticyclone. The good agreement between water masses in the CTD data and in the 2010-2011 simulation makes me confident that we can use it for Lagrangian analysis of water masses as well.

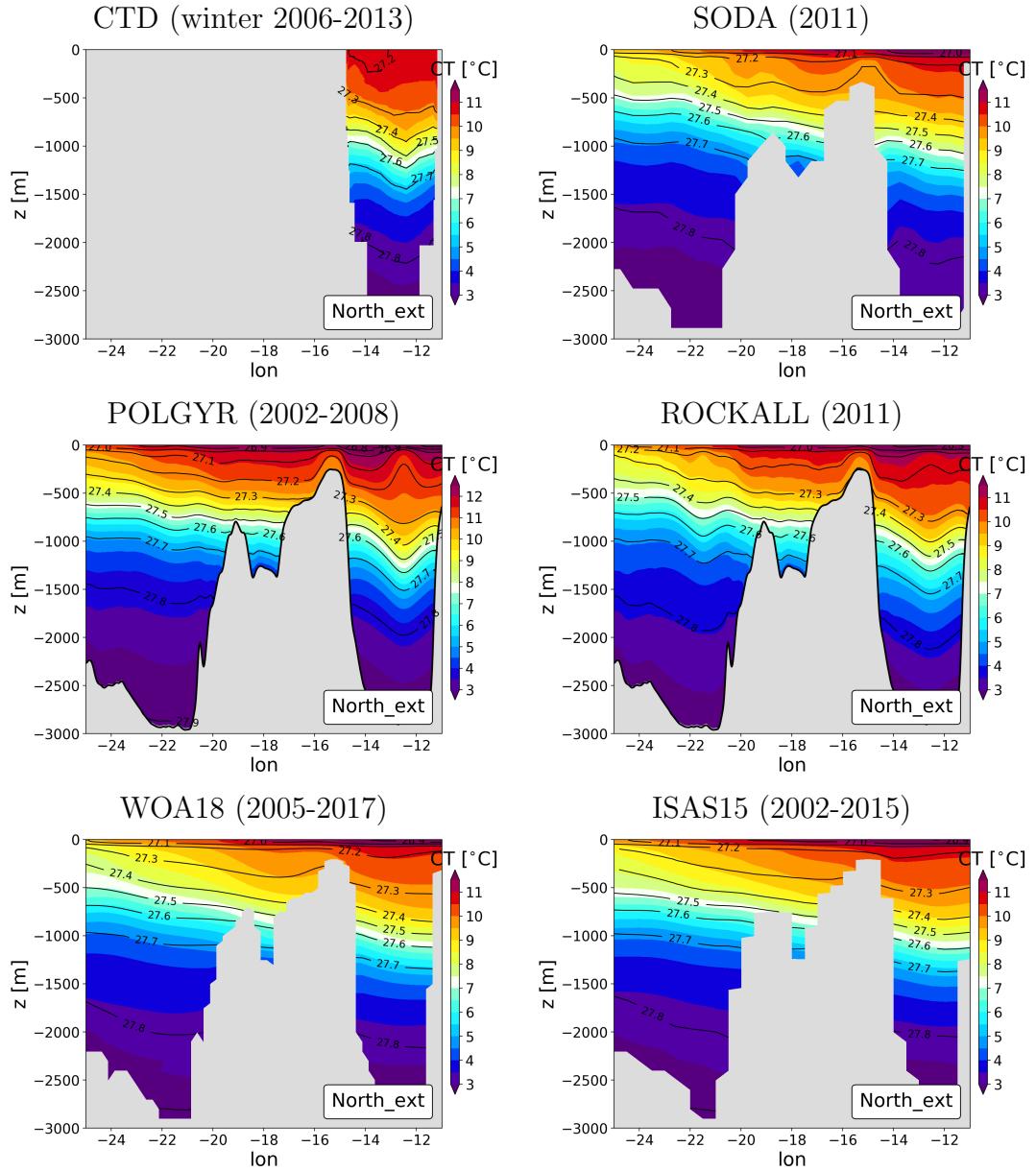


Figure 1: Annual mean of Conservative Temperature and potential density (contours)

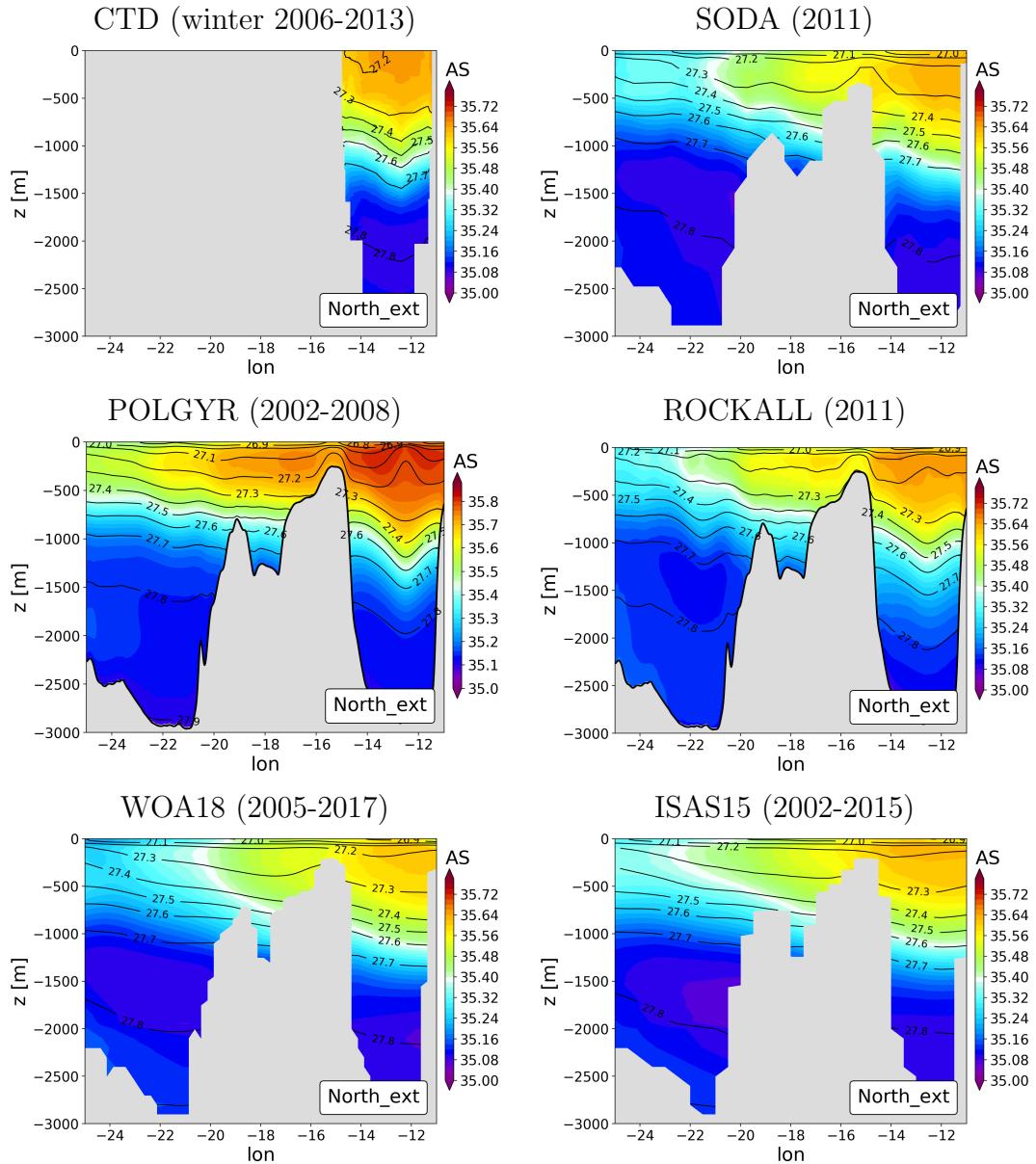


Figure 2: Annual mean of Absolute Salinity and potential density (contours)

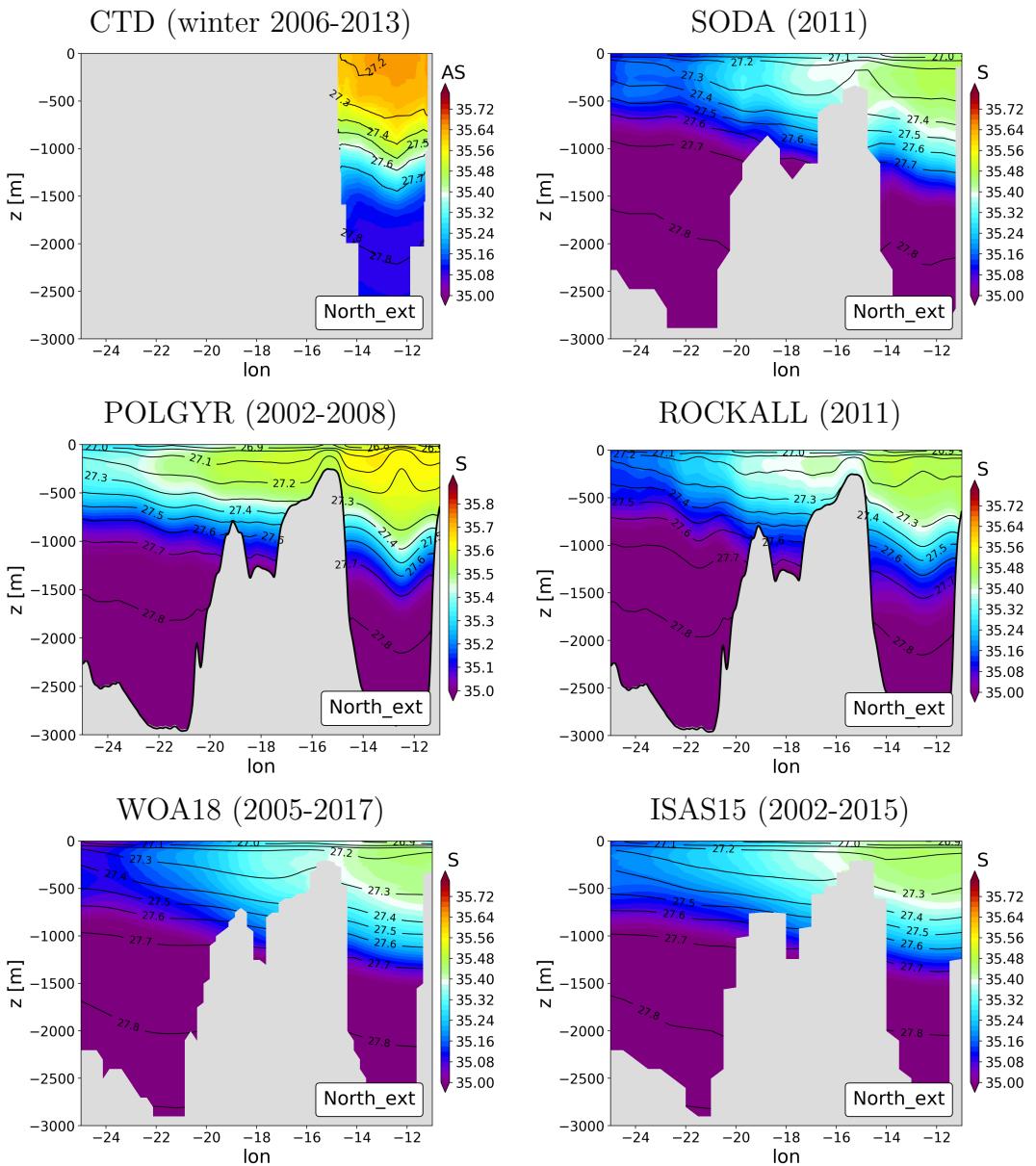


Figure 3: Annual mean of Salinity and potential density (contours)

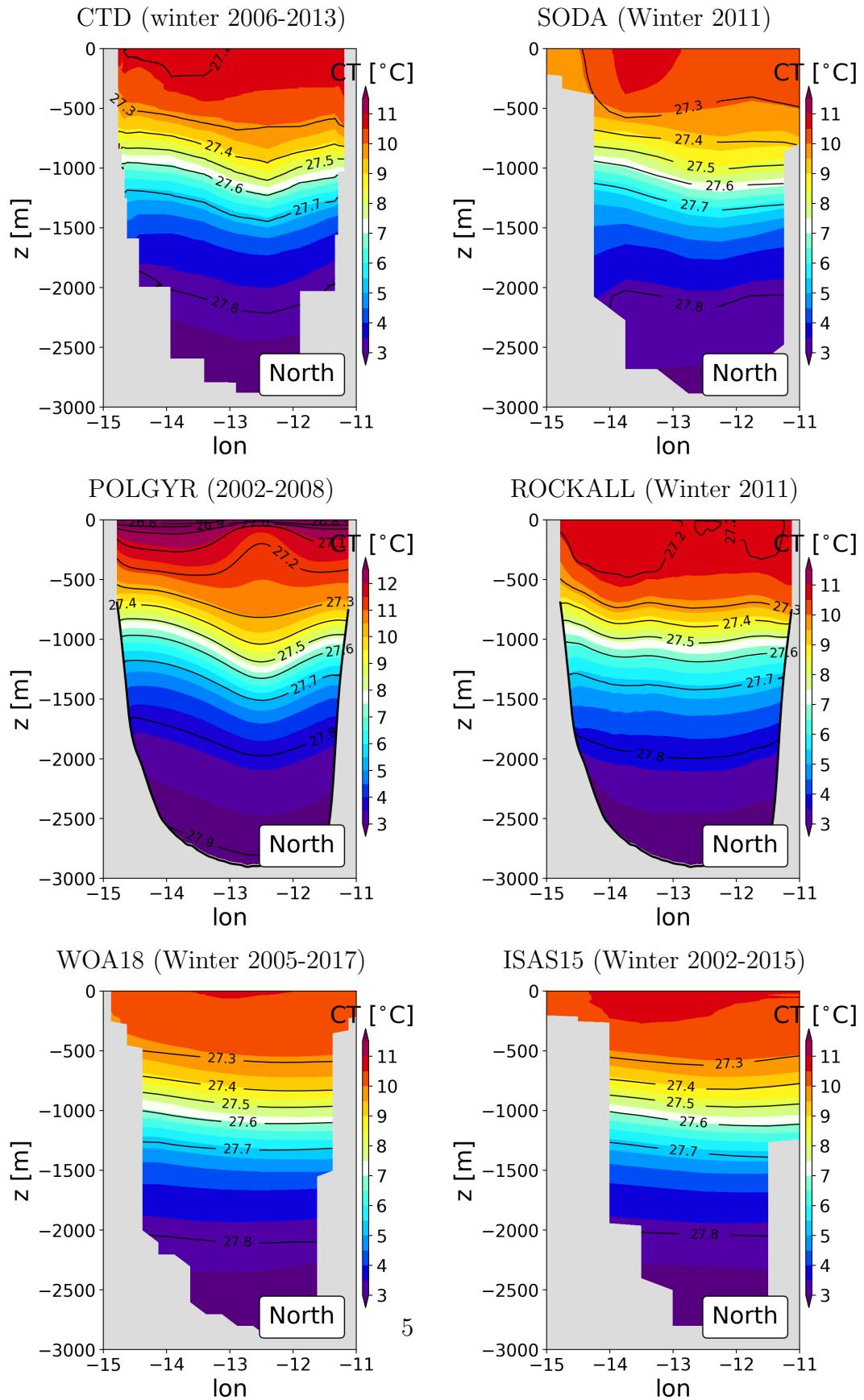


Figure 4: Winter mean of Conservative Temperature and potential density (contours)

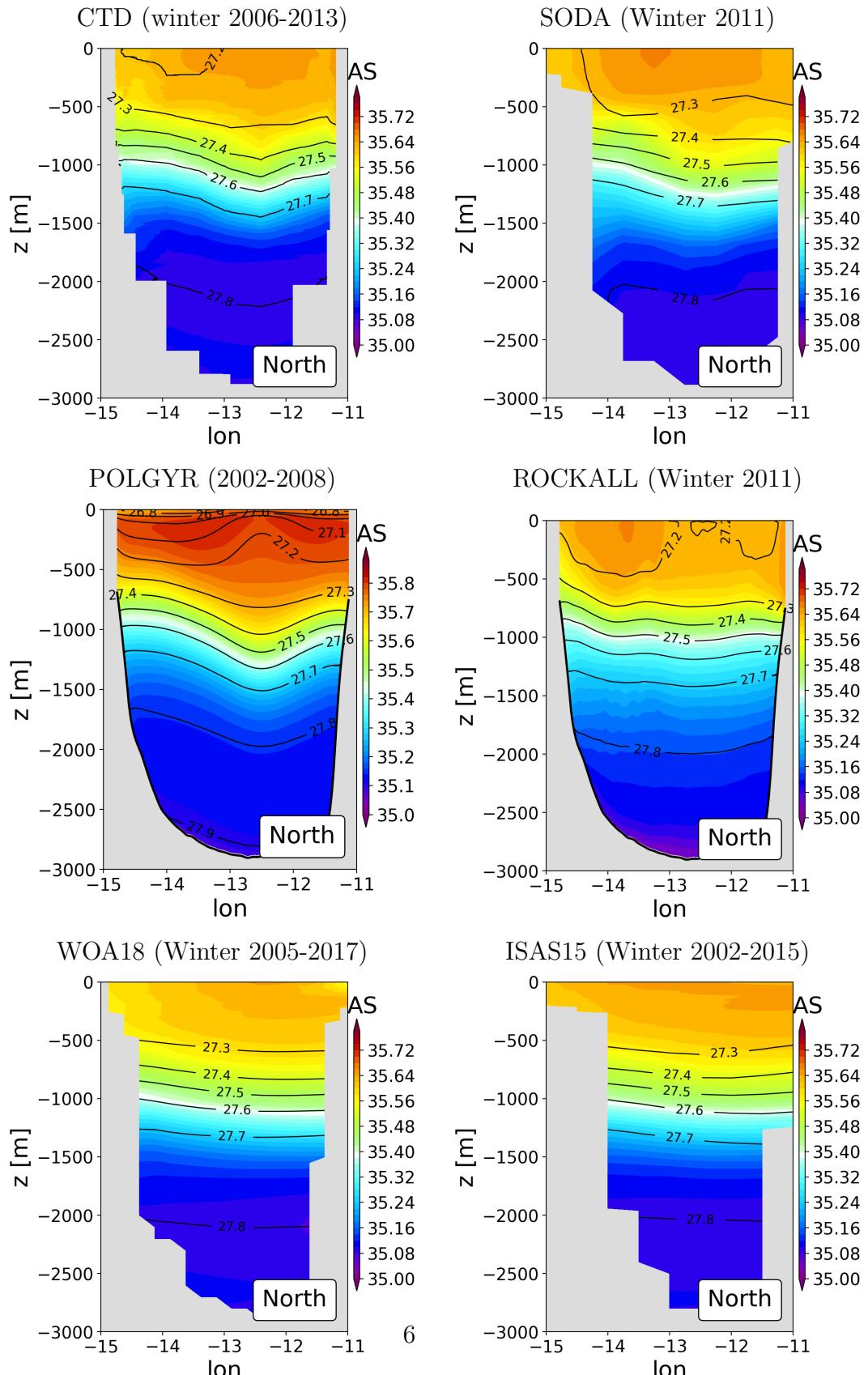


Figure 5: Winter mean of Conservative Temperature and potential density (contours)

2 Southern section

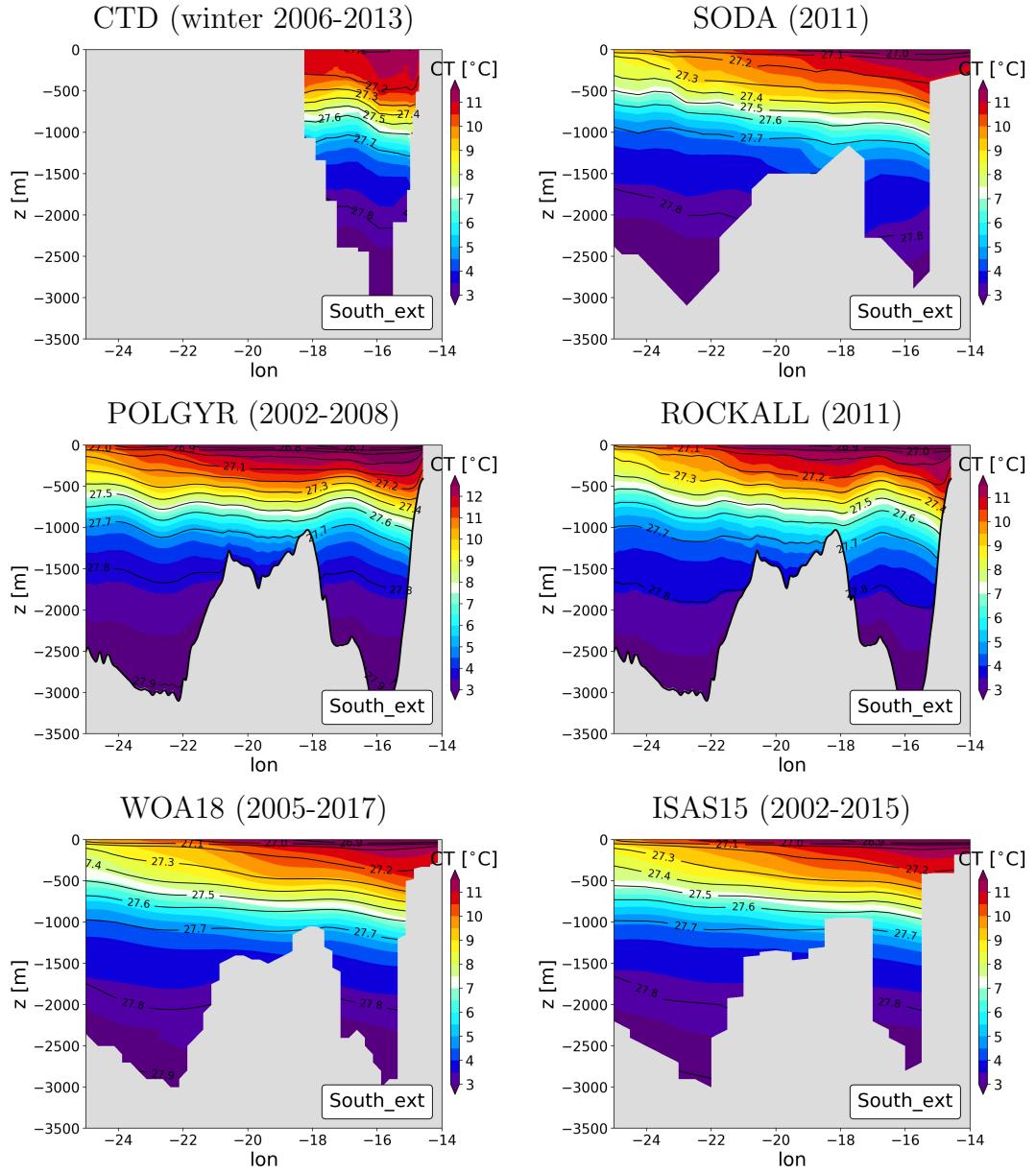


Figure 6: Annual mean of Conservative Temperature and potential density (contours)

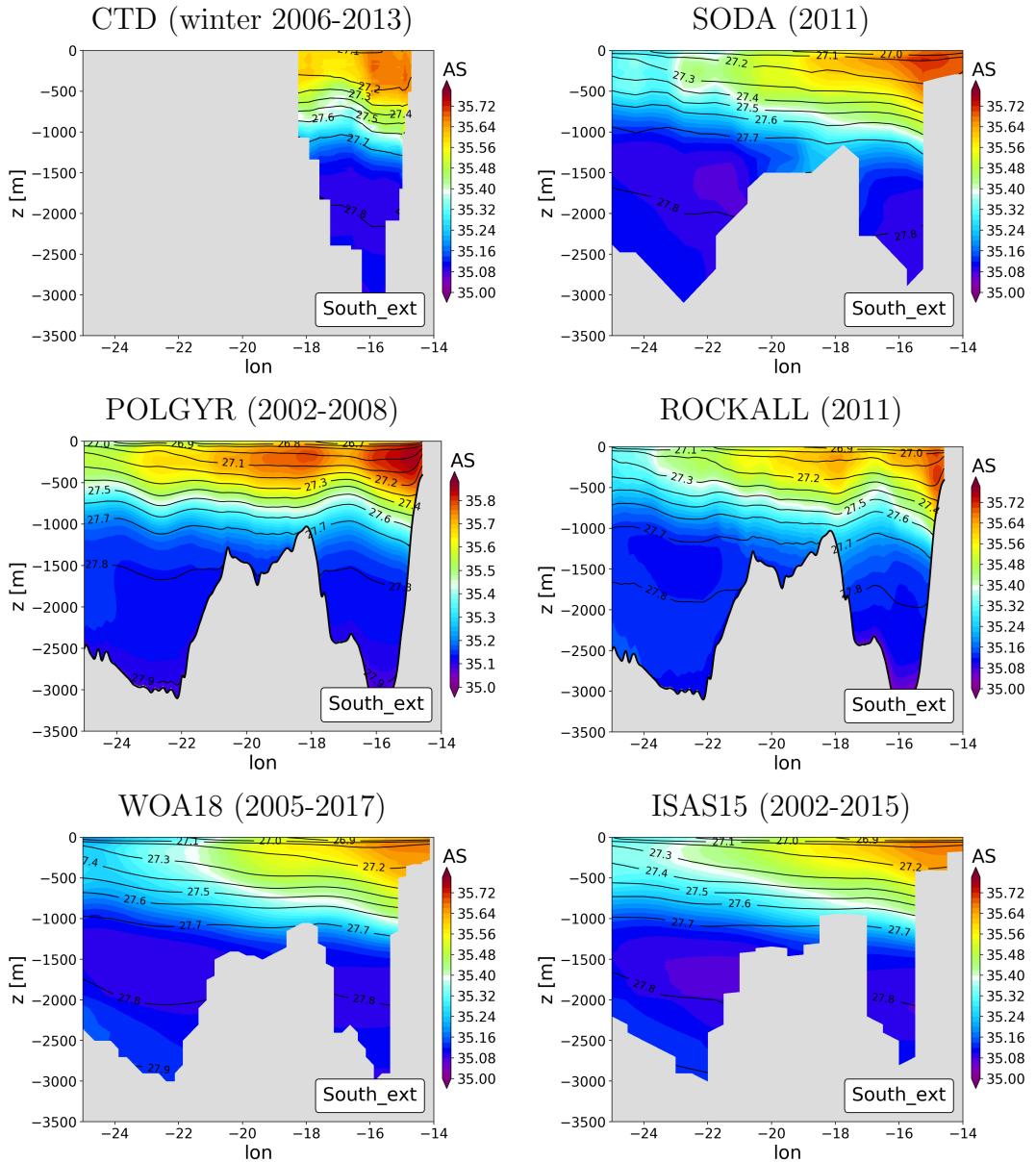


Figure 7: Annual mean of Absolute Salinity and potential density (contours)

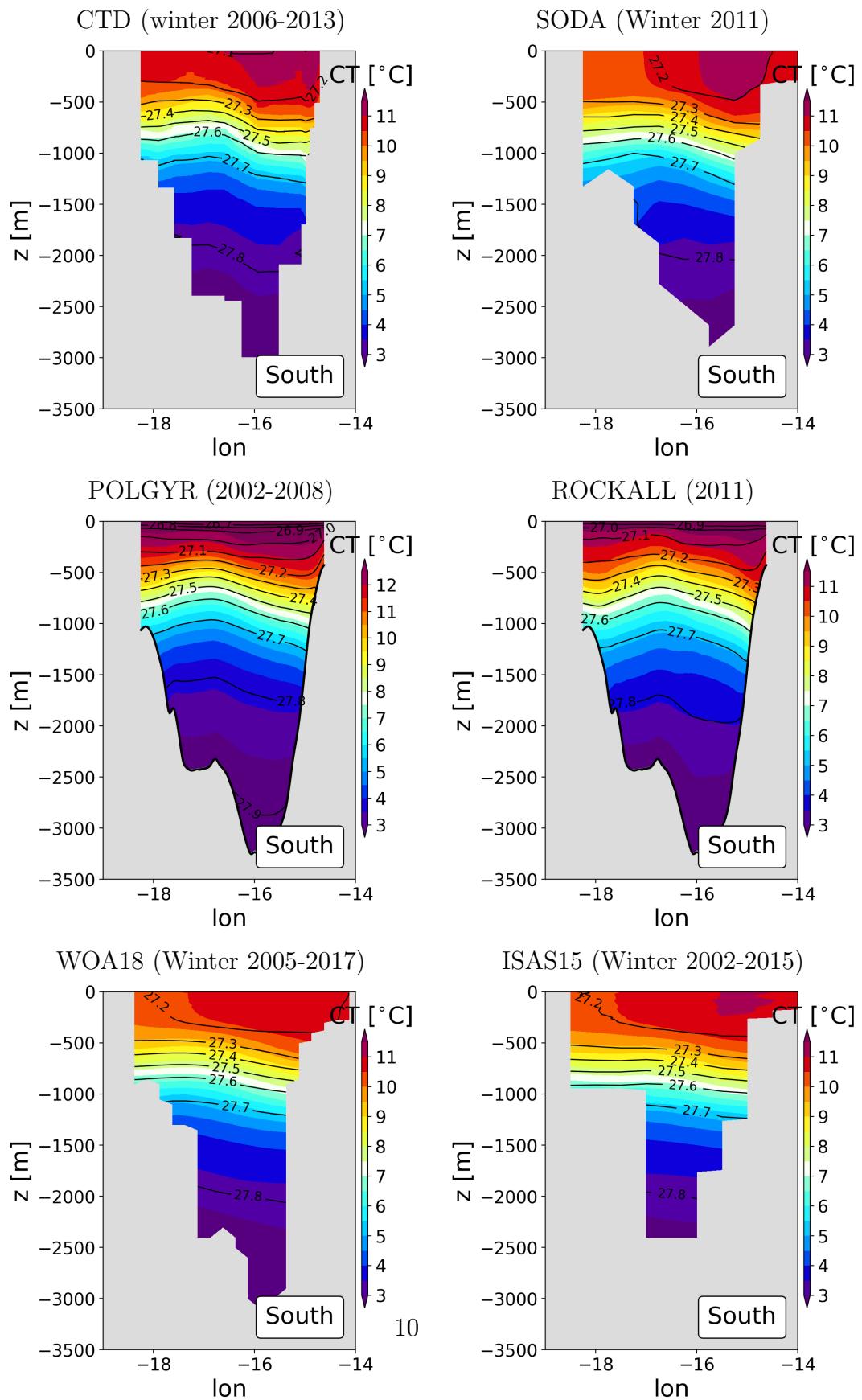


Figure 8: Winter mean of Conservative Temperature and potential density (contours)

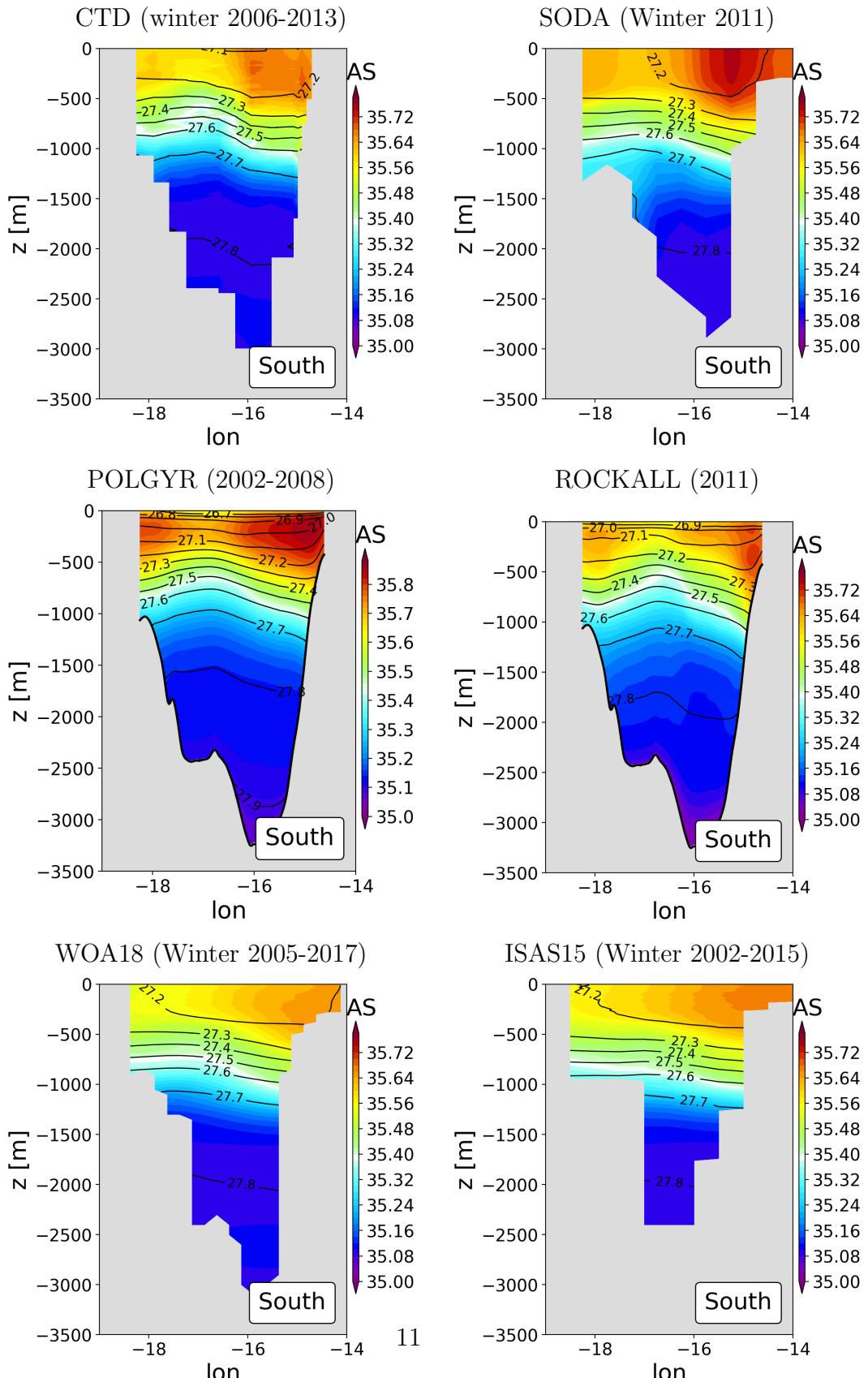


Figure 9: Winter mean of Conservative Temperature and potential density (contours)