1046-00-1227 **Thorsten Markus*** (Thorsten.Markus@nasa.gov), Cryospheric Sciences Branch, Code 614.1, NASA Goddard Space Flight Center, Greenbelt, MD 20771. *Climate change and the peculiar Antarctic ocean.*

Satellite passive microwave data been used for about three decades to provide information of the polar sea ice coverage. In contrast to the Arctic sea ice, which shows a dramatic and very public reduction in sea ice cover, the trend in the Antarctic sea ice cover is slightly increasing. Precipitation is expected to increase substantially over the polar regions with increased greenhouse warming. This has important implications for the, generally weak, stability of the upper layers of the Southern Ocean as well as for the snow cover on top the sea ice. The talk will give an overview of the observed changes in the Antarctic sea ice cover and will discuss processes and mechanisms unique to the Antarctic ocean that can explain the observed asymmetry between the two polar regions. (Received September 15, 2008)