



Comparison of Southern Hemisphere cyclone tracks in ERA40 and ERA-Interim data

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In the context of the IMILAST intercomparison project (Intercomparison of mid latitude storm diagnostics; <http://www.proclim.ch/IMILAST/index.html>), an analysis of mid-latitude cyclone characteristics deduced from ERA40 and ERAinterim data is presented. The analysis is based on the Murray and Simmonds cyclone identification and tracking algorithm.

Originally, ERA40 data are resolved with T159 (approximately 1.125°) while ERAinterim has a T255 horizontal resolution (corresponding to 0.75°). According to the IMILAST comparison setup, in a first step the cyclone identification and tracking was performed for 2.5° and 1.5° , respectively. Due to the higher spatial resolution and additionally changes (e.g. the application of the 4D-Var scheme) it might be expected that cyclone systems in the SH mid- and polar-latitudes are better resolved in ERAinterim data, giving more realistic features especially over the typical cyclone genesis regions over the Southern Ocean near the coastline of Antarctica.

First results reveal that especially over the Southern Ocean, south of 60°S , an increase in the cyclone track density of up to about 20% is analysed, accompanied by an deepening of the cyclones over large parts of the Southern Ocean and an increase of cyclogenesis to the north of the Ross- and Weddell-Sea as well as north of Wilkes Land. Further investigations, taking the even higher original resolution into account are ongoing.