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Atmospheric Chemistry and Physics Discussions

Interactive comment on "A global climatology of stratosphere-troposphere exchange using the ERA-interim dataset from 1979 to 2011" *by* B. Skerlak et al.

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Dear Klemens

I think the small net upward STE in the polar regions is not in conflict with a downward BDC since our tropopause (defined by 2pvu/380K, in polar regions around 300 hPa) lies quite a bit below the typical heights for the BDC (<100 hPa, please correct me if I am wrong). Furthermore, isentropes in the polar lowermost stratosphere (below 380K, above 2pvu) cross the dynamical tropopause further equatorward (typically in the extratropics) and thus quasi-isentropic STE of air masses brought down by the BDC will not give a signal directly at the pole.

Best regards Bojan

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 11537, 2013.