Session: C9 Poster: M170A

## The global subduction/obduction rates, their interannual and decadal variability

Lingling Liu[†]; Ruixin Huang
[†] Institute of Oceanology, CAS, China, People's Republic of
Leading author: liull@qdio.ac.cn

Ventilation related water mass formation and erosion is a key component global oceanic circulation and environment. Based on SODA outputs, the global subduction rate averaged over the time period from 1959 to 2006 is estimated at 505.8 Sv, while the corresponding global obduction rate is estimated at 482.1 Sv. The annual subduction/obduction rates vary greatly on the interannual and decadal timescales. The global subduction rate increased 7.6% over the past 50 years, while the obduction rate increased 9.8%; and the Southern Ocean plays the key role in global subduction/obduction rates and their variability. Moreover, the equatorial band is also a critically important site of water mass formation/erosion.