Geophysical Research Abstracts
Vol. 12, EGU2010-1549-2, 2010
EGU General Assembly 2010

Overturn of the Oceasn Flow in the North Atlantic as a Trigger of Inertia Motion to Form a Meridional Ocean Circulation

Shigehisa Nakamura
Kyoto University, Japan, schnak09@power.odn.ne.jp

This work is an introduction of a meridional ocean circulation. As for the zonal motions,there have been many contributions. Recent oceanographic works noticed an overturn of the ocean current in the North Atlantic. The author notices this overturn is a trigger to generate a meridional ocean circulation to have a track through the deep Atlantic, the deep circum-polar current, the deep branch flow to the Pacific between the Australian and the South America. The east part of the branch flow relates to the upwelling off Peru, and the west part relates to form a deep water in the Northwest Pacific. THe overturn of the North Atlantic suggests an outflow of the deep water and a storage of the old aged deep water in the Northwest Pacific. The storage water increase in the Northwest Pacific shoould be a trigger of the swelling up of the sea level mid Pacific to affect to the ocean front variations between the coastal waters and the ocean water. In order to keep a hydrodynamic balance on the earth, an increase of the deep water in the Pacific should flow through the Bering Sea and the Arctic Sea to get to the North Atlantic. It should be noted that a budget of the ocean water flow must be hold the condition of the water masses concservation on the earth surface. This inertia motion is maintained once induced after any natural effect or some man-made influences. At this stage, the author has to notice that there has been developed a meridional inertia path of the air particle as well as the ocean water parcel, nevertheless nobody has had pointed out this inertiamotion with a meridional path in the ocean. Air-sea interaction must be one of the main factors for driving the ocean water though the inertia motion in the global scale is more energetic. To the details, the scientists should pursue what geophysical dynamics must be developed in the future.