[EJ] Evening Poster | S (Solid Earth Sciences) | S-GD Geodesy

[S-GD02]Geodesy General Contributions &Global Geodetic Observing System

convener:Koji Matsuo(Geospatial Information Authority of Japan), Yusuke Yokota(Japan Coast Guard, Hydrographic and oceanographic department), Takahiro Wakasugi(国土交通省国土地理院)

Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

In this session, general contributions from all areas of geodesy are welcomed. Topics of interest will include but not limited to recent advances in measurement techniques, reference frame realization, earth rotation or earth tide. In addition, this session also provides a forum for discussing GGOS (Global Geodetic Observing System) related observation programs, advancements of geodetic techniques, collaboration among various organizations in the world. Topics will include improvements of observing system and data analysis, participations in global programs, global reference frames and geodesy's contributions to society.

[SGD02-P07]Heat flow in the solid Earth and changes in length of day

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Keywords:heat flow in the outer core , growth of the inner core, variations of lod

Long time changes in length of day(LOD)in the outer ocre are formed in stable layers near the core mantle boundary(CMB) and the cooling inner core boundary (ICB). We assume that the outer core is compressible. We determine the magnitude of changes in the LOD. We exculde the effects of a thermal wind becauses there are many ambiguous factors in the inner core. As a result,variations of the angular momentum are -7.23. 10-5. If the growth of the inner core to the present time since the radius of the inner core to be 375 km, is 2.7 Ga(Kumazawa et al.,1994)and 1.0 Ga(Labrosse et al.,2001),the rate of variations of the angular momentum is 0.87.10-13 yr-1, and -2.35. 10-13 yr-1. These values are less than the rate of the long time variations from tidal variations known in the present time d omega/omega = -3.8.10-10 yr-1(Rochester,1973).

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