[JJ] Evening Poster | S (Solid Earth Sciences) | S-CG Complex & General

[S-CG61]Ocean Floor Geoscience

convener:Kyoko Okino(Atmosphere and Ocean Research Institute, The University of Tokyo)
Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Most of Earth's volcanism and much of its tectonic activity occur on and beneath the seafloor. Various phenomena on the seafloor are closely linked to plate tectonics, Earth structure and dynamics, and also related to Earth's environments through the hydrosphere and atmosphere. Seafloor rocks and sediments record Earth's evolution and heat and material fluxes on the Earth. Ocean Floor Geoscience session covers a broad range of research on seafloor such as mid-ocean ridge process, subduction dynamics, arc magmatism, hot spot and LIPs, crustal movement and structure etc. Every field of researches and every approaches are welcomed. The session aims to encourage discussion among scientists from different study fields and to integrate our understanding of ocean floor. The session is co-dhaired by K. Tadokoro (Nagoya Univ.), O. Ishizuka (AIST), T. Toki (Univ. Ryukyu), and N. Takahashi (JAMSTEC).

[SCG61-P01]Past continental shapes inferred from extrapolated GPS/GNSS data

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Katsumata et al. (JpGU2016) showed that there are good relation between crustal rotation angles from paleomagnetic data near the Andes and crustal rotation angles from extrapolated GPS/GNSS data on South American continent. Those calculations, however, use spline interpolation in a plane (Smith and Wessel, 1990). We improved the method for the interpolation of GPS data on a globe, and we applied greenspline interpolation for spherical surface (Wessel, 2009) . The result is that, there are some differences between the two interpolations and shapes of past continents are different. For instance, past Australia continent became about 100km to 500km wider, and that the gap between Australia - Antarctica continental shapes at about the break-up of the Gondowana super continent became smaller. This result strongly implies that 20 years of global GPS/GNSS data include over million year scale intra-plate deformations.