グローバルＣＯＥ地球惑星科学
フロンティアセミナー

講演者　：　ステファン　カービー　博士

所　属　：　米国地質調査所

日　時　：　2010 年 10 月 13 日(水)　14:00 – 15:30

場　所　：　地震・噴火予知研究観測センター　別館 第一会議室

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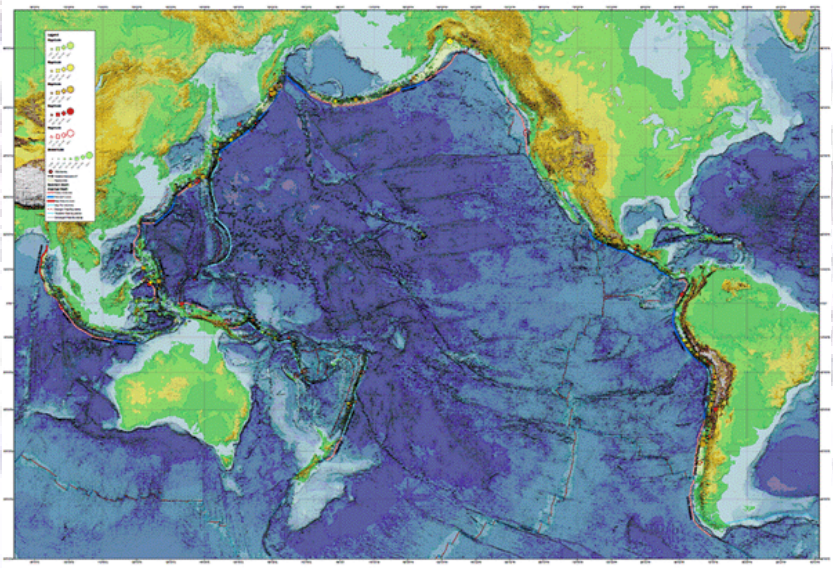
A reference pre-instrumental and instrumental interplate-thrust earthquake catalogue: Global distribution patterns and the effects of trench sediment fill in relation to seafloor smoothness - A Progress Report

講義内容：A reference catalogue of well-vetted historical interplate thrust (*IPT*) earthquakes from 1700 to 1899 based on earthquake strong-motion damage and tsunami runup and damage (events M ≥ 8.5 for 1700 to 1799 and M≥8.0 for 1800 to 1899) is combined with a catalogue of instrumental earthquakes from1900 to the present with M ≥ 7.5. The spatial distribution of these large events gives clues about the factors that evidently control whether a subduction system has potential for creating large, tsunamigenic earthquakes. The factors include: 1) Incoming plate age with subduction systems supporting great *IPT's* tending to involve Cenozoic plate ages; 2) High sediment influxes and accumulation rates in trenches; 3) Seafloor roughness, with smooth input seafloor tending to favor large IPT's, regardless of incoming plate age or sediment influx and accumulation. These factors are discussed in light of recent concepts about how the physical state of subduction plate boundaries could control IPT rupture lengths and hence IPT scalar seismic moments.　Finally, some of these concepts are applied to the NE Japan subduction system in an effort to better understand the unusual key features of this system.



Global Distribution of Large Tsunamigenic IPT Earthquakes and Trench Sediment Fill

主　催　：　東北大学　グローバルCOEプログラム
『変動地球惑星学の統合教育研究拠点』
拠点リーダー　大谷　栄治

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