[JJ] Evening Poster | S (Solid Earth Sciences) | S-SS Seismology

## [S-SS14]Strong Ground Motion and Earthquake Disaster

convener:Masayuki Kuriyama(Central Research Institute of Electric Power Industry) Tue. May 22, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe) Strong ground motion has social impacts as it induces earthquake disasters. We solicit contribution on any seismological topics related to strong ground motion that includes, but are not limited to, source processes, wave propagation, and site effects. We also welcome contribution on earthquake related disaster mitigation.

## [SSS14-P31]Difference in seismic source characteristics between surface and buried fault rupture of crustal earthquake in

## Japan

\*Shohei Yoshida<sup>1</sup>, Takao Kagawa<sup>1</sup>, Tatsuya Noguchi<sup>1</sup> (1.Graduate School of Engineering, Tottori University)

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Appearance of surface fault rupture in inland crustal earthquake affects significantly on ground motion characteristics. Somerville(2003) indicated that observed ground motions from buried ruptures are larger than earthquakes with surface rupture in period range between 0.3-3.0 seconds. Kagawa et al.(2004) explained that main causes of the difference are in seismic source characteristics of fault ruptures in between shallow and deep region, such as peak slip rate and stress drop. Inland crustal earthquakes have occurred frequently in Japan after the 1995 Kobe earthquake, and some of them had surface fault rupture (e.g., 2016 Kumamoto earthquake). In this study, we tried to construct characteristic seismic source models that composed of strong motion generation areas (SMGA) using empirical Green's function(Irikura,1986) for the M6 class inland crustal earthquake that occurred in recent years (e.g. 2013 Northern Tochigi, 2014 Northern Nagano, 2016 Kumamoto fore). Finally, we compared obtained SMGA parameters, and we confirmed depth dependency of SMGA source parameters with scaling relationship of previous studies.

Reference

Somerville, P. G.(2003) : Physics of the Earth and Planetary Interior, 137, 201-212. Kagawa et al.(2004) : Earth planet and space, 56, 3-14. Irikura(1986) : 7<sup>th</sup> Japan Earthq. Eng. Symp., Tokyo, 151-156.