#田　采祐 [1)], 三好　由純 [1)], 篠原　育 [2)], 堀　智昭 [1)], 中村　紗都子 [1)], 小路　真史 [1)],Segawa Tomo[1)], 北原　理弘 [3)], 松田　昇也 [4)], 今城　峻 [5)], 栗田　怜 [6)], 桂華　邦裕 [7)], 寺本　万里子 [8)], 浅村　和史 [2)]
[(1] 名大 ISEE 研,[(2] 宇宙研／宇宙機構,[(3] 東北大・理・地球物理,[(4] 金沢大学,[(5] 京大・地磁気センター,[(6] 京都大学 生存研,[(7] 東大・理,[(8] 九工大

Management of science data from the Arase satellite by ERG Science Center

#ChaeWoo Jun[1)], Yoshizumi Miyoshi[1)], Iku Shinohara[2)], Tomoaki Hori[1)], Satoko Nakamura[1)], Masafumi Shoji[1)], Tomo Segawa[1)], Masahiro Kitahara[3)], Shoya Matsuda[4)], Shun Imajo[5)], Satoshi Kurita[6)], Kunihiro Keika[7)], Mariko Teramoto[8)], Kazushi Asamura[2)]
[(1]ISEE, Nagoya Univ.,[(2]ISAS/JAXA,[(3]Dept. Geophys., Grad. Sch. Sci., Tohoku Univ.,[(4]Kanazawa Univ.,[(5]WDC for Geomagnetism, Kyoto, Kyoto University,[(6]RISH, Kyoto Univ.,[(7]University of Tokyo,[(8]Kyutech

Data science is a rising modern technique to demonstrate meaningful information from numerous data sources. For example, machine learning based on big data is used for the forecast of variations, classification of events, etc. Recently, IHDEA (International Heliophysics Data Environment Alliance) has been an international framework to discuss the data environment for the heliophysics community, in which JAXA/ISAS and ISEE, Nagoya University have participated as bureau members together with NASA and ESA. In IHDEA, the importance of common data format, well-defined metadata, and integrated analysis tools are reinforced and a significant effort is also made to discuss and identify techniques and applications that should be recommended as a part of the community standards. In this presentation, we review the activities of the ERG Science Center (ERG-SC), which is operated by ISEE, Nagoya University, and JAXA/ISAS. ERG-SC provides the science data files in the common data format (CDF) for the Arase satellite, ground-based observations, and simulation. By incorporating the community needs, the science center has developed and maintained a software module for the ERG project data that works with IDL/SPEDAS and Python/PySPEDAS. We also present the activities for the development and management of the Arase satellite data, ground-based data, and simulation data, as well as a topic of data DOI, and discuss the future directions for international collaborations of data science in heliospheric system science.