

EISCAT_3D レーダーで推進する EISCAT-日本国際共同研究 EISCAT-Japan collaborative studies driven by EISCAT_3D radars

宮岡 宏^{1*}, 野澤 悟徳², 小川 泰信¹, 大山 伸一郎², 中村 卓司¹, 藤井 良一², クレイグ・ヘインゼルマン³

Hiroshi Miyaoka^{1*}, Satonori Nozawa², Yasunobu Ogawa¹, Shin-ichiro Oyama², Takuji Nakamura¹, Ryoichi Fujii², Craig Heinselman³

¹ 国立極地研究所, ² 名古屋大学太陽地球環境研究所, ³ EISCAT 科学協会

¹ National Institute of Polar Research, ² STE Laboratory, Nagoya University, ³ EISCAT Scientific Association

The EISCAT(European Incoherent SCATter) Scientific Association is an international research organization, which operates incoherent scatter radars at 931MHz, 224MHz and 500MHz in northern Scandinavia and Svalbard for studies of physical and environmental processes in the middle/upper atmosphere and near-Earth space. Since 1996, National Institute of Polar Research, in collaboration with STEL of Nagoya University has promoted the EISCAT project for the user community in Japan to use the EISCAT facility for their scientific subjects.

EISCAT_3D is the major upgrade of the existing EISCAT radars in the northern Scandinavia. With a multi-static phased array system composed of one central active (transmit-receive) site and several receive-only sites, the EISCAT_3D system is expected to provide us 10 times higher temporal and spatial resolution and capabilities than the present radars.

In this presentation, we will overview our scientific activity and achievements with the EISCAT facility and our strategic plan of national funding for EISCAT_3D-J as well as the science targets which we expect to be unraveled by EISCAT_3D.

キーワード: 非干渉散乱レーダー, 欧州非干渉散乱レーダー科学協会, 電離圏, 熱圏, 中間圏, 三次元イメージング観測

Keywords: Incoherent scatter radar, EISCAT, Ionosphere, Thermosphere, Mesosphere, 3D imaging observation