

Formation of Preliminary Center for Capacity Building for Space Weather Research

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We (Space Environment Research Center of Kyushu University) report on a new International Core-to-Core program that we are promoting.

Consistent with the goals of the International Space Weather Initiative (ISWI, which is conducted under a mandate of the United Nations Committee on the Peaceful Uses of Outer Space), the ultimate goal of our new Core-to-Core research program is to (1) strengthen the space-weather-related research abilities of young scientists in the Asia region and Africa region, and (2) expose young Japanese scientists to more internationally-oriented science activities, such as doing field work in Asia and Africa.

The primary agenda, therefore, is to conduct Capacity Building for young scientists in Japan and Asia/Africa regions through a wide-variety of approaches: (1) conducting overseas ISWI/MAGDAS Schools, (2) implementing student exchanges, (3) installing ground magnetometers (e.g., MAGDAS - Magnetic Data Acquisition System) in "missing areas", and (4) bringing Asians and Africans to study at Japanese universities. Through this myriad of approaches, a human network for space weather research is established.

The term "Capacity Building" (as used here) means training the young scientists (in Asia/Africa) who take care of MAGDAS magnetometers so that there is mutual benefit between instrument providers and instrument hosts. This training has three main components: (1) training on the instrumentation (maintenance and installation), (2) training on data analysis (how to process the data from the instrumentation), and (3) instruction on how to do science with the acquired data – with an emphasis on doing science particular to the region of the instrument site.

The ISWI/MAGDAS Schools are especially effective for conducting Capacity Building, and helps not only the host students and scientists but also improves the skills of the Japanese researchers who are dispatched as school instructors. Interaction with various hosts allows their most talented people to consider further study at Kyushu University at the graduate school level, thereby expanding the aforementioned human network.

Our Core-to-Core research program also focuses on the enhancement of partnership between MAGDAS hosts. We envision the establishment of long-term partnership between the Japanese coordinator and host countries by setting up an association of MAGDAS hosts.

Keywords: International Space Weather Initiative, new Core-to-Core research program, Capacity Building, MAGDAS - Magnetic Data Acquisition System, ISWI/MAGDAS Schools