

Project No.:16006 Core Institution in Japan:National Astronomical Observatory of Japan

**JSPS Core-to-Core Program -Strategic Research Networks-
FY2008 Research Report**

Project No.	16006
Research Theme	Establishment of Japanese Virtual Observatory in relation with International Virtual Observatory by utilizing state-of-the-art information technology
Duration of Project	April, 2006 -- March, 2009
Core Institution in Japan	National Astronomical Observatory of Japan

Implementing Organizations

Country	Japan
Core Institution	National Astronomical Observatory of Japan
Co-Chair (name and title)	Ohishi, Masatoshi / Associate Professor
Number of Cooperating Institutions	7
Cooperating Institutions	Aoyama Gakuin university, Tokyo Institute of Technology, University of Tokyo, JAXA/ISAS, Tokyo Gakugei university, Ibaraki university, Graduate University for Advanced Studies

Country	the United States of America
Core Institution	Space Telescope Science Institute
Co-Chair (name and title)	Robert James Hanisch / Project Manager
Number of Cooperating Institutions	9
Cooperating Institutions	The Johns Hopkins University, California Institute of Technology, National Center for Supercomputing Applications, National Radio Astronomy Observatory, National Optical Astronomy Observatories, San Diego Supercomputing Center, Smithsonian Astrophysical Observatory, NASA Goddard Space Flight Center, Dominion Astrophysical Observatory
Matching Fund	US National Science Foundation, NSF grant, No. AST0122449

Country	the United Kingdom
Core Institution	Cambridge University
Co-Chair (name and title)	Nicholas Andrew Walton / AstroGrid Project Scientist
Number of Cooperating Institutions	7
Cooperating Institutions	Jodrell Bank Observatory,University of Edinburgh,Rutherford Appleton Laboratory,The University of Manchester,Mullard Space Science Laboratory,University of Leicester,The Queen's University of Belfast
Matching Fund	European Commission, EU FP6, EURO-VO-DCA

Country	Germany
Core Institution	European Southern Observatory
Co-Chair (name and title)	Paolo Padovani / EURO-VO Project Scientist
Number of Cooperating Institutions	2
Cooperating Institutions	Strasbourg Data Centre, European Space Astronomy Centre
Matching Fund	European Commission, EU FP6, EURO-VO-DCA

Result of Program Implementation

We held two IVOA (International Virtual Observatory Alliance, <http://www.ivoa.net/>) interoperability meetings as the "Seminars" in May and October 2008. The former was held in Trieste, Italy, with more than 90 participants. The meetings adopted new standard protocols, standard data models, and standard interfaces to interoperate individual VO projects around the world. We also held one international seminar jointly with the Geophysics society, in Tsukuba, Japan (<http://wdc2.kugi.kyoto-u.ac.jp/igy50/index.html>). The seminar was intended to transfer the VO technology to other disciplines. Japanese Virtual Observatory project has successfully operated its data service since 2008 March (<http://jvo.nao.ac.jp/portal/>). The JVO portal has already been accessed by many users worldwide, resulting in data download of more than 1 TBytes. JVO has been regarded as a core of the new Astronomy Data Center of the NAOJ, that started in April 2006 on, and an international review to the ADC concluded that JVO has quite high activity.

Achievements in FY2008 (Self Review)

We have successfully implemented the JVO portal system since 2008 March. Visit at <http://jvo.nao.ac.jp/portal/>. Anyone can access and download the observed data from more than 3,000 site in the world. More than 1 TBytes of data have already downloaded at maximum. The Subaru Suprime CAM data was found to be the most accessed data. Thus we added frequently used data and catalogues to the JVO portal in order to increase the usability of the VO service. In the course of such development JVO contributed to the standardization in the International Virtual Observatory Alliance (IVOA); Ohishi acted as the executive committee member and the chair for the Astro-RG group, and Shirasaki worked as a vice-chair of the VOQL working group. Some program members were invited to give talks on the virtual observatory in several international meetings. It should be noted that the Core-to-Core program members published 162 academic papers, including 6 invited talks. Clearly these quantities verifies that the Japanese VO activity level has been very high, that was accelerated by the Core-to-Core program of the JSPS.