

Development of real-time earth orientation parameters determination system using the Internet VLBI

Tetsuro Kondo[1], Yasuhiro Koyama[2], Mamoru Sekido[3], Junichi Nakajima[3], Ryuichi Ichikawa[3], Eiji Kawai[3], Hiroshi Ohkubo[4], Hiro Osaki[5], Moritaka Kimura[6]

[1] KSRC,CRL, [2] CRL/KSRC, [3] CRL, [4] Radio Astronomy Application Section, CRL, [5] Radio Astronomy Applications Section, KSRC, CRL, [6] Radio Astronomy Applications Group, Communications Research Laboratory

<http://www2.crl.go.jp/ka/radioastro/index-J.html>

With the advent of GPS known as a Car-Navi (car navigation system), wherever we might be on the earth, we could know our position correctly. The space version of this positioning system is a Space-Navi (space navigation system) which offers precise time and position information to spacecrafts in the space. Research on key technologies to establish the space-time infrastructure in the space is the project to investigate key technologies to realize the Space-Navi. This project consists of four research subjects, that is, (1) highly stable space-borne Hydrogen maser frequency standard, (2) time keeping of satellite group, (3) establishment of a space-time standard coordinate system, and (4) research on spacecraft positioning technology. VLBI group takes charge of the subjects (3) and (4). Establishment of a space-time standard coordinate system is subdivided into real-time precise measurement of the earth orientation parameters (EOP) and precise positioning of a space-time fiducial point (space lighthouse) in the space. To achieve real-time EOP monitoring, we started the development of the system based on an Internet VLBI system. Current status of the development of the system will be reported here.

Real-time monitoring of Earth Orientation Parameters

