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The Ultra Rapid UT1 measurements with real-time data transfer and automated data processing

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Recently, e-VLBI which is a technique of data transfer via network is used in VLBI of Geographical Survey Institute (GSI). So far, we had send the recording media which contained the observed data to correlator by airmail. However, we are now able to make the time between the end of the observation and the start of the correlation processing much more shortly by the fast transfer with e-VLBI.

Earth orientation parameters are fundamental parameter to join the Celestial Reference Frame (CRF) and the Terrestrial Reference Frame (TRF). Especially, dUT1, which shows earth rotation, is required frequent observation with fast turn-around times, because it makes unpredictable change in a short period. Tsukuba VLBI station has transferred the data to foreign correlators with e-VLBI and tried to make the data transfer of IVS-Intensive observing sessions faster since April 2005. In addition, we have worked on experiments for real-time data transfer and automated data processing, and aims to obtain dUT1 within 30 minutes after the end of the session with Sweden and Finland. In the presentation, we would like to show the situation, the current result and the issue in the future.