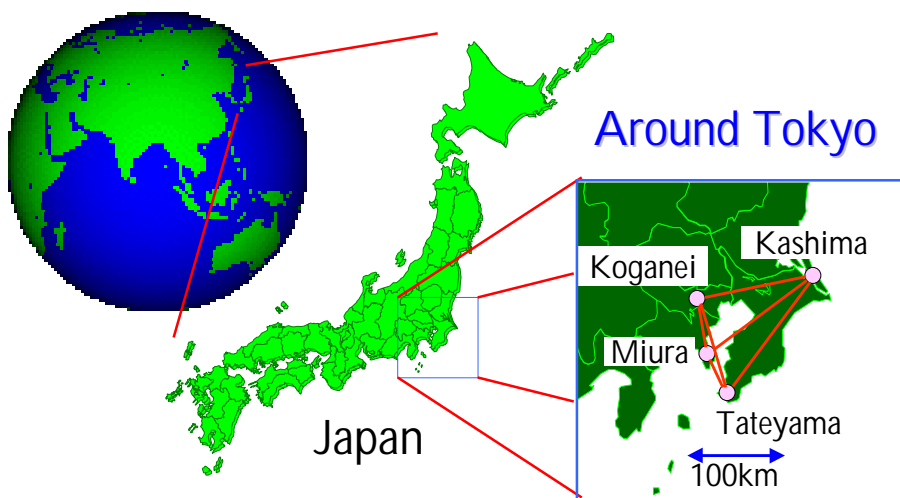


Crustal Deformation Monitoring Using the Real-time VLBI System in the Tokyo Metropolitan Area and its Performance

T. Kondo, N. Kurihara, Y. Koyama, M. Sekido,
R. Ichikawa, T. Yoshino, J. Amagai, K. Sebata,
M. Furuya, Y. Takahashi, H. Kiuchi, and A. Kaneko
Communications Research Laboratory
Japan



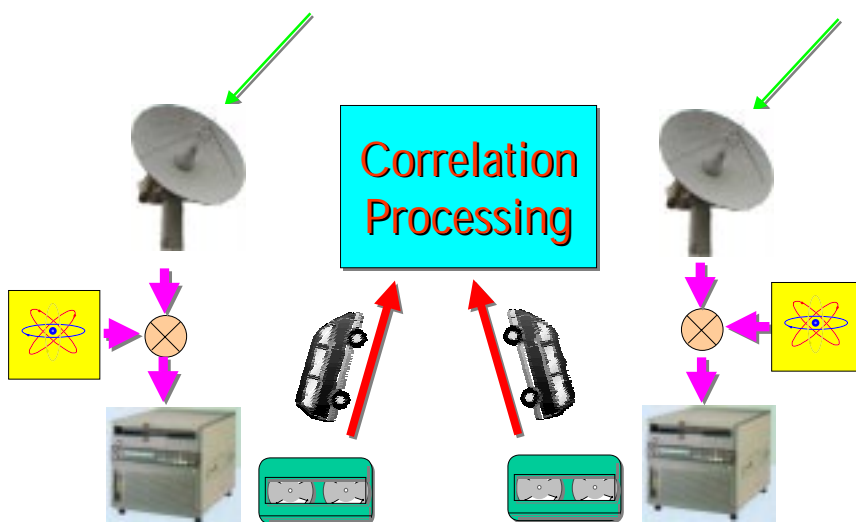
KSP VLBI network

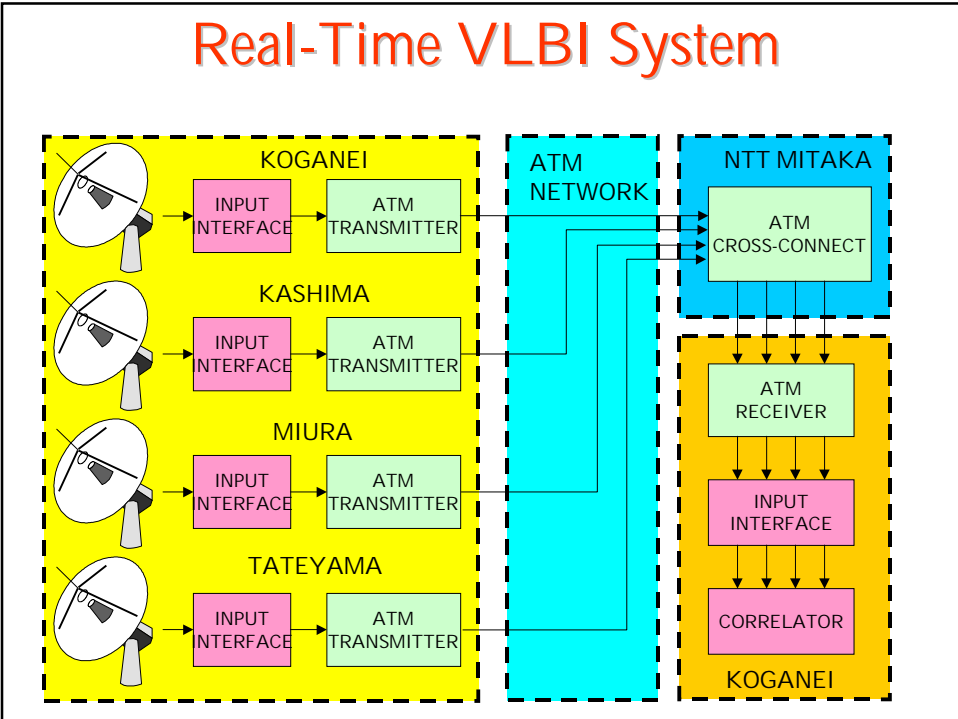
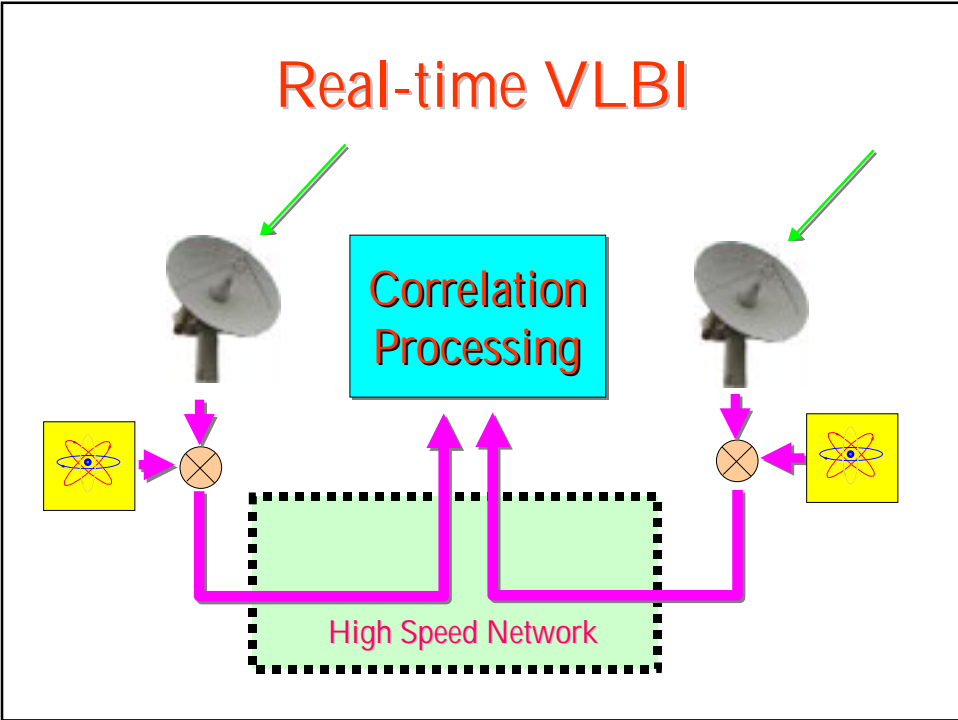


KSP Kashima Station (11m Antenna)



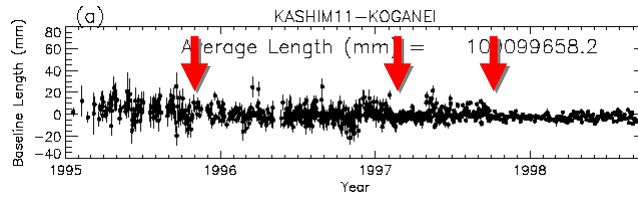
Tape-base VLBI



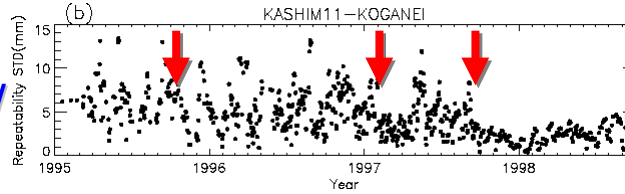


Evolution of Measurement Accuracy

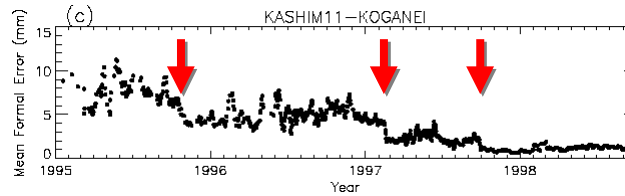
Baseline Length



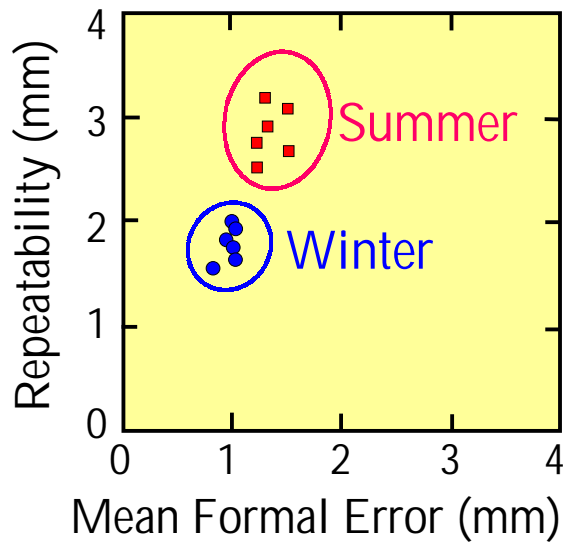
Repeatability



Formal Error



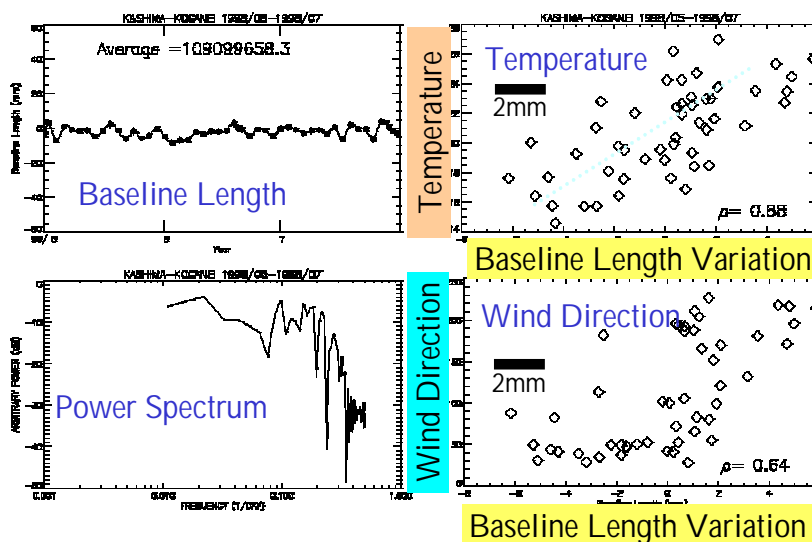
Degradation of Accuracy



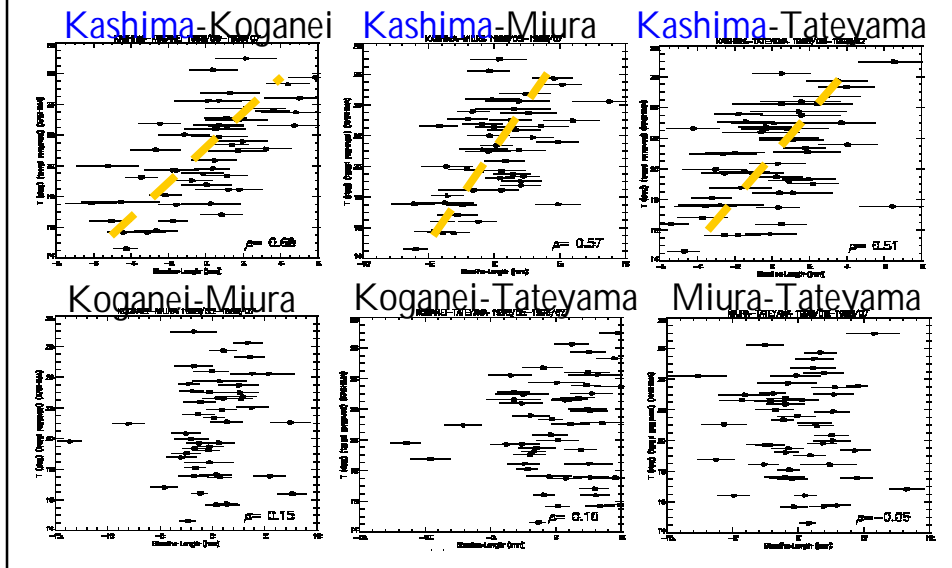
Current Accuracy of KSP VLBI

	Repeatability (mm)	Formal Error (mm)
Full Year (1997/10-1998/09)	2.4	1.2
Winter (1997/10-1998/03)	1.8	1.0
Summer (1998/04-1998/09)	2.9	1.3

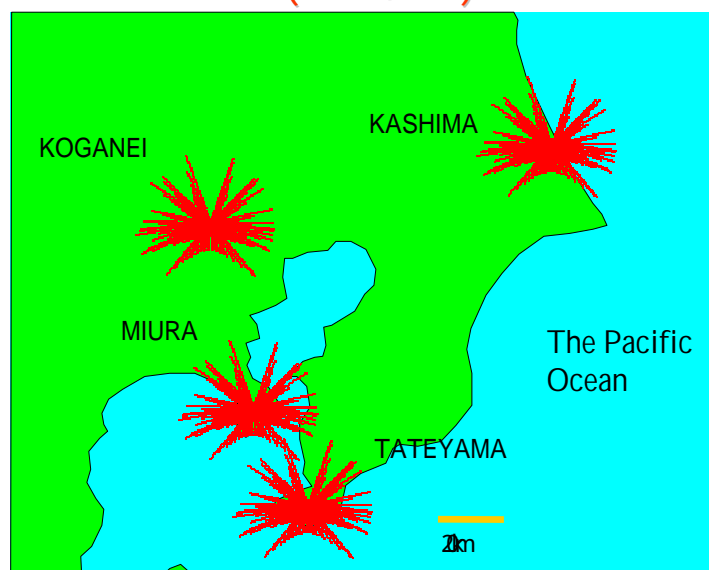
Examples of Correlation Analysis (Kashima-Koganei Baseline 1998/05-1998/07)



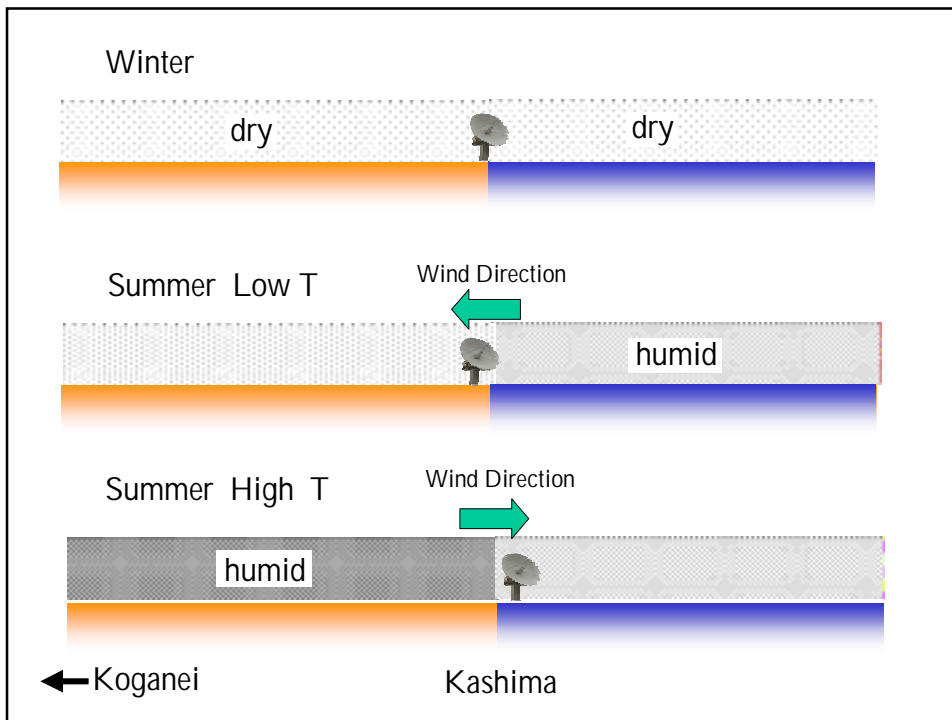
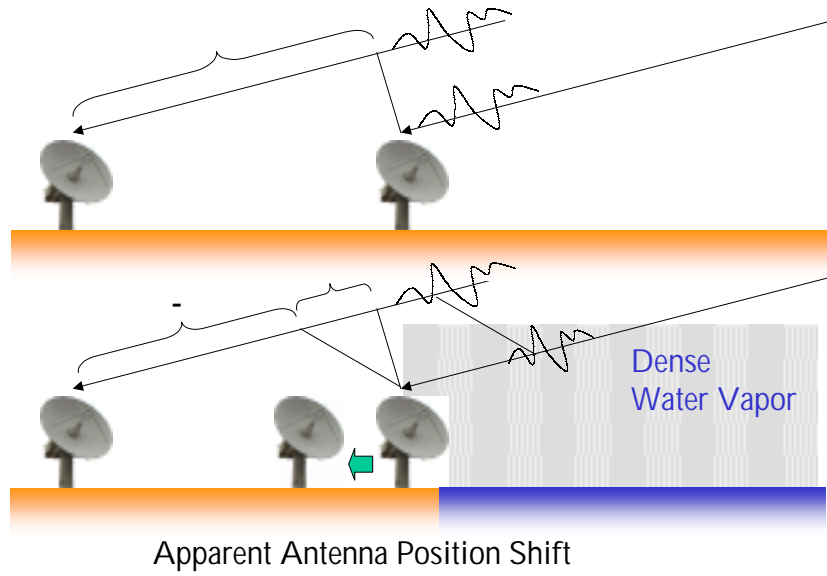
Relation Between Baseline Length Variation and Temperature (May-July, 1998)



Tropospheric Ray path at KSP VLBI (H < 4 km)

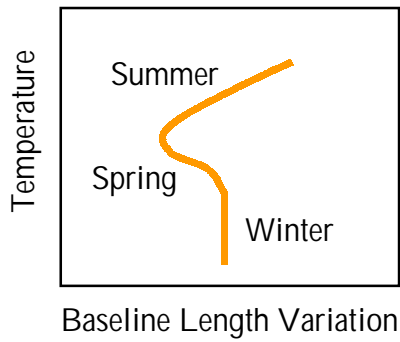


Effect of Asymmetrical Distribution of Water Vapor



Relation Between Baseline Length Fluctuation and Temperature

Expected



Observed

(January-July)

