

V37b **VERA ファーストFRINGE再解析II**

三好 真 (国立天文台)

This is the second report about results from re-analysis of the visibility data of the first 2-beam observations with VERA (VLBI Exploration of Radio Astrometry), previously reported by Honma et al., 2003 (hereafter A2003). Independently we checked the archival data and found the features noted in A2003 were not from the effect of phase referencing by simultaneous differential VLBI but mainly from a removal of large phase change by subtracting an arbitrary fitted curve to the phase variations. The differential phase of the observed H₂O masers between W49 North (W49N) and OH 43.8-0.1 did not show a sinusoidal variation with a period of one sidereal day due to a positional offset from the real celestial positions because the data used by A2003 were damaged by several bugs existed in the interferometer and the correlator at that time. Namely we could not reproduce the results in A2003 by a normal positional correction estimated from all time data, but could reproduce almost the same phases only for the first hour by adjusting parameters which caused very large phase variations for the successive time data that A2003 did not show without the reason. We also found the Allan standard deviations (ASDs) shown in A2003 are those of the residual phases after subtracting fitted functions to the raw data. The differences between them become large when tau is over 40 seconds.

It is appropriate to regard that the analysis in A2003 was not proper about demonstrating the performance of the instrument for phase referencing.