

[KV13] KVN 울산사이트 21m 전파망원경 설치

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현재 첫 번째 전파망원경의 설치는 KVN 울산사이트에서 진행되고 있다. 전파망원경의 구조물 제작 및 설치하는 국내 HighGain사에서, 정밀 부품 제작 및 설치검사는 Antedo사가 담당하고 있다. KVN전파망원경은 그 지향정밀도가 4arcsec이며, 구경효율이 수신 주파수 100GHz에서 60%인 고 정밀 안테나로서, 그 구조물 설치에 있어서 매우 정밀한 조립 및 정렬을 요구하고 있다. 본 발표에서는 울산 사이트에서 진행되었던 구조물 설치관련 진행 절차 및 정렬 방법을 소개하고자 한다.

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[KV14] CCcoda - The I/O library for the radio data reduction system  
VEDA

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The VERA (VLBI Exploration of Radio Astrometry) project is the astrometry observation project in radio wavelength currently running. The goal of the project is to measure the parallactic and proper motions of ~1000 stars, and to elucidate the overall structure of the Milky Way in next 15 years. The positional accuracy will be reached up to ~10 micro-arcsec in next few years. From 2004, the observations connecting 4 dedicated radio telescopes in Japan are being performed and the distances of some objects have already been measured. The measurements for other objects are ongoing. The co-operation with KVN (Korean VLBI Network) is also being planned. In present, data are correlated at Mitaka in Tokyo and is reduced with AIPS, one of the reduction software commonly used for the analysis of VLBI data, to understand properties of VERA data. For future, however, a semi-automatic, easily customizable pipeline analysis system is necessary for the huge amount of data to be produced. VEDA (VERA Data Analyser) is the software under development for the above purpose in VERA team. In VEDA, the fundamental I/O library "CCcoda" have been developed by me. The significance of CCcoda is the extensibility for file format of not only Mitaka correlator but FITS or the future Seoul correlator, and the portability with abstracted interfaces separating the I/O part from calculation part. In this paper I report the structure and the function of CCcoda.