



Radio source stability and geodetic VLBI

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The observation of the Earth's rotation by VLBI is conditioned by the celestial reference frame that should be as stable as possible. The selection of the most stable sources therefore constitutes a major step in the construction of a celestial reference frame since their stability prevents time deformation of the axes with time. The assessment of astrometric stability, i.e. the time stability the radiocenter location as detected by the VLBI, is one of the methods that were used in previous ICRF realizations (works of M. Feissel-Vernier and ICRF2). We think the same method should be addressed for the construction of the ICRF3. We analyzed the radio source time series obtained from the analysis of the data from the permanent geodetic VLBI monitoring program of the IVS. We used several utils based on basic statistics and more advanced methods (Allan variance) in order to provide a preliminary classification of sources.