1.3 EXTRAGALACTIC REFERENCE FRAME

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A COMPILED CATALOG OF OPTICAL POSITIONS OF EXTRAGALACTIC RADIO SOURCES

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ABSTRACT. Based on 27 individual catalogues, which have been published since 60s' and consist of the positions of the counterparts of extragalatic radio sources, we have compiled a combined catalogue by means of Aoki (Aoki, S. et al. 1983) method for transferring the reference frame from FK4 to FK5 and the referred epoch from B1950.0 to J2000.0 and IERS method (Feissel, M. et al. 1988), which is used for compiling the combined catalog of radio sources. Of course, in the compiling procedure the systematic differences of Peth 70, AGK3RN, and AGK3 (Schwan, H. 1985) have been considered. The precisions of optical positions in the combined optical catalog are as follows:

Type	Number	$E_\alpha \cos\delta$	E_δ
P	56	±0."123	±0."093
S	62	0."265	0."241
C	392	0."603	0."374

where P indicates primary sources
S indicates second sources
C indicates complementary sources

Comparison between the compiled optical catalog and RSC(IERS)93 C 01 (Feissel, M. et al. 1993) was made by using the primary sources. The rotation angles between two frames are as follows:

A_1=0."16 ± 0."03, A_2=-0."03 ± 0."03, A_3=0."11 ± 0."02

And local relative deformation of the combined optical catalog is not obvious within the precisions of optical observations.

REFERENCES

Aoki,S. et al. (1983). A. Ap. **128**, 263
Feissel, M. et al. (1988). BIH Annual Report for 1987, D-113
Feissel, M. et al. (1993). IERS Annual Report for 1992, 11-19
Schwan, H. (1985). A .Ap. **149**, 50

E. Høg and P. K. Seidelmann (eds.),
Astronomical and Astrophysical Objectives of Sub-Milliarcsecond Optical Astrometry, 379.