List of Tables

1 Mean source structure index values at X-band (8.4 GHz) for 701 sources with VLBI images available from the USNO Radio Reference Frame Image Database (RRFID) or the Bordeaux VLBI Image Database (BVID). . . . 32
2 Summary of Data and Model Comparisons . . . 44
3 Contributed Catalogs . . . 50
4 General characteristics of the combination catalog and the seven contributed solutions used to construct it. . . . 50
5 Number of common sources in the catalogs (all and defining). . . . 51
6 Weighted post-fit residuals ($\Delta\alpha\cos\delta$, $\Delta\delta$), μas. . . . 51
7 Comparison of catalogs: maoC08a vs. individual solutions. The first row for each pair presents the estimated parameters of the transformation model. The second rows present the corresponding standard deviations. . . . 52
8 Comparison of catalogs: comparisons between individual solutions. The first rows of each comparison present the estimated parameters of the transformation model. The second rows present the corresponding standard deviations. . . . 53
9 Comparison of catalogs: external uncertainties . . . 55
10 Solution Difference Statistics . . . 59
11 wrms differences of the different VLBI solutions w.r.t. IGS . . . 64
12 wrms differences of the different VLBI solutions w.r.t. IERS 05C04 for nutation . . . 64
13 wrms differences of the different VLBI solutions w.r.t. IERS 05C04 for UT1−UTC . . 65
14 Helmert parameters of TRF(gsf008a) w.r.t. VTRF2008 and ITRF2005 . . . 67
15 Agreement between ICRF2 and frames at 24, 32, and 43 GHz . . . 71
16 Relative orientation and deformation parameter to transform ICRF2 into ICRF1-Ext.2. A_1, A_2, A_3 are the small rotation angles between axes of the frames; dz (formerly B_δ) is the bias in declination. All these parameters have been adjusted on the basis of the 138 defining sources in ICRF2 used for the link to ICRF1-Ext.2. r_α and r_δ are the wrms residuals in $\alpha\cos\delta$ and δ, respectively. Unit is μas. . . . 81
17 Axis stability tests: transformation parameters between ICRF2 and ICRF1-Ext.2 for various subsets of defining sources. Unit is μas. . . . 81
18 Coordinates of 295 ICRF2 Defining Sources at S/X-band . . . 100
19 Coordinates of 922 ICRF2 Non-Defining Sources at S/X-band . . . 109
20 Coordinates of 2197 ICRF2 VCS-only Sources at S/X-band . . . 136
21 Physical characteristics of ICRF2 defining sources . . . 199