IV. The ITRF96 Data Analysis

The data analysis performed in view of the ITRF96 establishment are mainly: comparison of the individual solutions with ITRF94, combination of the solutions within each technique and a global combination of all the solutions together with the local ties of colocated stations.

IV.1. Comparison to ITRF94

Among those selected for the ITRF96 combination, each individual solution was compared to the ITRF94 in order in one hand to estimate the transformation parameters of the system attached to the solution with respect to ITRF94 and, on the other hand, the level of agreement with the ITRF94 values.

IV.2. Combination per Technique

In order to assess the relative quality of the individual solutions, independently from the influence of local ties, a combination within each technique was also performed. Matrix Scaling Factors have been rigorously estimated during the combined adjustment of the solutions.

IV.3. The ITRF96 Global Combination

The ITRF96 global combination is achieved with the following properties:

- It includes the 17 selected space geodetic solutions provided by the IERS analysis centers and 70 SINEX files containing positions and covariances, computed from local ties;

- The reference frame definition (origin, scale, orientation and time evolution) of the combination is achieved in such a way that ITRF96 is in the same system as the ITRF94, for more details about the latter, see (Boucher et al., 1996);

- Velocities are constrained to be the same for all points within each site;

- Matrix Scaling Factors have been rigorously estimated during this combined adjustment which was then iterated.