SUMMARY

This Technical Note contains a detailed description of the IERS products related to the Terrestrial Reference System for the period of the 1994 IERS Annual Report. It gives a detailed analysis about the ITRF94 and its associated velocity field.

As a new step for improving the ITRF products, the full covariance information of the individual solutions was used in the computation. In addition, the ITRF94 stations were classified according to the quality to their coordinates and velocities.

The ITRF94 orientation is constrained to the ITRF92 at epoch 1988.0, and its time evolution follows the geophysical model NNR-NUVEL1A. As a result, the IERS EOP published in Bulletins A and B and with the 1994 Annual Report will be consistent with the ITRF94 and ICRF if corrections found in Table 7, p. 11 are applied. The ITRF94 origin is a weighted mean of some SLR and GPS solutions, and its scale is based on an average of some VLBI, GPS and SLR solutions.

In addition, in order to meet the requirement of IUGG and IAU that the terrestrial reference systems and frames have TCG (Geocentric Coordinate Time) as their coordinate-time, the scale factor is corrected by $0.7\ 10^{-9}$ to take into account the fact that the analysis centres used the TAI or TT coordinate-time.