Analysis of Catalog corrections with respect to the Hipparcos Reference Frame

F.J. Marco¹, M.J. Martinez², J.A. Lopez¹

¹Universitat Jaume I,
Dept. Matematicas. Castelln (Spain) E-mail: marco@mat.uji.es
²Universidad Politecnica de Valencia, Dept. Matematicas. Valencia (Spain),
E-mail: mjmartin@mat.upv.es

An study of different analytical procedures to compare catalogues in spherical domains is presented in order to obtain analytical expressions for the necessary reductions. In particular, we consider the case of catalogues with bounded declination limits, near wich the errors must be carefully modelated. Finally, numerical results are doned with respect for differents catalogues with respect to the Hipparcos Reference Frame.