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DORIS geodetic contribution in Africa

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The DORIS network includes several stations in Africa, provinding long time series of observations since 1993. A recent reprocessing was recently done in view of the future ITRF2008 computation, using more recent models (GGM03 gravity field, GMF tropospheric mapping function), as well as the most recent improvements in data processing strategy (fixing daily solar pressure radiation coefficient, and estimating more frequently atmospheric drag coefficients). The goal of this presentation is first to describe the DORIS geodetic results available in Africa, to discuss their accuracy, in particular for 3-D velocity determination and the technical limitations of this technique. In a second step, we have compared and then combined these results with recent relevant GPS data to obtain information on the Nubia and Somalia relative plate motions. In particular, the difficulty to express DORIS and GPS results in well-defined and well-maintained Terrestrial Reference Frame will be addressed. Finally, horizontal and vertical velocities were compared to geological models.