

GNSS AS A MULTI-DISCIPLINARY TOOL FOR AFRICA

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Although primarily designed for positioning applications, Global Navigation Satellite Systems (GNSS), which currently included the Global Positioning System (GPS) and the Global'naya Navigatsionaya Sputnikoyaya Sistema (GLONASS), have developed into a multidisciplinary tools for navigation, geodesy, surveying, atmospheric science, disaster management and so on. Any regional or cross border development programmes in Africa which are based on geospatial information can only succeed if they are based on a modern uniform co-ordinate reference frame which is consistent with an international global reference frame. The Africa Reference Frame (AFREF) project is a geodetic project designed to unify the co-ordinate reference frames of Africa and is based on network of permanent GNSS stations. The presentation will briefly describe the AFREF project and its progress to date as well its importance for the provision of uniform geospatial information. Examples from Africa will also be presented in which GNSS data from a network of permanent GNSS base stations can be used for geophysical applications, weather forecasting, climate monitoring space weather monitoring and disaster mitigation.