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SEISMOTECTONIC MAP OF AFRICA
 First edition, 2016 - 1:110 000 000 scale
 Special version for the 35th International Geological Congress
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The first edition of the Seismotectonic Map of Africa is the result of a multidisciplinary task that required the definition of scientific and technical characteristics and the organization of a working group able to conduct the analysis of existing data. The project followed the proposal of the Organization of the African Geological Surveys (OAGS) and was carried out under the aegis of the Commission for the Geological Map of the World with support from UNESCO (Paris) and Nairobi offices - International Geological Program (IGCP) project 601 from 2011 to 2016, MAGET (North African Group of Earthquake and Tsunami studies), the Global Earthquake Model (GEM Foundation), the International Union of Geological Sciences (IUGS) and the Geological Society of Africa. The printed version of this first edition of the map was prepared to be presented at the 35th IGC (Cape Town, 27 August - 4 September, 2016).

The African continent is made of various geological structures that include zones of active deformation. Seismically active regions are primarily located along rift zones, thrust and fold mountain belts, transform faults and volcanic fields. Several tectonic structures may generate large earthquakes with significant damage and economic losses in Africa. The development of thematic mapping with the identification and characterization of seismically active zones constitutes the framework for the seismic hazard assessment and mitigation of catastrophes.

Along with the map preparation, a major objective was the building of a database on historical and instrumental seismicity, active tectonics, stress tensor distribution, earthquake geology, paleoseismology, active deformation and earthquake geodesy (GPS), crustal structure and seismic tomography, gravity, magnetic and structural segmentation, volcanic fields, rifting processes and geodynamic evolution. Guidelines for the seismotectonic map preparation and related data analysis were necessary to obtain homogeneous results. An important step was the database harmonization (e.g. earthquake intensities, magnitudes, fault parameters, etc.) at the local, regional and continental level. The data collection and storage are organized under geo-referenced feature using GIS.

The Seismotectonic Map of Africa is a synthesis originally prepared at the 1:5 000 000 scale based on regional scale maps. It features major historical and instrumental seismicity distribution, neotectonic and quaternary faults, two sketches of plate movement (with kinematic indicators) and plate map with principal stress direction. The map is accompanied by Explanatory notes with legend of symbols. More information on the GIS Database at the 1:5 000 000 is available at <http://eost.u-strasbg.fr/~gcp601/index.html>.

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 Meghraoui, M., P. Amponsah, A. Ayadi, A. Ayele, B. Ateba, A. Bensuleiman, D. Delvaux, M. El Gabry, R.-M. Fernandes, V. Mizi, M. Rose, Y. Timouali, 2016, The Seismotectonic Map of Africa, *Episodes* Vol. 39, no. 1, DOI:10.18814/episodes/2016v39n1/89232

LEGEND

Historical seismicity (< 1900 AD, EMS98)

> IX	> VIII	> VII	> VI	> V

Instrumental seismicity (Mw 1900 - 2010 AD)

> 7	> 6	> 5	> 4	> 3

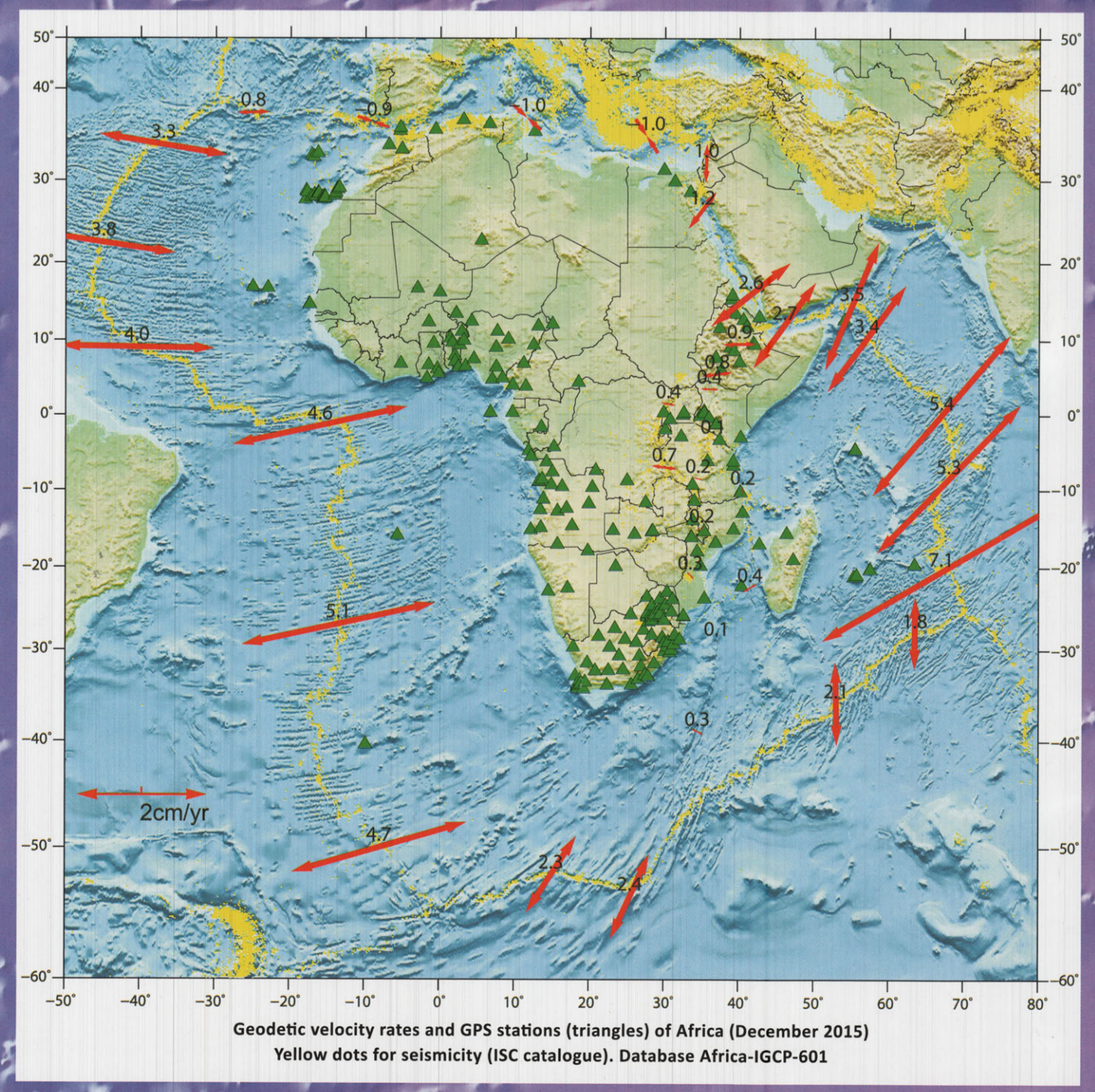
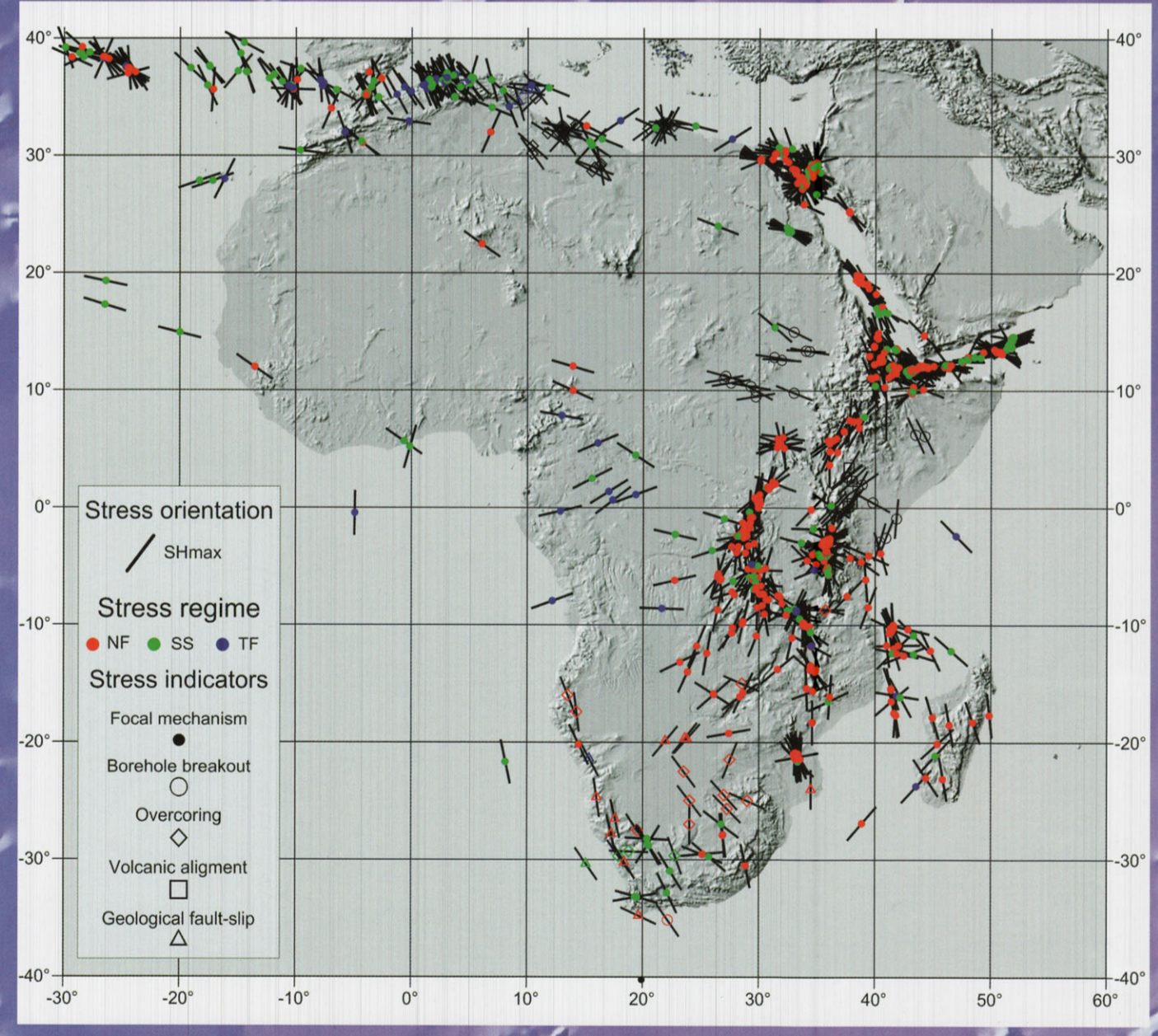
Focal mechanism

Volcanic fields (Neogene & Quaternary)

Active fault (< 150 ka)

Probable active fault

Crustal fault (excerpt from the Tectonic Map of Africa)



Prepared by the IGCP-601 Project Working Group
<http://eost.u-strasbg.fr/~gcp601/index.html>

OAGS: Organisation of African Geological Surveys
 IGCP/SIDA: International Geoscience Program/
 Swedish International Cooperation Authority
 CGMW: Commission for Geological Map of the World

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Map projection: WGS84 - Transverse Mercator (Mo: 16° East, Latitude: 0°)
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 Explanatory notes are downloadable at:
<http://eost.u-strasbg.fr/~gcp601/ExplanatoryNotes/SeismotectonicMapAfrica2016.pdf>
 The printed 1:110 million scale map is available for sale at <http://cgmw.org/en/16-catalogue>
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