



COST Action ES1206: Advanced GNSS Tropospheric Products for Monitoring Severe Weather Events and Climate (GNSS4SWEC)

Jonathan Jones (1), Guergana Guerova (2), Jan Dousa (3), Galina Dick (4), Siebren de Haan (5), Eric Pottiaux (6), Olivier Bock (7), and Rosa Pacione (8)

(1) Met Office, Observations R&D, Exeter, United Kingdom (jonathan.jones@metoffice.gov.uk), (2) Sofia University, Bulgaria, (3) Geodetic Observatory of Pecny, Czech Republic, (4) GFZ German Research Centre for Geosciences, Potsdam, Germany, (5) Royal Netherlands Meteorological Institute, de Bilt, Netherlands, (6) Royal Observatory of Belgium, Brussels, Belgium, (7) Institut Géographique National, Paris, France, (8) e-geos S.p.A. ASI/Centro di Geodesia Spaziale, Matera, Italy

GNSS is a well established atmospheric observing technique which can accurately sense atmospheric water vapour, the most abundant greenhouse gas, accounting for up to 70% of atmospheric warming. Water vapour is typically under-sampled in modern operational meteorological observing systems and obtaining and exploiting additional high-quality humidity observations is essential to improve weather forecasting and climate monitoring.

COST Action ES1206 is a 4-year project, running from 2013 to 2017, which is coordinating the research activities and improved capabilities from concurrent developments in the GNSS, meteorological and climate communities. For the first time, the synergy of multi-GNSS constellations is used to develop new, more advanced tropospheric products, exploiting the full potential of multi-GNSS on a wide range of temporal and spatial scales - from real-time products monitoring and forecasting severe weather, to the highest quality post-processed products suitable for climate research. The Action also promotes the use of meteorological data as an input to real-time GNSS services and is stimulating the transfer of knowledge and data throughout Europe and beyond.