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Arab Emirates Strong Motion Network

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UAE strong motion network consists of 62 stations distributed all over the country to construct UAE-Ground GSM “ShakeMaps” for existing urban areas and areas under strategic development. Additionally, structural design parameters will become available for verification and calibration of the seismic design code. Forty stations are equipped with shallow borehole EpiSensors and fourteen stations with surface EpiSensors installed on open ground or in small buildings and 7 stations equipped with TSA-100 and one station equipped with Titan. Stations use high dynamic range, IP aware, digitizer model Basalt, Trident or Quanterra, for data acquisition. The network telemetry topology consists of wireless GPRS backbone with data service from multiple ISPs and some station transmit data via VSAT.

A site characterization study at each site included geotechnical and geophysical analyses, microtremor testing, and soil dynamic investigations. The integral results provides estimation on the potential effects of local site conditions upon recorded ground motions. The primary operational objective is to provide input accelerations in real-time for the automatic calculation and distribution of reliable UAE-GSM “ShakeMap” immediately after a seismic event.

Promotional text

A description of the UAE Strong Motion Network as well as the various sensors that are used to provide a complete coverage of the seismic activity of the region.

Primary author: AL AFEEFI, Mohamed (National Center of Meteorology, Abu Dhabi, United Arab Emirates)

Co-author: Mr MEGAHED, Ali (National Center of Meteorology, Abu Dhabi, United Arab Emirates)

Presenter: AL AFEEFI, Mohamed (National Center of Meteorology, Abu Dhabi, United Arab Emirates)

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