

EarthScope Magnetotelluric Activities: Status, Products, and Future

Authors: Andy Frassetto, Adam Schultz, Bob Woodward

IRIS administers the NSF EarthScope Magnetotelluric (MT) Program using a subaward partnership with Oregon State University (OSU). EarthScope MT activities include Transportable (MT-TA) and Flexible (MT-FA) Array deployments from a pool of 28 long-period MT instruments maintained OSU. The MT-TA forms a community dataset of mid-crust to upper mantle resistivity observed with a grid of stations spaced at 70 km that spans over half of the continental U.S. The MT-FA comprises several PI-operated, high-resolution (including upper crust) surveys of specific geodynamic and volcanic targets. In 2018, the MT-TA is collecting 130 stations across the Great Plains to bridge the two existing footprints collected since 2006. There is considerable interest in the geophysics community to complete the MT-TA throughout the Lower-48 United States, addressing questions relevant to EarthScope as well as defining hazards related to space weather and the electric power grid. This poster highlights the accomplishments of the EarthScope Magnetotelluric program and provides context for potential future activities.

