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## X-band Polarimetric Doppler Radar Network in the Tokyo Metropolitan Area (X-NET)

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Since 2006, the National Research Institute for Earth Science and Disaster Prevention has been implementing an advanced X-band radar network, named X-NET, to mitigate urban disasters caused by severe storms. The research radars comprising the X-NET are five polarimetric Doppler radars and three Doppler radars. The goals of X-NET are to develop real-time processing of networked radar data and to provide end-users with the high-resolution precipitation and wind data that are necessary to understand severe storm development mechanisms, improve forecasting accuracy, and develop new urban disaster warning systems. The characteristic of the X-NET are; 1) radar network utilizing an advanced telecommunication network in urban areas, 2) immediate and economical efficiency using existing research radar facilities, 3) the test-bed is the Tokyo Metropolitan Area, where around 30 million people reside, 4) collaboration with end-users (scientists, administrative officers at the disaster prevention coordination divisions of national and local governments, private weather companies, etc.) through an interactive exchange of information, 5) contribution to the operational polarimetric radar networks of the Ministry of Land, Infrastructure, Transport and Tourism, which will be in operation in the Tokyo, Nagoya, Osaka metropolitan and Hokuriku areas in 2010.

Keywords: multi-parameter radar, network, torrential rain, precipitation, strong wind