

Social Experiment for Advantage of New Weather Radar Information

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Abstract

It is recognized that large cities with populations of several million people are inherently vulnerable to severe weather, such as torrential rainfall, lightning, and tornados. An increase in the occurrence of torrential rainfall, which may be caused by global warming, can cause extensive damages to large cities. The mechanism of the initiation, development, and dissipation processes of localized heavy rainfall, which are potential causes of natural disasters as flooding and landslides, is not understand yet. Thus, the development of extreme weather early detection and prediction system is urgent.

In recent years, advanced weather radar systems have been developed and are being operated. This X-band MP radar has become possible to observe the localized heavy rain because of a high resolution for space and time as compared to conventional weather radar. Therefore, in order to take advantage of this new weather radar information to society, social experiment was performed.

The social experiment has carried out in four different disaster prevention disciplines, i.e. rescue services, risk managements, infrastructure, and life and education in collaboration with related government institutions, local governments, private companies, and residents. The study fields are illustrated below;

- (1) Rescue Service, conducted by TDF
- (2) Risk Managements, conducted by
Edogawa-Ward of Tokyo, Yokohama-City, Fujisawa-City, and Minami Ashigara-City
- (3) Infrastructures, conducted by
East Japan Railway Company, Central Japan Railway Company, and Obayashi Corporation.
- (4) Life and Education, conducted by Toyo University, University of Tokyo, TMRIEP, and CAMJ

In the presentation, overview of social experiments and some of results are presented.

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