

# **Applications of Formosat-2 on Monitoring Earth Environment and Rapid Response to Global Disasters**

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## **Abstract**

Formosat-2 launched on May 21, 2004 has a unique orbit configuration to enable high spatial resolution imaging on a daily basis. The successful operation of the satellite has proved that the concept of such a daily revisit configuration from a sun synchronized near polar orbit is highly beneficial for site surveillance at both high temporal resolution and high spatial resolution, such as monitoring the places subject to catastrophic environmental disasters. The uniquely adjusted orbit and the impact to sensor alignment however, also raise new challenges in image processing.

An automatic data processing streamline developed by Prof Liu's group in collaboration with Imperial College (Dr J.G. Liu) paved the way of successful applications of Formosat-2 imagery data for rapid response to global disasters. Examples of 2004 South Asia earthquake and tsunami, 2007 Californial wildfire, 2008 Wilkin Ice Shelf Disintegration, 2008 Sichuan Earthquake, 2009 Victoria bushfire, 2009 North Korea missile test, 2009 Honduras Earthquake and 2009 Typhoon Morakot will be presented. Five lessons that we learned from these disaster events will be summarized.