

**Registration/Abstract Submission Form for
The 13th Asia/Oceania Meteorological Satellite Users' Conference**

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Nowcasting in Asia-Pacific: A United States Perspective

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The World Meteorological Organization (WMO) definition of nowcasting is “forecasting with local detail, by any method, over a period from the present to six hours ahead, including a detailed description of the present weather.” There are a wide array of meteorological services provisioned based on nowcasting. Nowcasting may consist of short-term temperature, moisture, and wind forecasts to support the general public or weather-sensitive industries, or result in warnings of hazardous weather conditions. Such warnings, for severe local storms, hurricanes, and other phenomena, are a critical part of nowcasting services that are provided for the general welfare of the public.

Satellite observations are a major asset to meteorologists when provisioning nowcasting services, particularly over vast geographic areas, especially the oceans. The U.S. National Oceanic and Atmospheric Administration (NOAA) recently assessed the importance of observations necessary to support nowcasting services that the National Weather Service (NWS) provides, conducting interviews and surveys with operational meteorologists. The United Nations recently announced an “Early Warnings for All” initiative to ensure that people worldwide are informed about and protected from dangerous weather and water events in a changing climate by 2027.

The U.S. conducts nowcasting for a vast portion of the Pacific Basin in the interest of the residents of Hawaii, Guam, the Commonwealth of the Northern Mariana Islands,

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and American Samoa, and aviators and mariners transiting the Pacific Ocean. With limited other observations from ships and buoys, nowcasting in the Pacific Basin is highly reliant on satellite imagery and products. Weather satellites from other nations are vital for monitoring tropical cyclones and other tropical and subtropical weather phenomena.

This presentation will discuss the outcomes of the work in the U.S. to assess and prioritize observational needs for nowcasting services, focusing specifically on the Asia-Pacific region. This effort included an identification of existing and potential future space-based observing platforms that will provide observations now and in the future for nowcasting services. In addition, ongoing work and upcoming directions of a new WMO task team on satellite nowcasting applications will be highlighted.