

## Planning Document for the 2013 AMS Annual Meeting

### Theme:

“Taking Predictions to the Next Level: Expanding Beyond Today's Weather, Water, and Climate Forecasting and Projections”

### Background:

The meteorological community can take enormous pride in 1) making prediction a fundamental part of its scientific and operational/service heritage, 2) developing and applying complex numerical models that now rely on a real-time, satellite dominated global observing systems, involve the atmosphere, ocean, land and cryosphere components of the Earth System and are run on the World's largest computers, and 3) forecasting extreme events, in some cases over a week in advance. The advancements over the past 60 years in the Meteorological and related Earth System sciences, global observing systems and computer capabilities, combined with the ability to provide decision support services through the public and private sectors, have been a crowning achievement for the entire enterprise related to weather, climate and ocean predictions

### Theme Concept:

It is now possible to envision accelerating the extension of today's predictive capabilities into other more non-traditional areas such as space weather, short term climate variability, ocean and coastal domains, related ecosystem forecasts, air and water quality, disease vectors, optimal green energy production, and other areas. The scientific basis and infrastructure involving observing capabilities, computers and forecaster/consultants that continue to improve and successfully serve the meteorological community can also be thought of as a great enabling factor that should serve as a basis for the rapid expansion of prediction capabilities into these newer areas. Based on the success of advancing weather predictions and the increasing linkage of these predictions to decision support services, and with an effort to take predictions to the next level, we should expect to see large societal impacts associated with commerce, health, transportation, energy issues and related use of our natural resources.

### Organizing Concept for the 2013 AMS Annual Meeting:

The 2013 AMS annual meeting could play a major role in “taking predictions to the next level” and provide a comprehensive overview of how science, observations, technological advances can be applied to 1) expand upon today's weather and climate prediction enterprise into areas involving commerce,

health, air and water quality, energy, space, coastal and ocean domains and related ecosystems, and 2) link these predictions to expanded decision support services and related societal impacts. Elevating this concept as a theme for the 2013 Annual meeting could serve as a catalyst for focusing the attention of the research, and operational communities (and also those who are involved in accelerating the transition of research results into operations) on the exciting possibilities related to advancing predictive capabilities across many fields and applications. The goal of the meeting would include stimulating those inside the AMS to continue thinking outside the box to advance predictive skill and expand predictive capabilities, while also engaging those who normally reside in professional activities outside of the AMS, who will also play fundamental roles in the effort for the AMS and its members to move beyond today's weather and climate forecasts.