

Forecasting Challenges Improvements for the Future

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1. INTRODUCTION

Organizational and forecast tool development will be the focus of the informative paper. This paper will define enhancements that will be sought to improve forecasting skills through system upgrades, and knowledge based practices.

2. WHERE WE ARE

Current meteorological operations yields historically the highest degree of accuracy ever enjoyed based on its configuration of equipment, known guidance, and personnel. Sustaining peak performance in varying seasonal patterns is the next operational goal and can be sought with minimal investment though education and continued research processes.

Taking a new quantum leap as provided by satellites and mesoscale modeling (AMPS) will undoubtedly require further science to operational advancements which may or may not be initially financially obtainable. The cost-to-performance percentage increase is known to be on the steep part of the exponential curve.

The remote operations are being reviewed to insure the greatest strides will be taken not to decrease accuracy over an in-situ environment. Tools are being employed and developed to insure contingencies exist and information is rapidly and coherently available to forecasting staff and in return developed products are provided in a timely manner to all customers. Seamless and nearly unnoticeable is the goal to remote operations.

3. AN HONEST LOOK AT THE FUTURE

Initially it is operations intent to use to the fullest capabilities what we have. To maximize and maintain current levels of accuracy SPAWAR is conducting a total review of available tools and operational processes. Expanding knowledge will be at the forefront of this review to promote academic development for the forecasting staff. Research will continued to be explored and sought for improved forecasting tools and improved processes. Equipment modifications, enhancements, and exploration of new systems will be considered but only supported when a gain in safety, efficiency, or accuracy could be realized.

Over the next few years the goal of seamless and unnoticeable remote operations will replace an increased number of forecasting staff from McMurdo to Charleston with a virtual presence. Internet and software advances make this possible with today's technology but still challenging with Antarctic limitations.

Science to operations applications is more vital today than ever and SPAWAR is dedicated to listening and learning from the science community. It is with the joint community that exploration can be viewed with operational eyes and applied when found. Studies of science have assisted advancing the knowledge of operational forecasters and it is proposed to advance build on this relationship in the upcoming years.