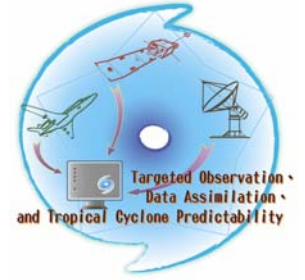


**Preface for the Special Collection on Targeted Observations, Data
Assimilation, and Tropical Cyclone Predictability Monthly Weather Review**



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Accurate tropical cyclone track forecasts are of foremost importance to the increasing population of coastal residents worldwide, necessitating advances in all facets of the numerical prediction process. These include the observational network, the data assimilation schemes that blend these observations with the numerical ‘first guess’ field, the vortex initialization schemes and the dynamics, physics and resolution of the models themselves, and methods to “target” observations in order to optimize the reduction in forecast error. During the past 30 years, tropical cyclone track forecast skill has increased steadily due to the improvements of all these. In particular, advances have been made in targeted observations and data assimilation over the past decade. This special issue collects a series of timely papers on these topics, many of which have resulted from multi-national collaborations.