Comments on "On Medium-Range Model Guidance and the 3–5 Day Extended Forecast"

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Livingston and Schaefer (1990) are correct in pointing out that the inherent deficiency in the medium-range forecast (MRF) in dealing with wave numbers from 10 to 20 is a major problem for National Weather Service (NWS) field forecasters preparing the extended-forecast package (EFP). However, the forecast problem is compounded by the National Meteorological Center's (NMC) issuing of surface prognoses for days 3–5 (AFOS graphics 9JH, 9KH, and 9LH). In producing these surface progs, NMC is, in effect, "steering" the field forecaster to base his or her EFP on the forecast pressure field and frontal positions. The authors point out that only the 120-h, 500-mb and surface pressure progs are available to Weather Service Forecast Office (WSFO) forecasters in time for them to prepare the EFP. In the absence of any other graphical or numerical guidance, the NWS forecaster is left with little choice but to assume that the forecast frontal positions and pressure field are an accurate (or nearly accurate) representation of events at verification time, and his or her EFP is heavily biased by those forecast positions. These positions are highly dependent on waves considerably shorter than those accurately forecast by the MRF. It makes little sense to acknowledge that the model is deficient in forecasting short synoptic, subsynoptic, and mesoscale waves, and then to proceed to produce graphics of surface features that reflect just these scales of motion, especially when the field forecaster is so heavily dependent on those graphics when preparing the EFP. In addition, Livingston and Schaefer point out that the WSFO forecasters see fewer than one-third of the charts seen by the forecasters at NMC who prepare the EFP discussion. This forces WSFO forecasters to make decisions about validity of the NMC discussion with no real basis from which to accept or reject the NMC conclusions.

Unlike NWS field forecasters, however, nongovernment weather forecasters who receive data via a third-party source do, for the most part, have the capability of receiving European Center for Medium-Range Weather Forecasting (ECMWF) and MRF forecasts of sea level pressure and 500-mb height for valid times other than $T + 120$ h. The implication here is not that private forecasters are more skillful at extended-range forecasting than their NWS counterparts, but that many forecasters do have ECMWF and MRF graphical products (from 72 to 240 h) available to them when preparing their own extended forecasts.

While Gadomski and Knight (1986) are correct in suggesting that an accompanying discussion that highlights the forecast problems involved in preparing the EFP would be valuable to the forecaster, I do not agree with the statement by Epstein (1988) that "the value of forecasts of even meager skill can be great if the limited reliability of the forecast is made explicit by the forecaster and explicitly appreciated by the decision maker." It would not seem to be in the best interests of NWS to announce that a particular forecast had little or no skill. My own feeling is that the general public does not have a great deal of confidence in extended-range forecasting to begin with, and any such admission of lack of skill would result in an erosion of public confidence in shorter-range forecasts as well.

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