



Experiments with the FIM global model for medium-range forecast duration

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NOAA/ESRL has developed and continued numerical, physics, and coupled ocean refinements to the FIM global model (Flow-following finite-volume) Icosahedral Model) with a unique combination of an adaptive, largely isentropic vertical grid and an icosahedral horizontal grid. The FIM model is being applied to both medium-range and seasonal prediction with considerable success and is a candidate for NOAA global prediction including within a multi-model ensemble and as a research earth system simulator with ocean and inline chemistry components already in use. FIM is currently run at down to 10-km resolution in real-time.

Performance of the FIM global model vs. GFS and other models for medium-range prediction will also be summarized. Generally, FIM shows improved wind forecasts from 12h to >120h duration over GFS and slightly improved anomaly correlation attributable to its dynamic core, as the presentation will demonstrate. The presentation will include detail on its coupled capability with inline chemistry and a matching icosahedral version of the HYCOM ocean model.