

Table 8-13. Prognostic Meteorological Model Evaluation Results for Recent Applications at 12 Km Horizontal Resolution.

(a) Surface Temperatures (deg C).

Domain	SAMI	SAMI	SAMI	LMOS	LMOS	OTAG	OTAG	OTAG	OTAG	OTAG	LMOS	LMOS	Eastern U.S.	Western U.S.
Model	RAMS	RAMS	RAMS	RAMS	RAMS	RAMS	MM5	MM5	MM5	MM5	MM5	MM5	MM5	MM5
Reference	7	7	7	6	6	3	3	2	1	5	6	6	1	4
Episode	3-12 Aug 1993	22-29 June 1992	24 Apr - 3 May 1995	26-28 June 1991	17-19 July 1991	13-21 July 1991	13-21 July 1991	1-11 July 1988	12-15 July 1995	18-22 June 1994	26-28 June 1991	17-19 July 1991	31 Jul - 2 Aug 1995	3-6 August 1990
Mean Bias (deg C)	-0.4	-1.1	-0.8	0.1	-0.0	1.6	-0.1	-0.6	-0.2	-0.7	-0.5	-0.3	0.8	0.2
Gross Error (deg C)	1.6	1.8	1.8	1.4	1.9	2.1	2.0	3.3	2.0	2.4	1.6	1.7	2.4	2.9

(b) Surface Winds (m/s).

Domain	SAMI	SAMI	SAMI	LMOS	LMOS	OTAG	OTAG	OTAG	OTAG	OTAG	LMOS	LMOS	Eastern U.S.	Western U.S.
Model	RAMS	RAMS	RAMS	RAMS	RAMS	RAMS	MM5	MM5	MM5	MM5	MM5	MM5	MM5	MM5
Reference	7	7	7	6	6	3	3	2	1	5	6	6	1	4
Episode	3-12 Aug 1993	22-29 June 1992	24 Apr - 3 May 1995	26-28 June 1991	17-19 July 1991	13-21 July 1991	13-21 July 1991	1-11 July 1988	12-15 July 1995	18-22 June 1994	26-28 June 1991	17-19 July 1991	31 Jul - 2 Aug 1995	3-6 August 1990
Mean Observed Wind Speed	1.11	1.54	1.86	2.94	2.02	1.95	2.00	1.63	2.31	1.02	2.94	1.99	1.43	1.68
Mean Predicted Wind Speed	2.66	2.55	2.98	2.59	1.95	2.04	2.46	2.70	2.80	1.86	3.11	2.30	1.61	2.06
Observed Standard Dev.	1.80	1.89	2.42	2.31	2.04	2.19	2.19	2.21	2.09	2.28	2.37	2.06	1.99	2.42
Predicted Standard Dev.	1.79	1.56	2.73	1.36	1.04	1.55	1.98	3.11	1.50	3.04	1.67	1.43	1.45	1.92
RMSE	2.18	1.89	2.35	1.82	1.73	1.61	1.92	3.21	1.91	2.69	1.70	1.65	1.78	2.13
RMSE _S	1.72	1.38	1.84	1.57	1.54	1.31	1.46	2.48	1.47	1.78	1.30	1.27	1.42	1.43
RMSE _U	1.28	1.24	1.46	0.89	0.78	0.91	1.20	1.88	1.16	1.93	1.08	1.04	1.04	1.56
Index of Agreement, I	0.75	0.75	0.81	0.69	0.64	0.74	0.73	0.64	0.68	0.80	0.79	0.77	0.75	0.80
Skill _E	0.75	0.66	0.64	0.39	0.38	0.43	0.56	0.89	0.59	0.87	0.46	0.51	0.54	0.66
Skill _{VAR}	1.02	0.84	1.15	0.58	0.52	0.70	0.91	1.47	0.75	1.38	0.70	0.70	0.74	0.81
Difference in Mean Wind Direction (deg)	25.6	20.6	4.4	16.7	7.4	27.1	17.0	7.9	15.2	0.1	14.0	7.4	8.0	3.0

(c) Surface Mixing Ratios (gm/Kg).

Domain	SAMI	SAMI	SAMI	LMOS	LMOS	OTAG	OTAG	OTAG	OTAG	OTAG	LMOS	LMOS	Eastern U.S.	Western U.S.
Model	RAMS	RAMS	RAMS	RAMS	RAMS	RAMS	MM5	MM5	MM5	MM5	MM5	MM5	MM5	MM5
Reference	7	7	7	6	6	3	3	2	1	5	6	6	1	4
Episode	3-12 Aug 1993	22-29 June 1992	24 Apr - 3 May 1995	26-28 June 1991	17-19 July 1991	13-21 July 1991	13-21 July 1991	1-11 July 1988	12-15 July 1995	18-22 June 1994	26-28 June 1991	17-19 July 1991	31 Jul - 2 Aug 1995	3-6 August 1990
Accuracy of Peak Prediction (%)	11.1	11.1	13.3	8.7	9.6	8.9	10.0	19.2	14.2	16.3	8.8	12.0	16.6	17.4
Normalized Bias (%)	-3.3	-2.0	-1.9	0.7	4.0	0.8	-1.3	-10.8	-8.1	-9.6	0.2	-3.0	-11.3	9.8
Mean Bias (gm/Kg)	-0.6	-0.3	-0.1	-0.1	0.4	-0.0	-0.3	-1.4	-1.5	-1.6	-0.1	-0.6	0.2	-0.2
Normalized Gross Error (%)	8.7	9.0	11.6	8.5	10.2	9.0	10.5	16.7	13.5	15.6	9.3	10.8	15.2	27.0
Gross Error (gm/Kg)	1.1	1.0	0.7	1.2	1.4	1.2	1.4	2.0	2.2	2.2	1.2	1.5	2.2	1.9

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