MOS-2000: A NEW ERA IN INTERPRETIVE WEATHER GUIDANCE?

J. Paul Dallavalle
Mary C. Erickson

http://www.nws.noaa.gov/tdl/synop
email: paul.dallavalle@noaa.gov

MODEL OUTPUT STATISTICS

The Essentials

Technique in which observed weather elements (predictands) are related statistically to appropriate predictor variables:

1. NWP Model Forecasts
2. Prior Surface Weather Observations
3. Geoclimatic Information

MOS-2000

What Does It Mean?

- New Database Formats
- New Analysis Software for Unix Platforms
- New Development and Implementation System

MOS-2000

What Does It Mean to the Customer?

- Enhanced AVN MOS for Short-Range
  - First phase: NGM MOS look-alike
  - Guidance to 72 h
  - 1000+ stations
- Enhanced MRF MOS for Medium-Range
  - New forecast elements
  - Revised element definitions
  - Same stations as short-range
- Eta MOS for Storm-Related Elements

NEW AVN/MRF MOS GUIDANCE

Will It Be More Useful?

- Available for 1000+ Sites in CONUS, AK, HI, PR
- Predictands from Current Observing System
- Model Variables from 95.25 km Grid
- For AVN, Model Variables Every 3 h to 72 h
- 0600 / 1800 UTC AVN MOS Packages

AVN MOS GUIDANCE

A Different Look

- Public Weather Elements to 72 h
- Revised Predictands
  - Total cloud cover (ASOS complemented with satellite estimates)
  - Thunderstorms (from lightning data)
  - 24-h snowfall (from co-op network)
- Predictor Sample from April 1997 to Present

MRF MOS

A Different Look

- New Weather Element Definitions
  - Wind, clouds, precip. type
- Additional Weather Elements
  - Temperature, dew pt., QPF, thunderstorms, snowfall
- Predictor Sample from 1992 to Present
  - Re-analysis data from 1992-96
  - MRF Model from April 1997

MOS GUIDANCE

Implementation Plans

- Feb. 2000 - AVN MOS Message (00Z / 12Z)
- Feb. 2000 - New MRF MOS Message
- Apr. 2000 - Complete AVN MOS (No Snow)
- Oct. 2000 - Complete MRF MOS (No Snow)
- Oct. 2000 - Partial AVN MOS (06 / 18Z)
- Oct. 2000 - Eta MOS Thunderstorm Guidance
- Apr. 2001 - NGM MOS Removed

MOS-2000

Future Enhancements

- Frequent Equation Updates
- Increased Accuracy
- More Stations
- Additional Predictands
- Dissemination in Digital Form (BUFR / GRIB)
- Complete AVN MOS Package 4x Daily
- New Techniques