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PNSWSH

PUBLIC INFORMATION STATEMENT...TECHNICAL IMPLEMENTATION NOTICE 01-19
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
1145 AM EDT TUE JUL 24 2001

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS
NOAA WEATHER WIRE SERVICE /NWS/ SUBSCRIBERS
EMERGENCY MANAGERS WEATHER INFORMATION NETWORK /EMWIN/
SUBSCRIBERS...
OTHER NWS CUSTOMERS...PARTNERS AND EMPLOYEES

FROM: PAUL NIPKO
ACTING CHAIR...COMMITTEE ON ANALYSIS AND FORECAST
TECHNIQUE IMPLEMENTATION /CAFTI/

SUBJECT: CHANGES IMPLEMENTED IN THE NATIONAL CENTERS FOR ENVIRONMENTAL
PREDICTION /NCEP/ OPERATIONAL MESO ETA MODEL SYSTEM...EFFECTIVE JULY 24
2001 AT 1200 UTC

NOTE: THE FOLLOWING CHANGES HAVE NO IMPACT ON NOAA WEATHER WIRE SERVICE OR
EMWIN SUBSCRIBERS.

AT 1200 COORDINATED UNIVERSAL TIME /UTC/ JULY 24 2001...THE FOLLOWING
CHANGES TO THE OPERATIONAL MESO ETA MODEL WERE IMPLEMENTED:

- THE ETA 3-DIMENSIONAL VARIATIONAL /3DVAR/ ANALYSIS WAS MODIFIED...BY
INTRODUCING A NEW ALGORITHM TO IMPROVE THE BALANCE BETWEEN MASS AND WIND
ANALYSES...BY PERFORMING THE ANALYSIS ON THE ETA VERTICAL COORDINATE
SURFACES INSTEAD ON PRESSURE SURFACES...AND BY INCREASING THE HORIZONTAL
RESOLUTION OF THE INTERNAL ANALYSIS GRID.

- ASSIMILATION OF HOURLY ANALYSES OF OBSERVED PRECIPITATION DURING THE ETA
DATA ASSIMILATION SYSTEM /EDAS/ RUN: THIS WILL CORRECT PRECIPITATION
BIASES DURING THE PRE-FORECAST ASSIMILATION PERIOD...IMPROVE THE SOIL
MOISTURE FIELD AND IMPROVE THE MESO ETA MODEL/S SHORT-TERM PRECIPITATION
FORECAST. THE HOURLY NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/
NATIONAL 4-KM PRECIPITATION ANALYSIS IS USED DURING THE EDAS...BASED ON
2500 HOURLY RAIN GAUGES AND HOURLY PRECIPITATION ESTIMATES FROM THE WSR-
88D RADARS.

- THE LAND-SURFACE PHYSICS SCHEME IN THE MESO ETA MODEL WAS UPGRADED.
DURING THE COLD SEASON: IMPROVED SHELTER TEMPERATURES OVER PATCHY
SNOWCOVER...NEW STATE VARIABLES...FROZEN SOIL...VARIABLE SNOWPACK DENSITY
AND NEW MAXIMUM SNOW ALBEDO DATABASE. DURING THE WARM SEASON: IMPROVED
NEAR-SURFACE SENSIBLE AND DEW POINT TEMPERATURES...DUE TO IMPROVED
FORMULATIONS OF BARE SOIL EVAPORATION AND SOIL THERMAL CONDUCTIVITY.

THIS CHANGE WAS APPROVED AT THE MAY 24 2001 MEETING OF THE COMMITTEE ON
ANALYSIS AND FORECAST TECHNIQUE IMPLEMENTATION /CAFTI/. A COPY OF THE
PRESENTATION MADE AT THAT MEETING IS AVAILABLE ONLINE AT /USE LOWER CASE/:
[FTP://FTP.NCEP.NOAA.GOV/PUB/EMC/WD20ER/CAFTIMAY01/V3 DOCUMENT.HTM](ftp://ftp.ncep.noaa.gov/pub/emc/wd20er/caftimay01/v3_document.htm)

VERIFICATION STATISTICS FOR BOTH THE REAL-TIME PARALLEL TESTS AND
RETROSPECTIVE TESTS OF THE FULL CHANGE PACKAGE CAN BE FOUND AT /USE LOWER
CASE/:

[HTTP://WWW.EMC.NCEP.NOAA.GOV/MMB/MMBPLL/SPRING2001/STATS/BUNDLE.HTML](http://www.emc.ncep.noaa.gov/MMB/MMBPLL/SPRING2001/STATS/BUNDLE.HTML)

MORE DETAILS CAN BE FOUND IN NWS TECHNICAL PROCEDURES BULLETIN NUMBER 479
AT /USE LOWER CASE/:

[HTTP://WWW.EMC.NCEP.NOAA.GOV/MMB/MMBPLL/SPRING2001/TPB/](http://www.emc.ncep.noaa.gov/MMB/MMBPLL/SPRING2001/TPB/)

NO CHANGES TO ANY OF THE STANDARD ETA MODEL GRIDS OR PRODUCTS AVAILABLE
FROM THE FAMILY OF SERVICES /FOS/...THE ADVANCED WEATHER INTERACTIVE
PROCESSING SYSTEM /AWIPS/ SATELLITE BROADCAST NETWORK...OR FROM THE OSO
FILE SERVER WERE MADE WITH THIS IMPLEMENTATION.

IF YOU HAVE ANY QUESTIONS ABOUT THESE CHANGES TO THE ETA MODEL...PLEASE
CONTACT ONE OF THE FOLLOWING PEOPLE AT NCEP IN CAMP SPRINGS MARYLAND:

ERIC ROGERS
PHONE: 301-763-8000 EXT. 7227
EMAIL: EROGERS@NCEP.NOAA.GOV

OR

GEOFF DIMEGO
PHONE: 301-763-8000 EXT. 7221
EMAIL: GDIMEGO@NCEP.NOAA.GOV

NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT /USE LOWER CASE/:

[HTTPS://WWW.WEATHER.GOV/NOTIFICATION/ARCHIVE](https://www.weather.gov/NOTIFICATION/ARCHIVE)

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