

NOUS41 KWBC 091850  
PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 07-89  
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC  
150 PM EST FRI NOV 9 2007

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

FROM: PAUL HIRSCHBERG  
CHIEF...SCIENCE PLANS BRANCH  
OFFICE OF SCIENCE AND TECHNOLOGY

SUBJECT: UPGRADE TO SHORT RANGE ENSEMBLE MODELING SYSTEM: EFFECTIVE  
DECEMBER 11 2007

EFFECTIVE TUESDAY DECEMBER 11 2007...AT 1500 COORDINATED UNIVERSAL TIME  
/UTC/...THE NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/ WILL  
UPGRADE THE SHORT RANGE ENSEMBLE MODELING SYSTEM /SREF/.

MODELING SYSTEM CHANGES:

- BIAS CORRECTED FIELDS WILL BE PRODUCED FOR ALL COMPONENTS/MEMBERS. EACH  
BIAS CORRECTION IS COMPUTED USING A DECAYING AVERAGE APPROACH WHERE HIGHER  
WEIGHT IS GIVEN TO THE MORE RECENT FORECAST. A SEPARATE BIAS CORRECTION  
IS COMPUTED AT EACH GRID POINT AND APPLIED TO EACH OF THE 21 SREF  
MEMBERS...FOR EACH CYCLE...03 UTC...09 UTC...15 UTC AND 21 UTC...FOR EACH  
FORECAST LEAD TIME...3-HOURLY OUT TO 87-HOURLY. ALL ENSEMBLE PRODUCT  
GENERATION USES THESE BIAS CORRECTED MEMBERS. THE APPLICATION OF THE  
PROCEDURE RESULTS IN SIGNIFICANTLY LOWER ERRORS AND BETTER BEHAVED  
PROBABILITIES.

- THE DOMAIN OF RSM MEMBERS WILL BE EXPANDED TO COVER MORE AREA WEST OF  
ALASKA COVERED BY THE OTHER MEMBERS.

- FOUR NEW AVIATION PRODUCTS WILL BE ADDED:  
ICING  
CLEAR AIR TURBULENCE  
LOW LEVEL CEILING  
FLIGHT RESTRICTION

- ADD BINARY UNIVERSAL FORM FOR THE REPRESENTATION OF METEOROLOGICAL DATA  
/BUFR/ OUTPUT FROM SIX WEATHER RESEARCH AND FORECAST /WRF/ MEMBERS.

A LIST OF BIAS CORRECTED FIELDS IS AVAILABLE. PLEASE SEE THE FOLLOWING  
WEBSITE FOR MORE INFORMATION /USE LOWER CASE/:

[HTTP://WWW.NCO.NCEP.NOAA.GOV/PMB/CHANGES/SREF-  
12\\_11\\_2007\\_BIASCORRECTEDFIELDS.HTML](http://www.nco.ncep.noaa.gov/pmb/changes/sref-12_11_2007_biasedcorrectedfields.html)

PARALLEL DATA SETS FOR THE CURRENT PRODUCTS AND BIAS CORRECTED PRODUCTS ARE AVAILABLE ON THE NCEP FTP SERVER AT THE LINK BELOW. NCEP ENCOURAGES ALL USERS TO EVALUATE THESE DATA SETS TO ENSURE THAT THEIR SYSTEMS ARE PREPARED FOR THE UPCOMING CHANGE. /USE LOWER CASE/

[FTP://FTPFRD.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/SREF/PARA/SREF.YYYYMMDD/HH](ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/sref/para/sref.yyyyymmdd/hh)

THE ENVIRONMENTAL MODELING CENTER /EMC/ HAS A PUBLICLY AVAILABLE WEBSITE WHICH CAN PROVIDE USERS MORE INFORMATION CONCERNING THE SREF MODELING SYSTEM AS WELL AS ALL OTHER NCEP MODELING SYSTEMS /USE LOWER CASE/:

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

DATA DELIVERY TIMING/VOLUME/CONTENT CHANGES:

NOAAPORT DATA:

- AT THE CURRENT TIME...THE FOLLOWING DOMAINS ARE DISSEMINATED TO NOAAPORT/ADVANCED WEATHER INTERACTIVE PROCESSING SYSTEM /AWIPS/ USERS: CONTIGUOUS U.S. /CONUS/...ALASKA...EASTERN PACIFIC.

- NO DATA CONTENT CHANGES ARE EXPECTED.
- NO CHANGE IS EXPECTED IN THE CONTENT DELIVERY TIME.
- NO SIGNIFICANT CHANGES IN DATA VOLUMES ARE EXPECTED.
- NO CHANGE IN PRODUCT DEFINITION SECTION /PDS/ CONTENT IS EXPECTED.

NWS FILE TRANSFER PROTOCOL /FTP/ SERVER: /USE LOWER CASE EXCEPT FOR THE SL...ST...MT AND CY/. THE HH REFERS TO THE CYCLE: 03...09...15...21. THE YYYYMMDD REFERS TO THE CURRENT DATE.

[FTP://TGFTP.NWS.NOAA.GOV/SL.US008001/ST.OPNL/MT.SREF CY.HH/RD.YYYYMMDD](ftp://tgftp.nws.noaa.gov/sl.us008001/st.opnl/mt.sref cy.hh/rd.yyyyymmdd)

- THE CONUS DOMAIN IS CURRENTLY DISSEMINATED.
- NO DATA CONTENT CHANGES ARE EXPECTED.
- NO CHANGE IS EXPECTED IN THE CONTENT DELIVERY TIME.
- NO SIGNIFICANT CHANGES IN DATA VOLUMES ARE EXPECTED.
- NO CHANGE IN PDS CONTENT IS EXPECTED.

NCEP FTP SERVER:

- AT THE CURRENT TIME...THE FOLLOWING DOMAINS ARE DISSEMINATED /USE LOWER CASE/:

[FTP://FTPFRD.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/SREF/PROD](ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/sref/prod)

NCEP FTP SERVER USERS: CONUS...ALASKA...EASTERN PACIFIC  
NWS FTP SERVERS USERS: CONUS:

- NO CHANGE IS EXPECTED IN THE CONTENT DELIVERY TIME.
- NO CHANGE IN PDS CONTENT IS EXPECTED FOR THE CURRENT DATA SETS WHICH ARE DELIVERED.
- NO SIGNIFICANT CHANGES IN DATA VOLUMES ARE EXPECTED FOR THE DATA SETS WHICH ARE CURRENTLY DELIVERED.

- THE DIRECTORY STRUCTURE WILL CHANGE SIGNIFICANTLY FOR THE SREF OUTPUT WHICH IS CURRENTLY DISSEMINATED. THE CYCLES WILL BE SEPARATED INTO THEIR OWN SUBDIRECTORIES INSTEAD OF RESIDING IN ONE SUBDIRECTORY. PLEASE SEE THE PARALLEL DATA SETS FOR AN EXAMPLE OF THE NEW DIRECTORY PATH. THE NEW FORMAT WILL BE AS FOLLOWS /USE LOWER CASE/:

MAIN/PARENT DIRECTORY STRUCTURE:

[FTP://FTPFRD.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/SREF/PROD](ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/sref/prod)

CURRENT SUBDIRECTORY STRUCTURE:

SREF.YYYYMMDD

NEW SUBDIRECTORY STRUCTURE:

SREF.YYYYMMDD/HH/PGRB - INDIVIDUAL MEMBER GRIDDED BINARY /GRIB/1/GRIB2 DATA SETS

SREF.YYYYMMDD/HH/ENSPROD - MEAN/SPREAD/PROB GRIB1/GRIB2 DATA SETS

- NEW BIAS CORRECTED DATA SETS WILL BECOME AVAILABLE ON THE NCEP FTP SERVER. THESE DATA SETS WILL BE DELIVERED APPROXIMATELY 60 MINUTES AFTER THE NON-BIAS CORRECTED DATA SETS.

MAIN DIRECTORY STRUCTURE:

[FTP://FTPFRD.NCEP.NOAA.GOV/PUB/DATA/NCCF/COM/SREF/PROD](ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/sref/prod)

SUBDIRECTORY STRUCTURE:

SREF.YYYYMMDD/HH/PGRB\_BIASC - INDIVIDUAL MEMBER GRIB1/GRIB2 DATA SETS

SREF.YYYYMMDD/HH/ENSPROD\_BIASC - MEAN/SPREAD/PROB GRIB1/GRIB2 DATA SETS

NCEP ENCOURAGES USERS TO ENSURE THEIR DECODERS ARE FLEXIBLE AND ARE ABLE TO ADEQUATELY HANDLE CHANGES IN CONTENT ORDER...PARAMETER FIELDS CHANGING ORDER...CHANGES IN THE SCALING FACTOR COMPONENT WITHIN THE PRODUCT DEFINITION SECTION /PDS/ OF THE GRIB FILES AND ANY VOLUME CHANGES THAT MAY BE FORTHCOMING. THESE ELEMENTS MAY CHANGE WITH FUTURE NCEP MODEL IMPLEMENTATIONS. NCEP WILL MAKE EVERY ATTEMPT TO ALERT USERS TO THESE CHANGES BEFORE IMPLEMENTATION.

FOR QUESTIONS REGARDING THE SCIENTIFIC CONTENT OF THE MODELING SYSTEM...PLEASE CONTACT:

GEOFF DIMEGO  
NCEP/EMC  
CAMP SPRINGS MARYLAND  
PHONE: 301-763-8000 X 7221  
EMAIL: [GEOFF.DIMEGO@NOAA.GOV](mailto:GEOFF.DIMEGO@NOAA.GOV)

FOR QUESTIONS REGARDING THE DATAFLOW ASPECTS OF THESE DATA SETS...PLEASE CONTACT THE NCEP/NCO/PMB DATAFLOW HELP DESK EMAIL ADDRESS BELOW /USE LOWER CASE FOR THE FOLLOWING PORTION OF THE EMAIL ADDRESS BELOW/: /ATAFLOW/:

EMAIL: [NCEP.PMB.DATAFLOW@NOAA.GOV](mailto:NCEP.PMB.DATAFLOW@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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