

Operational Ultraviolet Radiation Grids in the National Digital Guidance Database Product Description Document

1. Part I – Mission Connection

- a. Product Description – The Environmental Protection Agency (EPA), NWS partners and users expressed a need to have ultraviolet index and solar radiation grids available in digital form. To address this request NWS solicited comments on three experimental ultraviolet radiation grids in the National Digital Guidance Database (NDGD) through July 22, 2011. There was no negative comment expressed, therefore NWS will proceed with providing these digital products operationally.
- b. Product Type – Operational gridded data.
- c. Purpose – To provide users with ultraviolet radiation data in digital format.
- d. Audience - The intended audience are the requesting NWS partners and other users of the products.
- e. Presentation Format – The output will be gridded files in NDGD.
- f. PDD approval by Jason Tuell, Acting Director, Office of Climate, Water and Weather Services.

Part II – Technical Description

Format and Science Basis – the EPA, fire weather users, agricultural users and energy companies have asked the NWS to find additional ways to get UVI information. Putting the UVI forecasts into the NDGD makes the UVI more accessible to the weather industry.

In addition, while NWS/CPC currently provides the EPA with gridded data for the CONUS and Alaska, this data is sent via a non-operational computer system and may not be available 24/7. UVI data via the NDGD makes the data available to the EPA 24/7 for use in their Envirofacts UV Index zip code look up capabilities.

NWS will provide Operational Ultraviolet Index, Daily Maximum Ultraviolet Index and Downward Short Wave Radiation Flux grids via the NDGD. These grids will be derived automatically from the 1200 UTC model run of the Global Forecast System (GFS) for the CONUS.

The operational grids will be available at the following URLs:

ftp access:

<ftp://tgftp.nws.noaa.gov/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.dnggfs>

http access:

<http://weather.noaa.gov/pub/SL.us008001/ST.expr/DF.gr2/DC.ndgd/GT.dnggfs>

Availability – The Ultraviolet Index grids will be available for each daylight hour out to 48 hours, the Daily Maximum Ultraviolet Index grids will be available one per day out to 120 hours and the Downward Short Wave Radiation Flux grids will be available for every third daylight hour out to 120 hours.