

## **Encoding of Winds Products Using BUFR Format**

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### **Summary and Purpose of Document**

A cooperative effort between NOAA/NESDIS, the Cooperative Institute for Meteorological Satellite Studies (CIMSS), European Meteorological Satellite Organization (EUMETSAT), European Center for Medium Range Weather Forecasting (ECMWF), and the Japanese Meteorological Agency (JMA) has resulted in successfully defining a “unified” BUFR template for satellite-derived wind products.

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Action Requested: None

## Encoding of Winds Products Using BUFR Format

NOAA/NESDIS/CIMSS received the BUFR encoder software from ECMWF and successfully integrated it within the NESDIS operational GOES wind production suite on March 8, 1999. Since March 8, 1999 all of the NESDIS operational GOES wind products are being encoded in the BUFR format. The current operational wind products include infrared (IR) and visible cloud-drift winds and water vapor (WV) motion winds. These products are generated every 3 hours and posted on an operational NESDIS product server for access by the user community. NESDIS is still working on the issue of distributing the wind BUFR datasets over the Global Telecommunication system (GTS). WMO headers for these datasets have been assigned and are shown in Table 1 below.

<b>Wind Product</b>	<b>GOES-E</b>	<b>GOES-C</b>	<b>GOES-W</b>
IR Cloud-drift	IUXX01	IUXX02	IUXX03
Water Vapor	IUXX05	IUXX06	IUXX07
Visible Cloud-drift	IUXX11	IUXX12	IUXX13
Sounder WV (7.4um)	IUXX15	IUXX16	IUXX17
Sounder WV (7.0um)	IUXX21	IUXX22	IUXX23

Table 1: Assigned WMO Headers for GOES BUFR Satellite Wind Products

In order to facilitate the transition from the SATOB format to the BUFR format, and to accommodate users not yet prepared to process the BUFR wind datasets, NESDIS continues to encode its GOES wind products into the SATOB format. These SATOB products continue to be transmitted over the GTS every 3 hours.

NOAA/NESDIS/CIMSS continues to collaborate with EUMETSAT regarding the development and validation of wind vector characterization parameters and product quality indicators based on objective techniques. An objective technique has been developed which utilizes the advantages offered by the EUMETSAT and NOAA/NESDIS quality control approaches. Product validation activities are currently ongoing by NOAA/NESDIS/CIMSS to further optimize the integrated solution. Implementation of this integrated product quality control approach within the operational GOES wind production suite at NOAA/NESDIS is scheduled for the first quarter of 2000.