

NOUS41 KWBC 282100  
PNSWSH

Service Change Notice 24-34  
National Weather Service Headquarters Silver Spring MD  
500 PM EDT Thu Mar 28 2024

To:           Subscribers:  
              -NOAA Weather Wire Service  
              -Emergency Managers Weather Information Network  
              -NOAAPort  
              Other NWS Partners, Users and Employees

From:       Ajay Mehta, Director  
             NWS Office of Observations

Subject: NOAA-21 NUCAPS Soundings to be Added to the Satellite Broadcast  
Network (SBN) on near April 29, 2024

On or near April 29, 2024, NOAA-Unique Combined Atmospheric Processing  
System (NUCAPS) soundings from the NOAA-21 polar-orbiting satellite will  
be added to the Satellite Broadcast Network (SBN).

NUCAPS estimates atmospheric temperature and moisture at 100 pressure  
levels between the earth's surface and the upper atmosphere, about an hour  
after local solar noon in each location. NOAA-21 NUCAPS soundings provide  
insight into the early-afternoon pre-convective environment, complementing  
the mid-morning soundings of the Metop-C satellite.

Each NOAA-21 NUCAPS file (granule) spans about 30 seconds of time (about  
200 granules per orbit) and samples an area roughly 2,100km by 200km with  
a grid of  $30 \times 4 = 120$  atmospheric soundings. Each of these soundings  
estimates the following atmospheric parameters at 100 vertical levels:

Parameter	Units
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Pressure	mb
Air temperature	K
Liquid water mixing ratio	g/g
Water vapor mixing ratio	g/g
Ozone mixing ratio	ppb
Sulfur dioxide mixing ratio	ppb

NOAA-21 NUCAPS soundings on the SBN will amount to 1,800 files/day and  
0.38 GB/day. They will be broadcast via the SBN NMC3 channel (Port 1205,  
PID 105) using the following World Meteorological Organization (WMO)  
header codes:

IUTN11 KNES	IUTN14 KNES	IUTN17 KNES
IUTN12 KNES	IUTN15 KNES	IUTN18 KNES
IUTN13 KNES	IUTN16 KNES	IUTN19 KNES

These codes are also used for NOAA-21 NUCAPS. They correspond to the geographic regions previously detailed in Service Change Notice (SCN) 19-59, found at:

[https://www.weather.gov/media/notification/pdf2/scn19-59nucaps\\_soundings.pdf](https://www.weather.gov/media/notification/pdf2/scn19-59nucaps_soundings.pdf)

Additional details on NUCAPS soundings from NOAA-21 and other satellites are available on the NOAA Virtual Laboratory (VLab) at:

<https://vlab.noaa.gov/web/towr-s/jpss-nucaps>

Critical weather, enhanced caution, or other factors may affect the timing of this change.

For questions pertaining to these changes, please contact:

NOAA/NWS Office of Observations  
Silver Spring, MD  
Email: [nws-obs-satellites@noaa.gov](mailto:nws-obs-satellites@noaa.gov)

Or

AWIPS Network Control Facility (NCF) Help Desk  
NOAA/NWS Office of Central Processing  
Silver Spring, MD  
Phone: 888-808-8624

For questions regarding the content or distribution of the products listed here, please contact:

Joseph V. Fiore Jr.  
NOAA/NESDIS/OSPO/Satellite Products and Services Division  
College Park, MD  
email: [joseph.fiore@noaa.gov](mailto:joseph.fiore@noaa.gov)  
Google Voice: 240-622-5819

National Service Change Notices are online at:

<https://www.weather.gov/notification/>

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