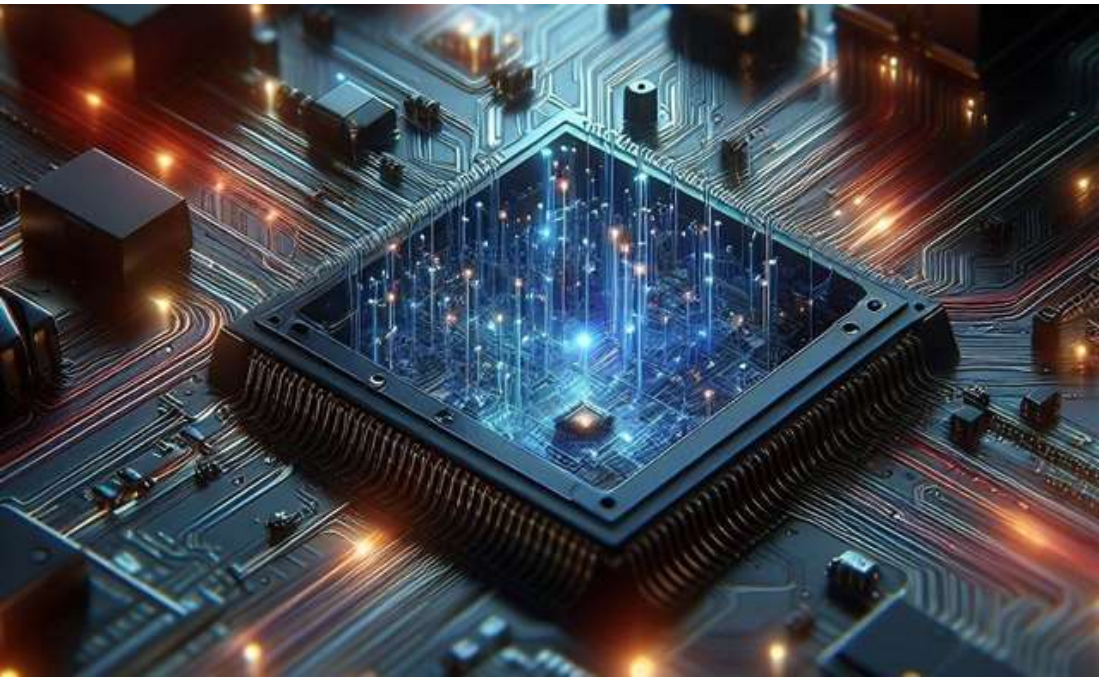

HFClock® – January 28th, 2025 <Gold Coast ARA>

Veritium Research | Gino Morello N2TBN

Background – Veritium Research LLC

- Small design consultancy based in Fort Lee, NJ directly across from Manhattan (NYC)
- Veritium specializes in the design of life-sustaining medical devices
- Team of seasoned electrical, mechanical, and software engineers
- HFClock® is a collaboration with Elwood Downey WB0OEW who first published HamClock in QST 2017
- Products began shipping in early 2018 through Gigaparts in Huntsville Alabama and Las Vegas Nevada
- End of COVID Veritium began selling direct-to-consumer to combat inflation and keep prices fixed
- The product line includes 9” with Resistive TS, 10.1” with PCAP TS, Raspberry Pi for external monitor
- Veritium also provides modified and/or full-custom designs based on customer requirements
- Roadmap of future products include variants of HFClock and general/application specific radio receivers

Background – Veritium Research LLC

The clocks utilize the Network Time Protocol (NTP) which is intended to synchronize all participating computers to within a few milliseconds of Coordinated Universal Time (UTC). NTP can usually maintain time to within tens of milliseconds over the public Internet and can achieve better than one millisecond accuracy in local area networks under ideal conditions.

Users simply configure the clock to connect to their Wi-Fi router, enter their call sign/name and home position (DE), and select how they prefer units to be displayed, Imperial or Metric. Additionally, the user may optionally select a satellite to track in real-time. Once configured, the user may further customize colors to be used for their call sign or name. New Over-The-Air (OTA) firmware updates may be installed via Wi-Fi at the discretion of the user.

The clocks are available with 9” and 10.1” LCD’s and users may select from furniture-grade hand-finished Walnut, Cherry, and Tiger Maple wooden frames. Custom versions are available via special order. For those users who would prefer to provide their own display, a Raspberry Pi® version is also available.

Background – HFClock - Basic Features

- Color WVGA LCD Display or External Monitor 1920x1080p Standard HD HDMI Interface (RP)
- Touchscreen User Interface or External Mouse (RP)
- Wi-Fi Internet Connectivity (2.4G 9” Wood, 2.4G and 5G Raspberry Pi, 2.4G and 5G 10.1” Wood)
- NTP Stratum 1 Time Information
- UTC, Local (DE), Remote (DX) Time
- Solar Flux and Sunspots
- Xray and Planetary Index
- Solar Images
- Mercator Projection Map with numerous overlays including MUF, Temperature, Aurora, etc.
- Azimuthal Projection Map Single or Double with overlays above
- Gray Line Display
- Multi-Band NCDXF Beacon Display
- DE and DX Position Display
- Great Circle Display
- Short/Long Haul Paths
- Path Length in Miles or Km
- Antenna Heading
- Imperial and Metric Units
- Furniture-Grade Solid Wood Frame
- Optional Temp/Humid/Pressure Sensor
- US Power Adapter Included (or EU Adapter in Europe)

Background – HFClock – Firmware and Software

- Software and firmware written in C and C++
- Same source code compiled for ESP8266 (9” wooden) and ARM processors (10.1” wooden + RP)
- Various compilers used but also possible to program through Arduino IDE
- Many features added to product since initial release based on suggestions from hams like you
- Over-the-Air Updates provided free of charge (no fixed schedule but average every 8-12 weeks)
- Numerous worldwide NTP servers may be used to minimize time lag

HFClock Family – HamXposition Marlborough, MA August 23-25 2024

1

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HFClock Family – HamXposition Marlborough, MA August 23-25 2024

1

Background – Wood Comparison – Tiger Maple, Cherry, Walnut

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HFClock Family – 1850-9x 9” in Cherry, Tiger Maple, and Walnut

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HFClock Family – 9” in Production

2

3

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HFClock Family – 1850-10x 10.1” in Cherry, Tiger Maple, and Walnut

Cherry

Tiger Maple

Walnut

HFClock Family – Model 1850-RP - Raspberry Pi - External Monitor

4

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Additional Information – HFClock

- Veritium Website: www.veritiumresearch.com
    - email: gmorello@veritiumresearch.com
    - telephone: 201-944-5076 ext. 1001
- Dedicated HFClock site: www.veritiumhfclock.com
- Original QST Article: https://clearskyinstitute.com/ham/HamClock/QST-HamClock.pdf

Additional Information – HFClock

Live Demonstration

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Additional Information – HFClock

Questions?

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Additional Information – HFClock

Thank You!

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Additional Information – HFClock

Additional Content

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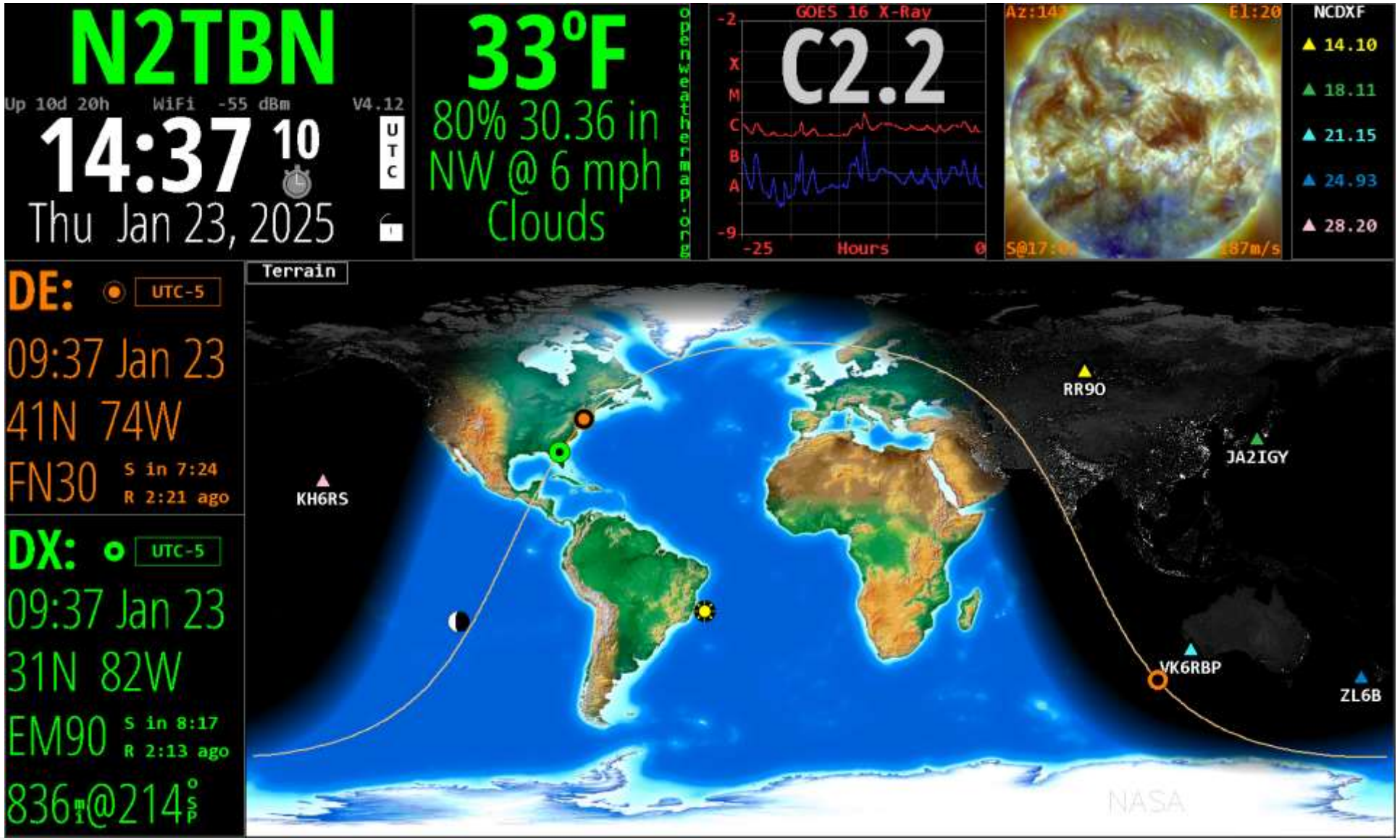
Screenshots –



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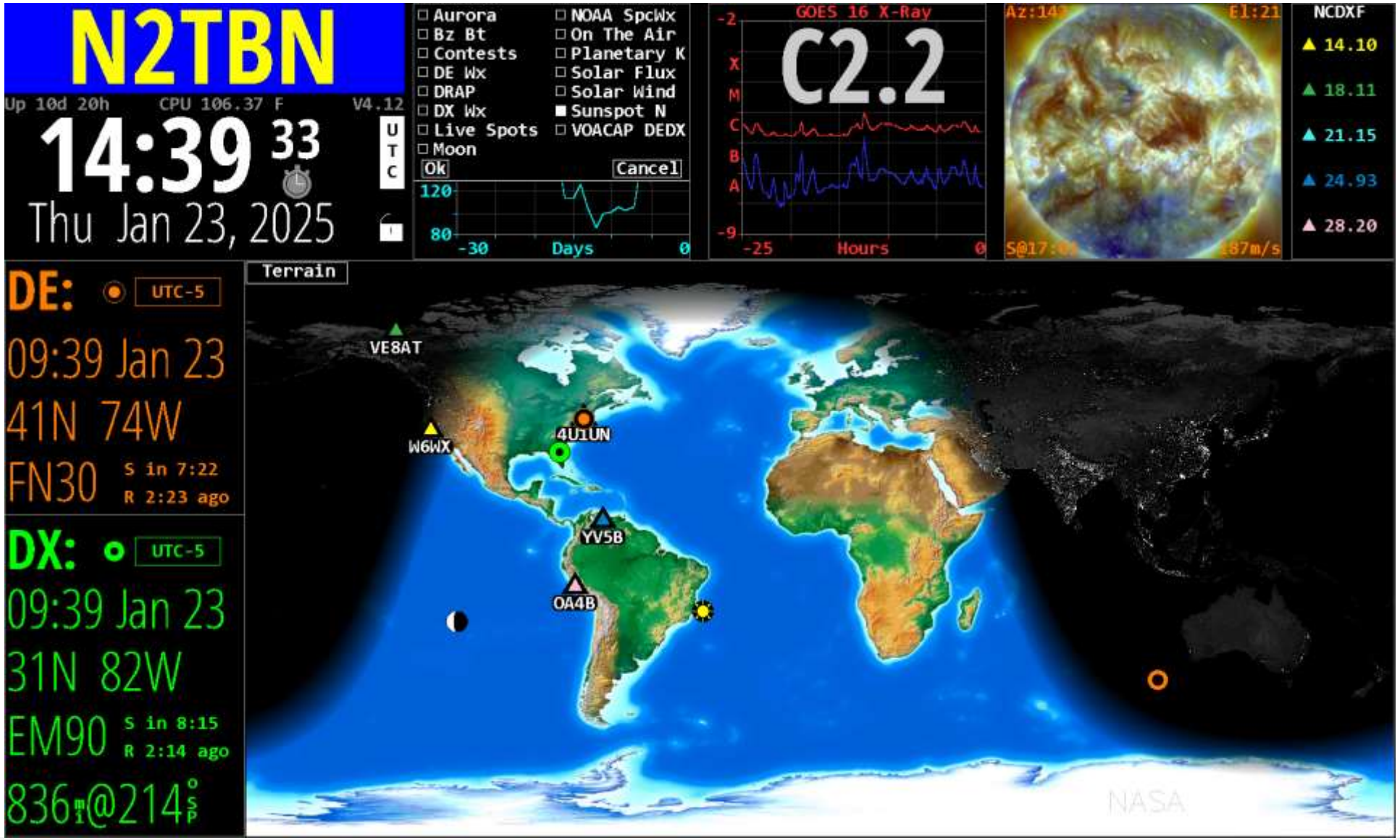
Screenshots –



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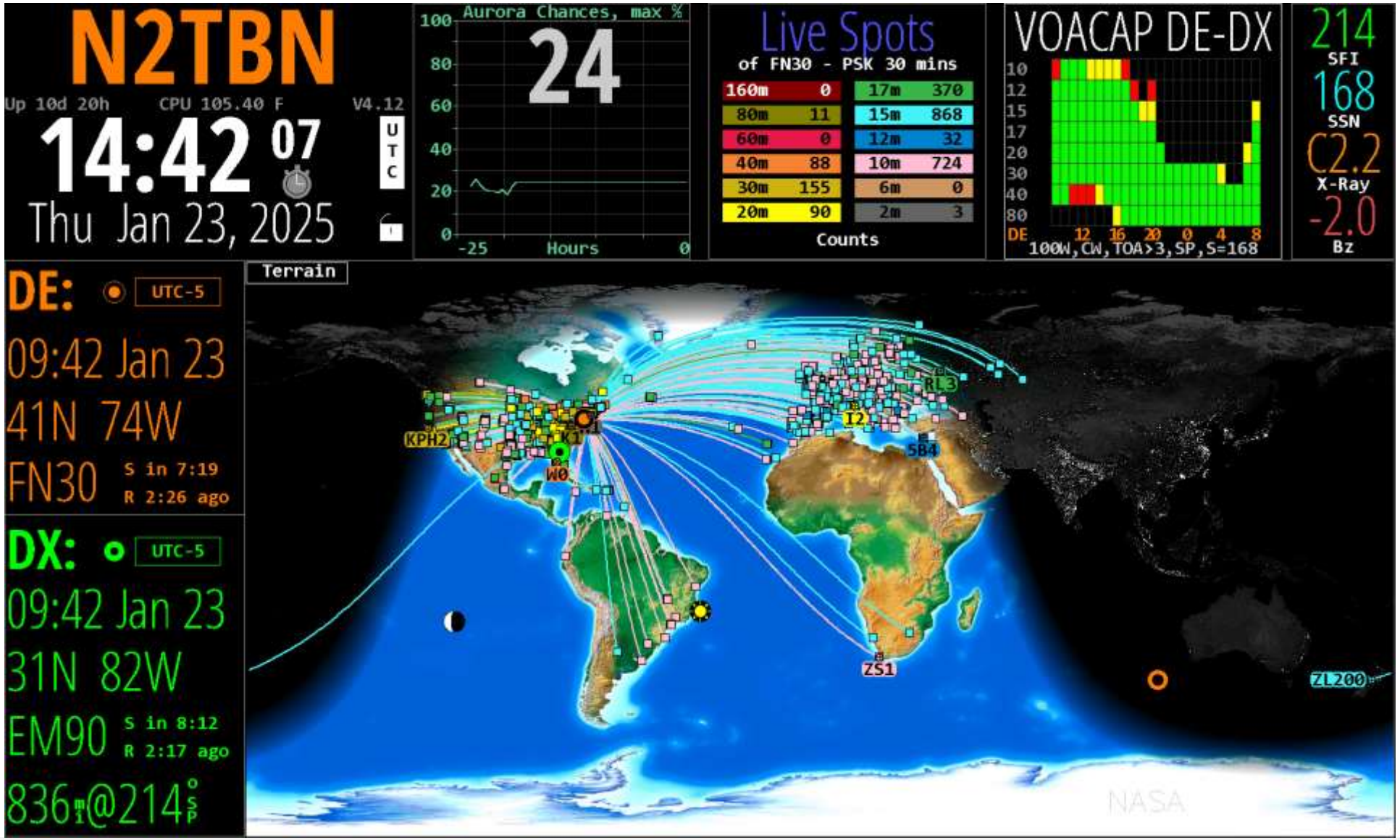

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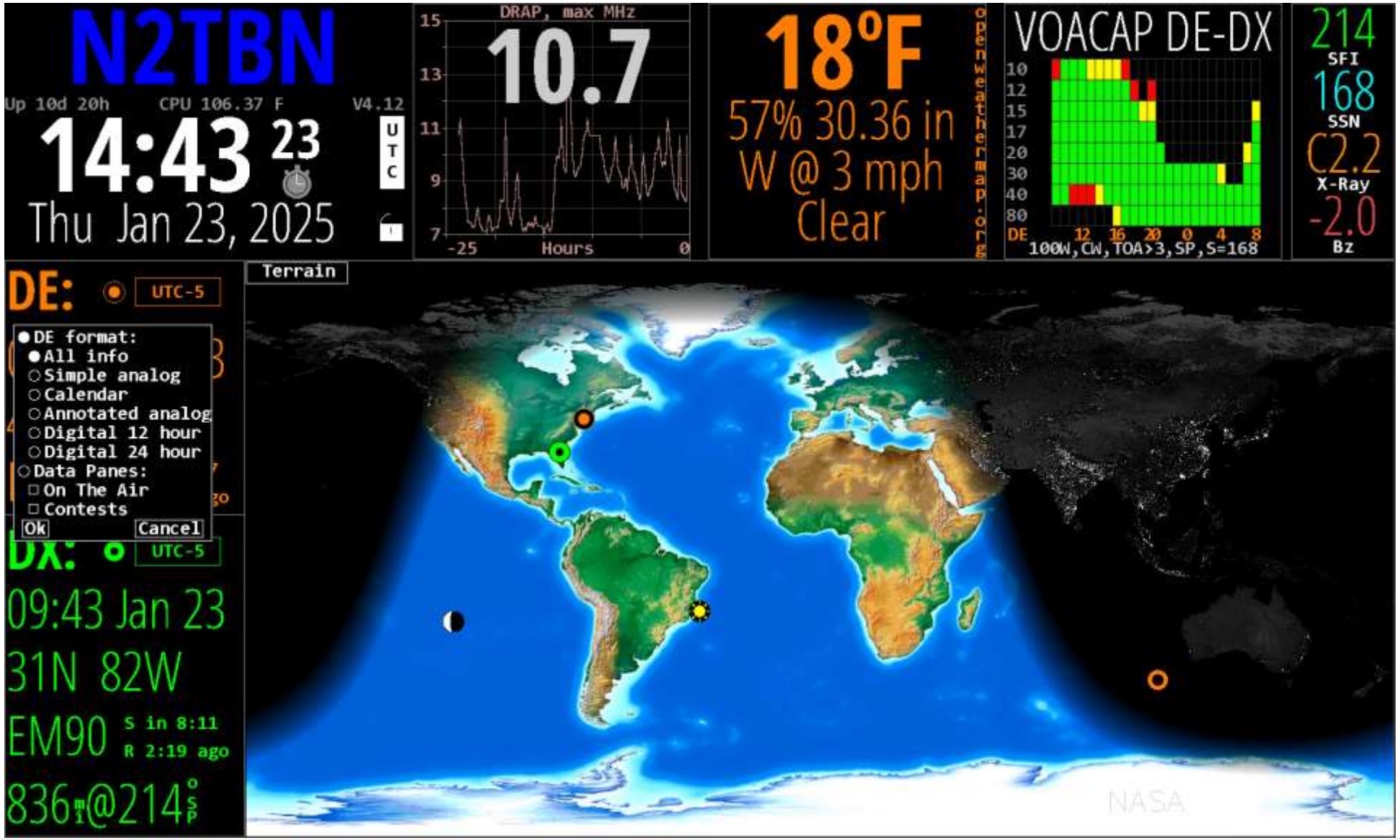

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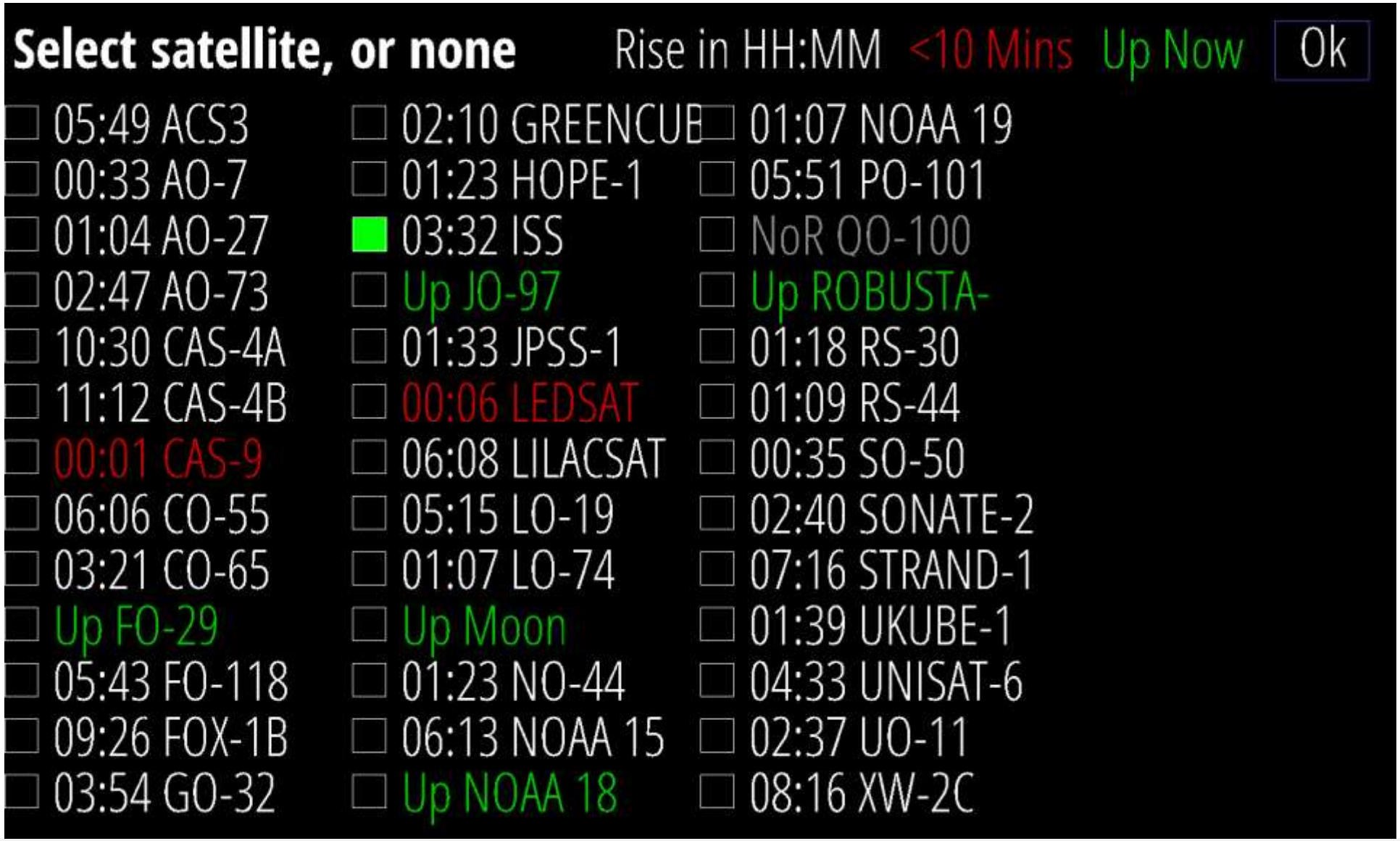

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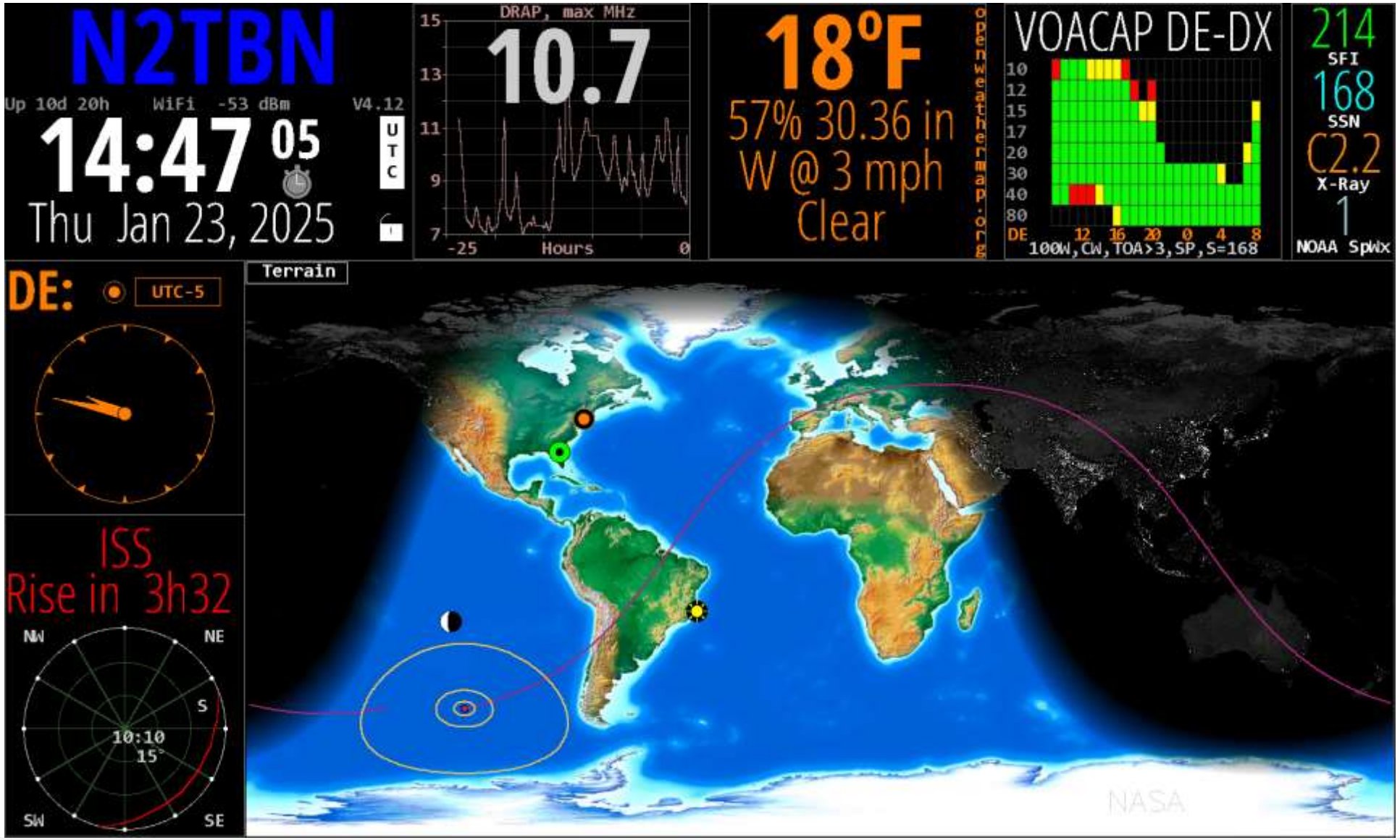

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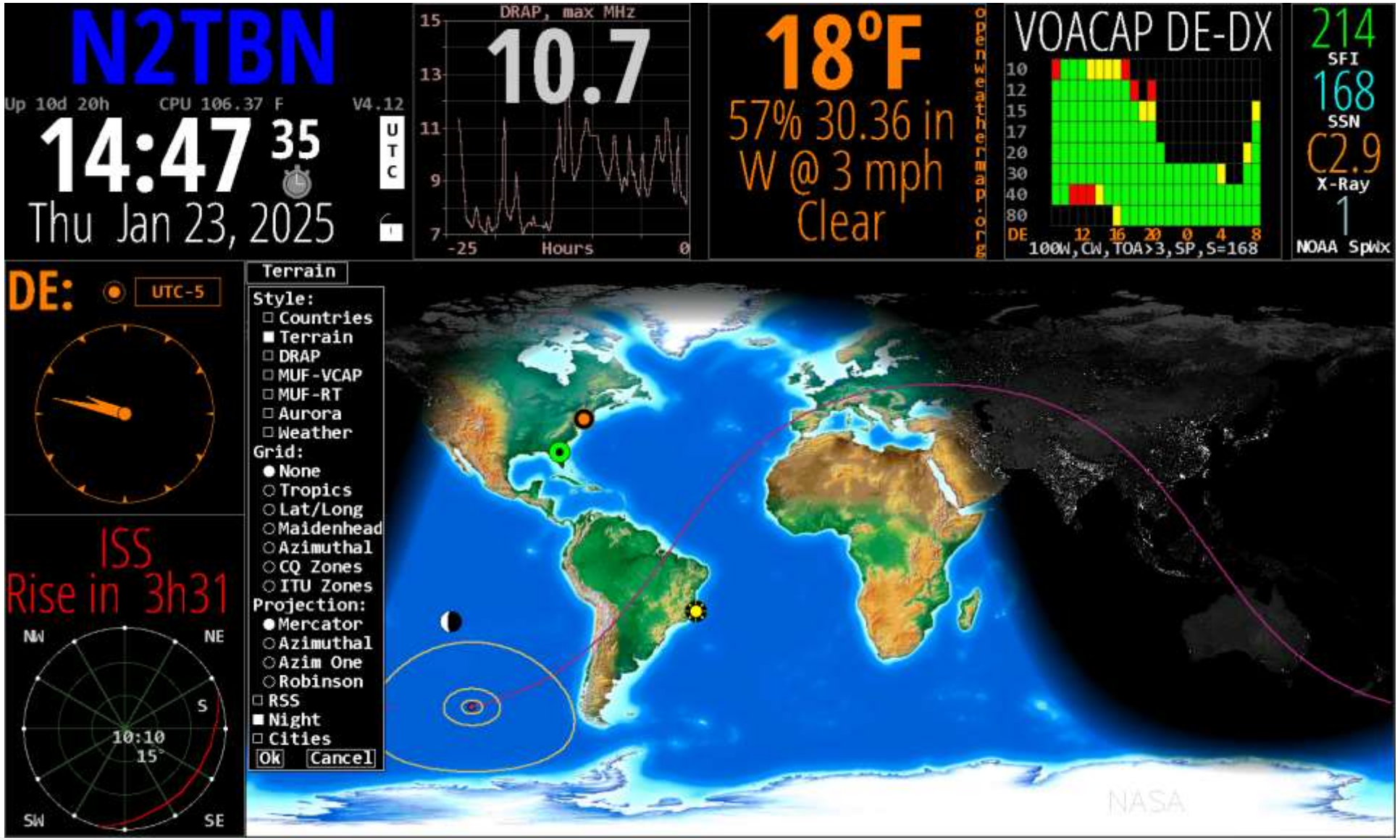

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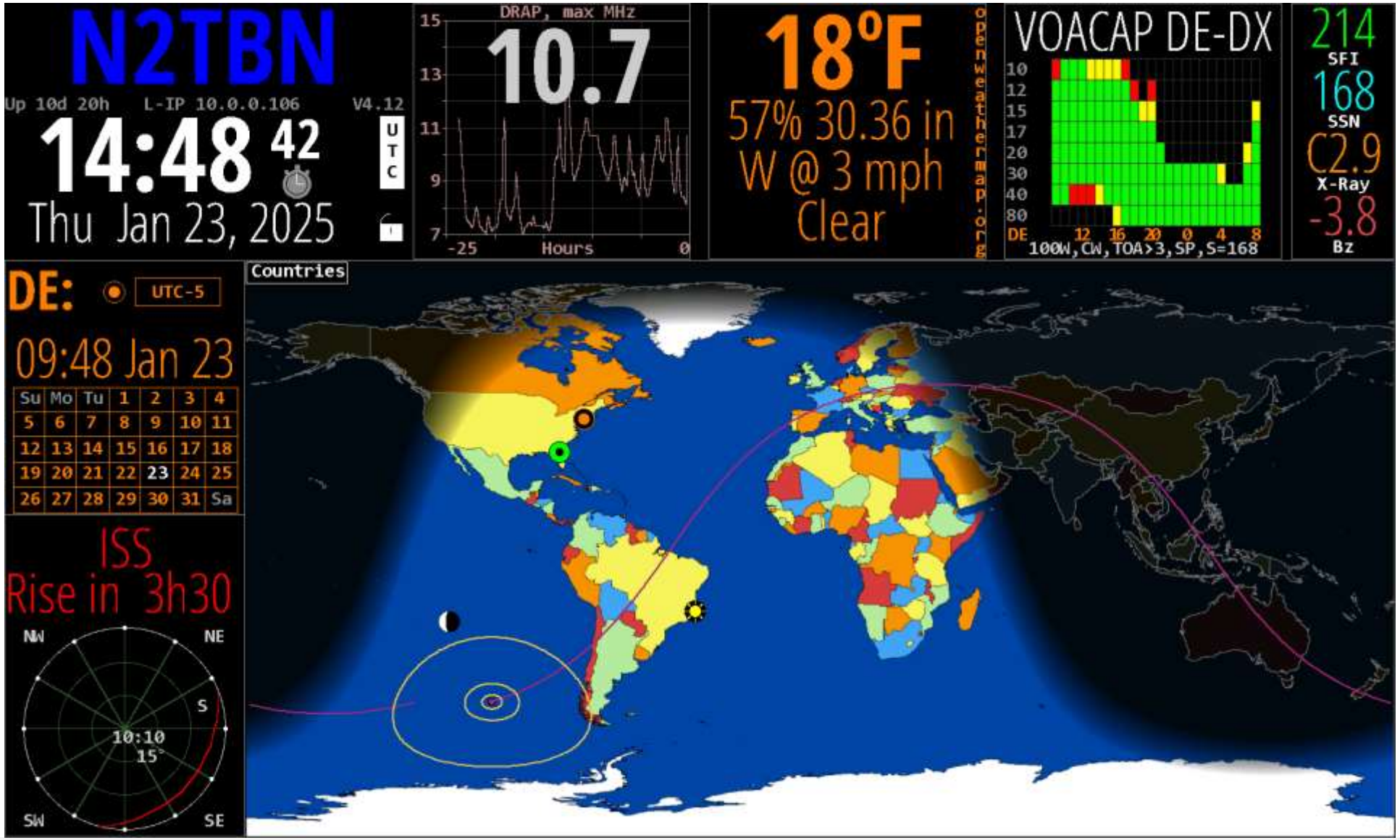

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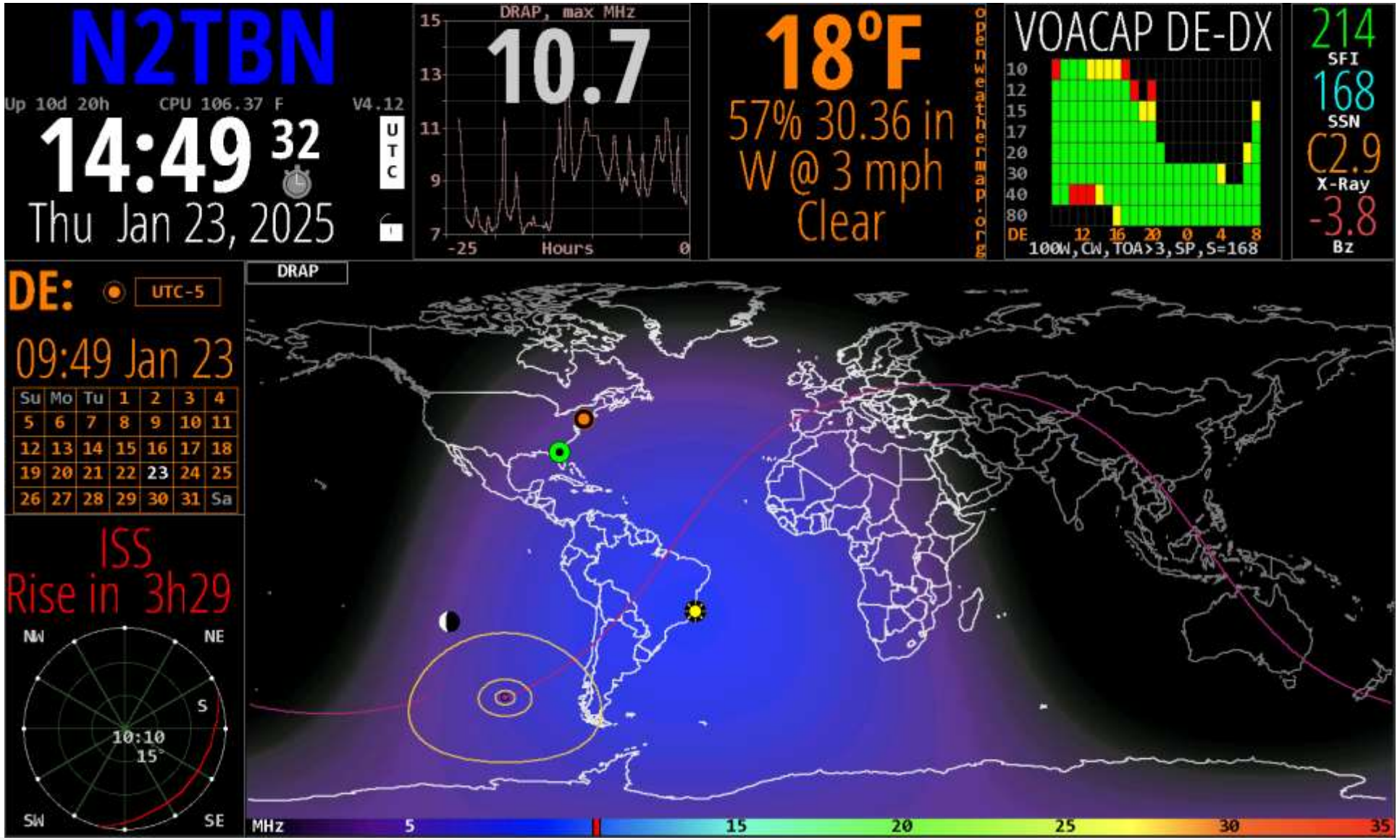

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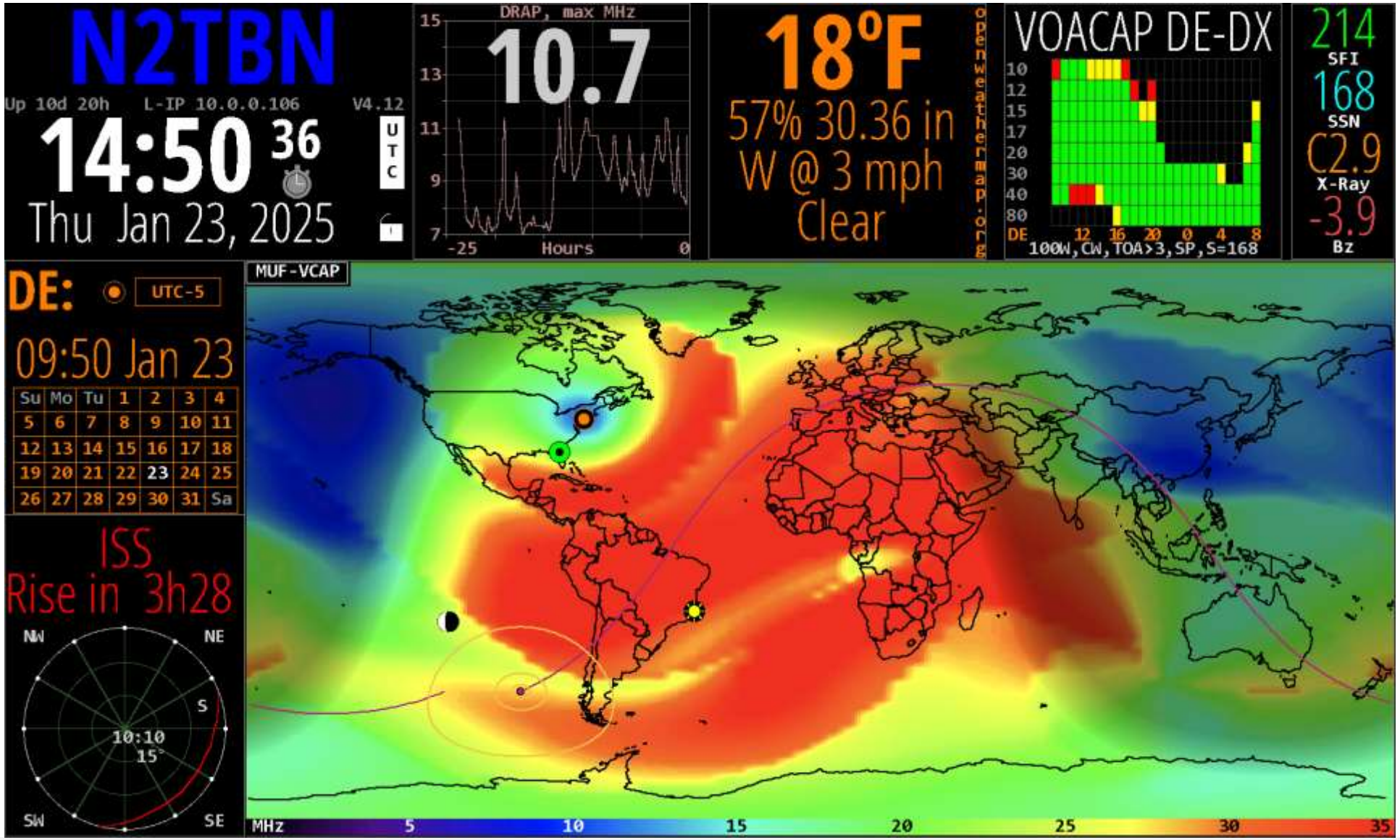

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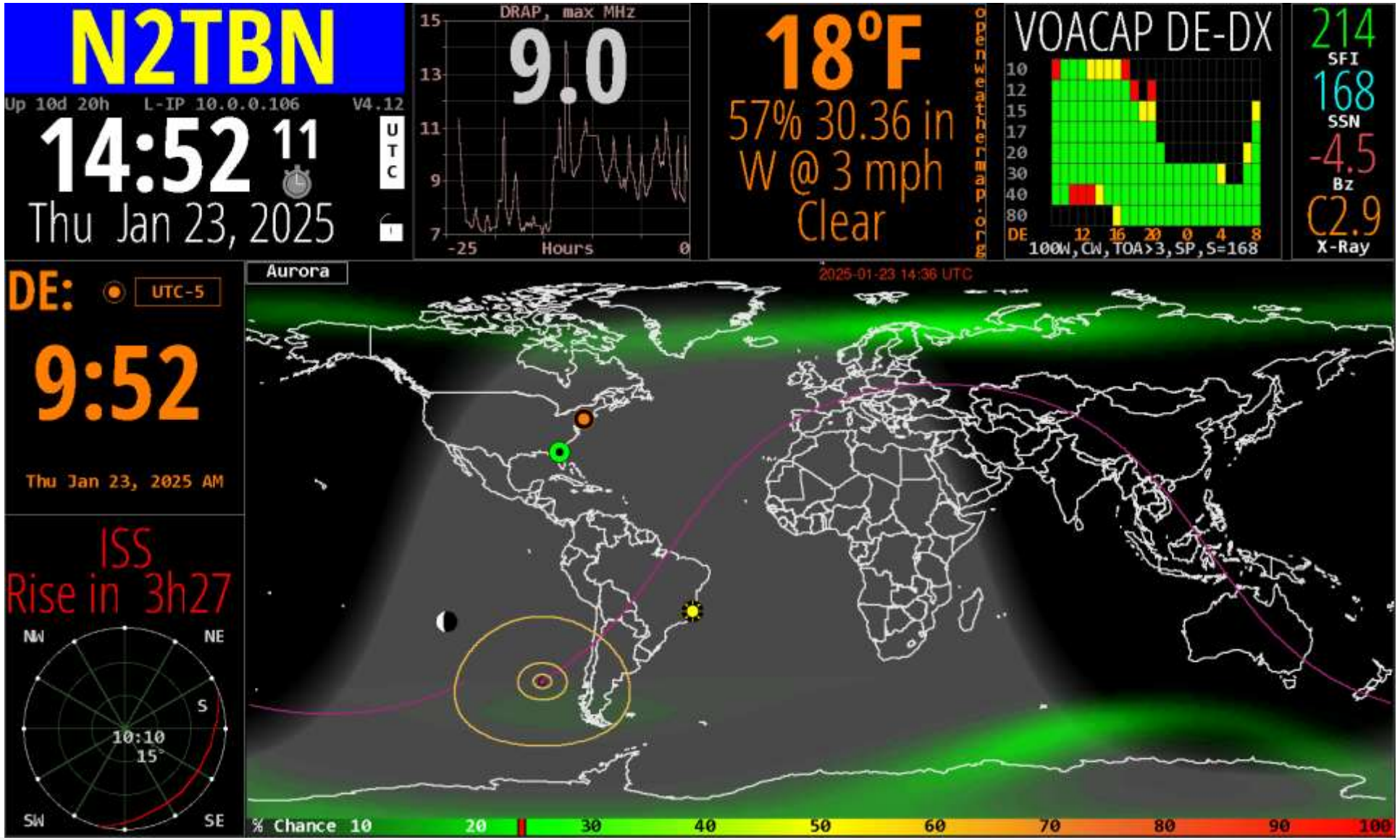

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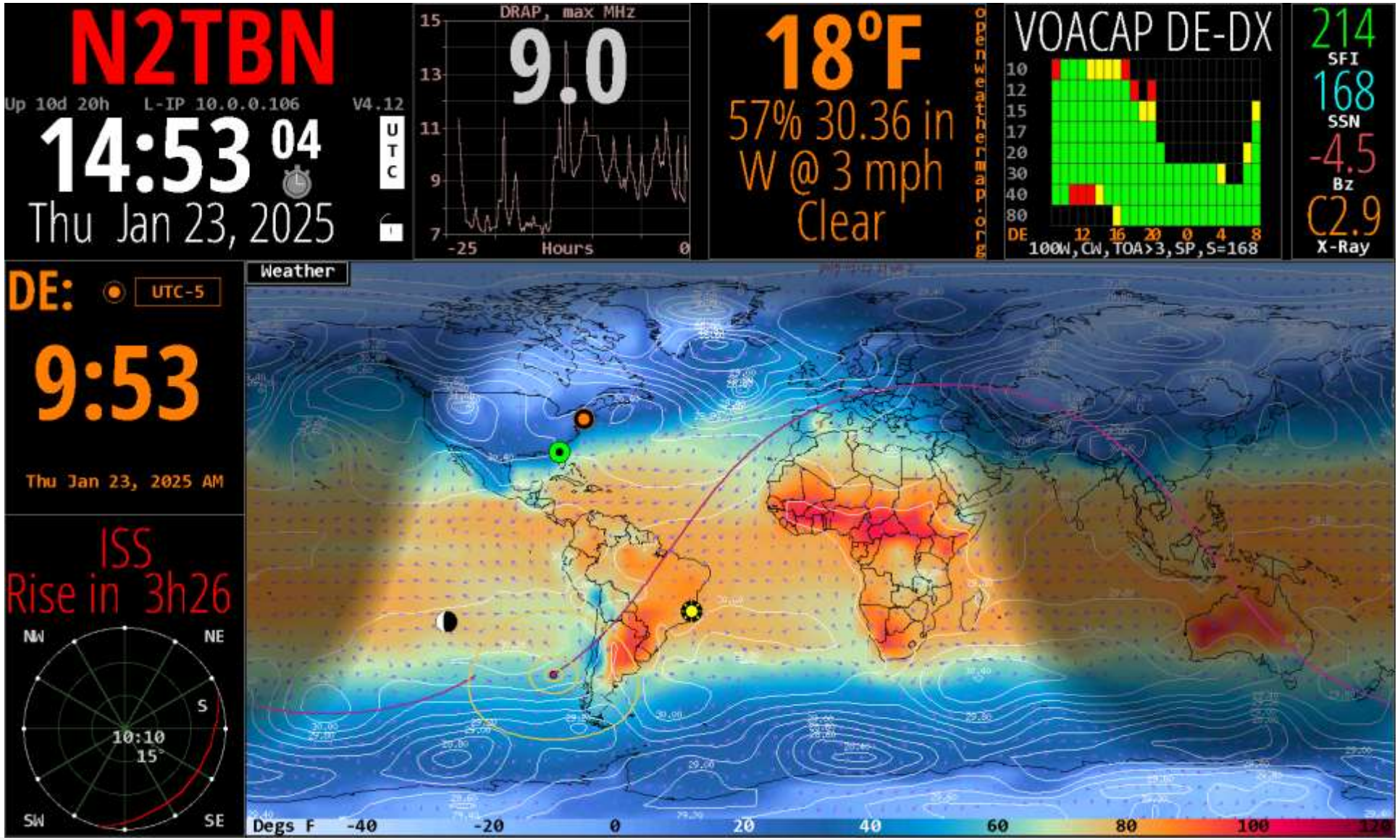

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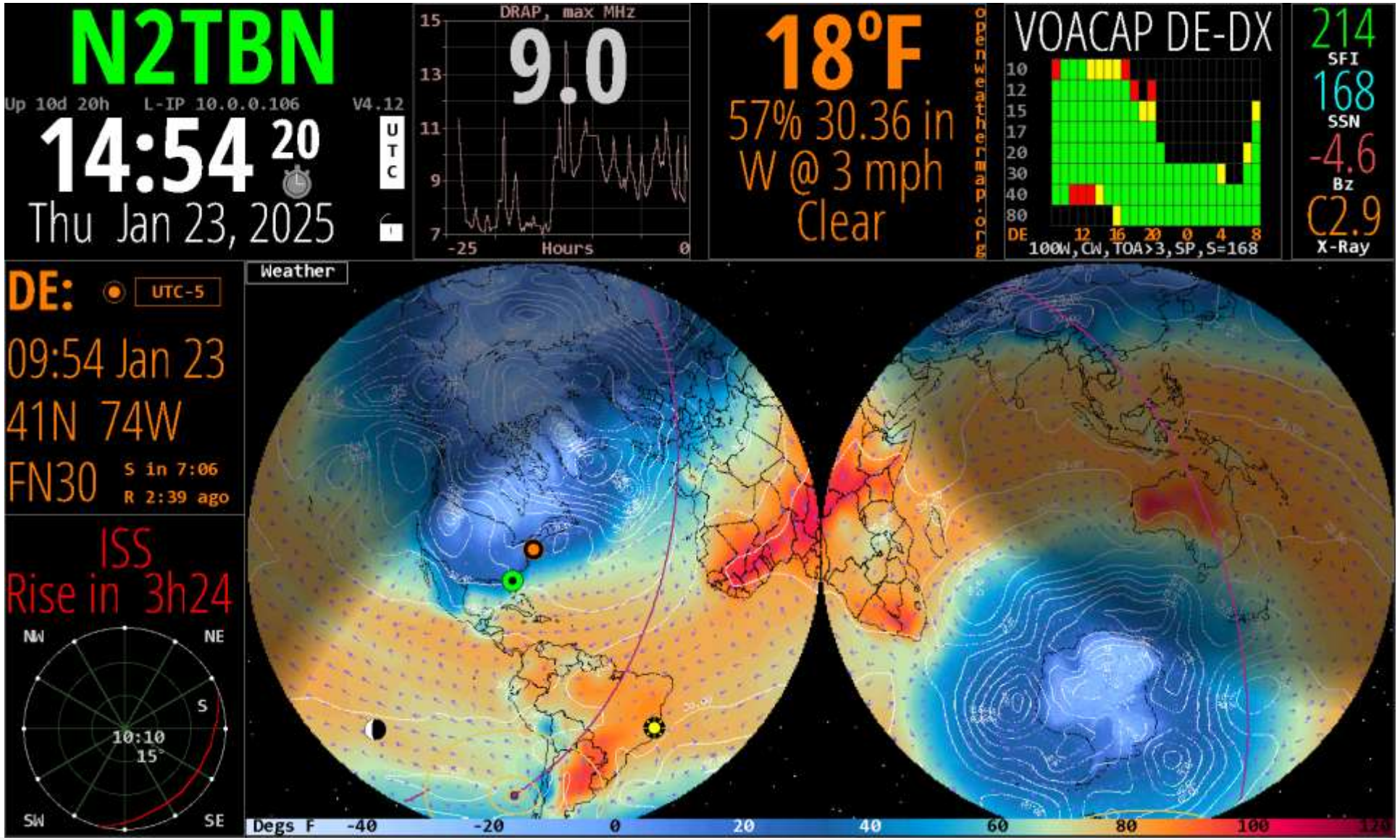

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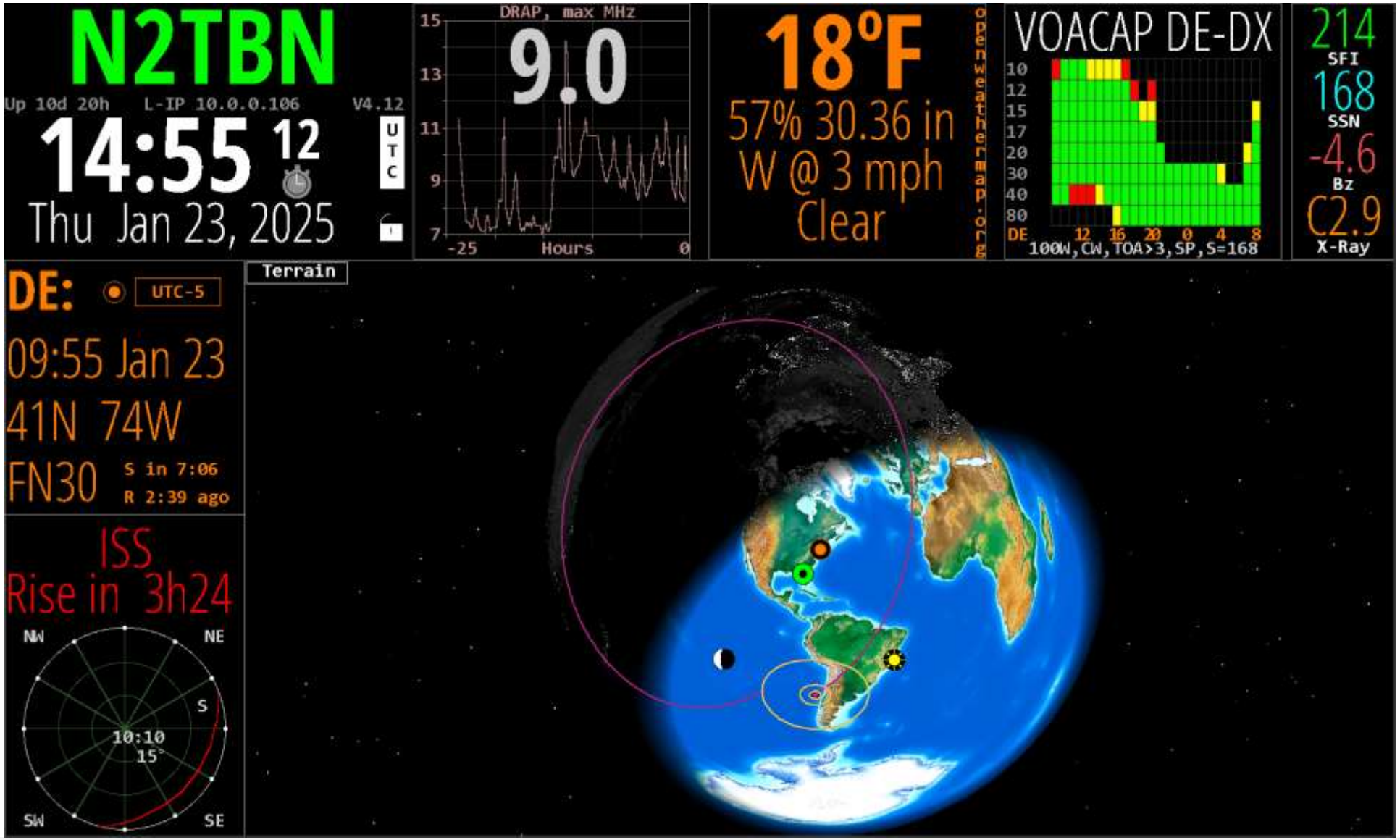

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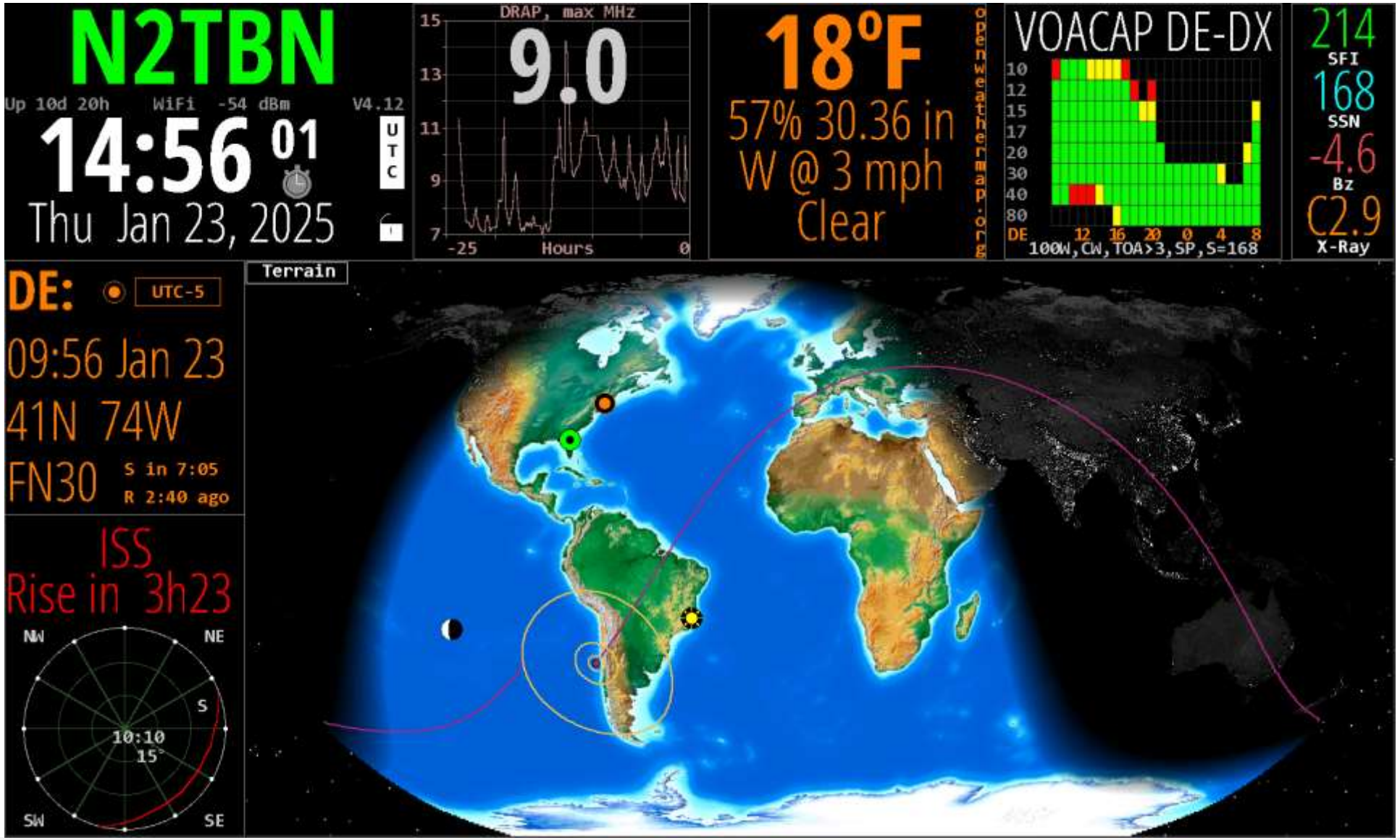

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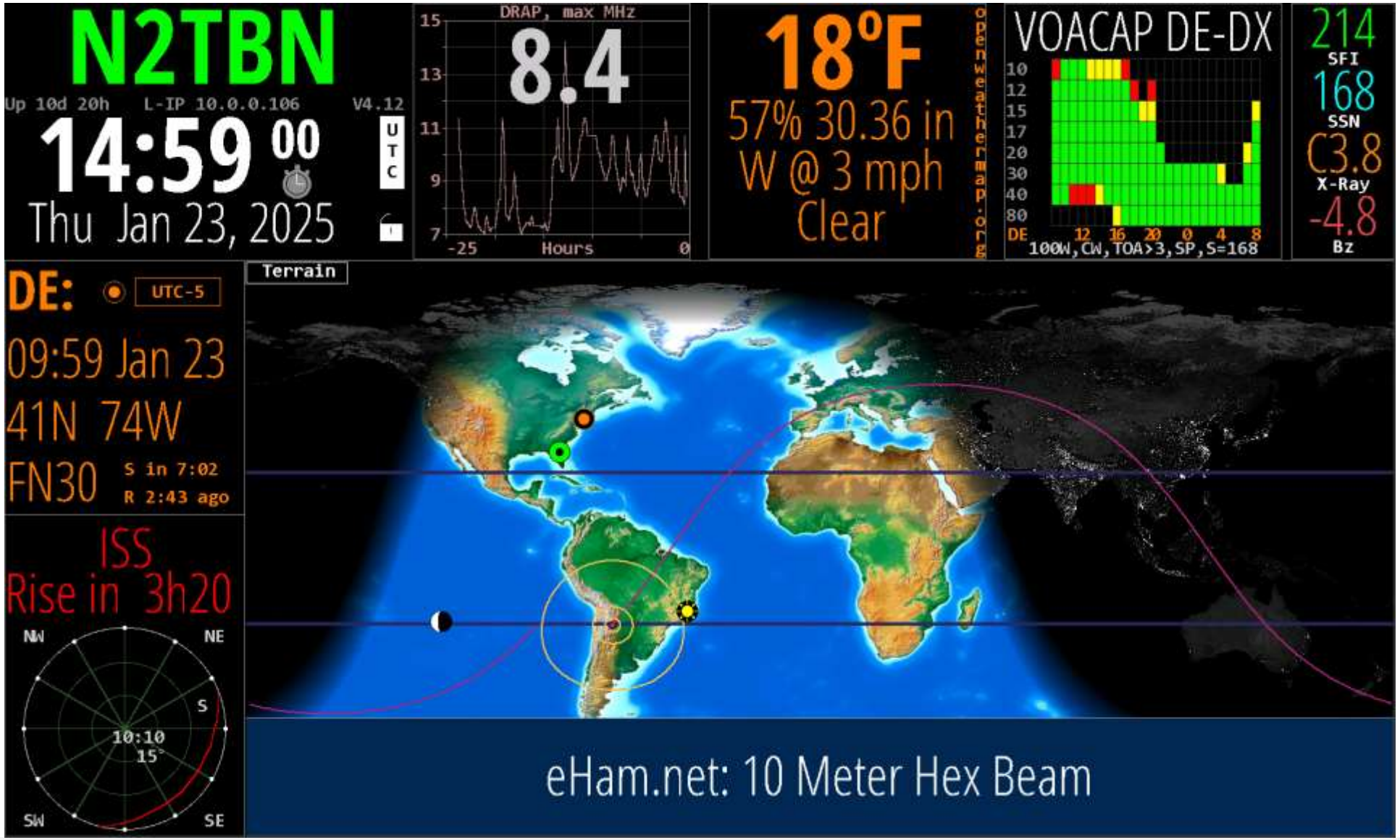

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