
OHBA Interference Detection

GNSS Satellite Positioning Jamming and Spoofing Conference



Fernanda Aedo

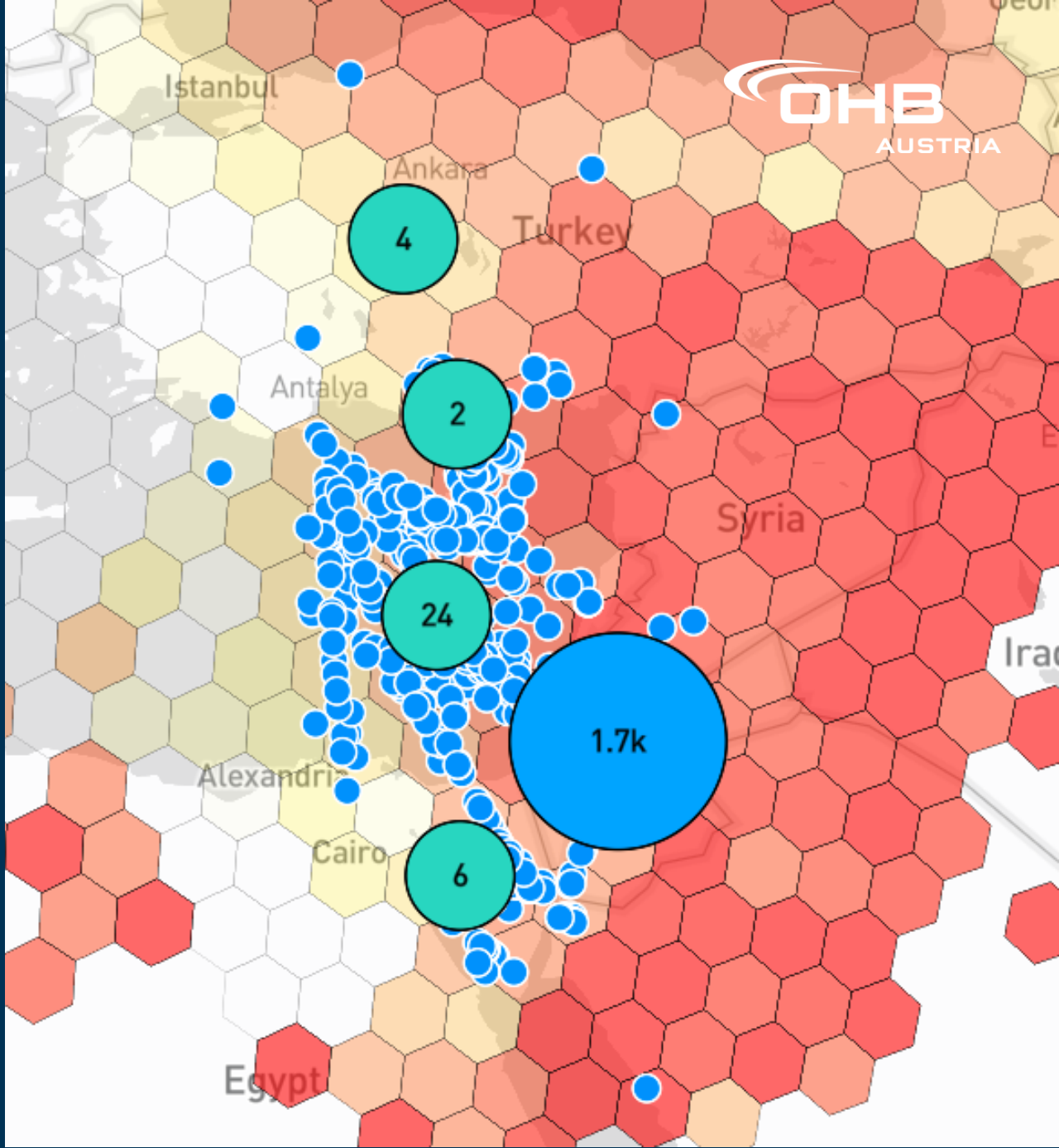
CYPRUS

POPULAR TOURIST DESTINATION



CYPRUS

CONSTANTLY AFFECTED

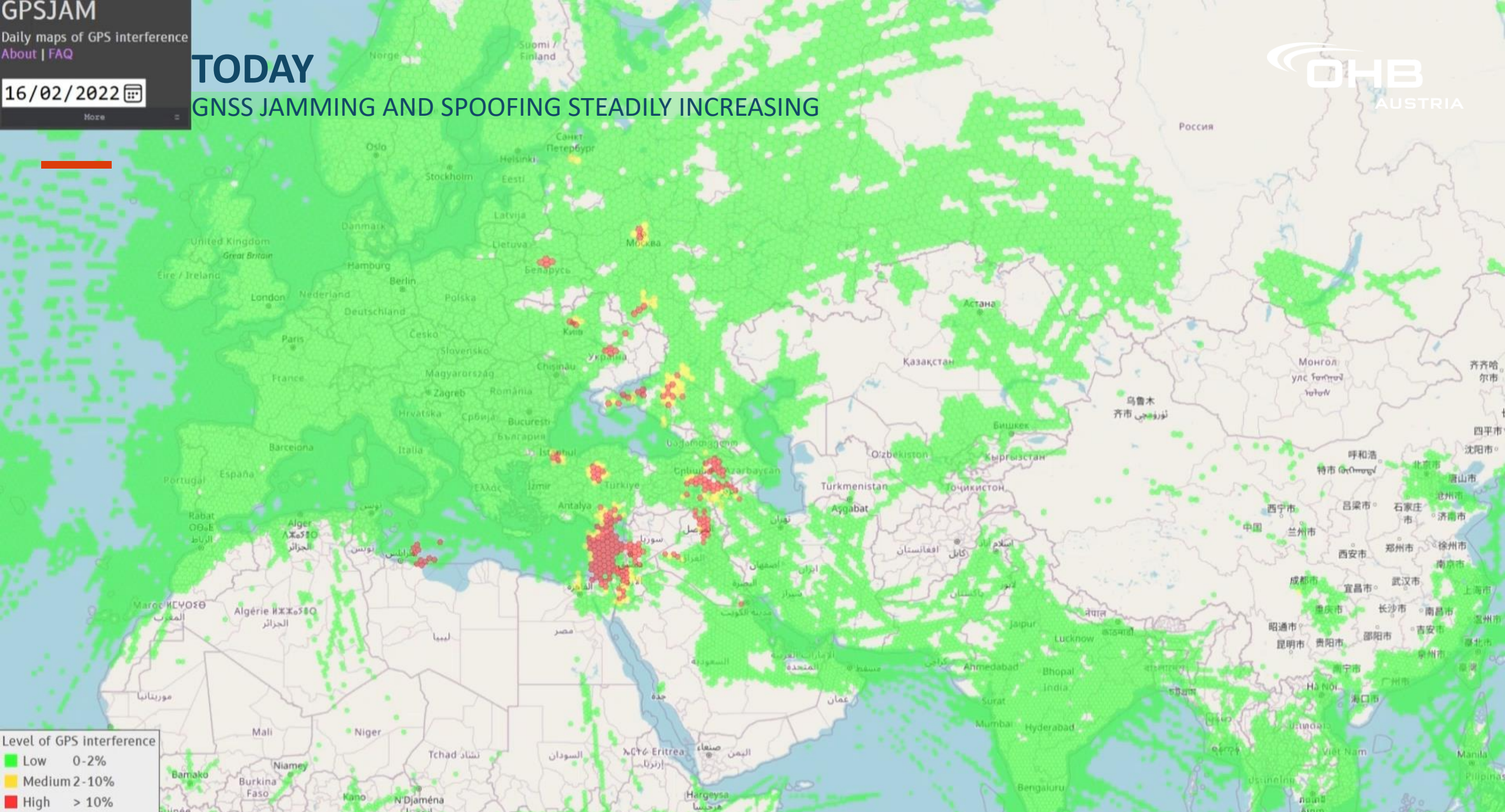


16/02/2022

More

TODAY

GNSS JAMMING AND SPOOFING STEADILY INCREASING

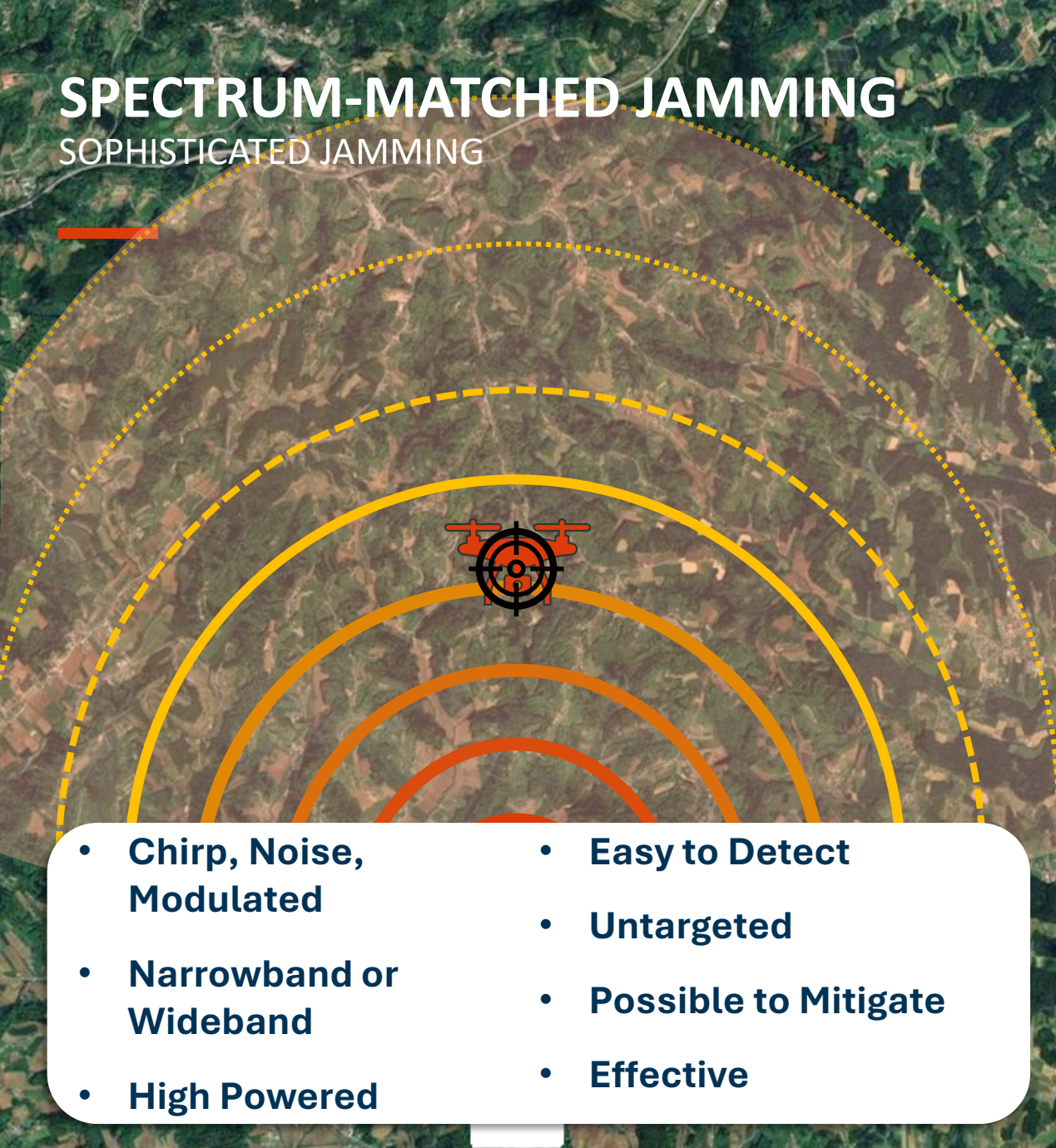


Level of GPS interference

Low	0-2%
Medium	2-10%
High	> 10%

SPECTRUM-MATCHED JAMMING

SOPHISTICATED JAMMING



- Chirp, Noise, Modulated
- Narrowband or Wideband
- High Powered
- Easy to Detect
- Untargeted
- Possible to Mitigate
- Effective



- GNSS Like Signals
- Empty Navigation Message
- Low Powered
- Hard to Detect
- Targeted
- Very Hard to Mitigate
- Highly Effective

CIRCLE SPOOFING

SOPHISTICATED SPOOFING

- **Spoofed position moves in a circle around a desired point**
- **Low Powered**
- **Hard to Detect**
- **Easier to spoof an unknown target**
- **Targets Dynamic Platforms (i.e., Airplanes, drones)**
- **Reduces unintended interferences**
- **Very Hard to Mitigate**



DETECT, ALARM, CLASSIFY, AND LOCALIZE INTERFERENCES

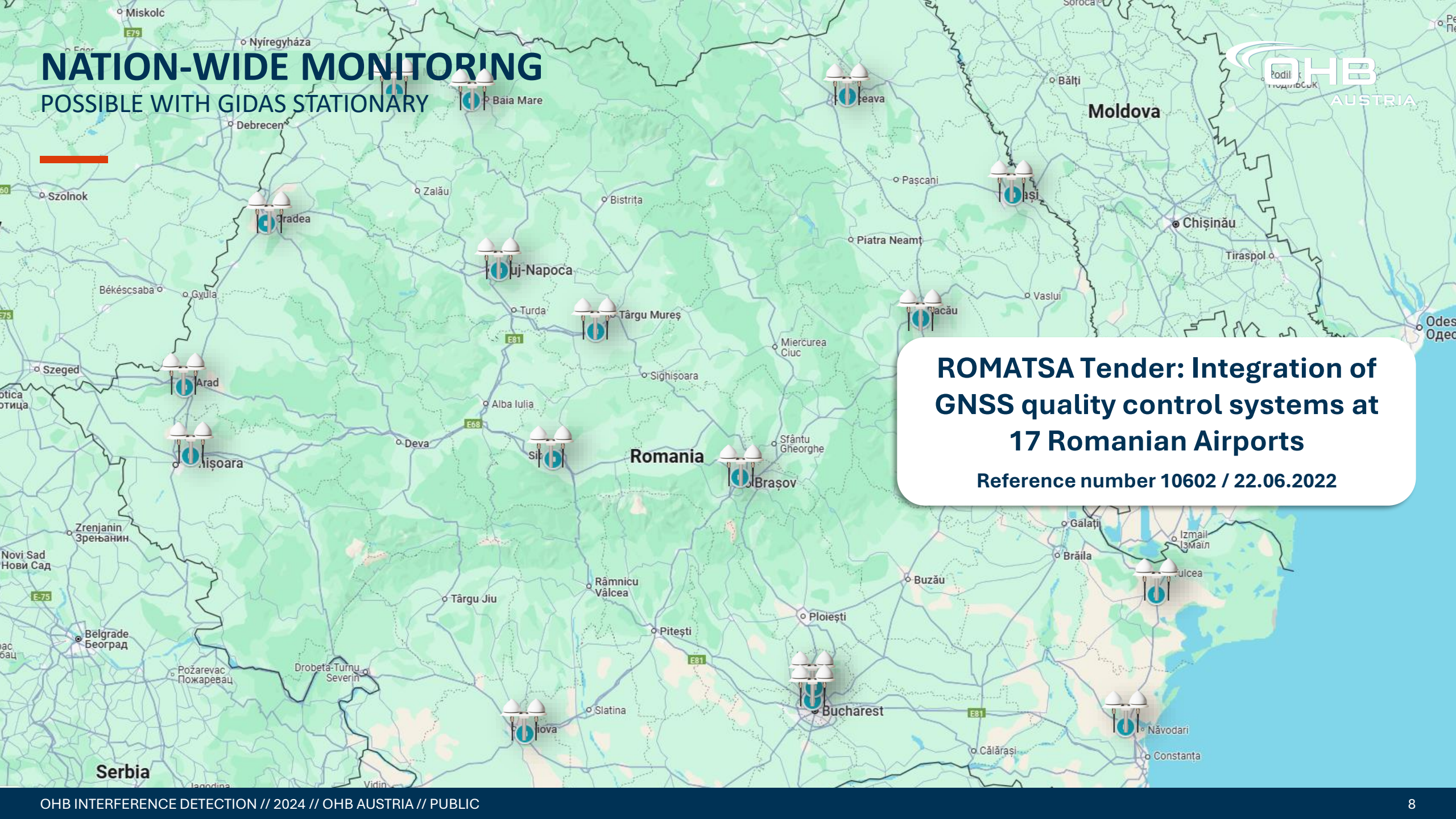
GIDAS



BENEFITS:

- Rapidly detect and localize interferences, allowing proactive mitigation measures
- Safeguard ILS Calibration, take-off and landing procedures, specially in adverse weather conditions
- Use data-driven insights to evaluate the reliability of GNSS and plan for contingencies
- Ensure compliance with key recommendations from the EASA's Safety Information Bulletin, ICAO GNSS Manual, ICAO Air Navigation Conference, IATA to ensure GNSS integrity:
 - Provide effective spectrum management and protection
 - Collect and communicate information on GNSS degradations
 - Develop effective contingency procedures for GNSS jamming/spoofing events

NATION-WIDE MONITORING POSSIBLE WITH GIDAS STATIONARY



**ROMATSA Tender: Integration of
GNSS quality control systems at
17 Romanian Airports**
Reference number 10602 / 22.06.2022

GIDAS VARIATIONS

PORTABLE, EMBEDDED AND MORE

- The fully autonomous, **stand-alone** GIDAS
- Engineered for flexible deployment at **any location** and under **any weather conditions**
- Gain real-time GNSS quality assessment for **on-the-spot awareness** and decision-making

- The GIDAS interference detection intelligence **directly integrated into your system**
- Leverages existing hardware and GNSS antennas for easy integration through a **C++ library**
- Ensures your system's awareness, **uninterrupted operations** and long-term resilience



GNSS Jamming or Spoofing

THANK YOU!



Fernanda Aedo

OHB Austria GmbH

Address:

Kärntner Straße 7b/1
A-8020 Graz, Austria

Phone: +43-316-890971-15

Mobile: +43-660-705-8702

E-Mail: fernanda.aedo@ohb-austria.at

Web: www.ohb-austria.at