



MEOSAR Update and Plans for Initial Operational Capability (IOC)

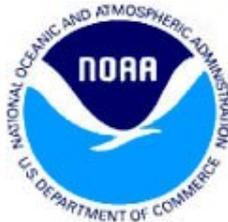
Beacon Manufacturers Workshop

2018

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Current MEOSAR Status

- Entered Early Operational Capability on Dec. 13th, 2016
- 19 S-Band and 15 L-Band satellites currently available
- 12 MEOLUTs Commissioned
 - Argentina, Australia, Canada, Cyprus, France, Japan, New Zealand, Norway, Spain, Turkey, USA (Hawaii, Florida)
- 7 more currently under test
 - Algeria, Brazil (Brasilia, Recife), Indonesia, Korea, Russia, UAE



Planned MEOSAR Status

MEOSATS

- GPS - 1 more S-band planned by 2018
- Galileo - 8 more L-Band satellites currently under test
- BDS – 2 launched 2018, 4 more planned by 2020
- **49 TOTAL**

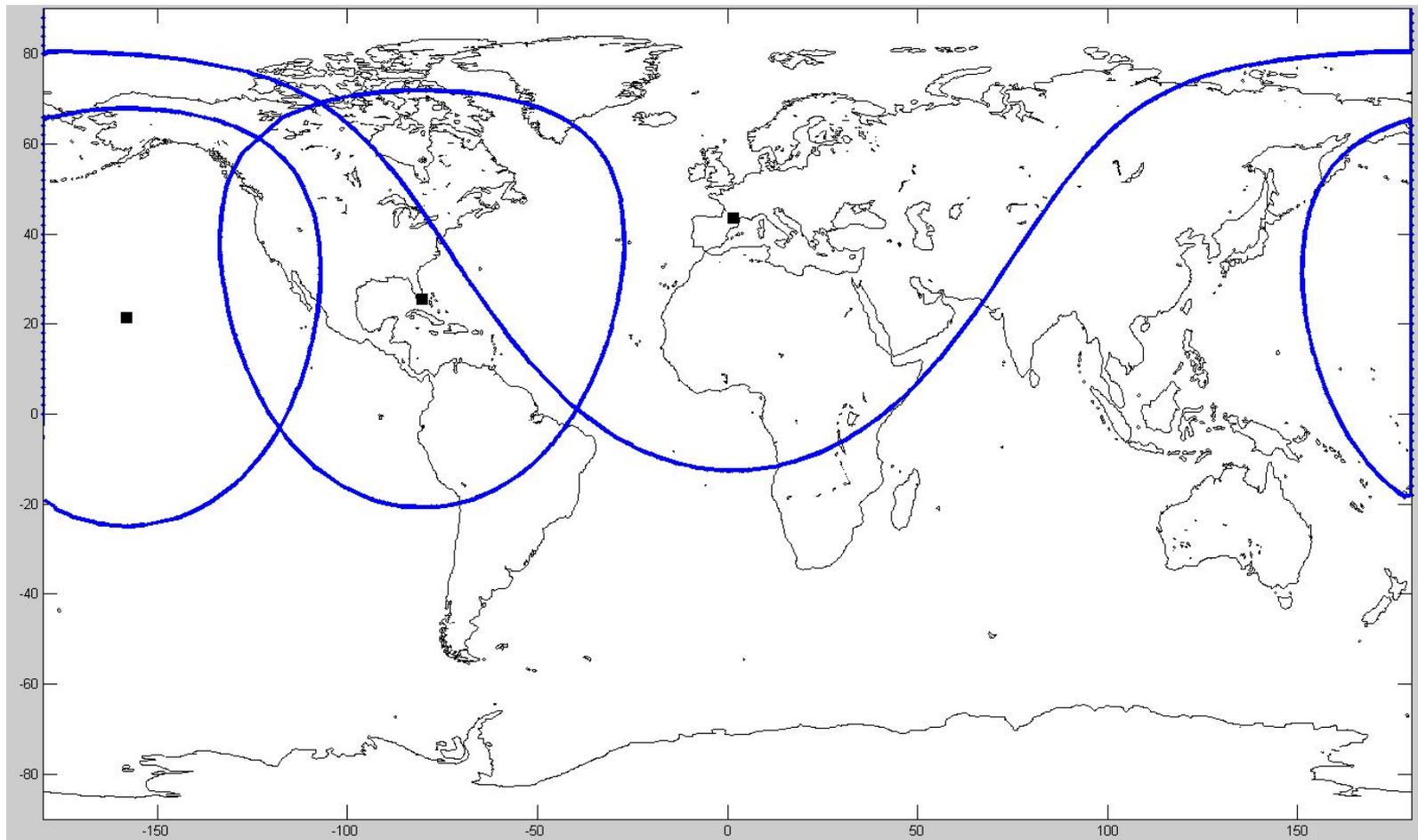
MEOLUTS

- 21 planned installations
- 1 TBD
- **42 TOTAL**

Jan 2017: MEOLUT Declared Coverage Area



3 MEOLUTS

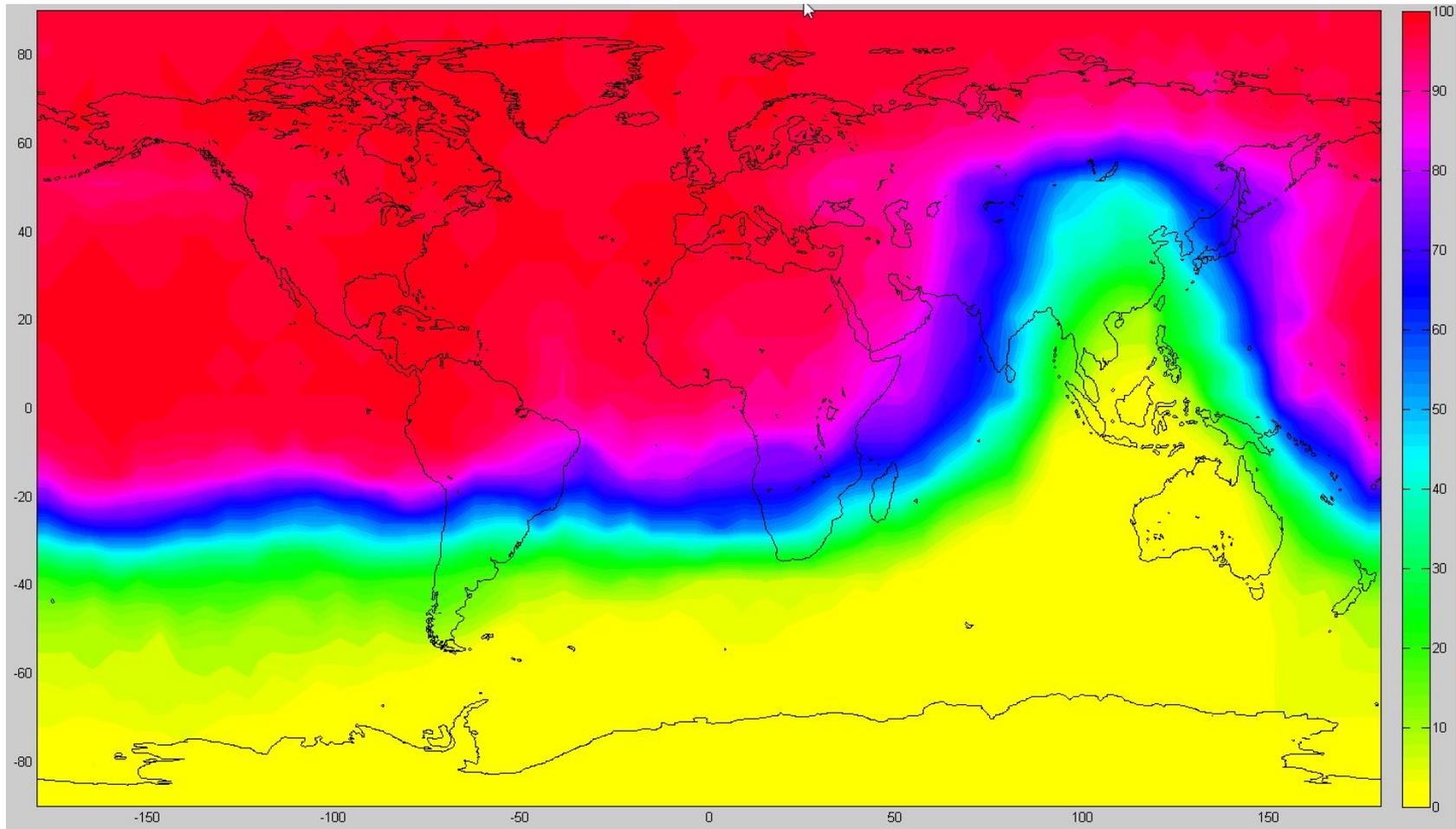




January 2017: Coverage / Accuracy

Coverage 37.1%

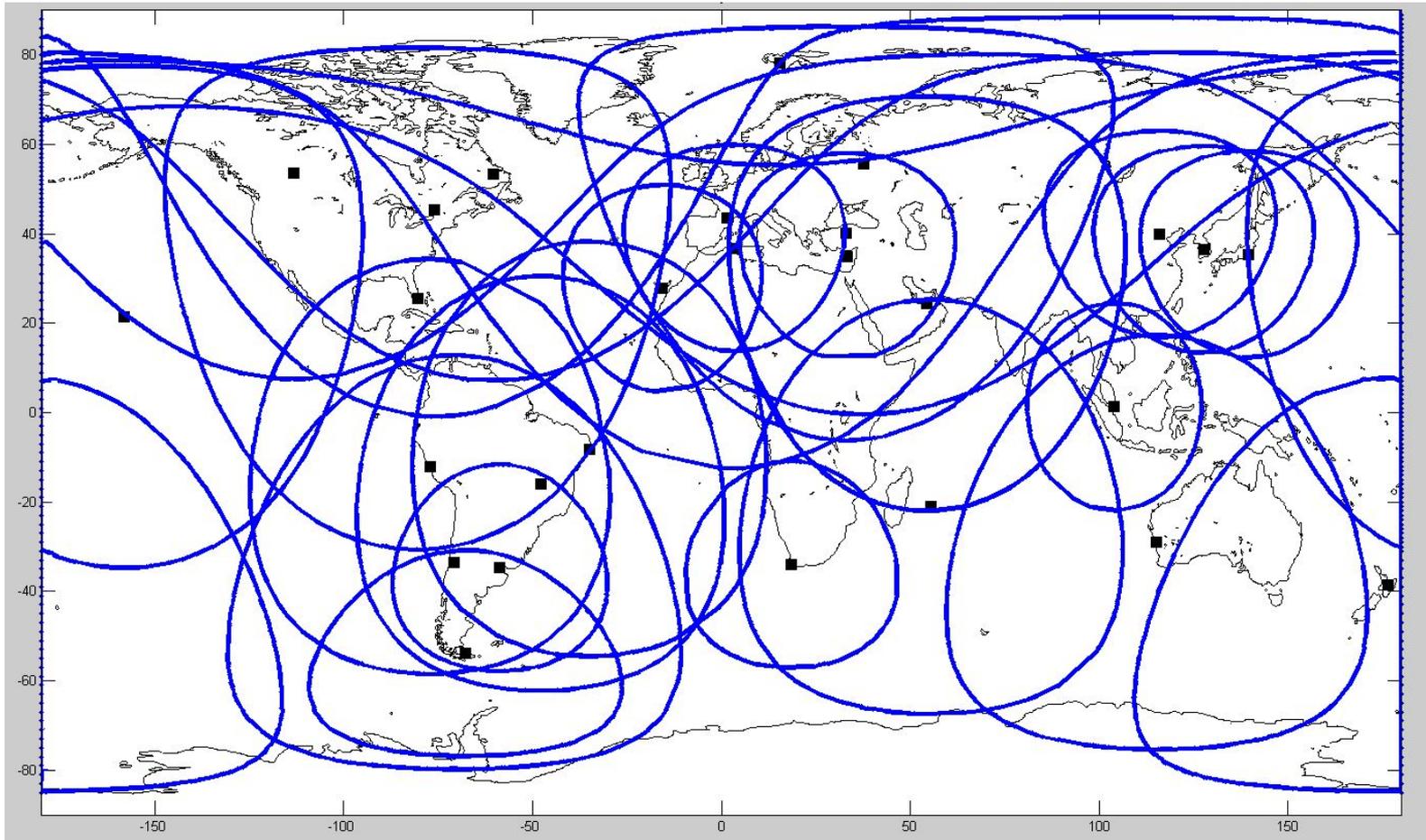
meets 95% ≤ 5 km – 31 Satellites (21 DASS / 10 Galileo) – 3 MEOLUTS



Jan 2020: MEOLUT Declared Coverage Area



27 MEOLUTS

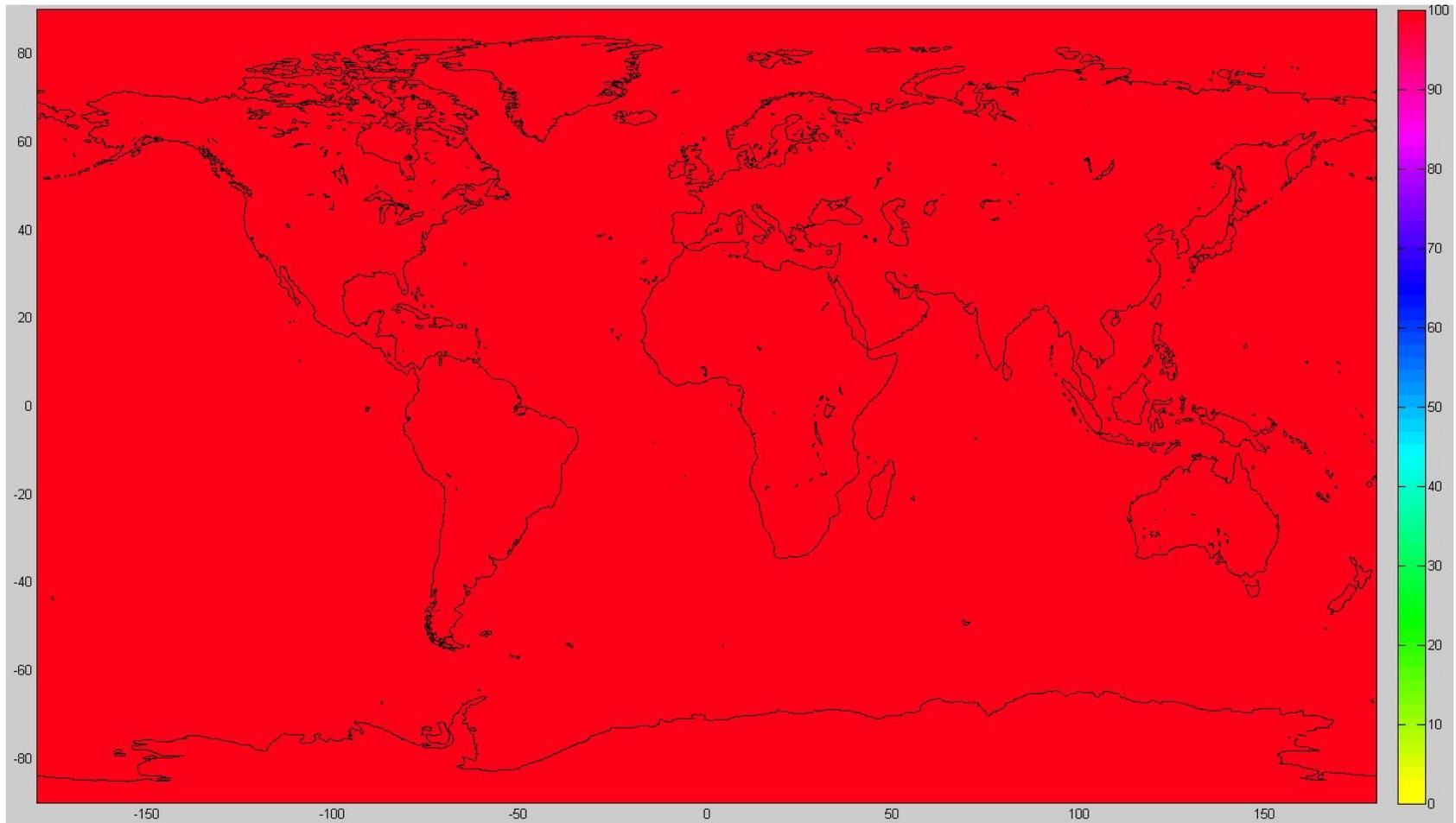




January 2020: Coverage / Accuracy

Coverage 100%

meets 95% \leq 5 km – 48 Satellites (24 DASS / 24 Galileo) – 27 MEOLUTS





USA LEO/MEOLUT Plans

- Hybrid LEO/MEO LUTs
 - 5 LEO/MEO antennas currently installed (Florida, Hawaii, Maryland)
 - 4 more LEO/MEO planned (Alaska and Guam)
 - The 4th Generation LEOLUTs track MEOLUTs when no LEOSAR satellites are in view.
 - The MEO data provided will be used as additional channels to the existing MEOLUTs.
 - Alaska, Guam and HI LEO/MEOs will feed MEO data to HI MEOLUT
 - Florida & Maryland LEO/MEOs will feed MEO data to FL MEOLUT
 - LEO/MEOLUTs will bridge the transition from LEOSAR to MEOSAR
- MEOLUT
 - New Southwest USA 6-channel MEOLUT planned

4th Generation LEO/MEOLUT Schedule for Operations



Late 2018	One (1) NOAA Suitland Test LEO/MEO
Late 2018	Two (2) Florida LEO/MEO Channels
Late 2018	Two (2) Hawaii LEO/MEO Channels
Late 2018	Two (2) Alaska LEO/MEO Channels
Early 2019	Two (2) Guam LEO/MEO Channels
Mid 2020	One (1) 6-channel SW MEOLUT



LGM MCC Status

- 3 commissioned
 - USMCC, FMCC, NMCC
- 13 installed and available for testing
- 18 planned installations



USA LGM MCC

Commissioning schedule

- 2018 Commissioned
 - AUMCC (will be reported at JC-32)
- 2018 In progress
 - JAMCC, CMCC
- 2019 Planned
 - ARMCC, BRMCC, CHMCC, PEMCC



LGM Initial Operational Capability (IOC)

Plan:

Reach IOC by JC-33 (2019)

Challenges:

Expected Horizontal Error (EHE)

Slow-moving beacon location accuracy

Suspect alerts

QMS requirements



QUESTIONS?