# SARSAT EMERGING ISSUES

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Policy

- Alert vs. Distress
  - ELT(DT)

- Inclusion of EE field
  - SAROPS provides additional information, but switch between km and nm can cause confusion

- Still looking at "notification" line indicating presence of data in IHDB

Moving Beacons and MEOSAR

- Ongoing

- International efforts

- U.S. SARSAT Program effort
  - NOAA buoys
  - NASA drones
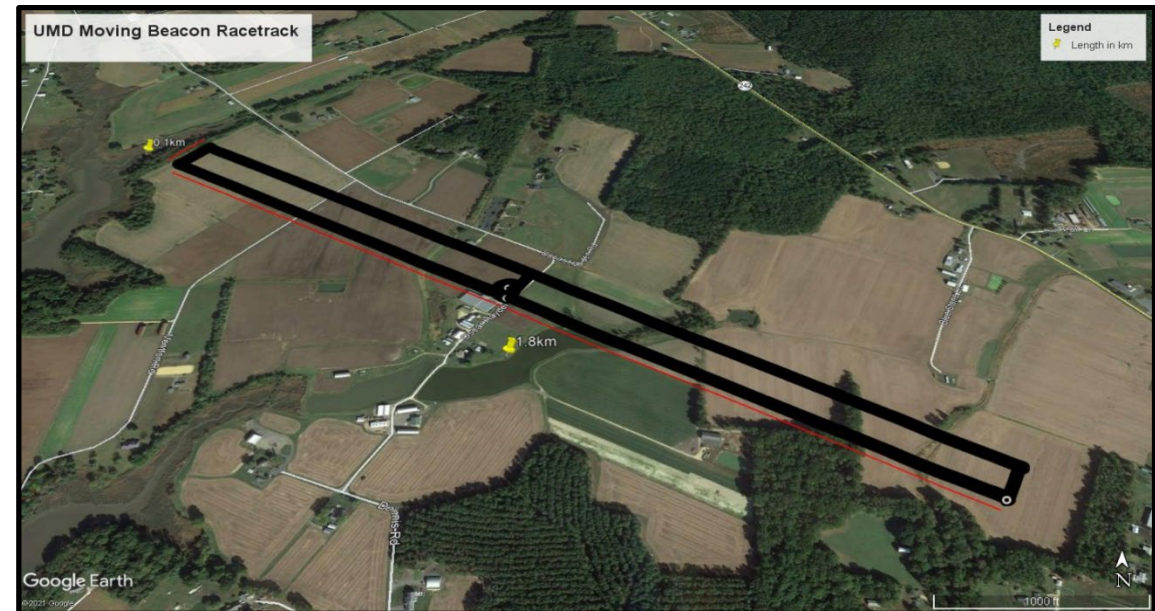
MEOSAR - EOC to IOC

- Early Operating Capability (EOC) to Initial Operating Capability (IOC)

- IOC (**Was** Estimated November 2019)
  - Specifications – i.e. Resolution for moving beacon location accuracy & Uncorroborated MEOSAR alerts
  - IOC = operating at full specifications. The MEOSAR system will not provide global coverage during the IOC phase

- Full Operating Capability (FOC)
  - System should be considered fully operational **and** have global coverage
  - MEOSAR will eventually become the primary system
    - (U.S. LEOSATs will go away when MEOSAR is FOC; International LEOSATs will remain; unsure how many LUTs will monitor LEOSATs)

- No official estimated IOC & FOC dates
  - Unofficial – IOC = 2022 & FOC = 2024

- MEOSAR standards / accuracies / timeliness vs. LEOSAR

- Once MEOSAR is IOC – USCG Policy will be updated

Return Link Service (RLS) – Type-1 Acknowledgement

- Optional

- Approved once RTCM Standards 11000.5(w/ Amendment) and 11010.4 are adopted and published.
  - Should be complete and published by the end of June
  - After publishing C/S S.007 will be updated

- There are limitations-
  - Not a guarantee that SAR services are enroute
  - Not instant-opportunity for people to doubt signal sent
    - Return link message – 30 min or less; seeing 2-8 min in live testing
      - (disclaimer: data was from known reliable beacons)

- Will *NOT* impact *HOW* you execute the SAR case, but good to know beacon capabilities. It *will* be listed as a feature on the SIT message.

- Type 2?

Second Generation Beacon

- Second Generation Beacons (SGB)
  - L band; no moving beacon issues; greater accuracy
    - FGB = 5 km
    - SGB
      - **Location accuracy <1 km, 95% of the time, within 5 minutes**
      - **Location accuracy <0.1 km, 95% of the time within 30 minutes**
- Will not be mandated, still many FGBs out there for foreseeable future
- Status – still testing
  - Unofficially expected on the market = 2022-2023
- CG *may not* update their aircraft
  - Will not be able to direction find the 406 MHz *satellite signal* or directly receive the Encoded position in their flight computer
  - If not, assets will be able to go to coordinates provided by RCC (which will be much more accurate) and will still be able to direction find on the 121.5 MHz homing signal

Reference Beacons

- Cape Hatteras-150 NM E of Cape Hatteras
  - 2E1C0B1002FFBFF
  - **34.714 N 72.248 W (34°42'52" N 72°14'51" W**

- Oregon-20 NM W of Columbia River Mouth
  - 2E1C0B2002FFBFF
  - **46.163 N 124.487 W (46°9'48" N 124°29'12" W)**

- Hawaii-205 NM SW of Honolulu
  - 2E1C0B3002FFBFF
  - **19.196 N 160.639 W (19°11'46" N 160°38'19" W)**

What do aircrews see?

MISC Info

- Access to 24/7 support above MCC controller

- Automatic Dependent Surveillance – Broadcast (ADS-B)
  - You can use this info from Air Traffic Control to help with SAR planning

- SRRs being updated
  - For US SRRs and bordering SRRs

- Updated NOAA SARSAT website
  - https://www.sarsat.noaa.gov

Current Discussions

- Reduce number of sent alerts that are unlikely SAR cases through filters

- RGDB
  - Anomalies
  - Know search function design

- Adding to (not modifying current info) RGDB with latest owner contact info provided by RCC
  - Beacon Turn-in program discussions

- SAR Systems Leaders Sync

Questions?