

Beacon Manufacturer's Workshop 2010

NOAA Report

LT Shawn Maddock

May 21, 2010



NOAA-SARSAT Status



Status of Operational Spacecraft

S7 (NOAA-15)	FOC
S8 (NOAA-16)	FOC
S9 (NOAA-17)	FOC
S10 (NOAA-18)	FOC
S11 (MetOp A)	FOC
S12 (NOAA-19)	FOC

GOES-10: De-orbited December 2009

GOES-11 (West): Positioned at 135W and operating as GOES-West.

GOES-12: April 26, 2010, transitioned to 60W, to support Brazil

GOES-13 (East): Positioned at 75W (arrived there April 26, 2010) and is operating as GOES-East.

GOES-14: In storage at 105W

NOAA-SARSAT Status



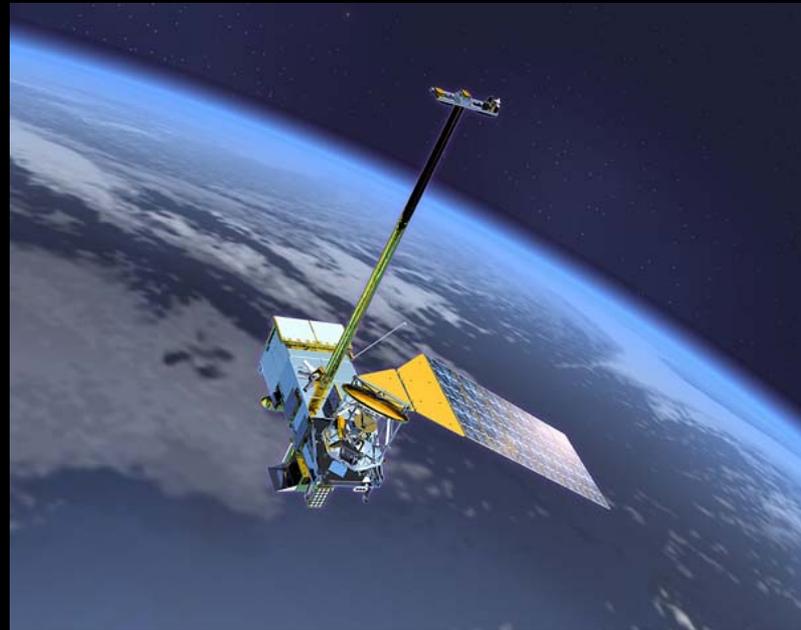
Future SARSAT spacecraft launches (approx.)

LEOSAR

MetOp B: April 2012

GEOSAR

GOES R: Sep 2012



Joint Polar Satellite System (JPSS)

NOAA-SARSAT Status



Status of Ground Segment

LEOLUTs

AK 1 & 2 (NOAA CDA Station - Fairbanks, Alaska) - operational

CA 1 & 2 (Vandenberg AFB, California) - operational

FL 1 & 2 (USCG Commsta Miami, Florida) - operational

GU 1 & 2 (Anderson AFB, Guam) - operational

HI 1 & 2 (USCG Commsta, Wahiawa, Hawaii) - operational

LSE (NSOF – Suitland, Maryland)

GEOLUT

MD 1 & 2 (NSOF – Suitland, Maryland) – operational

GSE (NSOF – Suitland, Maryland)

MEOLUT

NOAA began development activities in 2008 for a MEOLUT capability to be installed in Hawaii in January 2011

NOAA-SARSAT Status



Status of U.S. Mission Control Center

USMCC system availability: 99.981% available for 2009 (1.7 hours downtime)
100.0% available for 1Q10



NOAA-SARSAT Status



Status of U.S. Mission Control Center (USMCC)

USMCC has a backup location at Wallops Island, VA (established in 2008)



NOAA-SARSAT Status



Status of U.S. Mission Control Center

Number of 406 MHz beacon activations reported to RCCs/SPOCs within the USMCC service area

2009 False alert rate: 93.5% In 2008 it was 93.3%, so very similar

ALERT CLASSIFICATIONS	EPIRB	ELT	PLB	Sub-Total	Total
Distress alerts	99	32	43		174
False alerts					1453
Unfiltered processing anomalies				0	
Operational false alerts ¹ (beacon activations)					
Beacon mishandling	239	358	75	672	
Beacon malfunction	82	48	9	139	
Mounting failure	48	6	1	55	
Environmental conditions	46	14	0	60	
Voluntary activation ²	0	0	0	0	
Unknown	233	263	31	527	
Undetermined	516	432	87		1035
TOTAL	1263	1153	246		2662

SARSAT Saves



In 2009 a total of **195** lives were rescued in the U.S. SRR as a result of the Cospas-Sarsat System:

- 154 lives rescued via EPIRBs
- 8 lives rescued via ELTs
- 33 lives rescued via PLB

On a recent downward trend in the number of lives saved after years of upward trends:

2009: 195
2008: 282
2007: 353
2006: 272
2005: 222
2004: 260
2003: 224



2009 Breakdown by top 3 States:

Alaska – 49 lives rescued in 29 cases

Florida – 39 lives rescued in 13 cases

Texas – 32 lives rescued in 8 cases

SARSAT Saves



Rescues in the US SRR:

January 1 - May 14, 2010

Total: 106 lives saved in 35 events

EPIRB – 53 lives saved in 19 events

ELT – 22 lives saved in 4 events

PLB – 31 lives saved in 12 events

There were 52 people rescued in 39 events at this time last year (117 the year before).

(Last year's meeting was 2 weeks earlier)



6,340 people have been rescued in the United States since 1982

406 MHz Beacon Population



U.S. Beacon Population Forecast

Year / Beacons	2015	2020
ELTs	232,000	373,000
<u>EPIRBs</u>	285,000	330,000
PLBs	449,000	630,000
SSAS beacons	450	700

Live Testing of Beacons



The COSPAS-SARSAT (C/S) System is an operational entity, and is not designed for “live” testing. This is what the inverted frame synch is for.

A draft policy on beacon testing has been posted on the SARSAT web site. This is to remind readers that “live” testing of their beacons is not allowed by the Cospas-Sarsat system.

To read the draft policy, go to the left column of the NOAA web site, www.sarsat.noaa.gov and click the link under the section titled “How You Can Help “SARSAT.” The link for EPIRB testing procedures will still be right below it, which discusses proper “self testing” of the EPIRB, not “live” testing.

Live Testing of Beacons



On-line Beacon Registration

- [SARSAT \(Home\)](#)
- [What's New @ SARSAT?](#)
- [Background/History](#)
- [SARSAT Mission Statement](#)
- [Media/Press Information](#)

How SARSAT Works For You

- [SARSAT System Overview](#)
- [Emergency Beacons](#)
- [Satellites](#)
- [Ground Stations](#)
- [U.S. Mission Control Center](#)
- [Rescue Coordination Centers](#)
- [Recent Rescues](#)

How You Can Help SARSAT

- [Register Your Beacon](#)
- [False Alerts, and Prevention](#)
- [Lost Your Beacon???](#)
- [Testing Policy](#)
- [PIRR Testing Procedures](#)

Additional Information

- [Alaska PLB Program](#)
- [Frequently Asked Questions](#)
- [Dictionary](#)
- [SARSAT Slide Presentations](#)
- [System Documentation](#)
- [Cospas-Sarsat Future](#)
- [SARSAT Meetings](#)

NOAA Satellite and Information Service
National Environmental Satellite, Data, and Information Service (NESDIS)

Search and Rescue Satellite-aided Tracking

Alert*** [FEBRUARY 1, 2009 Cospas-Sarsat ceased coverage of 121.5 MHz and 243 MHz Emergency Beacons](#)
- [Click here for more information](#)

-Pilots are reminded and encouraged to monitor 121.5 MHz from their cockpit to listen for other aircraft that may be in distress.

COSPAS-SARSAT Rescues as of:

May 14, 2010

Number of Persons Rescued (To Date) in the United States: 106

- Rescues at sea: **53** people rescued in **19** events
- Aviation rescues: **22** people rescued in **4** events
- Terrestrial rescues: **31** people rescued in **12** events

- [Worldwide](#) - **Over 27,000+** People Rescued (since 1982)
- United States - **6,340** People Rescued (since 1982)

<http://www.sarsat.noaa.gov/sarsat.html>

Questions and Contact Information



**SARSAT Program Office
NOAA Satellite Ops Facility**

**4231 Suitland Rd.
Suitland, MD 20746**

www.sarsat.noaa.gov

**LT Shawn Maddock
ops.sarsat@noaa.gov**