

COSPAS-SARSAT

AP SAR/TF/3

STEVEN LETT

HEAD OF SECRETARIAT

COSPAS-SARSAT SAVES LIVES

SINCE THE FIRST RESCUE AIDED BY COSPAS-SARSAT ON 10 SEPTEMBER 1982:
COSPAS-SARSAT HAS AIDED IN THE RESCUE OF

37 000 PEOPLE!



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COSPAS-SARSAT SAVES LIVES

- ❑ In 2013, Cospas-Sarsat alert data assisted in 720 distress incidents in which 2,156 persons were rescued.
- ❑ The 406-MHz beacon population estimated to have reached over 1.6 million units during 2013, more than double the population in 2007!

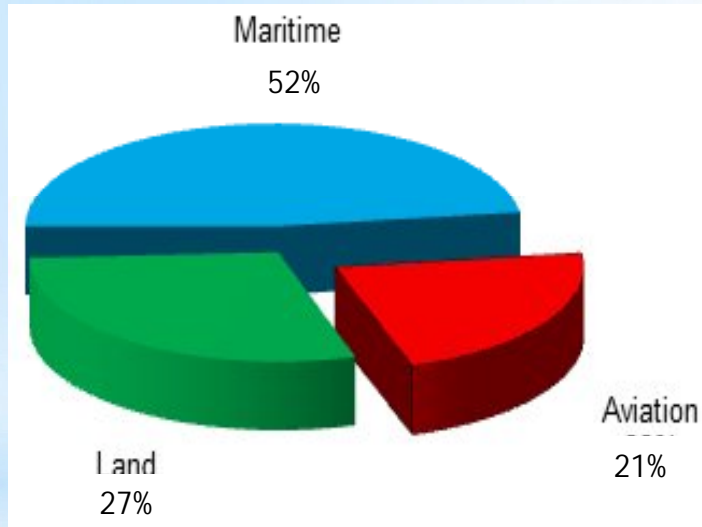


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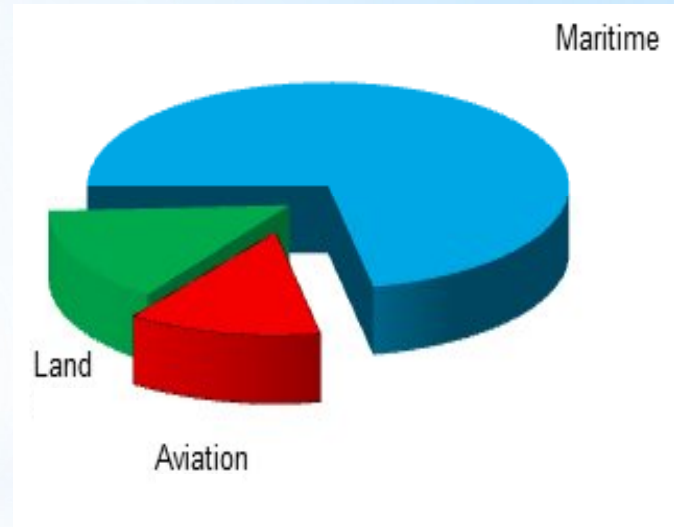
DISTRIBUTION OF EVENTS

Distribution of SAR Events Assisted by Cospas-Sarsat (Jan. - Dec. 2013)



Total: 720 SAR Events

Distribution of Persons Rescued with Assistance of Cospas-Sarsat (Jan. - Dec. 2013)



Total: 2,156 Persons



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IF COSPAS-SARSAT SAVES LIVES...

WHAT IS THE MATTER WITH THIS
PICTURE?



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IF COSPAS-SARSAT SAVES LIVES...

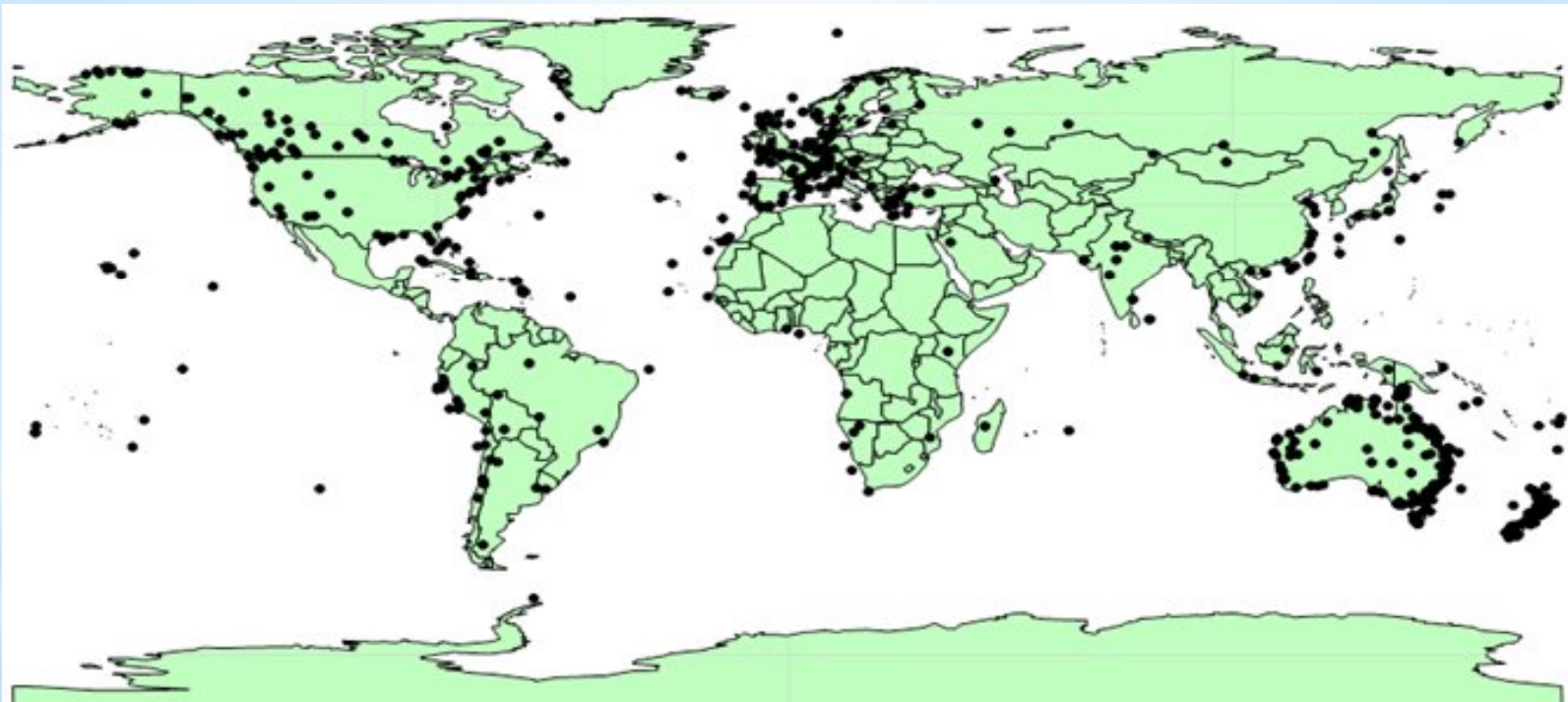


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IF COSPAS-SARSAT SAVES LIVES...

GEOGRAPHIC DISTRIBUTION OF CONFIRMED SAR EVENTS
ASSISTED BY COSPAS-SARSAT IN 2012

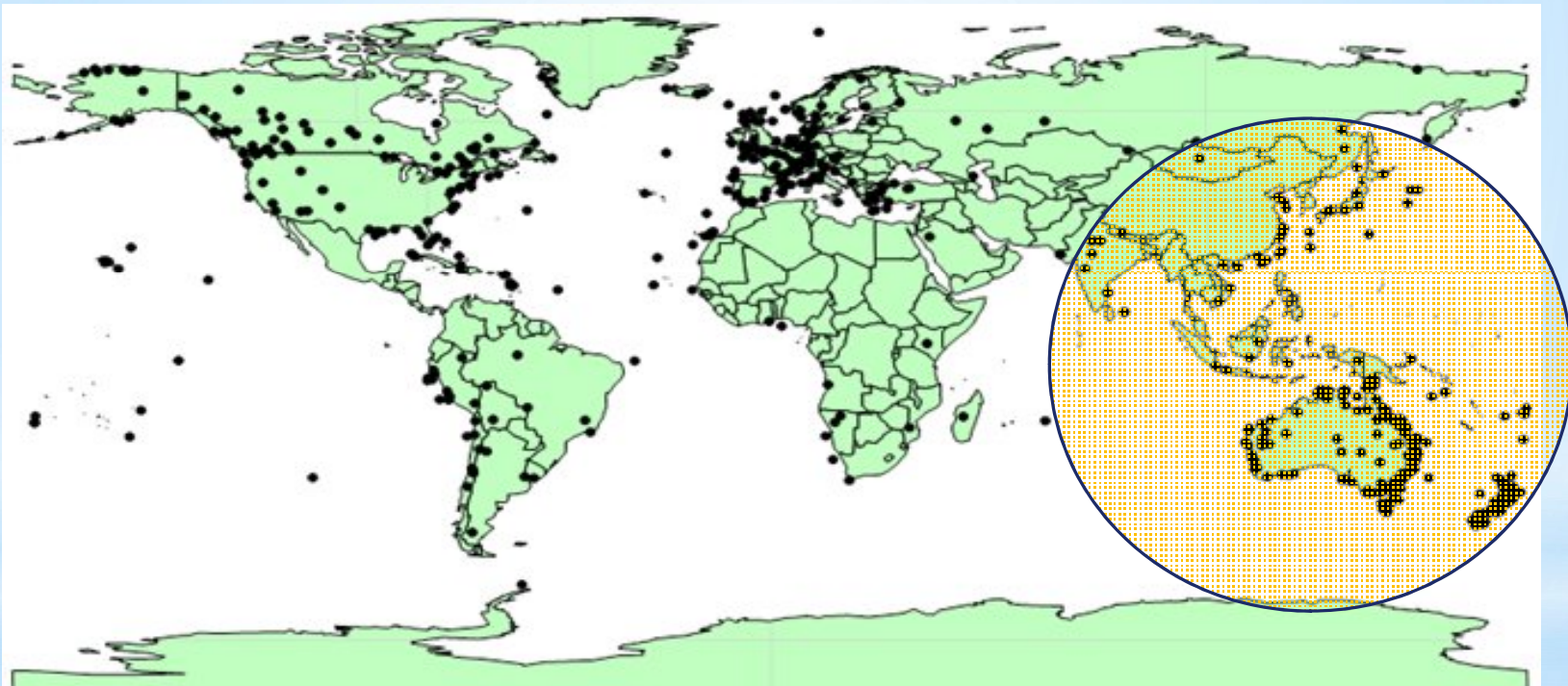


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IF COSPAS-SARSAT SAVES LIVES...

GEOGRAPHIC DISTRIBUTION OF CONFIRMED SAR EVENTS
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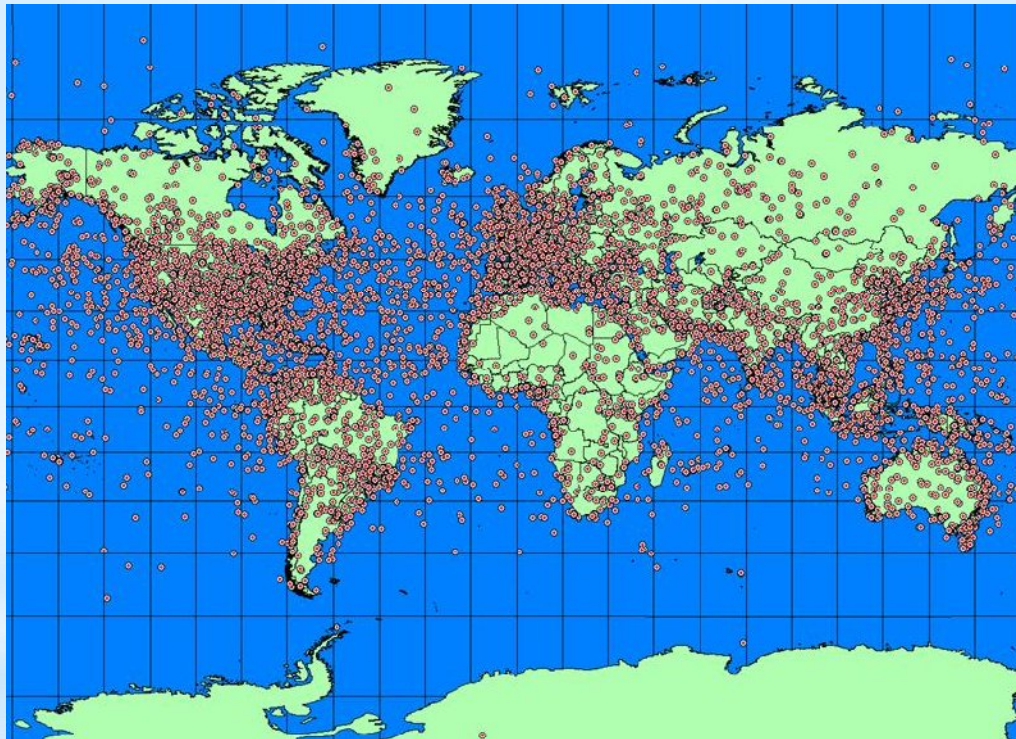


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IF COSPAS-SARSAT SAVES LIVES...

16 347 BEACON ACTIVATIONS WORLDWIDE (USMCC DATA) AND
≈3 764 IN THE REGION

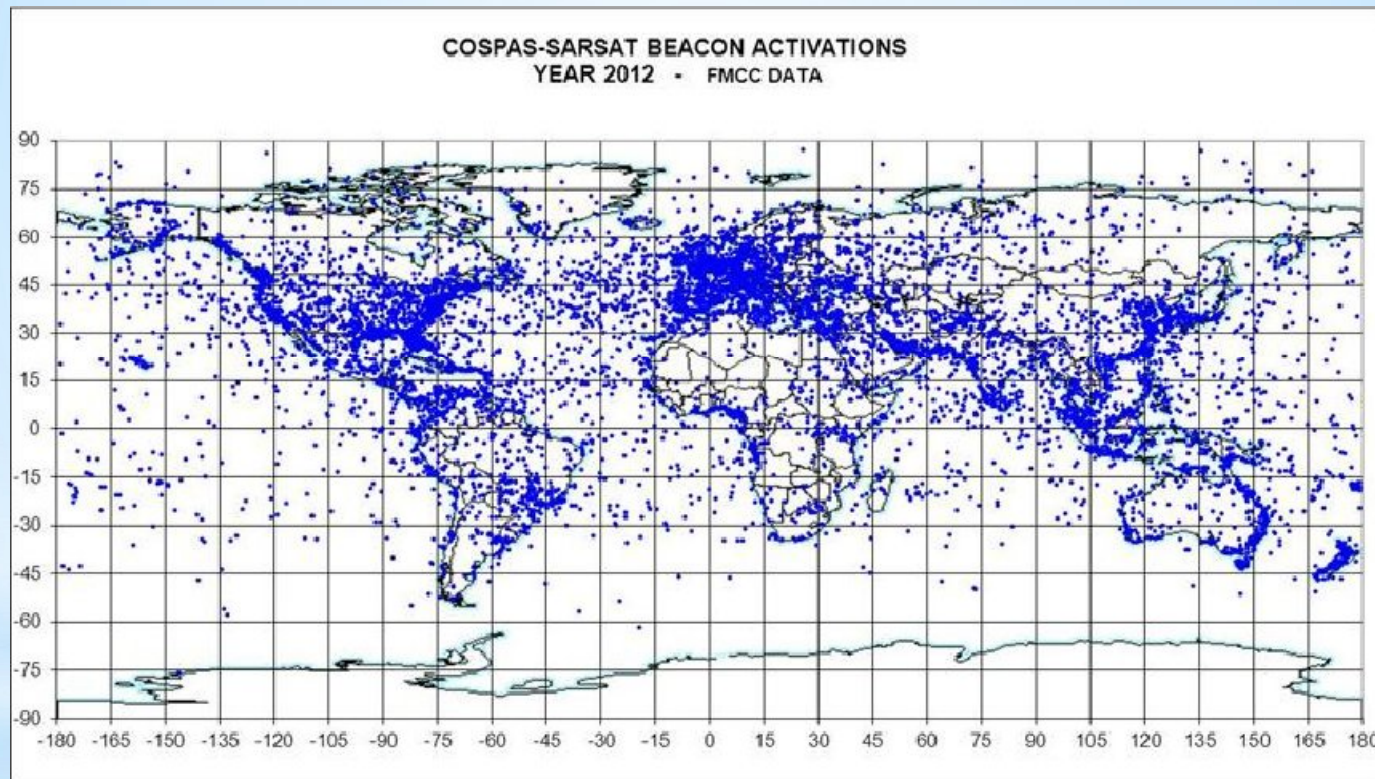


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IF COSPAS-SARSAT SAVES LIVES...

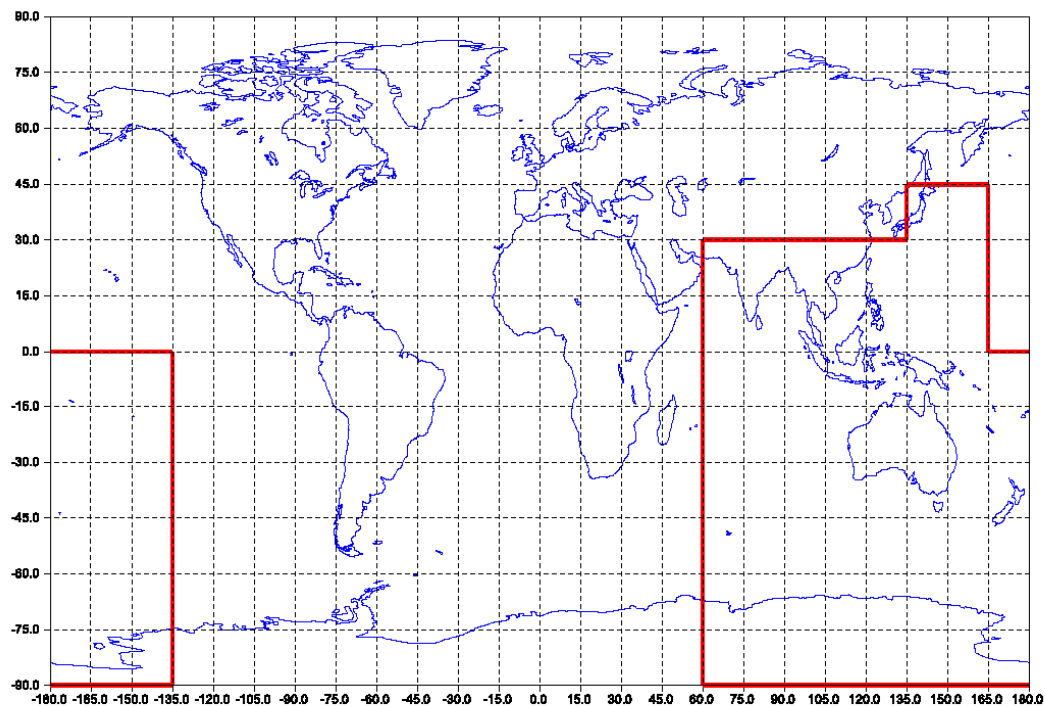
14 761 BEACON ACTIVATIONS WORLDWIDE (FMCC DATA) AND
≈3 633 IN THE REGION



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AREA REVIEWED



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CONFIRMED ALERTS IN AREA REVIEWED

Country	Number of Confirmed SAR Events with the Respective Country-Code			
	Aviation	Maritime	Land	Total
Australia	7	112	74	193
Bangladesh				
Cambodia				
Hong Kong, China		1		1
France/New Caledonia				
India	3	1		4
Indonesia	2	2		4
Japan		5		5
Malaysia				
Maldives				
Nepal	1 (data not used in SAR)			
New Zealand	6	12	83	101
Oman				
Philippines				
Singapore				
Sri Lanka				
Thailand				
USA	13	43	26	82
Vietnam		3		3



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DISPOSITION OF TOTAL ALERTS



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DISPOSITION OF TOTAL ALERTS



>95% OF ALL ALERTS RECEIVED ARE:
FALSE ALERTS, PLUS
UNDETERMINED ALERTS

17 CONFIRMED
ALERTS (MINUS
AUS, NZ, USA)

THIS NUMBER
SHOULD BE LARGER!
MORE RESCUES &
BETTER AFTER-
INCIDENT REPORTING

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DISPOSITION OF TOTAL ALERTS



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POTENTIAL EXPLANATIONS FOR LOW RATE OF CONFIRMED ALERTS

- LOW RATE OF BEACON OWNERSHIP
- ALTERNATIVE MEANS OF DISTRESS ALERTING (MOBILE PHONE, VHF, MF, INMARSAT, IRIDIUM [SPIDER TRACKS, ETC.])
- COMMUNICATION PROBLEMS IN GETTING ALERTS TO SAR RESPONDERS
- INADEQUATE SAR RESPONSE RESOURCES
- INADEQUATE REPORTING OF SAR RESPONSE FINDINGS?



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POTENTIAL SOLUTIONS FOR LOW RATE OF CONFIRMED ALERTS

- IMPROVE BEACON OWNERSHIP WITH AWARENESS CAMPAIGNS AND REDUCED COST BEACONS
- IMPROVE COMMUNICATIONS AND CONFIRM THE IMPROVEMENT THROUGH SUCCESSFUL TEST CALL RESULTS
- WORK WITH ICAO, IMO AND OTHER AGENCIES TO IMPROVE SAR CAPACITY
- IMPROVE REPORTING OF SAR RESPONSE FINDINGS

THIS IS VERY IMPORTANT: BY REPORTING TO YOUR SUPPORTING MCC THE FINDINGS FROM ALERTS YOU BUILD THE CREDIBILITY TO REQUEST MORE RESOURCES.



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OTHER SOLUTIONS

WE NEED TO HEAR FROM YOU!



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BEACON REGISTRATION

THE “REGISTRATION” OF BEACONS IN A GOVERNMENT DATABASE OR IN THE COSPAS-SARSAT INTERNATIONAL BEACON REGISTRATION DATABASE SERVES CRITICAL SEARCH-AND-RESCUE FUNCTIONS WHEN AN ALERT IS RECEIVED:

- HELPS SAR AUTHORITIES TO DETERMINE THE AIRCRAFT OR VESSEL IN DISTRESS
- PROVIDES BEACON-OWNER CONTACT INFORMATION SO THAT CALLS CAN BE MADE TO DETERMINE IF BEACON ACTIVATION WAS INADVERTENT
- PROVIDES CONTACT INFORMATION FOR ASSOCIATES OF THE BEACON OWNER WHO MAY BE ABLE TO CONTRIBUTE INFORMATION ABOUT THE VESSEL, THE VOYAGE/FLIGHTPLAN, NUMBER OF PASSENGERS, ETC.



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BEACON REGISTRATION

BECAUSE BEACON REGISTRATION IS SO IMPORTANT, IT SHOULD BE MADE AS EASY AS POSSIBLE FOR BEACON OWNERS TO REGISTER AND TO UPDATE INFORMATION.

THIS IS TRUE WHETHER THE REGISTRATION FACILITY IS MANAGED BY:

- A NATIONAL ADMINISTRATION OR
- COSPAS-SARSAT THROUGH THE INTERNATIONAL BEACON REGISTRATION DATABASE (IBRD)

IF YOU DO NOT MAKE REGISTRATION OBVIOUS AND EASY FOR THE BEACON OWNER, THEN YOUR JOB BECOMES HARDER WHEN AN ALERT IS RECEIVED



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THE INTERNATIONAL BEACON REGISTRATION DATABASE (IBRD)

THE IBRD, MANAGED BY THE COSPAS-SARSAT SECRETARIAT, SERVES TWO IMPORTANT PURPOSES:

- IT CAN BE USED AS AN ABSOLUTELY FREE RESOURCE FOR COUNTRIES TO ALLOW THEIR BEACON OWNERS TO REGISTER BEACONS
- IT PROVIDES A CENTRAL REPOSITORY FOR SAR AUTHORITIES TO RETRIEVE INFORMATION DURING A RESCUE WHEN AN ALERT IS RECEIVED
- SEE ATTACHMENT 1 TO DOCUMENT APSAR/TF/3 – WP03



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BEACON REGISTRATION TAKEAWAYS

- REGISTRATION IS IMPORTANT TO YOU – IT SAVES YOU TIME AND RESOURCES WHEN AN ALERT IS RECEIVED AND A RESCUE MIGHT BE LAUNCHED.
- REGISTRATION (AND UPDATES) NEEDS TO BE OBVIOUS AND EASY FOR BEACON OWNERS
- IF YOU HAVE THE RESOURCES TO MAINTAIN YOUR OWN BEACON REGISTRY, THAT IS FINE, BUT REMEMBER TO UPLOAD/UPDATE THAT INFORMATION FREQUENTLY ON THE IBRD SO THAT IT IS AVAILABLE TO OTHER SAR RESPONDERS
- IF YOU DO NOT HAVE THE RESOURCES TO MAINTAIN YOUR OWN REGISTRY, USE THE IBRD – IT'S FREE!
- BUT YOU NEED TO PUBLICIZE TO YOUR BEACON-OWNER COMMUNITY (MARINERS AND PILOTS) THAT THEY MUST REGISTER THEIR BEACONS



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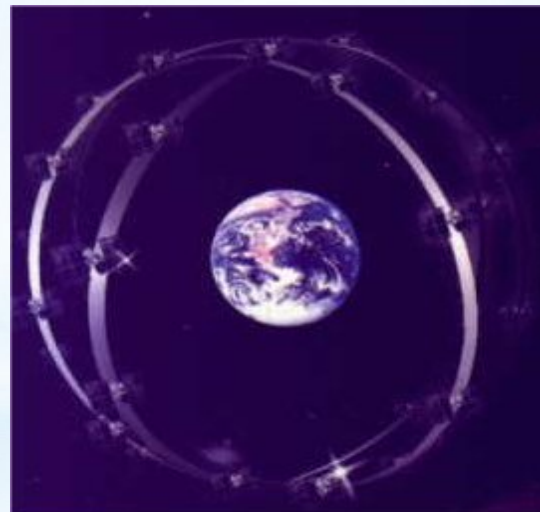
FUTURE MEOSAR SYSTEM FLEET

**MEOSAR Includes SAR Payloads on
Three Global Navigation Satellite Systems**

GPS / USA



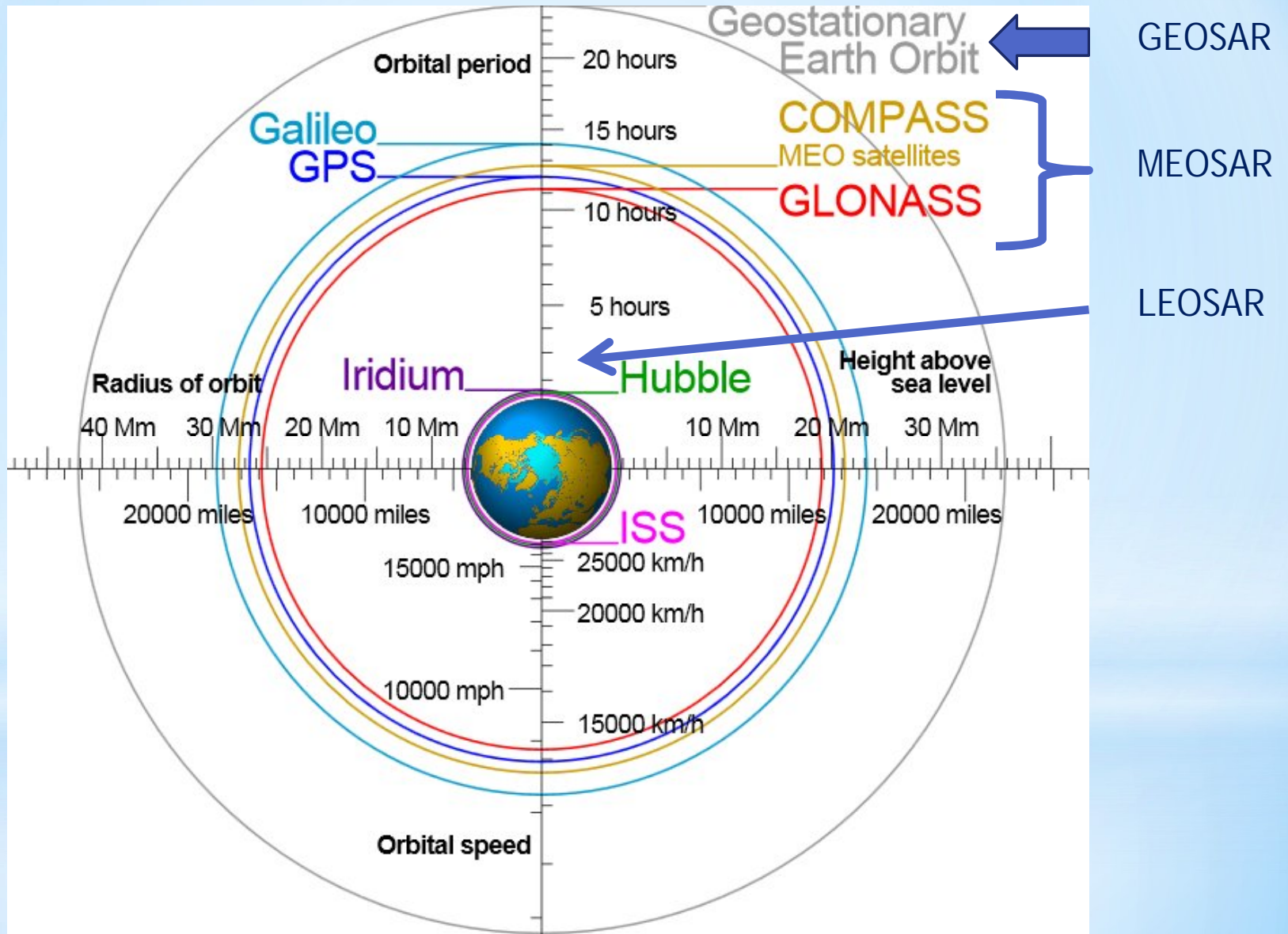
Glonass / Russia



Galileo / Europe

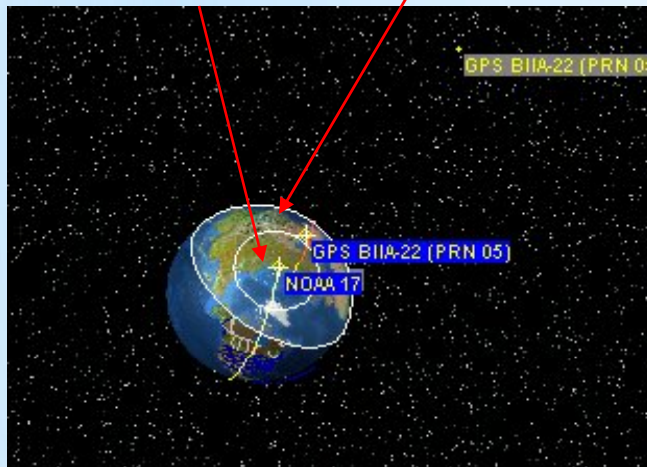


MEOSAR ORBIT COMPARISON

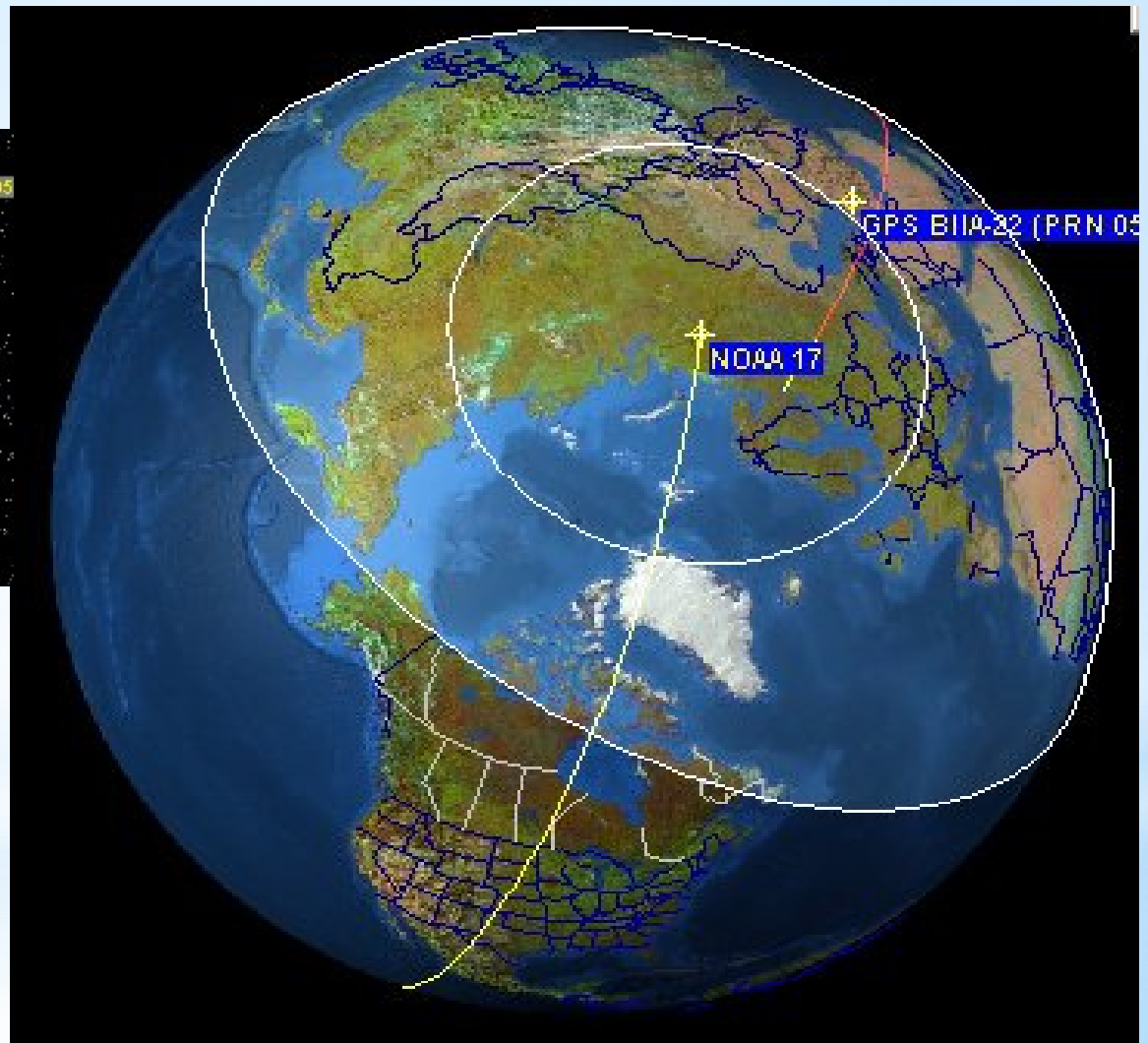


MEOSAR: AN IMPROVED SYSTEM CONCEPT

MEO sat at 20,000 km
LEO sat at 1,000 km



- MEO larger footprint than LEO
- Like GEO footprint but slowly moving
- Continuous global coverage (including poles)



FUTURE “SECOND-GENERATION” BEACONS



- Next generation of beacons can be optimized to take best advantage of the MEOSAR system
- Faster time to “first burst” - 3 seconds instead of 50
- More distress related information sent to RCCs
- Automatic in-flight activation
- Return link capabilities - including potentially remote activation
- Expanded “homing” options

The logo for COSPAS Sarsat features the text "COSPAS" in blue and "SARSAT" in red, with a central satellite icon. The satellite is a red sphere with blue and red orbital paths. Two large red curved lines frame the central icon. The background is a light blue gradient.

COSPAS  **SARSAT**