



#### THREE TOPICS TO COVER

- COSPAS-SARSAT PROGRAMME STRUCTURE AND SYSTEM
- ☐ INNOVATIONS STATUS: MEOSAR AND NEXT GENERATION BEACONS ELT(DT)s
- ☐ ALERT DATA DISTRIBUTION GADSS COMPLIANT





# COSPAS-SARSAT PROGRAMME STRUCTURE AND SYSTEM



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### WHO ARE WE?





International Cospas-Sarsat Programme

Slide 4

#### WE ARE YOU!

## COSPAS-SARSAT PARTICIPATING COUNTRIES/AGENCIES



ICAO- JRCC LCA SAR WORKSHOP

> **A**LGERIA **A**RGENTINA **AUSTRALIA BRAZIL** CANADA CHILE CHINA **CYPRUS DENMARK FINLAND FRANCE GERMANY** GREECE Hong Kong INDIA **INDONESIA ITALY** ITDC **JAPAN** KOREA (R. OF) **M**ALAYSIA **NETHERLANDS**

**NEW ZEALAND NIGERIA NORWAY PAKISTAN PERU POLAND Q**ATAR **R**USSIA SAUDI ARABIA **SERBIA SINGAPORE SOUTH AFRICA SPAIN SWEDEN SWITZERLAND THAILAND** Togo **TUNISIA TURKEY** UAE UK USA **VIETNAM** 



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### INTERGOVERNMENTAL COOPERATIVE

- NON-U.N. AGENCY, BUT SIMILARLY ORGANIZED
- PARTY STATES ARE CANADA, FRANCE, THE RUSSIAN FEDERATION AND THE UNITED STATES
- FACILITIES AND EXPERTISE CONTRIBUTED BY PARTIES AND 41 OTHER ASSOCIATED "PARTICIPANT" STATES AND AGENCIES, AND INTERGOVERNMENTAL ORGANIZATIONS
- ADMINISTRATIVE COSTS SHARED AMONG PARTY AND PARTICIPANT GOVERNMENTS
- NOT A REGULATORY BODY THAT IS THE ROLE OF OTHER INTERNATIONAL ORGANIZATIONS AND NATIONAL ADMINISTRATIONS (BUT WE SET AND TEST STANDARDS)
- NOT AN OPERATIONAL SAR UNIT THAT IS THE ROLE OF NATIONAL ADMINISTRATIONS YOU!

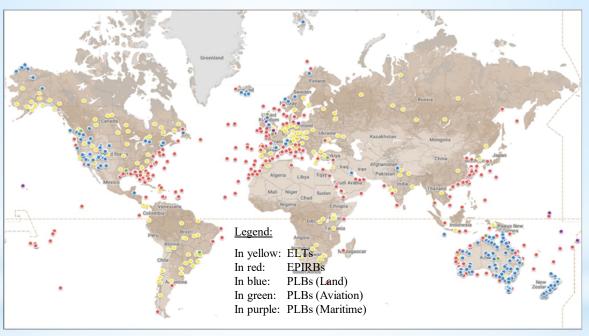




#### WHO ARE WE?

## WE ARE AN AGENCY THAT TODAY DELIVERS GLOBAL ALERTS TO OVER 200 COUNTRIES AND TERRITORIES!

IRRESPECTIVE OF WHETHER THEY ARE MEMBERS





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#### WHO ARE WE?

#### WE ARE ...

- THE ONLY SYSTEM THAT CAN INDEPENDENTLY LOCATE A BEACON ANYWHERE ON EARTH (WITHOUT THE AIRCRAFT REPORTING ITS POSITION NOR NEEDING GLOBAL NAVIGATION SATELLITE SYSTEM DATA, SUCH AS GPS)
- A COOPERATIVE OF GOVERNMENTS AND INTERGOVERNMENTAL ORGANIZATIONS (E.G., EC'S GALILEO AND EUMETSAT) THAT DELIVER ALERTS DIRECTLY TO SAR AGENCIES (E.G., RESCUE COORDINATION CENTRES), USUALLY BY AUTOMATIC MEANS



International Cospas-Sarsat Programme



#### COOPERATIVE RELATIONSHIPS

- UN AGENCIES
  - International Civil Aviation Organization (ICAO)
  - International Maritime Organization (IMO)
  - O INTERNATIONAL TELECOMMUNICATION UNION (ITU)
- OTHER INTERGOVERNMENTAL ORGANIZATIONS (IGOS)
  - EUROPEAN COMMISSION (EUSPA / GALILEO)
  - EUROPEAN ORGANISATION FOR THE EXPLOITATION OF METEOROLOGICAL SATELLITES (EUMETSAT).
  - O EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION (EUROCONTROL)
  - EUROPEAN UNION AVIATION SAFETY AGENCY (EASA)
- Non-Governmental Organizations (NGOs)
  - RADIO TECHNICAL COMMISSION FOR AVIATION (RTCA)
  - RADIO TECHNICAL COMMISSION FOR MARITIME (RTCM)
  - EUROPEAN ORGANIZATION FOR CIVIL AVIATION EQUIPMENT (EUROCAE)
  - O COMITÉ INTERNATIONAL RADIO-MARITIME (CIRM)



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### COSPAS-SARSAT ORGANIZATION



## Cospas-Sarsat Council

#### **Policy-Setting**

"Carry out the relevant policies and coordinate the activities of the Programme."

## Joint Committee

#### Cospas-Sarsat Secretariat

#### **Executive**

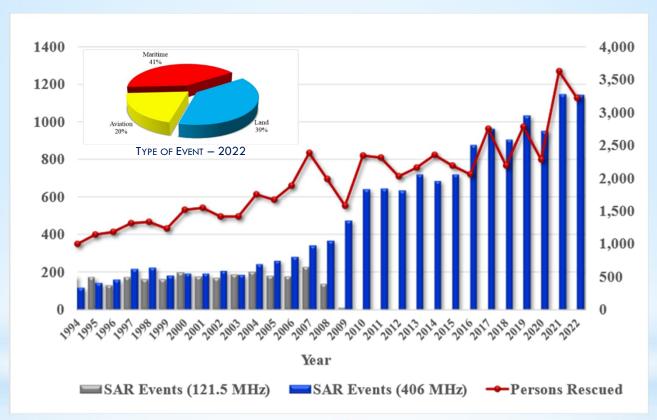
"The permanent administrative organ for the Programme [to] assist the Council in the implementation of its functions."

Operations
Working Group

Technical Working Group



#### GLOBAL SYSTEM - HISTORICALLY PROVEN





INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### INNOVATIONS STATUS: MEOSAR

MEDIUM-ALTITUDE EARTH ORBITING SEARCH-AND RESCUE SATELLITE SYSTEM



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### MEOSAR: AN IMPROVED SYSTEM CONCEPT

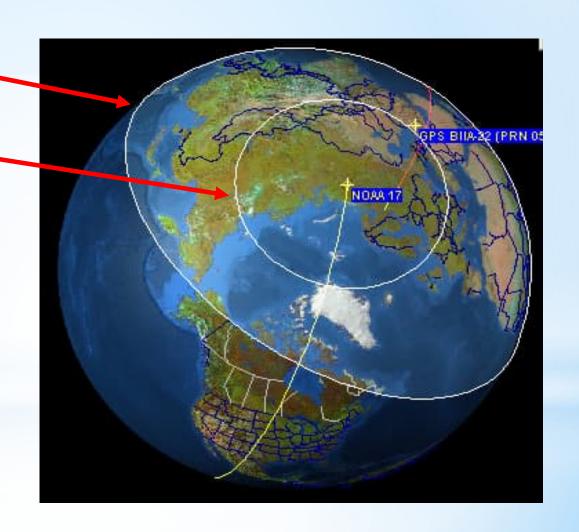
48+ MEOSAR SATELLITES

AT 20,000 KM

5 + 1 LEOSAR SATELLITES
AT 800 KM

12 + 8 GEOSAR SATELLITES
AT 36,000 KM

- MEO FOOTPRINT LARGER
  THAN LEO
- SIMILAR SIZE TO GEO
  FOOTPRINT, BUT SLOWLY
  MOVING
- CONTINUOUS GLOBAL
  COVERAGE THROUGH
  MULTIPLE SATELLITES
  (INCLUDING POLES)





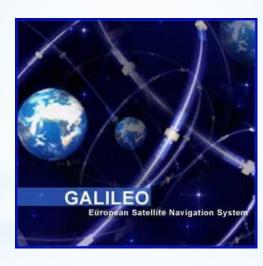
### MEOSAR SYSTEM FLEET ON THREE NAVIGATION SATELLITE HOSTS

(USING FREQUENCIES PROTECTED BY ITU FOR SAFETY OF LIFE - FIRST OPERATIONAL MEOSAR USE: 2016)

#### GPS / USA



#### Galileo / Europe



### SAR PAYLOADS ABOARD SIX BEIDOU (BDS) SATELLITES ALSO BEING MADE AVAILABLE BY CHINA

#### Glonass / Russia



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### MEOSAR ADVANTAGES

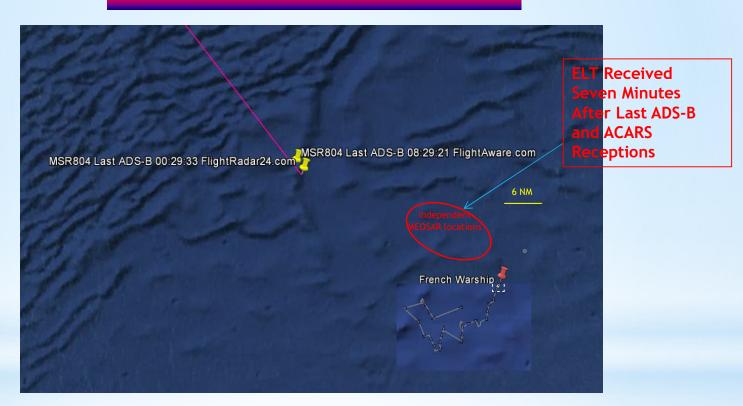
- NEAR INSTANTANEOUS WORLDWIDE DETECTION AND INDEPENDENT LOCATION DETERMINATION (INDEPENDENT OF BEACON-REPORTED NAVIGATION DATA FOR MOST 406-MHz BEACONS)
- SIGNIFICANTLY REDUCED EFFECT OF AIRCRAFT ORIENTATION/TERRAIN/WRECKAGE OBSTRUCTIONS
- EXTENSIVE REDUNDANCY/RELIABILITY IN SPACE AND GROUND SEGMENTS
- IMPROVED LOCATION ACCURACY
- ☐ IMPROVED BEACONS AND FEATURES, INCLUDING:
  - GALILEO-PROVIDED RETURN LINK SERVICE (RLS)
  - REDUNDANT LOCALIZATION OF "SECOND-GENERATION" ELT(DT)S (VALIDATING OR BACK-UP LOCATIONS THROUGH REPORTED NAVIGATION DATA AND INDEPENDENT CALCULATIONS, EVEN AT HIGH SPEEDS)

ARSAT

International Cospas-Sarsat Programme



## MEOSAR USED TO CALCULATE LOCATION OF EGYPTAIR FLIGHT MS 804 (19 MAY 2016)





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# INNOVATIONS STATUS: ELTS FOR DISTRESS TRACKING ELT(DT)S GADSS COMPLIANCE



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### ELTS FOR DISTRESS TRACKING - ELT(DT)S

- LEGACY ELTS WHERE DESIGNED FOR POST-CRASH ALERTING FOR SURVIVABLE INCIDENTS
- LIT(DT)S ARE SPECIFIED FOR IN-FLIGHT TRACKING OF AIRCRAFT IN DISTRESS
- EQUIPAGE WITH AT LEAST ONE AUTOMATIC ELT STILL REQUIRED BY ICAO WITH 121.5 MHz HOMING\*





## ICAO CONVENTION ANNEX 6, NEW PARAGRAPH 6.18 MAIN REQUIREMENTS

MANDATORY EQUIPAGE JANUARY 2025 FOR AIRCRAFT CERTIFICATED ON/AFTER JANUARY 2024

- ALLOW THE POSITION OF AN AIRCRAFT IN DISTRESS TO BE AUTONOMOUSLY
  DETERMINED WITHOUT HUMAN INTERVENTION AT LEAST ONCE EVERY MINUTE
  (COSPAS-SARSAT EXCEEDS THIS REPORTING-FREQUENCY REQUIREMENT AND, WITH
  "SECOND GENERATION" BEACONS, WILL PROVIDE REDUNDANT, INDEPENDENTLYCALCULATED POSITIONS TRILATERATED BY THE EARTH STATIONS IN ADDITION TO GNSS
  (ENCODED) POSITIONS)
- ABLE TO OPERATE IN THE EVENT OF AIRCRAFT POWER LOSS (ALL ELTS HAVE BUILT-IN BATTERY POWER SUPPLY)
- ☐ COMMENCE NO MORE THAN 5 SECONDS AFTER DETECTION OF ABNORMAL FLIGHT CONDITIONS

(COSPAS-SARSAT WILL MEET OR EXCEED THIS SPECIFICATION)





#### ELT(DT)S TO SUPPORT GADSS

- IMPROVED DISTRESS ALERTING BY AUTOMATIC ACTIVATION PRIOR TO POSSIBLE DAMAGE OR BLOCKAGE (DEBRIS, SUBMERSION, ETC.) IN A CRASH
- ACTIVATION UPON DETECTION OF ABNORMAL FLIGHT CONDITIONS (ON COMMAND FROM AIRCRAFT AVIONICS) IN ADDITION TO POSSIBLE MANUAL ACTIVATION BY PILOTS
- RLS FACILITATES POSSIBILITY OF ACTIVATION BY GROUND COMMAND

  HTTPS://WWW.LINKEDIN.COM/PULSE/GRICAS-ELTDT-FOREFRONT-AUTONOMOUS-DISTRESSTRACKING-GADSS-MARTIN/
- CAPABILITY FOR POSITION TO BE REDUNDANTLY DETERMINED USING MEOSAR CALCULATIONS (SECOND-GENERATION BEACONS) AND AIRCRAFT GNSS POSITIONS
- SPECIFIED FOR COMPLIANCE WITH PARAGRAPH 6.18 OF ANNEX 6 OF THE ICAO
  CONVENTION (LOCATION OF AN AIRCRAFT IN DISTRESS), AS IMPLEMENTED IN THE GLOBAL
  AERONAUTICAL DISTRESS AND SAFETY SYSTEM (GADSS) AUTONOMOUS DISTRESS TRACKING
  REQUIREMENTS
  INTERNATIONAL
  COSPAS SARSAT

COSPAS-SARSAT PROGRAMME



#### ELT(DT)S TO SUPPORT GADSS

- THE BIG ASTERISK \*
- BECAUSE THEY ARE DESIGNED FOR **IN-FLIGHT** DISTRESS TRACKING, ELT(DT)S ARE NOT REQUIRED TO HAVE A 121.5-MHz HOMING TRANSMITTER
- BUT MANY ELT(DT)S ARE MULTI-FUNCTION DEVICES THAT WILL HAVE A HOMING TRANSMITTER
- BE PREPARED FOR EITHER CASE





#### ELTS FOR DISTRESS TRACKING (ELT(DT)S)

- TRIGGERING ALGORITHMS (MASPS) ESTABLISHED BY EUROCAE WG-98 JOINTLY WITH RTCA SC-229
- BASED ON THE TECHNOLOGIES OF:
  - EXISTING "FIRST GENERATION" BEACON (FGB) SPECIFICATIONS, MODIFIED TO MEET NEW ICAO REQUIREMENTS (USING GNSS DATA TO MEET ICAO ACCURACY SPECIFICATIONS) — OPERATIONAL 1 JANUARY 2023
  - "SECOND GENERATION" BEACON (SGB) SIGNAL AND MESSAGE SCHEMES TO ALLOW REDUNDANT LOCATION DETERMINATION (GNSS AND INDEPENDENT), AND ADDITIONAL MESSAGE CONTENT — OPERATIONAL SOON





# ALERT DATA DISTRIBUTION – GADSS COMPLIANT



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### DATA DISTRIBUTION COMPONENTS

DISTRESS ALERT SIGNALS ARE RECEIVED BY ONE OR MORE "LOCAL USER TERMINAL" (LUT) EARTH STATIONS THAT CALCULATE AN ESTIMATED LOCATION FOR THE BEACON AND SEND THAT INFORMATION, TOGETHER WITH THE BEACON MESSAGE (IDENTIFICATION, ETC.) TO A MISSION CONTROL CENTRE (MCC) ASSOCIATED WITH THE LUT:

- MCC MISSION CONTROL CENTRE TAKES INFORMATION FROM A LUT OR ANOTHER MCC AND ROUTES IT TO THE PROPER DESTINATION. COSPAS-SARSAT HAS 33 MCCs.
- DDR DATA DISTRIBUTION REGION A REGION COMPRISED OF TWO OR MORE SERVICE AREAS, EACH SUPPORTED BY AN MCC, WHERE INFORMATION IS EXCHANGED BETWEEN MCCS. COSPAS-SARSAT HAS SIX DDRS.
- NODAL MCC (SIX) SERVES AS A HUB FOR MESSAGE ROUTING BETWEEN DDRS (MCCS ARE ALLOWED TO ADDITIONALLY HAVE BILATERAL ARRANGEMENTS WITH MCCS IN ADJACENT DDRS).
- SPOC/RCC SEARCH-AND-RESCUE POINT-OF-CONTACT OR RESCUE COORDINATION CENTRE
   THE FIRST ENTRY POINT FOR A COSPAS-SARSAT ALERT PROVIDED TO A COUNTRY OR
  TERRITORY. THE SPOC IS RESPONSIBLE FOR DELIVERING THE ALERT DATA TO SAR AUTHORITIES
  WHO CAN TAKE ACTION.





#### COSPAS-SARSAT SYSTEM

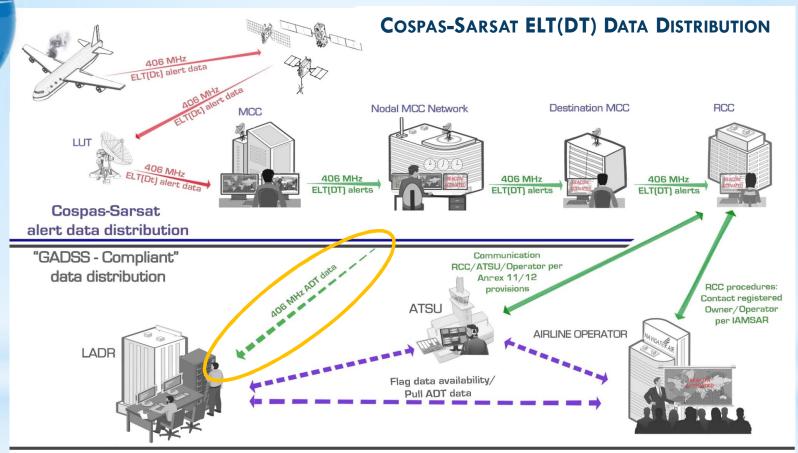




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# SAR WORKSHOP Solve of the second of the sec

#### "GADSS-COMPLIANT" DATA AVAILABILITY





#### 10-YEAR LOOK AHEAD

- COSPAS-SARSAT WILL BE RELIABLE PROVIDER OF GADSS DISTRESS-ALERTING SERVICES (IN ADDITION TO MARITIME AND PERSONAL CARRIAGE:
  - OVER 70 SATELLITES IN ORBIT, MOST WITH LARGE FOOTPRINTS
  - TWO WELL-TESTED AND DEPLOYED SIGNAL AND MESSAGE SCHEMES.
  - REDUNDANT LOCATION DETERMINATION (LOCAL NAV AND INDEPENDENT)
  - THE WORLD'S MOST TESTED AND USED DISTRESS DATA-AVAILABILITY AND DISTRIBUTION NETWORK
- COSPAS-SARSAT WILL BE ONE OF A BLEND OF GADSS (AND OTHER DISTRESS ALERTING)
  SOLUTION CHOICES:
  - OTHER SATELLITE LOCATION-DATA SERVICES
  - MULTIPLE SWIM-COMPLIANT DATA-AVAILABILITY AND DISTRIBUTION OPTIONS





#### TAKE-AWAYS

- COSPAS-SARSAT AN INTERGOVERNMENTAL COOPERATIVE OF COUNTRIES AND AGENCIES WORKING TOGETHER TO ADDRESS GLOBAL NEEDS
- ALERTS ARE PROVIDED GLOBALLY FREE OF CHARGE
- MEOSAR OPERATIONAL CAPABILITY AVAILABLE SINCE 2016
- **ELTS FOR DISTRESS TRACKING TO MEET ICAO REQUIREMENTS:** 
  - IN-FLIGHT TRIGGERING
  - COMPARABLE FIT AND FINISH
  - O PROVEN "FIRST GENERATION" BASED ELT(DT) CAPABILITY OPERATIONAL JANUARY 2023
  - O "SECOND-GENERATION" CAPABILITY BEING READIED
  - RETURN LINK SERVICE
- INTEGRATION WITH LADR BEING ORGANIZED AND TESTED









# "FIRST GENERATION" BEACONS (FGBS) AND "SECOND GENERATION" BEACONS (SGBS)





#### "FIRST GENERATION" BEACONS (FGBS)

- THE ORIGINAL DIGITAL 406-MHZ BEACON TECHNOLOGY, GOING BACK 40 YEARS (AS DISTINGUISHED FROM ANALOG 121.5-MHZ BEACONS WITH NO IDENTIFICATION)
- ☐ USES A NARROWBAND (3 KHZ) CHANNELIZATION SCHEME
- ☐ UP TO 119 MESSAGE BITS PER TRANSMISSION BURST





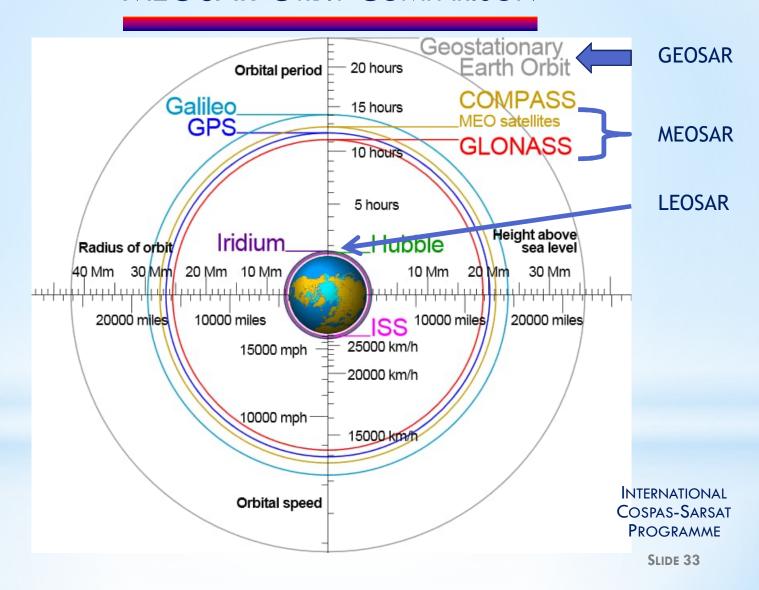
#### "SECOND GENERATION" BEACONS (SGBs)

- ☐ THE NEWEST DIGITAL 406-MHZ BEACON TECHNOLOGY, SOON TO BE INTRODUCED
- USES A WIDEBAND (SPREAD SPECTRUM) MODULATION METHOD THAT DOES NOT REQUIRE CHANNELIZATION
- EACH TRANSMISSION BURST HAS A LONGER MESSAGE WITH MORE INFORMATION (UP TO 202 BITS)
- INTRODUCED THE CONCEPT OF "ROTATING MESSAGE FIELDS" WHERE DIFFERENT TRANSMISSION BURSTS MAY HAVE DIFFERENT KINDS OF INFORMATION (ALSO USED IN A LIMITED WAY FOR FGB ELT(DT)S)
- EXPECTED TO BE MORE ROBUST IN RECEPTION (MORE IMMUNE TO INTERFERENCE)



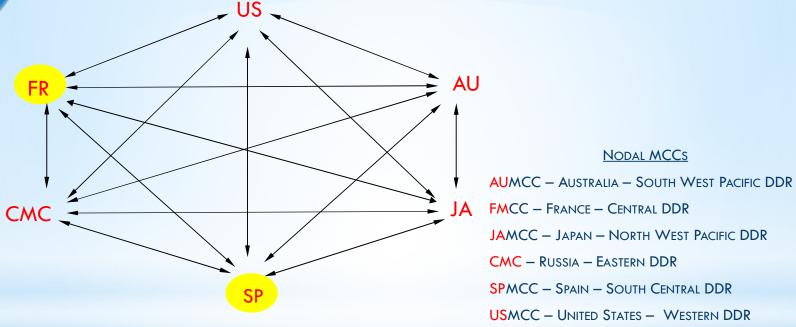


#### MEOSAR ORBIT COMPARISON





#### DATA DISTRIBUTION REGIONS





INTERNATIONAL COSPAS-SARSAT PROGRAMME



# COSPAS-SARSAT PROGRAMME LEGAL STRUCTURES



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### THE STATES PARTIES TO THIS AGREEMENT:

NOTING THE SUCCESSFUL IMPLEMENTATION OF THE COSPAS-SARSAT SEARCH AND RESCUE SATELLITE SYSTEM ESTABLISHED UNDER A MEMORANDUM OF UNDERSTANDING AMONG THE MINISTRY OF MERCHANT MARINE OF THE UNION OF SOVIET SOCIALIST REPUBLICS, THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION OF THE UNITED STATES OF AMERICA, THE DEPARTMENT OF NATIONAL DEFENCE OF CANADA AND THE CENTRE NATIONAL D'ETUDES SPATIALES OF FRANCE WHICH WAS SIGNED ON 5 OCTOBER 1984 AND CAME INTO EFFECT ON 8 JULY 1985;

AWARE OF THE EFFORTS IN THE INTERNATIONAL MARITIME ORGANIZATION TO ESTABLISH A GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM, BUILDING ON THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA ... AS WELL AS THE RESPONSIBILITIES OF THE INTERNATIONAL CIVIL AVIATION ORGANIZATION AND THE INTERNATIONAL TELECOMMUNICATION UNION IN THEIR RESPECTIVE FIELDS;

RECALLING THE PROVISIONS OF THE TREATY ON PRINCIPLES GOVERNING THE ACTIVITIES OF STATES IN THE EXPLORATION AND USE OF OUTER SPACE, INCLUDING THE MOON AND OTHER CELESTIAL BODIES, OF 27 JANUARY 1967, AND OTHER MULTILATERAL AGREEMENTS REGARDING THE USE OF OUTER SPACE TO WHICH THEY ARE PARTY....





ARTICLE 20

#### COSPAS-SARSAT PROGRAMME AGREEMENT

ARTICLE 1	Definitions
ARTICLE 2	Purpose Of The Agreement
ARTICLE 3	GENERAL DESCRIPTION OF THE SYSTEM
ARTICLE 4	Cooperating Agencies
ARTICLE 5	RESPONSIBILITIES OF PARTIES
ARTICLE 6	FINANCIAL MATTERS
ARTICLE 7	Structure
ARTICLE 8	THE COUNCIL - COMPOSITION AND PROCEDURES
ARTICLE 9	FUNCTIONS OF THE COUNCIL
ARTICLE 10	THE SECRETARIAT
ARTICLE 11	Ground Segment Providers
ARTICLE 12	USER STATES
ARTICLE 13	Relationship With International Organizations
ARTICLE 14	LIABILITY
ARTICLE 15	SETTLEMENT OF DISPUTES
ARTICLE 16	ACCESSION
ARTICLE 17	WITHDRAWAL
ARTICLE 18	AMENDMENTS
ARTICLE 19	DEPOSITARY

ENTRY INTO FORCE AND DURATION

COSPAS

International Cospas-Sarsat Programme



#### **ARTICLE 8:**

#### THE COUNCIL - COMPOSITION AND PROCEDURES

- 8.1 THE COUNCIL SHALL BE COMPOSED OF ONE REPRESENTATIVE OF EACH OF THE PARTIES WHO MAY BE ACCOMPANIED BY DEPUTIES AND ADVISERS.
- 8.2 THE COUNCIL SHALL ADOPT ITS OWN RULES OF PROCEDURE.
- 8.3 THE COUNCIL SHALL MEET AS OFTEN AS MAY BE NECESSARY FOR THE EFFICIENT DISCHARGE OF ITS FUNCTIONS, BUT NOT LESS THAN ONCE A YEAR.
- 8.4 DECISIONS OF THE COUNCIL SHALL BE TAKEN UNANIMOUSLY.
- 8.5 THE LANGUAGES OF THE COUNCIL SHALL BE ENGLISH, FRENCH AND RUSSIAN.



INTERNATIONAL COSPAS-SARSAT PROGRAMME



#### ARTICLE 13:

#### RELATIONSHIP WITH INTERNATIONAL ORGANIZATIONS

- 13.1 TO PROMOTE IMPLEMENTATION OF THIS AGREEMENT, THE PARTIES, ACTING THROUGH THE COUNCIL, SHALL COOPERATE WITH THE INTERNATIONAL CIVIL AVIATION ORGANIZATION, THE INTERNATIONAL TELECOMMUNICATION UNION AND THE INTERNATIONAL MARITIME ORGANIZATION, AS WELL AS WITH OTHER INTERNATIONAL ORGANIZATIONS, ON MATTERS OF COMMON INTEREST. THE PARTIES SHALL TAKE INTO ACCOUNT THE RELEVANT RESOLUTIONS, STANDARDS AND RECOMMENDATIONS OF THESE INTERNATIONAL ORGANIZATIONS.
- 13.2 THIS COOPERATION MAY BE FORMALIZED BETWEEN THESE ORGANIZATIONS AND THE PARTIES.





#### ARTICLE 14:

#### LIABILITY

- 14.1 THE PARTIES SHALL NOT MAKE ANY CLAIMS OR BRING ACTIONS AGAINST EACH OTHER FOR INJURY, DAMAGES OR FINANCIAL LOSSES ARISING OUT OF ACTIVITIES, OR LACK THEREOF, PURSUANT TO THIS AGREEMENT.
- 14.2 THE PARTIES ACCEPT NO LIABILITY TOWARDS USERS OF THE SYSTEM OR ANY THIRD PARTY, PARTICULARLY AS REGARDS ANY CLAIMS FOR INJURY, DAMAGES OR FINANCIAL LOSSES THAT MAY ARISE FROM THE USE OF THE SYSTEM. PARTIES WILL COOPERATE WITH A VIEW TO PROTECTING THEMSELVES FROM ANY SUCH POTENTIAL CLAIMS.





#### ARTICLE 15:

#### **SETTLEMENT OF DISPUTES**

- 15.1 ANY DISPUTE CONCERNING THE INTERPRETATION OR IMPLEMENTATION OF THIS AGREEMENT SHOULD BE SETTLED BY NEGOTIATIONS BETWEEN OR AMONG THE PARTIES CONCERNED.
- 15.2 IF A SETTLEMENT CANNOT BE REACHED BY SUCH NEGOTIATIONS, THE DISPUTE MAY, IF THE AFFECTED PARTIES SO AGREE, BE REFERRED TO ARBITRATION.





#### **COSPAS-SARSAT LEGAL STRUCTURES**

www.406.org > Cospas-Sarsat Professionals > Documents > System Documents > C/S P.000 Series - Programme

C/S P.001 INTERNATIONAL COSPAS-SARSAT PROGRAMME AGREEMENT

C/S P.002 PROCEDURE FOR THE NOTIFICATION OF ASSOCIATION WITH THE INTERNATIONAL COSPAS-SARSAT PROGRAMME
BY STATES NON-PARTY TO THE COSPAS-SARSAT AGREEMENT

C/S P.005 ARRANGEMENT BETWEEN CANADA, THE REPUBLIC OF FRANCE, THE RUSSIAN FEDERATION AND THE UNITED STATES OF AMERICA REGARDING THE HEADQUARTERS OF THE INTERNATIONAL COSPAS-SARSAT PROGRAMME

C/S P.006 Understanding Between the Cospas-Sarsat Programme and the Gouvernement du Québec concerning Exemptions, Fiscal Advantages and Courtesies accorded to the Programme, Representatives of Member States and Officials of the Secretariat





#### **COSPAS-SARSAT LEGAL STRUCTURES**

www.406.org > Cospas-Sarsat Professionals > Documents > System Documents > C/S P.000 Series - Programme

C/S P.008 ARRANGEMENT ON COOPERATION BETWEEN THE COOPERATING AGENCIES OF THE PARTIES TO THE INTERNATIONAL COSPAS-SARSAT PROGRAMME AGREEMENT AND THE EUROPEAN ORGANISATION FOR THE EXPLOITATION OF METEOROLOGICAL SATELLITES (EUMETSAT) ON THE EUMETSAT CONTRIBUTION TO THE COSPAS-SARSAT GEOSAR SYSTEM

C/S P.009 Understanding Between the States Parties to the International Cospas-Sarsat Programme Agreement and The Republic of India Concerning The Association of The Republic of India with the Cospas-Sarsat Programme as a Provider of Geostationary Satellite Service

C/S P.014 DECLARATION OF INTENT FOR CO-OPERATION ON THE DEVELOPMENT AND EVALUATION OF THE MEDIUM EARTH ORBIT SEARCH AND RESCUE (MEOSAR) SATELLITE SYSTEM BETWEEN THE CO-OPERATING AGENCIES OF THE INTERNATIONAL COSPAS-SARSAT PROGRAMME AND THE GALILEO JOINT UNDERTAKING (2006)

C/S P.016 COSPAS-SARSAT STRATEGIC PLAN

C/S P.017 DECLARATION OF INTENT BETWEEN THE CO-OPERATING AGENCIES OF THE INTERNATIONAL COSPAS-SARSAT PROGRAMME AND THE EUROPEAN COMMISSION FOR CO-OPERATION ON THE INITIAL OPERATIONAL CAPABILITY OF THE COSPAS-SARSAT MEOSAR SATELLITE SYSTEM (2016)

