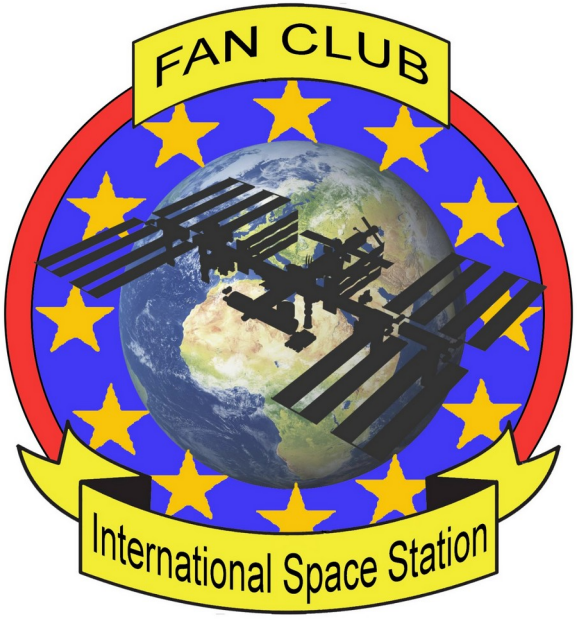
Micol Ivancic Canetta



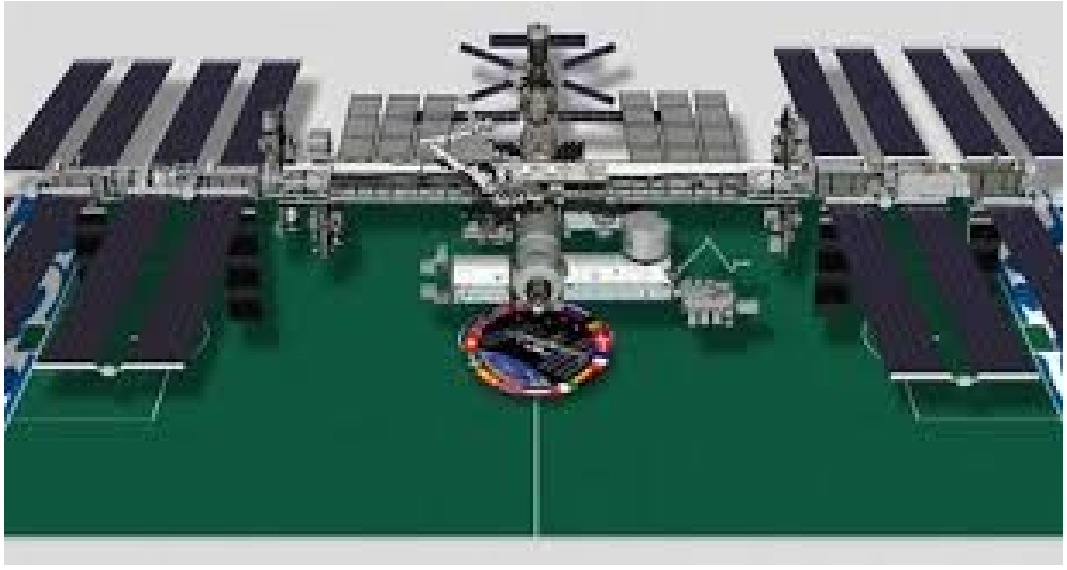
The International Space Station is a space station in low earth orbit, dedicated to scientific research and managed as a joint project by five different space agencies: NASA, RKA, ESA, JAXA and CSA-ASC.

This gigantic space laboratory is in orbit around our planet at an altitude between 330 and 410 km from the earth's surface, calculated referring to sea level; it travels at an average speed of 27,600 km / h completing 15.5 orbits in 24 hours. Thus, 16 sunrises and 16 sunsets are seen every day!

- Since 2000 it has been the operational
international group of astronauts e
cosmonauts of both genders: the ISS
it is continuously inhabited by a
variable crew from 2 to 6 members.

- Crews in rotation
I continue in missions
with an average duration of six months.
Some astronauts and cosmonauts are
returned several times to the ISS.

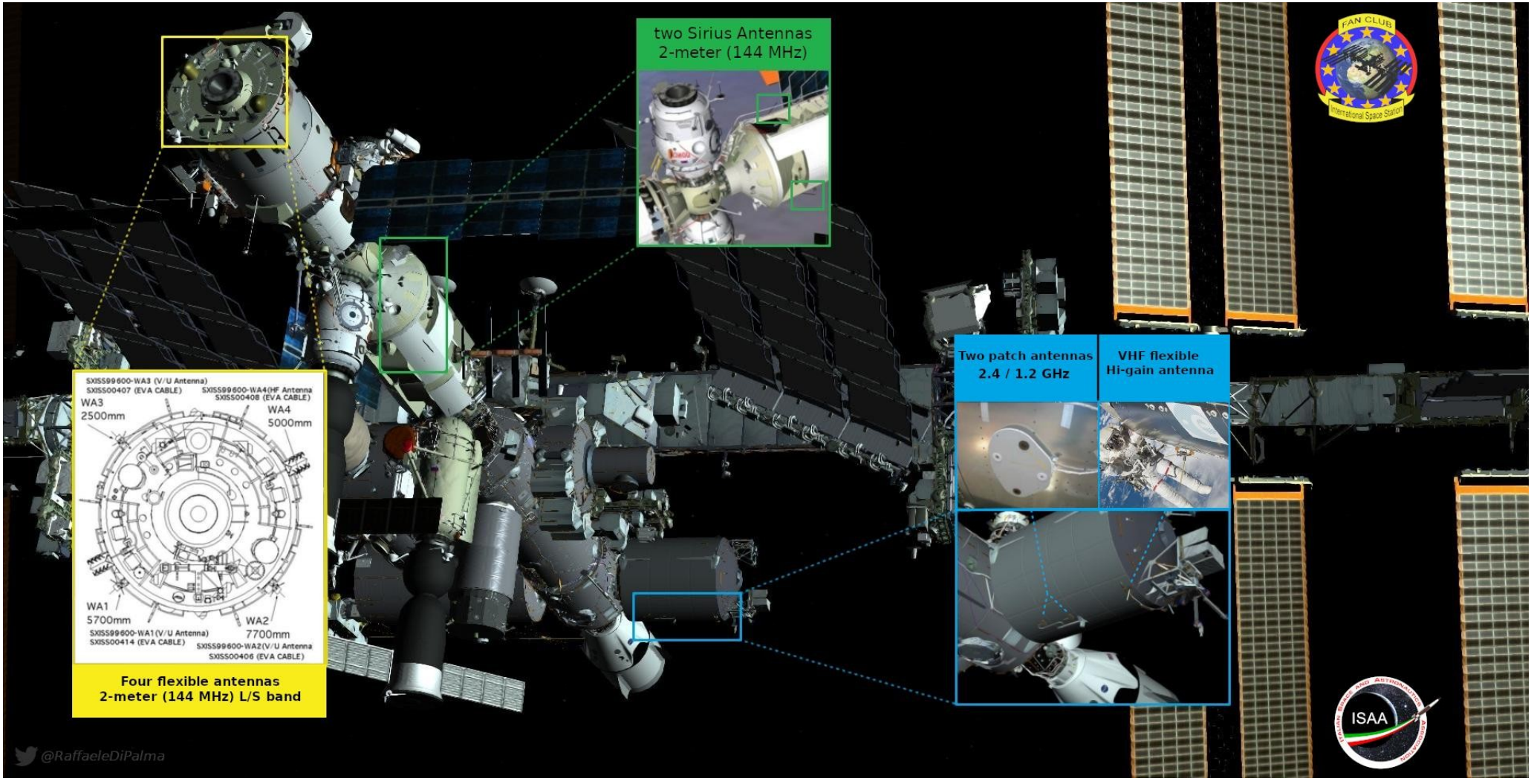
The station structure, which consists of a framework with housing modules and solar panels, it's the size of a full-size soccer field.
It is visible from Earth with the naked eye.
The modules of the ISS are made of aluminum, coated with BetaCloth, a white "fabric" that has the function of thermal protection and the action of atomic oxygen. Above it again is the MDPS (Meteoroids and Debris Protection System), made up of aluminum panels.
Assembled in orbit as a huge puzzle!



ARISS

Amateur Radio on International Space Station

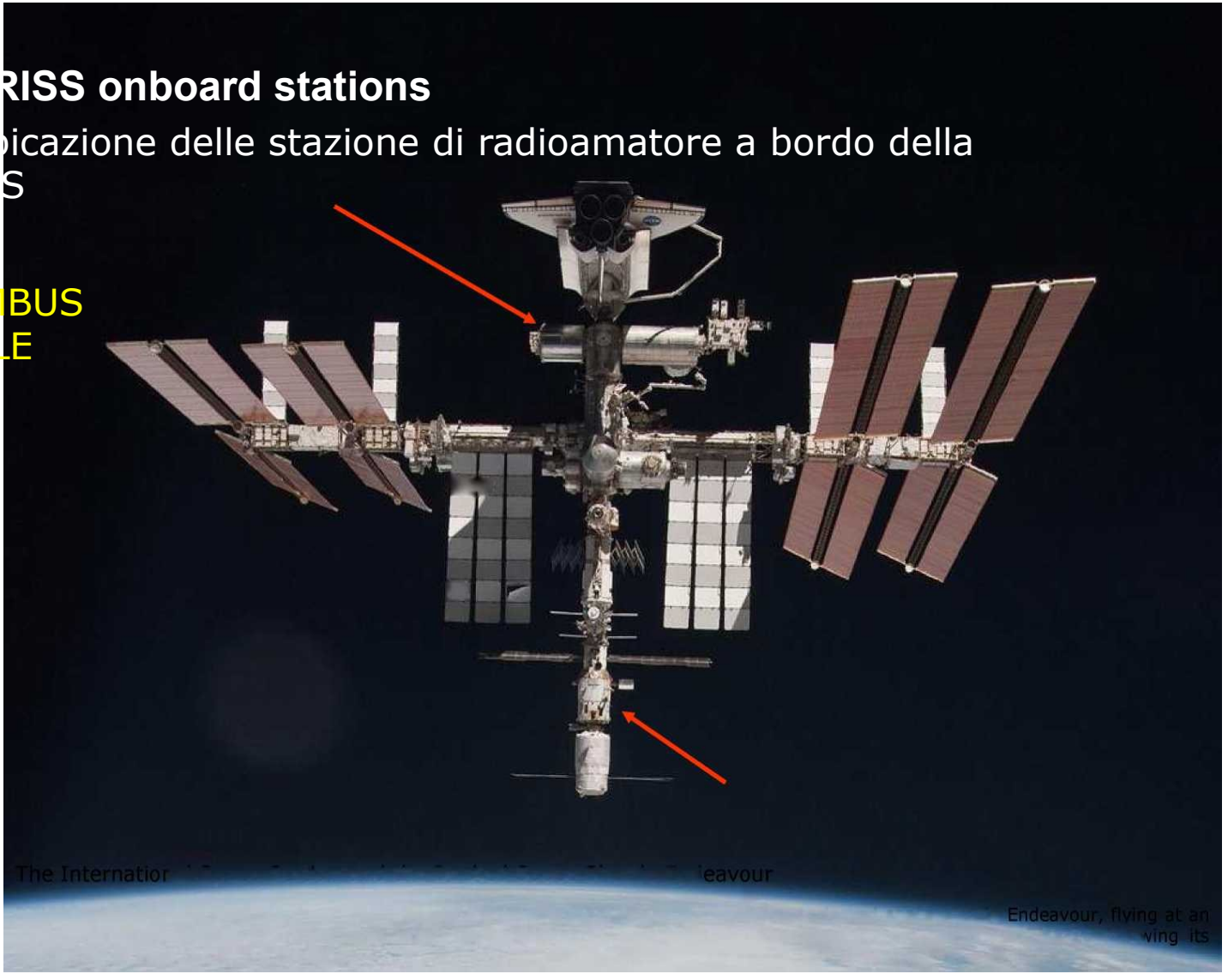
AMS AT Italia
®


two Sirius Antennas
2-meter (144 MHz)
FAN CLUB
International Space Station
SXISS99600-WA3 (V/U Antenna)
SXISS00407 (EVA CABLE)
SXISS99600-WA4(HF Antenna
SXISS00408 (EVA CABLE)
WA3
2500mm
WA4
5000mm
WA1
5700mm
WA2
7700mm
SXISS99600-WA1(V/U Antenna)
SXISS00414 (EVA CABLE)
SXISS99600-WA2(V/U Antenna
SXISS00406 (EVA CABLE)
Four flexible antennas
2-meter (144 MHz) L/S band
Two patch antennas
2.4 / 1.2 GHz
VHF flexible
Hi-gain antenna
ISAA
@RaffaeleDiPalma

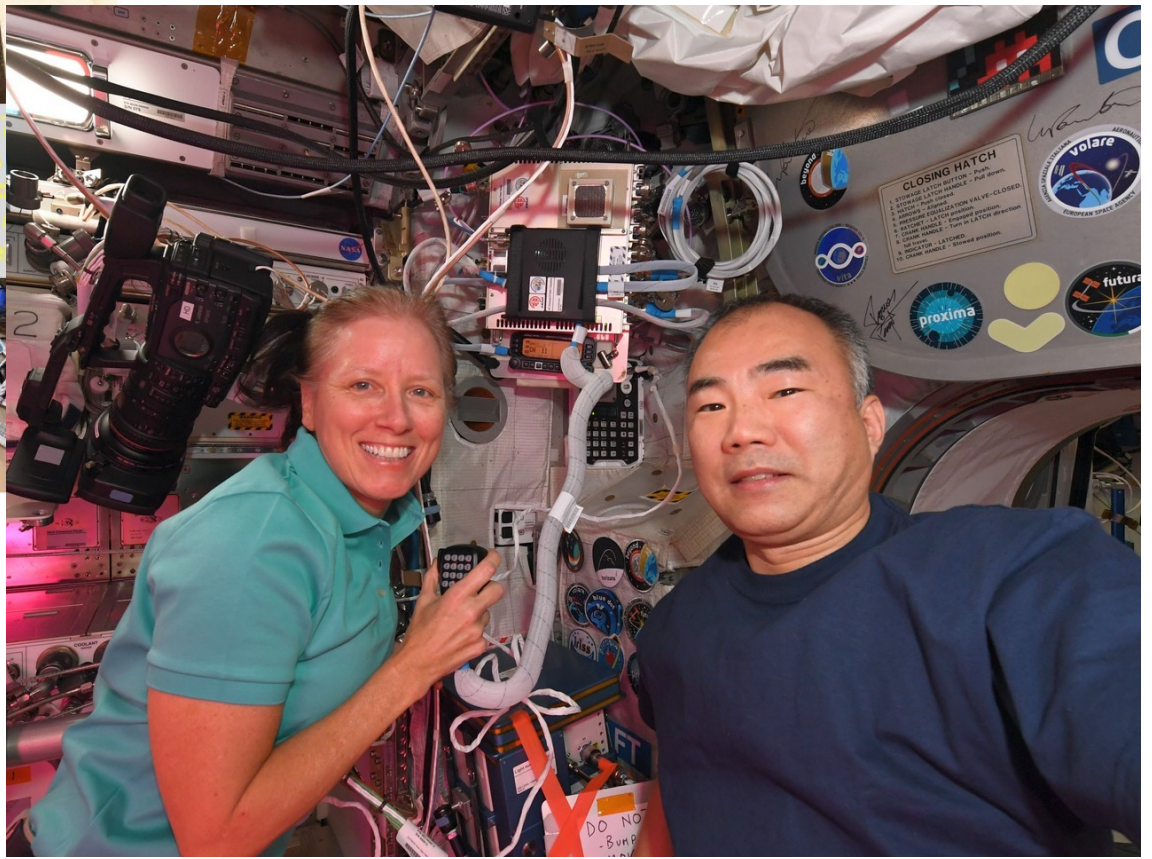
RISS onboard stations

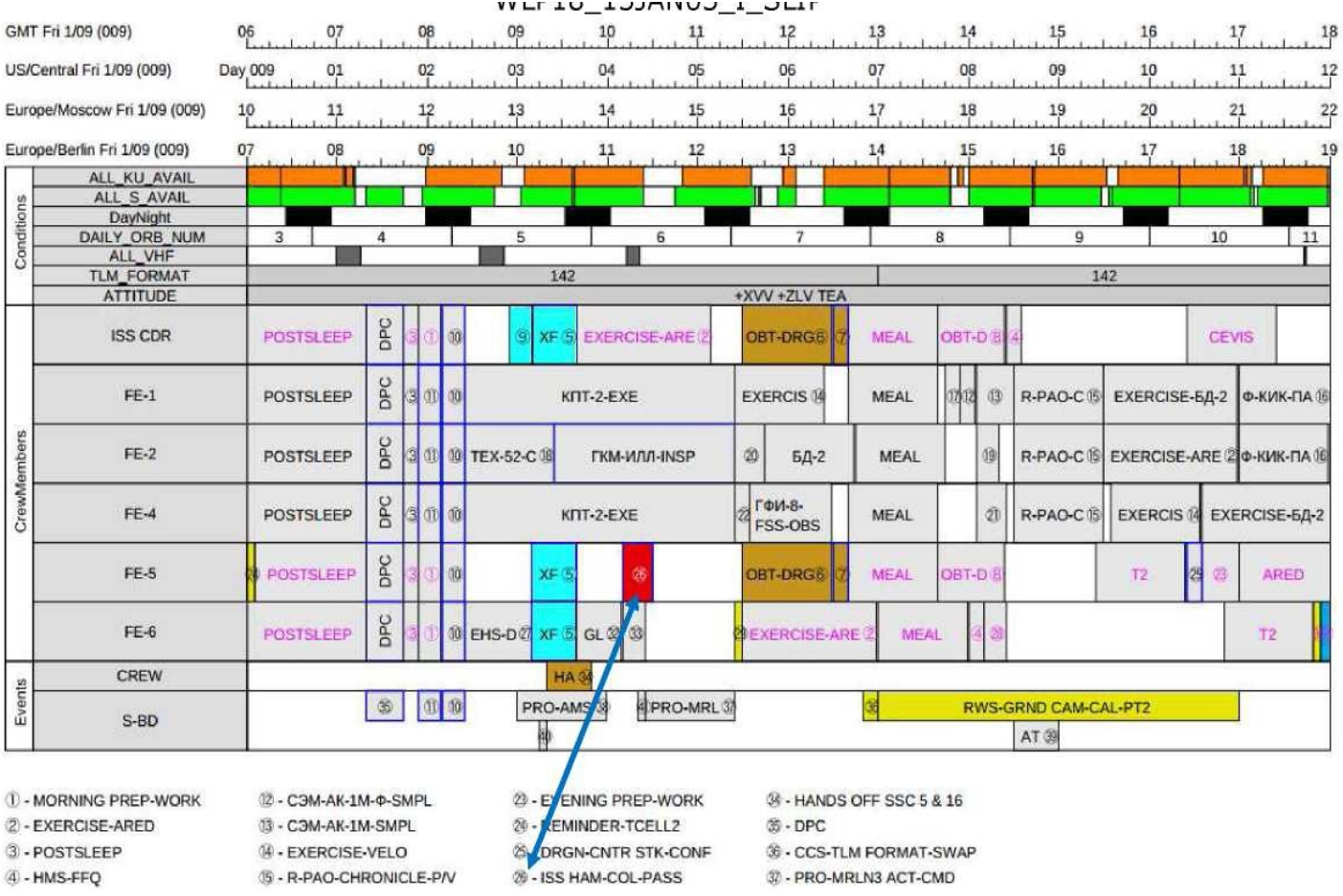
bicazione delle stazione di radioamatore a bordo della
S

COLUMBUS
MODULE




22 Novembre 201
L'astronauta ESA
sulla ISS (Missio
Radio installata
Servizio Russo del


CLOSING HATCH
volare
proxima
futura



① - MORNING PREP-WORK
② - EXERCISE-ARED
③ - POSTSLEEP
④ - HMS-FFQ
⑫ - СЭМ-АК-1М-Ф-SMPL
⑬ - СЭМ-АК-1М-SMPL
⑭ - EXERCISE-VELO
⑮ - R-PAO-CHRONICLE-P/V
㉓ - EVENING PREP-WORK
㉔ - REMINDER-TCELL2
㉕ - DRGN-CNTR STK-CONF
㉖ - ISS HAM-COL-PASS
㉞ - HANDS OFF SSC 5 & 16
㉟ - DPC
㊱ - CCS-TLM FORMAT-SWAP
㊲ - PRO-MRLN3 ACT-CMD

. PHONE

School contacts

Random QSO

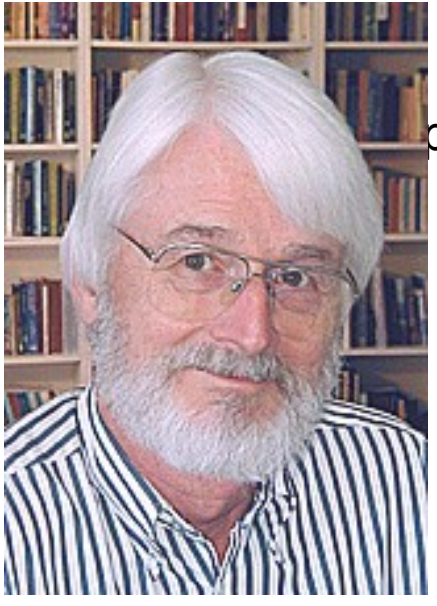
Crossband repeater

- *APRS*

- *SSTV*


ARISS SSTV Collection
Expedition 65 - Series 18
21-26 JUNE 2021
65
Images Received By
Call Sign
IK6DTA
Name @ Loc
ENNIO
Special Thanks To
NASA
CASIS

SLOW SCAN TELEVISION (SSTV) is a method mainly used by radio amateurs to transmit and receive static images via radio.
This is a rather slow method, usually taking eight seconds to a couple of minutes to transmit a frame of the image.



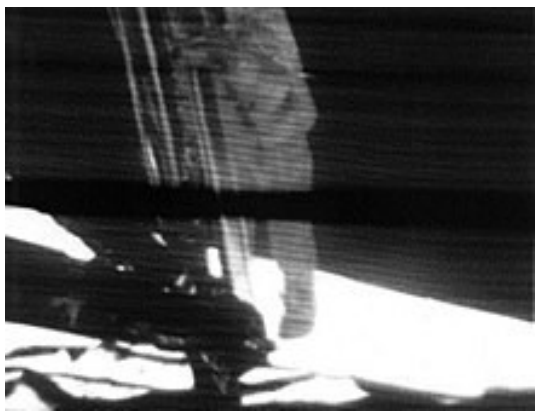
SSTV was introduced by Copthorne Macdonald in 1957-58. The
performed on the 11 meter band, which at the time in the USA was
amateur radio band and which was subsequently assigned to the

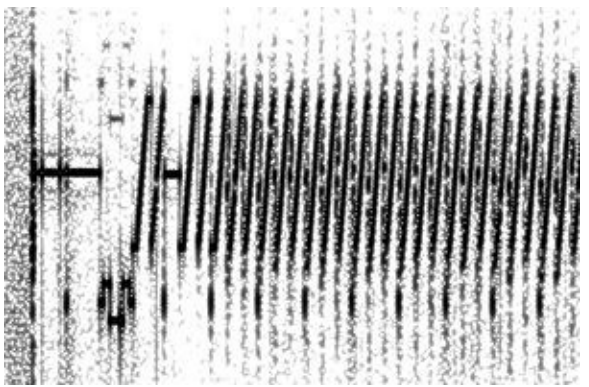
It wasn't the first experiment: the ancestor of SSTV and FAX was the BELINOGRAPH, invented by Eduard Belin in 1920 and used until the 1990s.

In the 1960s, the SSTV was used to transmit images from the Moon.

How does it work? Each different brightness value in the image is obtained from a different audio frequency. The frequency of the signal shifts to designate brighter or darker pixels, respectively. Color is obtained by sending the brightness of each color component separately.

There are several transmission modes, the most common are Martin, Scottie and Pd120 which is the mode usually used by the ISS.





Riceiving SSTV from ISS

145.800MHz FM

.Scanner (receiver only device) + antenna

.SDR key (software defined radio) + antenna

.Web-sdr (search http://www.websdr.org/) does not require antenna

.Radio for 2 meters + antenna, requires radio amateur, authorized operator for use.

Warning! The squelch circuit must be equal to zero or we will not receive anything.

Decodificare SSTV: come operare?

- Si può fare simultanemente alla ricezione, collegando l'apparato ricevente con cavetti adeguati al device per la decodifica, oppure in presa diretta semplicemente avvicinandoli;
- Si può registrare l'audio e decodificarlo successivamente, magari testando diversi software.

Decoding SSTV: software & app

RXSSTV, free

MMSSTV, free

Robot36 for Android, free

Slow Scan TV for iOS (3.49 euros)

RADIO @ ISS by ESA: here you will find a series of excellent video tutorials https://www.esa.int/ESA_Multimedia/Sets/Radio_ISS/(result_type)/videos

TRACKING!

It is essential to know when the ISS will pass on our horizon.

Online tracking (n2yo.com, sat passes)

App (ISS detector, ISS live now allows

to take pictures with our mobile phone!)

Software (Gpredict, Orbitron)

Achtung! Be sure to select

"All the steps"

and not just “visible passages”.

An example of reception of the campaign that has just ended and a historical one with real time decoding

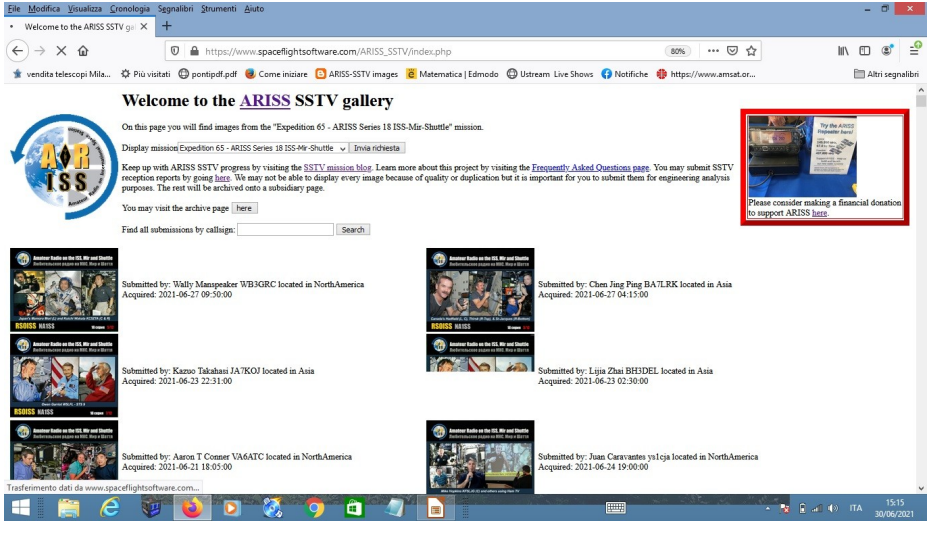
https://www.youtube.com/watch?v=PI_NySA5IEI

https://www.youtube.com/watch?v=IiLrE7W2OJw

ARISS SSTV GALLERY e ARISS SSTV AWARD

- https://www.spaceflightsoftware.com/ARISS_SSTV/index.php

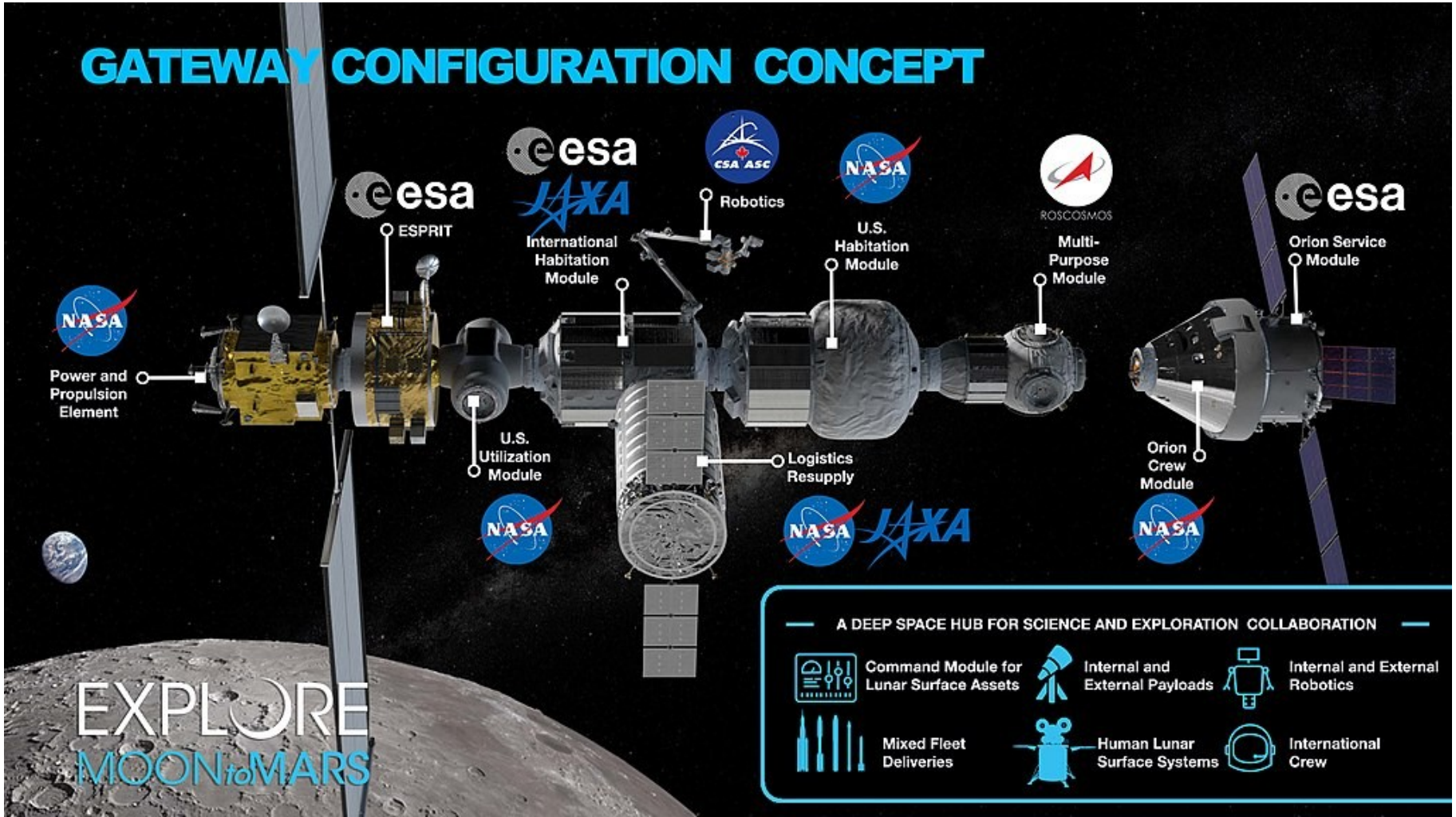
- https://ariss.pzk.org.pl/sstv/?fbclid=IwAR0YDcIsebKvugHV3c7l21TwNBMi-vVErnF3h_s-2rBJYfY3BprfgaC2j4g#tutaj



www.issfanclub.eu

micol@issfanclub.eu

A look to the future!



Thanks for your attention and good orbits!