«NEAR SPACE» MISSIONS

Space in the yard

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SPACE MISSIONS

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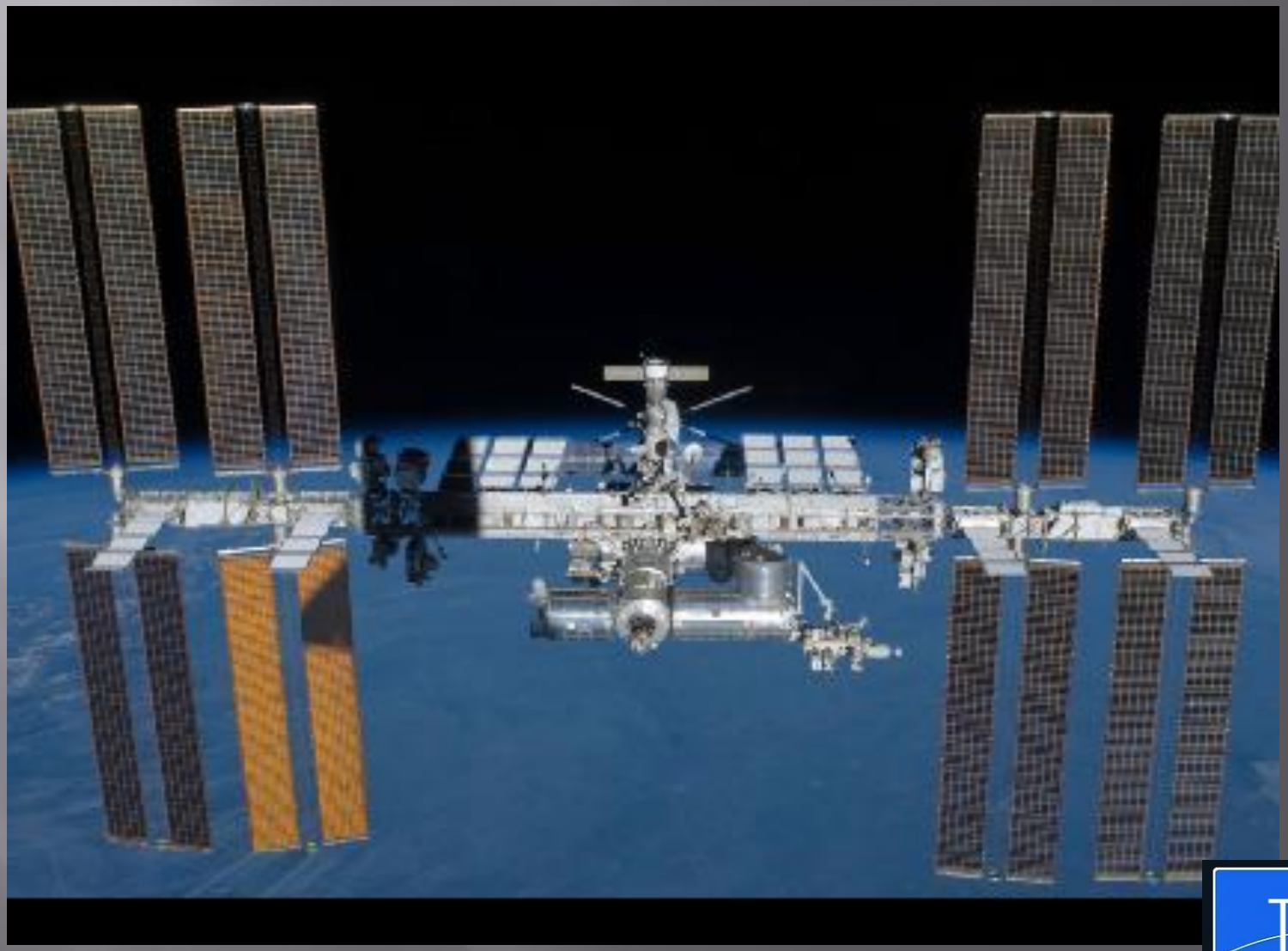
INTERNATIONAL SPACE STATION



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HOW TO «MEET» LEO?

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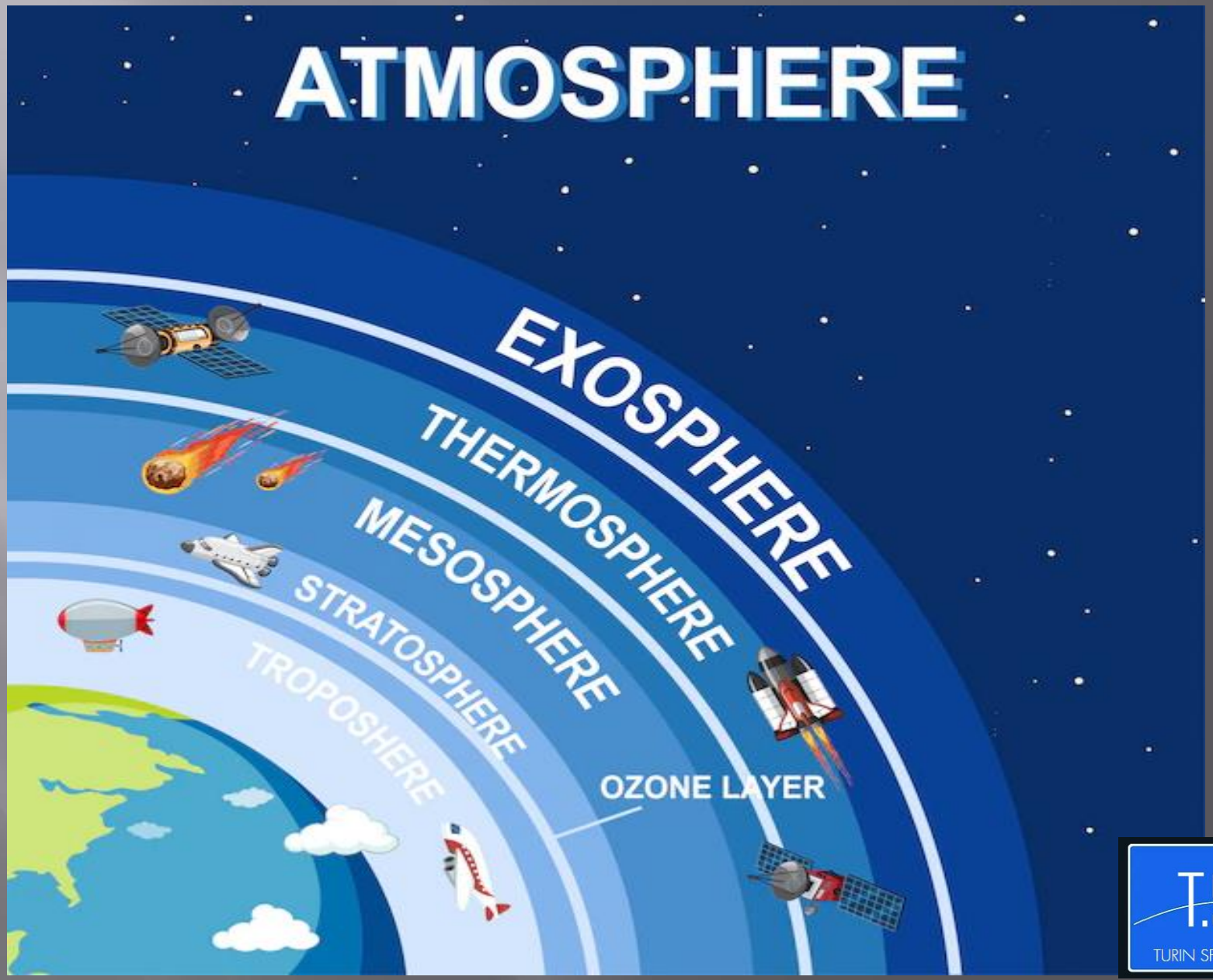
A TRIP AROUND EARTH



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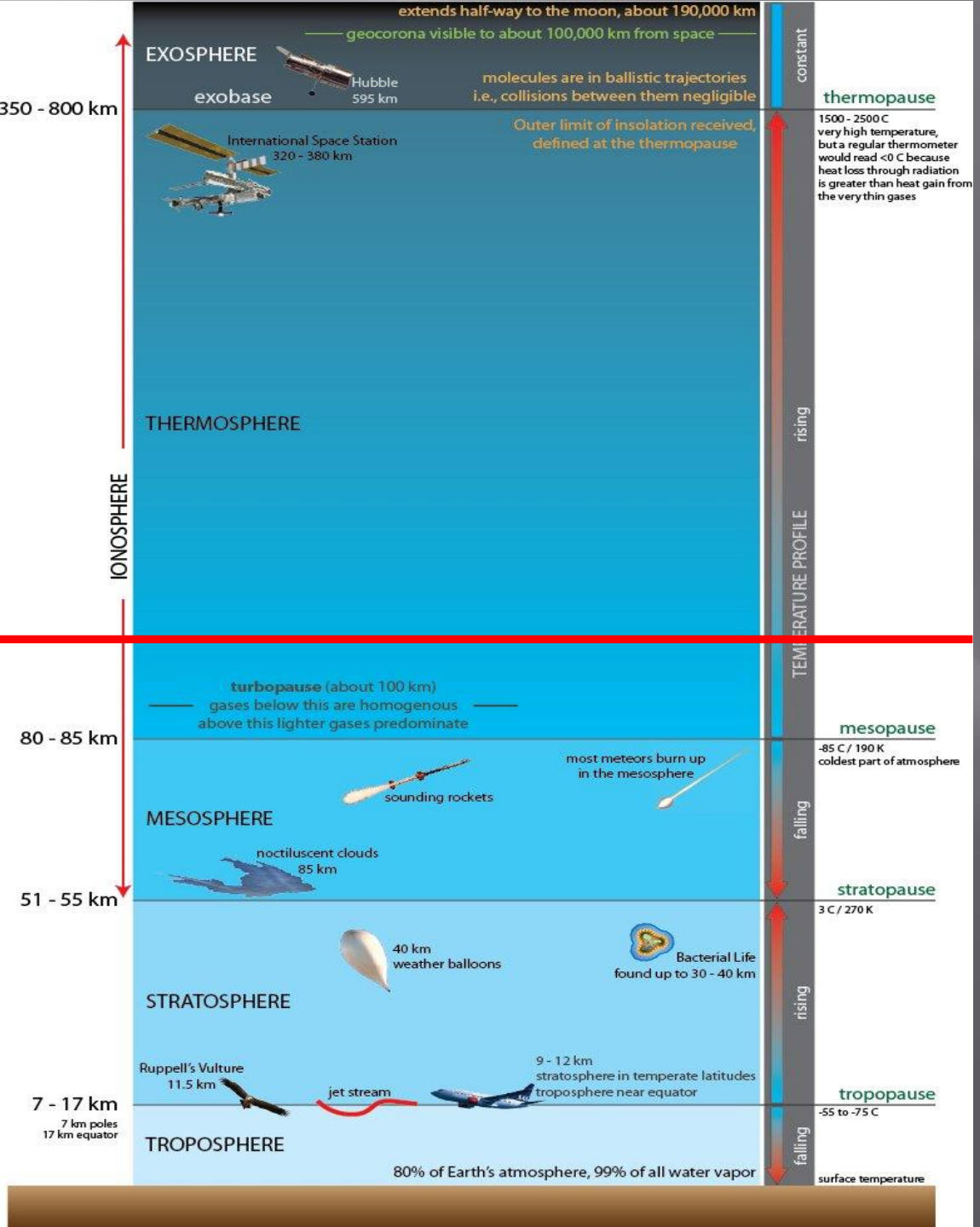

KARMAN's LIMIT

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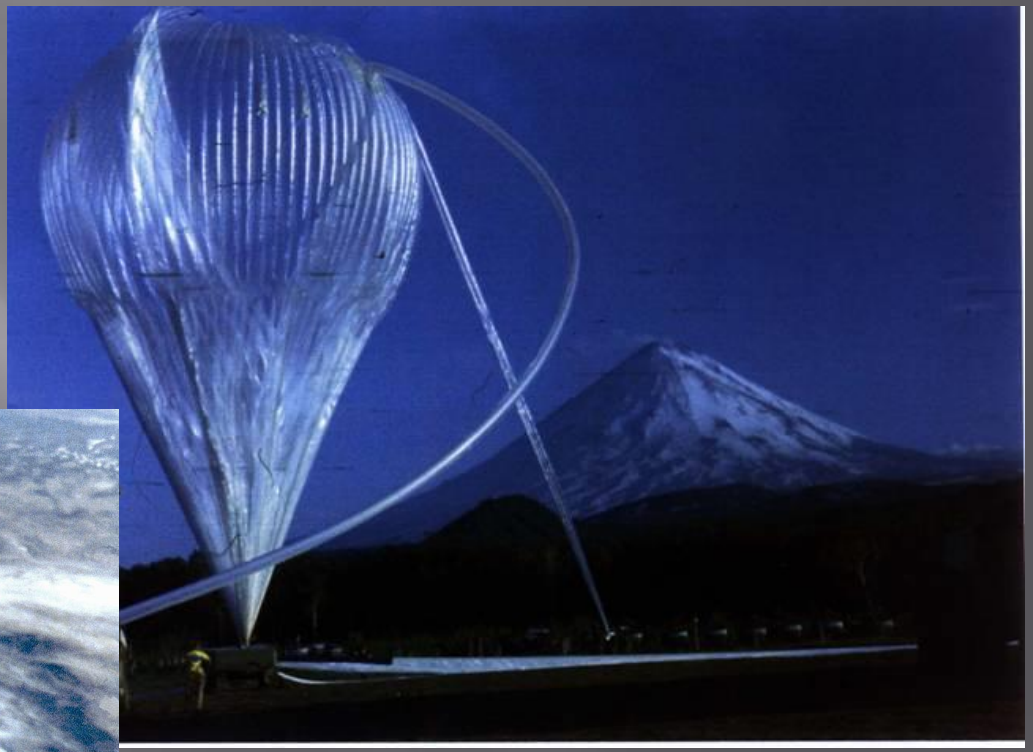
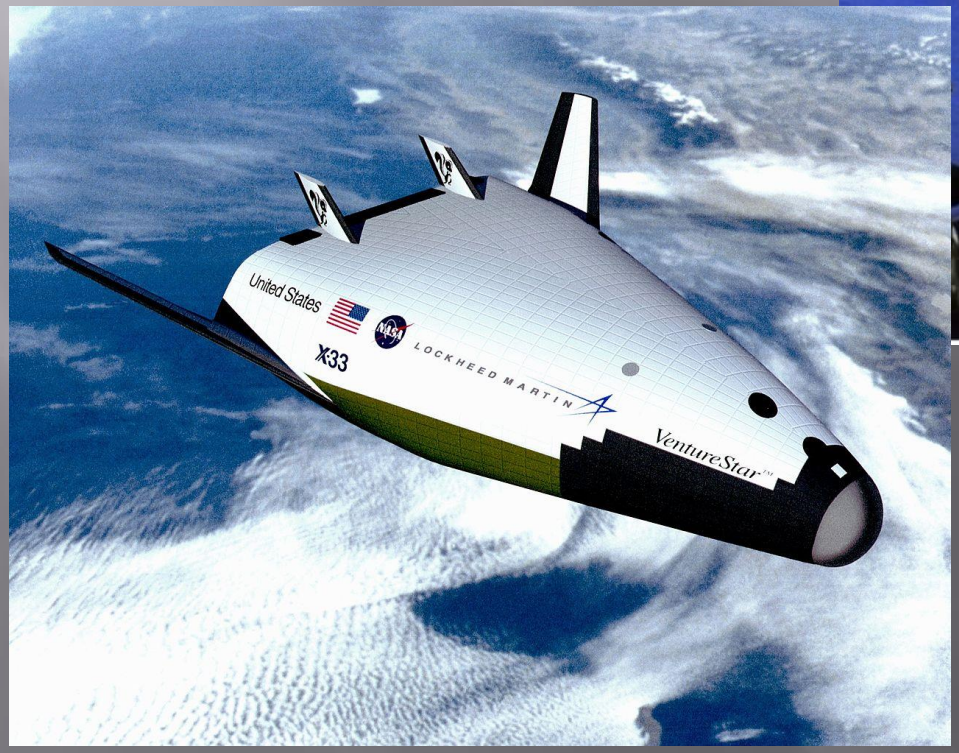
HOW TO REACH IT





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MAJOR ADVANTAGES

Envinronment very close to Space conditions

Possibility to maintain payload in altitude for long time

Very low costs to set a Mission

Flexibile launch sites

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PILOTI VIRTUALI ITALIANI (PVI)

PILOTI VIRTUALI ITALIANI

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www.turinspaceactivity.wixsite.com/space

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WHO IS P.V.I.?

It is a «No Profit» Italian Association relate to Flight Simulation Activity.
Scope of it is to share to people and schools the Flight culture by means of specific knowledges and give the possibilty to apply them using Virtual Tools.

P.V.I. is the only Association of Flight Simuation working at country level in Italy.
It is physically located in all Italian regions normally in areas very close to the major Airports and/or Flight Fields
Its major task is give the possibility to the SOCI to alternate the time past to fly virtually on servers and PC, with aeroportual services and dedicate social events .

It is importan remember that all of their participant are Aviation and Space entusiast people and many of them have the real flight licence (commrcial or military)
For them is possible to ue the PVI activities to maintain the flight ability by dedicate courses and execises. singular or in team

TURIN SPACE ACTIVITY (T.S.A.)

Born in 2016, supported by Turin's Space entusiast people, this section of PVI is growing with the scope to perform operative activities with Strato Balloon in order to give possibility to launch scientific payloads, organizing « Near Space » missions in Stratosphere, from the major airfields used by gliders and ultralights

- TSV1: launched in July 2016. “Demo” Mission to verify launch equipment and techniques.

- TSV2: launched in July 2018. «Stardust Gamma Ray» mission with the main tasks of capturing cosmic dust particles from comet «Swif-Tuttle», and measuring the level of radiation in the upper atmosphere.

- TSV3: launched in July 2019. «Apollo 50th Anniversary» mission commemorating the 50 years of the Moon landing, with the task of verifying the radioactive profile of the Stratosphere and testing some possible radio-protective materials through the «Cosmic» experiment Ray."

TIPICAL MISSION

Configurazione Sonda
TSV3 Apollo Mission CosmicRay

Riproduzione Capsula Apollo 11

Pallone sonda

Paracadute

Rilevatore raggi cosmici
con protezione

GPS e telemetria
Videocamere in HD

Capsula Columbia

Elettronica e computer
di bordo

Rilevatore raggi cosmici
senza protezione

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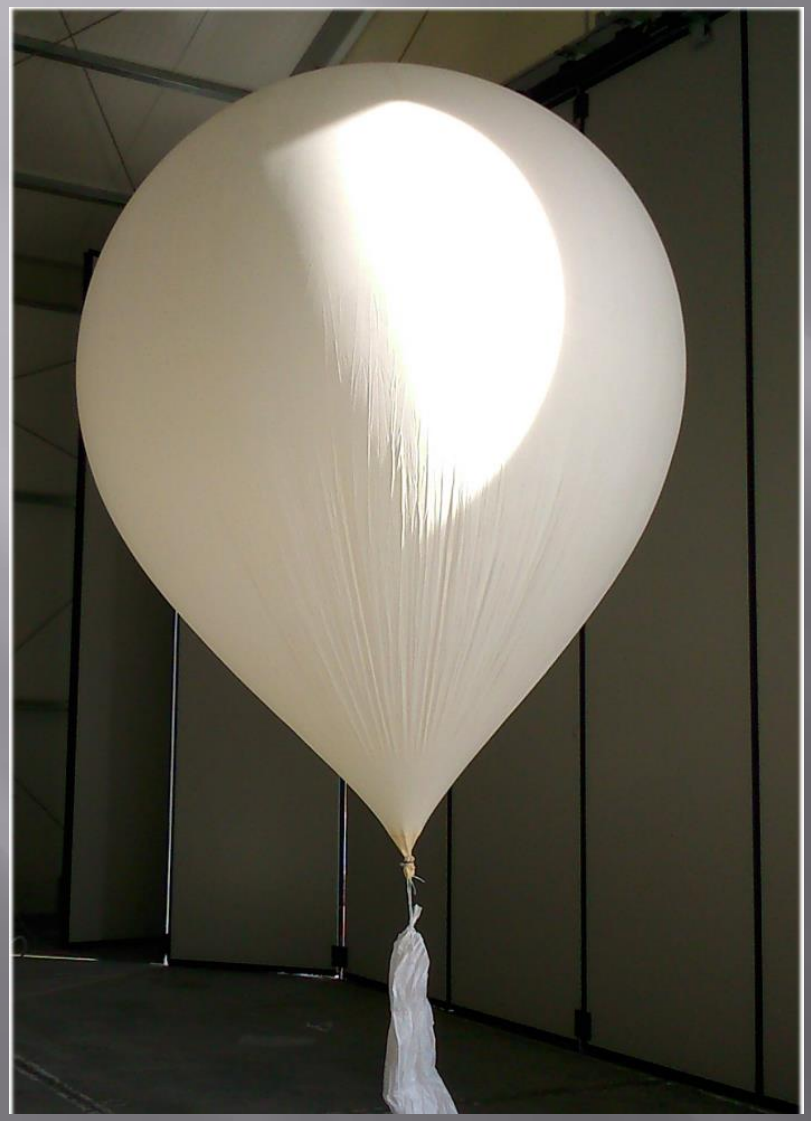
STRATO BALLOON



Pallone tipo TOTEX T 1600

- Massa 2.0 Kg
- Materiale: Lattice
- Gas utilizzato: Elio (1.0 lt = 1.0 g)
- Volume Iniziale: 5.0 m^3
- Diametro Iniziale: 2.0 m
- Volume allo scoppio: 1200 m^3
- Diametro allo scoppio: 15 m circa

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PARACHUTE

Paracadute No 290

Massa: 370 g
Diametro: 1480 cm
Materiale: Cupola in tessuto sintetico e tiranti in cotone

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PARAGLIDING

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TSV CONTROL CENTER

- Coppia di notebook (S.O. Windows Xp / Windows 10)
- Antenna verticale di 5.0 metri
- Coppia di radio UHF:
  Yaesu FT767 HF plus UHF 70 cm add-on module
  Kenwood TS790 VHF/UHF
- Software di decodifica della telemetria FLDIGI
- Software Flight Predictor Cambridge University Spaceflight Landing Predictor (http://predict.habhub.org/)

TX TELEMETRY

RADIOMETRIX NTX2

- Frequency Standard: 434.650 MHz (UHF)
- 3 sezioni Crystal Controlled VCXO
- Alimentazione: 2.9 ÷ 15.0 Vdc / 18 mA
- Data rate: 10kbps max.
- Potenza: +10 dBm (10 mW)
- Antenna da ¾ d'onda a filo

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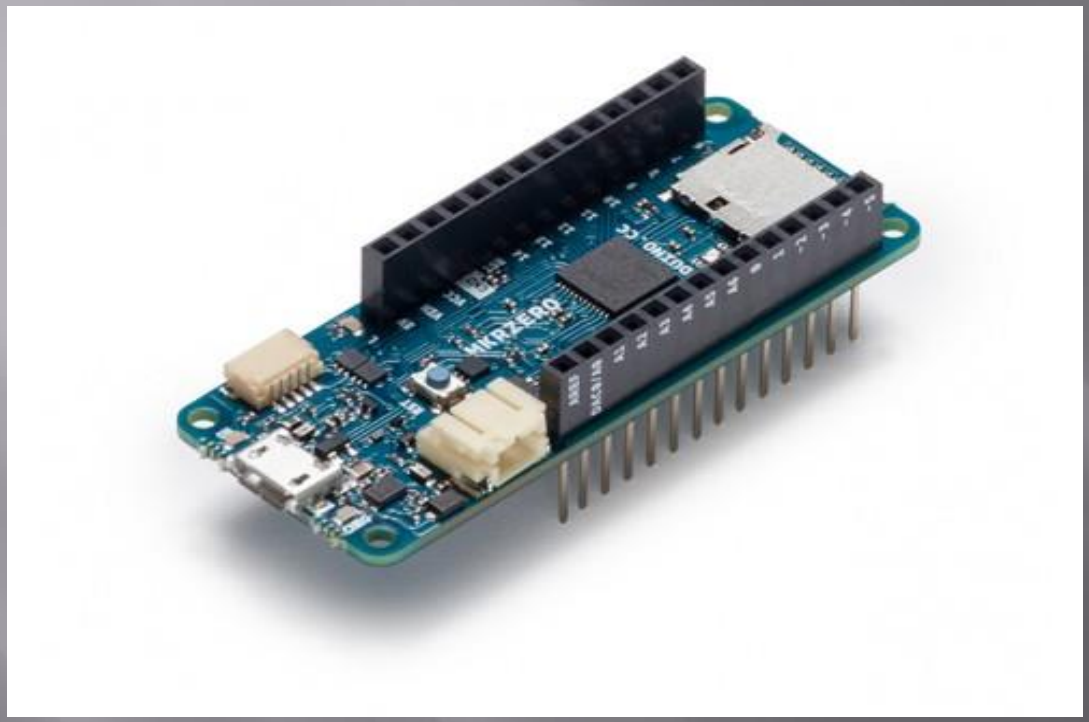
ON BOARD COMPUTER



Arduino MKR Zero Controller

- Stato della telemetria;
- Data;
- Orario in formato GMT;
- Posizione (latitudine, longitudine, altitudine);
- Temperatura esterna;
- Temperatura interna;
- Umidità;
- Pressione atmosferica;
- N. dei satelliti visibili;
- Velocità;
- Stato della batteria.

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GPS

SPOT Trace

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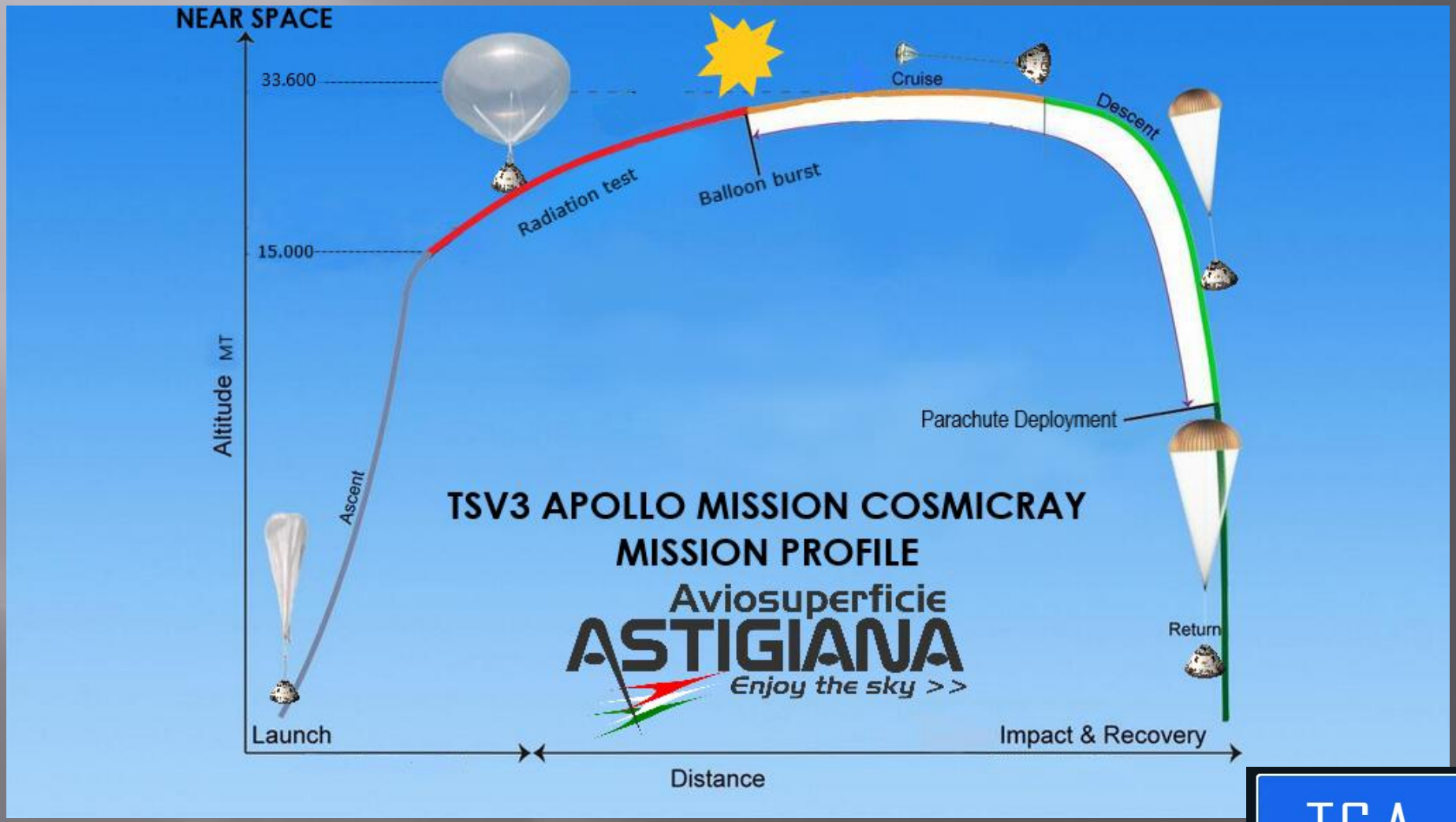
MISSION PROFILE



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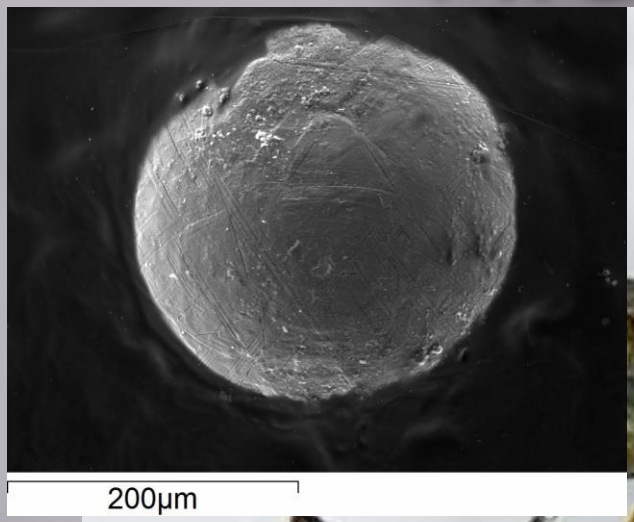
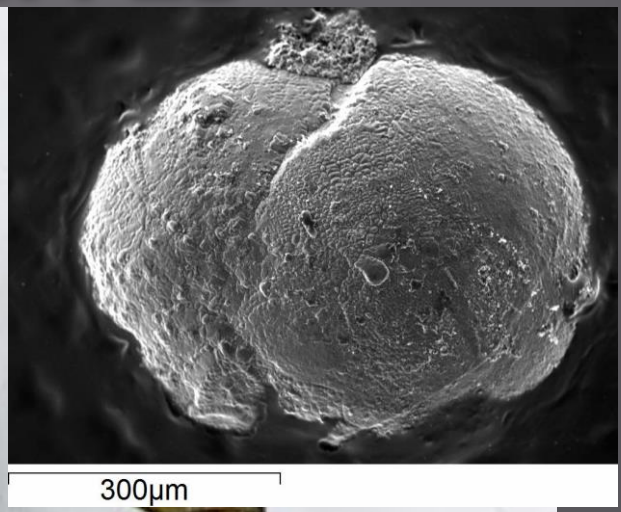
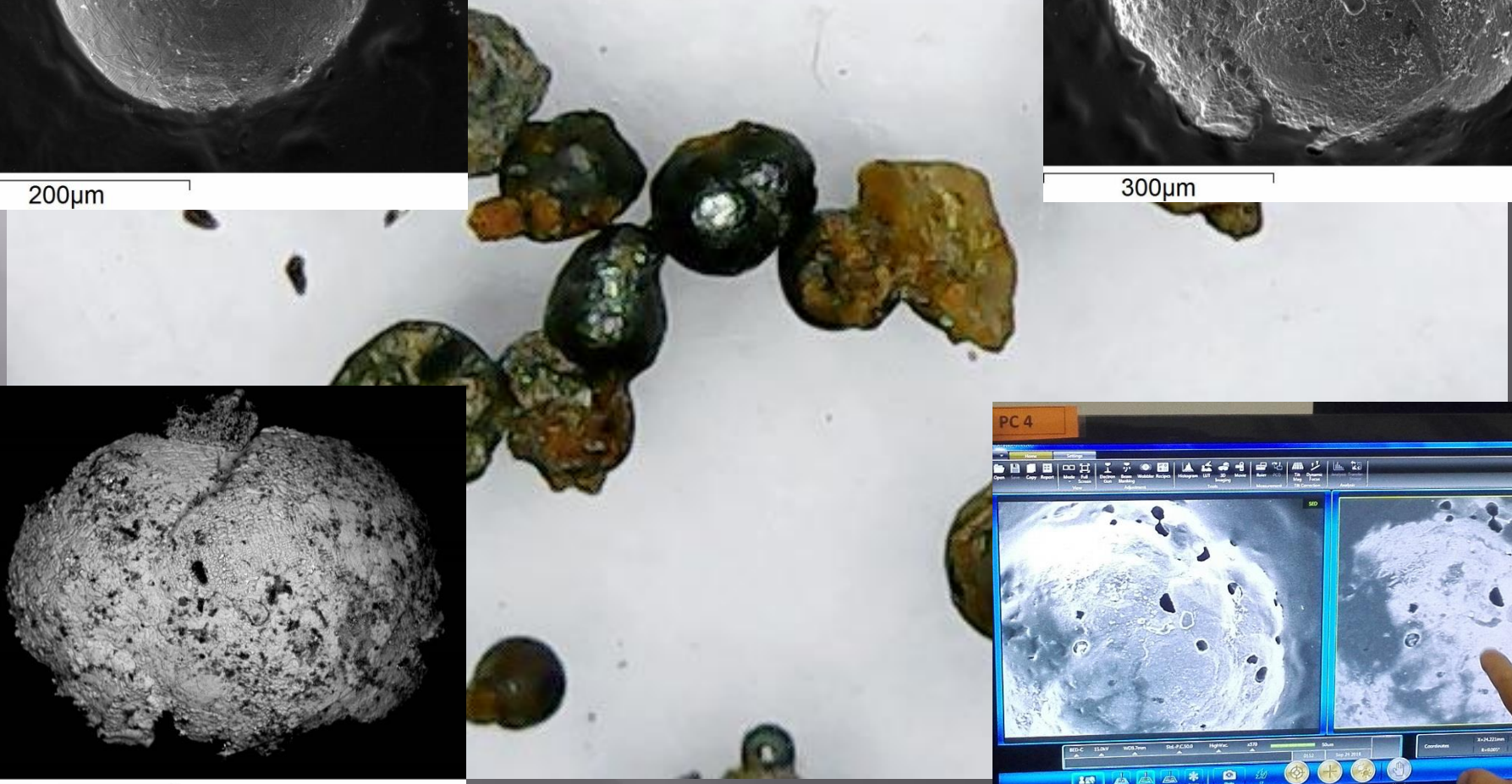
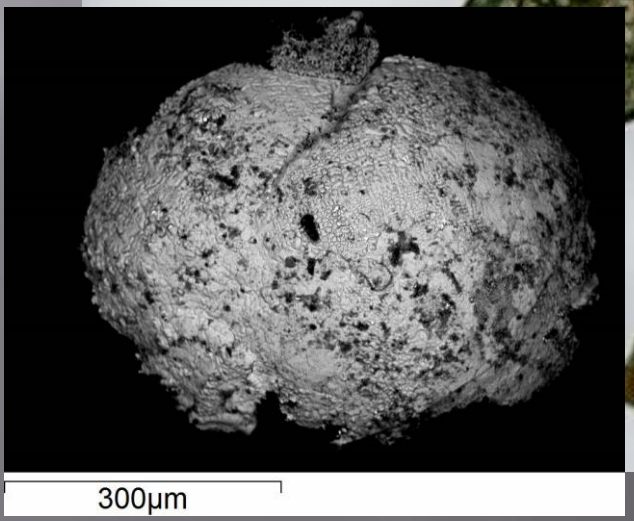
MICRO-METEORITES

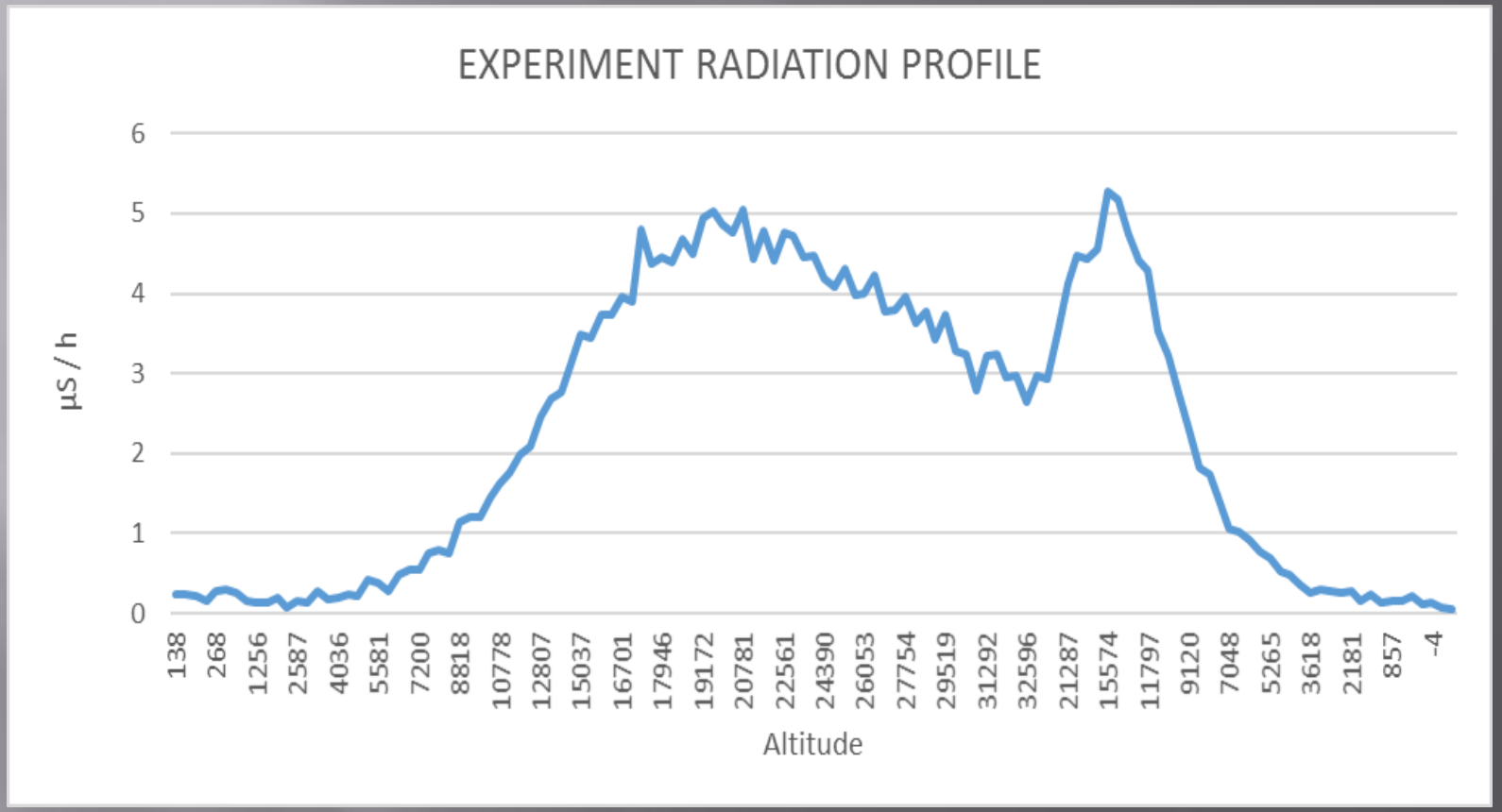








PROFILO RADIOATTIVO



Profilo radioattivo misurato nell' Esperimento «Cosmic Ray» sonda TSV3.

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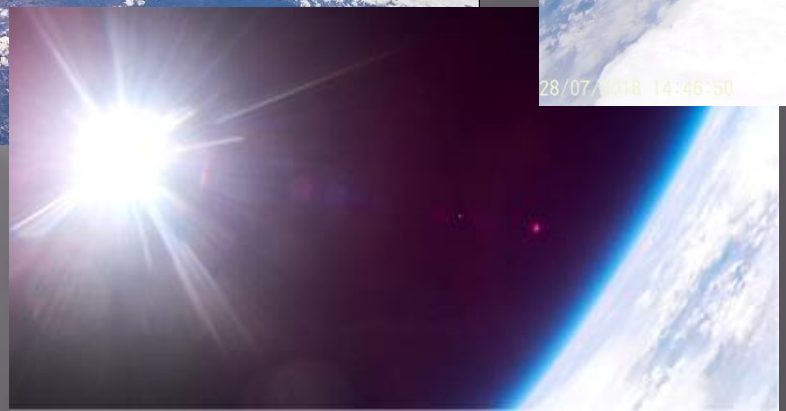
GALLERY



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THANKS FOR YOUR ATTENTION

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