

UNISON ITALY



Presenter: Alice Pellegrino

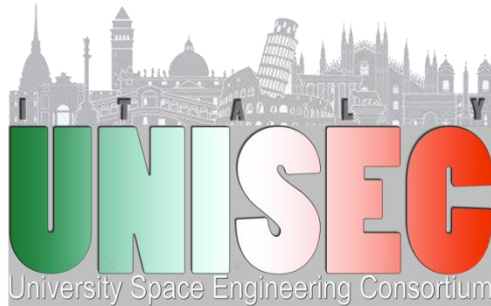


SAPIENZA
UNIVERSITÀ DI ROMA

6th UNISEC Global Meeting – Student Presentation
Strasbourg (France), 21st of November 2018



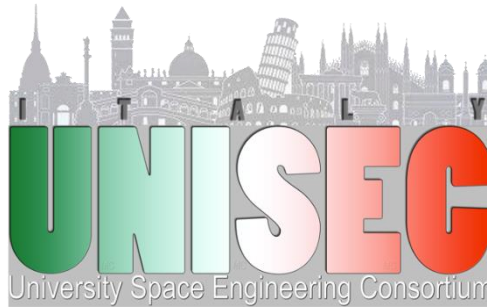
UNISON Italy



UNISEC and UNISON Italy have been established in July 2015



UNISON Italy



LA SAPIENZA



UNIVERSITY OF BOLOGNA



POLYTECHNIC OF TURIN



TOR VERGATA

UNISON Italy

REPRESENTATIVES



MARCELLO VALDATTA

Student representative for University of
Bologne



ALICE PELLEGRINO

Italian representative for UNISEC Italy /
Student representative for "La Sapienza",
University of Rome



LUIGI MASCOLO

Student representative for Polytechnic of
Turin



LEANDRO IORIO

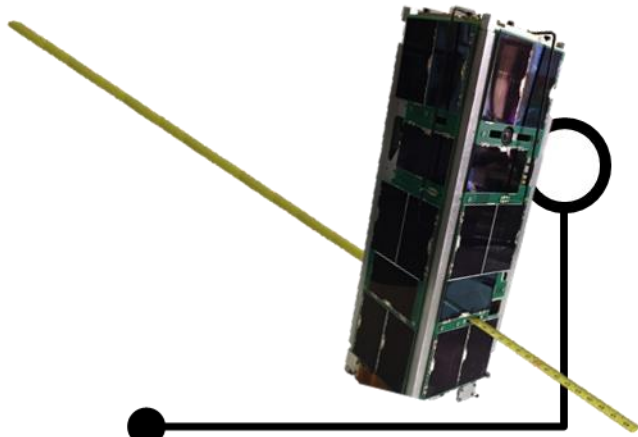
Student representative for University of
Rome "Tor Vergata"



UNISON Italy Student Activities

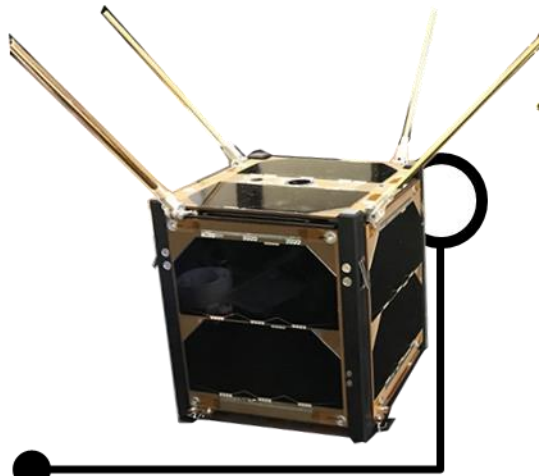


S5Lab CubeSat projects:



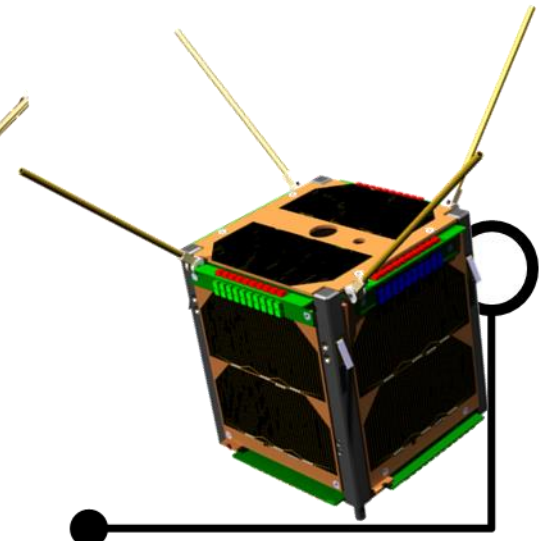
URSA MAIOR

University of Rome La Sapienza
Micro-Attitude In-Orbit Testing



1KUNS-PF

1st Kenyan University
Nano-Satellite – Precursor
Flight

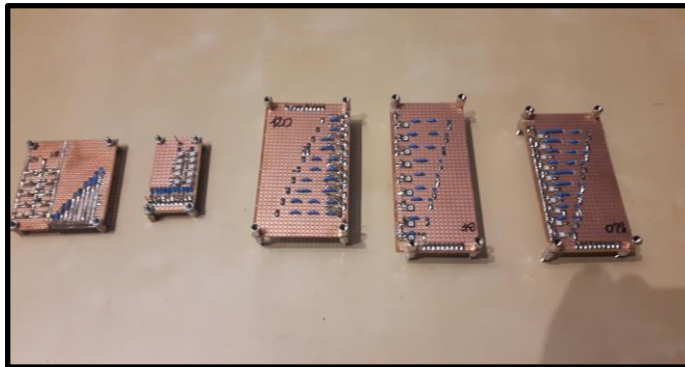


LEDSAT

LED-based small SATellite

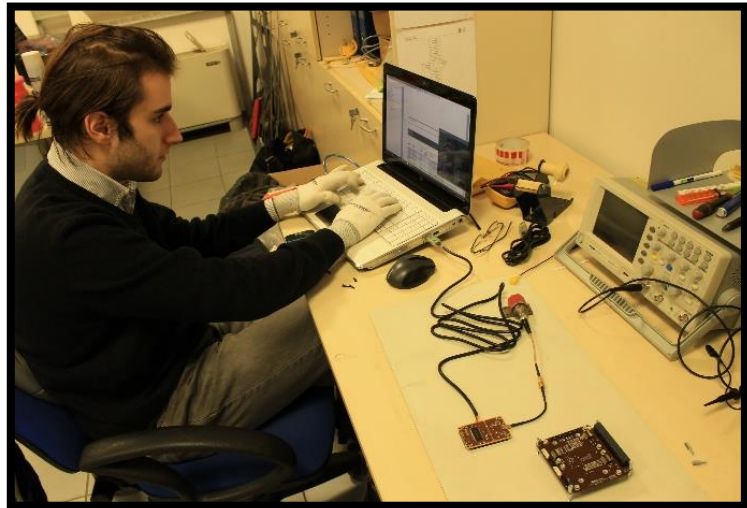
RADIOMETRIC TESTS

- Dominant wavelength measurements
- Irradiance measurements

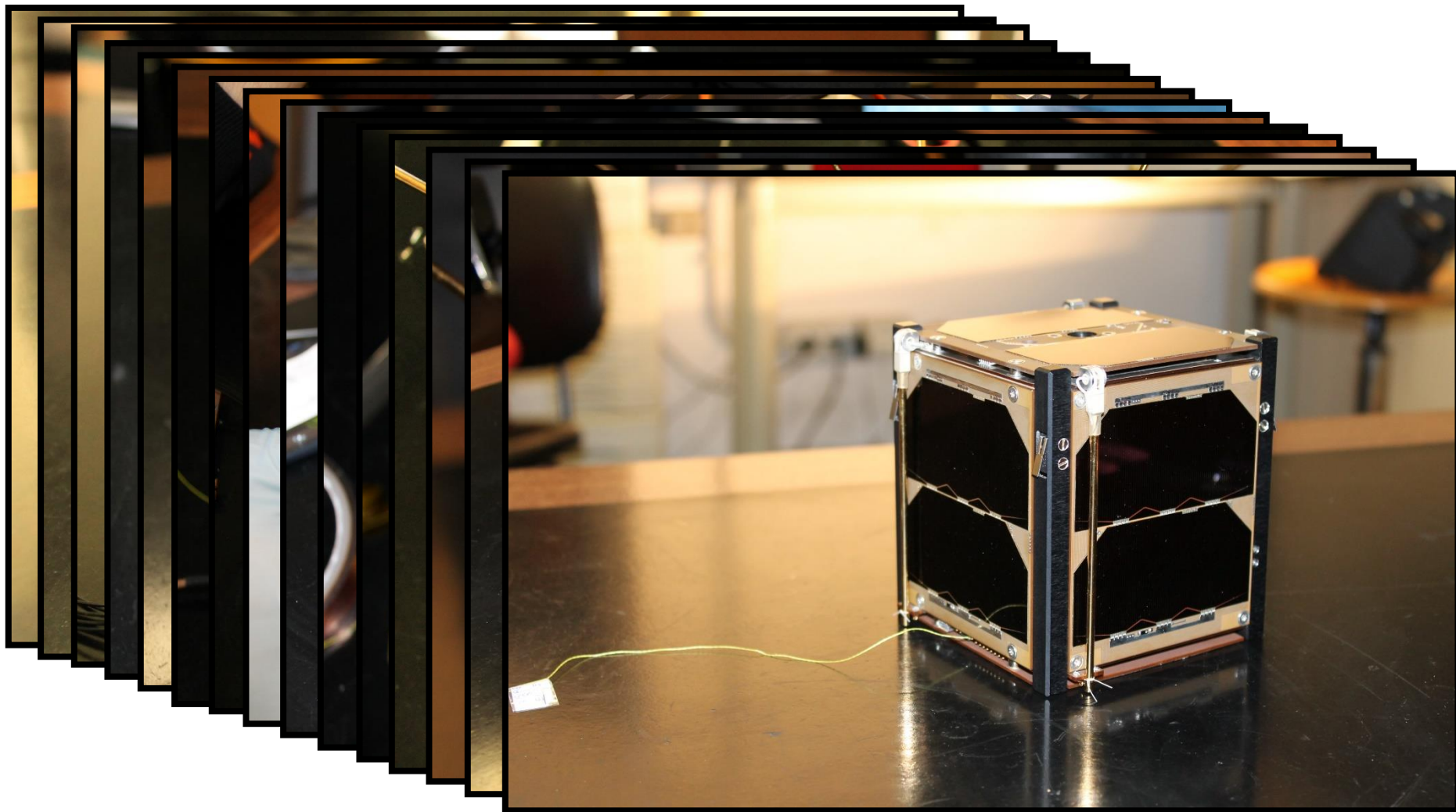


Colour	GREEN	RED	BLUE
Dominant wavelength (min. – max.) [nm]	498 - 512	620 - 624	468 - 472
Measured dominant wavelength [nm]	505	621	470
Irradiance (at 0.5 m) [W/m ²]	9.72×10^{-2}	1.33×10^{-1}	1.29×10^{-1}
Measured irradiance (at 0.5 m) [W/m ²]	2.3×10^{-1}	2.70×10^{-1}	4.6×10^{-1}

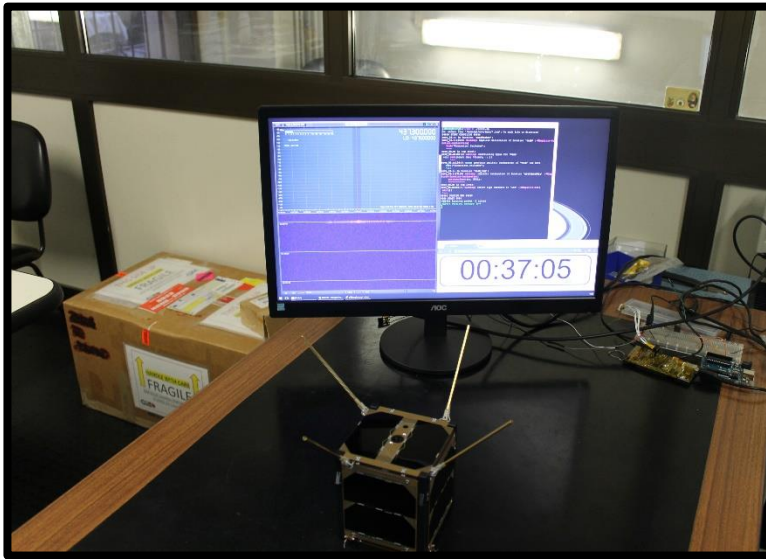
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1KUNS-PF GUI

Log

19:39:57 [098] : R: Message received

19:39:57 [098] : Telemetry of 19/09 19:54:29

19:40:00 [ARM] : Requested current telemetry

19:40:05 [ARM] : Requested current telemetry

19:40:09 [ARM] : Requested current telemetry

19:40:12 [ARM] : Requested current telemetry

19:41:14 [] :

19:41:14 [] :

20:47:03 [DIE] : User "Die-srv" connected

20:48:55 [DIE] : User "Diego" connected

20:49:00 [] : User "Diego" (151.100.1.80) timed out

21:04:17 [] : User "Die-srv" (151.100.1.80) closed the GUI

21:04:20 [DIE] : User "Die-srv" connected

21:06:34 [] :

21:06:34 [] : New passage

21:07:41 [] : Resetting AX100 Ground Watchdog

21:07:41 [DIE] : Unknown command. [Prefix 0x02 (2)]

21:17:29 [] :

21:17:29 [] :

21:18:59 [ARM] : User "Amando" connected

21:30:32 [] : User "Die-srv" (151.100.1.80) timed out

21:30:34 [] : User "Diego" (151.100.1.80) timed out

21:30:38 [DIE] : User "Die-srv" connected

21:30:50 [] : User "SSLab-MB" (151.100.1.80) timed out

21:31:14 [] : User "Die-srv" (151.100.1.80) timed out

Calendar selector and clock

settembre 2018

lun	mar	mer	gio	ven	sab	dom
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
1	2	3	4	5	6	7

UTC

22:00:59

UNIX

1537394459

19:00:00

Telemetry (T)

Pictures (I)

Parameters

System (S)

GS management (G)

Picture Map (P)

Clear Map

Commands scheduler and GS100

19/09/2018

19:01:39

Record command (B)

Elevation at scheduled time: -41

Ping A3200

Ping AX100

Normal

Reset GS100

Radio and Rotor

Doppler 139 Hz

Azimuth 174° (405°)

Elevation -85° (0°)

RSSI -105 dBm

BGND -93 dBm

AOS in 43m 30s

LOS in 52m 48s

Next command delay

Set from calendar (F)

Set delay in seconds (J)

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S5Lab Space Debris projects:



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S5Lab Space Debris projects:



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BEXUS Team: TARDIS Experiment



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BEXUS Team: TARDIS Experiment



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MIC Team: HEMERA Constellation



UNISON Italy Student Activities



Additional Activities

THE GROWTH OF TOMATO PLANTS MICRO-TOM IN SPACE ENVIROMENT

TEAM MICRO-TOM



2nd place winner at the 5th International Pre-MIC and project currently on-going at S5Lab

UNISON Italy Student Activities



Additional Activities



**Micro-Tom Plants growing
in the Rome - Urbe Sapienza
Space Environment
Simulator chamber**




**Instrumentation suitable for
CubeSat application**

2nd place winner at the 5th International Pre-MIC and project currently ongoing at S5Lab

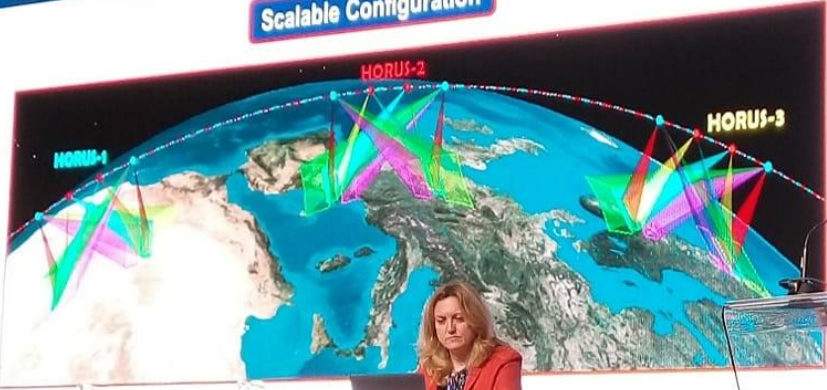
International Space Conferences



International Space Conferences

Synergy with existing EO spacecraft 

Scalable Configuration



11:00 - 12:30
Future EO
(part 2)

Chair:
Amanda Regan
ESA - ESRIN

Ulmer, Andrew
Capella Space, United States of America

Pellegrino, Alice
University of Rome "La Sapienza", Italy

Chisio, Giovanni
United States of America

...td, United Kingdom


...er Maas, Rosalie
...I, The Netherlands

...rini, Massimo Claudio
...S, Italy

ESA

OBSERVATION @-WEEK

HORUS cluster



International Space Conferences





UNISON Italy Official Website

<http://unisonitaly.eu>



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UNISON ITALY

VERSIONE ITALIANA

ENGLISH VERSION

UNISON Italy Last Updates

**New Italian Student
Representative**

Paolo Marzioli

**PhD student in Aerospace
Engineering at Sapienza
University of Rome**

**System Engineer of the LEDSAT
Project**



Questions?



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