



open data and Space Science in the UAE

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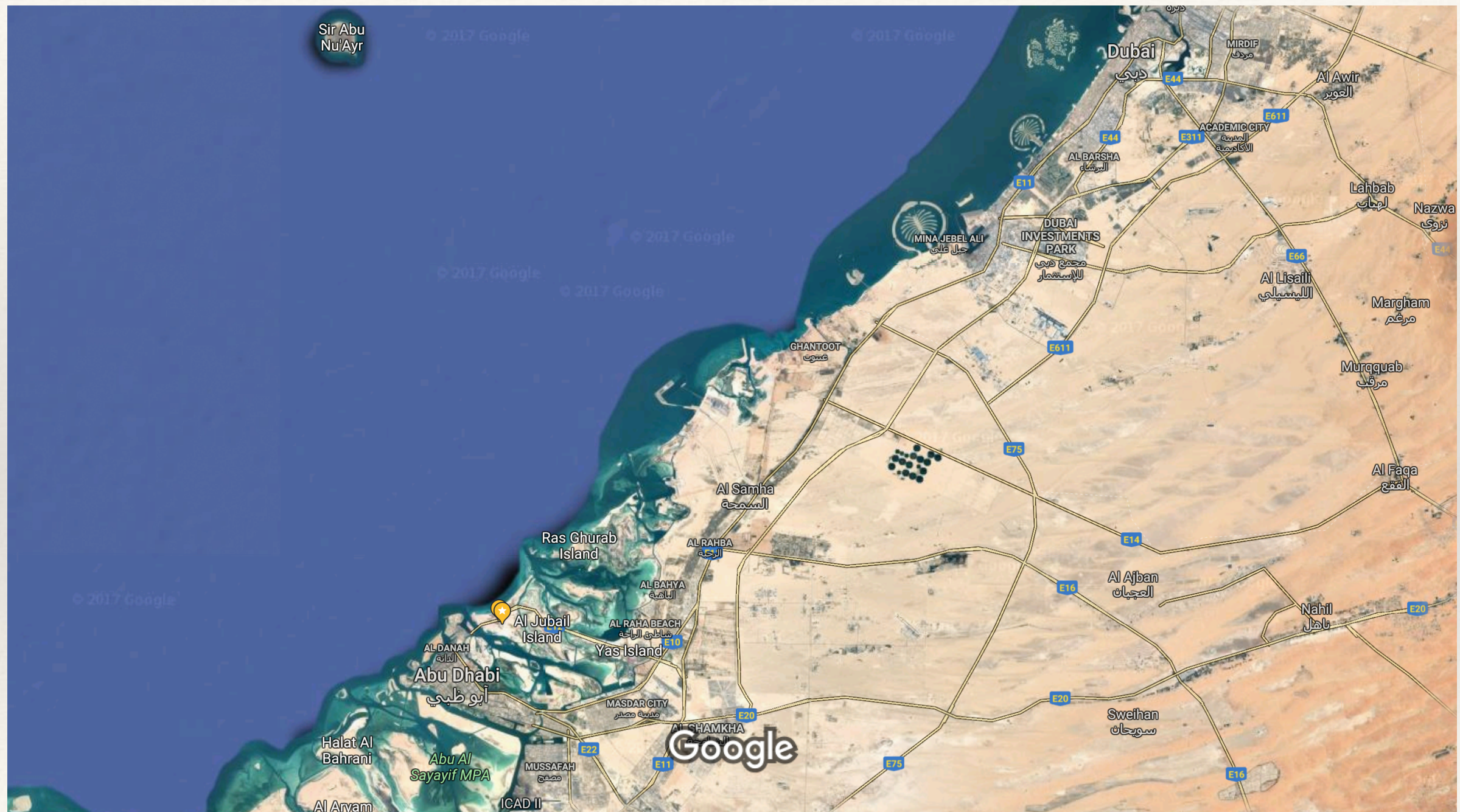
جامعة نيويورك أبوظبي



the UAE

- substantial effort by the government towards space
- driver for economical and educational growth
- the society responds well
- universities play a role

the UAE



Imagery ©2017 Landsat / Copernicus, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, Map data ©2017 Google 10 km

a new neighbour: Louvre Abu Dhabi



space science in the news

UAE Space Agency in talks with universities to create more space-science degrees

Agency seeking to recruit more Emiratis with science and engineering backgrounds

The results are in - and Alia's Genes in Space experiment is a winner

Dubai schoolgirl sent her experiment to the International Space Station for testing

Pressure is on for young Emirati space engineers aiming for Mars

The joint project between the centre and the UAE Space Agency is expected to lift off in 2020 and these engineers are working tirelessly to achieve that goal

Buzz Aldrin meets students at UAE Space Agency

Aldrin, who was the second person to walk on the moon, was in the country to discuss the UAE's advancements space science, technology, education and exploration.

Emirati students reach for the stars

Ahlam Al Qasim and Fatema Al Khouri have returned from a two-week internship at the Italian Space Agency and now want to help the UAE on its Mars mission.

space science in the UAE society



Sharjah Center for Astronomy & Space Sciences

the Mars mission

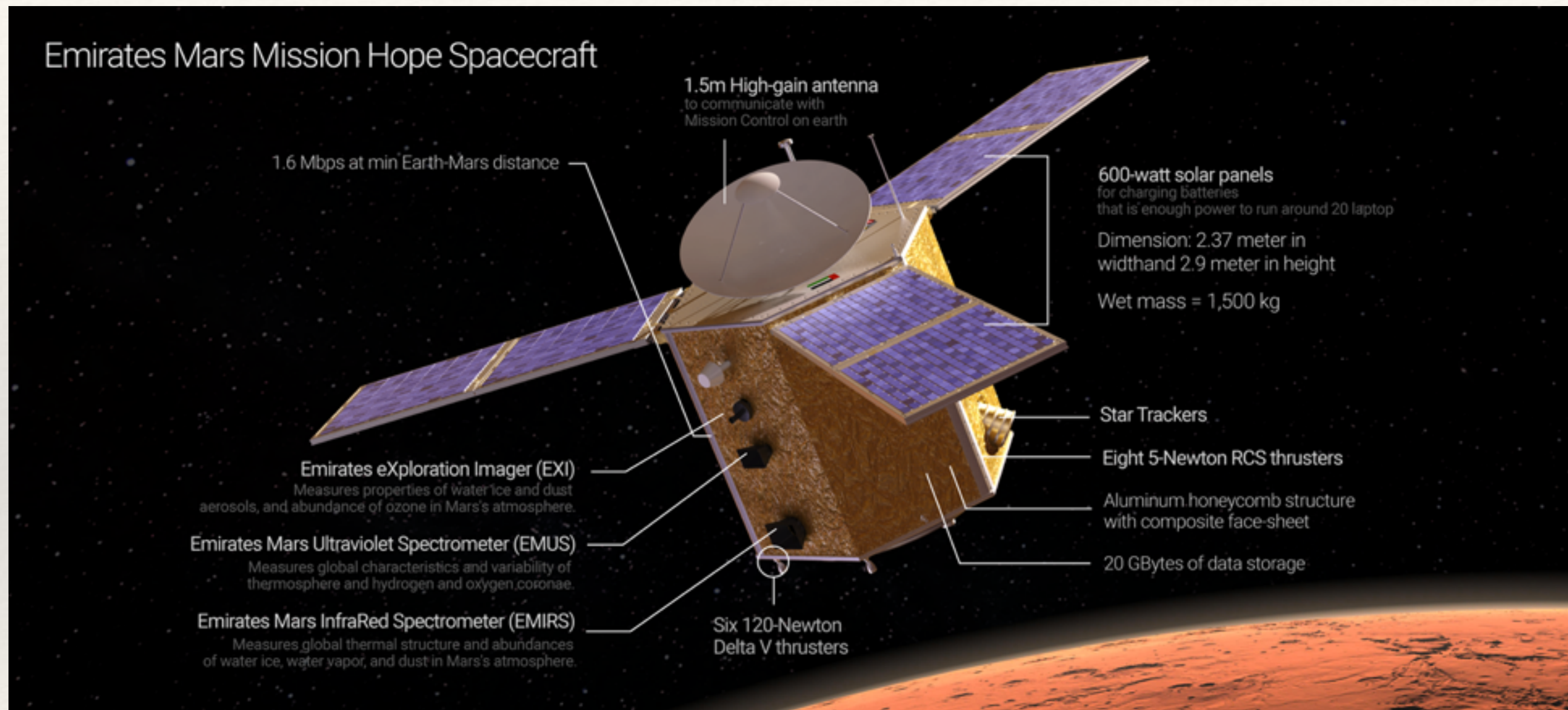


Image of Mohammed Bin Rashid Space Center

an open universe opportunity?

the context

- Emirates Institution for Advanced Science and Technology (EIAST), now Mohammed Bin Rashid Space Center, founded in 2006
- a Space Agency has been created in 2014
- existing collaborations between NYUAD - UAESA and NYUAD - MBRSC
- existing MoU UAESA - ASI
- existing links NYUAD and ASI
- other universities with space interests (KU-Masdar, University of Sharjah)
- recurrent space events as the Global Space Congress:

NYU Abu Dhabi

جامعة نيويورك أبوظبي



- Probably the most exceptional higher education `adventure' of modern times
- Students acceptance rate of less than 3%
- About 115 nationalities in the student body
- a research university

NYUAD students

BY the NUMBERS

ACADEMIC YEAR 16-17
(as of Oct. 10, 2016)

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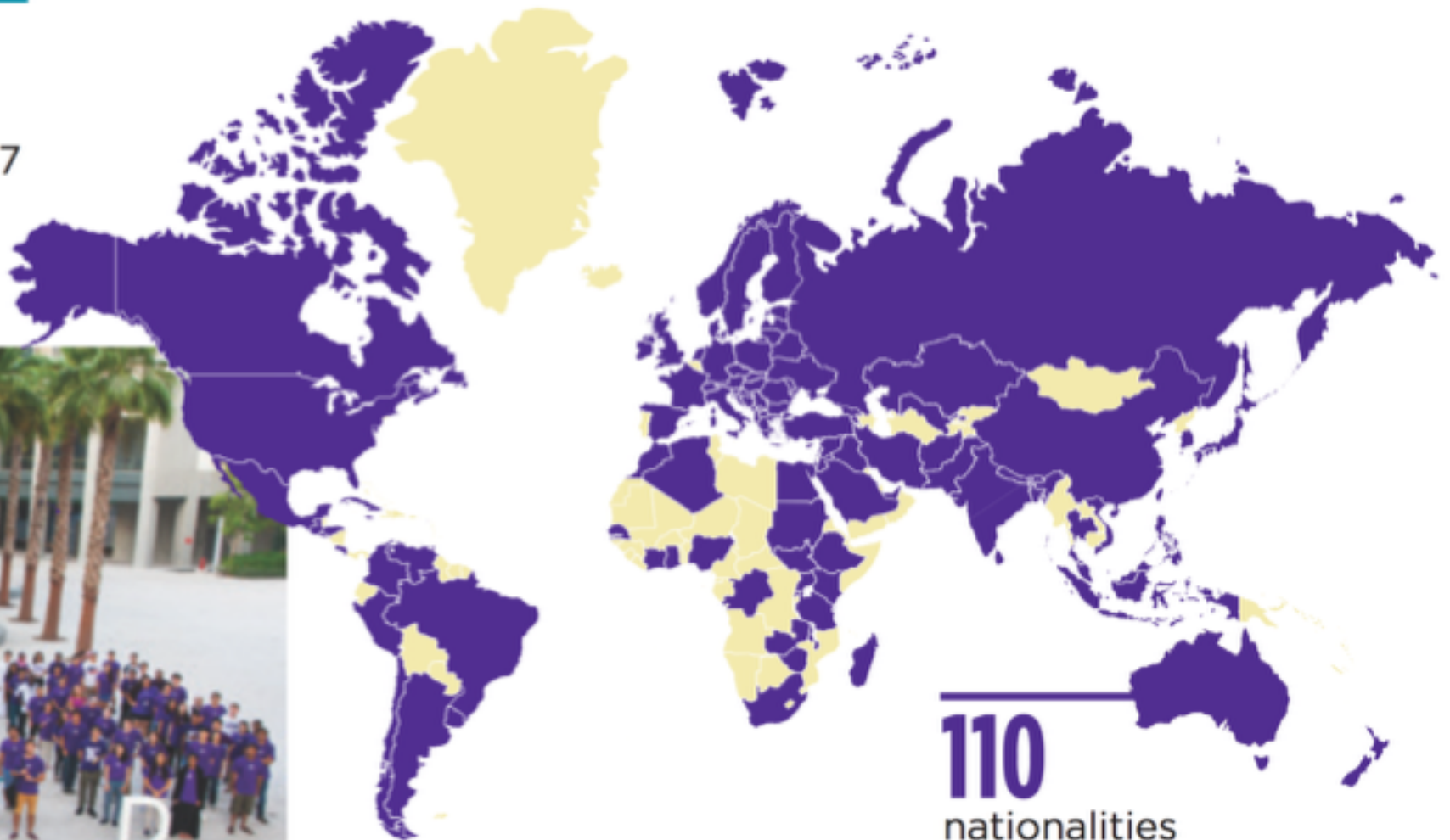
NYU | ABU DHABI

OVERALL STUDENT BODY

1,050+ students enrolled for
Academic Year 2016-17

54% female

46% male



110
nationalities
(including dual nationalities)

ACADEMICS

جامعة نيويورك أبوظبي



NYU | ABU DHABI

Academic Divisions

Arts & Humanities | Arab Crossroads, Art & Art History, Film & New Media, History, Literature & Creative Writing, Music, Philosophy

Engineering | Civil, Computer, Electrical, General, Mechanical

Science | Biology, Chemistry, Computer Science, Mathematics, Physics, Psychology

Social Sciences | Economics, Politics, Social Research & Public Policy

Undergraduate Programs

22 Undergraduate Majors

19 Concentrations

6 Multidisciplinary Programs

Global Ph.D. Programs

Biology

Chemistry

Computer Science

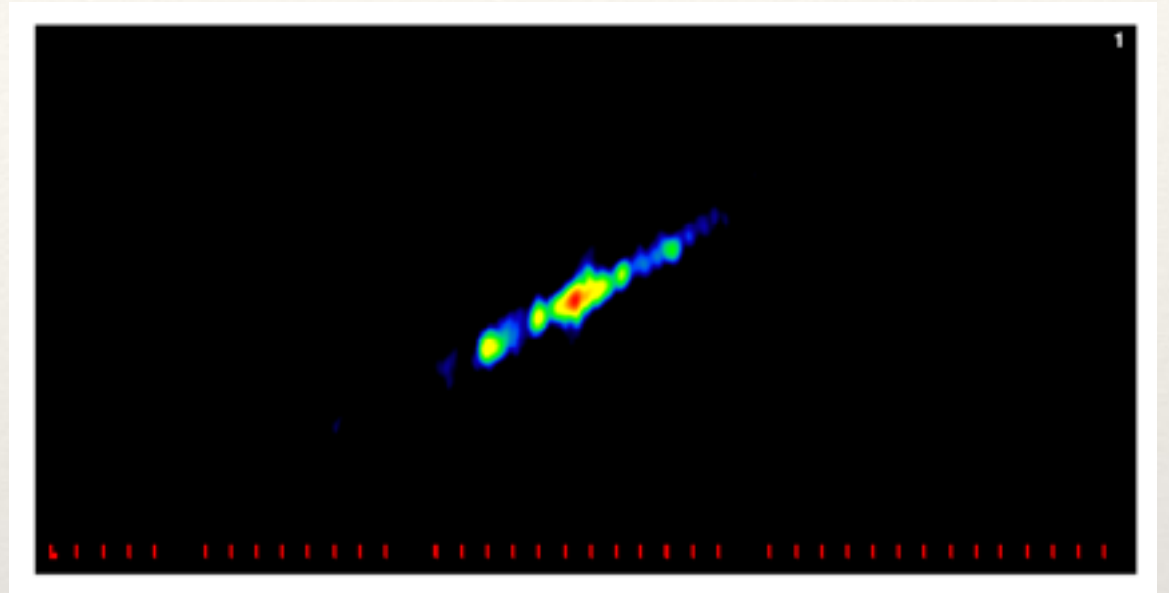
Engineering

Physics

astronomy and astrophysics @NYUAD

faculty interests strongly focused on A&A

- galaxy formation
- exoplanets
- helioseismology
- water masers
- supernova remnants
- compact objects
- dark matter
- TGFs.....

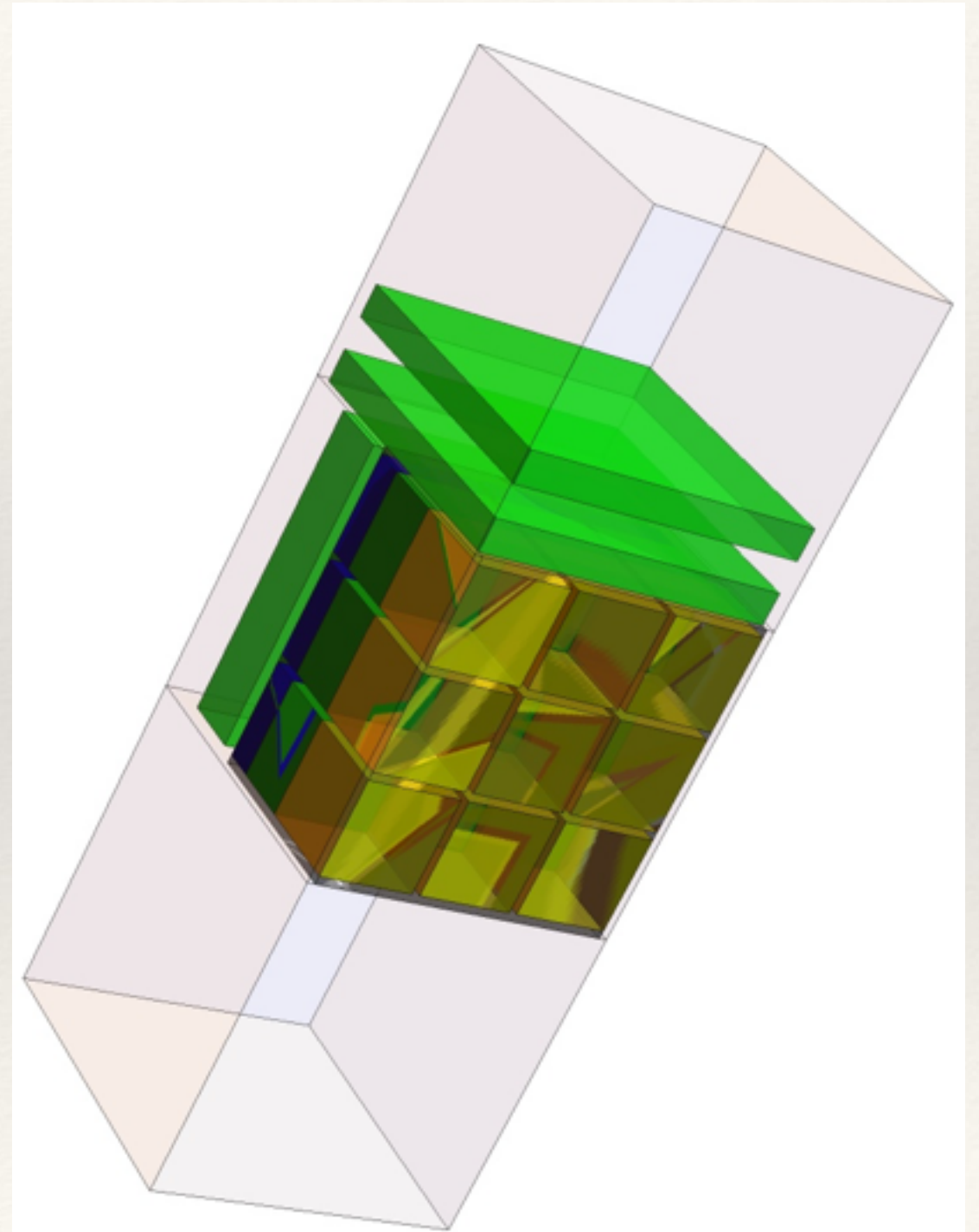


use of astronomy data at NYUAD

- outreach
- core courses (typical of a liberal arts college)
- Astronomy/Astrophysics courses
- research

projects NYUAD-UAESA

- CubeSat for TGFs
 - idea born at ASI Data Center (thanks to Carlotta Pittori and Paolo Giommi)
- possible project on radio astronomy



NYUAD, a hub for Open Universe in the UAE?

Just brainstorming, everything TBD!!

- Use of Open Universe tools:
 - in the classroom
 - for students' thesis
 - for outreach and science citizen projects

NYUAD, a hub for Open Universe in the UAE?

- Collaboration in Open Universe initiatives?:
 - having dedicated courses or one-week schools?
 - students coding?
 - triggering interest in other UAE Universities and institutions
- UNOOSA Director S. Di Pippo will visit in January

Conclusions

- the UAE space sector is growing
- opportunities to participate in shaping this growth
- the open universe approach to data sharing matches NYUAD philosophy to knowledge
- NYUAD and other institutions in the area are well placed to promote the open data approach
- open data would certainly help research and outreach