

UNITED NATIONS “MOON FARSIDE SCIENCE” TREATY

Claudio Maccone

*Director for Scientific Space Exploration, International Academy of Astronautics (IAA, Paris)
INAF Associate, Rome, Italy.*

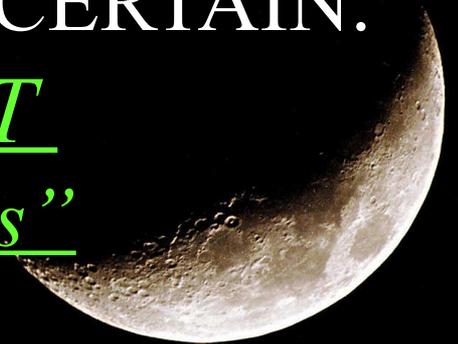
E-mail: claudio.maccone@gmail.com

**UNOOSA-COPUOS Science and Technology,
January 29 – February 09, 2024, at Vienna.**



“FAR SIDE SCIENCE” U.N. TREATY

- We suggest a “Farside Science Treaty” asking for all space-faring countries to comply with a list of ACCEPTED FREQUENCIES and FORBIDDEN FREQUENCIES for their spacecrafts whenever they fly above the Farside.
- We plan to submit this Treaty Proposal to the United Nations COPUOS in 2024.
- But these matters are LEGALLY UNCERTAIN.
- NEGOTIATIONS ARE URGENT
among Scientists and Space “Politicians”



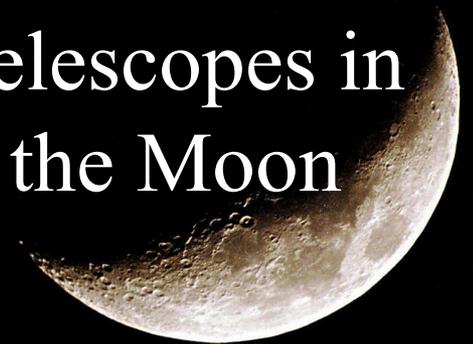
THE IMPORTANCE OF THE MOON FAR SIDE

- The Moon has the unique property of naturally shielding radio waves generated by human activities on Earth and around it. This results in a wide radio silence zone on and above its Farside, called SHIELDED ZONE (SZ) on the Moon Farside since 1974, when it was firstly defined by the International Telecommunication Union (ITU), the U.N. branch for telecommunications.
- Therefore the Moon becomes a region of utmost scientific interest, as it provides an environment free from the electromagnetic pollution typical on Earth.



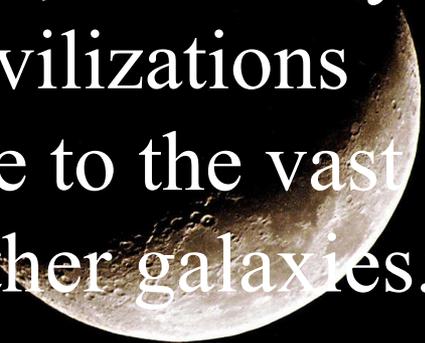
FOUR BRANCHES OF SCIENCE TO BE PURSUED ON THE FAR SIDE

- COSMOLOGY – To detect the extremely feeble radiation of the Hydrogen line at 1420 MHz, down-shifted to much lower frequencies (MHz or kHz), due to the 13.7 billion years of universe expansion.
- ASTROBIOLOGY – To study pre-biological interstellar molecules through their roto-vibrational spectra: a fine search for weak spectral lines that can be supported by advanced radio telescopes in combination with the radio silence of the Moon Farside.



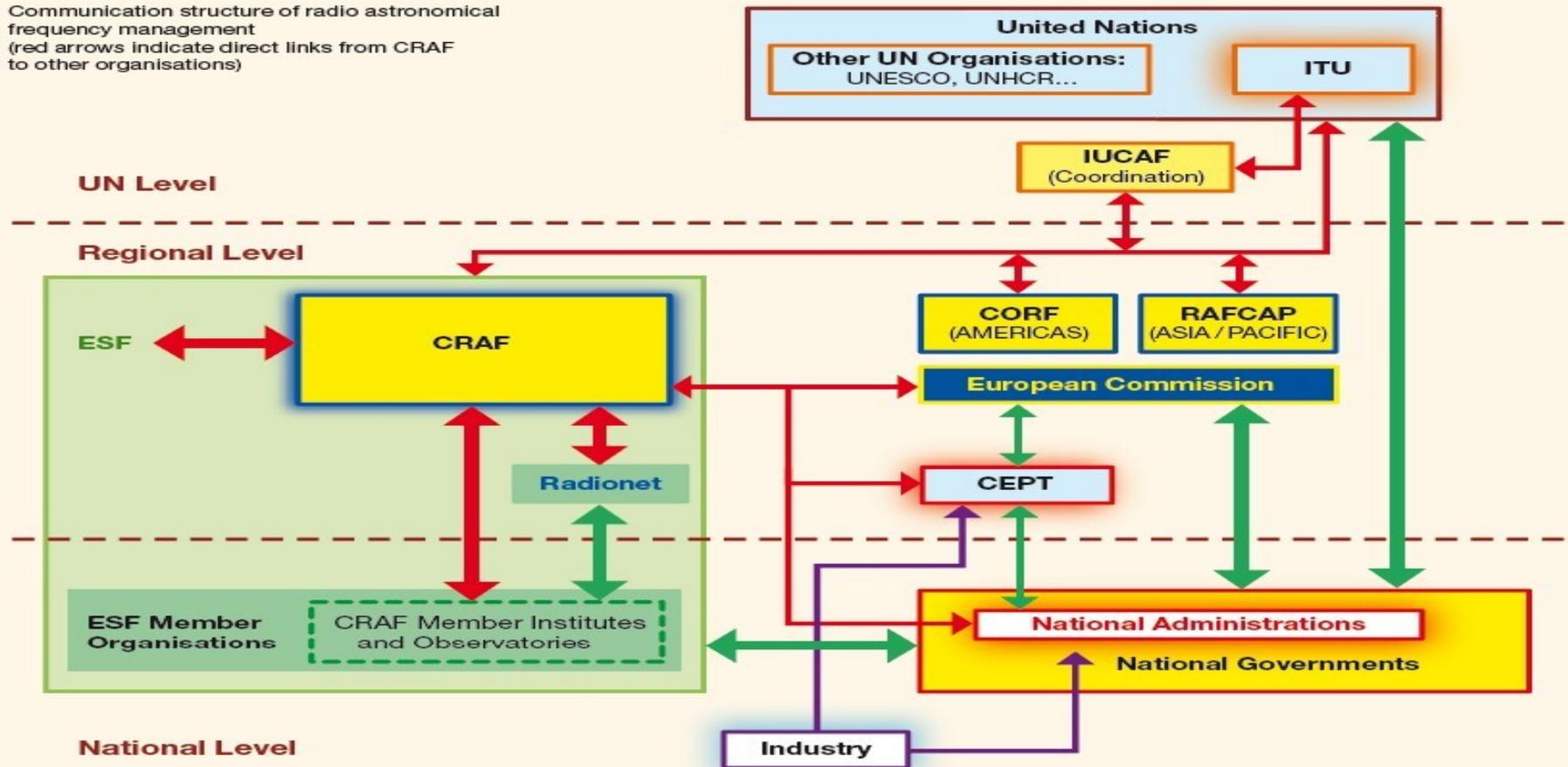
FOUR BRANCHES OF SCIENCE TO BE PURSUED ON THE FAR SIDE

- PLANETARY DEFENSE – From the Moon Farside, radar and optical telescopes can be used for accurate measurements, without interference, of the main orbital parameters of NEOs (Near-Earth Objects) to increase the LEAD time (time before Earth impact).
- SETI & Techno-Signatures – To search, with very low noise, for “signatures” of Alien Civilizations that would reach us extremely faint due to the vast distances of the stars within this and other galaxies.



International ORGANIZATIONS

Communication structure of radio astronomical frequency management
(red arrows indicate direct links from CRAF to other organisations)



CEPT: European Conference of Postal and Telecommunication Administrations

ITU: International Telecommunication Union

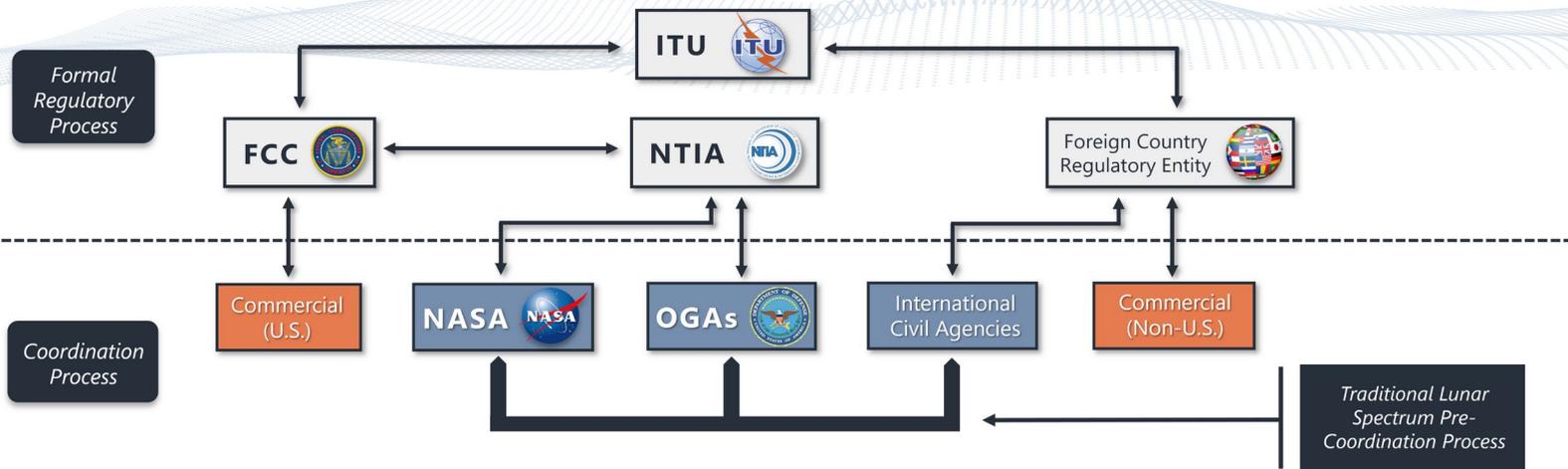
IUCAF: Scientific Committee on the Allocation of Frequencies for Radio Astronomy and Space Science (Unesco)

RAFCAP: Radio Astronomy Frequency Committee in the Asia-Pacific region

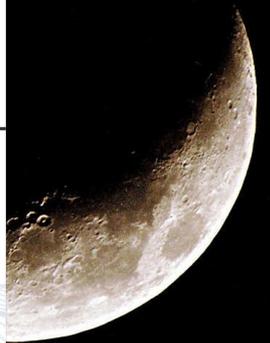
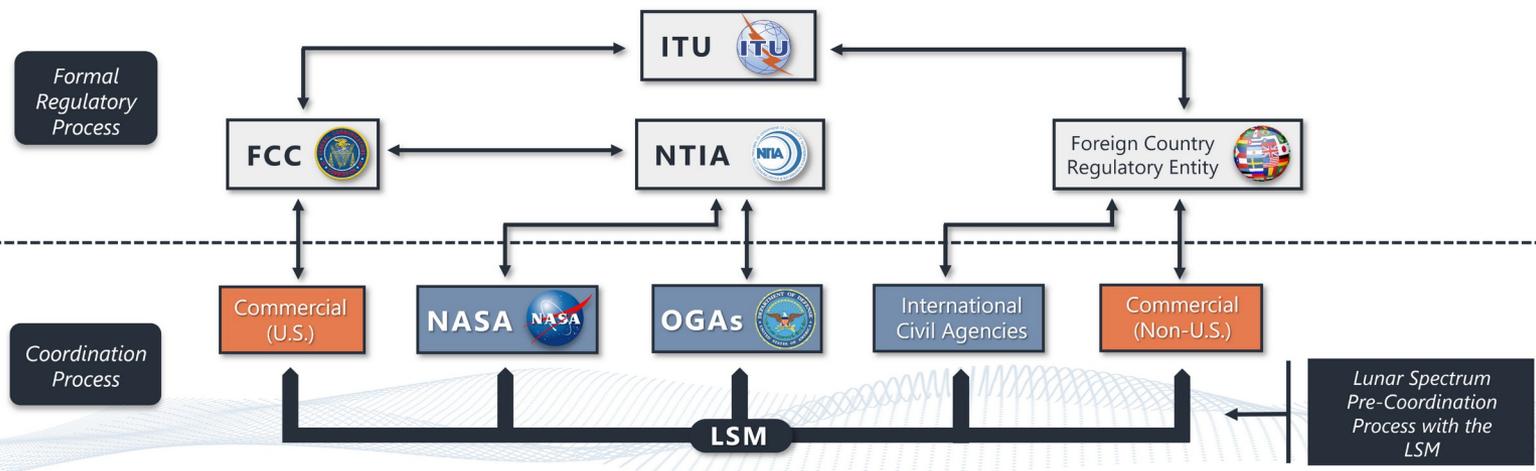
CORF: US Committee on Radio Frequency Requirements for Scientific Research

LSM = NASA LUNAR SPECTRUM FREQUENCY MANAGEMENT

Pre-Coordination without the LSM



Pre-Coordination with the LSM



CONCLUSION :

Preparing a Draft Treaty for
Moon Farside Protection
is a **COMPLICATED TASK**



Conference in Turin
March 21-22, 2024

FIRST IAA SYMPOSIUM
ON MOON FAR SIDE
PROTECTION

Contact: desk@moonfarsideprotection.org



Thanks very much

