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The Next Steps (A4)  
SETI 1: SETI Science and Technology (1)

Author: Dr. Claudio Maccone  
International Academy of Astronautics (IAA) and Istituto Nazionale di Astrofisica (INAF), Italy

MOON FARSIDE PROTECTION AND ASTRONOMY PROTECTION ARE URGENT

**Abstract**

The Moon Farside is the only place where radio transmissions and noises produced by Humanity on Earth may not reach: the spherical body of the Moon blocks them, acting like a shield. Thus, the legal protection of the Moon Farside from all kinds of non-scientific future exploitations (real estate, industry and military) has long been a concern for many scientists and IAA Academicians.

We started facing this problem in the 1990s, when the French radio astronomer Jean Heidmann of the Paris Meudon Observatory firstly promoted an IAA Cosmic Study dealing with areas of the Farside that should be reserved for scientific uses only. But Heidmann passed away in 2000, and his work had to be continued by others. This author took over Heidmann's IAA Cosmic study and, on June 10, 2010, this author was the first scientist ever to present the case for the Moon Farside Legal Protection at the United Nations Office of Outer Space Affairs in Vienna. In his presentation, he advocated the creation of a "Protected Antipode Circle (PAC)", a circular piece of land at the Farside center tangent to both +30 and -30 degrees parallels.

Unfortunately, the current "new race to the Moon" complicates matters terribly. All space-faring nations now keep their eyes on the Moon, and only the United Nations might have a sufficient authority to Legally Protect the Farside and save its unique "radio-noise free" environment.

This paper advocates the support to the Moon Farside Protection by all scientists working in three different areas of science: Planetary Defense, Cosmology, SETI:

1) PLANETARY DEFENSE needs radio quietness for the planetary radar, the main technology capable of describing in advance asteroids that might hit the Earth in the future, causing millions of casualties, if not the end of Life itself on Earth.

2) COSMOLOGY needs the radio quietness on and above the Moon Farside to pick up the extremely feeble radiation of the hydrogen line at 1420 MHz as down-shifted to much smaller frequencies by 14 billion years of Universe Expansion.

3) SETI needs radio quietness to possibly detect Alien Civilizations "signatures" that reach us very feeble because of the huge distances among stars in the Milky Way.