

PAC: PROTECTED ANTIPODE CIRCLE ON THE FAR SIDE OF THE MOON FOR THE BENEFIT OF ALL HUMANKIND. C. Maccone¹, Member of the International Academy of Astronautics, Via Martorelli 43, 10155 Torino (Turin), Italy, e-mail: clmaccon@libero.it

Abstract. The international scientific community, and especially the IAA (International Academy of Astronautics), have long been discussing the need to keep the Farside of the Moon free from man-made RFI (Radio Frequency Interference). In fact, the center of the Farside, specifically crater Daedalus, is ideal to set up a future radiotelescope (or phased array) to detect radio waves of all kinds that it is impossible to detect on Earth because of the ever-growing RFI.

Nobody, however, seems to have established a precise border for the circular region around the Antipode of the Earth (i.e. zero latitude and 180 deg longitude both East and West) that should be PROTECTED from wild human exploitation when several nations will have reached the capability of easy travel to the Moon.

In this paper we propose the creation of PAC, the Protected Antipode Circle, centered around the Antipode on the Farside and spanning an angle of 30 deg in longitude, in latitude and in all radial directions from the Antipode.

There are sound scientific reasons for this:

- 1) PAC is the only area of the Farside that will never be reached by the radiation emitted by future human space bases located at the L4 and L5 Lagrangian points of the Earth-Moon system;
- 2) PAC is the most shielded area of the Farside, with an expected attenuation of man-made RFI of 100 dB or higher;
- 3) PAC does not overlap with other areas of interest to human activity except for a minor common area with the Aitken Basin, the southern depression supposed to have been created 3.8 billion years ago during the “big wham” between the Earth and the Moon.

In view of these unique features, we propose PAC to be officially recognized by the United Nations as a INTERNATIONAL PROTECTED AREA, where no radio contamination by humans will possibly take place now and in the future. For the benefit of all humankind.

Reference: [1] Maccone C. “Protected Antipode Circle on the Farside of the Moon”, *Acta Astronautica* (2008), just published and available on line, since March 5th, 2008.