

IEEE Milestone Proposal: Detection of Radar Signals Reflected from the Moon

- **The significance of the achievement being claimed.**

On 10 January 1946, a team of military and civilian personnel at Camp Evans, Fort Monmouth, New Jersey, USA, reflected the first radar signals off the Moon using a specially modified SCR-270/1 radar. The signals took 2.5 seconds to travel to the Moon and back to the Earth. The achievement is significant since it demonstrated that Electromagnetic Waves are suitable for long-range communication and radar could penetrate the Earth's Ionosphere. Before 1946, scientists observed the universe using large passive radio telescopes that caught and recorded radio waves emanating from the universe outside the earth's atmosphere. This technique of passive reception was known as radio astronomy. Unlike radio astronomy, the new alternative radar astronomy, the technique employed by the project, is an active observation by reflecting microwaves off objects and analyzing the reflected signal.

- **The suitability of the location being proposed for the milestone plaque.**

The proposed location is IEEE New Jersey Coast and is the proper place to hold the milestone plaque since the event occurred at Camp Evans, Fort Monmouth, New Jersey, USA.

- **Whether the achievement truly led to a functioning, useful or marketable technology.**

Yes, indeed. Since 1946, this technique has been used to gather a wealth of data about the geological and dynamic properties of many of the planets, moons, and asteroids that orbit our sun. Additionally, it has been used to determine the length of the Astronomical Unit (AU) and the scale of the solar system itself.

- **Whether the proposal is adequately supported by references and citations.**

Yes, the event is adequately described and supported by the references cited.

- **The clarity of the citation wording.**

The citation wording is concise and to the point. Yes, it clearly describes the event and states the significance of the achievement.

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