**Site Location Study for Radio Astronomy Observatory using RFI Mapping and GIS Technique in the Philippines**

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ABSTRACT

Site location study in a particular type of observatory must be considered in order to come up with desired data. This should take in to account specifically when doing radio astronomy observations. In the Philippines, radio astronomy has limited access to research since there is no constructed observatory in this kind of discipline. Through this study, it can give various choices in selecting location in constructing and performing radio astronomy observatory. For this to materialize, the researcher identified the parameters that affect the performance of radio observations under two distinct parameters such: (a) anthropogenic factors and (b) geographic factors. Under the anthropogenic factors are the population density (1) and road network (3). On the other hand, geographic factors are the climate type (2), and topographical shielding (4). Each of these factors has shown direct correlation with the Radio Frequency Interference (RFI) based from the initial analysis through Multi-Criterion Decision Analysis (MCDA). As a result, the researcher was able to rank 16 regions in the Philippines in which we can deploy the best radio astronomy observation site.

*Keywords: Astronomy; Measurement; Physics; Astrophysics; and Radio Astronomy*

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