

METHOD FOR CREATING EARTH'S MAGNETIC FIELD MODEL OPTIMIZED FOR SATELLITE ATTITUDE OBSERVER

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ABSTRACT *One of the methods of determining orientation of a small satellite orbiting Earth is based on recreating spacecraft's orientation from comparison of measured magnetic field vector and Sun position with their respective models. To achieve this in real-time regime it is necessary that those models have sufficient precision and are relatively easy to compute. In this paper a methodology of creating Earth magnetic field model will be proposed. It will be shown that by reducing more complex model and optimizing its parameters it is possible to achieve adjustable precision with simultaneous reduction of computational cost.*

Keywords: *Earth's magnetic field, satellite, model, CubeSat*