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Analee M Miranda* (analee.miranda@us.af.mil), RF Technology Branch, 2241 Avionics Circle, Building 620, WPAFB Dayton, OH 45433, and **Stephanie R Keith, Grant Erdmann** and **Loria Wang**. *Age classification of human electromagnetic scattering at ultra high frequency.*

Radar based human detection and classification is a diverse field that is rich with challenging open problems. There are currently several commercial off the shelf computational electromagnetic software that have developed human packages specifically for the purpose of radar based human detection and classification. Most software, however, is not accurate within the Ultra High Frequency (UHF) radar bands. In this paper we carefully develop a theoretical human radar scattering model for UHF. We find that there are unique human-based resonances in the UHF band that aid in classifying a general age class. We also find that we may infer certain physical body indexes from radar scattering measurements. We continue the analysis by comparing the regions of the human body that maximally scatter based on frequency selection. We conclude the paper by listing a set of open problems that have been determined based on our paper's analysis. (Received September 08, 2014)