

Abstract Submitted
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Pulse Profiles and Polarization of the Cluster Pulsars¹ ASHLEY MARTSEN, Rochester Institute of Technology, SCOTT RANSOM, NRAO — Terzan 5 is a globular cluster in our galaxy that is home to 39 millisecond pulsars. The Terzan 5 pulsars are faint, and in general the polarization data has too low S/N ratios to be able to be analyzed. We combined over eleven years worth of archival GBT data to create high S/N profiles for the majority of the pulsars in the Terzan 5 cluster. Due to an instrumental issue, some of the polarization information was contaminated and was excluded from the polarization profiles. We also created higher S/N Total Intensity pulse profiles using all the data including the contaminated data, as the total intensity data was uncontaminated by the instrumental issues. We created both high S/N polarization and total intensity profiles for 34 pulsars in the Terzan 5 cluster in two different frequency ranges. From these high signal to noise profiles, more precise DM values were found for each pulsar and 29 pulsars had RM values calculated, which allowed for a map of the parallel component of the galactic magnetic field to be created.

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