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Prompt Radio Emission from Gamma Ray Bursts NOELLE GOTTHARDT, College of New Jersey — Gamma-ray bursts have been observed, but these enigmatic objects are yet unexplained. These short duration events are undoubtedly due to high-energy events. Fading optical emission and even radio emission has been observed from such events, but prompt radio emission from these events would be very useful in pinning down the physics of the bursts, the nature of the progenitor object,and possibly the medium in which it occurs. If these phenomena occur at large redshifts, there is the possibility that the observations could probe the Epoch of Reionization, or the intergalactic medium. A number of models have been proposed to explain the gamma-ray bursts, ranging from compact object mergers, to maser-like coherent emission. These models are not well constrained by current observations. Prompt radio emission may be detected by a transient radio array. I will discuss a planned search for such signals by the Eight-meter-wavelength Transient Array (ETA).

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