

FRB scintillation, lensing, and as probes of cosmology

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I will describe my recent work on wave scattering by magnetized plasma and conversion of linearly polarized source to partial circular polarization. Gravitational lensing of FRBs in the presence of turbulent plasma will also be discussed, and some results on how plasma scatterings might affect investigations of stellar mass objects will be presented. The potential use of FRBs to investigate the cosmic reionization history will be described. And finally, some results on FRB radiation mechanism will be shared, in particular what we can learn from the 217 ms periodicity that has been reported for FRB 20191221A .