

**Proposal Abstract:**

Possible variation of the fundamental physical constants over cosmic time were suggested by modern physical theories. To test that, astrophysical techniques measuring the information from distant celestial objects are required. Previous studies have given discrepant results and the relevant studies are far from complete. OH 18-cm absorption lines are of particular interests because they can be used to constrain the cosmological variations of the fine structure constant, the electron-proton mass ratio, and the magnetic moment of the proton. More importantly, radio absorption line studies have an order of magnitude more precision than optical studies. However, to date, the detections of OH 18-cm absorption lines at  $z > 0.05$  are just six, which precludes further understanding of the variations. Here, we would like to observe nine systematically selected bright radio sources that have been detected in HI 21-cm absorption to search for OH 18-cm absorption lines, which will allow us to constrain the variations of the constants at look-back time up to 5.5 Gyr.