

A Search for OH Megamasers at $z > 0.1$: Preliminary Results

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We report the discovery of 11 OH megamasers and one OH absorber, along with upper limits on the OH luminosity of 54 other luminous infrared galaxies at $z > 0.1$. The new megamasers show a wide range of spectral properties, but are consistent with the extant set of 55 objects, 8 of which have $z > 0.1$. The new OH detections are the preliminary results of a OH megamaser survey in progress at the Arecibo Observatory^a, which is expected to produce several dozen detections.

The ultimate goal of the survey is to calibrate the luminosity function of OH megamasers to the low-redshift galaxy merger rate ($0.1 < z < 0.2$), and to use this measure to estimate the merger rate at higher redshifts using pointed and blind surveys. The survey will also provide an enhanced sample of OH megamasers for the study of their environments, engines, lifetimes, and structure.

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