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Question: Other

Faint End of 1.3 mm Number Counts Revealed by ALMA

We present the faint end of number counts at 1.3 mm (238 GHz) obtained with the ALMA. Band 6 observations were carried out targeting 20 star-forming galaxies at $z \sim 1.4$ in the Subaru/XMM-Newton Deep Survey field. In the observations, we serendipitously detect faint sources (¿3.8σ, S(1.3mm) = 0.15-0.61 mJy) other than the targeted sources. We create number counts by using these 'sub-mJy sources', which probe the faintest flux range among surveys at millimeter wavelengths. The number counts are consistent with (flux-scaled) number counts at 850 μm and 870 μm obtained with gravitational lensing clusters. The ALMA number counts agree well with model predictions, which suggest that these sub-mJy populations are more like 'normal' star-forming galaxies than 'classical' SMGs with intense star-forming activity. In this flux range, $\sim$80% of the extragalactic background light at 1.3 mm is resolved into individual sources.