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How many fast radio bursts are we missing?

Fast radio bursts (FRBs) are millisecond-duration radio transients whose population characteristics remain poorly constrained. This study applies capture-recapture analysis, an established statistical method in ecology and epidemiology, to estimate the unseen population of FRBs based on repeat detections from current radio surveys. By treating FRB detections as “captures” and accounting for the probability of re-detection across multiple observing epochs in the CHIME/FRB Catalog 1, we model the total FRB population, including those yet undetected. Preliminary results suggest a substantially larger population of FRBs than currently cataloged.

Section

Galaxy/Extragalactic

Primary author: KONG, Albert

Presenter: KONG, Albert

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