

Correction to: Characterization of the repeating FRB 20220912A with the Allen Telescope Array

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This is a correction to ‘Characterization of the repeating FRB 20220912A with the Allen Telescope Array’ by Sheikh, Sofia; Farah, Wael; Pollak, Alexander; Siemion, Andrew; Chamma, Mohammed; Cruz, Luigi; Davis, Roy; DeBoer, David; Gajjar, Vishal; Karn, Phil; Kittling, Jamar; Lu, Wenbin; Masters, Mark; Premnath, Pranav; Schoultz, Sarah; Shumaker, Carol; Singh, Gurmehar; Snodgrass, Michael, published in Monthly Notices of the Royal Astronomical Society, Volume 527, Issue 4, February 2024, Pages 10425–10439, <https://doi.org/10.1093/mnras/stad3630>.

In the referenced paper, which described 541 h of ATA observations of FRB 20220912A and the detection of 35 bursts, we reported the use of a boxcar maximum width of 4096 samples (4.194 s) in the SPANDAK software to search for Fast Radio Bursts (FRBs). In actuality, we accidentally used the default parameter of 16 samples (1.024 ms).

In practice, using a too-narrow boxcar width can cause the code to potentially miss longer duration FRBs, acting as an unintended

duration filter. Caution should thus be applied when comparing these results with other studies on FRB20220912A that considered longer duration FRBs.

We have since re-processed all 541 h of data using a wider boxcar (1024 samples or 65.53 ms, the largest value that was feasible in compute-time), and discovered 102 total FRBs; 57 FRBs were missed in the original paper due to the insufficient maximum boxcar width, and 10, generally faint, FRBs were only recovered due to a new machine learning based candidate-sorting algorithm that was not available when the original paper was written.

After re-processing we detected 102 FRBs in 541 h of observing, implying an average burst rate above 4.7 Jy of $0.19 \pm 0.02 \text{ h}^{-1}$. The analysis supporting this result will be presented in a future paper which will update and extend the work represented in section 4 of the referenced paper. The results and conclusions in the referenced paper are all still correct for the originally reported sample represented by the 1.024 ms boxcar width.

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