Fast Radio Bursts (FRBs)

Pulsars

while the other one seen as just a single pulse and has a dispersion measure consistent with being either an FRB, an RRAT, or a long-period pulsar.

Arecibo, a standard dedispersion technique was applied to search for candidate radio signals at dispersion measures up to 1000 pc cm$^{-3}$. From the first 7% of GALFACTS data, 27 known pulsars have been detected by the search method, as well as 4 strong, previously unknown candidate objects. Three of these candidates have dispersion measures and periods consistent with their being pulsars, while the other one seen as just a single pulse and has a dispersion measure consistent with being either an FRB, an RRAT, or a long-period pulsar.

Dispersion: ionized media introduce a frequency-dependent lag to the time of arrival for electromagnetic waves, quantified by the "Dispersion Measure" (DM).

Total of 34 significant signals

- 27 objects matched with entries in pulsar catalogs
- 3 of these PSRs were detected on up & down scans
- 4 unlisted in major pulsar, RRAT, or FRB catalogs

GALFACTS Data

Moving Forward

1) Follow-up observations of unknown sources
2) Continue processing GALFACTS data
3) Expand DM range from 1000 to 3000+ pc cm$^{-3}$
4) Improve analysis methods and search pipeline
5) Obtain more accurate measurements

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