

Neutron Star Group

A Collection of Information About Amateur Pulsar Detection

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Relative Flux Density of Pulsars

The challenges of detecting pulsars are clearly shown by the following tables which show the relative flux densities (in descending order) of a number of pulsars. (from the [ATNF Pulsar Catalogue](#))

Ordered by Flux Density @ 400 MHz

After the first two pulsars (B0833-45, B0329+54) the 400 MHz signal strength drops away rapidly.

| # | NAME | PSRJ | P0 (s) | DM (cm ⁻³ pc) | W50 (ms) | W10 (ms) | S400 (mJy) | S1400 (mJy) |
|----|------------|------------|-----------|-----------------------------|-------------|-------------|---------------|----------------|
| 1 | B0833-45 | J0835-4510 | 0.089328 | 67.99 | 2.100 | 4.500 | 5000.00 | 1100.00 |
| 2 | B0329+54 | J0332+5434 | 0.714520 | 26.76 | 6.600 | 31.400 | 1500.00 | 203.00 |
| 3 | B1749-28 | J1752-2806 | 0.562558 | 50.37 | 9.100 | 15.000 | 1100.00 | 18.00 |
| 4 | J0437-4715 | J0437-4715 | 0.005757 | 2.64 | 0.141 | 1.020 | 550.00 | 149.00 |
| 5 | B0531+21 | J0534+2200 | 0.033392 | 56.79 | 3.000 | 4.700 | 550.00 | 14.00 |
| 6 | B0950+08 | J0953+0755 | 0.253065 | 2.96 | 9.500 | 20.600 | 400.00 | 84.00 |
| 7 | B1642-03 | J1645-0317 | 0.387690 | 35.73 | 4.200 | 8.000 | 393.00 | 21.00 |
| 8 | B1451-68 | J1456-6843 | 0.263377 | 8.60 | 12.500 | 29.000 | 350.00 | 80.00 |
| 9 | B2016+28 | J2018+2839 | 0.557953 | 14.17 | 14.900 | 22.200 | 314.00 | 30.00 |
| 10 | B2319+60 | J2321+6024 | 2.256488 | 94.59 | 131.100 | 153.700 | 303.20 | 12.00 |
| 11 | B1929+10 | J1932+1059 | 0.226518 | 3.18 | 7.400 | 14.000 | 303.00 | 36.00 |
| 12 | B0740-28 | J0742-2822 | 0.166762 | 73.78 | 5.400 | 8.300 | 296.00 | 15.00 |
| 13 | B1133+16 | J1136+1551 | 1.187913 | 4.85 | 31.700 | 41.800 | 257.00 | 32.00 |
| 14 | B2255+58 | J2257+5909 | 0.368246 | 151.08 | 14.800 | 32.200 | 251.90 | 9.20 |
| 15 | B1933+16 | J1935+1616 | 0.358738 | 158.52 | 9.000 | 17.700 | 242.00 | 42.00 |
| 16 | B1937+21 | J1939+2134 | 0.001558 | 71.02 | 0.038 | 0.190 | 240.00 | 13.20 |
| 17 | B1449-64 | J1453-6413 | 0.179485 | 71.07 | 4.400 | 9.700 | 230.00 | 14.00 |
| 18 | B0628-28 | J0630-2834 | 1.244419 | 34.47 | 58.200 | 119.700 | 206.00 | 23.00 |
| 19 | B0835-41 | J0837-4135 | 0.751624 | 147.29 | 8.900 | 18.000 | 197.00 | 16.00 |
| 20 | B0736-40 | J0738-4042 | 0.374920 | 160.80 | 29.000 | 52.000 | 190.00 | 80.00 |

Ordered by Flux Density @ 1400 MHz

Once again, after the first several pulsars (B0833-45, B0329+54, J0437-4715) the 1400 MHz signal strength drops away quickly.

| # | NAME | PSRJ | P0 (s) | DM (cm ⁻³ pc) | W50 (ms) | W10 (ms) | S400 (mJy) | S1400 (mJy) |
|----|------------|------------|-----------|-----------------------------|-------------|-------------|---------------|----------------|
| 1 | B0833-45 | J0835-4510 | 0.089328 | 67.99 | 2.100 | 4.500 | 5000.00 | 1100.00 |
| 2 | B0329+54 | J0332+5434 | 0.714520 | 26.76 | 6.600 | 31.400 | 1500.00 | 203.00 |
| 3 | J0437-4715 | J0437-4715 | 0.005757 | 2.64 | 0.141 | 1.020 | 550.00 | 149.00 |
| 4 | B0950+08 | J0953+0755 | 0.253065 | 2.96 | 9.500 | 20.600 | 400.00 | 84.00 |
| 5 | B0736-40 | J0738-4042 | 0.374920 | 160.80 | 29.000 | 52.000 | 190.00 | 80.00 |
| 6 | B1451-68 | J1456-6843 | 0.263377 | 8.60 | 12.500 | 29.000 | 350.00 | 80.00 |
| 7 | B1933+16 | J1935+1616 | 0.358738 | 158.52 | 9.000 | 17.700 | 242.00 | 42.00 |
| 8 | B1556-44 | J1559-4438 | 0.257056 | 56.10 | 6.000 | 14.000 | 110.00 | 40.00 |
| 9 | B2020+28 | J2022+2854 | 0.343402 | 24.64 | 12.000 | 15.800 | 71.00 | 38.00 |
| 10 | B1929+10 | J1932+1059 | 0.226518 | 3.18 | 7.400 | 14.000 | 303.00 | 36.00 |
| 11 | B1133+16 | J1136+1551 | 1.187913 | 4.85 | 31.700 | 41.800 | 257.00 | 32.00 |
| 12 | B2016+28 | J2018+2839 | 0.557953 | 14.17 | 14.900 | 22.200 | 314.00 | 30.00 |
| 13 | B2021+51 | J2022+5154 | 0.529197 | 22.65 | 7.400 | 29.400 | 77.00 | 27.00 |
| 14 | B0355+54 | J0358+5413 | 0.156382 | 57.14 | 3.900 | 10.800 | 46.80 | 23.00 |
| 15 | B0628-28 | J0630-2834 | 1.244419 | 34.47 | 58.200 | 119.700 | 206.00 | 23.00 |
| 16 | B1054-62 | J1056-6258 | 0.422447 | 320.30 | 20.000 | 39.000 | 45.00 | 21.00 |
| 17 | B1642-03 | J1645-0317 | 0.387690 | 35.73 | 4.200 | 8.000 | 393.00 | 21.00 |
| 18 | B2111+46 | J2113+4644 | 1.014685 | 141.26 | 32.100 | 152.800 | 47.20 | 19.00 |
| 19 | B1749-28 | J1752-2806 | 0.562558 | 50.37 | 9.100 | 15.000 | 1100.00 | 18.00 |
| 20 | B2154+40 | J2157+4017 | 1.525266 | 70.86 | 38.600 | 114.200 | 105.00 | 17.00 |

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