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**Table 9.** Kinematic parameters of the 398 SPY white dwarfs

| star | $e$ | $J_z$ | $U$ | $V$ | $W$ |
|---|---|---|---|---|---|
| | | kpc km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ |
| EC 12489−2750 | 0.13±0.05 | 1554±93 | 20.0±8.4 | 199.8±11.6 | −4.8±10.2 |
| EC 13123−2523 | 0.06±0.04 | 1726±84 | −16.2±9.4 | 223.2±10.7 | 39.3±14.6 |
| HE 0032−2744 | 0.10±0.02 | 1577±31 | 6.8±3.1 | 197.3±3.9 | −24.5±3.4 |
| HE 0043−0318 | 0.10±0.01 | 1913±17 | 7.9±1.7 | 238.8±2.1 | −43.0±2.7 |
| HE 0049−0940 | 0.08±0.02 | 1748±36 | −24.4±4.7 | 218.1±4.5 | −6.1±2.5 |
| HE 0103−3253 | 0.15±0.01 | 1945±10 | −32.5±3.1 | 243.1±1.2 | −10.6±2.8 |
| HE 0106−3253 | 0.04±0.01 | 1813±11 | 6.4±1.6 | 226.6±1.4 | −17.8±3.1 |
| HE 0138−4014 | 0.21±0.03 | 1515±61 | 51.1±7.8 | 189.6±7.6 | −1.6±4.1 |
| HE 0145−0610 | 0.07±0.01 | 1831±11 | −17.4±2.4 | 228.4±1.4 | −9.1±4.3 |
| HE 0152−5009 | 0.06±0.02 | 1843±32 | −3.5±4.5 | 230.6±4.0 | −28.8±2.8 |
| HE 0201−0513 | 0.83±0.06 | 352±110 | −7.1±3.3 | 43.6±13.6 | −3.8±3.6 |
| HE 0204−3821 | 0.07±0.02 | 1857±27 | 12.1±3.4 | 231.9±3.3 | −3.3±3.0 |
| HE 0204−4213 | 0.26±0.02 | 1936±42 | 72.1±7.0 | 242.3±5.3 | 8.2±4.2 |
| HE 0210−2012 | 0.15±0.01 | 1992±15 | −25.9±2.9 | 247.7±1.8 | 5.9±3.0 |
| HE 0222−2630 | 0.08±0.01 | 1859±16 | −17.6±2.3 | 231.3±2.0 | −18.7±3.3 |
| HE 0245−0008 | 0.27±0.02 | 1410±43 | −56.3±4.1 | 174.5±5.4 | −5.5±4.0 |
| HE 0246−5449 | 0.03±0.01 | 1791±27 | −7.2±3.4 | 223.9±3.4 | 4.6±3.2 |
| HE 0257−2104 | 0.22±0.01 | 1944±15 | 58.8±4.2 | 241.5±1.9 | −33.9±3.3 |
| HE 0300−2313 | 0.05±0.01 | 1846±15 | 4.1±2.4 | 230.0±1.9 | −0.1±4.3 |
| HE 0308−2305 | 0.09±0.01 | 1875±15 | 18.4±2.7 | 233.6±1.9 | −2.4±4.8 |
| HE 0317−2120 | 0.03±0.01 | 1808±12 | 3.4±2.0 | 225.4±1.5 | −0.7±3.2 |
| HE 0324−0646 | 0.08±0.01 | 1645±19 | 9.5±2.4 | 204.2±2.5 | −1.3±2.5 |
| HE 0324−2234 | 0.10±0.02 | 1882±32 | −25.9±4.2 | 233.5±3.9 | −2.4±3.7 |
| HE 0330−4736 | 0.11±0.02 | 1962±28 | −2.9±2.9 | 244.8±3.5 | −12.7±3.4 |
| HE 0333−2201 | 0.10±0.01 | 1893±13 | 21.2±2.3 | 235.9±1.6 | −19.3±3.2 |
| HE 0336−0741 | 0.22±0.02 | 1382±36 | −14.7±2.8 | 171.4±4.6 | −7.2±3.2 |
| HE 0338−3025 | 0.20±0.01 | 1922±17 | 56.1±3.1 | 239.8±2.2 | 15.5±3.6 |
| HE 0348−2404 | 0.05±0.01 | 1849±16 | −6.5±2.2 | 229.7±2.0 | −6.5±2.5 |
| HE 0348−4445 | 0.07±0.02 | 1877±33 | −7.8±3.4 | 233.9±4.1 | −14.2±4.1 |
| HE 0349−2537 | 0.12±0.01 | 1891±34 | 27.3±4.3 | 234.9±4.3 | 12.0±3.9 |
| HE 0358−5127 | 0.07±0.01 | 1859±29 | 8.2±3.5 | 232.1±3.6 | −4.3±3.5 |
| HE 0403−4129 | 0.14±0.02 | 2004±32 | 8.2±4.9 | 249.3±4.0 | −9.8±3.6 |
| HE 0404−1852 | 0.03±0.01 | 1784±17 | −10.1±2.5 | 220.8±2.2 | 4.6±2.7 |
| HE 0409−5154 | 0.37±0.04 | 1267±64 | 79.2±10.9 | 159.1±7.9 | 9.0±7.7 |
| HE 0416−1034 | 0.34±0.14 | 2296±287 | −50.0±25.6 | 283.2±35.4 | −14.6±28.7 |
| HE 0418−1021 | 0.04±0.01 | 1808±16 | −11.0±3.5 | 223.5±2.0 | 3.8±3.2 |
| HE 0418−5326 | 0.21±0.03 | 2148±48 | −3.2±5.8 | 267.7±6.0 | −1.0±6.0 |
| HE 0425−2015 | 0.06±0.01 | 1867±21 | 5.0±3.1 | 231.2±2.6 | −10.1±3.3 |
| HE 0426−0455 | 0.18±0.01 | 2083±14 | 9.5±2.6 | 259.1±1.7 | 5.7±1.9 |
| HE 0426−1011 | 0.21±0.01 | 1431±27 | −29.0±2.3 | 177.0±3.4 | 12.1±2.9 |
| HE 0436−1633 | 0.17±0.01 | 1703±30 | 52.4±3.9 | 211.6±3.7 | −18.0±3.7 |
| HE 0452−3429 | 0.03±0.01 | 1745±16 | −8.9±1.4 | 217.0±2.0 | −15.5±2.0 |
| HE 0452−3444 | 0.37±0.03 | 1152±56 | 57.7±3.9 | 143.6±7.0 | 73.4±5.9 |
| HE 0456−2347 | 0.10±0.01 | 1715±25 | 27.2±3.6 | 211.8±3.1 | −12.7±3.1 |
| HE 0507−1855 | 0.07±0.01 | 1897±27 | 0.7±3.7 | 234.9±3.3 | −8.6±3.2 |
| HE 0508−2343 | 0.33±0.01 | 1483±18 | −94.0±3.6 | 182.8±2.2 | −0.9±3.8 |
| HE 0532−5605 | 0.21±0.02 | 1370±43 | 0.6±1.4 | 171.1±5.3 | −31.7±3.7 |
| HE 1012−0049 | 0.12±0.01 | 1976±22 | 10.6±2.1 | 246.1±2.8 | 9.8±2.9 |
| HE 1053−0914 | 0.07±0.01 | 1779±25 | 16.2±2.7 | 222.1±3.1 | 0.2±3.1 |
| HE 1117−0222 | 0.03±0.00 | 1758±16 | −11.0±1.4 | 219.6±2.0 | 11.8±2.5 |
| HE 1124+0144 | 0.33±0.02 | 1581±18 | −101.8±7.5 | 196.5±2.3 | 33.4±2.9 |
| HE 1152−1244 | 0.02±0.01 | 1758±22 | 4.8±2.0 | 220.1±2.7 | 7.4±2.8 |
| HE 1215+0227 | 0.09±0.03 | 1615±56 | −17.8±6.1 | 202.5±7.0 | −2.0±8.5 |
| HE 1225+0038 | 0.17±0.01 | 2054±14 | −6.0±1.1 | 256.9±1.8 | −8.4±3.4 |
| HE 1233−0519 | 0.16±0.04 | 2000±80 | 17.9±5.1 | 250.8±10.0 | −12.6±17.1 |
| HE 1252−0202 | 0.07±0.01 | 1710±21 | 19.7±2.0 | 214.8±2.6 | −7.6±3.4 |
| HE 1258+0123 | 0.14±0.01 | 1964±21 | 23.7±2.3 | 246.2±2.6 | 23.7±5.3 |
| HE 1307−0059 | 0.16±0.07 | 1484±131 | 0.9±16.3 | 186.3±16.5 | 20.0±8.9 |
| HE 1315−1105 | 0.05±0.01 | 1802±20 | −13.3±2.6 | 225.7±2.4 | 9.2±3.4 |
| HE 1325−0854 | 0.11±0.01 | 1944±15 | 5.3±1.9 | 244.0±1.8 | −15.5±2.3 |
| HE 1326−0041 | 0.13±0.01 | 1785±18 | 38.8±2.8 | 224.7±2.2 | −4.0±3.3 |
| HE 1328−0535 | 0.09±0.02 | 1649±55 | −26.0±7.7 | 208.7±6.8 | −12.3±10.1 |
| HE 1335−0332 | 0.06±0.01 | 1787±22 | −17.9±3.6 | 224.7±2.7 | 24.0±5.2 |
| HE 1413+0021 | 0.16±0.01 | 2033±11 | 11.6±2.6 | 255.3±1.5 | 0.3±3.7 |

**Table 9.** Kinematic parameters of the 398 SPY white dwarfscontinued from previous page

| star | $e$ | $J_z$ kpc km s$^{-1}$ | $U$ km s$^{-1}$ | $V$ km s$^{-1}$ | $W$ km s$^{-1}$ |
|---|---|---|---|---|---|
| HE 1441−0047 | 0.18±0.01 | 2063±18 | 12.2±3.9 | 260.1±2.4 | −1.2±4.5 |
| HE 1518−0020 | 0.16±0.02 | 1490±31 | 20.6±2.5 | 187.4±3.8 | 15.2±2.3 |
| HE 1518−0344 | 0.09±0.02 | 1618±38 | 21.1±4.4 | 206.2±4.7 | −1.7±4.5 |
| HE 2133−1332 | 0.04±0.01 | 1747±14 | −12.3±1.9 | 218.7±1.7 | −8.6±2.5 |
| HE 2135−4055 | 0.21±0.01 | 1988±6 | 52.3±2.4 | 249.2±0.7 | −7.8±2.5 |
| HE 2140−1825 | 0.03±0.01 | 1745±15 | 10.9±1.9 | 219.5±1.8 | 17.5±2.0 |
| HE 2203−0101 | 0.09±0.01 | 1876±18 | 16.8±1.6 | 235.5±2.3 | 3.7±2.2 |
| HE 2205−1355 | 0.07±0.01 | 1878±18 | 1.4±2.3 | 235.6±2.2 | 1.9±3.6 |
| HE 2218−2706 | 0.16±0.01 | 1903±10 | −40.7±2.2 | 238.8±1.3 | 43.3±2.5 |
| HE 2220−0633 | 0.24±0.02 | 1941±20 | 68.0±6.7 | 243.2±2.4 | 10.9±4.5 |
| HE 2221−1630 | 0.08±0.01 | 1748±21 | 24.8±2.1 | 219.1±2.6 | −3.5±3.3 |
| HE 2230−1230 | 0.17±0.01 | 1945±23 | −37.4±3.7 | 245.0±2.9 | −2.8±3.0 |
| HE 2231−2647 | 0.09±0.01 | 1806±10 | −25.5±2.1 | 227.0±1.2 | 25.8±2.7 |
| HE 2251−6218 | 0.06±0.01 | 1817±25 | −15.3±3.5 | 228.7±3.1 | −2.9±3.2 |
| HE 2334−1355 | 0.11±0.01 | 1689±35 | 33.6±4.0 | 211.8±4.4 | −7.4±2.8 |
| HE 2347−4608 | 0.18±0.02 | 1621±58 | 52.4±5.2 | 204.3±7.3 | −12.1±3.3 |
| HE 2356−4513 | 0.14±0.01 | 1896±9 | 36.3±2.4 | 237.8±1.1 | −14.4±2.6 |
| HS0129+1041 | 0.12±0.01 | 1844±20 | −33.7±2.8 | 229.5±2.5 | −14.4±2.7 |
| HS0145+1737 | 0.04±0.01 | 1798±31 | −8.7±4.0 | 223.4±3.9 | 15.6±3.7 |
| HS0223+1211 | 0.21±0.01 | 1788±19 | 64.5±3.4 | 221.0±2.3 | 39.5±3.5 |
| HS0225+0010 | 0.07±0.01 | 1837±9 | 16.5±2.3 | 228.4±1.2 | 10.8±3.1 |
| HS0241+1411 | 0.15±0.01 | 2014±17 | 18.0±3.0 | 249.6±2.0 | 11.4±2.8 |
| HS0315+0858 | 0.07±0.01 | 1792±17 | −20.8±2.6 | 221.8±2.1 | 7.8±2.5 |
| HS0325+2142 | 0.11±0.01 | 1746±20 | −34.6±2.8 | 217.0±2.6 | −15.7±1.7 |
| HS0329+1121 | 0.13±0.01 | 1966±22 | 20.4±3.7 | 243.3±2.6 | 23.1±3.1 |
| HS0331+2240 | 0.29±0.01 | 2298±26 | −4.7±3.4 | 284.5±3.1 | 28.6±2.7 |
| HS0337+0939 | 0.15±0.01 | 1970±11 | −30.6±3.5 | 244.2±1.4 | −15.0±2.6 |
| HS0344+0944 | 0.09±0.01 | 1924±12 | 8.2±4.0 | 238.2±1.5 | −11.8±3.0 |
| HS0345+1324 | 0.15±0.01 | 2043±17 | −5.9±4.7 | 252.2±2.1 | −12.2±3.3 |
| HS0400+1451 | 0.15±0.01 | 1910±7 | −37.9±3.4 | 237.4±0.9 | −7.9±2.0 |
| HS0412+0632 | 0.11±0.01 | 1571±25 | 3.0±2.3 | 194.9±3.2 | −4.5±1.8 |
| HS0820+2503 | 0.33±0.03 | 1320±51 | −77.7±6.5 | 162.0±6.5 | −74.5±9.6 |
| HS0929+0839 | 0.08±0.01 | 1853±19 | −21.7±3.1 | 230.0±2.4 | −7.4±3.1 |
| HS0944+1913 | 0.14±0.01 | 1718±13 | −42.3±2.7 | 213.4±1.7 | 7.8±3.0 |
| HS0949+0935 | 0.06±0.01 | 1786±24 | −19.8±3.2 | 221.2±3.0 | −5.2±3.4 |
| HS1013+0321 | 0.10±0.01 | 1685±23 | 25.7±1.9 | 210.2±2.8 | 2.0±2.8 |
| HS1043+0258 | 0.11±0.02 | 1951±28 | −1.2±3.5 | 243.3±3.5 | 7.0±3.6 |
| HS1053+0844 | 0.03±0.01 | 1812±20 | −5.8±2.3 | 225.6±2.5 | −0.2±3.0 |
| HS1144+1517 | 0.10±0.01 | 1803±17 | −31.1±3.1 | 224.9±2.1 | 8.3±3.5 |
| HS1153+1416 | 0.14±0.07 | 1521±135 | 6.1±11.6 | 190.0±16.9 | −24.3±6.6 |
| HS1204+0159 | 0.06±0.01 | 1750±42 | 13.9±3.4 | 219.4±5.2 | 1.3±4.2 |
| HS1305+0029 | 0.11±0.02 | 1573±28 | −11.8±2.8 | 197.3±3.4 | 16.5±3.0 |
| HS1338+0807 | 0.30±0.02 | 1471±33 | 85.4±4.6 | 185.6±4.0 | 29.9±3.9 |
| HS1410+0809 | 0.12±0.01 | 1919±6 | 22.4±2.7 | 240.7±0.8 | 22.2±5.1 |
| HS1430+1339 | 0.06±0.00 | 1831±8 | −10.1±2.3 | 229.5±0.9 | −19.2±4.2 |
| HS1432+1441 | 0.29±0.02 | 1609±40 | 91.4±5.5 | 202.2±5.0 | 29.1±3.8 |
| HS1447+0454 | 0.07±0.01 | 1802±14 | −19.3±2.2 | 226.4±1.8 | −4.7±2.5 |
| HS1517+0814 | 0.21±0.01 | 1928±27 | 58.7±3.9 | 242.6±3.3 | 0.1±3.6 |
| HS1527+0614 | 0.93±0.04 | 171±146 | 175.3±12.5 | 21.2±18.4 | −48.8±8.2 |
| HS1614+1136 | 0.02±0.01 | 1713±19 | −1.2±3.1 | 215.8±2.3 | 13.0±2.9 |
| HS1616+0247 | 0.04±0.01 | 1786±18 | −6.2±2.9 | 225.7±2.2 | 6.8±2.5 |
| HS1641+1124 | 0.07±0.01 | 1819±17 | 19.9±2.5 | 229.0±2.1 | 18.1±2.0 |
| HS1646+1059 | 0.10±0.01 | 1698±21 | 32.7±3.4 | 214.6±2.6 | −25.8±3.0 |
| HS1648+1300 | 0.13±0.01 | 1857±17 | −33.6±2.5 | 234.2±2.2 | −30.0±2.2 |
| HS2058+0823 | 0.07±0.01 | 1806±30 | −16.0±3.2 | 228.0±3.8 | 14.7±2.8 |
| HS2132+0941 | 0.09±0.01 | 1682±19 | 26.1±2.4 | 210.9±2.3 | 25.3±1.8 |
| HS2138+0910 | 0.16±0.01 | 1477±21 | −0.9±1.4 | 185.0±2.6 | 16.2±2.0 |
| HS2148+1631 | 0.08±0.01 | 1654±24 | −15.5±2.1 | 207.6±3.0 | −25.6±3.4 |
| HS2210+2323 | 0.10±0.02 | 1939±33 | 2.7±1.6 | 242.7±4.2 | −4.2±2.5 |
| HS2225+2158 | 0.16±0.01 | 1836±25 | 50.3±3.5 | 229.2±3.2 | 10.9±2.3 |
| HS2229+2335 | 0.14±0.01 | 1566±26 | −24.7±2.9 | 196.1±3.3 | 6.8±2.9 |
| HS2233+0008 | 0.16±0.01 | 1926±16 | 41.5±2.0 | 241.0±2.0 | 3.1±2.3 |
| HS2259+1419 | 0.03±0.01 | 1688±17 | −3.0±1.4 | 211.1±2.2 | 49.2±2.0 |
| MCT 0031−3107 | 0.17±0.02 | 1710±50 | 50.4±5.7 | 214.7±6.2 | 15.0±17.5 |

**Table 9.** Kinematic parameters of the 398 SPY white dwarfscontinued from previous page

| star | $e$ | $J_z$ | $U$ | $V$ | $W$ |
|---|---|---|---|---|---|
| | | kpc km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ |
| MCT 0105−1634 | 0.22±0.04 | 1410±75 | 34.4±6.7 | 175.0±9.4 | −7.8±5.0 |
| MCT 0110−1617 | 0.16±0.07 | 2003±148 | −3.7±23.9 | 248.6±18.2 | −17.5±7.7 |
| MCT 2343−1740 | 0.14±0.02 | 2003±41 | −0.1±4.6 | 251.0±5.2 | 9.2±5.5 |
| MCT 2345−3940 | 0.13±0.01 | 1753±14 | −39.6±3.4 | 220.1±1.7 | 14.4±3.4 |
| MCT 2349−3627 | 0.24±0.05 | 1319±89 | 13.4±9.1 | 167.1±11.0 | −4.5±12.1 |
| WD 0000−186 | 0.19±0.01 | 1710±21 | 60.3±4.1 | 213.9±2.6 | 3.9±3.1 |
| WD 0005−163 | 0.21±0.02 | 1453±33 | −39.0±3.8 | 181.9±4.1 | 1.3±3.3 |
| WD 0011+000 | 0.23±0.02 | 1411±39 | −36.0±3.5 | 176.4±4.8 | −8.1±4.4 |
| WD 0013−241 | 0.30±0.02 | 2149±29 | 61.6±4.5 | 268.8±3.7 | 22.0±2.9 |
| WD 0016−220 | 0.12±0.01 | 1849±7 | 32.7±1.9 | 231.2±0.9 | 13.9±2.7 |
| WD 0016−258 | 0.11±0.01 | 1815±16 | 31.9±2.3 | 227.1±2.0 | −7.3±5.8 |
| WD 0018−339 | 0.16±0.02 | 1605±30 | −44.8±4.9 | 200.8±3.8 | −12.1±2.8 |
| WD 0029−181 | 0.10±0.02 | 1600±38 | −14.1±4.0 | 200.0±4.8 | −21.1±3.2 |
| WD 0032−175 | 0.25±0.02 | 1541±28 | −68.7±5.7 | 192.7±3.5 | 4.8±3.7 |
| WD 0032−177 | 0.22±0.03 | 1654±50 | −65.3±8.3 | 206.8±6.2 | 12.3±3.0 |
| WD 0033+016 | 0.17±0.01 | 1697±29 | 52.7±3.5 | 211.9±3.6 | −13.6±6.2 |
| WD 0047−524 | 0.07±0.01 | 1802±18 | −19.1±3.0 | 225.6±2.2 | −5.5±2.3 |
| WD 0048+202 | 0.07±0.01 | 1772±20 | −20.4±2.5 | 220.7±2.6 | −0.5±2.2 |
| WD 0052−147 | 0.06±0.01 | 1866±14 | 3.5±1.4 | 233.0±1.8 | −7.0±4.0 |
| WD 0101+048 | 0.11±0.01 | 1924±14 | −16.9±2.4 | 240.3±1.8 | 14.5±3.7 |
| WD 0102−142 | 0.14±0.02 | 1966±33 | −22.5±3.9 | 245.2±4.1 | 20.6±3.2 |
| WD 0103−278 | 0.25±0.02 | 1387±36 | −46.8±3.9 | 173.3±4.5 | −9.8±3.0 |
| WD 0106−358 | 0.13±0.02 | 1805±27 | 39.5±5.0 | 225.7±3.4 | −25.3±1.7 |
| WD 0108+143 | 0.12±0.01 | 1691±33 | −33.0±4.0 | 211.0±4.2 | −9.3±4.7 |
| WD 0110−139 | 0.08±0.01 | 1884±17 | 14.9±2.1 | 234.7±2.2 | −5.4±3.8 |
| WD 0114−605 | 0.19±0.02 | 1489±32 | −38.8±5.5 | 186.4±4.0 | −25.0±3.1 |
| WD 0124−257 | 0.22±0.02 | 1378±39 | 9.9±1.9 | 171.9±4.9 | −0.7±3.6 |
| WD 0126+101 | 0.16±0.01 | 1704±15 | 49.3±2.7 | 212.6±2.0 | −9.5±3.2 |
| WD 0127−050 | 0.20±0.01 | 1805±22 | 63.7±3.9 | 225.2±2.7 | 5.4±3.1 |
| WD 0129−205 | 0.13±0.01 | 1716±17 | −40.6±2.9 | 214.1±2.2 | −44.0±1.3 |
| WD 0137−291 | 0.04±0.01 | 1727±18 | −11.0±2.1 | 215.4±2.3 | 5.8±3.7 |
| WD 0138−236 | 0.07±0.03 | 1701±53 | 16.0±7.0 | 211.1±6.6 | 14.1±22.1 |
| WD 0140−392 | 0.10±0.01 | 1790±20 | −32.4±3.8 | 223.7±2.5 | −13.1±3.4 |
| WD 0143+216 | 0.17±0.01 | 1813±22 | 51.7±3.5 | 226.1±2.8 | 14.7±3.6 |
| WD 0145−221 | 0.02±0.01 | 1780±17 | −2.5±2.2 | 222.2±2.1 | −12.2±6.0 |
| WD 0148−255J | 0.19±0.03 | 1436±49 | −8.4±4.3 | 179.2±6.1 | 2.3±3.3 |
| WD 0151+017 | 0.25±0.02 | 1574±33 | −71.9±4.9 | 196.3±4.1 | −6.4±3.0 |
| WD 0155+069 | 0.30±0.01 | 2238±27 | 46.4±2.7 | 277.5±3.2 | 17.2±2.5 |
| WD 0204−233 | 0.31±0.03 | 1222±43 | −32.8±2.1 | 152.2±5.4 | −48.7±3.2 |
| WD 0205−136J | 0.09±0.02 | 1860±31 | 23.2±5.3 | 229.5±3.9 | −21.8±8.4 |
| WD 0205−304 | 0.24±0.02 | 1390±33 | −41.3±3.3 | 173.2±4.2 | −25.4±3.2 |
| WD 0205−365 | 0.07±0.03 | 1769±72 | 13.0±9.8 | 219.6±9.0 | −18.7±6.4 |
| WD 0208−263 | 0.12±0.02 | 1653±48 | −31.5±6.1 | 205.0±6.0 | −28.9±5.1 |
| WD 0209+085 | 0.14±0.01 | 1792±26 | −42.5±3.9 | 222.4±3.4 | −27.1±4.4 |
| WD 0212−231 | 0.12±0.01 | 1865±26 | −33.7±4.2 | 231.4±3.3 | 7.0±4.1 |
| WD 0226−329 | 0.19±0.01 | 1710±22 | 59.3±4.0 | 213.5±2.8 | 7.7±2.6 |
| WD 0227+050 | 0.06±0.00 | 1849±6 | 8.9±1.5 | 230.7±0.8 | 13.7±1.8 |
| WD 0229−481 | 0.13±0.04 | 1532±81 | −0.6±10.0 | 191.3±10.1 | 24.0±7.0 |
| WD 0231−054 | 0.10±0.01 | 1830±7 | −29.6±4.0 | 228.2±1.0 | 8.4±5.6 |
| WD 0242−174 | 0.06±0.01 | 1869±10 | −5.6±1.8 | 232.4±1.3 | 1.5±2.7 |
| WD 0243+155 | 0.11±0.01 | 1926±16 | 21.3±3.3 | 238.0±2.0 | −6.7±3.0 |
| WD 0250−007 | 0.03±0.01 | 1806±10 | 2.1±3.6 | 225.0±1.3 | 13.9±4.3 |
| WD 0250−026 | 0.14±0.01 | 2017±19 | −7.5±2.4 | 251.1±2.3 | −21.4±2.4 |
| WD 0252−350 | 0.86±0.05 | 362±93 | 138.0±10.9 | 46.0±11.4 | −42.4±3.3 |
| WD 0255−705 | 0.44±0.04 | 974±70 | −3.1±8.4 | 121.8±8.8 | 48.9±8.4 |
| WD 0302+027 | 0.23±0.05 | 1571±110 | 63.8±11.2 | 194.0±13.7 | −56.4±11.6 |
| WD 0308+188 | 0.02±0.01 | 1795±13 | −2.3±2.0 | 223.4±1.7 | −14.4±1.7 |
| WD 0310−688 | 0.07±0.00 | 1709±15 | 20.3±0.6 | 213.7±1.8 | −11.8±1.8 |
| WD 0317+196 | 0.10±0.01 | 1907±14 | −22.1±2.6 | 236.3±1.8 | −16.6±2.0 |
| WD 0318−021 | 0.13±0.01 | 1980±10 | −19.8±2.8 | 245.8±1.2 | 16.8±2.7 |
| WD 0320−539 | 0.19±0.02 | 1541±40 | 45.2±5.5 | 193.0±5.0 | −5.3±4.5 |
| WD 0336+040 | 0.09±0.01 | 1698±16 | −26.2±4.4 | 211.4±2.0 | −10.2±3.6 |
| WD 0339−035 | 0.20±0.01 | 1632±18 | −58.1±3.5 | 202.9±2.3 | 13.3±3.8 |
| WD 0352+052 | 0.34±0.01 | 1582±27 | 102.4±3.1 | 196.6±3.4 | 64.9±2.3 |

**Table 9.** Kinematic parameters of the 398 SPY white dwarfscontinued from previous page

| star | $e$ | $J_z$ | $U$ | $V$ | $W$ |
|---|---|---|---|---|---|
| | | kpc km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ |
| WD 0352+096 | 0.13±0.01 | 1771±12 | −42.0±3.2 | 220.5±1.5 | 3.1±2.4 |
| WD 0408−041 | 0.13±0.01 | 1682±23 | 38.6±3.3 | 208.8±2.9 | −4.9±2.7 |
| WD 0416−550 | 0.13±0.03 | 1553±46 | −19.7±6.1 | 193.3±5.9 | 23.9±6.2 |
| WD 0431+126 | 0.11±0.01 | 1773±10 | −35.3±3.1 | 220.3±1.3 | 6.1±1.7 |
| WD 0437+152 | 0.04±0.01 | 1825±20 | 9.0±2.6 | 224.1±2.5 | −19.5±2.9 |
| WD 0455−282 | 0.14±0.03 | 1568±47 | −26.1±5.1 | 194.3±6.0 | 3.9±6.0 |
| WD 0507+045.1 | 0.05±0.01 | 1832±9 | 10.6±2.8 | 228.3±1.2 | −1.2±1.3 |
| WD 0509−007 | 0.27±0.02 | 2269±41 | −13.5±3.0 | 279.9±4.8 | −18.0±3.5 |
| WD 0548+000 | 0.34±0.04 | 1207±62 | −31.4±7.4 | 147.6±7.9 | 10.9±3.9 |
| WD 0549+158 | 0.16±0.02 | 1489±37 | 10.1±2.9 | 184.8±4.7 | 0.5±1.0 |
| WD 0556+172 | 0.11±0.01 | 1824±12 | −33.7±3.6 | 225.5±1.6 | 1.0±1.4 |
| WD 0558+165 | 0.11±0.01 | 1870±13 | −28.7±3.6 | 231.7±1.7 | −13.3±2.4 |
| WD 0612+177 | 0.20±0.02 | 1391±34 | 1.8±2.8 | 172.9±4.3 | −43.2±3.5 |
| WD 0642−285 | 0.07±0.01 | 1836±27 | 16.5±2.7 | 229.1±3.4 | −23.6±3.0 |
| WD 0710+216 | 0.01±0.01 | 1766±12 | −1.4±3.0 | 219.6±1.6 | −23.3±2.4 |
| WD 0715−704J | 0.19±0.02 | 1938±36 | −53.7±6.5 | 242.2±4.5 | −21.3±5.0 |
| WD 0732−427 | 0.35±0.02 | 1555±24 | −106.2±6.8 | 193.6±3.0 | 59.2±4.5 |
| WD 0839−327 | 0.22±0.02 | 1845±21 | −66.5±4.8 | 230.5±2.7 | 8.1±0.4 |
| WD 0852+192 | 0.07±0.01 | 1896±14 | 1.3±2.6 | 235.4±1.8 | −11.0±2.5 |
| WD 0858+160 | 0.25±0.01 | 2048±25 | −62.8±3.4 | 253.6±2.9 | 14.5±2.6 |
| WD 0908+171 | 0.09±0.01 | 1931±17 | −4.0±2.7 | 239.0±2.1 | −8.0±2.6 |
| WD 0911−076 | 0.09±0.01 | 1707±24 | −29.3±2.7 | 211.5±2.9 | −7.3±2.9 |
| WD 0937−103 | 0.05±0.01 | 1750±35 | 11.6±2.1 | 218.1±4.4 | −6.1±3.2 |
| WD 0939−153 | 0.02±0.01 | 1792±27 | −6.3±2.6 | 223.1±3.3 | 17.6±2.7 |
| WD 0950+077 | 0.16±0.01 | 1673±23 | 46.4±2.9 | 208.2±2.9 | 3.2±2.2 |
| WD 0951−155 | 0.26±0.02 | 2084±29 | −63.2±5.8 | 258.7±3.5 | 15.8±2.7 |
| WD 0954+134 | 0.11±0.02 | 1806±41 | 31.6±4.8 | 224.1±5.1 | 3.0±4.5 |
| WD 0955+247 | 0.12±0.01 | 1568±24 | −13.4±2.4 | 195.7±3.0 | −5.0±3.4 |
| WD 0956+020 | 0.06±0.01 | 1756±16 | 15.5±2.5 | 218.6±2.0 | 50.3±2.6 |
| WD 0956+045 | 0.30±0.03 | 1270±45 | 34.1±4.2 | 158.1±5.6 | 16.0±3.5 |
| WD 1000−001 | 0.14±0.01 | 1578±19 | −30.1±2.5 | 195.7±2.5 | 18.7±2.9 |
| WD 1003−023 | 0.17±0.01 | 1965±19 | −40.3±3.7 | 244.4±2.4 | −6.6±2.6 |
| WD 1010+043 | 0.23±0.02 | 1530±36 | 59.3±5.5 | 190.3±4.5 | 39.6±4.2 |
| WD 1013−010 | 0.45±0.04 | 1084±37 | −91.9±12.2 | 135.1±4.7 | 70.6±8.4 |
| WD 1015+076 | 0.11±0.02 | 1931±36 | 19.2±3.4 | 240.1±4.5 | −13.8±5.8 |
| WD 1015+161 | 0.17±0.01 | 1526±23 | −35.6±2.7 | 189.5±2.9 | 4.2±3.3 |
| WD 1015−216 | 0.11±0.02 | 1930±31 | 10.9±2.2 | 240.8±3.9 | −14.8±3.1 |
| WD 1017+125 | 0.09±0.01 | 1907±19 | 10.6±2.0 | 237.0±2.3 | −11.0±2.8 |
| WD 1019+129 | 0.13±0.01 | 1587±19 | −25.8±2.2 | 197.3±2.4 | 19.1±3.1 |
| WD 1020−207 | 0.17±0.01 | 1458±22 | −14.2±2.1 | 181.9±2.7 | 12.7±2.6 |
| WD 1022+050 | 0.19±0.01 | 1491±13 | −45.1±2.0 | 185.9±1.6 | 61.3±2.2 |
| WD 1026+023 | 0.05±0.01 | 1852±15 | 4.3±1.7 | 231.1±1.9 | −14.7±2.4 |
| WD 1036+085 | 0.14±0.02 | 1645±29 | 34.8±3.6 | 204.4±3.7 | 6.2±3.0 |
| WD 1049−158 | 0.07±0.01 | 1740±28 | −21.5±2.3 | 217.4±3.5 | 12.2±2.8 |
| WD 1053−290 | 0.21±0.01 | 2015±30 | 46.5±2.6 | 252.2±3.8 | 3.0±2.1 |
| WD 1053−550 | 0.20±0.02 | 1778±23 | −62.4±5.3 | 222.3±2.9 | 22.0±2.7 |
| WD 1102−183 | 0.12±0.01 | 1787±27 | 37.3±2.1 | 223.5±3.3 | 25.0±2.6 |
| WD 1105−048 | 0.18±0.01 | 1487±24 | 26.8±1.4 | 185.8±3.0 | −3.0±2.7 |
| WD 1116+026 | 0.05±0.01 | 1815±15 | −12.0±1.4 | 226.7±1.9 | 21.6±2.8 |
| WD 1122−324 | 0.17±0.01 | 1909±26 | −49.9±4.5 | 238.7±3.2 | −8.9±2.8 |
| WD 1124−293 | 0.21±0.01 | 1908±25 | 59.7±3.6 | 238.9±3.1 | −17.7±2.5 |
| WD 1125−025 | 0.05±0.01 | 1731±34 | −15.2±3.1 | 216.1±4.2 | 11.3±5.4 |
| WD 1126−222 | 0.21±0.02 | 1452±43 | −40.4±3.9 | 181.4±5.4 | −10.3±4.5 |
| WD 1129+155 | 0.10±0.00 | 1881±9 | 21.6±1.1 | 234.9±1.2 | 12.7±2.9 |
| WD 1130−125 | 0.02±0.01 | 1775±28 | −5.1±1.3 | 222.0±3.5 | −1.4±3.6 |
| WD 1144−246 | 0.08±0.01 | 1806±27 | −27.9±4.2 | 226.6±3.4 | −21.6±3.5 |
| WD 1145+187 | 0.20±0.01 | 2099±19 | 1.5±1.3 | 262.1±2.3 | 34.2±2.7 |
| WD 1150−153 | 0.04±0.01 | 1746±25 | 9.5±1.9 | 218.6±3.1 | −9.5±3.1 |
| WD 1152−287 | 0.28±0.02 | 1248±28 | −13.0±4.5 | 156.6±3.6 | 36.0±2.6 |
| WD 1155−243 | 0.15±0.02 | 1500±30 | −12.7±2.9 | 188.1±3.8 | −12.7±3.4 |
| WD 1159−098 | 0.03±0.01 | 1756±33 | −7.4±1.7 | 219.6±4.2 | −11.2±4.9 |
| WD 1201−001 | 0.04±0.01 | 1714±20 | −11.1±1.7 | 214.3±2.6 | 10.0±3.6 |
| WD 1202−232 | 0.16±0.01 | 2046±21 | 4.0±1.0 | 255.8±2.7 | 7.6±2.3 |
| WD 1204−136 | 0.19±0.02 | 1571±33 | −49.6±4.3 | 196.4±4.1 | −9.5±3.7 |

**Table 9.** Kinematic parameters of the 398 SPY white dwarfscontinued from previous page

| star | $e$ | $J_z$ | $U$ | $V$ | $W$ |
|---|---|---|---|---|---|
| | | kpc km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ |
| WD 1207−157 | 0.11±0.01 | 1801±32 | −34.1±4.4 | 225.6±4.0 | −9.9±3.8 |
| WD 1216+036 | 0.12±0.01 | 1675±19 | 32.8±2.2 | 209.8±2.4 | 7.0±2.9 |
| WD 1220−292 | 0.15±0.01 | 1940±20 | 29.6±2.4 | 243.8±2.5 | −11.2±2.5 |
| WD 1230−308 | 0.13±0.01 | 1901±26 | 27.5±2.2 | 239.1±3.3 | 4.3±2.4 |
| WD 1231−141 | 0.09±0.01 | 1795±22 | −30.1±2.9 | 225.0±2.8 | −11.5±2.7 |
| WD 1233−164 | 0.09±0.02 | 1591±28 | −3.2±2.5 | 199.4±3.4 | 6.3±3.4 |
| WD 1236−495 | 0.13±0.02 | 1879±48 | −33.8±4.2 | 235.1±6.0 | −5.9±2.1 |
| WD 1237−028 | 0.09±0.01 | 1790±36 | −26.7±3.8 | 224.0±4.5 | 5.5±5.2 |
| WD 1241+235 | 0.13±0.01 | 1963±15 | 20.3±2.0 | 245.4±1.8 | −10.2±3.7 |
| WD 1244−125 | 0.10±0.01 | 1738±20 | −30.7±3.2 | 217.5±2.5 | 13.4±2.8 |
| WD 1249+160 | 0.25±0.02 | 1726±47 | 78.3±7.4 | 216.4±5.8 | −0.9±2.4 |
| WD 1249+182 | 0.10±0.01 | 1877±19 | −24.1±2.8 | 234.9±2.3 | −11.6±2.5 |
| WD 1257+032 | 0.10±0.01 | 1819±15 | −29.6±3.1 | 228.0±1.8 | 16.0±2.8 |
| WD 1257+047 | 0.13±0.01 | 1533±25 | 10.3±1.3 | 192.1±3.1 | 8.6±2.9 |
| WD 1308−301 | 0.19±0.01 | 1422±25 | 7.0±2.4 | 178.5±3.1 | 13.1±2.2 |
| WD 1310−305 | 0.10±0.00 | 1807±17 | 28.1±1.8 | 226.9±2.2 | −5.9±2.6 |
| WD 1314−067 | 0.08±0.01 | 1702±21 | 20.8±2.3 | 213.8±2.6 | −6.9±3.5 |
| WD 1323−514 | 0.48±0.05 | 1258±84 | −134.3±13.5 | 157.1±10.6 | 17.7±12.0 |
| WD 1326−236 | 0.06±0.01 | 1811±20 | −17.6±2.3 | 227.7±2.5 | −6.1±2.1 |
| WD 1327−083 | 0.34±0.03 | 1184±46 | −38.9±4.0 | 148.1±5.8 | 12.8±2.0 |
| WD 1328−152 | 0.17±0.02 | 2005±44 | 6.2±5.7 | 256.6±5.7 | 7.6±5.9 |
| WD 1330+036 | 0.21±0.02 | 1398±36 | −19.8±2.8 | 175.6±4.5 | 3.1±2.5 |
| WD 1332−229 | 0.17±0.01 | 1966±22 | 30.9±3.4 | 248.6±2.8 | −13.5±2.6 |
| WD 1334−160 | 0.04±0.01 | 1698±23 | −6.9±2.8 | 213.2±2.9 | 11.2±3.0 |
| WD 1334−678 | 0.35±0.04 | 1200±59 | −53.9±9.0 | 150.2±7.5 | 20.9±8.4 |
| WD 1342−237 | 0.08±0.01 | 1613±25 | −7.8±3.0 | 202.6±3.1 | 18.8±2.4 |
| WD 1344+106 | 0.24±0.02 | 1511±33 | −62.8±3.9 | 189.0±4.2 | −35.7±4.5 |
| WD 1356−233 | 0.20±0.01 | 1855±25 | −59.6±3.4 | 232.3±3.2 | −19.7±2.4 |
| WD 1401−147 | 0.13±0.02 | 1543±34 | −20.6±3.1 | 193.7±4.2 | −15.1±3.3 |
| WD 1410+168 | 0.37±0.03 | 1349±53 | 96.4±7.7 | 169.6±6.6 | −42.3±4.2 |
| WD 1411+135 | 0.18±0.01 | 2019±15 | 27.4±2.4 | 253.8±2.0 | 14.3±3.9 |
| WD 1418−088 | 0.24±0.01 | 1738±28 | −77.1±4.3 | 217.7±3.5 | −34.2±4.0 |
| WD 1420−244 | 0.09±0.01 | 1891±20 | 4.5±3.2 | 238.9±2.5 | −11.7±2.9 |
| WD 1422+095 | 0.11±0.01 | 1571±23 | −12.2±1.9 | 196.9±2.9 | −11.7±3.1 |
| WD 1426−276 | 0.40±0.02 | 1131±47 | 73.8±3.1 | 143.5±5.9 | −60.4±7.6 |
| WD 1431+153 | 0.04±0.01 | 1822±15 | −3.1±2.2 | 228.7±1.8 | −3.7±3.1 |
| WD 1434−223 | 0.24±0.02 | 1963±46 | −58.8±4.1 | 251.0±5.8 | −49.4±6.2 |
| WD 1448+077 | 0.62±0.06 | −975±207 | −154.8±8.1 | −122.6±26.1 | −14.0±6.7 |
| WD 1451+006 | 0.24±0.02 | 1404±38 | −47.9±3.8 | 176.8±4.7 | 18.2±3.2 |
| WD 1457−086 | 0.07±0.01 | 1795±15 | 20.2±2.7 | 226.9±1.8 | −10.4±2.8 |
| WD 1500−170 | 0.04±0.01 | 1765±35 | −9.5±4.1 | 223.7±4.3 | −26.3±4.3 |
| WD 1501+032 | 0.20±0.01 | 1974±21 | −47.9±3.3 | 248.1±2.6 | −3.6±3.5 |
| WD 1503−093 | 0.05±0.01 | 1732±17 | −15.9±2.1 | 217.6±2.0 | −8.0±1.9 |
| WD 1507+021 | 0.27±0.03 | 1245±48 | 0.3±3.6 | 157.7±6.0 | 37.0±3.7 |
| WD 1507+220 | 0.14±0.01 | 1561±18 | −30.1±1.8 | 196.2±2.2 | −43.5±2.6 |
| WD 1507−105 | 0.13±0.01 | 1777±15 | −40.1±2.7 | 223.2±1.9 | 8.1±2.4 |
| WD 1515−164 | 0.23±0.01 | 2007±20 | 54.5±3.2 | 253.5±2.6 | −9.6±3.2 |
| WD 1524−749 | 0.52±0.02 | −1203±146 | −137.6±19.9 | −154.5±19.0 | −16.1±10.7 |
| WD 1531+184 | 0.28±0.02 | 1380±42 | 60.5±4.0 | 173.4±5.2 | 12.1±3.0 |
| WD 1531−022 | 0.02±0.01 | 1753±12 | 5.4±3.6 | 219.8±1.4 | −3.5±3.2 |
| WD 1537−152 | 0.11±0.01 | 1794±17 | −32.4±3.3 | 226.5±2.0 | 28.3±3.1 |
| WD 1539−035 | 0.28±0.01 | 2088±15 | 64.7±2.7 | 263.6±2.0 | −8.3±3.0 |
| WD 1543−366 | 0.10±0.04 | 1869±43 | −20.3±11.9 | 236.0±5.3 | −0.7±3.7 |
| WD 1547+057 | 0.04±0.01 | 1804±18 | −6.0±4.3 | 227.4±2.2 | 12.8±4.1 |
| WD 1548+149 | 0.07±0.01 | 1769±17 | 20.6±2.5 | 222.5±2.1 | −1.0±2.4 |
| WD 1555−089 | 0.18±0.01 | 1625±30 | 54.1±3.0 | 204.4±3.7 | 24.0±2.8 |
| WD 1609+044 | 0.07±0.01 | 1809±17 | 19.6±2.6 | 228.8±2.0 | 20.1±2.3 |
| WD 1609+135 | 0.21±0.02 | 1704±27 | 66.3±4.9 | 213.4±3.4 | 8.8±4.4 |
| WD 1614+136 | 0.07±0.01 | 1735±20 | 22.1±2.4 | 219.3±2.5 | −5.9±2.1 |
| WD 1614+160 | 0.15±0.01 | 1794±16 | −43.9±2.9 | 226.7±2.0 | −1.3±2.8 |
| WD 1614−128 | 0.37±0.02 | 1252±44 | 81.6±2.6 | 157.7±5.5 | 13.4±2.3 |
| WD 1619+123 | 0.12±0.01 | 1892±10 | 27.5±2.4 | 237.7±1.3 | −14.4±2.4 |
| WD 1636+057 | 0.19±0.02 | 1429±39 | 20.1±6.1 | 179.1±4.9 | 9.0±4.1 |
| WD 1640+113 | 0.06±0.01 | 1651±27 | 8.6±3.2 | 208.6±3.4 | 14.5±3.0 |

**Table 9.** Kinematic parameters of the 398 SPY white dwarfscontinued from previous page

| star | $e$ | $J_z$ | $U$ | $V$ | $W$ |
|---|---|---|---|---|---|
| | | kpc km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ | km s$^{-1}$ |
| WD 1716+020 | 0.40±0.03 | 1033±56 | 1.0±2.7 | 129.7±7.0 | 38.3±3.3 |
| WD 1736+052 | 0.16±0.01 | 1630±30 | 44.5±4.5 | 204.5±3.7 | −4.3±2.3 |
| WD 1826−045 | 0.10±0.01 | 1575±21 | −7.1±3.4 | 197.5±2.6 | −11.6±1.4 |
| WD 1827−106 | 0.14±0.01 | 1504±29 | −29.2±3.1 | 189.1±3.6 | −71.8±6.5 |
| WD 1834−781 | 0.41±0.04 | 1009±55 | −56.7±8.8 | 126.6±6.9 | −92.5±6.8 |
| WD 1840+042 | 0.07±0.01 | 1733±20 | −22.5±3.3 | 217.2±2.4 | 20.2±1.8 |
| WD 1857+119 | 0.22±0.01 | 1813±29 | −66.2±3.7 | 227.7±3.7 | −6.4±1.4 |
| WD 1911+135 | 0.08±0.01 | 1729±21 | 24.2±2.4 | 216.7±2.6 | −8.3±1.2 |
| WD 1914−598 | 0.15±0.01 | 1728±19 | 46.1±2.6 | 217.4±2.4 | −14.0±1.5 |
| WD 1918+110 | 0.27±0.01 | 1944±28 | 76.3±3.5 | 244.9±3.5 | −44.1±4.4 |
| WD 1919+145 | 0.16±0.01 | 1988±19 | 27.8±2.1 | 248.9±2.3 | 7.4±0.8 |
| WD 1932−136 | 0.22±0.02 | 1362±35 | 22.0±3.2 | 172.3±4.3 | 4.6±1.5 |
| WD 1952−206 | 0.31±0.03 | 1202±52 | 33.7±2.7 | 151.1±6.5 | −60.7±4.5 |
| WD 1953−715 | 0.21±0.03 | 1420±42 | −34.7±4.4 | 178.6±5.3 | 2.7±2.5 |
| WD 1959+059 | 0.20±0.02 | 1424±34 | 29.7±4.8 | 179.0±4.2 | 27.6±2.7 |
| WD 2004−605 | 0.13±0.03 | 1899±27 | −29.4±7.1 | 238.5±3.3 | 0.7±5.3 |
| WD 2007−219 | 0.18±0.01 | 1509±22 | −36.1±3.4 | 189.2±2.7 | 10.2±2.4 |
| WD 2014−575 | 0.12±0.01 | 1790±12 | 35.0±2.6 | 224.8±1.4 | −31.4±2.1 |
| WD 2018−233 | 0.06±0.00 | 1819±9 | −13.4±2.4 | 228.5±1.1 | 6.0±1.7 |
| WD 2021−128 | 0.15±0.01 | 1801±20 | 47.7±2.8 | 226.2±2.4 | −0.6±1.7 |
| WD 2029+183 | 0.60±0.01 | 900±22 | −130.3±4.6 | 114.7±2.8 | −25.9±5.0 |
| WD 2032+188 | 0.25±0.02 | 1378±26 | 45.4±3.8 | 172.9±3.3 | −25.8±3.1 |
| WD 2039−682 | 0.03±0.01 | 1727±20 | −5.9±3.1 | 216.3±2.4 | −6.2±2.6 |
| WD 2046−220 | 0.14±0.01 | 1811±9 | −41.4±2.7 | 228.7±1.2 | 3.3±2.6 |
| WD 2051+095 | 0.28±0.02 | 2198±29 | −26.8±3.1 | 277.0±3.8 | 43.5±2.9 |
| WD 2058+181 | 0.23±0.01 | 1386±21 | −33.2±1.9 | 174.1±2.7 | −3.8±2.6 |
| WD 2115+010 | 0.15±0.01 | 1997±20 | −7.5±2.2 | 251.8±2.5 | 17.0±2.0 |
| WD 2122−467 | 0.09±0.02 | 1767±59 | −25.7±5.8 | 222.7±7.4 | −16.5±5.6 |
| WD 2127−221J | 0.10±0.02 | 1712±37 | 31.1±5.6 | 217.0±4.5 | −11.0±5.9 |
| WD 2134+218 | 0.15±0.01 | 1962±20 | 28.5±1.6 | 245.5±2.4 | 24.6±1.7 |
| WD 2136+229 | 0.30±0.01 | 1350±25 | −62.0±4.0 | 169.3±3.1 | 18.5±2.0 |
| WD 2137−379 | 0.12±0.01 | 1865±25 | −30.8±3.7 | 235.8±3.1 | 17.4±3.4 |
| WD 2139+115 | 0.22±0.02 | 1802±25 | −62.8±5.5 | 226.8±3.1 | −61.2±5.4 |
| WD 2151−307 | 0.07±0.01 | 1859±10 | 8.4±3.1 | 233.9±1.2 | −3.0±3.8 |
| WD 2156−546J | 0.16±0.02 | 1853±27 | −45.5±5.5 | 234.2±3.2 | 20.5±5.8 |
| WD 2157+161 | 0.21±0.02 | 1583±26 | −58.4±4.4 | 199.4±3.2 | −26.9±4.0 |
| WD 2204+071 | 0.18±0.01 | 1998±23 | 40.5±2.7 | 250.5±2.9 | 9.3±2.6 |
| WD 2205−139 | 0.10±0.01 | 1927±18 | 7.1±2.2 | 242.0±2.2 | −12.4±3.3 |
| WD 2226+061 | 0.27±0.01 | 1958±17 | 76.5±4.2 | 244.7±2.2 | 6.5±2.1 |
| WD 2226−449 | 0.21±0.02 | 1441±46 | 40.3±4.2 | 181.1±5.8 | −10.9±3.2 |
| WD 2240+125.1 | 0.13±0.01 | 1858±22 | 38.5±2.3 | 232.2±2.8 | −9.4±2.5 |
| WD 2240+125.2 | 0.14±0.01 | 1839±27 | 43.3±2.8 | 229.8±3.4 | −13.8±2.9 |
| WD 2240−017 | 0.19±0.01 | 1700±27 | 60.5±4.0 | 212.6±3.4 | 6.8±3.0 |
| WD 2248−504 | 0.13±0.02 | 1583±29 | −29.7±3.3 | 198.6±3.6 | −0.4±2.7 |
| WD 2253−081 | 0.28±0.02 | 1460±49 | −72.7±6.3 | 182.9±6.1 | 14.3±5.6 |
| WD 2254+126 | 0.13±0.01 | 1740±23 | −39.9±3.6 | 217.9±2.9 | −7.6±2.9 |
| WD 2303+242 | 0.03±0.01 | 1711±22 | 3.8±1.0 | 213.7±2.7 | 0.5±2.1 |
| WD 2306+124 | 0.15±0.01 | 2033±22 | 5.3±1.3 | 254.1±2.8 | 4.4±2.6 |
| WD 2306+130 | 0.06±0.01 | 1838±24 | −8.4±1.4 | 229.8±3.0 | 14.5±2.7 |
| WD 2311−260 | 0.08±0.03 | 1581±53 | 1.8±5.3 | 201.1±6.5 | −25.7±11.2 |
| WD 2314+064 | 0.12±0.01 | 1901±27 | −24.5±4.5 | 238.0±3.4 | 4.5±3.4 |
| WD 2318+126 | 0.24±0.02 | 1598±22 | −70.9±5.9 | 200.2±2.7 | 15.0±2.6 |
| WD 2318−226 | 0.17±0.04 | 1495±69 | 30.7±7.2 | 188.0±8.6 | −16.6±6.2 |
| WD 2321−549 | 0.10±0.02 | 1918±30 | −5.9±4.1 | 242.3±3.8 | 3.5±4.9 |
| WD 2322+206 | 0.10±0.01 | 1857±19 | 25.7±1.8 | 231.7±2.4 | 21.7±2.0 |
| WD 2322−181 | 0.31±0.03 | 1538±36 | −91.3±7.5 | 193.1±4.4 | −30.6±4.1 |
| WD 2324+060 | 0.16±0.01 | 1503±23 | 20.1±1.4 | 187.8±2.9 | 3.2±2.8 |
| WD 2326+049 | 0.21±0.01 | 1962±18 | 53.7±3.1 | 245.2±2.3 | −3.9±2.8 |
| WD 2328+107 | 0.23±0.01 | 2079±18 | 45.6±3.1 | 259.3±2.3 | −9.1±2.3 |
| WD 2329−332 | 0.14±0.02 | 1985±43 | −2.1±5.3 | 249.6±5.4 | −11.9±3.8 |
| WD 2331−475 | 0.07±0.00 | 1857±12 | 12.1±2.2 | 233.1±1.5 | 14.3±4.7 |
| WD 2333−049 | 0.24±0.01 | 1920±18 | 71.9±4.5 | 239.9±2.2 | −4.8±3.7 |
| WD 2333−165 | 0.09±0.01 | 1853±15 | 17.2±0.7 | 231.8±1.9 | −44.4±3.0 |
| WD 2336+063 | 0.09±0.01 | 1897±20 | −12.3±3.0 | 237.1±2.5 | −3.0±2.8 |

**Table 9.** Kinematic parameters of the 398 SPY white dwarfscontinued from previous page

| star | $e$ | $J_z$ kpc km s$^{-1}$ | $U$ km s$^{-1}$ | $V$ km s$^{-1}$ | $W$ km s$^{-1}$ |
|---|---|---|---|---|---|
| WD 2347−192 | 0.22±0.02 | 2005±25 | 53.0±5.0 | 251.1±3.1 | 8.3±4.3 |
| WD 2348−244 | 0.20±0.01 | 1661±23 | 61.9±3.4 | 207.8±2.8 | −23.3±4.2 |
| WD 2349−283 | 0.05±0.01 | 1680±18 | 10.1±1.0 | 210.5±2.2 | −10.6±2.8 |
| WD 2350−083 | 0.28±0.05 | 1716±80 | −84.0±15.8 | 215.2±9.9 | −47.8±5.3 |
| WD 2350−248 | 0.13±0.01 | 1955±9 | 21.7±1.3 | 244.9±1.2 | −7.2±4.9 |
| WD 2351−368 | 0.78±0.06 | 444±101 | 76.3±6.2 | 55.6±12.7 | 62.8±4.6 |
| WD 2354−151 | 0.09±0.01 | 1810±29 | 28.4±3.8 | 226.6±3.7 | −7.2±3.9 |
| WD 2359−324 | 0.66±0.04 | 696±81 | −125.0±9.8 | 87.4±10.2 | −88.5±4.1 |
| WD 2359−434 | 0.07±0.02 | 1767±21 | −16.8±3.0 | 220.9±2.7 | 64.9±8.7 |