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Supplemental Data for:

**Microwave Spectroscopic Investigation and Structural Determination of the
Ar-Difluoropyridine van der Waals Complexes**

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Table S1. Microwave transitions of 2,3-difluoropyridine-Ar complex.

| J' | K_a' | K_c' | F' | \rightarrow | J'' | K_a'' | K_c'' | F'' | ν_{obs} | ν_{o-c} |
|------|--------|--------|------|---------------|-------|---------|---------|-------|-------------|-------------|
| 2 | 2 | 1 | 3 | \rightarrow | 1 | 1 | 0 | 2 | 5103.1572 | -0.0015 |
| 2 | 2 | 1 | 2 | \rightarrow | 1 | 1 | 0 | 1 | 5103.6209 | -0.0006 |
| 2 | 2 | 0 | 3 | \rightarrow | 1 | 1 | 0 | 2 | 5115.3555 | -0.0005 |
| 2 | 2 | 0 | 2 | \rightarrow | 1 | 1 | 1 | 1 | 5205.6155 | -0.0002 |
| 3 | 1 | 3 | 2 | \rightarrow | 2 | 0 | 2 | 1 | 5658.1557 | 0.0065 |
| 3 | 1 | 3 | 4 | \rightarrow | 2 | 0 | 2 | 3 | 5658.1915 | 0.0004 |
| 3 | 1 | 3 | 3 | \rightarrow | 2 | 0 | 2 | 2 | 5658.9068 | 0.0007 |
| 4 | 1 | 3 | 4 | \rightarrow | 3 | 2 | 2 | 3 | 6102.0853 | 0.0001 |
| 4 | 1 | 3 | 4 | \rightarrow | 3 | 2 | 2 | 3 | 6102.0857 | 0.0005 |
| 4 | 1 | 3 | 5 | \rightarrow | 3 | 2 | 2 | 4 | 6102.2001 | 0.0006 |
| 4 | 1 | 3 | 3 | \rightarrow | 3 | 2 | 2 | 2 | 6102.2308 | 0.0020 |
| 3 | 1 | 2 | 3 | \rightarrow | 2 | 0 | 2 | 2 | 6205.1849 | 0.0000 |
| 3 | 1 | 2 | 4 | \rightarrow | 2 | 0 | 2 | 3 | 6206.4963 | 0.0006 |
| 3 | 1 | 2 | 2 | \rightarrow | 2 | 0 | 2 | 1 | 6207.1629 | -0.0004 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6816.0669 | 0.0009 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6816.3770 | 0.0009 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6816.9323 | -0.0004 |
| 4 | 0 | 4 | 4 | \rightarrow | 3 | 1 | 3 | 3 | 6818.1146 | 0.0005 |
| 4 | 0 | 4 | 5 | \rightarrow | 3 | 1 | 3 | 4 | 6818.2579 | -0.0002 |
| 4 | 0 | 4 | 3 | \rightarrow | 3 | 1 | 3 | 2 | 6818.4559 | 0.0004 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6875.7424 | -0.0007 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6875.9116 | 0.0002 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6876.0636 | 0.0000 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 7089.8443 | 0.0002 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 7091.2510 | 0.0005 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 7092.0337 | 0.0012 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 7148.9749 | 0.0000 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 7150.7869 | 0.0010 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 7151.7103 | 0.0006 |
| 4 | 1 | 4 | 3 | \rightarrow | 3 | 0 | 3 | 2 | 7305.7173 | 0.0029 |
| 4 | 1 | 4 | 5 | \rightarrow | 3 | 0 | 3 | 4 | 7305.7602 | 0.0012 |
| 4 | 1 | 4 | 4 | \rightarrow | 3 | 0 | 3 | 3 | 7306.3988 | 0.0015 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7974.6230 | 0.0001 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7974.6457 | -0.0002 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7974.7842 | 0.0008 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7975.6474 | -0.0023 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7975.6604 | 0.0015 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7975.8066 | 0.0000 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7986.6794 | -0.0011 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 1 | 1 | 7986.9121 | 0.0012 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7986.9804 | -0.0003 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7987.6929 | -0.0003 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 3 | 3 | 0 | 2 | → | 2 | 2 | 1 | 1 | 7987.9399 | 0.0021 |
| 3 | 3 | 0 | 4 | → | 2 | 2 | 1 | 3 | 7988.0042 | 0.0002 |
| 5 | 1 | 4 | 5 | → | 4 | 2 | 3 | 4 | 8080.3075 | -0.0010 |
| 5 | 1 | 4 | 6 | → | 4 | 2 | 3 | 5 | 8080.6342 | 0.0002 |
| 5 | 1 | 4 | 4 | → | 4 | 2 | 3 | 3 | 8080.7221 | 0.0005 |
| 4 | 1 | 3 | 4 | → | 3 | 0 | 3 | 3 | 8212.4021 | -0.0003 |
| 4 | 1 | 3 | 5 | → | 3 | 0 | 3 | 4 | 8213.8028 | 0.0001 |
| 4 | 1 | 3 | 3 | → | 3 | 0 | 3 | 2 | 8214.2825 | 0.0000 |
| 4 | 2 | 3 | 3 | → | 3 | 1 | 2 | 2 | 8482.2255 | -0.0003 |
| 4 | 2 | 3 | 5 | → | 3 | 1 | 2 | 4 | 8482.4343 | 0.0006 |
| 4 | 2 | 3 | 4 | → | 3 | 1 | 2 | 3 | 8483.1337 | 0.0006 |
| 5 | 0 | 5 | 5 | → | 4 | 1 | 4 | 4 | 8630.1358 | -0.0004 |
| 5 | 0 | 5 | 6 | → | 4 | 1 | 4 | 5 | 8630.2026 | -0.0004 |
| 5 | 0 | 5 | 4 | → | 4 | 1 | 4 | 3 | 8630.3194 | 0.0000 |
| 4 | 2 | 2 | 3 | → | 3 | 1 | 2 | 2 | 8652.4437 | 0.0002 |
| 4 | 2 | 2 | 5 | → | 3 | 1 | 2 | 4 | 8652.4759 | 0.0001 |
| 4 | 2 | 2 | 4 | → | 3 | 1 | 2 | 3 | 8652.4922 | -0.0014 |
| 5 | 1 | 5 | 4 | → | 4 | 0 | 4 | 3 | 8948.6222 | -0.0091 |
| 5 | 1 | 5 | 6 | → | 4 | 0 | 4 | 5 | 8948.6461 | -0.0006 |
| 4 | 2 | 3 | 4 | → | 3 | 1 | 3 | 3 | 9029.4118 | -0.0001 |
| 4 | 2 | 3 | 5 | → | 3 | 1 | 3 | 4 | 9030.7383 | 0.0001 |
| 4 | 2 | 3 | 3 | → | 3 | 1 | 3 | 2 | 9031.2385 | -0.0014 |
| 4 | 2 | 2 | 4 | → | 3 | 1 | 3 | 3 | 9198.7717 | -0.0007 |
| 4 | 2 | 2 | 5 | → | 3 | 1 | 3 | 4 | 9200.7804 | 0.0000 |
| 4 | 2 | 2 | 3 | → | 3 | 1 | 3 | 2 | 9201.4544 | -0.0031 |
| 4 | 3 | 2 | 3 | → | 3 | 2 | 1 | 2 | 9753.5012 | 0.0043 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 1 | 3 | 9753.5012 | 0.0010 |
| 4 | 3 | 2 | 5 | → | 3 | 2 | 1 | 4 | 9753.5272 | -0.0003 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 1 | 3 | 9760.5381 | 0.0001 |
| 4 | 3 | 1 | 3 | → | 3 | 2 | 1 | 2 | 9760.5911 | 0.0009 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 1 | 4 | 9760.6095 | -0.0001 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 2 | 3 | 9812.6310 | 0.0000 |
| 4 | 3 | 2 | 5 | → | 3 | 2 | 2 | 4 | 9813.0629 | 0.0000 |
| 4 | 3 | 2 | 3 | → | 3 | 2 | 2 | 2 | 9813.1738 | -0.0001 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 2 | 3 | 9819.6683 | -0.0004 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 2 | 4 | 9820.1445 | -0.0005 |
| 4 | 3 | 1 | 3 | → | 3 | 2 | 2 | 2 | 9820.2670 | -0.0003 |
| 6 | 1 | 5 | 6 | → | 5 | 2 | 4 | 5 | 10060.5664 | 0.0006 |
| 6 | 1 | 5 | 7 | → | 5 | 2 | 4 | 6 | 10060.9223 | 0.0004 |
| 6 | 1 | 5 | 5 | → | 5 | 2 | 4 | 4 | 10061.0038 | -0.0009 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 3 | 3 | 10104.4259 | 0.0009 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 3 | 5 | 10104.5884 | 0.0006 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 3 | 4 | 10105.3579 | 0.0013 |
| 5 | 1 | 4 | 5 | → | 4 | 0 | 4 | 4 | 10291.6066 | 0.0002 |
| 5 | 1 | 4 | 6 | → | 4 | 0 | 4 | 5 | 10293.1133 | -0.0007 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 5 | 1 | 4 | 4 | → | 4 | 0 | 4 | 3 | 10293.5058 | -0.0002 |
| 6 | 0 | 6 | 7 | → | 5 | 1 | 5 | 6 | 10411.3826 | 0.0013 |
| 6 | 0 | 6 | 6 | → | 5 | 1 | 5 | 5 | 10411.3826 | -0.0017 |
| 6 | 0 | 6 | 5 | → | 5 | 1 | 5 | 4 | 10411.4522 | -0.0009 |
| 5 | 2 | 3 | 5 | → | 4 | 1 | 3 | 4 | 10470.9959 | -0.0003 |
| 5 | 2 | 3 | 6 | → | 4 | 1 | 3 | 5 | 10471.1673 | 0.0012 |
| 5 | 2 | 3 | 4 | → | 4 | 1 | 3 | 3 | 10471.1916 | -0.0029 |
| 6 | 1 | 6 | 7 | → | 5 | 0 | 5 | 6 | 10603.0644 | -0.0006 |
| 6 | 1 | 6 | 5 | → | 5 | 0 | 5 | 4 | 10603.0731 | 0.0012 |
| 6 | 1 | 6 | 6 | → | 5 | 0 | 5 | 5 | 10603.4078 | -0.0005 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 0 | 3 | 10811.5821 | 0.0019 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 0 | 3 | 10811.6513 | 0.0006 |
| 4 | 4 | 1 | 3 | → | 3 | 3 | 0 | 2 | 10811.6513 | 0.0004 |
| 4 | 4 | 0 | 3 | → | 3 | 3 | 0 | 2 | 10811.7226 | 0.0005 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 0 | 4 | 10811.7226 | 0.0003 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 0 | 4 | 10811.7928 | -0.0004 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 1 | 3 | 10812.5940 | 0.0010 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 1 | 3 | 10812.6619 | -0.0015 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 1 | 4 | 10812.7476 | 0.0021 |
| 4 | 4 | 0 | 3 | → | 3 | 3 | 1 | 2 | 10812.7476 | -0.0013 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 1 | 4 | 10812.8166 | 0.0000 |
| 7 | 2 | 5 | 7 | → | 6 | 3 | 4 | 6 | 10829.0878 | -0.0003 |
| 7 | 2 | 5 | 8 | → | 6 | 3 | 4 | 7 | 10829.4978 | 0.0014 |
| 7 | 2 | 5 | 6 | → | 6 | 3 | 4 | 5 | 10829.5578 | -0.0009 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 4 | 4 | 11011.3618 | 0.0000 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 4 | 5 | 11012.6322 | 0.0007 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 4 | 3 | 11012.9933 | 0.0001 |
| 5 | 2 | 3 | 5 | → | 4 | 1 | 4 | 4 | 11376.9997 | -0.0017 |
| 5 | 2 | 3 | 6 | → | 4 | 1 | 4 | 5 | 11379.2095 | -0.0003 |
| 5 | 2 | 3 | 4 | → | 4 | 1 | 4 | 3 | 11379.7627 | 0.0000 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 2 | 3 | 11488.9146 | -0.0005 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 2 | 5 | 11488.9743 | 0.0008 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 2 | 4 | 11489.1853 | 0.0002 |
| 5 | 3 | 2 | 4 | → | 4 | 2 | 2 | 3 | 11516.6716 | 0.0009 |
| 5 | 3 | 2 | 6 | → | 4 | 2 | 2 | 5 | 11516.7051 | -0.0003 |
| 5 | 3 | 2 | 5 | → | 4 | 2 | 2 | 4 | 11516.8011 | 0.0000 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 3 | 4 | 11658.5451 | -0.0004 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 3 | 5 | 11659.0152 | -0.0004 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 3 | 3 | 11659.1324 | -0.0003 |
| 5 | 3 | 2 | 5 | → | 4 | 2 | 3 | 4 | 11686.1613 | -0.0005 |
| 5 | 3 | 2 | 6 | → | 4 | 2 | 3 | 5 | 11686.7473 | -0.0002 |
| 5 | 3 | 2 | 4 | → | 4 | 2 | 3 | 3 | 11686.8876 | -0.0007 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 4 | 4 | 11690.3925 | 0.0000 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 4 | 6 | 11690.5209 | 0.0005 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 4 | 5 | 11691.2929 | 0.0000 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 7 | 1 | 6 | 7 | → | 6 | 2 | 5 | 6 | 12022.1792 | 0.0001 |
| 7 | 1 | 6 | 8 | → | 6 | 2 | 5 | 7 | 12022.4721 | -0.0004 |
| 7 | 1 | 6 | 6 | → | 6 | 2 | 5 | 5 | 12022.5355 | -0.0001 |
| 7 | 0 | 7 | 8 | → | 6 | 1 | 6 | 7 | 12166.7340 | 0.0000 |
| 7 | 0 | 7 | 7 | → | 6 | 1 | 6 | 6 | 12166.7768 | -0.0011 |
| 7 | 0 | 7 | 6 | → | 6 | 1 | 6 | 5 | 12166.7768 | -0.0051 |
| 7 | 1 | 7 | 8 | → | 6 | 0 | 6 | 7 | 12275.0151 | -0.0004 |
| 7 | 1 | 7 | 6 | → | 6 | 0 | 6 | 5 | 12275.0337 | 0.0002 |
| 7 | 1 | 7 | 7 | → | 6 | 0 | 6 | 6 | 12275.2463 | 0.0000 |
| 6 | 2 | 4 | 6 | → | 5 | 1 | 4 | 5 | 12349.5788 | -0.0005 |
| 6 | 2 | 4 | 7 | → | 5 | 1 | 4 | 6 | 12349.9464 | -0.0002 |
| 6 | 2 | 4 | 5 | → | 5 | 1 | 4 | 4 | 12350.0114 | 0.0000 |
| 6 | 1 | 5 | 6 | → | 5 | 0 | 5 | 5 | 12441.7918 | 0.0006 |
| 6 | 1 | 5 | 7 | → | 5 | 0 | 5 | 6 | 12443.3499 | -0.0003 |
| 6 | 1 | 5 | 5 | → | 5 | 0 | 5 | 4 | 12443.6773 | -0.0010 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 1 | 4 | 12615.0572 | -0.0001 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 1 | 5 | 12615.2331 | -0.0023 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 1 | 3 | 12615.2489 | 0.0028 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 1 | 4 | 12615.6879 | -0.0001 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 1 | 5 | 12615.8675 | -0.0021 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 1 | 3 | 12615.8839 | 0.0028 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 2 | 4 | 12622.0945 | -0.0006 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 2 | 5 | 12622.3172 | -0.0002 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 2 | 3 | 12622.3398 | 0.0003 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 2 | 4 | 12622.7263 | 0.0004 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 2 | 5 | 12622.9514 | -0.0003 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 2 | 3 | 12622.9732 | -0.0013 |
| 8 | 2 | 6 | 8 | → | 7 | 3 | 5 | 7 | 12916.0629 | 0.0008 |
| 8 | 2 | 6 | 9 | → | 7 | 3 | 5 | 8 | 12916.5418 | -0.0008 |
| 8 | 2 | 6 | 7 | → | 7 | 3 | 5 | 6 | 12916.6097 | 0.0011 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 5 | 5 | 13033.7615 | 0.0002 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 5 | 6 | 13034.9881 | 0.0004 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 5 | 4 | 13035.2676 | 0.0003 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 3 | 4 | 13165.5498 | 0.0003 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 3 | 6 | 13165.6323 | 0.0000 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 3 | 5 | 13166.0634 | 0.0004 |
| 6 | 3 | 3 | 5 | → | 5 | 2 | 3 | 4 | 13245.7277 | 0.0001 |
| 6 | 3 | 3 | 7 | → | 5 | 2 | 3 | 6 | 13245.7701 | -0.0003 |
| 6 | 3 | 3 | 6 | → | 5 | 2 | 3 | 5 | 13245.9658 | 0.0001 |
| 7 | 2 | 6 | 6 | → | 6 | 1 | 5 | 5 | 13253.7621 | -0.0002 |
| 7 | 2 | 6 | 8 | → | 6 | 1 | 5 | 7 | 13253.8580 | -0.0004 |
| 7 | 2 | 6 | 7 | → | 6 | 1 | 5 | 6 | 13254.5775 | 0.0014 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 4 | 5 | 13531.7021 | -0.0006 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 4 | 6 | 13532.2103 | -0.0003 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 4 | 4 | 13532.3189 | -0.0002 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 6 | 3 | 3 | 6 | → | 5 | 2 | 4 | 5 | 13611.6044 | -0.0009 |
| 6 | 3 | 3 | 7 | → | 5 | 2 | 4 | 6 | 13612.3481 | -0.0006 |
| 6 | 3 | 3 | 5 | → | 5 | 2 | 4 | 4 | 13612.4960 | -0.0011 |
| 6 | 2 | 4 | 6 | → | 5 | 1 | 5 | 5 | 13692.0471 | -0.0006 |
| 6 | 2 | 4 | 7 | → | 5 | 1 | 5 | 6 | 13694.4133 | -0.0007 |
| 6 | 2 | 4 | 5 | → | 5 | 1 | 5 | 4 | 13694.8889 | 0.0027 |
| 8 | 0 | 8 | 9 | → | 7 | 1 | 7 | 8 | 13904.0125 | -0.0005 |
| 8 | 0 | 8 | 7 | → | 7 | 1 | 7 | 6 | 13904.0457 | -0.0019 |
| 8 | 0 | 8 | 8 | → | 7 | 1 | 7 | 7 | 13904.0742 | 0.0004 |
| 8 | 1 | 7 | 8 | → | 7 | 2 | 6 | 7 | 13945.3127 | -0.0013 |
| 8 | 1 | 7 | 9 | → | 7 | 2 | 6 | 8 | 13945.5040 | 0.0012 |
| 8 | 1 | 7 | 7 | → | 7 | 2 | 6 | 6 | 13945.5476 | 0.0026 |
| 8 | 1 | 8 | 9 | → | 7 | 0 | 7 | 8 | 13962.3921 | -0.0010 |
| 8 | 1 | 8 | 7 | → | 7 | 0 | 7 | 6 | 13962.4142 | -0.0001 |
| 8 | 1 | 8 | 8 | → | 7 | 0 | 7 | 7 | 13962.5485 | -0.0010 |
| 7 | 2 | 5 | 7 | → | 6 | 1 | 5 | 6 | 14300.2250 | -0.0002 |
| 7 | 2 | 5 | 8 | → | 6 | 1 | 5 | 7 | 14300.7853 | 0.0002 |
| 7 | 2 | 5 | 6 | → | 6 | 1 | 5 | 5 | 14300.8730 | -0.0001 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 2 | 5 | 14406.6978 | -0.0005 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 2 | 6 | 14406.8022 | -0.0028 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 2 | 4 | 14406.8180 | 0.0014 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 2 | 5 | 14409.8171 | -0.0001 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 2 | 6 | 14409.9353 | -0.0013 |
| 6 | 4 | 2 | 5 | → | 5 | 3 | 2 | 4 | 14409.9530 | 0.0027 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 3 | 5 | 14434.3144 | -0.0001 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 3 | 6 | 14434.5383 | 0.0012 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 3 | 4 | 14434.5688 | -0.0033 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 3 | 5 | 14437.4329 | -0.0005 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 3 | 6 | 14437.6693 | 0.0007 |
| 6 | 4 | 2 | 5 | → | 5 | 3 | 3 | 4 | 14437.7025 | -0.0032 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 4 | 5 | 14779.2641 | 0.0014 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 4 | 7 | 14779.3551 | 0.0004 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 4 | 6 | 14779.9421 | -0.0002 |
| 8 | 2 | 7 | 7 | → | 7 | 1 | 6 | 6 | 14813.6012 | -0.0001 |
| 8 | 2 | 7 | 9 | → | 7 | 1 | 6 | 8 | 14813.6715 | 0.0029 |
| 8 | 2 | 7 | 8 | → | 7 | 1 | 6 | 7 | 14814.2828 | 0.0000 |
| 7 | 3 | 4 | 6 | → | 6 | 2 | 4 | 5 | 14967.7870 | -0.0001 |
| 7 | 3 | 4 | 8 | → | 6 | 2 | 4 | 7 | 14967.8216 | 0.0004 |
| 7 | 3 | 4 | 7 | → | 6 | 2 | 4 | 6 | 14968.0079 | 0.0006 |
| 7 | 2 | 6 | 7 | → | 6 | 1 | 6 | 6 | 15092.9598 | 0.0010 |
| 7 | 2 | 6 | 8 | → | 6 | 1 | 6 | 7 | 15094.1445 | 0.0008 |
| 7 | 2 | 6 | 6 | → | 6 | 1 | 6 | 5 | 15094.3693 | 0.0004 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 5 | 6 | 15438.2287 | -0.0001 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 5 | 7 | 15438.7805 | -0.0005 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 5 | 5 | 15438.8806 | -0.0010 |

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|---|---|---|----|---|---|---|---|---|------------|---------|
| 6 | 5 | 2 | 6 | → | 5 | 4 | 1 | 5 | 15449.2882 | -0.0003 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 1 | 5 | 15449.3388 | 0.0017 |
| 6 | 5 | 2 | 7 | → | 5 | 4 | 1 | 6 | 15449.4468 | 0.0007 |
| 6 | 5 | 2 | 5 | → | 5 | 4 | 1 | 4 | 15449.4468 | -0.0028 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 1 | 6 | 15449.4958 | 0.0011 |
| 6 | 5 | 1 | 5 | → | 5 | 4 | 1 | 4 | 15449.4958 | -0.0024 |
| 6 | 5 | 2 | 6 | → | 5 | 4 | 2 | 5 | 15449.9190 | -0.0002 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 2 | 5 | 15449.9685 | 0.0008 |
| 6 | 5 | 2 | 7 | → | 5 | 4 | 2 | 6 | 15450.0825 | 0.0021 |
| 6 | 5 | 2 | 5 | → | 5 | 4 | 2 | 4 | 15450.0825 | -0.0021 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 2 | 6 | 15450.1310 | 0.0020 |
| 6 | 5 | 1 | 5 | → | 5 | 4 | 2 | 4 | 15450.1310 | -0.0023 |
| 7 | 3 | 4 | 7 | → | 6 | 2 | 5 | 6 | 15626.2934 | -0.0002 |
| 7 | 3 | 4 | 8 | → | 6 | 2 | 5 | 7 | 15627.2451 | -0.0024 |
| 7 | 3 | 4 | 6 | → | 6 | 2 | 5 | 5 | 15627.4046 | -0.0013 |
| 9 | 0 | 9 | 10 | → | 8 | 1 | 8 | 9 | 15629.9391 | -0.0040 |
| 9 | 0 | 9 | 8 | → | 8 | 1 | 8 | 7 | 15629.9759 | 0.0057 |
| 9 | 0 | 9 | 9 | → | 8 | 1 | 8 | 8 | 15630.0055 | -0.0019 |
| 9 | 1 | 9 | 10 | → | 8 | 0 | 8 | 9 | 15660.3626 | -0.0024 |
| 9 | 1 | 9 | 8 | → | 8 | 0 | 8 | 7 | 15660.3896 | 0.0034 |
| 9 | 1 | 9 | 9 | → | 8 | 0 | 8 | 8 | 15660.4751 | -0.0010 |
| 9 | 1 | 8 | 9 | → | 8 | 2 | 7 | 8 | 15818.4664 | -0.0001 |
| 9 | 1 | 8 | 10 | → | 8 | 2 | 7 | 9 | 15818.5486 | -0.0014 |
| 9 | 1 | 8 | 8 | → | 8 | 2 | 7 | 7 | 15818.5740 | -0.0018 |
| 7 | 4 | 4 | 6 | → | 6 | 3 | 3 | 5 | 16173.1037 | 0.0014 |
| 7 | 4 | 4 | 8 | → | 6 | 3 | 3 | 7 | 16173.1037 | -0.0030 |
| 7 | 4 | 4 | 7 | → | 6 | 3 | 3 | 6 | 16173.1254 | 0.0030 |
| 7 | 4 | 4 | 7 | → | 6 | 3 | 4 | 6 | 16253.0251 | 0.0001 |
| 7 | 4 | 4 | 8 | → | 6 | 3 | 4 | 7 | 16253.2458 | 0.0008 |
| 7 | 4 | 4 | 6 | → | 6 | 3 | 4 | 5 | 16253.2767 | -0.0035 |
| 7 | 4 | 3 | 7 | → | 6 | 3 | 4 | 6 | 16264.2484 | 0.0006 |
| 7 | 4 | 3 | 8 | → | 6 | 3 | 4 | 7 | 16264.5032 | 0.0015 |
| 7 | 4 | 3 | 6 | → | 6 | 3 | 4 | 5 | 16264.5390 | -0.0028 |
| 8 | 2 | 6 | 8 | → | 7 | 1 | 6 | 7 | 16332.1118 | 0.0000 |
| 8 | 2 | 6 | 9 | → | 7 | 1 | 6 | 8 | 16332.8528 | 0.0015 |
| 8 | 2 | 6 | 7 | → | 7 | 1 | 6 | 6 | 16332.9526 | -0.0018 |
| 8 | 3 | 6 | 7 | → | 7 | 2 | 5 | 6 | 16335.9522 | 0.0006 |
| 8 | 3 | 6 | 9 | → | 7 | 2 | 5 | 8 | 16336.0432 | 0.0012 |
| 8 | 3 | 6 | 8 | → | 7 | 2 | 5 | 7 | 16336.7200 | -0.0011 |
| 9 | 2 | 8 | 8 | → | 8 | 1 | 7 | 7 | 16389.7316 | 0.0000 |
| 9 | 2 | 8 | 10 | → | 8 | 1 | 7 | 9 | 16389.7712 | -0.0029 |
| 9 | 2 | 8 | 9 | → | 8 | 1 | 7 | 8 | 16390.2596 | -0.0001 |
| 8 | 3 | 5 | 7 | → | 7 | 2 | 5 | 6 | 16714.3809 | -0.0022 |
| 8 | 3 | 5 | 9 | → | 7 | 2 | 5 | 8 | 16714.4007 | 0.0019 |
| 8 | 3 | 5 | 8 | → | 7 | 2 | 5 | 7 | 16714.4866 | 0.0014 |

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|----|---|----|----|---|---|---|---|----|------------|---------|
| 8 | 1 | 7 | 8 | → | 7 | 0 | 7 | 7 | 16871.4966 | 0.0016 |
| 8 | 1 | 7 | 9 | → | 7 | 0 | 7 | 8 | 16872.9131 | 0.0008 |
| 8 | 1 | 7 | 7 | → | 7 | 0 | 7 | 6 | 16873.1399 | 0.0079 |
| 10 | 2 | 8 | 11 | → | 9 | 3 | 7 | 10 | 17092.3822 | 0.0013 |
| 10 | 2 | 8 | 9 | → | 9 | 3 | 7 | 8 | 17092.4239 | -0.0047 |
| 8 | 2 | 7 | 8 | → | 7 | 1 | 7 | 7 | 17183.5921 | -0.0003 |
| 8 | 2 | 7 | 9 | → | 7 | 1 | 7 | 8 | 17184.7310 | -0.0008 |
| 8 | 2 | 7 | 7 | → | 7 | 1 | 7 | 6 | 17184.9177 | 0.0000 |
| 7 | 5 | 3 | 7 | → | 6 | 4 | 2 | 6 | 17252.9705 | 0.0001 |
| 7 | 5 | 3 | 8 | → | 6 | 4 | 2 | 7 | 17253.1157 | -0.0029 |
| 7 | 5 | 3 | 6 | → | 6 | 4 | 2 | 5 | 17253.1356 | 0.0031 |
| 7 | 5 | 2 | 7 | → | 6 | 4 | 2 | 6 | 17253.2592 | 0.0007 |
| 7 | 5 | 2 | 8 | → | 6 | 4 | 2 | 7 | 17253.4055 | -0.0024 |
| 7 | 5 | 2 | 6 | → | 6 | 4 | 2 | 5 | 17253.4249 | 0.0031 |
| 7 | 5 | 3 | 7 | → | 6 | 4 | 3 | 6 | 17256.0891 | -0.0001 |
| 7 | 5 | 3 | 8 | → | 6 | 4 | 3 | 7 | 17256.2476 | -0.0025 |
| 7 | 5 | 3 | 6 | → | 6 | 4 | 3 | 5 | 17256.2699 | 0.0037 |
| 7 | 5 | 2 | 7 | → | 6 | 4 | 3 | 6 | 17256.3772 | -0.0001 |
| 7 | 5 | 2 | 8 | → | 6 | 4 | 3 | 7 | 17256.5370 | -0.0024 |
| 7 | 5 | 2 | 6 | → | 6 | 4 | 3 | 5 | 17256.5595 | 0.0041 |
| 10 | 0 | 10 | 11 | → | 9 | 1 | 9 | 10 | 17349.1884 | -0.0004 |
| 10 | 0 | 10 | 9 | → | 9 | 1 | 9 | 8 | 17349.2170 | 0.0063 |
| 10 | 0 | 10 | 10 | → | 9 | 1 | 9 | 9 | 17349.2492 | -0.0001 |
| 10 | 1 | 10 | 11 | → | 9 | 0 | 9 | 10 | 17364.6400 | -0.0029 |
| 10 | 1 | 10 | 9 | → | 9 | 0 | 9 | 8 | 17364.6671 | 0.0046 |
| 10 | 1 | 10 | 10 | → | 9 | 0 | 9 | 9 | 17364.7256 | -0.0004 |
| 8 | 3 | 6 | 8 | → | 7 | 2 | 6 | 7 | 17382.3702 | -0.0001 |
| 8 | 3 | 6 | 9 | → | 7 | 2 | 6 | 8 | 17382.9680 | -0.0004 |
| 8 | 3 | 6 | 7 | → | 7 | 2 | 6 | 6 | 17383.0617 | -0.0006 |
| 10 | 1 | 9 | 10 | → | 9 | 2 | 8 | 9 | 17642.1121 | -0.0012 |
| 10 | 1 | 9 | 11 | → | 9 | 2 | 8 | 10 | 17642.1121 | -0.0045 |
| 10 | 1 | 9 | 9 | → | 9 | 2 | 8 | 8 | 17642.1344 | 0.0025 |
| 10 | 2 | 9 | 9 | → | 9 | 1 | 8 | 8 | 17995.2786 | -0.0002 |
| 10 | 2 | 9 | 11 | → | 9 | 1 | 8 | 10 | 17995.3022 | -0.0007 |
| 10 | 2 | 9 | 10 | → | 9 | 1 | 8 | 9 | 17995.6635 | -0.0009 |
| 8 | 4 | 5 | 8 | → | 7 | 3 | 5 | 7 | 18084.0055 | -0.0017 |
| 8 | 4 | 5 | 9 | → | 7 | 3 | 5 | 8 | 18084.2370 | -0.0011 |
| 8 | 4 | 5 | 7 | → | 7 | 3 | 5 | 6 | 18084.2713 | -0.0013 |
| 8 | 4 | 4 | 8 | → | 7 | 3 | 5 | 7 | 18116.7003 | 0.0009 |
| 8 | 4 | 4 | 9 | → | 7 | 3 | 5 | 8 | 18117.0089 | 0.0023 |
| 8 | 4 | 4 | 7 | → | 7 | 3 | 5 | 6 | 18117.0485 | -0.0022 |
| 7 | 6 | 1 | 7 | → | 6 | 5 | 1 | 6 | 18279.4591 | -0.0008 |
| 7 | 6 | 2 | 7 | → | 6 | 5 | 1 | 6 | 18279.4591 | 0.0025 |
| 7 | 6 | 2 | 7 | → | 6 | 5 | 2 | 6 | 18279.5032 | -0.0017 |
| 7 | 6 | 1 | 7 | → | 6 | 5 | 2 | 6 | 18279.5032 | -0.0051 |

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|----|---|---|----|---|---|---|---|----|------------|---------|
| 7 | 6 | 2 | 6 | → | 6 | 5 | 1 | 5 | 18279.5876 | 0.0062 |
| 7 | 6 | 2 | 8 | → | 6 | 5 | 1 | 7 | 18279.5876 | 0.0043 |
| 7 | 6 | 1 | 6 | → | 6 | 5 | 1 | 5 | 18279.5876 | 0.0028 |
| 7 | 6 | 1 | 8 | → | 6 | 5 | 1 | 7 | 18279.5876 | 0.0010 |
| 7 | 6 | 2 | 6 | → | 6 | 5 | 2 | 5 | 18279.6312 | 0.0011 |
| 7 | 6 | 2 | 8 | → | 6 | 5 | 2 | 7 | 18279.6312 | -0.0006 |
| 7 | 6 | 1 | 6 | → | 6 | 5 | 2 | 5 | 18279.6312 | -0.0022 |
| 7 | 6 | 1 | 8 | → | 6 | 5 | 2 | 7 | 18279.6312 | -0.0040 |
| 9 | 2 | 7 | 9 | → | 8 | 1 | 7 | 8 | 18448.5339 | 0.0018 |
| 9 | 2 | 7 | 10 | → | 8 | 1 | 7 | 9 | 18449.4186 | 0.0006 |
| 9 | 2 | 7 | 8 | → | 8 | 1 | 7 | 7 | 18449.5326 | 0.0039 |
| 9 | 3 | 6 | 9 | → | 8 | 2 | 6 | 8 | 18515.5299 | 0.0024 |
| 9 | 3 | 6 | 10 | → | 8 | 2 | 6 | 9 | 18515.5930 | 0.0023 |
| 9 | 3 | 6 | 8 | → | 8 | 2 | 6 | 7 | 18515.5930 | -0.0021 |
| 8 | 5 | 4 | 8 | → | 7 | 4 | 3 | 7 | 19049.9490 | 0.0011 |
| 8 | 5 | 4 | 9 | → | 7 | 4 | 3 | 8 | 19050.0584 | -0.0009 |
| 8 | 5 | 4 | 7 | → | 7 | 4 | 3 | 6 | 19050.0726 | 0.0011 |
| 8 | 5 | 3 | 8 | → | 7 | 4 | 3 | 7 | 19051.1792 | -0.0007 |
| 8 | 5 | 3 | 9 | → | 7 | 4 | 3 | 8 | 19051.2936 | -0.0015 |
| 8 | 5 | 3 | 7 | → | 7 | 4 | 3 | 6 | 19051.3092 | 0.0015 |
| 8 | 5 | 4 | 8 | → | 7 | 4 | 4 | 7 | 19061.1706 | 0.0000 |
| 8 | 5 | 4 | 9 | → | 7 | 4 | 4 | 8 | 19061.3132 | -0.0030 |
| 8 | 5 | 4 | 7 | → | 7 | 4 | 4 | 6 | 19061.3359 | 0.0027 |
| 8 | 5 | 3 | 8 | → | 7 | 4 | 4 | 7 | 19062.4016 | -0.0011 |
| 8 | 5 | 3 | 9 | → | 7 | 4 | 4 | 8 | 19062.5490 | -0.0029 |
| 8 | 5 | 3 | 7 | → | 7 | 4 | 4 | 6 | 19062.5727 | 0.0033 |
| 7 | 7 | 0 | 8 | → | 6 | 6 | 0 | 7 | 19302.5981 | -0.0003 |
| 7 | 7 | 1 | 8 | → | 6 | 6 | 0 | 7 | 19302.5981 | -0.0003 |
| 7 | 7 | 0 | 8 | → | 6 | 6 | 1 | 7 | 19302.5981 | -0.0006 |
| 7 | 7 | 1 | 8 | → | 6 | 6 | 1 | 7 | 19302.5981 | -0.0006 |
| 9 | 4 | 6 | 8 | → | 8 | 3 | 5 | 7 | 19556.1907 | 0.0040 |
| 9 | 4 | 6 | 10 | → | 8 | 3 | 5 | 9 | 19556.2245 | -0.0021 |
| 9 | 4 | 6 | 9 | → | 8 | 3 | 5 | 8 | 19556.5641 | 0.0017 |
| 9 | 4 | 5 | 9 | → | 8 | 3 | 6 | 8 | 20015.6602 | 0.0009 |
| 9 | 4 | 5 | 10 | → | 8 | 3 | 6 | 9 | 20016.0664 | 0.0010 |
| 9 | 4 | 5 | 8 | → | 8 | 3 | 6 | 7 | 20016.1122 | -0.0044 |
| 10 | 1 | 9 | 10 | → | 9 | 0 | 9 | 9 | 21311.3122 | 0.0010 |
| 10 | 1 | 9 | 11 | → | 9 | 0 | 9 | 10 | 21312.4634 | -0.0033 |
| 10 | 1 | 9 | 9 | → | 9 | 0 | 9 | 8 | 21312.6084 | -0.0023 |

Table S2. Microwave transitions of 2,4-difluoropyridine-Ar complex.

| J' | K_a' | K_c' | F' | \rightarrow | J'' | K_a'' | K_c'' | F'' | ν_{obs} | ν_{o-c} |
|------|--------|--------|------|---------------|-------|---------|---------|-------|-------------|-------------|
| 3 | 0 | 3 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 4859.1171 | -0.0018 |
| 3 | 0 | 3 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 4859.2166 | 0.0001 |
| 3 | 0 | 3 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 4859.4078 | -0.0006 |
| 2 | 2 | 0 | 3 | \rightarrow | 1 | 1 | 1 | 2 | 4898.3554 | 0.0002 |
| 2 | 2 | 0 | 2 | \rightarrow | 1 | 1 | 1 | 1 | 4898.7554 | 0.0001 |
| 3 | 1 | 3 | 3 | \rightarrow | 2 | 0 | 2 | 2 | 5039.7174 | -0.0007 |
| 3 | 1 | 3 | 4 | \rightarrow | 2 | 0 | 2 | 3 | 5040.0713 | 0.0000 |
| 3 | 1 | 3 | 2 | \rightarrow | 2 | 0 | 2 | 1 | 5040.2503 | -0.0003 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6103.7127 | 0.0002 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6104.4287 | 0.0006 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6104.8262 | 0.0010 |
| 4 | 0 | 4 | 3 | \rightarrow | 3 | 1 | 3 | 2 | 6460.1007 | 0.0009 |
| 4 | 0 | 4 | 5 | \rightarrow | 3 | 1 | 3 | 4 | 6460.1120 | 0.0009 |
| 4 | 0 | 4 | 4 | \rightarrow | 3 | 1 | 3 | 3 | 6460.1232 | -0.0011 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6520.0531 | 0.0010 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6520.2233 | 0.0004 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6520.4301 | 0.0007 |
| 4 | 1 | 4 | 4 | \rightarrow | 3 | 0 | 3 | 3 | 6522.3636 | -0.0002 |
| 4 | 1 | 4 | 5 | \rightarrow | 3 | 0 | 3 | 4 | 6522.5107 | 0.0000 |
| 4 | 1 | 4 | 3 | \rightarrow | 3 | 0 | 3 | 2 | 6522.5517 | -0.0008 |
| 4 | 1 | 3 | 3 | \rightarrow | 3 | 2 | 2 | 2 | 6719.3205 | -0.0011 |
| 4 | 1 | 3 | 5 | \rightarrow | 3 | 2 | 2 | 4 | 6719.4633 | 0.0005 |
| 4 | 1 | 3 | 4 | \rightarrow | 3 | 2 | 2 | 3 | 6720.0115 | 0.0005 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 6800.2335 | -0.0011 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 6800.3153 | -0.0015 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 6800.4672 | 0.0015 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7168.3930 | -0.0003 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7168.7822 | 0.0001 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7168.8627 | 0.0007 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7198.1341 | -0.0019 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7198.4453 | -0.0005 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7198.4988 | 0.0006 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 7215.8379 | -0.0011 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 7216.1117 | 0.0000 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 7216.8044 | -0.0007 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7268.0236 | -0.0011 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 1 | 1 | 7268.0327 | 0.0024 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7268.1152 | -0.0001 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 1 | 1 | 7297.6664 | 0.0000 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7297.7661 | -0.0014 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7297.7793 | 0.0001 |
| 4 | 2 | 3 | 4 | \rightarrow | 3 | 1 | 2 | 3 | 7526.9574 | 0.0000 |

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|---|---|---|---|---|---|---|---|---|-----------|---------|
| 4 | 2 | 3 | 5 | → | 3 | 1 | 2 | 4 | 7527.5304 | 0.0000 |
| 4 | 2 | 3 | 3 | → | 3 | 1 | 2 | 2 | 7527.7458 | 0.0000 |
| 5 | 0 | 5 | 5 | → | 4 | 1 | 4 | 4 | 8018.8871 | -0.0004 |
| 5 | 0 | 5 | 4 | → | 4 | 1 | 4 | 3 | 8018.9109 | 0.0000 |
| 5 | 0 | 5 | 6 | → | 4 | 1 | 4 | 5 | 8018.9109 | -0.0007 |
| 5 | 1 | 5 | 5 | → | 4 | 0 | 4 | 4 | 8036.9586 | -0.0002 |
| 5 | 1 | 5 | 6 | → | 4 | 0 | 4 | 5 | 8037.0216 | -0.0011 |
| 5 | 1 | 5 | 4 | → | 4 | 0 | 4 | 3 | 8037.0334 | 0.0013 |
| 5 | 2 | 3 | 4 | → | 4 | 3 | 2 | 3 | 8188.7607 | -0.0003 |
| 5 | 2 | 3 | 6 | → | 4 | 3 | 2 | 5 | 8188.9433 | 0.0004 |
| 5 | 2 | 3 | 5 | → | 4 | 3 | 2 | 4 | 8189.8200 | -0.0006 |
| 4 | 2 | 2 | 5 | → | 3 | 1 | 2 | 4 | 8505.5695 | -0.0003 |
| 4 | 2 | 2 | 4 | → | 3 | 1 | 2 | 3 | 8505.6521 | -0.0003 |
| 5 | 1 | 4 | 4 | → | 4 | 2 | 3 | 3 | 8517.1487 | 0.0005 |
| 5 | 1 | 4 | 6 | → | 4 | 2 | 3 | 5 | 8517.1753 | 0.0002 |
| 5 | 1 | 4 | 5 | → | 4 | 2 | 3 | 4 | 8517.3483 | -0.0001 |
| 4 | 1 | 3 | 3 | → | 3 | 0 | 3 | 2 | 8660.4381 | 0.0007 |
| 4 | 1 | 3 | 5 | → | 3 | 0 | 3 | 4 | 8660.5639 | 0.0008 |
| 4 | 1 | 3 | 4 | → | 3 | 0 | 3 | 3 | 8661.0655 | -0.0026 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 1 | 3 | 8760.1071 | 0.0000 |
| 4 | 3 | 2 | 5 | → | 3 | 2 | 1 | 4 | 8760.7056 | 0.0000 |
| 4 | 3 | 2 | 3 | → | 3 | 2 | 1 | 2 | 8760.9101 | 0.0002 |
| 4 | 2 | 3 | 3 | → | 3 | 1 | 3 | 2 | 8889.6541 | 0.0017 |
| 4 | 2 | 3 | 5 | → | 3 | 1 | 3 | 4 | 8889.7228 | 0.0000 |
| 4 | 2 | 3 | 4 | → | 3 | 1 | 3 | 3 | 8889.9672 | 0.0006 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 3 | 4 | 8906.5044 | -0.0002 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 3 | 5 | 8906.8785 | -0.0003 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 3 | 3 | 8906.9842 | 0.0000 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 1 | 3 | 8942.0281 | 0.0005 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 1 | 4 | 8942.3626 | 0.0007 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 2 | 3 | 9176.4466 | 0.0000 |
| 4 | 3 | 2 | 5 | → | 3 | 2 | 2 | 4 | 9176.4992 | -0.0012 |
| 6 | 3 | 3 | 5 | → | 5 | 4 | 2 | 4 | 9292.9343 | -0.0011 |
| 6 | 3 | 3 | 7 | → | 5 | 4 | 2 | 6 | 9293.1200 | 0.0022 |
| 6 | 3 | 3 | 6 | → | 5 | 4 | 2 | 5 | 9294.1603 | -0.0012 |
| 4 | 3 | 1 | 3 | → | 3 | 2 | 2 | 2 | 9358.1012 | -0.0012 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 2 | 4 | 9358.1562 | -0.0004 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 2 | 3 | 9358.3661 | -0.0010 |
| 6 | 0 | 6 | 6 | → | 5 | 1 | 5 | 5 | 9562.2582 | 0.0010 |
| 6 | 0 | 6 | 5 | → | 5 | 1 | 5 | 4 | 9562.2826 | -0.0004 |
| 6 | 0 | 6 | 7 | → | 5 | 1 | 5 | 6 | 9562.2826 | -0.0007 |
| 6 | 1 | 6 | 6 | → | 5 | 0 | 5 | 5 | 9567.0078 | 0.0007 |
| 6 | 1 | 6 | 7 | → | 5 | 0 | 5 | 6 | 9567.0420 | -0.0004 |
| 6 | 1 | 6 | 5 | → | 5 | 0 | 5 | 4 | 9567.0420 | -0.0019 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 0 | 3 | 9744.6804 | -0.0001 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 4 | 4 | 1 | 3 | → | 3 | 3 | 0 | 2 | 9744.8522 | -0.0034 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 0 | 4 | 9744.8639 | 0.0011 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 0 | 3 | 9751.9569 | -0.0003 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 0 | 4 | 9752.1239 | 0.0011 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 1 | 3 | 9774.4205 | -0.0027 |
| 4 | 4 | 1 | 3 | → | 3 | 3 | 1 | 2 | 9774.4919 | 0.0001 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 1 | 4 | 9774.5288 | 0.0023 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 1 | 3 | 9781.6995 | -0.0005 |
| 4 | 4 | 0 | 3 | → | 3 | 3 | 1 | 2 | 9781.7503 | 0.0028 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 1 | 4 | 9781.7862 | -0.0003 |
| 4 | 2 | 2 | 3 | → | 3 | 1 | 3 | 2 | 9867.5208 | -0.0024 |
| 4 | 2 | 2 | 5 | → | 3 | 1 | 3 | 4 | 9867.7624 | 0.0000 |
| 4 | 2 | 2 | 4 | → | 3 | 1 | 3 | 3 | 9868.6616 | -0.0001 |
| 7 | 4 | 3 | 6 | → | 6 | 5 | 2 | 5 | 10169.8304 | 0.0016 |
| 7 | 4 | 3 | 8 | → | 6 | 5 | 2 | 7 | 10169.9841 | -0.0014 |
| 7 | 4 | 3 | 7 | → | 6 | 5 | 2 | 6 | 10171.0215 | 0.0006 |
| 6 | 1 | 5 | 7 | → | 5 | 2 | 4 | 6 | 10178.2551 | -0.0004 |
| 6 | 1 | 5 | 5 | → | 5 | 2 | 4 | 4 | 10178.2551 | -0.0040 |
| 6 | 1 | 5 | 6 | → | 5 | 2 | 4 | 5 | 10178.2717 | 0.0020 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 2 | 4 | 10190.9549 | 0.0000 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 2 | 5 | 10191.5607 | 0.0002 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 2 | 3 | 10191.7270 | -0.0002 |
| 6 | 2 | 4 | 5 | → | 5 | 3 | 3 | 4 | 10272.0175 | 0.0007 |
| 6 | 2 | 4 | 7 | → | 5 | 3 | 3 | 6 | 10272.0891 | 0.0006 |
| 6 | 2 | 4 | 6 | → | 5 | 3 | 3 | 5 | 10272.5559 | -0.0002 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 4 | 5 | 10328.3718 | 0.0000 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 4 | 6 | 10328.5671 | -0.0003 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 4 | 4 | 10328.6128 | 0.0007 |
| 5 | 2 | 3 | 4 | → | 4 | 1 | 3 | 3 | 10645.9541 | 0.0005 |
| 5 | 2 | 3 | 6 | → | 4 | 1 | 3 | 5 | 10645.9807 | 0.0002 |
| 5 | 2 | 3 | 5 | → | 4 | 1 | 3 | 4 | 10646.2573 | 0.0009 |
| 5 | 3 | 2 | 5 | → | 4 | 2 | 2 | 4 | 10759.3861 | -0.0004 |
| 5 | 3 | 2 | 6 | → | 4 | 2 | 2 | 5 | 10759.5328 | -0.0001 |
| 5 | 3 | 2 | 4 | → | 4 | 2 | 2 | 3 | 10759.6074 | 0.0010 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 4 | 3 | 11044.8707 | 0.0016 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 4 | 5 | 11044.9316 | 0.0003 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 4 | 4 | 11045.2103 | 0.0014 |
| 7 | 0 | 7 | 7 | → | 6 | 1 | 6 | 6 | 11100.8689 | 0.0008 |
| 7 | 0 | 7 | 6 | → | 6 | 1 | 6 | 5 | 11100.8893 | 0.0002 |
| 7 | 0 | 7 | 8 | → | 6 | 1 | 6 | 7 | 11100.8893 | -0.0006 |
| 7 | 1 | 7 | 7 | → | 6 | 0 | 6 | 6 | 11102.0426 | 0.0017 |
| 7 | 1 | 7 | 6 | → | 6 | 0 | 6 | 5 | 11102.0643 | 0.0000 |
| 7 | 1 | 7 | 8 | → | 6 | 0 | 6 | 7 | 11102.0643 | -0.0004 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 3 | 3 | 11169.6004 | 0.0023 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 3 | 5 | 11169.6004 | 0.0005 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 5 | 3 | 3 | 5 | → | 4 | 2 | 3 | 4 | 11169.6464 | -0.0036 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 1 | 4 | 11438.8432 | -0.0004 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 1 | 5 | 11439.2281 | -0.0001 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 1 | 3 | 11439.3173 | -0.0004 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 1 | 4 | 11498.7246 | -0.0003 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 1 | 5 | 11499.0214 | 0.0002 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 1 | 3 | 11499.0945 | 0.0019 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 3 | 5 | 11507.5959 | 0.0001 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 3 | 6 | 11508.1163 | 0.0001 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 3 | 4 | 11508.2326 | 0.0000 |
| 7 | 3 | 4 | 6 | → | 6 | 4 | 3 | 5 | 11612.2177 | 0.0015 |
| 7 | 3 | 4 | 8 | → | 6 | 4 | 3 | 7 | 11612.3185 | 0.0013 |
| 7 | 3 | 4 | 7 | → | 6 | 4 | 3 | 6 | 11613.0434 | -0.0001 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 2 | 4 | 11620.7643 | 0.0001 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 2 | 5 | 11620.8853 | 0.0008 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 2 | 3 | 11620.9053 | -0.0006 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 2 | 4 | 11680.6460 | 0.0006 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 2 | 5 | 11680.6765 | -0.0008 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 2 | 3 | 11680.6765 | -0.0044 |
| 5 | 3 | 2 | 4 | → | 4 | 2 | 3 | 3 | 11737.4772 | 0.0000 |
| 5 | 3 | 2 | 6 | → | 4 | 2 | 3 | 5 | 11737.5719 | -0.0004 |
| 5 | 3 | 2 | 5 | → | 4 | 2 | 3 | 4 | 11738.0818 | 0.0001 |
| 7 | 1 | 6 | 7 | → | 6 | 2 | 5 | 6 | 11762.1494 | 0.0000 |
| 7 | 1 | 6 | 8 | → | 6 | 2 | 5 | 7 | 11762.1821 | -0.0013 |
| 7 | 1 | 6 | 6 | → | 6 | 2 | 5 | 5 | 11762.1924 | 0.0007 |
| 7 | 2 | 6 | 7 | → | 6 | 1 | 5 | 6 | 11811.2944 | -0.0004 |
| 7 | 2 | 6 | 8 | → | 6 | 1 | 5 | 7 | 11811.3939 | -0.0004 |
| 7 | 2 | 6 | 6 | → | 6 | 1 | 5 | 5 | 11811.4136 | 0.0002 |
| 7 | 2 | 5 | 6 | → | 6 | 3 | 4 | 5 | 12172.3853 | -0.0006 |
| 7 | 2 | 5 | 8 | → | 6 | 3 | 4 | 7 | 12172.4054 | 0.0008 |
| 7 | 2 | 5 | 7 | → | 6 | 3 | 4 | 6 | 12172.5847 | -0.0001 |
| 5 | 5 | 1 | 5 | → | 4 | 4 | 0 | 4 | 12290.9284 | 0.0001 |
| 5 | 5 | 1 | 4 | → | 4 | 4 | 0 | 3 | 12291.0074 | -0.0022 |
| 5 | 5 | 1 | 6 | → | 4 | 4 | 0 | 5 | 12291.0297 | 0.0007 |
| 5 | 5 | 0 | 5 | → | 4 | 4 | 0 | 4 | 12292.5271 | 0.0000 |
| 5 | 5 | 0 | 4 | → | 4 | 4 | 0 | 3 | 12292.6044 | -0.0004 |
| 5 | 5 | 0 | 6 | → | 4 | 4 | 0 | 5 | 12292.6255 | 0.0007 |
| 5 | 5 | 1 | 5 | → | 4 | 4 | 1 | 4 | 12298.2047 | -0.0002 |
| 5 | 5 | 1 | 4 | → | 4 | 4 | 1 | 3 | 12298.2667 | 0.0013 |
| 5 | 5 | 1 | 6 | → | 4 | 4 | 1 | 5 | 12298.2899 | 0.0008 |
| 5 | 5 | 0 | 5 | → | 4 | 4 | 1 | 4 | 12299.8037 | -0.0003 |
| 5 | 5 | 0 | 4 | → | 4 | 4 | 1 | 3 | 12299.8637 | 0.0031 |
| 5 | 5 | 0 | 6 | → | 4 | 4 | 1 | 5 | 12299.8844 | -0.0004 |
| 8 | 0 | 8 | 8 | → | 7 | 1 | 7 | 7 | 12638.1054 | -0.0025 |
| 8 | 0 | 8 | 7 | → | 7 | 1 | 7 | 6 | 12638.1263 | 0.0019 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 8 | 0 | 8 | 9 | → | 7 | 1 | 7 | 8 | 12638.1263 | 0.0007 |
| 8 | 1 | 8 | 8 | → | 7 | 0 | 7 | 7 | 12638.3821 | -0.0032 |
| 8 | 1 | 8 | 7 | → | 7 | 0 | 7 | 6 | 12638.4038 | 0.0016 |
| 8 | 1 | 8 | 9 | → | 7 | 0 | 7 | 8 | 12638.4038 | 0.0004 |
| 6 | 3 | 3 | 7 | → | 5 | 2 | 3 | 6 | 12725.0594 | 0.0000 |
| 6 | 3 | 3 | 6 | → | 5 | 2 | 3 | 5 | 12725.1057 | 0.0007 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 4 | 6 | 12796.8688 | 0.0002 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 4 | 7 | 12797.2367 | -0.0002 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 4 | 5 | 12797.3065 | -0.0002 |
| 6 | 2 | 4 | 5 | → | 5 | 1 | 4 | 4 | 12924.4667 | 0.0000 |
| 6 | 2 | 4 | 7 | → | 5 | 1 | 4 | 6 | 12924.5145 | 0.0013 |
| 6 | 2 | 4 | 6 | → | 5 | 1 | 4 | 5 | 12924.8570 | -0.0006 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 2 | 5 | 12957.8805 | -0.0001 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 2 | 6 | 12958.3969 | 0.0020 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 2 | 4 | 12958.5042 | -0.0007 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 2 | 5 | 13210.3170 | -0.0005 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 2 | 6 | 13210.5948 | 0.0013 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 5 | 4 | 13238.2797 | -0.0010 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 5 | 6 | 13238.3327 | 0.0010 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 5 | 5 | 13238.6058 | 0.0019 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 4 | 6 | 13247.2204 | 0.0025 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 4 | 5 | 13247.3477 | 0.0002 |
| 8 | 1 | 7 | 8 | → | 7 | 2 | 6 | 7 | 13313.8253 | -0.0005 |
| 8 | 1 | 7 | 9 | → | 7 | 2 | 6 | 8 | 13313.8657 | -0.0013 |
| 8 | 1 | 7 | 7 | → | 7 | 2 | 6 | 6 | 13313.8740 | 0.0001 |
| 8 | 2 | 7 | 8 | → | 7 | 1 | 6 | 7 | 13328.2986 | -0.0011 |
| 8 | 2 | 7 | 9 | → | 7 | 1 | 6 | 8 | 13328.3577 | -0.0012 |
| 8 | 2 | 7 | 7 | → | 7 | 1 | 6 | 6 | 13328.3689 | 0.0006 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 3 | 5 | 13526.3128 | 0.0005 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 3 | 6 | 13526.3635 | -0.0039 |
| 6 | 4 | 2 | 5 | → | 5 | 3 | 3 | 4 | 13778.5416 | -0.0008 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 3 | 6 | 13778.5655 | -0.0005 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 3 | 5 | 13778.7484 | -0.0008 |
| 8 | 3 | 5 | 7 | → | 7 | 4 | 4 | 6 | 13824.1024 | 0.0011 |
| 8 | 3 | 5 | 9 | → | 7 | 4 | 4 | 8 | 13824.1499 | 0.0002 |
| 8 | 3 | 5 | 8 | → | 7 | 4 | 4 | 7 | 13824.5825 | 0.0005 |
| 8 | 2 | 6 | 9 | → | 7 | 3 | 5 | 8 | 13893.4516 | 0.0007 |
| 8 | 2 | 6 | 7 | → | 7 | 3 | 5 | 6 | 13893.4516 | -0.0013 |
| 8 | 2 | 6 | 8 | → | 7 | 3 | 5 | 7 | 13893.4775 | -0.0018 |
| 6 | 5 | 2 | 6 | → | 5 | 4 | 1 | 5 | 14054.2110 | -0.0018 |
| 6 | 5 | 2 | 7 | → | 5 | 4 | 1 | 6 | 14054.4303 | 0.0010 |
| 6 | 5 | 2 | 6 | → | 5 | 4 | 2 | 5 | 14114.0950 | 0.0009 |
| 6 | 5 | 2 | 7 | → | 5 | 4 | 2 | 6 | 14114.2215 | -0.0006 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 2 | 5 | 14130.5314 | 0.0002 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 2 | 6 | 14130.6346 | -0.0015 |

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|---|---|---|----|---|---|---|---|---|------------|---------|
| 6 | 5 | 1 | 5 | → | 5 | 4 | 2 | 4 | 14130.6509 | 0.0031 |
| 8 | 3 | 6 | 8 | → | 7 | 2 | 5 | 7 | 14152.3001 | -0.0005 |
| 8 | 3 | 6 | 9 | → | 7 | 2 | 5 | 8 | 14152.5132 | 0.0012 |
| 8 | 3 | 6 | 7 | → | 7 | 2 | 5 | 6 | 14152.5450 | -0.0024 |
| 9 | 0 | 9 | 9 | → | 8 | 1 | 8 | 8 | 14174.8979 | -0.0041 |
| 9 | 0 | 9 | 8 | → | 8 | 1 | 8 | 7 | 14174.9182 | 0.0034 |
| 9 | 0 | 9 | 10 | → | 8 | 1 | 8 | 9 | 14174.9182 | 0.0021 |
| 9 | 1 | 9 | 9 | → | 8 | 0 | 8 | 8 | 14174.9657 | 0.0001 |
| 9 | 1 | 9 | 8 | → | 8 | 0 | 8 | 7 | 14174.9846 | 0.0061 |
| 9 | 1 | 9 | 10 | → | 8 | 0 | 8 | 9 | 14174.9846 | 0.0048 |
| 7 | 4 | 4 | 7 | → | 6 | 3 | 3 | 6 | 14293.6598 | 0.0000 |
| 7 | 4 | 4 | 8 | → | 6 | 3 | 3 | 7 | 14294.2036 | 0.0003 |
| 7 | 4 | 4 | 6 | → | 6 | 3 | 3 | 5 | 14294.3027 | -0.0003 |
| 6 | 6 | 1 | 6 | → | 5 | 5 | 0 | 5 | 14825.9288 | -0.0006 |
| 6 | 6 | 1 | 5 | → | 5 | 5 | 0 | 4 | 14825.9776 | -0.0013 |
| 6 | 6 | 1 | 7 | → | 5 | 5 | 0 | 6 | 14825.9984 | 0.0014 |
| 6 | 6 | 0 | 6 | → | 5 | 5 | 1 | 5 | 14827.8578 | 0.0004 |
| 6 | 6 | 0 | 5 | → | 5 | 5 | 1 | 4 | 14827.9016 | -0.0006 |
| 6 | 6 | 0 | 7 | → | 5 | 5 | 1 | 6 | 14827.9227 | 0.0017 |
| 9 | 1 | 8 | 9 | → | 8 | 2 | 7 | 8 | 14854.3302 | 0.0036 |
| 9 | 1 | 8 | 10 | → | 8 | 2 | 7 | 9 | 14854.3649 | 0.0012 |
| 9 | 1 | 8 | 8 | → | 8 | 2 | 7 | 7 | 14854.3649 | -0.0035 |
| 9 | 2 | 7 | 9 | → | 8 | 3 | 6 | 8 | 15504.7452 | 0.0015 |
| 9 | 2 | 7 | 10 | → | 8 | 3 | 6 | 9 | 15504.7699 | -0.0025 |
| 9 | 2 | 7 | 8 | → | 8 | 3 | 6 | 7 | 15504.7768 | -0.0022 |
| 8 | 4 | 5 | 8 | → | 7 | 3 | 4 | 7 | 15509.7495 | 0.0019 |
| 8 | 4 | 5 | 9 | → | 7 | 3 | 4 | 8 | 15510.2332 | -0.0009 |
| 8 | 4 | 5 | 7 | → | 7 | 3 | 4 | 6 | 15510.3125 | 0.0009 |
| 9 | 3 | 7 | 9 | → | 8 | 2 | 6 | 8 | 15596.5943 | -0.0007 |
| 9 | 3 | 7 | 10 | → | 8 | 2 | 6 | 9 | 15596.7049 | -0.0041 |
| 9 | 3 | 7 | 8 | → | 8 | 2 | 6 | 7 | 15596.7279 | 0.0013 |
| 7 | 5 | 3 | 7 | → | 6 | 4 | 2 | 6 | 15705.9560 | 0.0000 |
| 7 | 5 | 3 | 8 | → | 6 | 4 | 2 | 7 | 15706.2999 | 0.0006 |
| 7 | 5 | 3 | 6 | → | 6 | 4 | 2 | 5 | 15706.3584 | 0.0001 |
| 7 | 5 | 2 | 7 | → | 6 | 4 | 3 | 6 | 16046.2041 | -0.0032 |
| 7 | 5 | 2 | 8 | → | 6 | 4 | 3 | 7 | 16046.2307 | 0.0063 |
| 7 | 5 | 2 | 6 | → | 6 | 4 | 3 | 5 | 16046.2307 | 0.0000 |
| 7 | 4 | 3 | 6 | → | 6 | 3 | 4 | 5 | 16207.9782 | -0.0005 |
| 7 | 4 | 3 | 8 | → | 6 | 3 | 4 | 7 | 16208.0342 | 0.0010 |
| 7 | 4 | 3 | 7 | → | 6 | 3 | 4 | 6 | 16208.4609 | -0.0017 |
| 7 | 6 | 2 | 7 | → | 6 | 5 | 1 | 6 | 16615.7395 | -0.0004 |
| 7 | 6 | 2 | 8 | → | 6 | 5 | 1 | 7 | 16615.8734 | -0.0024 |
| 7 | 6 | 2 | 6 | → | 6 | 5 | 1 | 5 | 16615.8911 | 0.0026 |
| 7 | 6 | 1 | 7 | → | 6 | 5 | 2 | 6 | 16636.2165 | -0.0005 |
| 7 | 6 | 1 | 8 | → | 6 | 5 | 2 | 7 | 16636.3231 | -0.0013 |

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|---|---|---|----|---|---|---|---|---|------------|---------|
| 7 | 6 | 1 | 6 | → | 6 | 5 | 2 | 5 | 16636.3328 | 0.0003 |
| 8 | 5 | 4 | 8 | → | 7 | 4 | 3 | 7 | 17160.2961 | 0.0001 |
| 8 | 5 | 4 | 9 | → | 7 | 4 | 3 | 8 | 17160.7529 | -0.0017 |
| 8 | 5 | 4 | 7 | → | 7 | 4 | 3 | 6 | 17160.8266 | 0.0008 |
| 7 | 7 | 1 | 7 | → | 6 | 6 | 0 | 6 | 17357.6665 | 0.0024 |
| 7 | 7 | 1 | 6 | → | 6 | 6 | 0 | 5 | 17357.6941 | -0.0047 |
| 7 | 7 | 1 | 8 | → | 6 | 6 | 0 | 7 | 17357.7153 | 0.0012 |
| 7 | 7 | 0 | 7 | → | 6 | 6 | 1 | 6 | 17358.0600 | 0.0025 |
| 7 | 7 | 0 | 6 | → | 6 | 6 | 1 | 5 | 17358.0878 | -0.0037 |
| 7 | 7 | 0 | 8 | → | 6 | 6 | 1 | 7 | 17358.1085 | 0.0016 |
| 8 | 5 | 3 | 7 | → | 7 | 4 | 4 | 6 | 18170.4447 | -0.0036 |
| 8 | 5 | 3 | 9 | → | 7 | 4 | 4 | 8 | 18170.4650 | 0.0016 |
| 8 | 5 | 3 | 8 | → | 7 | 4 | 4 | 7 | 18170.6298 | 0.0006 |
| 8 | 6 | 3 | 8 | → | 7 | 5 | 2 | 7 | 18356.8916 | -0.0010 |
| 8 | 6 | 3 | 9 | → | 7 | 5 | 2 | 8 | 18357.0966 | -0.0007 |
| 8 | 6 | 3 | 7 | → | 7 | 5 | 2 | 6 | 18357.1273 | 0.0018 |
| 9 | 5 | 5 | 9 | → | 8 | 4 | 4 | 8 | 18410.0045 | 0.0011 |
| 9 | 5 | 5 | 10 | → | 8 | 4 | 4 | 9 | 18410.5061 | 0.0019 |
| 9 | 5 | 5 | 8 | → | 8 | 4 | 4 | 7 | 18410.5734 | 0.0005 |
| 8 | 6 | 2 | 8 | → | 7 | 5 | 3 | 7 | 18470.5982 | 0.0005 |
| 8 | 6 | 2 | 9 | → | 7 | 5 | 3 | 8 | 18470.6857 | -0.0029 |
| 8 | 6 | 2 | 7 | → | 7 | 5 | 3 | 6 | 18470.7026 | 0.0016 |
| 8 | 7 | 2 | 8 | → | 7 | 6 | 1 | 7 | 19155.1254 | 0.0013 |
| 8 | 7 | 2 | 9 | → | 7 | 6 | 1 | 8 | 19155.2212 | -0.0014 |
| 8 | 7 | 2 | 7 | → | 7 | 6 | 1 | 6 | 19155.2286 | 0.0010 |
| 8 | 7 | 1 | 8 | → | 7 | 6 | 2 | 7 | 19160.0861 | -0.0005 |
| 8 | 7 | 1 | 9 | → | 7 | 6 | 2 | 8 | 19160.1778 | -0.0008 |
| 8 | 7 | 1 | 7 | → | 7 | 6 | 2 | 6 | 19160.1834 | 0.0010 |

Table S3. Microwave transitions of 2,5-difluoropyridine-Ar complex.

| J' | K_a' | K_c' | F' | \rightarrow | J'' | K_a'' | K_c'' | F'' | ν_{obs} | ν_{o-c} |
|------|--------|--------|------|---------------|-------|---------|---------|-------|-------------|-------------|
| 4 | 0 | 4 | 5 | \rightarrow | 3 | 1 | 3 | 4 | 6145.5464 | 0.0001 |
| 4 | 0 | 4 | 3 | \rightarrow | 3 | 1 | 3 | 2 | 6145.6149 | -0.0005 |
| 4 | 0 | 4 | 4 | \rightarrow | 3 | 1 | 3 | 3 | 6145.7230 | -0.0017 |
| 4 | 1 | 4 | 5 | \rightarrow | 3 | 0 | 3 | 4 | 6148.9037 | -0.0001 |
| 4 | 1 | 4 | 3 | \rightarrow | 3 | 0 | 3 | 2 | 6148.9742 | 0.0007 |
| 4 | 1 | 4 | 4 | \rightarrow | 3 | 0 | 3 | 3 | 6149.0813 | 0.0000 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6768.6371 | -0.0004 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6768.9030 | 0.0007 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6768.9325 | 0.0007 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 6834.9423 | 0.0011 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 6835.1592 | 0.0005 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 6835.2046 | -0.0034 |
| 3 | 1 | 2 | 3 | \rightarrow | 2 | 0 | 2 | 2 | 6840.7420 | -0.0009 |
| 3 | 1 | 2 | 4 | \rightarrow | 2 | 0 | 2 | 3 | 6841.6661 | 0.0020 |
| 3 | 1 | 2 | 2 | \rightarrow | 2 | 0 | 2 | 1 | 6842.1870 | 0.0004 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 6929.8656 | 0.0006 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 6930.8158 | 0.0003 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 6931.3433 | -0.0009 |
| 4 | 1 | 3 | 3 | \rightarrow | 3 | 2 | 2 | 2 | 6959.4082 | -0.0016 |
| 4 | 1 | 3 | 5 | \rightarrow | 3 | 2 | 2 | 4 | 6959.5067 | 0.0010 |
| 4 | 1 | 3 | 4 | \rightarrow | 3 | 2 | 2 | 3 | 6959.8745 | -0.0028 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7019.1689 | -0.0008 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7019.2822 | -0.0003 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7019.3475 | 0.0002 |
| 4 | 2 | 3 | 3 | \rightarrow | 3 | 1 | 2 | 2 | 7093.0193 | -0.0005 |
| 4 | 2 | 3 | 5 | \rightarrow | 3 | 1 | 2 | 4 | 7093.0965 | -0.0008 |
| 4 | 2 | 3 | 4 | \rightarrow | 3 | 1 | 2 | 3 | 7093.4158 | 0.0000 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7121.8557 | 0.0000 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7122.1322 | 0.0001 |
| 4 | 2 | 2 | 3 | \rightarrow | 3 | 3 | 1 | 2 | 7256.4537 | 0.0010 |
| 4 | 2 | 2 | 5 | \rightarrow | 3 | 3 | 1 | 4 | 7256.6919 | 0.0003 |
| 4 | 2 | 2 | 4 | \rightarrow | 3 | 3 | 1 | 3 | 7257.2873 | 0.0000 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7305.9303 | 0.0002 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7306.3213 | 0.0006 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 1 | 1 | 7306.3213 | -0.0031 |
| 5 | 0 | 5 | 6 | \rightarrow | 4 | 1 | 4 | 5 | 7574.1691 | -0.0006 |
| 5 | 0 | 5 | 4 | \rightarrow | 4 | 1 | 4 | 3 | 7574.2249 | 0.0045 |
| 5 | 0 | 5 | 5 | \rightarrow | 4 | 1 | 4 | 4 | 7574.2933 | 0.0001 |
| 5 | 1 | 5 | 6 | \rightarrow | 4 | 0 | 4 | 5 | 7574.5283 | 0.0043 |
| 5 | 1 | 5 | 4 | \rightarrow | 4 | 0 | 4 | 3 | 7574.5782 | 0.0036 |
| 5 | 1 | 5 | 5 | \rightarrow | 4 | 0 | 4 | 4 | 7574.6517 | 0.0045 |
| 4 | 3 | 2 | 3 | \rightarrow | 3 | 2 | 1 | 2 | 8274.4879 | 0.0006 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|-----------|---------|
| 4 | 3 | 2 | 5 | → | 3 | 2 | 1 | 4 | 8274.5820 | -0.0004 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 1 | 3 | 8274.7463 | 0.0007 |
| 5 | 1 | 4 | 4 | → | 4 | 2 | 3 | 3 | 8439.9297 | 0.0005 |
| 5 | 1 | 4 | 6 | → | 4 | 2 | 3 | 5 | 8439.9610 | -0.0015 |
| 5 | 1 | 4 | 5 | → | 4 | 2 | 3 | 4 | 8440.2215 | -0.0011 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 3 | 3 | 8463.5450 | -0.0002 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 3 | 5 | 8463.5766 | -0.0008 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 3 | 4 | 8463.8330 | 0.0002 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 1 | 3 | 9059.6106 | 0.0008 |
| 4 | 3 | 1 | 3 | → | 3 | 2 | 1 | 2 | 9059.7184 | 0.0039 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 1 | 4 | 9059.7334 | -0.0018 |
| 4 | 2 | 2 | 4 | → | 3 | 1 | 2 | 3 | 9063.1357 | 0.0003 |
| 4 | 2 | 2 | 5 | → | 3 | 1 | 2 | 4 | 9063.5095 | 0.0005 |
| 4 | 2 | 2 | 3 | → | 3 | 1 | 2 | 2 | 9063.6101 | 0.0006 |
| 5 | 2 | 3 | 4 | → | 4 | 3 | 2 | 3 | 9137.1820 | -0.0019 |
| 5 | 2 | 3 | 6 | → | 4 | 3 | 2 | 5 | 9137.2753 | 0.0006 |
| 5 | 2 | 3 | 5 | → | 4 | 3 | 2 | 4 | 9137.6109 | -0.0015 |
| 4 | 1 | 3 | 4 | → | 3 | 0 | 3 | 3 | 9182.5238 | 0.0000 |
| 4 | 1 | 3 | 5 | → | 3 | 0 | 3 | 4 | 9183.3920 | 0.0004 |
| 4 | 1 | 3 | 3 | → | 3 | 0 | 3 | 2 | 9183.7307 | 0.0007 |
| 4 | 2 | 3 | 4 | → | 3 | 1 | 3 | 3 | 9200.2378 | 0.0007 |
| 4 | 2 | 3 | 5 | → | 3 | 1 | 3 | 4 | 9201.1085 | 0.0002 |
| 4 | 2 | 3 | 3 | → | 3 | 1 | 3 | 2 | 9201.4475 | 0.0000 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 2 | 3 | 9258.5912 | 0.0004 |
| 4 | 3 | 2 | 5 | → | 3 | 2 | 2 | 4 | 9258.9993 | 0.0003 |
| 4 | 3 | 2 | 3 | → | 3 | 2 | 2 | 2 | 9259.1043 | 0.0003 |
| 4 | 4 | 1 | 3 | → | 3 | 3 | 0 | 2 | 9332.7414 | -0.0017 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 0 | 3 | 9332.8170 | -0.0024 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 0 | 4 | 9332.8347 | -0.0007 |
| 4 | 4 | 0 | 3 | → | 3 | 3 | 0 | 2 | 9435.2009 | 0.0003 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 0 | 3 | 9435.2228 | -0.0021 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 0 | 4 | 9435.2817 | -0.0004 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 1 | 3 | 9516.8925 | -0.0014 |
| 4 | 4 | 1 | 3 | → | 3 | 3 | 1 | 2 | 9516.9732 | 0.0014 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 1 | 4 | 9517.0237 | -0.0003 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 2 | 3 | 9524.6364 | 0.0000 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 2 | 5 | 9524.7031 | 0.0000 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 2 | 4 | 9524.9458 | 0.0002 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 1 | 3 | 9619.2993 | 0.0000 |
| 4 | 4 | 0 | 3 | → | 3 | 3 | 1 | 2 | 9619.4277 | -0.0014 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 1 | 4 | 9619.4706 | -0.0002 |
| 6 | 1 | 5 | 5 | → | 5 | 2 | 4 | 4 | 9875.6742 | -0.0036 |
| 6 | 1 | 5 | 7 | → | 5 | 2 | 4 | 6 | 9875.6891 | -0.0001 |
| 6 | 1 | 5 | 6 | → | 5 | 2 | 4 | 5 | 9875.8856 | -0.0008 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 4 | 6 | 9878.8944 | 0.0014 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 6 | 2 | 5 | 6 | → | 5 | 1 | 4 | 5 | 9879.0894 | -0.0003 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 2 | 3 | 10043.4541 | -0.0008 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 2 | 4 | 10044.1527 | 0.0008 |
| 4 | 3 | 1 | 3 | → | 3 | 2 | 2 | 2 | 10044.3300 | -0.0009 |
| 6 | 2 | 4 | 5 | → | 5 | 3 | 3 | 4 | 10715.6627 | -0.0038 |
| 6 | 2 | 4 | 7 | → | 5 | 3 | 3 | 6 | 10715.7123 | 0.0005 |
| 6 | 2 | 4 | 6 | → | 5 | 3 | 3 | 5 | 10715.9615 | -0.0010 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 3 | 4 | 10808.7095 | 0.0019 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 3 | 6 | 10808.7507 | 0.0005 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 3 | 5 | 10808.9879 | 0.0003 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 1 | 3 | 10816.8504 | 0.0051 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 1 | 5 | 10816.8976 | 0.0008 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 1 | 4 | 10816.9668 | 0.0002 |
| 6 | 3 | 3 | 5 | → | 5 | 4 | 2 | 4 | 11191.2869 | 0.0015 |
| 6 | 3 | 3 | 7 | → | 5 | 4 | 2 | 6 | 11191.3600 | 0.0012 |
| 6 | 3 | 3 | 6 | → | 5 | 4 | 2 | 5 | 11191.6626 | -0.0015 |
| 5 | 3 | 2 | 5 | → | 4 | 2 | 2 | 4 | 11280.7702 | -0.0002 |
| 5 | 3 | 2 | 4 | → | 4 | 2 | 2 | 3 | 11280.9746 | -0.0002 |
| 7 | 1 | 6 | 6 | → | 6 | 2 | 5 | 5 | 11303.4802 | -0.0004 |
| 7 | 1 | 6 | 8 | → | 6 | 2 | 5 | 7 | 11303.4802 | -0.0024 |
| 7 | 1 | 6 | 7 | → | 6 | 2 | 5 | 6 | 11303.6350 | -0.0021 |
| 7 | 2 | 6 | 6 | → | 6 | 1 | 5 | 5 | 11303.8615 | 0.0038 |
| 7 | 2 | 6 | 8 | → | 6 | 1 | 5 | 7 | 11303.8615 | 0.0018 |
| 7 | 2 | 6 | 7 | → | 6 | 1 | 5 | 6 | 11304.0161 | 0.0018 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 1 | 4 | 11387.6203 | -0.0007 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 1 | 3 | 11387.6801 | 0.0015 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 1 | 5 | 11387.6988 | -0.0010 |
| 5 | 2 | 3 | 5 | → | 4 | 1 | 3 | 4 | 11436.3262 | 0.0003 |
| 5 | 2 | 3 | 6 | → | 4 | 1 | 3 | 5 | 11436.7687 | 0.0006 |
| 5 | 2 | 3 | 4 | → | 4 | 1 | 3 | 3 | 11436.8784 | 0.0003 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 3 | 4 | 11494.6665 | 0.0013 |
| 5 | 1 | 4 | 5 | → | 4 | 0 | 4 | 4 | 11494.7351 | 0.0000 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 3 | 5 | 11495.1163 | 0.0015 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 3 | 3 | 11495.2263 | 0.0003 |
| 5 | 1 | 4 | 6 | → | 4 | 0 | 4 | 5 | 11495.5257 | 0.0011 |
| 5 | 1 | 4 | 4 | → | 4 | 0 | 4 | 3 | 11495.7619 | 0.0007 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 4 | 4 | 11497.2757 | 0.0002 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 4 | 5 | 11498.0652 | 0.0000 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 4 | 3 | 11498.3021 | 0.0002 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 2 | 4 | 11601.8305 | -0.0003 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 2 | 5 | 11602.0495 | -0.0001 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 2 | 3 | 11602.0714 | -0.0008 |
| 5 | 5 | 0 | 5 | → | 4 | 4 | 0 | 4 | 11871.6742 | -0.0017 |
| 5 | 5 | 0 | 4 | → | 4 | 4 | 0 | 3 | 11871.6742 | -0.0038 |
| 5 | 5 | 0 | 6 | → | 4 | 4 | 0 | 5 | 11871.7272 | 0.0009 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 5 | 5 | 1 | 5 | → | 4 | 4 | 1 | 4 | 11922.9897 | -0.0006 |
| 5 | 5 | 1 | 4 | → | 4 | 4 | 1 | 3 | 11923.0248 | -0.0018 |
| 5 | 5 | 1 | 6 | → | 4 | 4 | 1 | 5 | 11923.0670 | -0.0003 |
| 5 | 5 | 0 | 5 | → | 4 | 4 | 1 | 4 | 11974.0800 | -0.0012 |
| 5 | 5 | 0 | 4 | → | 4 | 4 | 1 | 3 | 11974.1341 | -0.0013 |
| 5 | 5 | 0 | 6 | → | 4 | 4 | 1 | 5 | 11974.1732 | 0.0002 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 2 | 4 | 12038.3001 | 0.0018 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 2 | 6 | 12038.3440 | 0.0004 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 2 | 5 | 12038.5088 | 0.0023 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 2 | 4 | 12172.4854 | 0.0001 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 2 | 5 | 12172.8518 | -0.0008 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 2 | 3 | 12172.9064 | 0.0007 |
| 7 | 2 | 5 | 6 | → | 6 | 3 | 4 | 5 | 12175.0473 | -0.0005 |
| 7 | 2 | 5 | 8 | → | 6 | 3 | 4 | 7 | 12175.0704 | -0.0027 |
| 7 | 2 | 5 | 7 | → | 6 | 3 | 4 | 6 | 12175.2735 | -0.0032 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 4 | 5 | 12190.9908 | -0.0011 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 4 | 7 | 12191.0142 | -0.0028 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 4 | 6 | 12191.2176 | -0.0017 |
| 6 | 5 | 2 | 5 | → | 5 | 4 | 1 | 4 | 13391.1785 | 0.0003 |
| 6 | 5 | 2 | 6 | → | 5 | 4 | 1 | 5 | 13391.2243 | 0.0031 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 2 | 5 | 13518.8610 | -0.0010 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 2 | 6 | 13518.9668 | -0.0001 |
| 6 | 4 | 2 | 5 | → | 5 | 3 | 2 | 4 | 13518.9668 | 0.0000 |
| 6 | 3 | 3 | 6 | → | 5 | 2 | 3 | 5 | 13655.8844 | 0.0018 |
| 6 | 3 | 3 | 7 | → | 5 | 2 | 3 | 6 | 13656.1355 | 0.0018 |
| 6 | 3 | 3 | 5 | → | 5 | 2 | 3 | 4 | 13656.1721 | -0.0015 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 1 | 5 | 13763.6715 | -0.0018 |
| 6 | 5 | 1 | 5 | → | 5 | 4 | 1 | 4 | 13763.7143 | -0.0027 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 1 | 6 | 13763.7329 | -0.0010 |
| 6 | 2 | 4 | 6 | → | 5 | 1 | 4 | 5 | 13770.4054 | 0.0004 |
| 6 | 2 | 4 | 7 | → | 5 | 1 | 4 | 6 | 13770.8644 | 0.0002 |
| 6 | 2 | 4 | 5 | → | 5 | 1 | 4 | 4 | 13770.9634 | 0.0000 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 4 | 5 | 13781.4816 | 0.0009 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 4 | 6 | 13781.9416 | 0.0009 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 4 | 4 | 13782.0412 | 0.0009 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 3 | 5 | 13794.3318 | 0.0004 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 3 | 6 | 13794.5966 | 0.0014 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 3 | 4 | 13794.6364 | -0.0003 |
| 6 | 1 | 5 | 6 | → | 5 | 0 | 5 | 5 | 13798.8671 | -0.0016 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 5 | 5 | 13799.1739 | -0.0037 |
| 6 | 1 | 5 | 7 | → | 5 | 0 | 5 | 6 | 13799.5853 | 0.0004 |
| 6 | 1 | 5 | 5 | → | 5 | 0 | 5 | 4 | 13799.7595 | 0.0001 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 5 | 6 | 13799.8917 | -0.0019 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 5 | 4 | 13800.0656 | -0.0026 |
| 6 | 5 | 2 | 6 | → | 5 | 4 | 2 | 5 | 13961.8745 | -0.0011 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 6 | 5 | 2 | 7 | → | 5 | 4 | 2 | 6 | 13962.0092 | -0.0014 |
| 6 | 5 | 2 | 5 | → | 5 | 4 | 2 | 4 | 13962.0092 | -0.0022 |
| 6 | 6 | 1 | 6 | → | 5 | 5 | 0 | 5 | 14286.3083 | 0.0035 |
| 6 | 6 | 1 | 5 | → | 5 | 5 | 0 | 4 | 14286.3083 | 0.0000 |
| 6 | 6 | 1 | 7 | → | 5 | 5 | 0 | 6 | 14286.3414 | -0.0005 |
| 6 | 6 | 0 | 6 | → | 5 | 5 | 0 | 5 | 14309.9749 | 0.0011 |
| 6 | 6 | 0 | 5 | → | 5 | 5 | 0 | 4 | 14309.9870 | 0.0035 |
| 6 | 6 | 0 | 7 | → | 5 | 5 | 0 | 6 | 14310.0178 | 0.0015 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 2 | 5 | 14334.3244 | -0.0032 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 2 | 6 | 14334.5339 | -0.0031 |
| 6 | 5 | 1 | 5 | → | 5 | 4 | 2 | 4 | 14334.5512 | 0.0008 |
| 7 | 5 | 2 | 7 | → | 6 | 4 | 2 | 6 | 15793.0689 | -0.0025 |
| 7 | 4 | 3 | 7 | → | 6 | 3 | 3 | 6 | 15847.8521 | 0.0000 |
| 7 | 4 | 3 | 8 | → | 6 | 3 | 3 | 7 | 15848.0022 | -0.0016 |
| 7 | 4 | 3 | 6 | → | 6 | 3 | 3 | 5 | 15848.0199 | 0.0021 |
| 7 | 3 | 4 | 7 | → | 6 | 2 | 4 | 6 | 16026.6034 | -0.0006 |
| 7 | 3 | 4 | 8 | → | 6 | 2 | 4 | 7 | 16026.8955 | 0.0022 |
| 7 | 3 | 4 | 6 | → | 6 | 2 | 4 | 5 | 16026.9388 | -0.0002 |
| 7 | 4 | 4 | 7 | → | 6 | 3 | 4 | 6 | 16061.5311 | 0.0031 |
| 7 | 4 | 4 | 8 | → | 6 | 3 | 4 | 7 | 16061.8226 | 0.0033 |
| 7 | 4 | 4 | 6 | → | 6 | 3 | 4 | 5 | 16061.8656 | 0.0002 |
| 7 | 2 | 5 | 7 | → | 6 | 1 | 5 | 6 | 16080.8715 | 0.0005 |
| 7 | 2 | 5 | 8 | → | 6 | 1 | 5 | 7 | 16081.3241 | -0.0004 |
| 7 | 2 | 5 | 6 | → | 6 | 1 | 5 | 5 | 16081.4082 | -0.0020 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 5 | 6 | 16082.5335 | -0.0010 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 5 | 7 | 16082.9875 | -0.0006 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 5 | 5 | 16083.0717 | -0.0021 |
| 7 | 5 | 3 | 7 | → | 6 | 4 | 3 | 6 | 16105.1433 | 0.0006 |
| 7 | 5 | 3 | 8 | → | 6 | 4 | 3 | 7 | 16105.3116 | -0.0004 |
| 7 | 5 | 3 | 6 | → | 6 | 4 | 3 | 5 | 16105.3311 | 0.0031 |
| 7 | 6 | 1 | 8 | → | 6 | 5 | 1 | 7 | 16184.6611 | 0.0025 |
| 7 | 6 | 2 | 7 | → | 6 | 5 | 2 | 6 | 16339.0428 | -0.0014 |
| 7 | 6 | 2 | 6 | → | 6 | 5 | 2 | 5 | 16339.1285 | -0.0026 |
| 7 | 6 | 2 | 8 | → | 6 | 5 | 2 | 7 | 16339.1363 | -0.0003 |
| 8 | 5 | 3 | 8 | → | 7 | 4 | 3 | 7 | 18037.2250 | -0.0004 |
| 8 | 5 | 3 | 9 | → | 7 | 4 | 3 | 8 | 18037.3220 | 0.0007 |
| 8 | 5 | 3 | 7 | → | 7 | 4 | 3 | 6 | 18037.3220 | -0.0026 |
| 8 | 6 | 2 | 8 | → | 7 | 5 | 2 | 7 | 18114.8778 | -0.0012 |
| 8 | 6 | 2 | 7 | → | 7 | 5 | 2 | 6 | 18114.9206 | -0.0028 |
| 8 | 4 | 4 | 8 | → | 7 | 3 | 4 | 7 | 18254.0602 | 0.0021 |
| 8 | 4 | 4 | 9 | → | 7 | 3 | 4 | 8 | 18254.2529 | 0.0031 |
| 8 | 4 | 4 | 7 | → | 7 | 3 | 4 | 6 | 18254.2720 | 0.0002 |
| 8 | 5 | 4 | 8 | → | 7 | 4 | 4 | 7 | 18341.5346 | 0.0033 |
| 8 | 5 | 4 | 9 | → | 7 | 4 | 4 | 8 | 18341.7297 | 0.0024 |
| 8 | 5 | 4 | 7 | → | 7 | 4 | 4 | 6 | 18341.7493 | -0.0002 |

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|---|---|---|----|---|---|---|---|---|------------|---------|
| 8 | 3 | 5 | 8 | → | 7 | 2 | 5 | 7 | 18352.5431 | 0.0000 |
| 8 | 3 | 5 | 9 | → | 7 | 2 | 5 | 8 | 18352.8493 | 0.0012 |
| 8 | 3 | 5 | 7 | → | 7 | 2 | 5 | 6 | 18352.8949 | 0.0017 |
| 8 | 4 | 5 | 8 | → | 7 | 3 | 5 | 7 | 18358.9803 | 0.0013 |
| 8 | 4 | 5 | 9 | → | 7 | 3 | 5 | 8 | 18359.2874 | 0.0032 |
| 8 | 4 | 5 | 7 | → | 7 | 3 | 5 | 6 | 18359.3293 | 0.0000 |
| 8 | 6 | 3 | 8 | → | 7 | 5 | 3 | 7 | 18431.8572 | -0.0005 |
| 8 | 6 | 3 | 9 | → | 7 | 5 | 3 | 8 | 18431.9779 | 0.0033 |
| 8 | 6 | 3 | 7 | → | 7 | 5 | 3 | 6 | 18431.9779 | -0.0018 |
| 8 | 7 | 1 | 8 | → | 7 | 6 | 1 | 7 | 18629.8346 | 0.0000 |
| 8 | 7 | 1 | 7 | → | 7 | 6 | 1 | 6 | 18629.8694 | -0.0037 |
| 8 | 7 | 1 | 9 | → | 7 | 6 | 1 | 8 | 18629.8837 | 0.0003 |
| 8 | 7 | 2 | 8 | → | 7 | 6 | 2 | 7 | 18731.5493 | 0.0000 |
| 8 | 7 | 2 | 7 | → | 7 | 6 | 2 | 6 | 18731.6100 | -0.0004 |
| 9 | 6 | 3 | 8 | → | 8 | 5 | 3 | 7 | 20252.1763 | -0.0021 |
| 9 | 6 | 3 | 10 | → | 8 | 5 | 3 | 9 | 20252.1763 | -0.0030 |

Table S4. Microwave transitions of 2,6-difluoropyridine-Ar complex.

| J' | K_a' | K_c' | F' | \rightarrow | J'' | K_a'' | K_c'' | F'' | ν_{obs} | ν_{o-c} |
|------|--------|--------|------|---------------|-------|---------|---------|-------|-------------|-------------|
| 2 | 1 | 1 | 2 | \rightarrow | 1 | 0 | 1 | 1 | 4326.9000 | 0.0004 |
| 2 | 1 | 1 | 3 | \rightarrow | 1 | 0 | 1 | 2 | 4328.1587 | 0.0006 |
| 2 | 1 | 1 | 1 | \rightarrow | 1 | 0 | 1 | 0 | 4329.4916 | 0.0037 |
| 2 | 2 | 0 | 1 | \rightarrow | 1 | 1 | 0 | 0 | 4704.5409 | 0.0027 |
| 2 | 2 | 0 | 2 | \rightarrow | 1 | 1 | 0 | 2 | 4704.5955 | -0.0010 |
| 2 | 2 | 0 | 3 | \rightarrow | 1 | 1 | 0 | 2 | 4705.7344 | -0.0001 |
| 2 | 2 | 0 | 2 | \rightarrow | 1 | 1 | 0 | 1 | 4705.8163 | 0.0005 |
| 2 | 2 | 0 | 1 | \rightarrow | 1 | 1 | 0 | 1 | 4707.5860 | -0.0007 |
| 2 | 2 | 1 | 2 | \rightarrow | 1 | 1 | 1 | 1 | 4828.1703 | -0.0005 |
| 2 | 2 | 1 | 3 | \rightarrow | 1 | 1 | 1 | 2 | 4829.4366 | -0.0008 |
| 2 | 2 | 1 | 1 | \rightarrow | 1 | 1 | 1 | 0 | 4830.6622 | -0.0013 |
| 3 | 1 | 2 | 3 | \rightarrow | 2 | 0 | 2 | 2 | 6487.5698 | -0.0002 |
| 3 | 1 | 2 | 2 | \rightarrow | 2 | 0 | 2 | 2 | 6487.8711 | 0.0005 |
| 3 | 1 | 2 | 3 | \rightarrow | 2 | 0 | 2 | 3 | 6488.7071 | -0.0008 |
| 3 | 1 | 2 | 4 | \rightarrow | 2 | 0 | 2 | 3 | 6488.9306 | 0.0002 |
| 3 | 1 | 2 | 2 | \rightarrow | 2 | 0 | 2 | 1 | 6489.6408 | -0.0001 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 1 | 3 | 6604.5358 | -0.0010 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6605.1281 | -0.0004 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6605.3314 | -0.0007 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6605.3693 | -0.0004 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 1 | 2 | 6606.2528 | -0.0007 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 6866.5447 | -0.0003 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 6867.8513 | 0.0000 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 6868.5765 | -0.0009 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 0 | 3 | 7245.6719 | -0.0007 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7246.5694 | 0.0006 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7246.8041 | -0.0007 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7246.8126 | 0.0019 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 0 | 2 | 7248.3396 | 0.0000 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 1 | 3 | 7309.4490 | -0.0009 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7310.1647 | 0.0003 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 1 | 1 | 7310.4553 | -0.0003 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7310.4899 | 0.0008 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 1 | 2 | 7311.5656 | -0.0021 |
| 4 | 2 | 2 | 4 | \rightarrow | 3 | 1 | 2 | 3 | 8625.6934 | 0.0000 |
| 4 | 2 | 2 | 5 | \rightarrow | 3 | 1 | 2 | 4 | 8626.1443 | 0.0000 |
| 4 | 2 | 2 | 3 | \rightarrow | 3 | 1 | 2 | 2 | 8626.2401 | 0.0005 |
| 4 | 1 | 3 | 4 | \rightarrow | 3 | 0 | 3 | 3 | 8765.0055 | 0.0005 |
| 4 | 1 | 3 | 5 | \rightarrow | 3 | 0 | 3 | 4 | 8766.3800 | 0.0007 |
| 4 | 1 | 3 | 3 | \rightarrow | 3 | 0 | 3 | 2 | 8766.8804 | 0.0013 |
| 4 | 2 | 3 | 4 | \rightarrow | 3 | 1 | 3 | 3 | 8986.6687 | -0.0008 |
| 4 | 2 | 3 | 5 | \rightarrow | 3 | 1 | 3 | 4 | 8987.9063 | 0.0000 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 4 | 2 | 3 | 3 | → | 3 | 1 | 3 | 2 | 8988.3774 | -0.0006 |
| 4 | 3 | 1 | 3 | → | 3 | 2 | 1 | 2 | 9045.6253 | -0.0001 |
| 4 | 3 | 1 | 5 | → | 3 | 2 | 1 | 4 | 9045.7029 | -0.0014 |
| 4 | 3 | 1 | 4 | → | 3 | 2 | 1 | 3 | 9045.7113 | 0.0013 |
| 4 | 3 | 2 | 4 | → | 3 | 2 | 2 | 3 | 9261.3046 | -0.0001 |
| 4 | 3 | 2 | 5 | → | 3 | 2 | 2 | 4 | 9261.8085 | 0.0003 |
| 4 | 3 | 2 | 3 | → | 3 | 2 | 2 | 2 | 9261.9371 | -0.0003 |
| 4 | 4 | 0 | 3 | → | 3 | 3 | 0 | 2 | 9806.7810 | 0.0002 |
| 4 | 4 | 0 | 4 | → | 3 | 3 | 0 | 3 | 9806.8112 | 0.0002 |
| 4 | 4 | 0 | 5 | → | 3 | 3 | 0 | 4 | 9806.8707 | 0.0000 |
| 4 | 4 | 1 | 4 | → | 3 | 3 | 1 | 3 | 9826.7656 | 0.0000 |
| 4 | 4 | 1 | 3 | → | 3 | 3 | 1 | 2 | 9826.8391 | 0.0006 |
| 4 | 4 | 1 | 5 | → | 3 | 3 | 1 | 4 | 9826.9008 | 0.0003 |
| 5 | 2 | 3 | 5 | → | 4 | 1 | 3 | 4 | 10789.4332 | 0.0003 |
| 5 | 2 | 3 | 6 | → | 4 | 1 | 3 | 5 | 10790.0879 | -0.0002 |
| 5 | 2 | 3 | 4 | → | 4 | 1 | 3 | 3 | 10790.2324 | 0.0001 |
| 5 | 3 | 2 | 5 | → | 4 | 2 | 2 | 4 | 10908.7927 | -0.0004 |
| 5 | 3 | 2 | 4 | → | 4 | 2 | 2 | 3 | 10908.8791 | -0.0021 |
| 5 | 3 | 2 | 6 | → | 4 | 2 | 2 | 5 | 10908.8970 | 0.0006 |
| 5 | 1 | 4 | 5 | → | 4 | 0 | 4 | 4 | 11071.6319 | 0.0003 |
| 5 | 1 | 4 | 6 | → | 4 | 0 | 4 | 5 | 11072.8722 | 0.0001 |
| 5 | 1 | 4 | 4 | → | 4 | 0 | 4 | 3 | 11073.2250 | 0.0003 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 4 | 4 | 11168.4099 | -0.0009 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 4 | 5 | 11169.5641 | -0.0003 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 4 | 3 | 11169.9001 | -0.0005 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 3 | 4 | 11290.4842 | -0.0001 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 3 | 5 | 11291.0737 | 0.0000 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 3 | 3 | 11291.2159 | 0.0000 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 1 | 3 | 11610.7309 | 0.0008 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 1 | 4 | 11610.7716 | 0.0020 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 1 | 5 | 11610.7716 | -0.0019 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 2 | 4 | 11720.4367 | 0.0002 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 2 | 5 | 11720.6684 | 0.0000 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 2 | 3 | 11720.6898 | 0.0011 |
| 5 | 5 | 0 | 5 | → | 4 | 4 | 0 | 4 | 12354.4971 | -0.0009 |
| 5 | 5 | 0 | 4 | → | 4 | 4 | 0 | 3 | 12354.5110 | 0.0005 |
| 5 | 5 | 0 | 6 | → | 4 | 4 | 0 | 5 | 12354.5616 | 0.0002 |
| 5 | 5 | 1 | 5 | → | 4 | 4 | 1 | 4 | 12359.4428 | 0.0014 |
| 5 | 5 | 1 | 4 | → | 4 | 4 | 1 | 3 | 12359.4714 | -0.0009 |
| 5 | 5 | 1 | 6 | → | 4 | 4 | 1 | 5 | 12359.5187 | -0.0005 |
| 6 | 3 | 3 | 6 | → | 5 | 2 | 3 | 5 | 12907.5637 | 0.0003 |
| 6 | 3 | 3 | 7 | → | 5 | 2 | 3 | 6 | 12907.8259 | 0.0005 |
| 6 | 3 | 3 | 5 | → | 5 | 2 | 3 | 4 | 12907.8529 | -0.0007 |
| 6 | 2 | 4 | 6 | → | 5 | 1 | 4 | 5 | 13083.8342 | -0.0002 |
| 6 | 2 | 4 | 7 | → | 5 | 1 | 4 | 6 | 13084.6029 | 0.0001 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 6 | 2 | 4 | 5 | → | 5 | 1 | 4 | 4 | 13084.7536 | -0.0006 |
| 6 | 1 | 5 | 6 | → | 5 | 0 | 5 | 5 | 13352.3041 | 0.0005 |
| 6 | 1 | 5 | 7 | → | 5 | 0 | 5 | 6 | 13353.3993 | 0.0000 |
| 6 | 1 | 5 | 5 | → | 5 | 0 | 5 | 4 | 13353.6553 | -0.0007 |
| 6 | 4 | 2 | 5 | → | 5 | 3 | 2 | 4 | 13379.2960 | 0.0020 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 2 | 6 | 13379.3274 | 0.0003 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 2 | 5 | 13379.3606 | -0.0016 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 5 | 5 | 13386.4909 | -0.0010 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 5 | 6 | 13387.5533 | -0.0006 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 5 | 4 | 13387.8049 | -0.0003 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 4 | 5 | 13398.1341 | 0.0004 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 4 | 6 | 13398.7754 | 0.0002 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 4 | 4 | 13398.9089 | -0.0002 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 3 | 5 | 13667.7503 | 0.0000 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 3 | 6 | 13668.0497 | 0.0002 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 3 | 4 | 13668.0961 | 0.0021 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 1 | 5 | 14187.1379 | 0.0001 |
| 6 | 5 | 1 | 5 | → | 5 | 4 | 1 | 4 | 14187.1724 | -0.0022 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 1 | 6 | 14187.1944 | 0.0002 |
| 6 | 5 | 2 | 6 | → | 5 | 4 | 2 | 5 | 14225.2650 | 0.0001 |
| 6 | 5 | 2 | 5 | → | 5 | 4 | 2 | 4 | 14225.3924 | 0.0024 |
| 6 | 5 | 2 | 7 | → | 5 | 4 | 2 | 6 | 14225.3924 | -0.0014 |
| 6 | 6 | 0 | 6 | → | 5 | 5 | 0 | 5 | 14896.2016 | -0.0009 |
| 6 | 6 | 0 | 5 | → | 5 | 5 | 0 | 4 | 14896.2231 | 0.0039 |
| 6 | 6 | 0 | 7 | → | 5 | 5 | 0 | 6 | 14896.2537 | -0.0005 |
| 6 | 6 | 1 | 6 | → | 5 | 5 | 1 | 5 | 14897.2865 | -0.0001 |
| 6 | 6 | 1 | 5 | → | 5 | 5 | 1 | 4 | 14897.3088 | 0.0022 |
| 6 | 6 | 1 | 7 | → | 5 | 5 | 1 | 6 | 14897.3406 | -0.0004 |
| 7 | 3 | 4 | 7 | → | 6 | 2 | 4 | 6 | 15069.0262 | -0.0008 |
| 7 | 3 | 4 | 8 | → | 6 | 2 | 4 | 7 | 15069.4563 | 0.0012 |
| 7 | 3 | 4 | 6 | → | 6 | 2 | 4 | 5 | 15069.5115 | -0.0017 |
| 7 | 4 | 3 | 7 | → | 6 | 3 | 3 | 6 | 15205.9870 | 0.0019 |
| 7 | 4 | 3 | 6 | → | 6 | 3 | 3 | 5 | 15206.0122 | -0.0030 |
| 7 | 4 | 3 | 8 | → | 6 | 3 | 3 | 7 | 15206.0280 | 0.0011 |
| 7 | 2 | 5 | 7 | → | 6 | 1 | 5 | 6 | 15419.1128 | -0.0003 |
| 7 | 2 | 5 | 8 | → | 6 | 1 | 5 | 7 | 15419.8665 | 0.0000 |
| 7 | 2 | 5 | 6 | → | 6 | 1 | 5 | 5 | 15419.9981 | -0.0006 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 5 | 6 | 15570.0765 | 0.0002 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 5 | 7 | 15570.7389 | 0.0000 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 5 | 5 | 15570.8587 | -0.0004 |
| 7 | 1 | 6 | 7 | → | 6 | 0 | 6 | 6 | 15610.3634 | 0.0007 |
| 7 | 1 | 6 | 8 | → | 6 | 0 | 6 | 7 | 15611.3457 | 0.0008 |
| 7 | 1 | 6 | 6 | → | 6 | 0 | 6 | 5 | 15611.5407 | 0.0001 |
| 7 | 2 | 6 | 7 | → | 6 | 1 | 6 | 6 | 15620.9638 | 0.0000 |
| 7 | 2 | 6 | 8 | → | 6 | 1 | 6 | 7 | 15621.9348 | -0.0007 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 7 | 2 | 6 | 6 | → | 6 | 1 | 6 | 5 | 15622.1287 | -0.0011 |
| 7 | 4 | 4 | 7 | → | 6 | 3 | 4 | 6 | 15687.7872 | 0.0001 |
| 7 | 4 | 4 | 8 | → | 6 | 3 | 4 | 7 | 15688.1501 | -0.0001 |
| 7 | 4 | 4 | 6 | → | 6 | 3 | 4 | 5 | 15688.2057 | 0.0008 |
| 7 | 5 | 2 | 6 | → | 6 | 4 | 2 | 5 | 15969.8062 | -0.0011 |
| 7 | 5 | 2 | 8 | → | 6 | 4 | 2 | 7 | 15969.8273 | -0.0007 |
| 7 | 5 | 2 | 7 | → | 6 | 4 | 2 | 6 | 15969.8467 | 0.0020 |
| 7 | 5 | 3 | 7 | → | 6 | 4 | 3 | 6 | 16116.1787 | 0.0006 |
| 7 | 5 | 3 | 8 | → | 6 | 4 | 3 | 7 | 16116.3387 | -0.0011 |
| 7 | 5 | 3 | 6 | → | 6 | 4 | 3 | 5 | 16116.3538 | 0.0022 |
| 7 | 6 | 1 | 7 | → | 6 | 5 | 1 | 6 | 16742.1361 | -0.0009 |
| 7 | 6 | 1 | 6 | → | 6 | 5 | 1 | 5 | 16742.1938 | -0.0009 |
| 7 | 6 | 1 | 8 | → | 6 | 5 | 1 | 7 | 16742.2081 | 0.0016 |
| 7 | 6 | 2 | 7 | → | 6 | 5 | 2 | 6 | 16752.7831 | -0.0011 |
| 7 | 6 | 2 | 6 | → | 6 | 5 | 2 | 5 | 16752.8610 | -0.0024 |
| 7 | 6 | 2 | 8 | → | 6 | 5 | 2 | 7 | 16752.8732 | 0.0011 |
| 8 | 4 | 4 | 8 | → | 7 | 3 | 4 | 7 | 17179.3952 | 0.0000 |
| 8 | 4 | 4 | 9 | → | 7 | 3 | 4 | 8 | 17179.5683 | -0.0005 |
| 8 | 4 | 4 | 7 | → | 7 | 3 | 4 | 6 | 17179.5832 | 0.0029 |
| 8 | 3 | 5 | 8 | → | 7 | 2 | 5 | 7 | 17377.7013 | -0.0003 |
| 8 | 3 | 5 | 9 | → | 7 | 2 | 5 | 8 | 17378.2378 | 0.0007 |
| 8 | 3 | 5 | 7 | → | 7 | 2 | 5 | 6 | 17378.3093 | 0.0010 |
| 7 | 7 | 0 | 7 | → | 6 | 6 | 0 | 6 | 17436.1386 | -0.0020 |
| 7 | 7 | 0 | 6 | → | 6 | 6 | 0 | 5 | 17436.1581 | 0.0028 |
| 7 | 7 | 0 | 8 | → | 6 | 6 | 0 | 7 | 17436.1812 | -0.0003 |
| 7 | 7 | 1 | 7 | → | 6 | 6 | 1 | 6 | 17436.3599 | -0.0016 |
| 7 | 7 | 1 | 6 | → | 6 | 6 | 1 | 5 | 17436.3782 | 0.0013 |
| 7 | 7 | 1 | 8 | → | 6 | 6 | 1 | 7 | 17436.4018 | -0.0011 |
| 8 | 5 | 3 | 7 | → | 7 | 4 | 3 | 6 | 17708.6159 | -0.0016 |
| 8 | 5 | 3 | 9 | → | 7 | 4 | 3 | 8 | 17708.6404 | 0.0021 |
| 8 | 5 | 3 | 8 | → | 7 | 4 | 3 | 7 | 17708.6913 | -0.0003 |
| 8 | 2 | 6 | 8 | → | 7 | 1 | 6 | 7 | 17724.7622 | 0.0000 |
| 8 | 2 | 6 | 9 | → | 7 | 1 | 6 | 8 | 17725.4602 | 0.0000 |
| 8 | 2 | 6 | 7 | → | 7 | 1 | 6 | 6 | 17725.5708 | 0.0005 |
| 8 | 3 | 6 | 8 | → | 7 | 2 | 6 | 7 | 17783.5470 | -0.0004 |
| 8 | 3 | 6 | 9 | → | 7 | 2 | 6 | 8 | 17784.2046 | -0.0001 |
| 8 | 3 | 6 | 7 | → | 7 | 2 | 6 | 6 | 17784.3111 | 0.0011 |
| 8 | 4 | 5 | 8 | → | 7 | 3 | 5 | 7 | 17785.5232 | 0.0008 |
| 8 | 4 | 5 | 9 | → | 7 | 3 | 5 | 8 | 17785.9393 | 0.0003 |
| 8 | 4 | 5 | 7 | → | 7 | 3 | 5 | 6 | 17785.9967 | -0.0008 |
| 8 | 1 | 7 | 8 | → | 7 | 0 | 7 | 7 | 17857.9624 | -0.0002 |
| 8 | 1 | 7 | 9 | → | 7 | 0 | 7 | 8 | 17858.8573 | 0.0016 |
| 8 | 1 | 7 | 7 | → | 7 | 0 | 7 | 6 | 17859.0105 | 0.0002 |
| 8 | 2 | 7 | 8 | → | 7 | 1 | 7 | 7 | 17860.9833 | -0.0002 |
| 8 | 2 | 7 | 9 | → | 7 | 1 | 7 | 8 | 17861.8736 | 0.0000 |

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|---|---|---|----|---|---|---|---|---|------------|---------|
| 8 | 2 | 7 | 7 | → | 7 | 1 | 7 | 6 | 17862.0264 | -0.0012 |
| 8 | 5 | 4 | 8 | → | 7 | 4 | 4 | 7 | 18056.4476 | -0.0001 |
| 8 | 5 | 4 | 9 | → | 7 | 4 | 4 | 8 | 18056.6496 | -0.0024 |
| 8 | 5 | 4 | 7 | → | 7 | 4 | 4 | 6 | 18056.6753 | 0.0024 |
| 8 | 6 | 2 | 7 | → | 7 | 5 | 2 | 6 | 18561.2234 | -0.0016 |
| 8 | 6 | 2 | 9 | → | 7 | 5 | 2 | 8 | 18561.2351 | 0.0010 |
| 8 | 6 | 3 | 8 | → | 7 | 5 | 3 | 7 | 18614.8695 | 0.0008 |
| 8 | 6 | 3 | 9 | → | 7 | 5 | 3 | 8 | 18614.9696 | 0.0007 |
| 8 | 6 | 3 | 7 | → | 7 | 5 | 3 | 6 | 18614.9696 | -0.0001 |
| 8 | 7 | 1 | 8 | → | 7 | 6 | 1 | 7 | 19285.7562 | -0.0029 |
| 8 | 7 | 1 | 7 | → | 7 | 6 | 1 | 6 | 19285.8120 | -0.0016 |
| 9 | 4 | 5 | 9 | → | 8 | 3 | 5 | 8 | 19333.5681 | -0.0006 |
| 9 | 4 | 5 | 10 | → | 8 | 3 | 5 | 9 | 19333.8829 | -0.0007 |
| 9 | 5 | 4 | 8 | → | 8 | 4 | 4 | 7 | 19499.0479 | 0.0000 |
| 9 | 5 | 4 | 9 | → | 8 | 4 | 4 | 8 | 19499.0479 | -0.0026 |
| 9 | 5 | 4 | 8 | → | 8 | 4 | 4 | 7 | 19499.0479 | 0.0000 |
| 9 | 5 | 4 | 9 | → | 8 | 4 | 4 | 8 | 19499.0479 | -0.0026 |
| 9 | 5 | 4 | 10 | → | 8 | 4 | 4 | 9 | 19499.0587 | 0.0011 |
| 9 | 5 | 4 | 10 | → | 8 | 4 | 4 | 9 | 19499.0587 | 0.0011 |
| 9 | 3 | 6 | 9 | → | 8 | 2 | 6 | 8 | 19740.6616 | -0.0006 |
| 9 | 3 | 6 | 10 | → | 8 | 2 | 6 | 9 | 19741.2059 | 0.0000 |
| 9 | 3 | 6 | 8 | → | 8 | 2 | 6 | 7 | 19741.2739 | 0.0001 |
| 9 | 4 | 6 | 9 | → | 8 | 3 | 6 | 8 | 19950.1888 | 0.0000 |
| 9 | 4 | 6 | 10 | → | 8 | 3 | 6 | 9 | 19950.6404 | 0.0005 |
| 9 | 4 | 6 | 8 | → | 8 | 3 | 6 | 7 | 19950.6955 | -0.0027 |
| 9 | 2 | 7 | 9 | → | 8 | 1 | 7 | 8 | 19997.6585 | 0.0013 |
| 9 | 2 | 7 | 10 | → | 8 | 1 | 7 | 9 | 19998.3062 | -0.0012 |
| 9 | 2 | 7 | 8 | → | 8 | 1 | 7 | 7 | 19998.4030 | 0.0031 |
| 9 | 3 | 7 | 9 | → | 8 | 2 | 7 | 8 | 20017.6216 | -0.0009 |
| 9 | 3 | 7 | 8 | → | 8 | 2 | 7 | 7 | 20018.3485 | -0.0007 |
| 9 | 5 | 5 | 9 | → | 8 | 4 | 5 | 8 | 20066.9254 | 0.0001 |
| 9 | 5 | 5 | 10 | → | 8 | 4 | 5 | 9 | 20067.1781 | -0.0017 |
| 9 | 5 | 5 | 8 | → | 8 | 4 | 5 | 7 | 20067.2099 | 0.0027 |
| 9 | 6 | 3 | 8 | → | 8 | 5 | 3 | 7 | 20323.6789 | -0.0012 |
| 9 | 6 | 3 | 10 | → | 8 | 5 | 3 | 9 | 20323.6947 | 0.0011 |
| 9 | 6 | 3 | 9 | → | 8 | 5 | 3 | 8 | 20323.7226 | -0.0011 |
| 9 | 6 | 4 | 9 | → | 8 | 5 | 4 | 8 | 20499.7167 | -0.0001 |
| 9 | 6 | 4 | 10 | → | 8 | 5 | 4 | 9 | 20499.8347 | -0.0004 |
| 9 | 6 | 4 | 8 | → | 8 | 5 | 4 | 7 | 20499.8413 | -0.0002 |
| 9 | 7 | 2 | 9 | → | 8 | 6 | 2 | 8 | 21123.1725 | 0.0015 |
| 9 | 7 | 2 | 8 | → | 8 | 6 | 2 | 7 | 21123.2207 | -0.0003 |
| 9 | 7 | 2 | 10 | → | 8 | 6 | 2 | 9 | 21123.2255 | -0.0001 |
| 9 | 7 | 3 | 9 | → | 8 | 6 | 3 | 8 | 21139.2999 | 0.0000 |
| 9 | 7 | 3 | 8 | → | 8 | 6 | 3 | 7 | 21139.3731 | 0.0017 |
| 9 | 7 | 3 | 10 | → | 8 | 6 | 3 | 9 | 21139.3731 | -0.0004 |

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|---|---|---|----|---|---|---|---|---|------------|---------|
| 9 | 8 | 1 | 8 | → | 8 | 7 | 1 | 7 | 21825.4416 | -0.0008 |
| 9 | 8 | 1 | 10 | → | 8 | 7 | 1 | 9 | 21825.4519 | 0.0011 |
| 9 | 8 | 2 | 9 | → | 8 | 7 | 2 | 8 | 21825.9933 | 0.0020 |
| 9 | 8 | 2 | 8 | → | 8 | 7 | 2 | 7 | 21826.0377 | -0.0012 |
| 9 | 8 | 2 | 10 | → | 8 | 7 | 2 | 9 | 21826.0478 | 0.0006 |

Table S5. Microwave transitions of 3,5-difluoropyridine-Ar complex.

| J' | K_a' | K_c' | F' | \rightarrow | J'' | K_a'' | K_c'' | F'' | ν_{obs} | ν_{o-c} |
|------|--------|--------|------|---------------|-------|---------|---------|-------|-------------|-------------|
| 3 | 1 | 2 | 3 | \rightarrow | 2 | 0 | 2 | 2 | 6380.0077 | -0.0002 |
| 3 | 1 | 2 | 4 | \rightarrow | 2 | 0 | 2 | 3 | 6381.4565 | 0.0013 |
| 3 | 1 | 2 | 2 | \rightarrow | 2 | 0 | 2 | 1 | 6382.2506 | -0.0019 |
| 3 | 2 | 1 | 3 | \rightarrow | 2 | 1 | 1 | 2 | 6458.8303 | 0.0012 |
| 3 | 2 | 1 | 4 | \rightarrow | 2 | 1 | 1 | 3 | 6459.1796 | 0.0004 |
| 3 | 2 | 1 | 2 | \rightarrow | 2 | 1 | 1 | 1 | 6459.2007 | 0.0002 |
| 3 | 2 | 2 | 3 | \rightarrow | 2 | 1 | 2 | 2 | 6719.1650 | -0.0001 |
| 3 | 2 | 2 | 4 | \rightarrow | 2 | 1 | 2 | 3 | 6720.6324 | 0.0009 |
| 3 | 2 | 2 | 2 | \rightarrow | 2 | 1 | 2 | 1 | 6721.4469 | 0.0002 |
| 3 | 3 | 0 | 2 | \rightarrow | 2 | 2 | 0 | 1 | 7059.4741 | 0.0006 |
| 3 | 3 | 0 | 3 | \rightarrow | 2 | 2 | 0 | 2 | 7059.6643 | -0.0005 |
| 3 | 3 | 0 | 4 | \rightarrow | 2 | 2 | 0 | 3 | 7059.7380 | -0.0003 |
| 3 | 3 | 1 | 3 | \rightarrow | 2 | 2 | 1 | 2 | 7133.5596 | 0.0003 |
| 3 | 3 | 1 | 2 | \rightarrow | 2 | 2 | 1 | 1 | 7133.9038 | -0.0011 |
| 3 | 3 | 1 | 4 | \rightarrow | 2 | 2 | 1 | 3 | 7133.9641 | -0.0003 |
| 4 | 2 | 2 | 4 | \rightarrow | 3 | 1 | 2 | 3 | 8462.2302 | 0.0000 |
| 4 | 2 | 2 | 5 | \rightarrow | 3 | 1 | 2 | 4 | 8462.7538 | 0.0005 |
| 4 | 2 | 2 | 3 | \rightarrow | 3 | 1 | 2 | 2 | 8462.8842 | 0.0000 |
| 4 | 1 | 3 | 4 | \rightarrow | 3 | 0 | 3 | 3 | 8630.6751 | -0.0007 |
| 4 | 1 | 3 | 5 | \rightarrow | 3 | 0 | 3 | 4 | 8632.1014 | 0.0004 |
| 4 | 1 | 3 | 3 | \rightarrow | 3 | 0 | 3 | 2 | 8632.6387 | -0.0010 |
| 4 | 2 | 3 | 4 | \rightarrow | 3 | 1 | 3 | 3 | 8809.0513 | -0.0020 |
| 4 | 2 | 3 | 5 | \rightarrow | 3 | 1 | 3 | 4 | 8810.4119 | 0.0005 |
| 4 | 2 | 3 | 3 | \rightarrow | 3 | 1 | 3 | 2 | 8810.9363 | 0.0000 |
| 4 | 3 | 1 | 4 | \rightarrow | 3 | 2 | 1 | 3 | 8814.7399 | -0.0001 |
| 4 | 3 | 1 | 3 | \rightarrow | 3 | 2 | 1 | 2 | 8814.7981 | 0.0014 |
| 4 | 3 | 1 | 5 | \rightarrow | 3 | 2 | 1 | 4 | 8814.8472 | -0.0001 |
| 4 | 3 | 2 | 4 | \rightarrow | 3 | 2 | 2 | 3 | 9049.4420 | 0.0002 |
| 4 | 3 | 2 | 5 | \rightarrow | 3 | 2 | 2 | 4 | 9050.0462 | 0.0001 |
| 4 | 3 | 2 | 3 | \rightarrow | 3 | 2 | 2 | 2 | 9050.2012 | 0.0000 |
| 4 | 4 | 0 | 3 | \rightarrow | 3 | 3 | 0 | 2 | 9557.4257 | -0.0008 |
| 4 | 4 | 0 | 4 | \rightarrow | 3 | 3 | 0 | 3 | 9557.4331 | 0.0005 |
| 4 | 4 | 0 | 5 | \rightarrow | 3 | 3 | 0 | 4 | 9557.5379 | 0.0002 |
| 4 | 4 | 1 | 4 | \rightarrow | 3 | 3 | 1 | 3 | 9584.0839 | 0.0000 |
| 4 | 4 | 1 | 3 | \rightarrow | 3 | 3 | 1 | 2 | 9584.1891 | 0.0000 |
| 4 | 4 | 1 | 5 | \rightarrow | 3 | 3 | 1 | 4 | 9584.2705 | 0.0006 |
| 5 | 2 | 3 | 5 | \rightarrow | 4 | 1 | 3 | 4 | 10621.2875 | 0.0000 |
| 5 | 2 | 3 | 6 | \rightarrow | 4 | 1 | 3 | 5 | 10621.9878 | 0.0010 |
| 5 | 2 | 3 | 4 | \rightarrow | 4 | 1 | 3 | 3 | 10622.1514 | -0.0006 |
| 5 | 3 | 2 | 5 | \rightarrow | 4 | 2 | 2 | 4 | 10662.5219 | -0.0014 |
| 5 | 3 | 2 | 6 | \rightarrow | 4 | 2 | 2 | 5 | 10662.7174 | -0.0008 |
| 5 | 3 | 2 | 4 | \rightarrow | 4 | 2 | 2 | 3 | 10662.7308 | 0.0028 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 5 | 1 | 4 | 5 | → | 4 | 0 | 4 | 4 | 10891.6663 | 0.0002 |
| 5 | 1 | 4 | 6 | → | 4 | 0 | 4 | 5 | 10892.9565 | 0.0009 |
| 5 | 1 | 4 | 4 | → | 4 | 0 | 4 | 3 | 10893.3327 | -0.0005 |
| 5 | 2 | 4 | 5 | → | 4 | 1 | 4 | 4 | 10960.0636 | -0.0003 |
| 5 | 2 | 4 | 6 | → | 4 | 1 | 4 | 5 | 10961.3116 | 0.0001 |
| 5 | 2 | 4 | 4 | → | 4 | 1 | 4 | 3 | 10961.6806 | -0.0006 |
| 5 | 3 | 3 | 5 | → | 4 | 2 | 3 | 4 | 11052.2437 | 0.0001 |
| 5 | 3 | 3 | 6 | → | 4 | 2 | 3 | 5 | 11052.9197 | 0.0005 |
| 5 | 3 | 3 | 4 | → | 4 | 2 | 3 | 3 | 11053.0845 | -0.0005 |
| 5 | 4 | 1 | 5 | → | 4 | 3 | 1 | 4 | 11300.3781 | -0.0002 |
| 5 | 4 | 1 | 4 | → | 4 | 3 | 1 | 3 | 11300.4210 | -0.0008 |
| 5 | 4 | 1 | 6 | → | 4 | 3 | 1 | 5 | 11300.4563 | -0.0003 |
| 5 | 4 | 2 | 5 | → | 4 | 3 | 2 | 4 | 11438.0516 | 0.0000 |
| 5 | 4 | 2 | 6 | → | 4 | 3 | 2 | 5 | 11438.3603 | 0.0007 |
| 5 | 4 | 2 | 4 | → | 4 | 3 | 2 | 3 | 11438.3890 | -0.0008 |
| 5 | 5 | 0 | 5 | → | 4 | 4 | 0 | 4 | 12044.3990 | 0.0009 |
| 5 | 5 | 0 | 4 | → | 4 | 4 | 0 | 3 | 12044.4261 | -0.0012 |
| 5 | 5 | 0 | 6 | → | 4 | 4 | 0 | 5 | 12044.4932 | 0.0001 |
| 5 | 5 | 1 | 5 | → | 4 | 4 | 1 | 4 | 12051.9044 | -0.0002 |
| 5 | 5 | 1 | 4 | → | 4 | 4 | 1 | 3 | 12051.9590 | 0.0029 |
| 5 | 5 | 1 | 6 | → | 4 | 4 | 1 | 5 | 12052.0170 | -0.0001 |
| 6 | 3 | 3 | 6 | → | 5 | 2 | 3 | 5 | 12666.1882 | 0.0008 |
| 6 | 3 | 3 | 7 | → | 5 | 2 | 3 | 6 | 12666.5140 | 0.0000 |
| 6 | 3 | 3 | 5 | → | 5 | 2 | 3 | 4 | 12666.5597 | 0.0000 |
| 6 | 2 | 4 | 6 | → | 5 | 1 | 4 | 5 | 12898.9455 | 0.0002 |
| 6 | 2 | 4 | 7 | → | 5 | 1 | 4 | 6 | 12899.7251 | 0.0002 |
| 6 | 2 | 4 | 5 | → | 5 | 1 | 4 | 4 | 12899.8865 | 0.0001 |
| 6 | 4 | 2 | 6 | → | 5 | 3 | 2 | 5 | 13027.6430 | -0.0005 |
| 6 | 4 | 2 | 5 | → | 5 | 3 | 2 | 4 | 13027.6843 | -0.0013 |
| 6 | 4 | 2 | 7 | → | 5 | 3 | 2 | 6 | 13027.7028 | 0.0006 |
| 6 | 1 | 5 | 6 | → | 5 | 0 | 5 | 5 | 13122.1271 | -0.0002 |
| 6 | 1 | 5 | 7 | → | 5 | 0 | 5 | 6 | 13123.2832 | 0.0018 |
| 6 | 1 | 5 | 5 | → | 5 | 0 | 5 | 4 | 13123.5575 | -0.0007 |
| 6 | 3 | 4 | 6 | → | 5 | 2 | 4 | 5 | 13137.7266 | 0.0000 |
| 6 | 3 | 4 | 7 | → | 5 | 2 | 4 | 6 | 13138.4372 | 0.0003 |
| 6 | 3 | 4 | 5 | → | 5 | 2 | 4 | 4 | 13138.5877 | -0.0008 |
| 6 | 2 | 5 | 6 | → | 5 | 1 | 5 | 5 | 13143.4228 | 0.0000 |
| 6 | 2 | 5 | 7 | → | 5 | 1 | 5 | 6 | 13144.5619 | 0.0000 |
| 6 | 2 | 5 | 5 | → | 5 | 1 | 5 | 4 | 13144.8357 | -0.0007 |
| 6 | 4 | 3 | 6 | → | 5 | 3 | 3 | 5 | 13357.5654 | 0.0001 |
| 6 | 4 | 3 | 7 | → | 5 | 3 | 3 | 6 | 13357.9371 | -0.0006 |
| 6 | 4 | 3 | 5 | → | 5 | 3 | 3 | 4 | 13357.9967 | 0.0010 |
| 6 | 5 | 1 | 6 | → | 5 | 4 | 1 | 5 | 13816.7644 | 0.0000 |
| 6 | 5 | 1 | 5 | → | 5 | 4 | 1 | 4 | 13816.8496 | -0.0014 |
| 6 | 5 | 1 | 7 | → | 5 | 4 | 1 | 6 | 13816.8691 | 0.0000 |

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|---|---|---|---|---|---|---|---|---|------------|---------|
| 6 | 5 | 2 | 6 | → | 5 | 4 | 2 | 5 | 13872.3204 | -0.0017 |
| 6 | 5 | 2 | 5 | → | 5 | 4 | 2 | 4 | 13872.5088 | 0.0005 |
| 6 | 5 | 2 | 7 | → | 5 | 4 | 2 | 6 | 13872.5088 | 0.0001 |
| 6 | 6 | 0 | 6 | → | 5 | 5 | 0 | 5 | 14524.2435 | 0.0007 |
| 6 | 6 | 0 | 5 | → | 5 | 5 | 0 | 4 | 14524.2717 | -0.0007 |
| 6 | 6 | 0 | 7 | → | 5 | 5 | 0 | 6 | 14524.3177 | -0.0007 |
| 6 | 6 | 1 | 6 | → | 5 | 5 | 1 | 5 | 14526.1071 | 0.0004 |
| 6 | 6 | 1 | 5 | → | 5 | 5 | 1 | 4 | 14526.1408 | 0.0001 |
| 6 | 6 | 1 | 7 | → | 5 | 5 | 1 | 6 | 14526.1851 | -0.0008 |
| 7 | 2 | 5 | 7 | → | 6 | 1 | 5 | 6 | 15186.0478 | -0.0011 |
| 7 | 2 | 5 | 8 | → | 6 | 1 | 5 | 7 | 15186.8081 | -0.0012 |
| 7 | 2 | 5 | 6 | → | 6 | 1 | 5 | 5 | 15186.9470 | -0.0013 |
| 7 | 3 | 5 | 7 | → | 6 | 2 | 5 | 6 | 15285.2363 | -0.0011 |
| 7 | 3 | 5 | 8 | → | 6 | 2 | 5 | 7 | 15285.9570 | 0.0026 |
| 7 | 3 | 5 | 6 | → | 6 | 2 | 5 | 5 | 15286.0882 | 0.0006 |
| 7 | 1 | 6 | 7 | → | 6 | 0 | 6 | 6 | 15333.5815 | -0.0005 |
| 7 | 1 | 6 | 8 | → | 6 | 0 | 6 | 7 | 15334.6259 | 0.0000 |
| 7 | 1 | 6 | 6 | → | 6 | 0 | 6 | 5 | 15334.8386 | 0.0008 |
| 7 | 2 | 6 | 7 | → | 6 | 1 | 6 | 6 | 15339.4347 | -0.0002 |
| 7 | 2 | 6 | 8 | → | 6 | 1 | 6 | 7 | 15340.4753 | 0.0008 |
| 7 | 2 | 6 | 6 | → | 6 | 1 | 6 | 5 | 15340.6825 | -0.0033 |
| 7 | 4 | 4 | 7 | → | 6 | 3 | 4 | 6 | 15359.9312 | -0.0010 |
| 7 | 4 | 4 | 8 | → | 6 | 3 | 4 | 7 | 15360.3585 | 0.0002 |
| 7 | 4 | 4 | 6 | → | 6 | 3 | 4 | 5 | 15360.4267 | 0.0020 |
| 7 | 5 | 2 | 7 | → | 6 | 4 | 2 | 6 | 15531.5711 | 0.0002 |
| 7 | 5 | 2 | 6 | → | 6 | 4 | 2 | 5 | 15531.5974 | -0.0014 |
| 7 | 5 | 2 | 8 | → | 6 | 4 | 2 | 7 | 15531.6125 | -0.0003 |
| 7 | 5 | 3 | 7 | → | 6 | 4 | 3 | 6 | 15728.5680 | 0.0007 |
| 7 | 5 | 3 | 8 | → | 6 | 4 | 3 | 7 | 15728.7915 | -0.0002 |
| 7 | 5 | 3 | 6 | → | 6 | 4 | 3 | 5 | 15728.8164 | 0.0050 |
| 7 | 6 | 1 | 7 | → | 6 | 5 | 1 | 6 | 16314.7176 | -0.0009 |
| 7 | 6 | 1 | 6 | → | 6 | 5 | 1 | 5 | 16314.8120 | -0.0023 |
| 7 | 6 | 1 | 8 | → | 6 | 5 | 1 | 7 | 16314.8286 | 0.0019 |
| 7 | 6 | 2 | 7 | → | 6 | 5 | 2 | 6 | 16332.4994 | 0.0019 |
| 7 | 6 | 2 | 6 | → | 6 | 5 | 2 | 5 | 16332.6180 | -0.0026 |
| 7 | 6 | 2 | 8 | → | 6 | 5 | 2 | 7 | 16332.6306 | 0.0017 |
| 8 | 4 | 4 | 8 | → | 7 | 3 | 4 | 7 | 16859.8006 | 0.0025 |
| 8 | 4 | 4 | 9 | → | 7 | 3 | 4 | 8 | 16860.0376 | 0.0002 |
| 8 | 4 | 4 | 7 | → | 7 | 3 | 4 | 6 | 16860.0591 | -0.0013 |
| 8 | 5 | 3 | 8 | → | 7 | 4 | 3 | 7 | 17230.8655 | 0.0039 |
| 8 | 5 | 3 | 7 | → | 7 | 4 | 3 | 6 | 17230.8762 | -0.0046 |
| 8 | 5 | 3 | 9 | → | 7 | 4 | 3 | 8 | 17230.8914 | 0.0008 |
| 8 | 2 | 6 | 8 | → | 7 | 1 | 6 | 7 | 17434.3006 | -0.0012 |
| 8 | 2 | 6 | 9 | → | 7 | 1 | 6 | 8 | 17435.0219 | 0.0010 |
| 8 | 2 | 6 | 7 | → | 7 | 1 | 6 | 6 | 17435.1379 | 0.0000 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|------------|---------|
| 8 | 4 | 5 | 8 | → | 7 | 3 | 5 | 7 | 17443.9437 | -0.0005 |
| 8 | 4 | 5 | 9 | → | 7 | 3 | 5 | 8 | 17444.4111 | 0.0000 |
| 8 | 4 | 5 | 7 | → | 7 | 3 | 5 | 6 | 17444.4770 | -0.0019 |
| 8 | 3 | 6 | 8 | → | 7 | 2 | 6 | 7 | 17467.9965 | -0.0003 |
| 8 | 3 | 6 | 9 | → | 7 | 2 | 6 | 8 | 17468.7000 | 0.0011 |
| 8 | 3 | 6 | 7 | → | 7 | 2 | 6 | 6 | 17468.8126 | -0.0012 |
| 8 | 1 | 7 | 8 | → | 7 | 0 | 7 | 7 | 17537.4748 | 0.0032 |
| 8 | 1 | 7 | 9 | → | 7 | 0 | 7 | 8 | 17538.4234 | -0.0010 |
| 8 | 1 | 7 | 7 | → | 7 | 0 | 7 | 6 | 17538.5930 | 0.0008 |
| 8 | 5 | 4 | 8 | → | 7 | 4 | 4 | 7 | 17648.3723 | 0.0001 |
| 8 | 5 | 4 | 9 | → | 7 | 4 | 4 | 8 | 17648.6371 | 0.0007 |
| 8 | 5 | 4 | 7 | → | 7 | 4 | 4 | 6 | 17648.6619 | -0.0035 |
| 8 | 6 | 2 | 8 | → | 7 | 5 | 2 | 7 | 18066.7818 | -0.0043 |
| 8 | 6 | 2 | 9 | → | 7 | 5 | 2 | 8 | 18066.8629 | 0.0035 |
| 8 | 6 | 3 | 8 | → | 7 | 5 | 3 | 7 | 18151.8020 | 0.0016 |
| 8 | 6 | 3 | 9 | → | 7 | 5 | 3 | 8 | 18151.9544 | 0.0029 |
| 8 | 6 | 3 | 7 | → | 7 | 5 | 3 | 6 | 18151.9544 | -0.0024 |
| 8 | 7 | 1 | 8 | → | 7 | 6 | 1 | 7 | 18798.5299 | -0.0020 |
| 8 | 7 | 1 | 7 | → | 7 | 6 | 1 | 6 | 18798.6172 | -0.0005 |
| 8 | 7 | 1 | 9 | → | 7 | 6 | 1 | 8 | 18798.6310 | 0.0026 |
