

The  $\epsilon(v, 0)$  bands [ $D^2\Sigma^+ - X^2\Pi_r$ ],  $\text{cm}^{-1}$ .

| J    | $\epsilon(0,0)$ band [D(0)-X(0)] |                     |            |            |            |                     |                     |            |
|------|----------------------------------|---------------------|------------|------------|------------|---------------------|---------------------|------------|
|      | $R_{11ee}+Q_{21fe}$              | $Q_{11ef}+P_{21ff}$ | $P_{11ee}$ | $P_{12ee}$ | $R_{22ff}$ | $Q_{22fe}+R_{12ee}$ | $P_{22ff}+Q_{12ef}$ | $R_{21ff}$ |
| 0.5  | 53295.09                         | 53291.08            |            |            |            |                     |                     | 53303.05   |
| 1.5  | 53298.04B                        | 53289.93B           | 53286.10   | 53166.19   | 53189.81B  | 53178.15            | 53170.15            | 53309.96   |
| 2.5  | 53301.64                         | 53289.66            | 53281.72   | 53161.54   | 53197.37   | 53181.49            | 53169.49B           | 53317.49   |
| 3.5  | 53305.85                         | 53289.93B           | 53277.99   | 53157.51   | 53205.29   | 53185.34            | 53169.49B           | 53325.74   |
| 4.5  | 53310.73                         | 53290.75            | 53274.90   | 53153.94   | 53213.71   | 53189.81B           | 53169.89            | 53334.58   |
| 5.5  | 53316.23                         | 53292.26B           | 53272.40   | 53150.96   | 53222.66   | 53194.78            | 53170.88            | 53344.04   |
| 6.5  | 53322.36                         | 53294.41            | 53270.59   | 53148.53   | 53232.14   | 53200.29            | 53172.42            | 53354.14   |
| 7.5  | 53329.13                         | 53297.17B           | 53269.44   | 53146.64   | 53242.19B  | 53206.36            | 53174.49            | 53364.87   |
| 8.5  | 53336.53                         | 53300.58B           | 53268.89B  | 53145.29   | 53252.76   | 53212.95            | 53177.12            | 53376.23   |
| 9.5  | 53344.57                         | 53304.64B           | 53268.89B  | 53144.41   | 53263.97B  | 53220.09            | 53180.29            | 53388.26   |
| 10.5 | 53353.23                         | 53309.31B           | 53269.66   | 53144.41B  | 53275.56B  | 53227.79            | 53184.00            | 53400.89   |
| 11.5 | 53362.52                         | 53314.63            | 53271.00   | 53144.41B  | 53287.76   | 53236.04            | 53188.26            | 53414.18B  |
| 12.5 | 53372.45B                        | 53320.57            | 53272.97   | 53145.29B  | 53300.58B  | 53244.82            | 53193.07            | 53428.02   |
| 13.5 | 53382.98                         | 53327.14            | 53275.56B  | 53146.64B  | 53313.80   | 53254.16            | 53198.44            | 53442.52   |
| 14.5 | 53394.15                         | 53334.35            | 53278.81   | 53148.53B  | 53327.64   | 53263.97B           | 53204.35            | 53457.66   |
| 15.5 | 53405.96                         | 53342.13B           | 53282.64   | 53150.96B  | 53342.13B  | 53274.48            | 53210.83            | 53473.42   |
| 16.5 | 53418.37                         | 53350.60            | 53287.15   | 53153.94B  | 53356.98   | 53285.47            | 53217.84            | 53489.76B  |
| 17.5 | 53431.41                         | 53359.67            | 53292.26   | 53157.51B  | 53372.45B  | 53297.17B           | 53225.41            |            |
| 18.5 | 53445.06                         | 53369.36            | 53298.04B  |            |            | 53309.31B           | 53233.53            |            |
| 19.5 | 53459.34                         | 53379.66            | 53304.64B  |            |            | 53321.72            | 53242.19B           |            |
| 20.5 | 53474.27                         | 53390.62            |            |            |            | 53334.94            |                     |            |
| 21.5 | 53489.76B                        | 53402.10            |            |            |            | 53348.69            |                     |            |
| 22.5 |                                  | 53414.18B           |            |            |            |                     |                     |            |

| J    | $\epsilon(1,0)$ band [D(1)-X(0)] |                     |            |            |            |                     |                     |            |
|------|----------------------------------|---------------------|------------|------------|------------|---------------------|---------------------|------------|
|      | $R_{11ee}+Q_{21fe}$              | $Q_{11ef}+P_{21ff}$ | $P_{11ee}$ | $P_{12ee}$ | $R_{22ff}$ | $Q_{22fe}+R_{12ee}$ | $P_{22ff}+Q_{12ef}$ | $R_{21ff}$ |
| 0.5  | 55574.46                         | 55570.58B           | 55582.11B  |            |            |                     |                     |            |
| 1.5  | 55577.34                         | 55569.51            | 55565.59   | 55445.60   | 55469.16B  | 55457.59            | 55449.62B           | 55589.27   |
| 2.5  | 55580.78                         | 55568.95B           | 55561.16   | 55440.96   | 55476.43   | 55460.74B           | 55448.93B           | 55596.61B  |
| 3.5  | 55584.84                         | 55568.95B           | 55557.38B  | 55436.79   | 55484.17B  | 55464.37            | 55448.71            | 55604.51   |
| 4.5  | 55589.52                         | 55569.77            | 55554.09   | 55433.11   | 55492.21   | 55468.57B           | 55448.93            | 55613.08   |
| 5.5  | 55594.73                         | 55571.03            | 55551.48   | 55429.96   | 55500.85   | 55473.28            | 55449.62            | 55622.31   |
| 6.5  | 55600.56                         | 55572.91            | 55549.43   | 55427.29   | 55509.99   | 55478.50            | 55450.91            | 55632.00   |
| 7.5  | 55606.98                         | 55575.39B           | 55547.92B  | 55425.12   | 55519.42   | 55484.17B           | 55452.71            | 55642.33   |
| 8.5  | 55613.98                         | 55578.45            | 55547.13B  | 55423.47   | 55529.60   | 55490.39            | 55454.97            | 55653.09   |
|      |                                  |                     |            |            | 55530.18   |                     |                     | 55653.68   |
| 9.5  | 55621.41                         | 55582.11            | 55546.90   | 55422.35   | 55540.52   | 55496.95            | 55457.80            | 55664.82   |
|      | 55622.31                         |                     |            |            |            | 55497.54            |                     |            |
| 10.5 | 55629.85                         | 55586.18            | 55547.13B  | 55421.74   | 55551.68B  | 55504.42            | 55460.74B           | 55676.95   |
|      |                                  | 55586.76            |            |            |            |                     | 55461.43            |            |
| 11.5 | 55638.60                         | 55591.23            | 55547.92B  | 55421.50   | 55563.24   | 55512.11            | 55464.90            | 55689.62   |
|      |                                  |                     | 55548.45   | 55422.00   |            |                     |                     |            |
| 12.5 | 55647.95                         | 55596.61B           | 55549.67   | 55421.74   | 55575.39B  | 55520.32            | 55469.16B           | 55702.98   |
| 13.5 | 55657.87                         | 55602.64            | 55551.68   | 55422.80   | 55588.01   | 55529.04            | 55473.94            | 55716.74   |
| 14.5 | 55668.37                         | 55609.22            | 55554.38   | 55424.17   | 55601.13   | 55538.24            | 55479.24            | 55731.14   |
| 15.5 | 55679.48                         | 55616.37            | 55557.38B  | 55426.08   | 55614.72   | 55547.92B           | 55485.03            | 55746.08   |
| 16.5 | 55691.09                         | 55624.10            | 55761.49   | 55428.44   | 55628.75   | 55558.14            | 55491.34            | 55761.56   |
| 17.5 | 55703.26                         | 55632.40            | 55565.86   | 55431.25   | 55644.74   | 55568.95B           | 55498.11            |            |
| 18.5 | 55715.69B                        | 55641.18            | 55570.58B  | 55434.73   |            |                     | 55505.34            |            |
| 19.5 |                                  | 55650.34B           | 55576.17   | 55438.53   |            |                     |                     |            |
| 20.5 |                                  |                     | 55582.11B  |            |            |                     |                     |            |

| J    | $\epsilon(2,0)$ band [D(2)-X(0)] |                     |            |            |            |                     |                     |            |
|------|----------------------------------|---------------------|------------|------------|------------|---------------------|---------------------|------------|
|      | $R_{11ee}+Q_{21fe}$              | $Q_{11ef}+P_{21ff}$ | $P_{11ee}$ | $P_{12ee}$ | $R_{22ff}$ | $Q_{22fe}+R_{12ee}$ | $P_{22ff}+Q_{12ef}$ | $R_{21ff}$ |
| 0.5  | 57808.47B                        | 57804.58            |            |            |            |                     |                     | 57816.27   |
| 1.5  | 57811.48B                        | 57803.48B           | 57799.50   | 57679.60   | 57703.04   | 57691.35            | 57683.31B           | 57822.96B  |
| 2.5  | 57814.58B                        | 57802.93B           | 57795.09   | 57674.92   | 57710.13   | 57694.51            | 57682.62B           | 57830.29   |
| 3.5  | 57818.59                         | 57802.93B           | 57791.28   | 57670.78   | 57717.62   | 57698.09            | 57682.62B           | 57838.06   |
| 4.5  | 57822.96B                        | 57803.48B           | 57788.00   | 57667.03   | 57725.56B  | 57702.14            | 57682.62B           | 57846.37B  |
| 5.5  | 57828.09                         | 57804.58B           | 57785.25   | 57663.75   | 57733.92   | 57706.64            | 57683.31B           | 57855.32B  |
| 6.5  | 57833.65                         | 57806.30            | 57783.01   | 57660.93   | 57742.81   | 57711.56            | 57684.30            | 57864.77   |
| 7.5  | 57839.73                         | 57808.47B           | 57781.35   | 57658.52   | 57752.02   | 57716.95            | 57685.81            | 57874.68   |
| 8.5  | 57846.37B                        | 57811.48B           | 57780.06B  | 57656.58   | 57761.69   | 57722.79            | 57687.72            | 57885.21   |
| 9.5  | 57853.53                         | 57814.58B           | 57779.54B  | 57655.08   | 57771.88   | 57729.07            | 57690.12            | 57896.24   |
| 10.5 | 57861.24                         | 57818.35            | 57779.54B  | 57654.07   | 57782.53B  | 57735.79            | 57692.98            | 57907.76B  |
| 11.5 | 57869.48                         | 57822.70            | 57780.06B  | 57653.43B  | 57793.52   | 57742.89            | 57696.28            | 57919.90   |
| 12.5 | 57878.23                         | 57827.55            | 57781.04   | 57653.43B  | 57805.07   | 57750.60            | 57700.03            | 57932.53   |
| 13.5 | 57887.53                         | 57832.93            | 57782.53B  | 57653.43B  | 57816.99   | 57758.67            | 57704.25            | 57945.69   |
| 14.5 | 57897.38                         | 57838.89            | 57784.64   | 57654.44   | 57829.39   | 57767.24            | 57708.88            | 57959.40   |
| 15.5 | 57907.76B                        | 57845.37            | 57787.26   | 57655.70   | 57842.28   | 57776.21            | 57714.01            | 57973.71   |
| 16.5 | 57918.56                         | 57852.36            | 57790.35   |            | 57855.32B  | 57785.67            | 57719.58            | 57988.31   |
| 17.5 | 57929.94                         | 57859.89            | 57794.07   |            |            | 57795.55            | 57725.56B           | 58003.55   |
| 18.5 | 57941.84                         | 57867.91            | 57798.23   |            |            | 57805.85            | 57732.11            | 58019.29   |
| 19.5 | 57954.24                         | 57876.48            |            |            |            | 57816.64            | 57738.99            | 58035.45   |
| 20.5 | 57967.10                         | 57885.53            |            |            |            |                     | 57746.38            |            |
| 21.5 | 57980.52                         | 57895.06            |            |            |            |                     | 57754.16            |            |
| 22.5 | 57994.24                         | 57905.04            |            |            |            |                     |                     |            |
| 23.5 | 58008.39                         |                     |            |            |            |                     |                     |            |

| J    | $\epsilon(3,0)$ band [D(3)-X(0)] |                     |            |            |            |                     |                     |            |
|------|----------------------------------|---------------------|------------|------------|------------|---------------------|---------------------|------------|
|      | $R_{11ee}+Q_{21fe}$              | $Q_{11ef}+P_{21ff}$ | $P_{11ee}$ | $P_{12ee}$ | $R_{22ff}$ | $Q_{22fe}+R_{12ee}$ | $P_{22ff}+Q_{12ef}$ | $R_{21ff}$ |
| 0.5  | 59991.11                         | 59987.26            |            |            |            |                     |                     | 59998.82   |
| 1.5  | 59993.81                         | 59986.10            | 59982.26   | 59862.31   | 59885.27B  | 59873.88            | 59866.21            | 60005.36   |
| 2.5  | 59996.99                         | 59985.34B           | 59977.74   | 59857.60   | 59892.20   | 59876.83            | 59865.35            | 60012.38   |
| 3.5  | 60000.69                         | 59985.34B           | 59973.77   | 59853.24   | 59899.39   | 59880.20            | 59864.87B           | 60019.90   |
| 4.5  | 60004.90                         | 59985.52            | 59970.25   | 59849.30   | 59907.04   | 59883.93            | 59864.87B           | 60027.94   |
| 5.5  | 60009.59                         | 59986.44            | 59967.28B  | 59845.80   | 59914.86B  | 59888.13            | 59865.10            | 60036.44   |
| 6.5  | 60014.78                         | 59987.76            | 59964.78   | 59842.70   | 59923.43   | 59892.68B           | 59865.79            | 60045.43   |
| 7.5  | 60020.41B                        | 59989.62            | 59962.77   | 59839.99   | 59932.22   | 59897.65            | 59866.90            | 60054.92   |
| 8.5  | 60026.59                         | 59991.93B           | 59961.29   | 59837.66   | 59941.38   | 59903.00            | 59868.44            | 60064.87   |
| 9.5  | 60033.19                         | 59994.71            | 59960.34   | 59835.78   | 59950.89   | 59908.72            | 59870.34            | 60075.27   |
| 10.5 | 60040.28                         | 59997.98            | 59959.70B  | 59834.29   | 59960.83B  | 59914.86B           | 59872.65            | 60086.08   |
| 11.5 | 60047.77                         | 60001.70            | 59959.70B  | 59833.12   | 59970.88   | 59921.26            | 59875.31            | 60097.33   |
| 12.5 | 60055.67                         | 60005.85            | 59960.13   | 59832.46B  | 59981.36   | 59928.03            | 59878.30            | 60108.88   |
| 13.5 | 60063.91                         | 60010.38            | 59960.83B  | 59831.97B  | 59991.93B  | 59935.05            | 59881.67            | 60120.66   |
| 14.5 | 60072.38                         | 60015.29            | 59962.07   | 59831.97B  |            | 59942.19            | 59885.27B           | 60132.39   |
| 15.5 | 60080.84                         | 60020.41B           | 59963.67   | 59831.97B  |            | 59949.25            | 59889.03            |            |
| 16.5 | 60088.97                         | 60025.59            | 59965.47   | 59832.46B  |            | 59956.03            | 59892.68B           |            |
| 17.5 |                                  | 60030.31            | 59967.28B  |            |            |                     |                     |            |
| 18.5 |                                  | 60034.11            |            |            |            |                     |                     |            |

B: Blended lines.

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