

表 2 谱线模式参数表

Table 2 The parameters of molecular line observing modes

| Mode | $N_{\text{band}}$ | BW<br>/MHz | $N_{\text{chan}}$ | $\Delta f$<br>/kHz | $\Delta v /(\text{km} \cdot \text{s}^{-1})$ |          |         |         |         |
|------|-------------------|------------|-------------------|--------------------|---|----------|---------|---------|---------|
|      |                   |            |                   |                    | 45 GHz                                      | 22.5 GHz | 9 GHz   | 6.7 GHz | 1.7 GHz |
| 1    | 1                 | 1500       | 1024              | 1465               | 9.8   | 19.5     | 49      | 66      | 259     |
| 2    | 1                 | 1500       | 16384             | 92                 | 0.6   | 1.2      | 3.1     | 4.1     | 16.2    |
| 3    | 1                 | 1000       | 16384             | 61                 | 0.4   | 0.8      | 2.0     | 2.7     | 10.8    |
| 4    | 1                 | 187.5      | 32768             | 5.7                | 0.04  | 0.08     | 0.19    | 0.26    | 1.01    |
| 5    | 1                 | 187.5      | 65536             | 2.9                | 0.02  | 0.04     | 0.10    | 0.13    | 0.51    |
| 6    | 1                 | 187.5      | 131072            | 1.4                | 0.01  | 0.02     | 0.05    | 0.06    | 0.25    |
| 7    | 1                 | 100        | 32768             | 3.1                | 0.02  | 0.04     | 0.1     | 0.14    | 0.55    |
| 8    | 1                 | 100        | 65536             | 1.5                | 0.01  | 0.02     | 0.05    | 0.07    | 0.26    |
| 9    | 1                 | 100        | 131072            | 0.8                | 0.005                                       | 0.01     | 0.03    | 0.036   | 0.14    |
| 10   | 1                 | 23.44      | 32768             | 0.7                | 0.005                                       | 0.009    | 0.023   | 0.031   | 0.124   |
| 11   | 1                 | 23.44      | 65536             | 0.4                | 0.003                                       | 0.0053   | 0.013   | 0.018   | 0.07    |
| 12   | 1                 | 23.44      | 131072            | 0.2                | 0.0013                                      | 0.0026   | 0.0067  | 0.009   | 0.035   |
| 13   | 1                 | 23.44      | 262144            | 0.1                | 0.0007                                      | 0.0013   | 0.0033  | 0.0045  | 0.018   |
| 14   | 1                 | 23.44      | 524288            | 0.05               | 0.00035                                     | 0.00065  | 0.00165 | 0.00225 | 0.009   |
| 15   | 1                 | 11.72      | 32768             | 0.4                | 0.003                                       | 0.0053   | 0.013   | 0.018   | 0.07    |
| 16   | 1                 | 11.72      | 65536             | 0.2                | 0.0013                                      | 0.0026   | 0.0067  | 0.009   | 0.035   |
| 17   | 1                 | 11.72      | 131072            | 0.1                | 0.0007                                      | 0.0013   | 0.0033  | 0.0045  | 0.018   |
| 18   | 1                 | 11.72      | 262144            | 0.05               | 0.00035                                     | 0.00065  | 0.00165 | 0.00225 | 0.009   |
| 19   | 1                 | 11.72      | 524288            | 0.02               | 0.00013                                     | 0.00026  | 0.00067 | 0.0009  | 0.0035  |
| 20   | 8                 | 23.44      | 4096              | 5.7                | 0.038                                       | 0.076    | 0.19    | 0.26    | 1.01    |
| 21   | 8                 | 23.44      | 8192              | 2.9                | 0.02  | 0.04     | 0.1     | 0.13    | 0.51    |
| 22   | 8                 | 23.44      | 16384             | 1.4                | 0.01  | 0.02     | 0.05    | 0.06    | 0.25    |
| 23   | 8                 | 23.44      | 32768             | 0.7                | 0.005                                       | 0.009    | 0.023   | 0.031   | 0.124   |
| 24   | 8                 | 23.44      | 65536             | 0.4                | 0.003                                       | 0.0053   | 0.013   | 0.018   | 0.07    |
| 25   | 8                 | 15.625     | 4096              | 3.8                | 0.025                                       | 0.051    | 0.13    | 0.17    | 0.67    |
| 26   | 8                 | 15.625     | 8192              | 1.9                | 0.013                                       | 0.025    | 0.063   | 0.085   | 0.34    |
| 27   | 8                 | 15.625     | 16384             | 0.95               | 0.006                                       | 0.013    | 0.032   | 0.043   | 0.17    |
| 28   | 8                 | 15.625     | 32678             | 0.48               | 0.0032                                      | 0.0064   | 0.016   | 0.021   | 0.085   |
| 29   | 8                 | 15.625     | 65536             | 0.24               | 0.0016                                      | 0.0032   | 0.008   | 0.011   | 0.042   |