



## Magnitude Scales for Marsquakes Calibrated from InSight Data

Maren Böse, Simon Stähler, Nicholas Deichmann, Domenico Giardini, John Clinton, Philippe Lognonné, Savas Ceylan, Martin van Driel, Constantinos Charalambous, Nikolaj Dahmen, et al.

### ► To cite this version:

Maren Böse, Simon Stähler, Nicholas Deichmann, Domenico Giardini, John Clinton, et al.. Magnitude Scales for Marsquakes Calibrated from InSight Data. Bulletin of the Seismological Society of America, 2021, 111 (6), pp.3003-3015. 10.1785/0120210045 . hal-03917218

**HAL Id: hal-03917218**

**<https://u-paris.hal.science/hal-03917218>**

Submitted on 23 Sep 2023

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

1 **Supplementary Material**

2

3 **Magnitude Scales for Marsquakes Calibrated from InSight Data**

4 Böse, M., S. Stähler, N. Deichmann, D. Giardini, J. Clinton, P. Lognonné, S. Ceylan, M. van Driel, C. Charalambous, N. Dahmen, A. Horleston, T. Kawamura, A. Khan, M.

5 Knapmeyer, G. Orhand-Mainsant, J.-R. Scholz, F. Euchner, B.W. Banerdt

6

7 This file contains source parameters of marsquakes as provided in the InSight catalog v.5 (until 2020/10/12) of the InSight Marsquake Service (2021), as well as time-domain

8 and spectral amplitudes, spectral fitting parameters and magnitudes as computed in this article.

9

10 **References**

11 InSight Marsquake Service (2021). Mars Seismic Catalogue, InSight Mission; V5 2021-01-04. ETHZ, IPGP, JPL, ICL, MPS, Univ. Bristol. <https://doi.org/10.12686/a10>.

**Table S1.**

Type, quality, distance, amplitudes (time-domain body-wave  $A_P$  and  $A_S$ ; time-domain 2.4 resonance  $A_{2.4,pick}$  and spectral-domain  $A_0$  and  $A_{2.4,spec}$ ), signal-to-noise ratio (SNR), SNR type (P/S wave, frequency band), spectral fitting parameter  $t^*$ , magnitudes ( $m_b^{Ma}$ ,  $m_{bS}^{Ma}$ ,  $M_{2.4,pick}^{Ma}$ ,  $M_{2.4,spec}^{Ma}$ ,  $M_{W,spec}^{Ma}$ ,  $M_W^{Ma}$ ), magnitude uncertainty (standard deviation,  $\sigma_M$ ), and seismic moment ( $M_0$ ) of 279 events (with distance estimates) in the InSight catalog v.5. The preferred magnitude,  $M_W^{Ma}$ , is  $M_{W,spec}^{Ma}$  for *LF*, *BB*, and *HF* events, and  $M_{2.4,spec}^{Ma}$  for *VF* and *2.4Hz* events.

**Low-frequency event family**

| type | event  | quality | distance [o] | distance unc. [o] | $A_P$ [m] | $A_S$ [m] | $A_0$ [m/vHz] | SNR  | SNR type | $t^*$ [s] | $m_b^{Ma}$ | $m_{bS}^{Ma}$ | $M_{W,spec}^{Ma}$ | $M_W^{Ma}$ | $\sigma_M$ | $M_0$    |
|------|--------|---------|--------------|-------------------|-----------|-----------|---------------|------|----------|-----------|------------|---------------|-------------------|------------|------------|----------|
| LF   | S0105a | C       | 29.6         | 8.9               | 1.97E-10  | 4.65E-10  | 2.61E-10      | 10.0 | (S,2-5s) | 0.9       | 3.2        | 3.2           | 3.0               | 3.0        | 0.5        | 1.24E+11 |
| LF   | S0167a | C       | 95.3         | 23.8              | 7.46E-11  | 1.97E-10  | 8.15E-10      | 8.6  | (S,2-5s) | 4.4       | 3.1        | 3.3           | 3.7               | 3.7        | 0.5        | 3.47E+11 |
| LF   | S0173a | A       | 27.9         | 1.6               | 1.27E-09  | 2.03E-09  | 3.01E-09      | 91.3 | (S,2-5s) | 2.1       | 4.0        | 3.8           | 3.7               | 3.7        | 0.4        | 3.59E+11 |
| LF   | S0183a | B       | 44.5         | 17.6              | 2.56E-10  | -         | 2.62E-10      | 3.2  | (S,2-5s) | 2.9       | 3.4        | -             | 3.1               | 3.1        | 0.4        | 1.49E+11 |
| LF   | S0189a | B       | 35.0         | 8.6               | 7.58E-11  | 1.23E-10  | 1.37E-10      | 3.9  | (S,2-5s) | 1.5       | 2.8        | 2.7           | 2.9               | 2.9        | 0.4        | 1.01E+11 |
| LF   | S0226b | C       | 94.1         | 23.5              | 8.16E-11  | 2.09E-10  | 1.62E-10      | 2.7  | (S,2-5s) | 2.2       | 3.2        | 3.3           | 3.2               | 3.2        | 0.5        | 1.68E+11 |
| LF   | S0234c | D       | 71.1         | 17.8              | 9.06E-11  | 1.95E-10  | 8.74E-11      | 0.9  | (S,2-5s) | 1.4       | 3.1        | 3.2           | 2.9               | 2.9        | 0.4        | 1.13E+11 |
| LF   | S0254b | D       | 89.5         | 22.4              | 9.27E-11  | 9.10E-11  | 3.51E-11      | 1.5  | (P,2-5s) | 0.4       | 3.2        | 3.0           | 2.7               | 2.7        | 0.4        | 8.34E+10 |
| LF   | S0290b | B       | 28.8         | 9.4               | 2.51E-10  | 1.66E-10  | 1.30E-09      | 1.1  | (S,2-5s) | 3.5       | 3.3        | 2.7           | 3.4               | 3.4        | 0.5        | 2.51E+11 |
| LF   | S0320b | C       | 32.2         | 8.1               | 6.77E-11  | 1.59E-10  | 2.43E-10      | 3.4  | (S,2-5s) | 2.1       | 2.7        | 2.7           | 3.0               | 3.0        | 0.4        | 1.25E+11 |
| LF   | S0323d | C       | 33.0         | 8.2               | 5.31E-11  | -         | 2.38E-10      | 2.7  | (S,2-5s) | 2.6       | 2.6        | -             | 3.0               | 3.0        | 0.4        | 1.25E+11 |
| LF   | S0325a | B       | 37.5         | 6.0               | 9.77E-10  | -         | 2.38E-09      | 12.6 | (S,2-5s) | 2.9       | 3.9        | -             | 3.7               | 3.7        | 0.4        | 3.69E+11 |

|    |        |   |      |      |          |          |          |       |          |     |     |     |     |     |     |          |
|----|--------|---|------|------|----------|----------|----------|-------|----------|-----|-----|-----|-----|-----|-----|----------|
| LF | S0345a | C | 91.5 | 22.9 | 1.29E-10 | 1.51E-10 | 1.99E-10 | 4.6   | (S,2-5s) | 2.2 | 3.3 | 3.2 | 3.2 | 3.2 | 0.5 | 1.82E+11 |
| LF | S0357a | C | 36.0 | 9.0  | 5.59E-11 | -        | 1.78E-10 | 2.8   | (S,2-5s) | 2.2 | 2.7 | -   | 2.9 | 2.9 | 0.5 | 1.14E+11 |
| LF | S0407a | B | 29.8 | 2.0  | 1.21E-10 | 2.03E-10 | 2.78E-10 | 3.5   | (S,2-5s) | 2.0 | 3.0 | 2.8 | 3.0 | 3.0 | 0.4 | 1.28E+11 |
| LF | S0409d | B | 27.2 | 5.9  | 7.11E-11 | 3.16E-10 | 5.35E-10 | 22.4  | (S,2-5s) | 2.3 | 2.7 | 3.0 | 3.2 | 3.2 | 0.4 | 1.65E+11 |
| LF | S0421b | C | 97.4 | 24.4 | 7.88E-11 | 1.61E-10 | 2.00E-10 | 2.3   | (S,2-5s) | 2.1 | 3.2 | 3.3 | 3.3 | 3.3 | 0.5 | 1.88E+11 |
| LF | S0423a | D | 30.3 | 7.6  | 4.85E-11 | 6.53E-11 | 1.70E-10 | 1.9   | (P,2-5s) | 2.1 | 2.6 | 2.3 | 2.9 | 2.9 | 0.4 | 1.04E+11 |
| LF | S0474a | C | 26.1 | 18.3 | 1.17E-10 | 2.10E-10 | 2.11E-10 | 1.9   | (S,2-5s) | 1.6 | 2.9 | 2.8 | 2.9 | 2.9 | 0.4 | 1.07E+11 |
| LF | S0474b | D | 27.7 | 6.9  | 1.52E-10 | 4.21E-10 | 1.03E-09 | 16.8  | (S,2-5s) | 3.2 | 3.0 | 3.1 | 3.4 | 3.4 | 0.4 | 2.22E+11 |
|    |        |   |      |      |          |          |          |       |          |     |     |     |     |     |     |          |
| BB | S0133a | C | 88.5 | 22.1 | 9.60E-11 | 8.39E-11 | 1.43E-10 | 4.6   | (S,2-5s) | 1.4 | 3.2 | 2.9 | 3.1 | 3.1 | 0.5 | 1.55E+11 |
| BB | S0152a | C | 98.1 | 24.5 | 6.57E-11 | 8.38E-11 | 6.51E-11 | 2.1   | (S,2-5s) | 0.7 | 3.1 | 3.0 | 2.9 | 2.9 | 0.5 | 1.14E+11 |
| BB | S0154a | C | 33.7 | 8.4  | 1.97E-10 | 3.37E-10 | 1.89E-10 | 19.4  | (S,2-5s) | 1.2 | 3.2 | 3.1 | 2.9 | 2.9 | 0.4 | 1.14E+11 |
| BB | S0185a | B | 58.8 | 21.4 | 6.11E-11 | 1.87E-10 | 1.69E-10 | 4.9   | (S,2-5s) | 1.2 | 2.9 | 3.1 | 3.1 | 3.1 | 0.4 | 1.39E+11 |
| BB | S0205a | C | 42.4 | 10.6 | 6.06E-11 | -        | 1.75E-10 | 2.0   | (P,2-5s) | 1.8 | 2.8 | -   | 3.0 | 3.0 | 0.5 | 1.22E+11 |
| BB | S0235b | A | 26.5 | 1.6  | 7.05E-10 | 3.25E-09 | 1.94E-09 | 288.9 | (S,2-5s) | 2.6 | 3.7 | 4.0 | 3.5 | 3.5 | 0.3 | 2.89E+11 |
| BB | S0235c | C | 27.9 | 7.5  | 1.22E-10 | 1.59E-10 | 9.00E-11 | 2.2   | (S,2-5s) | 1.0 | 2.9 | 2.7 | 2.7 | 2.7 | 0.4 | 7.55E+10 |
| BB | S0395a | C | 90.6 | 22.6 | 1.29E-10 | 2.94E-10 | 1.21E-10 | 6.6   | (S,2-5s) | 1.0 | 3.3 | 3.5 | 3.1 | 3.1 | 0.4 | 1.45E+11 |
| BB | S0484b | B | 31.4 | 5.9  | 9.06E-11 | 2.27E-10 | 1.68E-10 | 3.2   | (S,2-5s) | 1.2 | 2.9 | 2.9 | 2.9 | 2.9 | 0.4 | 1.05E+11 |

19 *LF* – low-frequency, *BB* – broadband

## High-frequency event family

| type | event  | quality | distance<br>[o] | distance<br>unc.<br>[o] | $A_{2.4,pick}$<br>[m] | $A_{2.4,spec}$<br>[m/VHz] | $A_0$<br>[m/VHz] | SNR | SNR<br>type | $t^*$<br>[s] | $M_{2.4,pick}^{Ma}$ | $M_{2.4,spec}^{Ma}$ | $M_{W,spec}^{Ma}$ | $M_W^{Ma}$ | $\sigma_M$ | $M_0$    |
|------|--------|---------|-----------------|-------------------------|-----------------------|---------------------------|------------------|-----|-------------|--------------|---------------------|---------------------|-------------------|------------|------------|----------|
| HF   | S0185b | B       | 27.3            | 6.8                     | 4.81E-11              | 2.68E-11                  | 9.66E-12         | 3.8 | (2.4Hz)     | 0.1          | 1.9                 | 1.9                 | 2.0               | 2.0        | 0.2        | 2.53E+10 |
| HF   | S0202c | C       | 23.7            | 5.9                     | 5.49E-11              | 2.55E-11                  | 6.74E-12         | 3.3 | (2.4Hz)     | 0.1          | 1.9                 | 1.8                 | 1.8               | 1.8        | 0.2        | 2.05E+10 |
| HF   | S0213a | C       | 31.0            | 7.8                     | 3.9E-11               | 2.29E-11                  | 6.42E-12         | 3.8 | (2.4Hz)     | 0.1          | 1.8                 | 1.9                 | 1.9               | 1.9        | 0.2        | 2.21E+10 |
| HF   | S0228c | B       | 21.4            | 5.3                     | 4.27E-11              | 2.6E-11                   | 8.04E-12         | 4.5 | (2.4Hz)     | 0.1          | 1.7                 | 1.8                 | 1.8               | 1.8        | 0.2        | 2.14E+10 |
| HF   | S0231b | B       | 23.4            | 5.8                     | 4.97E-11              | 2.83E-11                  | 1.02E-11         | 4.3 | (2.4Hz)     | 0.1          | 1.8                 | 1.9                 | 1.9               | 1.9        | 0.2        | 2.46E+10 |
| HF   | S0239a | B       | 26.4            | 6.6                     | 7.5E-11               | 3.28E-11                  | 6.67E-12         | 4.8 | (2.4Hz)     | 0.1          | 2.1                 | 2.0                 | 1.8               | 1.8        | 0.2        | 2.12E+10 |
| HF   | S0246a | B       | 25.5            | 6.4                     | 5.71E-11              | 2.58E-11                  | 5.36E-12         | 4.6 | (2.4Hz)     | 0.1          | 1.9                 | 1.9                 | 1.8               | 1.8        | 0.2        | 1.90E+10 |
| HF   | S0260a | B       | 25.2            | 6.3                     | 1.16E-10              | 6.22E-11                  | 2.46E-11         | 7.2 | (2.4Hz)     | 0.2          | 2.2                 | 2.2                 | 2.2               | 2.2        | 0.2        | 3.73E+10 |
| HF   | S0262b | C       | 24.5            | 6.1                     | 6.01E-11              | 2.89E-11                  | 2.30E-11         | 3.8 | (2.4Hz)     | 0.2          | 1.9                 | 1.9                 | 2.2               | 2.2        | 0.2        | 3.59E+10 |
| HF   | S0289a | B       | 26.3            | 6.6                     | 1.35E-10              | 6.68E-11                  | 3.53E-11         | 7.9 | (2.4Hz)     | 0.3          | 2.3                 | 2.3                 | 2.3               | 2.3        | 0.2        | 4.45E+10 |
| HF   | S0291c | B       | 22.4            | 5.6                     | 5.89E-11              | 3.16E-11                  | 1.25E-11         | 4.2 | (2.4Hz)     | 0.1          | 1.9                 | 1.9                 | 2.0               | 2.0        | 0.2        | 2.65E+10 |
| HF   | S0292a | C       | 31.4            | 7.8                     | 6.1E-11               | 2.32E-11                  | 5.52E-12         | 3.6 | (2.4Hz)     | 0.1          | 2.0                 | 1.9                 | 1.8               | 1.8        | 0.2        | 2.08E+10 |
| HF   | S0303a | C       | 25.5            | 6.4                     | 3.51E-11              | 2.33E-11                  | 1.19E-11         | 3.5 | (2.4Hz)     | 0.1          | 1.7                 | 1.8                 | 2.0               | 2.0        | 0.2        | 2.71E+10 |
| HF   | S0304b | B       | 25.4            | 6.3                     | 7.75E-11              | 3.54E-11                  | 1.43E-11         | 5.6 | (2.4Hz)     | 0.2          | 2.1                 | 2.0                 | 2.1               | 2.1        | 0.2        | 2.94E+10 |
| HF   | S0306a | C       | 31.4            | 7.8                     | 1.45E-10              | 6.59E-11                  | 7.64E-11         | 3.7 | (2.4Hz)     | 0.3          | 2.4                 | 2.4                 | 2.6               | 2.6        | 0.2        | 6.68E+10 |
| HF   | S0308a | B       | 26.6            | 6.7                     | 1.13E-10              | 6.46E-11                  | 1.19E-11         | 4.7 | (2.4Hz)     | 0.2          | 2.2                 | 2.3                 | 2.0               | 2.0        | 0.2        | 2.76E+10 |
| HF   | S0311a | C       | 26.3            | 6.6                     | 9.92E-11              | 4.78E-11                  | 9.78E-12         | 5.1 | (2.4Hz)     | 0.1          | 2.2                 | 2.1                 | 2.0               | 2.0        | 0.2        | 2.52E+10 |
| HF   | S0314b | B       | 23.7            | 5.9                     | 1.08E-10              | 4.71E-11                  | 7.77E-12         | 4.8 | (2.4Hz)     | 0.1          | 2.2                 | 2.1                 | 1.9               | 1.9        | 0.2        | 2.19E+10 |
| HF   | S0315b | B       | 23.2            | 5.8                     | 4.81E-11              | 3.17E-11                  | 1.19E-11         | 4.0 | (2.4Hz)     | 0.1          | 1.8                 | 1.9                 | 2.0               | 2.0        | 0.2        | 2.62E+10 |
| HF   | S0319a | B       | 23.5            | 5.9                     | 4.95E-11              | 2.72E-11                  | 8.09E-12         | 3.3 | (2.4Hz)     | 0.1          | 1.8                 | 1.8                 | 1.9               | 1.9        | 0.2        | 2.22E+10 |
| HF   | S0319b | B       | 25.7            | 6.4                     | 7.82E-11              | 5.19E-11                  | 1.54E-11         | 4.3 | (2.4Hz)     | 0.1          | 2.1                 | 2.2                 | 2.1               | 2.1        | 0.2        | 3.05E+10 |
| HF   | S0323a | B       | 23.2            | 5.8                     | 6.69E-11              | 2.64E-11                  | 5.76E-12         | 3.8 | (2.4Hz)     | 0.1          | 2.0                 | 1.8                 | 1.8               | 1.8        | 0.2        | 1.90E+10 |

|    |        |   |      |     |          |          |          |     |         |     |     |     |     |     |     |          |
|----|--------|---|------|-----|----------|----------|----------|-----|---------|-----|-----|-----|-----|-----|-----|----------|
| HF | S0325b | B | 25.9 | 6.5 | 5.69E-11 | 4.29E-11 | 2.71E-11 | 4.9 | (2.4Hz) | 0.2 | 1.9 | 2.1 | 2.2 | 2.2 | 0.2 | 3.93E+10 |
| HF | S0327c | B | 18.4 | 4.6 | 9.06E-11 | 4.9E-11  | 1.07E-11 | 5.3 | (2.4Hz) | 0.1 | 2.0 | 2.0 | 1.9 | 1.9 | 0.2 | 2.31E+10 |
| HF | S0331a | B | 22.6 | 5.7 | 1.9E-10  | 1.55E-10 | 3.23E-11 | 6.0 | (2.4Hz) | 0.2 | 2.4 | 2.6 | 2.3 | 2.3 | 0.2 | 4.05E+10 |
| HF | S0340a | B | 27.1 | 6.8 | 4.95E-11 | 2.91E-11 | 1.68E-11 | 3.2 | (2.4Hz) | 0.2 | 1.9 | 1.9 | 2.1 | 2.1 | 0.2 | 3.23E+10 |
| HF | S0343b | B | 27.0 | 6.8 | 6.6E-11  | 3.6E-11  | 1.68E-11 | 4.5 | (2.4Hz) | 0.2 | 2.0 | 2.0 | 2.1 | 2.1 | 0.2 | 3.23E+10 |
| HF | S0347a | C | 24.0 | 6.0 | 9.86E-11 | 5.07E-11 | 8.47E-12 | 5.5 | (2.4Hz) | 0.1 | 2.1 | 2.1 | 1.9 | 1.9 | 0.2 | 2.28E+10 |
| HF | S0349a | B | 25.5 | 6.4 | 4.44E-11 | 2.72E-11 | 1.21E-11 | 4.0 | (2.4Hz) | 0.2 | 1.8 | 1.9 | 2.0 | 2.0 | 0.2 | 2.73E+10 |
| HF | S0351b | C | 27.3 | 6.8 | 5.5E-11  | 2.06E-11 | 7.40E-12 | 4.0 | (2.4Hz) | 0.2 | 1.9 | 1.8 | 1.9 | 1.9 | 0.2 | 2.25E+10 |
| HF | S0352a | B | 28.4 | 7.1 | 9.79E-11 | 4.58E-11 | 1.69E-11 | 4.8 | (2.4Hz) | 0.2 | 2.2 | 2.2 | 2.1 | 2.1 | 0.2 | 3.30E+10 |
| HF | S0361c | B | 25.4 | 6.3 | 8.96E-11 | 5.27E-11 | 1.07E-11 | 4.6 | (2.4Hz) | 0.1 | 2.1 | 2.2 | 2.0 | 2.0 | 0.2 | 2.59E+10 |
| HF | S0363d | C | 28.3 | 7.1 | 4.85E-11 | 2.3E-11  | 8.72E-12 | 3.1 | (2.4Hz) | 0.1 | 1.9 | 1.9 | 1.9 | 1.9 | 0.2 | 2.45E+10 |
| HF | S0371b | B | 24.4 | 6.1 | 7.02E-11 | 3.58E-11 | 1.37E-11 | 3.9 | (2.4Hz) | 0.2 | 2.0 | 2.0 | 2.0 | 2.0 | 0.2 | 2.84E+10 |
| HF | S0375a | C | 26.6 | 6.7 | 6.28E-11 | 4.51E-11 | 2.68E-11 | 4.7 | (2.4Hz) | 0.3 | 2.0 | 2.1 | 2.2 | 2.2 | 0.2 | 3.95E+10 |
| HF | S0384b | B | 23.3 | 5.8 | 1.09E-10 | 6.66E-11 | 2.06E-11 | 5.3 | (2.4Hz) | 0.2 | 2.2 | 2.2 | 2.1 | 2.1 | 0.2 | 3.35E+10 |
| HF | S0384c | C | 28.0 | 7.0 | 5.1E-11  | 2.33E-11 | 5.12E-12 | 3.2 | (2.4Hz) | 0.1 | 1.9 | 1.9 | 1.8 | 1.8 | 0.2 | 1.93E+10 |
| HF | S0384d | C | 28.7 | 7.2 | 3.44E-11 | 1.72E-11 | 1.10E-11 | 2.5 | (2.4Hz) | 0.2 | 1.8 | 1.7 | 2.0 | 2.0 | 0.2 | 2.73E+10 |
| HF | S0385a | C | 23.8 | 6.0 | 8.08E-11 | 3.42E-11 | 1.41E-11 | 3.0 | (2.4Hz) | 0.2 | 2.0 | 2.0 | 2.0 | 2.0 | 0.2 | 2.86E+10 |
| HF | S0392a | B | 27.0 | 6.8 | 5.88E-11 | 4.97E-11 | 1.16E-11 | 4.4 | (2.4Hz) | 0.1 | 2.0 | 2.2 | 2.0 | 2.0 | 0.2 | 2.74E+10 |
| HF | S0405f | B | 22.8 | 5.7 | 5.67E-11 | 2.6E-11  | 1.02E-11 | 4.1 | (2.4Hz) | 0.1 | 1.9 | 1.8 | 1.9 | 1.9 | 0.2 | 2.44E+10 |
| HF | S0423c | B | 27.3 | 6.8 | 6.41E-11 | 2.25E-11 | 7.44E-12 | 3.4 | (2.4Hz) | 0.1 | 2.0 | 1.8 | 1.9 | 1.9 | 0.2 | 2.26E+10 |
| HF | S0428a | C | 23.7 | 5.9 | 3.93E-11 | 1.93E-11 | 1.23E-11 | 3.0 | (2.4Hz) | 0.2 | 1.7 | 1.7 | 2.0 | 2.0 | 0.2 | 2.68E+10 |
| HF | S0429a | B | 24.1 | 6.0 | 5.43E-11 | 1.95E-11 | 1.07E-11 | 2.7 | (2.4Hz) | 0.2 | 1.9 | 1.7 | 2.0 | 2.0 | 0.2 | 2.54E+10 |
| HF | S0431b | C | 27.5 | 6.9 | 5.06E-11 | 2.25E-11 | 1.22E-11 | 3.6 | (2.4Hz) | 0.2 | 1.9 | 1.8 | 2.0 | 2.0 | 0.2 | 2.82E+10 |
| HF | S0432a | B | 24.7 | 6.2 | 4.4E-11  | 3.81E-11 | 1.17E-11 | 3.6 | (2.4Hz) | 0.2 | 1.8 | 2.0 | 2.0 | 2.0 | 0.2 | 2.66E+10 |
| HF | S0436c | B | 21.5 | 5.4 | 3.98E-11 | 2.48E-11 | 1.07E-11 | 3.2 | (2.4Hz) | 0.2 | 1.7 | 1.8 | 1.9 | 1.9 | 0.2 | 2.44E+10 |

|    |        |   |      |     |          |          |          |     |         |     |     |     |     |     |     |          |
|----|--------|---|------|-----|----------|----------|----------|-----|---------|-----|-----|-----|-----|-----|-----|----------|
| HF | S0458a | C | 19.2 | 4.8 | 4.27E-11 | 1.99E-11 | 5.17E-12 | 2.2 | (2.4Hz) | 0.1 | 1.7 | 1.6 | 1.7 | 1.7 | 0.2 | 1.69E+10 |
| HF | S0458b | C | 19.9 | 5.0 | 3.61E-11 | 2.12E-11 | 1.29E-11 | 2.7 | (2.4Hz) | 0.2 | 1.6 | 1.7 | 2.0 | 2.0 | 0.2 | 2.58E+10 |
| HF | S0490a | B | 17.4 | 4.3 | 2.98E-10 | 1.87E-10 | 1.10E-11 | 8.5 | (2.4Hz) | 0.1 | 2.5 | 2.6 | 1.9 | 1.9 | 0.2 | 2.29E+10 |
|    |        |   |      |     |          |          |          |     |         |     |     |     |     |     |     |          |
| VF | S0128a | B | 7.8  | 1.9 | 5.46E-10 | 2.76E-10 | 5.89E-11 | 7.1 | (2.4Hz) | 0.1 | 2.4 | 2.4 | 2.2 | 2.2 | 0.2 | 3.62E+10 |
| VF | S0202b | C | 14.1 | 3.5 | 4.27E-11 | 2.55E-11 | -        | 3.3 | (2.4Hz) | 0.1 | 1.5 | 1.6 | -   | 1.6 | 0.2 | 1.46E+10 |
| VF | S0218a | B | 31.1 | 7.8 | 9.45E-11 | 4.93E-11 | -        | 5.0 | (2.4Hz) | 0.1 | 2.2 | 2.2 | -   | 2.2 | 0.2 | 3.84E+10 |
| VF | S0226a | C | 9.0  | 2.2 | 2.12E-11 | 1.62E-11 | -        | 3.1 | (2.4Hz) | 0.1 | 1.0 | 1.2 | -   | 1.2 | 0.2 | 7.98E+09 |
| VF | S0241a | C | 14.9 | 3.7 | 2.97E-11 | 1.37E-11 | -        | 2.0 | (2.4Hz) | 0.6 | 1.4 | 1.4 | -   | 1.4 | 0.2 | 1.00E+10 |
| VF | S0263a | B | 6.4  | 1.6 | 1E-10    | 5.92E-11 | -        | 7.3 | (2.4Hz) | 0.4 | 1.6 | 1.6 | -   | 1.6 | 0.2 | 1.52E+10 |
| VF | S0264e | B | 34.5 | 8.6 | 1.17E-10 | 5.92E-11 | 2.70E-11 | 8.1 | (2.4Hz) | 0.2 | 2.4 | 2.4 | 2.3 | 2.3 | 0.2 | 4.35E+10 |
| VF | S0306c | C | 9.5  | 2.4 | 2.65E-11 | 1.1E-11  | -        | 1.4 | (2.4Hz) | 0.1 | 1.2 | 1.1 | -   | 1.1 | 0.2 | 6.43E+09 |
| VF | S0334a | B | 19.8 | 5.0 | 2.06E-10 | 1.08E-10 | 2.24E-11 | 6.9 | (2.4Hz) | 0.6 | 2.4 | 2.4 | 2.1 | 2.1 | 0.2 | 3.29E+10 |
| VF | S0334b | C | 17.0 | 4.2 | 3.05E-11 | 2.04E-11 | -        | 2.4 | (2.4Hz) | 0.2 | 1.5 | 1.6 | -   | 1.6 | 0.2 | 1.43E+10 |
| VF | S0343a | C | 21.0 | 5.2 | 3E-11    | 2.04E-11 | -        | 2.9 | (2.4Hz) | 0.5 | 1.6 | 1.7 | -   | 1.7 | 0.2 | 1.64E+10 |
| VF | S0358c | C | 18.7 | 4.7 | 4.92E-11 | 2.18E-11 | -        | 3.2 | (2.4Hz) | 0.1 | 1.7 | 1.7 | -   | 1.7 | 0.2 | 1.59E+10 |
| VF | S0376a | C | 3.5  | 0.9 | 4.43E-11 | 3.09E-11 | 7.94E-12 | 3.5 | (2.4Hz) | 0.1 | 1.0 | 1.1 | 1.4 | 1.4 | 0.2 | 1.12E+10 |
| VF | S0387a | B | 32.1 | 8.0 | 7.41E-11 | 3.6E-11  | 1.26E-11 | 3.5 | (2.4Hz) | 0.1 | 2.1 | 2.1 | 2.1 | 2.1 | 0.2 | 3.02E+10 |
| VF | S0421a | B | 36.8 | 9.2 | 1.06E-10 | 5.67E-11 | 3.69E-11 | 8.1 | (2.4Hz) | 0.6 | 2.4 | 2.4 | 2.4 | 2.4 | 0.2 | 5.11E+10 |
| VF | S0424c | B | 31.2 | 7.8 | 1.31E-10 | 4.49E-11 | 2.77E-11 | 8.8 | (2.4Hz) | 0.5 | 2.4 | 2.2 | 2.3 | 2.3 | 0.2 | 4.25E+10 |
| VF | S0475a | B | 13.9 | 3.5 | 1.16E-10 | 4.87E-11 | 2.00E-11 | 5.8 | (2.4Hz) | 0.2 | 2.0 | 1.9 | 2.0 | 2.0 | 0.2 | 2.75E+10 |
| VF | S0500a | B | 12.0 | 3.0 | 1.39E-10 | 5.44E-11 | -        | 5.5 | (2.4Hz) | 0.1 | 2.0 | 1.9 | -   | 1.9 | 0.2 | 2.18E+10 |
| VF | S0542a | C | 21.4 | 5.3 | 5.3E-10  | 2.91E-10 | -        | 4.0 | (2.4Hz) | 0.1 | 2.8 | 2.8 | -   | 2.8 | 0.2 | 9.78E+10 |
| VF | S0653a | C | 7.0  | 1.7 | 2.33E-10 | 1.4E-10  | -        | 3.0 | (2.4Hz) | 0.1 | 2.0 | 2.0 | -   | 2.0 | 0.2 | 2.85E+10 |
| VF | S0661a | C | 7.3  | 1.8 | 2.68E-10 | 1.43E-10 | -        | 3.7 | (2.4Hz) | 0.1 | 2.1 | 2.1 | -   | 2.1 | 0.2 | 2.98E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
| 24 | S0151a | C | 37.7 | 9.4 | 2.79E-11 | 1.62E-11 | - | 2.5 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.08E+10 |
| 24 | S0168a | C | 27.4 | 6.8 | 3.04E-11 | 1.82E-11 | - | 2.7 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.82E+10 |
| 24 | S0182a | C | 27.6 | 6.9 | 1.3E-11  | 1.18E-11 | - | 2.0 | (2.4Hz) | - | 1.3 | 1.6 | - | 1.6 | 0.2 | 1.37E+10 |
| 24 | S0183b | C | 30.0 | 7.5 | 3.2E-11  | 1.62E-11 | - | 2.7 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.79E+10 |
| 24 | S0186a | C | 35.0 | 8.8 | 2.54E-11 | 1.28E-11 | - | 2.0 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.69E+10 |
| 24 | S0193a | C | 24.8 | 6.2 | 2.33E-11 | 1.65E-11 | - | 2.7 | (2.4Hz) | - | 1.5 | 1.7 | - | 1.7 | 0.2 | 1.59E+10 |
| 24 | S0194c | B | 27.7 | 6.9 | 2.89E-11 | 2E-11    | - | 3.1 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 1.95E+10 |
| 24 | S0200a | C | 24.2 | 6.0 | 2.93E-11 | 1.52E-11 | - | 2.5 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.48E+10 |
| 24 | S0201b | C | 21.6 | 5.4 | 2.96E-11 | 1.67E-11 | - | 2.3 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.46E+10 |
| 24 | S0203b | C | 33.8 | 8.4 | 1.87E-11 | 1.22E-11 | - | 2.0 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.60E+10 |
| 24 | S0212a | C | 26.2 | 6.5 | 2.21E-11 | 1.34E-11 | - | 2.7 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.44E+10 |
| 24 | S0212c | C | 26.6 | 6.7 | 1.98E-11 | 1.32E-11 | - | 2.4 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.44E+10 |
| 24 | S0215a | C | 30.4 | 7.6 | 2.63E-11 | 1.49E-11 | - | 2.4 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.70E+10 |
| 24 | S0216a | B | 20.6 | 5.2 | 3.54E-11 | 1.6E-11  | - | 3.5 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.38E+10 |
| 24 | S0216b | B | 22.7 | 5.7 | 2.34E-11 | 1.65E-11 | - | 3.1 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.50E+10 |
| 24 | S0219a | C | 32.1 | 8.0 | 2.02E-11 | 1.37E-11 | - | 2.1 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0219b | C | 24.1 | 6.0 | 3.63E-11 | 2.04E-11 | - | 3.2 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.80E+10 |
| 24 | S0219c | B | 26.7 | 6.7 | 3.03E-11 | 1.5E-11  | - | 3.0 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.57E+10 |
| 24 | S0221b | C | 24.0 | 6.0 | 2.75E-11 | 1.39E-11 | - | 2.5 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.39E+10 |
| 24 | S0221c | C | 22.1 | 5.5 | 2.73E-11 | 1.3E-11  | - | 1.8 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.26E+10 |
| 24 | S0222a | B | 20.1 | 5.0 | 3.94E-11 | 2.02E-11 | - | 3.6 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.58E+10 |
| 24 | S0226c | C | 25.8 | 6.5 | 2.17E-11 | 1.21E-11 | - | 1.8 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.33E+10 |
| 24 | S0227d | B | 23.5 | 5.9 | 3.42E-11 | 1.87E-11 | - | 3.2 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0228b | C | 19.9 | 5.0 | 2.93E-11 | 1.26E-11 | - | 2.2 | (2.4Hz) | - | 1.5 | 1.4 | - | 1.4 | 0.2 | 1.15E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0229a | B | 26.0 | 6.5 | 3.45E-11 | 1.47E-11 | - | 2.8 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.52E+10 |
| 24 | S0234b | C | 13.1 | 3.3 | 1.91E-11 | 1.19E-11 | - | 2.0 | (2.4Hz) | - | 1.2 | 1.2 | - | 1.2 | 0.2 | 8.37E+09 |
| 24 | S0235d | C | 25.3 | 6.3 | 2.52E-11 | 1.28E-11 | - | 2.5 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.36E+10 |
| 24 | S0240b | C | 25.7 | 6.4 | 5.24E-11 | 3.57E-11 | - | 3.5 | (2.4Hz) | - | 1.9 | 2.0 | - | 2.0 | 0.2 | 2.73E+10 |
| 24 | S0241b | C | 26.9 | 6.7 | 2.23E-11 | 1.19E-11 | - | 2.1 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.35E+10 |
| 24 | S0242a | C | 21.3 | 5.3 | 4.6E-11  | 2.7E-11  | - | 4.0 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.00E+10 |
| 24 | S0242b | C | 20.1 | 5.0 | 2.79E-11 | 1.61E-11 | - | 2.1 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.36E+10 |
| 24 | S0244a | C | 16.8 | 4.2 | 2.42E-11 | 1.31E-11 | - | 2.1 | (2.4Hz) | - | 1.4 | 1.4 | - | 1.4 | 0.2 | 1.05E+10 |
| 24 | S0244b | C | 19.5 | 4.9 | 2.63E-11 | 1.36E-11 | - | 2.4 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.19E+10 |
| 24 | S0244c | C | 18.7 | 4.7 | 3.27E-11 | 1.53E-11 | - | 2.7 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.25E+10 |
| 24 | S0244d | C | 19.6 | 4.9 | 2.57E-11 | 1.59E-11 | - | 3.4 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.33E+10 |
| 24 | S0244e | C | 26.7 | 6.7 | 1.91E-11 | 1.23E-11 | - | 2.1 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.38E+10 |
| 24 | S0246b | C | 24.9 | 6.2 | 2.4E-11  | 1.31E-11 | - | 2.2 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.37E+10 |
| 24 | S0247a | B | 18.0 | 4.5 | 3.33E-11 | 1.66E-11 | - | 3.2 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.29E+10 |
| 24 | S0247b | B | 24.3 | 6.1 | 1.94E-11 | 1.24E-11 | - | 2.0 | (2.4Hz) | - | 1.4 | 1.5 | - | 1.5 | 0.2 | 1.30E+10 |
| 24 | S0248a | B | 17.7 | 4.4 | 2.89E-11 | 1.34E-11 | - | 2.8 | (2.4Hz) | - | 1.5 | 1.4 | - | 1.4 | 0.2 | 1.11E+10 |
| 24 | S0248b | B | 16.8 | 4.2 | 2.15E-11 | 1.47E-11 | - | 2.5 | (2.4Hz) | - | 1.3 | 1.4 | - | 1.4 | 0.2 | 1.14E+10 |
| 24 | S0248d | C | 23.1 | 5.8 | 2.58E-11 | 1.45E-11 | - | 2.0 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.39E+10 |
| 24 | S0250a | C | 25.2 | 6.3 | 2.72E-11 | 1.29E-11 | - | 2.3 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.37E+10 |
| 24 | S0251c | C | 22.4 | 5.6 | 2.98E-11 | 1.38E-11 | - | 2.2 | (2.4Hz) | - | 1.6 | 1.5 | - | 1.5 | 0.2 | 1.32E+10 |
| 24 | S0252a | B | 20.1 | 5.0 | 5.86E-11 | 2.5E-11  | - | 4.1 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.83E+10 |
| 24 | S0252b | C | 25.8 | 6.5 | 2.98E-11 | 1.54E-11 | - | 1.6 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.56E+10 |
| 24 | S0253b | C | 26.3 | 6.6 | 1.52E-11 | 1.25E-11 | - | 1.9 | (2.4Hz) | - | 1.4 | 1.6 | - | 1.6 | 0.2 | 1.38E+10 |
| 24 | S0254a | C | 23.3 | 5.8 | 2.57E-11 | 1.73E-11 | - | 2.9 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.58E+10 |
| 24 | S0254c | C | 27.7 | 6.9 | 2.77E-11 | 1.48E-11 | - | 2.4 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.60E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0255b | B | 30.2 | 7.5 | 3.52E-11 | 1.72E-11 | - | 3.1 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 1.87E+10 |
| 24 | S0256c | C | 26.6 | 6.7 | 2.25E-11 | 1.43E-11 | - | 2.5 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.52E+10 |
| 24 | S0257a | C | 30.3 | 7.6 | 3.53E-11 | 2.19E-11 | - | 2.6 | (2.4Hz) | - | 1.8 | 1.9 | - | 1.9 | 0.2 | 2.20E+10 |
| 24 | S0257b | B | 25.9 | 6.5 | 3.83E-11 | 2.45E-11 | - | 4.1 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.13E+10 |
| 24 | S0260b | C | 28.7 | 7.2 | 2.18E-11 | 1.3E-11  | - | 2.8 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.50E+10 |
| 24 | S0261a | C | 25.5 | 6.4 | 2.5E-11  | 1.43E-11 | - | 3.0 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.48E+10 |
| 24 | S0261b | C | 22.8 | 5.7 | 3.28E-11 | 1.84E-11 | - | 4.8 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.62E+10 |
| 24 | S0263c | B | 25.9 | 6.5 | 2.77E-11 | 1.61E-11 | - | 2.9 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.61E+10 |
| 24 | S0264b | B | 23.7 | 5.9 | 4.9E-11  | 2.04E-11 | - | 3.2 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.78E+10 |
| 24 | S0265b | C | 23.7 | 5.9 | 3.75E-11 | 2.49E-11 | - | 3.7 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 2.03E+10 |
| 24 | S0265c | C | 19.0 | 4.8 | 2.09E-11 | 1.29E-11 | - | 2.2 | (2.4Hz) | - | 1.4 | 1.4 | - | 1.4 | 0.2 | 1.13E+10 |
| 24 | S0265e | B | 24.0 | 6.0 | 2.2E-11  | 1.34E-11 | - | 2.3 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.36E+10 |
| 24 | S0266c | C | 22.4 | 5.6 | 1.71E-11 | 1.41E-11 | - | 2.3 | (2.4Hz) | - | 1.3 | 1.5 | - | 1.5 | 0.2 | 1.34E+10 |
| 24 | S0266e | C | 33.1 | 8.3 | 2.98E-11 | 1.33E-11 | - | 2.6 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0289b | C | 24.2 | 6.0 | 3.77E-11 | 2.46E-11 | - | 2.5 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 2.05E+10 |
| 24 | S0290a | C | 21.9 | 5.5 | 4.16E-11 | 2.3E-11  | - | 3.1 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.83E+10 |
| 24 | S0291b | C | 21.7 | 5.4 | 2.77E-11 | 1.6E-11  | - | 2.9 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.43E+10 |
| 24 | S0291d | C | 28.3 | 7.1 | 3.63E-11 | 1.65E-11 | - | 2.3 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.74E+10 |
| 24 | S0292c | C | 27.1 | 6.8 | 3.1E-11  | 1.66E-11 | - | 2.6 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.70E+10 |
| 24 | S0294b | C | 24.3 | 6.1 | 5.93E-11 | 3.31E-11 | - | 1.7 | (2.4Hz) | - | 1.9 | 1.9 | - | 1.9 | 0.2 | 2.50E+10 |
| 24 | S0295b | C | 24.7 | 6.2 | 3.03E-11 | 2.03E-11 | - | 2.9 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.82E+10 |
| 24 | S0297b | C | 21.0 | 5.2 | 4.64E-11 | 2.1E-11  | - | 2.7 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0297c | C | 25.1 | 6.3 | 4.18E-11 | 2.38E-11 | - | 2.9 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.05E+10 |
| 24 | S0297d | C | 19.1 | 4.8 | 2.97E-11 | 1.57E-11 | - | 1.9 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.29E+10 |
| 24 | S0297e | C | 19.5 | 4.9 | 2.65E-11 | 1.48E-11 | - | 2.3 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.26E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0299a | C | 26.0 | 6.5 | 5.41E-11 | 4.25E-11 | - | 2.9 | (2.4Hz) | - | 1.9 | 2.1 | - | 2.1 | 0.2 | 3.09E+10 |
| 24 | S0299b | C | 22.1 | 5.5 | 3.94E-11 | 1.64E-11 | - | 3.0 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.47E+10 |
| 24 | S0300a | C | 16.7 | 4.2 | 3.77E-11 | 1.64E-11 | - | 3.0 | (2.4Hz) | - | 1.6 | 1.5 | - | 1.5 | 0.2 | 1.22E+10 |
| 24 | S0301a | C | 29.5 | 7.4 | 5.94E-11 | 2.75E-11 | - | 4.0 | (2.4Hz) | - | 2.0 | 2.0 | - | 2.0 | 0.2 | 2.51E+10 |
| 24 | S0303b | C | 19.5 | 4.9 | 3.15E-11 | 1.63E-11 | - | 2.1 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.35E+10 |
| 24 | S0304a | C | 24.8 | 6.2 | 5.08E-11 | 1.99E-11 | - | 3.9 | (2.4Hz) | - | 1.9 | 1.7 | - | 1.7 | 0.2 | 1.81E+10 |
| 24 | S0308b | C | 25.9 | 6.5 | 3.76E-11 | 2.41E-11 | - | 3.4 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.11E+10 |
| 24 | S0309c | C | 28.4 | 7.1 | 4.06E-11 | 1.72E-11 | - | 2.2 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.79E+10 |
| 24 | S0311b | B | 25.8 | 6.5 | 4.68E-11 | 2.34E-11 | - | 3.6 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.06E+10 |
| 24 | S0314a | B | 19.7 | 4.9 | 3.61E-11 | 2.18E-11 | - | 3.2 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.65E+10 |
| 24 | S0315d | C | 23.1 | 5.8 | 3.8E-11  | 1.78E-11 | - | 2.1 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.60E+10 |
| 24 | S0318a | C | 27.1 | 6.8 | 5.22E-11 | 2.08E-11 | - | 3.1 | (2.4Hz) | - | 1.9 | 1.8 | - | 1.8 | 0.2 | 1.97E+10 |
| 24 | S0320a | C | 32.9 | 8.2 | 9.29E-11 | 4.85E-11 | - | 4.4 | (2.4Hz) | - | 2.2 | 2.2 | - | 2.2 | 0.2 | 3.95E+10 |
| 24 | S0321a | B | 23.3 | 5.8 | 2.98E-11 | 1.69E-11 | - | 2.2 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.55E+10 |
| 24 | S0322a | C | 27.3 | 6.8 | 4.04E-11 | 3.11E-11 | - | 2.6 | (2.4Hz) | - | 1.8 | 2.0 | - | 2.0 | 0.2 | 2.59E+10 |
| 24 | S0323b | C | 27.2 | 6.8 | 3.64E-11 | 1.73E-11 | - | 2.8 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.75E+10 |
| 24 | S0323c | B | 22.3 | 5.6 | 2.97E-11 | 1.61E-11 | - | 2.4 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.46E+10 |
| 24 | S0324d | C | 19.3 | 4.8 | 3.4E-11  | 1.66E-11 | - | 2.4 | (2.4Hz) | - | 1.6 | 1.5 | - | 1.5 | 0.2 | 1.35E+10 |
| 24 | S0325c | B | 22.7 | 5.7 | 2.87E-11 | 1.49E-11 | - | 2.6 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.40E+10 |
| 24 | S0325d | B | 23.6 | 5.9 | 7.54E-11 | 3.26E-11 | - | 4.4 | (2.4Hz) | - | 2.0 | 1.9 | - | 1.9 | 0.2 | 2.43E+10 |
| 24 | S0325e | C | 26.7 | 6.7 | 1.98E-11 | 1.36E-11 | - | 2.0 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.47E+10 |
| 24 | S0327a | B | 21.0 | 5.2 | 4.95E-11 | 2.09E-11 | - | 3.0 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0327b | C | 26.1 | 6.5 | 2.52E-11 | 1.61E-11 | - | 2.6 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.62E+10 |
| 24 | S0329a | C | 25.8 | 6.5 | 4.58E-11 | 2.24E-11 | - | 2.9 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.01E+10 |
| 24 | S0331b | C | 25.1 | 6.3 | 4.83E-11 | 2.61E-11 | - | 3.8 | (2.4Hz) | - | 1.8 | 1.9 | - | 1.9 | 0.2 | 2.18E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0332a | C | 20.0 | 5.0 | 4.54E-11 | 1.68E-11 | - | 3.1 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.40E+10 |
| 24 | S0333a | C | 29.0 | 7.2 | 3.46E-11 | 1.87E-11 | - | 2.2 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 1.92E+10 |
| 24 | S0335b | C | 28.3 | 7.1 | 3.43E-11 | 1.54E-11 | - | 2.0 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.66E+10 |
| 24 | S0337a | C | 27.6 | 6.9 | 3.1E-11  | 2.12E-11 | - | 2.9 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 2.02E+10 |
| 24 | S0338a | C | 27.0 | 6.8 | 5.94E-11 | 3.03E-11 | - | 3.3 | (2.4Hz) | - | 2.0 | 2.0 | - | 2.0 | 0.2 | 2.53E+10 |
| 24 | S0338b | B | 26.6 | 6.7 | 7.5E-11  | 3.75E-11 | - | 4.1 | (2.4Hz) | - | 2.1 | 2.0 | - | 2.0 | 0.2 | 2.89E+10 |
| 24 | S0339c | C | 18.4 | 4.6 | 2.75E-11 | 1.64E-11 | - | 2.1 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.30E+10 |
| 24 | S0340b | C | 22.0 | 5.5 | 2.7E-11  | 1.38E-11 | - | 2.7 | (2.4Hz) | - | 1.5 | 1.5 | - | 1.5 | 0.2 | 1.31E+10 |
| 24 | S0342a | B | 25.7 | 6.4 | 4.27E-11 | 2.03E-11 | - | 3.1 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 1.87E+10 |
| 24 | S0344a | C | 23.5 | 5.9 | 2.61E-11 | 1.8E-11  | - | 2.4 | (2.4Hz) | - | 1.5 | 1.7 | - | 1.7 | 0.2 | 1.63E+10 |
| 24 | S0346d | C | 23.9 | 6.0 | 3.8E-11  | 1.85E-11 | - | 2.4 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.68E+10 |
| 24 | S0348a | C | 27.3 | 6.8 | 4.72E-11 | 1.82E-11 | - | 2.5 | (2.4Hz) | - | 1.9 | 1.7 | - | 1.7 | 0.2 | 1.81E+10 |
| 24 | S0348b | C | 25.1 | 6.3 | 4.82E-11 | 2.16E-11 | - | 3.1 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 1.92E+10 |
| 24 | S0348c | C | 22.8 | 5.7 | 4.45E-11 | 2.21E-11 | - | 3.2 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.83E+10 |
| 24 | S0348d | C | 22.8 | 5.7 | 2.7E-11  | 1.63E-11 | - | 2.1 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.49E+10 |
| 24 | S0349b | C | 27.4 | 6.8 | 1.15E-10 | 6.47E-11 | - | 2.4 | (2.4Hz) | - | 2.3 | 2.3 | - | 2.3 | 0.2 | 4.23E+10 |
| 24 | S0353b | C | 25.2 | 6.3 | 2.63E-11 | 2.35E-11 | - | 2.6 | (2.4Hz) | - | 1.6 | 1.8 | - | 1.8 | 0.2 | 2.04E+10 |
| 24 | S0353c | C | 24.5 | 6.1 | 2.12E-11 | 1.36E-11 | - | 2.2 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.39E+10 |
| 24 | S0353d | C | 17.0 | 4.2 | 3.67E-11 | 3.84E-11 | - | 2.5 | (2.4Hz) | - | 1.6 | 1.9 | - | 1.9 | 0.2 | 2.18E+10 |
| 24 | S0355a | C | 19.4 | 4.8 | 6.25E-11 | 2.26E-11 | - | 2.9 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0358b | C | 20.4 | 5.1 | 2.97E-11 | 1.59E-11 | - | 2.0 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.36E+10 |
| 24 | S0359a | C | 28.7 | 7.2 | 3.41E-11 | 2.07E-11 | - | 2.5 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.04E+10 |
| 24 | S0361b | C | 26.0 | 6.5 | 3.53E-11 | 1.76E-11 | - | 2.5 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.72E+10 |
| 24 | S0363a | C | 24.4 | 6.1 | 3.46E-11 | 2.64E-11 | - | 3.3 | (2.4Hz) | - | 1.7 | 1.9 | - | 1.9 | 0.2 | 2.16E+10 |
| 24 | S0363b | C | 24.0 | 6.0 | 2.32E-11 | 1.67E-11 | - | 2.2 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.57E+10 |

|    |        |   |      |      |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|------|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0363c | C | 22.2 | 5.5  | 3.53E-11 | 1.86E-11 | - | 2.7 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.60E+10 |
| 24 | S0365a | C | 22.6 | 5.7  | 3.7E-11  | 1.89E-11 | - | 3.9 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.64E+10 |
| 24 | S0366c | B | 22.7 | 5.7  | 4.59E-11 | 2.22E-11 | - | 3.0 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.83E+10 |
| 24 | S0366d | C | 20.9 | 5.2  | 2.9E-11  | 1.79E-11 | - | 2.2 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.50E+10 |
| 24 | S0366e | C | 23.6 | 5.9  | 3.58E-11 | 2.26E-11 | - | 3.2 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 1.90E+10 |
| 24 | S0367c | B | 23.9 | 6.0  | 2.43E-11 | 1.8E-11  | - | 2.4 | (2.4Hz) | - | 1.5 | 1.7 | - | 1.7 | 0.2 | 1.65E+10 |
| 24 | S0367d | C | 25.1 | 6.3  | 2.51E-11 | 1.44E-11 | - | 2.1 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.47E+10 |
| 24 | S0368a | C | 31.9 | 8.0  | 1.87E-11 | 1.32E-11 | - | 1.7 | (2.4Hz) | - | 1.5 | 1.7 | - | 1.7 | 0.2 | 1.62E+10 |
| 24 | S0369b | C | 21.9 | 5.5  | 3.5E-11  | 1.87E-11 | - | 2.7 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.59E+10 |
| 24 | S0370a | C | 21.3 | 5.3  | 4.62E-11 | 2.5E-11  | - | 3.7 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 1.90E+10 |
| 24 | S0372a | B | 23.7 | 5.9  | 6.05E-11 | 3.23E-11 | - | 4.3 | (2.4Hz) | - | 1.9 | 1.9 | - | 1.9 | 0.2 | 2.42E+10 |
| 24 | S0373b | C | 24.1 | 6.0  | 4.53E-11 | 1.88E-11 | - | 2.8 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.71E+10 |
| 24 | S0378a | C | 25.3 | 6.3  | 5.39E-11 | 2.56E-11 | - | 2.7 | (2.4Hz) | - | 1.9 | 1.9 | - | 1.9 | 0.2 | 2.16E+10 |
| 24 | S0378b | B | 24.0 | 6.0  | 5.36E-11 | 2.95E-11 | - | 3.6 | (2.4Hz) | - | 1.9 | 1.9 | - | 1.9 | 0.2 | 2.30E+10 |
| 24 | S0383a | C | 18.5 | 4.6  | 3.42E-11 | 1.8E-11  | - | 2.9 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.39E+10 |
| 24 | S0384a | C | 28.3 | 7.1  | 5.21E-11 | 2.44E-11 | - | 2.7 | (2.4Hz) | - | 1.9 | 1.9 | - | 1.9 | 0.2 | 2.26E+10 |
| 24 | S0385b | C | 22.5 | 5.6  | 2.98E-11 | 1.97E-11 | - | 2.3 | (2.4Hz) | - | 1.6 | 1.7 | - | 1.7 | 0.2 | 1.68E+10 |
| 24 | S0386b | C | 25.1 | 6.3  | 4.03E-11 | 1.96E-11 | - | 2.5 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.80E+10 |
| 24 | S0390c | C | 17.4 | 4.3  | 1.96E-11 | 1.56E-11 | - | 1.9 | (2.4Hz) | - | 1.3 | 1.5 | - | 1.5 | 0.2 | 1.21E+10 |
| 24 | S0394a | B | 23.8 | 6.0  | 6.39E-11 | 2.47E-11 | - | 3.7 | (2.4Hz) | - | 1.9 | 1.8 | - | 1.8 | 0.2 | 2.03E+10 |
| 24 | S0397a | C | 20.5 | 5.1  | 3.7E-11  | 2.5E-11  | - | 2.5 | (2.4Hz) | - | 1.6 | 1.8 | - | 1.8 | 0.2 | 1.85E+10 |
| 24 | S0397b | C | 24.4 | 6.1  | 5.05E-11 | 2.12E-11 | - | 3.1 | (2.4Hz) | - | 1.9 | 1.8 | - | 1.8 | 0.2 | 1.86E+10 |
| 24 | S0397d | C | 22.5 | 5.6  | 2.32E-11 | 1.5E-11  | - | 2.1 | (2.4Hz) | - | 1.5 | 1.6 | - | 1.6 | 0.2 | 1.40E+10 |
| 24 | S0398b | C | 30.5 | 7.6  | 3.53E-11 | 1.84E-11 | - | 2.2 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 1.97E+10 |
| 24 | S0401b | C | 40.9 | 10.2 | 4.74E-11 | 1.82E-11 | - | 3.1 | (2.4Hz) | - | 2.0 | 1.9 | - | 1.9 | 0.2 | 2.37E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0405b | C | 18.8 | 4.7 | 3.57E-11 | 1.95E-11 | - | 2.3 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.48E+10 |
| 24 | S0405d | C | 24.9 | 6.2 | 3.12E-11 | 1.53E-11 | - | 2.5 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.52E+10 |
| 24 | S0408a | C | 27.1 | 6.8 | 4.33E-11 | 2.94E-11 | - | 3.5 | (2.4Hz) | - | 1.8 | 1.9 | - | 1.9 | 0.2 | 2.48E+10 |
| 24 | S0408b | B | 24.4 | 6.1 | 4.83E-11 | 3.12E-11 | - | 3.8 | (2.4Hz) | - | 1.8 | 1.9 | - | 1.9 | 0.2 | 2.41E+10 |
| 24 | S0409c | C | 24.6 | 6.2 | 3.6E-11  | 1.9E-11  | - | 3.0 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.74E+10 |
| 24 | S0412a | C | 25.3 | 6.3 | 4.08E-11 | 1.62E-11 | - | 3.2 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.59E+10 |
| 24 | S0414a | C | 28.8 | 7.2 | 3.32E-11 | 1.66E-11 | - | 2.5 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.77E+10 |
| 24 | S0415a | C | 20.4 | 5.1 | 3.97E-11 | 2.11E-11 | - | 2.8 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.65E+10 |
| 24 | S0417a | B | 22.4 | 5.6 | 3.95E-11 | 2.13E-11 | - | 3.0 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.76E+10 |
| 24 | S0417b | C | 24.5 | 6.1 | 2.62E-11 | 1.58E-11 | - | 1.8 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.54E+10 |
| 24 | S0418a | B | 29.2 | 7.3 | 4.18E-11 | 2.14E-11 | - | 3.2 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.11E+10 |
| 24 | S0419a | C | 31.0 | 7.8 | 3.68E-11 | 1.89E-11 | - | 2.7 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.02E+10 |
| 24 | S0423d | C | 22.6 | 5.7 | 3.98E-11 | 1.77E-11 | - | 2.3 | (2.4Hz) | - | 1.7 | 1.6 | - | 1.6 | 0.2 | 1.57E+10 |
| 24 | S0427b | C | 22.7 | 5.7 | 2.95E-11 | 1.74E-11 | - | 2.4 | (2.4Hz) | - | 1.6 | 1.6 | - | 1.6 | 0.2 | 1.56E+10 |
| 24 | S0429b | C | 27.2 | 6.8 | 3.38E-11 | 1.72E-11 | - | 2.2 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.74E+10 |
| 24 | S0429c | B | 19.7 | 4.9 | 5.49E-11 | 2.43E-11 | - | 3.4 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.77E+10 |
| 24 | S0430a | C | 27.1 | 6.8 | 3.78E-11 | 2.19E-11 | - | 2.8 | (2.4Hz) | - | 1.8 | 1.8 | - | 1.8 | 0.2 | 2.04E+10 |
| 24 | S0430c | B | 28.4 | 7.1 | 5.72E-11 | 1.92E-11 | - | 3.3 | (2.4Hz) | - | 2.0 | 1.8 | - | 1.8 | 0.2 | 1.93E+10 |
| 24 | S0436b | C | 31.8 | 8.0 | 4.61E-11 | 1.62E-11 | - | 2.3 | (2.4Hz) | - | 1.9 | 1.8 | - | 1.8 | 0.2 | 1.86E+10 |
| 24 | S0439a | C | 23.5 | 5.9 | 8.58E-11 | 5.88E-11 | - | 5.9 | (2.4Hz) | - | 2.1 | 2.2 | - | 2.2 | 0.2 | 3.59E+10 |
| 24 | S0446a | C | 25.3 | 6.3 | 6.62E-11 | 3.13E-11 | - | 2.9 | (2.4Hz) | - | 2.0 | 1.9 | - | 1.9 | 0.2 | 2.47E+10 |
| 24 | S0448a | C | 31.0 | 7.8 | 5.19E-11 | 2.96E-11 | - | 2.8 | (2.4Hz) | - | 2.0 | 2.0 | - | 2.0 | 0.2 | 2.73E+10 |
| 24 | S0460a | B | 21.8 | 5.5 | 4.37E-11 | 2.56E-11 | - | 3.0 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 1.96E+10 |
| 24 | S0467a | C | 20.5 | 5.1 | 4.15E-11 | 2.77E-11 | - | 3.0 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 1.98E+10 |
| 24 | S0472a | C | 24.1 | 6.0 | 3.3E-11  | 2.28E-11 | - | 2.1 | (2.4Hz) | - | 1.7 | 1.8 | - | 1.8 | 0.2 | 1.94E+10 |

|    |        |   |      |     |          |          |   |     |         |   |     |     |   |     |     |          |
|----|--------|---|------|-----|----------|----------|---|-----|---------|---|-----|-----|---|-----|-----|----------|
| 24 | S0477a | B | 26.1 | 6.5 | 7.43E-11 | 2.49E-11 | - | 4.2 | (2.4Hz) | - | 2.0 | 1.9 | - | 1.9 | 0.2 | 2.17E+10 |
| 24 | S0494a | C | 25.4 | 6.3 | 3.88E-11 | 1.73E-11 | - | 2.9 | (2.4Hz) | - | 1.8 | 1.7 | - | 1.7 | 0.2 | 1.67E+10 |
| 24 | S0510a | C | 21.5 | 5.4 | 3.95E-11 | 2.35E-11 | - | 2.1 | (2.4Hz) | - | 1.7 | 1.7 | - | 1.7 | 0.2 | 1.83E+10 |
| 24 | S0518a | C | 16.9 | 4.2 | 1.92E-10 | 1.12E-10 | - | 2.6 | (2.4Hz) | - | 2.3 | 2.3 | - | 2.3 | 0.2 | 4.42E+10 |
| 24 | S0534a | C | 38.2 | 9.6 | 4.29E-10 | 2.61E-10 | - | 2.5 | (2.4Hz) | - | 3.0 | 3.0 | - | 3.0 | 0.2 | 1.34E+11 |

21

HF – high-frequency, VF – very high-frequency, 24 - 2.4Hz resonance