|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Clock Model** | **Run** | **lmL(SS)** | **mean lmL(SS)** | **BF** | **lmL(PS)** | **mean lmL(PS)** | **BF** |
| Strict | run 1 | -2636.29 | -2637.79 | 20.82 | -2636.06 | -2637.11 | 19.63 |
| run 2 | -2636.76 | -2636.43 |
| run 3 | -2640.33 | -2638.83 |
| UCLN | run 1 | -2637.82 | -2636.30 | 17.83 | -2637.75 | -2636.25 | 17.92 |
| run 2 | -2635.80 | -2635.59 |
| run 3 | -2635.28 | -2635.42 |
| RLC | run 1 | -2626.57 | -2627.38 | 0 | -2626.68 | -2627.29 | 0 |
| run 2 | -2626.92 | -2626.85 |
| run 3 | -2628.66 | -2628.35 |

Table S2: Clock model comparisons. Log marginal likelihood (lmL) estimates by stepping-stone sampling (SS) and path sampling (PS) and natural log Bayes factors (BF).

The BF was calculated using the following formula:

The model with the highest lmL was used as model 1, i.e., the RLC model. According to Kass and Raftery (1995), model 1 is favored over model 2 for BF values greater than 2 and model 2 is favored over model 1 for values smaller than -2.

Reference : Kass, R. E.  and A. E. Raftery. Bayes factors. 1995. Journal of the American Statistical Association 90(430): 773– 795.