**S2 Table. List of all predictors and how they were calculated.** References refer to when the respective predictor was first introduced in the context of behaviour prediction. All predictors except the Fast Fourier Transformation can be considered summary statistics because they result in a single number. We add the complete Fast Fourier Spectrum as predictors. The total amount of predictors from the Fast Fourier Spectrum is therefore dependant on burst length.

|  |  |  |
| --- | --- | --- |
| **Predictor** | **Calculation** | **Reference** |
| Mean | mean of the x axis xmean of the y axis ymean of the z axis z |  |
| Standard deviation (sd) | sd of the x axissd of the y axissd of the z axis |  |
| Inverse coefficient of variation (ICV) | xsdofthexaxisysdoftheyaxiszsdofthezaxis |  |
| Variation | 1n−1sd²ofthexaxis1n−1sd²oftheyaxis1n−1sd²ofthezaxis |  |
| Skewness | skewness() function in R, type = 3 of the x axisskewness() function in R, type = 3 of the y axisskewness() function in R, type = 3 of the z axis | [(Meyer et al., 2017)](https://www.zotero.org/google-docs/?0SMNmg) |
| Kurtosis | kurtosis() function in R, type = 3 of the x axiskurtosis() function in R, type = 3 of the y axiskurtosis() function in R, type = 3 of the z axis | [(Meyer et al., 2017)](https://www.zotero.org/google-docs/?ZtwIie) |
| q | x2+y2+z2 | [(Nathan et al., 2012)](https://www.zotero.org/google-docs/?eN2hdq) |
| Pitch | arctanyx2+z2180 | [(Collins et al., 2015)](https://www.zotero.org/google-docs/?iNsTmj) |
| Roll | arctanxy2+z2180 | [(Collins et al., 2015)](https://www.zotero.org/google-docs/?PjGFMF) |
| Overall body acceleration (ODBA) | 1nxn−x+1nyn−y+1nzn−z | [(Wilson et al., 2006)](https://www.zotero.org/google-docs/?sgMEtM) |
| Fast Fourier transformation (FFT) | fft() function in R of the x axis considering only the real numbersfft() function in R of the y axis considering only the real numbersfft() function in R of the z axis considering only the real numbers | [(R Core Team, 2018)](https://www.zotero.org/google-docs/?0jlCES) |