

triact package for R: Analyzing the lying behavior of cows from accelerometer data

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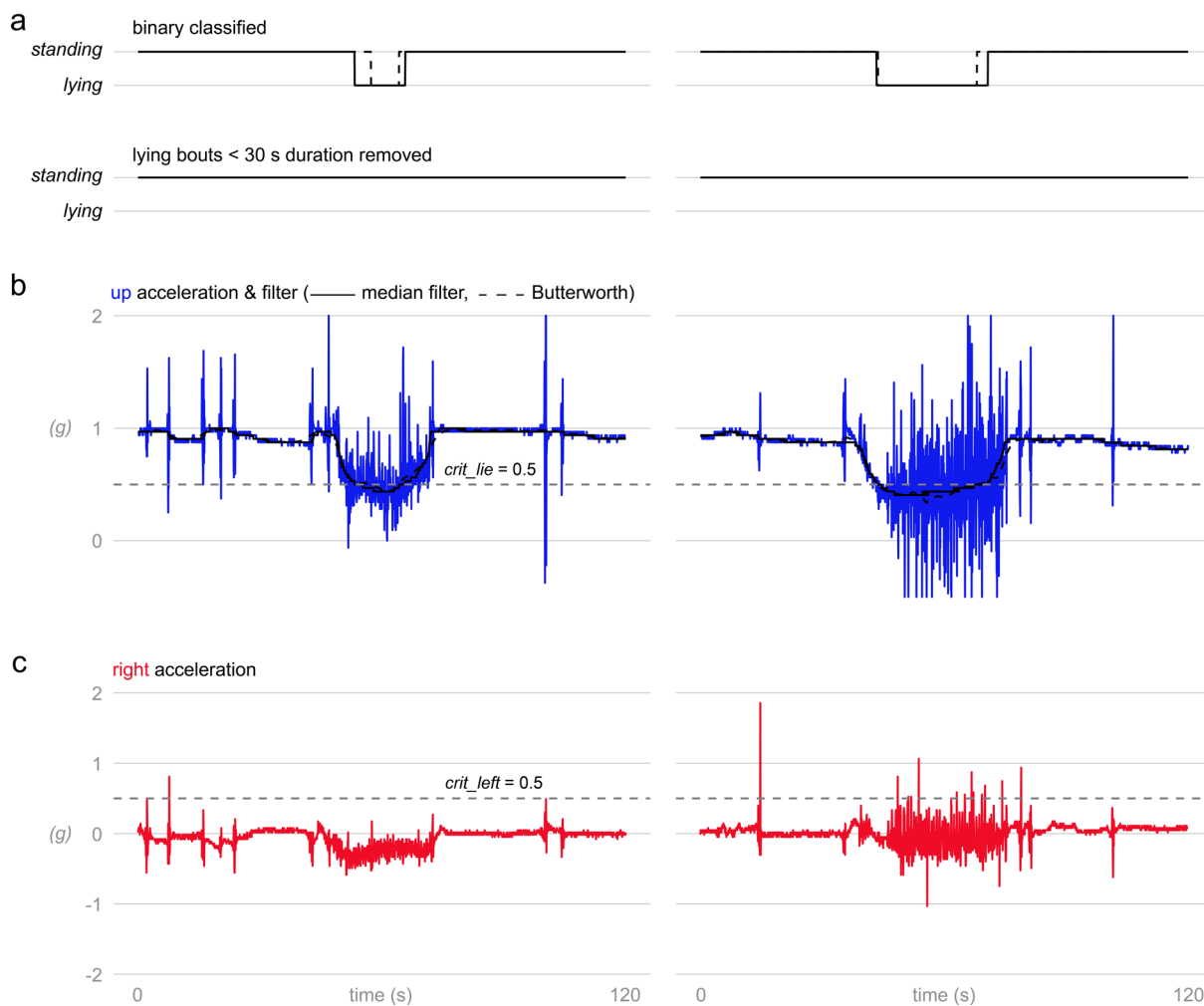


Figure S1. Two examples of a cow lifting the hind leg with the attached accelerometer towards the horizontal position (corresponding to Supplementary Videos 1 and 2). **(a)** Results on standing and lying posture and lying laterality (left L, right R) as determined with *triaact*. **(b)** Acceleration as measured on the *upward* axis (up) with filtered data and critical lying threshold indicated as dashed horizontal line. **(c)** Acceleration as measured on the *right* axis with threshold for determining lying side indicated as dashed horizontal line. Data obtained at 20 Hz sampling frequency with a triaxial accelerometer mounted on the left hind leg of a dairy cow.

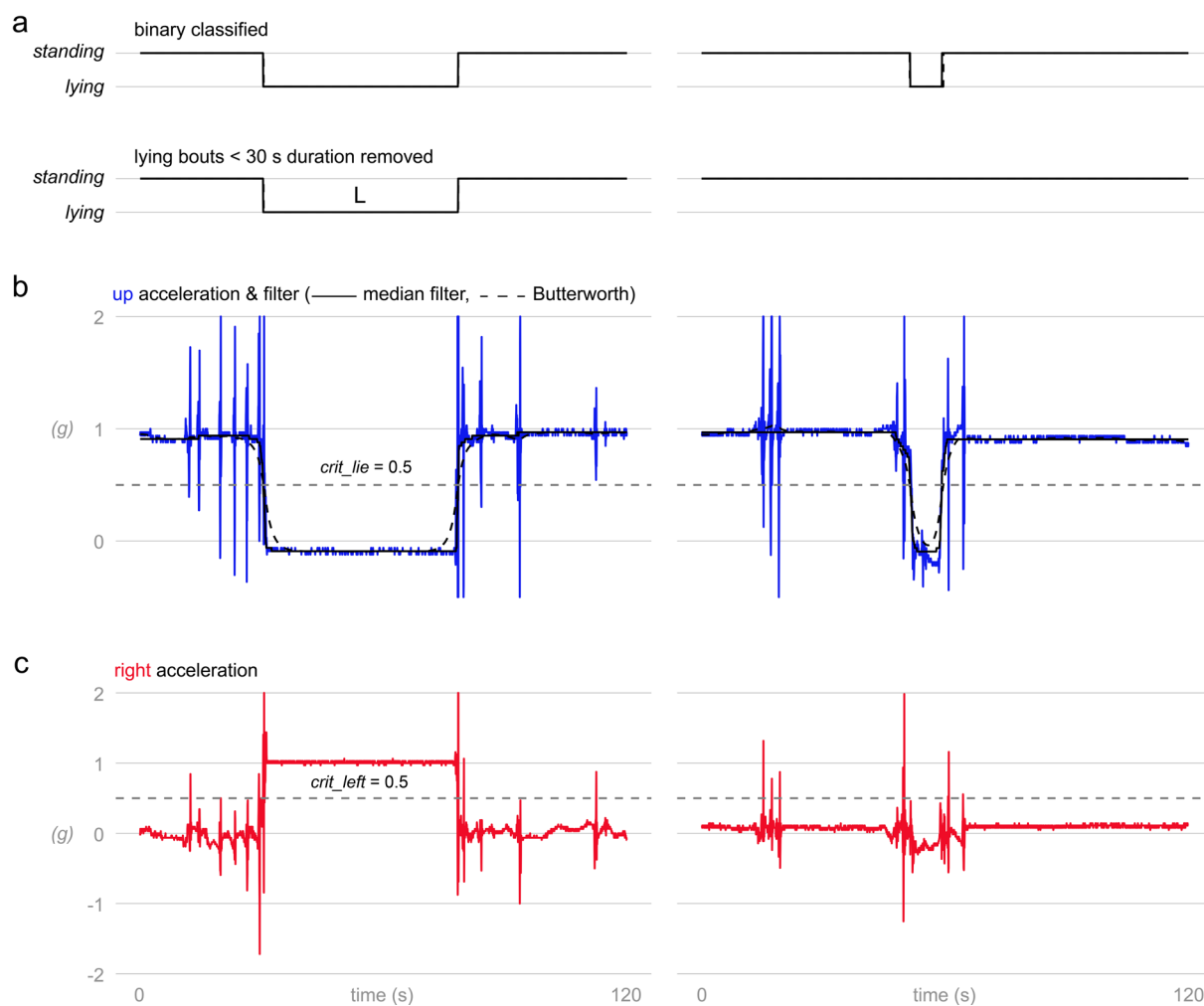


Figure S2. Two examples of short lying bouts (corresponding to Supplementary Videos 3 and 4). The example on the right shows a false negative, as *triact* falsely removed the lying bout in the last step of the algorithm. **(a)** Results on standing and lying posture and lying laterality (left L, right R) as determined with *triact*. **(b)** Acceleration as measured on the *upward* axis (up) with filtered data and critical lying threshold indicated as dashed horizontal line. **(c)** Acceleration as measured on the *right* axis with threshold for determining lying side indicated as dashed horizontal line. Data obtained at 20 Hz sampling frequency with a triaxial accelerometer mounted on the left hind leg of a dairy cow.

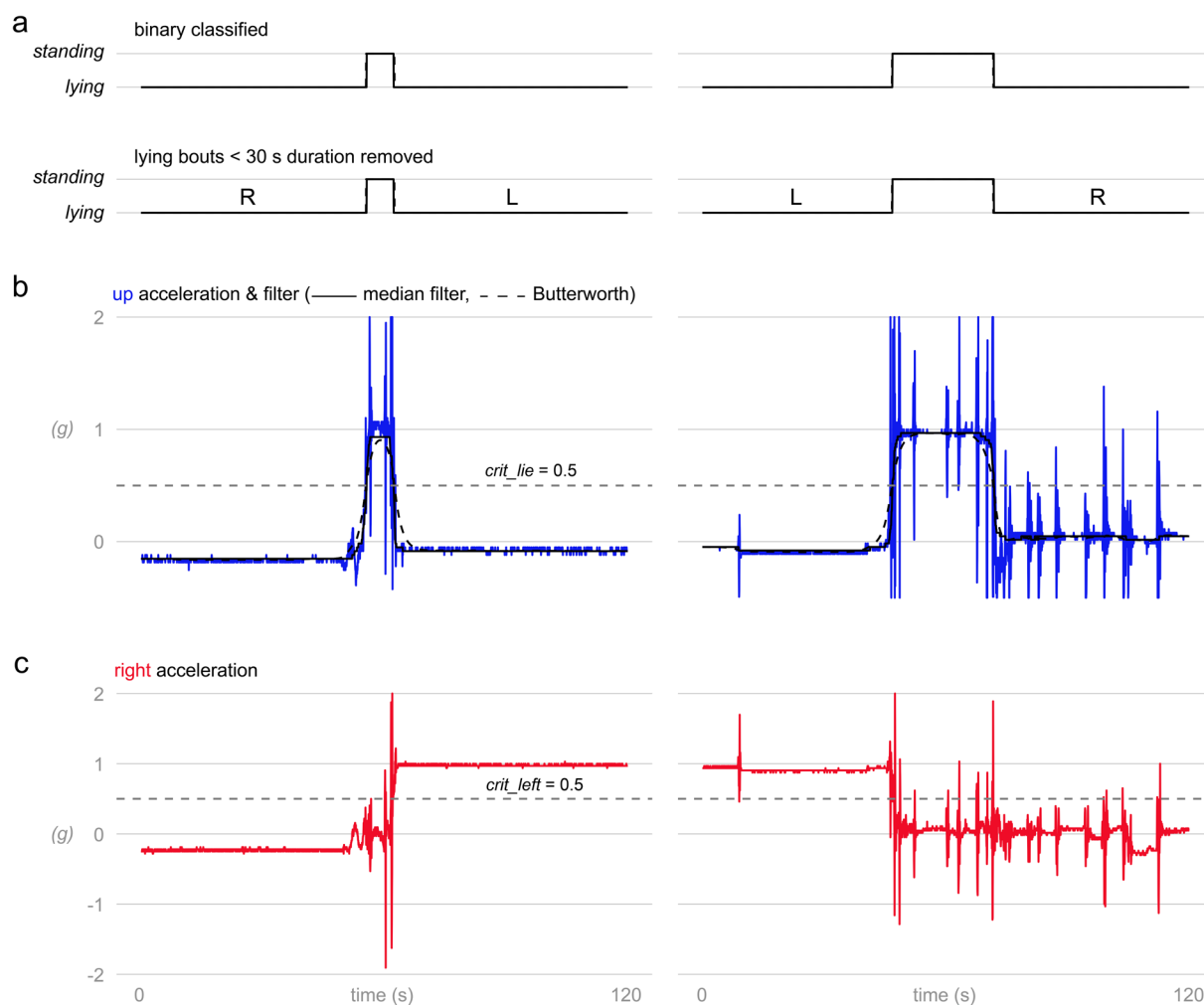


Figure S3. Two examples of short standing bouts (corresponding to Supplementary Videos 5 and 6). **(a)** Results on standing and lying posture and lying laterality (left L, right R) as determined with *triact*. **(b)** Acceleration as measured on the *upward* axis (up) with filtered data and critical lying threshold indicated as dashed horizontal line. **(c)** Acceleration as measured on the *right* axis with threshold for determining lying side indicated as dashed horizontal line. Data obtained at 20 Hz sampling frequency with a triaxial accelerometer mounted on the left hind leg of a dairy cow.