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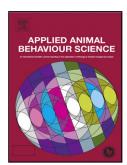
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ACCEPTED MANUSCRIPT

Assessment of circadian rhythm of activity combined with random regression model as a novel approach to monitoring sheep in an extensive system

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Highlights

- Circadian rhythm for activity enables the understanding of sheep response to weather
- Variation in the circadian rhythms for activity was related to a lower performance
- Random regression model effectively identified between-individual variation

Abstract

Sensor-based technologies are becoming increasingly available and can be used to automatically gather long-term data about animal behaviour. With this information, it is possible to assess the

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