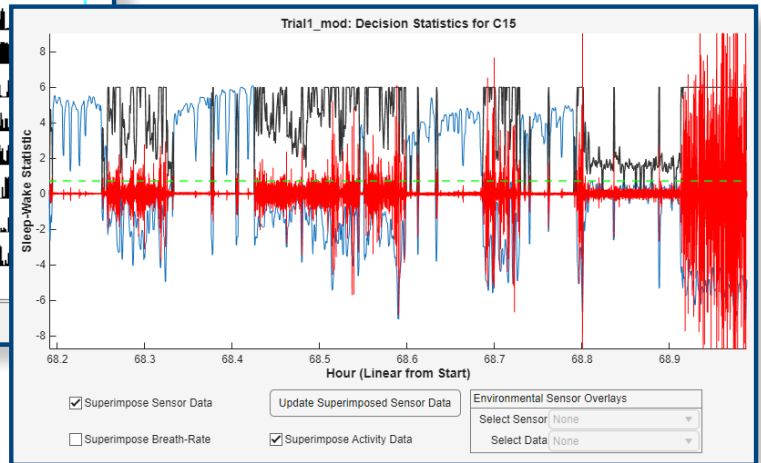
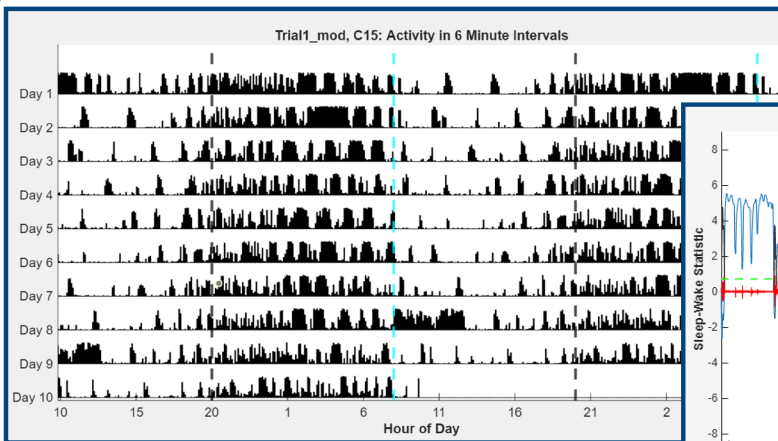


Activity/Circadian Analysis



Activity Measurements (*PiezoSleep 5*)

Building on our longstanding experience with non-invasive sleep versus wake assessments in rodents, we are enhancing our circadian rhythm and activity measurement software. The *PiezoSleep™* system offers continuous monitoring of pressure fluctuations on the cage floor caused by thoracic and head movements during periods of low activity, as well as locomotion and rearing during high activity states. Activity levels are quantitatively assessed every 2 seconds using energy computation and calibration protocols. With integrated sleep detection, the system utilizes baseline energy values recorded during sleep as a reference for no activity. Energy levels exceeding this baseline are calibrated to delineate low, medium, and high activity categories.

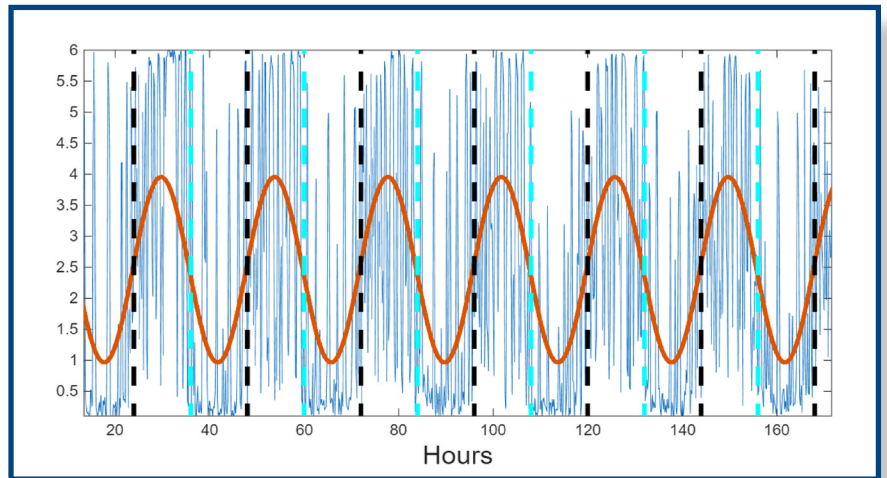
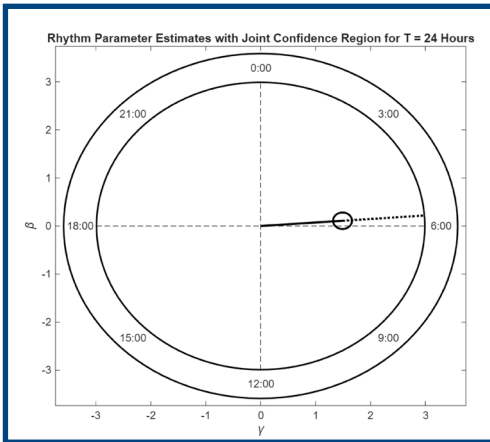
Current features (*SleepStats 4 Pro*)

- Continuous measurements irrespective of the animal's location within the cage
- Activity data presented as actograms and exportable to CSV files at user-defined resolutions
- Data export compatibility with ClockLab (Actimetrics, Lafayette, IN, USA) for further analysis using external activity analysis tools
- No requirement for specialized lighting or in-cage devices that may alter natural behaviors
- Simultaneous recording of environmental variables such as light intensity and temperature, alongside behavioral statistics—particularly beneficial for experiments involving varying light conditions and onset times



Expanded Activity Analysis Features

Coming soon to SleepStats 4 Pro



- Cosinor analysis with graphical displays and parameter export capabilities
- An interactive graphical user interface for adjusting thresholds and resolutions to define activity onsets and bouts

