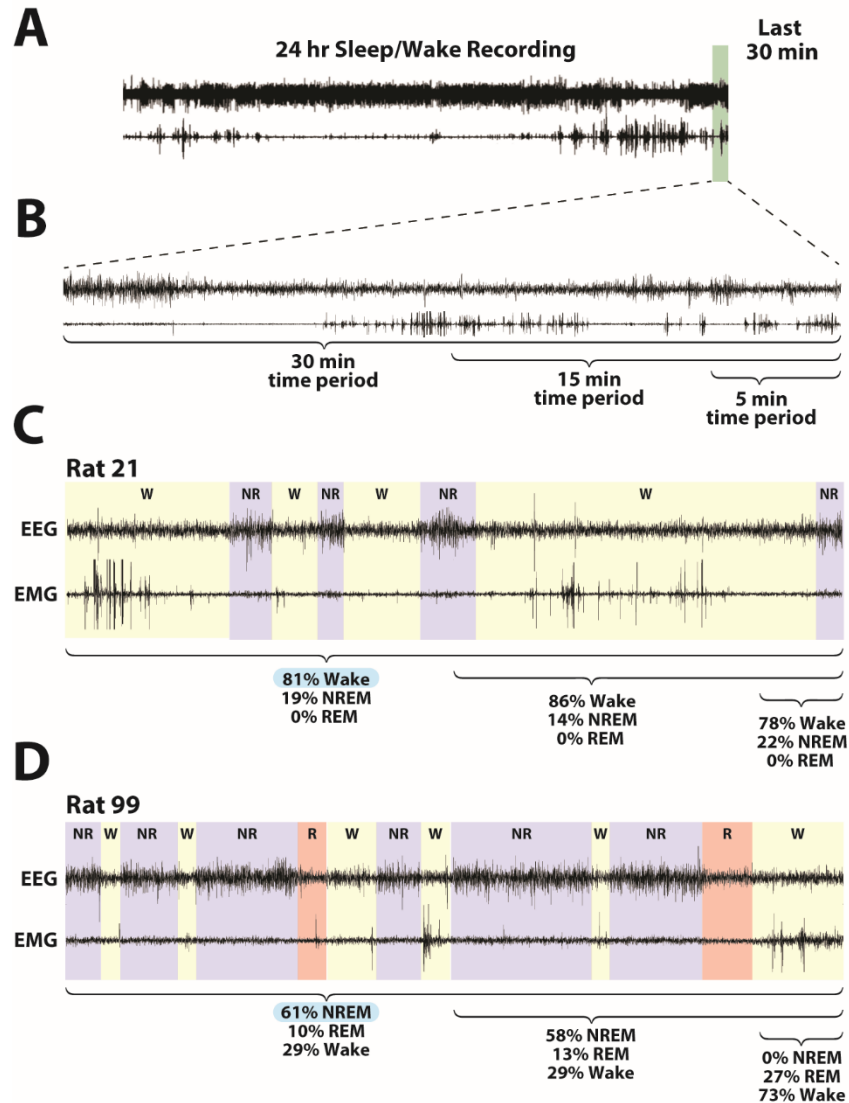


Supplemental Figure 1. DA release and uptake as a function of time since sacrifice. After 24 h of sleep/wake recording, rats were sacrificed, and tissue slices were prepared for FSCV recordings. In a subset of rats, two slices were recorded: one slice shortly after sacrificing the animals (n=26) and a second slice up to 7 hr post-sacrifice (n=19). To assess whether the amount of time since sacrifice affected DA release (A and B) or uptake (C and D) we used regression analyses to assess the relationship between time post-sacrifice and DA release and plotted these data to rats as Wake vs Sleep or ZT6 vs ZT18. Results indicate little evidence of a relationship between the time post-decapitation and either DA measure, suggesting that the amount of time of recording post-sacrifice does not affect DA release or uptake. Correlation coefficients, associated p-values, and black regression lines represent analyses on data collapsed across ZT6 and ZT18. Yellow dashed lines depict regression lines for ZT6 data, and red dotted lines depict regression

lines for ZT18 data. Note: data points in correlations appear different across panels due to overlaying of symbols.



Supplemental Figure 2. Analysis of sleep/wake activity and categorization into Sleep and Wake groups. Alterations in DAT function in response to pharmacological and physiological challenges can occur on the time scale of seconds to minutes. Therefore, we hypothesized that sleep/wake activity in the last 30 min prior to sacrifice would predict fluctuations in DAT function. (A) Example 24 h EEG/EMG recording from Rat 50. Section in green box depicts the last 30 min of the recording, immediately prior to sacrificing the rat. (B) The last 30 min of the EEG/EMG recording was enlarged to highlight the final 5, 15, and 30 min portions of sleep/wake activity prior to sacrifice. We refer to these as the 5, 15, and 30-min time periods of sleep/wake activity

throughout the manuscript. To examine the relationship between sleep/wake state and DA measures of interest, we correlated the percentage of time, bout number, and bout length for Wake (W; yellow), NREM (NR; blue), and REM (R; red) for the 5, 15, or 30-min time periods with respect to DA release and uptake. Percentages of individual sleep/wake states, as well as bout number and bout lengths, were established for each rat and used for analyses as described in the Methods. To categorize rats into Wake and Sleep groups we used a median split on the percentages of Wake during the 30-min time period. Rats that showed Wake percentages equal to or greater than the median were assigned to the Wake group, while rats with Wake percentages lower than the median were assigned to the Sleep group. (C) EEG-EMG traces of a rat categorized into the Wake group. Rat 21 displayed 78% Wake, 22% NREM and 0% REM during the 5-min period. For the 15-min (86% Wake; 14% NREM; 0% REM) and 30-min time periods (81% Wake; 19% NREM; 0% REM) rat 21 also showed high percentages of Wake. (D) EEG-EMG traces of a rat categorized into the Sleep group. Rat 99 displayed 73% Wake, 27% REM and 0% NREM during the 5-min period. For the 15- and 30-min time periods rat 99 displayed 71% Sleep (NREM + REM).