
**FIGURE 1** was missing the boundary circles for the enlarged *inset* details for Spindle, SPWR, and SO in the *middle*, it was also missing the scale bars for μV and s at the *bottom*. The corrected figure is printed below.

**FIGURE 1.** Characteristic features of sleep architecture and predominant neural oscillations across the sleep period in humans and rodents

Top: in both humans and rodents, a distinction is made between NREM and REM sleep stages. In humans, NREM sleep is further divided into stages N1–N3, depending on sleep depth. In rodents, a further subdivision of NREM sleep is uncommon due to the short duration of sleep episodes. Bottom: the traces show representative recordings from human EEG over frontal (Fz) and parietal (Pz) locations, and mouse intracranial local field potentials (LFP) in frontal cortex (FC) and dorsal hippocampus (HC). Discrete electrical events in NREM sleep are thalamo-cortical sleep spindles (green), cortical slow oscillations (SO; blue), and hippocampal sharp-wave ripples (SPWR; red). Sleep spindles (~10–16 Hz) are a hallmark of NREM stage N2 sleep. They are generated through inhibition of thalamo-cortical relay cells by the repetitive spike-bursting of GABAergic thalamic reticular neurons (121). As sleep deepens, neural activity slows and synchronizes. Both slow-wave activity (SWA; 0.5–4 Hz) and slow oscillations (~1 Hz) dominate. Slow oscillations are cortically generated biphasic rhythms consisting of the alternation between a hyperpolarizing state of neuronal silence (or “Down state”) and a depolarizing state (or “Up state”), which reflects enhanced activity of both excitatory and inhibitory cortical neurons (88, 121). Note, the polarity of up and down states is reversed between humans and rodents due to the depth LFP recording in rodents. Sharp wave-ripples (SPWRs) are short-lasting (~50–100 ms), fast-oscillatory events of ~100–250 Hz observed in the hippocampal formation during NREM sleep (20), which are measured electrophysiologicaly by using invasive intracranial electrodes. During REM sleep, low-amplitude EEG frequencies appear. In rodents, continuous theta oscillations (~5–9 Hz) are clearly pronounced, with GABAergic neurons of the medial septum relevant for theta pacing of the hippocampus and other limbic cortical structures (20). In contrast to rodents, humans appear to have multiple theta generators producing only short theta sequences during REM sleep (24).