

1125-92-2494

Kiefer Hart Green* (kieferrhgreen@gmail.com). *Finding Theta Oscillations Using Independent component analysis*. Preliminary report.

Prior research using independent component analysis observed theta type oscillations in slow-wave sleep of rats whereas before theta had only been observed in REM sleep and while awake, so this could simply be a false positive. In order to confirm that the observed presence of theta oscillations using independent component analysis means that theta is actually present, we need to know the probability of a false positive. We present an explorative mathematical model for recordings of the brain in order to determine the probability of observing a theta type signal using independent component analysis. We find the probability of observing theta that is not significant at the 97.5% level. (Received September 20, 2016)