**Procedure for Determining Lights Out and Lights ON, Sleep Onset and Sleep Offset, and Wake Periods During OCST in the Sleep, Aging and Circadian Rhythm Disorders**

**Lights OFF** is based on the Lights Out time, which is given in the sleep questionnaire. Also, all signals must be attached to the participant at the reported Lights Out time, if a signal is not on the participant yet, Lights Out will not be marked until all signals are attached. If the reported Lights Out is not available or reliable, the time marked for sleep onset may be used instead.

*Note:*If sleep onset occurs *before* the participant’s reported time to bed, then the staged lights are marked ON from the first epoch of the recording to the first epoch of sleep (i.e. sleep onset time).

**Lights ON** is based on the participant’s report on the time that they woke up, which is also given in the sleep questionnaire. If this is not available or reliable, the staged lights are marked ON after the last epoch of sleep (i.e. sleep offset) until the last epoch of the recording.

Lights On was set after the last epoch of sleep for most studies, and this was usually close or very close to the reported Lights On time

*Note*: Lights On is also marked when the recording becomes unscoreable and stays unscoreable for the rest of the study

**Sleep Onset** is an estimated time marked based on a qualitative assessment which includes evidence of reduction in artifact across channels and assumption of rhythmic breathing.

**Sleep Offset** is marked by appearance of sustained movement artifact and participant sleep questionnaire data.

**Sleep Periods** are scored from sleep onset to sleep offset so long as there is evidence of sustained reduction in artifact across channels and sustained assumption of rhythmic breathing. However, wake periods may take place during the sleep period and would therefore need to be scored (see next section).

**Wake Periods**that occur during the estimated sleep period and can be marked if there are consecutive epochs with consistent activity.   Wake periods are also scored when the oximetry signal **or** all respiratory signals have dropped out (or are unreliable) for a duration of at least 20 minutes.

*Note:*There is no minimum duration required if **both** oximetry and all respiratory signals have dropped out or are unreliable.

**Unscoreable Areas:**When a portion of the recording is found to be unscoreable due to a loss of reliable signal from all respiratory channels **and** from the oximetry channel, that portion is scored as wake until the recording becomes scoreable again. Since both are missing, the scorer cannot determine whether or not sleep or wake is taking place. Therefore, no minimum duration is required to mark the period as wake.

However, if the recording continues to be unscoreable for the rest of the recording, Lights ON and sleep offset should be marked at the point that the recording becomes unscoreable. This will be noted in the study database.