

# 실제 수면다원검사의 스테이징



김 지 현

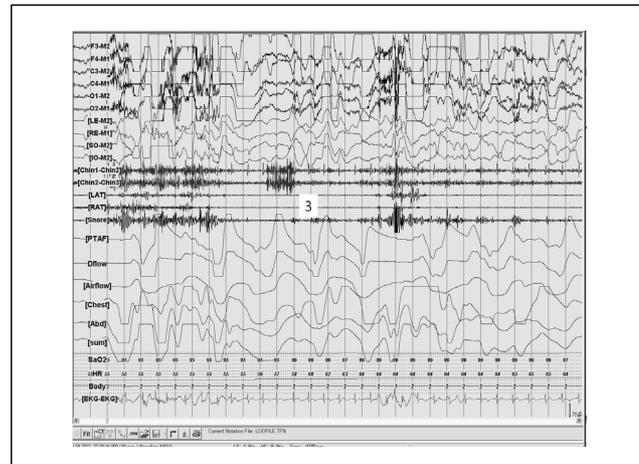
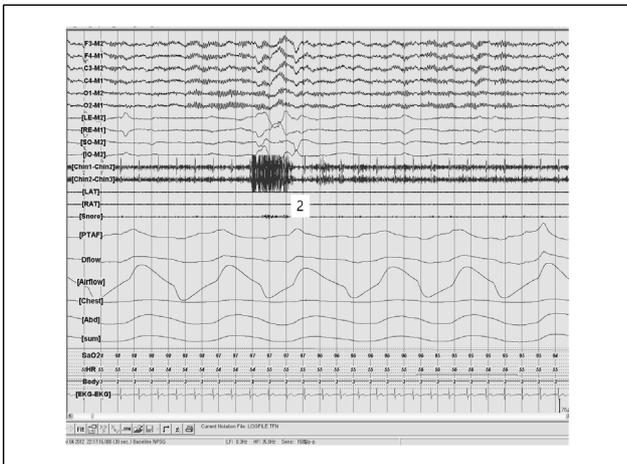
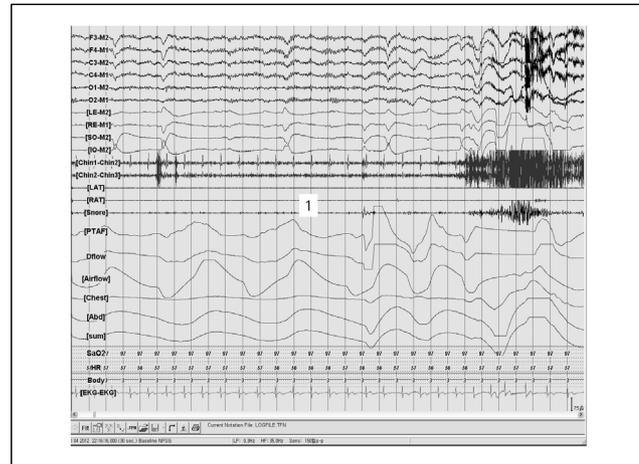
이대서울병원 신경과

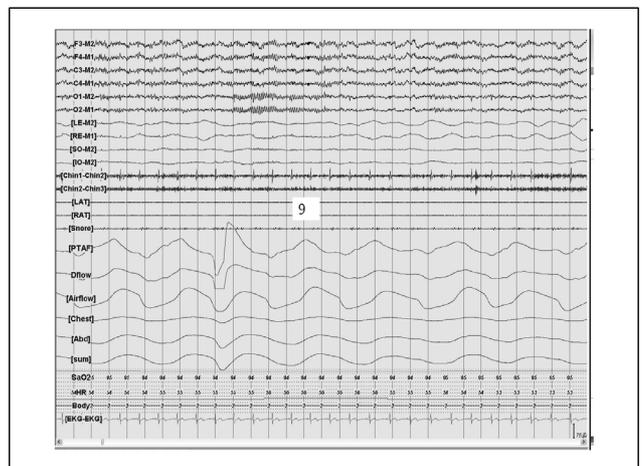
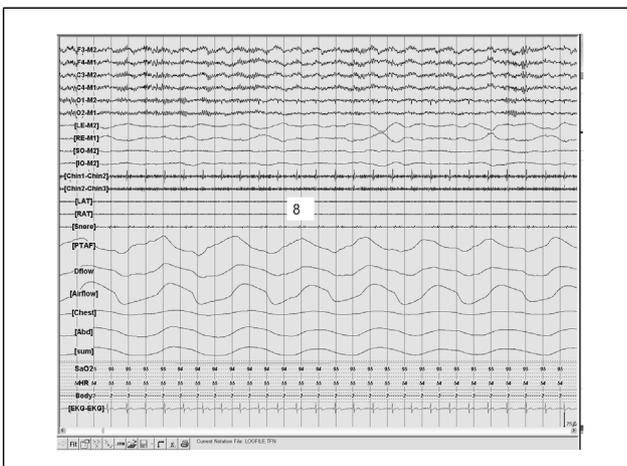
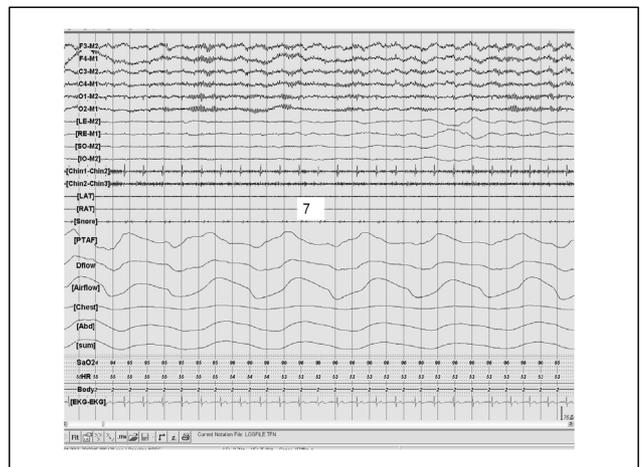
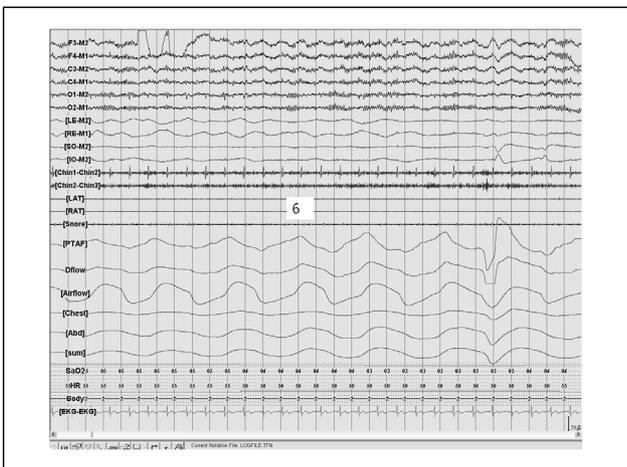
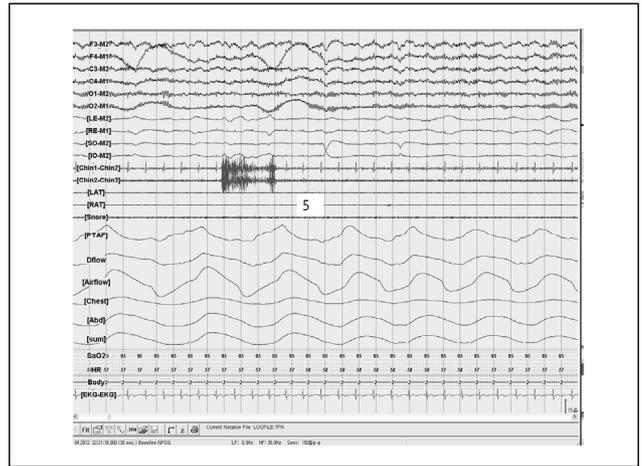
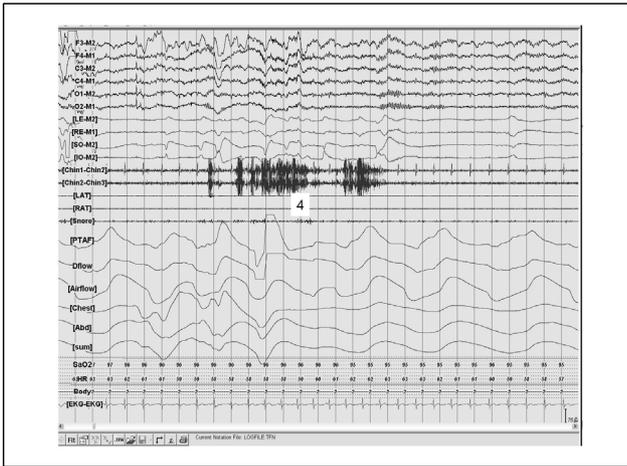
## Real time sleep staging

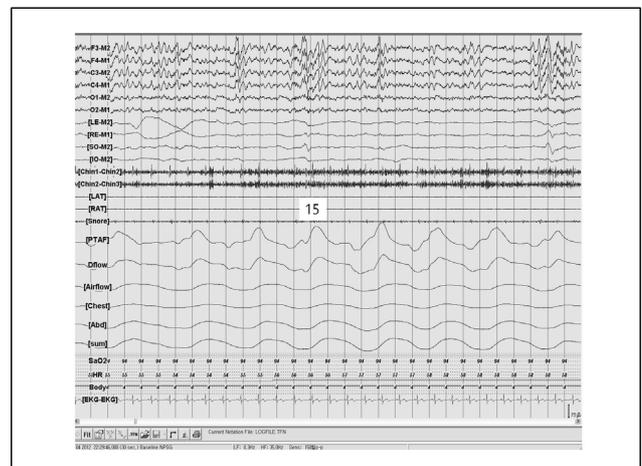
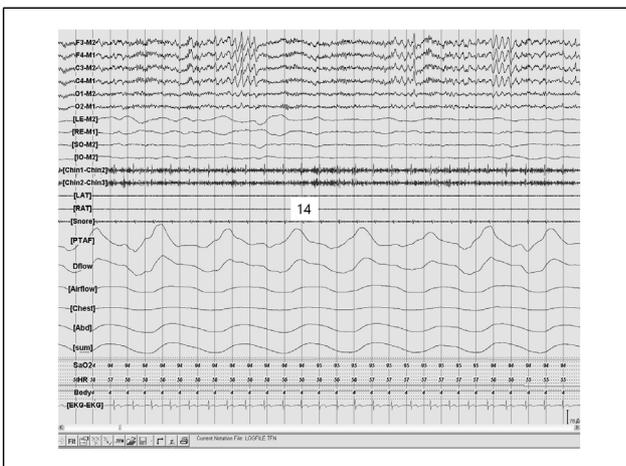
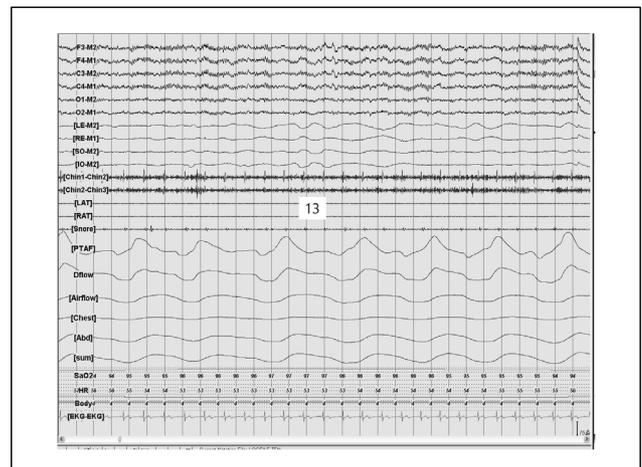
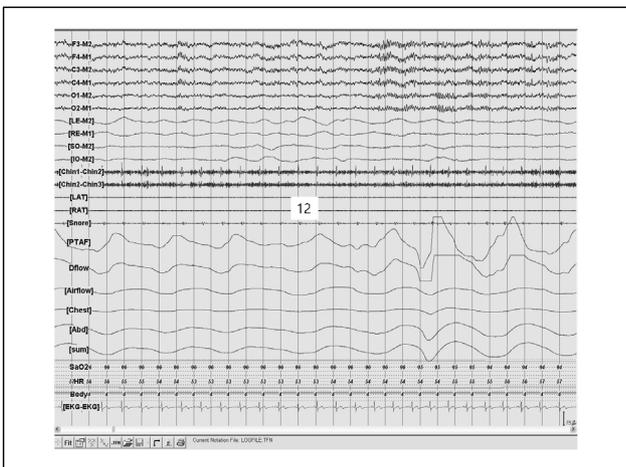
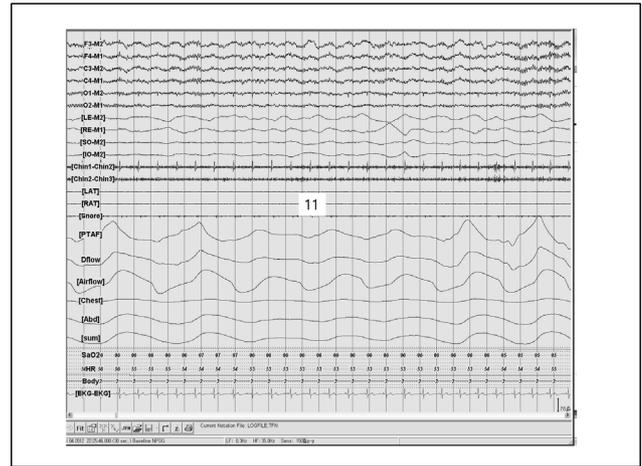
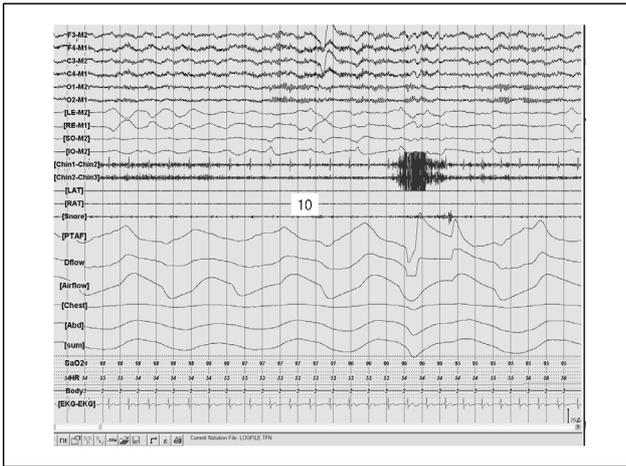
Jee Hyun Kim, MD, PhD

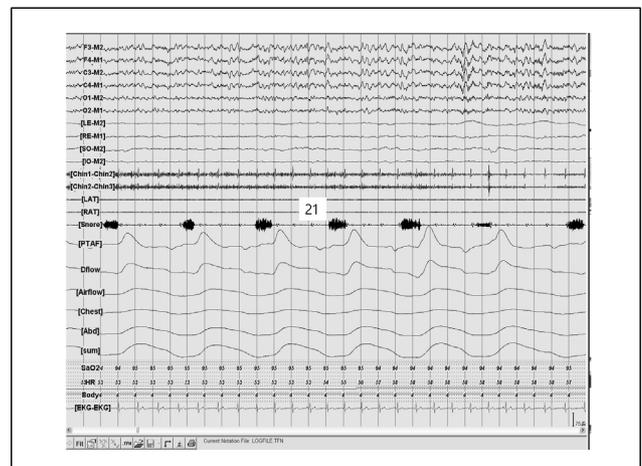
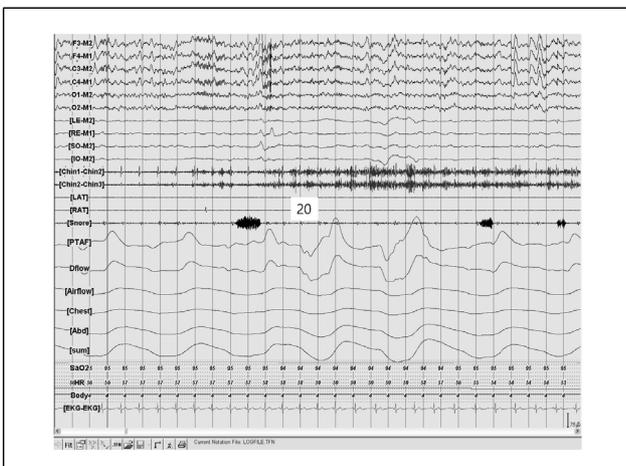
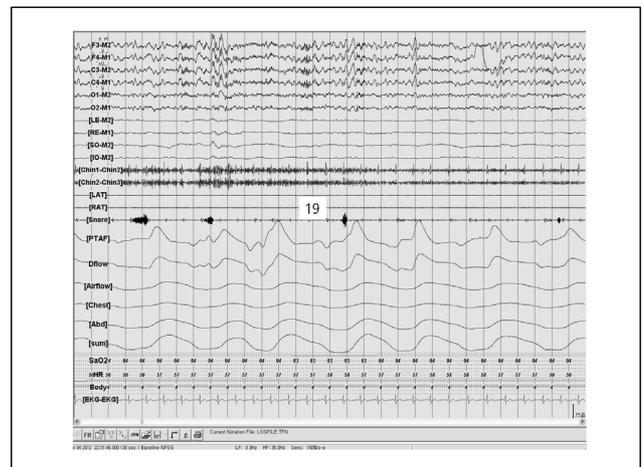
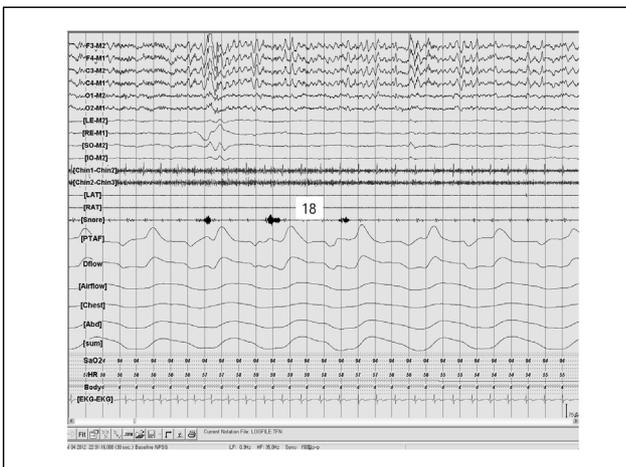
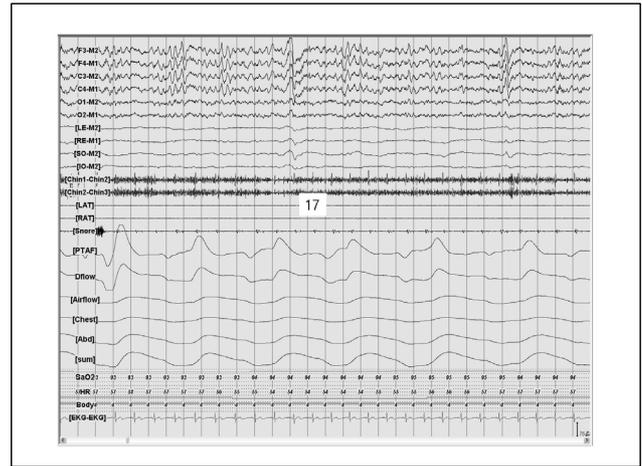
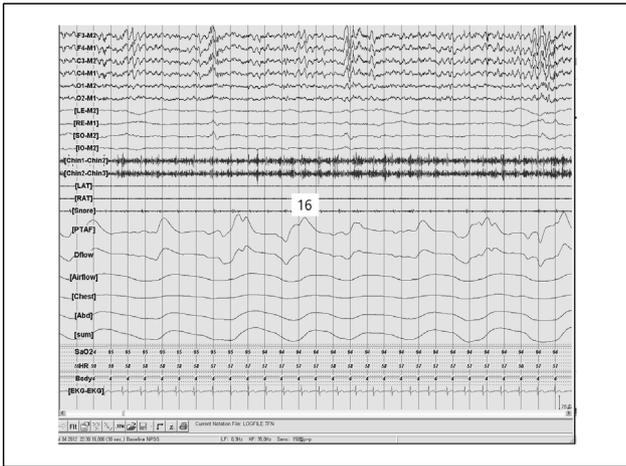
Department of Neurology, Ewha Womans University Seoul Hospital, Ewha Womans University College of Medicine, Seoul, Republic of Korea

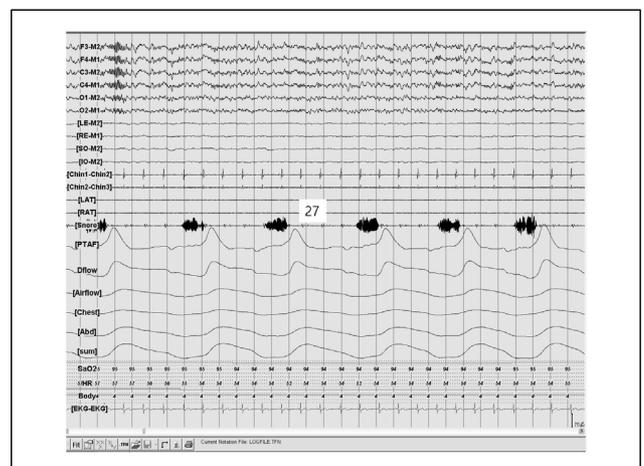
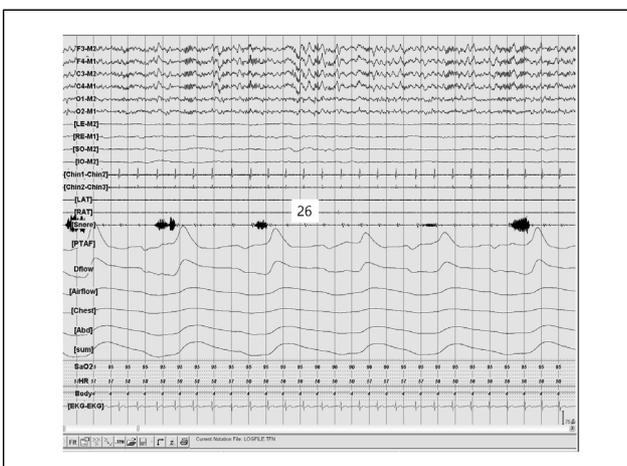
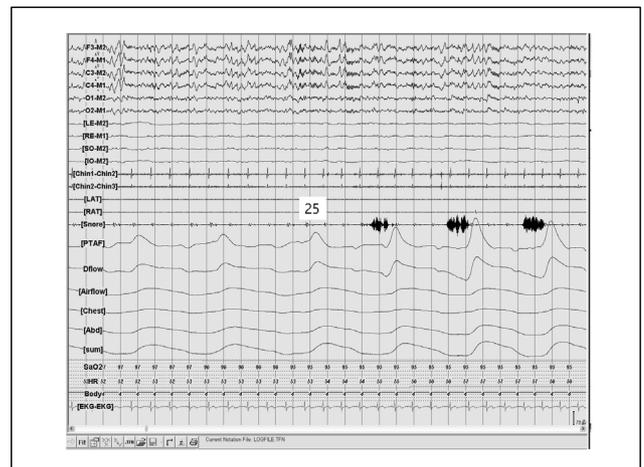
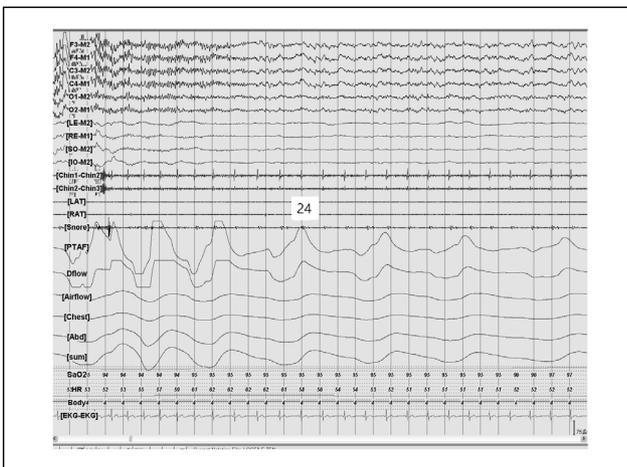
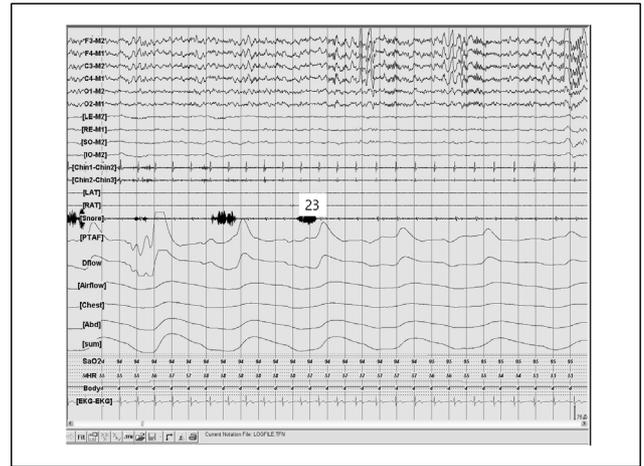
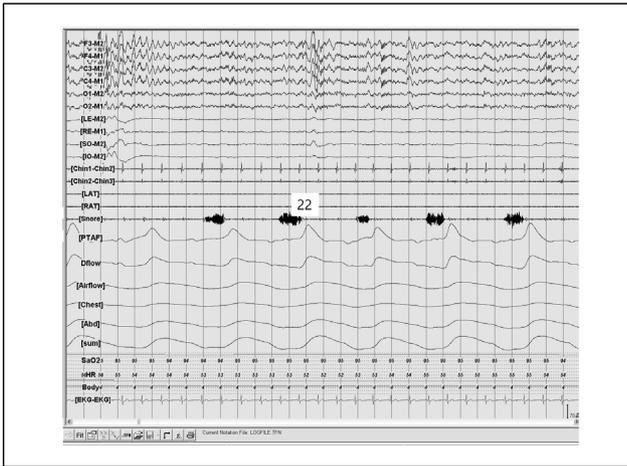
다음은 staging 해보세요  
**STAGING 1<sup>ST</sup> CASE**

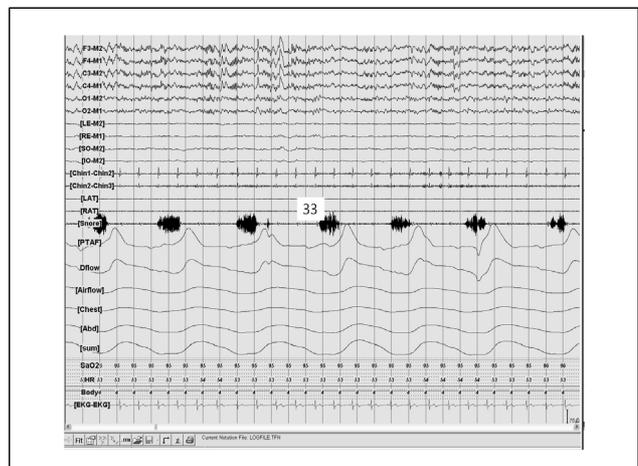
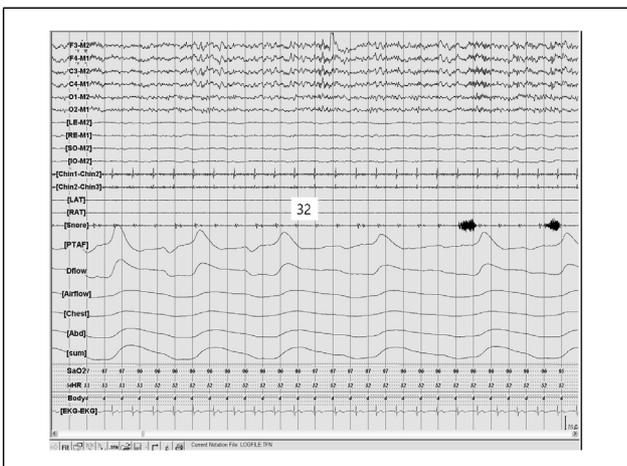
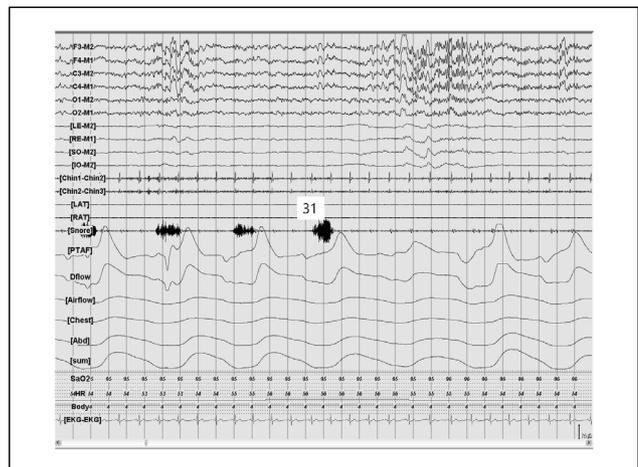
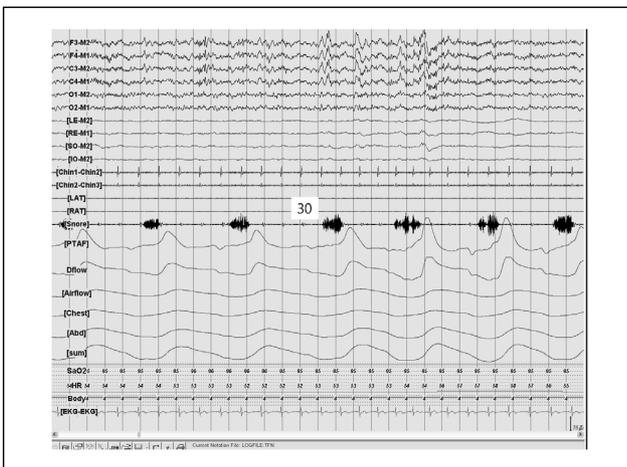
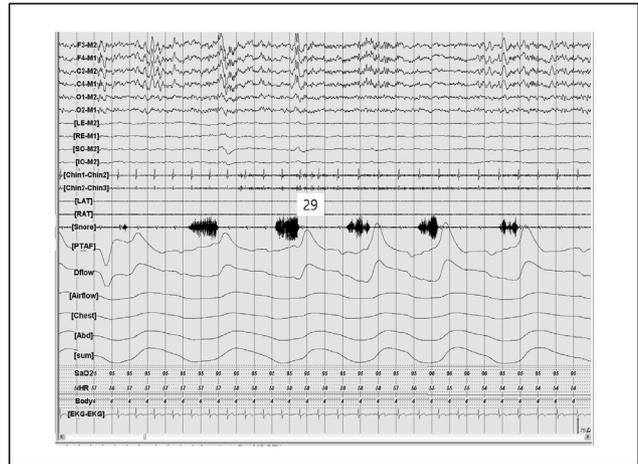
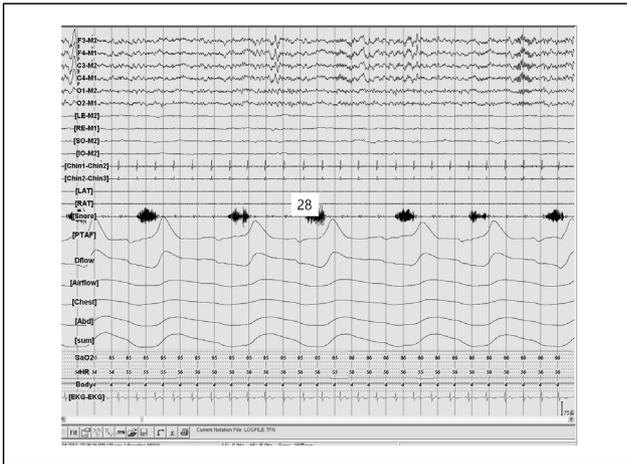


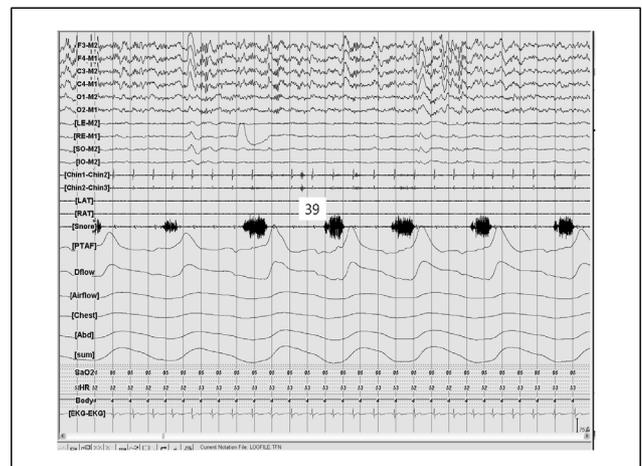
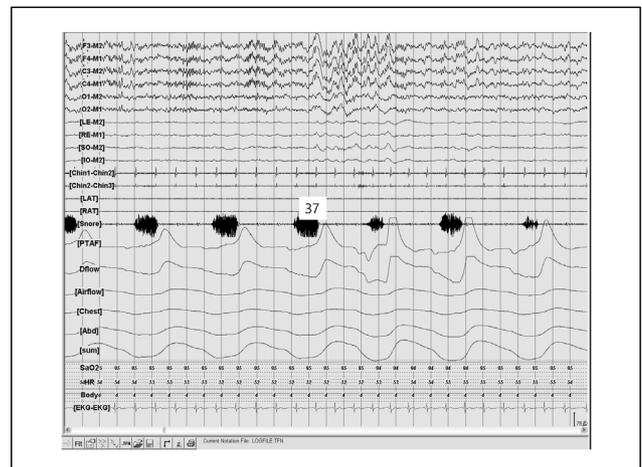
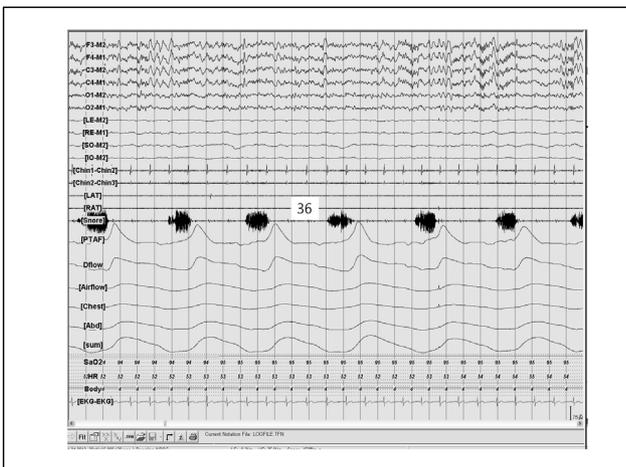
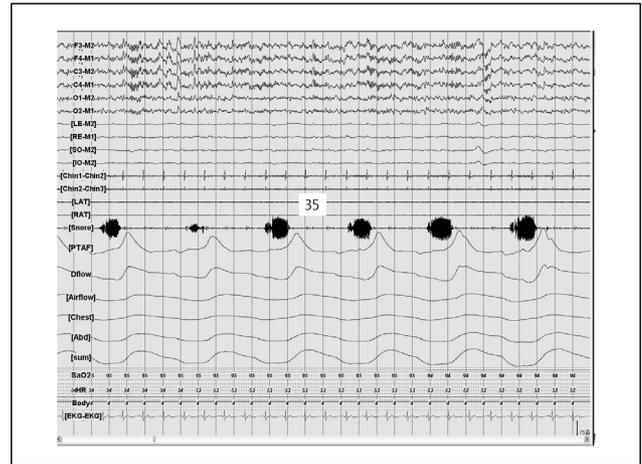
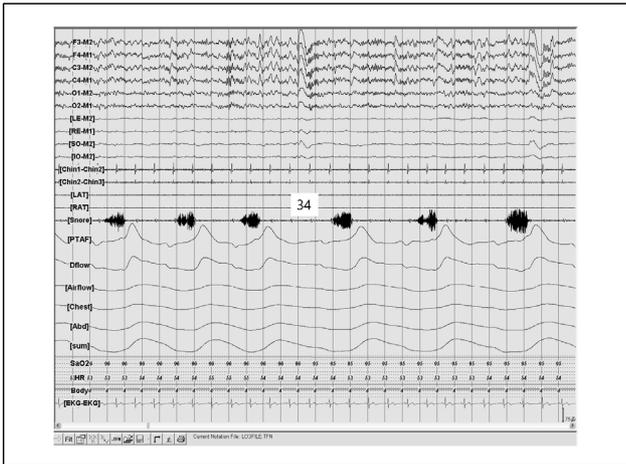


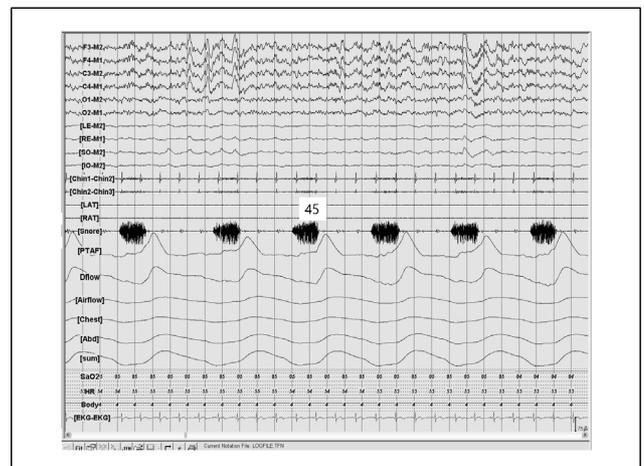
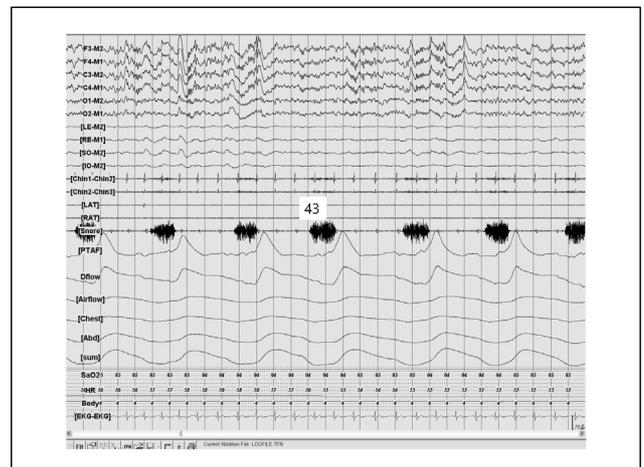
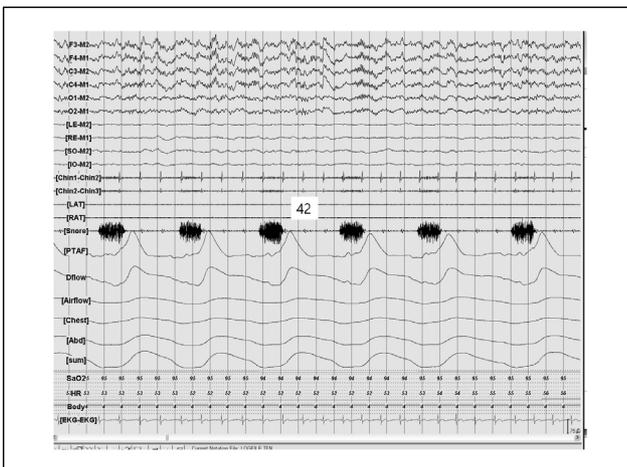
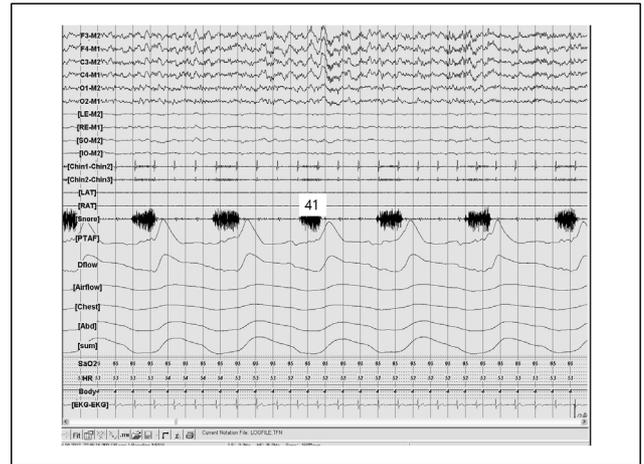
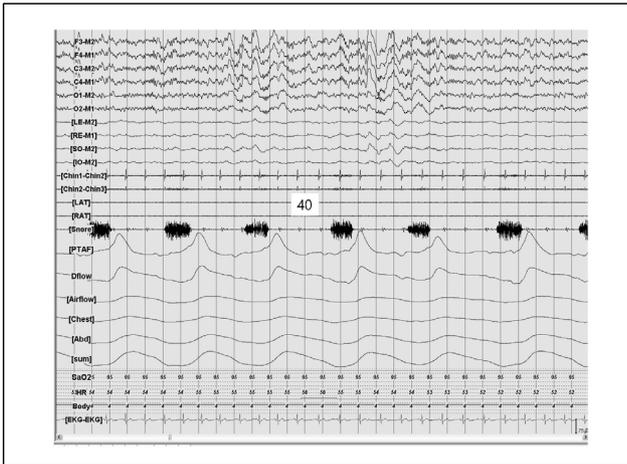


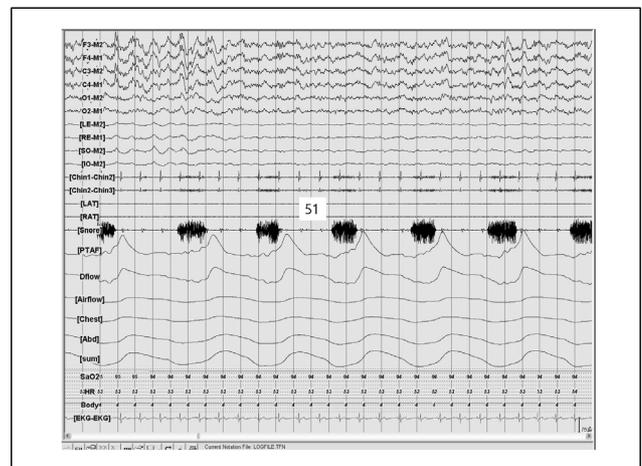
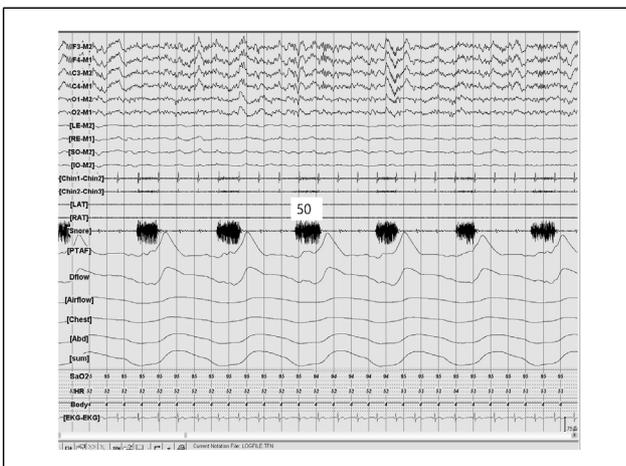
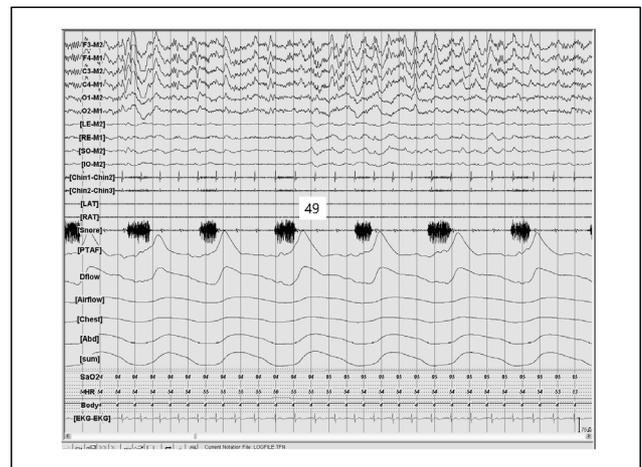
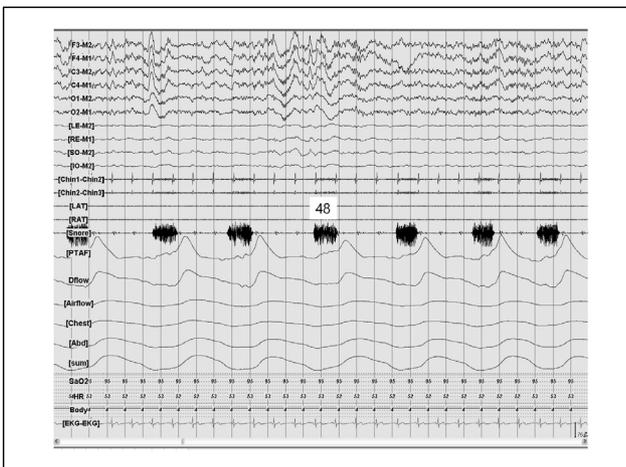
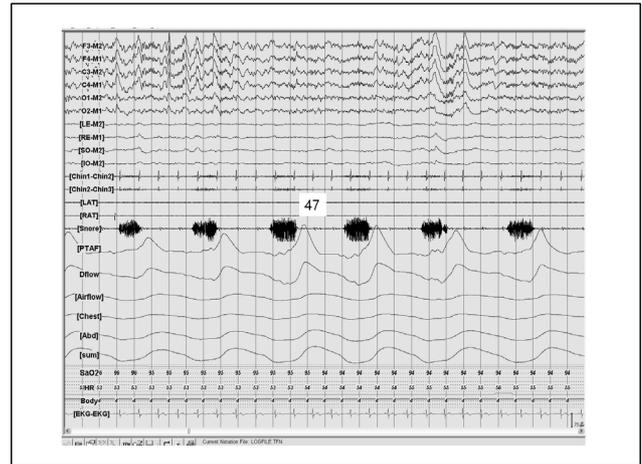
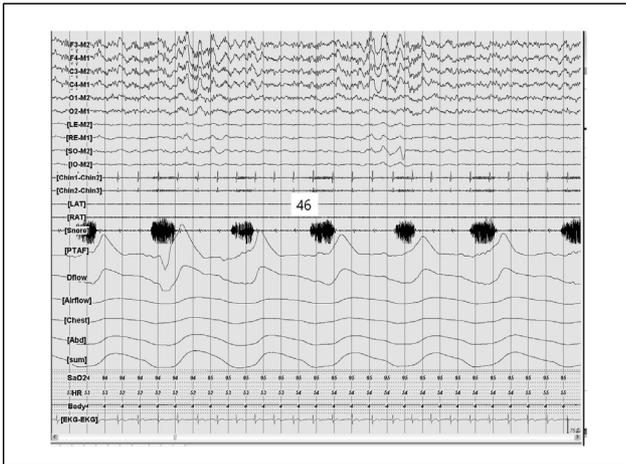


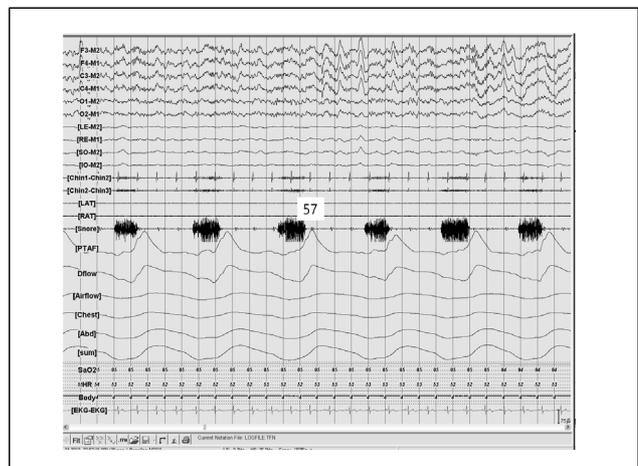
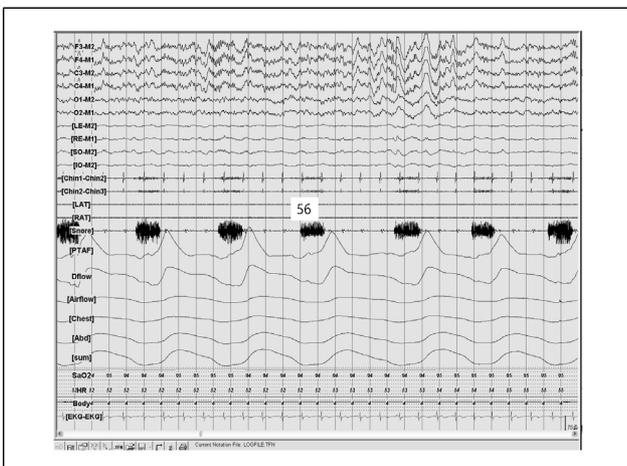
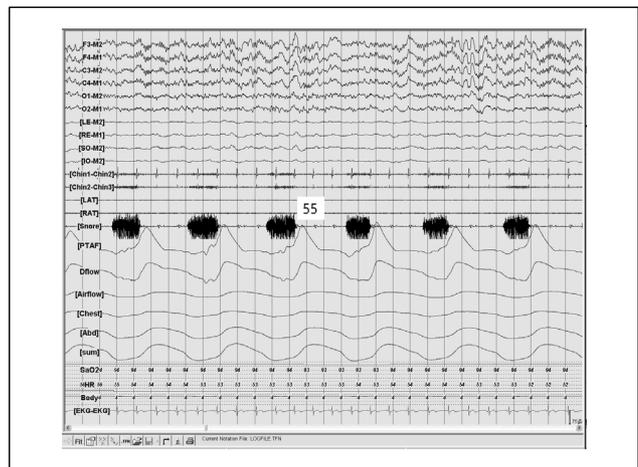
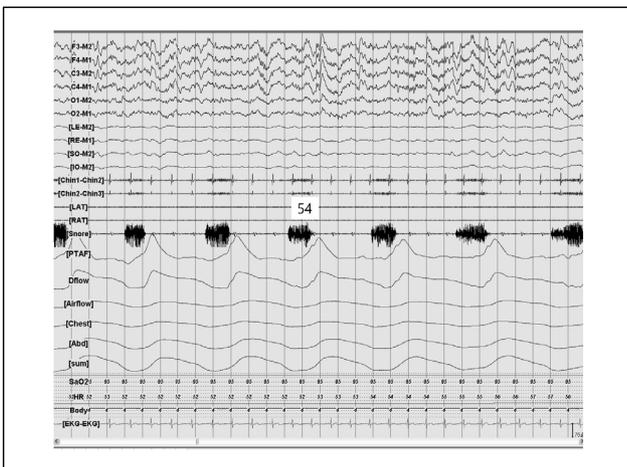
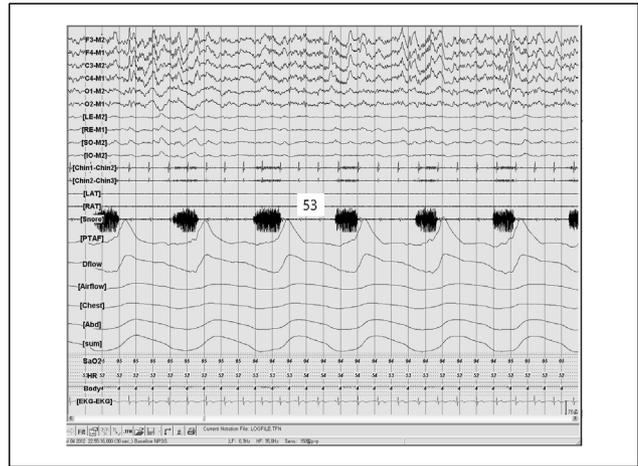
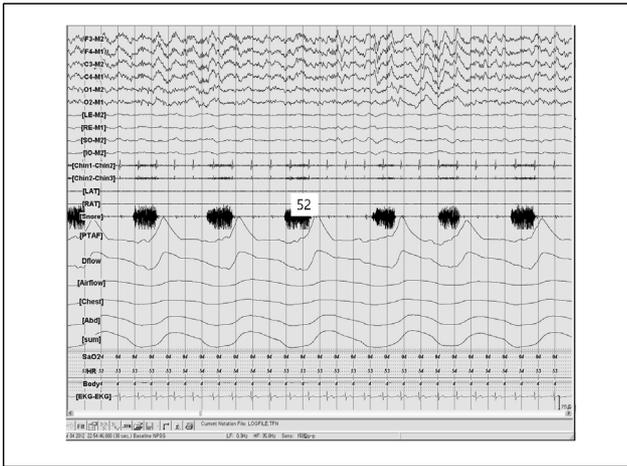


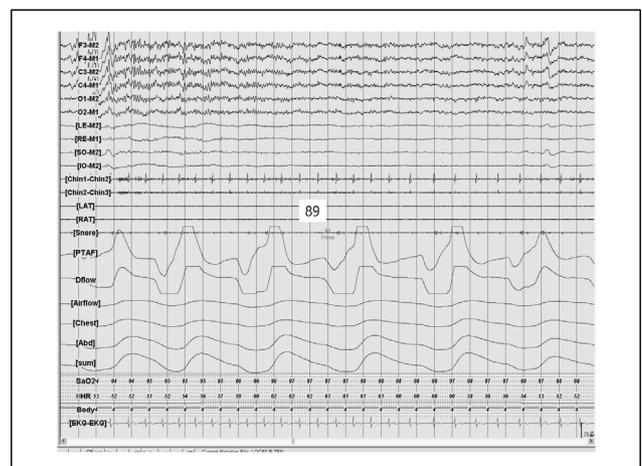
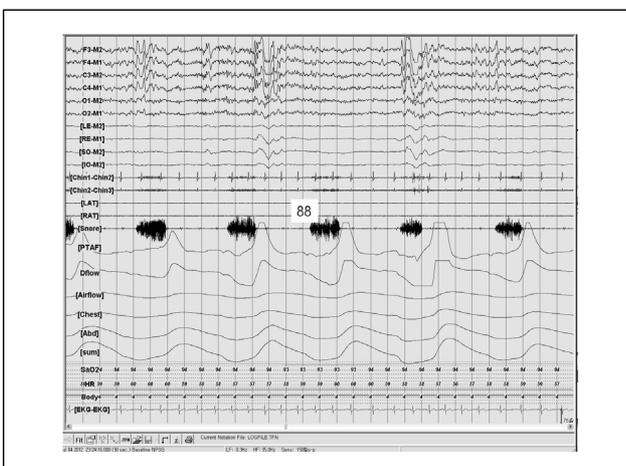
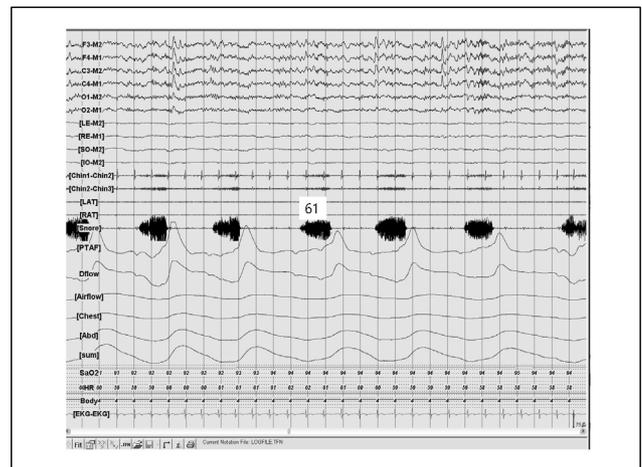
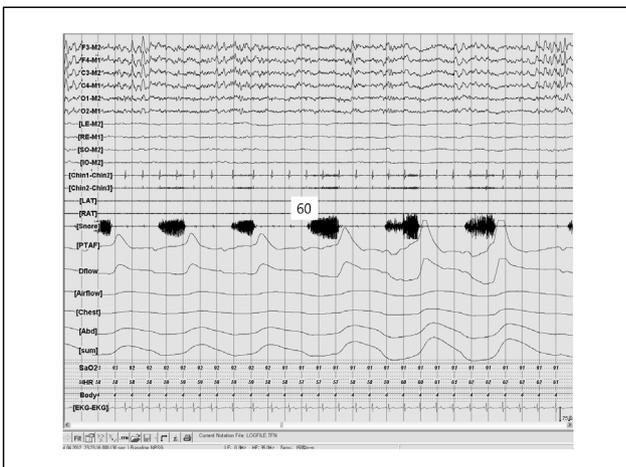
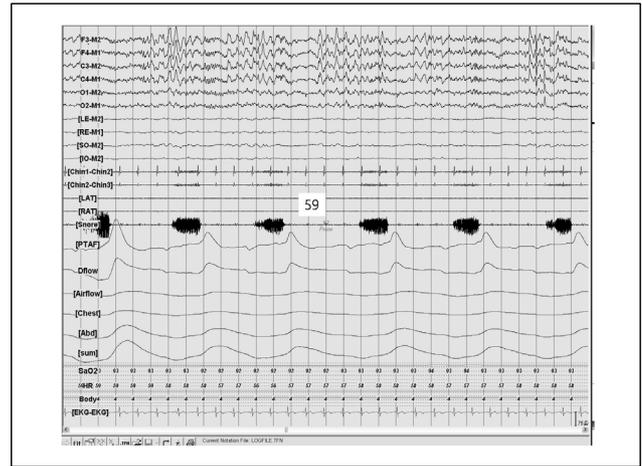
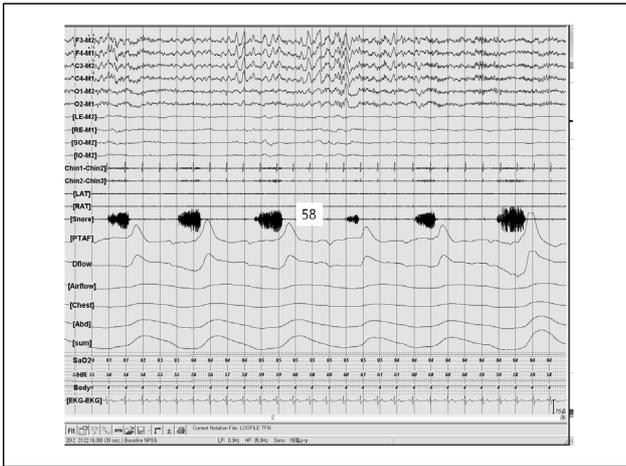


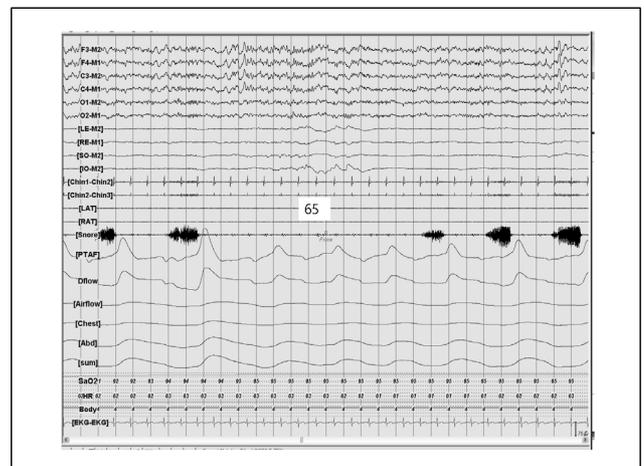
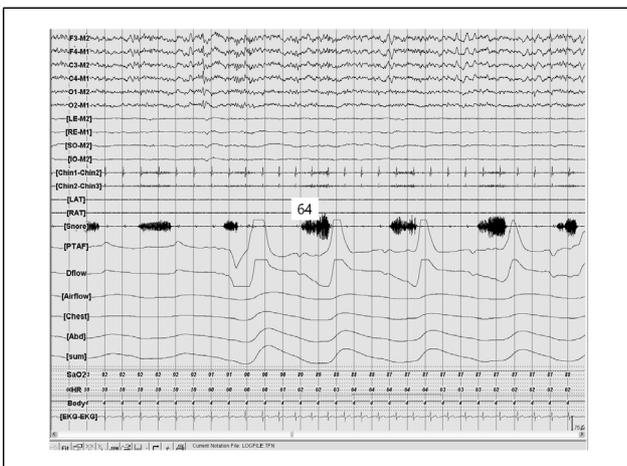
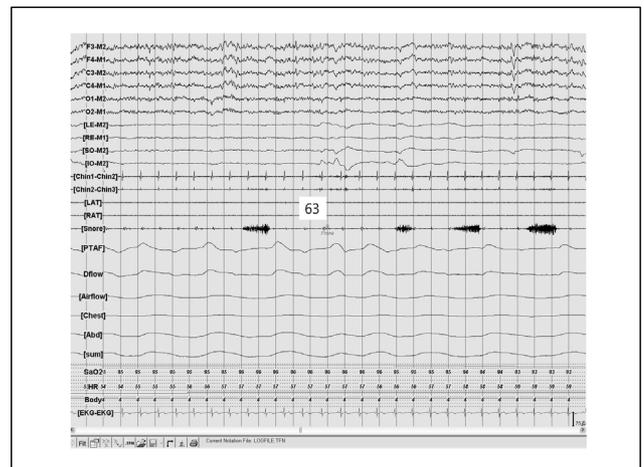
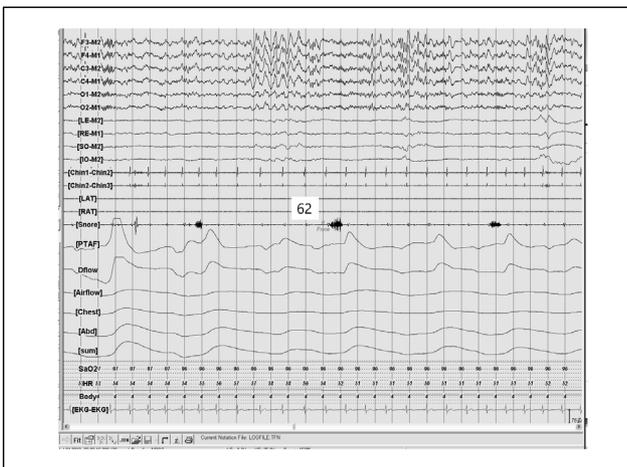
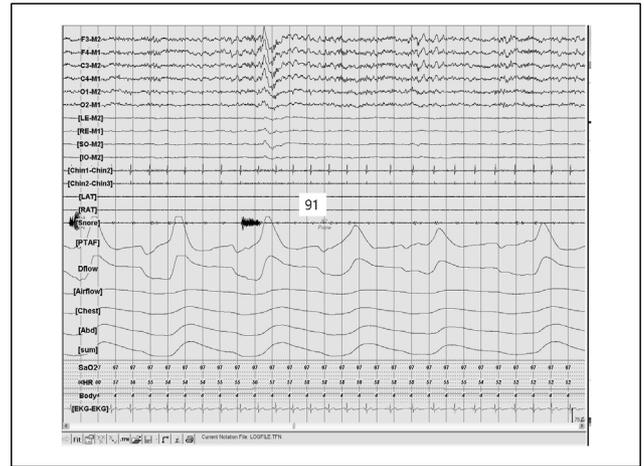


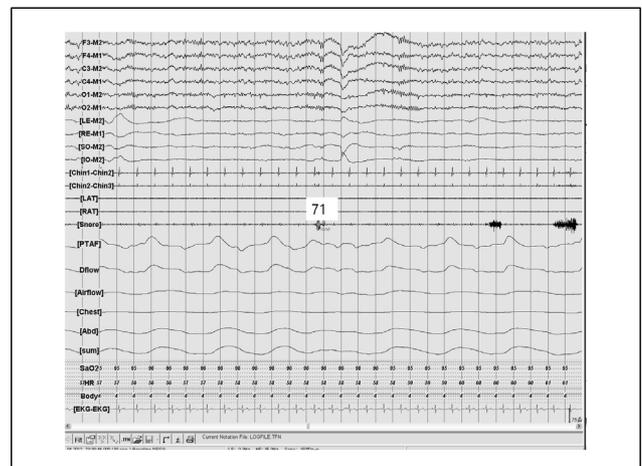
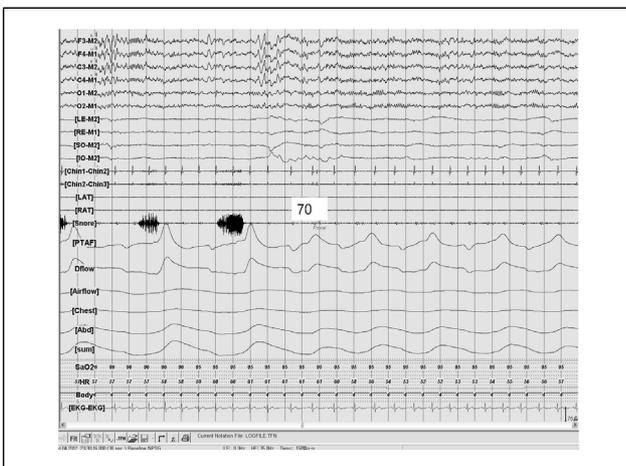
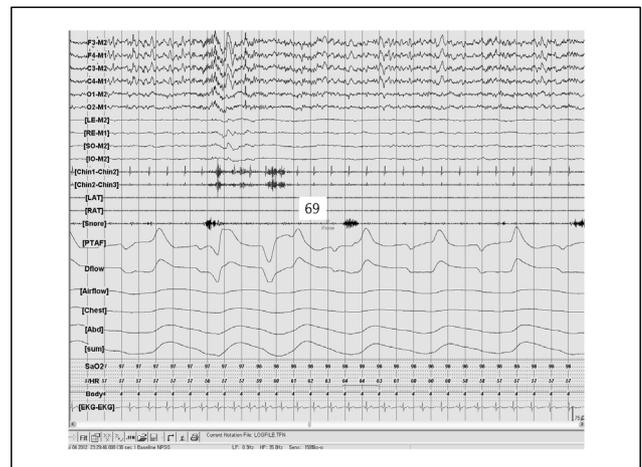
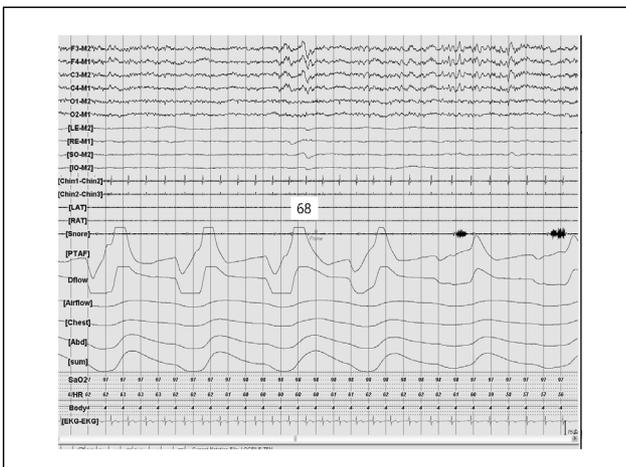
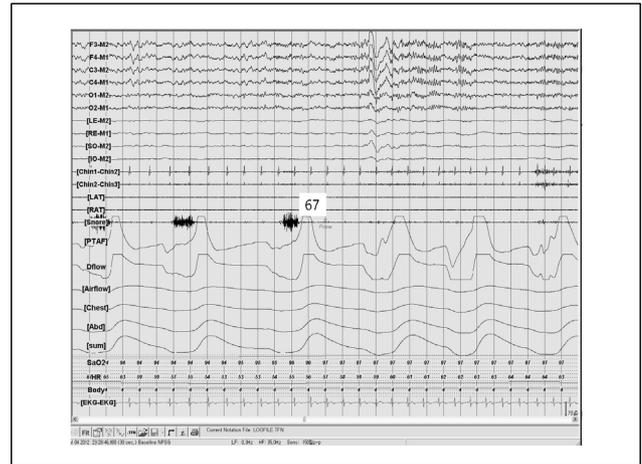
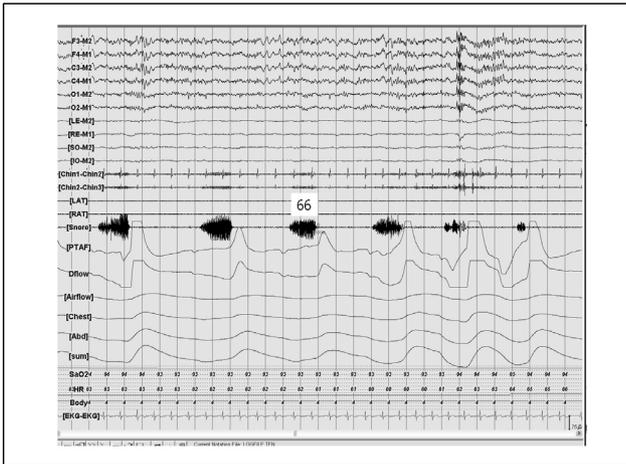


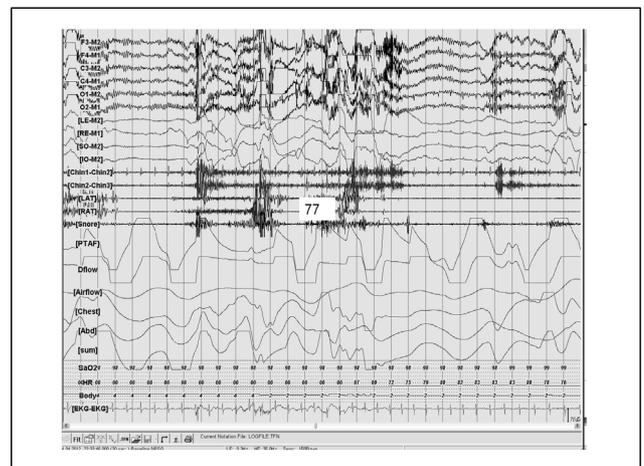
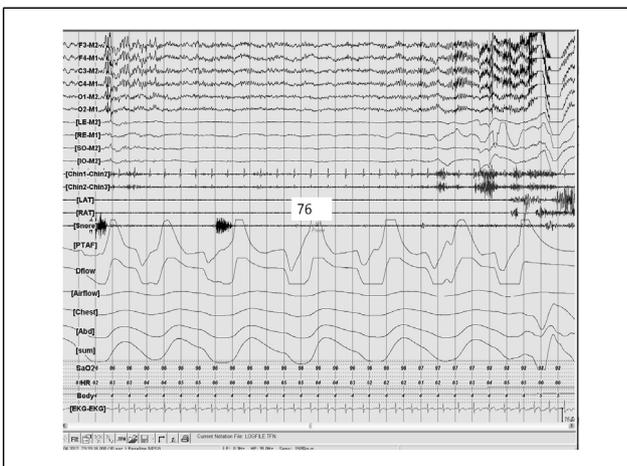
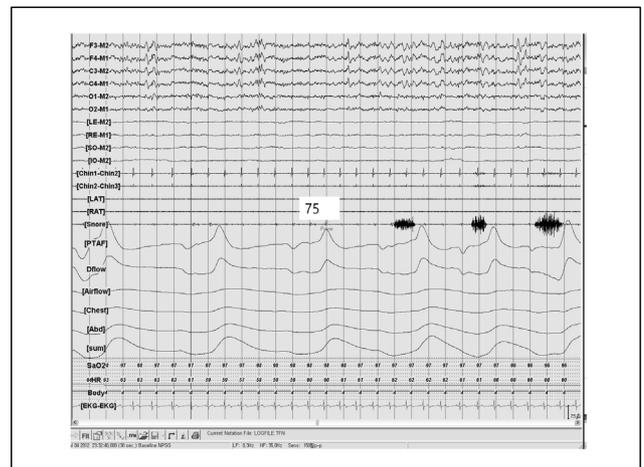
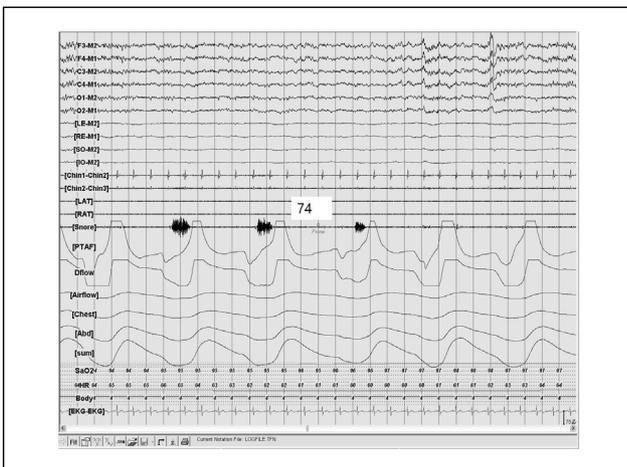
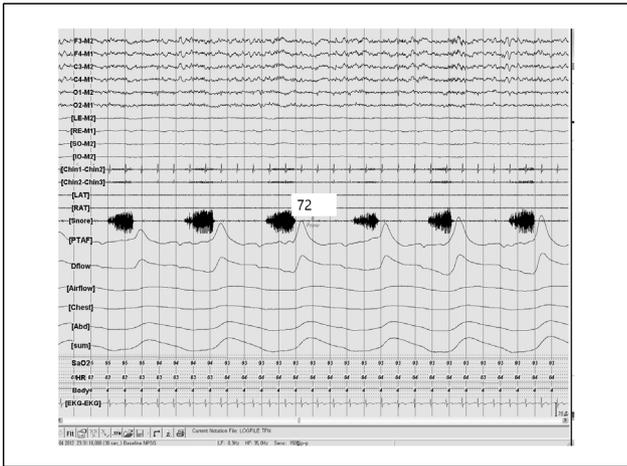


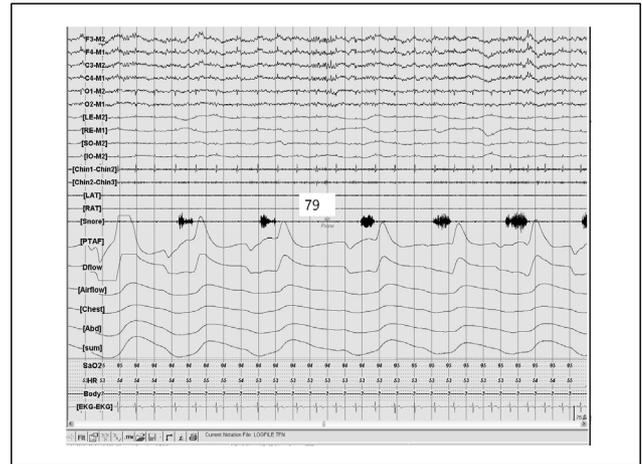
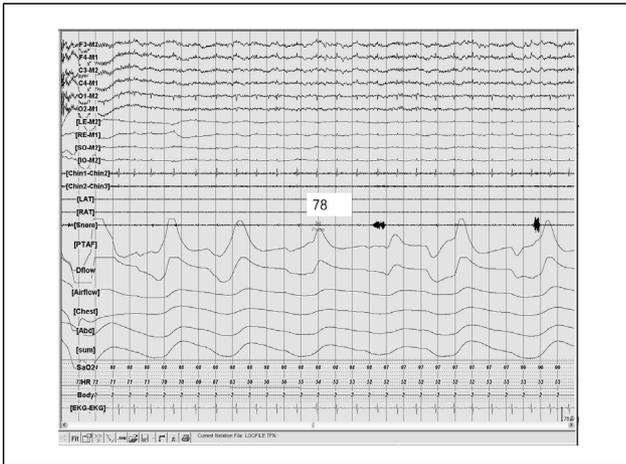




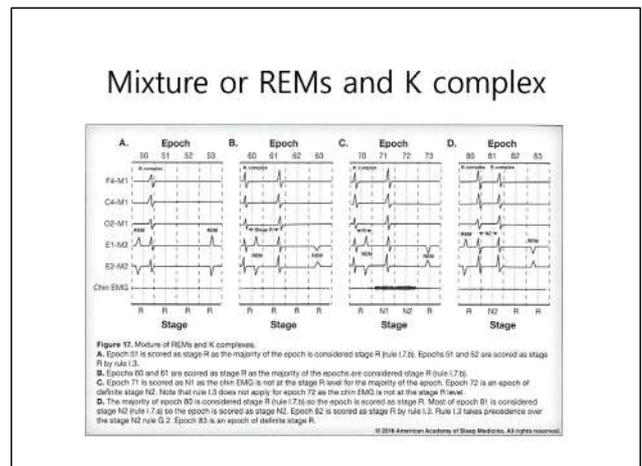
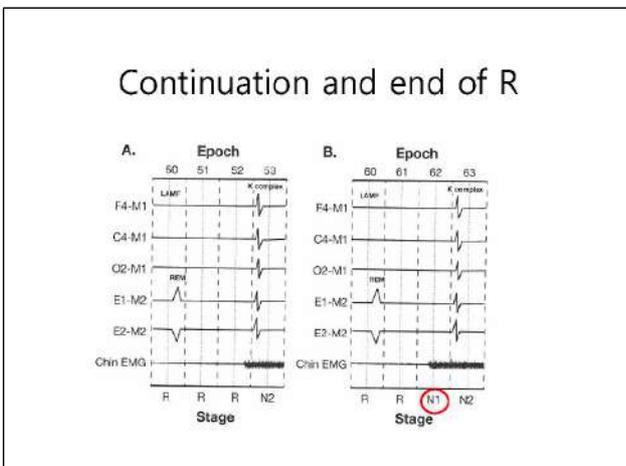
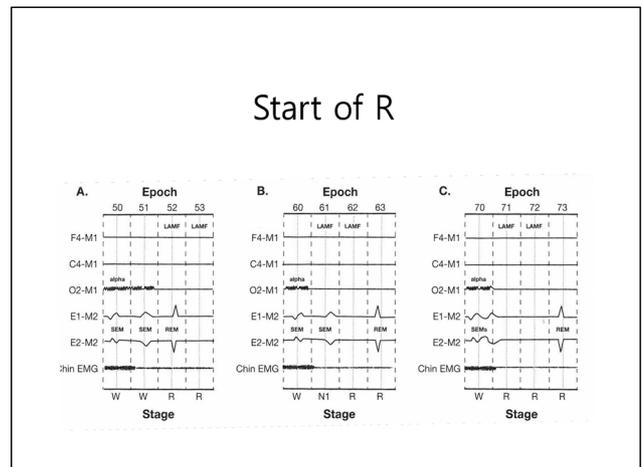






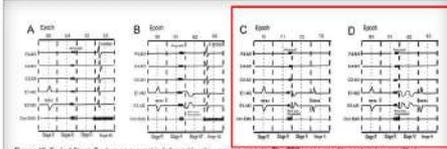


다음은 staging 하세요  
**STAGING 2<sup>ND</sup> CASE  
 (START & END OF REM)**

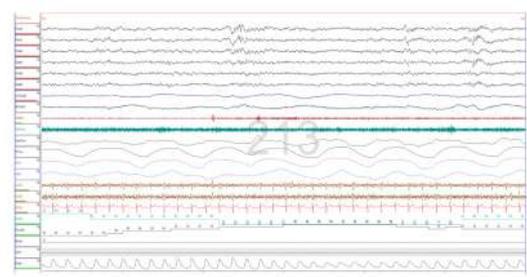


## End of stage R

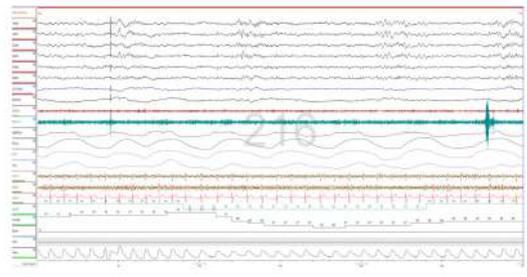
Arousal without SEM - continued as R  
 Arousal with SEM followed by N2 - scored as N1  
 Arousal with SEM followed by REM - scored as R  
 Arousal with SEM followed by REM - scored as N1 if SEMs takes the majority of epoch



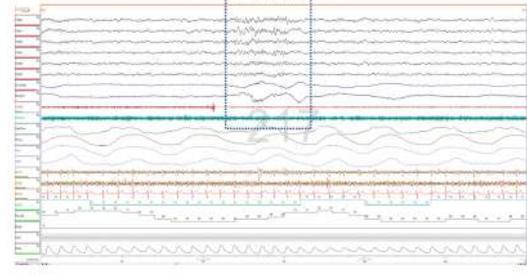
**Figure 16.** End of Stage R when an arousal is followed by slow eye movements. The EEG is acquired to confirm low-amplitude, mixed-frequency activity versus otherwise depicted.  
**A.** Stage R is interrupted by an arousal followed by low-amplitude, mixed-frequency EEG without slow eye movements. Epoch 52 continues to be scored as stage R as the EEG shows a low-amplitude, mixed-frequency pattern, and the majority of the epoch contains slow-wave (SW) waves (all the stage R waves). Compare the effects of an arousal interrupting stage R with one interrupting REM (Figure 8).  
**B.** Stage R is interrupted by an arousal followed by slow eye movements and low-amplitude, mixed-frequency EEG. Because slow eye movements are present following the arousal, Epoch 52 is scored as stage N1 even though slow activity is at the stage R level. Stage N1 continues until there is evidence for another sleep stage (here stage N2 in epoch 53).  
**C.** Stage R is interrupted by an arousal followed by slow eye movements and low-amplitude, mixed-frequency EEG. However, the majority of epoch 52 shows mixed-frequency activity, and is scored as stage R based on rule 3 as epoch 53 is definite stage R.  
**D.** Stage R is interrupted by an arousal followed by slow eye movements and low-amplitude, mixed-frequency EEG with clear activity at the stage R level. Epoch 52 is scored as stage R even if the slow activity is at the stage R level as the majority of the epoch contains slow eye movements. Stage N1 continues until there is evidence of another sleep stage (here definite stage R in epoch 53).  
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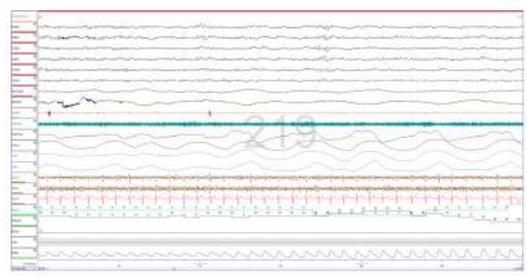
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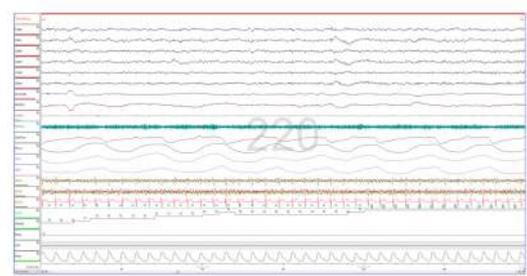
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