Manuscript #578S

1. Full Title: Prevalence of Alpha Intrusion and Association with Disease and Sleepiness
   Abbreviated Title (length 26): Alpha Intrusion

2. Writing Group (list individual with lead responsibility first):
   Lead: Carl E. Rosenberg, M.D.
   Address: University Hospitals - Rainbow Babies & Children's Hospital
             Division of Clinical Epidemiology (DCE)
             11100 Euclid Avenue
             Cleveland, OH 44106-6003
   Phone: (216) 844-6272
   Fax: (216) 844-6265
   Email Address: cerosen@netocm.com

   Dr. Richard Bootzin
   Dr. Philip Smith
   Dr. Terry Young
   Coordinating Center representative

3. Timeline:
   Set up working files and data structure in October of 1998 and begin data analyses in
   January 1999, after all studies have been scored.

4. Rationale:
   Alpha intrusion (and alpha-delta sleep) has been reported to be associated with non-
   restorative sleep and fibromyalgia. However, the prevalence of the disorder in healthy or
   disease populations is unknown. While patients with non-restorative sleep have been seen
   to have alpha intrusion, it is unknown whether or not alpha intrusion can predict non-
   restorative sleep. Yet, this phenomenon continues to be used as a diagnostic tool for those
   conditions. This would yield an important clinical result allowing proper interpretation of
   the PSG in the case of amorphous conditions such as fibromyalgia and excessive daytime
   sleepiness.

5. Main Hypothesis:
   Alpha intrusion has been considered an indicator of non-restorative sleep causing
   excessive daytime sleepiness. However, it is not known whether or not the prevalence of
   alpha intrusion varies between “sleepy” and “not sleepy” people when controlling for
   RDI. Alpha sleep may be a normal variant similar to the "low voltage" EEG. (The "low
   voltage" EEG can be seen in Huntington’s Chorea, withdrawal states, and bilateral
subdurals. However, the low voltage EEG is most commonly seen as a normal variant.) Alpha intrusion is equally a normal variant.

6. Data (variables, time window, source, inclusions/ exclusions):
Population: SHHS population with fully scored studies after February 1, 1997, in which alpha intrusion and alpha artifact were distinguished.
Data required: Age, gender, medications, RDI, self-report of sleep and medical history, ESS.
Analyses: Compare the prevalence of alpha intrusion in patients distinguished by ESS score and self sleep report controlling for age, gender, RDI.