



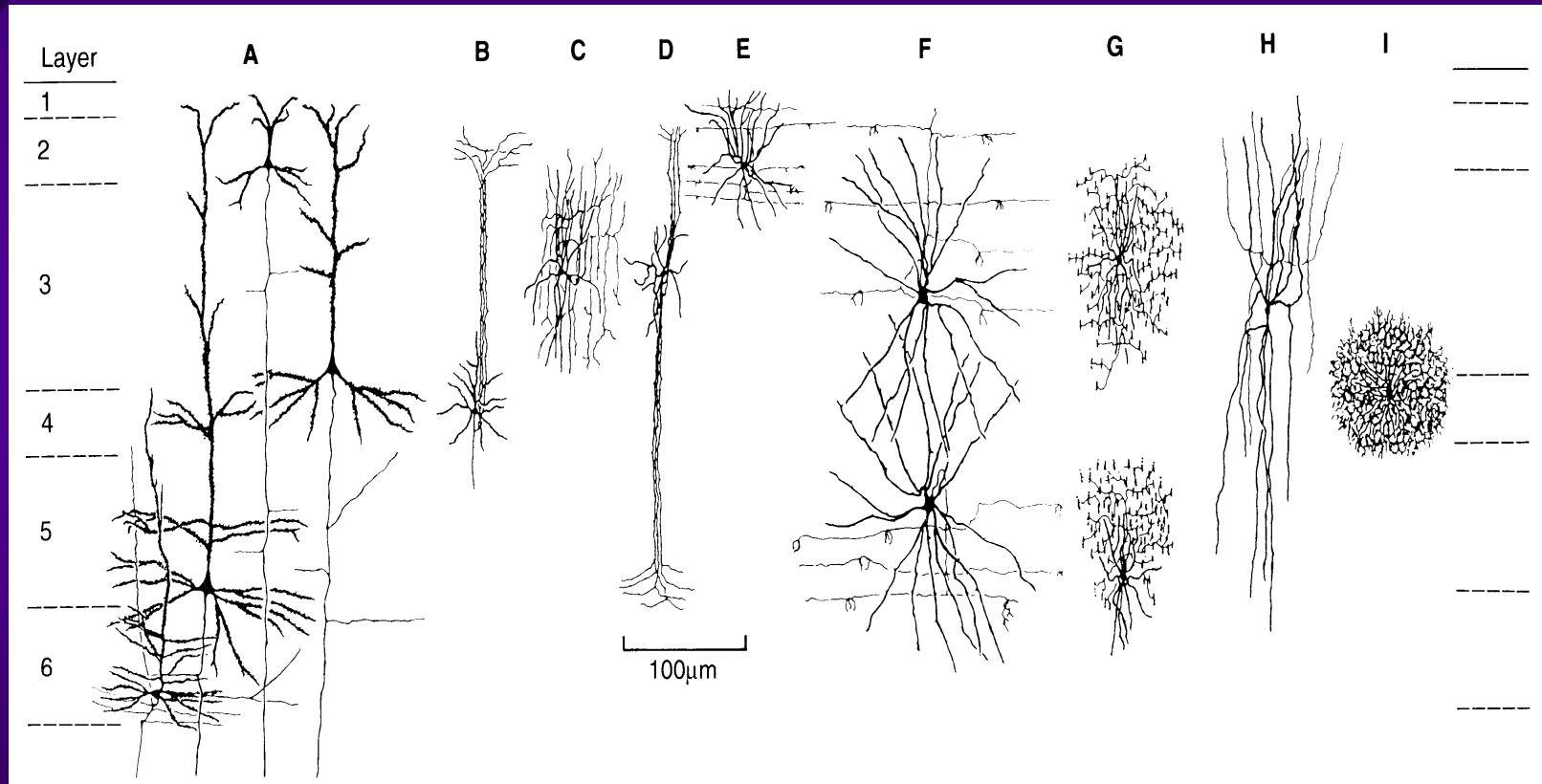
Seminar

General brain functions





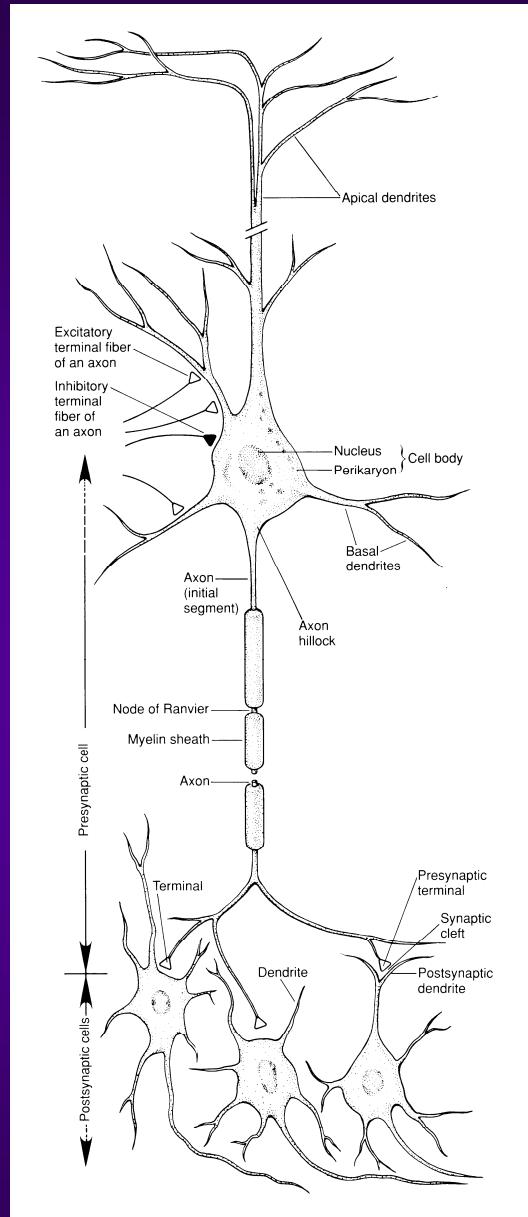
Cortical neurons





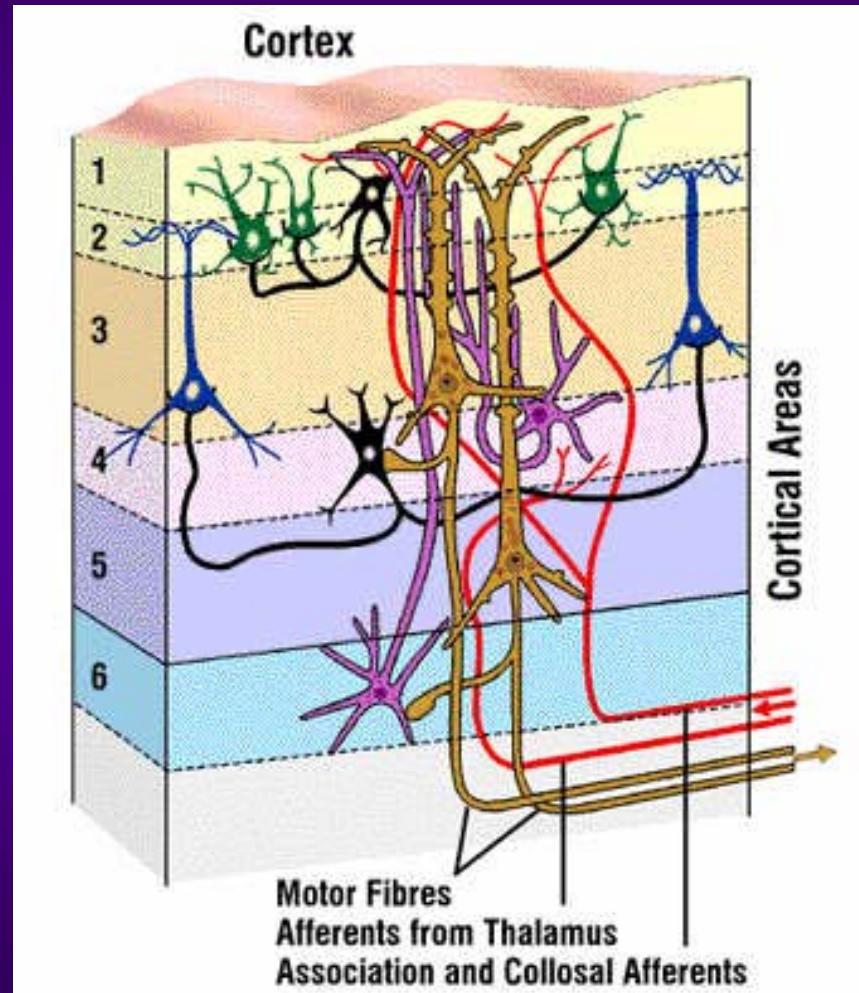
neuron in vertebrates

*axonal branches
make synapses
with 1000 other
neurons*



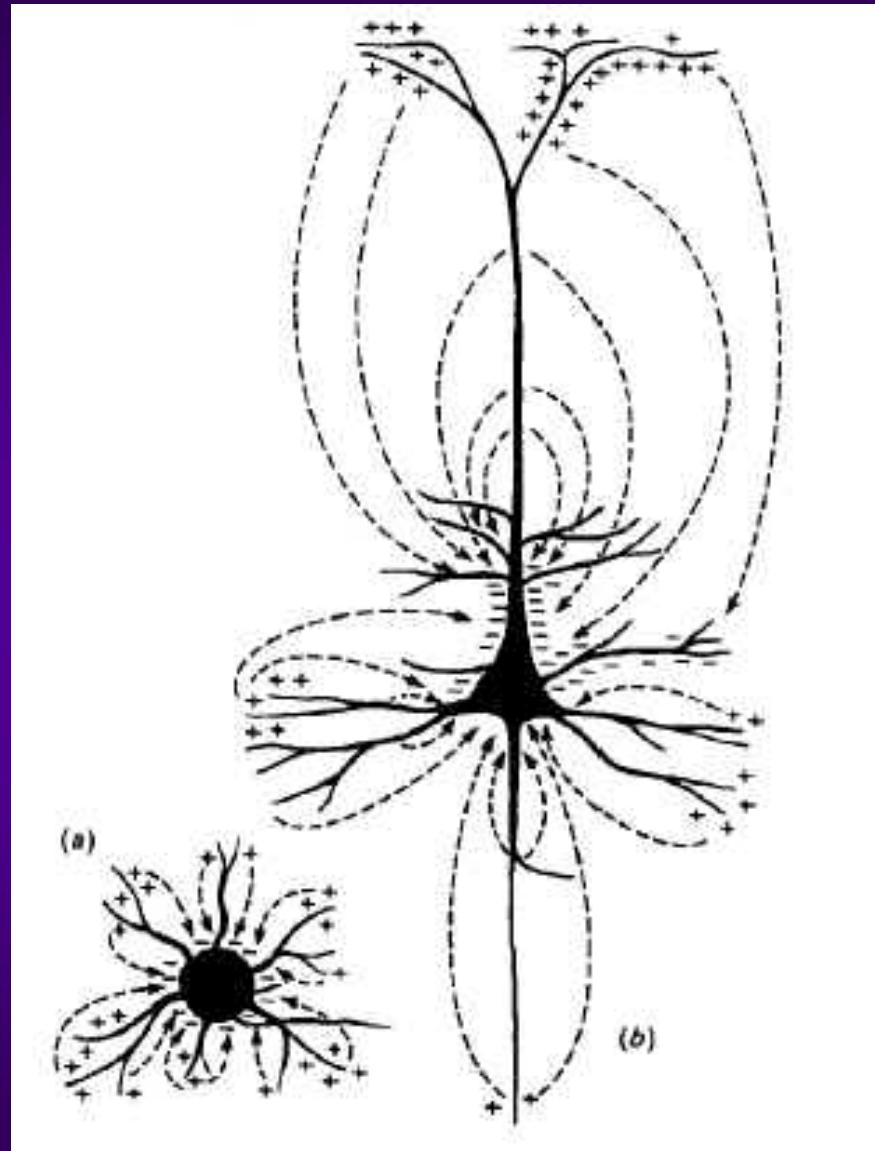


Cortical layers



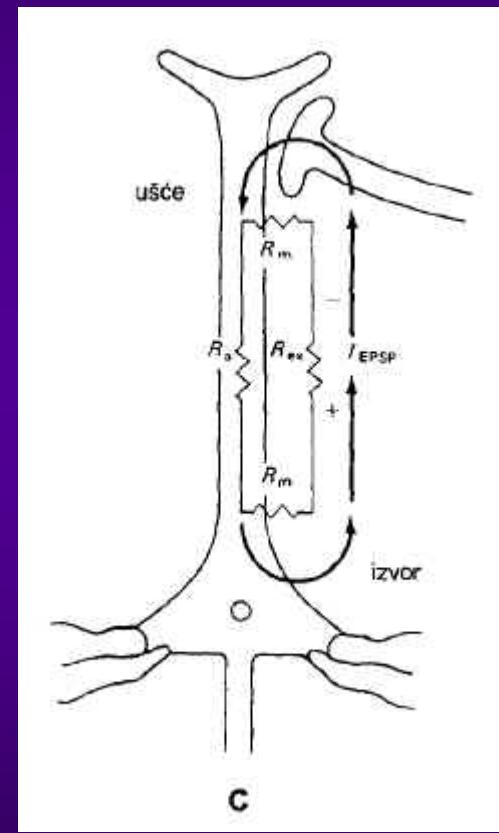
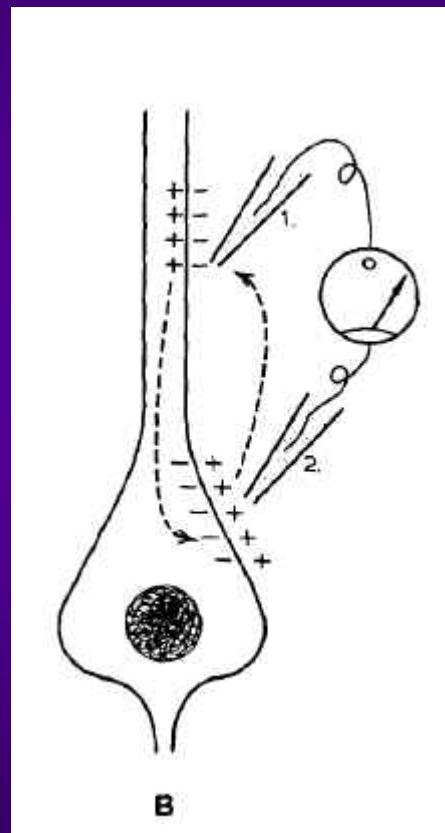
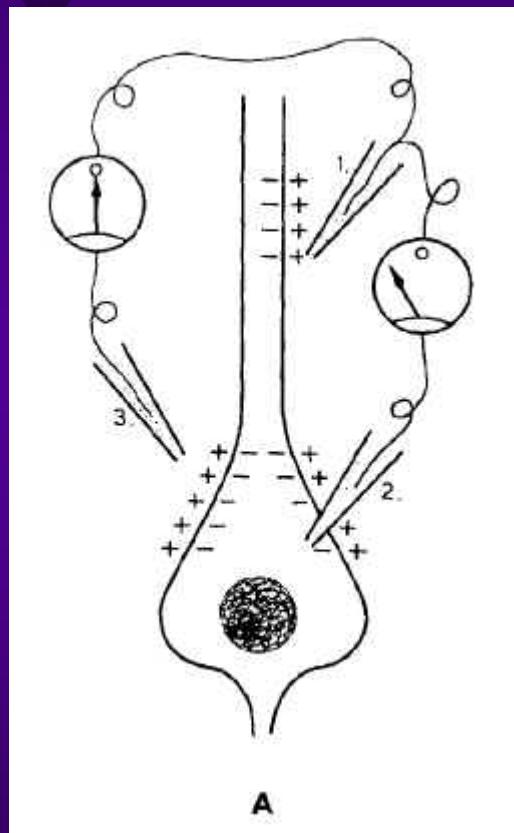


Geometry of the neurons

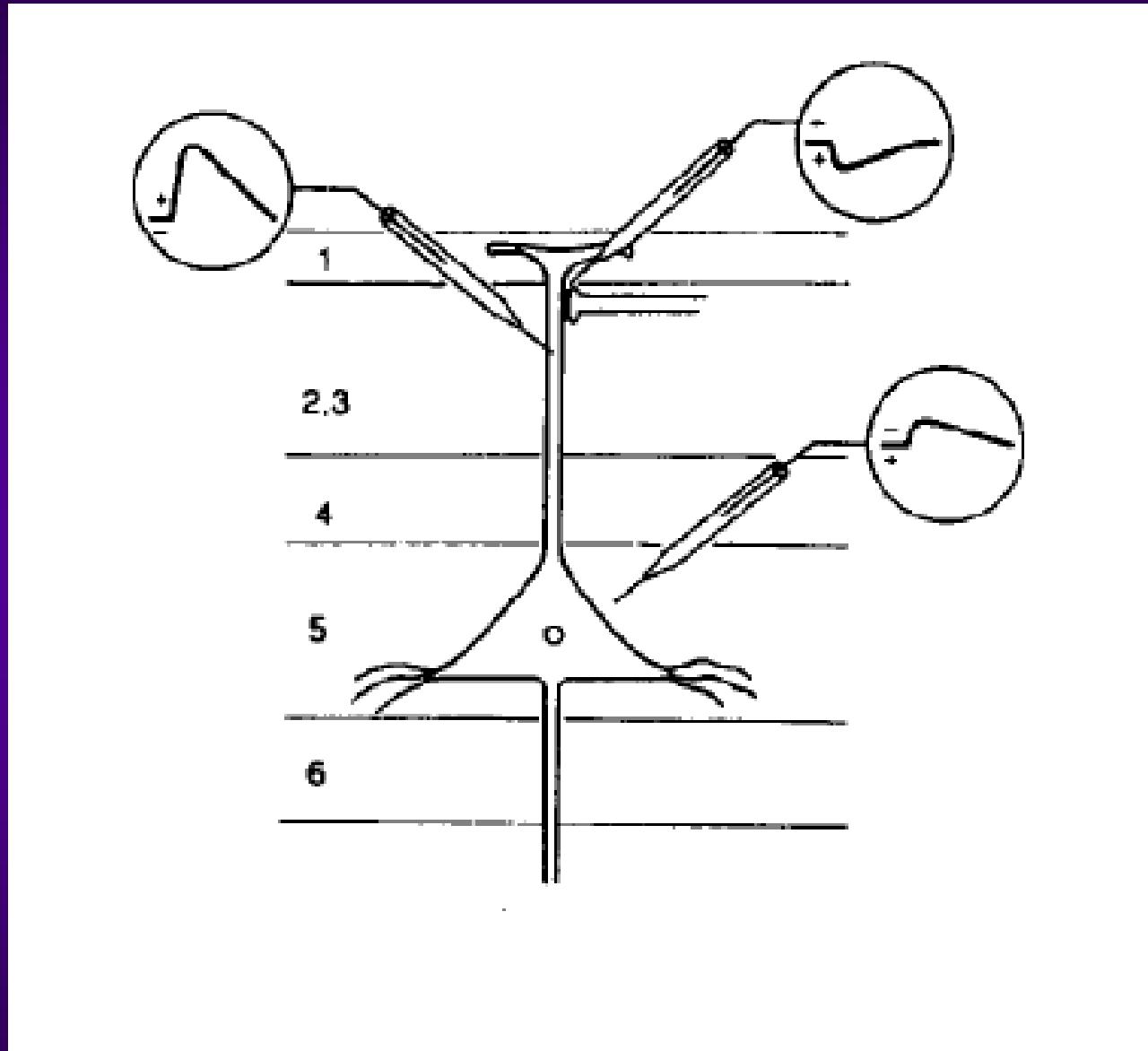




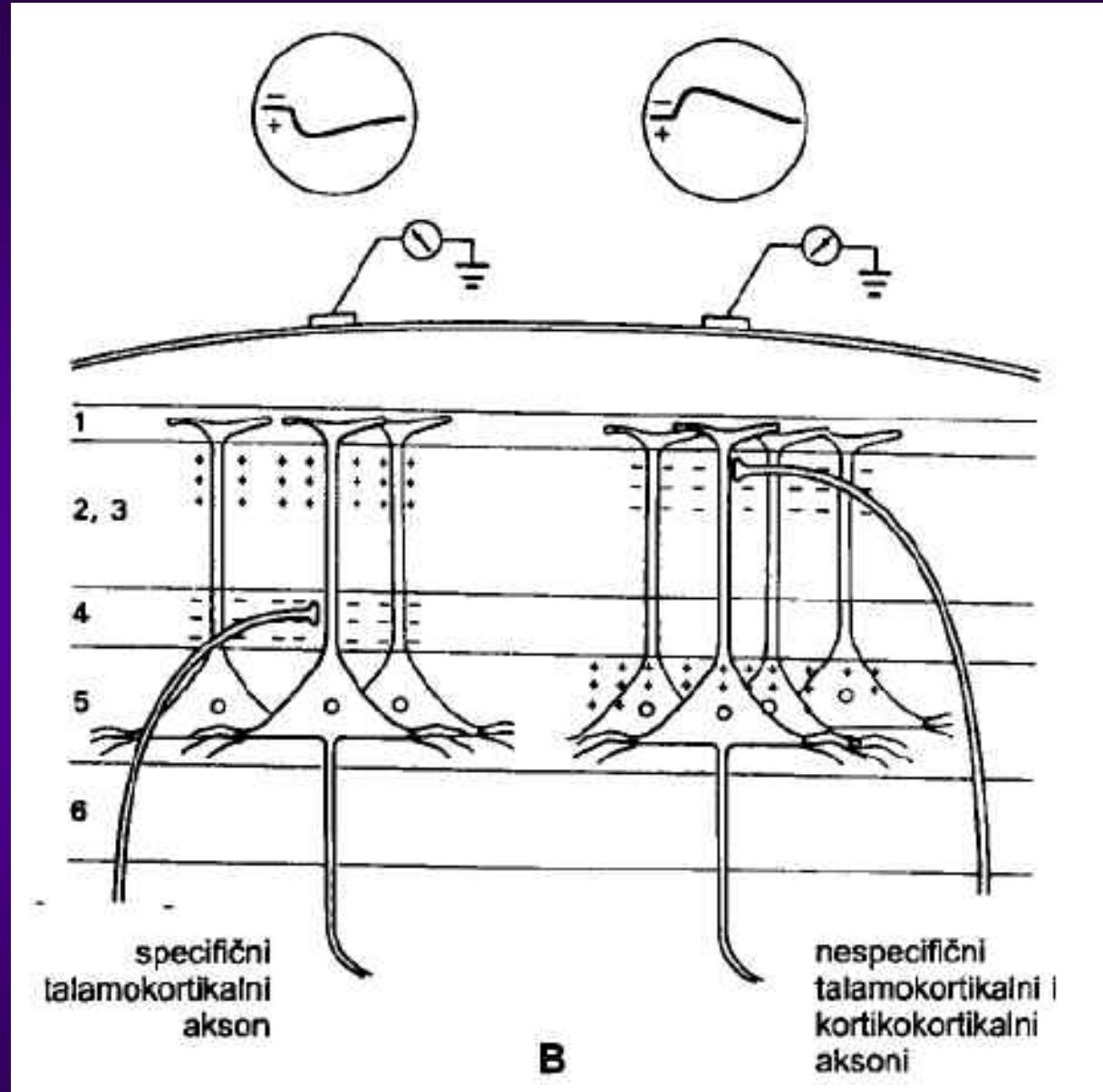
Electrophysiology of pyramidal neurons



Basics of EEG

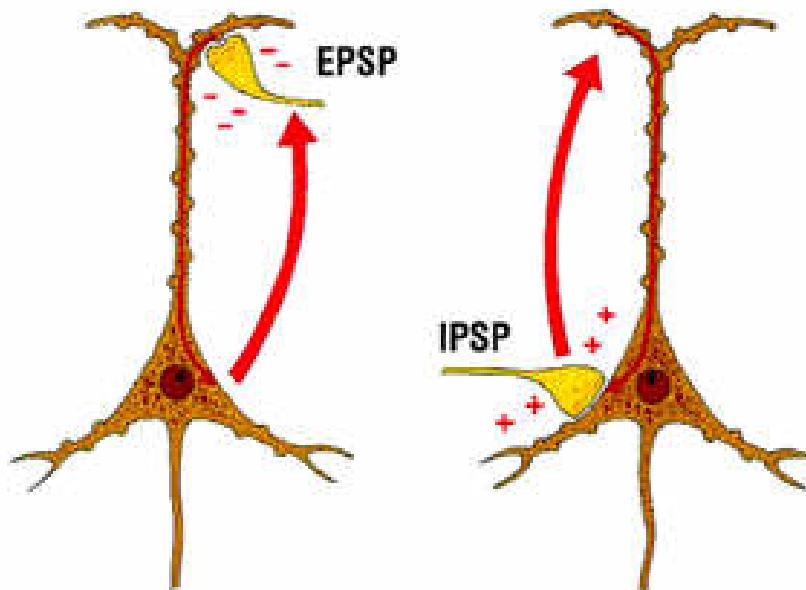
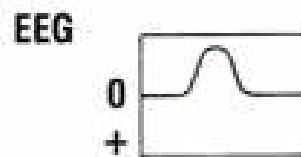
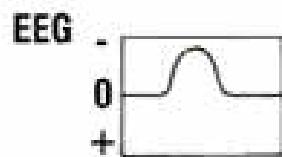


Basics of EEG



Negative wave on EEG

Basis of the EEG

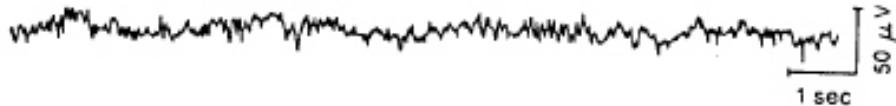


Illustrates why superficial excitatory post-synaptic potentials (EPSPs) and deep inhibitory post-synaptic potentials (IPSPs) produce the same current flow, hence deflections of the same polarity when recorded by the surface EEG.

From: D.S. Dinner and H. Luders in Porter, Marselli PL (eds), *The Epilepsies*, London, Butterworths, 1985.

EEG waves

pojačana budnost - beta valovi (više od 13 Hz)



opuštena budnost i pospanost - alfa valovi (8 - 13 Hz)

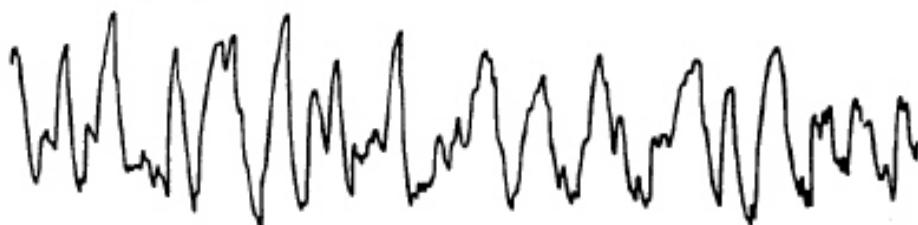


vreteno spavanja
(7 - 14 Hz)

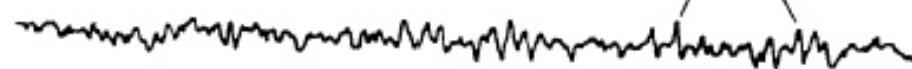


K-kompleks

delta valovi (manje od 4Hz)

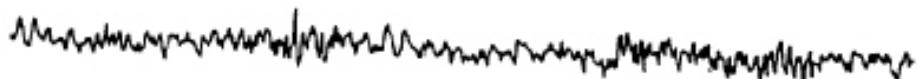


REM-spavanje (nepravilni mali brzi valovi)



pilasti valovi

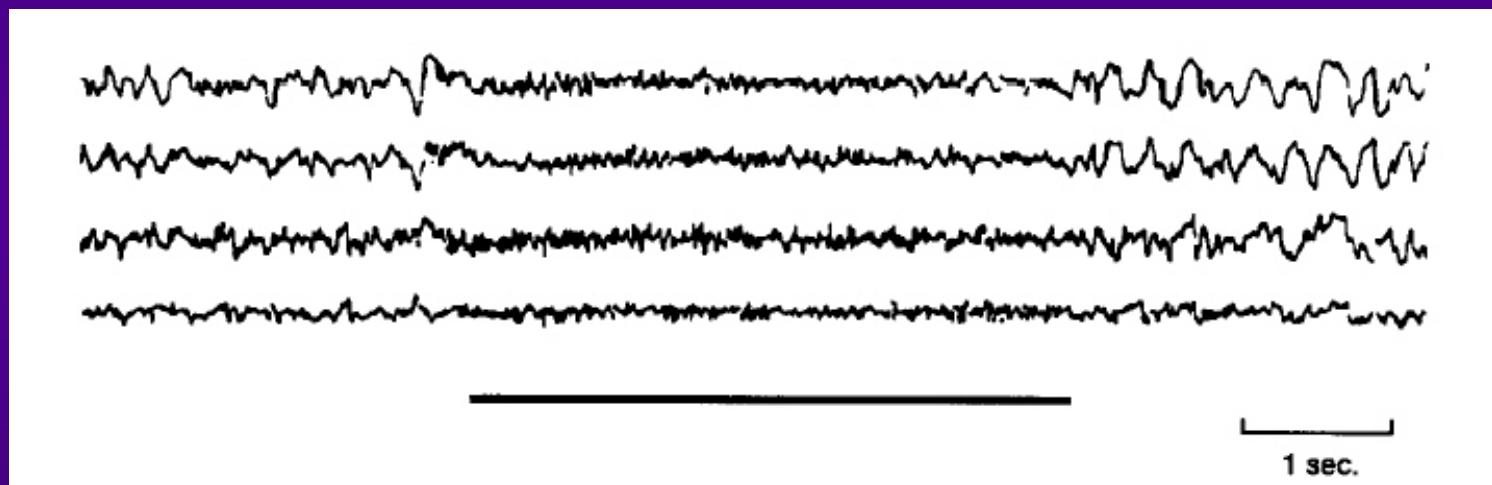
theta valovi (4 - 7 Hz)





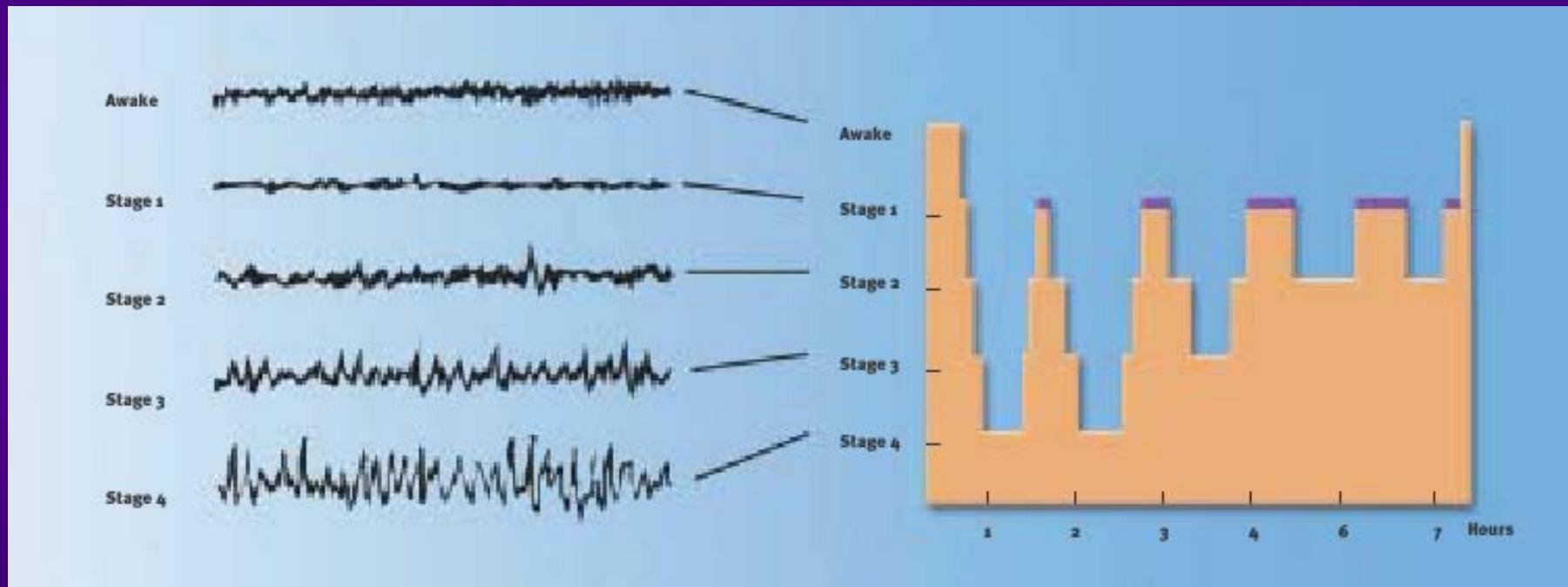
*EEG
waves*

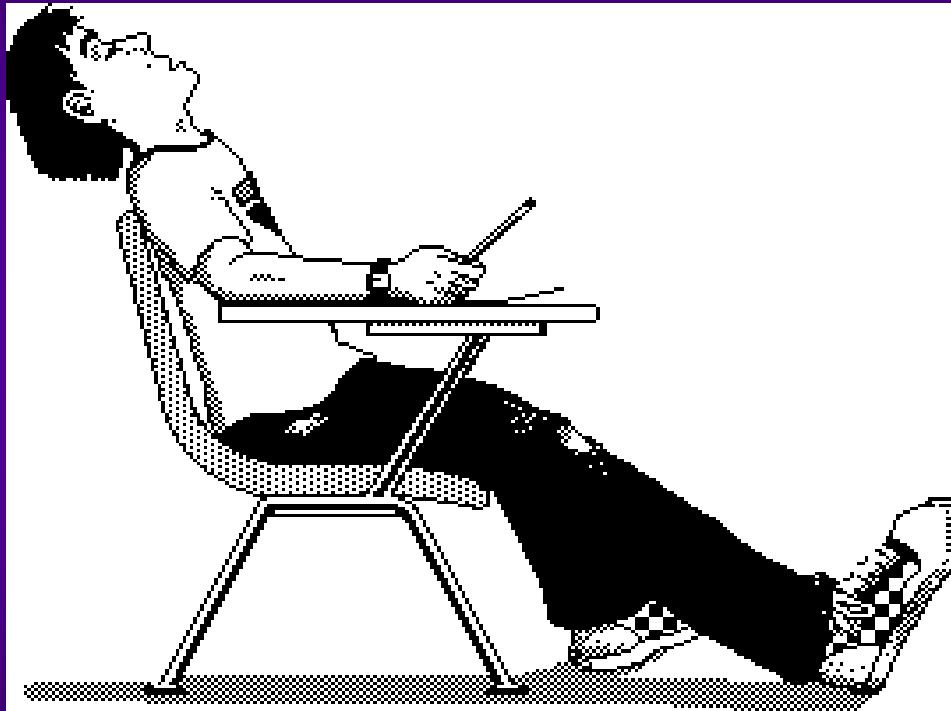
Alpha blockade





Sleep stages





M1

838

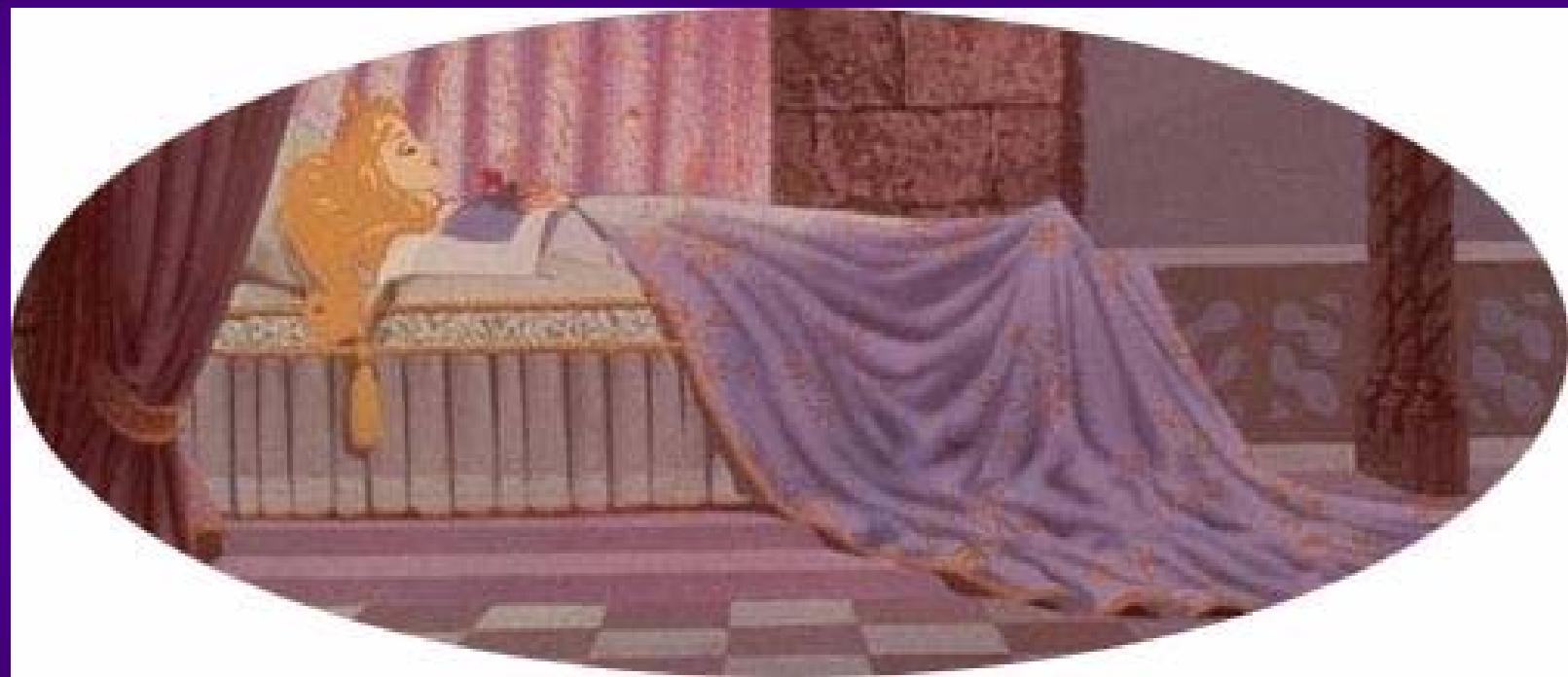


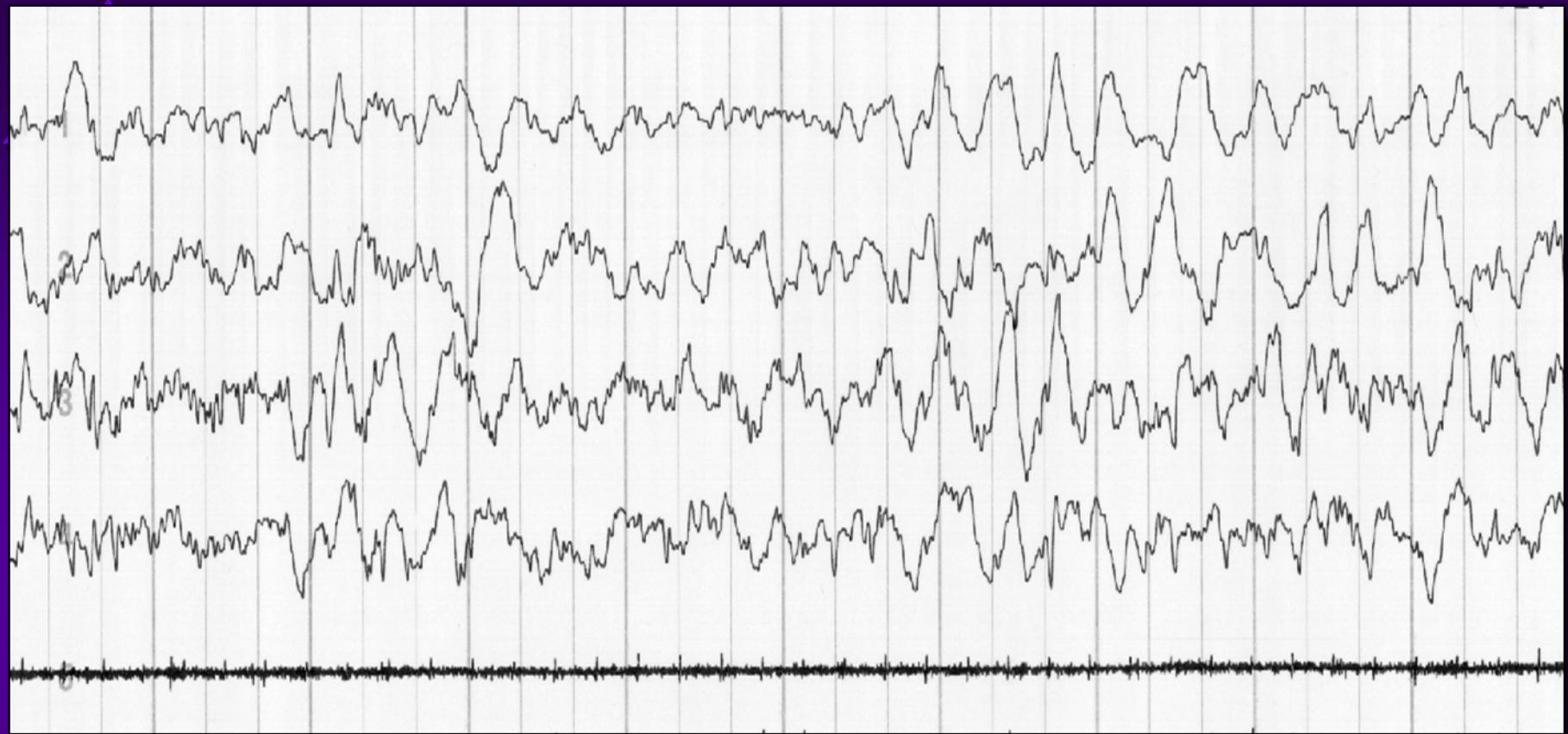


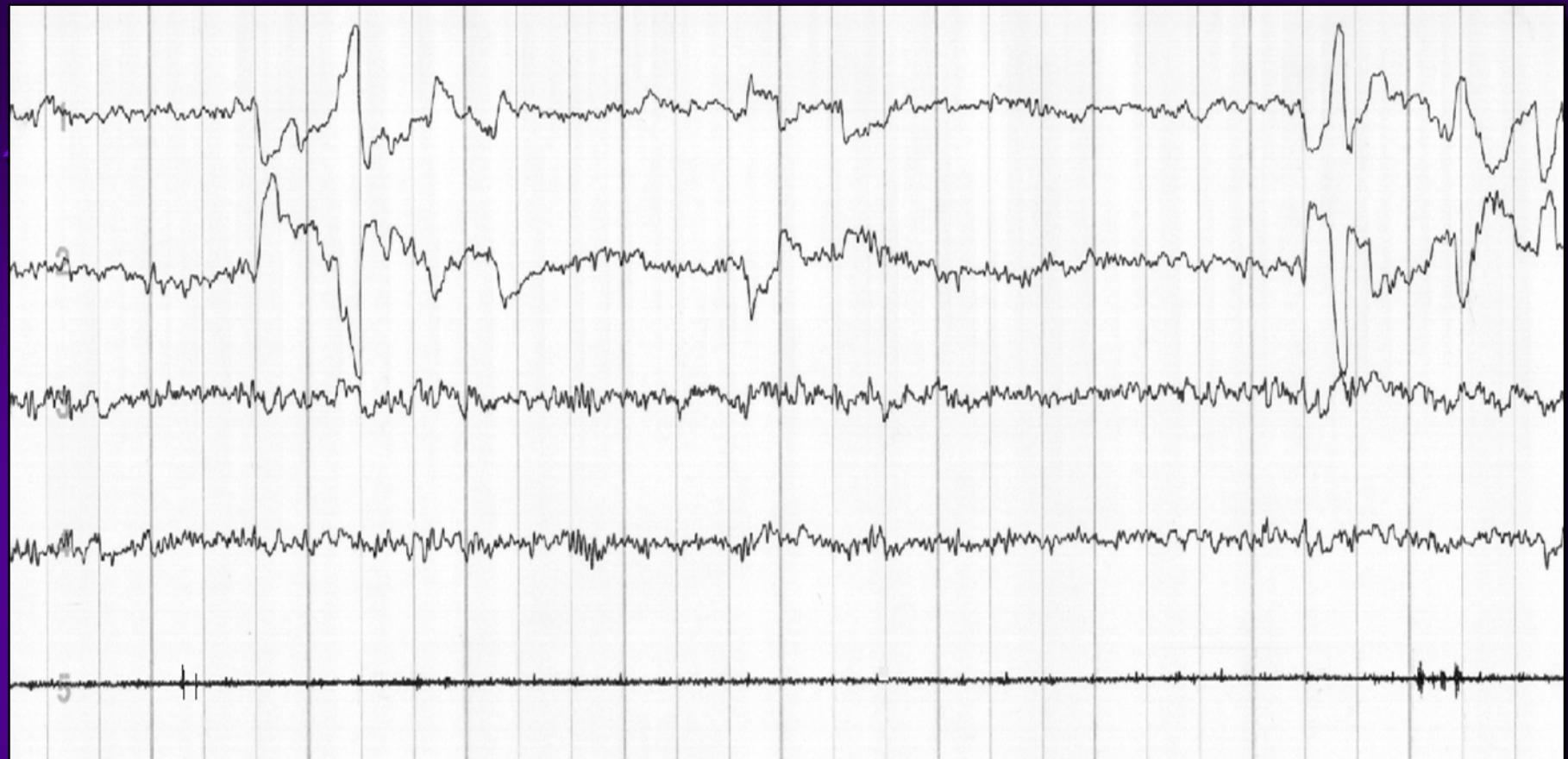
Need Sleep?™

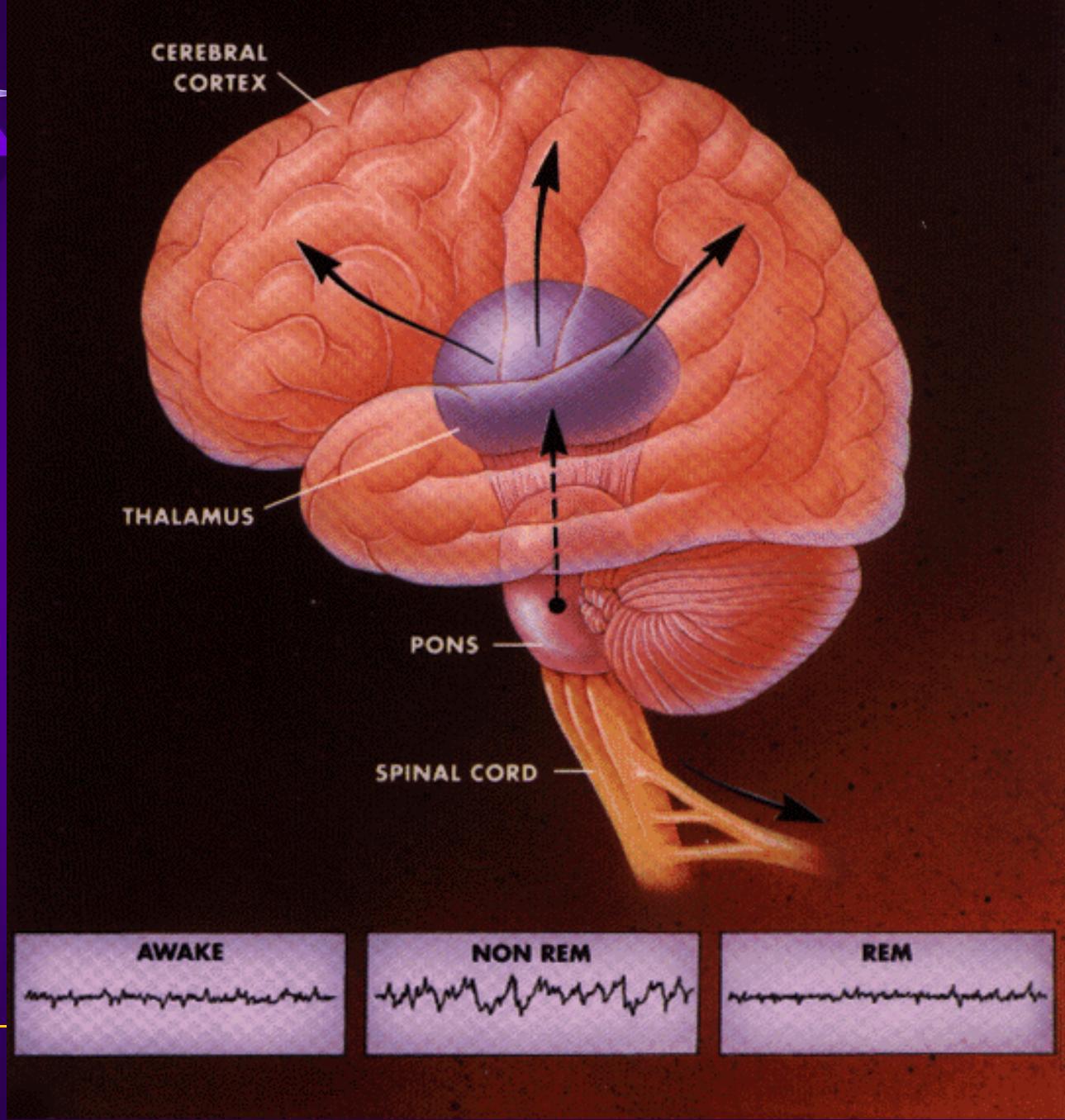


www.sleepnet.com™



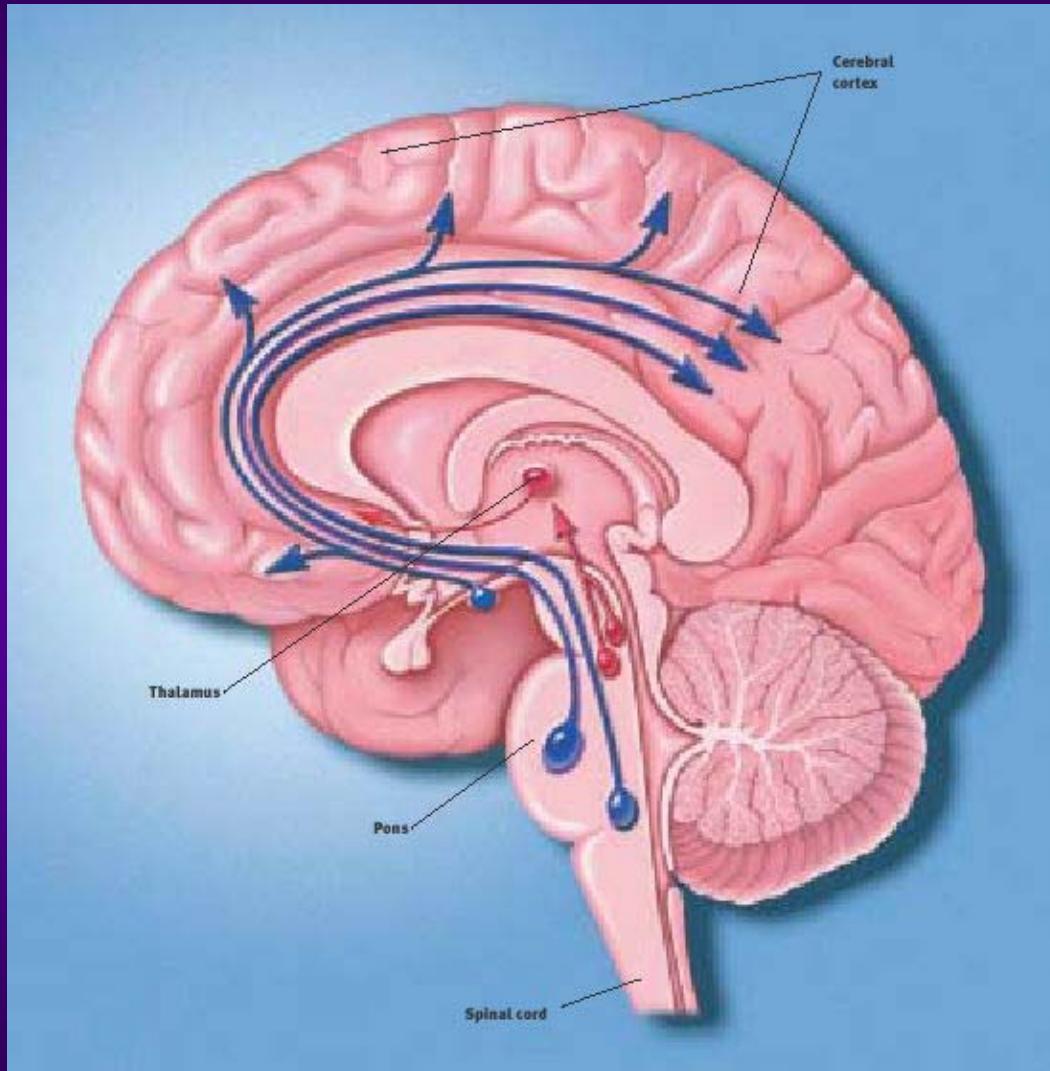




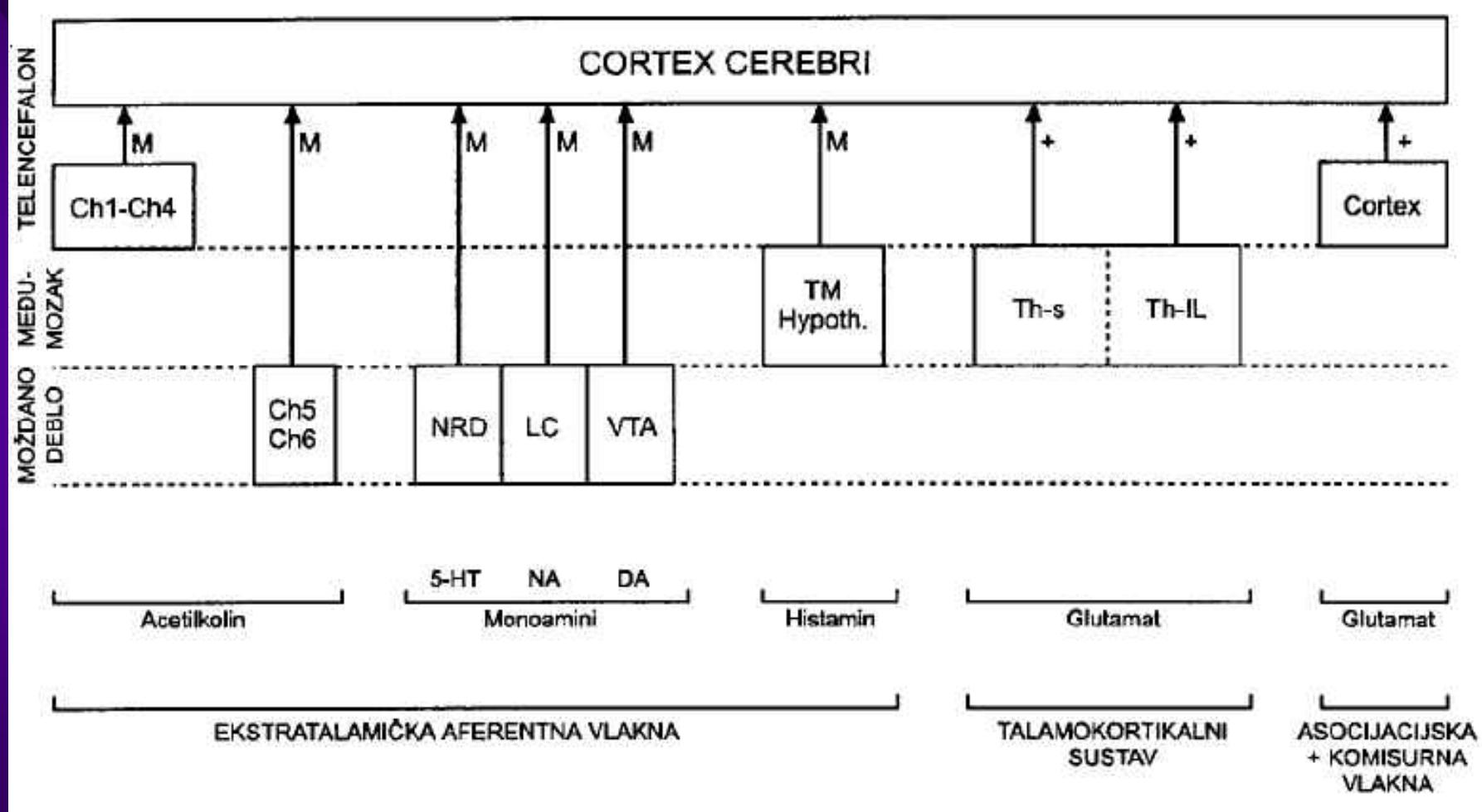




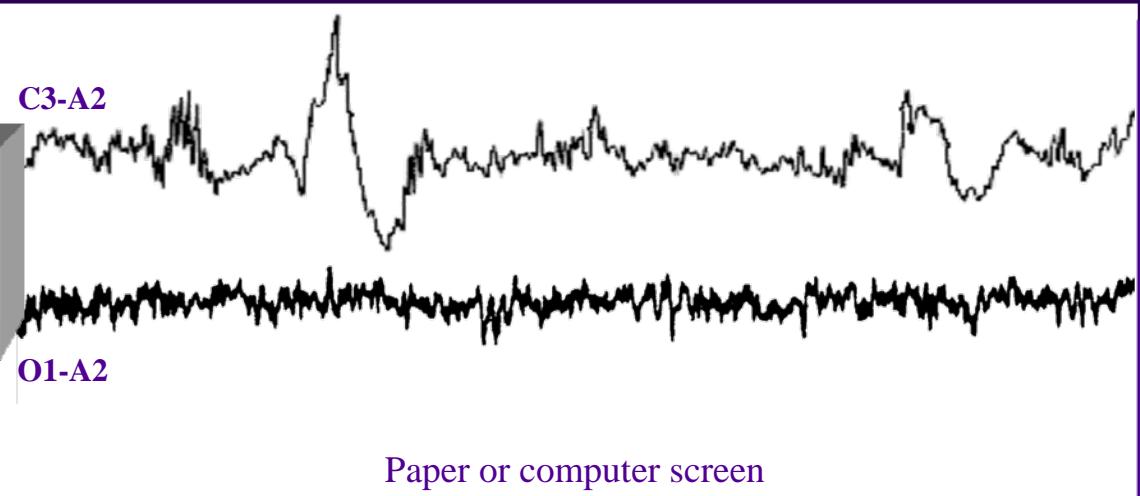
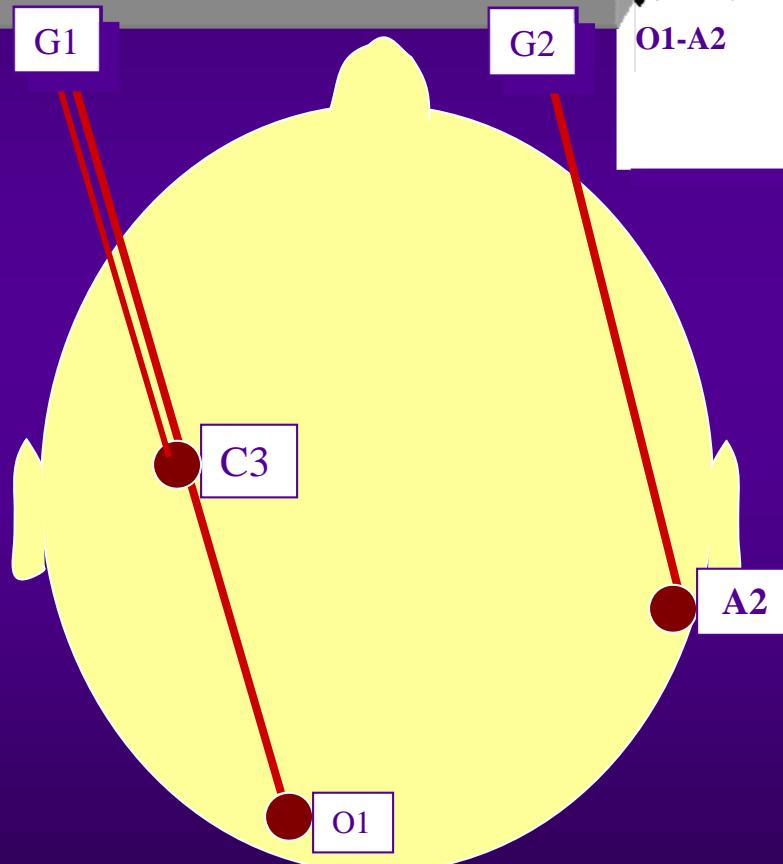
Pathways to cortex



Pathways to cortex



Differential Amplifier



Paper or computer screen

Electroencephalography in the
Overnight Sleep Study

Electroencephalography (EEG)

