

18. Lilly, John C. 1951. "Equipotential Maps of the Posterior Ectosylvian Area and Acoustic I and II of the Cat During Responses and Spontaneous Activity" (Abstract). Fed. Proc. 10:84

No. 18

Reprinted from FEDERATION PROCEEDINGS
March, 1951, Vol. 10, No. 1, Part 1
Printed in U. S. A.

Equipotential maps of the posterior ectosylvian area and acoustic I and II of the cat during responses and spontaneous activity. JOHN C. LILLY. *E. R. Johnson Fndn., Univ. of Pennsylvania, Philadelphia.*

By means of the *bavatron* (*Am. Inst. Elec. Eng.* 37, March 1940; *Federation Proc.* 9:78, 1950; *E.E.G. Clin. Neurophysiol.* 2:358, 1950) relative potentials are recorded from 25 implanted electrodes simultaneously at 7.8 msec. intervals in a region including parts of acoustic I and II (AI and AII) and posterior ectosylvian (Ep of Rose and Woolsey) of a cat's cortex. Equipotential contour maps are made from these data taken at a fairly deep anesthetic level. The two types of lagre 'forms' (responding and 'spontaneous') seen in the activity of this region repeat themselves (with minor variants) in their sites of origin, in their transformations with time, and in their interactions. AI is distinguished from AII by having a quicker die-away of the responding form; AI and AII, from Ep, by response contours which parallel the boundary between AI-AII and Ep. 'Spontacts' (spontaneous activity forms) arise in the middle of Ep (EpII), revealing, also, the AI-AII and Ep boundary. The dorsal end of Ep (EpI) generates forms which are similar during both responses and spontacts. At times with very loud, long (relative to a click) noises, spontacts can be induced in Ep which follow response forms in AI-AII; this effect is masked by a steady background noise. These observations suggest that at least 4 functional areas exist in this region: AI, AII, EpI, and EpII.

P. 48