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# Visuotopic organization of bush baby primary visual cor (V1) revealed by optical imaging

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## Abstract

The bush baby (Galago garnetti) is a small nocturnal prosimian primate with a smooth cortex. I study, we used optical imaging to examine the visuotopic organization of V1, taking advantage fact that a significant portion of V1 is available to imaging on the dorsal and lateral surface in th species. For visual mapping, topographically limited horizontal and vertical grating stimuli were presented monocularly either within 2 rectangular windows or 2 patches at eccentricities rangin to 15 . Shifting the mapping stimuli by as little as 1 produced discrete shifts in activation foci in The visuotopic organization of bush baby V1 was similar to that previously reported based upon microelectrode mapping (Rosa et al., 1997). V1 shows a continuous representation of the visua with the vertical meridian marking the V1/V2 border and the horizontal meridian bisecting V1. T cortical magnification factor (CMF) was calculated as the average mm distance in cortex for 1 d visual space. CMF systematically decreased with increasing eccentricity: CMF = -0.11 * eccentr 1.78 (R= 0.67, P< 0.0001), but was less steep than reported in macaque monkeys and did not vertical versus horizontal meridian anisotropy reported for macaque monkeys (Van Essen et al. The relationship was comparable to that described by Rosa et al. (1997). Taken together, these indicate that: 1) the organization of bush baby V1 is analogous to that of other primates and 2) imaging can usefully be applied as an efficient and high resolution visual mapping tool.

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