

Fig. 1 Response-intensity families recorded from two rods: a, in normal Ringer's solution and b, in test solution with the Ca^{2+} feedback removed. Single trials in all traces, 520 nm light throughout. The dark current in a was quite stable throughout the experiment, but that in b showed slow variations in between light steps. To compensate for these variations in the dark current, each response amplitude plotted in Fig. 2 has been normalized against the size of dark current at the time the response was elicited. Insets: averaged responses of the cells to dim flashes in the control and the test solutions. The calculated flash sensitivity (normalized) and the response integration time, corresponding to the parameters and t_i in the text, are $0.049 \text{ photon}^{-1} \mu\text{m}^2$, 1.29 s in a and $0.068 \text{ photon}^{-1} \mu\text{m}^2$, 2.33 s in b.

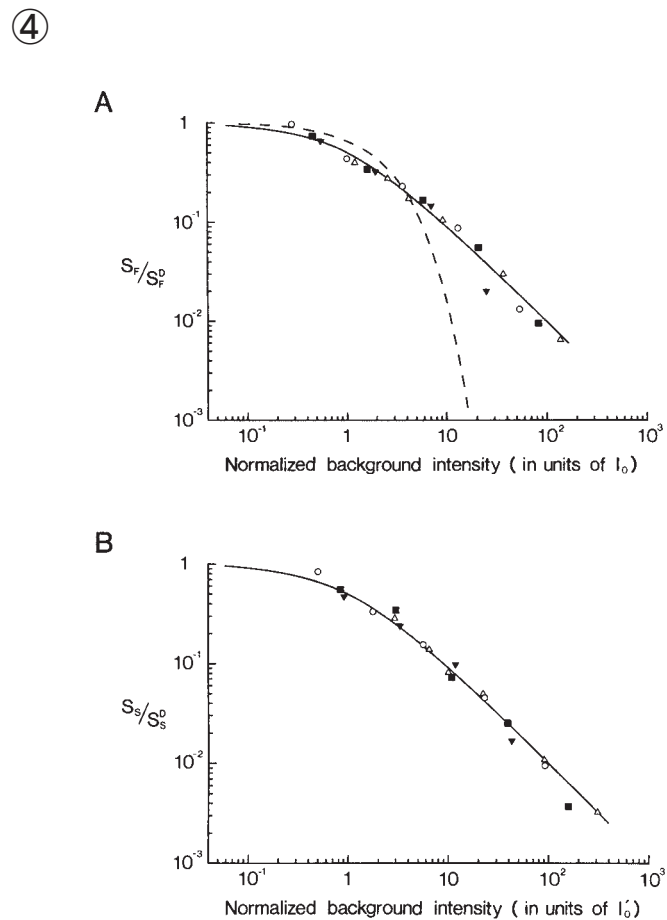


FIGURE 9. Collected results from four incremental flash-on-background experiments on rabbit rods, plotted on normalized axes. (A) Dependence of flash sensitivity on background. Continuous curve is from Eq. 4 and dashed curve is from Eq. 5. The position of the dashed curve relative to the experimental points represents the average position of such curves for all four cells. (B) Dependence of calculated step sensitivity on background. Continuous curve is from Eq. 6. The data obtained from the experiment in Fig. 8 are indicated by the open triangles in both panels. Temperature was 39-41 °C. Saturated current was 12-17 pA.

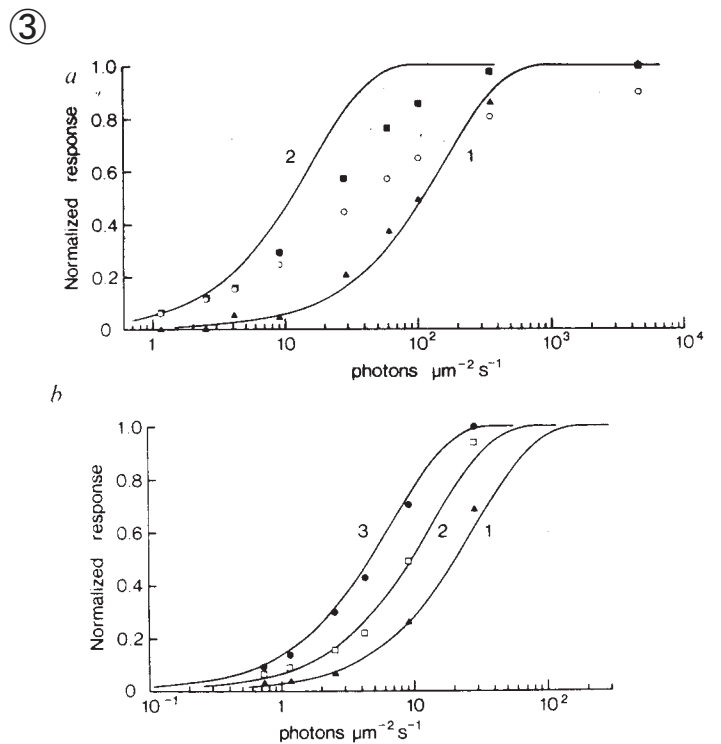


Fig. 2 Response-intensity plots obtained from the rod experiments of Fig. 1. All response amplitudes have been normalized against corresponding dark currents (see Fig. 1 legend). a, Response amplitudes were measured at 0.4 s after the onset of light step (▲), at transient peak (■) and at steady-state level just before the turning off of light (○). b, Response amplitudes were measured at 0.8 s (▲) and 1.6 s (□) after light onset, and at steady-state level (●). The smooth curves were all drawn according to equation (1). (from Nakatani and Yau, *Nature* 334:69-71, 1988)