

Data points (words) were generated at the rate of 12.6 per second. The beginning of a run was scored if the angular speed $\dot{\theta}$ was less than $35^\circ/\text{word}$ for three successive words. The end of a run was scored if the angular speed was greater than $35^\circ/\text{word}$ for two successive words or if it was greater than $35^\circ/\text{word}$ for one word, provided, in the latter case, that the change in the average direction between successive pairs of words was also greater than 35° . The angular speed is sensitive to short term fluctuations in the data. These depend on the ways in which the bacteria wobble and on the time constants (0.08 s) of the circuits which precede the analogue-to-digital converter. The time constants, the recording rate and the value $35^\circ/\text{word}$ were chosen empirically by comparing results of digital analyses with plots of the kind shown in Fig. 1.