

Fig. E-1

C6 dorsal root branches are distributed in a fan shape between the foramen and the spinal cord. The third branch of the C6 dorsal root was usually used for recording. The C5-C6 capsule was divided into nine areas and was electrically stimulated to provoke receptor activity in the dorsal aspect of the capsule. Neural activity was recorded in two channels with use of dual bipolar electrodes. The T1 spinous process was fixed to an aluminum strut. Two stereomaging cameras were used to determine the real-time strain on the capsule. M = muscle, T = tendon, Ch1 = Channel 1, and Ch2 = Channel 2.

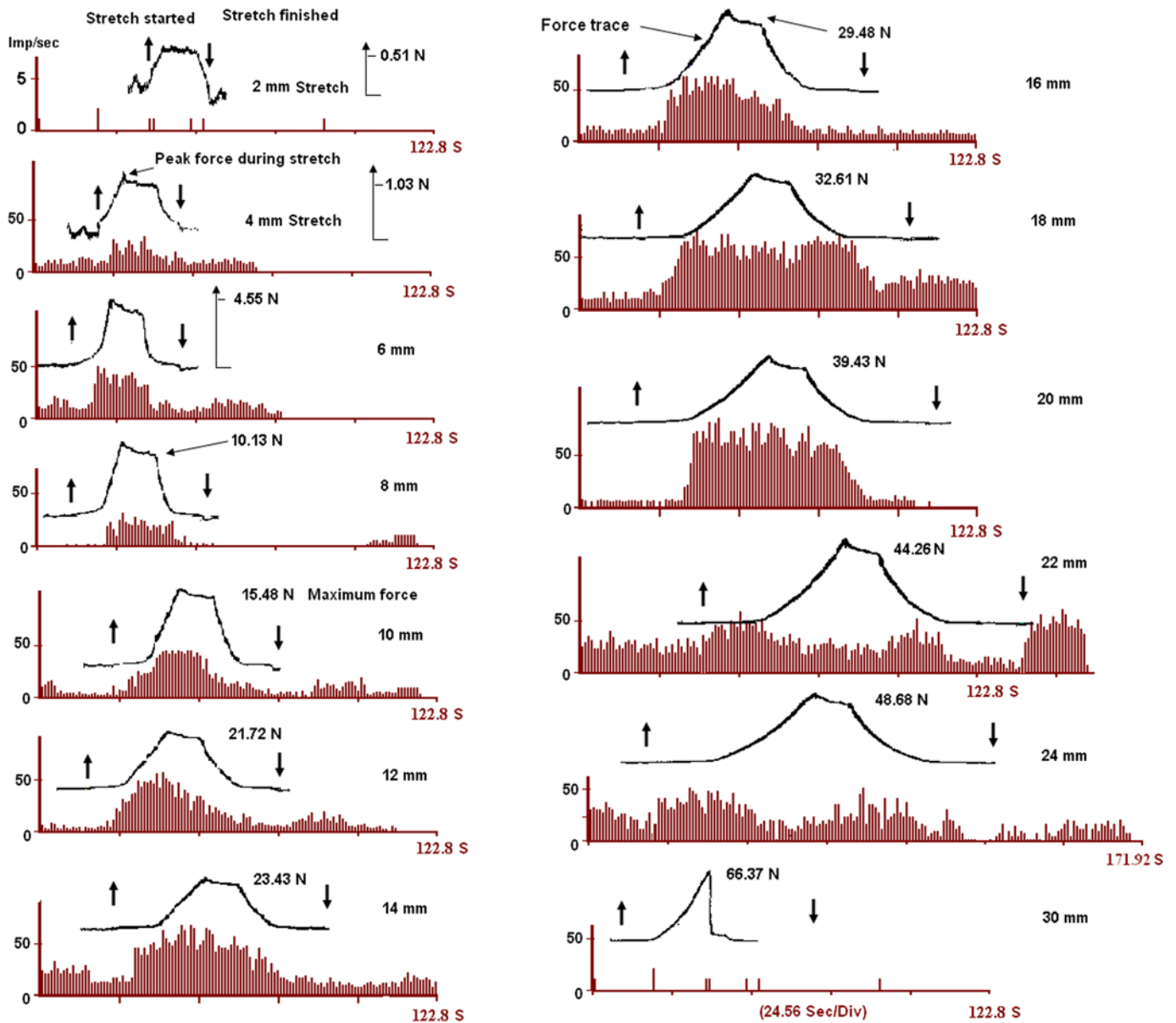


Fig. E-2

Response of a representative non-saturated low-threshold mechanoreceptor to capsular stretch. The discharge rate gradually increased as the actuator displacement increased to 20 mm. The receptor behaved as a slowly adapting unit during the hold phase of stretch. The up arrow indicates the beginning of stretch, and the down arrow indicates that the actuator returned to the original position. Maximum stretch force (in newtons) on the capsule was produced when the actuator moved to each designated displacement. This maximum stretch force gradually increased when actuator displacement increased. For each stretch, the upper trace is the real-time force trace, and the lower histogram shows the single-unit discharge rate over the time.

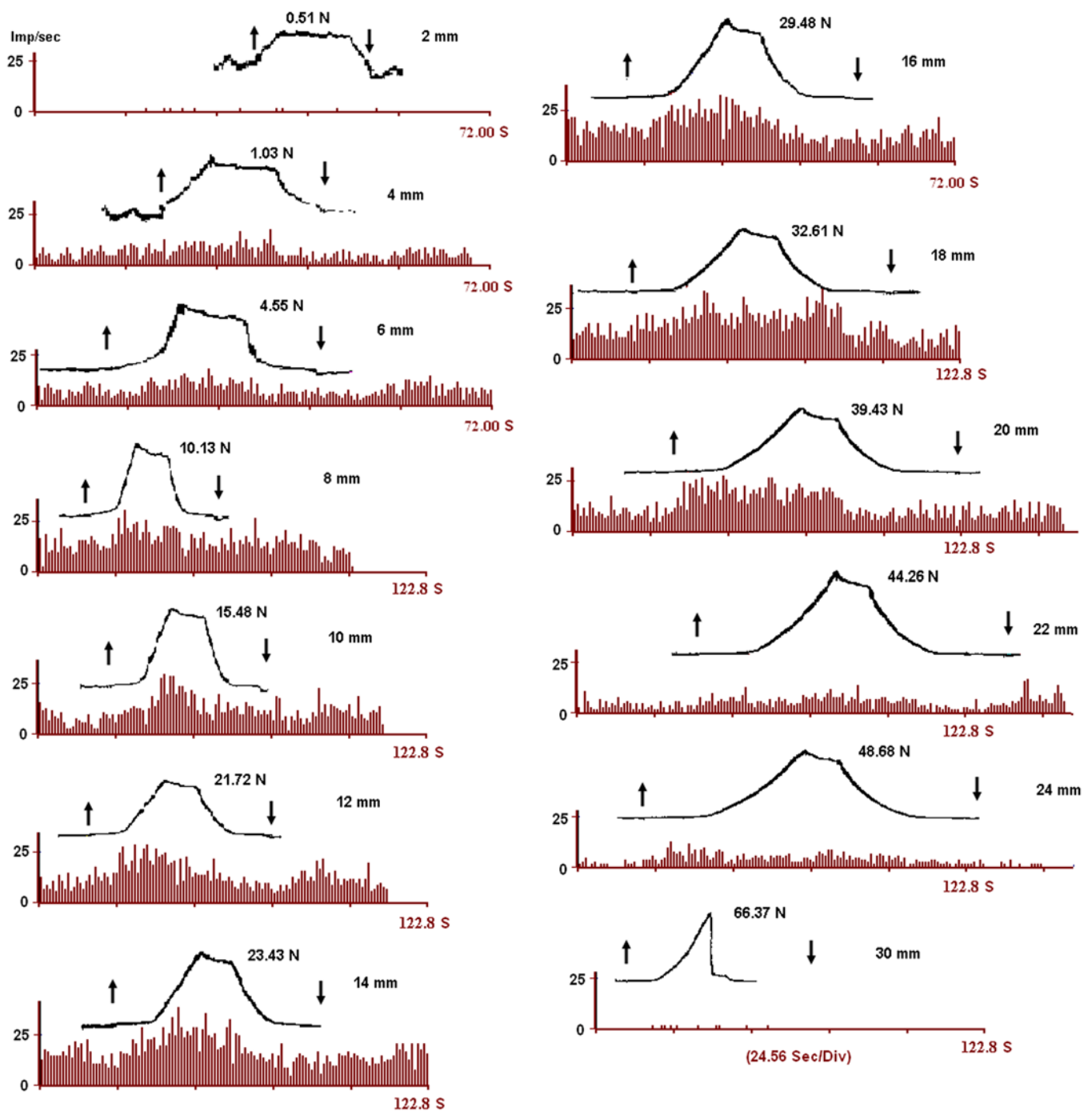


Fig. E-3

Response of a representative saturated low-threshold mechanoreceptor to capsular stretch. The discharge rate saturated at 8 mm of actuator displacement. The receptor appeared to be a slowly adapting unit during the hold phase of stretch.

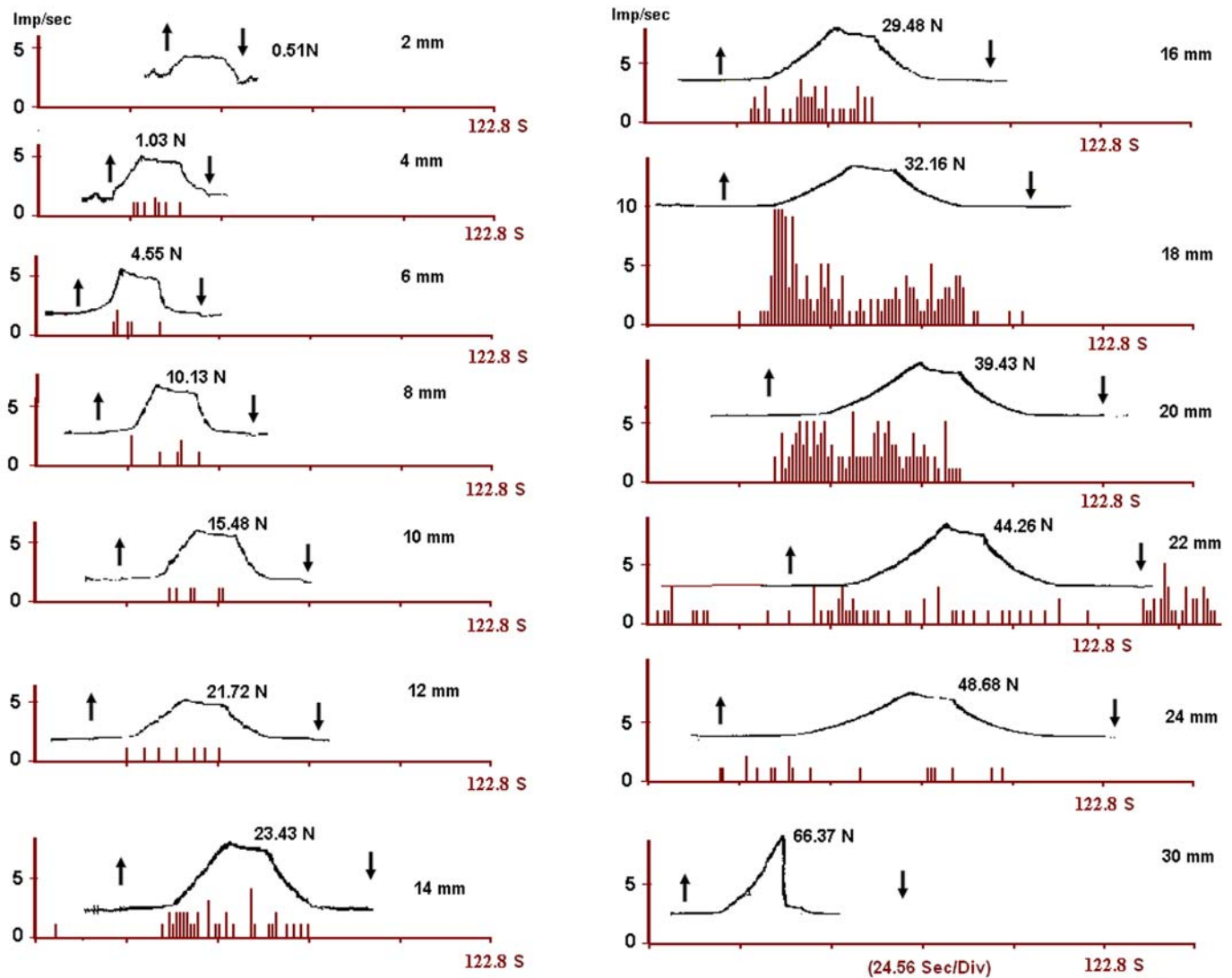


Fig. E-4

Response of a representative high-threshold mechanoreceptor to stretch. The receptor was weakly activated before 12 mm of actuator displacement. The discharge rate increased significantly between 14 and 20 mm of actuator displacement. The receptor behaved in a slowly adapting pattern.