

23. STRUCTURAL ANALYSIS AND CLASSIFICATION

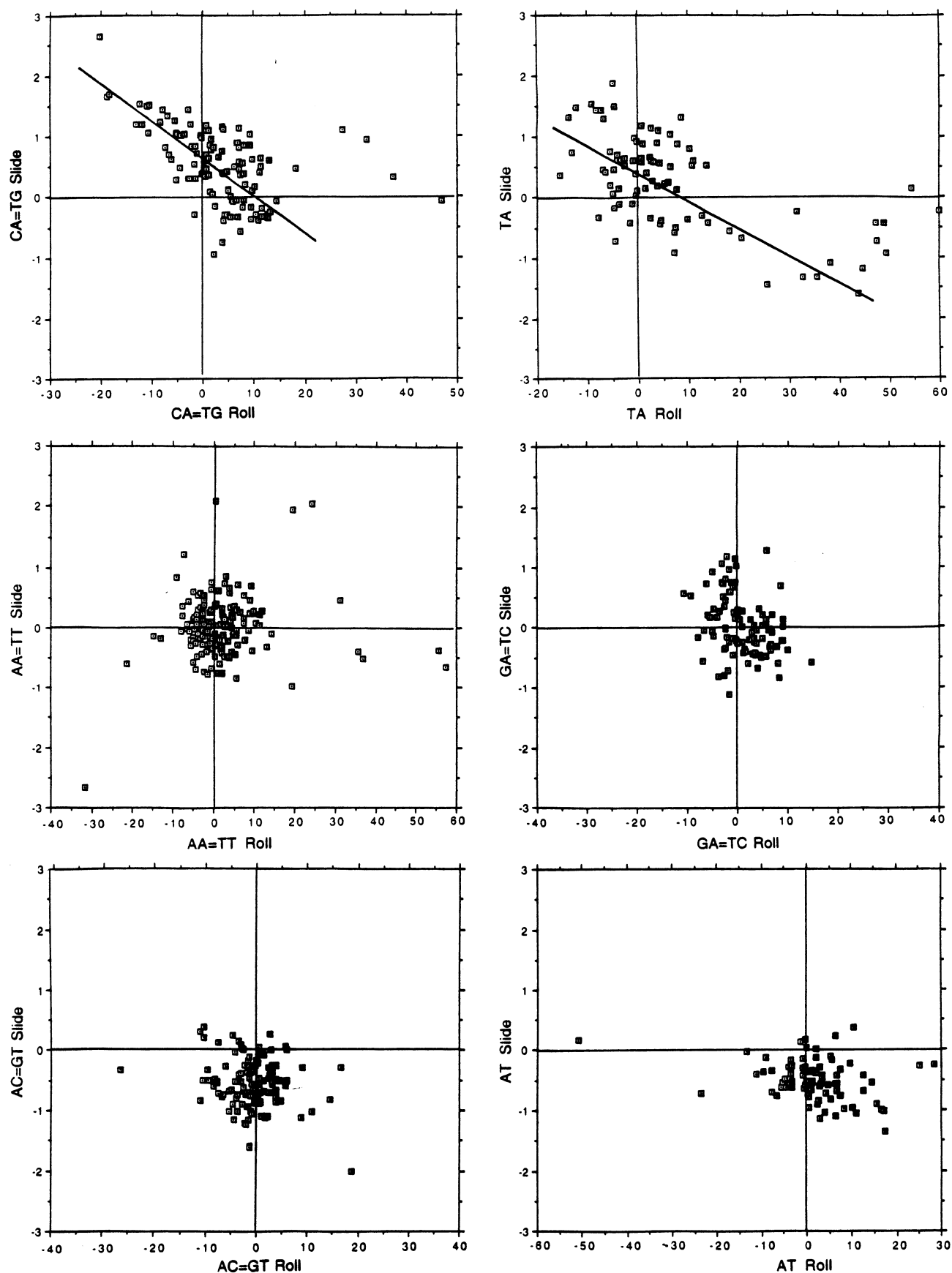


Fig. 23.3.4.9. Slide *versus* roll plots for six of the ten possible base-pair steps. Data points are from 971 steps in crystal structure analyses of 63 sequence-specific protein–DNA complexes. A complete set of 30 plots for slide/roll, twist/roll and slide/twist at all ten steps is to be found in Dickerson (1998*b*), and equivalent plots for DNA alone are given by El Hassan & Calladine (1997). Y-R steps exhibit a broad range of roll, slide and twist values, with roughly linear correlations between pairs of variables. Points for A-A and other R-R steps cluster tightly around the origin, showing little tendency toward roll bending. Curiously enough, points for R-Y steps tend to favour negative values of slide and twist, and, hence, to concentrate in the lower left quadrant of a slide/tilt plot.