Because of the uncertainties in breakup conditions, the values of A for each B in Table 20 have been plotted against qα in Figure 14. By reading from the plots, a value of A for the five values of B can be obtained for any breakup qα deemed appropriate between 5,000 and 20,000 deg-lb/ft$^2$.

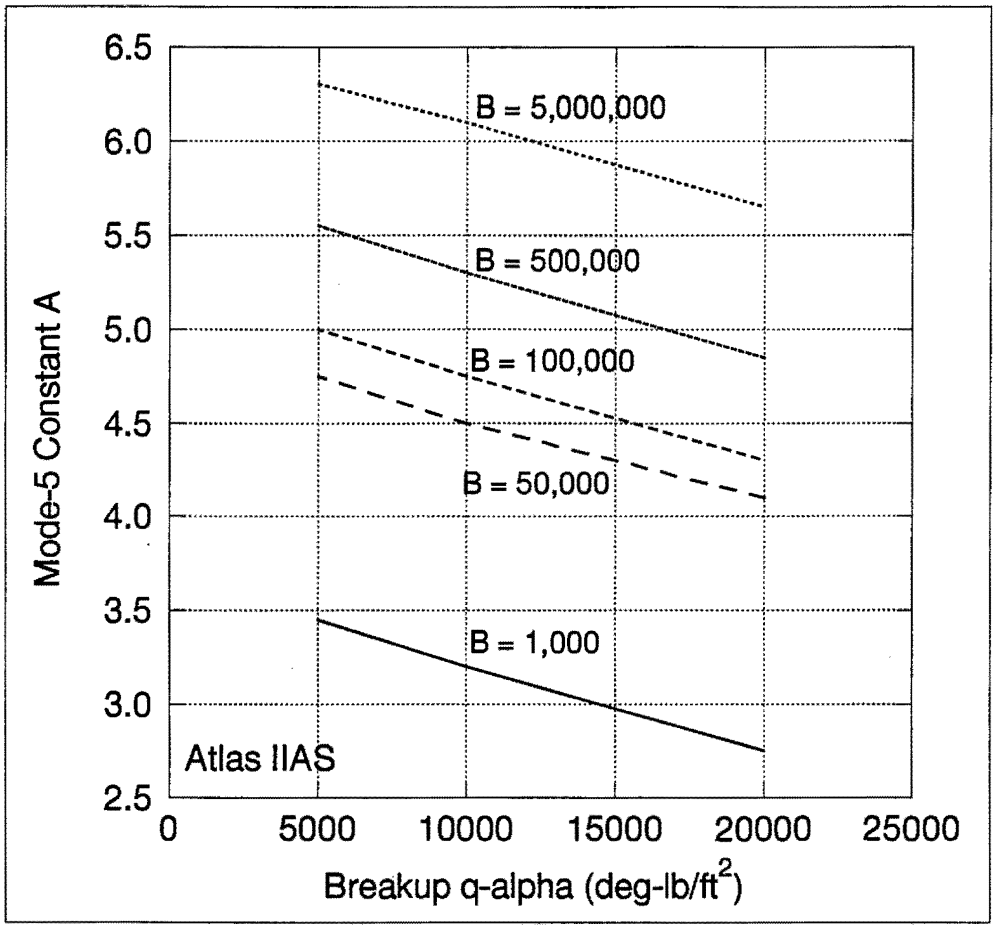


Figure 14. Effects of Breakup q-alpha on A for Atlas IIAS

### 6.2.2 Launch-Area Mode-5 Risks

The twenty sets of A and B shown in Table 20 were used to compute Mode-5 launch-area risks for population centers inside the impact limit lines for an Atlas IIAS daytime launch of a Telstar-4 payload from Pad 36A. Results of these and two other cases are given in Table 21. The Mode-5 $E_c$ in the first line (old baseline case) of Table 21 is presented for comparison only. It was obtained from data in the first line of Table 45 of an earlier RTI study[3]. In Ref. [3], the total Atlas IIAS failure probability for the first two minutes of flight was set at 0.04, with the probability of a Mode-5 failure response assumed to be 0.005. The second line in Table 21 shows the result of a recomputation of the Mode-5 baseline risks, again with B = 1000 and A = 3, using newly derived values for the total failure probability and for a Mode-5 failure response. For flight phases 0 – 2, a total failure probability of 0.031 was assumed, as extracted from Table 6 for