

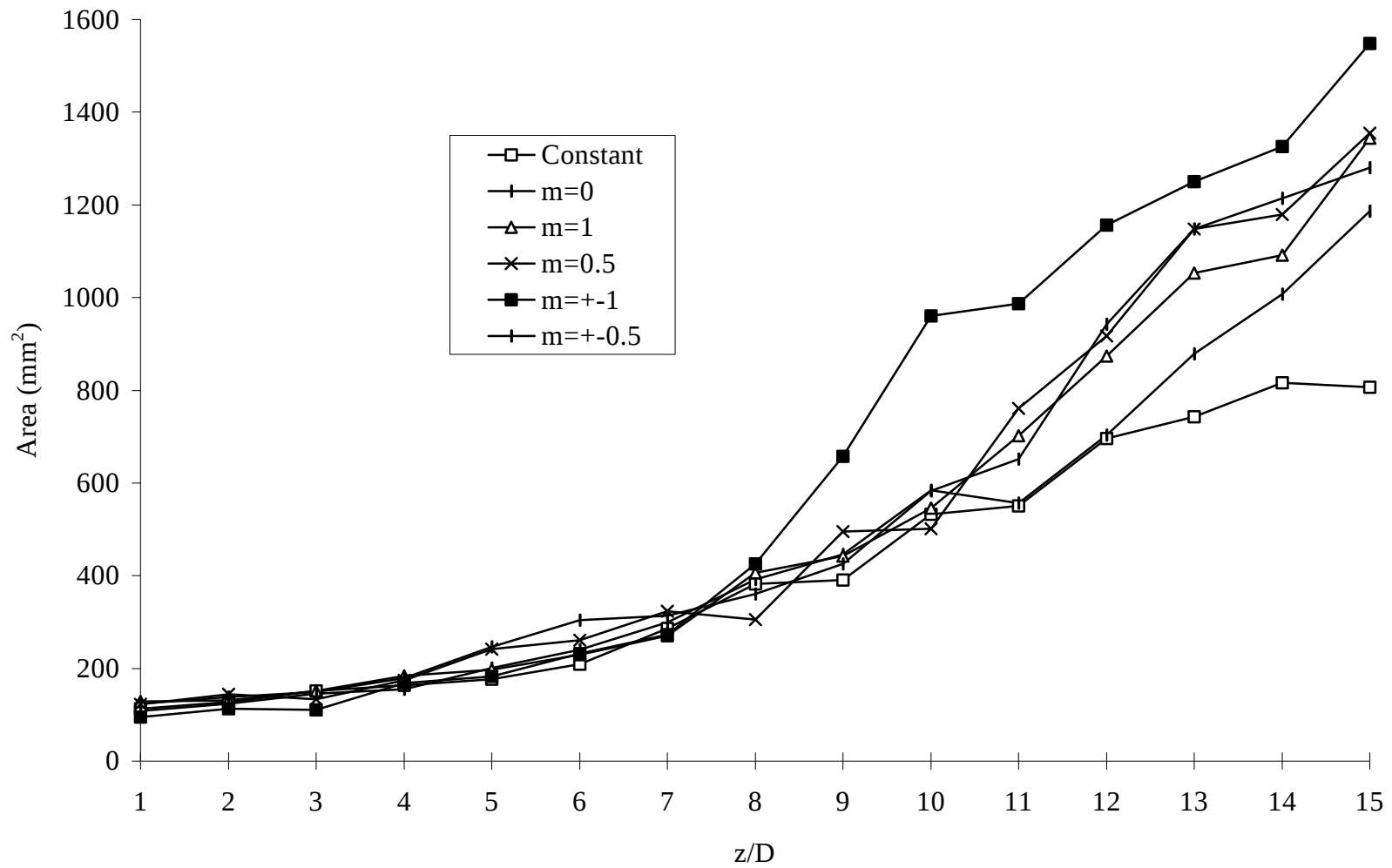


Figure 4.12: Area Enclosed by $I/I_{\max}(z) = 0.5$ Contour vs. Downstream Position
Swirl Nozzle with 30 Hz Pulsation, $MR = 0.08$