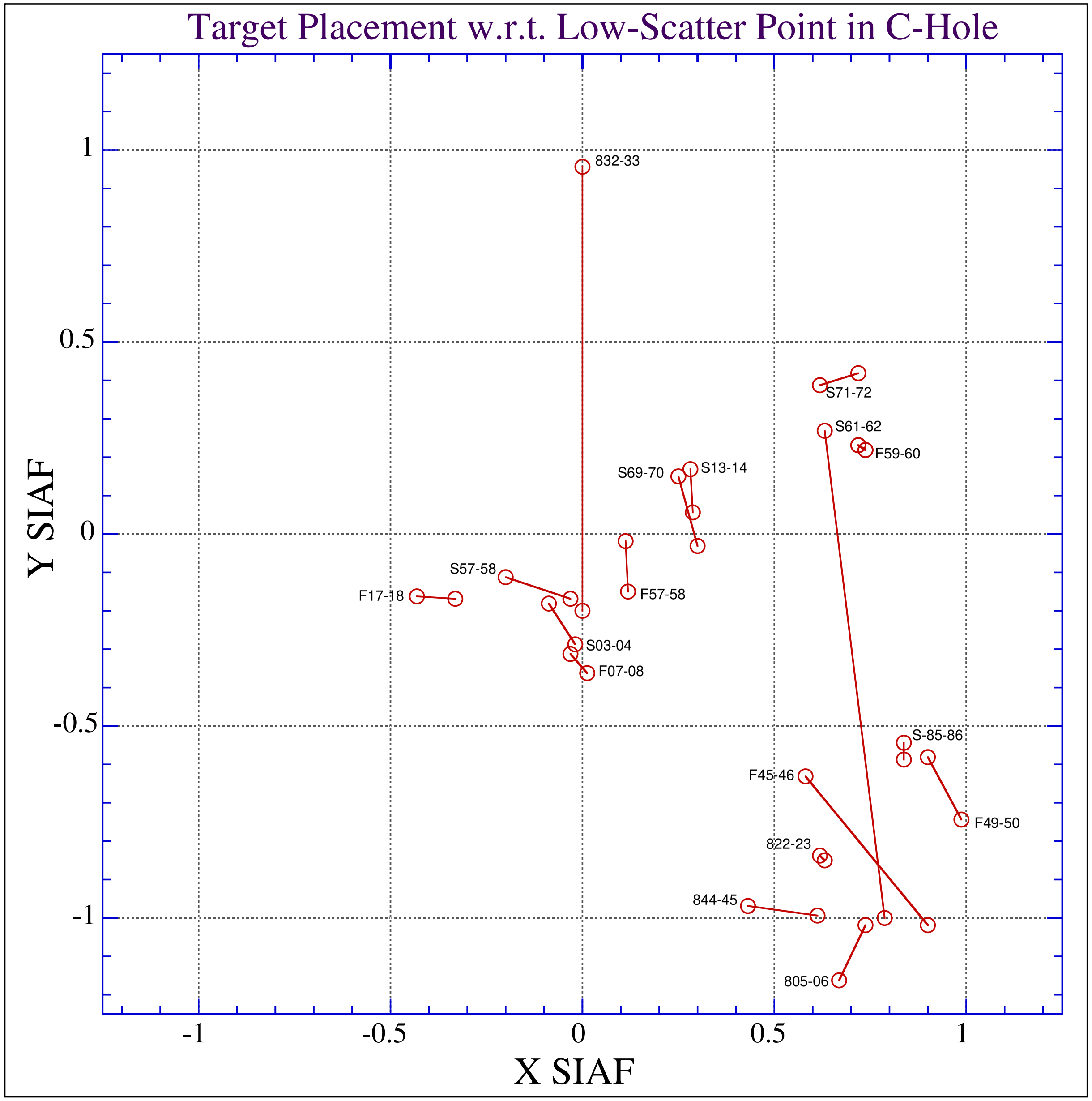


Figure 1. The first 34 NICMOS GTO coronagraphic target acquisitions exhibit large pointing errors due to a soon-to-be fixed problem in the on-board flight software. Acquisitions are done in pairs, approximately 20 minutes apart, in the same target visibility period. The spacecraft is rolled 30° between acquisitions to obtain coronagraphic images at two orientations.

The origin of the graph to the left is the desired placement of the target in the coronagraphic hole (the "low scatter point" of the coronagraph") in the "Science Aperture Instrument" frame in pixels. The actual target placements should be a tight cluster around (0,0). To achieve the detection limits and sensitivities required for the EONS search programs the maximum deviation from the low scatter point for an acquisition pair should be no more than 0.25 pixels, with a dispersion for the two points in the pair of no more than 0.1 pixels.

To "recover" the observations, targets with similar mis-pointings maybe paired and subtracted after appropriate flux-scaling. In the absence of large spacecraft "breathing" excursions, the magnitude of the subtraction residuals is greatly reduced. Unfortunately, only a few such mis-pointing pairs exist for the already obtained data. The NICMOS IDT is now designing a post software fix observing program to obtain reference/calibration coronagraphic PSFs to recover, to a large degree, the observations already in hand.