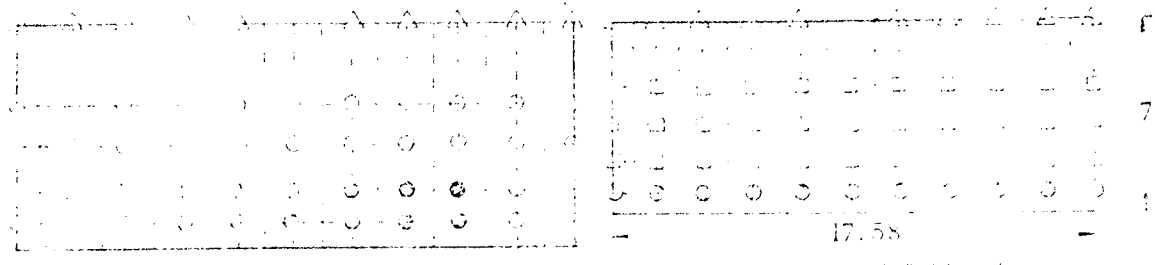


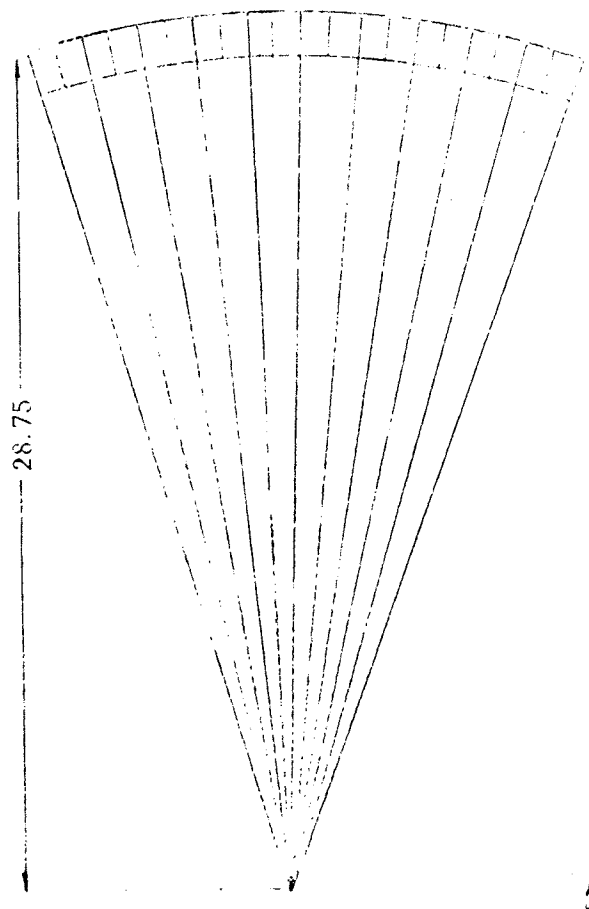
Figure 19. Model 10 : AR 2.0 (Dimensions in feet)



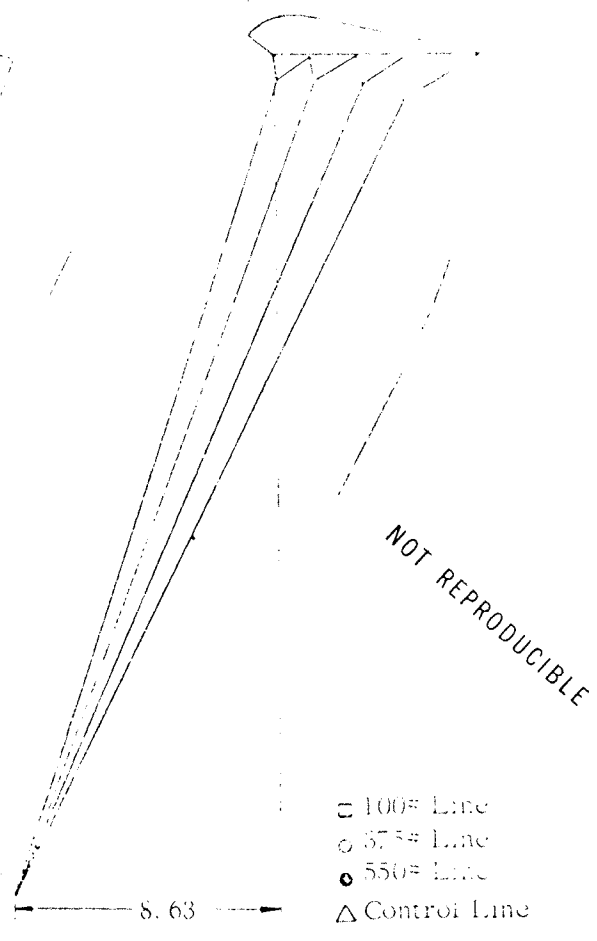
19.17

Tether Variable AR 2.5 Model

7.67



28.75



8.63

- 100# Line
- 37.5# Line
- 550# Line
- △ Control Line

NOT REPRODUCIBLE

Figure 20. Model 11 : AR 2.5 (Dimensions in feet)

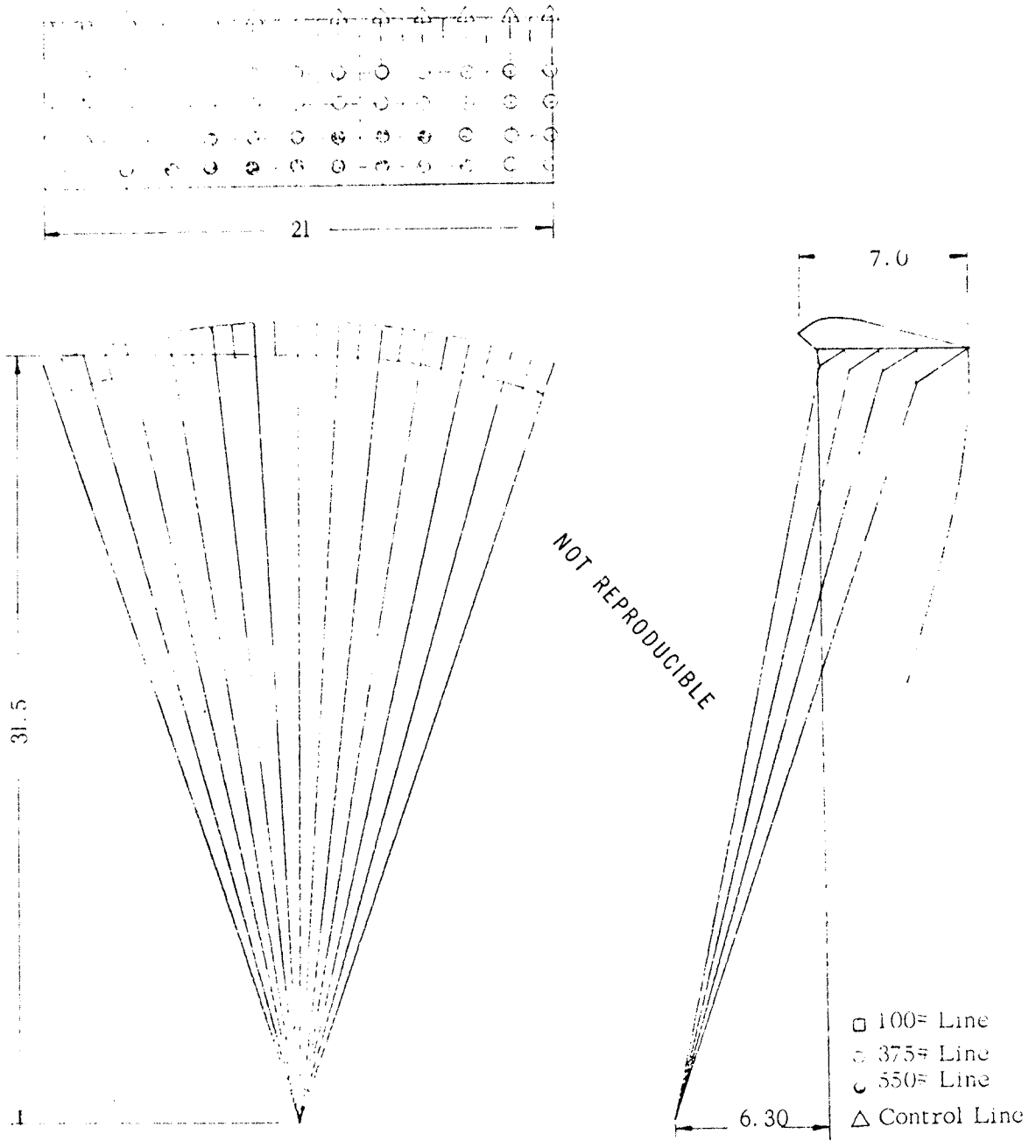


Figure 21 . Models 12 and 13 : AR 3.0 (Dimensions in feet)

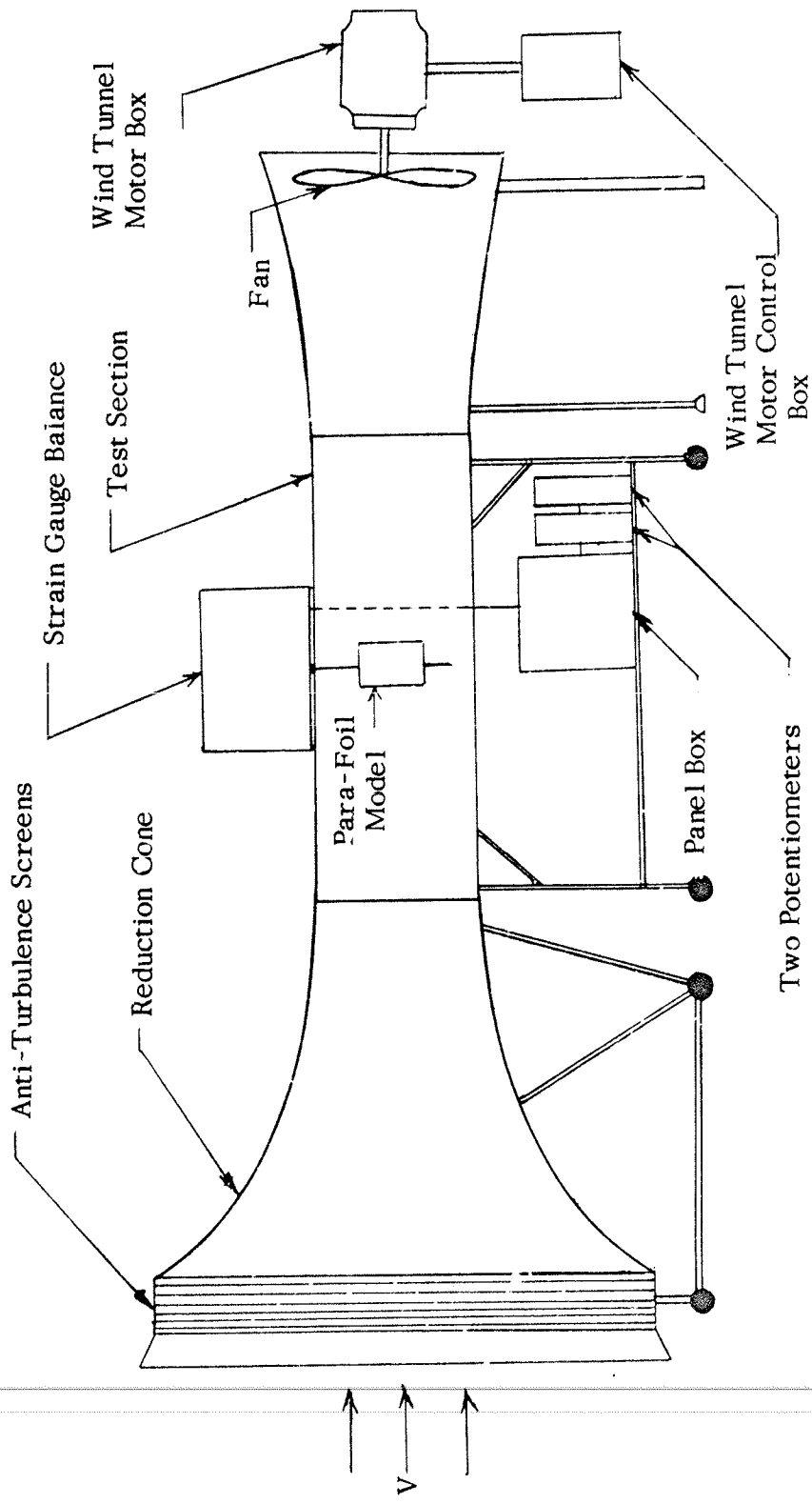


Figure 22. Notre Dame Wind Tunnel with Static Test Mount Configuration

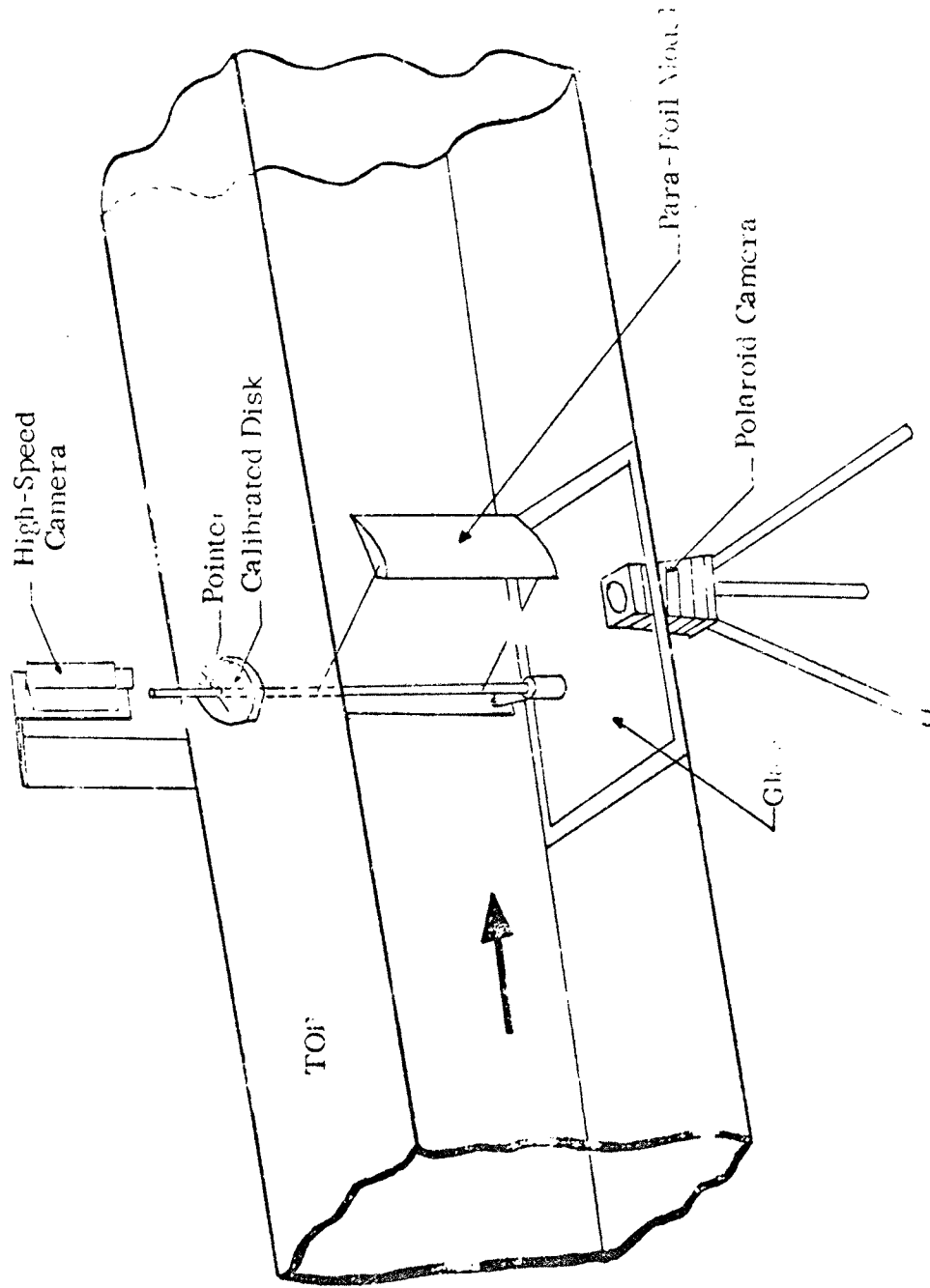


Fig. 23 Para-Foil Model with Support Equipment as Mounted in Wind Tunnel Test Section.

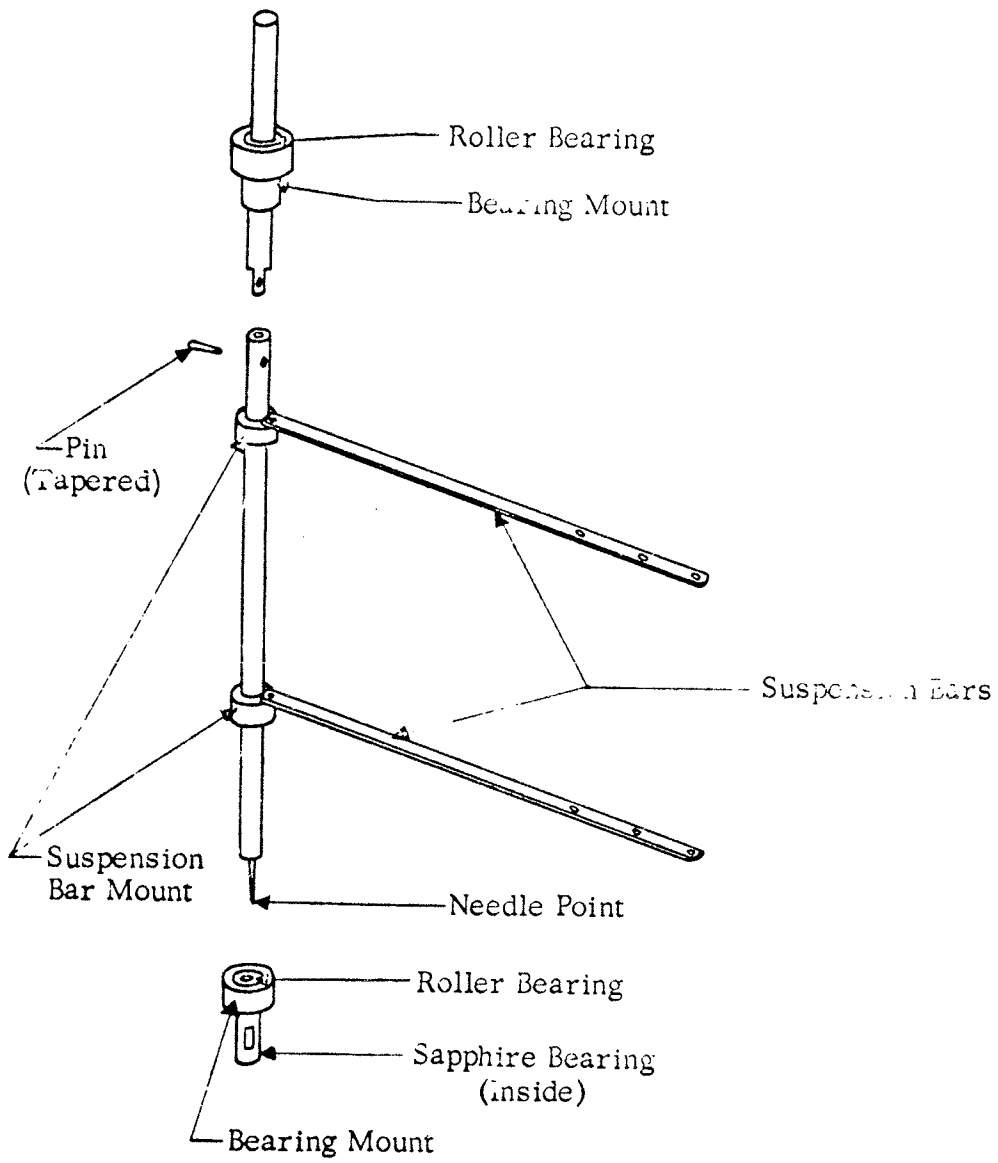


Fig.24 Suspension System Components

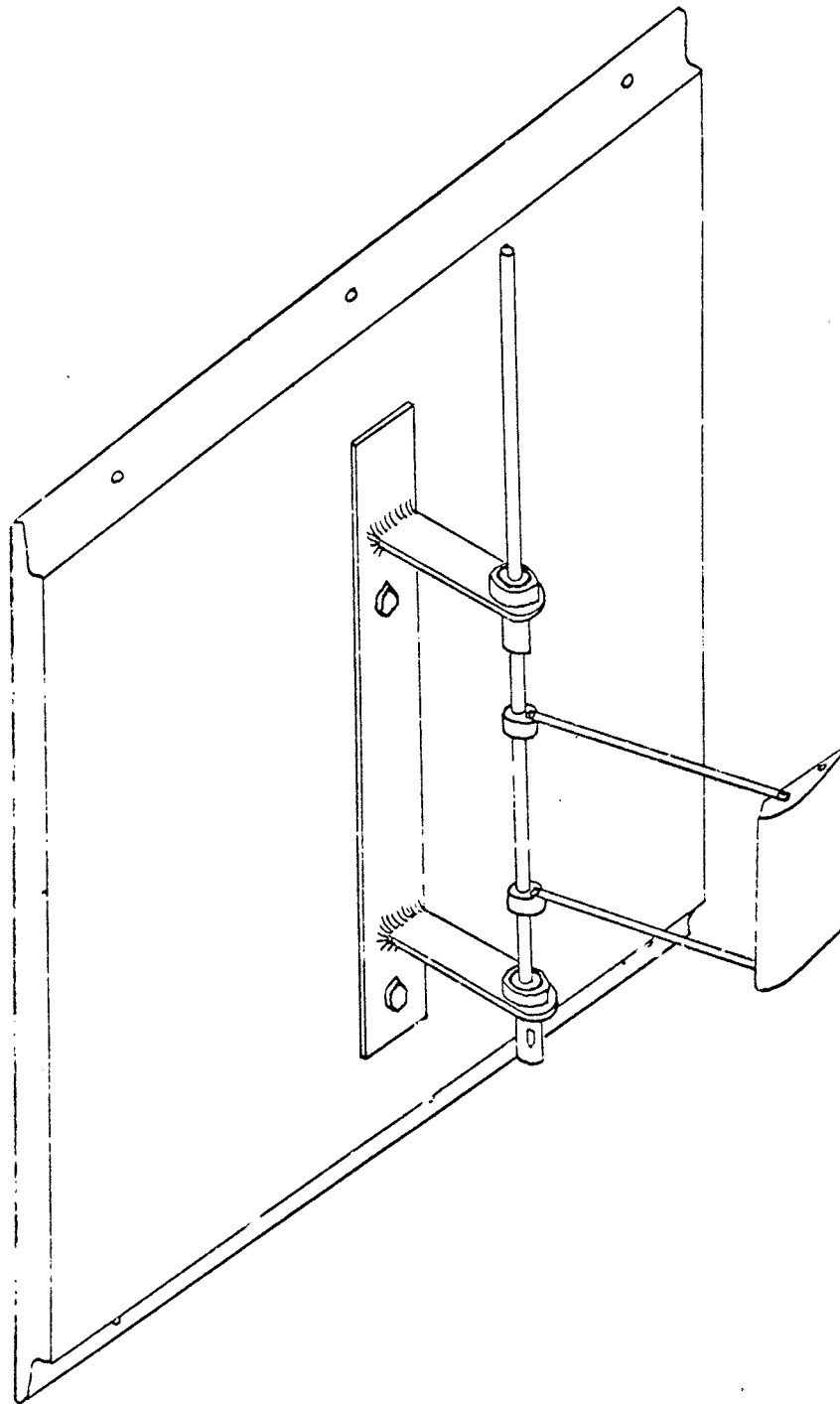


Fig. 25 Suspension System and Model Mounted on Wind Tunnel Door

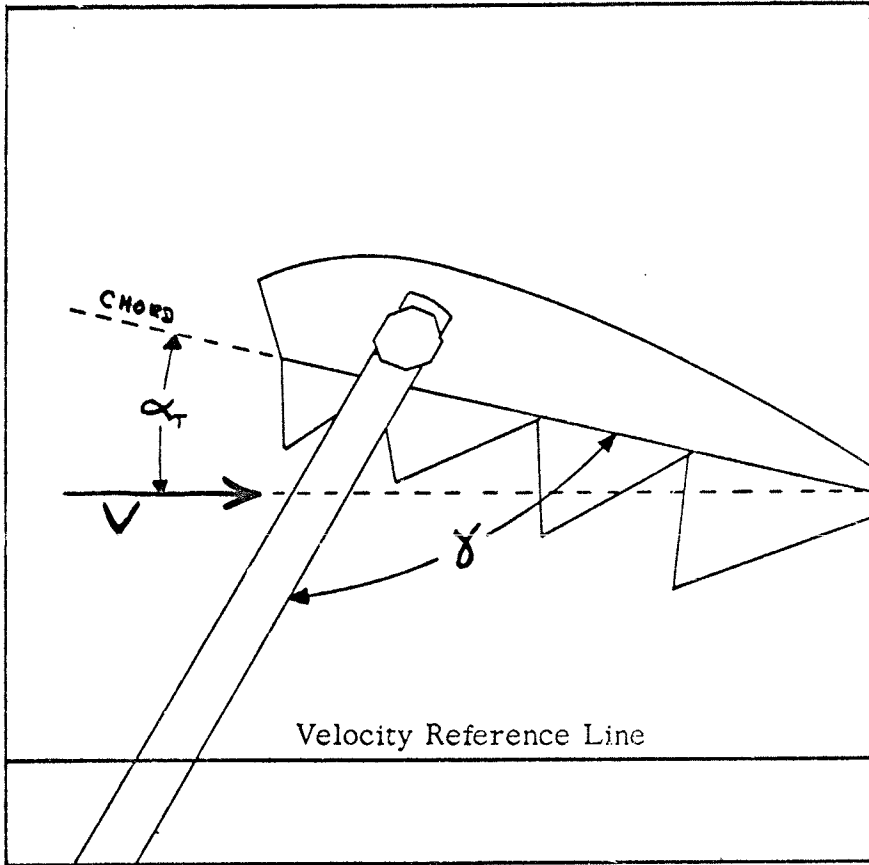


Fig. 26 Schematic of Polaroid Picture Showing α_T and γ

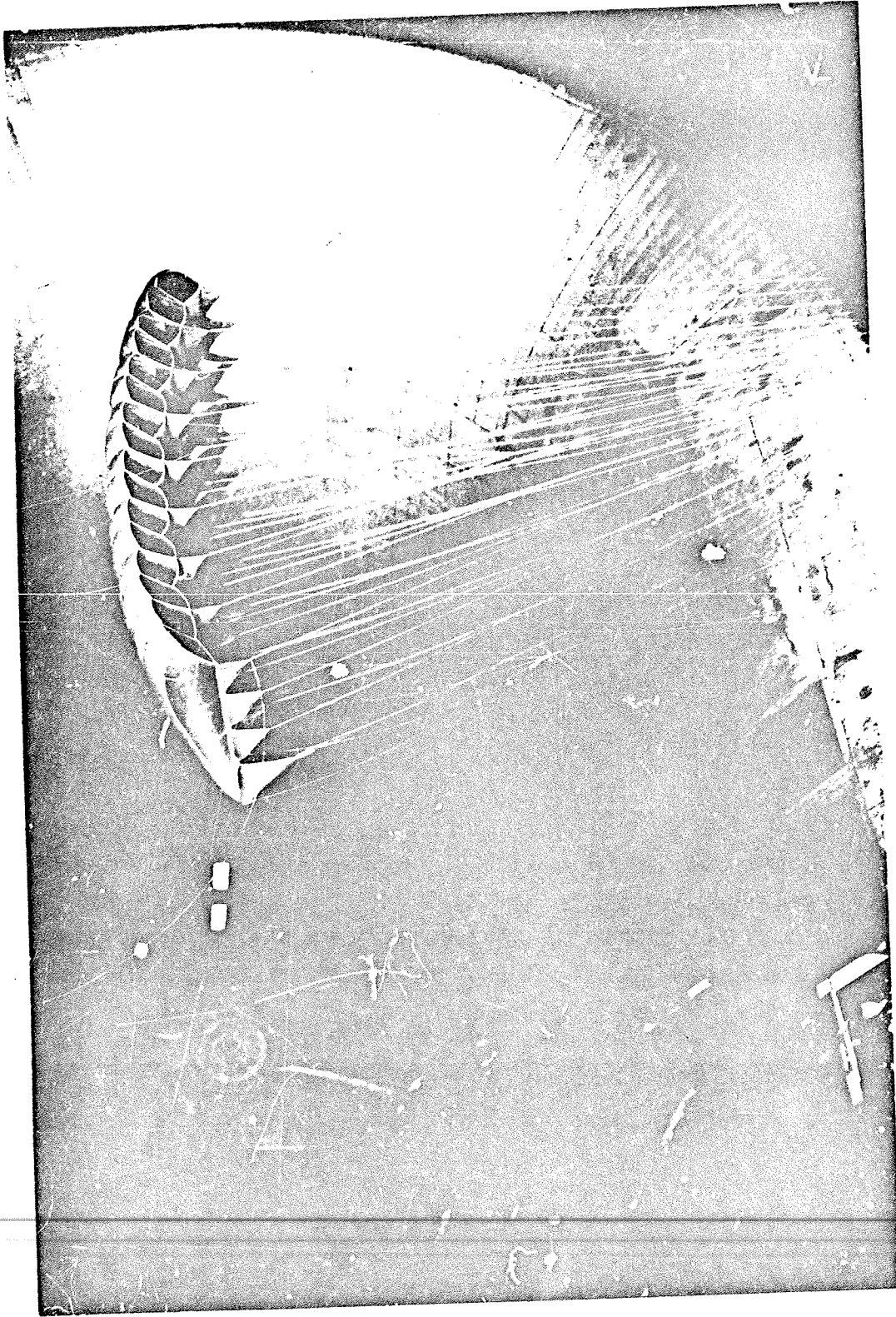


Figure 27. Tether Testing Phase



Figure 28. Strut Testing Phase

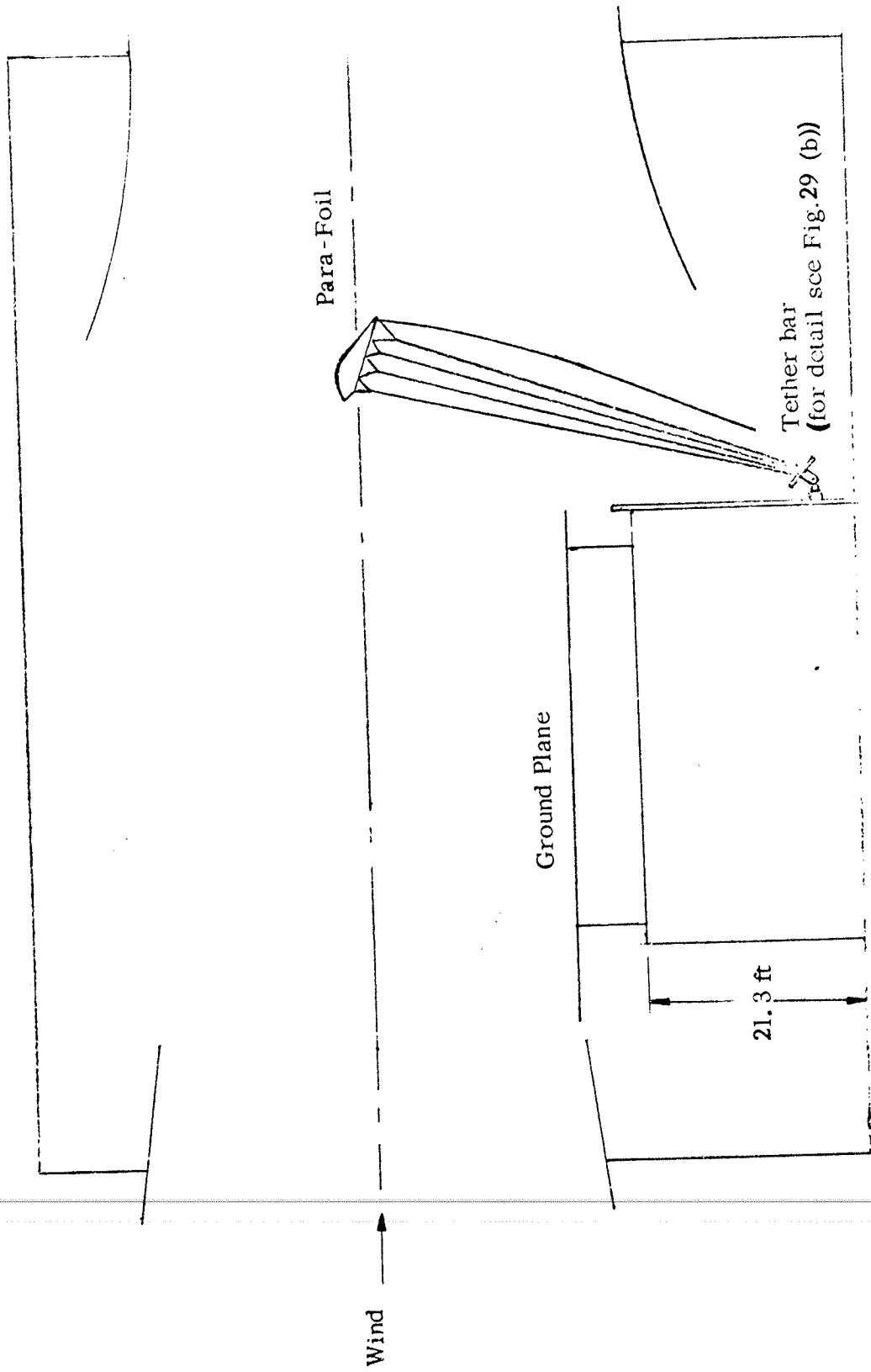


Figure 29 a. Tether Test Set - up- General Arrangement

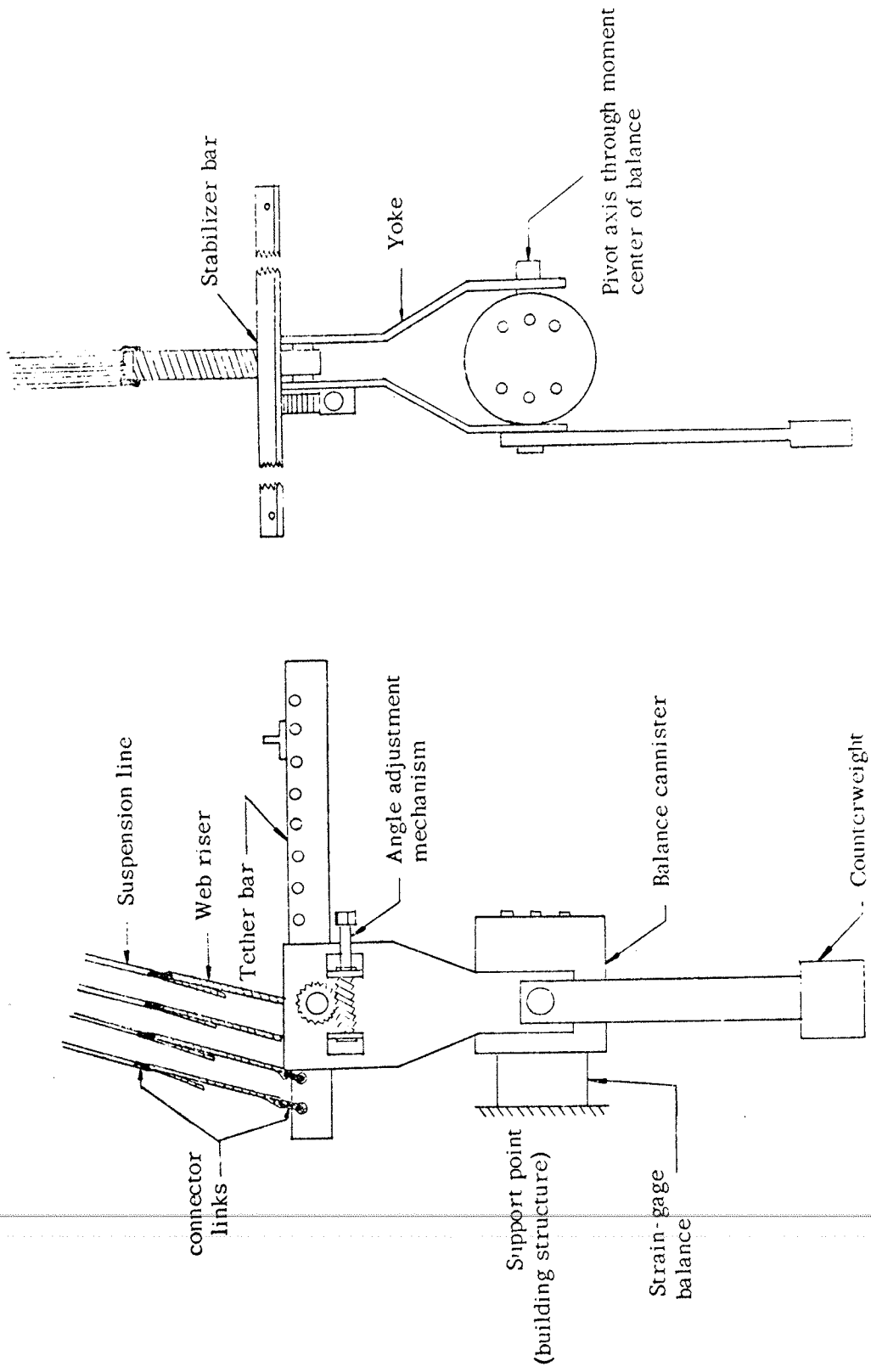


Figure 29 b. Tether Test Set-up - Mount Assembly

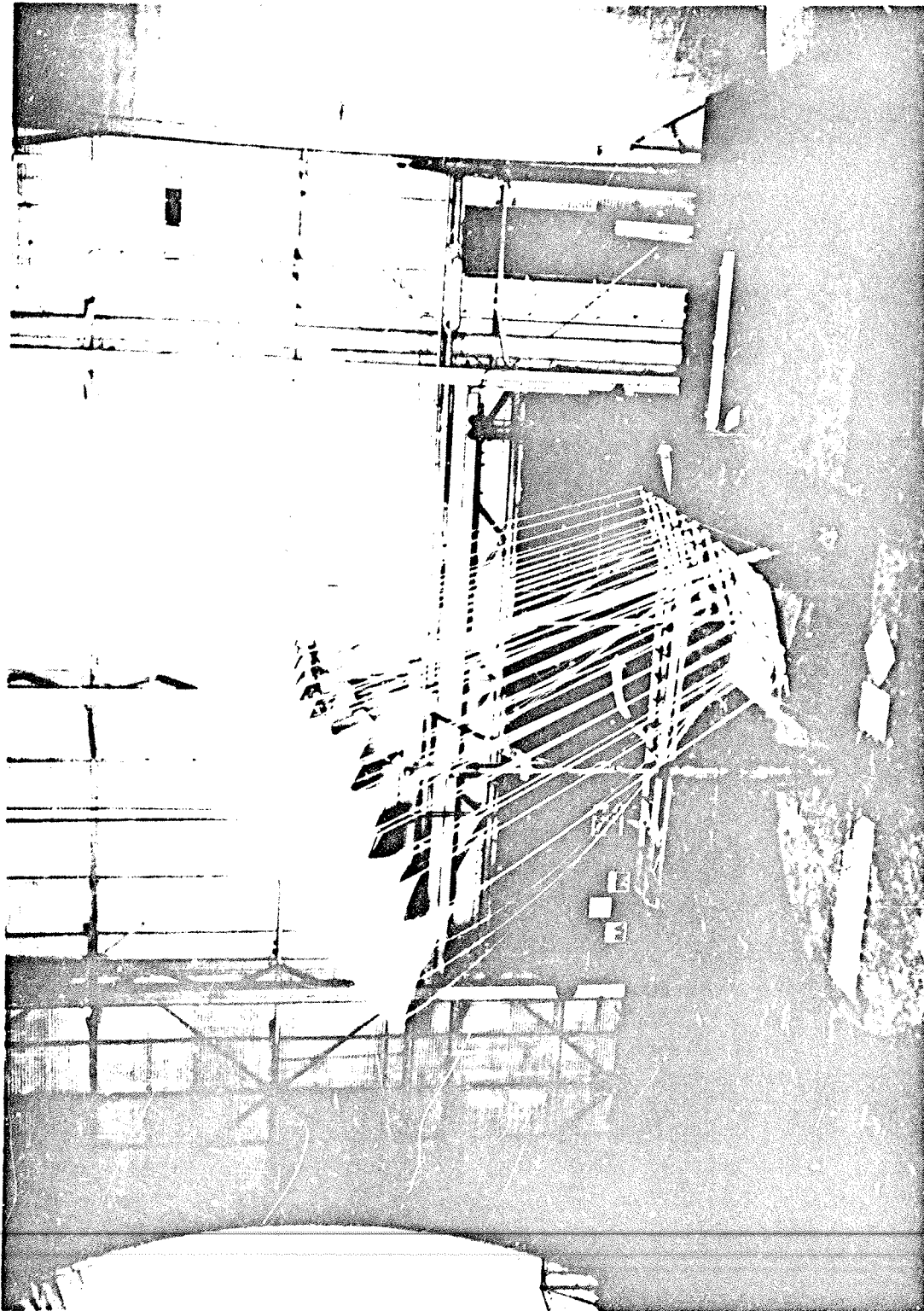


Figure 30. Strut Testing Phase

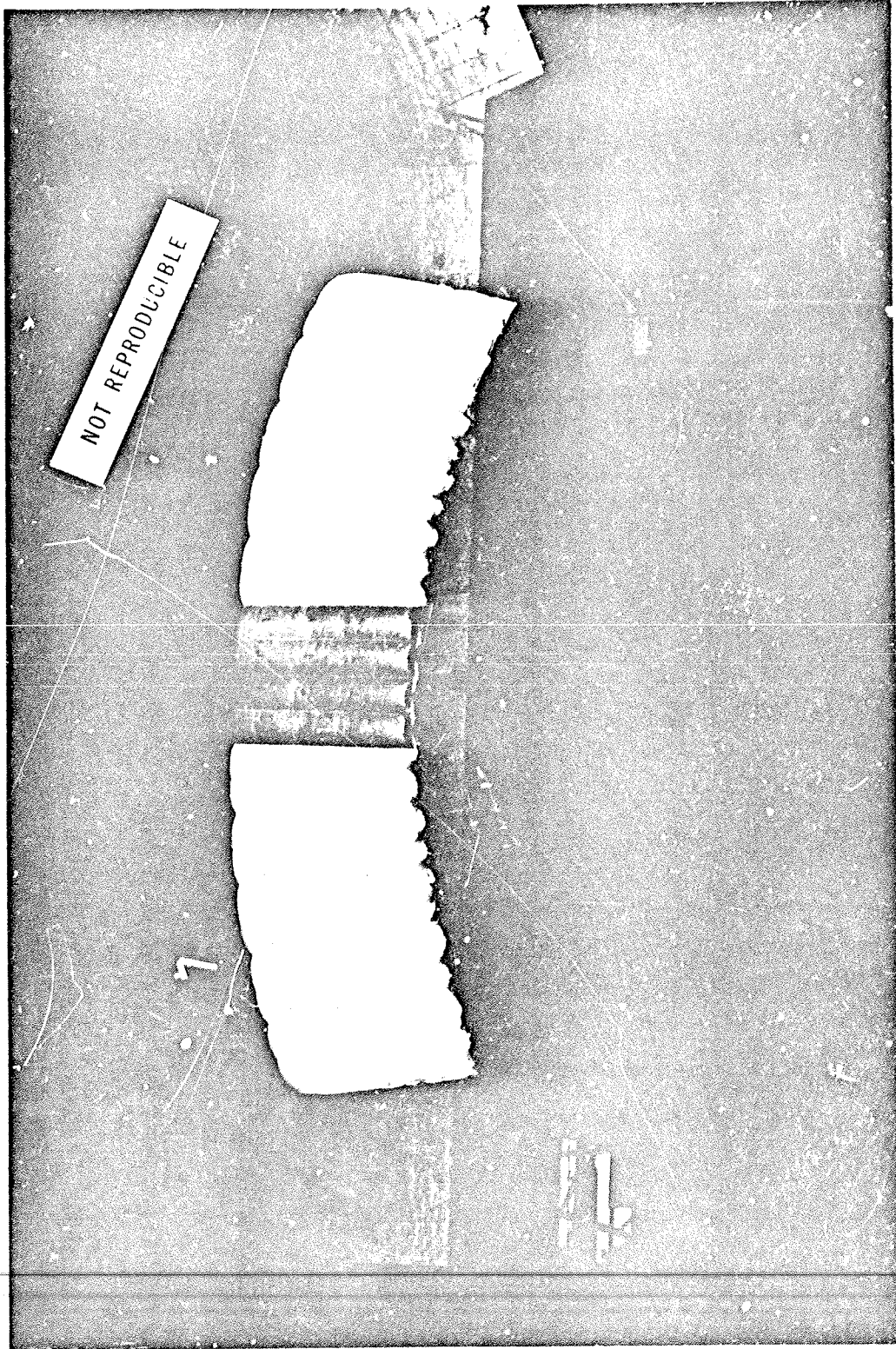


Figure 31 a. : Strut AR 3.0 Model. $\alpha = - 5^\circ$

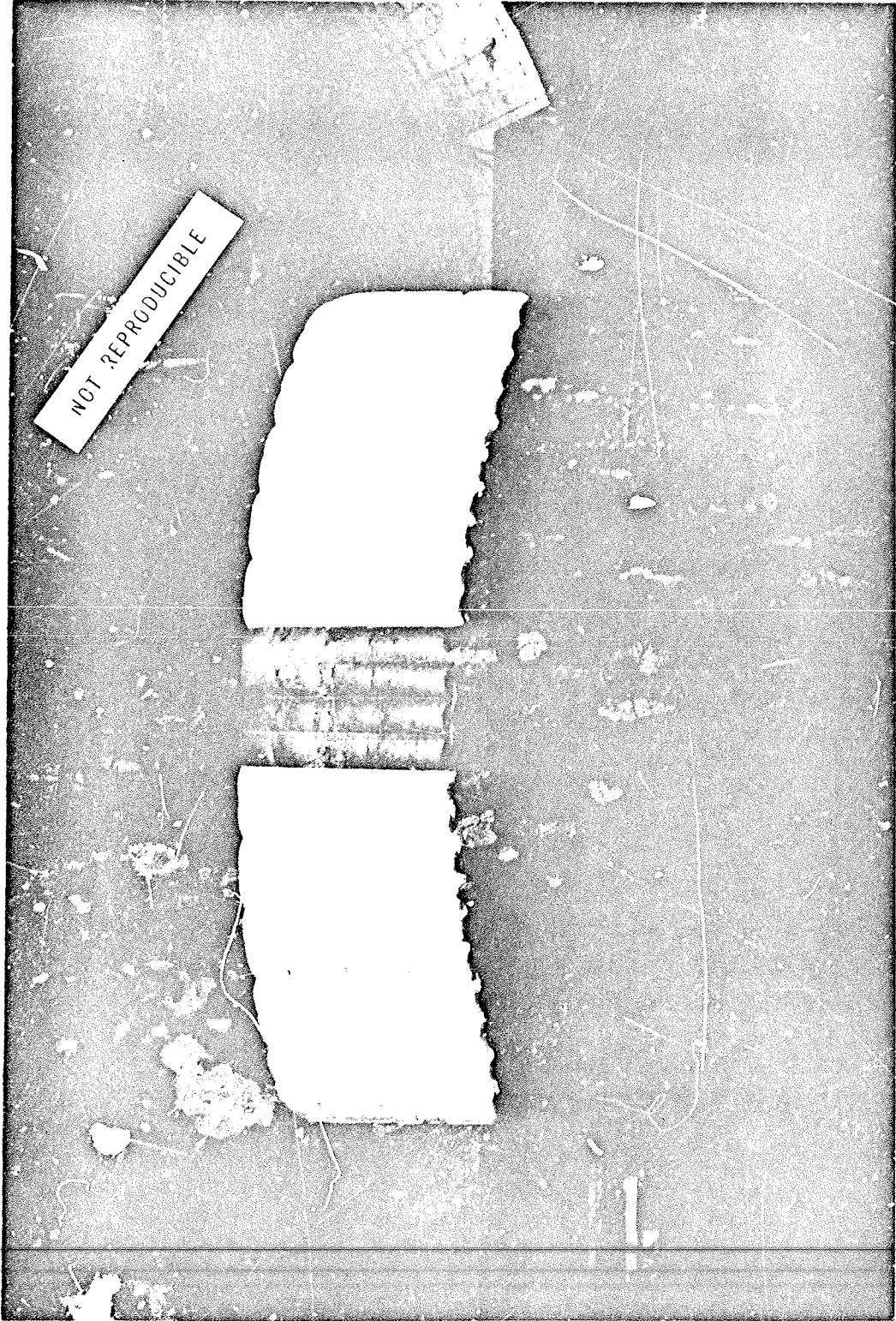


Figure 31 b : Strut AR 3.0 Model. $\alpha = 7.5^\circ$

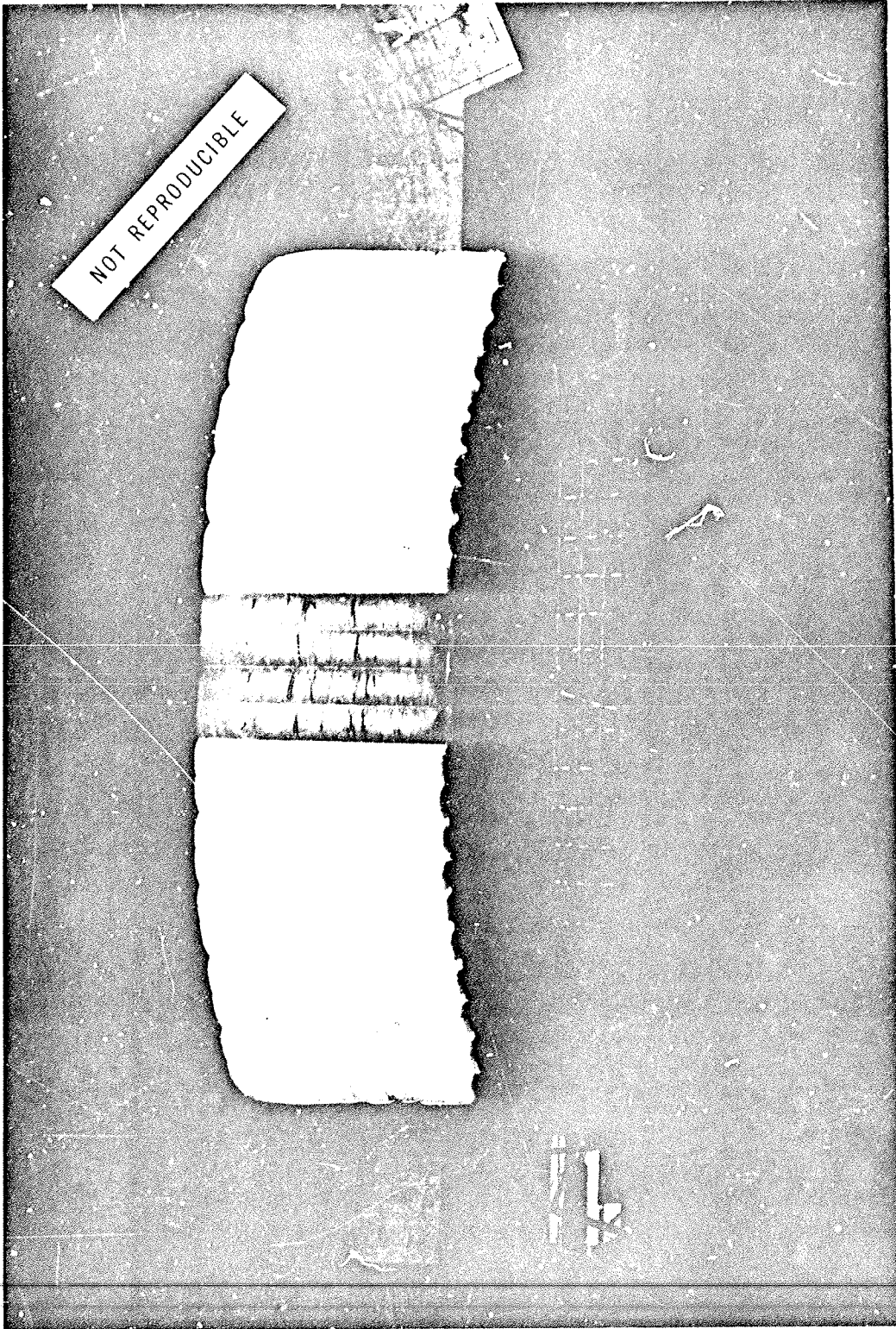


Figure 3l c : Strut AR 3.0 Model. $\alpha = 17.5^\circ$

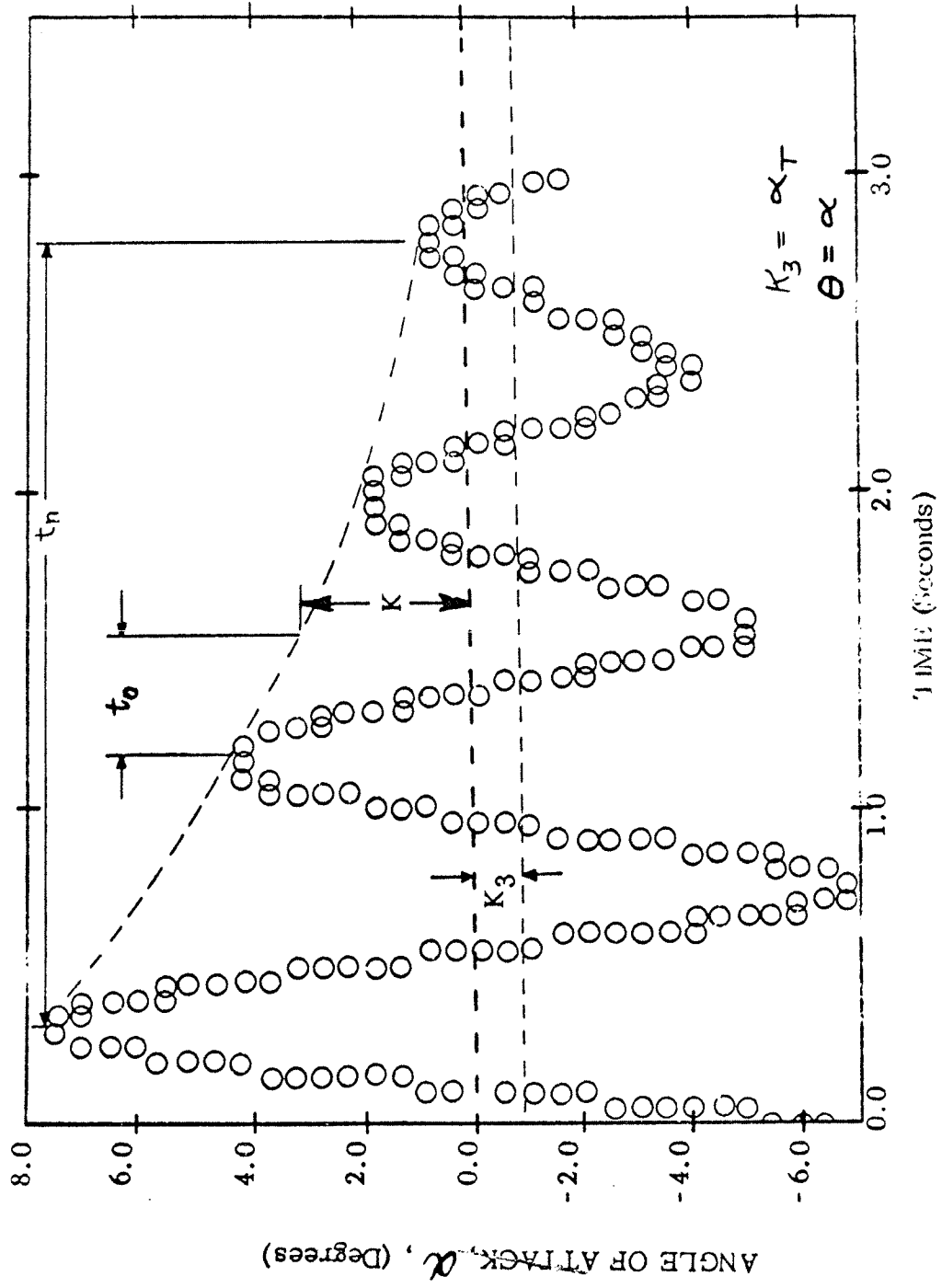


Fig. 32 Data Plot (Test No. 28)

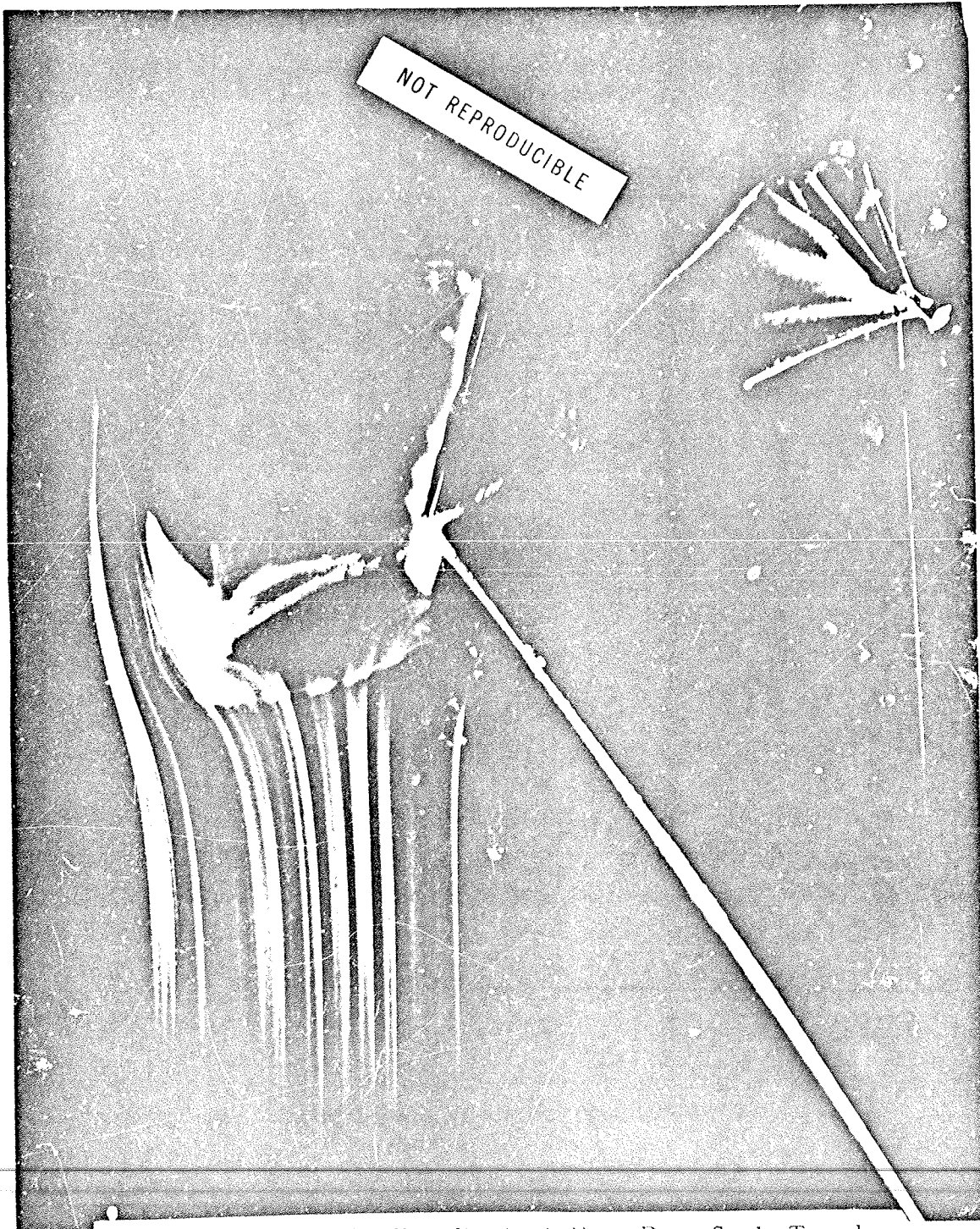


Fig. 33 Para-Flow Flow Visualization in Notre Dame Smoke Tunnel

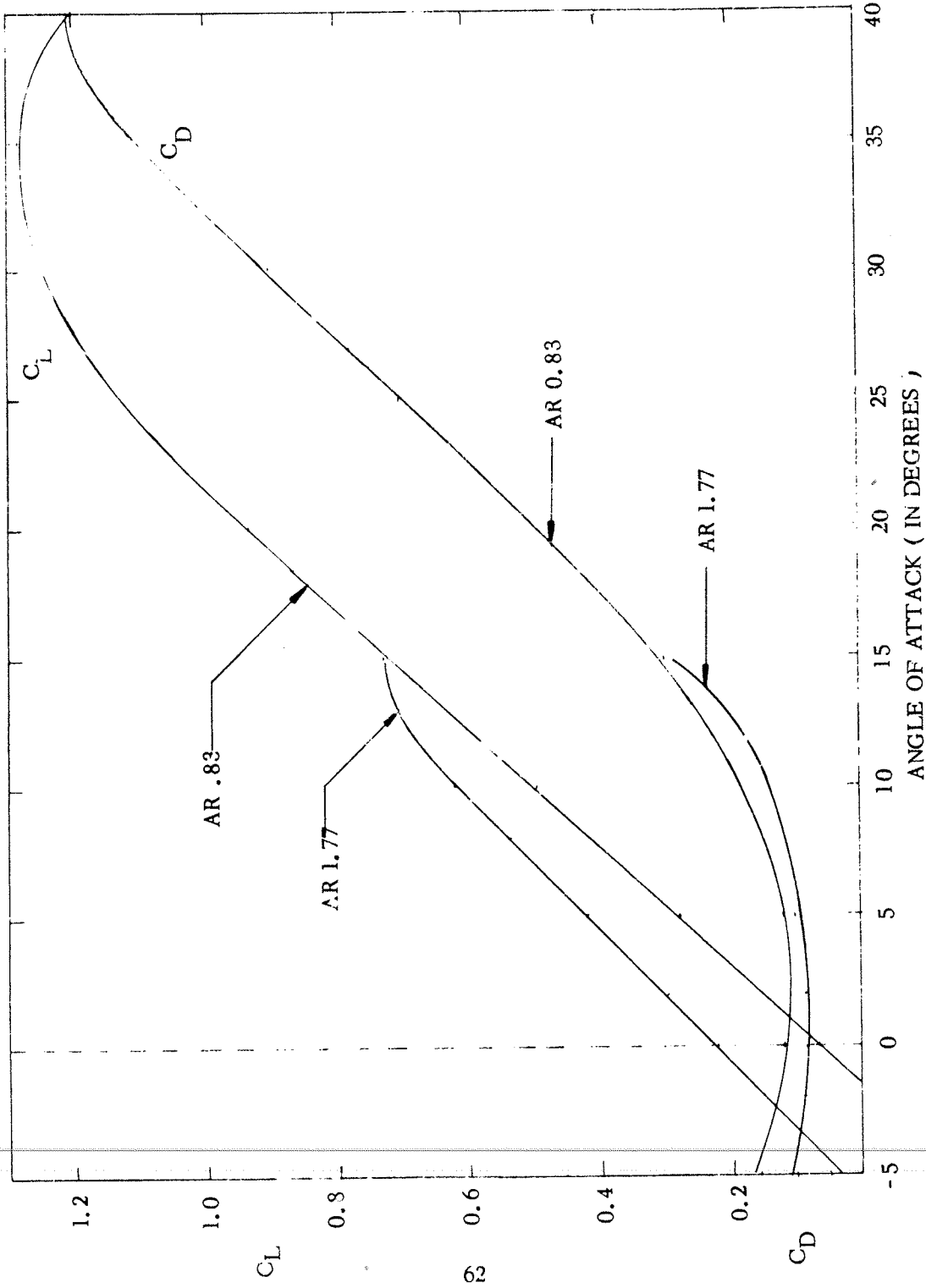


Figure 34. Early Notre Dame Tests : Summary Lift and Drag

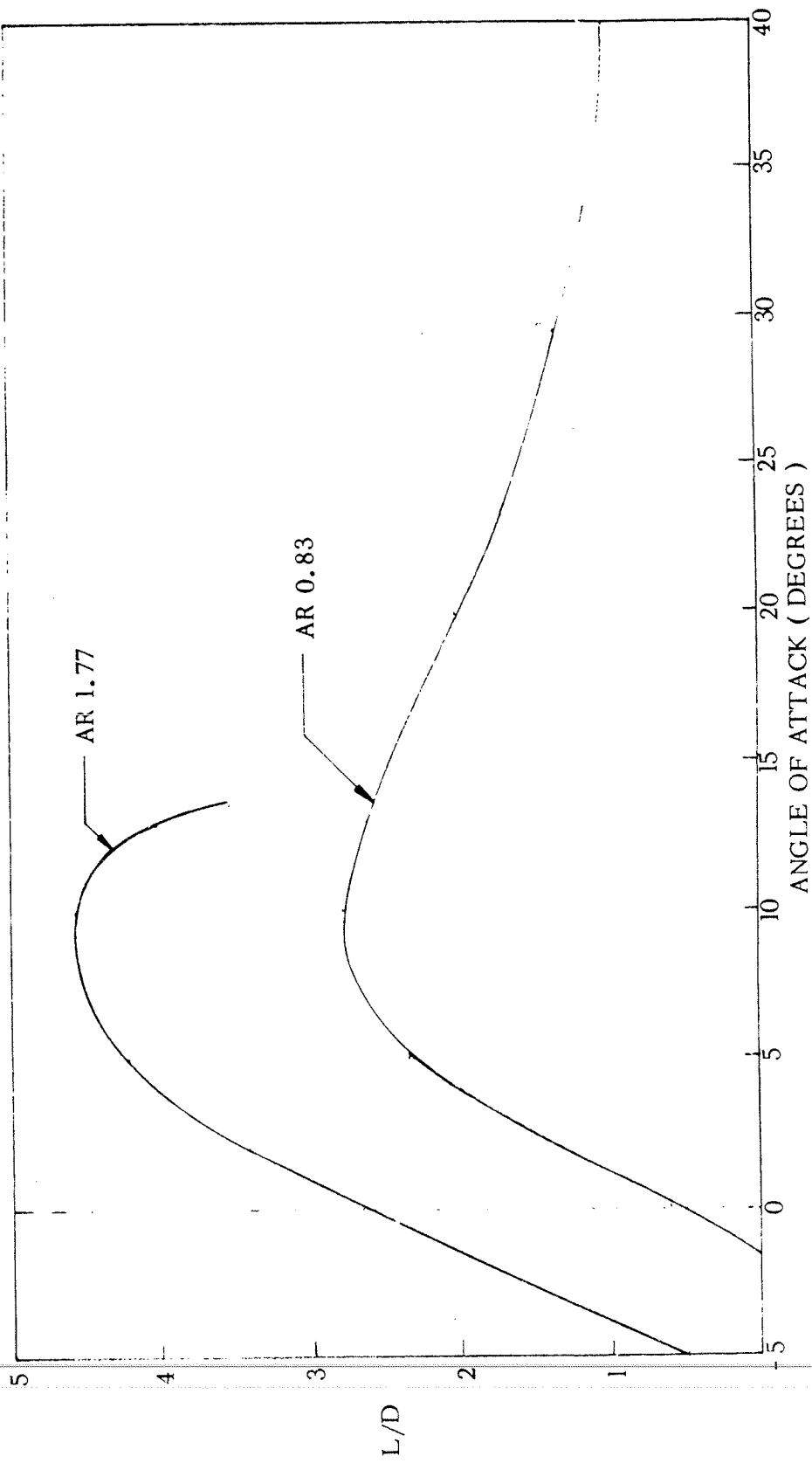


Figure 35. Early Notre Dame Tests : Summary Lift to Drag Ratio

	Rigid Airfoil	Rigid Airfoil plus Flares	Rigid Airfoil plus Nylon Cloth	Rigid Airfoil plus Flares plus Nylon Cloth
Symbols:	+ ———	x ———	Δ ———	o ———
$C_{L\alpha}$.0500/deg	.0508/deg	.0530/deg	.0510/deg
C_{Lmax}	.98 @ 17.5°	.93 @ 17.5°	1.12 @ 19.5°	1.20 @ 21.5°
Stall	17.5°	17.5°	19.5°	21.5°
Drag	(Basis)	Approx. same	Greater	Slightly greater
L/D_{max}	5.0 @ 10°	5.15 @ 11°	4.43 @ 11°	4.81 @ 11.5°

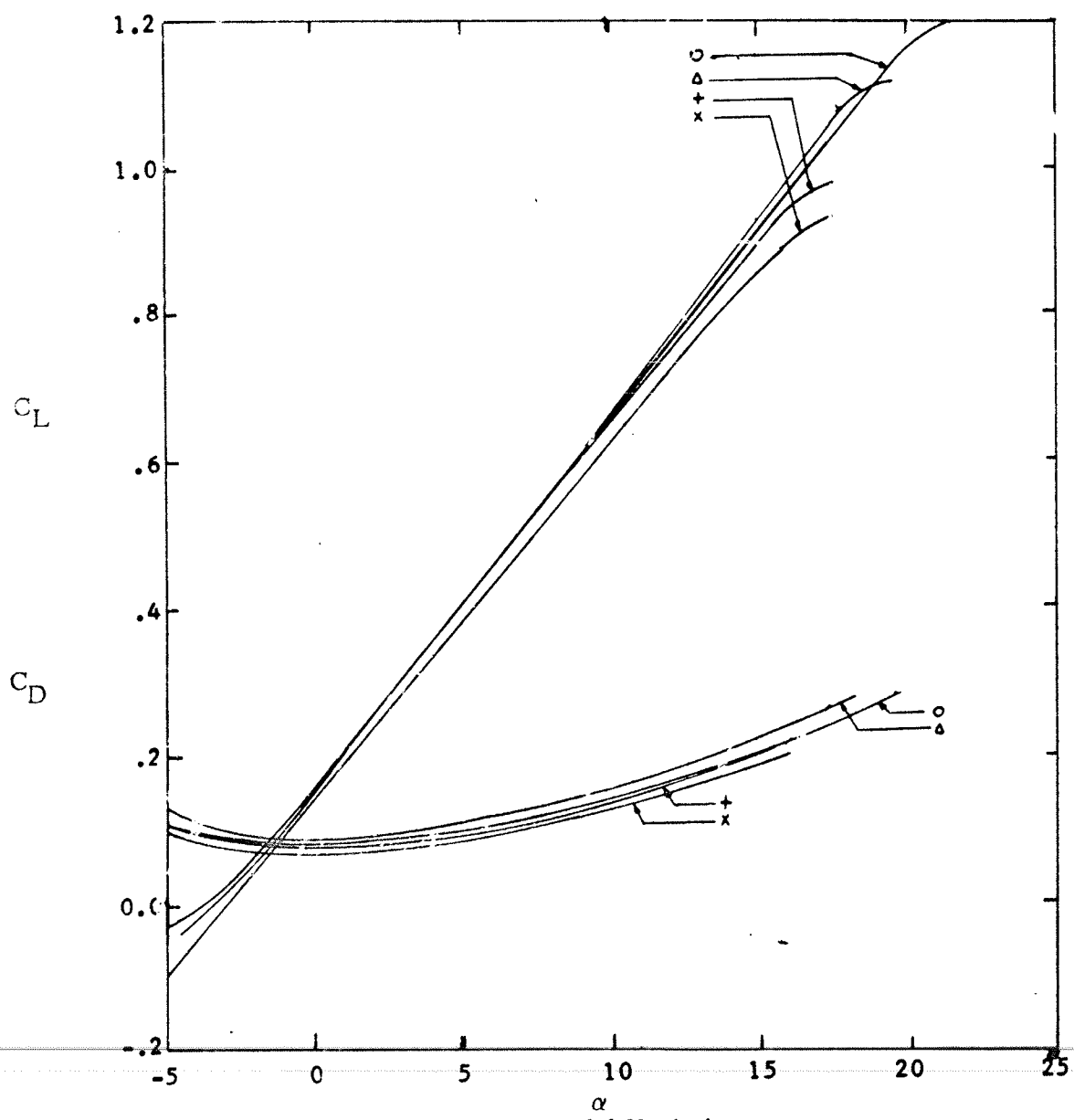


Figure 36. Rigid Airfoil with Model Variations

	Rigid Parafoil	Rigid Parafoil plus Flares	Rigid Parafoil plus Nylon Cloth	Rigid Parafoil plus Flares plus Nylon Cloth
Symbols :	+ ———	x ———	Δ ———	○ ———
$C_{L,\alpha}$:	.0400/deg	.0408/deg	.0440/deg	.0410/deg
$C_{L,max}$:	.66 @ 11.5°	.58 @ 9.5°	.74 @ 11.5°	.72 @ 13.5°
Stall :	11.5°	9.5°	11.5°	13.5°
Drag :	(Basis)	Slightly Greater	Greater	Slightly Greater
L/D_{max} :	5.0 @ 7.5°	4.0 @ 6.5°	3.9 @ 8°	4.6 @ 10°

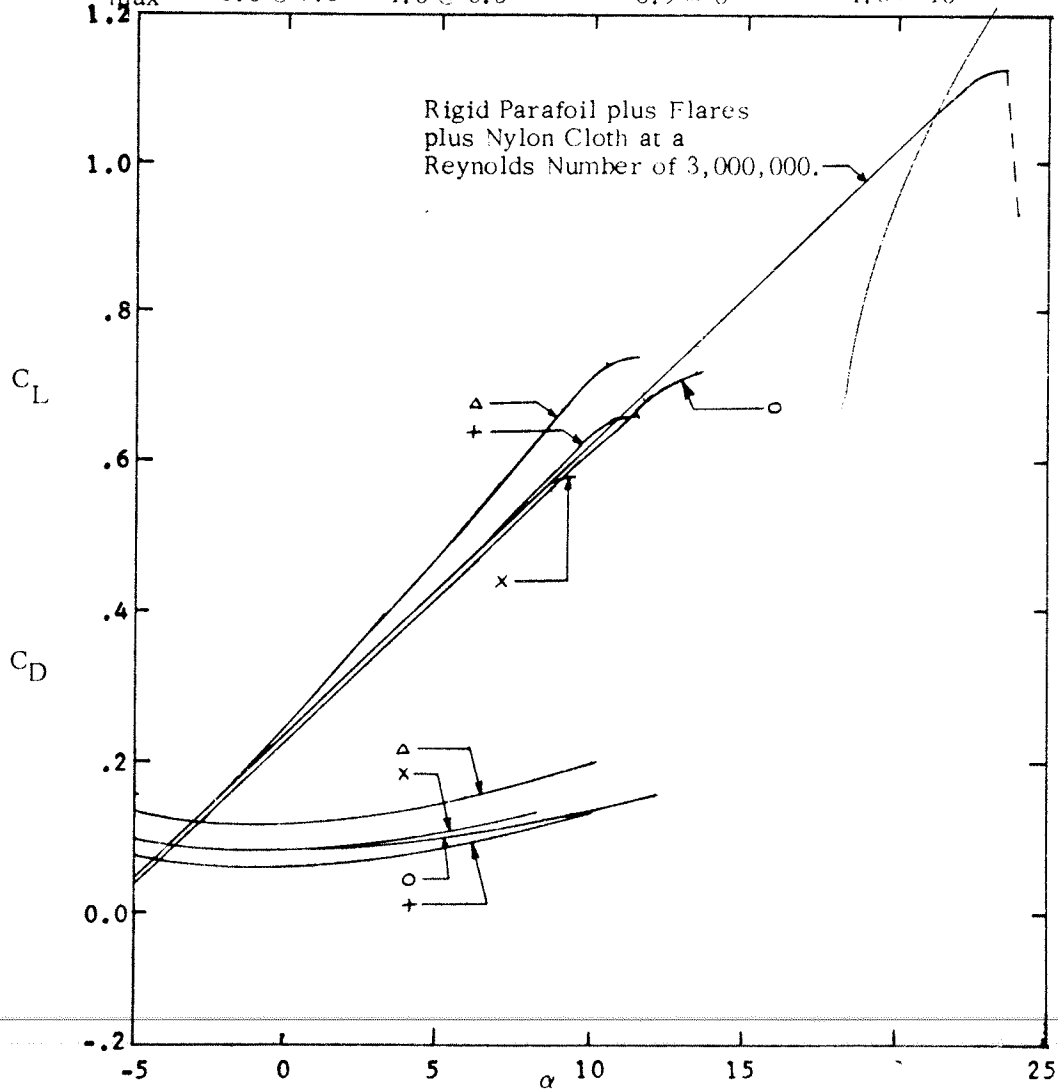


Figure 37. Rigid Parafoil with Model Variations

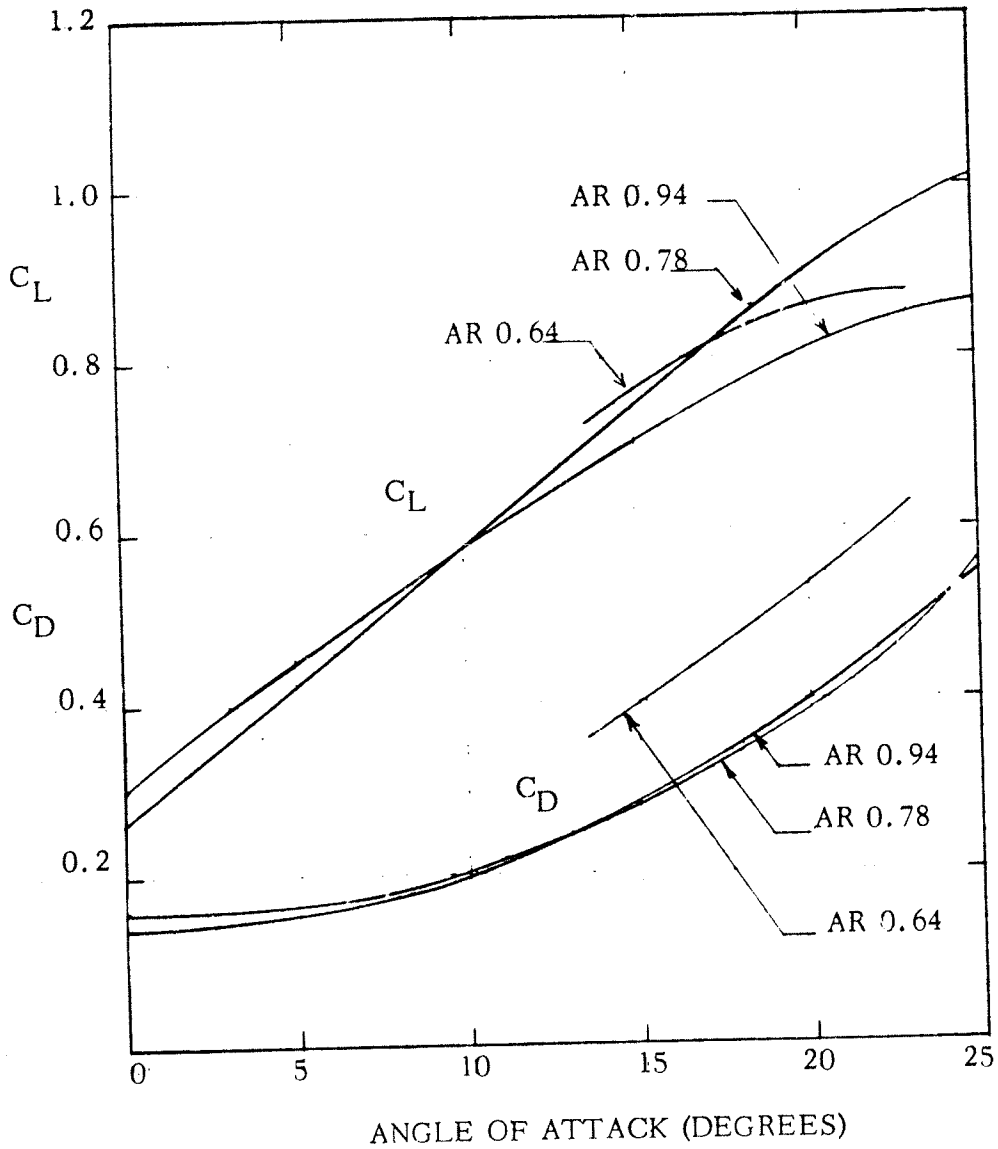


Figure 38. Early NASA Tests: Lift and Drag Summary

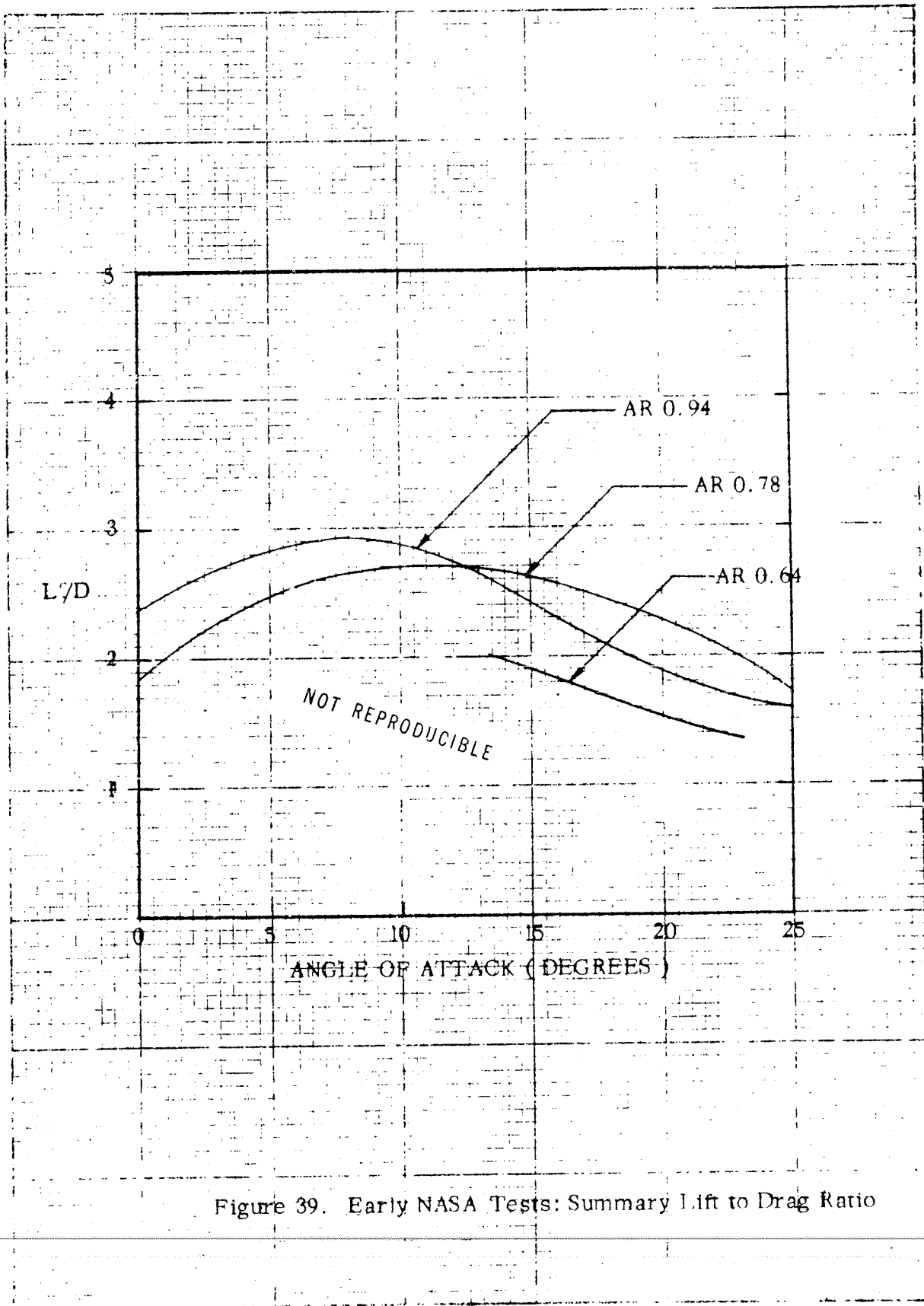


Figure 39. Early NASA Tests: Summary Lift to Drag Ratio

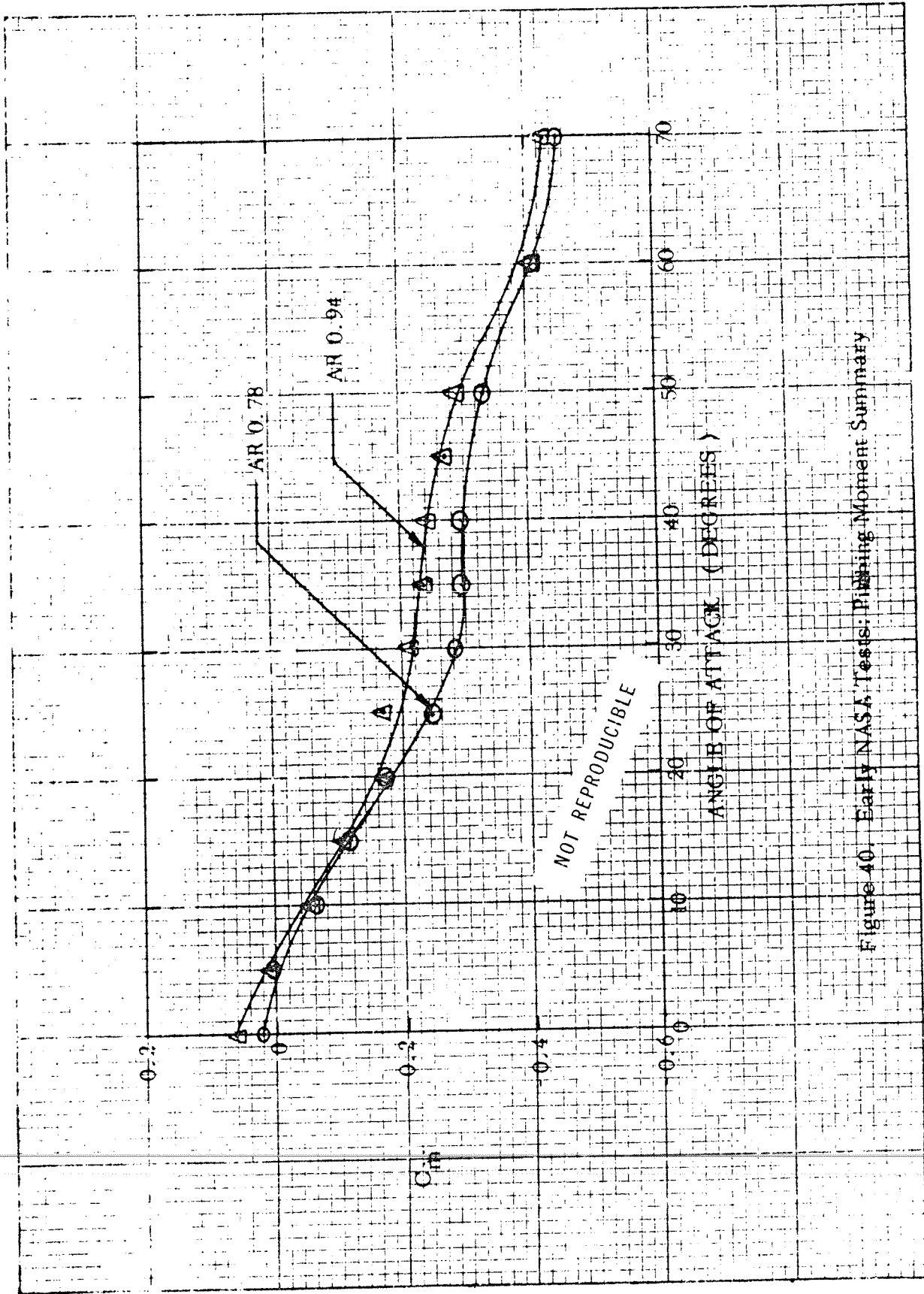


Figure 40 Early NASA Tests: Pitching Moment Summary

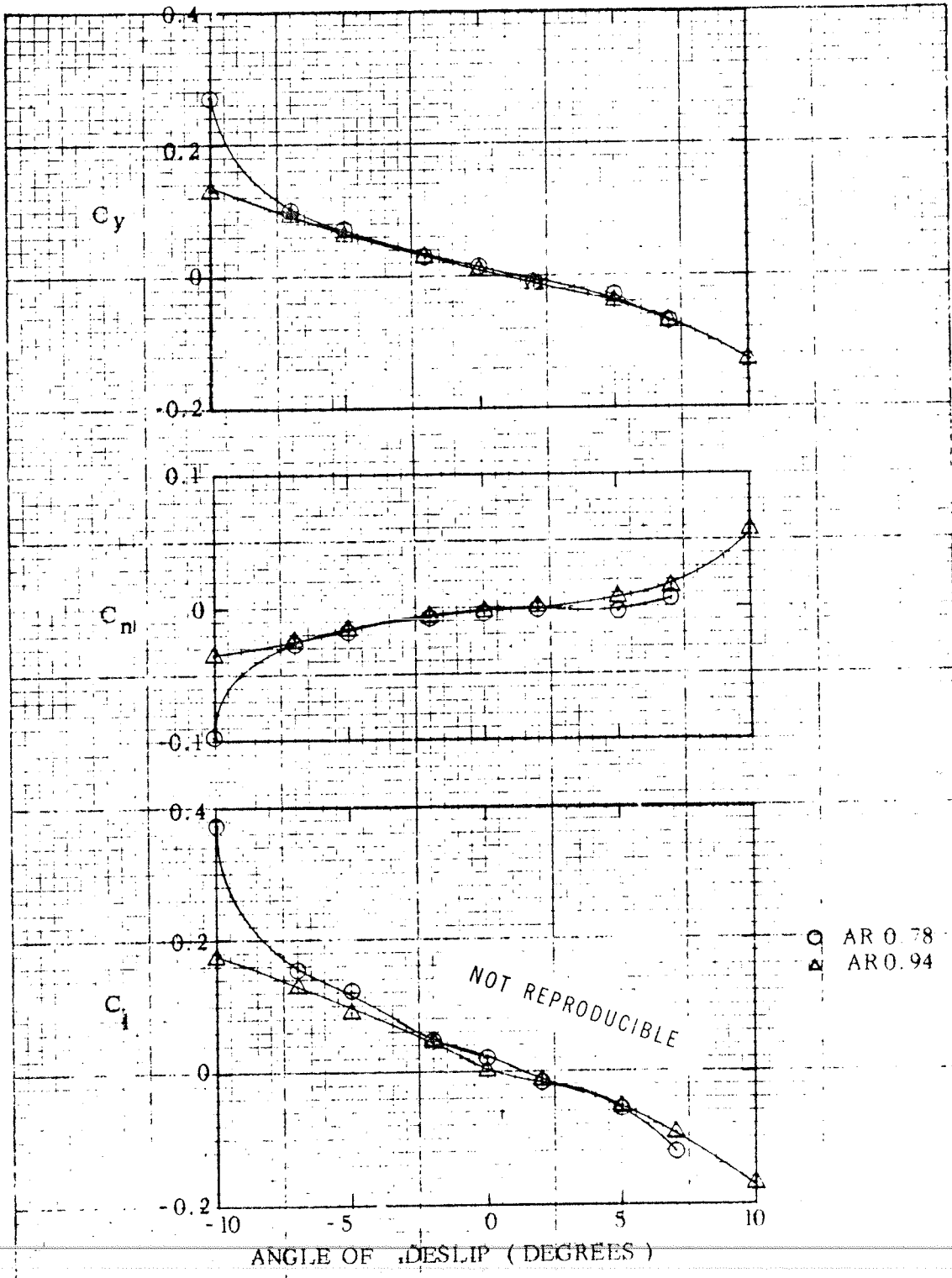


Figure 4. Early NASA Tests: Lateral - Directional Moment Summary

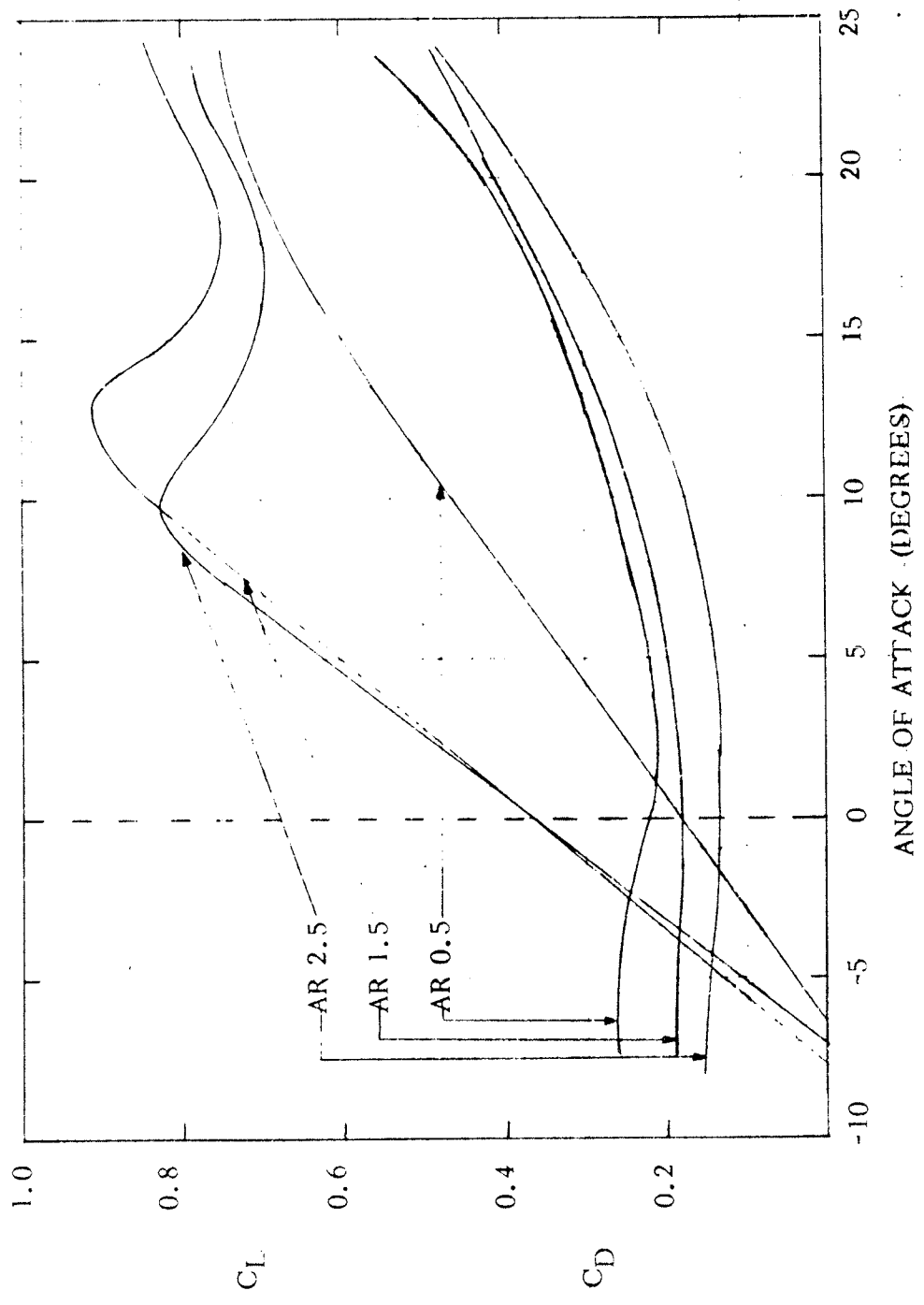


Figure 42a. Notre Dame 1967 Tests: Lift to Drag Summary Curves

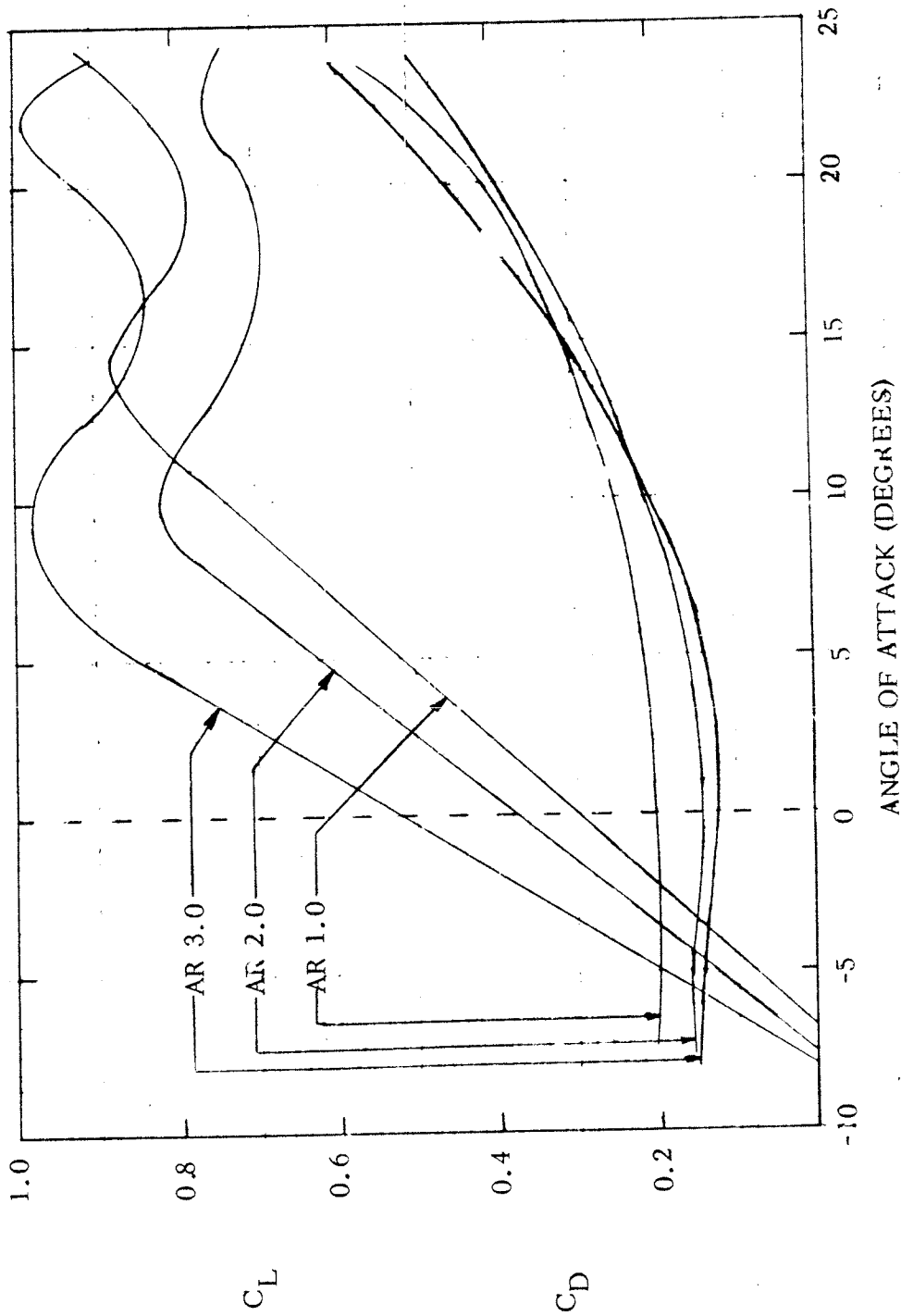


Figure 42b. Notre Dame 1967 Tests: Lift to Drag Summary Curves

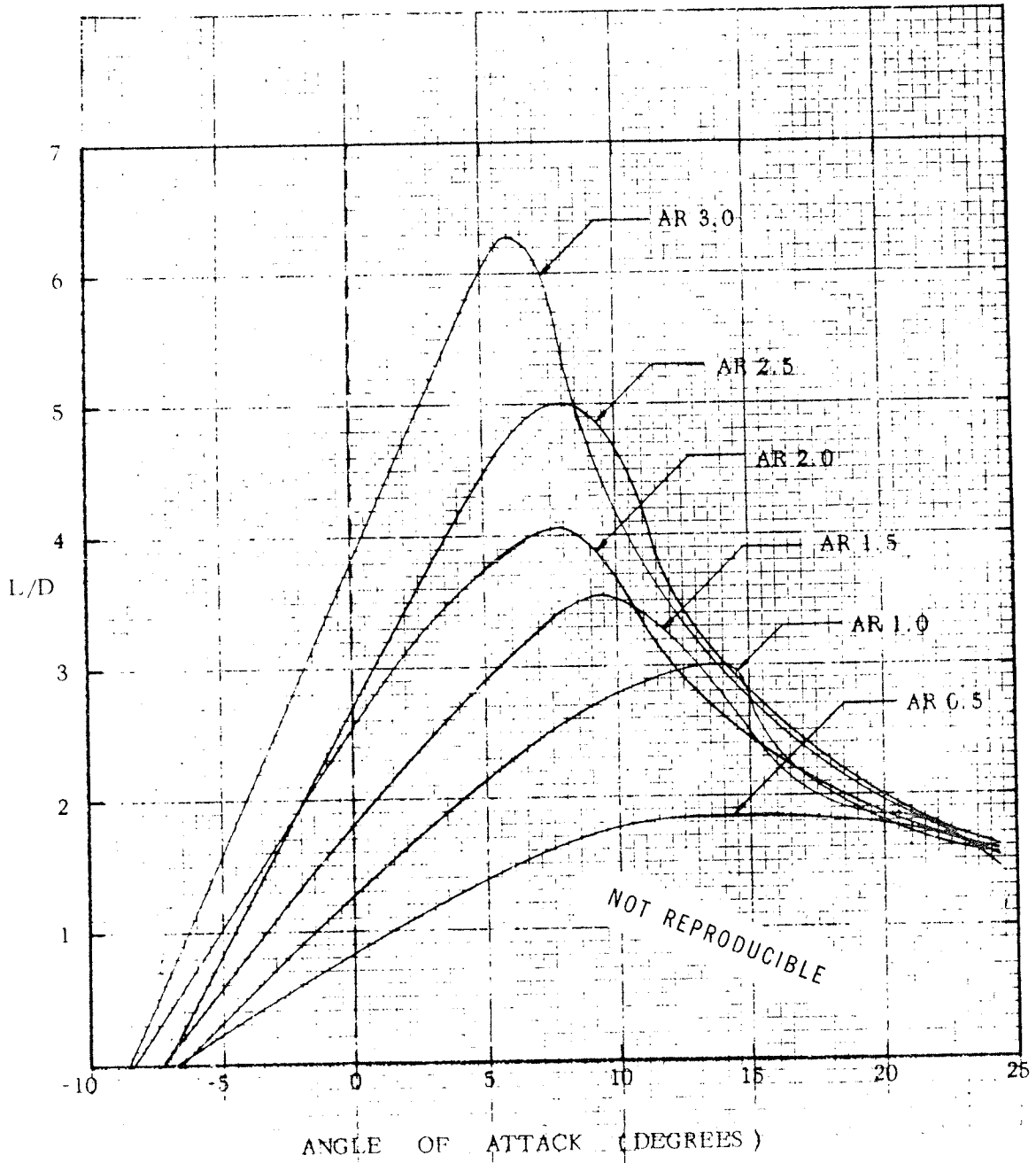
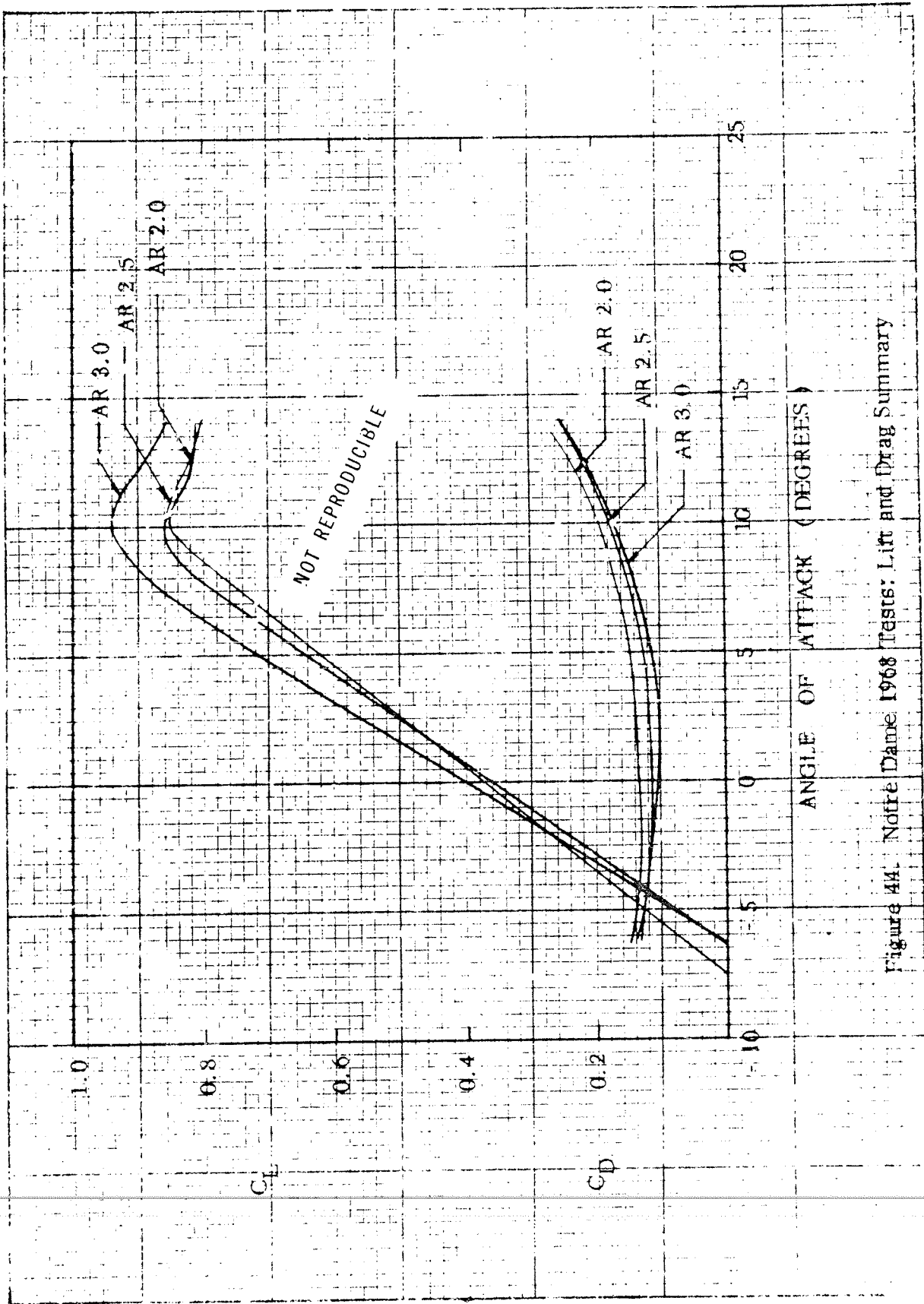


Figure 43. Notre Dame 1967 Tests: Lift to Drag Ratio Summary Curves



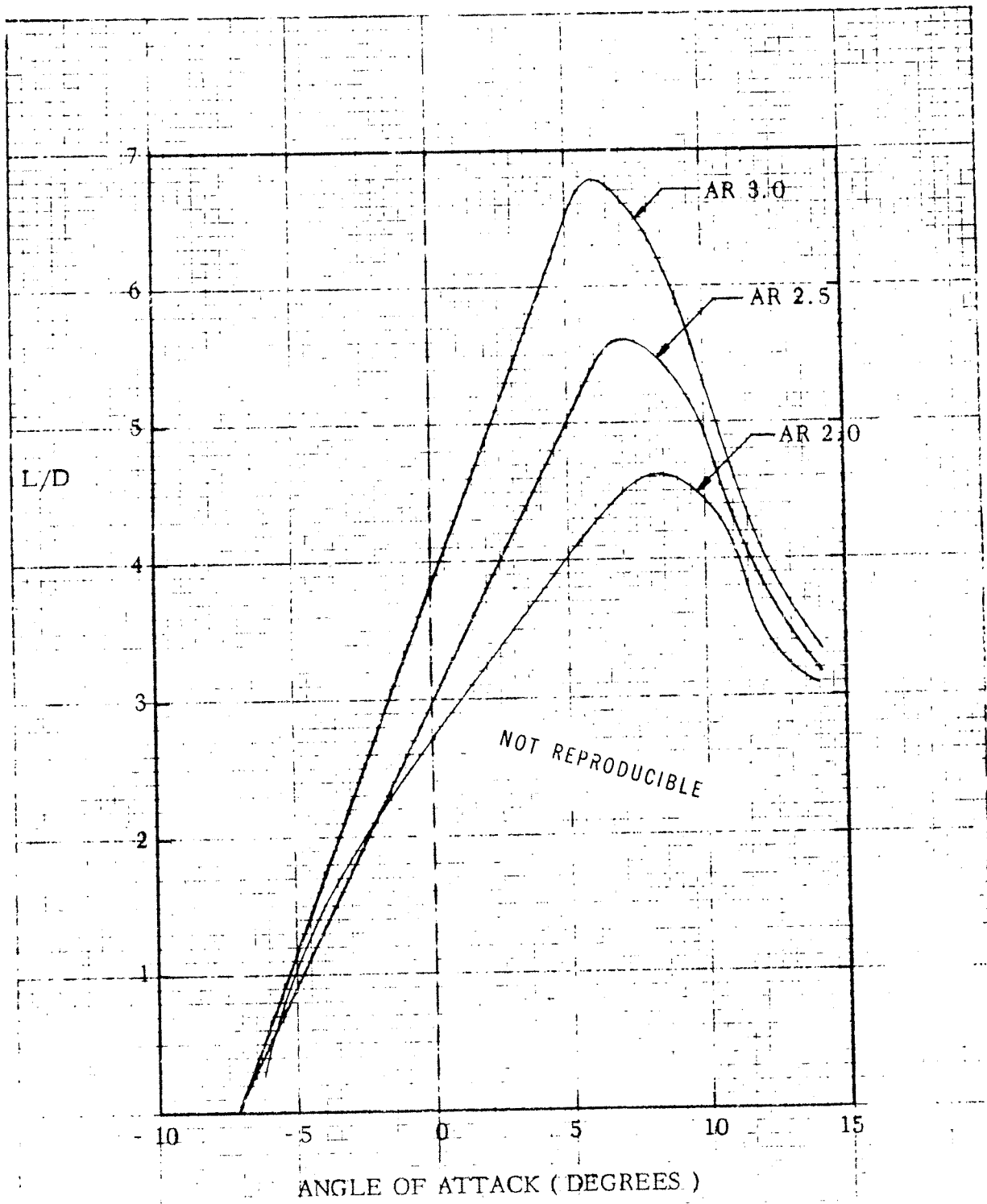


Figure 45. Notre Dame 1968 Tests: Summary Lift to Drag Ratio

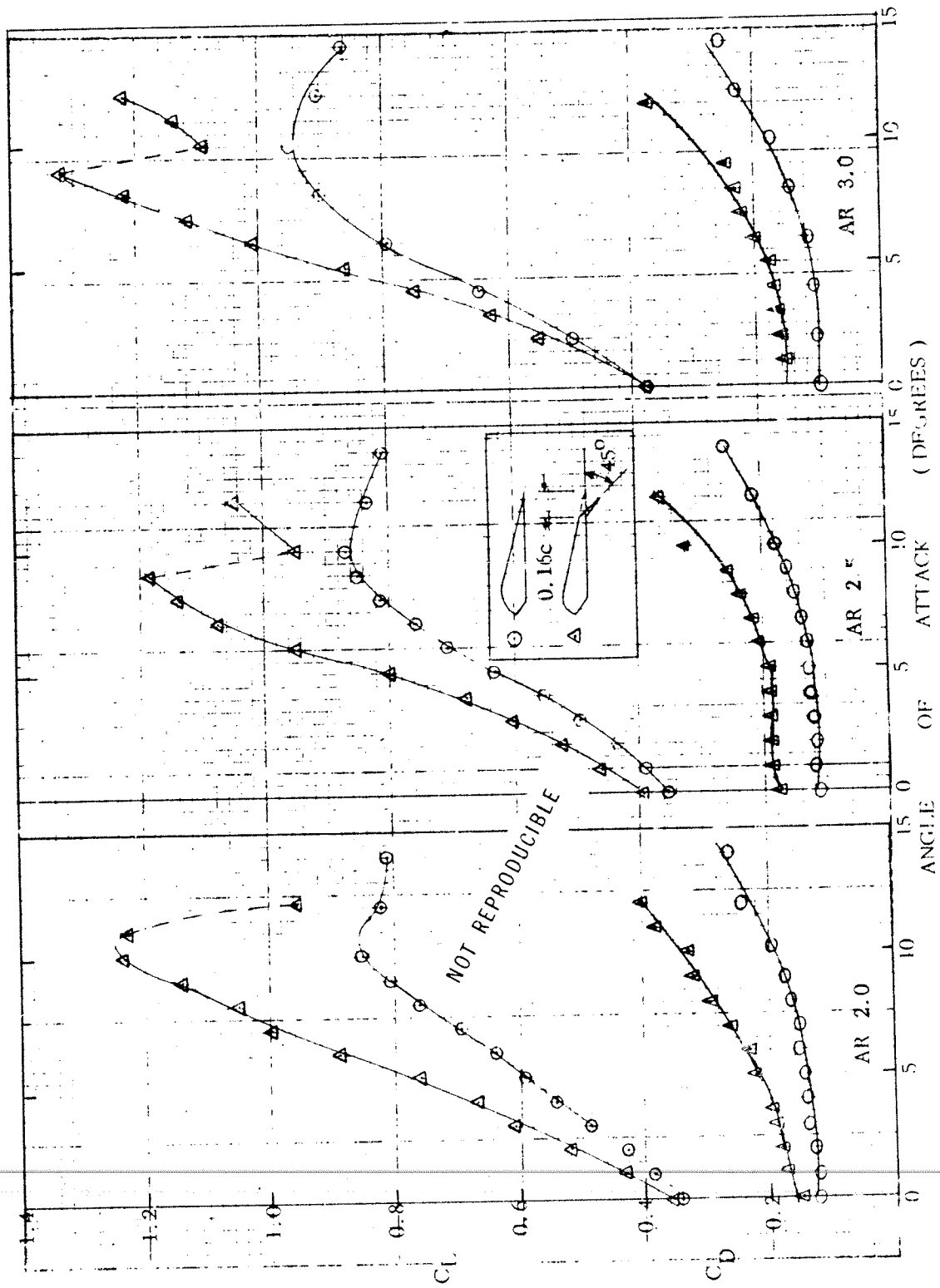


Figure 46. Notre Dame 1968 Tests: Flap Deflection Summary Lift Curves

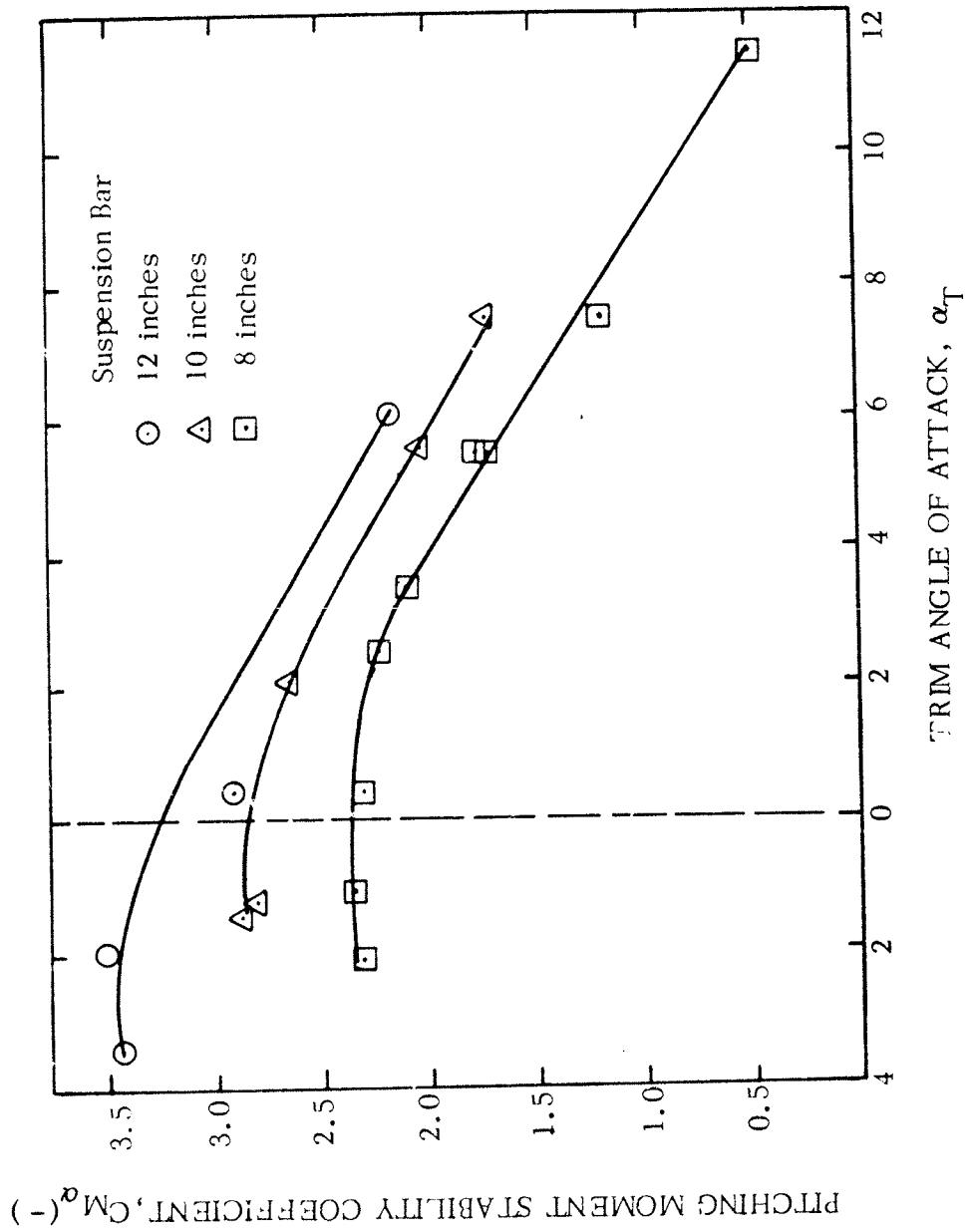


Fig. 47a. Variation of the Pitching Moment Stability Coefficient with Trim Angle.

PITCHING MOMENT STABILITY COEFFICIENT, C_{M^a} (-)

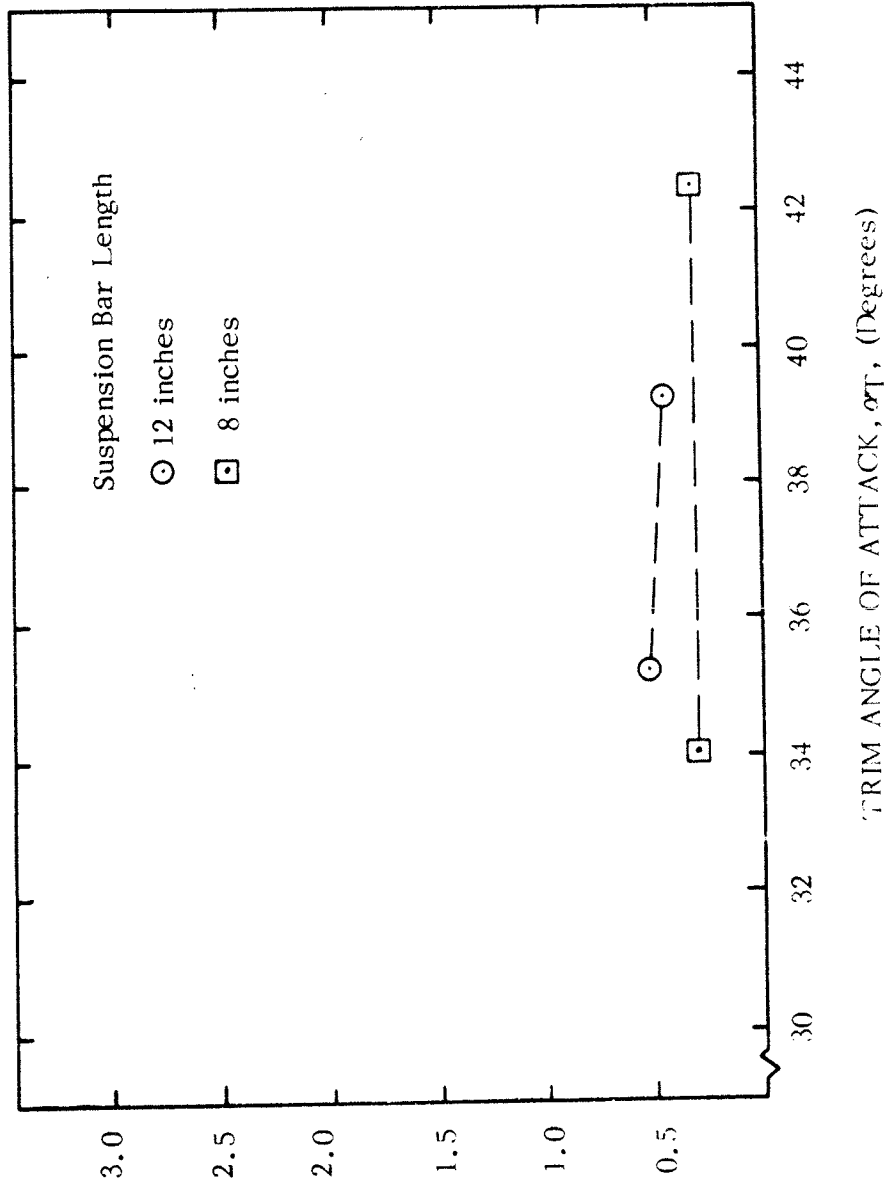


Figure 47b. Variation of Pitching Moment Stability Coefficient with Trim Angle.

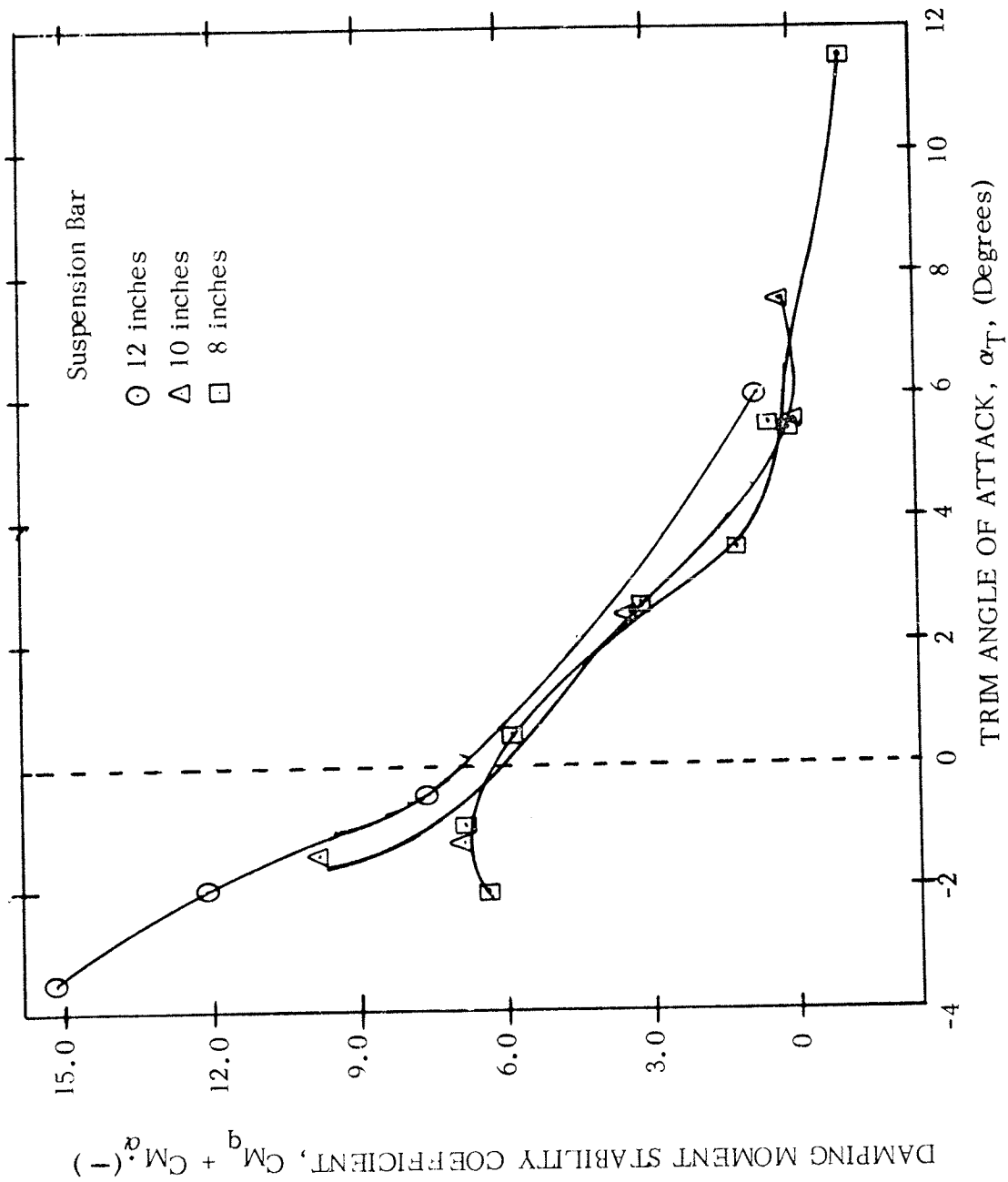


Figure 48a. Variation of Damping Moment Stability Coefficient with Trim Angle