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- C87-130 Aeroelastic Stability Characteristics of a Composite Swept Wing with Tip Weights for an Unrestrained Vehicle. I. Lottati, *Technion-Israel Institute of Technology* (24, 11, p. 793) Article
- C87-131 Buckling, Postbuckling, and Failure of Stiffened Panels Under Shear and Compression. Rocky R. Arnold and Jatin C. Parekh, *Anamet Laboratories*, *Inc.* (24, 11, p. 803) Article based on AIAA Paper 86-1027 CP863
- C87-132 Aeroelastic Tailoring of Aft-Swept High-Aspect-Ratio Composite Wings. John A. Green, *Stanford University* (24, 11, p. 812) Article
- C87-133 Damping in Beams with Multiple Dry Friction Supports. D. M. Tang, E. H. Dowell and J. E. Albright, *Duke University* (24, 11, p. 820) Article
- C87-134 Analysis of Unsteady Aerodynamics for Elastic Bodies in Supersonic Flow. Pablo Garcia-Fogeda and D. D. Liu, *Arizona State University* (24, 12, p. 833) Article based on AIAA Paper 86-0007
- C87-135 Effect of Kármán Vortex Shedding on Airfoil Stall Flutter. L. E. Ericsson, Lockheed Missiles and Space Company, Inc. (24, 12, p. 841) Article based on AIAA Paper 86-1789 CP865
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- C87-137 Planform Effects for Low-Fineness-Ratio Multibody Configurations at Supersonic Speeds. S. Naomi McMillin and Richard M. Wood, *NASA Langley Research Center* (24, 12, p. 856) Article based on AIAA Paper 86-1799 CP865
- C87-138 Experimental Investigation of Rotorcraft Hub and Shaft Fairing Drag Reduction. Larry A. Young, David R. Graham and Robert H. Stroub, NASA Ames Research Center (24, 12, p. 861) Article based on AIAA Paper 86-1783 CP865
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- C87-140 Supersonic Airfoil Optimization. James L. Pittman, NASA Langley Research Center (24, 12, p. 873) Article based on AIAA Paper 86-1818 CP865
- C87-141 Some Effects of Interference Flowfields on Supersonic Configurations. M. Leroy Spearman, NASA Langley Research Center (24, 12, p. 880) Article based on AIAA Paper 86-2078 CP867