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Development of a Landing Drag Chute System for Very Light Jets

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Figure 1: Viper Aircraft all carbon fiber experimental Mark II Viper Jet with performance unmatched by any other very light jet. **Photo:** Used with permission of Viper Aircraft Corporation.

Abstract:

The recent emergence and proliferation of very light jets will revolutionize the general and corporate aviation markets with new innovative technologies to reduce operational costs, increase efficiency and operational flight capabilities. These jets will be operating from smaller municipal airports with shorter runway lengths. To allow safer operations from shorter runways, light weight high performance landing brake parachute systems have been developed by the author for use in very light jets. This paper describes the design and development of a landing drag chute system for the all carbon fiber construction Viper Jet Mark II aircraft. Design principles and configuration are derived from pervious parachute systems fight qualified for high speed deployments on rockets flown to space and back, as well as design heritage of the Global Flyer jet Drag chute system flown non-stop around the world in 2005 and 2006 by Steve Fossett to set 3 new aviation world records. The design principles and concepts outlined in this paper can adapted and modified for use in other very light jet aircraft currently on the market.