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AN ANALYSIS OF POSSIBLE SAFETY LAPSES ARISING DURING SUBORBITAL FLIGHT USING
AVIATION ACCIDENT TRENDS AND CAUSATIONS.

Abstract

The planned flights of the suborbital Reusable Launch Vehicle (RLV) beginning with the launch of SpaceShipTwo this year will mark the commencement of operational flights with Spaceflight Participants (SFP) to suborbit. However, unlike aviation, the lack of historical data on flight safety for suborbital RLV renders a challenge for the industry and agencies to predict possible areas of inflight failures; particularly those arising from human error. Regulations place emphasis on hardware and public safety; but, unlike the aviation industry, human error is not sufficiently addressed— especially considering that human error contributes to majority of aviation accidents and incidents. Considering that there are similarities between commercial aviation aircraft operations as well as some of the suborbital RLV's in terms of flight operations, this paper will analyze aviation accident and incident trends by phases of flight and human error causations to extrapolate to suborbital flights.