

## **LiDAR on Ice**

James Van Rens <sup>a</sup>

<sup>a</sup> RIEGL USA, 7035 Grand National Drive, Orlando, FL 32819- jvanrens@rieglusa.com

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### **ABSTRACT:**

An advanced dual-channel airborne LiDAR system is being used to estimate snowpack within major mountain watersheds for snow observation. This LiDAR system is taking snowpack assessment to a new level. Snowmelt provides more than seventy-five percent of the freshwater supply for the western United States. This LiDAR system is being utilized to monitor and track changes in the snowmelt. Flying at an altitude of 22,000 feet, the LiDAR system is able to produce the most accurate measurement to date of snowpack. The created models are then able to predict how much snowmelt the state reservoir operations will receive. This permits more effective flood control, water supply management, and hydroelectric power generation. In addition, this information also allows for better ways to handle natural resource management, as well as water resource assessment and management.