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Unmanned Stratospheric Glider for Satellite Calibration

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Stratodynamics Aviation Inc. is an Earth Observation platform and service provider that's pioneered a new cost-effective method of remote access the stratosphere. The platform called the HiDRON has successfully deployed scientific instruments over 100,000 feet above the earth and back again using balloon launched, autonomous technology.

Most satellites are able to self-calibrate however, optical and spectral units that are required to interpret data through the boundary layer face difficult challenges. We've identified opportunities to calibrate instruments by flying proxy beam/pulse emitters at stratospheric altitudes. As well, we see meaningful advantages to an Aircore integrated system that can capture high altitude air samples as a validation exercise. This method serves to extend the mission life of satellites beyond their intended length. Specifically, the RADARSAT constellation, the COPERNICUS program, AEOLUS as well as future Greenhouse Gas sensing satellites.

We would like to propose this technology to the EGU General Assembly 2020 for consideration as a calibration solution.