

**EXPLORING RADAR-LIDAR
SYSTEMS AND SYNERGIES**

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ABSTRACT

Radar and Lidar instruments are used to detect and gather a massive amount of information about earth's surfaces, atmosphere and its oceans. These instruments can be used separately or combined to improve our understanding of detection strategies, earth's climate, carbon cycle, ecosystem science etc. Lidar and Radar have different characteristics as they are transmitted at different wavelengths. These fundamental differences and characteristics presents an opporunity to observe how they can complement each other to progress in this field. This research attempts to review radar and lidar by comparing them and exploring the possibilities for radar-lidar synergies that can overcome the current limitations in detection technologies.