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Paper Title:	**A Systematic Examination of Ground-Based and Space-Based Approaches to Optical Detection and Tracking of Artificial Satellites**
Abstract:	Space situational awareness is the cornerstone of our national security space strategy to promote the responsible, peaceful, and safe use of space. Radar systems are traditionally used for detection and tracking of space objects in low earth orbit (LEO), but optical systems are necessary for detection and tracking of satellites in higher orbits such as medium earth orbit (MEO), geosynchronous orbit (GEO), and high earth orbit (HEO). Current optical surveillance approaches include both ground-based and space-based sensors. Each approach has its advantages and disadvantages and there are significant differences in cost for procurement and operations. This paper presents a systematic examination of the characteristics of each approach and the relative merits of various combinations of ground-based and space-based sensors for detection and tracking of satellites at altitudes above LEO.