ABSTRACT

TITLE:	Tracking Space Debris With a Single Camera System Via Gauss's Method
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ABSTRACT: Mankind has just over 1,000 operational satellites in orbit around the earth. Aside from those, people are tracking 15,000 chunks of space debris in orbit about the earth. There are an estimated 500,000 marble-size or larger chunks of space debris in orbit about the earth, moving at roughly 20,000 mph. These operational satellites are vital to our modern economy, so it is essential that we can track all the space debris possible in order to avoid catastrophic collisions. My senior research project explored the feasibility of a simple, single camera system as a means to track space debris and uniquely define the debris' orbit via Gauss's method.