

## Reduce the Impact of Wildfires by Identifying Them Early from Space and Sending Location Directly to Closest First Responders

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**Abstract :** The evolution of global warming has escalated the number and complexity of forest fires around the world. As an example, the United States and Brazil combined generated more than 30,000 forest fires last year. The impact to our environment, structures and individuals is incalculable. The world has learned to try to take this in stride, trying multiple ways to contain fires. Some countries are trying to use cameras in limited areas. There are discussions of using hundreds of low earth orbit satellites and linking them together, and, interfacing them through ground networks. These are all truly noble attempts to defeat the forest fire phenomenon. But there is a better, simpler answer. A bigger piece of the solutions puzzle is to see the fires while they are small, soon after initiation. The approach is to see the fires while they are very small and report their location (latitude and longitude) to local first responders. This is done by placing a sensor at geostationary orbit (GEO: 26,000 miles above the earth). By placing this small satellite in GEO, we can "stare" at the earth, and sense temperature changes. We do not "see" fires, but "measure" temperature changes. This has already been demonstrated on an experimental scale. Fires were seen at close to initiation, and info forwarded to first responders. It were the first to identify the fires 7 out of 8 times. The goal is to have a small independent satellite at GEO orbit focused only on forest fire initiation. Thus, with one small satellite, focused only on forest fire initiation, we hope to greatly decrease the impact to persons, property and the environment.

**Keywords :** space detection, wildfire early warning, demonstration wildfire detection and action from space, space detection to first responders

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