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### Tags: Data Visualization

*Inbound displays, in an abstract manner, the frequency Earth is bombarded by CMEs. Minimalist and modern, Inbound mounts to any wall to remind people that solar activity has a constant and tangible impact on our planet. Inbound shows colored sections at either end of a board, one red (the Sun) and one blue (Earth). When a CME is detected by the STEREO or LASCO satellites we determine its travel time and light the white LEDs on the board to show the CME as it rolls closer to Earth.*

This project is solving the [**Solar Flare**](https://2013.spaceappschallenge.org/challenge/solar-flare) challenge.

**Description**

Inbound displays, in an abstract manner, the frequency Earth is bombarded by coronal mass ejections emanating from the Sun. Minimalist and modern, the display mounts to any wall to remind and inform people that solar activity has a constant and tangible impact on our planet.

While discussing the possible challenges our team wanted to tackle, we quickly realized that no one in the group was aware that a CME had just passed by Earth days earlier. Our aim was to help make people more aware by building a continuously-on piece of wall art that illustrated the large number of CMEs that interact with our little corner of space.

Inbound shows two colored sections at either end of a long board, one red to represent the Sun, and the other blue to represent Earth. Whenever a partial or full-halo CME is detected by either the STEREO or LASCO satellites we determine the lift-off time and velocity at which it is traveling; we then light up the white LEDs on the board, in progression, to show the CME as it rolls closer to Earth.

Please take a few moments to watch our project video below for a demonstration and full explanation on how we put this project together. We've also included all of the source code for both the web service and Arduino at the GitHub link below.

**Project Information**

* License: [Apache License, Version 2.0](http://opensource.org/licenses/Apache-2.0)
* Source Code/Project URL: <https://github.com/mcongrove/Inbound/>