

# SID's and the SidDataGrabber

SID's are Sudden Ionospheric Disturbances caused by X-rays from the sun. The AAVSO Solar Section has been collecting information on SIDs since 1958 and continues to this day. It is easier than ever to setup a SID monitor and collect data 24/7 for the AAVSO to contribute to this project.

What we do is capitalize on the Stanford/SARA project that has created software and an inexpensive SuperSID monitor device. ( <http://solar-center.stanford.edu/SID/sidmonitor> ). For about \$150 and 10 hrs effort you can build an antenna and setup a monitoring station.

Providing data to the Stanford project is well and good, but its goals are different from the AAVSO project. What we do here is re-purpose that data. The SidDataGrabber application helps you to quickly sort through the daily data logs generated by your monitor and extract the information needed by the AAVSO Solar Section.

The Stanford project is passive: you automatically ftp your data to them and forget that you even have a monitor running. By revisiting your data monthly to cull data for the AAVSO project you get back in touch with why you built the monitor: to see the wonders of the Sun and its impact on our ionosphere.

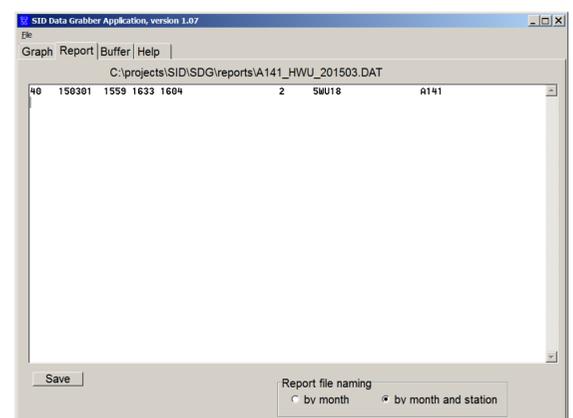
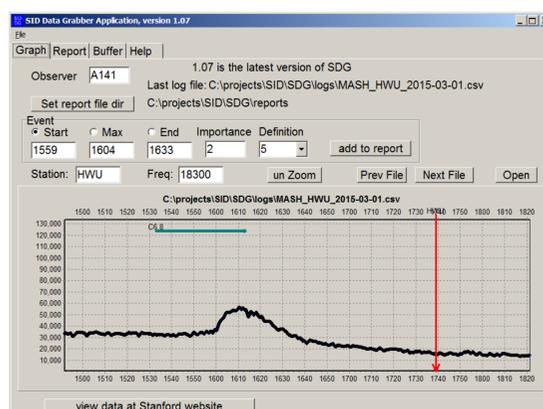
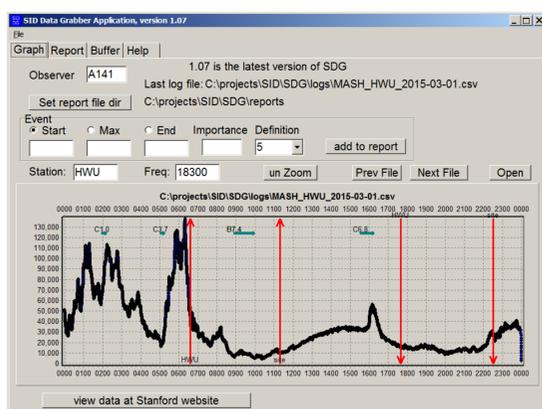
Here's how to do it:

- Build an antenna. The AAVSO website has instructions for a suitable antenna: <http://www.aavso.org/print/simple-easy-build-sid-receiver> . These instructions show the antenna construction as well as the electronics for a receiver. Skip the latter part as we are going to use the Stanford receiver. Shown below is the electronics you purchase from the Stanford/SARA project for about \$50. ( <http://solar-center.stanford.edu/SID/obtaining/> )



- Set it up and tune it and get it online FTPing daily data reports to Stanford.

- At the end of each month use the SidDataGrabber to extract SID event data into an AAVSO report for submission to the Solar Section.



If you are interested in trying this project, take a look at the AAVSO Solar Section at <http://www.aavso.org/solar>. Contact Rodney Howe, the head of the section about becoming an AAVSO SID observer.

You'll be able to collect data even when it rains, a nice feature for you photometrists frustrated by the clouds!

The SidDataGrabber application is available at <http://www.aavso.org/sid-data-grabber>

George Silvis, A141, 2015