

New Generation Instrument – QF-2010

On March 30, 2011, we deployed the first prototype of our new QF-2010 instrument. The system has 3 new and smaller induction magnetometers (buried), and two air conductivity sensors (for simultaneous detection of positive and negative ions, in the white cylinder with “Frisbee hat”) to detect electromagnetic signals associated with nearby earthquakes. It also has a simple geophone (buried) as well as temperature and relative humidity sensors for environmental data, solar panels and a battery for power, and a cell modem for data transfers. The unit only draws 10 watts of power so it can operate several weeks, even during prolonged overcast. Even more importantly, it operates through and after an earthquake even when local power is interrupted. The overall cost has been cut in half and the time to install it has been cut to one third compared to the previous model.



Major Network Expansion

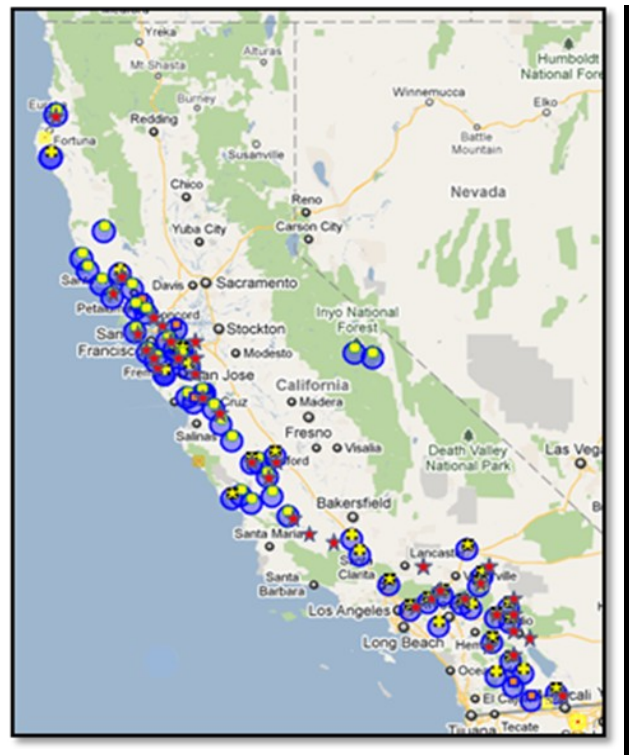
The latest instrument refinement is part of a strategic plan to replace 20 aging instruments and install 10 new instruments in California – as well as 20 new instruments in Peru, Chile, Taiwan, Greece, and Turkey during this calendar year. This ambitious plan involves placing instruments at locations with high risk for medium to large earthquakes. The goal is to get more examples of electromagnetic signals in the two weeks prior to new earthquakes to validate our earthquake forecasting methodology.

Many of the new instruments are replacing older sensors that were part of a high school science outreach project started in 2000. Those sensors have far outlasted their expected lifetimes, and are a tribute to the high school students who worked so hard to build and deploy them. They should be proud of their high school science accomplishments during this project.

These new systems are part of our effort to deploy 200 modern instruments throughout California. Please help us reach that important goal by visiting the Host and Sponsor links at www.quakefinder.com.

Finding Great Sites for the New Instruments

The map below shows the current locations (blue circles) of our 65 instruments in California. These represent five generations of instruments, each designed to be better than the last. The size of the circles represents about a 20 mile (32 km) diameter of reception for M5+ earthquakes. As you can see, there are many “holes” in coverage, and many areas still have the oldest instruments. The red stars show where we plan to replace old sensors or install new ones, filling the “holes in coverage”. A critical need for deploying new instruments is finding homeowners willing to host our sensors on their property. If you are intrigued with our program, happen to live near one of these red stars (or know someone who does,) then we invite you to contact us (below) and let’s decide together if it makes sense to locate an instrument on your property. The data from all these sites are processed daily and published on our web site.



For a more detailed view see:

<http://www.quakefinder.com/joomla15/index.php/map>

For more information or to discuss hosting an instrument, contact Tom Bleier at:

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