

We are pleased to announce our upcoming webinar of the PVQAT Soiling Group:

PV Soiling Monitoring Stations

17 October 2017 7:00 San Jose 8:00 Denver 16:00 Paris 18:00 Dubai 19:30 Mumbai 22:00 Shanghai

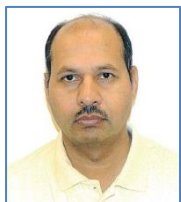
For the time in other locations, consult this [event world clock](#)

Soiling has emerged as one of the key unsolved problems for PV performance, and good data are key to understanding the issues and opportunities. This webinar will explore measurement issues and describe some commercial measurement systems available to the soiling research and PV plant operations communities.

A simple inexpensive method to measure soiling loss on PV modules

Ajay Singh & Matthew Perry, Campbell Scientific Inc., Logan, Utah

Dust accumulation studies are important to maximize the economic benefits of PV installations. Soiling is a complex phenomenon that depends on many factors that are tied to the climate of a local site, as well as activities near and around the site. One can model the economic effects of soiling, but these models need site-specific soiling rates. There are several methods to measure the soiling losses at a site. They vary in the complexity of implementation and the scope of measurement. The complexity of monitoring system designs may affect data availability. This presentation will discuss a simple system using ISC to measure the effect of local soiling conditions on PV modules.



Ajay Singh, Ph.D. is an Application Scientist in the Renewable Energy Group at Campbell Scientific Inc, a renowned supplier of quality sensor and data logging equipment. CSI equipment is found in numerous commercial and research grade monitoring networks and PV installations. Dr. Singh received his Ph.D. in Experimental Plasma Physics and has spent two decades studying (and teaching about) the stability of magnetically-confined high temperature plasmas with the end goal of controlled nuclear fusion (as occurs within the sun). He also holds an MBA from Utah State University. He joined the renewable energy group at Campbell Scientific in June of 2015 and has been active in the field of PV soiling, having designed the PV soiling monitors that CSI offers.

Key Aspects of PV Array Soiling Loss Measurement

Michael Gostein, Chief Technical Officer, Atonometrics, Inc., Austin, Texas

Measuring soiling losses in PV arrays has become increasingly important to PV system operations. Most soiling measurement systems compare the output of a naturally soiled PV device with that of a clean PV device to determine a soiling ratio. However, there are many ways to implement this concept, and deployed stations range in sophistication. For the engineer specifying such a system, there are many options to consider, including what types of PV devices the system will use, what electrical parameters to measure, and how to implement the routine washing of the clean device. Each of these questions has different answers depending on budget, site conditions, and objectives. In addition, after the equipment is installed, another challenge is understanding the proper analysis of the data. In this talk we give an overview of these key aspects of PV array soiling loss measurement, illustrated by examples from the field.



Michael Gostein, Ph.D., is Chief Technical Officer of Atonometrics, Inc., based in Austin, Texas. Atonometrics develops test and measurement equipment for the PV industry and is a world leader in the supply of PV system soiling measurement instrumentation, having shipped ~500 systems worldwide. Dr. Gostein has published numerous articles on soiling measurement, PV instrumentation, and other test and measurement topics and has been issued 6 patents. Previously he was Chief Technologist at Philips Advanced Metrology Systems, supplying optical measurement instrumentation to the semiconductor industry. Dr. Gostein received a Ph.D. in Physics from the University of Texas at Austin and a B.S. in Physics from the Massachusetts Institute of Technology.

Meeting details:

There is no need to pre-register. Simply join the meeting from your computer, tablet or smartphone.

<https://global.gotomeeting.com/join/646649997>

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Additional call for PVQAT speakers and participants

We are also soliciting volunteers for future PVQAT TG12 webinars from companies, institutes and individuals alike. The topics will focus around the following core ideas:

- Soiling sensors & monitors
- Anti-soiling and AR coatings
- Cleaning equipment
- Software tools connected to soiling measurement and evaluation
- Networks and resources for the assessment of airborne contamination

If you have a commercial or pre-commercial product in any of the above areas, we believe our audience will be very interested to hear from you.

In addition, we are encouraging presenters on O&M issues connected to soiling in solar energy systems. These topics will hopefully bridge gaps by reporting on lessons learned from practical experience in order to stimulate high-quality scientific and engineering studies currently underway. The duration of each presenter's talk will be no more than 20 minutes. Those interested in participating as a speaker should email Greg Smestad.

Questions? Contacts:

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An archive of our previous webinars may be found at:

<http://pvqataskforceqarating.pbworks.com/w/page/109737652/Soiling%20and%20Dust%20Webinars>