



Call for Abstracts

Area 7: Space Technologies

Dear Colleagues,

On behalf of the technical program committee, it is my pleasure to invite you to submit papers for Area 7: “**Space Technologies**” of the **35th IEEE Photovoltaic Specialists Conference**, which will be held in **Honolulu, Hawaii**, from **June 20th-25th in 2010**. The IEEE PVSC meeting is the established international platform for presenting PV related research of high scientific level.

Advances in photovoltaic devices for space applications over the past decade have been remarkable. However, on-orbit power requirements continue to grow and thus there is much work still to be done for future space missions. Papers are sought that describe devices capable of high efficiency and/or high specific power, including solar array designs. Also of interest are papers concerning space reliability, space environmental effects, and protective materials for the space environment. To span the spectrum from research to applied engineering, we welcome papers concerning characterization and qualification as well as flight experiments and missions.

Area 7 has been devoted to these important topics, which have been categorized in three subareas as presented below. We encourage people to submit papers **on detailed scientific research studies** and **visionary papers** addressing the full range of these fundamental issues and technological challenges in the field, including:

Subarea 7.1: Space Materials and Devices

This subarea focuses on the novel approaches, in both design and application, for achieving high performance photovoltaics for space. Here we will capture the latest advancements in materials and devices enabling the most efficient solar cells available. Such topics may include (but are not limited to) next generation thinned multijunction solar cells, semiconductor bonded solar cells, or hybrid designs. In addition, novel environmental protection to enable longer on-orbit capability will be included. Papers on characterization, modeling, and qualification of high efficiency solar cells are also welcome.

Subarea 7.2: Space Systems

High performance solar cells are the primary focus of the conference. But additional attention is given in this topic area to integration and implementation of solar cells into energy generation systems. Advanced array designs offering enhanced mission capability will be examined in this subarea. In particular, novel cell integration schemes will be discussed.





Subarea 7.3: Flight Performance and Environmental Effects

Analysis and results from on-orbit experimentation will be presented in this subarea. This includes behavioral data and analysis of high performance photovoltaic devices exposed to the space environment as well as results from on-ground testing activities under realistic conditions. Here papers are expected that concern solar cell degradation due to particle irradiation along with its modeling and flight prediction. Also of interest are papers in which performance data is presented relevant to specific missions like near sun or deep space where solar cell performance has to be determined under extreme conditions (high intensity, high temperature and low intensity, low temperature, respectively).

Please check our website for the 35th IEEE PVSC at www.ieee-pvsc.org . Extended abstracts of 3 pages in length need to be submitted before the deadline of February 15, 2010, on the conference website.

Looking forward to see you all during an exciting and thought-provoking meeting in Honolulu, Hawaii.

Sincerely yours,

Alex Howard, *Air Force Research Laboratory, USA*
Area 7 Chair

Carsten Baur, *European Space Agency, The Netherlands*
Mitsuru Imaizumi, *Japan Aerospace Exploration Agency, Japan*
Area 7 International Co-Chairs

