



TASK 13 Workshop/Webinar Characterisation of Photovoltaic Systems

Marc Köntges, ISFH, Ulrike Jahn, FhG CSP

At Institute for Solar Energy Reseach Hamelin, Germany, 23rd Oct. 2025

IEA PVPS in a nutshell



- One of 39 currently active Technology Collaboration Programmes within the IEA
- 32 years old established in 1993
- 27 countries plus the European Commission and 2 Sponsors
- 9 active Tasks and 1 Action Group
- 34 reports published and 17 events organized in the past year
- ~400 participants across ExCo and all Tasks



Task 13 Collaboration - History and Presence



Task 2: 1994-2008 Performance and Reliability of Photovoltaic Systems

- PV performance database
- PV performance figures

Task 13: 2010-2014

- + Performance and reliability of components
- + Testing and standards

Task 13: 2014-2017

- + Economical aspects and business models
- + Yield prediction & uncertainties
- + Failure detection and statistics

Task 13: 2018-2021

- + New module and system designs
- + Field testing
- + O&M practice
- + Risk assessment & mitigation

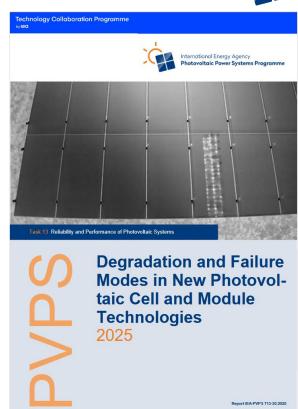
Task 13: 2022-2025

- + New materials & applications (IPV)
- + Digitalization
- + Climate/environment specific design/testing
- + Techno-Economic key performance indicators
- + Second Life PV
- + PV & storage

Why to we do this Workshop/Webinar?



- The TASK13 analyses
 Performance, Operation and Reliability
 of Photovoltaic Systems
- Recent report T13-30-2025 →
 showed that we have many degradation and
 failure modes which are not easy
 to characterise in the field
- In new action ST2.2 Failure Localization and Assessment in Photovoltaic Systems we aim to close this gap



Agenda



Workshop on the Characterisation of Photovoltaic Systems			
08:15	00:10	Welcome Task 13 Workshop on methods for PV system inspection	Marc Köntges and Ulrike Jahn
08:25	00:20	Failure in current PV systems and their relevance to find them	Marc Köntges, ISFH
08:45	00:20	Advances needed in PV park inspection	Ioannis Tsanakas, CEA INES (online)
09:05	00:20	Fault diagnosis in PV plants with monitoring data	Giosué Maugeri, RSE
09:25	00:10	Q&A	Ulrike Jahn, Fraunhofer CSP
9:35		Coffee Break	
Second Workshop Session			
09:55	00:20	Progress in autonomous drone electroluminescence inspection	Jan Schlipf, AEPVI
10:15	00:20	Find open circuited bypass diodes without changing electrical circuit	Michael Siebert, ISFH
10:35	00:20	Frame conditions for thermography inspections of photovoltaic plants	Sergiu Spataru, DTU
10:55	00:15	Q&A and closing of the Workshop	Marc Köntges, ISFH
11:10		Coffee Break for discussion	

We thank all Speakers and you for your participation







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