

SPECIAL PV WORKSHOP

Space Photovoltaics for Energy Conversion
in extra-terrestrial environment Workshop

📍 PARIS-FRANCE

04/07/2024



Organised by :



MORNING PROGRAM

SESSION 1 | CHALLENGES FOR THE FUTURE

9H30

DR. Stephen TAYLOR - ESA

Photovoltaic technology for space applications to cope with the needs of the present and the future

10H00

DR. Loris IBARRART - CNES

Solar cell models and measurements: an overview

10H30 - 10H45 **BREAK** ⏸

10H45

DR. Romain CARIOU - CEA

Towards a robust Si PV technology for space

11H15

DR. Carmine PELLEGRINO - Fraunhofer ISE

Strategies for cost reduction in III-V space solar cells

11H45

DR. César DOMINGUEZ - UPM

Micro-concentrators as mission enablers for deep space missions

12H15

DR. Francesco SOTTILE - LSI

Theoretical approaches for photovoltaics

12H45 - 14H00 **LUNCH** 🍴

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AFTERNOON PROGRAM

SESSION 2 | RADIATION EFFECTS: MICROSCOPIC

14H00

DR. Antonino ALESSI - LSI

Electron irradiation

14H20

DR. Gaëlle GUTIERREZ - JANNuS-Saclay

Overview of JANNuS irradiation facility

14H30

DR. Yana GURIMSKAYA - Solestial

Investigation of Radiation Damage in p-Type Silicon Induced by 1 MeV Electron Irradiation

15H00 - 15H30 **BREAK** ⏸

15H30

DR. Ahmad RASA KIRMANI - RIT

Radiation damage and healing mechanisms in halide perovskites

16H00

DR. Sophie DUZELLIER / DR. Thierry NUNS - ONERA

Degradation of PhotoVoltaic Assembly in the space environment

16H30

Océane GUILLOT - CEA

Si Heterojunction radiation hardness

17H00

DR. Valentin D. MIHAILETCHI - ISC

Silicon Solar Cell Technologies for Space Applications: Degradation and Regeneration Effects

17H30
(19H15)

Poster session

17H30

Lab guided tour - Solar cell set-ups (3 groups)

19H30 - 23H00 **GALA DINER** 🍷

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MORNING PROGRAM

SESSION 3 | RADIATION EFFECTS: MACROSCOPIC

09H30

DR. Tatsuya TAKAMOTO - SHARP

Introduction of Sharp Space solar cell products

10H30

DR. Carla COSTA - CNES

Perovskites robustness against space radiations

11H00 - 11H15 **BREAK** ⏸

11H15

DR. Victor KHORENKO - AZUR SPACE

Production of radiation hard III-V solar cells

11H45

Soufian YJJOU - TRAD

Solar cell radiation-induced degradation simulation tool for space applications

12H15

DR. Carlos ALGORA - UPM

Status of III-V flexible solar cells at the Solar Energy Institute of UPM

12H45 - 14H00 **LUNCH** 🍴

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AFTERNOON PROGRAM

SESSION 4 | NEW EMERGING MATERIALS AND ARCHITECTURE

14H00

PR. Gavin CONIBEER - UNSW / Extraterrestrial

The revival of Silicon solar cells for space applications

14H30

DR. Maxime DARNON - LaHC

Micro fabrication of III-V-based solar cells for weight reduction and performance improvement

15H00 - 15H30 **BREAK** ⏸

15H30

DR. Stéphane COLLIN - CNRS / IPVF

Light trapping for ultrathin III-V & Si solar cells

16H00

DR. Pilar ESPINET GONZALEZ - The Aerospace Corporation

Solar Array Shielding: The Ultra-Light Approach

16H30

17H30

Round table

"Trends & challenges for next generation robust space photovoltaic solutions" & Final remarks

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