



# ACCURATE FLUX CALIBRATION

in the Era of Space Astronomy and All-Sky Surveys

October 22-25, 2024

TUESDAY, OCTOBER 22<sup>ND</sup>

TIME	TITLE	SPEAKER
8:45 AM	<i>STScI's Director Welcome Message/Introductory Talk</i>	<i>Jen Lotz</i>
<b>Session 1A:</b>		
9:00 AM	<b>Astronomical Flux Calibration- An Overview</b>	<b>Chris Stubbs</b>
9:30 AM	<b>Improving the Absolute Calibration Across the Visible and Mid-infrared &amp; <i>New approaches to improving the absolute flux calibration of standard stars</i></b>	<b>George Rieke &amp; Susana Deustua</b>
10:10 AM	<b>The James Webb Space Telescope Absolute Flux Calibration: Program Design and Calibrator Stars</b>	<b>Karl Gordon</b>
10:30 AM	AM Coffee Break & Poster Session <i>(Zhen-Kai Gao, Andreea Petric, Charles Proffitt, and Kevin Volk)</i>	
<b>Session 1B:</b>		
11:00 AM	<b>Status of JWST NIRSpec Flux calibration</b>	<b>Charles Proffitt</b>
11:20 AM	<b>The Status of the JWST/NIRCam Absolute Flux Calibration</b>	<b>Martha Boyer</b>
11:40 AM	<b>Absolute flux calibration in the mid-IR: Lessons from the MIRI Medium Resolution Spectrometer</b>	<b>David Law</b>
12:00 PM	<i>Session Discussion</i>	
12:30 PM	<i>Lunch Break</i>	



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## Session 2A:

1:30 PM	<i>CALSPEC Basics</i>	<i>Ralph Bohlin</i>
1:50 PM	<i>New Photometric Calibration of the Wide Field Camera 3 Detectors</i>	<i>Annalisa Calamida</i>
2:10 PM	<i>Time Dependent Sensitivity of ACS/WFC</i>	<i>Gagandeep Anand</i>
2:30 PM	<i>Update on the Absolute Flux Recalibrations of the HST/STIS modes</i>	<i>Svea Hernandez</i>
2:50 PM	<i>Establishing the Absolute Flux Calibration for NASA's SPHEREx All-Sky Spectroscopic Survey</i>	<i>Matthew Ashby</i>
3:10 PM	<i>PM Coffee Break &amp; Poster Session (Roberto Avila, Mariarosa Marinelli, TalaWanda Monroe, and Matthew Siebert)</i>	

## Session 2B:

3:40 PM	<i>Refining the CALSPEC Catalog of Standards with TESS</i>	<i>Thomas Dutkiewicz</i>
4:00 PM	<i>Rapidly Changing HST/STIS Time Dependent Sensitivity in the NUV</i>	<i>Daniel Stapleton</i>
4:20 PM	<i>Evaluating HASP Flux Calibration Using CALSPEC Models to Enable High-quality Spectral Data from HST</i>	<i>Lauren Miller</i>
4:40 PM	<i>Session Discussion</i>	
5:10 PM	<i>Close Out</i>	



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WEDNESDAY, OCTOBER 23<sup>RD</sup>

TIME	TITLE	SPEAKER
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**Session 3A:**

8:30 AM	A Decade of Improvements in Calibration and Needed Improvements for Supernova Cosmology	Daniel Scolnic
9:00 AM	Toward Millimag Photometry with the Rubin Observatory Legacy Survey of Space and Time	Eli Rykoff
9:20 AM	ALTAIR High-Altitude Micro-Airships for Precision Rubin Observatory Calibration (and Beyond): Status & Plans	Justin Albert
9:40 AM	Roman-WFI: characterization of widefield chromatic response	Eric Switzer
10:00 AM	Euclid photometric calibration - The first year in space	Mischa Schirmer
10:20 AM	AM Coffee Break & Poster Session (Justin Albert, Evan Bray, Ami Choi, Dario Fadda, and Sanjib Sharma)	

**Session 3B:**

10:50 AM	Cross-calibrating HST and 2MASS for Evolved Star Distances	Meredith Durbin
11:20 AM	The absolute sky seen through the lens of calibration spectra	Michael Weiler
11:40 AM	CALSPEC and the Gaia photometric system	Jesus Maiz Apellaniz
12:00 PM	Session Discussion	
12:30 PM	Lunch Break	



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TIME	TITLE	SPEAKER
<b>Session 4A:</b>		
1:30 PM	<i>Absolute Calibration Across the Spectrum</i>	<i>Luca Casagrande</i>
2:00 PM	<i>Accurate flux scale for multifilter surveys with the white dwarf locus</i>	<i>Carlos Lopez - Sanjuan</i>
2:20 PM	<i>A library of high-fidelity spectra with the MUSE integral field spectrograph</i>	<i>Valentin Ivanov</i>
2:40 PM	<i>Observing Faint Suns in Clusters for Photometric Calibration</i>	<i>Everett Schlawin</i>
3:00 PM	<i>Photometric calibration strategy for the Near-Earth Object (NEO) Surveyor mission</i>	<i>Sean Carey</i>
3:20 PM	<i>PM Coffee Break &amp; Poster Session (Emma Godden, Karl Gordon, Olena Kompaniiets, Angelle Tanner, and Alex Zhang)</i>	
<b>Session 4B:</b>		
3:50 PM	<i>The Definition of the Magnitude System For James Webb Space Telescope Photometry</i>	<i>Kevin Volk</i>
4:10 PM	<i>The NASA Landolt Mission Overview</i>	<i>Peter Plavchan</i>
4:30 PM	<i>The International Astronomical Consortium of High Energy Calibration: Method and Activity</i>	<i>Kristin Madsen</i>
4:50 PM	<i>Session Discussion</i>	
5:20 PM	<i>Close Out</i>	
5:30 PM	<i>SDAS Beer and Snacks Reception</i>	



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THURSDAY, OCTOBER 24<sup>TH</sup>

TIME	TITLE	SPEAKER
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**Session 5A:**

8:30 AM	The Future of SN Ia Cosmology with the Nancy Grace Roman Space Telescope	<i>Rebekah Hounsell</i>
9:00 AM	<i>The trouble with K giants: A challenging class of mid-infrared standard stars</i>	<i>Greg Sloan</i>
9:20 AM	NIST-traceable Optical Flux Calibration using the SNIFS CALibration Apparatus (SCALA)	Daniel Kusters
9:40 AM	What does SI traceability mean for stellar spectral flux calibration?	Joseph Rice
10:00 AM	Blackbody Stars for Accurate UV-VIS-IR Flux Calibration	Nao Suzuki
10:20 AM	AM Coffee Break & Poster Session <i>(Peter Brown, Susana Deustua, Eunkyun Han, and William Kenworthy)</i>	

**Session 5B:**

10:50 AM	<i>Reaching 2% Local Flux Precision with HST COS &amp; STIS to Enable AGN Reverberation Mapping</i>	<i>Rachel Plesha</i>
11:10 AM	<i>The calibration requirements of the Ultraviolet Explorer (UVEX)</i>	<i>Hannah Earnshaw</i>
11:30 AM	<i>ALMA Flux Calibration</i>	<i>Ruediger Kneissl</i>
11:50 AM	<i>Session Discussion</i>	
12:20 PM	<i>Group Photo outside of the Muller Building</i>	



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TIME	TITLE	SPEAKER
12:30 PM	Lunch Break	
<b>Session 6A:</b>		
1:20 PM	<i>The characterisation of atmospheric effects on ground-based astronomical observations</i>	<i>Florian Kerber</i>
1:50 PM	<i>A novel absolute photometric calibration based on fitting the system and atmosphere transmission</i>	<i>Simone Garrappa</i>
2:10 PM	<i>Towards blind telluric correction</i>	<i>Alain Smette</i>
2:30 PM	<i>Toward a Homogeneously Flux-Calibrated EXternal Ground Based Dataset for the Euclid Mission</i>	<i>Joseph Mohr</i>
2:50 PM	<i>Methods and issues with flux calibration methods employed by student researchers and amateur astrono</i>	<i>Brian Kloppenborg</i>
3:10 PM	<i>PM Coffee Break &amp; Poster Session (Kathleen Kraemer, Andreea Petric, Diego Reyes, and Ian Wong)</i>	
<b>Session 6B:</b>		
3:40 PM	<i>A Deep Dive into the Variability and Calibration of the JWST MIRI Imager</i>	<i>Mary Anne Limbach</i>
4:00 PM	<i>Current Flux Calibration Limits Stellar Age Estimates</i>	<i>Jamie Tayar</i>
4:20 PM	<i>Single-lined Eclipsing Binaries Become Benchmark Binaries with Better Flux Calibration</i>	<i>Daniel Stevens</i>
4:40 PM	<i>Session Discussion</i>	
5:10 PM	<i>Close Out</i>	
6:00 PM	<i>Workshop Thank You Reception in STScI's Café</i>	



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FRIDAY, OCTOBER 25<sup>TH</sup>

TIME	TITLE	SPEAKER
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**Session 7A:**

8:30 AM	The Potential of Cool Stars as Flux Calibrators	<i>Carlos Allende Prieto</i>
9:00 AM	Calibrating the Effective Temperatures & Linear Radii Scales for Giant Stars	Gerard van Belle
9:20 AM	The Updated BOSZ Synthetic Stellar Spectral Library	Szabolcs Meszaros
9:40 AM	A network of cool white dwarfs as standards for flux calibration	Abbigail Elms
10:00 AM	AM Coffee Break & Poster Session <i>(Ellyn Baines, Susana Deustua, Peter Nemeth, David Rubin, and Prasenjit Saha)</i>	

**Session 7B:**

10:30 AM	<i>All-sky Faint DA White Dwarf Spectrophotometric Standards for Observatories and Surveys</i>	<i>Abhijit Saha</i>
10:50 AM	<i>DAmodel: Hierarchical Bayesian Modelling of DA White Dwarfs for Spectrophotometric Calibration</i>	<i>Ben Boyd</i>
11:10 AM	<i>Checking the JWST/MIRI Imager absolute flux calibration using four nearby white dwarfs</i>	<i>John Debes</i>
11:30 AM	Wrap up/Session Discussion	
12:00 PM	Workshop Conclusion	



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