

Science with the Hubble and James Webb Space Telescopes VII: Stars, Gas & Dust in the Universe

29 April–2 May, 2024

AGENDA

Monday 29 April

Session 1: Introduction

Chair: Chris Evans

- 09:00 Introductions
- 09:15 Angela Adamo (invited)
Star clusters in the JWST era: A piece in the puzzle of galaxy evolution
- 09:40 Julia Roman-Duval (invited)
ULLYSES has landed
- 10:05 Ariane Lançon (invited)
Stars and galaxies in the Local Universe: First Euclid results
- 10:30 Coffee

Session 2: Mission Updates & Wider Context

Chair: Stefanie Milam

- 11:00 Tom Brown (invited)
Hubble in the time-domain decade
- 11:20 Macarena Garcia Marin (invited)
JWST status updates and science timeline
- 11:40 Christian Soto
Coordinated observations with JWST & HST
- 12:00 John Carpenter (invited)
Future developments at the ALMA Observatory
- 12:30 Cristina Oliveira
Stars, Gas, and Dust with the Nancy Grace Roman Space Telescope
- 12:45 Hugues Sana
The Ultraviolet Explorer (UVEX) mission
- 13:00 Lunch

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Round-Table Discussion I

- 14:30 Maximising Hubble's Synergies & Legacy
16:00 Coffee

Session 3: Solar System & Exoplanets

Chair: Neill Reid

- 16:30 Heidi Hammel (invited)
Solar System Science with JWST and Hubble
- 17:00 Stefanie Milam
Insights to the physiochemical history of comets with JWST and ALMA
- 17:15 Elodie Choquet (invited)
Direct imaging of exoplanets and debris disks with HST & JWST
- 17:45 Valentin Christiaens
The first JWST images of protoplanets
- 18:00 Henrik Melin (remote)
Ionospheric irregularities at Jupiter observed by JWST
- 18:15 Poster lightning talks
- 18:30 Reception

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Tuesday 30 April

Session 4: Planet & Star Formation

Chair: Jennifer Wiseman

- 09:00 Ruobing Dong (invited)
Planets form in gaseous protoplanetary disks around newborn stars
- 09:30 Francois Menard
Dust evolution and vertical settling in planet-forming disks: a game-changing HST-JWST-ALMA synergy
- 09:45 Polychronis Patapis
Gas and dust in the environment of planet formation: first spectra of planetary mass companion disks
- 10:00 Maria Navarro
PROJECT-J: the embedded jet and molecular flow of the HH46 IRS protostar observed with JWST
- 10:15 Poster lightning talks
- 10:30 Coffee

Session 5: Transients, SNe & GRBs

Chair: Annalisa De Cia

- 11:00 Sara Bonito (invited)
Transients & Variable Stars with the Vera Rubin Observatory
- 11:30 Andrew Levan (invited)
Explosive transients with Hubble & Webb
- 12:00 Charlotte Wood
Properties of the Local Dust Environment Around the Type Ia SN 2009ig
- 12:15 Kirsty Taggart
SN2023fyq: A Ibn supernova with the First Detected Progenitor System and Pre-Explosion Cold Dust
- 12:30 Melissa Shahbandeh
Unraveling Cosmic Dust Origins: JWST Revelations from Supernovae
- 12:45 Lunch

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Session 6: Stars, Stellar Populations & the Distance Scale I

Chair: Megan Reiter

- 14:30 Nolan Habel
A JWST Imaging Study of Young Stellar Populations in Local Low-Metallicity Star-Forming Regions
- 14:45 Cristina Pallanca
The synergy of data from JWST and HST: the case of the Bulge globular cluster NGC 6440
- 15:00 Morten Andersen
The low-mass Initial Mass Function across Environments and cluster dynamics
- 15:15 Wolf-Rainer Hamann
The massive young cluster NGC 346 in the SMC: a template for starbursts in metal-poor galaxies
- 15:30 Brent Tully (invited)
A population II TRGB-SBF route to H_0 with HST and JWST
- 16:00 Coffee

Session 7: Stars, Stellar Populations & the Distance Scale II

Chair: Annalisa De Cia

- 16:30 Adam Riess (invited, remote)
JWST Weighs in on the Hubble Tension
- 17:00 Beena Meena
Galaxy UV Legacy Project: High Resolution HST Imaging of Star-Formation in Nearby Galaxies
- 17:15 Sean Linden
Lifting back the veil: Quantifying feedback from dusty star clusters in nearby Galaxies
- 17:30 Close
- 18:30 Public Talk: *Exploring the Universe with the Hubble & James Webb Space Telescopes*
Jennifer Wiseman & Chris Evans
Salão Nobre, Rectory Building of the University of Porto

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Wednesday 1 May

Session 8: ISM & Dust

Chair: Jarle Brinchmann

- 09:00 Emilie Habart (invited)
PDRs4All: JWST's NIR and MIR imaging and spectroscopic view of the Orion Bar photo-dissociation region
- 09:25 Irene Shivarai (invited)
Unveiling Dust Beyond Our Local Universe
- 09:50 Marjorie Declair
MEAD: Measuring Extinction and Abundances of Dust
- 10:05 Andrew Fox
Gas and dust in the Milky Way Halo
- 10:20 Helena Faustino Vieira
Resolving the extragalactic ISM with HST extinction
- 10:35 Coffee

Session 9: Galaxies & Galaxy Evolution

Chair: Adi Zitrin

- 11:00 Janice Lee (invited)
Star Formation in Nearby Galaxies: New Insights from ~100,000 Star Clusters and Associations.
- 11:25 Aaron Evans (invited)
The Great Observatories All-sky LIRGs Survey
- 11:50 Ana Paulino-Afonso
LAE size evolution from $z\sim 2$ and $z\sim 6$: insights from HST and JWST observations
- 12:05 Sangeeta Malhotra
Universal Peas
- 12:20 Kalina Nedkova
UVCANDELS: What drives the differences between UV and optical sizes of disk galaxies?
- 12:35 Ilias Goovaerts
Faint star forming galaxies towards the epoch of reionisation viewed with HST, JWST and VLT/MUSE
- 12:50 Allison Man (remote)
A panchromatic view of the circumgalactic medium surrounding a brightest cluster galaxy at $z=0.4$
- 13:05 Lunch, then free afternoon.
- 19:00 Conference dinner, starting at [Taylor's Port Cellars Visitor's Centre](#) (arrive: 18:30)

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Thursday 2 May

Session 10: Future Look

Chair: Chris Evans

- 09:00 Luigi Colangeli (invited)
Overview of the Future ESA Science Programme
- 09:25 Janice Lee (invited)
Stars, Gas & Dust with the Habitable Worlds Observatory
- 09:50 Michele Cirasuolo (invited)
ESO's European Extremely Large Telescope
- 10:15 Eros Vanzella
From JWST to ELT: What Studies Will Be Routinely Conducted on the High-z Universe After 2030?
- 10:30 Coffee

Round-Table Discussion II

- 11:00 Looking to the 2030s and Beyond
- 12:30 Lunch

Session 11: AGN

Chair: Adi Zitrin

- 14:00 Yuichi Harikane (invited)
Galaxy evolution & AGN with HST & JWST
- 14:30 Cristina Ramos Almeida
Deciphering the interplay between young stars, multi-phase gas and dust in obscured quasars
- 14:45 Lorenzo Ulivi
Exploring the Nuclear Region of Arp220 with NIRSpec@JWST
- 15:00 Lukas Furtak
Little red dots – JWST uncovers a new population of dust-obscured AGN in the epoch of reionization
- 15:15 Varsha Kulkarni (remote)
Constraining Dust Grain Composition and Structure in Past ~10 Gyrs with mid-IR Quasar Spectroscopy
- 15:30 Coffee

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Session 12: High-z Universe

Chair: Jarle Brinchmann

- 16:00 Pascal Oesch (invited)
High-redshift galaxies with HST & JWST
- 16:30 Adele Plat
Constraining the nature of strong CIV emitters at $z > 6$ using a detailed emission-line analysis
- 16:45 Polychronis Papaderos
On the challenge of interpreting color maps of high-z starburst galaxies with JWST
- 17:00 Nathan Adams
EPOCHS: Analysing the largest sample of high-z galaxies in HST+JWST's deepest fields
- 17:15 Daniel Langeroodi
Chemical Evolution of Stars and ISM from $z \sim 10$ to Cosmic Noon
- 17:30 Rogier Windhorst (remote)
The Crown Jewels of JWST PEARLS: Project Overview and Main Results
- 17:45 Closing Remarks

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Posters

- P01 Angela Adamo
An overview of the JWST FEAST programme
- P02 Dori Blakely
The James Webb Interferometer: Joint model fitting to the accreting protoplanets and disk around PDS 70 reveals evidence for circumplanetary disk emission and additional asymmetric emission within the disk gap
- P03 Giacomo Bortolini
Unveiling IZw18 age's mystery with JWST
- P04 Rubén Fedriani
Unveiling Extreme Conditions Star Formation in the Galactic Center with JWST NIRCam
- P05 Miriam Golubchik
A search for transients in the Reionization Lensing Cluster Survey (RELICS)
- P06 Alec Hirschauer
I Zw 18: Dust Life Cycle at Very Low Metallicity
- P07 Keri Hoadley
H₂ with Hubble + JWST
- P08 Caroline Huang
Measuring Mira Distances with HST and JWST
- P09 Sarah Kendrew
The hidden stellar emission from ALMA-mapped sub-millimeter galaxies with JWST
- P10 Nanda Kumar
Tracing the stars, gas and dust in young stellar clusters: The JWST potential
- P11 Abigail Lee
An Independent Determination of H₀ Based on the JAGB Method
- P12 Francesco Massaro
Powerful radio sources in the southern sky: Entering the SKA era with HST & JWST
- P13 Divakara Mayya
Sizes and ages of star clusters inside the bubbles traced in the JWST/MIRI images
- P14 Stephen McKay
Identifying and Characterizing Faint DSFGs Using JWST NIRCam Priors
- P15 Max Newman
Calibrating the Tip of the Red Giant Branch Distance Method in HST and JWST Near Infrared Filters

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- P16 Lidia Oskinova
High-Mass X-ray Binaries and what do the HST and the JWST teach us about them
- P17 Abel Schootemeijer
Do massive stars in the Early Universe rotate rapidly? New horizons on metal-poor dwarf galaxies
- P18 Ryo Tazaki
JWST observations of edge-on protoplanetary disks: the case of HH30
- P19 David Thilker
Extragalactic dust filament network properties based on emission and attenuation via JWST and HST
- P20 Daniel Vaz
Leo T Dissected with HST and MUSE
- P21 Silvia Vicente
Photodissociation Regions (PDRs) in Orion Proplyds with the JWST
- P22 Peter Zeidler
Discovering planetary-mass brown dwarf candidates in the Small Magellanic Cloud