



Welcome to Oases 2023 and to ASU Cosmology and Beus Center! (Tuesday Feb 21, 2023; Tempe, AZ)

Sanch Borthakur – extragalactic astronomy, CGM gas physics

Katrina Bossert – space and ionospheric physics

Judd Bowman – first neutral hydrogen & instrumentation

Sean Bryan – remote sensing; CubeSounder & SPHEREx

Nat Butler – high z transients and Gamma Ray Bursters

Chris Groppi – experimental astronomy and star-formation

Danny Jacobs – low frequency astronomy & instrumentation

Rolf Jansen – extragalactic star-formation & JWST surveys

Karen Knierman – merging galaxies & tidal tails

Phil Mauskopf – instrumentation for cosmology SPHEREx

Allison Noble – astrophysics of early stars, gas, & dust

Jenny Patience – cosmic star- and planet formation

Evan Scannapieco – astrophysical feedback & element formation

Molly Simon – astronomy and planetary science education

Sumner Starrfield – astrophysics of stellar explosions

Frank Timmes – stellar and chemical evolution; First stars

Alex Van Engelen – cosmological structure formation

Rogier Windhorst – Hubble & JWST studies of first objects

Patrick Young – stellar and chemical evolution theory

Matthew Baumgart – particle physics, quantum field theory

Andrei Belitsky – strongly coupled gauge theory

Paul Davies – gravitational and quantum theory

Damien Easson – gravitational theory, inflation

Simon Foreman – 21 cm, large-scale structure

Cynthia Keeler – quantum gravity

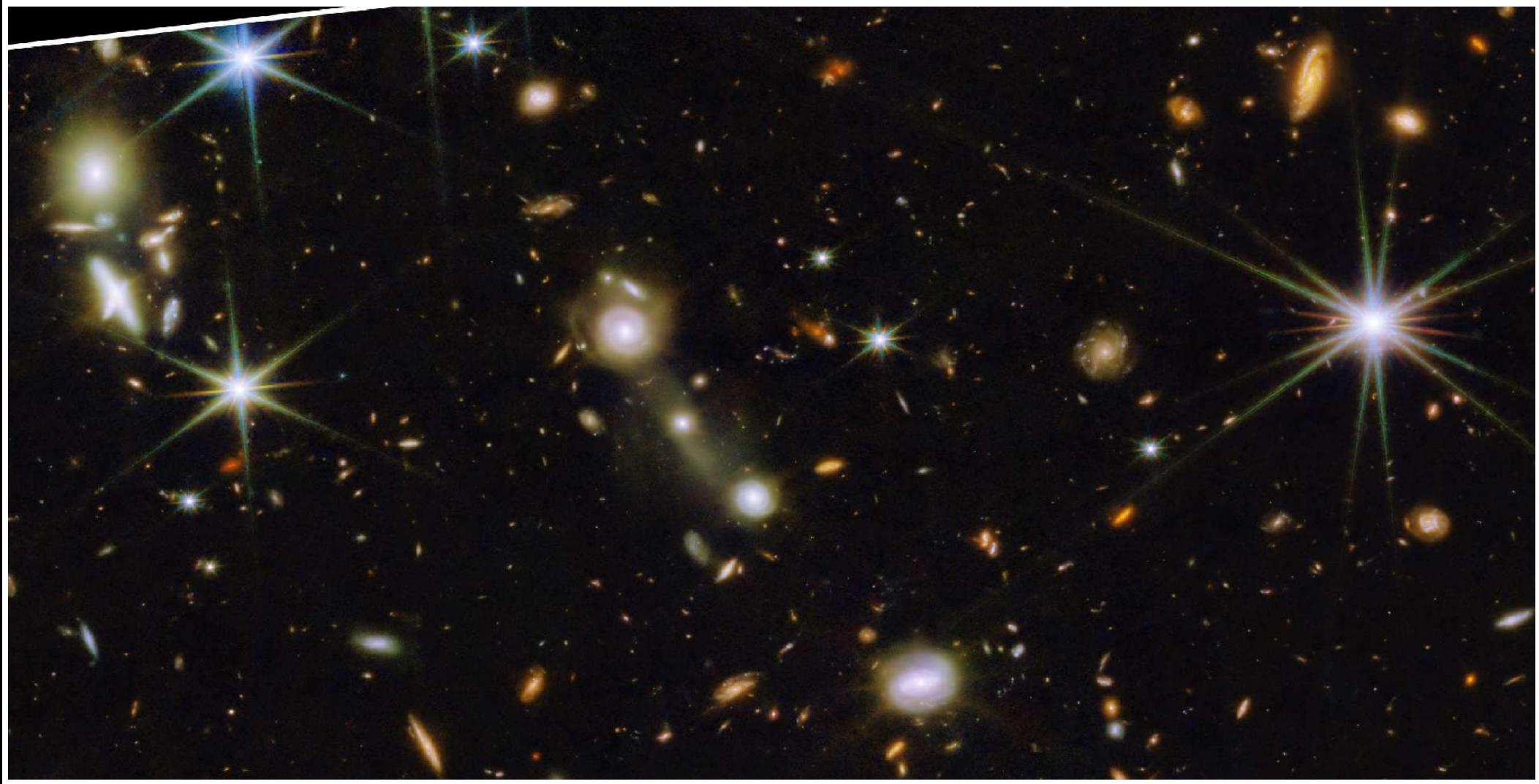
Richard Lebed – QCD and nuclear physics

Cecilia Lunardini – neutrinos

Maulik Parikh – gravitational theory, quantum gravity

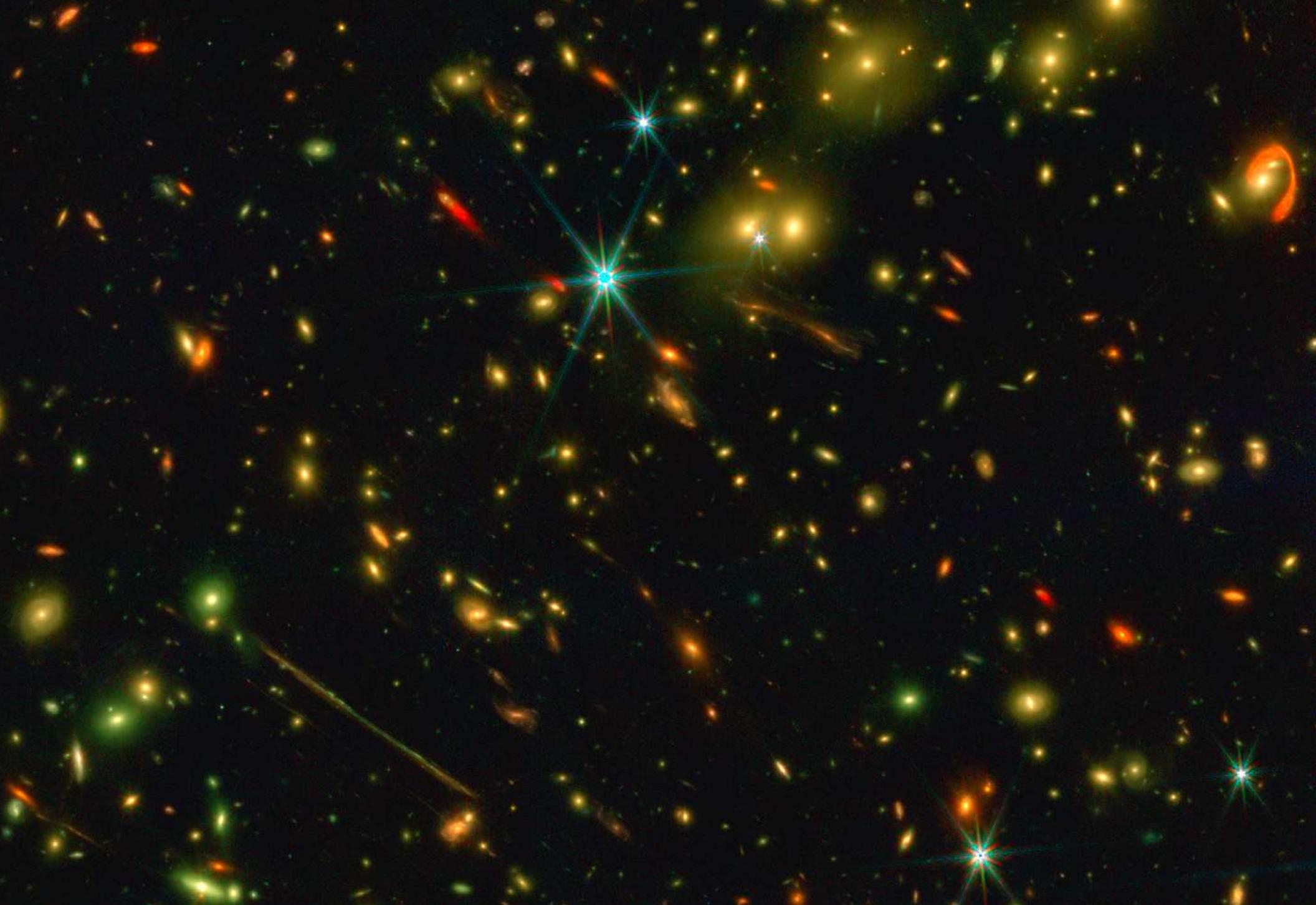
William Terrano – dark matter experiments

Tanmay Vachaspati – IG magnetic fields, cosmic strings



Have fun at Oases in the Desert — expect the unexpected in the CGM:

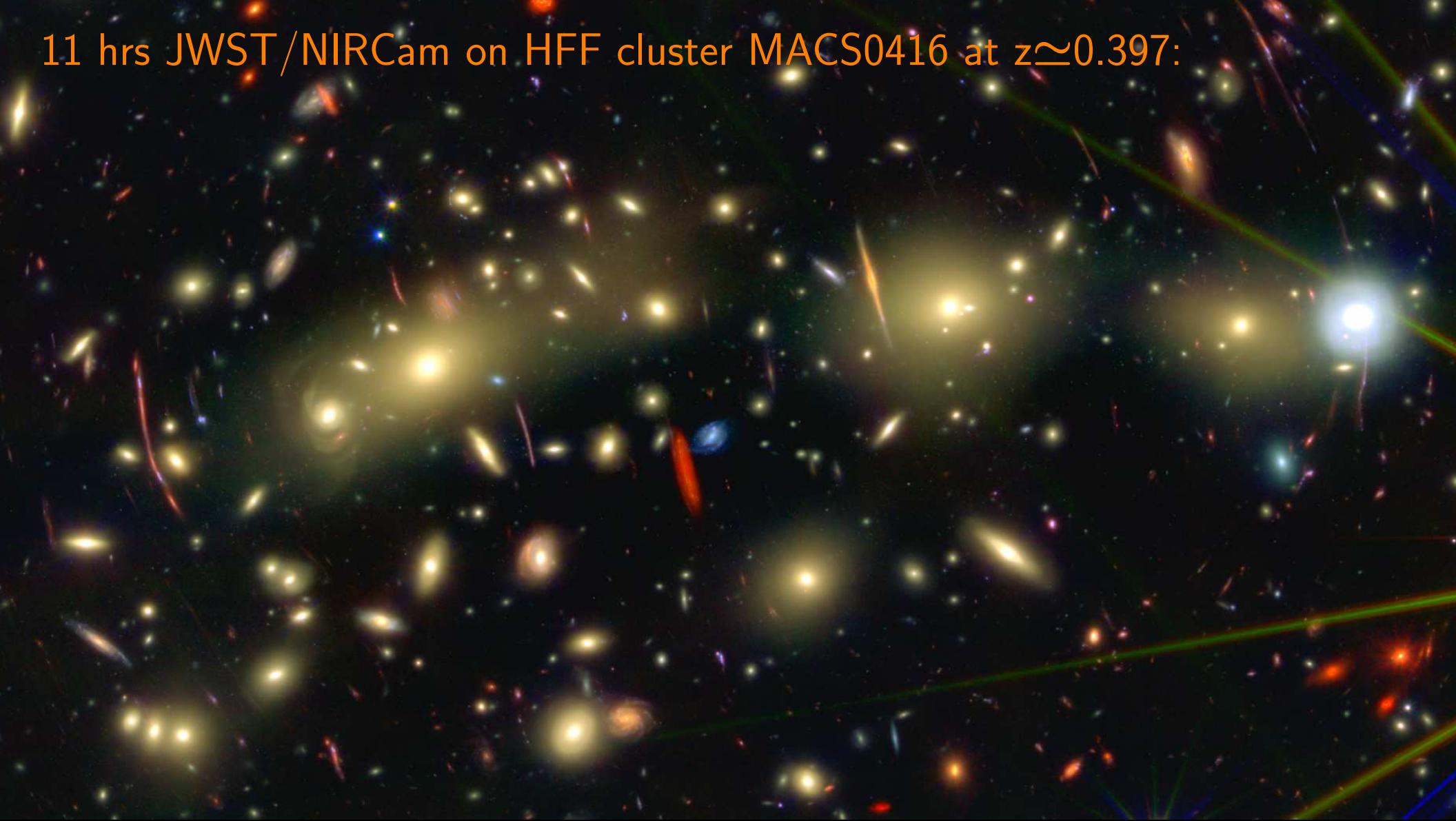
- Expect faint stars in the CGM — JWST sees tidal tails everywhere!
- Expect dust in the CGM: JWST sees plenty distorted dusty systems and outflows, also at high redshifts.



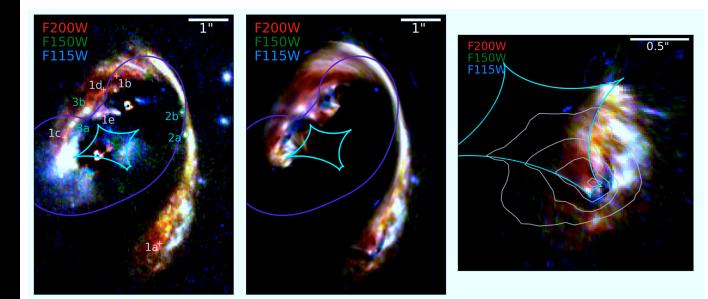
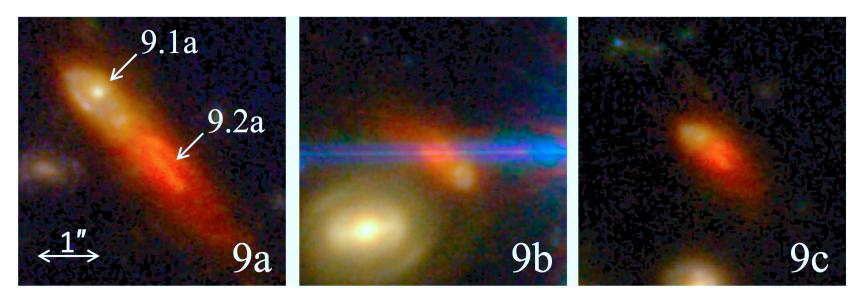
8-filter JWST/NIRCam of massive El Gordo cluster at redshift $z \simeq 0.87$

Diego et al. (A&A in press; astro-ph/2210.06514), Frye et al. (2023), Kamieneski et al. (2023), Carleton et al. (2023, in prep.)

11 hrs JWST/NIRCam on HFF cluster MACS0416 at $z \simeq 0.397$:



JWST/NIRCam: dusty (ALMA) sources behind El Gordo at $z \simeq 2.3\text{--}4.3$:



Please visit us at the galleries of ISTB4 and GWC-5th floor buildings.

or on: <http://https://sese.asu.edu/> or <https://cosmology.asu.edu/>

Talk: http://www.asu.edu/clas/hst/www/jwst/oases23_cosmo_jwst.pdf

Data: <https://sites.google.com/view/jwstpearls> and <http://skysurf.asu.edu/>

Carleton, T., Windhorst, R. A., O'Brien, R., et al. 2022, AJ, 164, 170 ([astro-ph/2205.06347](#))

Cheng, C., Huang, J.-S., Smail, I., et al. 2023, ApJ, 942, L19 ([astro-ph/2210.08163](#))

Diego, J. M., Meena, A. K., Adams, N. J., et al. A&A, submitted ([astro-ph/2210.06514](#))

Duncan, K. J., Windhorst, R. A., Koekemoer, A. M., et al. 2022, MNRAS, submitted ([astro-ph/2212.09769](#))

Ferreira, L., Adams, N., Conselice, C. J., et al. 2022, ApJL, 938, L2 ([astro-ph/2207.09428](#))

Keel, W. C., Windhorst, R. A., Jansen, R. A., et al. 2022, AJ, in press ([astro-ph/2208.14475](#))

Windhorst, R., Timmes, F. X., Wyithe, J. S. B., et al. 2018, ApJS, 234, 41 ([astro-ph/1801.03584](#))

Windhorst, R. A., Carleton, T., O'Brien, R., et al. 2022, AJ, 164, 141 ([astro-ph/2205.06214](#))

Windhorst, R. A., Cohen, S. H., Jansen, R. A., et al. 2023, AJ, 165, 13 ([astro-ph/2209.04119](#))

Yan, H., Cohen, S. H., Windhorst, R. A., et al. 2023, ApJL, 942, L8 ([astro-ph/2209.04092](#))

<https://blogs.nasa.gov/webb/2022/10/05/webb-hubble-team-up-to-trace-interstellar-dust-within-a-galactic-pair/>

<https://blogs.nasa.gov/webb/2022/12/14/webb-glimpses-field-of-extragalactic-pearls-studded-with-galactic-diamonds/>

<https://esawebb.org/images/pearls1/zoomable/>