What can James Webb Space Telescope do for Citizen Science?

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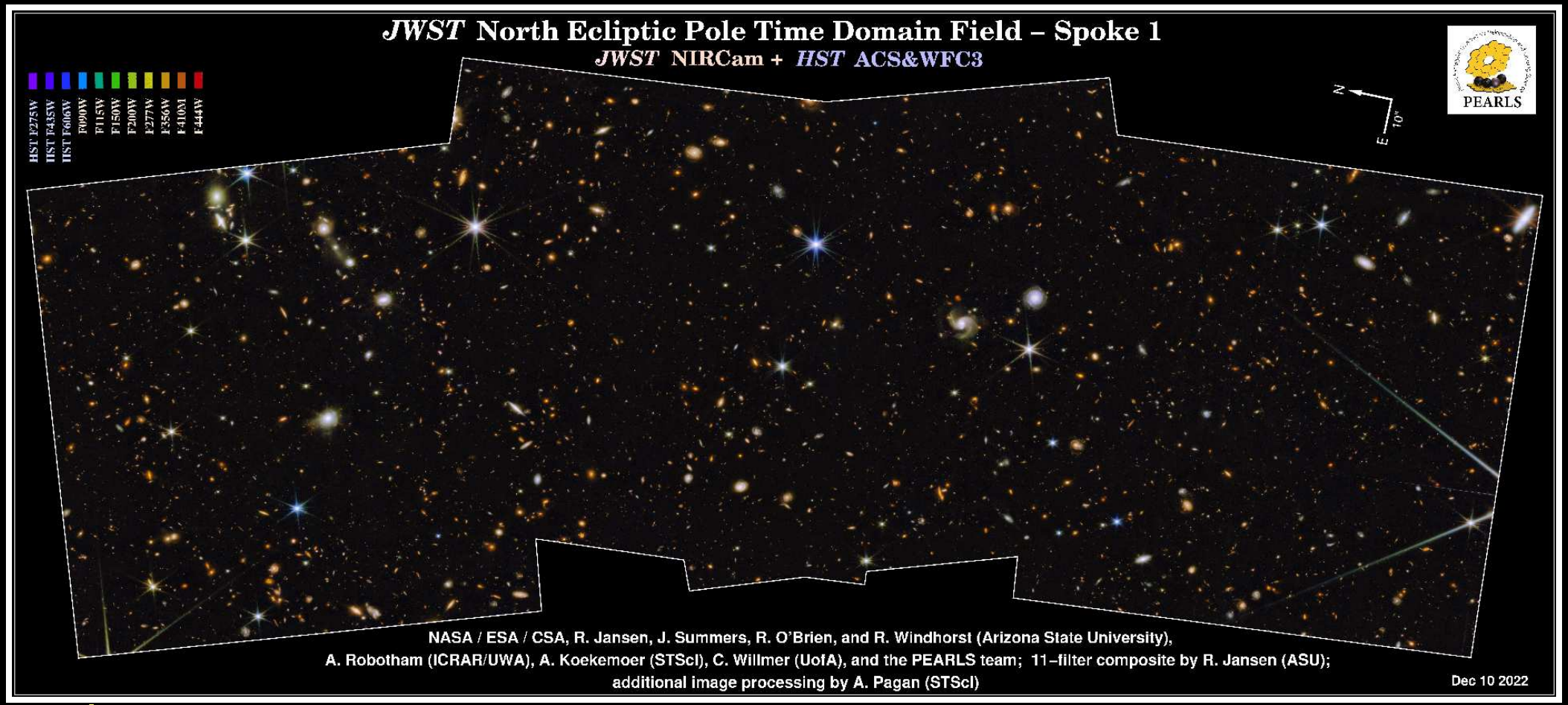
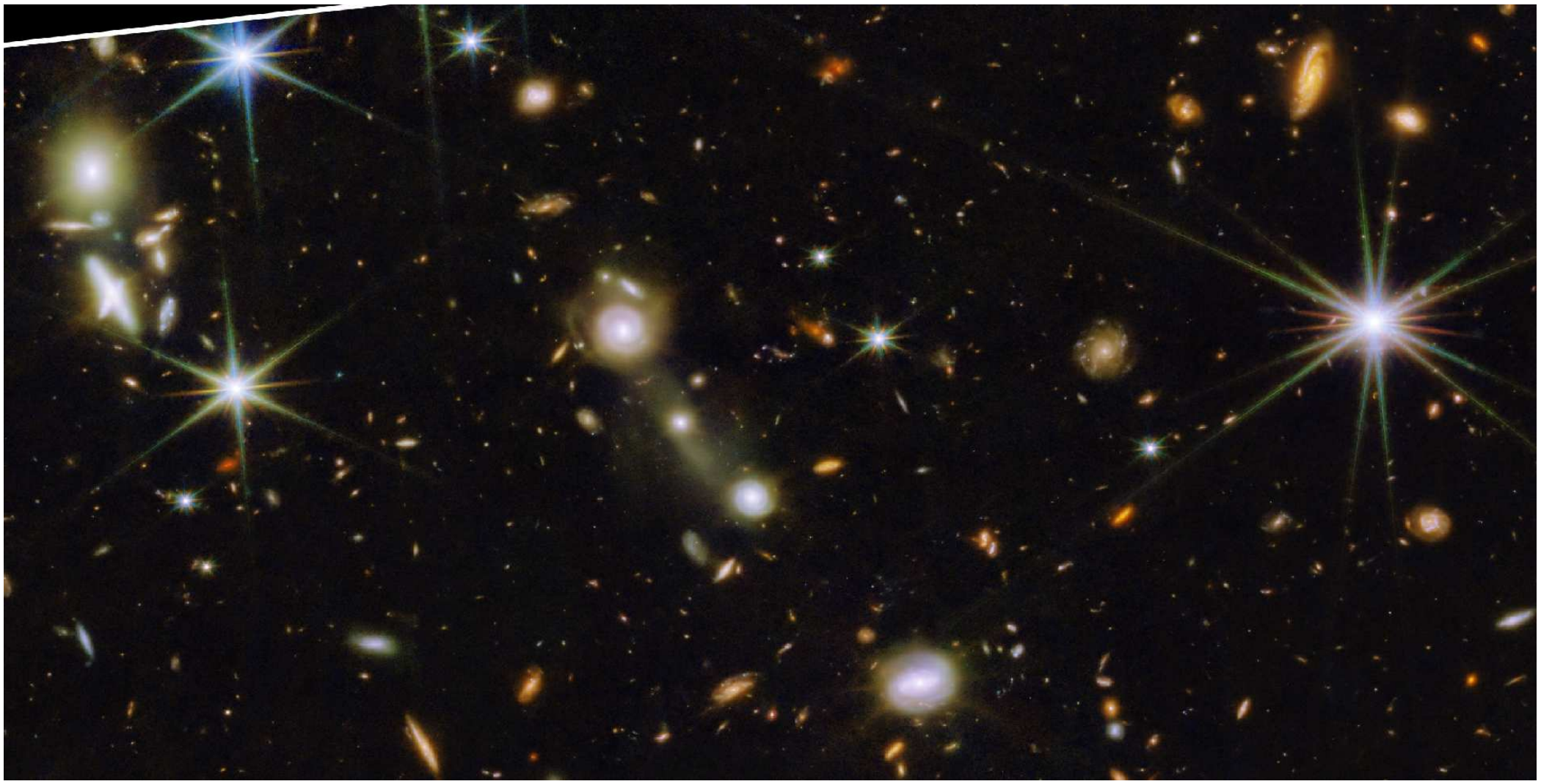


2023 Citizen Science Conference, Monday May 22, 2023 (ASU, Tempe, AZ)

PDF on: http://www.asu.edu/clas/hst/www/jwst/galzoo_windhorst_jwst23.pdf



North Ecliptic Pole (NEP) Time Domain Field (TDF) from PEARLS project:

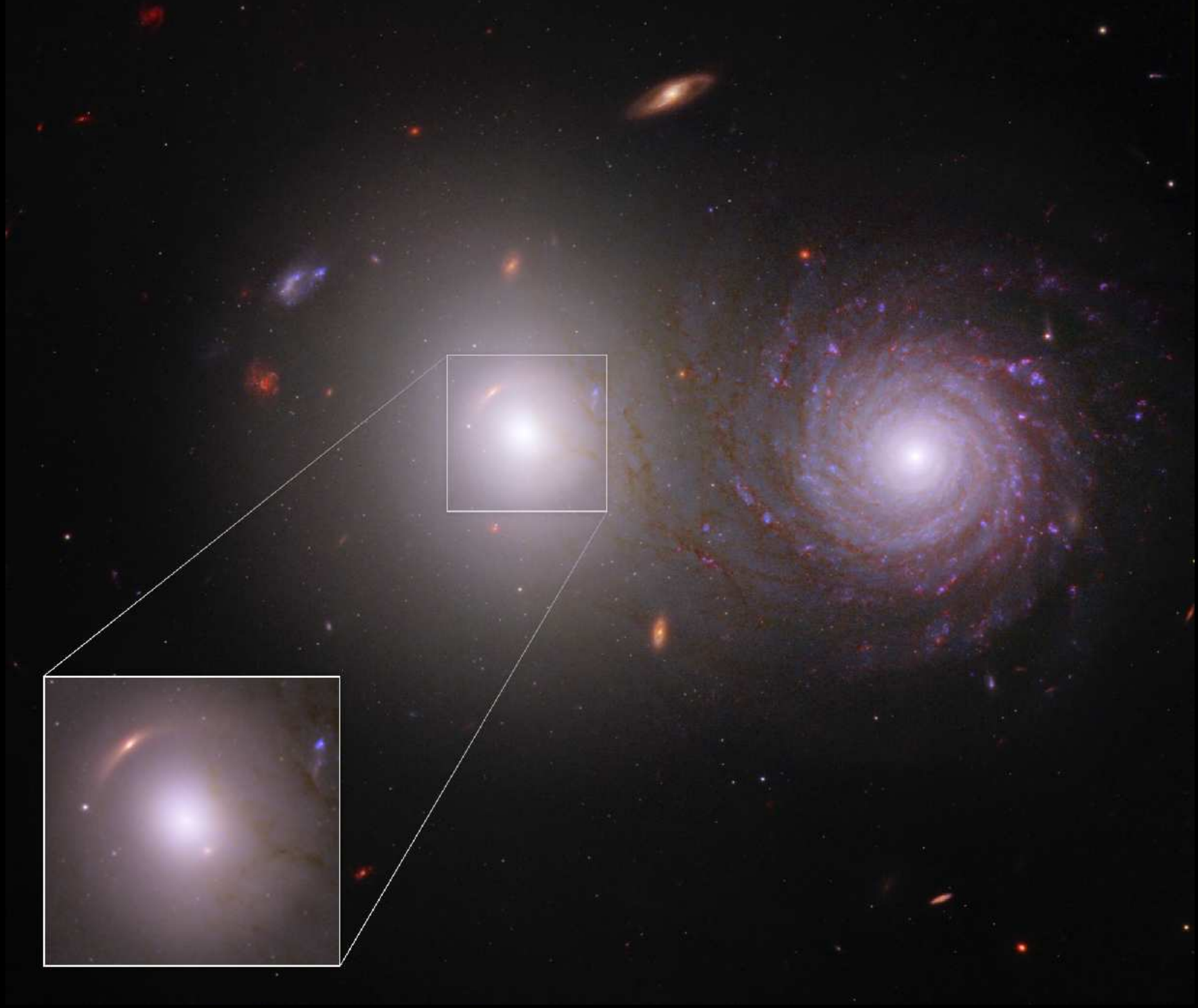
(PEARLS = Prime Extragalactic Areas for Reionization and Lensing Science; Windhorst et al. 2023, Astron. J., 165, 13; astro-ph/2209.04119)

- Some remarkable results in PEARLS and other recent JWST projects:
- (Old SED) tidal tails everywhere. Abundance of red (dusty) spirals.
- Gravitational lensing everywhere: galaxy-galaxy lensing!

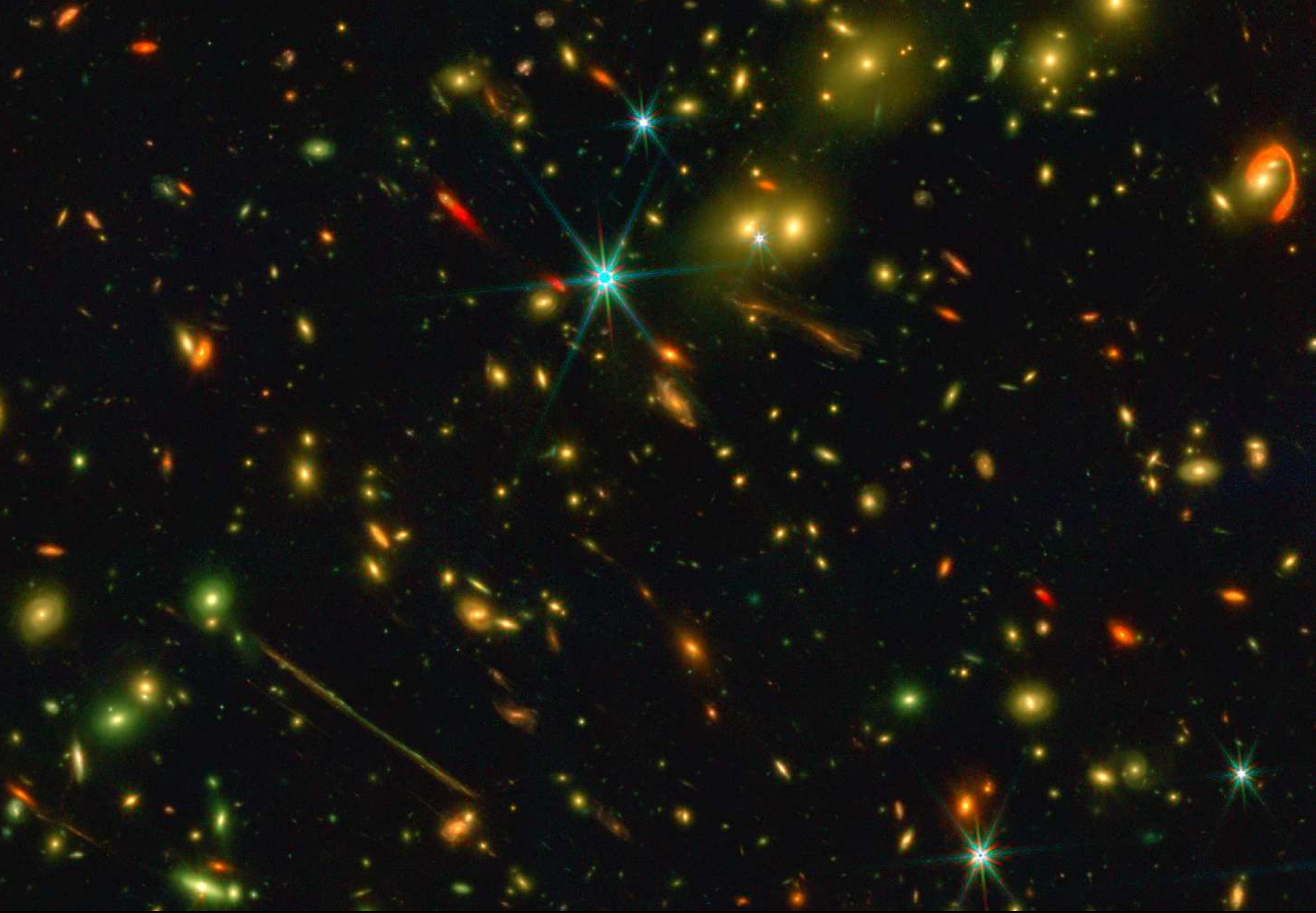
Potential Citizen Science Studies from JWST data:

- (1) Chasing your Galaxy Tidal Tails !
- (2) Galaxy Mergers: Wet and Dry ...
- (3) Galaxy Galaxy Lensing: It takes two to Gravity-Tango!
- (4) Overlapping Galaxies: For Dust Though Art ...
- (5) Rich Cluster Lensing: Looking through Einstein's Eyes ...
- (6) Variable Sources: Staring down Supermassive Black Holes ...
- (7) Variable Sources: The Highest Redshift Supernovae
- (8) Brown Dwarf Atmospheres (like Jupiter's Great Red Spot)
- (9) Expect and Explore the Great Unknown!!

Spiral Galaxy overlapping Elliptical: Tracing cosmic dust (Keel^{+} 22) ...



... and the elliptical also lenses a galaxy seen 2 Byrs after Big Bang!

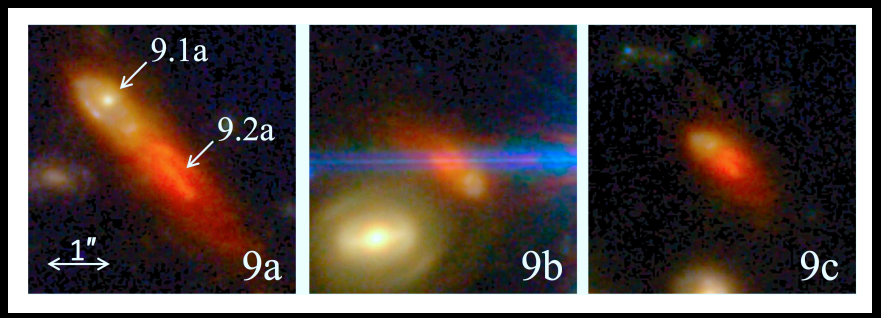


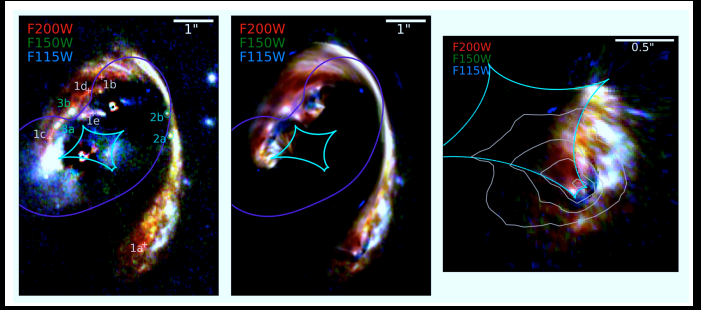
8-filter JWST/NIRCam of massive El Gordo cluster at redshift z$\simeq$0.87

Diego et al. (2023; astro-ph/2210.06514), Frye et al. (2023), Kamieneski et al. (2023), Carleton et al. (2023).

11 hrs JWST/NIRCam on HFF cluster MACS0416 at z≃0.397:

JWST/NIRCam: dusty (ALMA) sources behind El Gordo at z≃2.3–4.3:





• References and other sources of material

Talk: http://www.asu.edu/clas/hst/www/jwst/skysurf_webbsurf_manchester23.pdf

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

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