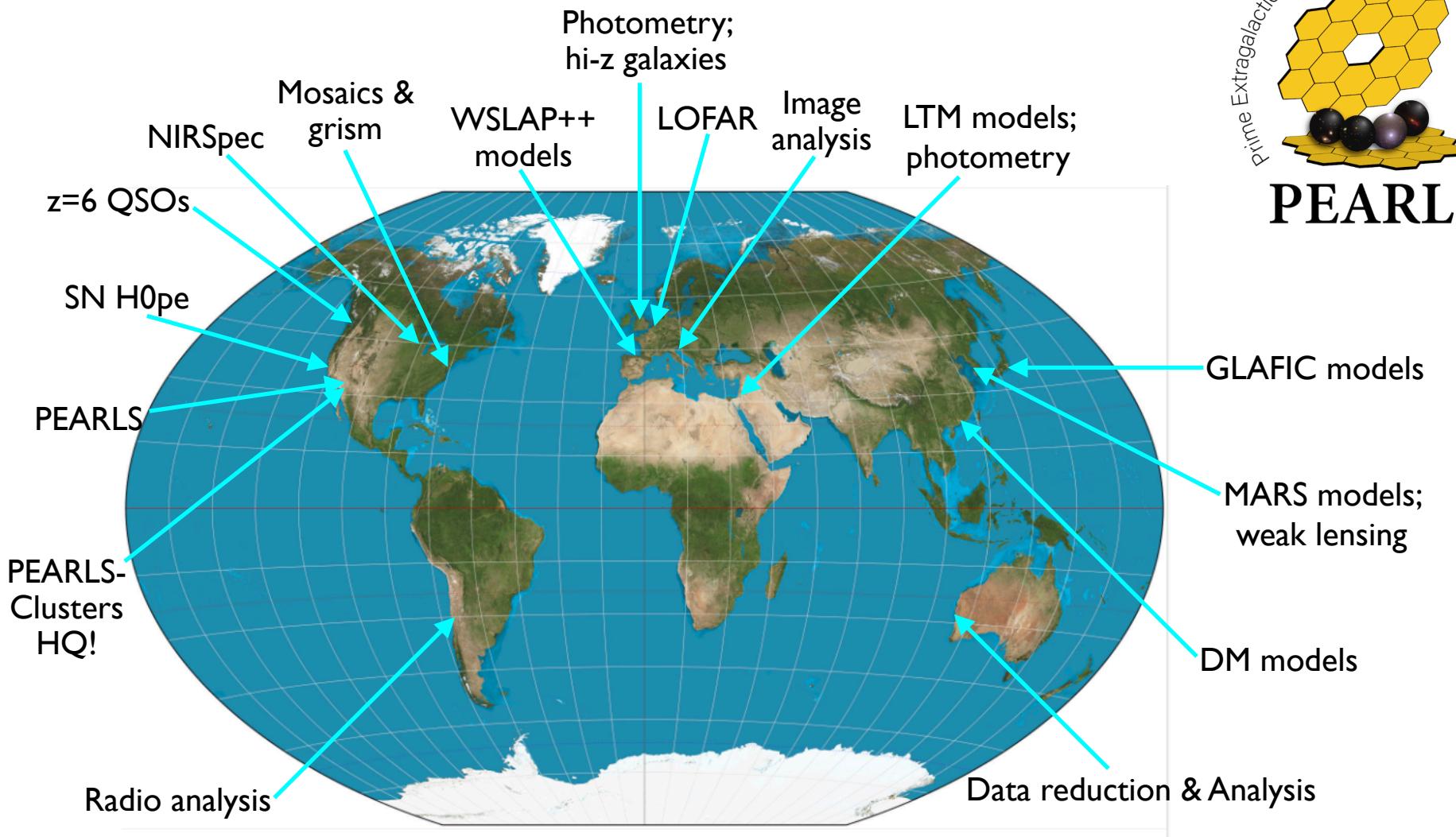
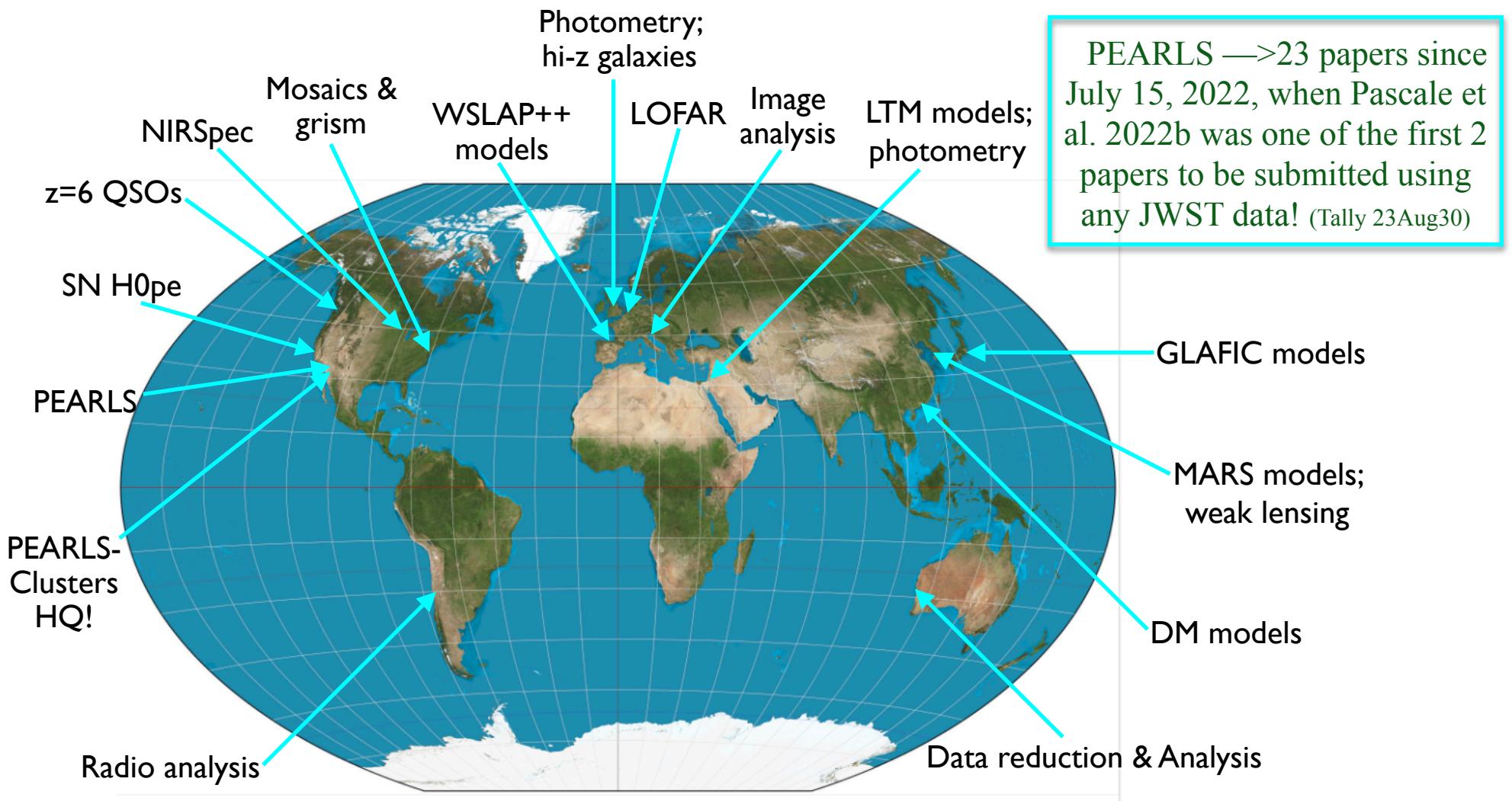


# PEARLS Program



IPEARLS-Clusters branch formed in 2013 in response to lack of cluster representation at GTO level. Targets are 8 galaxy cluster fields (PID 1176, PI: Windhorst; PID 4446, PI: Frye). Some targets have nonstandard physical properties. Why? Gift of GTO time is rare license to take a risk! This sliver of a talk focuses on PLCK G165.7+67.0.

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# JWST/NIRCam imaging of G165

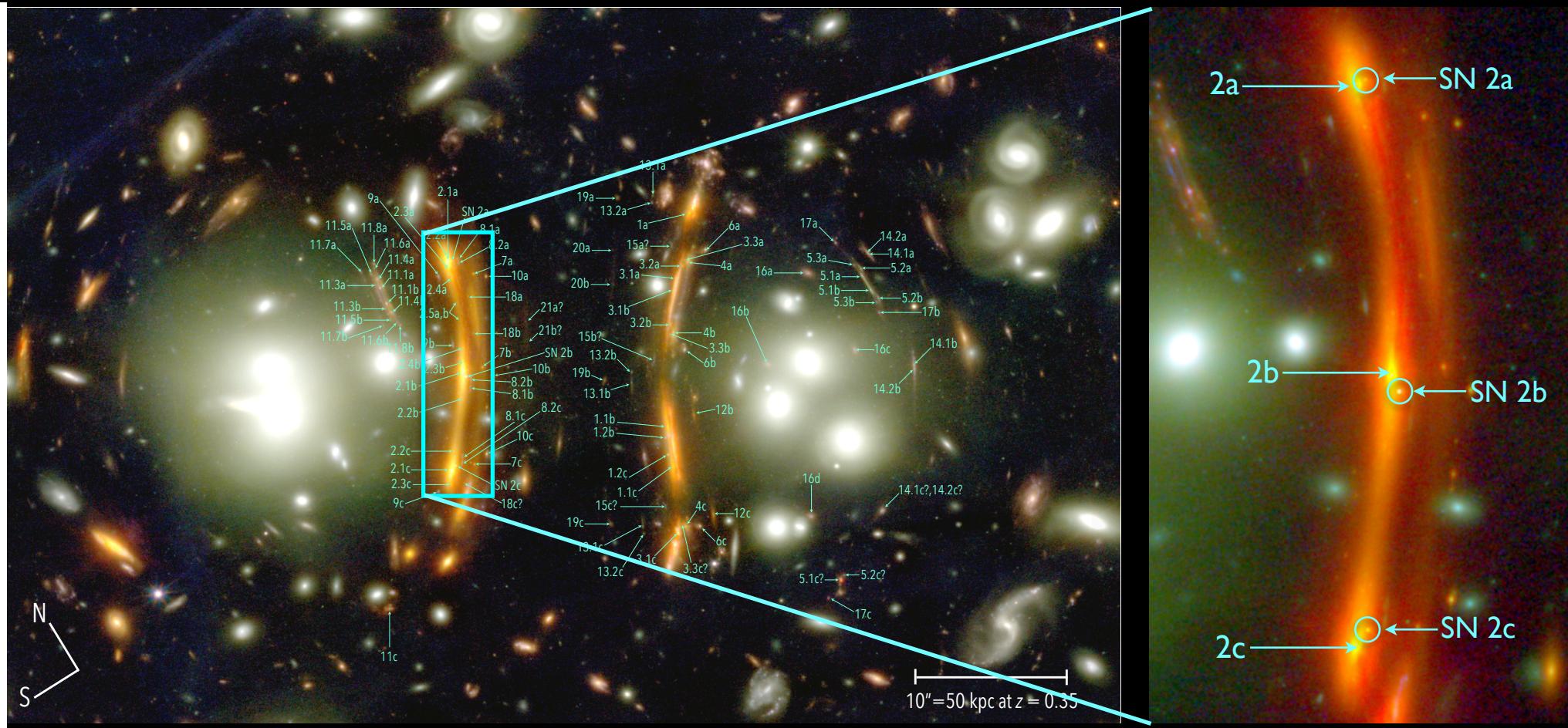
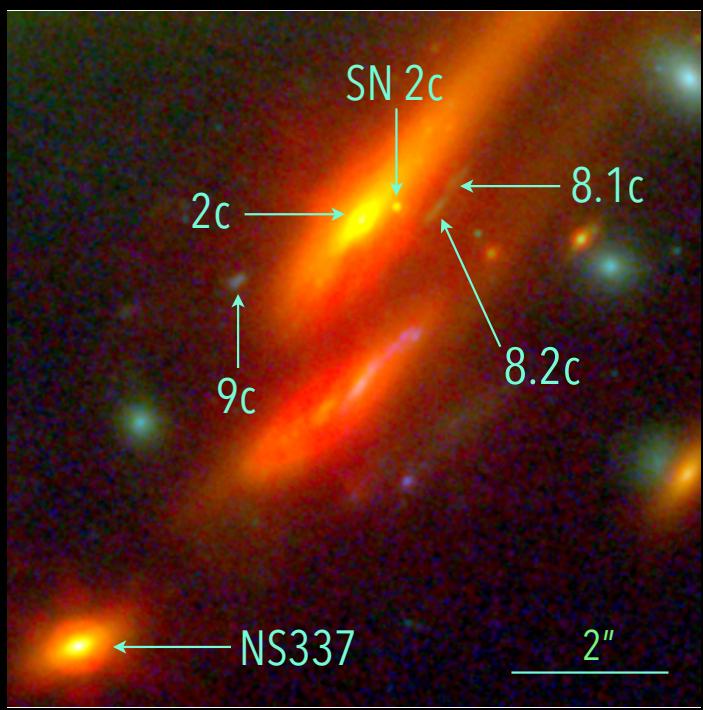


Image showed 3 bright point sources that parity-flipped wrt Arc 2 as predicted by lensing theory.

Light curve of this triply-imaged source had high >90% probability of SN Ia. We measured  $z=1.783$  (DDT, LBT/LUCI), acquired follow-up NIRCam & NIRSpec data (PID 4446, PI: Frye).

We confirm this transient to be a Type Ia SN, and suitable for measuring H0 (Frye+23b; Pierel+23; Chen+23; Pascale+23b)

# JWST/NIRSpec



- SN 2c and its host galaxy (2c) are depicted with 4 *close* galaxy neighbors ( $\Delta v < 900$  km/s, source plane separation  $< 34$  kpc)
- Spectroscopy/SED fits find Arc 2 to be quiescent & massive & its friends to be SFGs/SBGs
- This picture is potentially consistent with galaxy downsizing
- Look for upcoming papers (**Frye+23b; Pierel+23; Chen+23; Pascale+23b**)
- 

