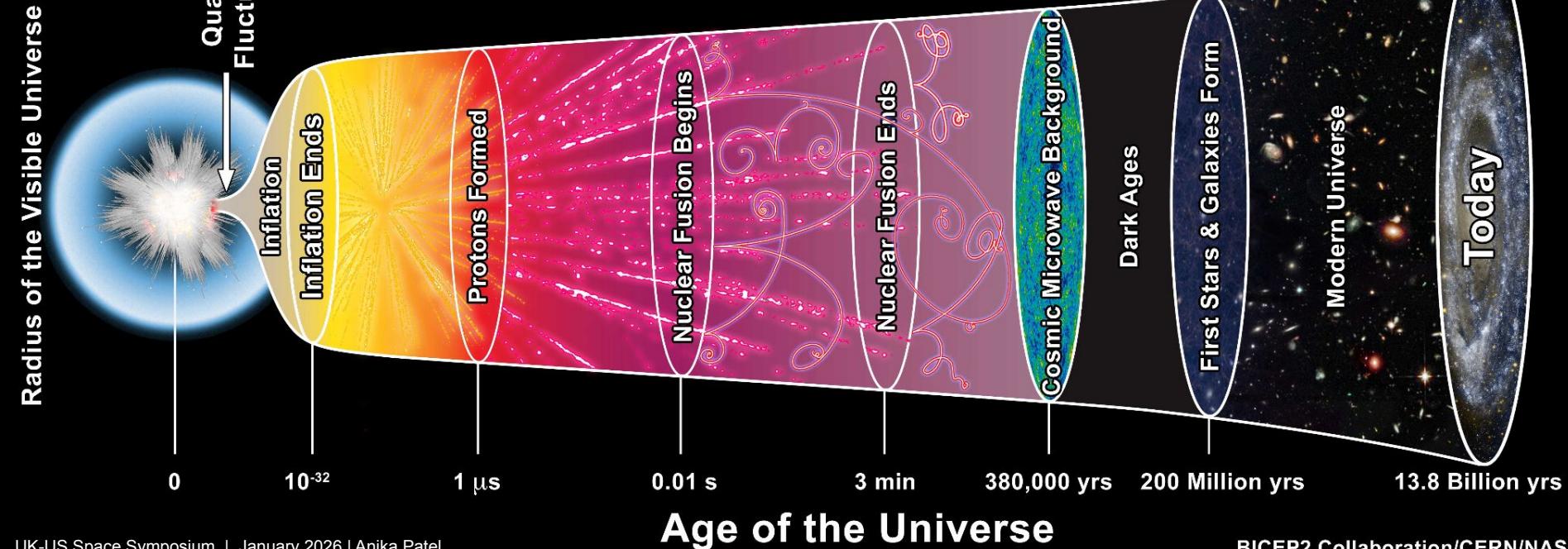


- Cosmic Microwave Background, or CMB, is the oldest light in the Universe (14 billions years old!)
- UK-US partnerships (and global collaborations) have accelerated discoveries

History of the Universe



Ground-based CMB Telescopes

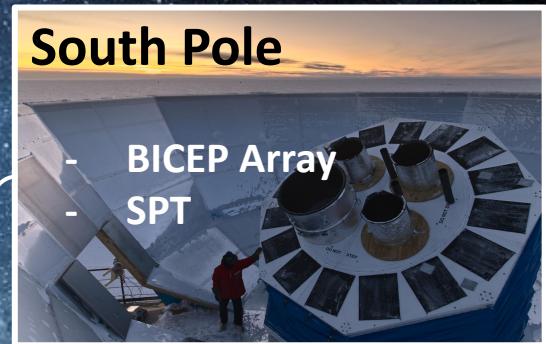
Chile

- Simons Observatory
- ACT
- CLASS
- Polarbear



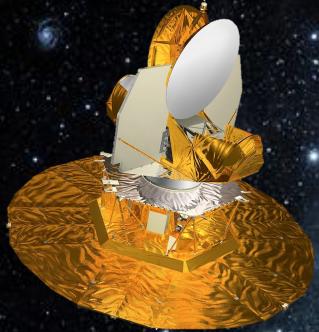
South Pole

- BICEP Array
- SPT



- Ground-based telescopes: rapid deployment, iterative improvements
- Complement space missions by testing instruments, methods, and analysis
- I work on **BICEP Array**, a collaboration with institutions from UK, USA and Canada, probing the CMB

Space-based CMB Telescopes



WMAP



Planck



LiteBIRD

- Japan-led, UK & US contributions
- Proposed mission for space CMB polarization



PICO

- NASA mission study, global collaboration
- Key science: early universe, primordial B-modes, neutrino physics