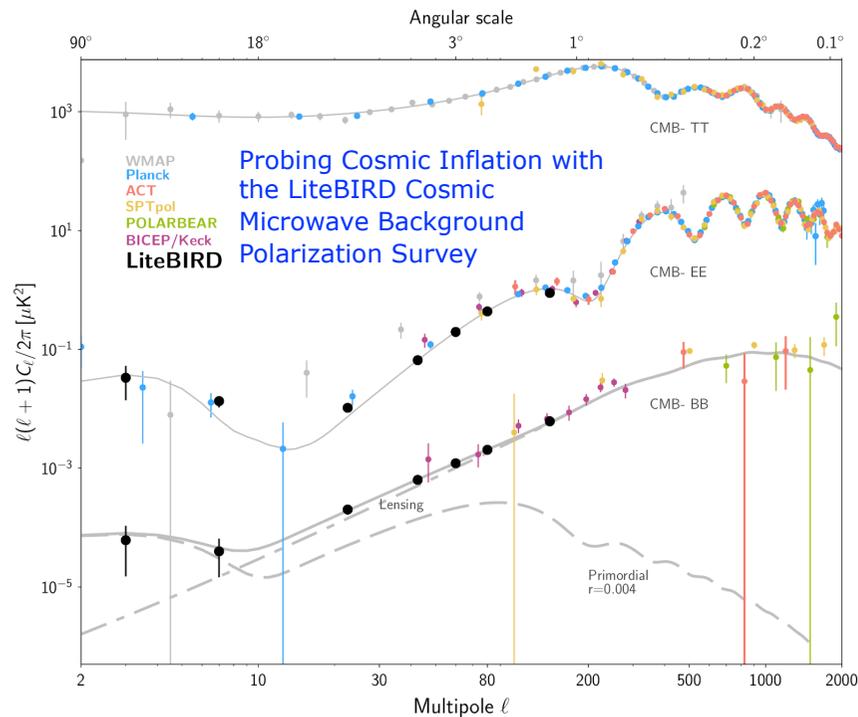


Post Planck: ongoing, future and concepts of CMB anisotropies experiments



Ground: BICEP 3, Keck Array, QUIJOTE, Polarbear/Simons Array, ACTPol, QUBIC, AdvACTPol, SPT-3G, ABS, CLASS, LSPE-STRIP, GroundBird, SPO, Simons Observatory, CMB-S4, ...

Balloon: EBEX, Spider, LSPE-SWIPE, ...

Space: LiteBird (phase A), Pixie, Pico, Bharat , CORE ...

- *Exploring Cosmic Origins, series of 10 papers on JCAP*

*supporting the **CORE** proposal to ESA M5 call*

- **CMB-S4** science book, First Edition

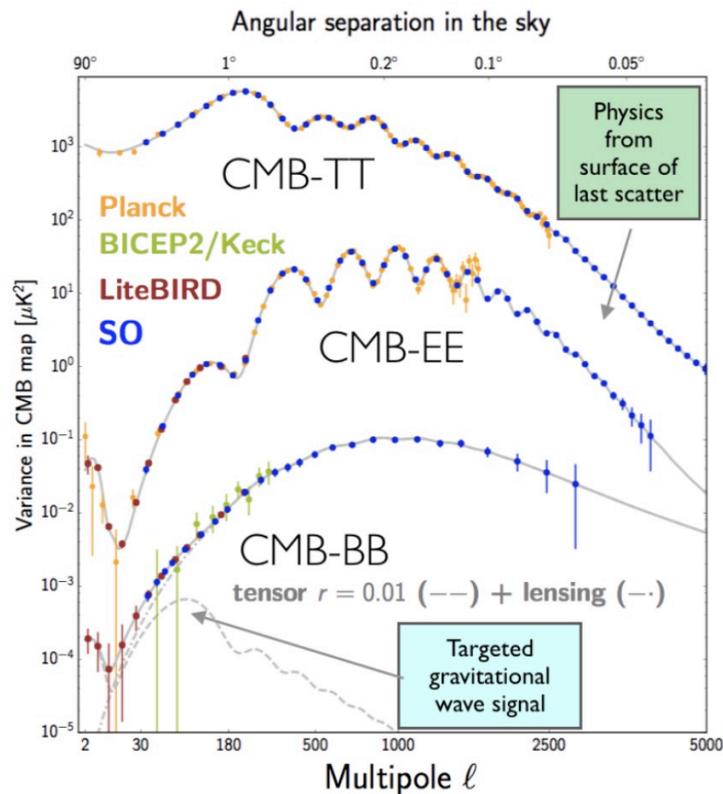
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Microwave Background Polarization Survey

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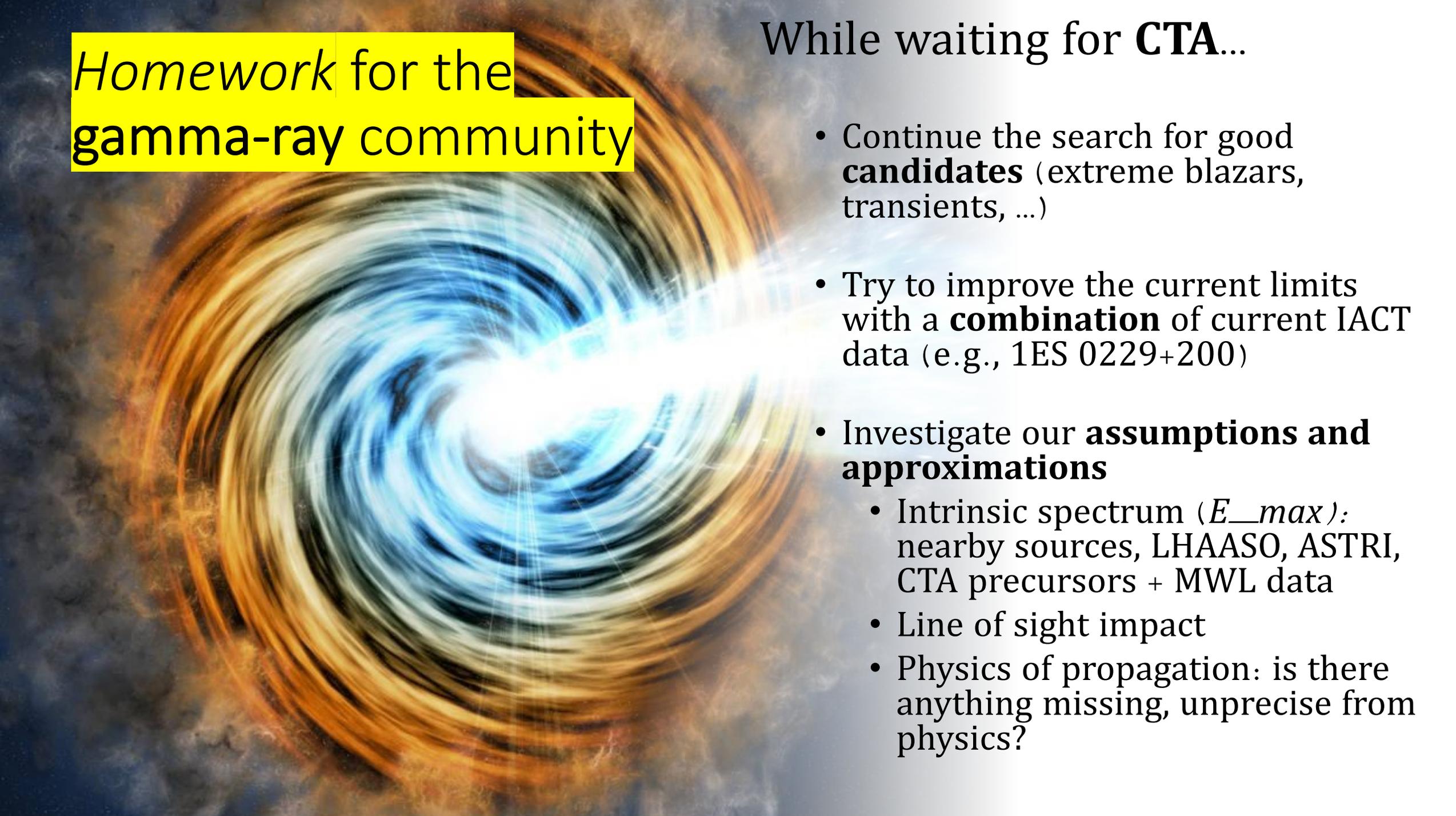
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Homework for the
gamma-ray community

While waiting for CTA...

- Continue the search for good **candidates** (extreme blazars, transients, ...)
- Try to improve the current limits with a **combination** of current IACT data (e.g., 1ES 0229+200)
- Investigate our **assumptions and approximations**
 - Intrinsic spectrum (E_{max}): nearby sources, LHAASO, ASTRI, CTA precursors + MWL data
 - Line of sight impact
 - Physics of propagation: is there anything missing, unprecise from physics?

Radio domain

- **~2030: SKA**
- all SKA science cases already started being explored by precursors/pathfinders: ASKAP, MEERKAT, CHIME, APERITIF, **LOFAR**, MWA... → RM grid, synchrotron emission, FRB

Simulations

- drivers for high-z galaxy formation/cosmology: JWST, Euclid, eROSITA... → steady improvement of “**astrophysical seeding**” models
- connected to Radio observations, blossoming of models to track relativistic particles, radio observables, magnetic field models with increasing complexity ..
→ increasing hope we can connected all different estimates of \vec{B} across epochs, scales, environment. (still “physically motivated” models for PMF can only come from elsewhere!)