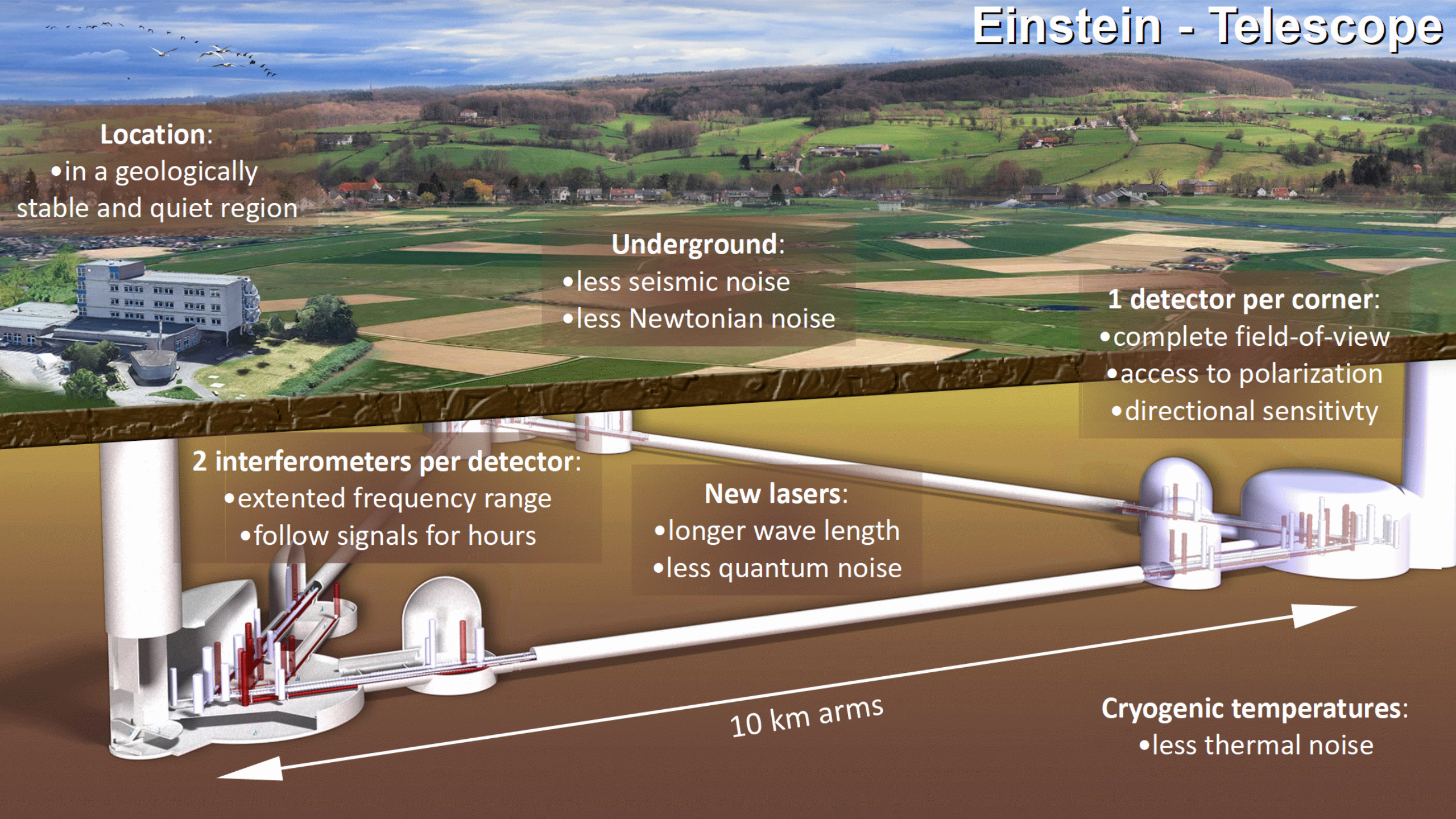
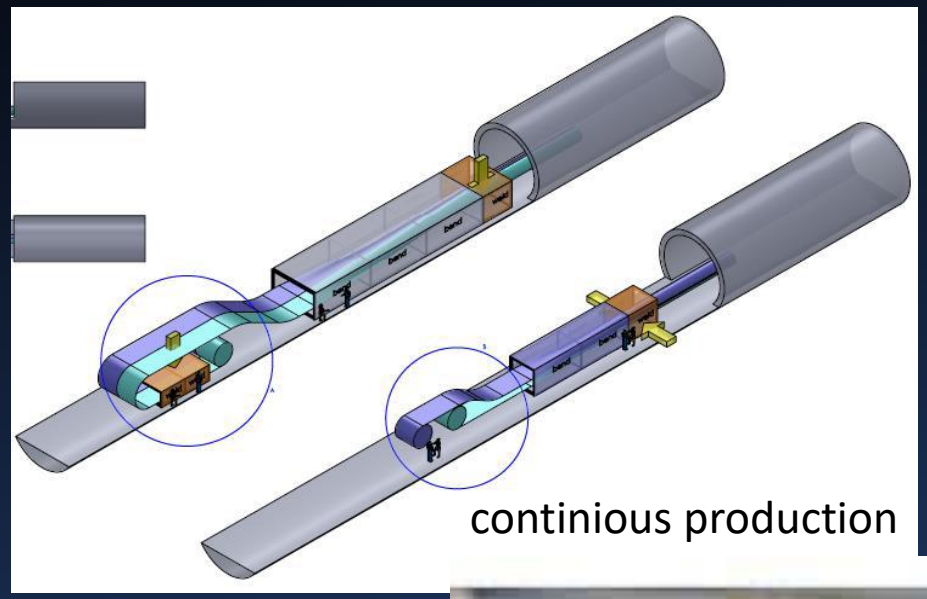
Einstein - Telescope



ET Vacuum

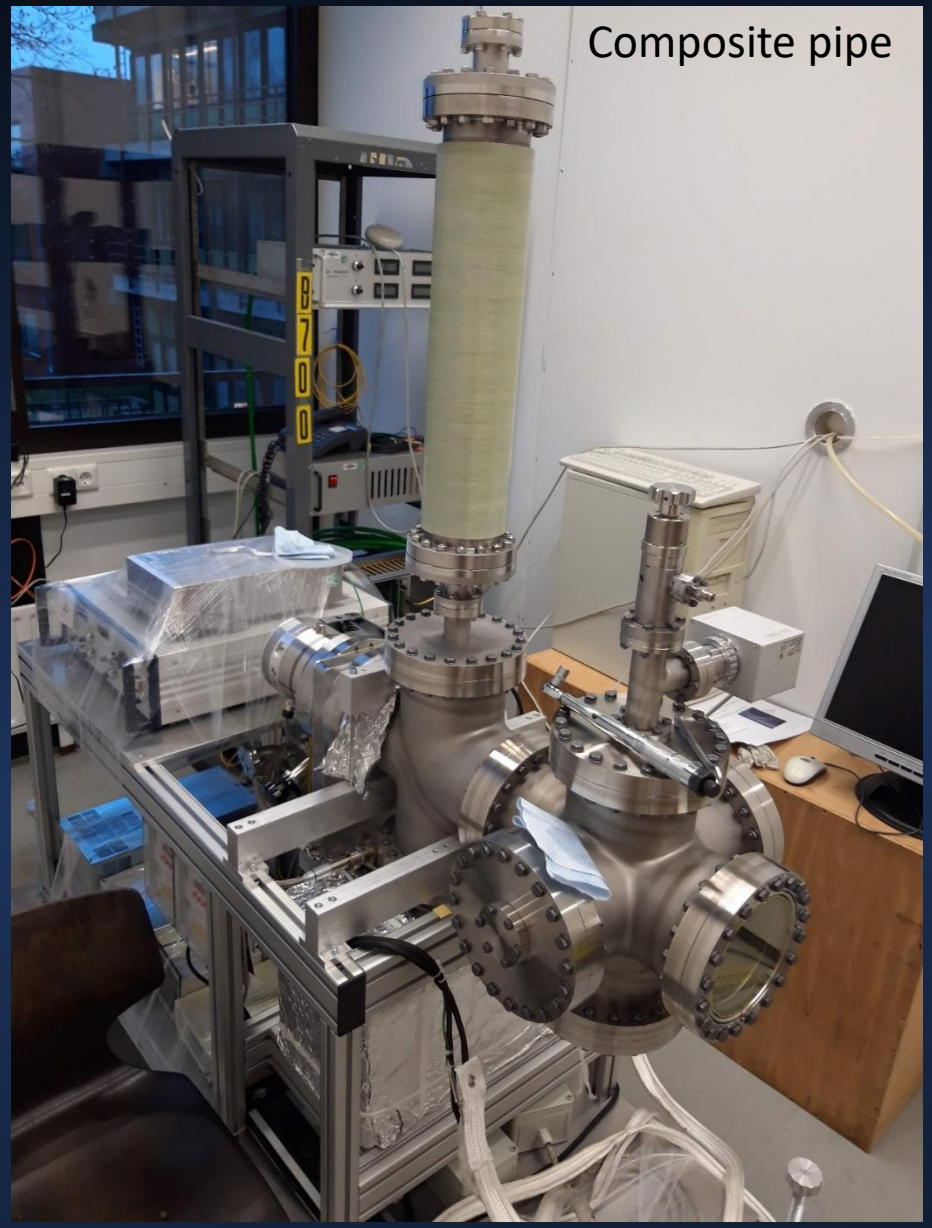
- 12 x 10 km arms @ room temperature + cryogenic endstations (mirrors)
- Largest UHV system ever built
- Fluctuations in gas density → fluctuation in the index of reflection → noise
- Vacuum 10^{-11} mbar (cost 450 Mio. €)
- Technological developments for better vacuum and lower cost
  - New materials
  - Coatings
  - Distributed pumping
  - New concepts for pipes
  - New production technologies
  - Better design tools

New UHV Technologies



continious production

mild steel



Composite pipe