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| Topic | Notes |
| Timeline of the Big Bang | * Happened 13.7 billion years ago * Started as a cosmic egg/primordial atom   + Hot dense material   + Protons, electrons & neutrons * Dark age – universe expanding   + No stars, hydrogen fusion 🡪 heavier elements * Stars & galaxies forms * Today: universe is still expanding * Predictions:   + Andromeda galaxy is going to collide with ours   + Keep expanding 🡪 star die out 🡪 no life   + Gravity is collapse on itself and potentially another big bang could happen |
| Lemaitre | * Priest * Theory that the universe was expanding   + Distance and light – red shift   + Linear relationship between distance of galaxies and their shifts * Not accepted at first |
| Hubble | * Found pulsating stars * Universe is expanding   + Red shifts   + Classified galaxies   + Hubble constant – H=V/D finds the rate at which galaxies/stars move away from us |
| Wilson/Penzias  COBE- Smoot  Background Radiation | * NASA research for ECHO project – they trying to increase the transmission signals of radios * Found background radiation by accident * COBE – cosmic background explorer * Creates a map of the universe background radiation * Looking into the past when looking at this data   + Takes light years to get here   + Background radiation is everywhere and that there was a large explosion to create is so it provides evidence that the Big Bang occurred |