

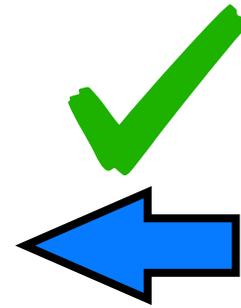
# Introduction to Cosmology

Sergey Sibiryakov

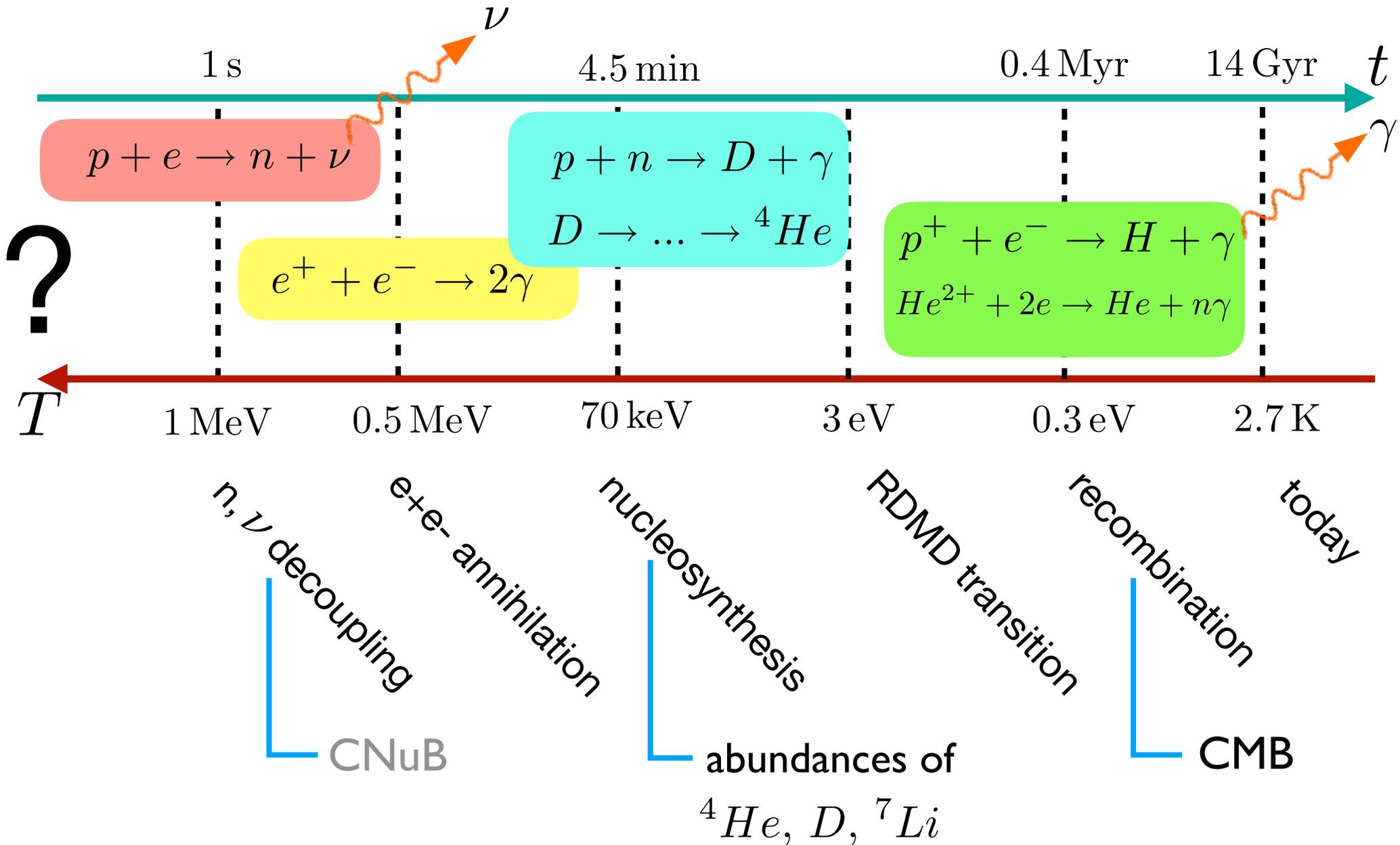


# 14 billion years of the Universe history in 3 hours

- Expansion of the Universe
- Hot Big Bang
- Inflation



# Hot Universe in brief

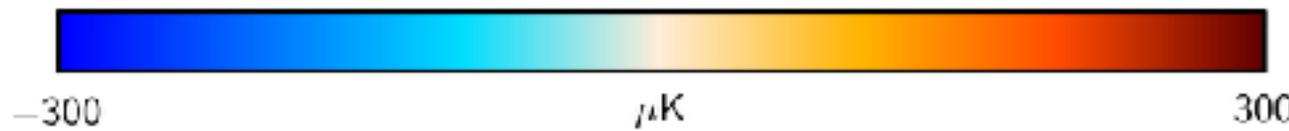
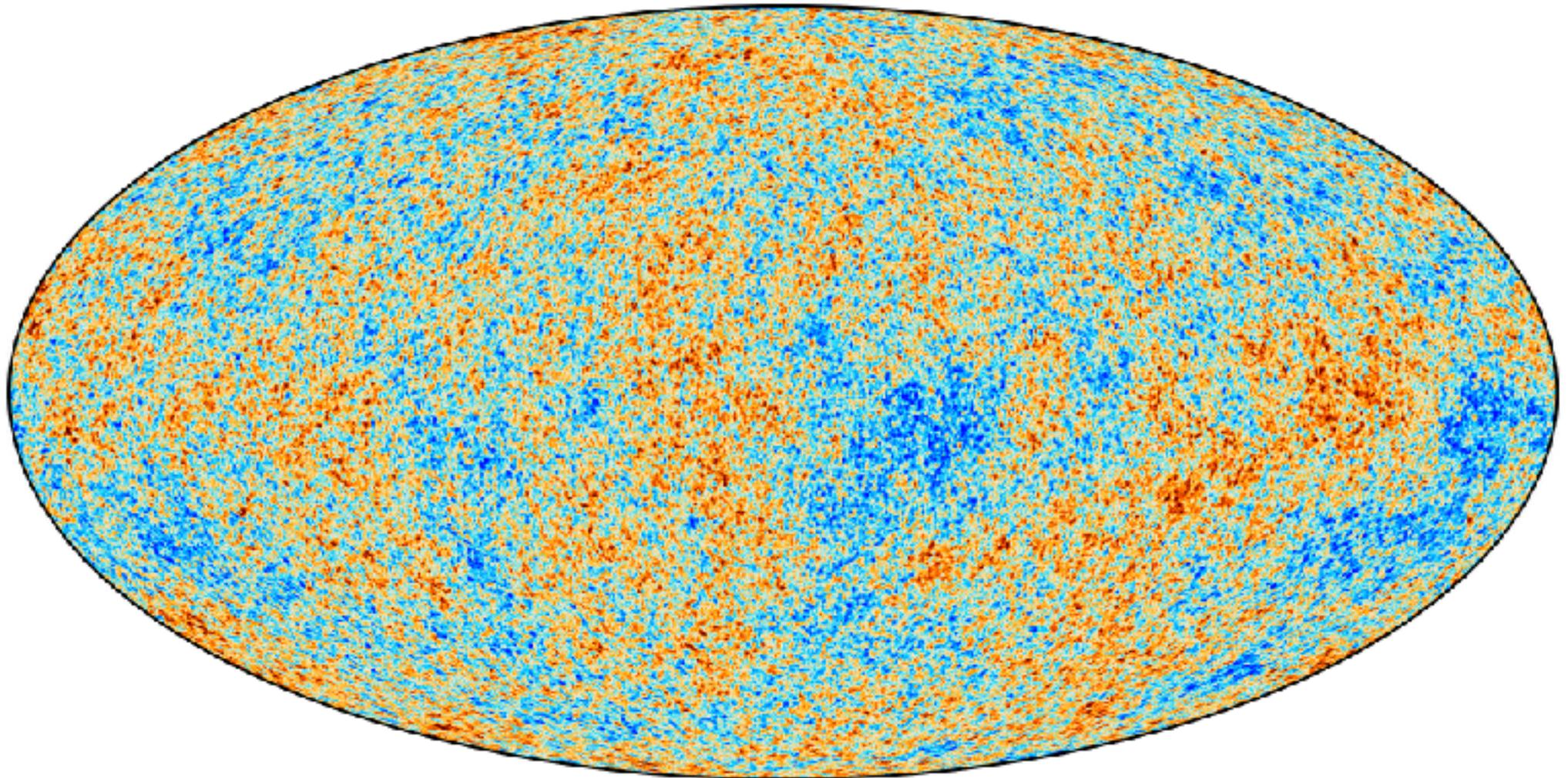


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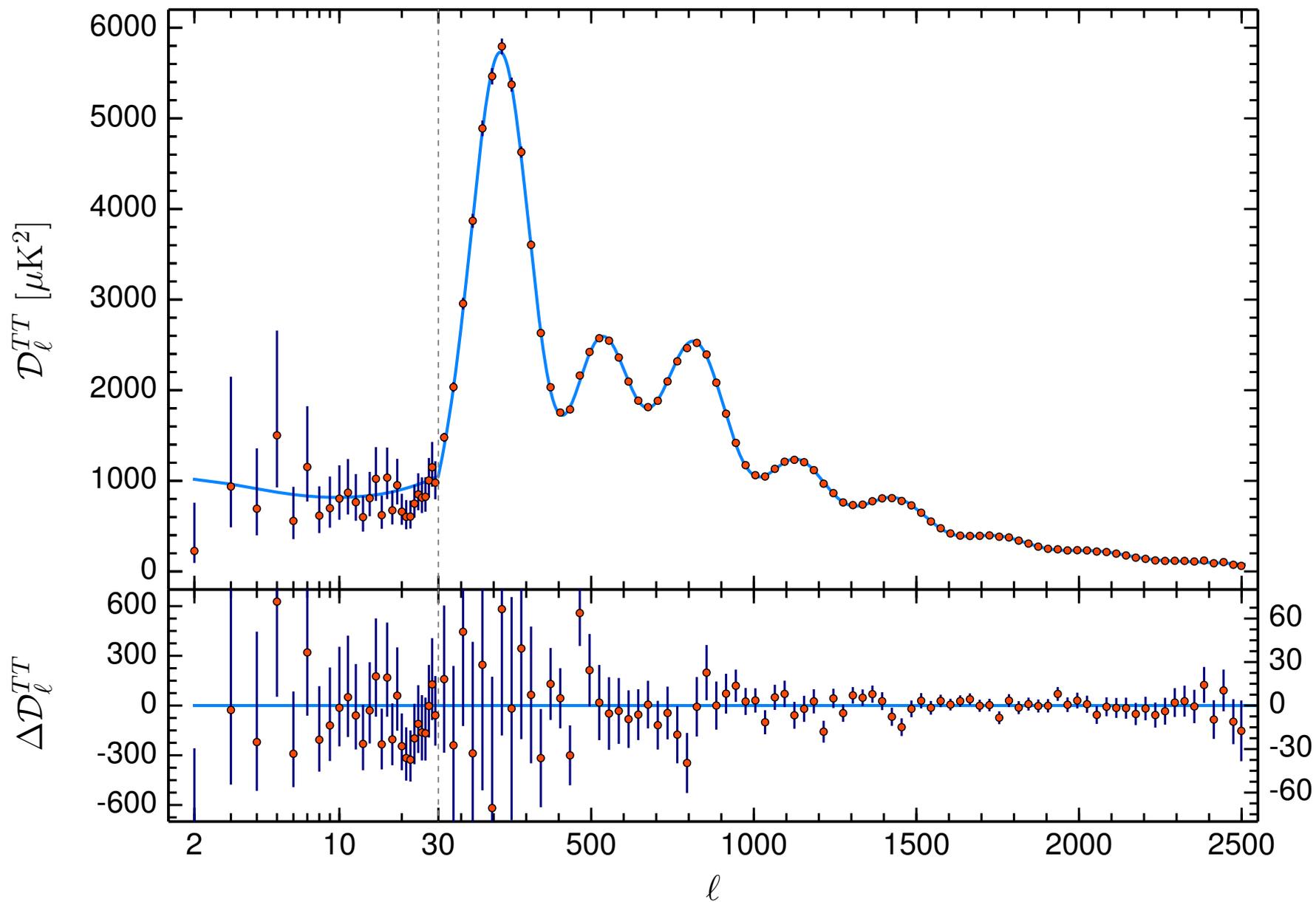


# CMB anisotropies



*Planck coll. (2015)*

# CMB anisotropies



# Where the next breakthrough ?

## Wanted: BSM physics

- Dark matter
- Baryogenesis
- Inflation, reheating

## Conceptual

- Why cosmological constant is so small ?
- What was before inflation ?
- Why quantum mechanics works for the whole Universe ?