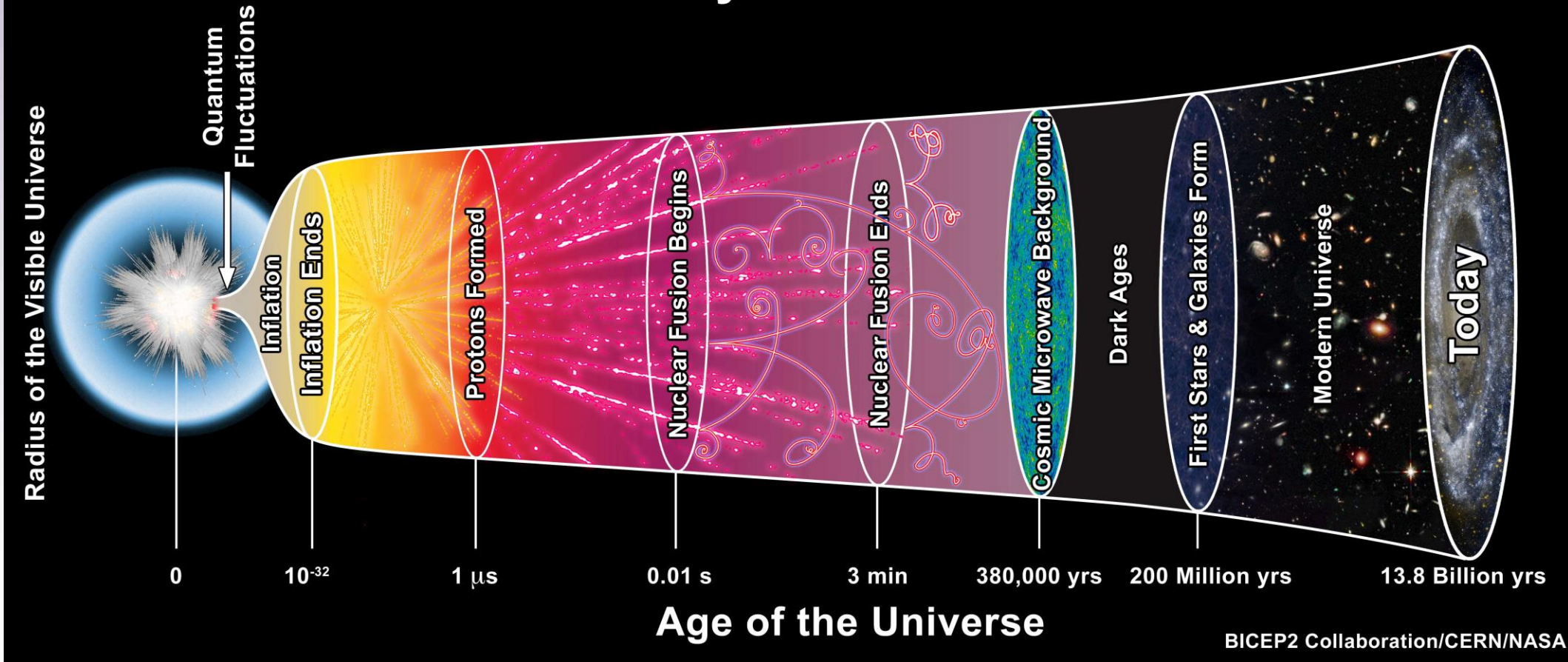


Studies of the nucleosynthesis
 $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$ in inverse kinematics for the
MAGIX experiment at MESA

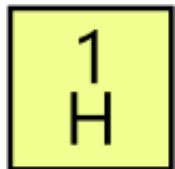
Stefan Lunkenheimer
MAGIX-Collaboration

57. International Winter Meeting on Nuclear Physics (Bormio)

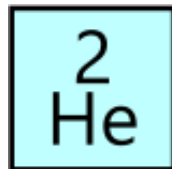
History of the Universe



Big Bang Nucleosynthesis:



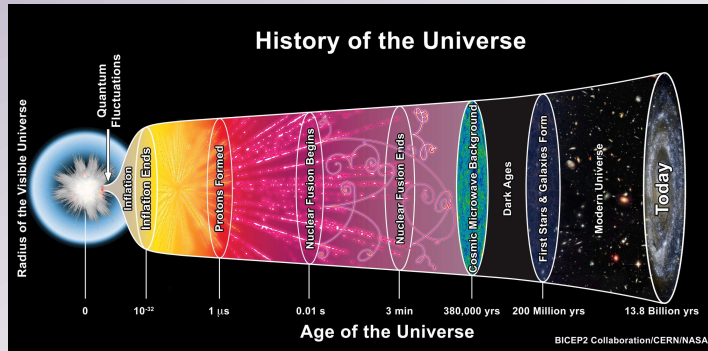
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25%



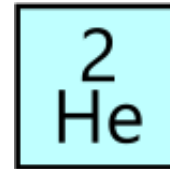
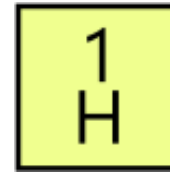
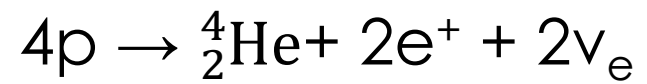
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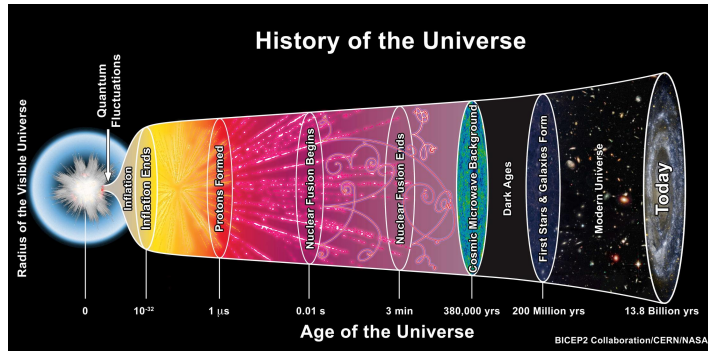


Big Bang Nucleosynthesis

Stellar Nucleosynthesis:

Hydrogen Burning Stage



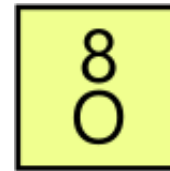
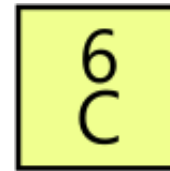
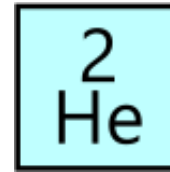
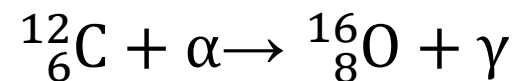
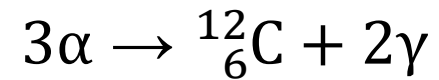


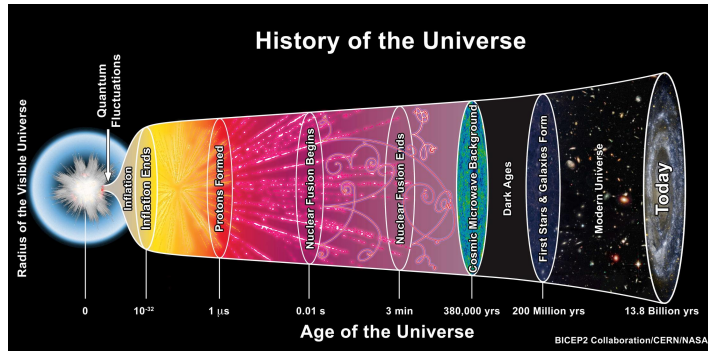
Big Bang Nucleosynthesis

Stellar Nucleosynthesis:

Hydrogen Burning Stage

Helium Burning Stage



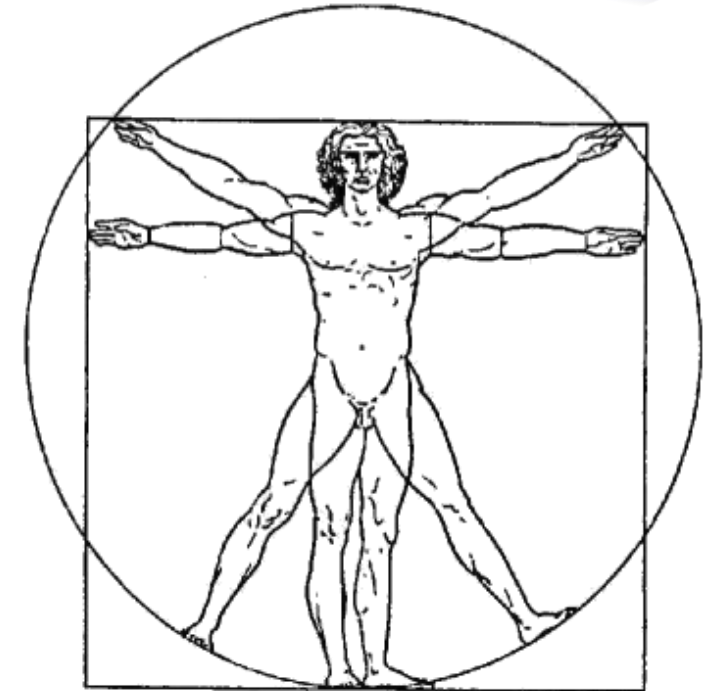
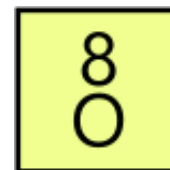
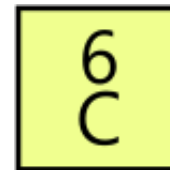
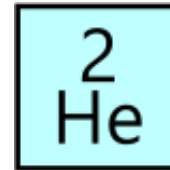
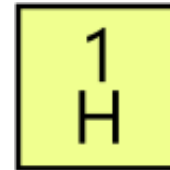
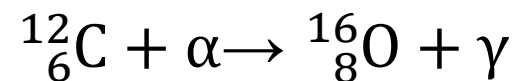
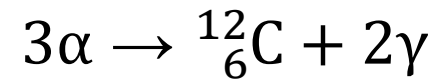


Big Bang Nucleosynthesis

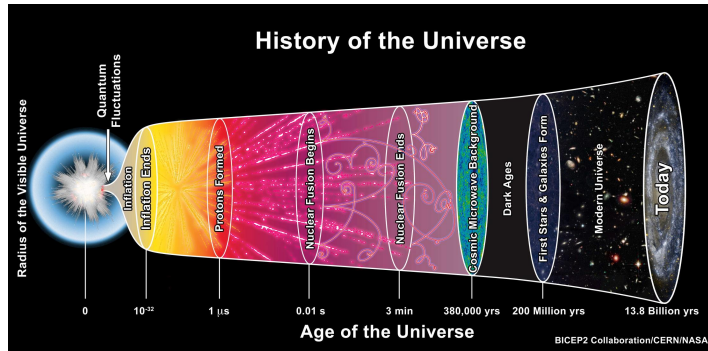
Stellar Nucleosynthesis:

Hydrogen Burning Stage

Helium Burning Stage



Human consist to 98% of H,C,O



What if the second reactions does not happen?

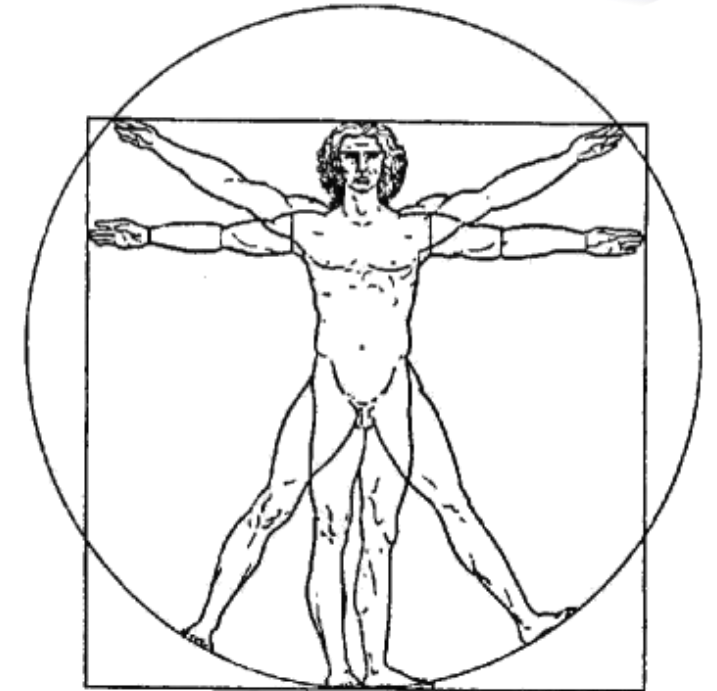
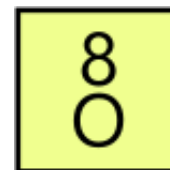
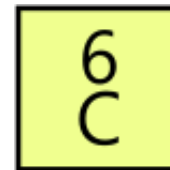
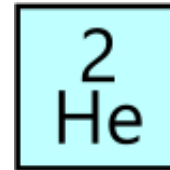
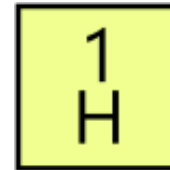
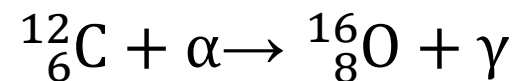
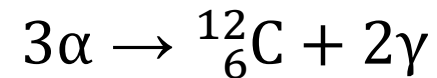


Big Bang Nucleosynthesis

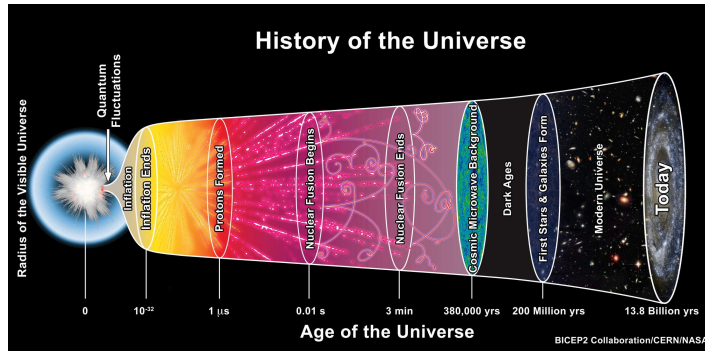
Stellar Nucleosynthesis:

Hydrogen Burning Stage

Helium Burning Stage



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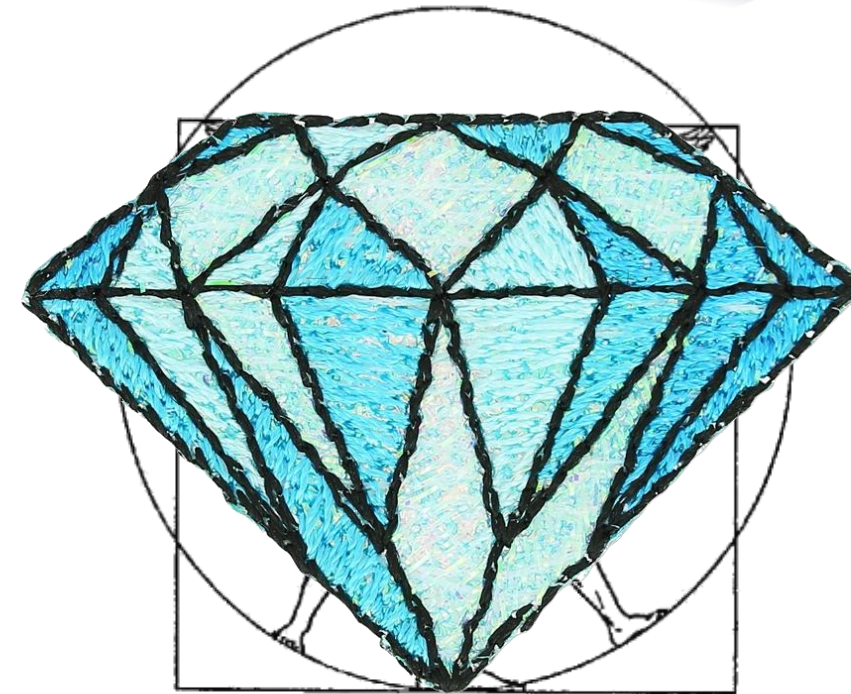
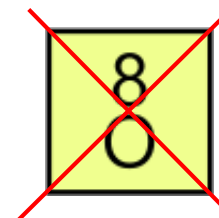
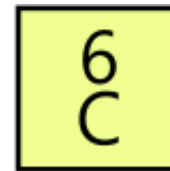
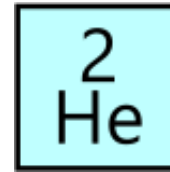
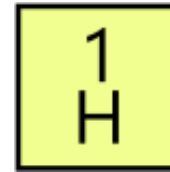
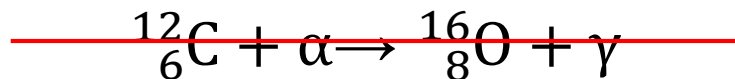
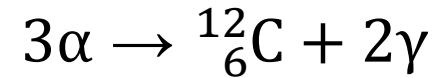


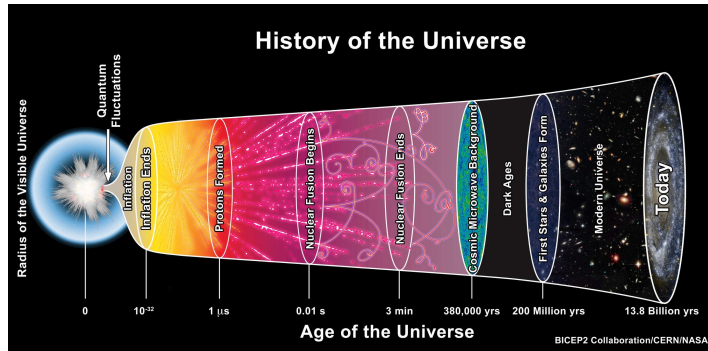
Big Bang Nucleosynthesis

Stellar Nucleosynthesis:

Hydrogen Burning Stage

Helium Burning Stage





We are living in a lucky universe.

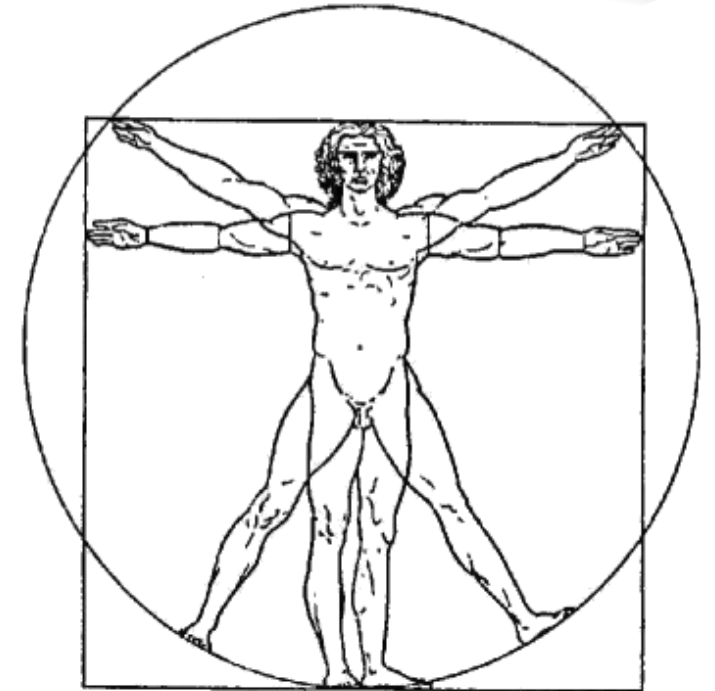
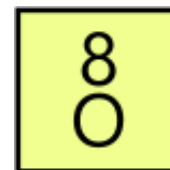
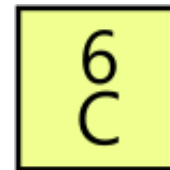
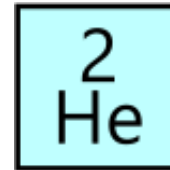
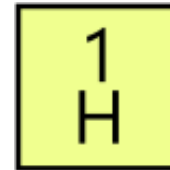
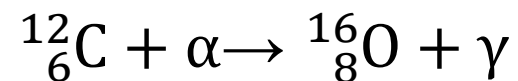
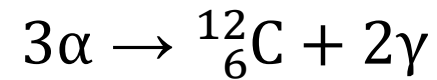


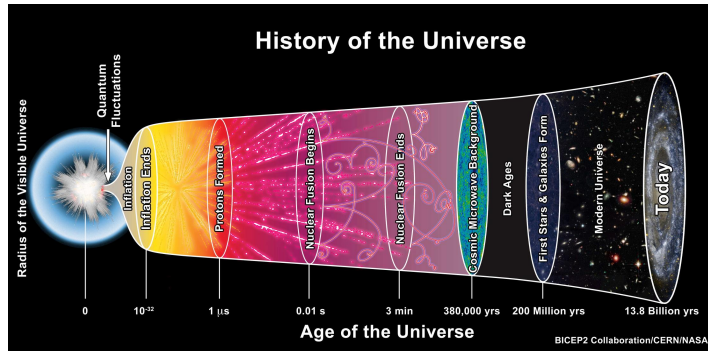
Big Bang Nucleosynthesis

Stellar Nucleosynthesis:

Hydrogen Burning Stage

Helium Burning Stage





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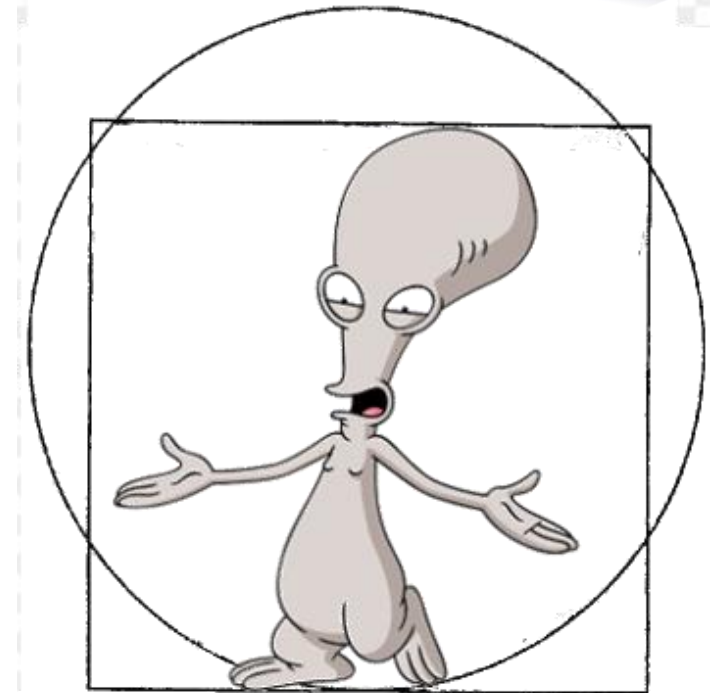
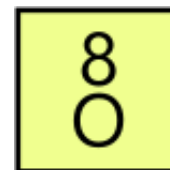
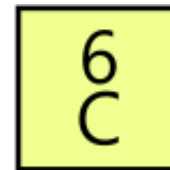
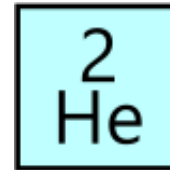
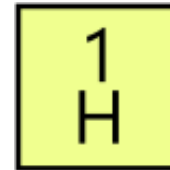
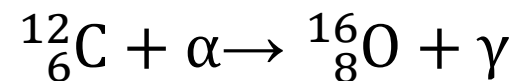
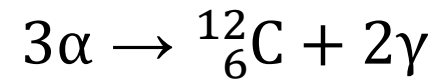


Big Bang Nucleosynthesis

Stellar Nucleosynthesis:

Hydrogen Burning Stage

Helium Burning Stage





THANK YOU FOR YOUR ATTENTION!

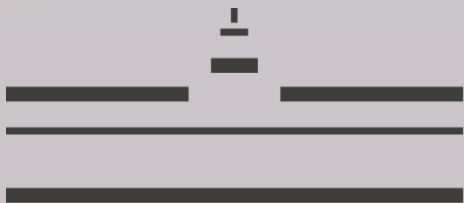
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