

vii) To find the time at which nuclear reactions occurred throughout the universe I would need to find the temperature and density above which nuclear reactions proceed at a non trivial rate. I would need to find how the temperature and density of the universe vary with time - both temperature and density can be expressed as functions of R , which can be expressed as a function of t by solving Friedmann's equations!

The ^{isotropic} cosmic microwave background radiation implies that the universe was extremely isotropic in earlier times, and we believe also it to be isotropic to all observers i.e. homogeneous as well as isotropic. Hence, the conditions of temperature and density needed for nuclear reactions to proceed at a non trivial rate would have existed throughout the universe at the same time.

① to use eq (1) + (2) Assum. Radiation Dominant.

(56)