

The Age of Our Nearest Stellar Neighbor

Tuesday, 19 September 2017 11:45 (15 minutes)

The Alpha Centauri triple system (A: G2V; B: K1V; C: dM6) represents an important rung on the stellar age ladder. The two sunlike stars, A and B, have a resolved visual orbit (80 year period), and decades of radial velocity measurements (in part from recent planet hunting, spurred by “Breakthrough StarShot,” which aims to send a swarm of laser-propelled nanobots to the system before the end of this century). The accurately known distance, resolved orbit, modern RVs, and asteroseismology has led to very precise determinations of the stellar parameters, perhaps the best for any star other than the Sun itself. Further, the slightly more massive A component is somewhat evolved, while its lower mass companion is firmly on the Main sequence. This lucky property of the binary allows stellar evolution modeling to pin down the age, as described by Flannery & Ayres in the late 1970’s. I summarize the most recent age estimates, and how these fit in with the ultraviolet and X-ray activities.

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Session Classification: Solar-type and low-mass stars and the connection to exoplanets