

DISCUSSION FOLLOWING PAPER BY IBEN

Kippenhahn to Iben: Was there anything new about Breger's correlation between pulsational stability, rotation and metal content? Was there any explanation?

Iben: There is indeed a correlation between rotation rate and pulsation and between metallicity indicators and pulsation. For example, it seems that rotation prevents pulsation. I do not remember the sense of the correlation between metallicity and rotation. The correlations are strong since $\frac{2}{3}$ of the stars in the 'observational' instability strip are nonvariable. No detailed explanation was given.

Faulkner: On the topic of the distance to the Hyades, we have known since the mid-1960's that the best observed nearby dwarfs and sub-dwarfs, when corrected for line-blanking effects, define a curve in the $M_{\text{bol}}, \delta(U-B)$ diagram which passes 0^m.2 above the Hyades position (i.e. the origin) in this diagram. One consequence of correcting the distance to the Hyades by 0^m.2 is that the Hyades will now lie on the curve already defined by stars 'corrected to the Hyades'. There are those who have felt that this is not an unreasonable requirement.

Arnett to Iben: (1) Doug. Keeley, now at Santa Cruz, obtained results similar to those of P. R. Wood quoted by Iben (see Keeley's Ph.D. dissertation Cal. Inst. Tech. 1968).

(2) How does θ_d^2 variation in $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$ cause changes in the position of a star in the HR diagram.

Iben: The time which a star spends in this particular evolutionary phase is changed.