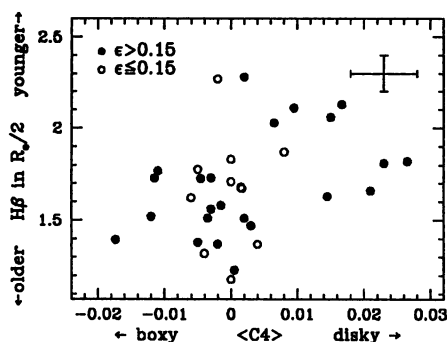


THE SHAPES AND AGES OF ELLIPTICAL GALAXIES

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Normally elliptical galaxies are thought to be old, evolved systems, but recently a controversy has arisen over the age of ellipticals. Measurements by González (1993, Ph.D. thesis, UCSC) show that the $H\beta$ absorption indices of ellipticals span a range of values. Population synthesis models indicate that the $H\beta$ index is a good age indicator and hence, contrary to normal perception, the ages of ellipticals seem to span a range of values.

Here we investigate the hypothesis that the younger ages found in some elliptical galaxies are in fact due to an additional younger stellar population in a disk-like distribution superimposed on the old main body. In the figure we therefore examine the relation between $H\beta$ index (from González' thesis and Davies et al. 1993, MNRAS 262, 650) and the shape of the isophotes as indicated by the $C4$ parameter (from Bender et al. 1989, A&A 217, 35; Peletier et al. 1990, AJ 100, 1091; Goudfrooij et al. 1994, A&AS 104, 179).



A weak trend can be seen in this diagram. There is an apparent lack of galaxies with boxy isophotes and high $H\beta$ index and of galaxies with disk-like isophotes and low $H\beta$ index. This could mean that galaxies with “young” centres (high $H\beta$ index) have an additional younger population distributed in a disk. A more detailed study is required to see whether higher $H\beta$ indices are indeed predominantly related to the light of the disk-like distribution.