

## JOINT DISCUSSION 8: STELLAR EVOLUTION IN REAL TIME, PART II

### *EXPLICIT EVIDENCES FOR STELLAR EVOLUTION*

This Part of the report contains the summaries of the most affirmative conclusions about recognized evidences for stellar evolution. We would certainly prefer to know that we have actually discovered this or that piece of evidence but it can be equally valuable to know that the present state of knowledge forbids a conclusion of the sort which we wish. Not surprisingly, there are instances for which we are lucky to be able to make only a limiting statement about the matter. So *affirmative* here really means that a conclusion - positive or negative - has actually been attained. To the *layman* in stellar evolutionary studies it may be surprising that there exists such a diversity of evolutionary criteria - radiometric, spectrometric, orbital dynamical, spin dynamical - all with a defined time base available at the present day. It may be hoped that some of the conclusions summarized here will make their way routinely into undergraduate texts in the foreseeable future and that tools such as the HRD or CMD will not appear as only static snapshots.

The convenors of the JD8 are also well aware that some specific subjects are actually missing from the following highlights and expect to cover these gaps in the full presentation of the Proceedings. The editors also note that the summaries of the impressive presentations by N. Mowlavi and K. Nomoto did not arrive by press time; these too will appear in the final volume. In what follows, the summaries are arrayed by advancing stellar evolution as closely as the variety of masses, the single or double star condition, and current knowledge permit.