

*When the argument got very heated
And things, which should not be repeated,
Were shouted out loud
Came a voice from the crowd
"Its all bull (expletive deleted)".*

SESSION 4

PANEL DISCUSSION ON STELLAR WIND THEORIES

Chairman and Introductory Speaker: A.G. HEARN

Panel Members:

1. J. CASTOR: Radiatively driven stellar winds: Model improvements, ionization balance and the infrared spectrum.
2. H. LAMERS: The warm wind model.
3. J. CASSINELLI: The coronal plus cool wind model for Of stars and OB supergiants.
4. R. THOMAS: The thermodynamic requirements on atmospheric models imposed by observed stellar nonthermal mass-fluxes and by those observed nonthermal features enhanced in Xe stars.

Editors' note: The Scientific Organizing Committee agreed that the following questions were to be presented to the panelists in advance. The panelists were to use these as guidelines in their presentation at the Symposium and for their written contributions. The precise formulation of the questions was made by Dr. A. Hearn.

1) How does the temperature structure and stellar wind velocity in the theory vary with height? A geometrical distance in units of stellar radii or kilometers would seem to be the best representation.

- 2) How does the theory account for the observations of:
- a) the U.V. region and in particular the simultaneous presence of high and low ionization stages;
 - b) the hydrogen and helium lines;
 - c) the observed upper limits of X-ray emission;
 - d) the I.R. emission?

3) How does the theory explain the observed differences in ionization and mass loss rate between a supergiant such as ζ Orionis and a main sequence star such as τ Scorpii?

4) How does the theory account for the variability of the wind with time?

5) What specific observations are needed to prove or disprove the theory?

6) What does the theory predict for the variation of mass loss rates with stellar characteristics?