

Eta Carinae in the Context of the Most Massive Stars

JD13: 13-14 ; follow up meeting 15/Aug 2009

Rio de Janeiro, Brazil, IAU GA 2009

MOTIVATION

Eta Car, with its historical outbursts and visible ejecta, continues to challenge both observers and modelers. Just in the past five years over 100 papers have been published. We now know it to be a massive binary system with a 5.54-year period. In January 2009, Eta Car will undergo one of these periodic low-states and will be followed by an intensive multi-wavelength campaign ranging from X-rays to radio. A large amount of data will be collected and used to test a number of working models, including 3-D models of the massive interacting winds. August 2009 is an excellent time for observers and theorists to come together and review the accumulated studies, as have occurred in four meetings since 1998 devoted to Eta Car.

WR140 is also passing through periastron in early 2009. It, too, is a intensively studied massive interacting binary. comparison of its properties with that of Eta Car will be very instructive. These well-known examples of evolved massive binary systems provide many clues as to the fate of the most massive stars. What are the effects of the interacting winds, of individual stellar rotation, and of the circumstellar material on what we see as hypernovae/supernovae?

TOPICS

- Eta Carinae: the 2009.0 event: Monitoring campaigns in X-rays, optical, radio, interferometry
- WR140 and HD5980: similarities and differences to Eta Carinae
- LBVs and Eta Carinae: What is the relationship?
- Massive binary systems, wind interactions and 3-D modeling
- Shapes of the Homunculus and Little Homunculus: what do we learn about mass ejection?
- Massive stars: the connection to supernovae, hypernovae and gamma ray bursters
- Where do we go from here? (future directions)

CALL FOR PAPERS: We are receiving submissions for oral talks and posters

FOLLOW UP MEETING

The 1.5 days allocated for the Joint Discussion will not cover all topics and indeed observations and modeling will continue on these systems. A one to two day workshop will immediately follow the IAU General Assembly devoted to specific topics defined by attendees of the Joint Discussion. Orbital parameters and wind-wind collision physics are two already defined topics for this workshop.

PRE-REGISTRATION IS OPEN

Weblink: www.astro.iag.usp.br/~damineli/JD13

Email: jd13@astro.iag.usp.br