

Título/Title:

Are high-mass young stars bloated?!

Orientador/Supervisor:

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Descrição/Description:

Almost two decades ago, using classical stellar structure physics, theoreticians predicted that the young high-mass (O and B type) stars should be swollen up to 400 R_{sun} . This is because a high-mass star grows by gulping very fast, large amounts of high entropy material. The high internal entropy then drives the star to swell and cool off for a while until its internal system is stabilized and contracts to the main-sequence values. We have discovered a very enigmatic object which holds many characteristics of such a swollen young star and obtained new high-quality data in the radio and infrared using the Jansky Very Large Array and Cerro Tololo 4m Victor Blanco telescopes. The student will work on either or both of these data sets to make progress on testing the swollen high-mass young star hypothesis. New ALMA and/or GRAVITY interferometer data may also become available by the time the project begins and the student will be welcome to work on these data as well.