



# *Massive stars in embedded HII regions*

CONSTELLATION SCHOOL ON X-RAYS FROM STAR  
FORMING REGIONS

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# Abstract

- Even though massive stars are important in the Universe, it is still not clear how they are formed. There are several origin models but more observations and studies are needed to solve the problem. In our work we are studying Brackett gamma images of very young star forming regions (Cygnus and Carina). We want to find new embedded HII regions and their exciting OB stars and explore their properties (e.g. binarity and clustering) at the early stages of their life.

# Why to study massive stars?

- They are important
- But:
  - They are rare
  - They are far away
  - They evolve very quickly

# Why to study embedded regions?

- There are many observations of OB stars
- But what happen at the very early stages?
- Massive stars don't have a pre-main sequence phase.



# What are we doing?

- We are studying Carina and Cygnus.
- We want to observe them in bracket gamma.
- We want to study the multiplicity and clustering properties.

# The data

- The data are from HAWK-I @VLT
- It is a mosaic of four CCD
- Each file is a lack of four images
- We have four bands

# How we analyze the data

- First of all is to align the images.
- Then we make a color image with Aladin
- We observe them in order to find embedded objects

# Example of color image



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# Example of color image



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# Future work

- To make CCD with the catalogs
- To make the SED's
- To take images of Cygnus and do the same work (with LBT)