

## OBSERVATIONS OF SUB-MILLIMETRE OF HYDROGEN RECOMBINATIONS LINES TOWARDS $\eta$ CARINA AND NGC253

**Rodrigo Parra**

*European Southern Observatory*

*E-mail: parrar@eso.org*

I summarize the observational results of the recent APEX observations of sub-millimetre hydrogen recombination lines towards the southern evolved star  $\eta$ Carina and starburst galaxy NGC253.

In  $\eta$ Carina, evidence of strong variation has been found in the H29 $\alpha$  and H27 $\alpha$  (maser) lines. This variation is probably associated to 5.5 yr period periastron passage predicted for last January. In addition, the line profiles of the new higher frequency H26 and H27 $\alpha$  detections support previously found evidence  $\eta$ Carina contains a recombination line maser.

In NGC253, the H29, H27 and H26 $\alpha$  lines have been detected towards the active nucleus of this galaxy. These detections are consistent with previous multi-component starburst models previously derived from centimeter lines.