

## Raman scattering in a massive young star in the Small Magellanic Cloud

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### Abstract

I present the first detection of Raman-scattered wings to the H $\alpha$  line in a massive young stellar object (mYSO)

*Keywords:* Atomic physics; Radiative transfer; Photodissociation regions

### 1. INTRODUCTION

### 2. OBSERVATIONS

### 3. RESULTS

### 4. CONCLUSIONS

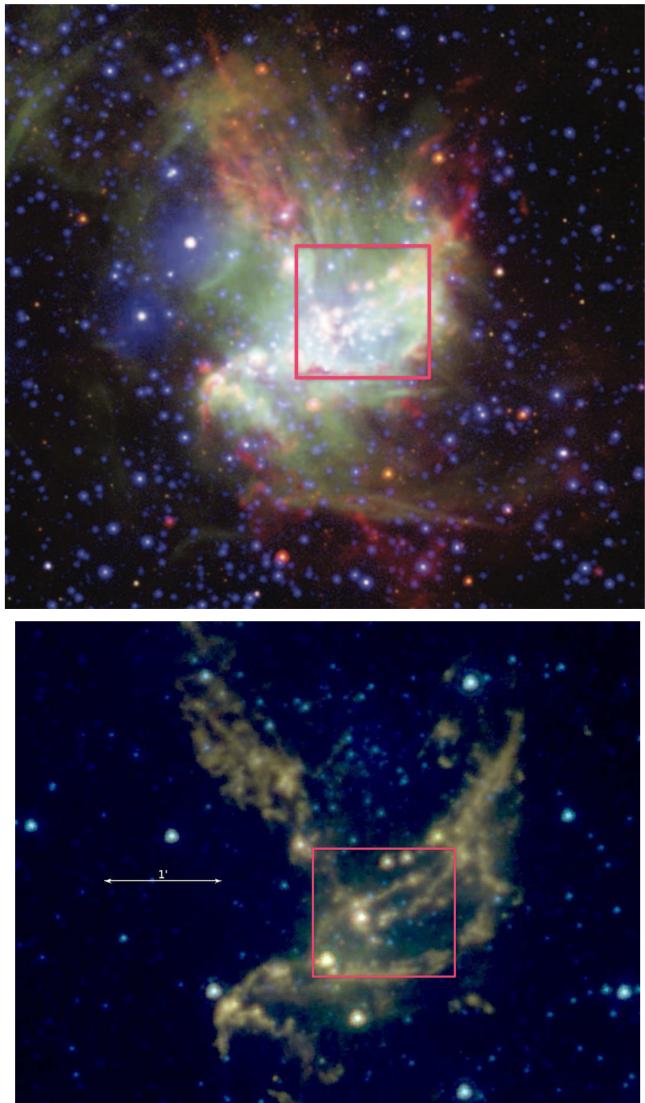
<sup>1</sup> Thank you.

*Facilities:* VLT:Yepun (MUSE); VLA

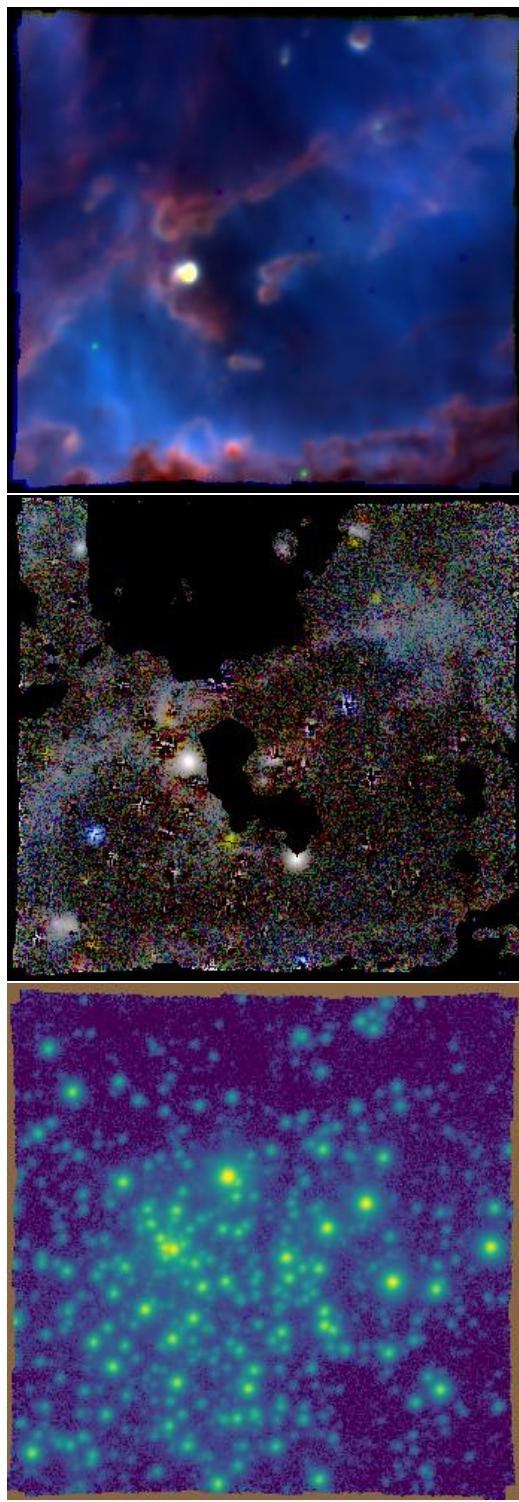
### REFERENCES

Gouliermis, D. A., Chu, Y.-H., Henning, T., et al. 2008, ApJ, 688,  
1050

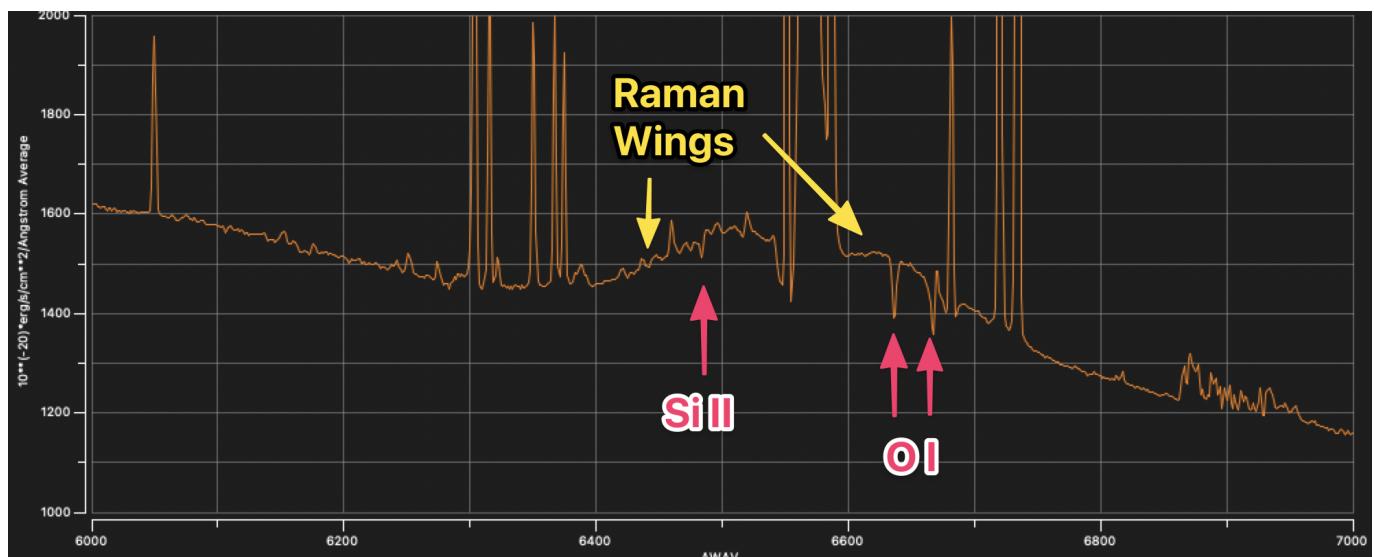
Whelan, D. G., Lebouteiller, V., Galliano, F., et al. 2013, ApJ, 771,  
16



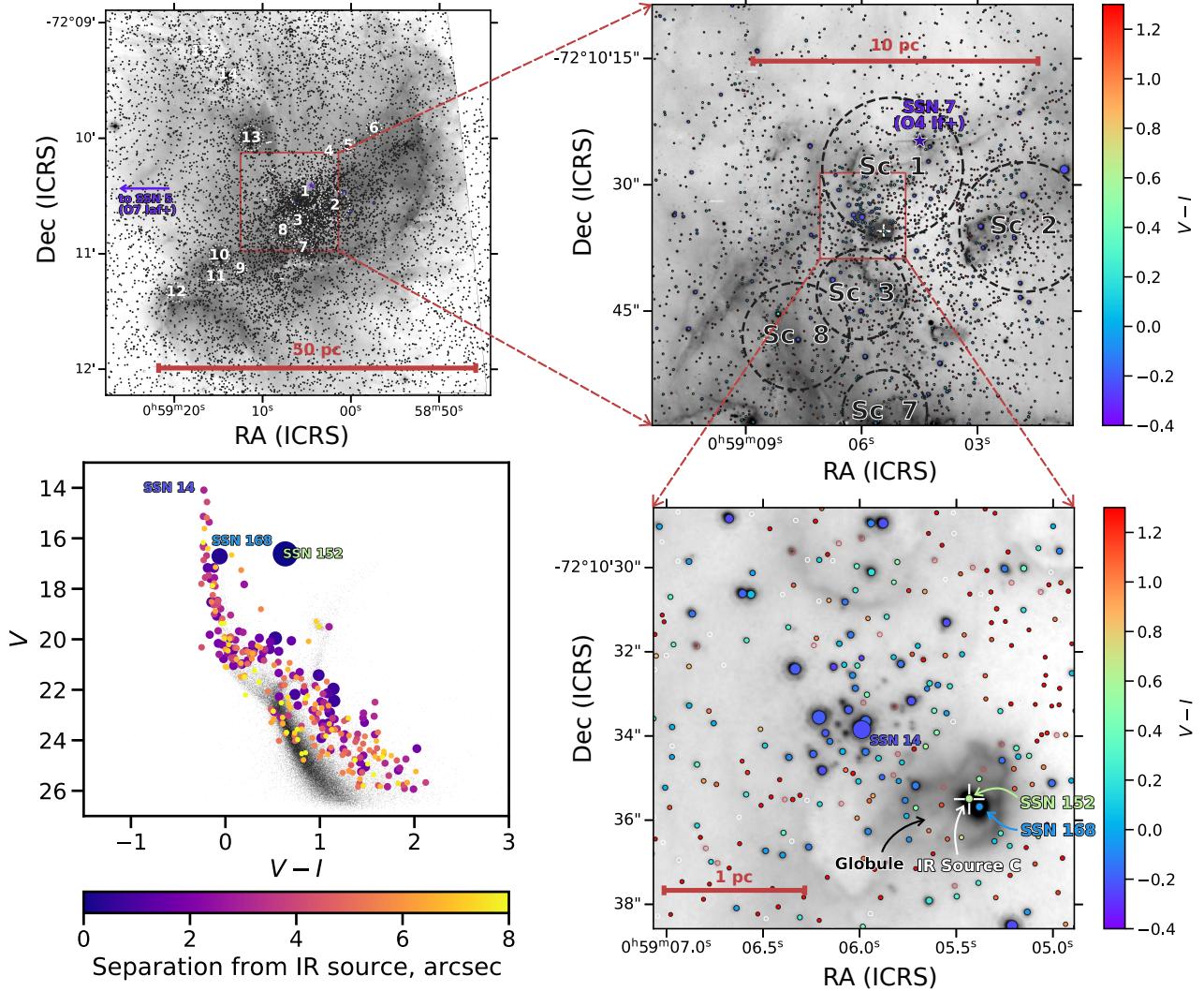
**Figure 1.** MUSE field of view (red box) shown superimposed on (a) a composite optical/X-ray image of the N 66/NGC 346 region from Gouliermis et al. (2008) and (b) a Spitzer mid-infrared image (Whelan et al. 2013).



**Figure 2.** (a) Color composite emission line map: [S II], H $\alpha$ , [O III]. (b) Color composite Raman wing map (c) Continuum map.



**Figure 3.** The actual spectrum



**Figure 4.** Hierarchical structure of the NGC 346 star cluster.