



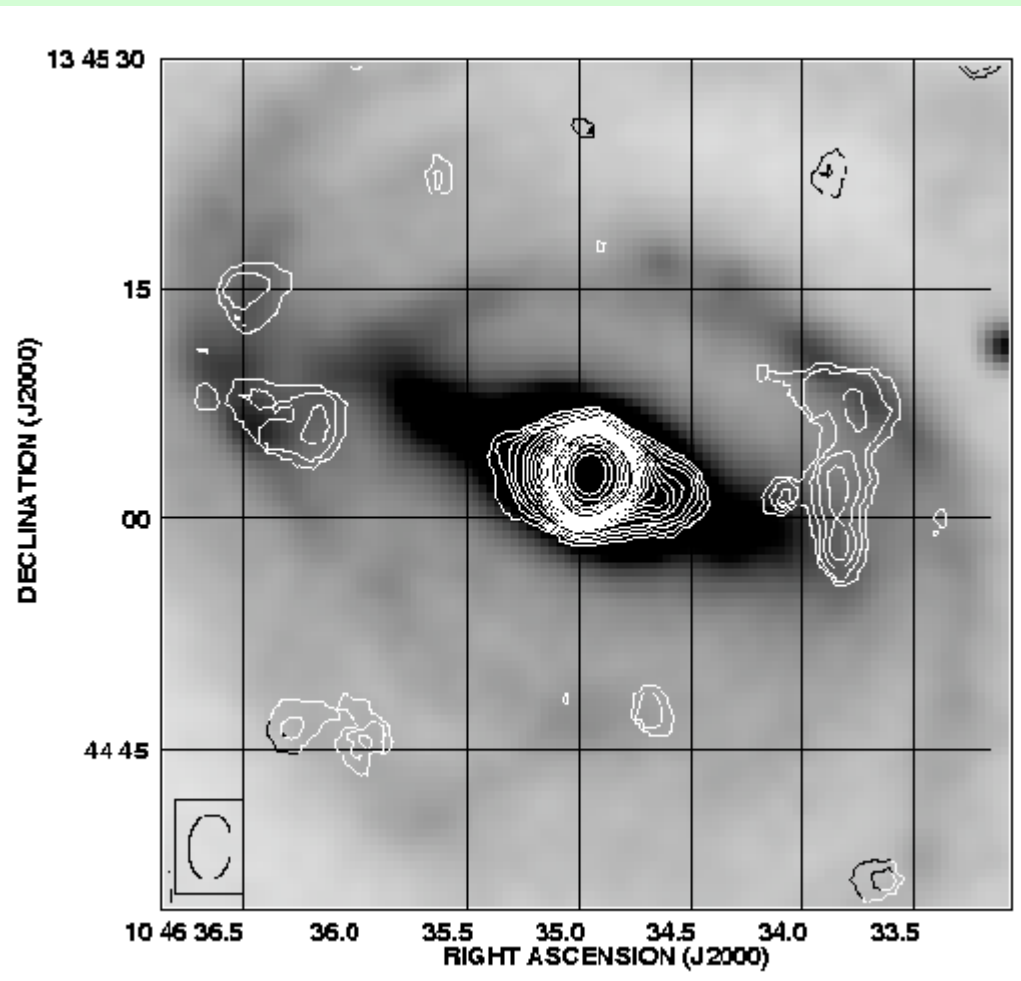
150 Magnitudes of visual extinction towards the central region of the barred galaxy NGC 3367



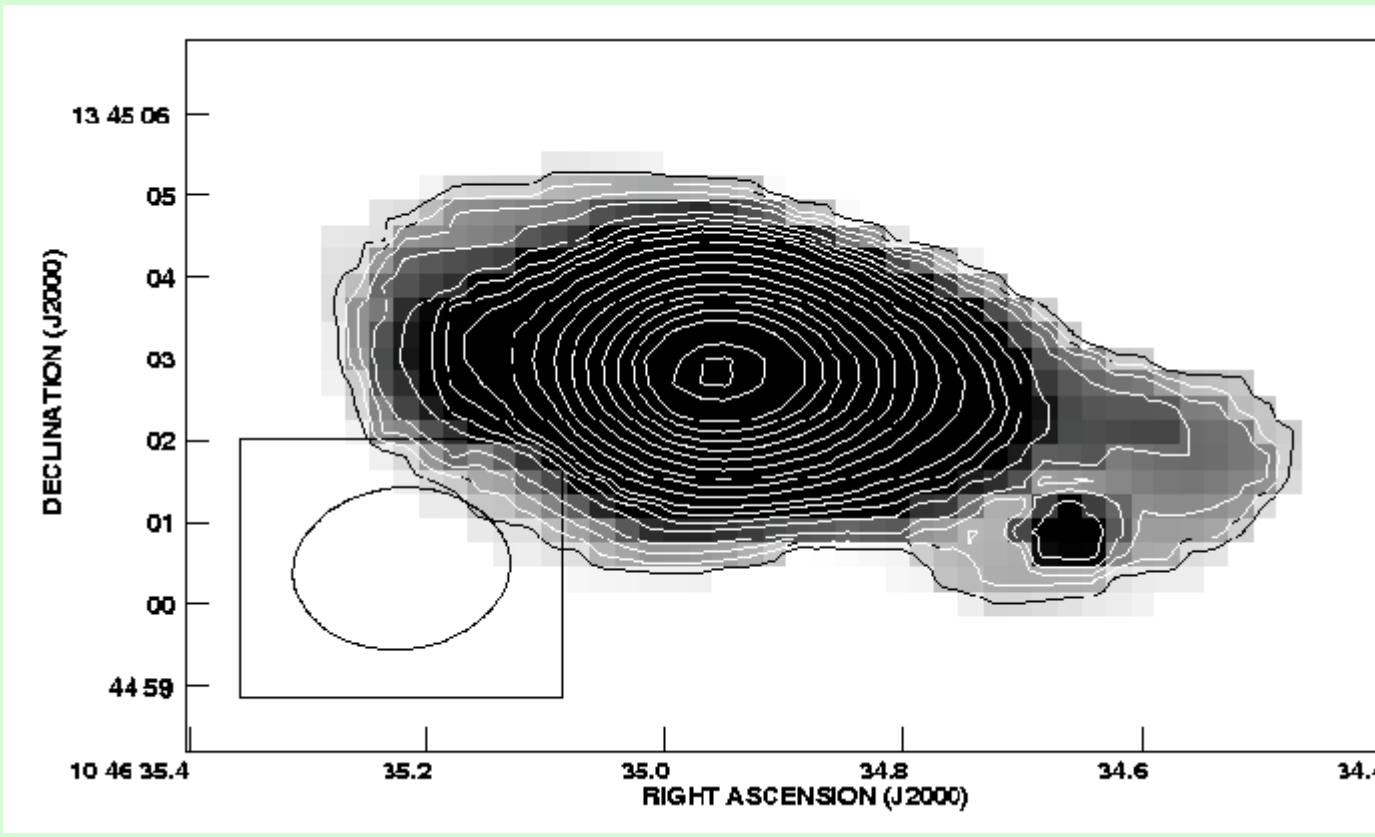
José Antonio GARCIA-BARRETO^{1,2}, Nick Z. SCOVILLE³, J. KODA³, K. SHETH³

¹Instituto de Astronomía, UNAM (Mexico), ²Visitor in Astronomy at the Division of Physics, Mathematics and Astronomy at Caltech (USA), ³Department of Astronomy, Caltech (USA)

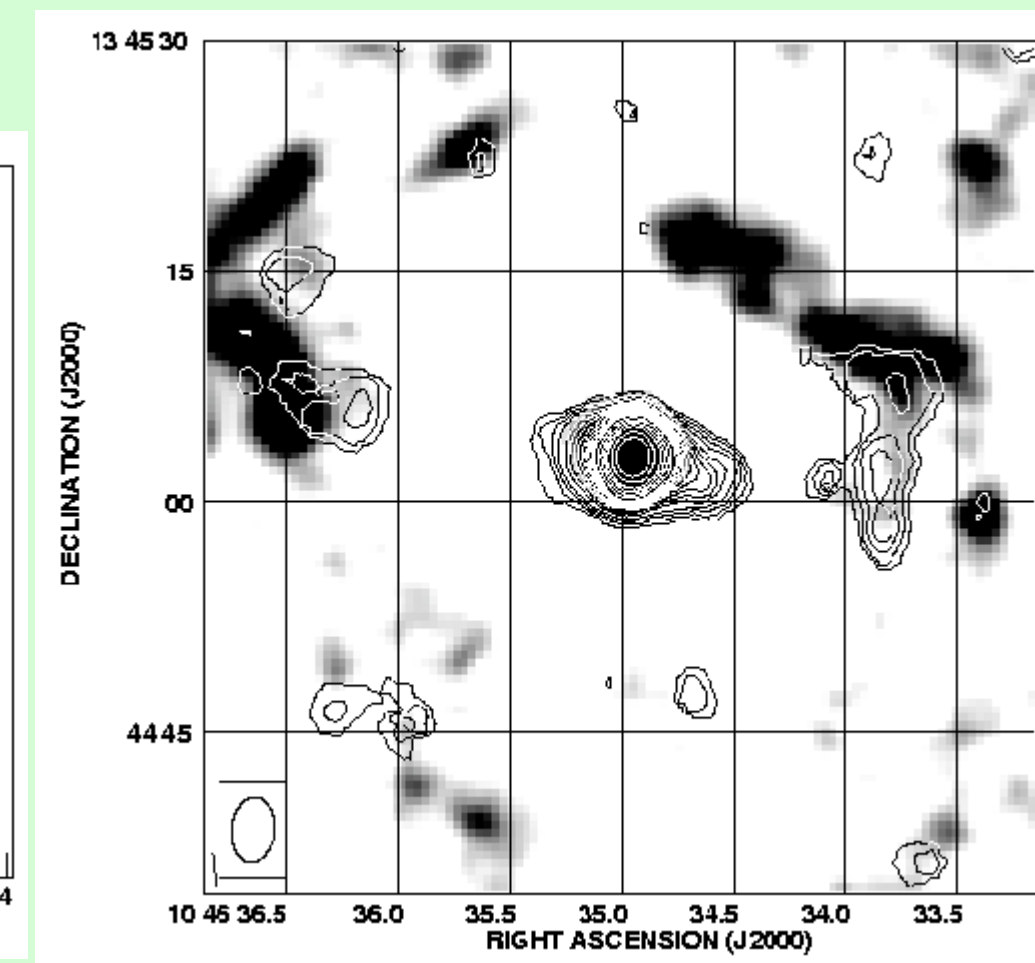
Abstract: CO(1-0) emission has been imaged at 2'' resolution in the central 10 kpc of the barred spiral galaxy NGC 3367. The peak molecular emission is in a source of radius 2'' (425pc) centered on the galaxy nucleus. The molecular mass is about $3 \times 10^8 M_{\text{sun}}$ in this peak and about $6 \times 10^8 M_{\text{sun}}$ within a radius of 4''.5 (950 pc). The very large gas mass in the central source imply extinctions of the order of 150 optical magnitudes obscuring optical emission lines (e.g. broad-line region) associated with the nuclear source. NGC 3367 has bipolar synchrotron lobes out to a radius of 6 kpc straddling the nucleus.



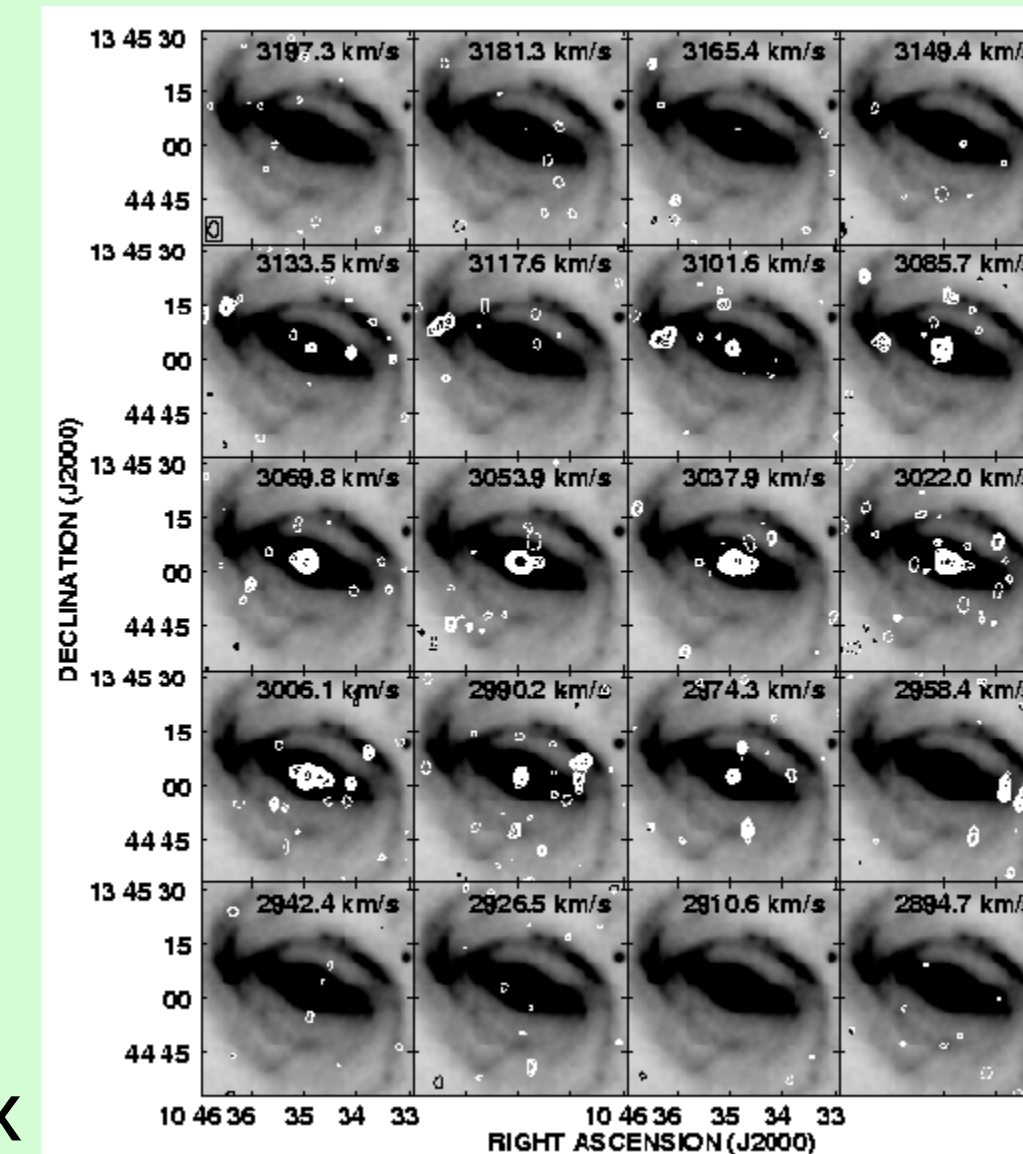
CO(1-0) integrated line flux over 300 km/s with FWHM beam of 4''.2 x 2''.7, superposed on the optical I (red) image



Central CO(1-0) integrated line Flux over 300 km/s with FWHM Beam of 2''.6 x 1''.9. Peak is at $\alpha=10^{\text{h}}46^{\text{m}}34^{\text{s}}.95$, $\delta=+13^{\circ}45'02''.7$



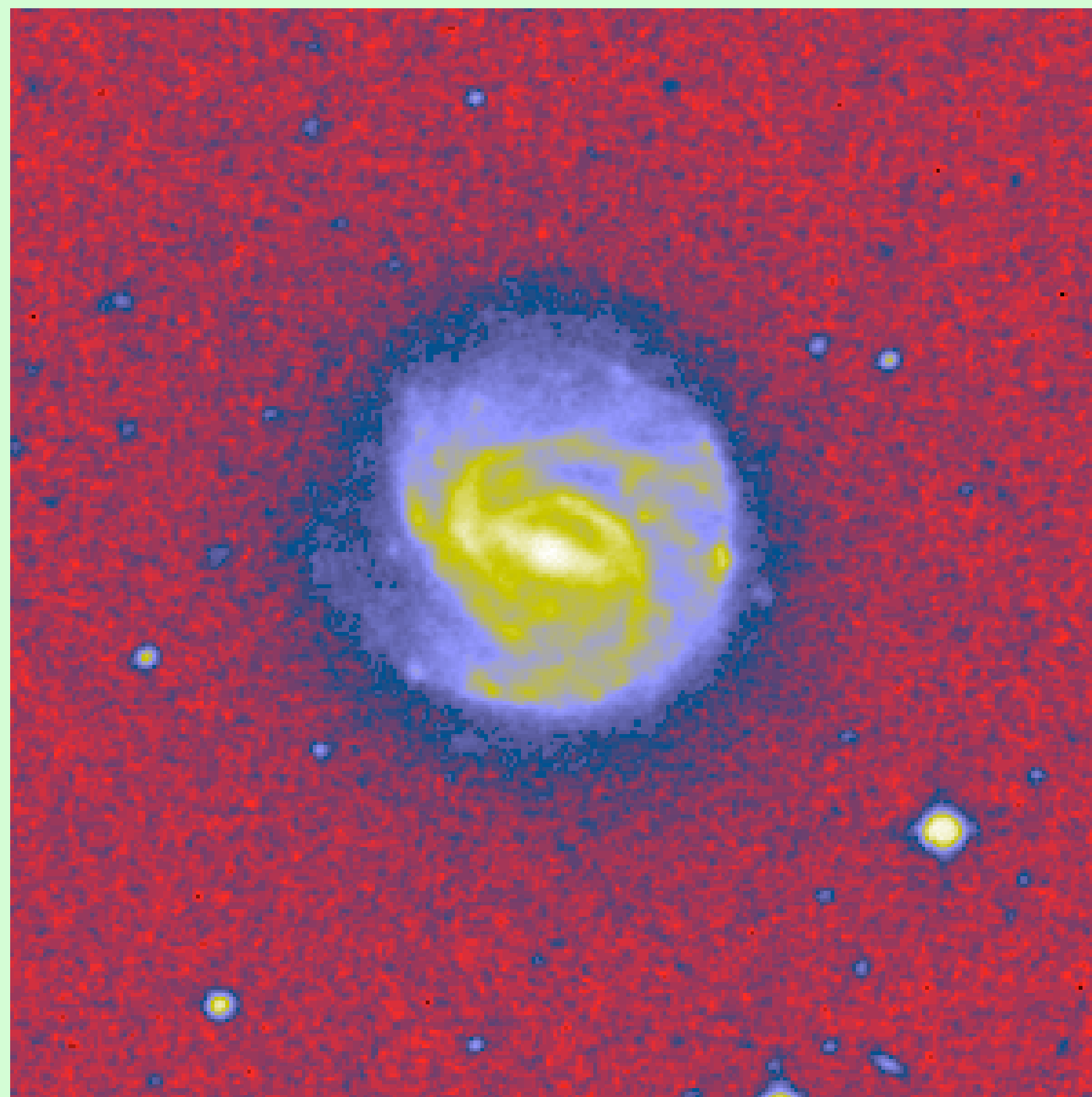
CO(1-0) integrated line flux over 300 km/s with FWHM beam of 4''.2 x 2''.7, superposed on the optical Hα image



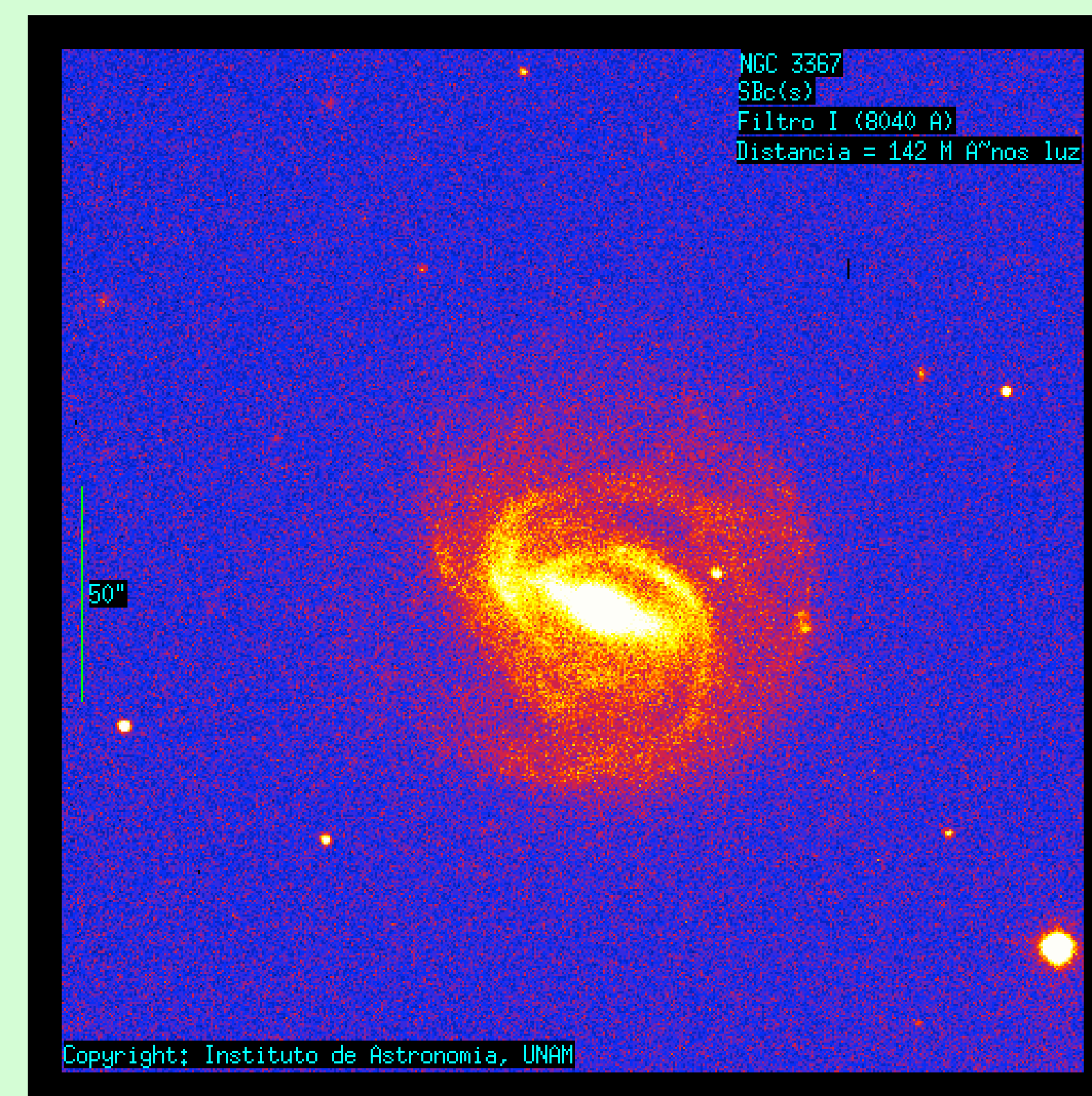
CO(1-0) channel maps covering 300 km/s with FWHM beam of 4''.2 x 2''.7, superposed on the optical I (red) image



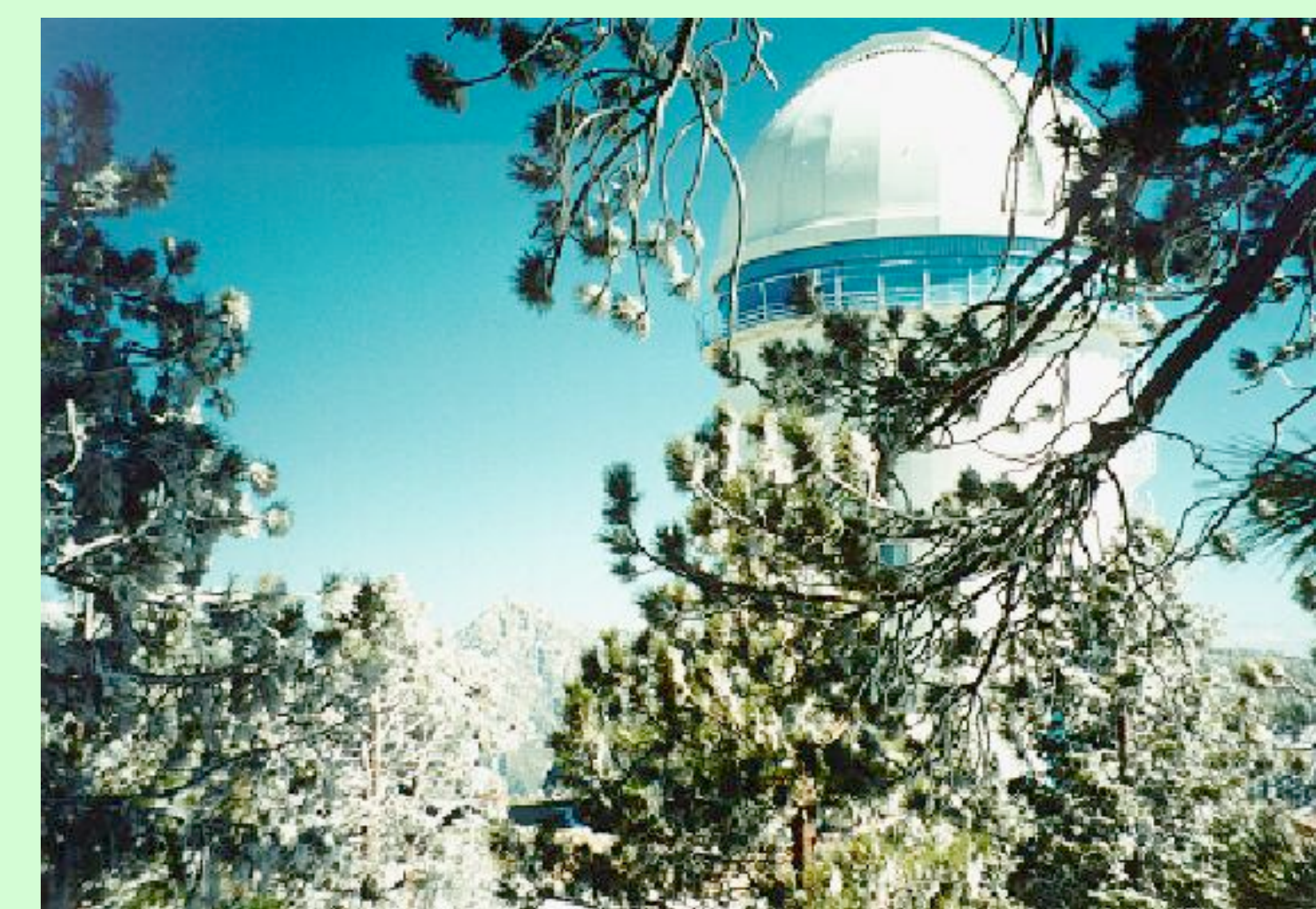
OVRO millimeter Array: 6 antennas, each 10.4m in diameter



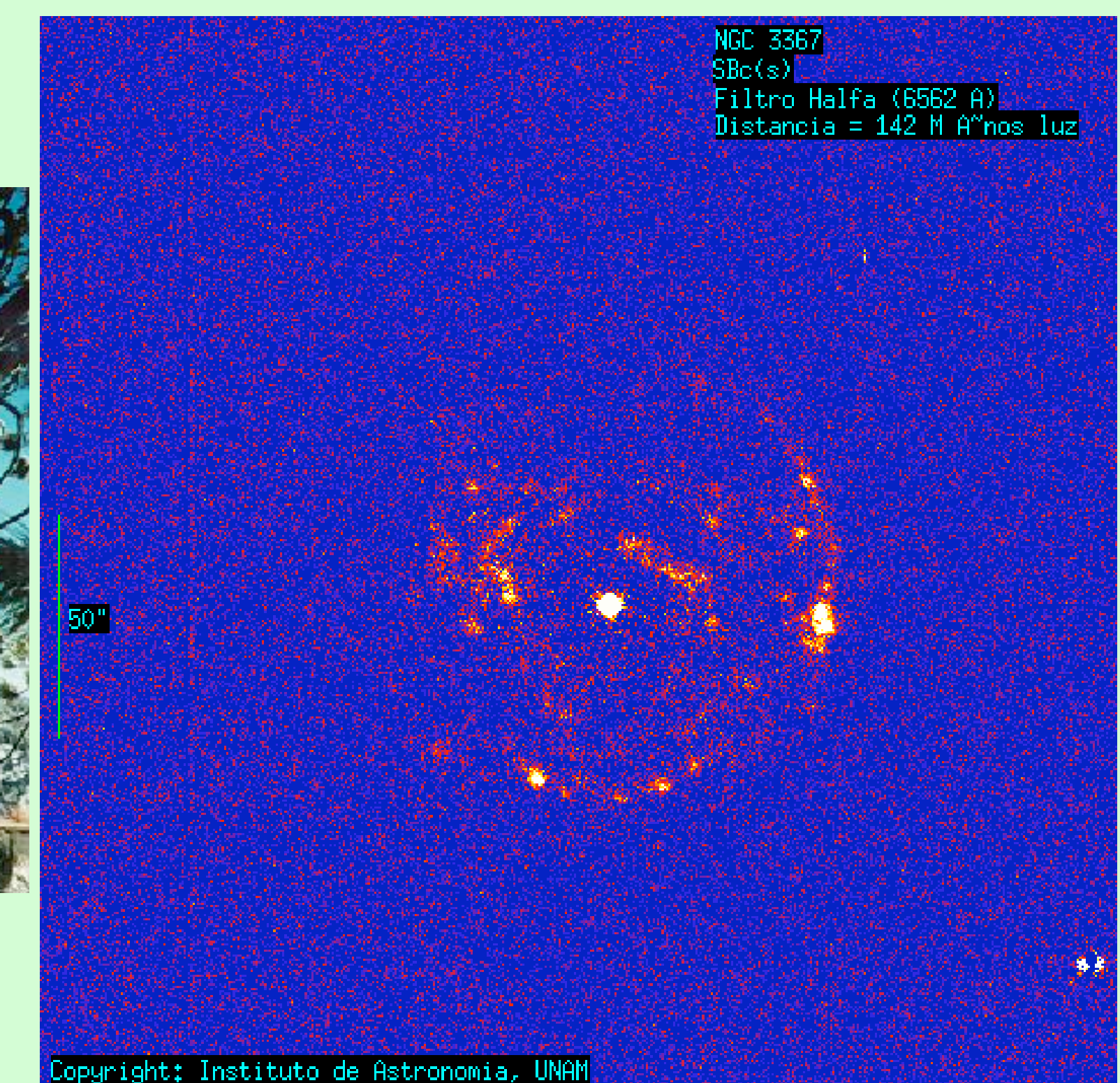
NGC 3367: Optical DSS red image



NGC 3367: Optical broadband red I (8040 Å) image observed at the 2.1 m optical telescope in San Pedro Mártir, Baja California México.



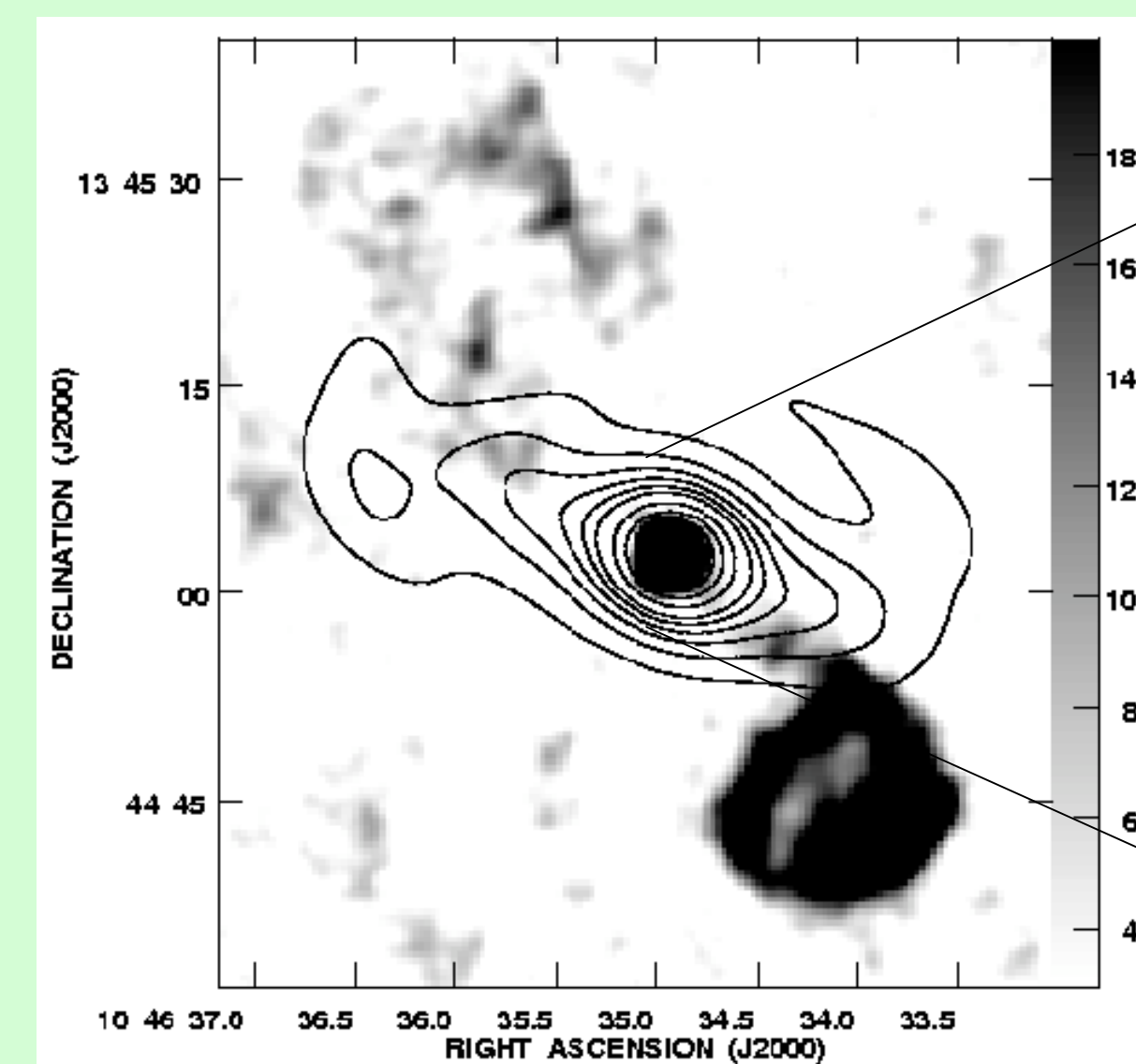
2.1 m optical telescope in San Pedro Mártir, Baja California, México



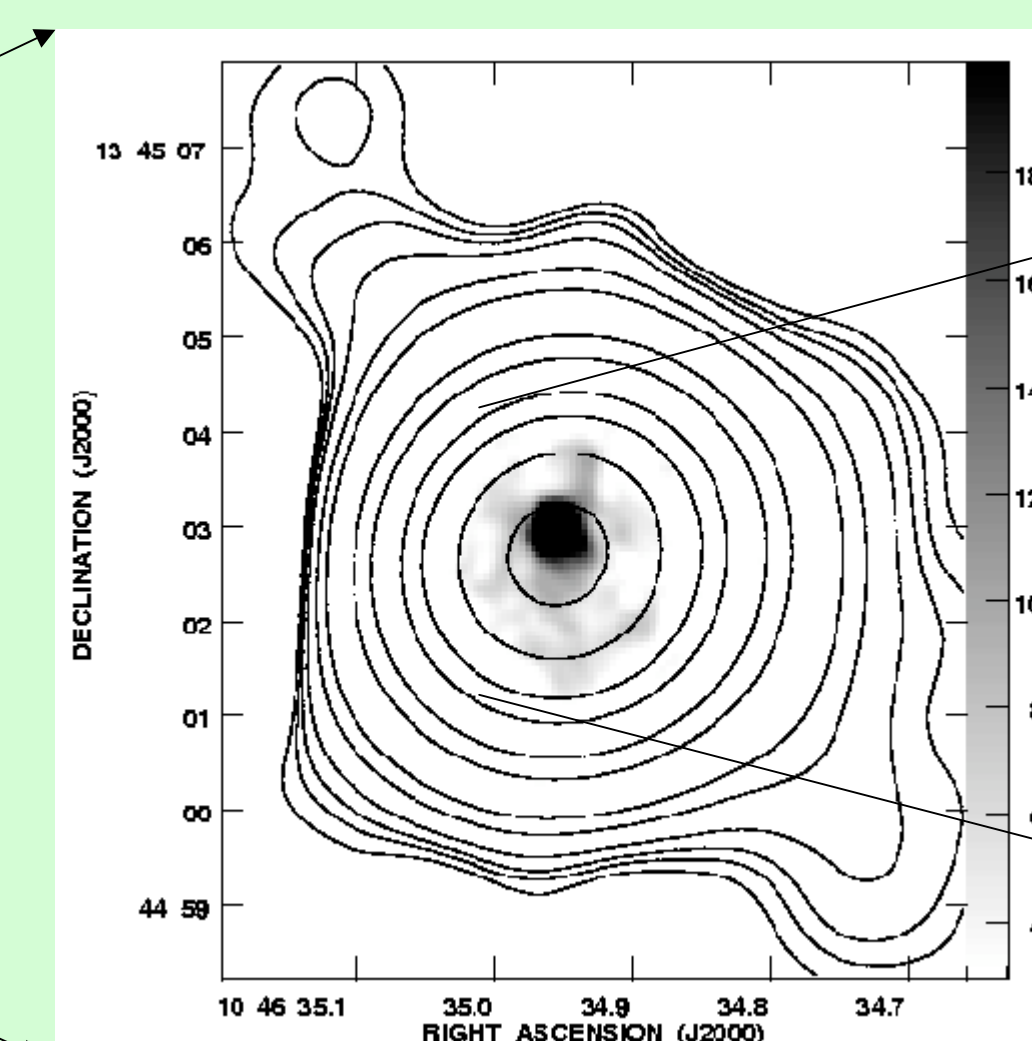
NGC 3367: Hα image. Notice the bright central emission (probably from the narrow line region) and the semicircle to the south west formed by several HII regions.



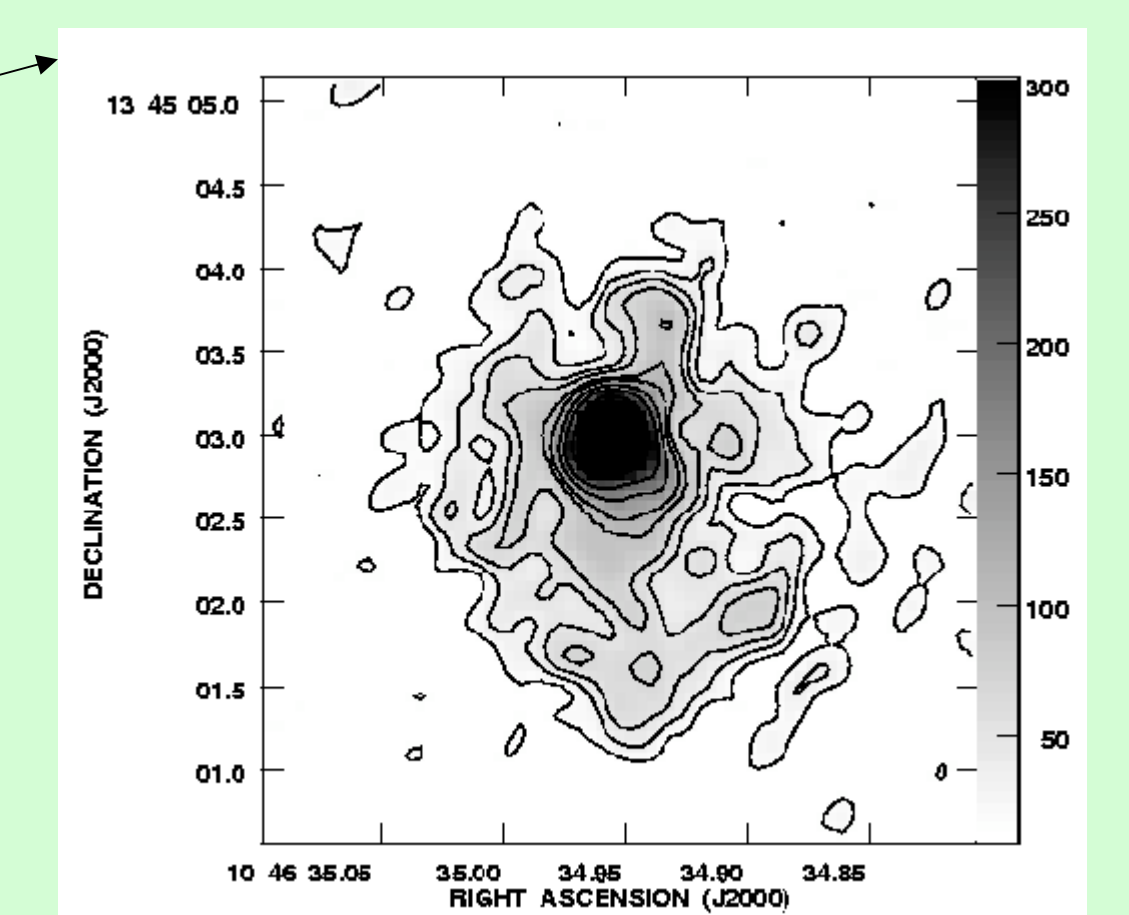
The Very Large Array is part of the National Radio Astronomy Observatory which is a facility of NSF operated under the Cooperative agreement by AU, Inc.



Large Scale synchrotron emission at 20 cm image in grey scale, superposed on the central red (I) image in contours



Innermost 7'' radio continuum Image at 20cm, in conoturs, Superposed with high resolution 3.6 cm radio continuum emission In grey scale



Innermost 3'' radio continuum At 3.6 cm at FWHM beam of 0''.28 x 0''.25. Notice the Unresolved central source.

Full description and analysis can be found in **Garcia-Barreto**, et al. 2005, AJ, **129**, 125-135.