

**R40c          NMA High Resoluition CO Survey of Virgo Spirals: VII. NGC 4254:  
Comparison with Optical Images**祖父江義明<sup>1</sup>, 幸田仁<sup>2</sup>, 中西裕之<sup>1</sup>, 日高真 (1. 東大理, 2. 国立天文台)

We present high-angular-resolution interferometer observations of the CO (1-0) emission in the central region of the SA(r)c galaxy NGC 4254. The obserations were obtained using the NMA in the course of a long-term CO survey of Virgo spirals. We present various CO maps of the galaxy such as the Ico distributions, velocity fields, position-velocity diagrams. We compare these data with the HST and H $\alpha$  images. The dark lanes are closely correlated with the CO arms and clumps, whereas HII regions are associated but generally displaced slightly from CO peaks. The CO intensity maps show that the inner disk has a well-developed multiple spiral arms, winding out from a bar-shaped elongated molecular complex, while no bar structure is found in the optical images. In addition to bisymmetric spiral arms, an assymmetric tightly wound arm with high molecular gas density is found to wind out from a central molecular bar. The tightly wound arm, well traces optical dark lanes, and many HII regions are associated. The inner asymmetric spiral structures can be explained by ram-pressure distortion of inter-arm low density regions of the inner disk by the intra-cluster gas wind, and is indeed well mimicked by a hydrodynamical simulation.