R35c NMA High Resoluiton CO Survey of Virgo Spirals: II. Exact Central Rotation Curves and Massive Cores

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In our High-Resolution CO Survey of Virgo spirals with the Nobeyam mm-wave Array, we have obtained high-angular resolution kinematical informations for individual galaxies. In order to investigate the detailed mass distribution in the central regions of the galaxies, we used the data to construct position-velocity diagrams (PVD) along the major axes.

We then applied our new iteration method to derive exact rotation curves from observed PVDs to our data. The iteration method was developed by Takamiya and Sofue (2002 ApJ.L.), and has been improved in the present work.

Many of the observed galaxies were found to have extremely steep rise of rotation velocity close to the nulcei, indicating the existence of compact massive cores. We will further discuss the general characteristics of mass distribution around the nuclei by deconvolution of the rotation curves.