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Rotation of Spiral Galaxies Described with Various Sphere/Disc Gravitational Models C.F. GALLO, JAMES FENG, Superconix Inc — The measured rotation velocity profiles of spiral galaxies are described with a wide variety of "Sphere and/or Disc" gravitational models, withOUT need for halos of Dark Matter. Our approach utilizes Newtonian gravity/mechanics to search (via computer) with flexibility for mass distributions that satisfy the measured rotational velocity profiles. The many models involve various combinations of spherical bulges and/or thin discs, including research of Marmet and Nicholson and Mizony and Peratt. The deduced mass distributions differ from those previously used, with less mass at the center and more mass toward the periphery. Some models exhibit persistent bulges at the galactic rim (as observed in some galaxies). Most previous research assumes a density maximum at the galactic center decaying exponentially with radius by analogy to the light distribution curves. But this assumption is weak. The temperature is an important variable and molecular H2 should be included per Marmet. These prior models do NOT describe the measured velocity profiles and recourse is made to Dark Matter or gravitational deviations to compensate. By contrast, all our results indicate no Dark Matter and no deviations from simple gravity.

Charles Gallo
Superconix Inc

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