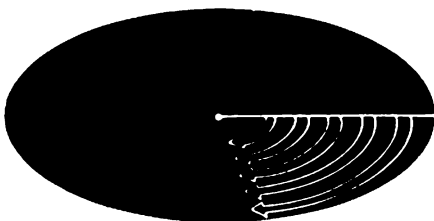
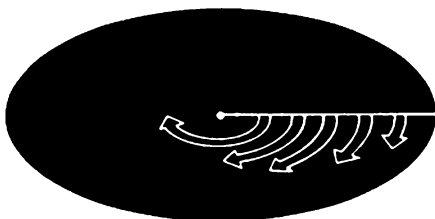


THREE TYPES OF ROTATION

SOLID BODY ROTATION—In a rotating solid disk, such as a phonograph record, the outer edge revolves faster than the inner portion.



SOLAR SYSTEM ROTATION—In our Solar System, where the Sun holds most of the mass, each planet orbits more slowly the farther away it is from the sun. For example, Mercury, the closest planet, travels ten times faster than Pluton, which is a hundred times farther from the Sun.



GALACTIC ROTATION—In a galaxy, mass is more widely distributed, and, because of this, the rates at which gas and stars rotate should increase with the distance from the center—until that point is reached at which most of the galaxy's mass is inside their orbit. Out beyond that point, gas and stars should slow down. But, instead, galactic rotation rates never slow down, the farther a star in the disk is from the center. The outermost stars rotate about the common center as fast as most of the stars not far out from the center. This is incredible and cannot be explained by physical laws.

