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Possible Origins And Equations Of Rotation And Formation Origins Of Two Armed Spiral And Barred Spiral Galaxies, Stars, Planets And Some Satellites As Universal Patterns In Nature Existing On A Grand And Small Scale STEWART BREKKE¹, Northeastern Illinois Univ — Very old powdered coffee creamer added to a cup of fresh instant coffee and stirred resulted in surface pairs of semi molten coffee creamer strands orbiting the coffee cup rim. As the coffee slowed down, the orbits of the strands decayed, tangentially accreted in their fore sections forming a perfect two armed spiral and a two armed barred spiral galaxy. Each two armed galaxy began rotating due to the transformation of strand orbital motion into galaxy rotational motion when the strands combined to form the new galaxy. The galaxy Rotation/Formation Equation may be $I\omega qalaxy = I_1\omega arm1 + I_2\omega arm2$. Some irregular small creamer chunks slowly rotating were tangentially accreted by a creamer strand creating a faster rotating semi spherical body. Imagining the irregular chunks as possibly prestellar/preplanetary cores, a possible star or planet rotation /formation equation could be $I\omega newstar/planet = I\omega prestar/preplanetary core +$ $I\omega hydrogen/materialstrand1 + ... + I\omega hydrogen/materialstrandn$. Photos of two armed spiral galaxies indicate possible external origin of galactic arms as observed in coffee cup above in M51, M99, M101 etc. Insights into actual galactic, stellar, planetary formation/rotation may now exist.

¹earlier relevant abstracts submitted at PSF11 APR14, APR19.and other APS annual and section meetings.

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