Dwarf and Large Galaxies

By Clark M. Thomas

Recent data show that the distribution of dwarf galaxies around large galaxies such as our own Milky Way may not follow the most popular gravity vortex model. We are seeing how dwarf galaxies are mostly tidal epiphenomena, not primary phenomena, in the course of galactic evolution.

Up until the latest data were received and analyzed, most cosmologists had as their preferred model the idea that groups of visible dwarf galaxies were gravitationally derived and distributed in space among *random* dense zones of dark matter. Clustered accumulation should have led during an earlier era (when the visible universe was smaller in diameter) to today's much larger galaxies. Dwarf galaxies were thus modeled as primary building blocks for today's large galaxies. This transformation is known as the Lambda Cold Dark Matter model.[1]

More recently, other dwarf galaxies and their associated dark matter would have been gravitationally captured by large and growing galaxies *from random directions* – and these later dwarf groups would thereby revolve without preferential orbits around their new large gravity vortex.

Contrary to this assumed universal model, it was already known that there is a pattern within both the Andromeda (M31) and Milky Way (MW) gravity fields for dwarf galaxies to *not* follow the random orbits model. Our Local Group has a preference for coherent dwarf galaxy orbits around the equatorial planes of the

[1] https://www.seeker.com/astronomy/dwarf-galaxy-observations-call-into-question-conventional-theory-of-dark-matter

two much larger galaxies. We see a planar distribution around our MW and Andromeda somewhat like planets around our sun.

New data points received from Centaurus A[2] – a large elliptical galaxy of a trillion solar masses in the constellation Centaurus, which is 13 million light years away – demonstrate the same coherent equatorial rotation, showing that our Local Group is typical, not atypical. Centaurus A (NGC 5128) is sufficiently close and massive to observe its dwarfs; plus it is not part of the Local Group. In other words, our local galactic neighborhood is not special.[3]

When General Relativity (GR) gravity funnels are illustrated as cartoons on two-dimensional paper, blackboards, or screens it looks like an object is captured within one tornado-like funnel.[4] However, there is no theoretical limit for how long such funnels could become, nor from how many funnel-directions one orbiting object is influenced.

Seemingly, the largest proximal funnel predominates at any one point. Vectors of orbiting objects along a curved line of many positional points could thereby be irregular with sequentially competing gravity funnels. This has not been observed.

GR funnels are gravity features of the brane sheets within which they occur. There is no math limit to the number of possible funnels-within-sheets, even within a three dimensional universe. There are also few if any unchallenged funnels within shifting perspectives and seemingly infinite positional possibilities.

Hypothesized multiple extra dimensions don't clarify and simplify an already vast number of funnels. Extra dimensions also have never been demonstrated, nor has supersymmetry

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2 http://www.astronomy.com/news/2018/02/centaurus-as-satellites-rotate-together

3 https://www.popsci.com/satellite-galaxies-cosmology

4 http://astronomy-links.net/DipoleRepellerExplained.pdf

been shown even with the Large Hadron Collider. Therefore, an infinite number of funnels either requires an infinite number of gravity sheets/branes intersecting each point – or such math sheets don't exist at all. Brane-dead ideas radically violate the law of parsimony. The only sensible remaining model is the 21st century formulation of 3D push/shadow gravity.

Dwarf galaxies are only dwarfs relative to large galaxies. Mostly they are irregular, not spiral or elliptical. Among the stars and other features in our night sky are residents from remnant dwarf galaxies incorporated within the capturing MW. An example is Messier 54, a visual globular cluster within the teacup asterism of the constellation Sagittarius. M54 is the remnant core of the consumed Sagittarius Dwarf Spheroidal Galaxy.[5]

Significantly, MW stars and clusters are all spectroscopically similar. This spectroscopic commonality is like a smoking gun, just as rocks recovered by Apollo missions are evidence of a common historical link between Earth and our moon.

If isolated and random dark matter clusters apart from the likes of our galaxy (with its own dark matter halo) were to generate gravitationally spawned stars like ours, it would mean that dark matter is essentially normal, baryonic matter. I have explained that indeed dark and baryonic matter are the same *at their roots,* but only on a scale extremely smaller than atoms.[6] It is thus unlikely that elemental, free-in-space dark matter alone would metamorphose to churn out the many baryonic stars in a dwarf galaxy cluster.

On the other hand, encounters and mergers between large dusty galaxies could churn out enough ordinary stars to create tidal dwarf galaxies that end up coherently orbiting around large galactic equators. The dancing interactions of such galaxies,

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5 https://en.wikipedia.org/wiki/Sagittarius_Dwarf_Spheroidal_Galaxy

6 http://astronomy-links.net/Solar.Corona.pdf

featuring *gravitationally colliding baryonic gas clouds*, is ordinary and common – past, present, and future.

For example, in the early *past* the active MW with its central black hole gravitationally blended with other gassy galaxies – thereby populating in our *present* era several tidal dwarf galaxies orbiting around the MW equator. F*uture* tidal gravity forces will accelerate again when Andromeda and the MW merge into a new and more massive spiral or elliptical.[7]

All cosmic metamorphosis of this nature can be elegantly explained by the updated version of push/shadow gravity on a galactic and intergalactic scale. No GR cartoon gravity funnels and multi-dimensional branes are needed.[8]

It is likely that supermassive black holes, along with inflowing plasma gas, helped to first create and modify large galaxies.[9] It is also likely that many or most free-floating dwarf galaxies in today's local universe may be products of earlier large galactic interactions and mergers – whereby some dwarfs remained with their initial captor, while others were centrifugally ejected into deep space.

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7 https://www.eurekalert.org/pub_releases/2018-02/uob-aar012918.php

8 https://phys.org/news/2017-03-einstein.html#nRlv

9 https://arxiv.org/pdf/0907.1608.pdf