



## HOW ARE THE SPIRAL AND OTHER TYPES OF GALAXIES FORMED?

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The goal of this article is to prove the formation of galaxies via rotation of objects around their axis, with the strict abiding of the law of universal gravitation.

[Rotation of objects](#) (smaller objects, stars, galaxies,...) is analysed through the effects of rotation [1](#) in the formation of objects and in processes that follow, due to: the rotation around the axis; the effects on the other orbiting objects or on binary objects; the effect of rotation on the displacement of an incoming object into the orbit; the influence of the speed of rotation on the quantity and mass of particles and objects orbiting around a main object [2](#); its influence on the radius, temperature, and accordingly on the color and surface gravity of a star [3](#).

First of all, let's get rid of the Big Bang.

If the official science claims, „The universe is spreading“, then there should be a **small** universe (with a small diameter) 300-400 thousand years after the so-called Big Bang, and a **big** universe, in which „...the most distant objects in the universe are the galaxies [GN-z11](#) 13,39 bn. ly (billion light years), [EGSY8p7](#) 13,23 bn. ly, [GRB 090423](#) 13,18 bn. ly, etc.“

„The light that comes from the "edges" of the universe started on your way to us at the time of last scattering of photons at 3000 K. This is the light gathered by the satellite COBE (Cosmic Background Explorer), and later the WMAP (Wilkinson Microwave Anisotropy Probe)“

How is it possible for an event of a single point to arrive from the edges of the present-day universe?

If „the most distant objects in the universe are the galaxies [GN-z11](#) 13,39 bn. ly (billion light years), [EGSY8p7](#) 13,23 bn. ly, [GRB 090423](#) 13,18 bn. ly, etc.“ are also the fastest objects, then, according to Big Bang, these galaxies are also the oldest ones.

The relation is obvious: the greatest speed is related to the oldest and most distant objects.

How can, then, Hubble's law be valid? How can universe be spreading with the increasing speed, if that applies only for the oldest and most distant galaxies? [4](#)

The beginning of the formation of galaxies can be recognized in the planetary and stellar systems. The rotation of a central object makes it possible for a small quantity of objects<sup>5</sup> and other matter to overpower the forces of attraction of the central object and to keep existing in their orbits around it (the objects that are locked down by their tidal forces or that possess an extremely slow rotation, i.e. they have no independent rotation – they don't have other objects orbiting around themselves; for example: Mercury, Venus and the majority of satellites).

It is a very widespread occurrence that a central object consists of almost all of the system matter (~ 99% of the total system matter). The constant activity of rotation and gravity leads to the creation<sup>6</sup> of binary systems, but also to the melting of smaller and larger objects that are on the same orbit. Melting occurs when two or more objects share the same trajectory, direction (orbit) and have the same speeds in the orbit, where the forces of attraction cannot significantly influence it.

„Opposite to the process of rotation there is [the approaching of an object to the poles](#) of a central object, where there are no orbits created, but only collisions of the incoming objects with the central object. These objects also have a speed, just as the objects that approach straight or with an inclination towards the equator do, but these speeds neither create orbits (**new evidence, confirmation** [11, 12](#)), nor there are observations to support such claims. If there is no rotation, there is also no orbit, no matter what the speed of the incoming object is.“ <sup>6</sup>

The forces of attraction and the rotation of stars firstly form binary systems. Since rotation and the force of attraction are constant processes, binary systems grow into clusters (there are ~150 of the globular stellar clusters).

With the increase in a cluster's mass, some of these binary systems overcome the balance of stable orbit around the central object and their orbits start to distance themselves (the process of Earth / Moon). By distancing themselves from the center of galaxy and the entrance of a stellar cluster into the outer edge of the galaxy, the rotation increases its speed due to very low temperatures (below 4,216°K <sup>7</sup>) and the objects turn into a disc-shape form. They (now already dwarf galaxies) become long-lasting companions of the galaxy, as their fast growth is ended once they are out.

There are also „two ways of creating galaxies with their recognizable rotating center. The first is that a star with a higher speed of rotation survives all the challenges of the dynamic

universe and sufficiently increases its mass so that the number of objects in its orbit can be considered a further growing galaxy.

The other is to create a cyclone out of gas or invisible matter inside the irregular galaxy and with the assistance of rotation. That cyclone turns the irregular galaxy into a regular one.

The similarity of these ways is obvious, because even the fast-rotating stars, just as all the rest, have a cyclone in the center, from one pole to the other. A switch of poles occurs when there are slower cyclones on the stars; the cyclones then fail to reach one another. Due to that, matter on the poles rotates faster than the one in the center, in the equatorial area. Faster rotation balances an object and alternating switches of poles are then unexpected.“ [8](#)

This implies the existence of no less than two types of galaxy centers, which structurally differ from each other. The first type is created by the growth of stellar clusters and the start of cyclones in the center of an irregular galaxy, while the other is gaseous-liquid and is formed by the stellar growth. With the increase of the rotation speed and the formation of cyclones in the center, the first type galactic centers overgrow into a gaseous-liquid form (this implies the existence of transitional phases).

The rotation speed of a galactic center determines the form of a galaxy and the ongoing processes.

A very fast cyclone rotation (in an elliptical galaxy) creates huge friction, which heats up matter; that can be seen on quasars and very fast-rotating small objects (stars) through the emission of radiation that takes place on the poles.

A vast number of stars and other matter (the center of a galaxy), when rotating around the common center, act as a single body, related to the rest of the galaxy.

A cluster of a very large number of stars around the same center creates a common gravity, where the stars act as a single body (it stands for the mass of the center, ~99 % of the total galactic mass), around which a famous disc of stellar systems, gas, etc., is created.

A slow rotation of a galactic center (as in the stellar clusters) does not create a recognizable center (the center looks more like the ones of close binary systems), while the fast rotation creates the center that ranges from the northern to the southern pole of the center.

The speed of rotation of a galaxy center, together with mass and quantity of stars and other matter in space, determines the form and the size of a galaxy (Jupiter... / Mars,... on planets, their environment temperature also has the influence to it). The center of a regular galaxy without a recognizable center rotates faster on the surface (equator) than on its center (just as in a part of globular stellar clusters). With the high speeds of rotation in the center that stretches from one pole to the other, the speed decreases in the direction of the surface of the galaxy center, all the way to the edge of galaxy, when, due to the low temperatures (below 4,216°K), there is an increase of speed of the border objects (like in the Oort cloud<sup>9</sup>). The decreasing speeds of the orbiting objects into the depth, like in our system, also contribute to the form of a galaxy, and these are the conditions in which the alignment of planets (the stars in a galaxy) can take place, etc.

Conclusion: galaxies are created by the ongoing attraction of stars (objects) and the rotation, which is a creator of all systems in Universe. All processes are in accordance with the laws of physics, without hypothetical assumptions for the emptinesses to exist and to be filled (hypothetical objects of the extreme density) and the use of dark matter (dark matter is a means in which all processes take place, but it does not significantly influence them).<sup>10</sup>

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  2. [https://www.academia.edu/19025940/Why\\_there\\_is\\_a\\_ring\\_an\\_asteroid\\_belt\\_or\\_a\\_disk\\_around\\_the\\_celestial\\_objects](https://www.academia.edu/19025940/Why_there_is_a_ring_an_asteroid_belt_or_a_disk_around_the_celestial_objects)
  3. <http://www.svemir-ipaksevrti.com/Universe-and-rotation.html#The-causal>
  4. [https://www.academia.edu/33292773/Where\\_is\\_the\\_truth\\_about\\_Big\\_Bang\\_theory.doc](https://www.academia.edu/33292773/Where_is_the_truth_about_Big_Bang_theory.doc)
  5. <http://www.svemir-ipaksevrti.com/the-Universe-rotating.html#5b>
  6. <http://www.svemir-ipaksevrti.com/Svemir-i-vrtinja-kratki-tekst.html#Zadarska-teorija-svemira>
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  11. <https://www.nasa.gov/feature/jpl/small-asteroid-or-comet-visits-from-beyond-the-solar-system>
  12. <https://phys.org/news/2017-10-small-asteroid-comet-solar.html>
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