

## **GREAT AGE COSMOLOGY #3**

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Extending from galaxies are huge halos of gas and dust, much larger than previously thought. Mass estimates of these halos indicate a mass about equal to the galaxy's stars. Material type verifies these halos to be the exudate of the galaxy's supernovae (SNs). It is known stars that explode give considerable force and speed to the gas and dust they blow off. The rate of SNs when searched for was found to be very low. Simple calculations using this data results in a very great age for a Milky Way size galaxy and provides answers to current research on mysteries such as dark matter. It is known it takes trillions of years for stars to cool down, and once cool they would emit millions of times less heat, and no light. They might be IR detectable within a few light years from us.

### **HALOS AND THEIR CONTENT**

If large halos of gas and dust exist around galaxies containing as much mass as all the stars in the host galaxies, there are serious implications about where this matter came from and what it contains. These halos contain gas and dust that have only one source, stars that once resided in those galaxies until they exploded. It is known that about ten percent of stars in galaxies will SN. These stars are generally about ten times the size of the sun. If the Milky Way has three hundred billion shining stars, there would be about thirty billion SN in the past that provided the halo content.

### **SUPERNOVA RATE & AGE CALCULATION**

Study from 50 trillion stars watched almost continuously for SNs for three years found three SN. For a Milky Way size galaxy, that is 0.006 SN per year.

$30,000,000,000 \text{ SN} / 0.006 \text{ SN /year} = 5,000,000,000,000$  (5 trillion) years for the creation of the Milky Way halo.

This does not account for the gas and dust from SNs recycled back into the making of planets and stars in the galaxy.

### **NO WASTED TIME IN FIVE TRILLION YEARS**

Great age gives time for stars to finish the bright nuclear phase and begin to cool to the levels they cannot be seen, except they still possess gravity and

have gravity influence. This certainly could be the mysterious dark matter so well evidenced by galaxy rotations. This also means where gas is mostly unavailable during a period in a galaxy, the galaxy will appear to contain nearly all-dark matter, aka cool stars.

Great age suggests the universe is not expanding. The shift of light to the red would require another explanation such as being caused mostly by the presence of gaseous contents in the intergalactic medium (IGM) throughout the universe. The degree of redshift is a factor of distance and gas density. Some distortions would occur to photons coming from distant objects due to absorption of photons by the IGM content. The IGM would re-emit as black body radiation at the temperature of the contents, about 2.7 degrees K.

### **WILL THIS CHANGE THE CURRENT POPULAR PARADIGM**

The current system is highly influenced by belief, and we know old beliefs seldom die. Newer telescopes such as JWST likely will find more nearby dark stars and see more clearly the early universe, offering even more evidence of a far older cosmos than currently thought.

### **READING RECOMMENDATIONS**

#### **Halo studies**

- 1: <http://arxiv.org/pdf/1608.02588.pdf>
- 2: <http://arxiv.org/pdf/1607.01020.pdf>

#### **Supernovae study**

- 1: [http://www.dailygalaxy.com/my\\_weblog/2016/03/kepler-space-telescope-continuously-watching-50-trillion-stars-captures-three-new-supernova.html](http://www.dailygalaxy.com/my_weblog/2016/03/kepler-space-telescope-continuously-watching-50-trillion-stars-captures-three-new-supernova.html)

#### **Sparse galaxy**

- 1: <https://www.sciencedaily.com/releases/2016/08/160826084206.htm>

#### **Failure of the current hunt for dark matter**

- 1: <http://www.scientificamerican.com/article/physics-confronts-its-heart-of-darkness/>

#### **Dark stars being found**

- 1: <http://www.redorbit.com/news/space/1113413736/free-floating-brown-dwarf-042116/>

**GROWTH IN CONCEPTS AND THE UNIVERSE, AGES UPON AGES**

