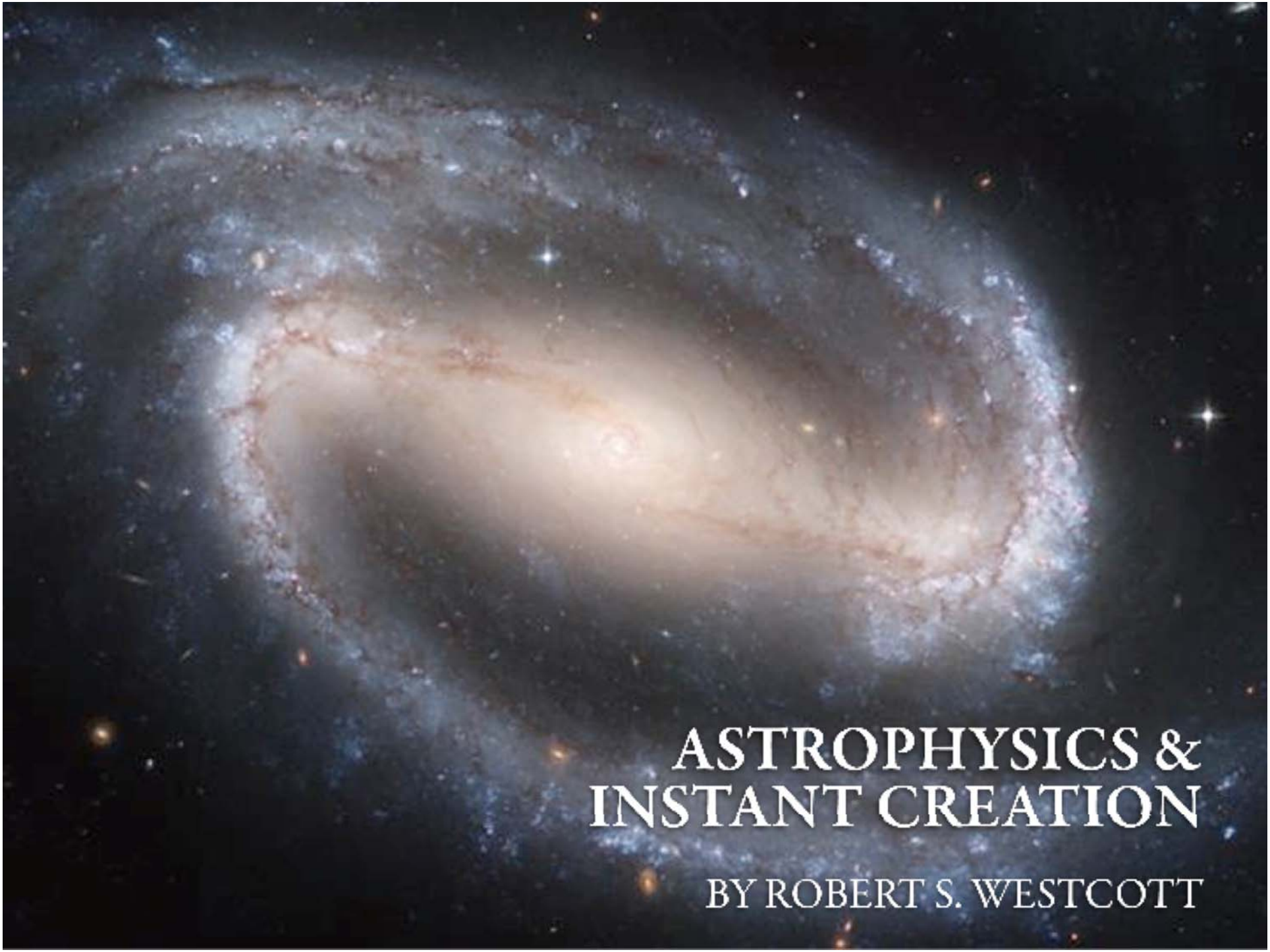
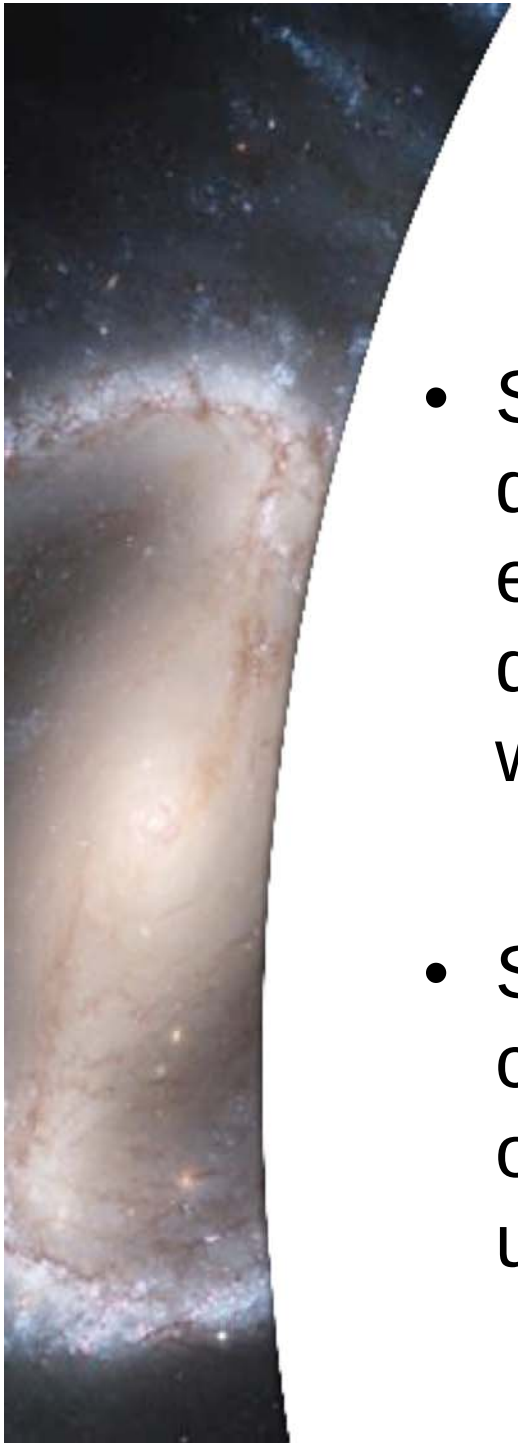
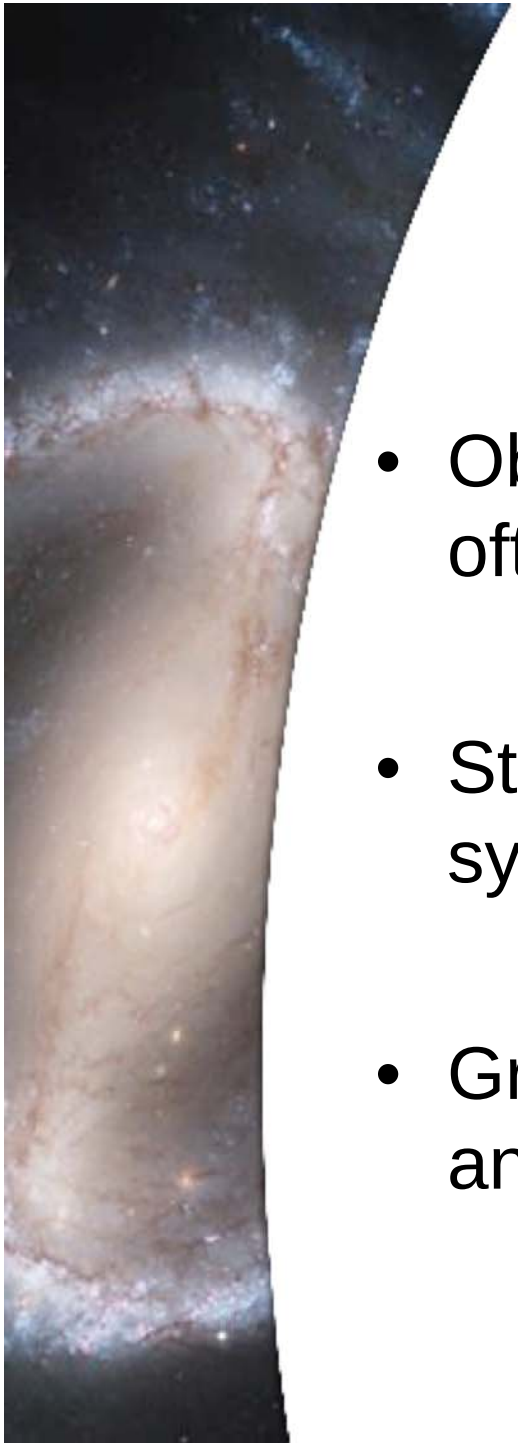

ASTROPHYSICS &
INSTANT CREATION
BY ROBERT S. WESTCOTT



What is Science?

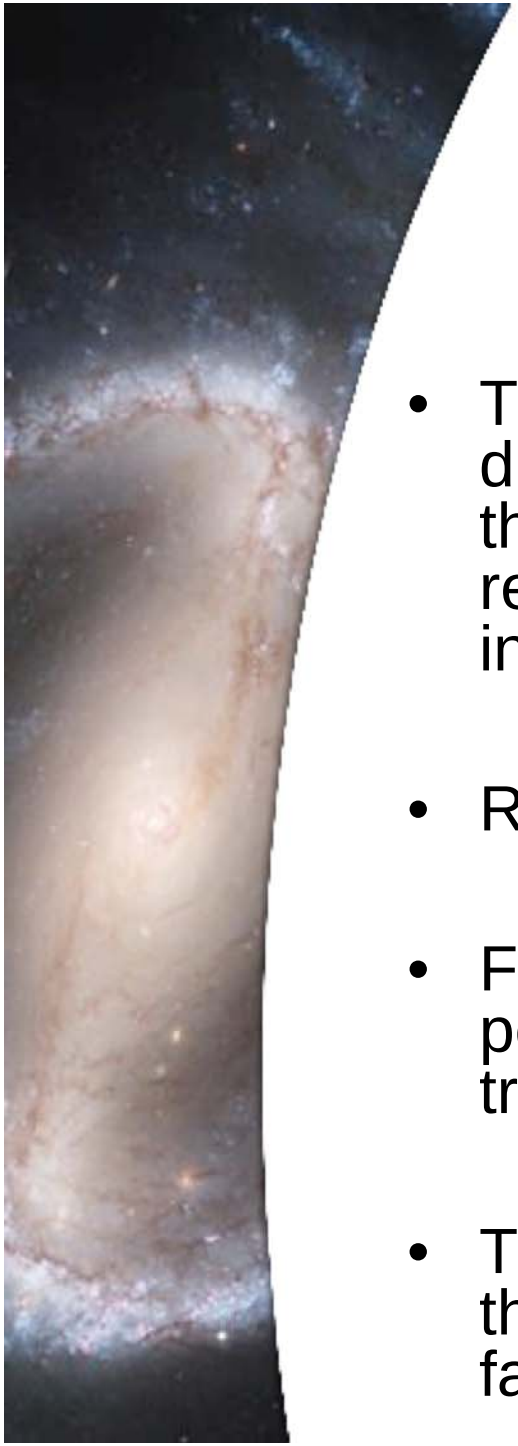
- Science is the systematized knowledge derived from observation, study, and experimentation carried on in order to determine the nature or principles of what is being studied.

- Science is based on the collection and collation of data derived from objective observation and measurement of the universe.



Can Science give us understanding of the unseen?

- Observing and measuring the seeable often gives us knowledge of the unseen.
- Stellar wobble and other planetary systems.
- Gravitational lens effect, neutron stars, and black holes.



Truth is factual and can be scientifically tested.

- Truth is its own defense. You should never be discouraged from seeking and investigating the truth and evaluating your position in relation to the facts discovered in your investigation.
- Reality defines truth through observable facts.
- Fanaticism is born and ignorance is perpetuated when one stops investigating the truth.
- Truth is not determined by the consensus of the opinions of the majority but is tied to factual data.

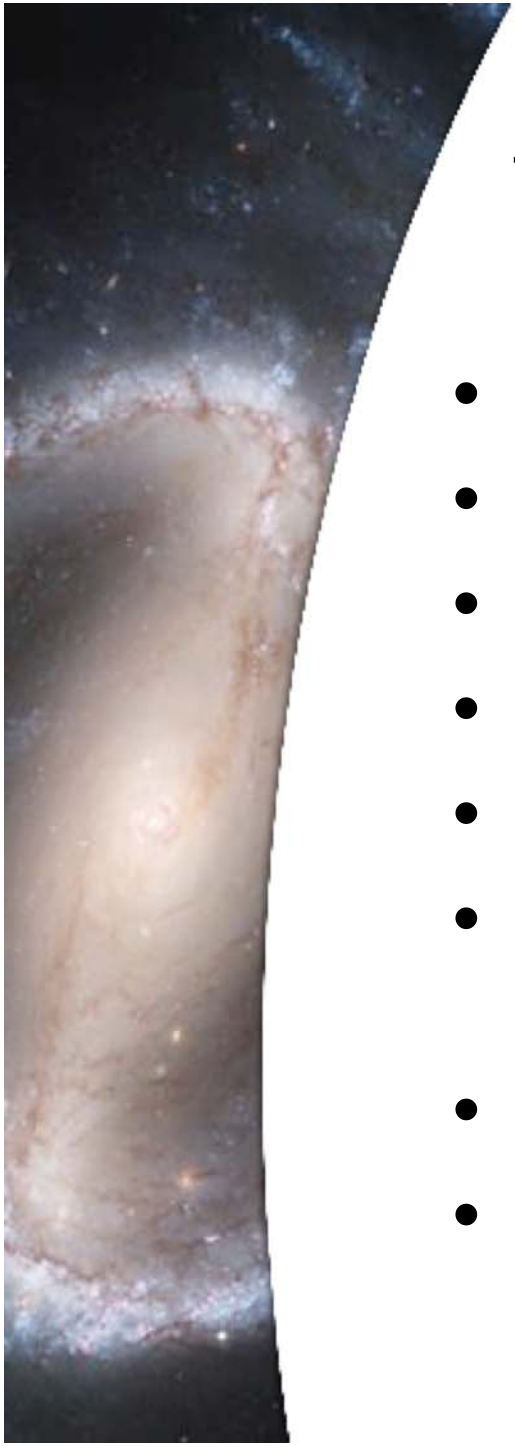
The questioning and debate of Science

- Science is only improved if the prevalent theories can be questioned, debated, and corrected according to objective facts, discovered, both past and present.

- In intellectual education there should be no subject that cannot be discussed or debated and no doubts not answered through the introduction of objective facts, or the evaluation and correction of theory based on the introduction and discussion of the relevancy of those objective facts.

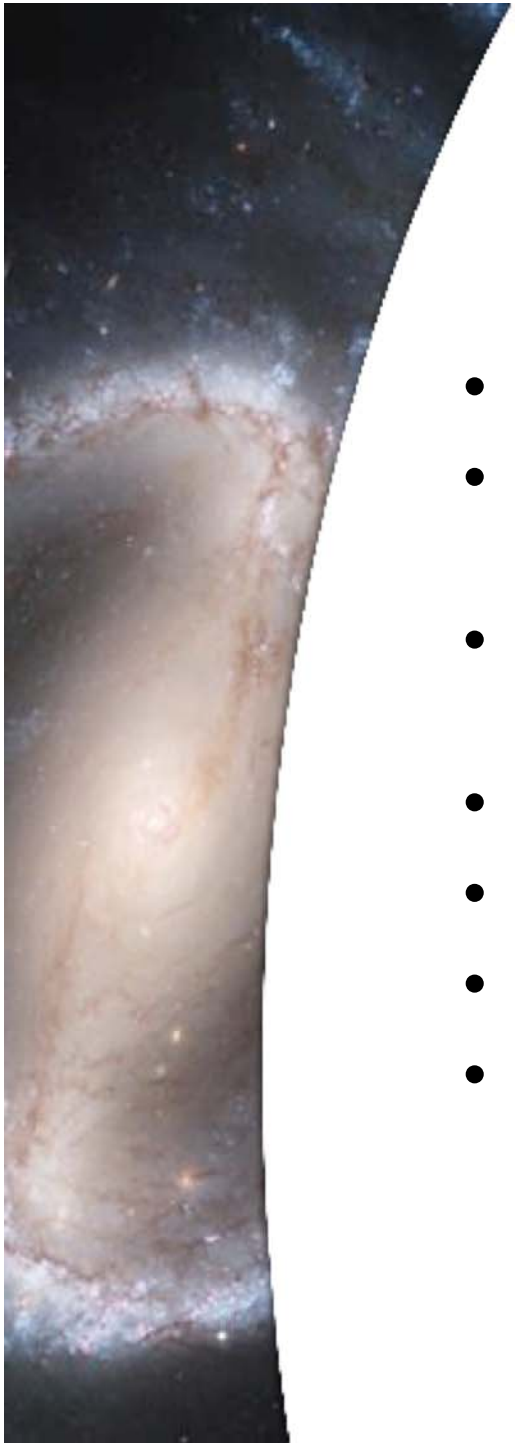
The questioning of scientific theory

- “No theory in science is ever absolutely and finally proved. Scientists should be ready to alter or even abandon their most cherished generalizations when new facts contradict them. They must always remember that their theories, even their physical laws, are dependent on observable facts, and not vice versa (Keeton and McFadden, ***Elements of Biological Science***, 1983, p. 3).



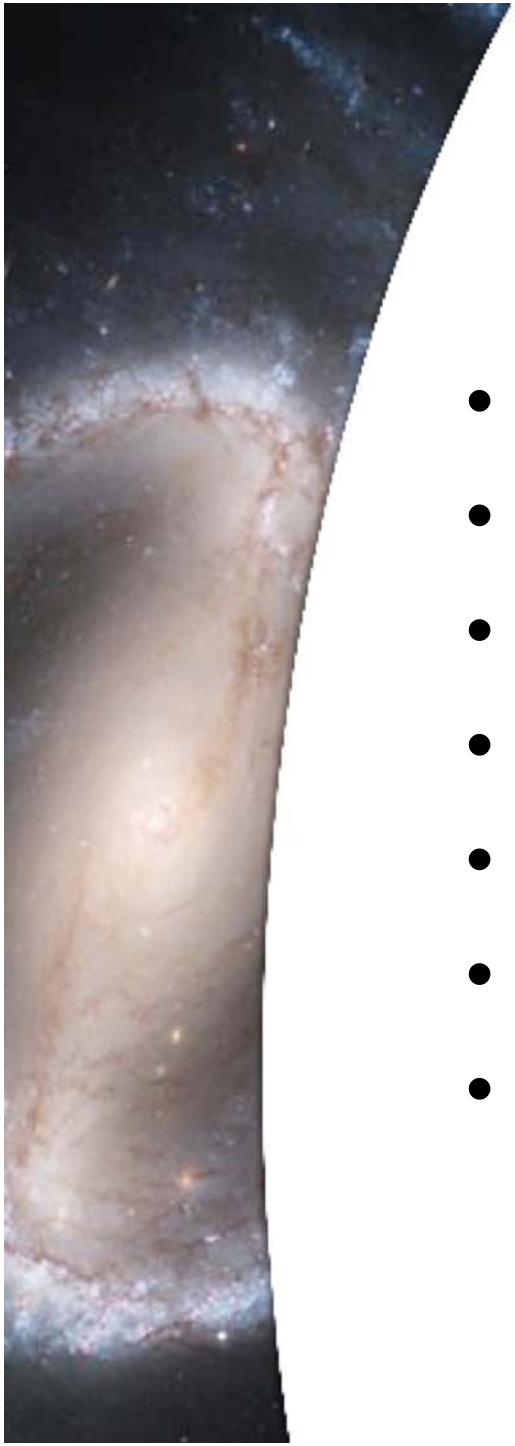
The purposes of studying apologetics.

- 1. To deepen faith
- 2. To dissolve doubts
- 3. To answer honest questions
- 4. To help skeptics see
- 5. To disband confusion
- 6. To win people to saving faith in Christ
- 7. To stop the mouths of corrupters.
- 8. Not to win arguments



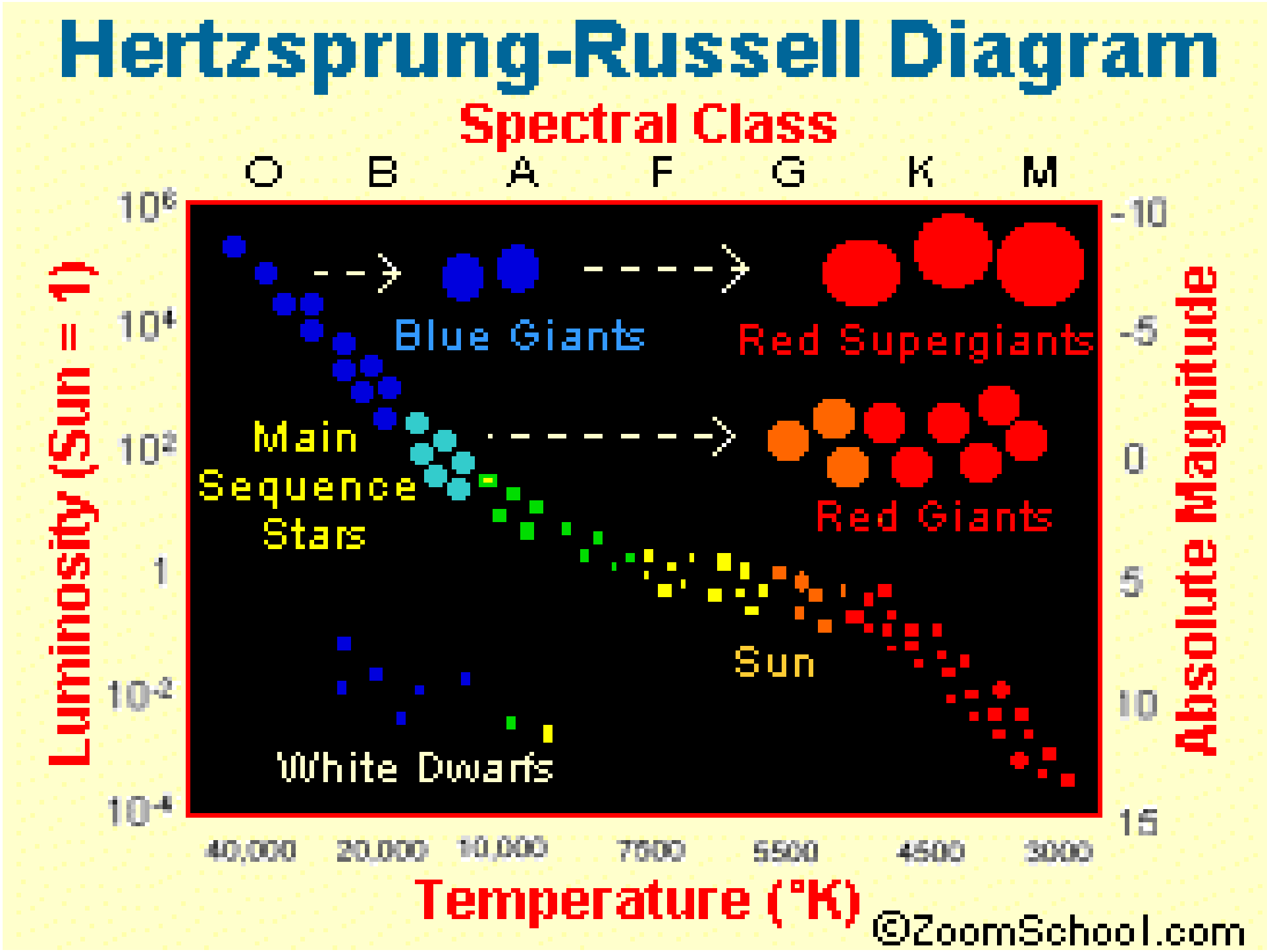
Materialism

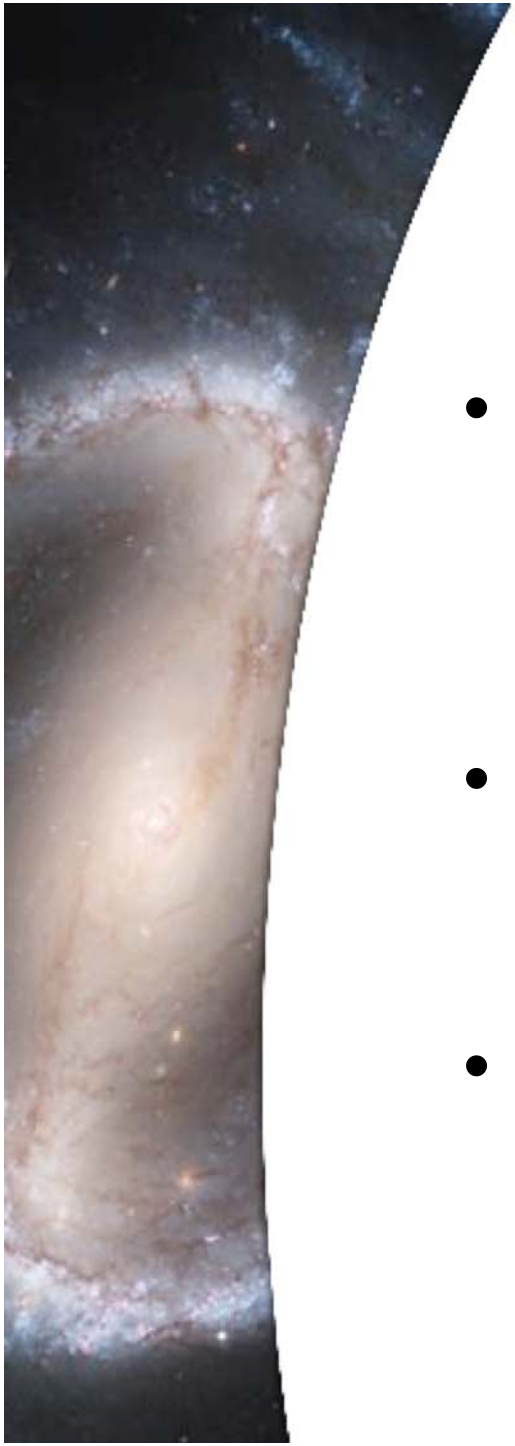
- There is no God.
- Everything came into being through random combinations of matter.
- Mankind was a product of time and random collisions of atoms.
- Man is a higher animal only.
- There is really no actual purpose in life.
- Morality is a myth.
- The character of man is produced by his environment.



The Theory of the Evolution of Stars

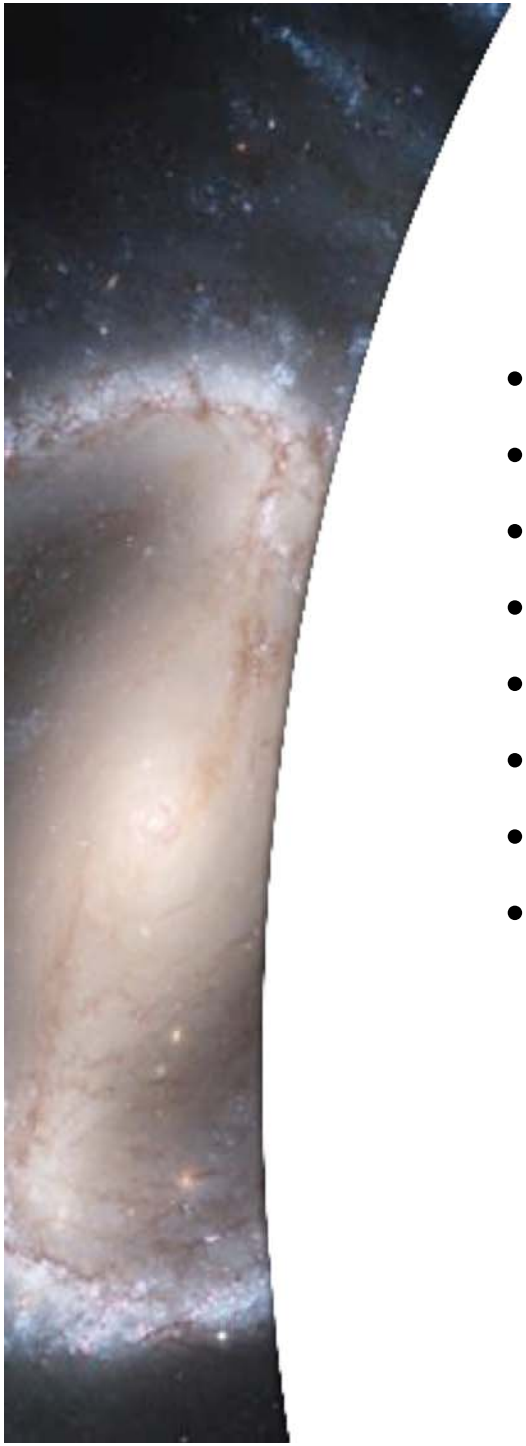
- 1. The diffused gas phase.
- 2. The compression phase.
- 3. The heat phase.
- 4. The nuclear reaction phase.
- 5. The development phase.
- 6. The mature phase.
- 7. The death phase.


Hertzsprung-Russell Diagram
Spectral Class
O
B
A
F
G
K
M
Luminosity (Sun = 1)
Absolute Magnitude
Blue Giants
Red Supergiants
Main Sequence Stars
Red Giants
Sun
White Dwarfs
40,000
20,000
10,000
7500
5500
4500
3000
Temperature (°K)
©ZoomSchool.com



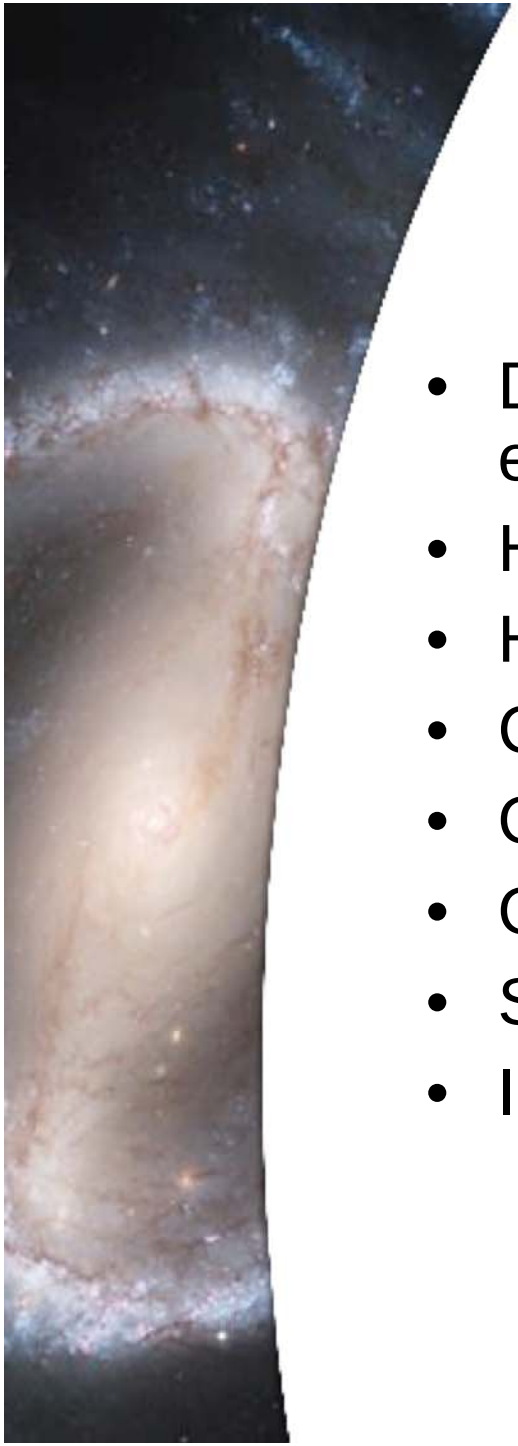
Problems with the Astronomical Evolution Theory

- 1. The best astrophysicists cannot agree on the age of the universe, solar system, planets and satellites.
- 2. Astronomers use circular reasoning in their evolutionary theory.
- 3. The transmutation of heavier elements is limited.



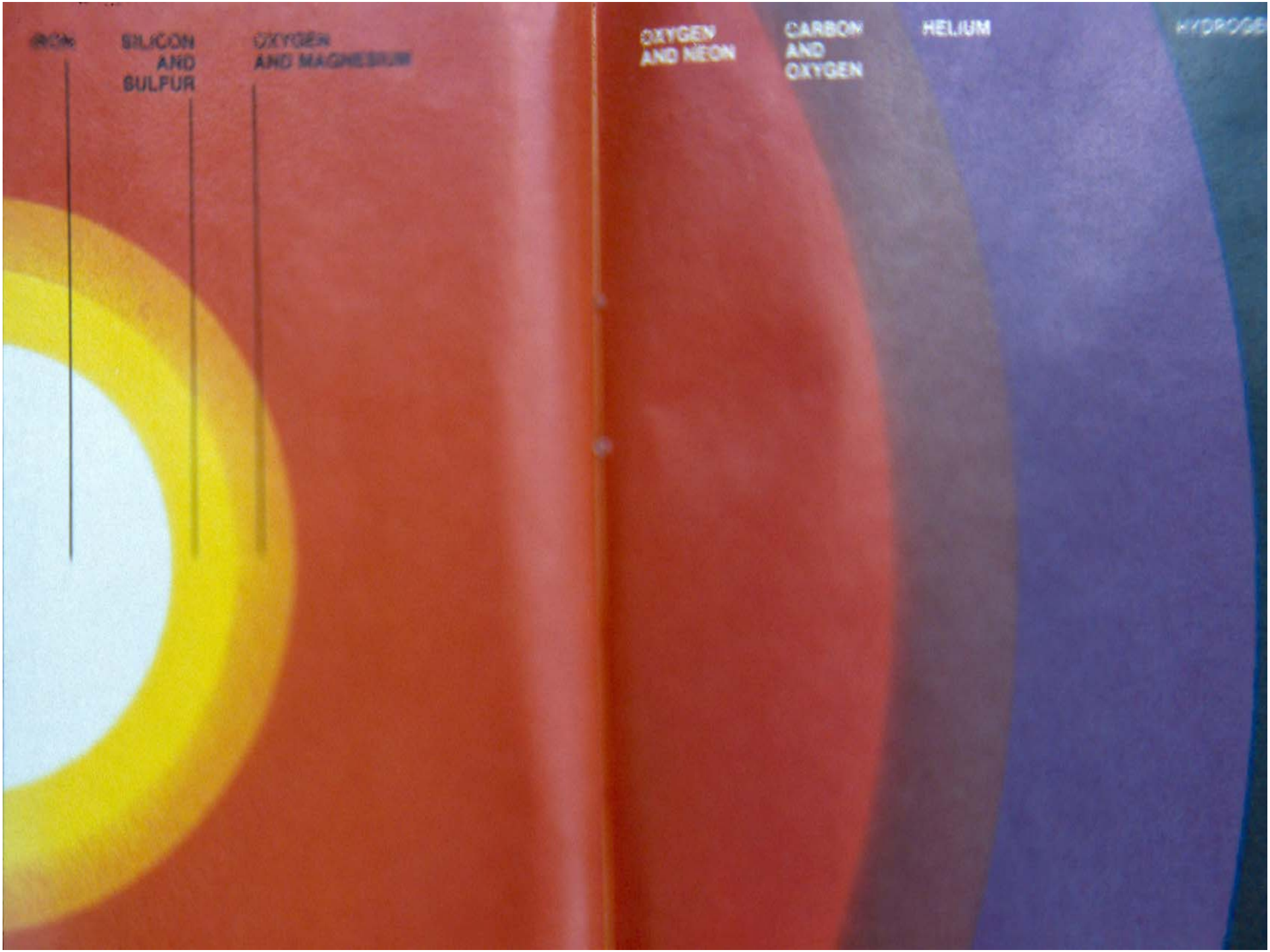
1. Estimates for the Age of the Universe

NAME	**AGE OF THE UNIVERSE**
Gamow	4.3 to 5 billion years
Peebles and Wilkenson	7 billion years
Ashford	10-15 billion years
Heklovski	70 billion years
Alfven	1 trillion years
Hoyle	Infinite age (retracted)



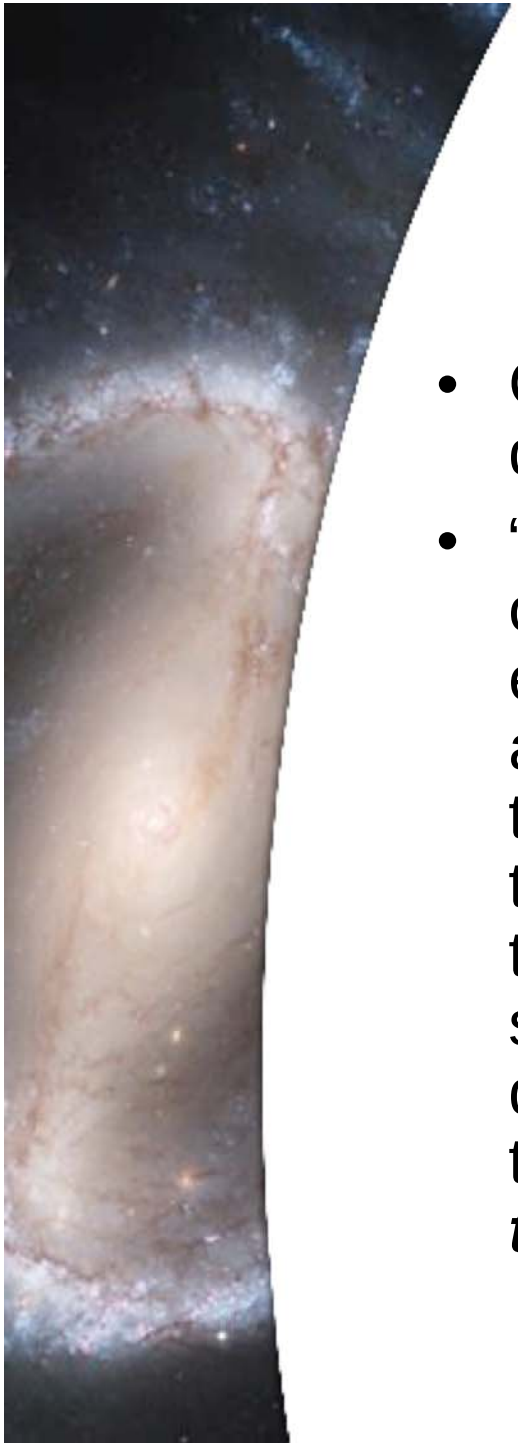
Transmutation of heavier elements

- Due to thermonuclear reactions in stars, elements are combined in fusion reactions:
- Hydrogen is fused to make Helium.
- Helium
- Carbon & Oxygen
- Oxygen & Neon
- Oxygen & Magnesium
- Silicon & Sulfur
- Iron


IRON
SILICON AND SULFUR
OXYGEN AND MAGNESIUM
OXYGEN AND NEON
CARBON AND OXYGEN
HELIUM
HYDROGEN

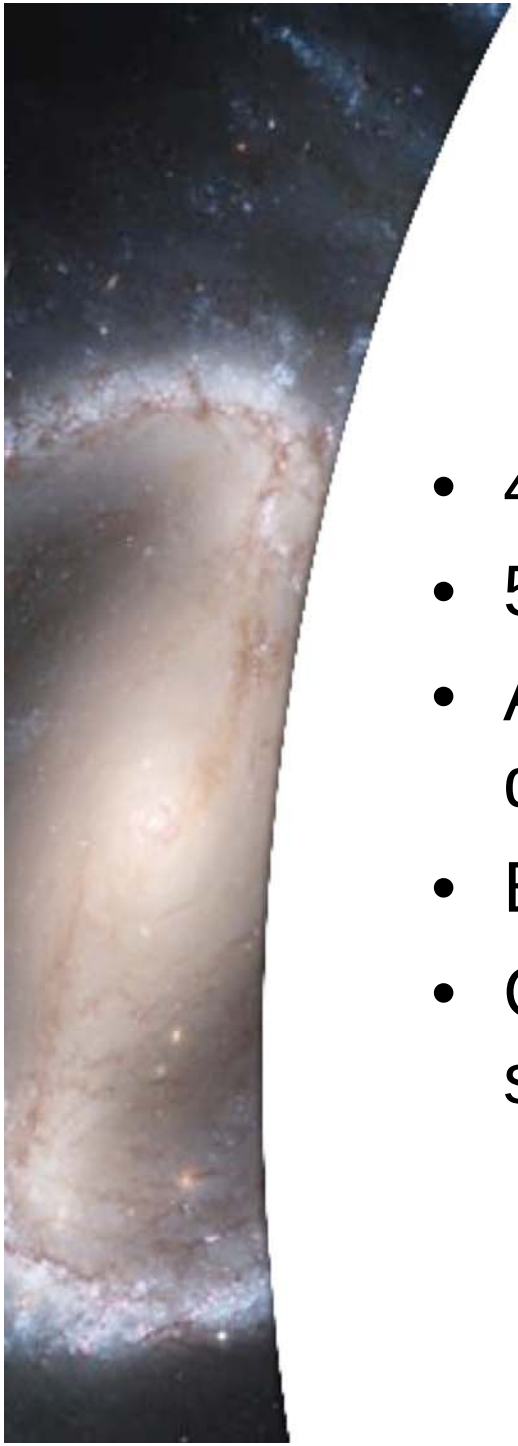
Novas and Supernovas

- When stars reach the Iron phase they explode and return all the energy they have borrowed from the universe throughout their existence in the matter of two weeks. At this time the transmuted elements in stars returns to Helium.



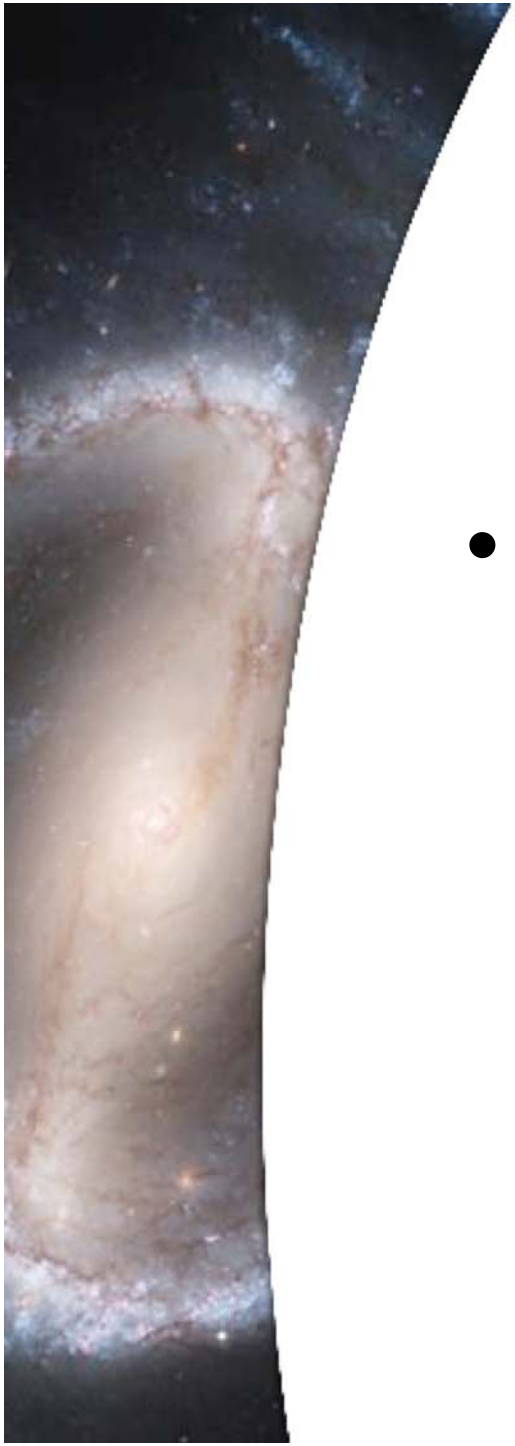
The immediate formation of the chemical elements

- George Gamow, one of the scientists that discovered the Big Bang, stated,
- “It has been possible to show that the observed relative abundances of chemical elements in the universe can be interpreted as a result of simple nuclear reactions which took place during the first thirty minutes after the universe bagan to expand, when the temperature of the primordial material filling space was in the neighborhood of one billion degrees.” (Gamow, George, Introduction to the 1952 edition of ***The Birth and Death of the Sun***: New York, Viking Press, 1952).



Problems with the Astronomical Evolution Theory (Continued)

- 4. The law of the conservation of energy.
- 5. The law of entropy.
- A. The expanding universe and age dating the universe.
- B. The Spectral analysis of stars.
- C. The Doppler Shift and the vector and speed of stars.

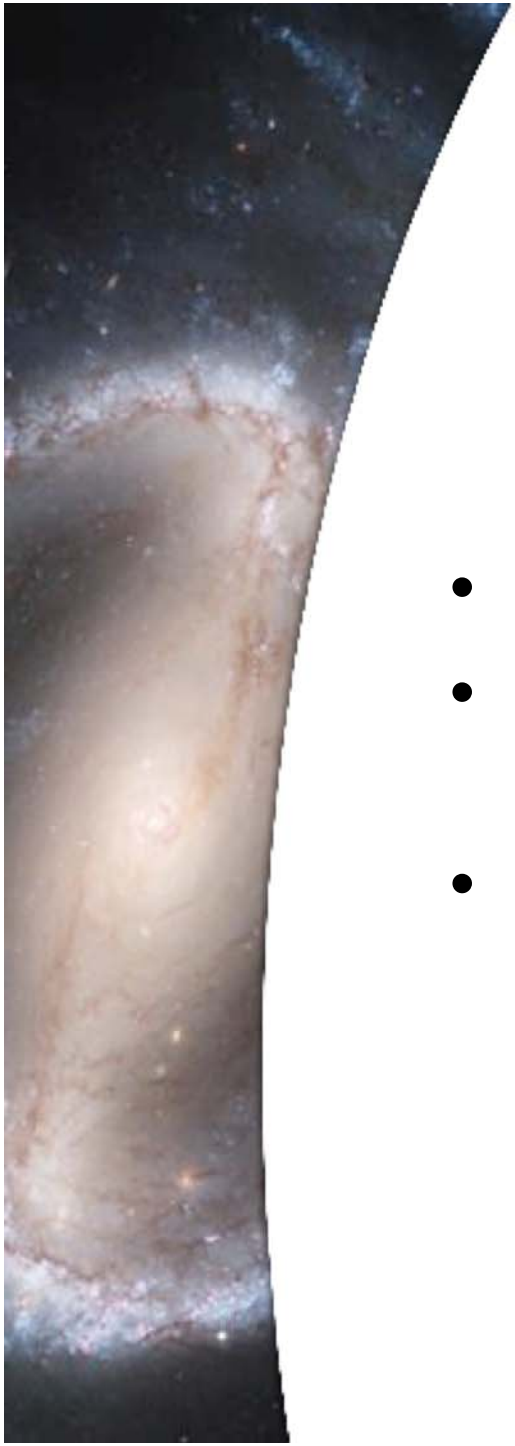


4. The Law of the Conservation of energy

- Energy can neither be created nor destroyed.

5. The law of entropy.

- A. The expanding universe and age dating the universe.
- B. The Spectral analysis of stars.
- C. The Doppler Shift and the vector and speed of stars.



D. Calculating the Galaxy and star direction and speed related to Earth.

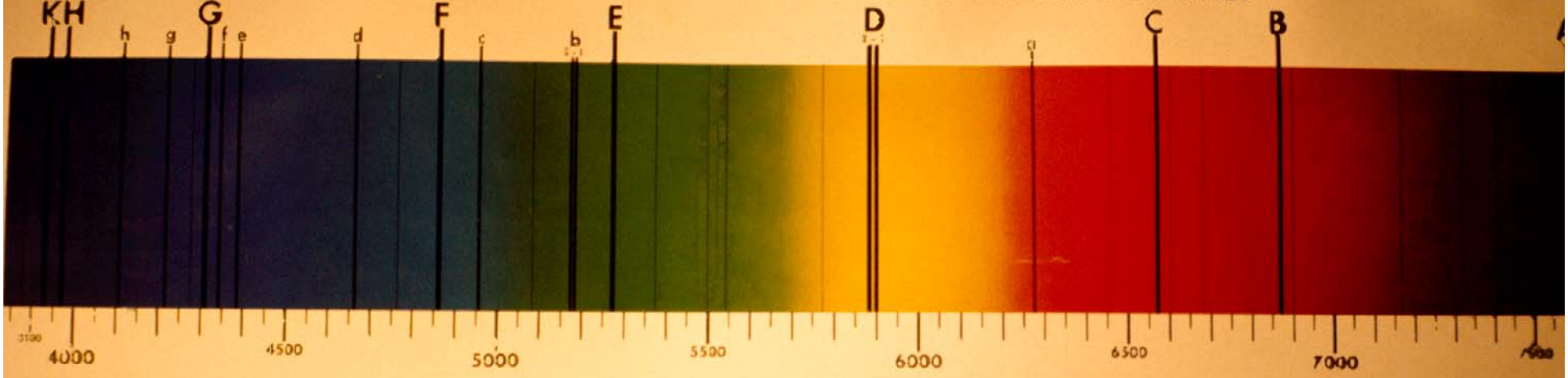
- E. The beginning point of the Big Bang.
- F. The age of the planets, satellites, Earth, and Moon.
- G. Conclusion from the evidence

THE SPECTRUM
A band of colors called a spectrum is formed when white light passes through a prism. The prism "bends" each color as it goes through. It bends violet light the most and red light the least.

GAMMA RAYS — X-RAYS — ULTRA VIOLET
INFRA RED — SHORT WAVE RADIO
VISIBLE SPECTRUM
2900 TO 7600 ANGSTROM UNITS (1X10⁻⁸ CM.)
4000
4500
5000
5500
6000
6500
7000
7500
Continuous Spectra are produced by incandescent solids, liquids and gases under high pressure.
EMISSION (BRIGHT LINE) SPECTRA

SOLAR SPECTRUM

VISIBLE PORTION SHOWING PROMINENT FRAUNHOFER LINES



FRAUNHOFER LINES

In 1802, the English Scientist, William Wollaston, noticed black lines crossing the visible Solar Spectrum. Later, Fraunhofer, the inventor of the diffraction grating, assigned letters to these lines. These lines have, since, been used as reference points for measuring the indexes of refraction glasses, spectroscopic calibrations etc.

Kirkhoff, in 1859, proved that they are absorption lines of elements in the atmosphere of the Sun or Earth, and that they have the same wave length or frequency as the emission lines of the incandescent or electrically excited vapors of these elements.

Under high resolution, several of the lines, for example the "G" lines, are seen to be multiple lines and are due to more than one element. For example, the "G" line, Fe and Ca 4308.

The Fraunhofer lines above, on the chart, are exaggerated in width, for visibility. The wave length scale is in Angstrom units = 1×10^{-8} cm.

There are approximately 15,000 Fraunhofer lines in the entire Solar Spectrum, including the Infra-Red and the Ultra-Violet.

PROMINENT FRAUNHOFER LINES

(APPROXIMATE TO NEAREST HUNDREDTH ANGSTROM UNIT)

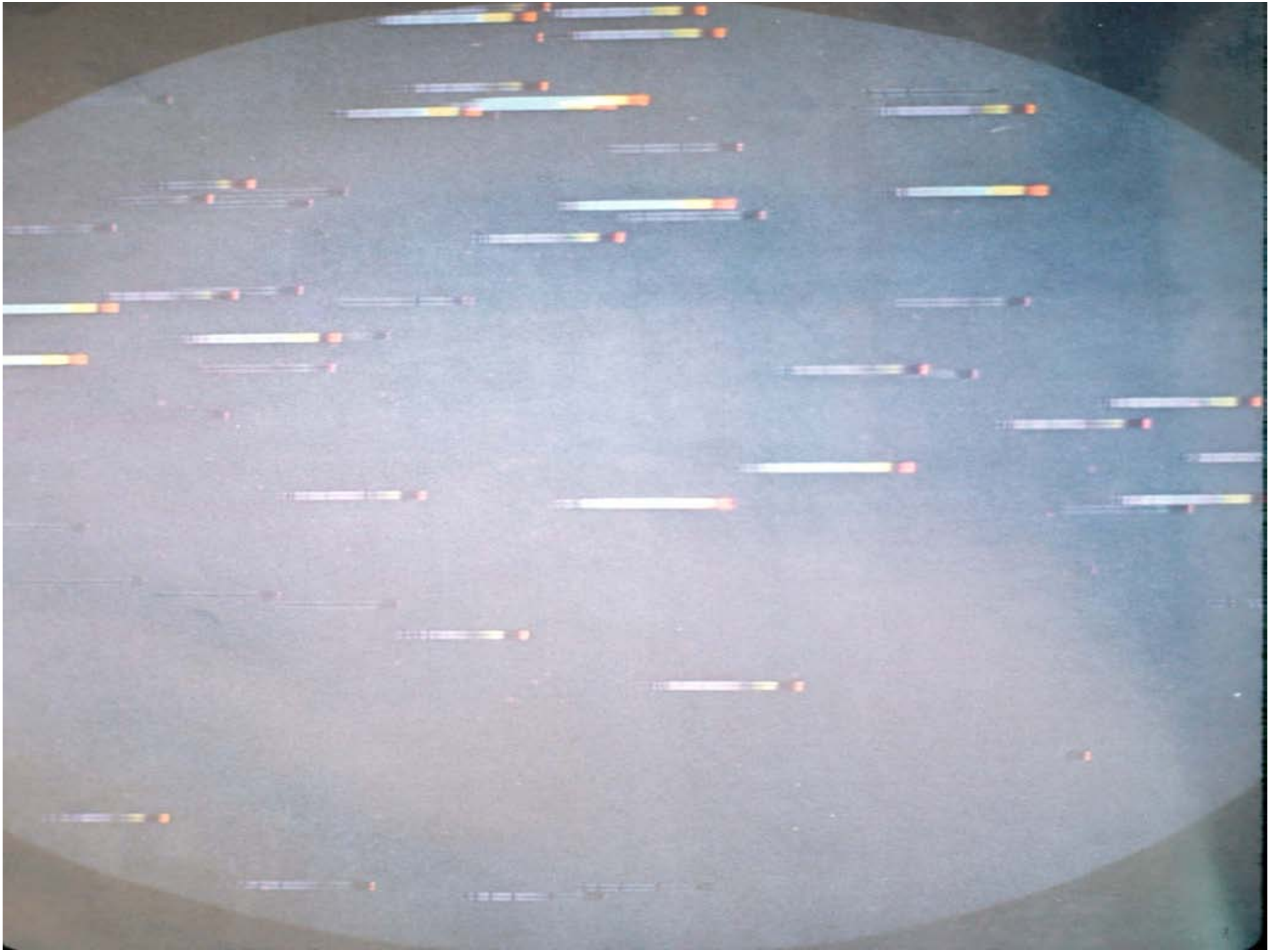
LINES	DUE TO	WAVE LENGTHS
A – (band)	O_2	7594 to 7621
B – (band)	O_2	6867 – 6884
C	H	6563
a – (band)	O_2	6276 – 6287
D – 1, 2	Na	5896 & 5890
E	Fe	5270
b – 1, 2	Mg	5184 & 5173
c	Fe	4958

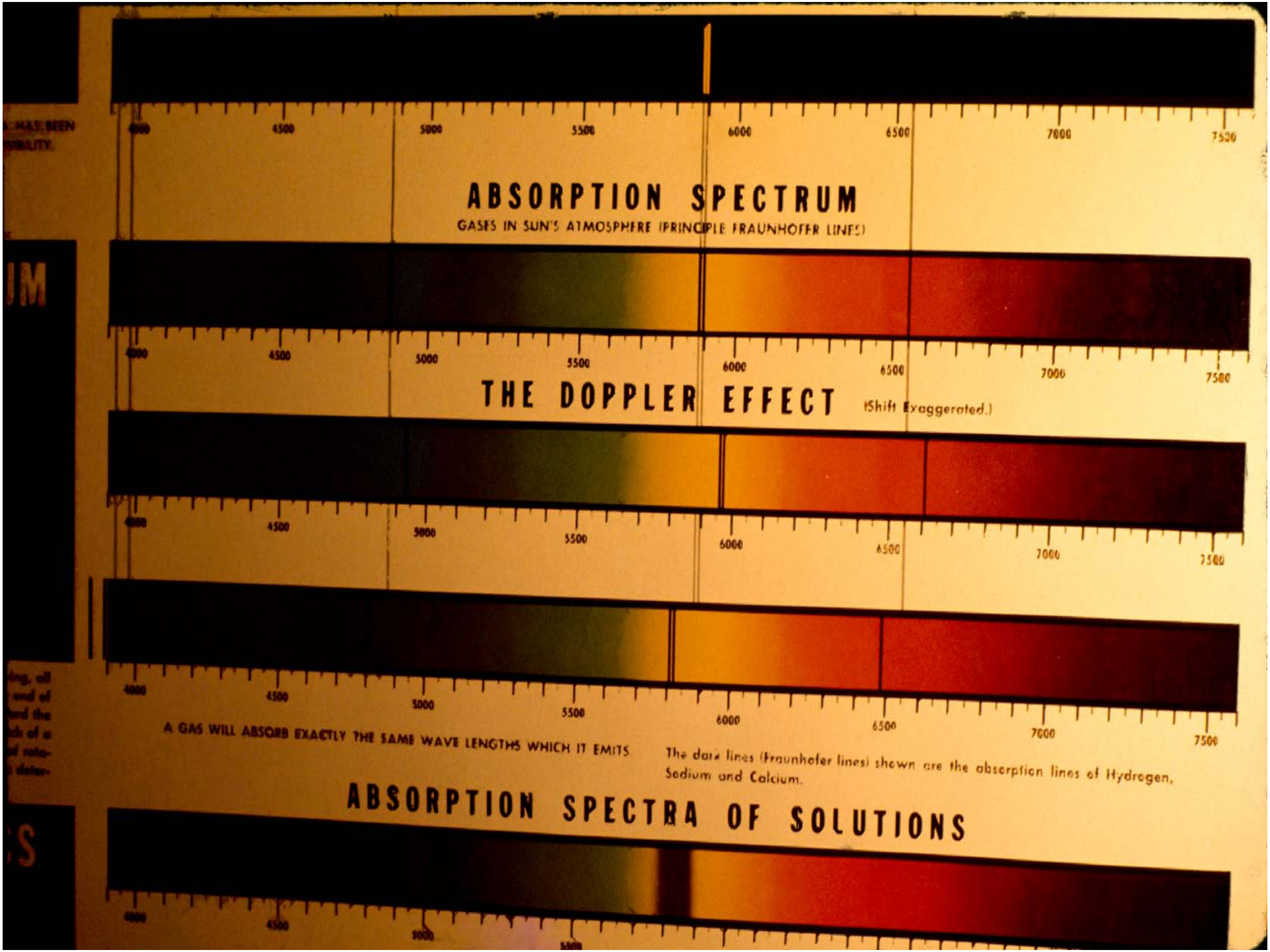
LINES	DUE TO	WAVE LENGTHS
F	H	4861
d	Fe	4668
e	Fe	4384
f	H	4340
G	Fe & Ca	4308
g	Ca	4227
h	H	4102
H	Ca	3968
K	Ca	3933

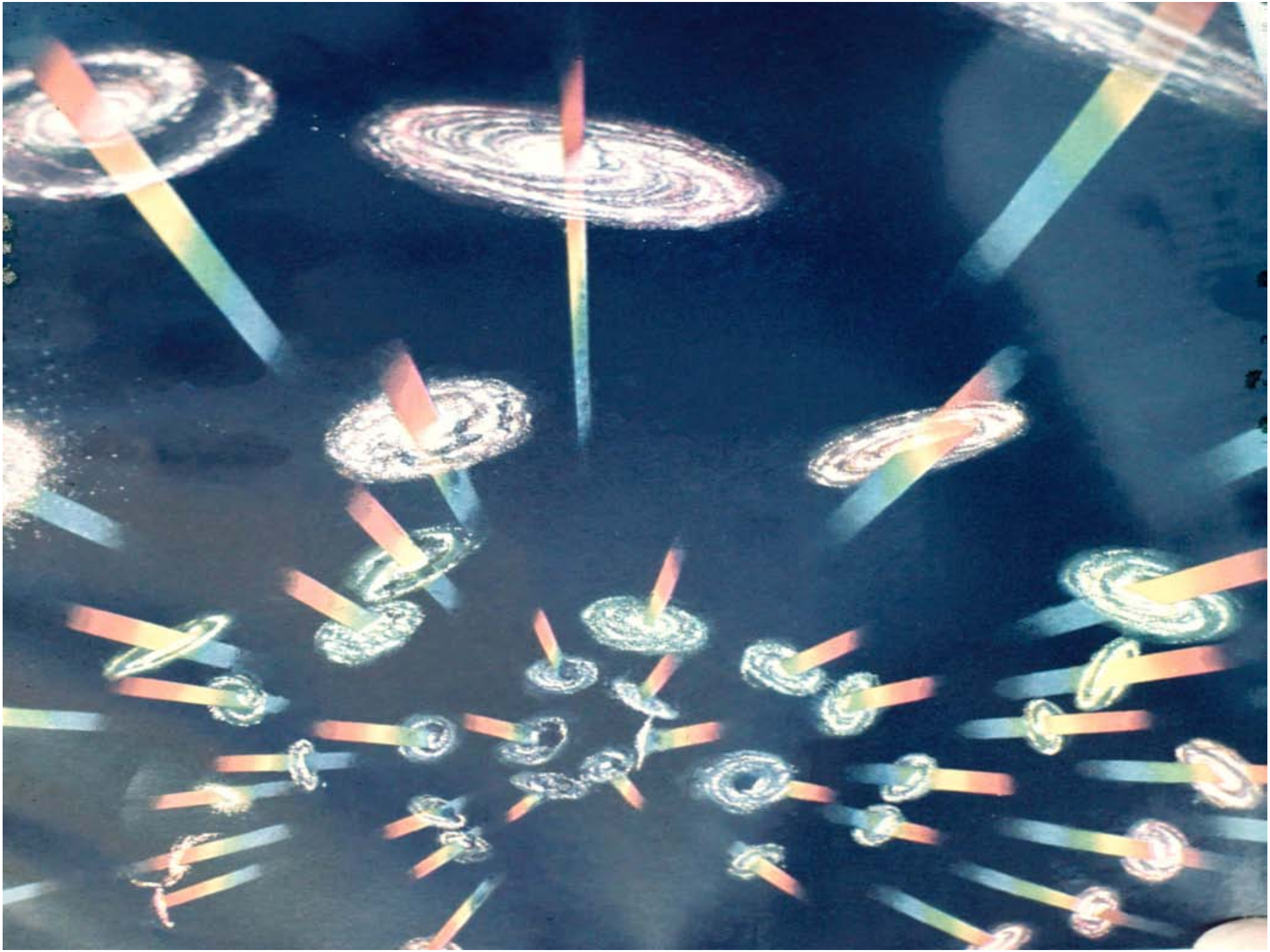
WINSCO

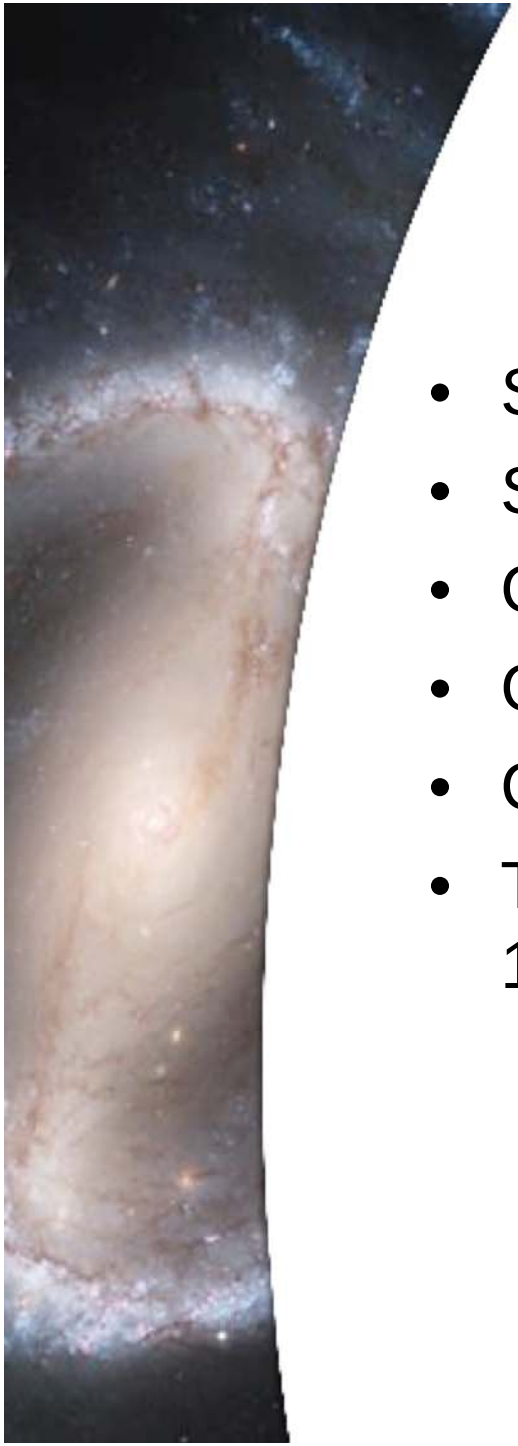
WABASH INSTRUMENTS & SPECIALTIES, INC.

WABASH - INDIANA



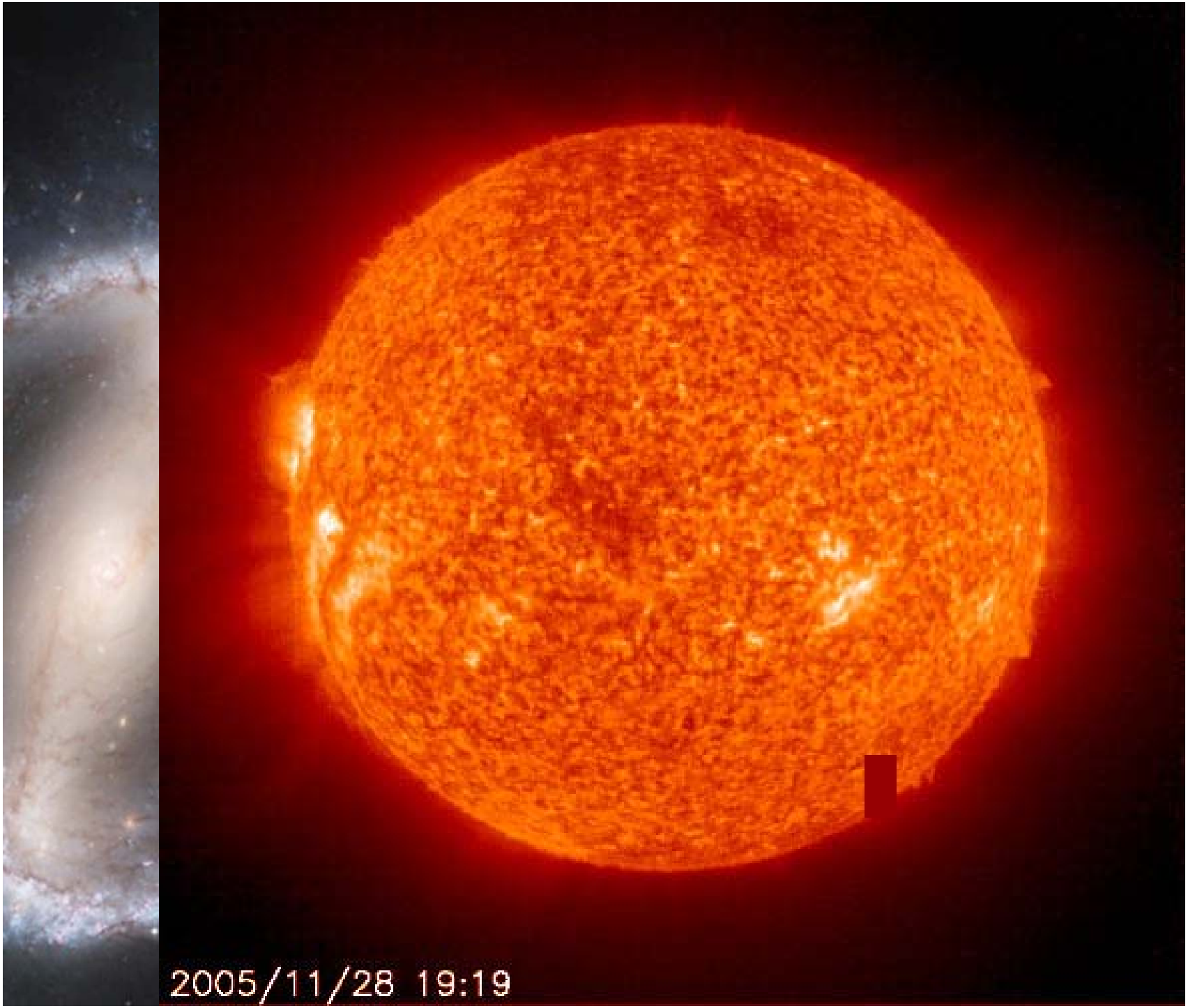

4000
4500
5000
5500
6000
6500
7000
7500
ABSORPTION SPECTRUM
GASES IN SUN'S ATMOSPHERE (PRINCIPLE FRAUNHOFER LINES)
THE DOPPLER EFFECT
(Shift Exaggerated.)
A GAS WILL ABSORB EXACTLY THE SAME WAVE LENGTHS WHICH IT EMITS
The dark lines (Fraunhofer lines) shown are the absorption lines of Hydrogen, Sodium and Calcium.
ABSORPTION SPECTRA OF SOLUTIONS





The Abundance of Stars

- Sun-Our star
- Star clusters
- Globular Clusters of Stars
- Galaxies (averaging 200 billion stars each)
- Clusters of galaxies
- The universe consisting of an estimated 100 billion galaxies +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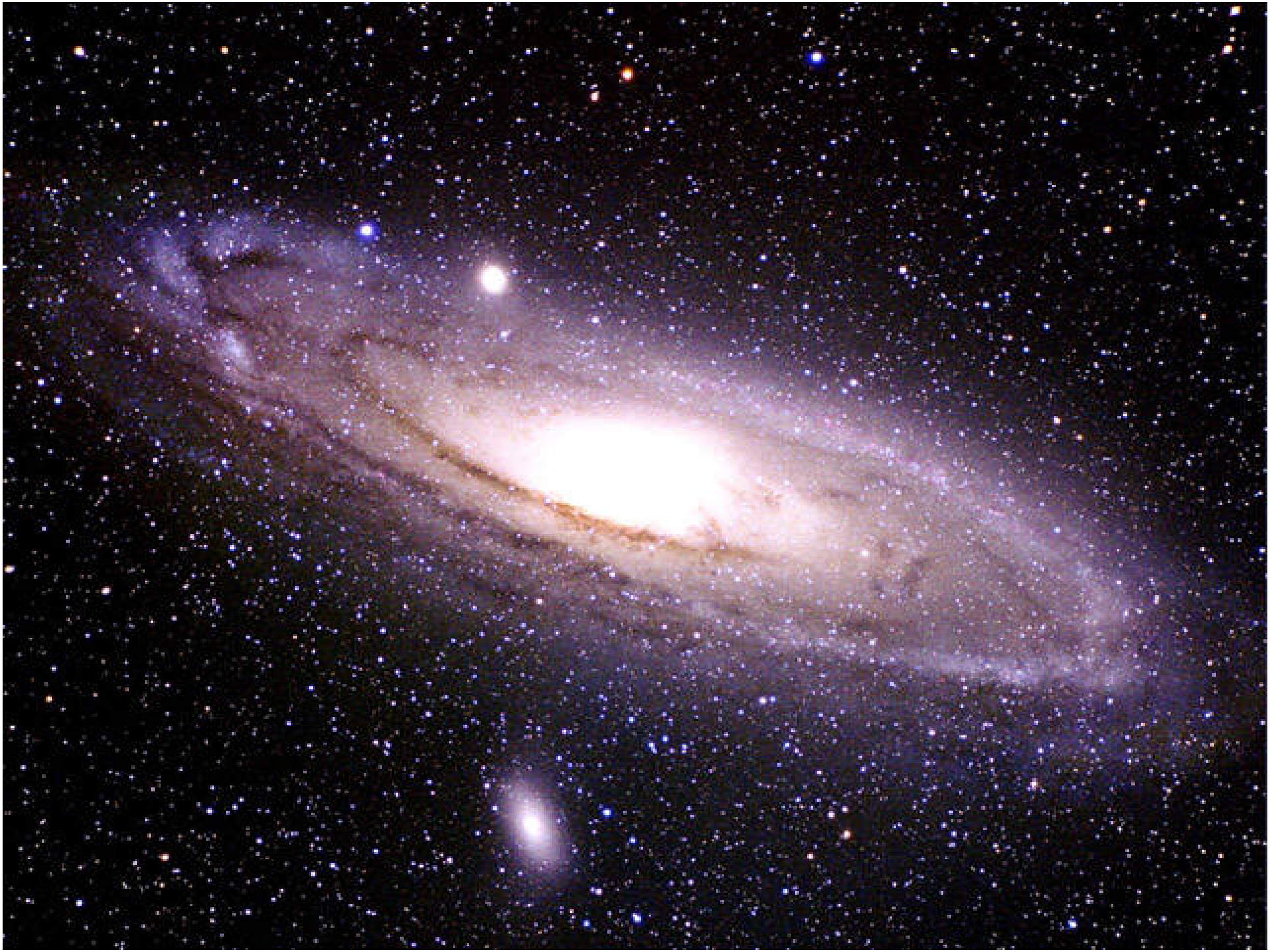
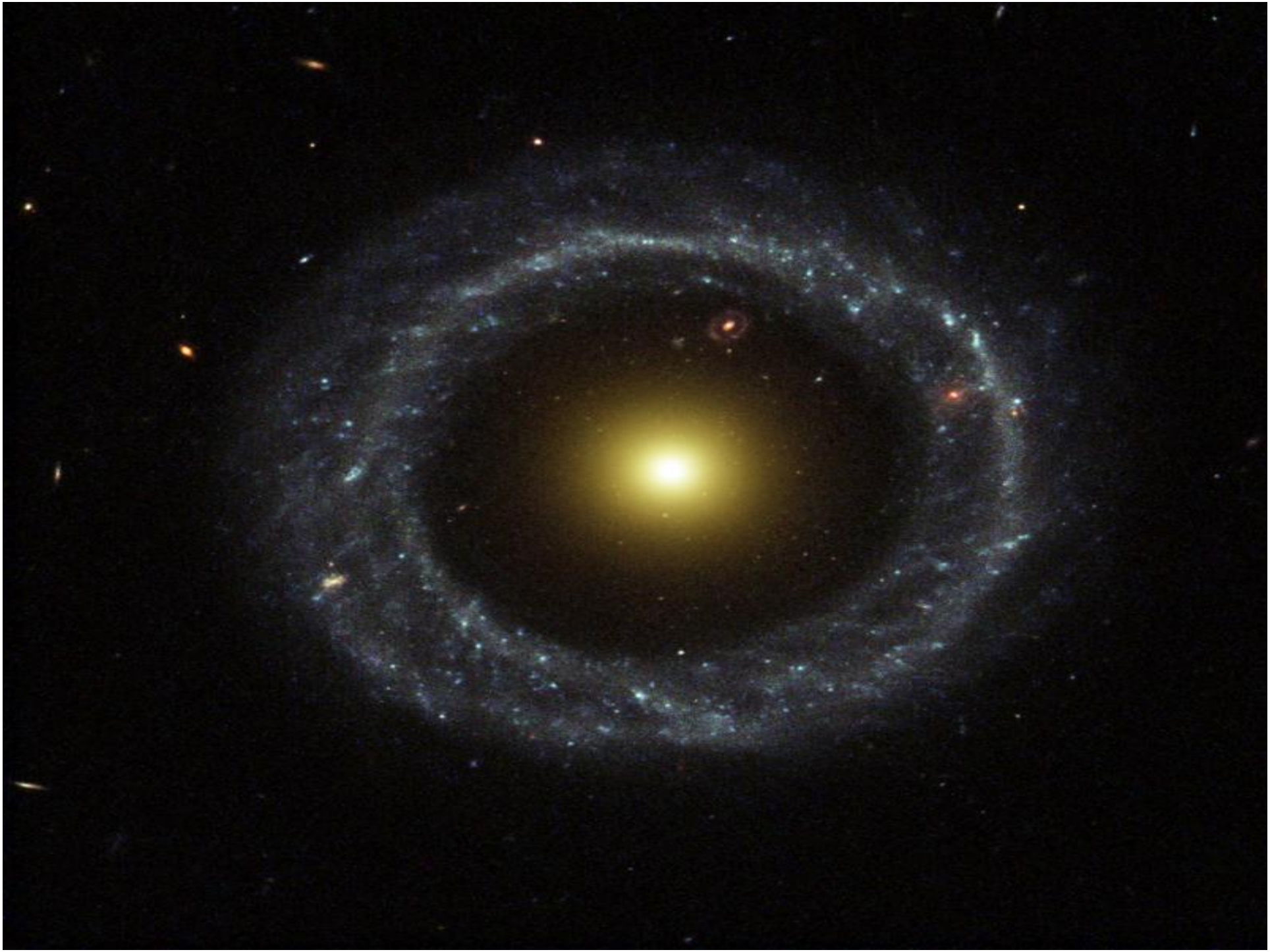
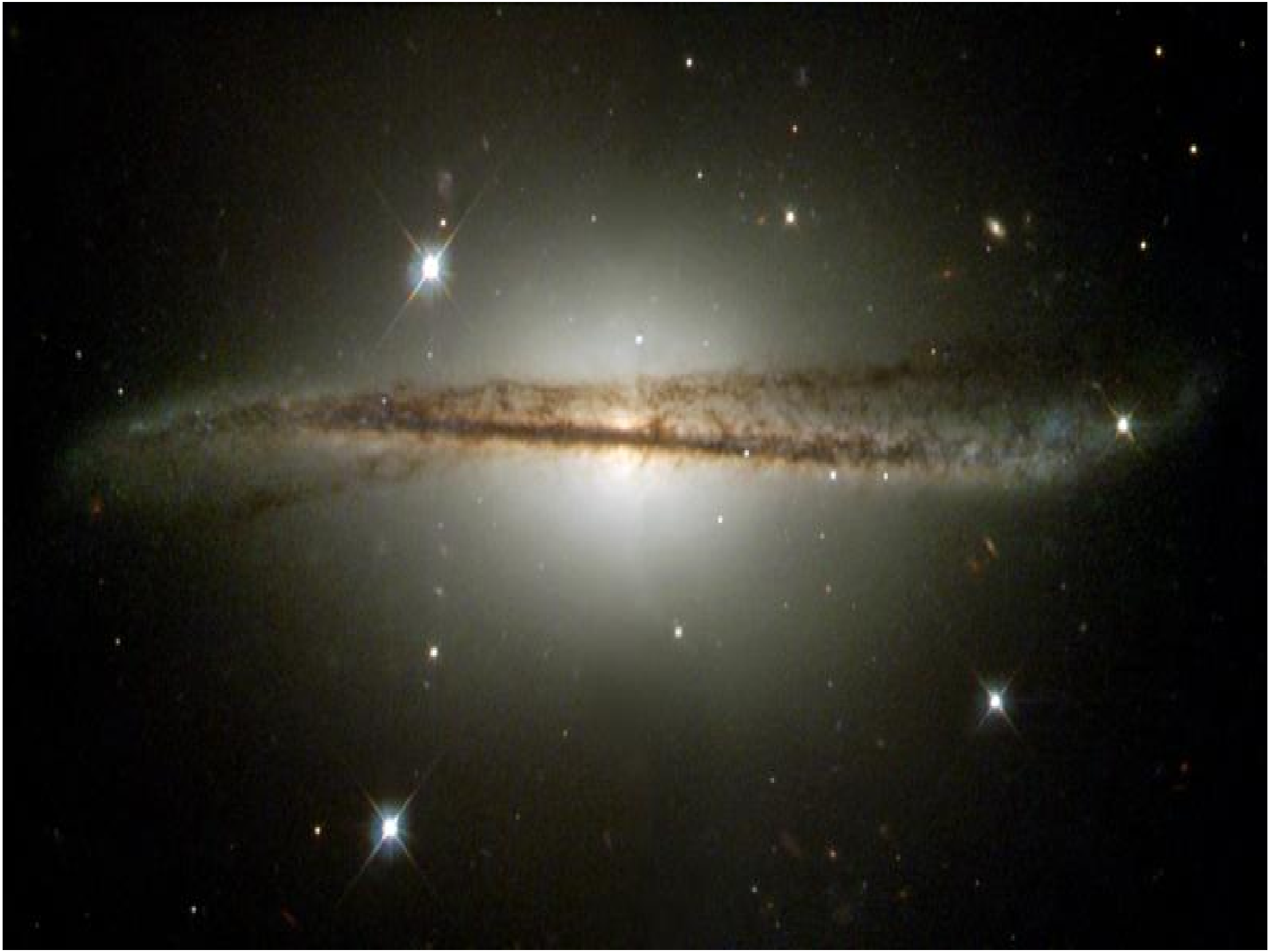
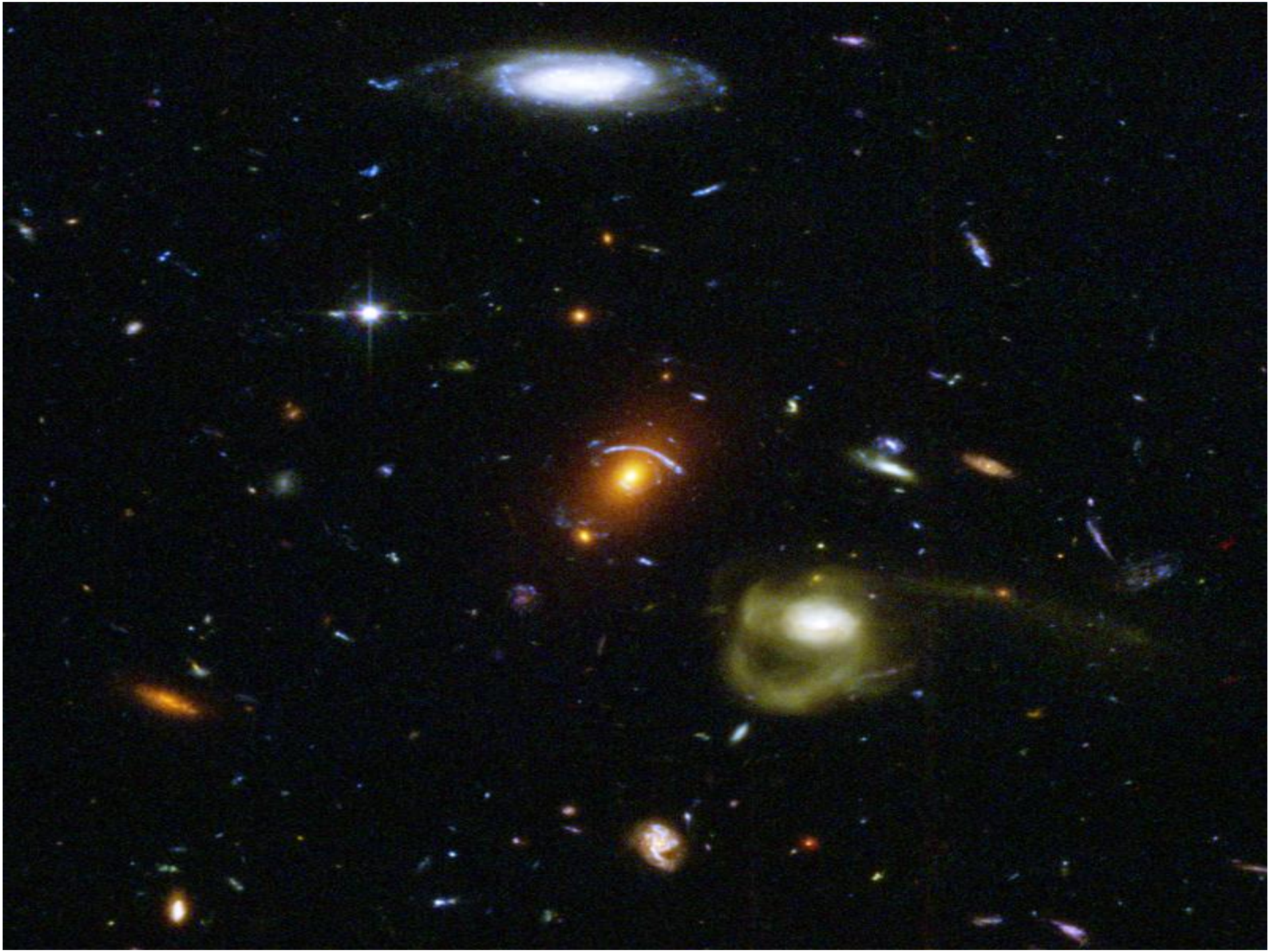
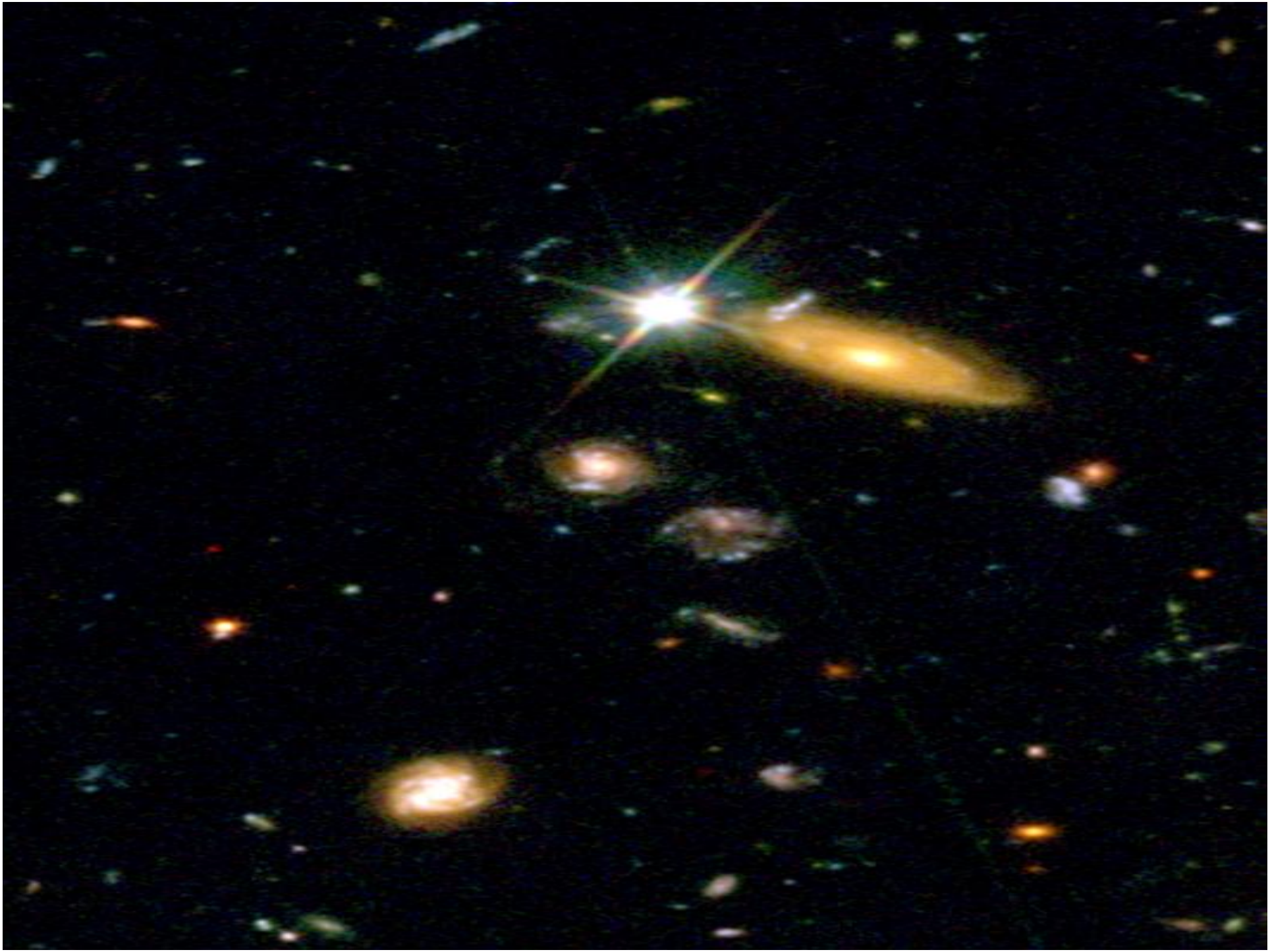
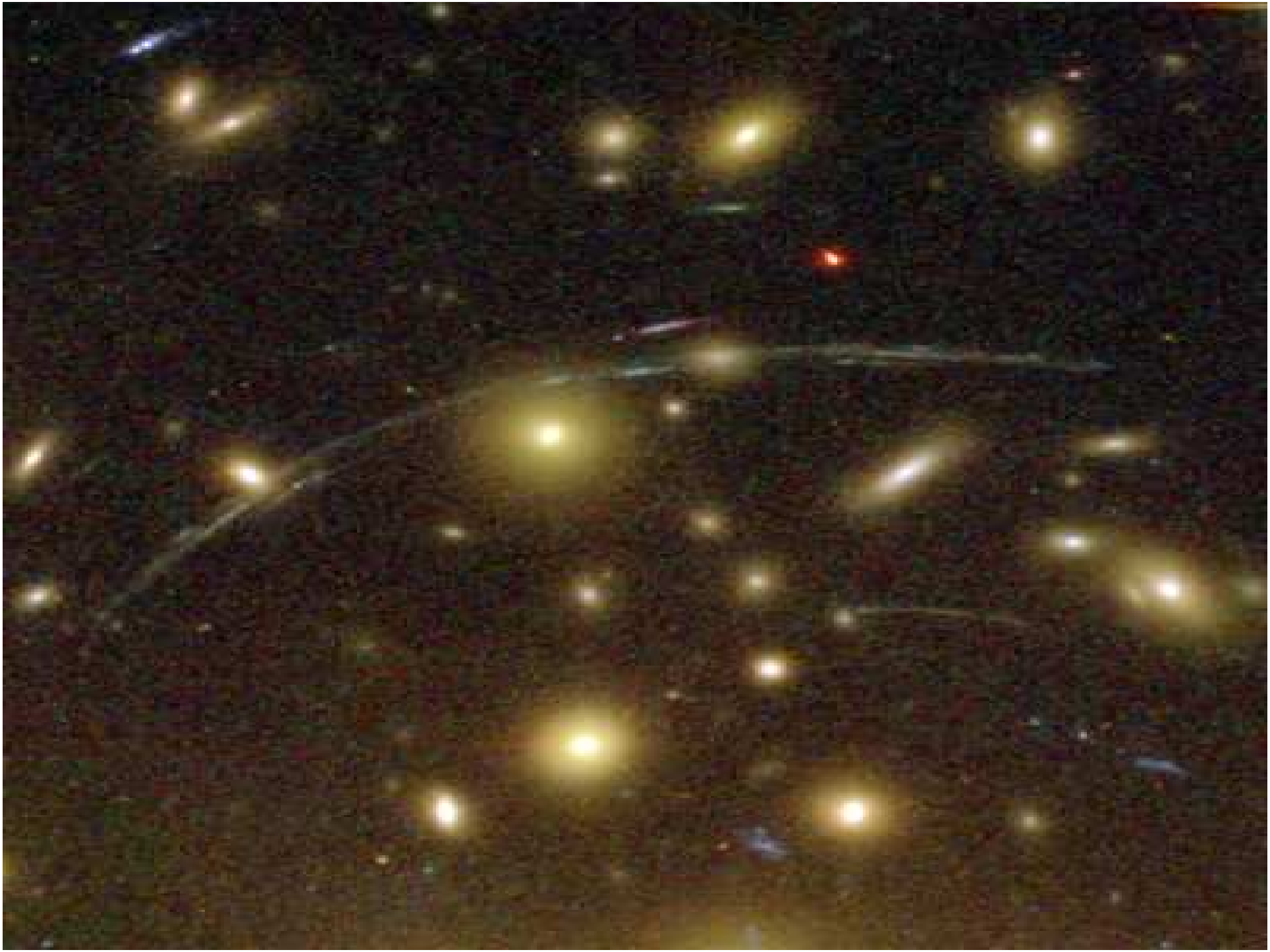


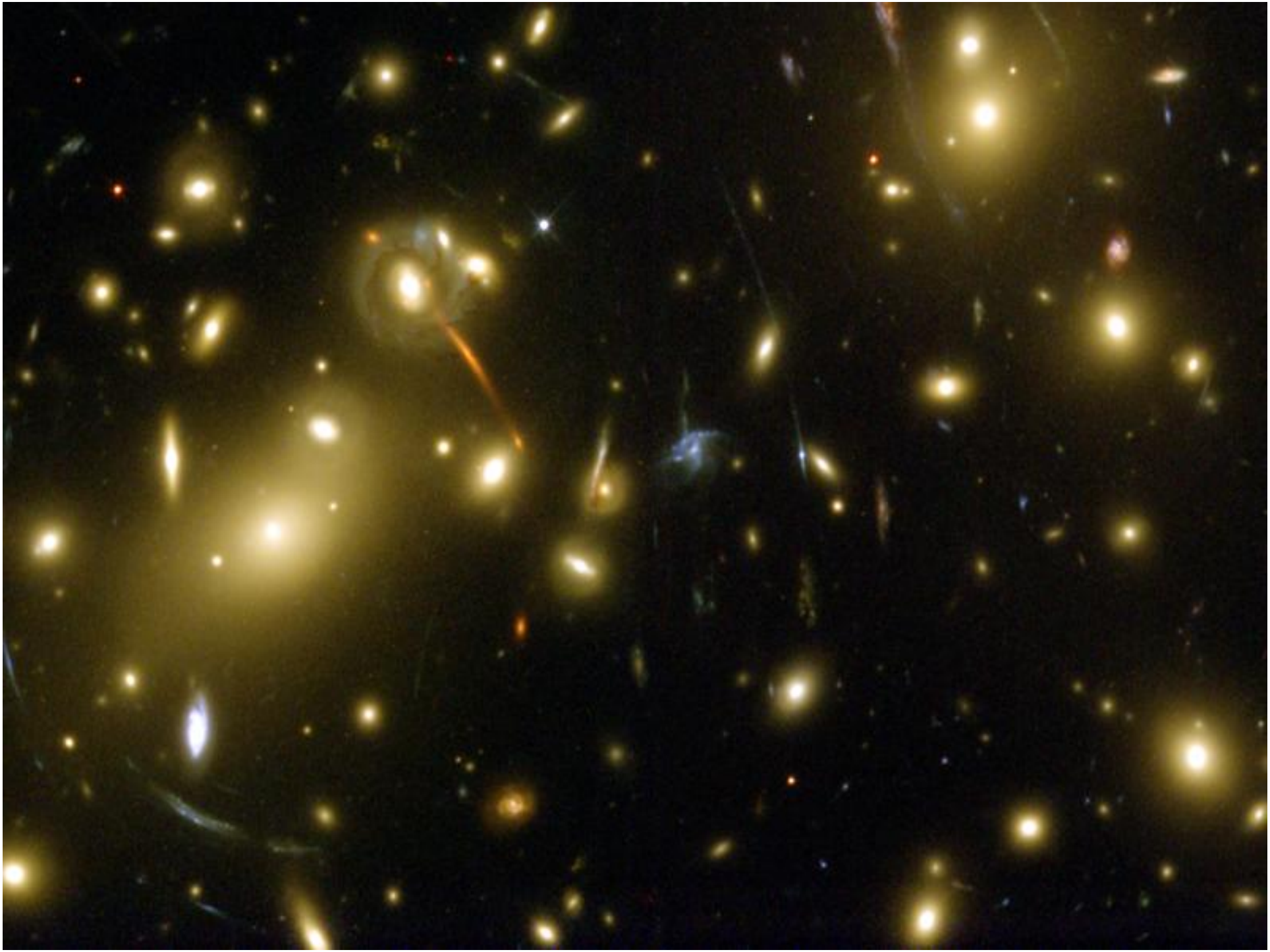


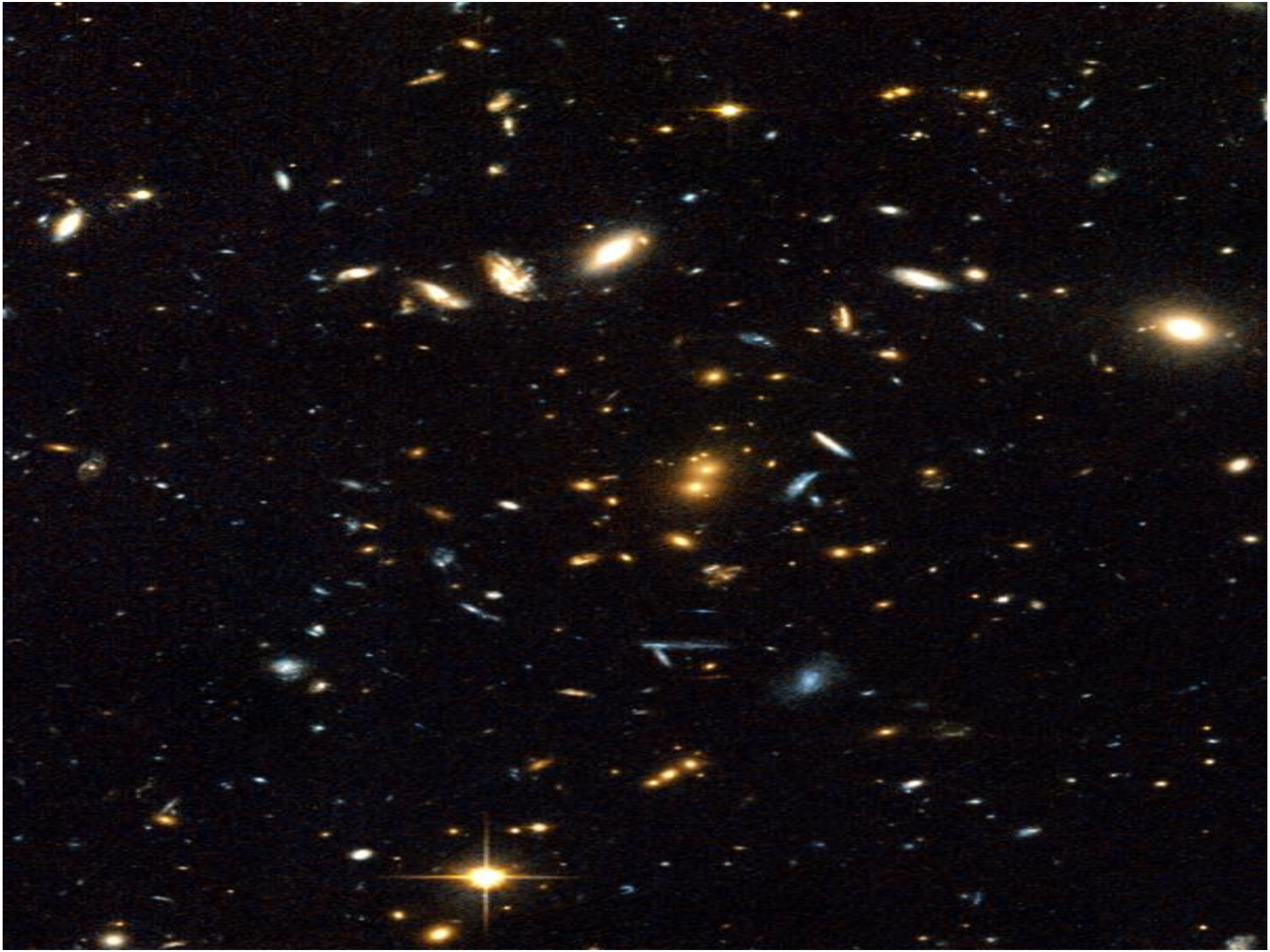


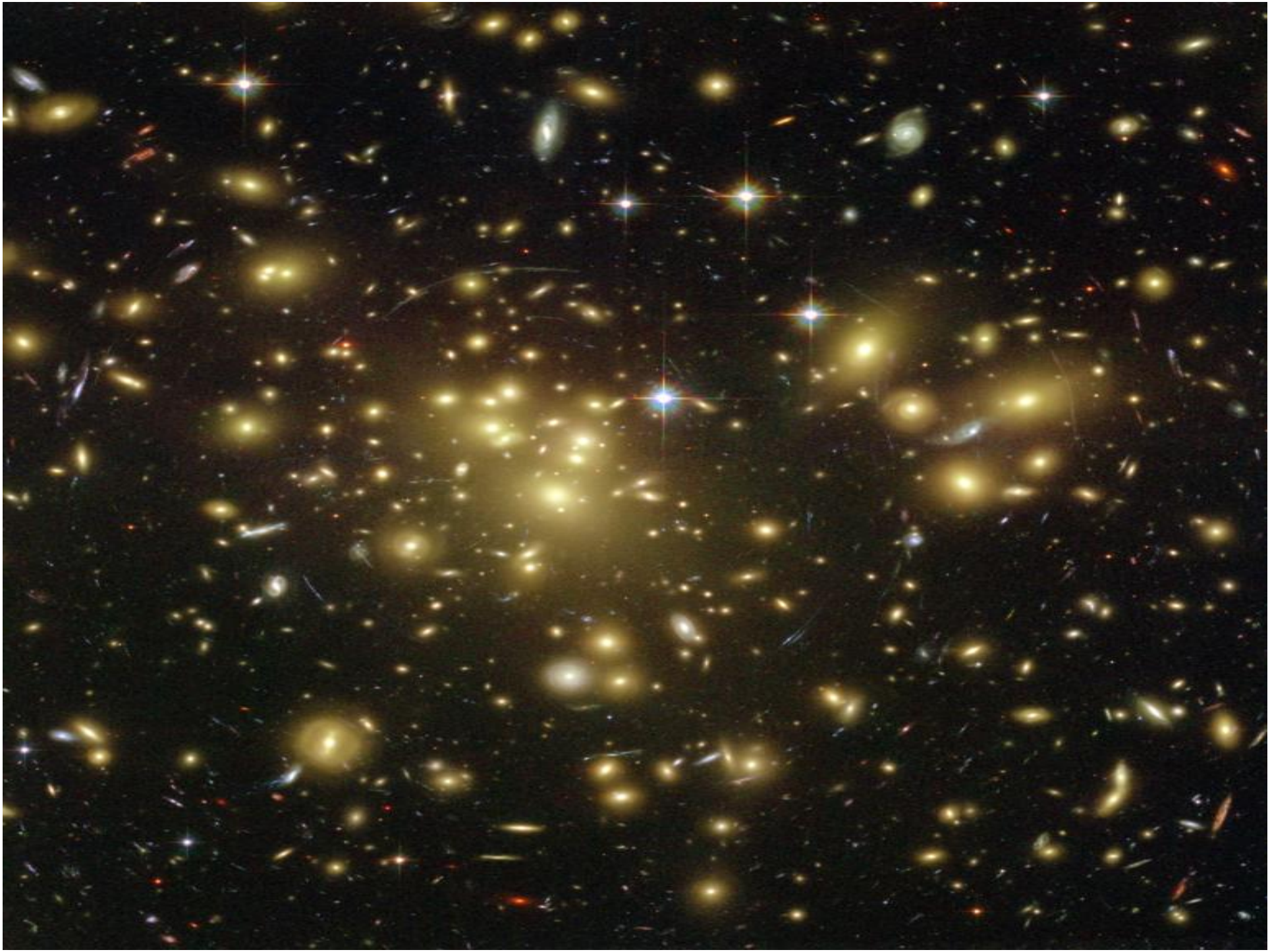


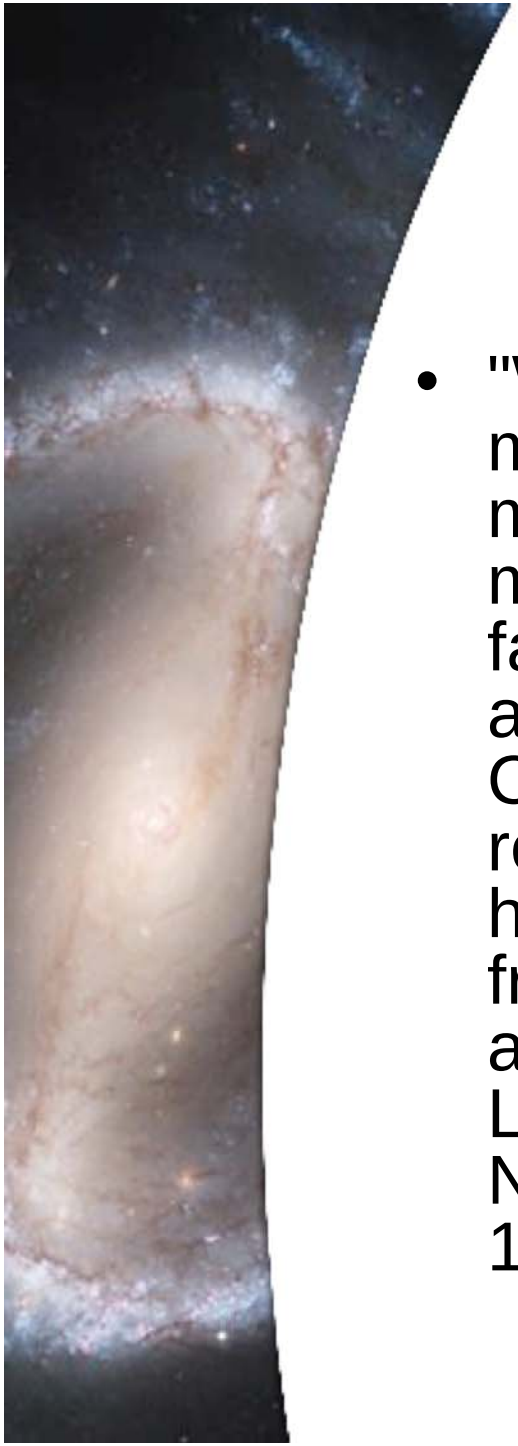










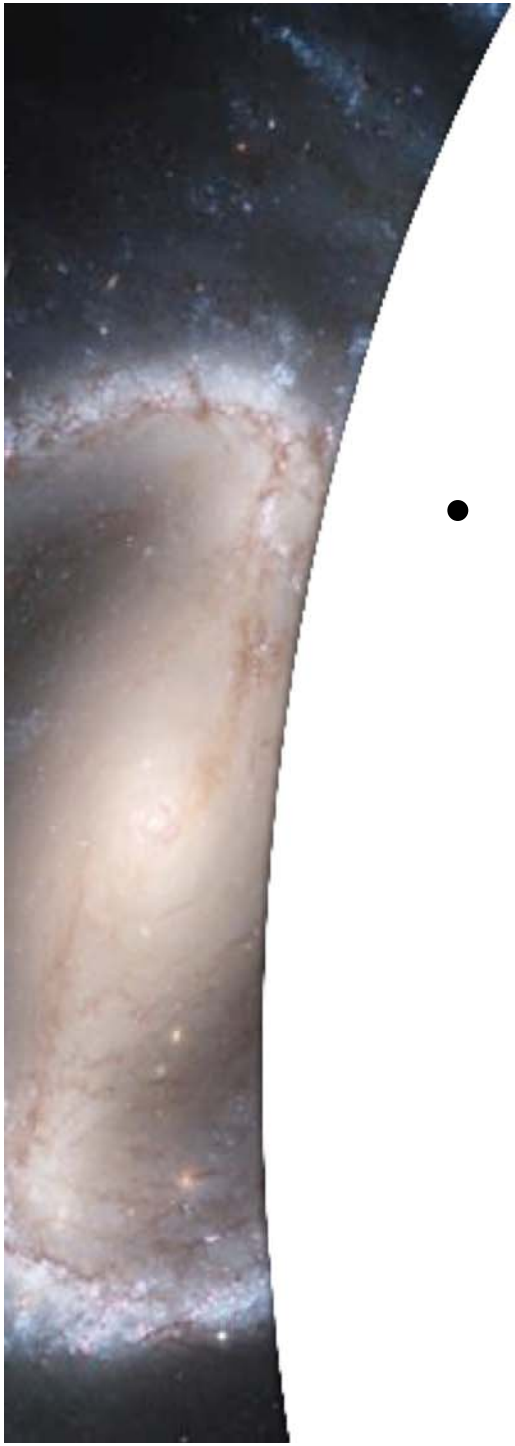


Concerning this sudden expansion, Barnett states,

- "While the nearer galaxies, about one million light years away, are traveling at a mere 100 miles a second, those 250 million light years away are flying off at the fantastic rate of 25,000 miles a second, almost one seventh the velocity of light... Calculations based on the velocities of the receding galaxies show that they must have separated and started their flight from the 'center' of this shrunken universe about five billion years ago." (Barnett, Lincoln, The Universe and Dr. Einstein. New York, N. Y.: Mentor Books, p. 100, 101)

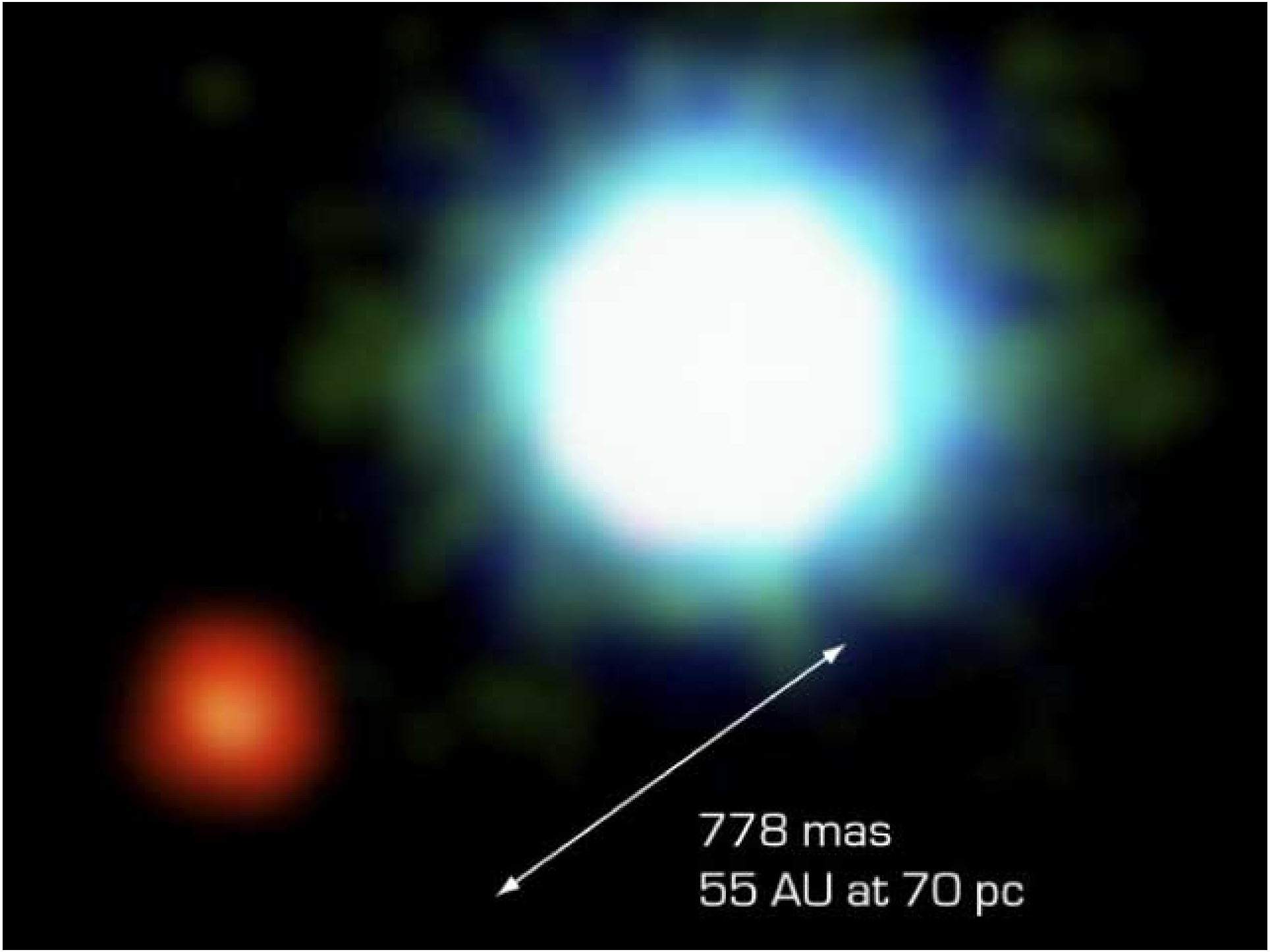
- The age of the planets, satellites , the earth, and moon through all different scientific data tends to indicate that these are also about the same age as the stars and galaxies.

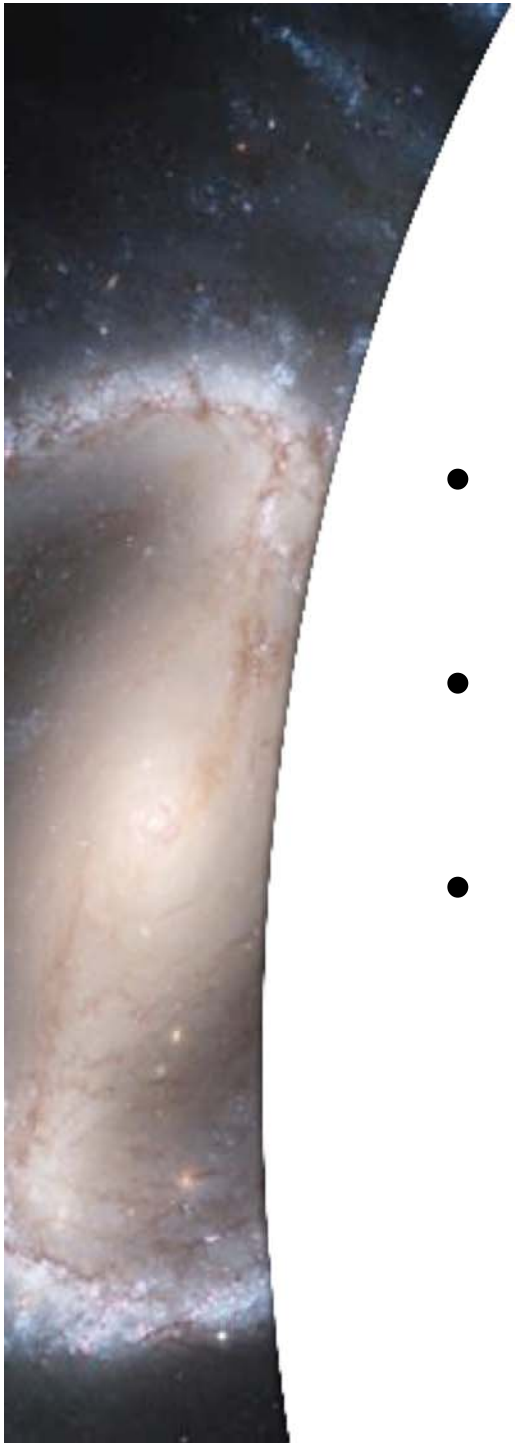
- Because of solid scientific data, Hoyle, the chief proponent of the steady state theory that the universe had no beginning or end, had to conclude: **"Evidently the earth is not very much younger than the whole Milky Way itself."** (Hoyle, 1963, p. 139, c.f. Barnett, 1958, p. 105-106). (Hoyle, Fred, Frontiers of Astronomy. New York, N. Y.: Harper & Rowe, Publishers, Inc. 1963).



Conclusion from the evidence:

- The galaxies, stars, planets, and all other bodies appeared to come into being suddenly at a specific time in the past, and this "creation" was sudden according to their calculations. There is no conflicting evidence to this "big bang" of sudden creation.

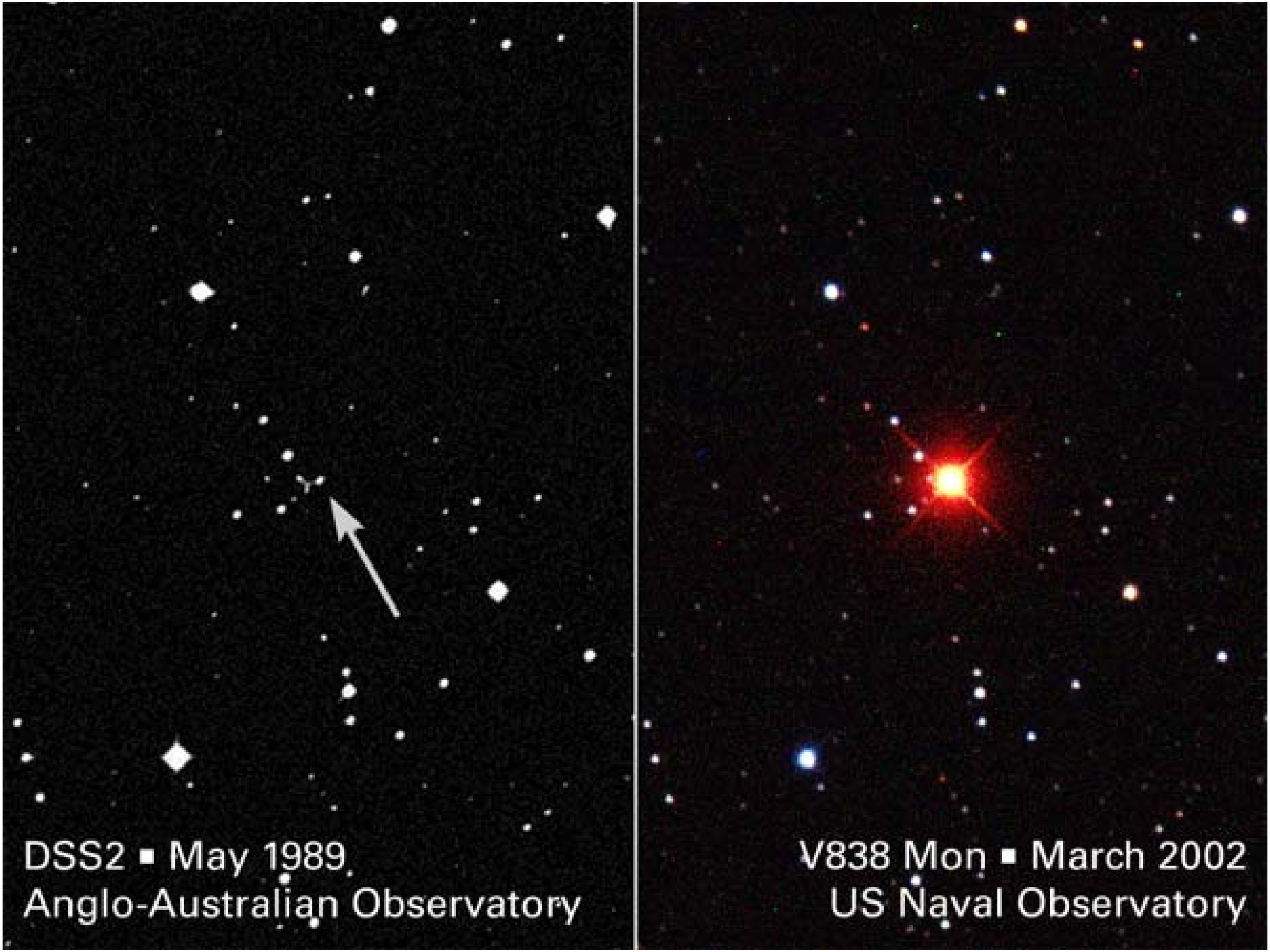

778 mas
55 AU at 70 pc



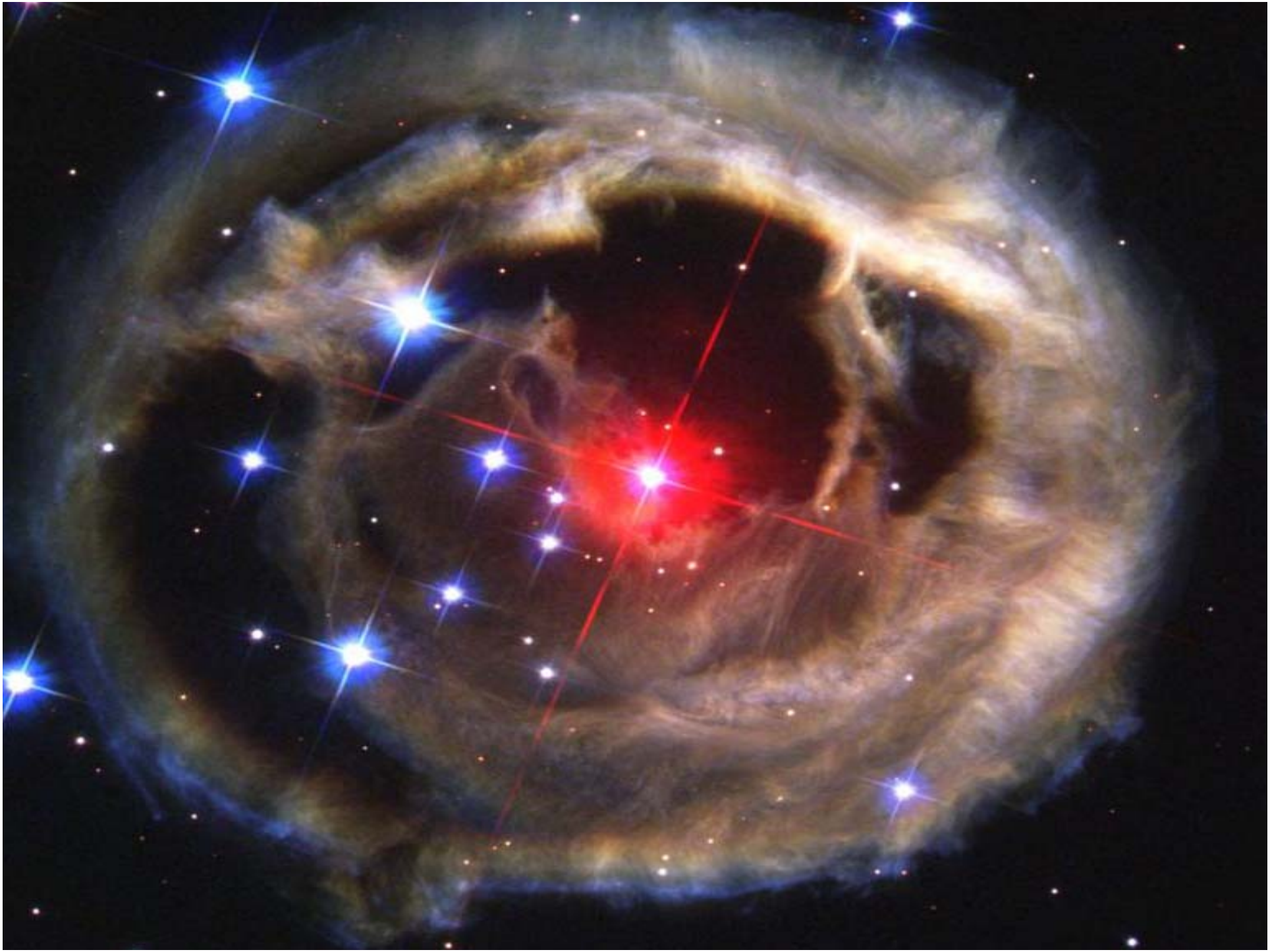
Entropy and the destruction of stars

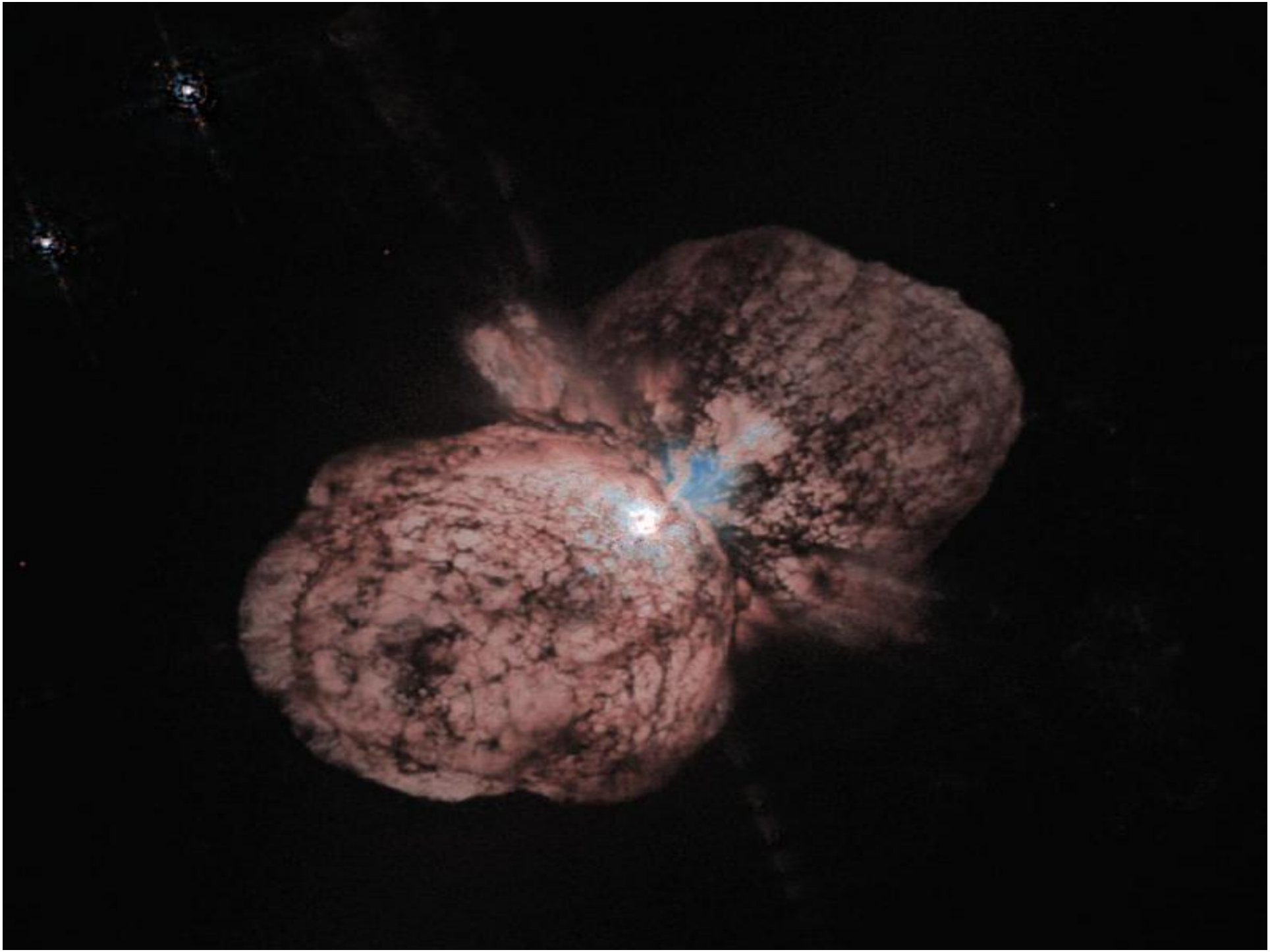
- The Royal Astronomical Society of Great Britton reported that
- more stars are burning out than are created and that
- the main amount of stars in extent in the universe today came into being about 6 billion years ago.

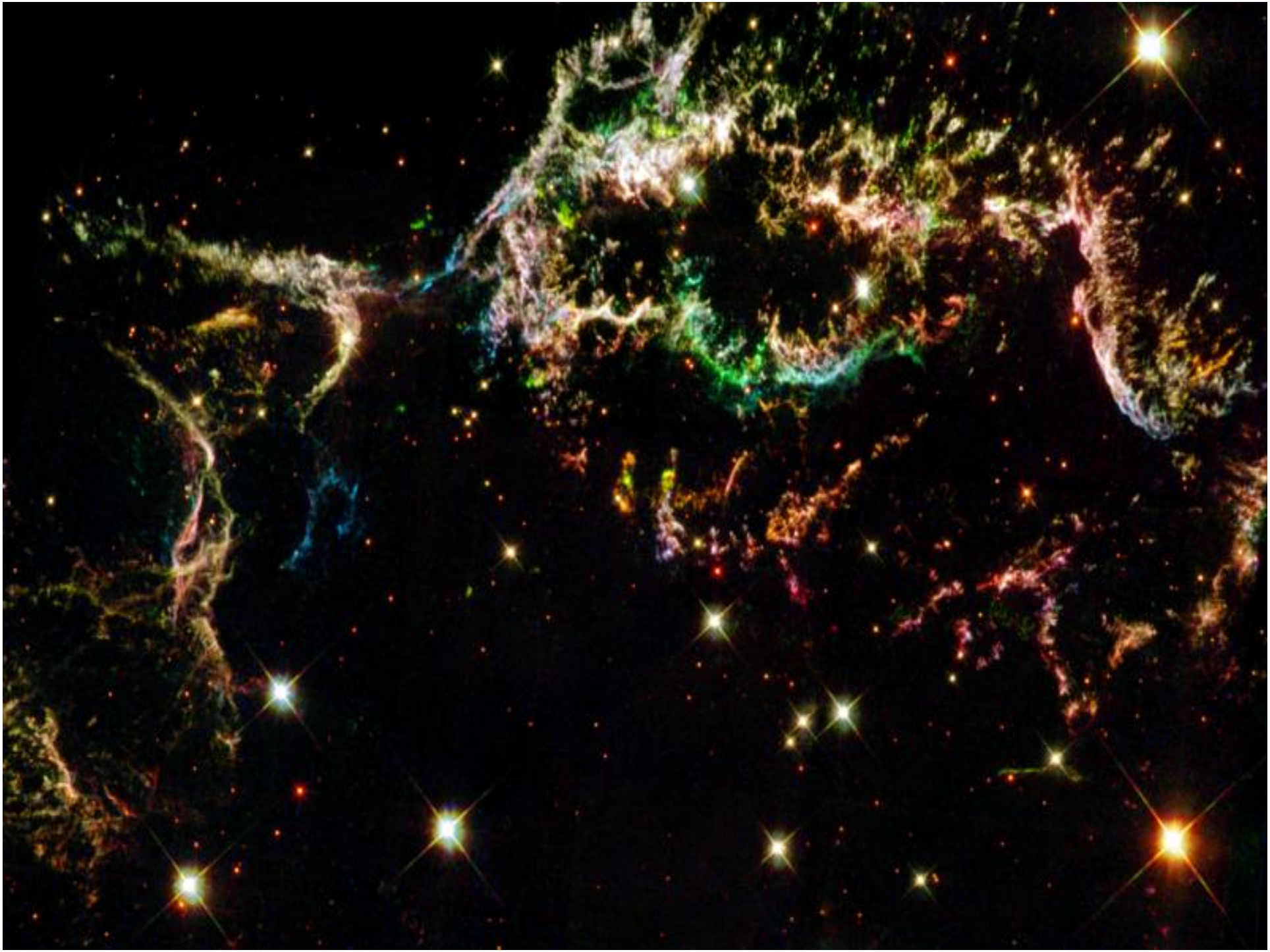
- “Our analysis confirms that the age of star formation is drawing to a close. . . The number formed in the huge sample of galaxies (40,000) we studied has been in decline for around 6 billion years-roughly since our Sun came into being.” Professor Alan Heavens, Institute for Astronomy, University of Edinburgh, quoted in Monthly notices of the British Royal Astronomical Society, August 21, 2002.

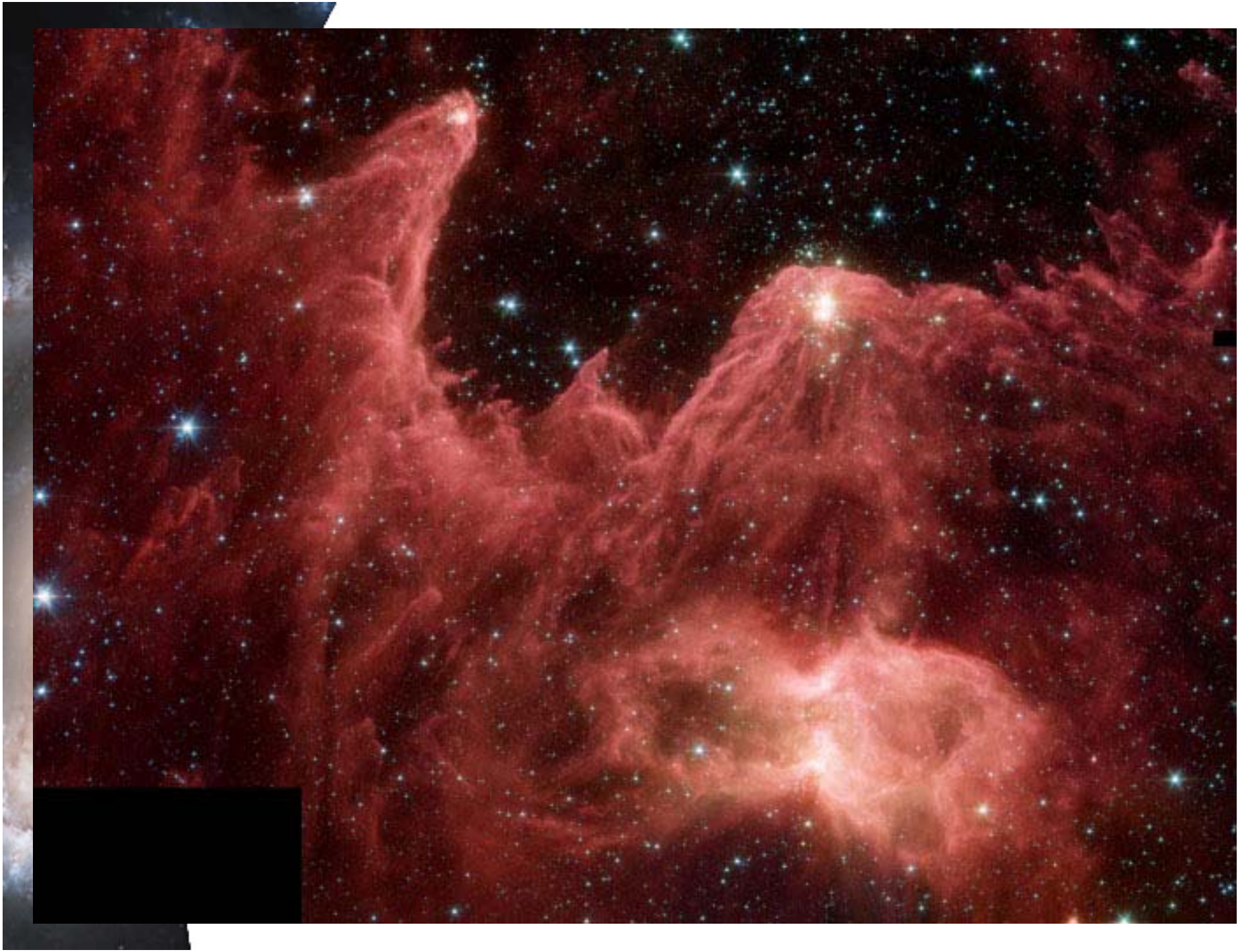

DSS2 ▪ May 1989
Anglo-Australian Observatory
V838 Mon ▪ March 2002
US Naval Observatory

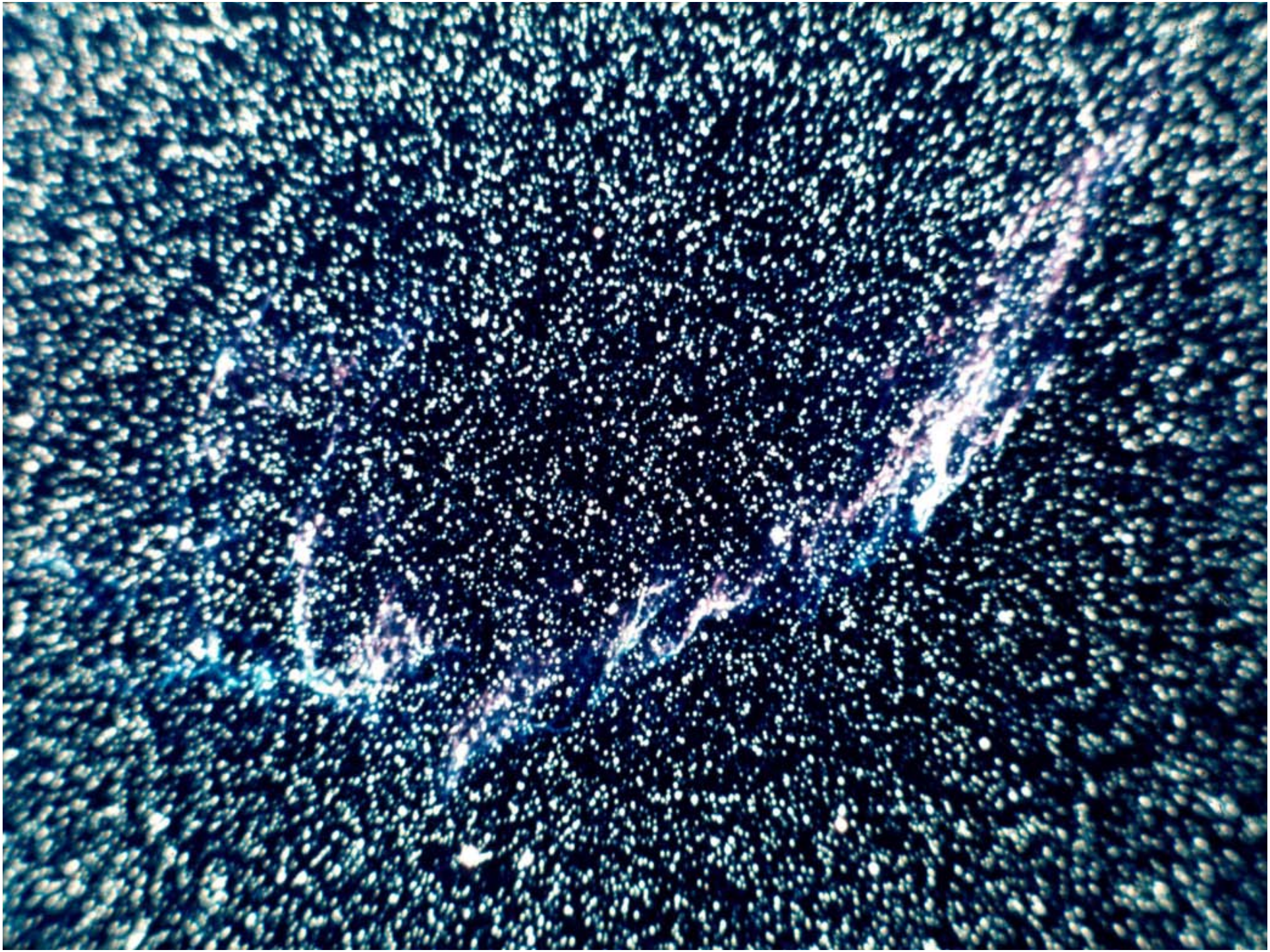
V838 Monocerotis

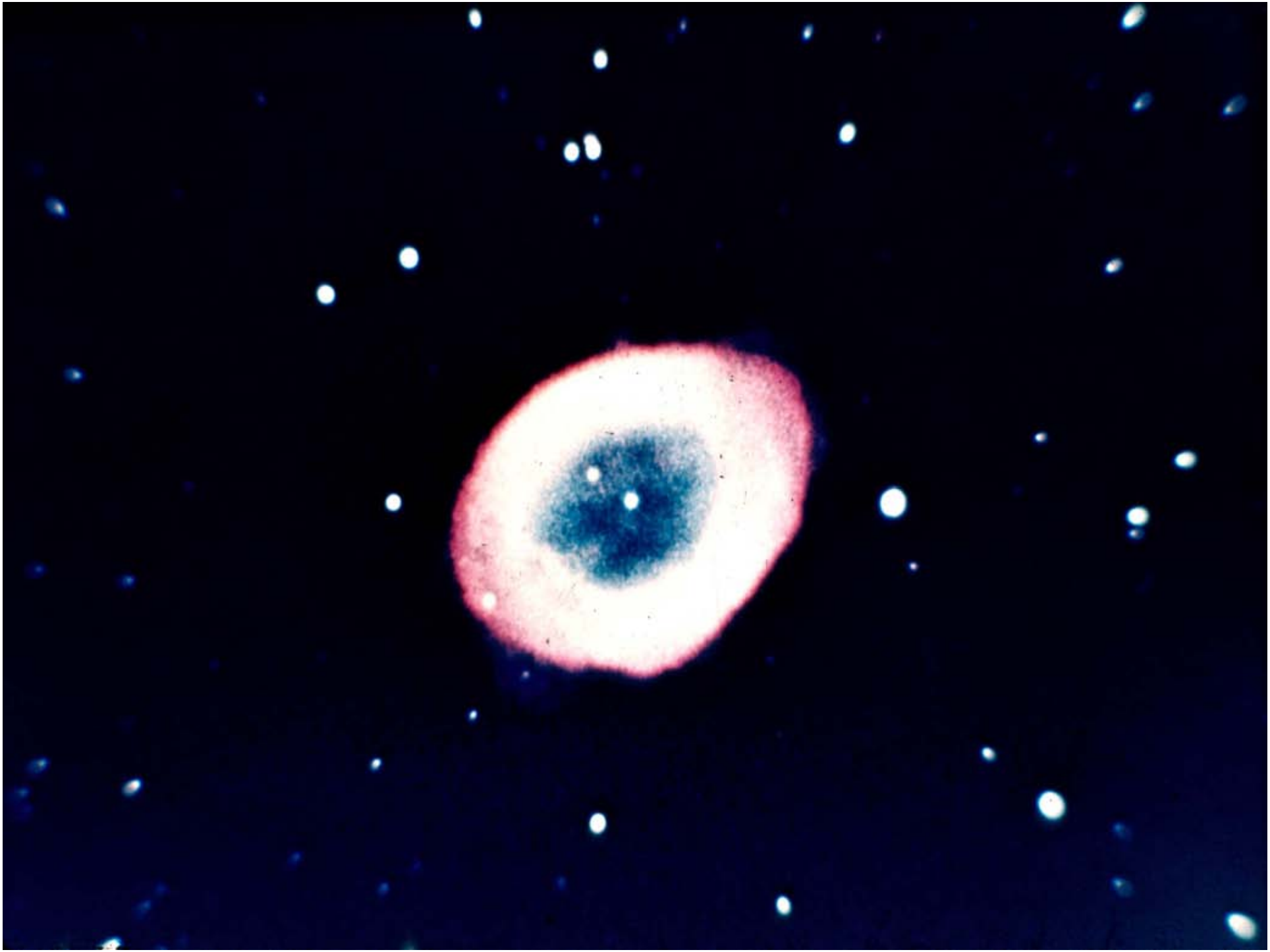












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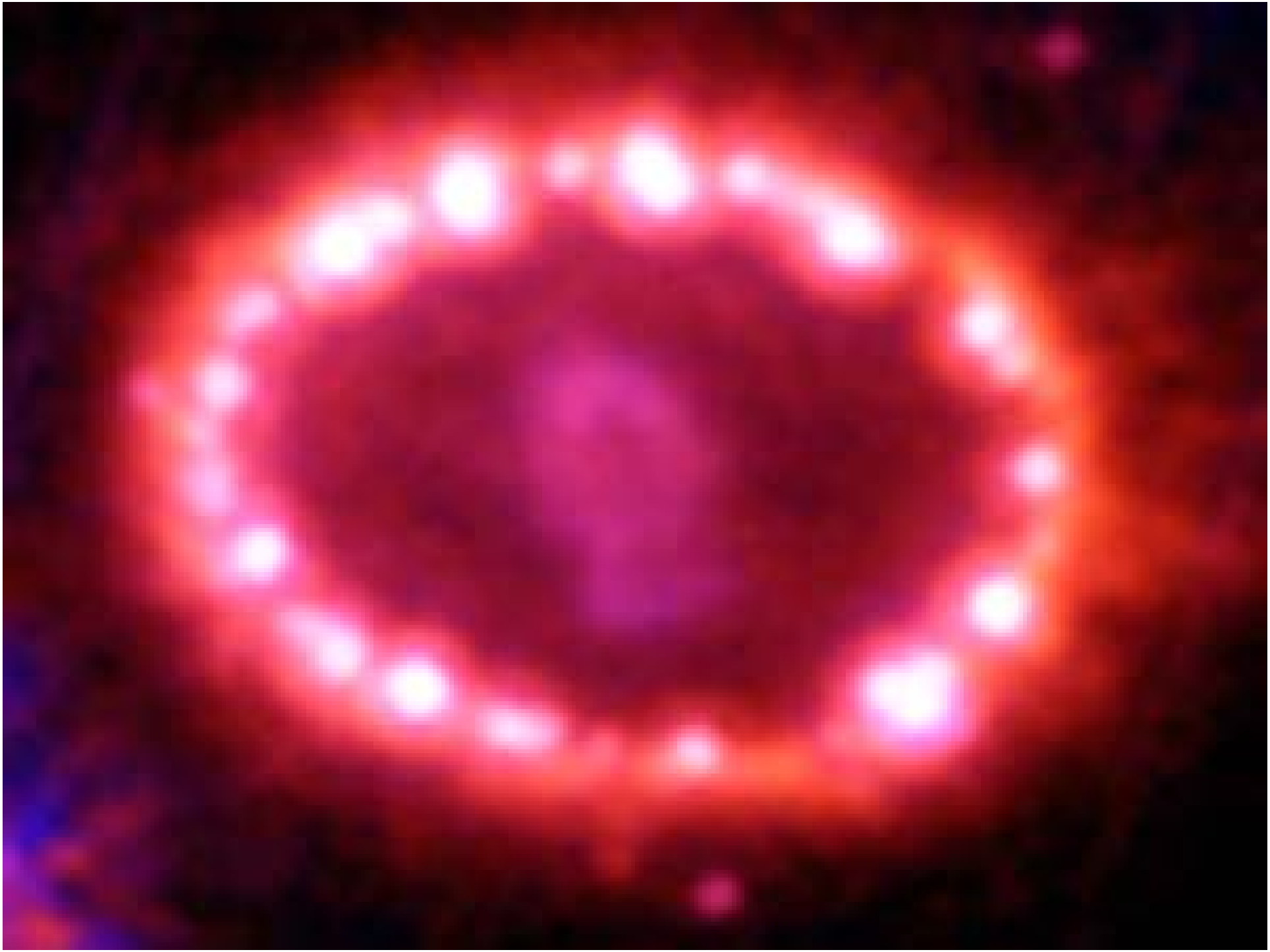
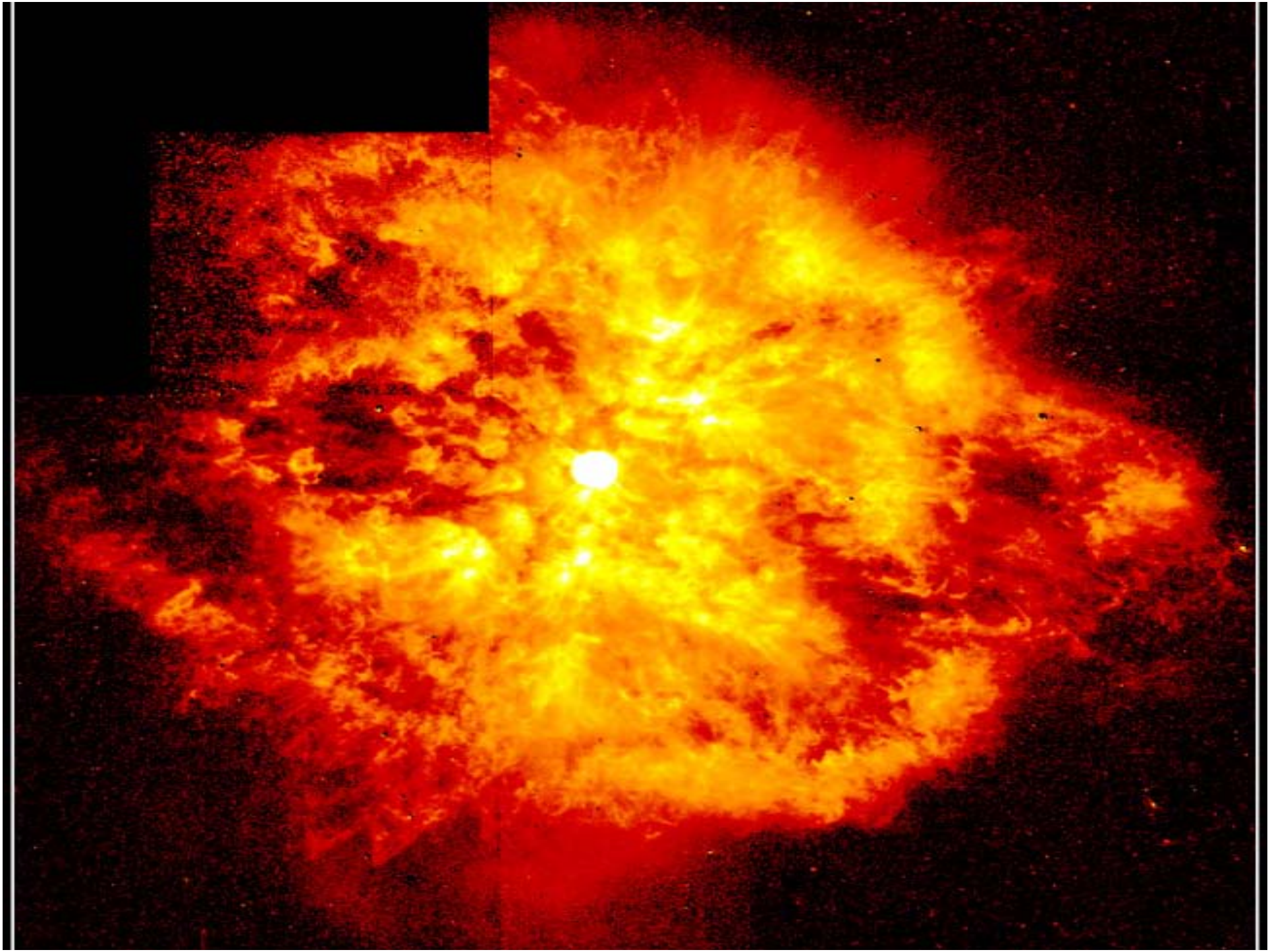
LARGER IMAGE





Concerning the implications of the law of entropy, Barnett states:

- "There is an important philosophical corollary to this view. For if the universe is running down and nature's processes are proceeding in just one direction, the inescapable inference is that everything had a beginning: somehow and sometime the cosmic processes were started, the stellar fires were ignited, and the whole vast pageant of the universe brought into being.

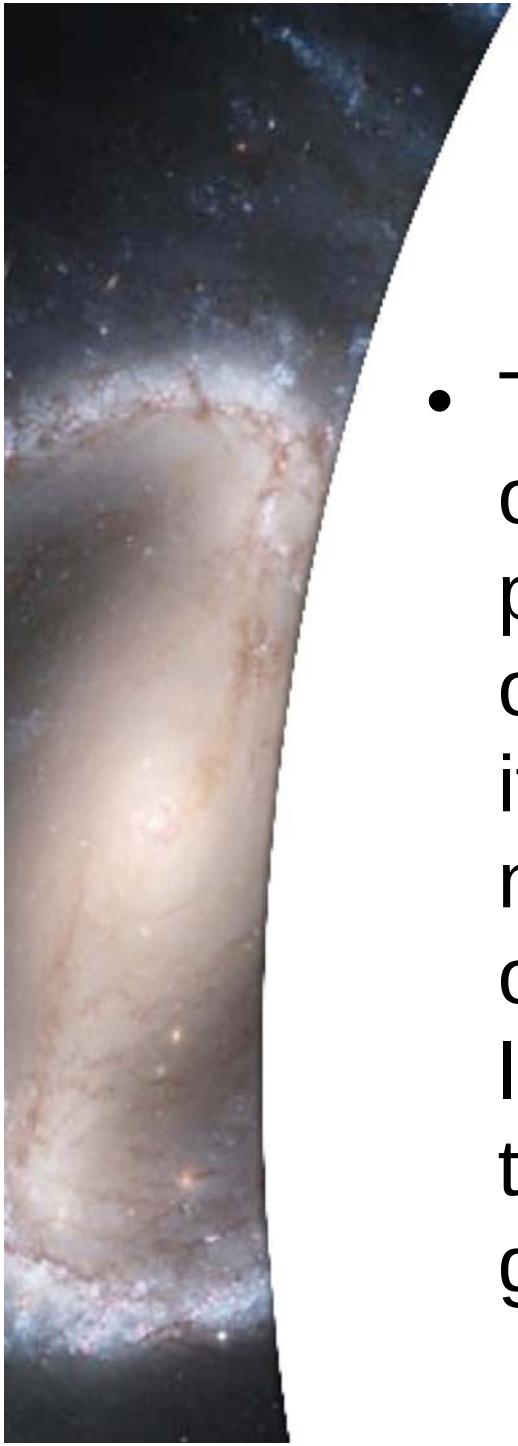
- Most of the clues, moreover, that have been discovered at the inner and outer frontiers of scientific cognition suggest a definite time of Creation. The unvarying rate at which uranium expends its nuclear energies and the absence of any natural process leading to its formation indicate that all the uranium on earth must have come into existence at one specific time, which, according to the best calculations of geophysicists, was between four and five billion years ago.

- The tempo at which the wild thermonuclear processes in the interior of stars transmute matter into radiation enables astronomers to compute with fair assurance the duration of stellar life, and the figure they reach as the likely average age of most stars visible in the firmament today is five billion years.

- The arithmetic of the geophysicists and astrophysicists is thus in striking agreement with that of the cosmogonists who, basing their calculations on the apparent velocity of the receding galaxies, find that the universe began to expand five billion years ago. And there are other signs in other areas of science that submit the same reckoning. So all the evidence that points to the ultimate annihilation of the universe points just as definitely to an inception fixed in time." (Barnett, 1958, p. 105-106).

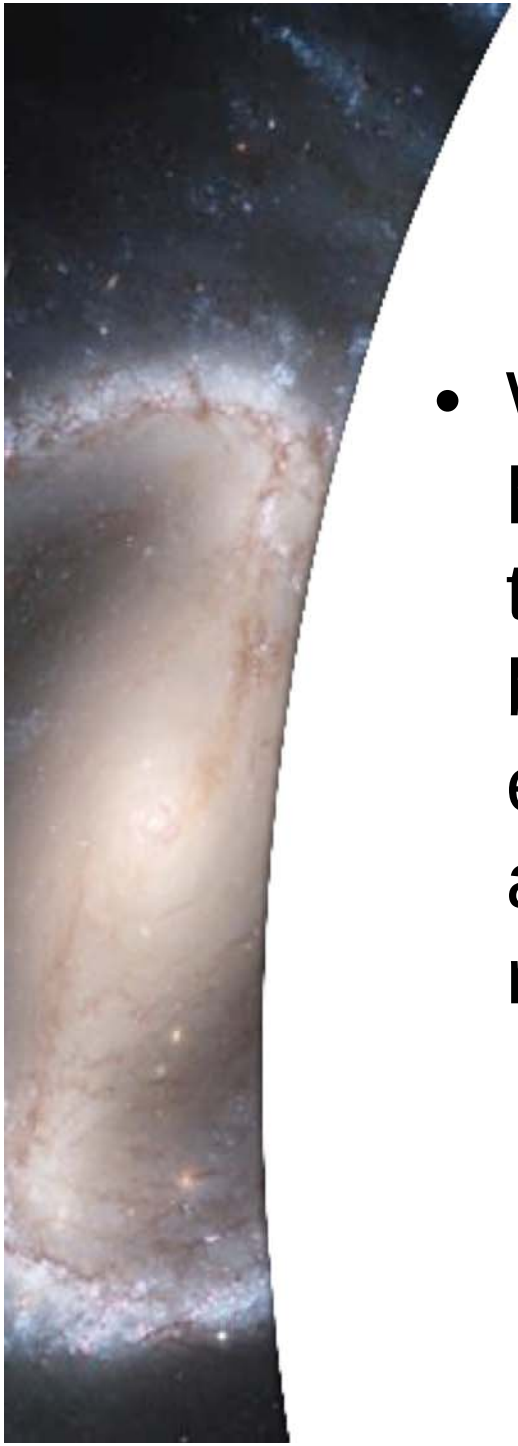
Neutron Stars and Super Atoms

- . Neutron stars are relatively small stars of densely packed matter. The body of the star seems to be solid nuclear material instead of consisting of elements. It is as though the body of the star was a nucleus of a super atom.

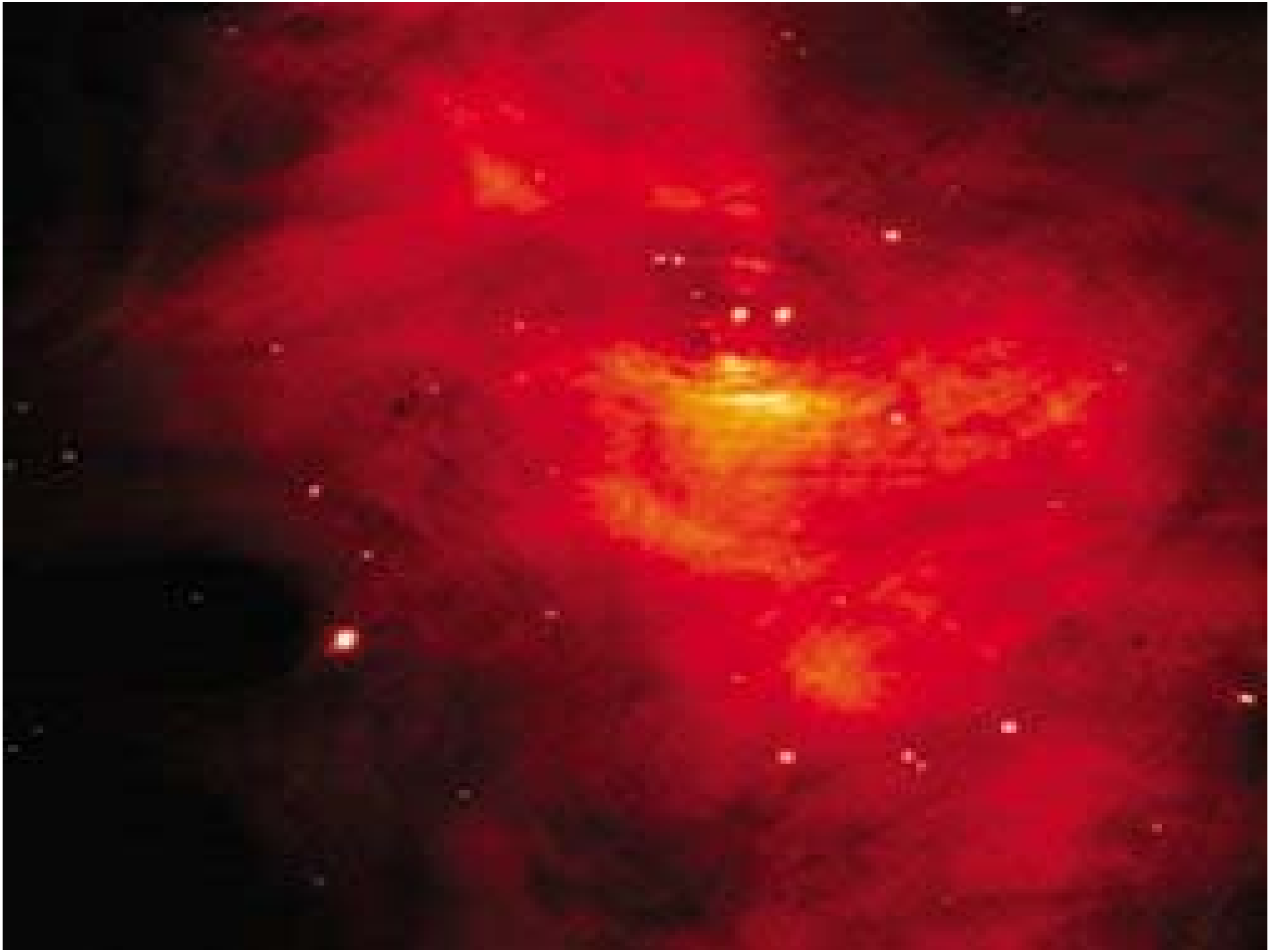


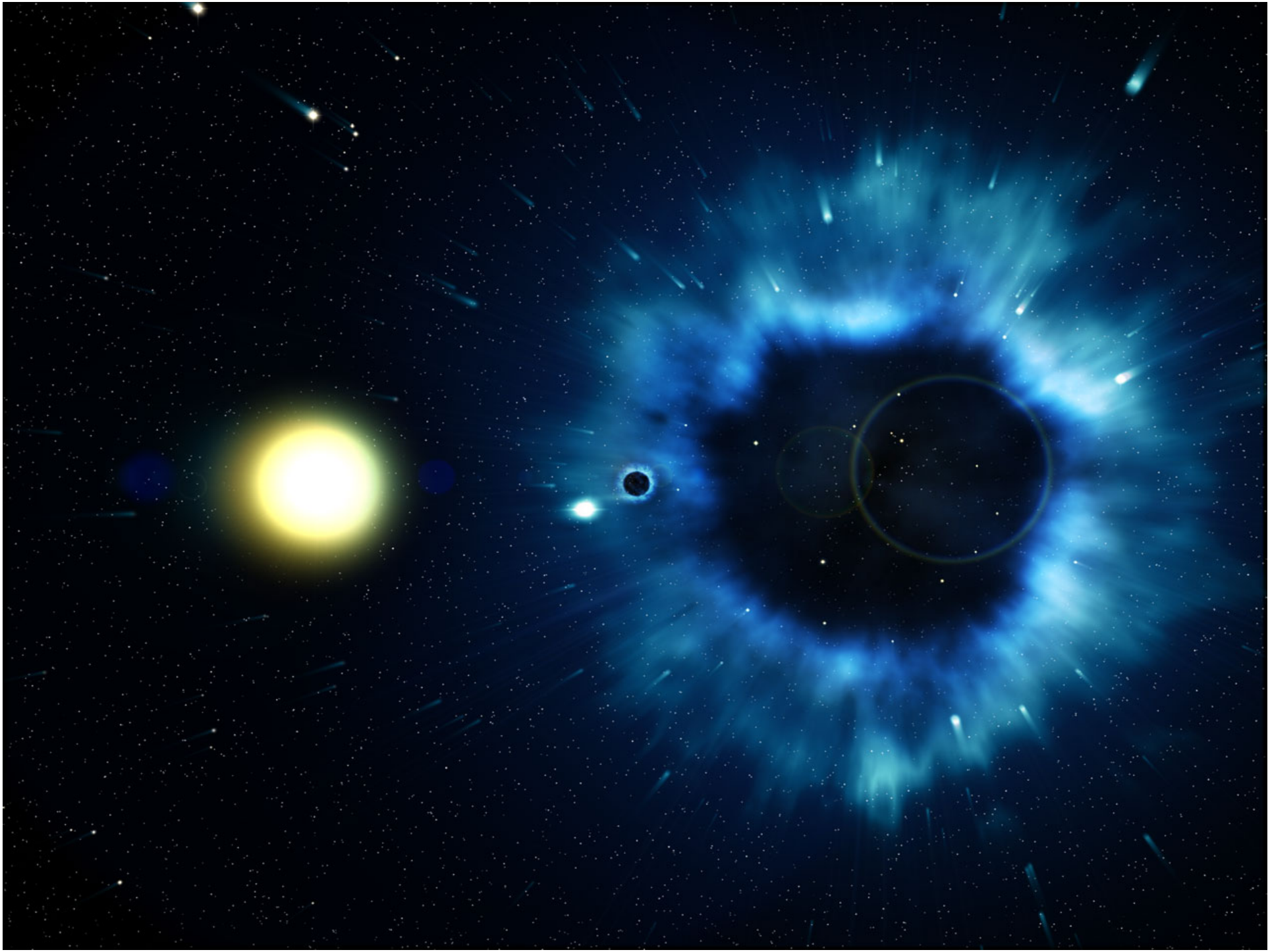
- The density of the gravitational field of the star is so great that the star pulls anything straying into its area of space into its mass and absorbs it. Any light passing near the neutron star is bent by the intensity of the gravitational field, and any light that may be emitted from that type of star is drawn back by its gravitational field.

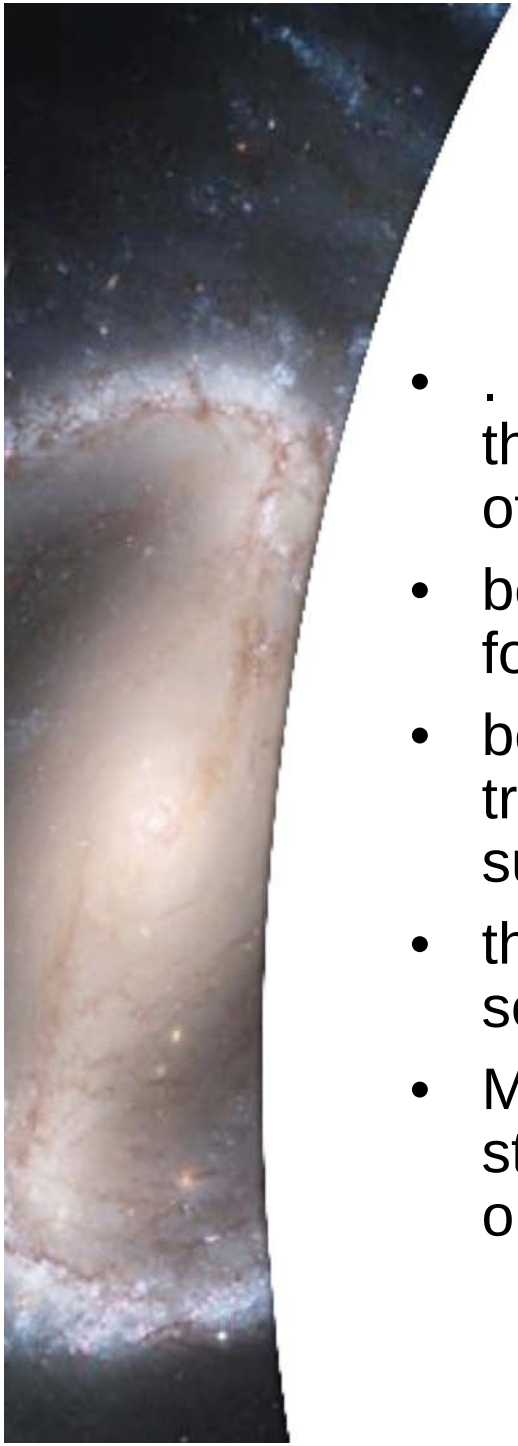
- More dense neutron stars are also called "black holes." Loosely speaking, a black hole is a region of space that has so much mass concentrated in it that there is no way for a nearby object to escape its gravitational pull.



- We discover neutron stars and black holes through the gravitational effect they have on other astronomical bodies near them or by the lensatic effect of bending light emitted from another star passing behind the neutron star.







Conclusion:

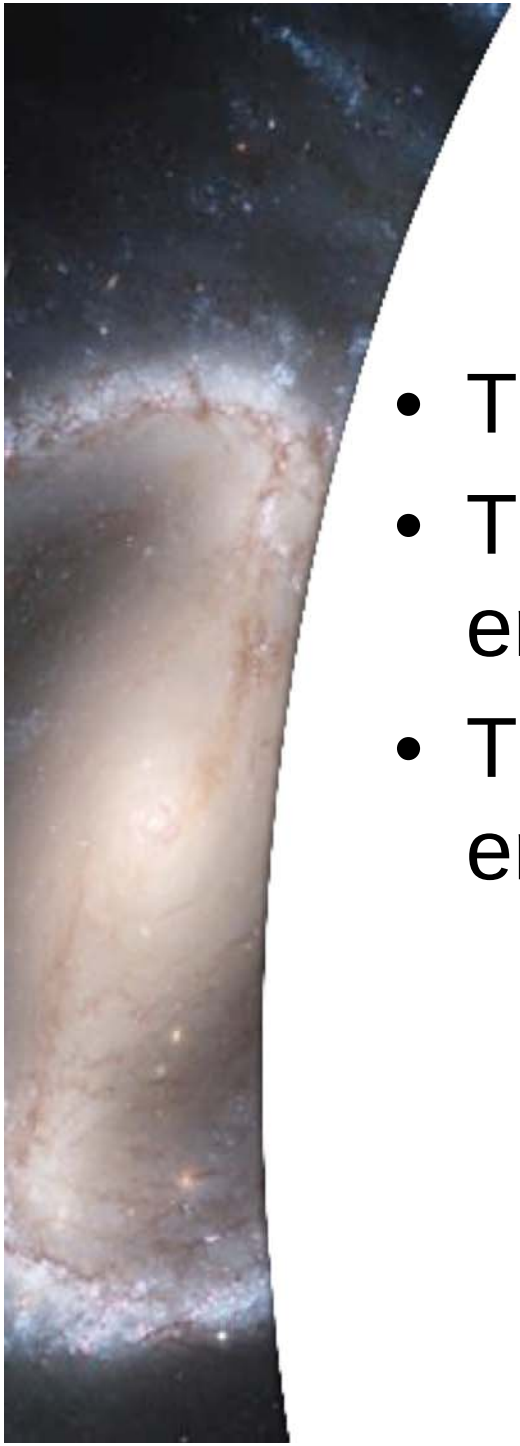
- . Because the elements are normally formed by the transmutation of hydrogen within the masses of the stars as we have seen,
- because the heaviest elements do not seem to be formed by transmutation in this way, and
- because the heavier elements in stars seem to be transmuted back to helium when the stars supernova,
- the neutron stars must have been formed through some other process.
- Many astro-physicists have suggested that these stars were formed as a part of the process of the original creation at the "big bang."

Anti-matter

- The existence of anti-matter: In 1954 a meteorite hit a weather balloon instrument package. The examination of the results of this collision showed that the damage reduced the protons in the matter in the instrument package to nothing while releasing the electrons. This was the beginning of the corroboration of the existence of anti-matter predicted by Einstein. Since 1994 anti-matter has been corroborated many times in modern physics laboratory experiments and measurements.

The significance of anti-matter:

- . Since the combination of anti-matter with matter converts the two types of matter back to energy, and since both matter and anti-matter still exist, the universe could not have been in existence for an infinite period of time. All collisions between matter and anti-matter would already have occurred if there had been an infinite amount of time in which these collisions could have occurred, then there would be no material left in existence.



Star formation and the laws of Physics

- The law of entropy.
- The mathematical formula for entropy.
- The significance for the law of entropy.

The Law of Entropy

- Barnette states, "There is an important philosophical corollary to this view. For if the universe is running down and nature's processes are proceeding in just one direction, the inescapable inference is that everything had a beginning: somehow and sometime the cosmic processes were started, the stellar fires were ignited, and the whole vast pageant of the universe brought into being.

- Most of the clues, moreover, that have been discovered at the inner and outer frontiers of scientific cognition suggest a definite time of Creation. The unvarying rate at which uranium expends its nuclear energies and the absence of any natural process leading to its formation indicate that all the uranium on earth must have come into existence at one specific time, which, according to the best calculations of geophysicists, was between four and five billion years ago.

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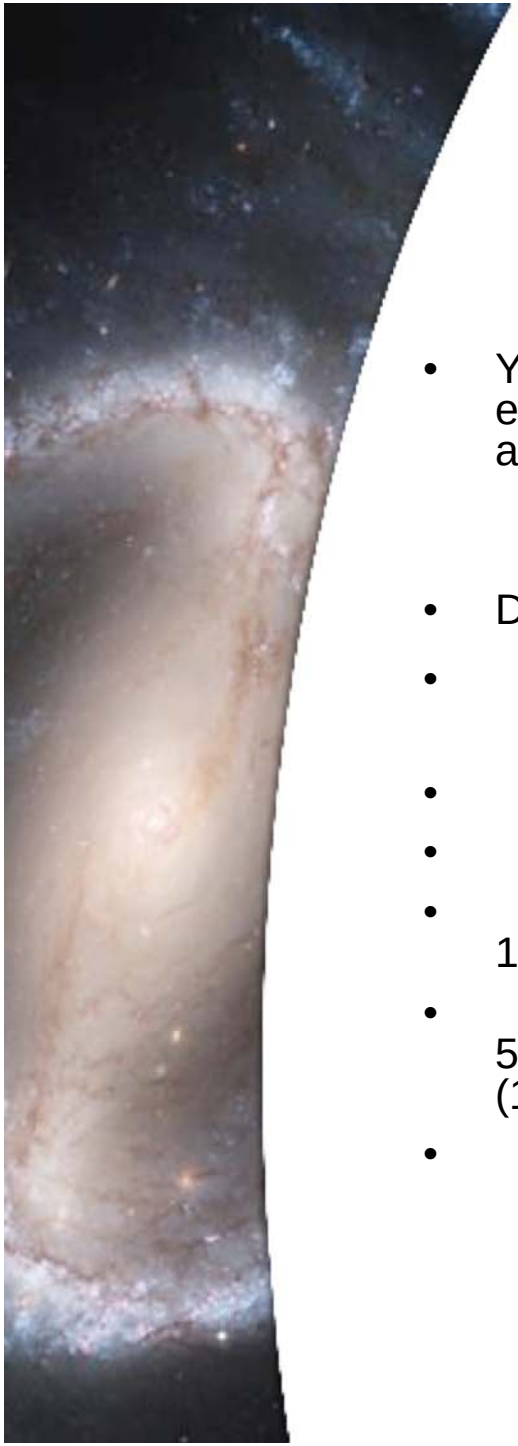


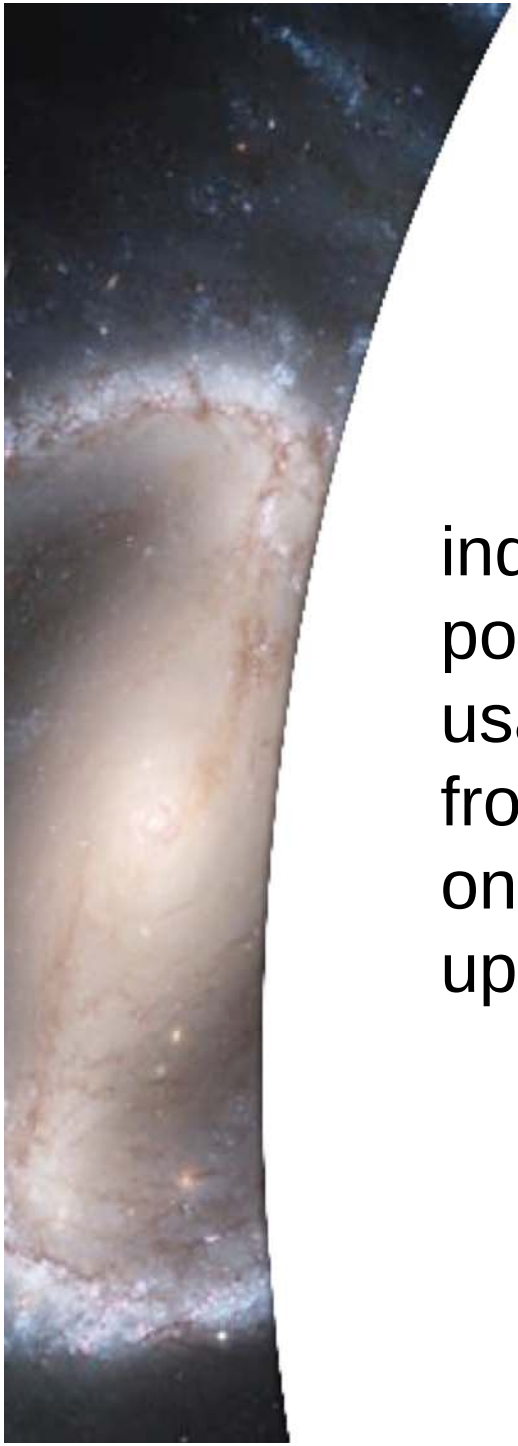
Entropy formulae.

- You can find the following formula for calculating the change of entropy and the data for the sizes, weight, and temperature of stars and interstellar dust clouds in physics and astronomy texts.

- DS = Cp $\underline{DT1/T2 + R\ DV1}$ where
- V2
  - D= change
- S = Entropy
- Cp = Molar heat capacity = 5/2Radius of the gas cloud
- T_1 & T_2 =Temperatures before and after compression = 100 & 100,000 degrees Kelvin
- V_1 & V_2 =Volume of the gas cloud before and after compression = 564 followed by 45 zeros (5.64×10^{47}), and 14 followed by 32 zeros (1.4×10^{33}) cu. m.
- R=universal gas constant = 2 Calories / mole in degrees Kelvin

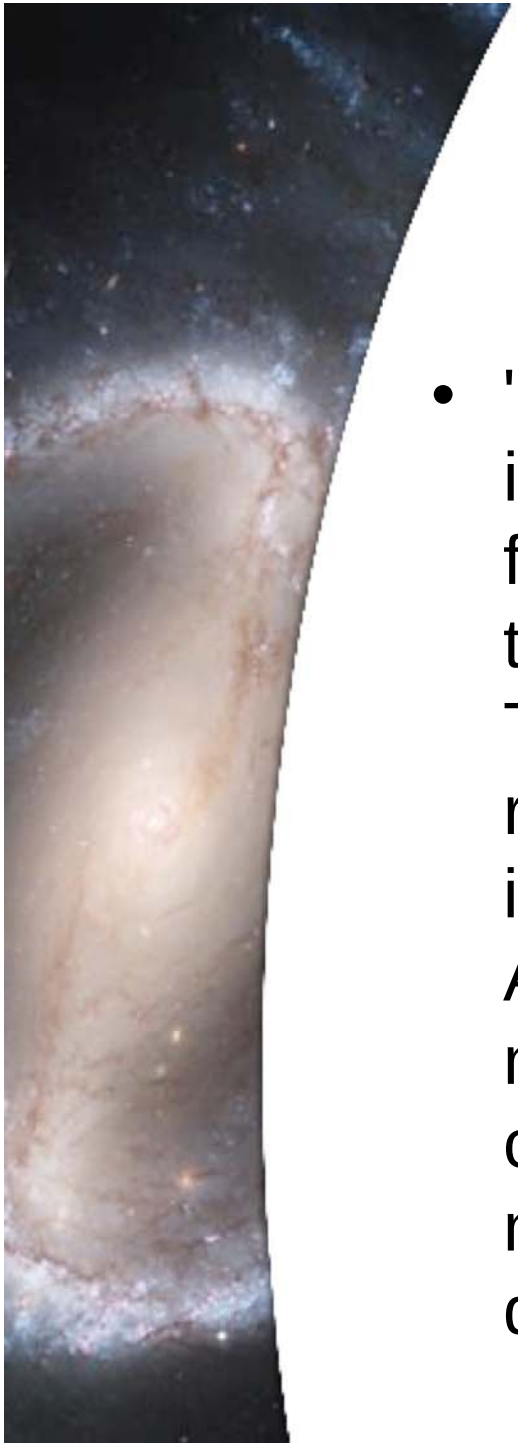
Significance of the law of entropy.

- Applying the data concerning the physical measurements of interstellar gas clouds and the physical properties of stars to the formula for determining the effect of entropy on the formation of stars, it is demonstrated that there would have to be **a reduction of entropy 33 times per mole of material in the interstellar gas cloud** in order to form stars by natural processes or by accident.



Barnett pointed out concerning Tolman's pulsating universe theory:

The law of entropy, as already stated, indicates that energy tends to go from a position of greater usability to one of lesser usability, and that matter tends to progress from a position of greater organization to one of lesser organization unless acted upon by an external organizing force.



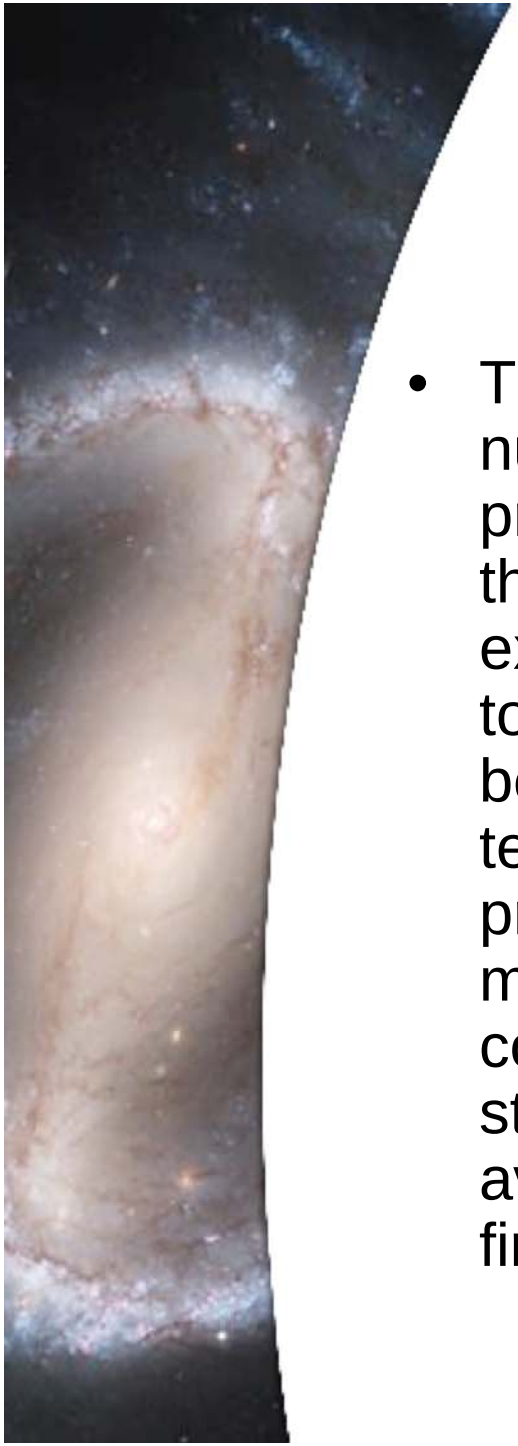
- "These cycles are governed by changes in the amount of matter in the universe; for as Einstein showed, the curvature of the universe is dependent on its content. The difficulty with this theory is that it rests on the assumption that somewhere in the universe matter is being formed. Although it is true that the amount of matter in the universe is perpetually changing, the change appears to be mainly in one direction, towards dissolution.

- All the phenomina of nature, visible and invisible, within the atom and in outer space, indicate that the substance and energy of the universe are enexorably diffusing like vapor through the insatiable void. The sun is slowly but surely burning out, the stars are dying embers, and everywhere in the cosmos heat is turning to cold, matter is dissolving into radiation, and energy is being dissipated into empty space...

- The universe is thus progressing toward an ultimate "heat death," or as it is technically defined, a condition of "maximum entropy." When the universe reaches this state some billions of years from now all the processes of nature will cease. All space will be at the same temperature. No energy can be used because all of it will be uniformly distributed through the cosmos. There will be no light, no life, no warmth— nothing but perpetual and irrevocable stagnation.

- Time itself will come to an end. For entropy points the direction of time... And there is no way of avoiding this destiny. For the fateful principle known as the Second Law of Thermodynamics, which stands today as the principal pillar of classical physics left intact by the march of science, proclaims that the fundamental processes of nature are irreversible. Nature moves just one way." (Barnett, Lincoln, The Universe and Dr. Einstein. New York, N. Y.: Mentor Books, 1958. p. 102-103.)

- "There is an important philosophical corollary to this view. For if the universe is running down and nature's processes are proceeding in just one direction, the inescapable inference is that everything had a beginning: somehow and sometime the cosmic processes were started, the stellar fires were ignited, and the whole vast pageant of the universe brought into being. Most of the clues, moreover, that have been discovered at the inner and outer frontiers of scientific cognition suggest a definite time of Creation.



- The unvarying rate at which uranium expends its nuclear energies and the absence of any natural process leading to its formation indicate that all the uranium on earth must have come into existence at one specific time, which, according to the best calculations of geophysicists, was between four and five billion years ago. The tempo at which the wild thermonuclear processes in the interior of stars transmute matter into radiation enables astronomers to compute with fair assurance the duration of stellar life, and the figure they reach as the likely average age of most stars visible in the firmament today is five billion years.

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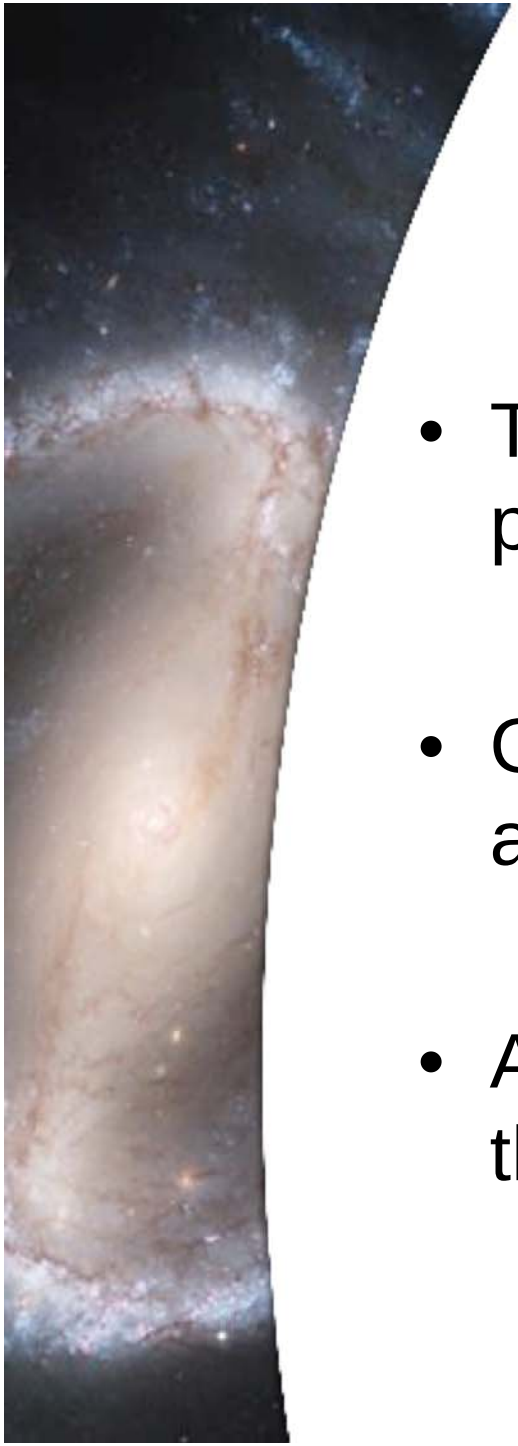
Gravity and the universal gas laws

- Interstellar gas clouds are supposed to grow as they accumulate more matter through increasing gravitation. They are also supposed to compress the central portion of the gas cloud through mutual gravitation until the matter in the interior of the central mass becomes dense enough and hot enough to initiate a thermonuclear reaction and become a star. An application of the gas laws as correlated with the laws of gravitation lends serious doubt to this theory.

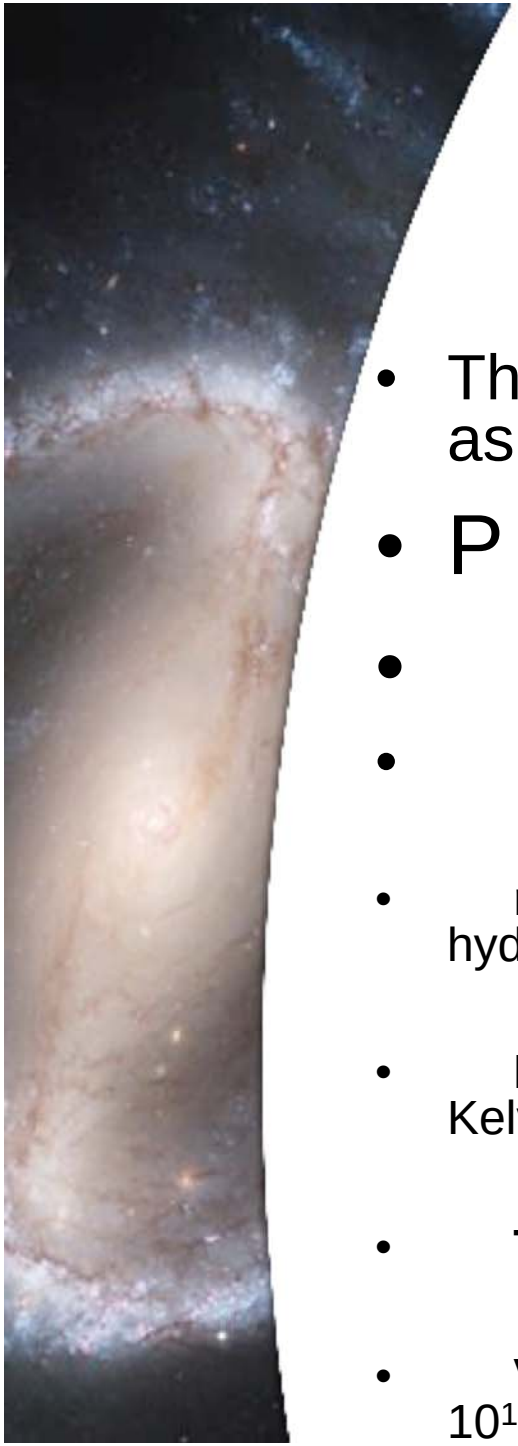


What we must investigate.

- The outward forces on gas from thermal pressure
- Gravitational pull exerted by the mass in an interstellar gas cloud.
- Amount of gravitational force needed for thermo-nuclear ignition.

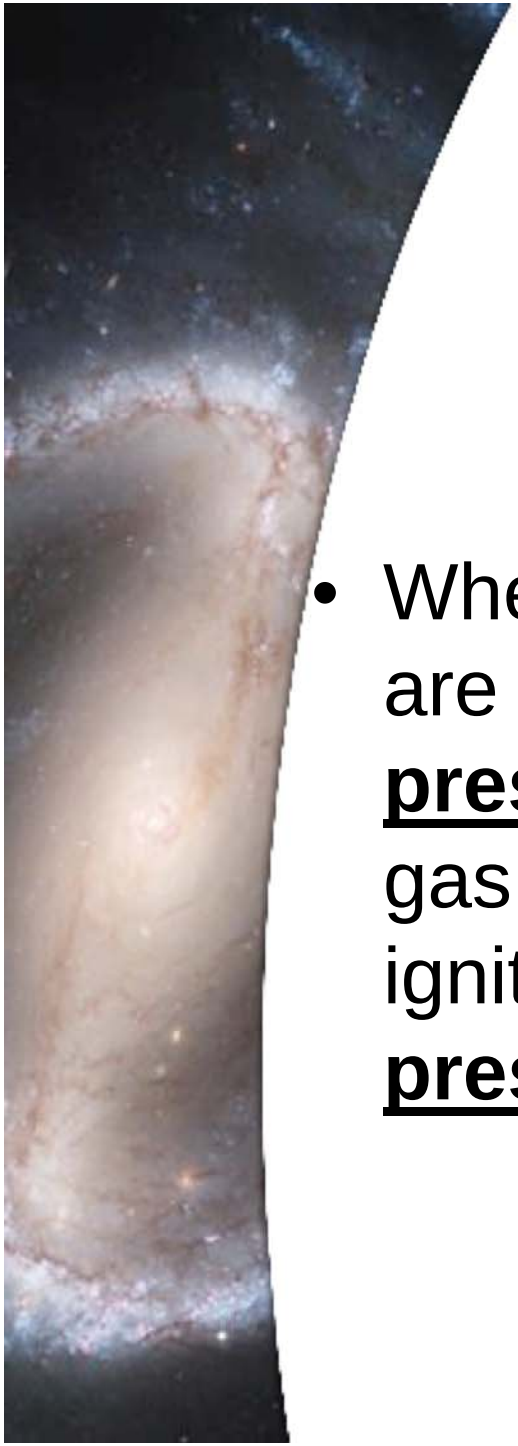
The outward forces on gas from thermal pressure

- Gases heat when compressed, and exert an outward force when heated. The question that arises in the theory of stellar evolution is whether the pull of gravity in the vacuum of space is sufficient to compress the interstellar gas to the extent that it will heat up to the point of critical mass for a thermonuclear ignition.



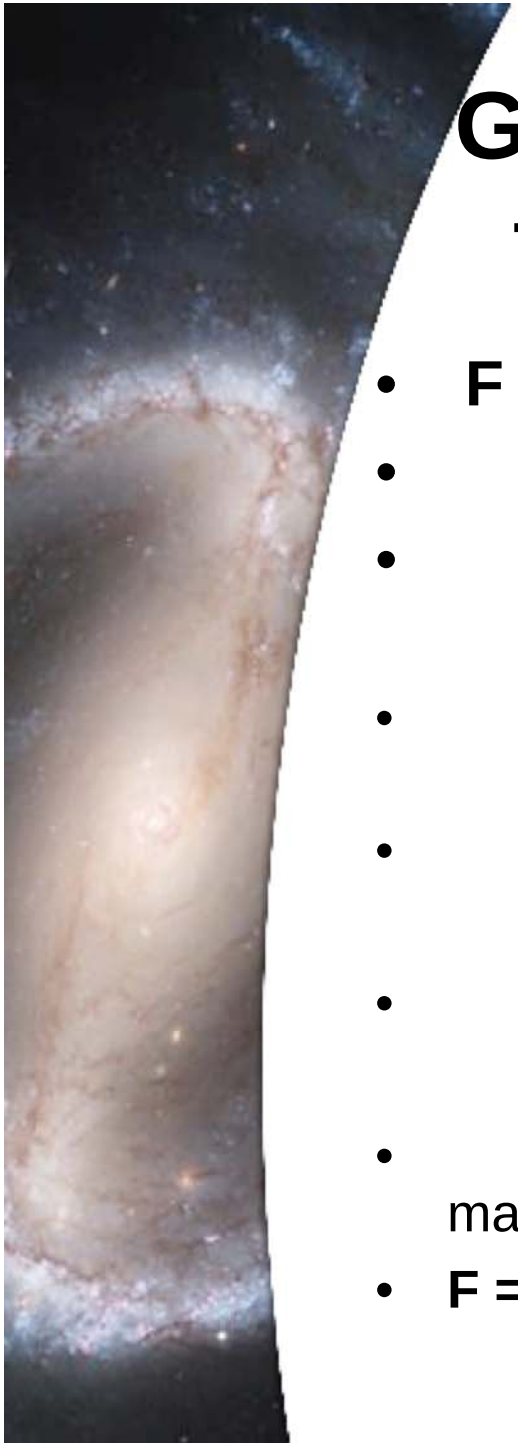
Outward forces from compression heating in an interstellar gas cloud.

- The formula for the pressure/heat ratio in gasses is as follows:
- $P = \frac{nRT}{V}$ where
- **P** = the pressure in newtons
- **n** = numbers of moles in the gas cloud, or 2×10^{30} moles of hydrogen
- **R** = the universal gas constant, or 2 calories per mole in degrees Kelvin
- **T** = the temperature in degrees Kelvin and
- **V** = the volume of the gas cloud figuring from a radius of 5.13×10^{15} meters



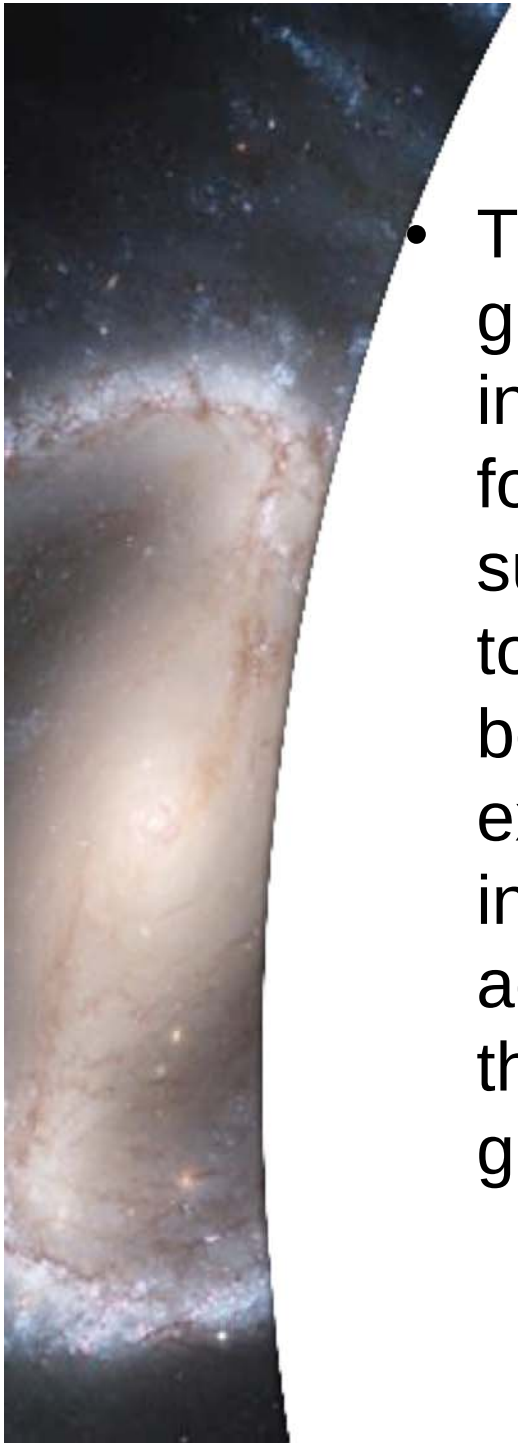
Amount of gravitational force needed for thermo-nuclear ignition.

- When the data for interstellar gas clouds are fed into this formula, the **gravitational pressure needed** to compress interstellar gas clouds to the point of thermonuclear ignition is **9.72 X 10^{20} Newtons of pressure**.

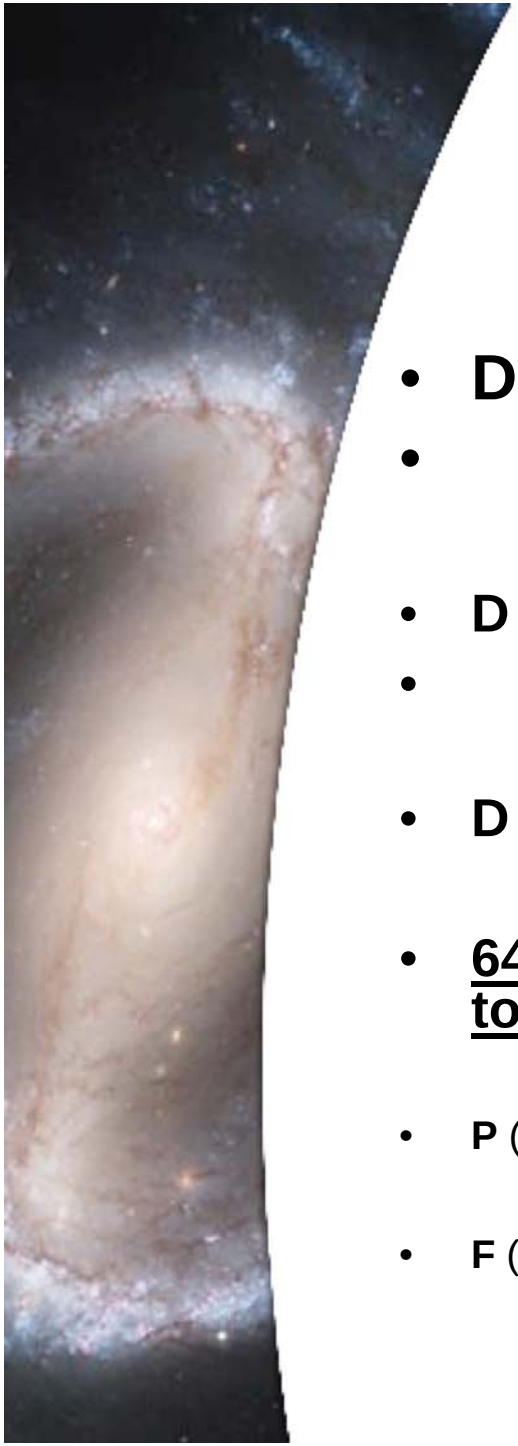


Gravitational pull exerted by the mass in the gas cloud

- **$F = \frac{3GM^2}{2r^2}$** where
- F = gravitational force exerted by the mass involved
- G = the gravitational constant, or 6.67×10^{-11}
- M = the cloud mass, or 2×10^{30} moles of hydrogen
- r = the radius of the gas cloud, or 5.13×10^{15} m.
- The gravitational force of an interstellar gas cloud of this magnitude would be:
- **$F = 1.52 \times 10^{19}$ Newtons.**



- The differential between the actual gravitational force exerted by the interstellar gas cloud and the amount of force needed to compress the gas cloud sufficiently to heat the interior of the cloud to get thermonuclear ignition can therefore be calculated by dividing the forces exerted outward by the heat of expansion in the gas cloud compressed sufficiently to achieve ignition by the force exerted on the interior of the gas cloud by mutual gravitation. The formula would be



- **Differential = $\frac{P}{F}$ or**

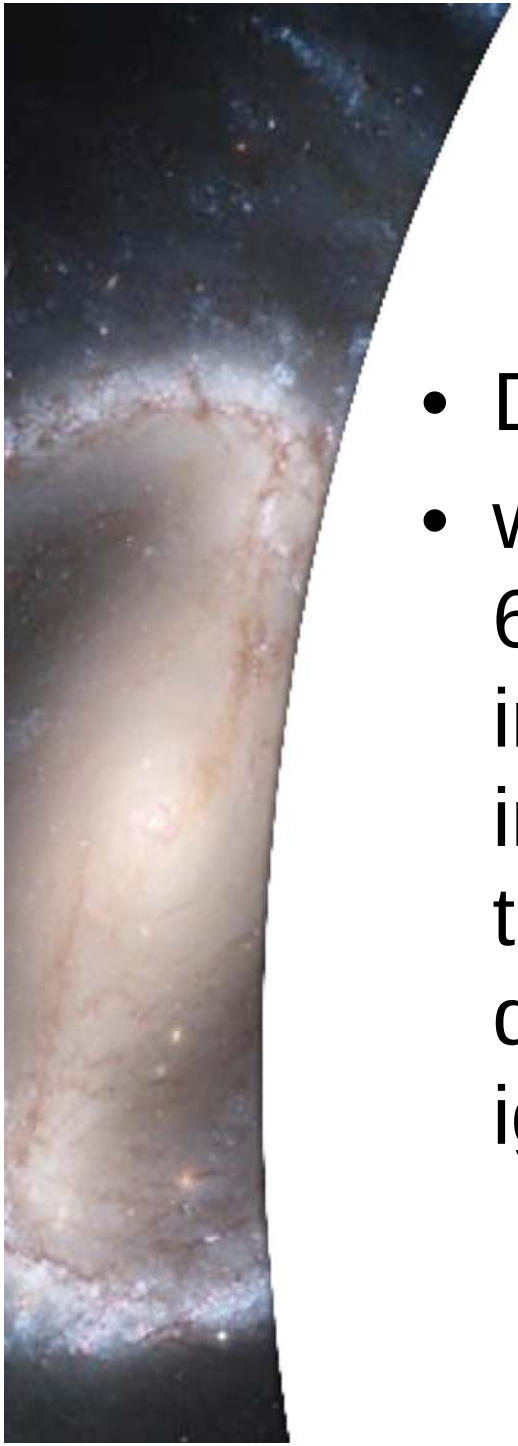
- **$D = \frac{9.72 \times 10^{20} \text{ newtons}}{1.52 \times 10^{19} \text{ newtons}}$**

- **D = 6.4 X 10 or**

- **<u>64 times the gravitation of an interstellar gas cloud to compress to a thermonuclear ignition</u>**

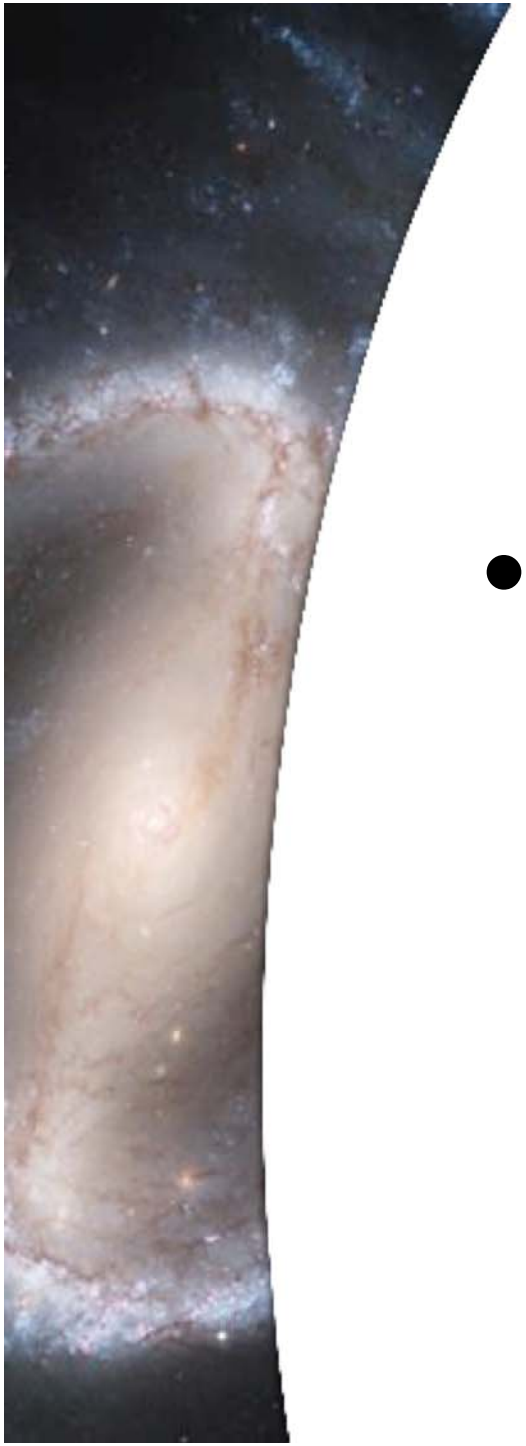
- **P** (pressure needed to compress a star)

- **F** (force of the gravitational pull of the mass of the gas cloud)



- D = 64,
- which indicates that it would take 64 times the gravitational force involved in an interstellar gas cloud in order to compress the center of the gas cloud to the heat and density needed for thermonuclear ignition and the birth of a star.

- Considering that it would take a reduction of 33 times the entropy per mole of material in a gas cloud, and an increase of 64 times the gravity involved in the interstellar gas cloud to reach a point of thermonuclear ignition, it seems more reasonable to assume that stars, as well as the heavier elements in all of nature, and neutron stars are immediate products of the original "big bang," not as gradual products of slow and random evolution.

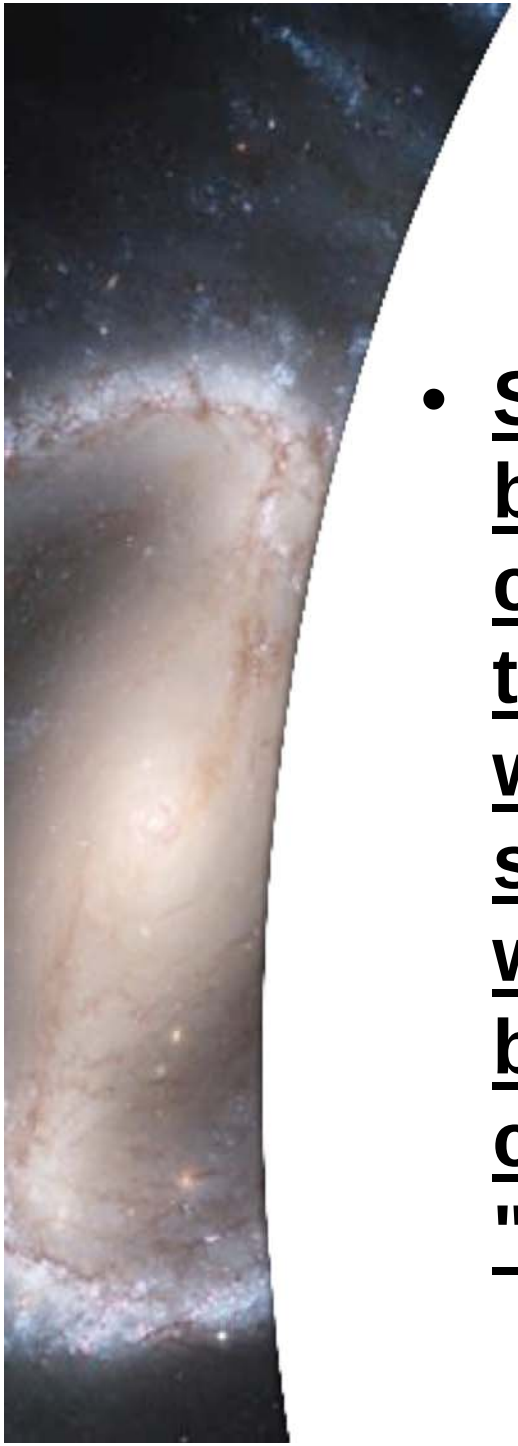


Conclusion:

- **Stars are a product of Big Bang or instant creation, not gradual, random evolution.**

The Laws of Angular Momentum

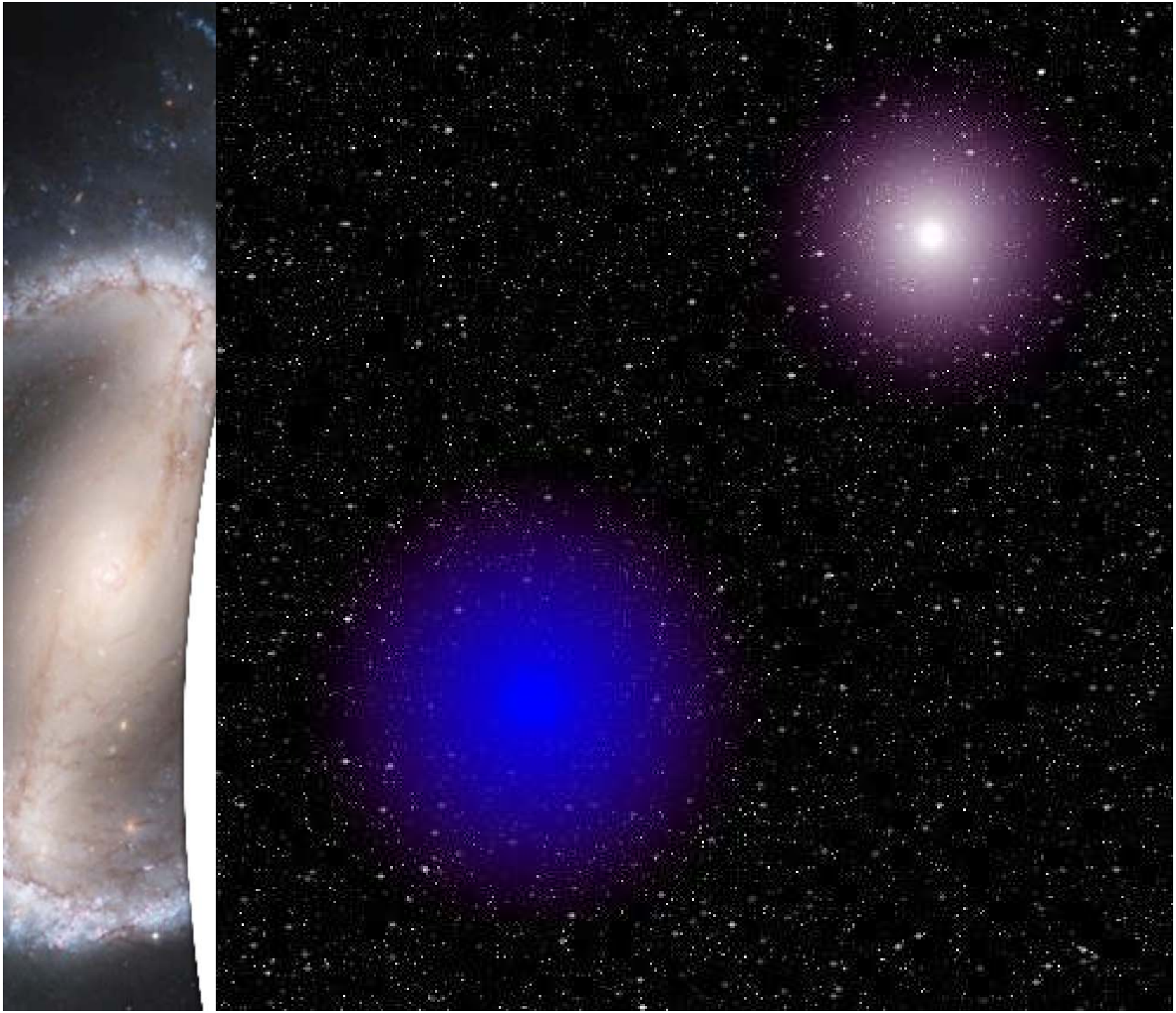
- The great astronomer, Johanes Kepler, discovered the laws of angular momentum as applied to satellites. He discovered that the distance between revolving bodies cubed was equal to the time of rotation squared. This can easily be experienced by anyone on a turn table or spinning on skates. When the arms are outstretched, the speed of the spin is slower. When the skater pulls the arms in, however, the speed of spin increases.



- **Since interstellar gas clouds spin, by the time they had been compressed to the size of a star, the speed of the surface of the star would be traveling faster than the speed of light. Centrifugal force would have torn the star apart long before the thermonuclear reaction could have started the star "burning."**

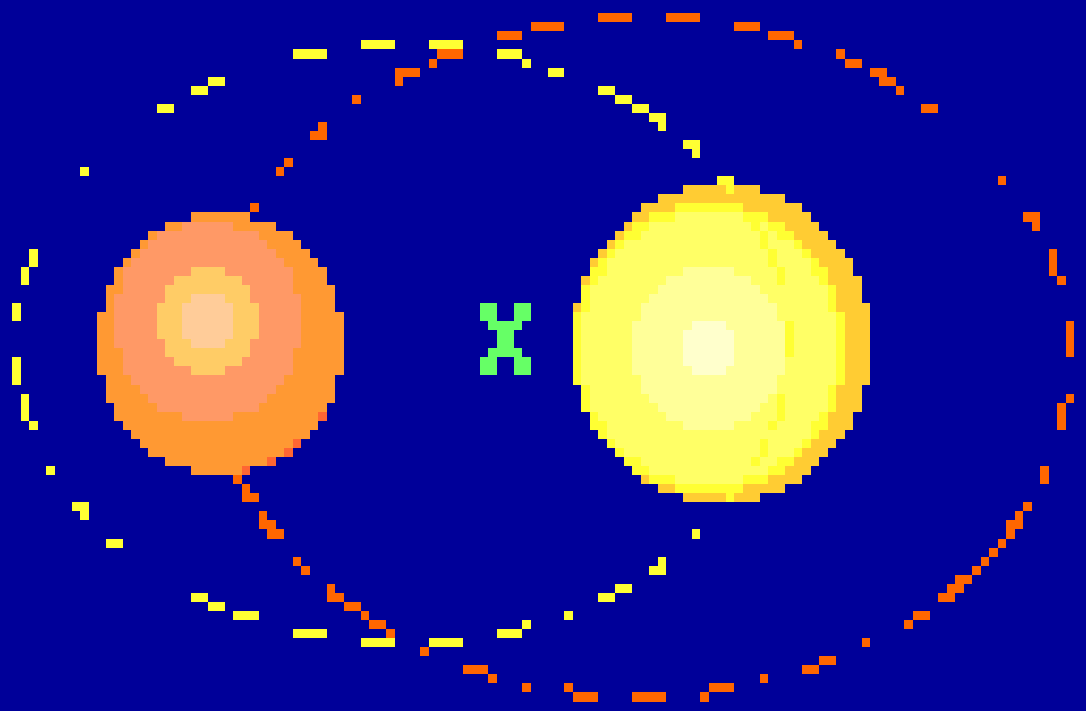
Binary Stars

- Binary stars are stars that rotate around a common axis. They would have to be of the same age by formation, but are of a different H-R classification on the main sequence.



Double Star System

Orbiting around the Barycenter (X)



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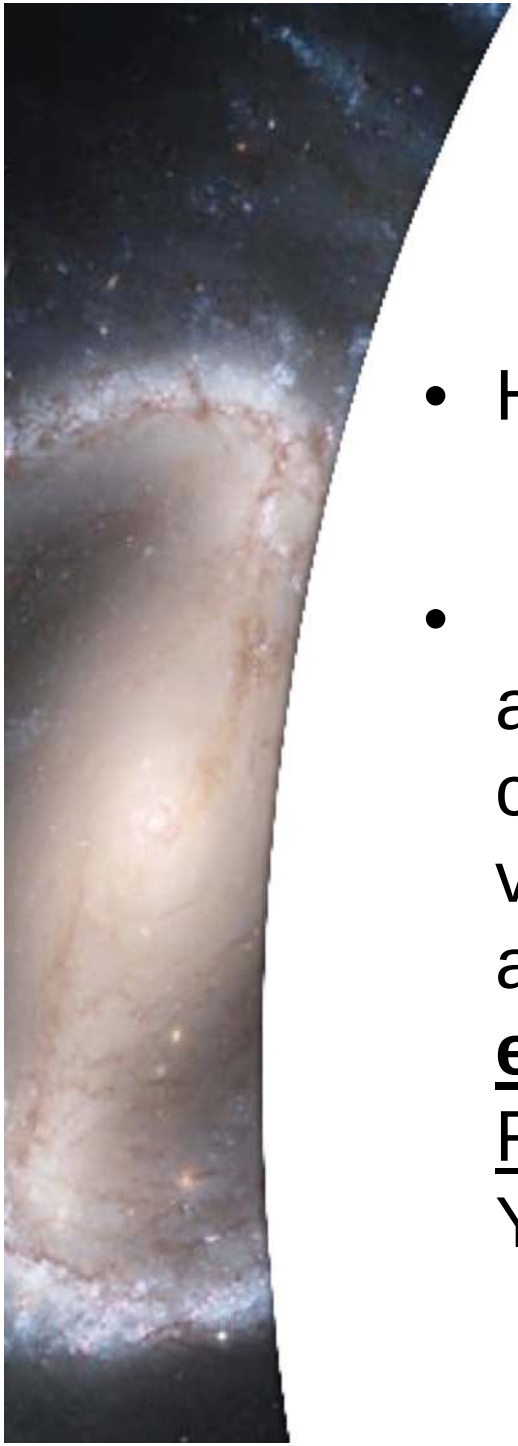

Fred Hoyle

- Hoyle points out,

- "The evidence is that the two stars of a double system are always born at closely the same time and place. This view which I think is shared by all astronomers leaves us with **an evolutionary paradox**." (Hoyle, Fred, Frontiers of Astronomy. New York, N. Y.: Harper & Rowe, 1963. p. 180).

- Astronomers would classify them as of different evolutionary age if viewed separately. This raises questions concerning the classifying stars according to ages, and not according to separate metabolic speed of aging.
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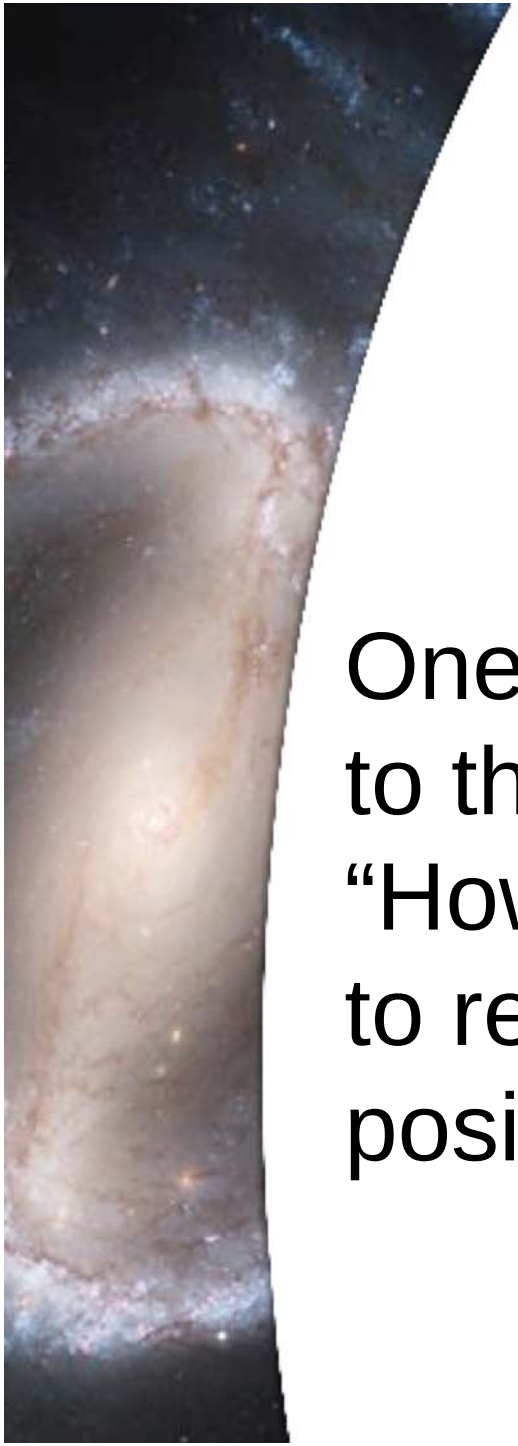
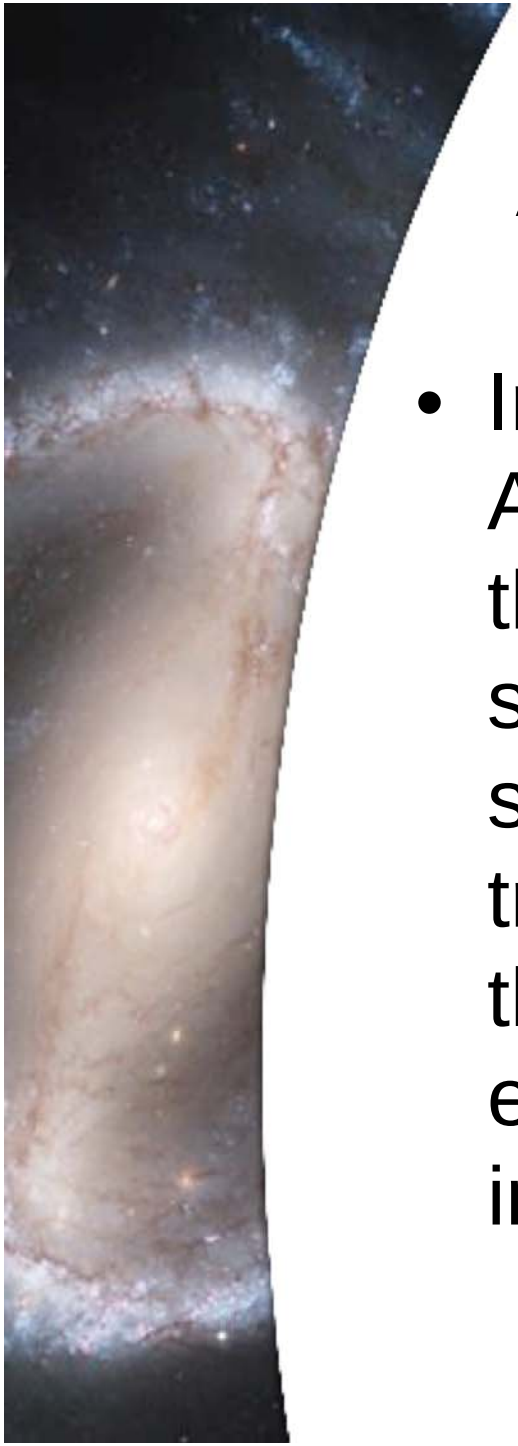


The expansion of the universe

One of the major questions related to the evidence for the “Big Bang” is, “How long did it take for the universe to reach it’s present apparent position?”

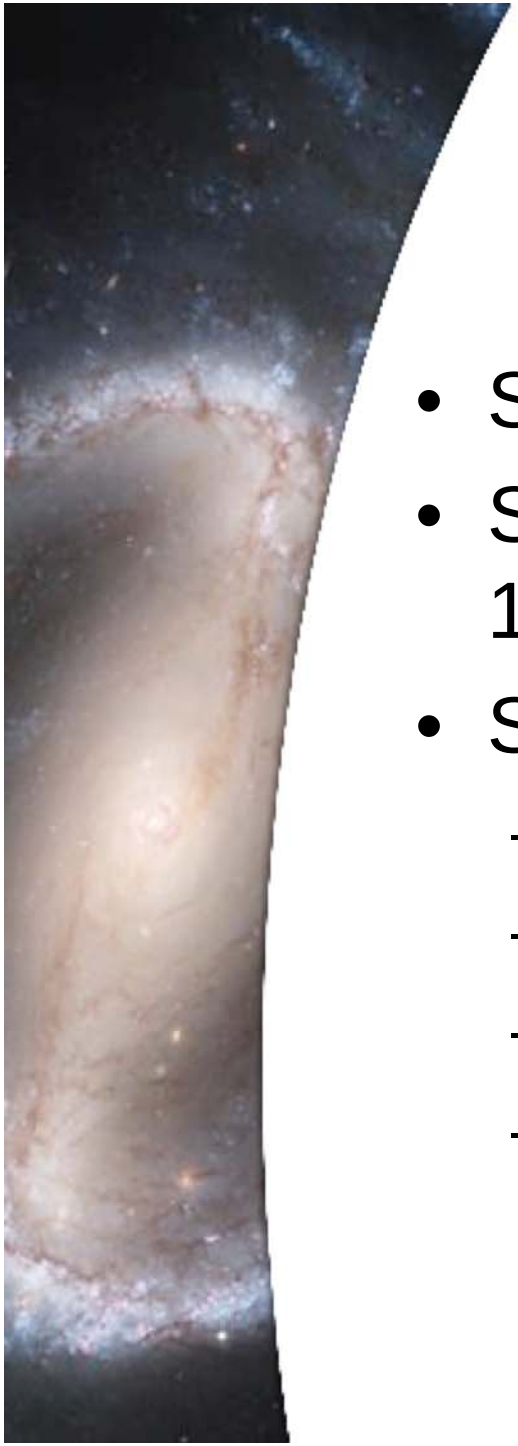


Alan Guth's Inflationary Model

- In 1980, the American physicist Alan Guth devised a way around these problems. He theorized that shortly after the Big Bang (10^{-35} seconds, or 100 billion trillion trillionths of a second, to be exact), the universe underwent a period of extraordinarily rapid expansion, inflating its size by a factor of 10^{50}.

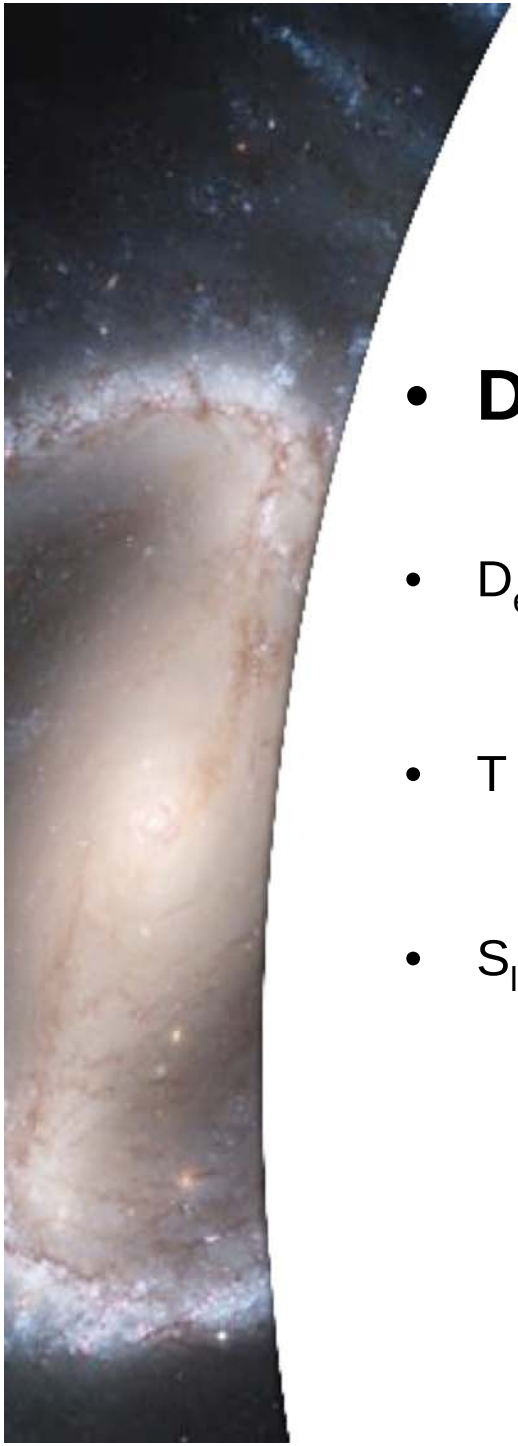
Stephen Hawking and the Beginning of the Universe

- The great astrophysicist, Stephen Hawking, states that at 10^{-43} seconds there was nothing, and that at 10^{-33} seconds the universe was as big as a grapefruit. That means that the expansion of the beginning universe traveled 2.5 inches in 10^{-33} second or .00000000000000000000000000000001second.



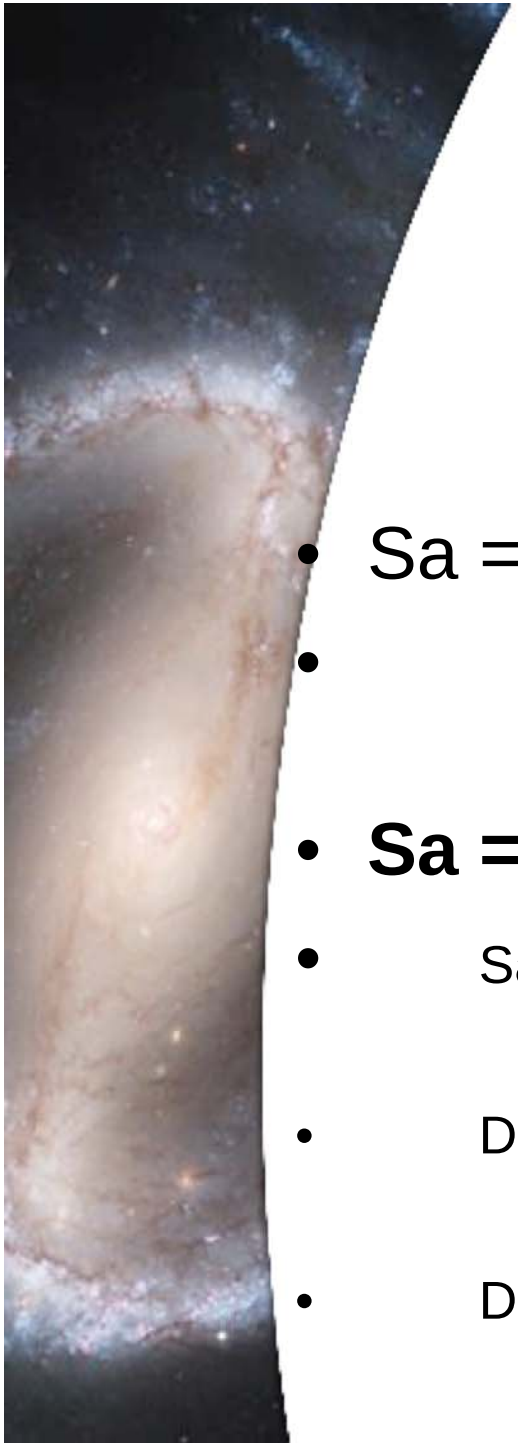
The speed of light in inches per second

- Slin = S_l X Ft_{mi} X In_{ft}
- Slin = 186,000 mi/sec X 5,280 Ft. X 12 in.
- Slin = **1.2 X 10^{10} in/sec**
  - S_l = Speed of light or 186,000 mi/sec
  - Ft = Feet in a mile of 5,280 feet
  - In = Inches in a foot or 12 inches
  - S_{lin} = Speed of light in inches per second or 1.2 X 10^{10} in/sec



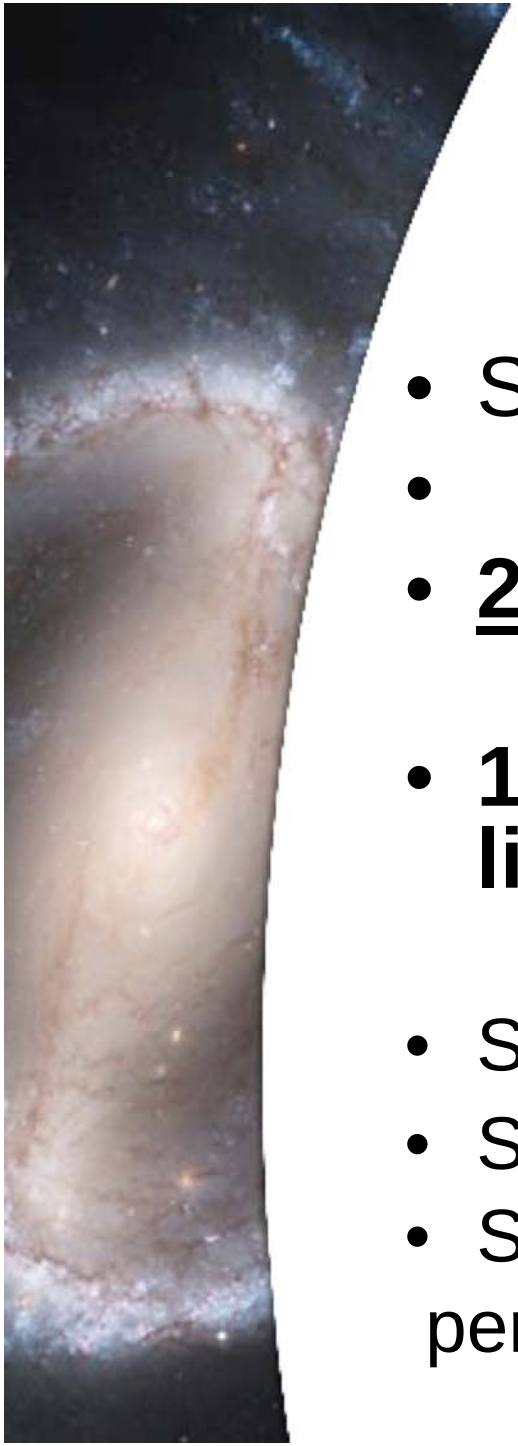
Expected distance/time

- **$D_e = S_{lin}$ X T =** $(1.2 \times 10^{10}) \times 10^{-33} =$ **1.2×10^{-24}**
- D_e (expected distance) = **1.2×10^{-24} inches in 10^{-33} sec.**
  - (.000000000000000000000012 inches in 10^{-33} sec.
- T (time of original expansion) = 10^{-33} sec.
- S_{lin} (speed of light in in./sec.) = 1.2 X 10^{10} in/sec



Actual speed of expansion

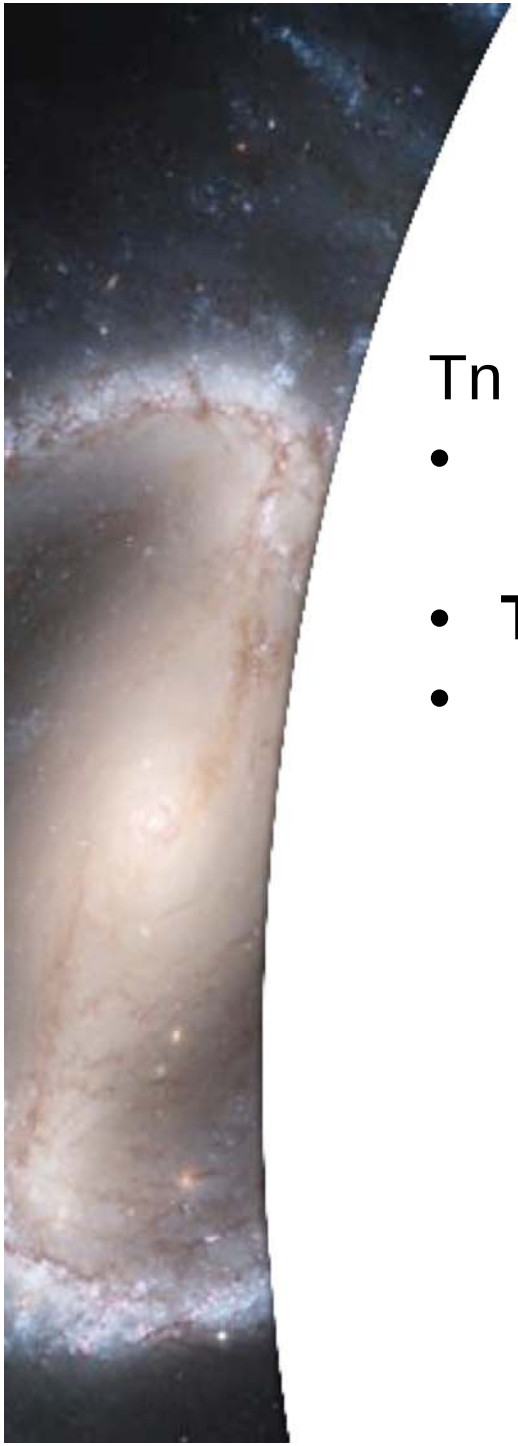
- $Sa = \frac{Da}{De} = \frac{2.5}{1.2 \times 10^{-24}}$
- **$Sa = 2.1 \times 10^{24}$ times the speed of light**
- Sa = actual speed of expansion
- Da = actual distance traveled (2.5 inches)
- De = expected distance traveled in 10^{-33} sec.



Average speed of expansion of the early universe

- Se = $\frac{S1+ S2}{2}$ =
- **$\frac{2.1 \times 10^{24} + .17}{2}$ =**
- **1.05×10^{24} times the speed of light**

- Se = Speed of expansion
- S_1 = Speed of expansion (2.1×10^{24})
- S_2 = 70 % the speed of light in miles per second or 130,000 (1.3×10^{5}) mps.

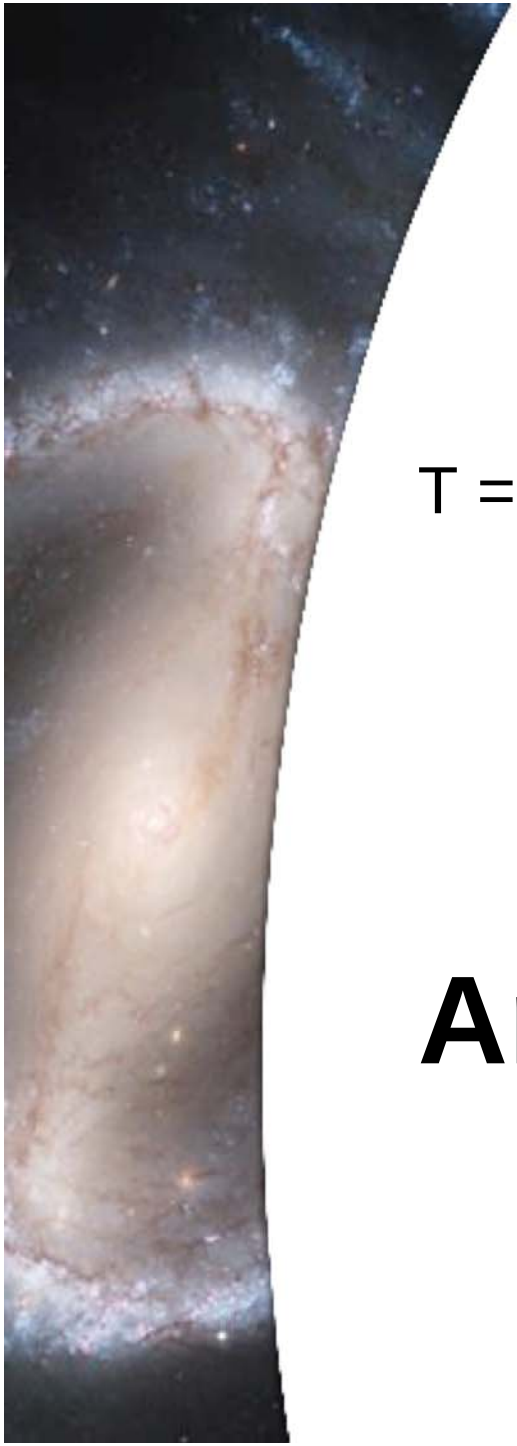


The time needed to reach the present apparent position of the universe

$Tn = \frac{D}{S} = \frac{6 \times 10^{9}}{1.05 \times 10^{24}} =$

- **$Tn = 5.7 \times 10^{-15}$ year** or
- **.000000000000057 year.**

  - Tn = Time to reach present position
  - D = Distance to present position or 6×10^{9} light years
  - S = Average speed of expansion or
    - **1.05×10^{24}** times the speed of light



Days needed to reach the present known position

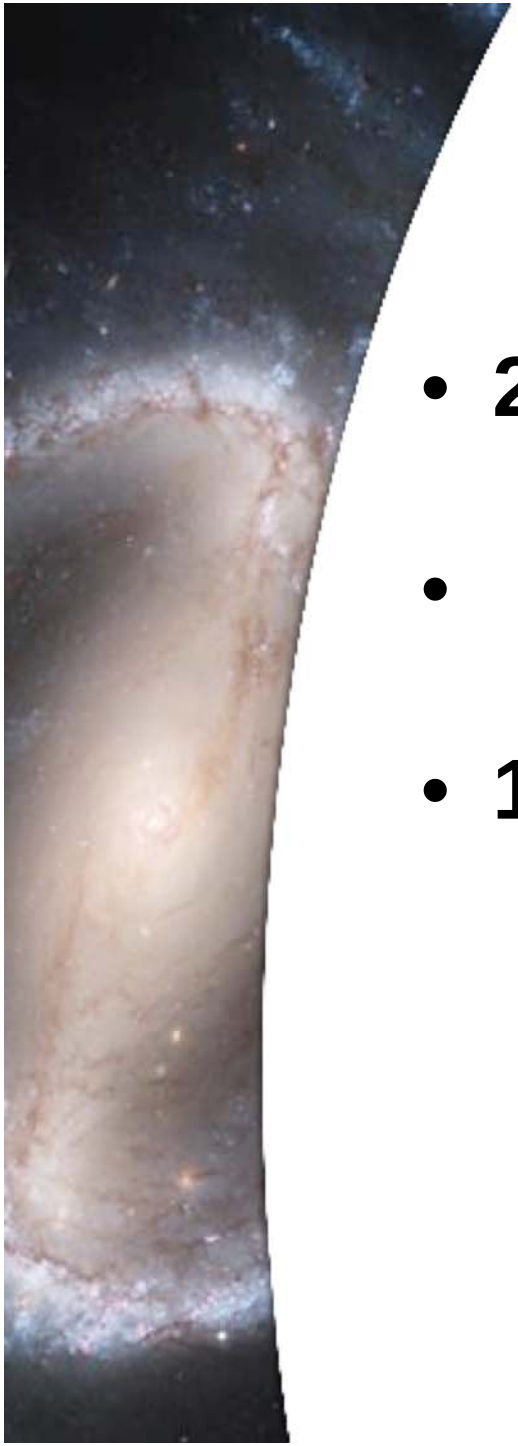
$T = Yr \times Tn = 365.25 \times 5.7 \times 10^{-15} =$

T = Time required

Yr = Days in a year

Tn = Time to reach present position

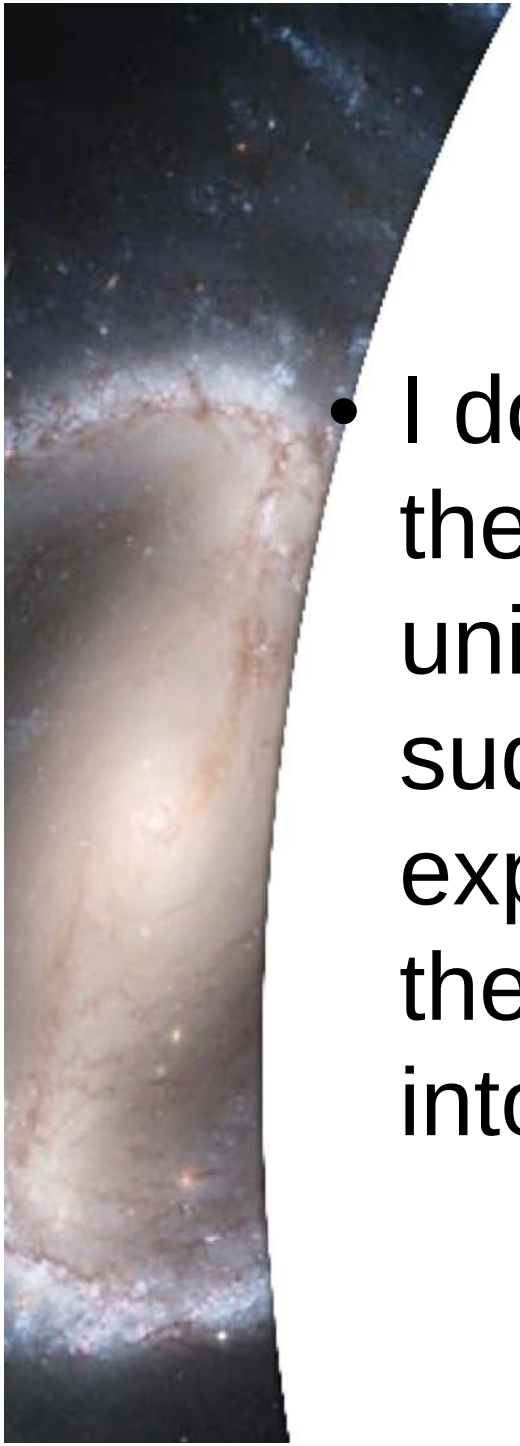
Are you ready for this?



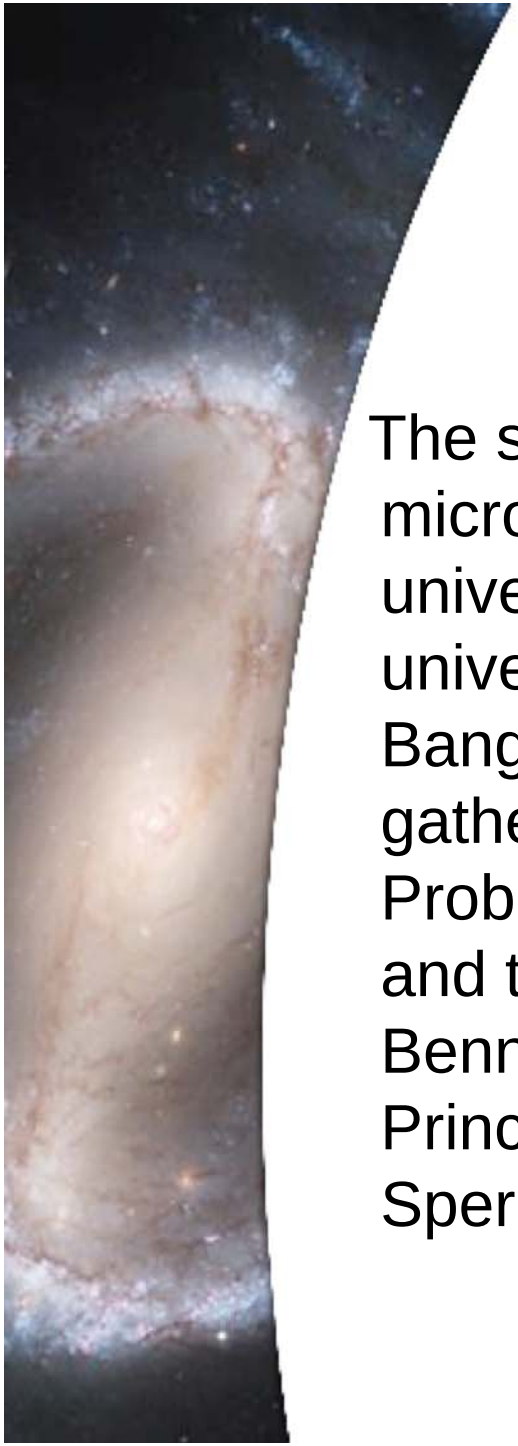
Are you ready for this?

- **2.1×10^{-12} Days or**
- or
- **1.8×10^{-7} second (.00000018 second)**
  - **or**
    - **18 hundred millionths of a second**

- If you blinked, you missed it all.

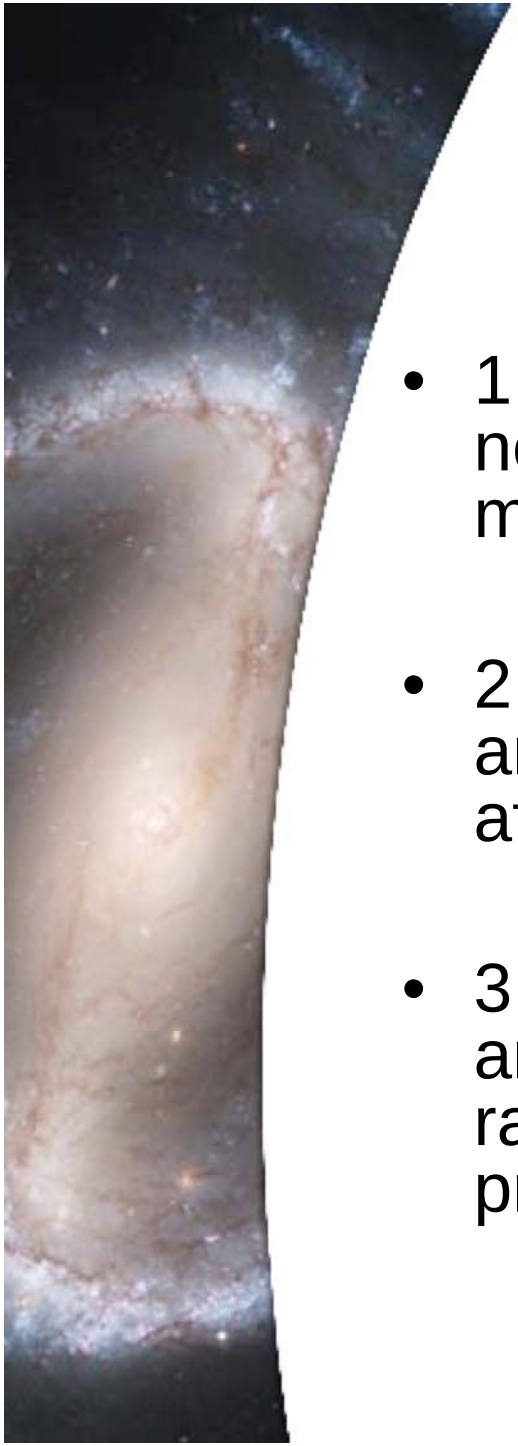


- I do not believe that this reflects the actual expansion of the universe, but recognizes that it suddenly began and that the expansion was so massive that the universe appeared to leap into existence instantly.



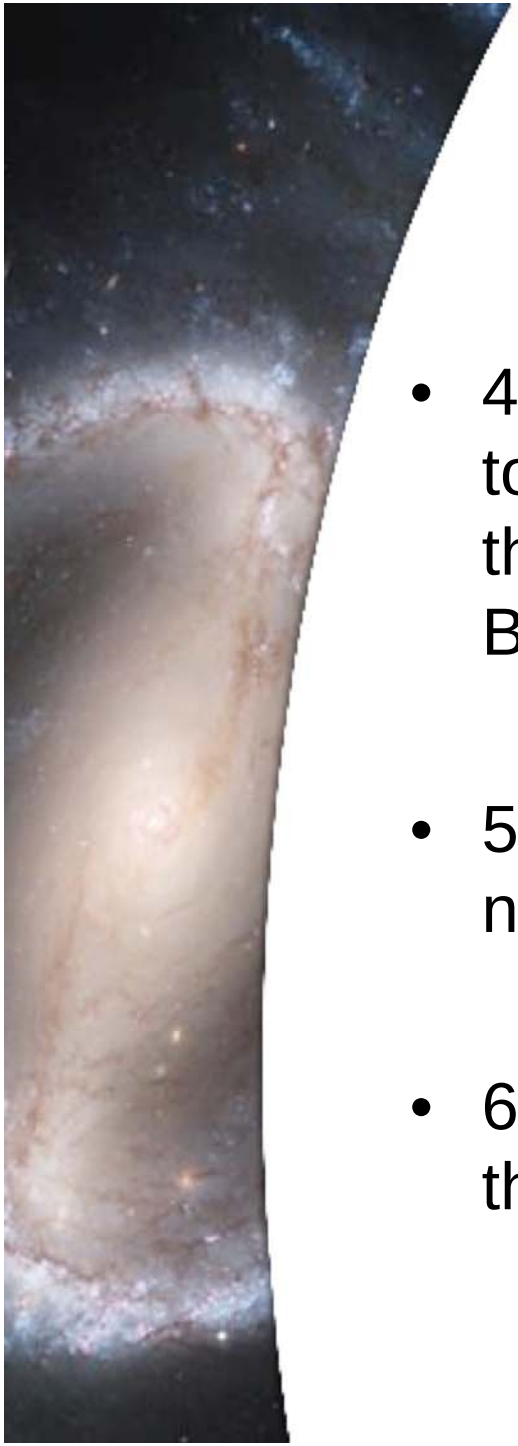
Is this compatible with other scientific data?

The study of variations in the brightness of galactic microwave radiation has demonstrated that the universe expanded to nearly the size of the present universe in about a trillionth of a second after the “Big Bang.” This conclusion was reached by data gathered from the Wilkinson Microwave Anistomy Probe (WMAP) satellite launched by NASA in 2001 and the conclusion was announced by Charles Bennette of Johns Hopkins University and two Princeton colleagues, Lyman Page and David Spergel (Crenson, March 17, 2006).



Conclusions

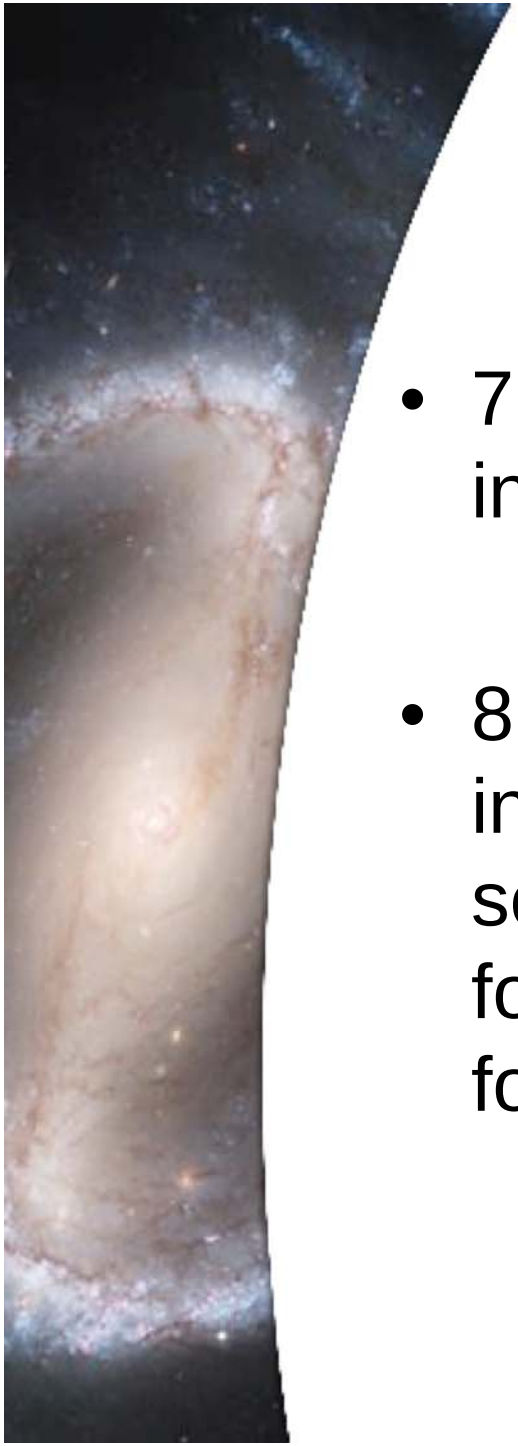
- 1. The universe came into being from nothing to its present mass through a massive explosion.
- 2. Black holes, neutron stars, normal stars and elements came into being immediately after the universe began to expand.
- 3. Black holes, neutron stars, normal stars and elements were not formed through random natural processes, but were products of the “Big Bang”.



- 4. It took only a small fraction of a second to reach the present observable position of the newly created universe after the “Big Bang”.

- 5. The universe is inexorably running down, not evolving upward to greater complexity.

- 6. The existence of anti-matter proves that the universe is not eternal, but finite.



- 7. All these issues point to an intelligent designer-creator.

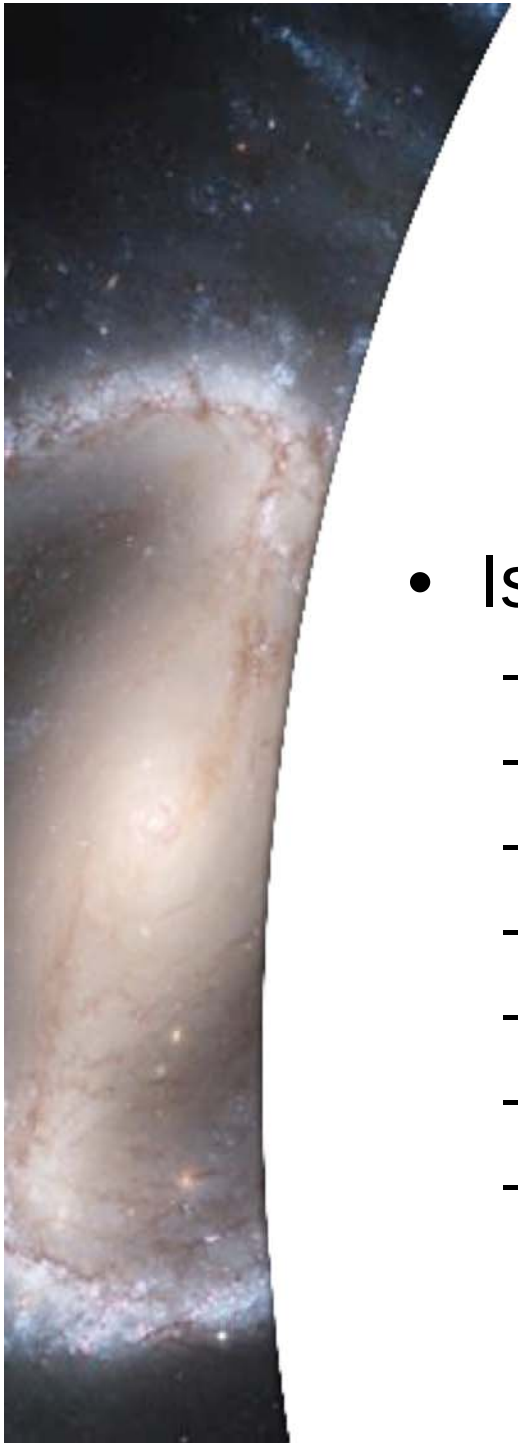
- 8. Believing in the existence of an intelligent designer, creator is far more scientific than believing that random forces accidentally were responsible for all the material universe.

- **We call Him God.**

- Gen. 1:1 describes this sudden appearance of the universe by saying,

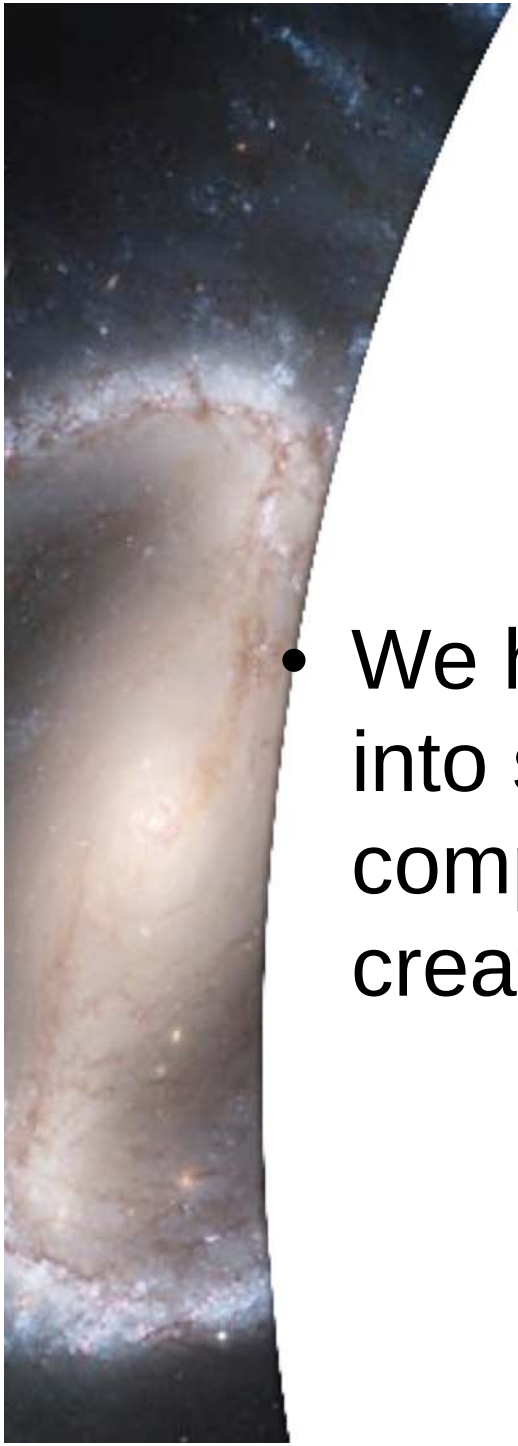
- ***“In the beginning God created the heavens and the earth.”***

- Bara (create in Hebrew) means to make de novo, or to make something that did not exist before.



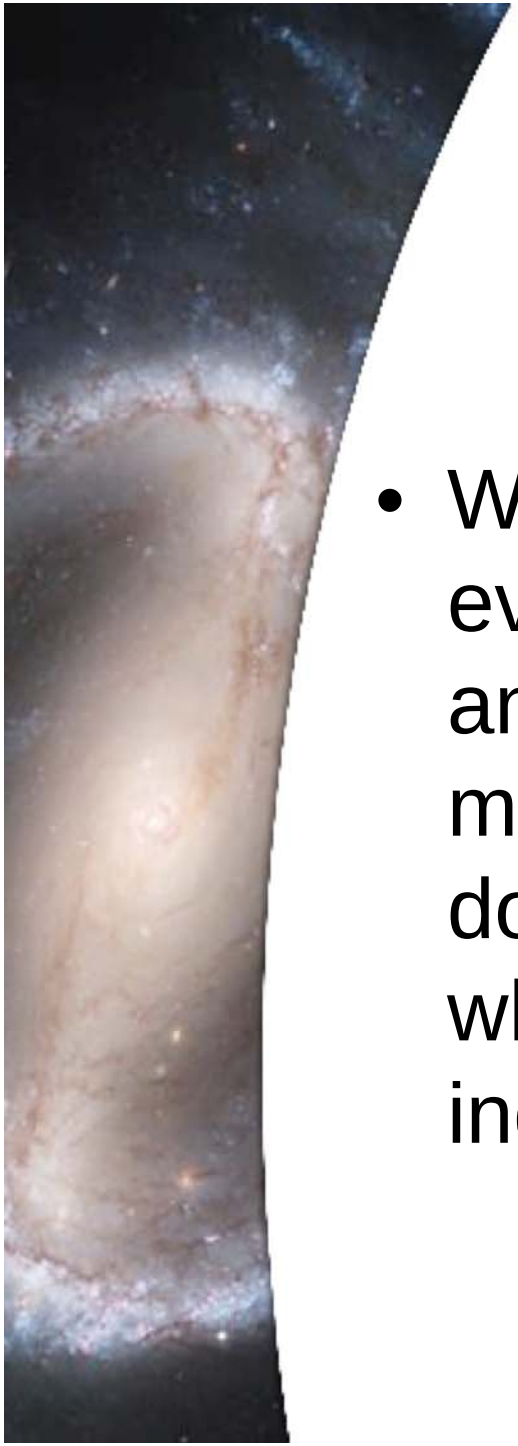
Can the study of the material lead us to evidence for spiritual things?

- Is there evidence for
  - The existence of God?
  - The power and authority of God?
  - The accuracy and authority of the Bible?
  - The historicity of Jesus Christ?
  - The deity of Jesus Christ?
  - Life after death?
  - Eternal life?

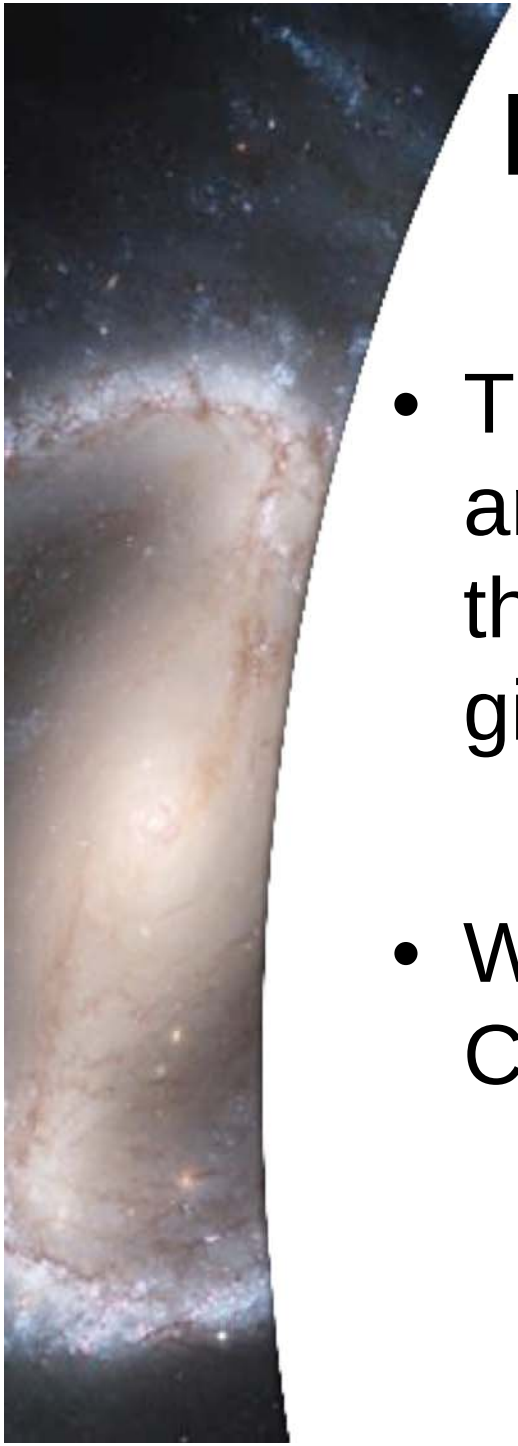


God Exists

- We have seen that the universe sprang into sudden existence, and how this is compatible with the Biblical account of creation.



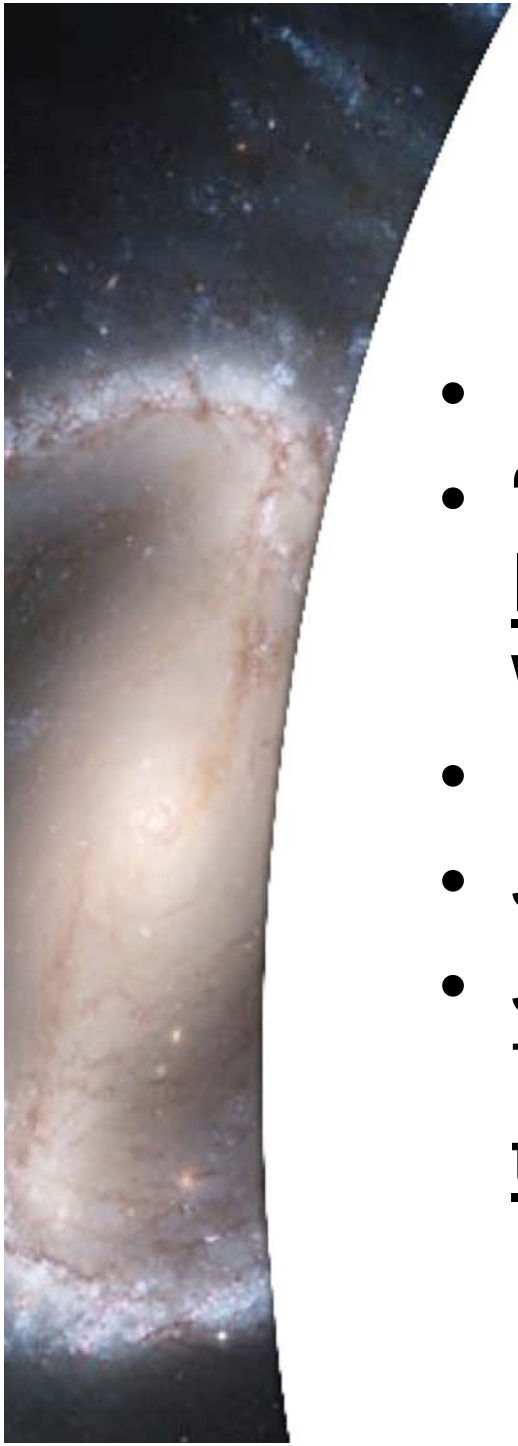
- When we study genetics It will be evident that all life is the product of an intelligent designer. The genetic molecule is a 8 billion component double binary mathematical formula which determines all life. This indicates an intelligent designer.



How can we know God?

- The Bible tells us that God loves us and came to earth as the man, Jesus, that He died to save us in order to give us eternal life.

- What does the Bible say about Jesus Christ?



Jesus Christ is the only way to eternal life.

- I Cor. 3:11.
- "For **other foundation can no man lay** than that which has been laid, which Is Jesus Christ."
-
- John 14:6.
- Jesus said, "I am the Way, and the Truth, and the Life. **No man comes to the Father but through Me.**"

Rom. 1:18-22

- "For the wrath of God is revealed from heaven against all ungodliness and unrighteousness of men, who suppress the truth in unrighteousness; because that which may be known of God is manifest in them; for God has showed it to them. For **the invisible things of Him from the creation of the world are clearly seen, being understood** by the things that are made, even His eternal power and Godhead; **so that they are without excuse**: because that, when **they knew God**, they did not glorify Him as God, neither were thankful; but became vain in their imaginations, and their foolish heart was darkened. **Professing themselves to be wise (Homo sapiens)**, they became fools."

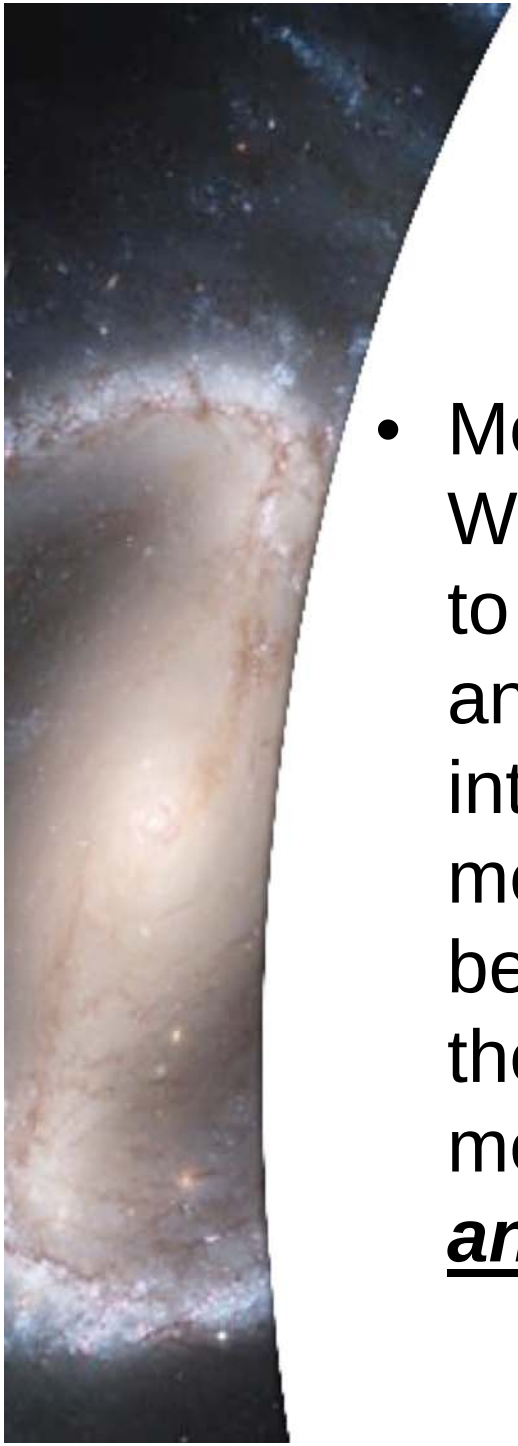
Causes of doubt

- Uneducated or ignorant, not knowing the facts.
- Confusion of education in conclusions, not objective facts (Psalm 1:1).
- Deciding to not believe (Rom. 1:18).
- Peer Pressure and ridicule (I Cor. 15:33, 34).
- Brain damage.
- Emotional disturbance (Neurosis, etc.).
- Toxicity.
- Unstable personality (James 1:8, 4:8).

Aldous Huxley

- “Does the world as a whole possess the value of meaning that we constantly attribute to certain parts of it (such as human beings and their works); and, if so, what is the nature of that value and meaning? This is a question which, a few years ago, I would not even have posed. For, like so many of my contemporaries, I took it for granted that there was no meaning.

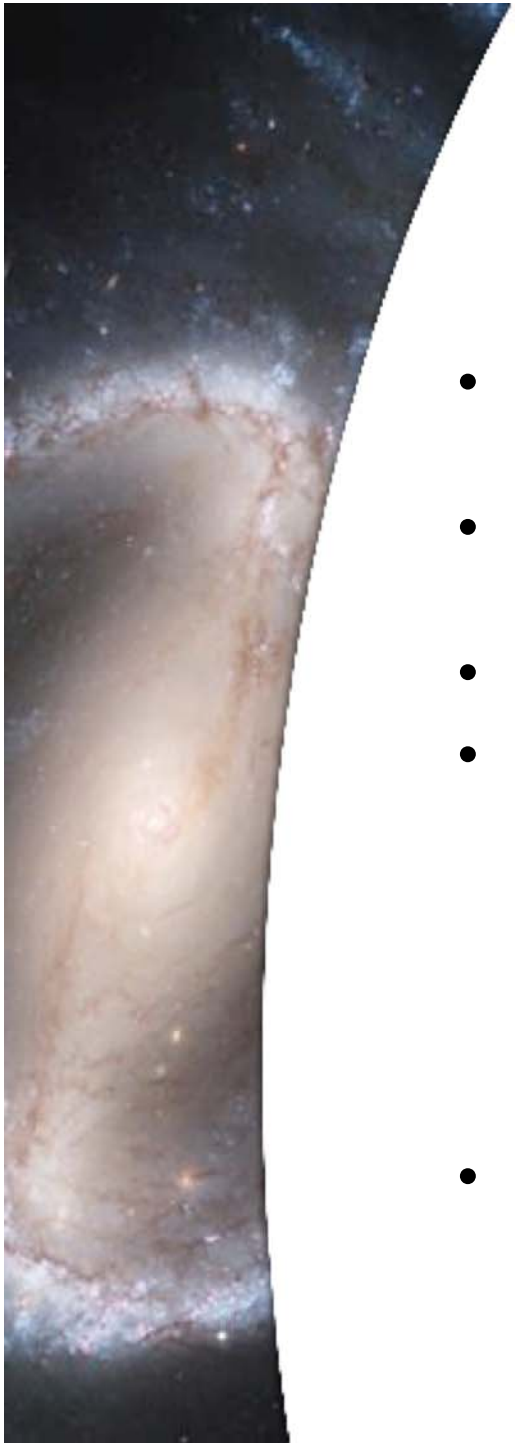
- This was partly due to the fact that I shared a common belief that the scientific picture of an abstraction from reality was a true picture of reality as a whole; partly also to other, non-intellectual reasons. I had motives for not wanting the world to have a meaning; consequently assumed that it had none, and was able without any difficulty to find satisfying for this assumption.



- Most ignorance is vincible ignorance. We don't know because we don't want to know. It is our will that decides how and upon what subjects we shall use our intelligence. Those who detect no meaning in the world generally do so because, for one reason or other, it suits their books that the world should be meaningless (Huxley, Aldous, ***Ends and Means***, 1937, p. 316).

- For myself as no doubt for most of my contemporaries, the philosophy of meaninglessness was essentially an instrument of liberation. The liberation that we desired was simultaneously liberation from a certain political and economic system and liberation from a certain system of morality. We objected to the morality because it interfered with our sexual freedom. . .

- The supporters of these systems claimed that in some way they embodied the meaning (a Christian meaning, they insisted) of the world. There was one admirably simple method of confuting these people and at the same time justifying ourselves in our political and erotic revolt; we could deny that the world had any meaning whatsoever (Huxley, p. 316)

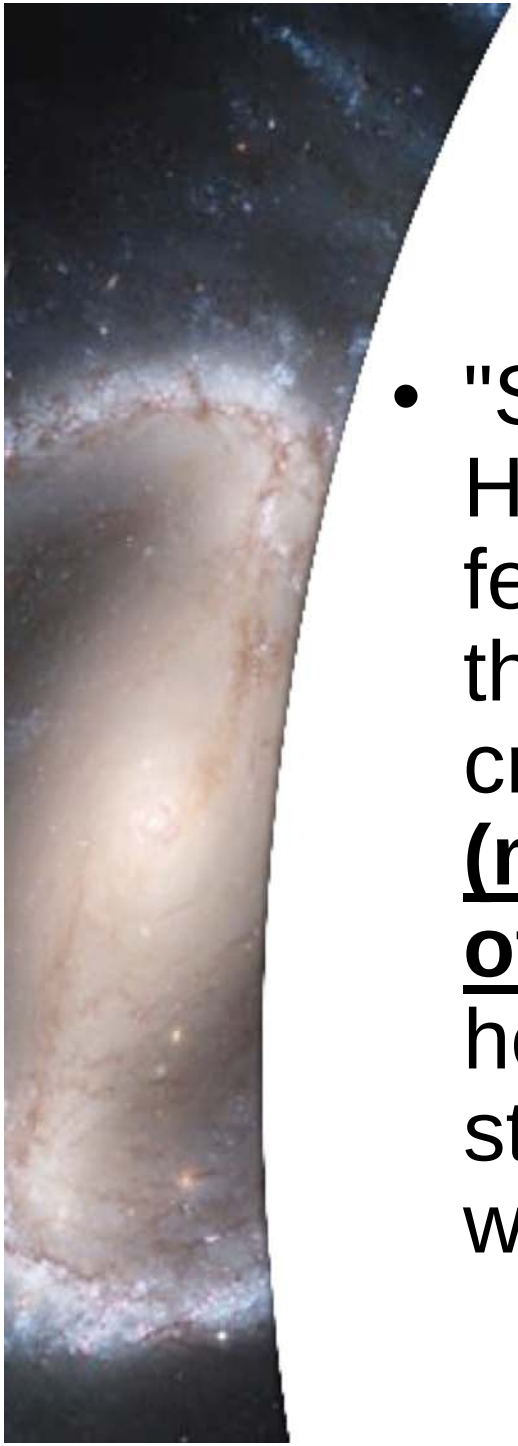


Dealing with honest seekers of truth

- **1. Inform through presenting factual evidence.**
- **2. Answer their questions with factual evidence, not your belief system.**
- **3. Summarize the implications of the facts.**
- **4. Extend into spiritual implications.**
  - B. The Historicity of Christ.
  - C. The Deity of Christ.
  - A. The authority of the Bible.
  - D. The purpose of His death and Resurrection.
  - E. The clear presentation and challenge to saving faith.
- **5. Never become angry of frustrated by the argument of others. Stay on target.**

Should we answer doubt?

- "But **sanctify** (make a special place for) the Lord God in your heart; and **be ready (prepared) always to give an answer (apologetics)** to **every one** that **asks you** a **reason** (logic) of the **hope** (assurance) that **is in you**, with **meekness** (not getting disturbed when attacked) and **fear** (reverence)." (I Pet. 3:15)



II Pet. 3:3-5

- "Saying, 'Where is the promise of His coming? For since the fathers fell asleep, all things continue as they were from the beginning of creation.' **For this they willingly (made a decision) are ignorant of**, that by the word of God the heavens were of old, and the earth standing out of the water and in the water."

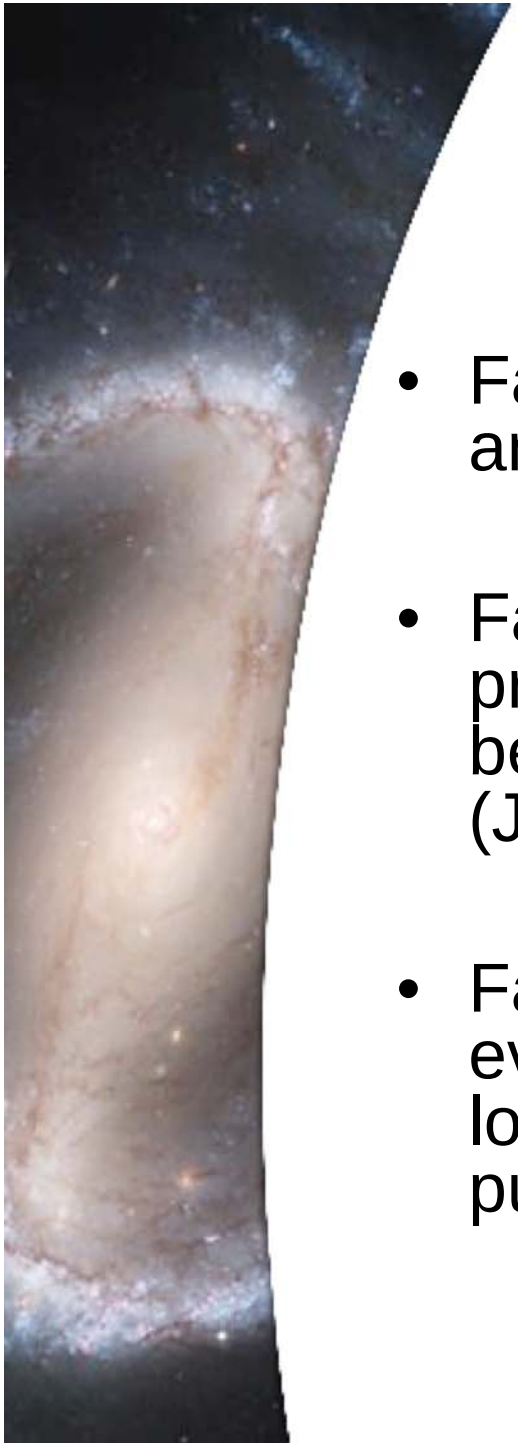
Hebrews 11:6

- “But without faith it is impossible to please Him: for he that comes to God must believe that He exists, and that He is a rewarder of those who diligently seek Him.”

- Acts 4:12.
- “**<u>Neither is there salvation in any other</u>**: for there is none other name under heaven given among men, **<u>whereby we must be saved</u>**.”

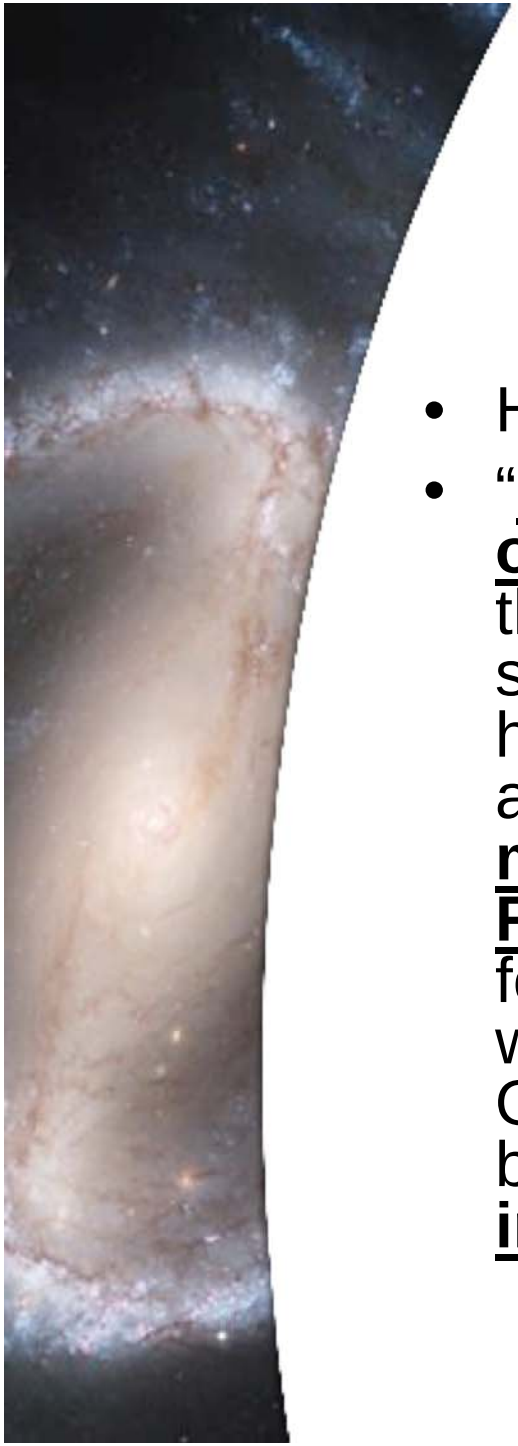
John 3:16

- “For God so loved the world that He gave His only begotten Son, that whosoever believes in Him should not perish, but have everlasting life.”



What is true faith?

- Faith is not believing that Jesus lived, died, and rose again. That is history.
- Faith is trusting God to do what He promised when He said that “Whosoever believes in Him (Jesus) has everlasting life (John 3:36).
- Faith for living is trusting God to work out everything together for good to those who love Him and are called according to His purpose (Rom. 8:28).



Are people responsible to find the truth and abide by it?

- Heb. 5:12-14
- "**For through the time you have the obligation to be teachers**, you again have the need that someone teach you again the simplest principles of the oracles of God; and had become (perfect tense) in need of milk, and not solid food. **For every one that uses milk is unskillful in the Word of Righteousness; for he is a toddler**. Solid food belongs to those who are mature, those who had **habitually trained** (for the Olympics) their sense organs to discern between the **appropriate** and the **inappropriate**."