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Astronomy Awareness for the Growing Global Civilisations

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ABSTRACT

Astronomy is an in-depth study of celestial bodies such as planets, stars, galaxies, and other universe phenomena. Characterized by rapid advances in technology and space exploration, astronomy not only provides insight into the origins of the universe but also has an increasing urgency in an ever-evolving globalized world. The science of astronomy lies in various aspects, including understanding the origin of the universe, the evolution of stars, and the study of planets outside the Solar System.

These discoveries contribute significantly to technological advancement and global security. In a globalized world that proved to be quite reliable this year. International growth is expected to slow down to 2.7 percent in 2024 which was the lowest annual growth since the pandemic in 2020.

The world's two largest economies, the US and China, are expected to decline in growth next year, which will affect the globalized world. In this research, the author uses the research method of analysis Data collected from telescopic observations, and space missions can be analysed mathematically and statistically to understand the characteristics of the universe, such as the distance of stars, the composition of planetary atmospheres, or the patterns of galactic motion.

From this research, it can be concluded that astronomy is not only about researching and exploring the universe but also about its urgency and relevance in an increasingly connected global world.

I. Introduction

Astronomy has played a significant role in human and technical advancement from the dawn of time. The capacity to forecast the motions of the Sun and stars, which are crucial components in many areas, has made the sky a source of amazement. The deep curiosity regarding the origin and history of the Sun, Moon, stars, galaxies, and the Universe itself stems from a need to know more about our origins.

Human soul and public imagination are stimulated by astronomy. The outcomes of the contemporary astronomical study have already profoundly influenced our society, with words like "black hole," "big bang," and "light-year" becoming commonplace. Any well-stocked bookshop will have an astronomy section with enormous, gorgeous picture books of the universe and technical books about the cutting edge, written by journalists, writers with astronomy degrees, and practicing astronomers.

Astronomy could have a significant impact on global conditions and world civilization [1]. One of the worldwide factors influencing global civilization is astronomy. The study of events and objects, such as stars, planets, and galaxies, both inside and outside the Earth system, is known as astronomy. A contemporary example of the long history of astronomy's contributions to science and technology is the 1960s NASA experimentation in X-ray astronomy, which was extended to the production of X-ray inspection systems for airports, military installations, and border control agencies. Astronomers' image-processing methods are now widely used in arthroscopic surgery, industrial settings, and even in the tracking of critically endangered wildlife. Now, scheduling software created for the Hubble Space Telescope is being used to streamline semiconductor production and control patient flow in medical facilities.

In a globalized world that has proven to be quite reliable this year, it is expected to slump next year due to the pressures of war, inflation, and still-high interest rates. International growth is expected to slow to 2.7 percent in 2024 from a pace of 2.9 percent this year, which was the lowest annual growth since the pandemic in 2020. The world's two largest economies, the US and China, are expected to decline in growth next year, which will affect the globalized world [2].

Indonesia is feeling the vibration of the impact of the global demand slowdown as a major test in 2024. The challenges of the global economy in 2024 can be summarised into several main aspects, such as weakening global demand, changes in trade policy, uncertainty related to global monetary policy, and tensions in international trade.

Global warming has become a major issue in the world, a challenge that must be faced by all countries in the 21st century. It impacts global climate change because of the greenhouse effect and fulfillment of emissions. Global warming occurs because of the massive exploitation of natural resources that are not in this condition will occur from year to year which is a serious problem for the world because of climate change [3]. The urgency of astronomy in 2024 on the global with the effects that appear in the middle of world civilization is an important topic in explaining the impact and influence of astronomy on global conditions and world civilization. The impact of astronomy on global conditions and world civilization will continue to grow and needs to be dealt with in an effective way [4].

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II. Method

The research method used in this study is a literature analysis research method conducted to obtain information about the influence and urgency of astronomy on the global, as well as the effects that appear in the middle of world civilization. Data collected from observations and space missions can analysed mathematically and statistically to understand the characteristics of the universe, such as the distance of stars, the composition of planetary atmospheres, or the patterns of galactic motion. Multi-faceted study of a theory that is based on objective knowledge assumptions and then written about in various sources of information. The references are sourced from journals and books.

III. Results and Discussion

The global significance of astronomy in 2024 with its effects on world civilisation can be seen through the various astronomical phenomena that will occur during 2024. Total Solar Eclipses, planetary alignments, the emergence of new star nests, global boiling, and more extreme weather will affect world civilization. The schedule of astronomical phenomena that will occur will also increase the interest and excitement of scientists and astronomy enthusiasts. The alignment of the planets and the moon will produce a beautiful sight when viewed from Earth, while a total solar eclipse will make Earth's conditions dark as night, but only for a short time interval [5].

The emergence of new star nests or star nurseries will allow scientists to study the mysterious things that happen in the Antennae region. Global warming and more extreme weather will affect the world's civilization, including increases in global temperatures, daily temperatures, and monthly temperatures. The El Niño that emerged from June 2023 also plays an important role in increasing global temperatures. The schedule of astronomical phenomena that will occur in 2024 increases the interest and excitement of scientists and astronomy enthusiasts. There are dozens of astronomical phenomena to watch, including new Moon phases, full Moon, and Solar and Lunar eclipses. The global significance of astronomy in 2024 can be seen through the various astronomical phenomena that will occur during 2024 [6].

Some of the astronomical phenomena that occurred include the Total Solar Eclipse that occurred on 8 April 2024, which is a very rare once-a-year phenomenon. The Total Solar Eclipse will make for a beautiful sight when viewed from Earth, which could lead to eclipse-chasing tours and expeditions. There is the phenomenon of planetary alignment or planetary conjunction, which will produce a beautiful sight when viewed from Earth. The alignment of the planets will produce a beautiful sight when viewed from Earth, which can become a tourist activity and expedition to chase planetary conjunctions. There is the phenomenon of new star nests or star nurseries appearing, which is a rare occurrence. The appearance of new star nests or star nurseries will allow scientists to study the mysterious things happening in the Antennae region. The year 2024 will see global warming and more extreme weather, which will affect world civilization. This includes increased global temperatures, increased daily and monthly temperatures, total solar eclipses, planetary alignments, and the emergence of new star nests. The Covid-19 pandemic has affected the global economy, causing demand for exported and imported goods to decline. Astronomy 2024 will have an impact on the demand for export and import goods, such as regional and global supply

chains, the Fourth Industrial Revolution (4IR) and the digital era, and the increase in Free Trade Agreements/Regional Trade Agreements in the world, such as the ASEAN Regional Comprehensive Economic Partnership (RCEP) [7].

Astronomy in 2024 affects public policy, such as the DKI Jakarta government which made a Large-Scale Social Restrictions (PSBB) policy and replaced it with the Enforcement of Restrictions on Community Activities (PPKM) as an instrument to prevent the spread of COVID-19. Astronomy 2024 will affect education, such as the face-to-face school policy that has sprung up school clusters (SD, SMP, and SMA) [8]. Astronomy 2024 will affect social behaviour, such as sanctions given to residents who do not use masks and social work for one hour. Astronomy 2024 will affect health, such as the DKI Provincial Government's policy of controlling events that occur by making control measures on other variables that may affect the event. Astronomy 2024 will affect science, such as the research methods of science, which have the main characteristics of being arranged systematically and coherently using the scientific method. So, astronomy 2024 will have a global effect on world civilization in several aspects, such as global economic recovery, public policy, education, social behaviour, health, and science [9].

Astronomy 2024 will affect world civilization through various factors, which will affect weather, climate, human behaviour, technology, and global political and economic stability. Global warming will continue, caused by greenhouse gases accumulating in the atmosphere. This will affect global weather and climate, which will become a top global risk by 2024 [10]. Several rare astronomical phenomena will occur in 2024, such as total solar eclipses, planetary alignments, and the emergence of new star nests. Solar storms are expected to peak in 2024, which will affect power grids, GPS signals, and satellites. 2024 will be a general election year for presidential candidates in Indonesia, which will be synonymous with the risk of "misinformation and disinformation"& "polarisation of society" [11].

Global warming will affect climate change, which will affect weather, natural events, and human behaviour. The use of technology to process raw materials will affect the earth's temperature, which will be a top global risk by 2024. Some regional conflicts and crises will potentially spill over to the global sphere, which will affect global political and economic stability. On this occasion, astronomy 2024 will affect world civilization through various factors, which will affect weather, climate, human behaviour, technology, and global political and economic stability [12]. The astronomical urgency of 2024 for the global is a phenomenon that can influence human behaviour, technology, and global political and economic stability. Global warming is a phenomenon that can affect human behaviour, technology, and global political and economic stability. Global warming will continue, caused by greenhouse gases accumulating in the atmosphere [13]. This will affect global weather and climate, which will become the top global risk in 2024. Global warming is a phenomenon that can affect human behaviour, technology, and global political and economic stability. This is caused by greenhouse gases accumulating in the atmosphere, which will affect global weather and climate. Greenhouse gases are gases that can affect global weather and climate [10].

Greenhouse gases are formed when organic materials such as carbon dioxide, methane, and nitrogen oxide are obtained by microorganisms and plants, and then accumulate in the atmosphere. The effects of global warming are changes that occur in global weather and climate, which can affect human behaviour, technology, and global political and economic

stability. The effects of global warming include changes in weather, natural events, and human behaviour. Global warming will be the top global risk in 2024. This is caused by changes in global weather and climate which can affect human behaviour, technology, and global political and economic stability [13].

Rare astronomical phenomena are phenomena that can influence human behaviour, technology, and global political and economic stability. Several rare astronomical phenomena will occur in 2024, such as a total solar eclipse, the alignment of planets, and the emergence of new star nests. Rare astronomical phenomena are phenomena that can influence human behaviour, technology, and global political and economic stability. Several rare astronomical phenomena will occur in 2024, such as a total solar eclipse, the alignment of planets, and the emergence of new star nests. A total solar eclipse is a phenomenon that occurs when the Moon completely blocks the Sun's light from reaching Earth. The peak of the solar eclipse which will occur on April 8th, 2024, is expected to last less than 10 minutes. The emergence of new star nests is a phenomenon that can influence human behaviour, technology, and global political and economic stability. This new star nest will influence weather, natural events, and human behaviour.

The sun could cause changes in GPS signals because GPS signals depend on the radio signals used to send and receive GPS signals. If the radio signal is disrupted, the GPS signal can be disrupted directly, which can cause a loss of precision and accuracy of the GPS signal [14]. Solar storms can cause changes in satellite performance because the radio signals used to control and regulate satellites depend on GPS signals. If the GPS signal is disrupted, satellite performance can be directly disrupted, which can cause damage and loss of satellite connections [15].

Climate change will affect the weather and seasons, which will affect human life. Throughout 2023, there will be 4,938 natural disasters in Indonesia, causing at least 265 people to die. The impacts of climate change will be felt in 2023, which will increase the risk of natural disasters. The most significant impact of climate change is that the climate and seasons become more uncertain. Climate change will affect natural disasters, which will affect human life. The deadliest natural disasters in Indonesia are forest and land fires, floods, and extreme weather [12]. It is necessary to make efforts to reduce disaster risks, which include meteorological disaster control, landslide disaster control, and storm disaster control. Climate change will affect human behaviour, which will affect human life. It is necessary to adopt climate change-informed behaviour, such as optimizing the function of water resources infrastructure in urban and rural areas [16].

Technology has great potential in processing raw materials, which will affect the earth's temperature, which will be the top global risk in 2024. The use of technology to process raw materials, such as processing oil, natural gas, and metals, will affect the earth's temperature. This is caused by greenhouse gas emissions and others produced by the processing of raw materials. Processing raw materials will produce greenhouse gas emissions, which will increase the earth's temperature. Greenhouse gas emissions occur when raw materials are converted into final products, such as plastics, fuels, and building materials. The use of technology to process raw materials will affect the earth's temperature because the resulting greenhouse gas emissions will increase the earth's temperature. This will influence the weather, natural events, and human behaviour [17]. To reduce greenhouse gas emissions

produced using technology to process raw materials, solutions need to be implemented such as using clean fuel, using more efficient technology, and reducing the use of unnecessary raw materials. The use of technology to reduce greenhouse gas emissions, such as technology that converts carbon dioxide into fuel, will help reduce greenhouse gas emissions produced by processing raw materials [18].

The urgency of astronomy in 2024 on a global scale with its emerging effects on world civilization can be viewed from various perspectives, starting from global warming, and rare astronomical phenomena, to the impact on global political and economic stability.

Some factors impacts that arise [19] Global Warming Global warming will continue, caused by greenhouse gases accumulating in the atmosphere. This will affect global weather and climate, which will become the top global risk in 2024. Several rare astronomical phenomena will occur in 2024, such as a total solar eclipse, the alignment of planets, and the emergence of new star nests. The Quadrantids meteor shower is an amazing celestial phenomenon with a high level of activity. This meteor comes from the dust of comet 2003 EH1, which was first discovered in 2003. This meteor shower occurs on January 1-5, reaching its peak on the night of the 3rd and the morning of the 4th. A penumbral lunar eclipse is an astronomical phenomenon that occurs when some light The Sun's path to the Moon is blocked by the Earth. This event will occur on March 25, 2024 [20].

A Total Solar Eclipse or Ring Solar Eclipse is a phenomenon that occurs when the Moon completely blocks the Sun's light from reaching Earth. The peak of the solar eclipse which will occur on April 8, 2024, is expected to last less than 10 minutes. The alignment of the planets or planetary conjunction is a phenomenon that was the first- and last time astronomers observed an event like this. The emergence of new star nests is a phenomenon that can influence human behaviour, technology, and global political and economic stability [20].

To overcome the impact of astronomical phenomena that occur in 2024, several steps can be taken with education and knowledge about the astronomical phenomena that occur that can help overcome the impact. Skywatchers and scientists can provide information about these phenomena, as well as explain their impact on human behaviour, technology, and global political and economic stability. Observations and plans can be made to reduce the negative impacts of astronomical phenomena. For example, observations of the Quadrantids meteor shower can be made in 2024, which will occur from January 3 to 4. During the peak phase, dozens of meteors will be visible every hour, and clear sky conditions and minimal light pollution can affect the quality of observations [21].

Astronomy has various influences and hopes for the future of world civilization. Astronomy is a science that studies natural phenomena in outer space, which can be observed from Earth. Every month, astronomical phenomena change because of the movement of celestial bodies that have different orbits and speeds. Some astronomical phenomena occur once every ten or hundreds of years, which are called rare astronomical phenomena. Global boiling and more extreme weather affect world civilization, including increasing global temperatures, increasing daily and monthly temperatures, and more extreme weather.

The schedule of astronomical phenomena that will occur in 2024 will also increase the interest and happiness of scientists and astronomy fans. Rising global temperatures will bring hotter conditions in some regions, which will affect agriculture, health, and the

environment. Increasing daily and monthly temperatures will affect human health because it can cause dehydration, lung disease, and other health problems. More extreme weather, such as heavy rain, and direct rain will affect infrastructure, roads, and the environment.

Protection and control can be carried out to reduce the negative impact of astronomical phenomena. For example, a total solar eclipse occurs on April 8, 2024, which will last less than 10 minutes. To reduce the negative impact of a total solar eclipse, protection and control can be done, such as using glass in buildings, stopping dangerous activities, and adjusting work schedules. Health and safety measures can be taken to reduce the negative impacts of astronomical phenomena. For example, health can be done by arranging work schedules, using masks, and arranging the scope of work. Safety can be done by arranging a travel schedule, using gloves, and arranging the scope of the trip.

Astronomy influences human life in various ways, such as increasing global temperature will affect agriculture, health, and the environment. Rising global temperatures will bring hotter conditions in some regions, which will affect agriculture, health, and the environment. [22].

Increases in daily and monthly temperatures will affect human health because they can cause dehydration, lung disease, and other health problems. More extreme weather, such as heavy rain, heavy rain, and direct rain, will affect infrastructure, roads, and the environment. A total solar eclipse is a solar eclipse that occurs when the disk of the Sun is completely covered by the disk of the Moon. When this eclipse occurs, the disk of the Moon can appear as large as the disk of the Sun, or even larger. The alignment of the planets will produce a beautiful view when viewed from Earth, which can become a tourist activity and expedition to pursue planetary conjunctions. The emergence of new star nests or star nurseries will allow scientists to study the mysterious things happening in the Antenna region.

Indonesia's astronomical position is a position that is influenced by imaginary lines, namely latitude and longitude. This line is a line that does not exist on the earth's surface but influences Indonesia's astronomical location. Astronomical science in the branches of biological science, such as genetics, biochemistry, and biotechnology, can influence human life in the development of technology and knowledge.

The influence of astronomy on world civilization can be seen through various astronomical phenomena that will occur during 2024, such as a total solar eclipse, the alignment of planets, the emergence of new star nests, global boiling, and more extreme weather.

IV. Conclusion

Astronomy in the global world can be seen through various astronomical phenomena that will occur during 2024, such as a total solar eclipse, the alignment of planets, the emergence of new star nests, global boiling, and more extreme weather. A total solar eclipse will produce a beautiful view when viewed from Earth, which can become a tourist activity and expedition to chase the eclipse. The alignment of the planets will produce a beautiful view when viewed from Earth, which can become a tourist activity and expedition to pursue planetary conjunctions. The emergence of new star nests or star nurseries will allow scientists to study the mysterious things happening in the Antenna region. Astronomical phenomena that occurred in April 2024 such as Solar Eclipse to meteor shower, Total Solar Eclipse on

April 8, 2024, and Lyrid meteor shower on April 21-22, 2024. Apart from that, there are also rare astronomical phenomena such as the alignment of planets, the emergence of new star nests, global boiling, and more extreme weather. Scientists and astronomy enthusiasts in Indonesia and internationally will collect the latest information about astronomical phenomena in 2024 and share information through various sources, such as websites, social media, and observatories.

Global warming and more extreme weather will affect world civilization, including increasing global temperatures, increasing daily and monthly temperatures, and more extreme weather. The schedule of astronomical phenomena that will occur in 2024 will also increase the interest and happiness of scientists and astronomy fans. The global urgency of astronomy in 2024 can affect world civilization in various ways, such as increasing global temperatures, increasing daily and monthly temperatures, total solar eclipse, and alignment of planets.

Increasing global temperatures, increasing daily and monthly temperatures, and more extreme weather will affect world civilization in various ways. Rising global temperatures will bring hotter conditions in some regions, which will affect agriculture, health, and the environment. Increasing daily and monthly temperatures will affect human health because it can cause dehydration, lung disease, and other health problems. More extreme weather, such as heavy rain, heavy rain, and direct rain, will affect infrastructure, roads, and the environment.

The global urgency of astronomy in 2024 could affect world civilization in various ways, such as increasing global temperatures, increasing daily and monthly temperatures, a total solar eclipse, the alignment of planets, and the emergence of new star nests.

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