

**TSUROYYA'S STAR AS A SIGN OF PANDEMIC'S END
(Critical Study of The End of a Pandemic From Hadith And Astronomical
Perspective)**

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Abstrak

Semenjak awal tahun 2020 kita disibukkan menghadapi pandemi covid-19. Banyak pola dan tatanan kehidupan yang berubah. Mulai dari kegiatan ritual peribatan sampai dengan aktifitas sehari-hari. Lamanya pandemi ini membuat banyak kalangan memunculkan prediksi kapan pandemi ini berakhir. Diantara prediksi akhir pandemi yang muncul yakni ketika terbitnya bintang Tsurouyya. Prediksi ini muncul berdasarkan pembacaan terhadap hadist yang menjelaskan tentang 'ahah. Tulisan ini bertujuan untuk mengkaji bagaimana prediksi akhir pandemi covid-19 ini dilihat dari pemahaman hadist yang komprehensif serta kondisi yang melatar belakangi turunya hadist tersebut. Selain itu, karena yang dijadikan petunjuk adalah bintang Tsurouyya, maka prespektif dari ilmu astronomi juga akan diketengahkan. Penelitian ini memakai metode kolaborasi antara library research dan field research. Literatur hadist tentang bintang tsurouyya sebagai akhir akhir 'ahah dikumpulkan, termasuk bagaimana pendapat muhaddist dan sudut pandang astronomi dalam hal ini. Kemudian prediksi tersebut diuji verifikasi dari pandangan astronominya dengan field research. Dari penelitian ini ditemukan bahwa opini yang berkembang secara liar di public tentang akhir pandemi dilihat dari munculnya bintang tsurouyya dari prespektif hadist kurang tepat. Karena maksud dari kata 'ahah dalam hadist lebih merujuk ke hama yang menyerang tanaman, bukan hewan ataupun manusia, sehingga kurang tepat bila diartikan sebagai pandemi. Dari prespektif astronomi, terbitnya bintang tsurouyya ini terjadi pada tanggal 15 Juni 2020. Ini merupakan siklus tahunan yang pasti terjadi. Terbitnya bintang tsurouyya ini menjadi penanda awal musim panen buah kurma di Arab.

Keywords : Bintang Tsurouyya, Akhir Pandemi, Prespektif Hadist, Astronomi

A. Introduction

At the beginning of 2020, the world was shocked by the incidence of severe infections with unknown causes. This stems from China's report to the World Health Organization (WHO). There are 44 severe pneumonia patients in an area Wuhan City, Hubei Province, China, to be precise on the last day of 2019 China. Initial allegations were related to wet markets selling fish, sea animals and various

other animals. Precisely on January 10, 2020 the cause began to be identified and the code of the ethical gene was obtained, namely the new corona virus.¹

Subsequent research has shown a close relationship with the corona virus that causes Severe Acute Respiratory Syndrome (SARS) which plagued Hong Kong in 2003. Finally, WHO named it the novel corona virus (nCoV-19). Not long after, reports emerged from other provinces in China and even outside China, namely people with travel history from the city of Wuhan and China. They come from South Korea, Japan, Thailand, United States of America, Macau, Hong Kong, Singapore, Malaysia and 25 other countries including France, Germany, United Arab Emirates, Vietnam and Cambodia. The threat of a pandemic is getting bigger when various cases show human to human transmission to doctors and medical personnel who treat patients even though there is no history of traveling to closed markets.²

Another report showed that there was transmission in accompanying Chinese tourists visiting Japan, along with other evidence of transmission in household contacts outside of China. Human to human transmission has resulted in an extraordinary increase in the number of cases. Until the end of January 2020, there was an increase of 2000 confirmed cases within 24 hours. Finally, at the end of January 2020 WHO determined the Global Emergency status for this Corona virus case and on February 11, 2020 WHO named it as COVID-19.³

According to the WHO's weekly data release, in the last 7 days to November 3, 2020, WHO recorded 3,355,265 new cases in the world, with the death rate reaching 45,051. That way, if it is accumulated as a whole, starting from the beginning of the occurrence of Covid-19, there have been 45,968,799 cases with an accumulated death of 1,192,911 people. This is certainly not a small amount. In Indonesia alone, up to November 3, 2020, there were a total of 410,088 cases with an accumulated death toll of 13,869 people. In the last 7 days before November 3, 2020, there were 24,108 cases of additional cases in Indonesia with a risk of death of 664 people.⁴

This certainly has quite a radical effect not only on health issues,⁵ but also on economic, political, environmental⁶ and religious life issues.⁷ From an economic

¹ Diah Handayani et al., "Penyakit Virus Corona 2019," *Jurnal Respirologi Indonesia* 40, no. 2 (2020): 119-29.

² Ibid.

³ Ibid.

⁴ World Health Organization, "Weekly Epidemiological Update on COVID-19," 2020, <https://www.who.int/docs/default-source/coronaviruse/situation-reports/20201012-weekly-epi-update-9.pdf>.

⁵ Zainun Nur Hisyam Tahrus, "Dunia Dalam Ancaman Pandemi: Kajian Transisi Kesehatan Dan Mortalitas Akibat Covid-19," *Research Gate*, 2020.

perspective, Wibowo Hadiwardoyo said that Indonesia's economic growth in 2020, which was originally estimated at 5.3%, was corrected as a result of the Corona pandemic. Some people predict growth below 2% given the uncertainty and different predictions, as well as fluctuations in the USD exchange rate. The USD exchange rate saw a drastic increase to IDR 16,000/USD in early April 2020.⁸

In terms of religion, Covid-19 has an effect on emerging religious activities. MUI and major religious organizations such as NU and Muhammadiyah, issued fatwas on closing masjid for congregational activities in the red zone where the potential for transmission is quite high, while waiting for the path of science to resolve the cure for the Corona virus. In some places it is advisable to keep your distance even during congregational prayers. this is a strange thing to do in normal conditions.⁹

In terms of politics, the existence of this pandemic has raised a discourse for the simultaneous postponement of Pilkada which will be held at the end of 2020. The campaign was carried out by still paying attention to health protocols.¹⁰

The magnitude of the effects caused by this pandemic has prompted the government to take a stand. starting from appeals for social distancing, wearing masks, washing hands with soap, increasing endurance, consuming balanced nutrition,¹¹ managing comorbid diseases and paying attention to vulnerable groups as well as clean and healthy living habits.¹²¹³

Regarding this, the public has different responses in response to Covid-19. Some don't really care.¹⁴ But there are also those who are so serious about

⁶ Marco Capelli and Francesco Conserva, "The rsEnvironmental Sustainability at the Time of COVID-19 Pandemy: An Holistic Approach through LEED @ v4 BD+C Rating System," *Preprint*, no. May (2020), doi:10.13140/RG.2.2.24299.90407.

⁷ János Besenyő and Marianna Kármán, "Effects of COVID-19 Pandemy on African Health, Political and Economic Strategy," *Insights into Regional Development* 2, no. 3 (2020): 630–44, doi:10.9770/ird.2020.2.3(2).

⁸ Wibowo Hadiwardoyo, "Kerugian Ekonomi Nasional Akibat Pandemi Covid-19," *BASKARA: Journal of Business & Entrepreneurship* 2, no. 2 (2020): 83–92.

⁹ Dadang Kuswana, Bambang Qomaruzzaman, and Masmuni Mahatma, "Agama Dan Wabah: Tanggapan Ulama Jawa Barat Atas Covid-19 Tahun 2020," *UIN Sunan Gunung Djati Bandung*, 2020.

¹⁰ Ririn Noviyanti Putri, "Indonesia Dalam Menghadapi Pandemi Covid-19," *Jurnal Ilmiah Universitas Batanghari Jambi* 20, no. 2 (2020): 705–9.

¹¹ Gugus Tugas Covid-19, "Protokol Percepatan Penanganan Pandemi Covid-19 (Corona Virus Disease 2019)," vol. 1, 2020, [https://covid19.go.id/storage/app/media/Protokol/Protokol Percepatan Penanganan Pandemi Corona Virus Disease 2019.pdf](https://covid19.go.id/storage/app/media/Protokol/Protokol%20Percepatan%20Penanganan%20Pandemi%20Corona%20Virus%20Disease%202019.pdf).

¹² International Labour Organization ILO, *In the Face of a Pandemic: Ensuring Safety and Health at Work*, 2020, https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_742463.pdf <https://www.dgs.pt/saude-ocupacional/documentos-so/oit-campanha-sst-2020-pdf.aspx>.

¹³ Tri Widjaja, Melania Suweni Muntini, and Totok Suhartanto, "Mensikapi Tata Kehidupan Baru Di Masa Pasca Pandemi Covid-19 Melalui Green Healthy Building," n.d.

¹⁴ Handayani et al., "Penyakit Virus Corona 2019."

following its developments.¹⁵¹⁶ then came the prediction of the end of this covid-19 pandemic. Information is growing wildly on social media. FransiscusRianPratikto in the Journal of Industrial Systems Engineering Volume 9 No 2 - July 2020 (Special Edition for COVID-19) predicts the end of the COVID-19 Pandemic in Indonesia with simulations based on parametric growth models. It was found that according to the modified Gompertz model the pandemic will end between 9 March - 7 September 2021 at the level of total cases / million population between 206 and 555. Meanwhile, according to the logistical model, the pandemic will end between 28 August - 23 September 2020 at the level of total cases / million inhabitants between 180 and 375.¹⁷

In addition, other predictions emerged about the end of Covid-19. This second group claims its opinion with the legality of the hadiths about 'ahah. They understand that Covid-19 will end when the Tsurayya star rises in the morning. This second prediction is what we will examine in more depth in this paper, both from the sharah hadith approach and from an astronomical perspective.

Previously there have been several studies that have emerged on this theme. In the case of Pandemic, Yuliana is in Corona virus diseases (vovid-19); A literature review explains that Covid is a new virus that can be diagnosed from common symptoms such as fever, cough and difficulty breathing.¹⁸ Meanwhile, DiahHandayani in Corona Virus Disease 2019 explained that the COVID-19 infection caused by the new corona virus is a new pandemic with a very fast spread between people. The degree of disease can vary from upper respiratory tract infections to acute respiratory distress syndrome (ARDS). Until now, there is no specific antiviral therapy and no vaccine for COVID-19 has been found. It needs development on various matters including prevention around the world.¹⁹

As for the effects of the pandemic, JánosBesenyő in Effects Of Covid-19 Pandemy On African Health, Political And Economic Strategy, explained that Africa is in a difficult condition in facing this pandemic, not only in terms of health but also politically and economically.²⁰ In addition, other research by WibowoHadiwardoyo focuses more on highlighting the National Economic

¹⁵ Hari Santoso, "Tentang Wabah Penyakit Menular," *Badan Pembinaan Hukum Nasional Departemen Kehakiman Dan Hak Asasi Manusia RI*, 2005, 1-44.

¹⁶ Ni Putu Emy Darma Yanti et al., "Gambaran Pengetahuan Masyarakat Tentang Covid-19 Dan Perilaku Masyarakat Di Masa Pandemi Covid-19," *Jurnal Keperawatan Jiwa* Vol. 8 No., no. 3 (2020): 485-90.socia

¹⁷ Fransiscus Rian Pratikto, "Prediksi Akhir Pandemi COVID-19 Di Indonesia Dengan Simulasi Berbasis Model Pertumbuhan Parametrik," *Jurnal Rekayasa Sistem Industri* 9, no. 2 (2020): 63-68.

¹⁸ Yuliana Yuliana, "Corona Virus Diseases (Covid-19): Sebuah Tinjauan Literatur," *Wellness And Healthy Magazine* 2, no. 1 (2020): 187-92.

¹⁹ Handayani et al., "Penyakit Virus Corona 2019."

²⁰ Besenyő and Kármán, "Effects of COVID-19 Pandemy on African Health, Political and EconomiWWc Strategy."

Losses Due to the Covid-19 Pandemic. Wibowo said that the national losses due to this pandemic were quite large. The state needs to come up with the right policies, both in terms of location, time and procedure.²¹ The United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the latest report regarding the impact of covid on the world of education. It was stated that with the existence of Covid-19 there were many lessons that could be taken. Among them is the need for the readiness of all parties to run the education system in accordance with the times and technology.²²

Meanwhile, related to AnggiaValerish and MarshellAdi Putra's pandemic data in the Global COVID-19 Pandemic and the Problems of the Nation-State: Data Transparency as a Socio-digital Vaccine? Examining the problems faced by the nation-state regarding data transparency and why data transparency can be called a 'socio-digital vaccine' to prevent the spread of the coronavirus. This paper is based on the argument that, although data is part of the digital spectrum, how the government treats data, whether it is transparent or not, still has an impact on the social and political aspects of the nation and state.²³

In addition, there are those who study the relationship between the Covid pandemic in religious discourse. DadangKuswana, et al in Religion and Plague (West Java Ulama Response to Covid 19 of 2020) found that West Java scholars, who became research informants, showed the orientation of the Asyariyah theodetic conception such as Al-Ghazali and Jalaluddin Rumi's thinking models. In addition, this research also shows several findings regarding the need for religion to complement its authority in the area of life science.²⁴

Then Muhammad NurulWathoni&Nursyamsu in Tafsir Virus (FauqaBa'ūdḥah: Correlation of Covid-19 with Allah's Verses) then explained 3 things. First, according to modern interpreters, fauqabaūdḥah is defined as germs and viruses. Second, modern science has proven that something that is taken for granted, such as a virus, can actually deliver signs of God's great power. Third, humans are classified as two in responding to Covid-19, namely the attitude of underestimating the corona virus so that it does not take lessons from the pandemic disaster and the attitude of muhasabah himself to get closer to Allah and

²¹ Hadiwardoyo, "Kerugian Ekonomi Nasional Akibat Pandemi Covid-19."

²² Diane B. Wayne, Marianne Green, and Eric G. Neilson, "Medical Education in the Time of COVID-19," *Science Advances* 6, no. 31 (2020), doi:10.1126/sciadv.abc7110.

²³ Anggia Valerisha and Marshell Adi Putra, "Pandemi Global COVID-19 Dan Problematika Negara-Bangsa: Transparansi Data Sebagai Vaksin Socio-Digital?," *Jurnal Ilmiah Hubungan Internasional*, 2020, 131-37.

²⁴ Kuswana, Qomaruzzaman, and Mahatma, "Agama Dan Wabah: Tanggapan Ulama Jawa Barat Atas Covid-19 Tahun 2020."

follow the directions of religious and government figures in dealing with Covid-19.²⁵

As for the tsuroyya star or what is also called the pleiades, Amelia Sparavigna in *The Pleiades: the celestial herd of ancient timekeepers*²⁶ explained that in ancient Egypt, there was a myth about the pleiades. The appearance of the pleiades is marked as a special time. NASA made a release about its observations regarding the pleiades. In this case, the facts related to the pleiades are shown. It was also stated that pleiades is not a litte dipper star.²⁷

Meanwhile, regarding the prediction of the end of the pandemic, Fransiscus in *Predicting the End of the COVID-19 Pandemic in Indonesia with a Parametric Growth Model-Based Simulation* stated that according to the modified Gompertz model or logistic model, the pandemic will end in September.²⁸ Meanwhile, according to Zohair Malki, et al in *ARIMA Models for Predicting the End of COVID-19 Pandemic and the Risk of a Second Rebound*, it was revealed that there is a possibility that Covid-19 will reappear in the second wave this year.²⁹

The research that we will take up here is to examine the recent issues regarding the prediction of the end of Covid-19, marked by the rising of the Tsuroyya star.

B. Method

The author examines it with a combination of library research and field research with a critical analysis approach. Library research was conducted by the author to see the context of understanding the end of a pandemic from the perspective of the hadiths and muhaddist explanations. With a critical analytical approach, the writer will comprehensively look at the text of the hadiths and the context in which these hadiths were derived. Meanwhile, the author used field research to verify the truth of the end of the pandemic seen from the rising of the Tsuroyya star. Is it true that when the Tsuroyya star rises, the pandemic will end.

C. Discuss and Result

C.1. Pandemic and Community Response in Facing Them

Pandemic is a level of disease based on its spread. In general, there are three levels of disease that are known in the world of epidemiology, namely endemic,

²⁵ Lalu Muhammad nurul Wathoni, "TAFSIR VIRUS (FAUQA BA'ÜDHAH): KORELASI COVID-19 DENGAN AYAT-AYAT ALLAH," *El-Umdah* 3, no. 1 (2020): 63–84.

²⁶ Amelia Sparavigna, "The Pleiades: The Celestial Herd of Ancient Timekeepers," *History and Philosophy of Physics*, no. September (2008), <http://arxiv.org/abs/0810.1592>.

²⁷ National Aeronautic and Space Administration, "Pleiades Star Cluster," 2013, <https://nightsky.jpl.nasa.gov/docs/DiscoveryMarch.pdf>.

²⁸ Pratikto, "Prediksi Akhir Pandemi COVID-19 Di Indonesia Dengan Simulasi Berbasis Model Pertumbuhan Parametrik."

²⁹ Zohair Malki et al., "ARIMA Models for Predicting the End of COVID-19 Pandemic and the Risk of Second Rebound," *Neural Computing and Applications*, 2020, 1–20.

epidemic, and pandemic. The Center for Disease Control and Prevention (CDC) defines each of these three levels of disease: endemic is the constant presence of an infectious disease in a population within a certain area, epidemic is an increase in the number of disease cases, often suddenly, above the the normal limit predicted for the population in an area, whereas a pandemic is an epidemic that has spread to several countries and continents with a massive number of infections.³⁰

The announcement of COVID-19 as a pandemic on March 11, 2020, indicates that the disease has infected so many populations in various countries. Data from John Hopkins University & Meidicine Coronavirus Resource Center as of March 25, 2020 shows that the transmission of COVID-19 has infected 175 countries with a transmission rate of 425,493 cases.³¹

World Health Organization divides COVID-19 into suspect, probable and confirmed cases, while the Ministry of Health of the Republic of Indonesia (Kemenkes RI) classifies them into people under surveillance (ODP), patients under surveillance (PDP), people without symptoms (OTG) and the patient was confirmed if the RT-PCR COVID-19 result was positive with any symptoms. Examination materials include throat swabs, sputum and bronchoalveolar lavage (BAL). Until now, there is no specific antiviral and vaccine, so supportive therapy is given according to the degree of disease. The spread of disease is known through droplets and contact with droplets. The prognosis of the patient is according to the degree of disease, a mild degree of upper respiratory tract infection is generally a good prognosis, but if there is acute respiratory distress syndrome (ARDS) the prognosis is poor, especially if accompanied by comorbidities, elderly and has a history of previous lung disease. The main prevention as well as management is the isolation of cases to control the spread. Research is still needed to deal with the threat of this new virus pandemic.³²

In Indonesia, as of March 2, 2020, the first two cases of COVID-19 entered Indonesia.³³ In just three weeks, until March 25, 2020, there have been 790 cases in Indonesia (John Hopkins University, No Year). This figure shows that COVID-19 is spreading so fast in Indonesia. As of November 3, 2020, there were a total of 410,088 cases with an accumulated death of 13,869 people.

³⁰ US Departement of Health and Human Service, *Principle of Epidemiology in Public Health Practice, Parkes' Occupational Lung Disorders, Fourth Edition*, 2012, doi:10.1201/9781315381848.

³¹ John Hopkins University and Medicine, "COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University," n.d., <https://coronavirus.jhu.edu/map.html>.

³² Handayani et al., "Penyakit Virus Corona 2019."

³³ Ihsanuddin, "Fakta Lengkap Kasus Pertama Virus Corona Di Indonesia," n.d., <https://nasional.kompas.com/read/2020/03/03/06314981/fakta-lengkap-kasus-pertama-virus-corona-di-indonesia?page=all>.

The high number of COVID-19 outbreaks in Indonesia has generated mixed responses among the community. Among the responses that emerged was about predicting the end of the Covid-19 Pandemic.

C.2. Pandemic End Prediction

There are 4 predictions that arise regarding when the Covid-19 pandemic will end.

1) October 2020

This prediction was carried out by Zohair Malki, et al. They used Auto Regressive Integrated Moving Average (ARIMA) modeling. The ARIMA is a statistical and econo-metric famous model that is applicated in the time-series analysis related to understand the data or to predict future points in the series. In addition, they also compare the results of ARIMA modeling with the State of the Art model. They took 5 country samples by identifying the dynamics of the suspect data. From this ARIM modeling, it was found that in these 5 countries, Covid-19 is predicted to end 100% in October.³⁴

Countries	The state-of-the-art models [13]			The proposed model		
	Turning Date	End 99%	End 100%	Turning Date	End 99%	End 100%
France	3-Apr-20	18-May-20	5-Aug-20	01-Jan-2020	27-Sep-2020	13-Oct-2020
Italy	29-Mar-20	21-May-20	25-Aug-20	08-Jan-2020	14-Sep-2020	01-Oct-2020
United States	10-Apr-20	24-May-20	27-Aug-20	30-May-2020	01-Oct-2020	15-Oct-2020
Russia	24-Apr-20	28-May-20	20-Jul-20	08-Jan-2020	14-Sep-2020	01-Oct-2020
United Kingdom	12-Apr-20	27-May-20	14-Aug-20	08-Jan-2020	14-Sep-2020	01-Oct-2020

Table 1. ARIMA Modeling on Pandemic End Prediction

2) Between 9 March - 7 September 2021

Fransiscus predicts the end of this pandemic by using the modified Gompertz growth model analysis. According to the modified Gompertz model, the pandemic will end between March 9 - September 7, 2021 at a level of total cases per million population between 206 and 555. going through all phases of growth. The analysis of the modified Gompertz growth model is considered to have a higher suitability value than the logistic model that will be described below.³⁵

3) Between 28 August - 23 September 2020

This prediction was also conveyed by Fransiscus using the Logistics model. This model has 3 parameters, namely a representation of the maximum possible value, a representation of the maximum growth rate, and a representation of the time interval before growth occurs (lag phase). Based on this logistical model, it is

³⁴ Malki et al., "ARIMA Models for Predicting the End of COVID-19 Pandemic and the Risk of Second Rebound."

³⁵ Pratikto, "Prediksi Akhir Pandemi COVID-19 Di Indonesia Dengan Simulasi Berbasis Model Pertumbuhan Parametrik."

predicted that the pandemic will end between 28 August - 23 September 2020 at a level of total cases per million population between 180 and 375.

4) The Time of Tsuroyya Star Rising

This prediction emerged among Indonesian society after referring to several hadiths about 'ahah. They understand 'ahah in the hadith as a disease that afflicts humans, so they interpret it as a pandemic. It is stated in the hadith that 'ahah will be raised by Allah SWT from all countries when the Tsuroyya star has risen in the morning. So from here they are busy predicting when the Tsuroyya star will rise. It is this aspect of doctrine that makes them more determined to predict this.

C.3. Tsuroyya Star in an Overview of Astronomy and Mythology

In astronomical views, a Tsuroyya star is called a Pleiades star. Pleiades are also known as Seven Sisters. This open cluster is located in the constellation Taurus. These stars are one of the closest star clusters and are most clearly visible to the naked eye. The brightest stars of the cluster are named the Seven Sisters in Greek mythology.³⁶

Due to their high visibility, these stars received a special place in many ancient cultures. They are the winter star in the Northern Hemisphere and the summer star in the Southern Hemisphere: we can say that these stars have been known since ancient times, by several cultures around the world, including the Maori and Aboriginal people of Australia, Chinese, Maya and Aztecs and Native Americans of North America. The Pleiades begin to shine on the horizon and set in the West, during October-November, the perfect time of year in the Mediterranean region, for plowing and sowing of the land. As the leading star of the Greek agricultural calendar, Hesiod, the poet who lived around 700 BC, mentioned the Pleiades several times in his poem, *The Works and Days*.³⁷ In Indonesia, especially Java people mark the planting season when the height of the Tsuroyya star in the morning is around 50 degrees from the horizon.

In the encyclopedia britannica, it is stated that the Pleiades (catalog number M45) is an open cluster of young stars in the zodiacal constellation Taurus, about 440 light years from the solar system. It contains a large amount of bright misty material and more than 1,000 stars. It's just that there are only six or seven stars that can be seen with the naked eye so that they are prominent in myths and literature in many cultures. When the Pleiades rises before dawn, it indicates that

³⁶ Sparavigna, "The Pleiades: The Celestial Herd of Ancient Timekeepers."

³⁷ Ibid.

the northern hemisphere has entered spring. In ancient times, it was also used to mark the opening of the sailing and agricultural seasons. Because of the importance of the pleiades in marking this season, the South American Indians used the same word for "pleiades" and "year."³⁸

In a mythological perspective, there are various interpretations of the pleiades. Interpretation of these stars in local mythology varies. However, a rather common element is their feminine nature. For example, In one of the Maori traditions. The Maori name for this star cluster is Matariki. Matahariki is a mother with six daughters.³⁹ The Sioux tribe in North America has a legend connecting the origins of the Pleiades to the Tower of the Devil. The stars were originally seven women who were being chased by a bear. They prayed to the gods to lift the land they lived on high into the air, to save them from the bears. The girls then transformed into the Pleiades stars.⁴⁰

In Greek myth, several Olympian gods were engaged to seven heavenly sisters. Merope, one of the youngest of the seven Pleiades, married Sisyphus so he eventually became mortal and disappeared. That's how the myth explains why in the Pleiades star cluster only six stars are shining brightly and one is shining gloomily. In Hindu mythology, the Pleiades are believed to be the six wives of six wise men. The numbers are not fixed but change in the myth between six and seven.⁴¹

C.4. Tsurroya's Stars as the End of The Pandemic

The attraction of the Tsurroya star did not end with the myths of the past. Recently, when the Covid-19 pandemic emerged, the appearance of the Tsurroya star in the morning, was considered a marker of the end of the Covid-19 pandemic. This discussion is widely discussed on social media, both Facebook and YouTube, and has been shared a lot on the WhatsApp group. For example, a fb account named Ikhwanoe wrote:⁴²

“ Covid19 VS Lintang Kerti

³⁸ The Editors of Encyclopaedia Britannica, "Pleiades," n.d., <https://www.britannica.com/place/Pleiades-astronomy>.

³⁹ Nicholas Herriman, "Stars in the Sky: Pleiades, Matariki, Mahahiki, Seven Sisters, Subaru," n.d., https://www.academia.edu/3746023/Stars_in_the_Sky_Pleiades_Matariki_Mahahiki_Seven_Sisters_Subaru.

⁴⁰ Sparavigna, "The Pleiades: The Celestial Herd of Ancient Timekeepers."

⁴¹ Ibid.

⁴² Ikhwanoe, "Covid 19 VS Lintang Kerti," n.d., https://m.facebook.com/story.php?story_fbid=1559159177567485&id=100004202533749.

Pandemi kali ini mendorong beberapa golongan untuk mengkaji hal tersebut terlebih aliran sosmediyah, saya angkat satu contoh dalam hal ini yang saya dapatkan dari firqoh whatshaapiyah mengenai hilangnya covid-19.

إِذَا ارْتَفَعَ النَّجْمُ رُفِعَتِ الْعَاهَةُ عَنْ أَهْلِ كُلِّ بَلَدٍ

“Jika Bintang (Najm) naik, maka diangkatlah penyakit/virus dari penduduk seluruh negeri” (HR. at-Thabrani)

إِذَا طَلَعَ النَّجْمُ صَبَاحًا رُفِعَتِ الْعَاهَةُ عَنْ أَهْلِ كُلِّ بَلَدٍ

“Jika Bintang (Najm) terbit pada pagi hari, maka diangkatlah penyakit/virus dari penduduk seluruh negeri” (HR. Abu Daud)

مَا طَلَعَ النَّجْمُ قَطُّ وَفِي الْأَرْضِ مِنَ الْعَاهَةِ شَيْءٌ إِلَّا رُفِعَ

“Tidaklah terbit Bintang (Najm), sementara di bumi tengah dilanda penyakit/virus, melainkan (penyakit/virus) itu diangkat” (HR. Ahmad)

Al-Hafidz Ibnu Hajar al-‘Asqalani dalam kitab “Badzl al-Ma’un” nya menyatakan (Hal. 369) :

وكانت الطواعين الماضية تقع في فصل الربيع بعد انقضاء الشتاء وترتفع في أول الصيف

"Wabah (Tho'un) pada masa lalu, terjadi pada Musim Semi, setelah berakhirnya Musim Dingin. Wabah berakhir di permulaan Musim Panas".

Jadi kapan berakhirnya Wabah Virus Covid-19 ini? Tanggal 7 Juni 2020. Waktu yang paling cepat munculnya Tsurayya adalah setelah melewati setengah perjalanannya, yakni 6 hari. Yang itu berarti tanggal 13 Juni. Tanggal inilah (13 Juni) waktu yang kemungkinan Tsurayya terlihat muncul pada pagi hari atau waktu fajar. Sekaligus tanggal inilah (13 Juni), virus yang mewabah ini baru (mulai) terangkat dan hilang. Sabda Sang Baginda pasti benarnya. Yang berpeluang salah adalah perhitungan dan penafsiran saya. Atau keduanya benar, tapi Allah yang Maha Pengasih Maha Penyayang, berkenan menghilangkannya di waktu yang tidak sampai bulan Juni, semoga. (Irfan Zidni Wahab al-Hasib)

Messages like this are widely spread in the WA group, status from Facebook to YouTube in roughly the same language with the names of different authors.

C.5. Interpretation of the Hadist about 'Ahah

If we examine further, from several hadiths in circulation, there are 3 things that need to be clarified in this matter, namely about the meaning of najm, shobah and 'ahah.

1. An- Najm

Etymologically, Najm means star. The Javanese call it *lintang* or *kartika*. The existence of al in the editorial of the word an-najm refers to one thing that is well known. Muhammad Zakariya al-Madani in the book *Aujaz al-Masalik*, made

it clear that what is meant by najm here is najm as-suroyya. ⁴³This an-najm editorial is also used in one of the surahs in the al-Qur'an. Al-Baghowi understands the meaning of an-najm here is the star Tsurooyya. ⁴⁴

In the explanation of the book *Muwattho* ', interestingly, this hadith about the Tsurooyya star is not included in the discussion of pandemics. But in the discussion about buying and selling fruit. It was stated that we were not allowed to buy and sell fruit until after the Tsurooyya star appeared. This prohibition is not solely ta'abbudi ghoiru ma'qul al-ma'na. There is an 'illat hukmi' that can be withdrawn in relation to this prohibition, namely that the sale and purchase of fruit is not allowed as long as it does not appear ripe or fit for consumption. It is clear that in the Arabian Peninsula, the rising of the Tsurooyya star is used to mark the freedom of fruits from pests, because usually when the Tsurooyya star appears, the pests that attack the fruits will disappear. ⁴⁵

2. *Shobah*

Etymologically, *Shobah* means morning time. Indonesians understand that morning is the time after sunrise until noon. ⁴⁶ In the Big Indonesian Dictionary (KBBI) morning is also referred to as the beginning of the day. ⁴⁷ However, seen from the terminology in Arabic, *shobah* in this context has a different meaning from morning. Zakariya al-Madani in this hadith states that what is meant by *shobah* here is at dawn or the dawn of the shodiq. ⁴⁸ So that in predicting the rising of the Tsurooyya star later, it is at the time of the dawn of the shodiq, not when the sun rises or other times, because within a certain period of time, the Tsurooyya star will always rise, either in the morning, during the day or at night.

3. *'Ahah*

Etymologically, oral al-arab reveals that '*ahah* is a kind of disease that can afflict plants, animals or animals. This is also mentioned in mu'jam al-ghoni. ⁴⁹ But in mu'jam al-arobiyyah al-mu'ashiroh ⁵⁰ and mu'jam al-roid ⁵¹, '*ahah* is more

⁴³ Zakariya Al-Madani, *Aujaz Al-Masalik Ila Muwattho' Malik* (India: Sheikh Abul Hasan Nadwi Center, 2003). 401

⁴⁴ Muhammad Husain Al-Baghowi, *Tafsir Al-Baghowi* (Beirut: Dar At-Thoyyibah, 1990).

⁴⁵ Al-Madani, *Aujaz Al-Masalik Ila Muwattho' Malik*.

⁴⁶ Badan Pengembangan dan Pembinaan Bahasa, "(KBBI), Kamus Besar Bahasa Indonesia Jaringan), Kamus Versi Online/Daring (Dalam," n.d., <https://kbbi.web.id/pagi>.

⁴⁷ Ibid.

⁴⁸ Al-Madani, *Aujaz Al-Masalik Ila Muwattho' Malik*.

⁴⁹ Abdul Ghoni, "Mu'jam Al-Ghoni," 2001, <https://www.almougem.com/search.php?query=عاهة>.

⁵⁰ Ahmad Mukhtar Umar, "Al-Arobiyyah Al-Mu'ashiroh," n.d., <https://www.almougem.com/search.php?query=عاهة>.

synonymous with diseases that afflict plants and animals, not for humans. Abu Ja'far at-Thohawi in *Syarah Musykil al-Atsar* states that what is meant by 'ahah in this context is a pest that attacks plants or fruits during the season and will end in summer. Arabs in this case often mark the beginning of summer as a sign of the end of pest infestation with the phenomenon of the rising star of the Tsuroyya.⁵²

When analyzed from the cause of the decline or the context in which the hadiths fell, it is completely unrelated to the pandemic. In one of his narrations, Ibn Umar mentions the context in which this hadith was derived. Rasulullah at that time prohibited Ibn Umar from carrying out fruit buying and selling transactions until the loss of pests on the fruits. Then Ibn Umar asked, "When did that happen?". Rasulullah answered him, "that is, when the Tsuroyya star appeared." Fiqh Scolar then prohibited the sale and purchase of fruit transactions unless they looked ripe or fit for consumption. One of the indicators that the fruit is fit for consumption is when it is safe from 'ahah (pests). And a sign that pests are no longer attacking is when the tsuroyya star appears. It also signifies the end of winter and the start of summer.

From this context, it can be concluded that the purpose of the rising of the Tsuroyya star in the above hadiths is not to explain when the pandemic that befell humans will end. This only explains about the indicator of the arrival of summer which is a sign of the end of a pest attack, so that fruits can be traded.

C.6. Verification of the End of Pandemic Prediction with Tsuroyya Star

Apart from the hadith approach, the author will also analyze it from an astronomical approach in order to verify this astronomical phenomenon. In this case, the author will simulate when the Tsuroyya star rises at dawn Shodiq, and when the Tsuroyya star will set at dawn shodiq by using the Stellarium application. In this simulation, the author uses the markaz example in Jakarta. As for the calculation of the dawn of the dawn or it can be called the beginning of the dawn prayer time using a calculation application based on the *Irsyadul Murid* book.

⁵¹ Jabron Mas'ud, "Mu'jam Ar-Roid," 1965, <https://www.almougem.com/search.php?query=عاهة>.

⁵² Abu Ja'far At-Thokhawi, *Syarah Musykil Al-Atsar*, 1st ed. (Beirut: Mu'assasah ar-Risalah, 1994).

Hisab Waktu Sholat Pada Tahun 1441 s/d 1441 H.

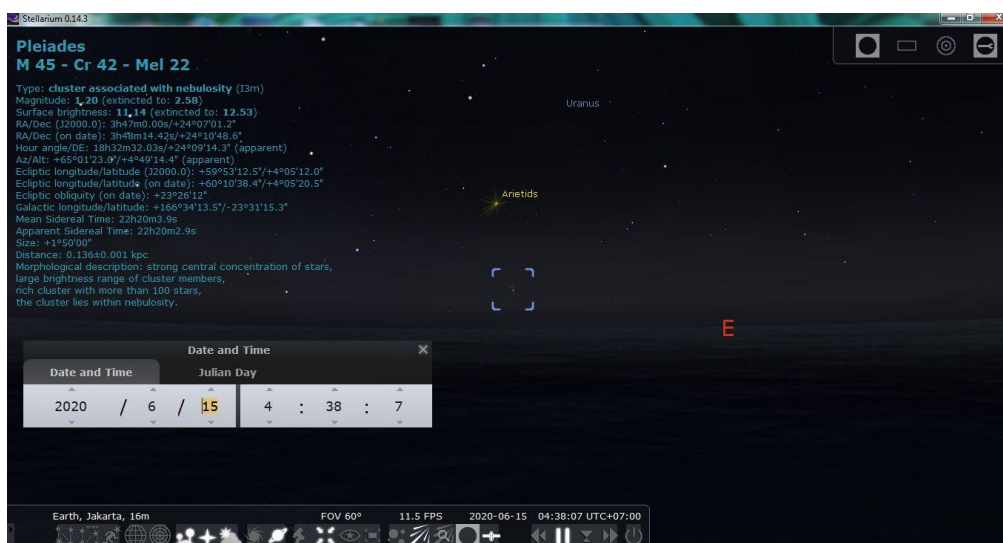
Untuk Kota JAKARTA - INDONESIA. Lintang: 06 10 00.00 (LS), Bujur: 106 49 00.00 (BT). Time Zone = (+) 07, TT = 0

20	Jum'at-Wage	12/06/2020	04° 28' 07"	04° 38' 07"	05° 59' 38"	06° 25' 04"	11° 54' 42"	15° 16' 41"	17° 47' 45"
21	Sabtu-Kliwon	13/06/2020	04° 28' 19"	04° 38' 19"	05° 59' 52"	06° 25' 19"	11° 54' 54"	15° 16' 53"	17° 47' 56"
22	Ahad-Legi	14/06/2020	04° 28' 31"	04° 38' 31"	06° 00' 06"	06° 25' 33"	11° 55' 07"	15° 17' 05"	17° 48' 07"
23	Senin-Pahing	15/06/2020	04° 28' 44"	04° 38' 44"	06° 00' 20"	06° 25' 48"	11° 55' 20"	15° 17' 17"	17° 48' 19"
24	Selasa-Pon	16/06/2020	04° 28' 56"	04° 38' 56"	06° 00' 34"	06° 26' 02"	11° 55' 33"	15° 17' 30"	17° 48' 31"
25	Rabu-Wage	17/06/2020	04° 29' 09"	04° 39' 09"	06° 00' 48"	06° 26' 16"	11° 55' 46"	15° 17' 43"	17° 48' 43"
26	Kamis-Kliwon	18/06/2020	04° 29' 22"	04° 39' 22"	06° 01' 02"	06° 26' 30"	11° 55' 59"	15° 17' 55"	17° 48' 55"
27	Jum'at-Legi	19/06/2020	04° 29' 35"	04° 39' 35"	06° 01' 15"	06° 26' 44"	11° 56' 12"	15° 18' 08"	17° 49' 08"
28	Sabtu-Pahing	20/06/2020	04° 29' 48"	04° 39' 48"	06° 01' 28"	06° 26' 57"	11° 56' 25"	15° 18' 21"	17° 49' 21"
29	Ahad-Pon	21/06/2020	04° 30' 01"	04° 40' 01"	06° 01' 41"	06° 27' 10"	11° 56' 38"	15° 18' 34"	17° 49' 34"
JADWAL WAKTU SHOLAT PADA BULAN DZUL QO'DAH 1441 H									
Tgl	Hari-Pasaran	Masehi	Imsak	Subuh	Terbit	Dluha	Dzuhur	Ashar	Maghrib
01	Senin-Wage	22/06/2020	04° 30' 14"	04° 40' 14"	06° 01' 54"	06° 27' 23"	11° 56' 51"	15° 18' 47"	17° 49' 47"
02	Selasa-Kliwon	23/06/2020	04° 30' 27"	04° 40' 27"	06° 02' 07"	06° 27' 35"	11° 57' 04"	15° 19' 00"	17° 50' 00"
03	Rabu-Legi	24/06/2020	04° 30' 40"	04° 40' 40"	06° 02' 19"	06° 27' 47"	11° 57' 16"	15° 19' 13"	17° 50' 14"
04	Kamis-Pahing	25/06/2020	04° 30' 53"	04° 40' 53"	06° 02' 31"	06° 27' 59"	11° 57' 29"	15° 19' 26"	17° 50' 27"
05	Jum'at-Pon	26/06/2020	04° 31' 06"	04° 41' 06"	06° 02' 42"	06° 28' 10"	11° 57' 42"	15° 19' 39"	17° 50' 41"
06	Sabtu-Wage	27/06/2020	04° 31' 18"	04° 41' 18"	06° 02' 54"	06° 28' 20"	11° 57' 54"	15° 19' 52"	17° 50' 55"
07	Ahad-Kliwon	28/06/2020	04° 31' 31"	04° 41' 31"	06° 03' 04"	06° 28' 31"	11° 58' 06"	15° 20' 05"	17° 51' 08"
08	Senin-Legi	29/06/2020	04° 31' 44"	04° 41' 44"	06° 03' 15"	06° 28' 41"	11° 58' 18"	15° 20' 17"	17° 51' 22"

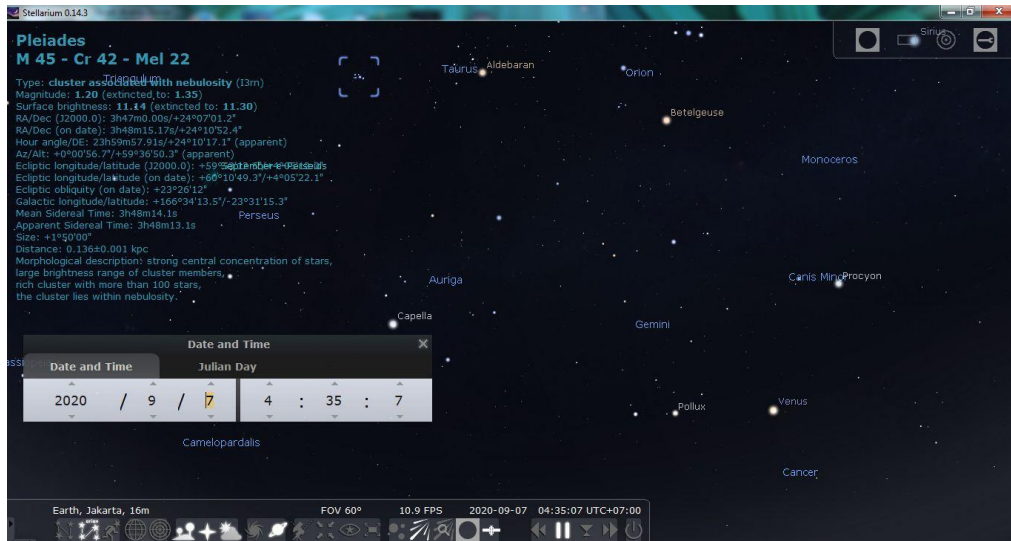
Pic. 1. Subuh Time based on hisab result

From the data above, it is known that for the month of June 2020, the dawn of Sadiq in Jakarta will range from 04.38 - 04.41 WIB.

When viewed from the stellarium application, the rising of the tsuroyya star at dawn of shodiq in Jakarta occurred on June 15, 2020. With an altitude of 2 degrees, it is quite possible to observe the tsuroyya star. Meanwhile, the Tsuruyya star reaches its culmination point at the dawn of Sadiq on September 7, 2020, and the Tsuruyya star will set at dawn Shodiq when December 3, 2020.



Pic 2. *Tsurayya* Star on June 15th, 2020



Pic 3. *Tsurayya* Star on September 7th, 2020



Pic 4. *Tsurayya* Star on December 3rd, 2020

The simulation of the rising of the *Tsurayya* star is then verified with observational data in the field. Based on observations in the field, on June 15, 2020 the *Tsurayya* star has indeed appeared and can be observed with the naked eye. And on June 19, 2020 the image of the *tsuroyya* star was successfully documented. Likewise, on July 27, 2020, when Venus, the Moon and *Tsurayya* star were above the horizon, in close proximity.



Pic.5. *Tsuroyya* Star at June 19th, 2020



Pic.6. *Tsuroyya* Star at July 27th, 2020

After this field verification is carried out, one fact that we can still see together is that the Covid-19 pandemic is still not over. Until this article was

written, the number of suspects for the Covid-19 pandemic was still fluctuating. This proves that the prediction of the end of the Covid-19 pandemic with an indicator of the rising Tsuruyya star from the hadith or astronomical approaches cannot be justified.

D. Conclusion

Based on the above explanation, it can be concluded that the prediction of the end of the Covid-19 pandemic with the indicator of the rising of the Tsuruyya star cannot be justified from both hadith and astronomical perspectives. From the perspective of the hadith, the meaning of the word 'ahah which is widely quoted does not refer to a pandemic that afflicts humans. 'Ahah is more accurately interpreted as a pest that attacks fruits. As for the astronomical approach, the appearance of the Tsuruyya star is predicted on June 15, 2020. And after field verification, the Tsuruyya star has indeed been published, but the Covid-19 pandemic is still not over. This proves that predicting the end of the Covid-19 pandemic with an indicator of the rising Tsuruyya star is incorrect.

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