Accepted Manuscript

Relationship between lightning and solar activity for recorded between CE 1392–1877 in Korea

Junhyeok Jeon, Sung-Jun Noh, Dong-Hee Lee

PII: \$1364-6826(17)30598-9

DOI: 10.1016/j.jastp.2018.03.020

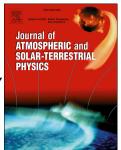
Reference: ATP 4823

To appear in: Journal of Atmospheric and Solar-Terrestrial Physics

Received Date: 24 October 2017
Revised Date: 26 March 2018
Accepted Date: 27 March 2018

Please cite this article as: Jeon, J., Noh, S.-J., Lee, D.-H., Relationship between lightning and solar activity for recorded between CE 1392–1877 in Korea, *Journal of Atmospheric and Solar-Terrestrial Physics* (2018), doi: 10.1016/j.jastp.2018.03.020.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



ACCEPTED MANUSCRIPT

Relationship between lightning and solar activity for recorded between CE 1392-1877 in Korea

Junhyeok Jeon^{1a}, Sung-Jun Noh¹, Dong-Hee Lee¹²

¹Department of Astronomy and Space Science, Chungbuk National University, Chungdae-ro 1, Seowon-Gu, Cheongju, Chungbuk 28644, Republic of Korea

²Satellite Planning Division, National Meteorological Satellite Center, 64-18, Jincheon, Chungbuk 27803, Republic of Korea

^a Corresponding author at: Department of Astronomy and Space Science, Chungbuk National University, S1-4(405), Chungdae-ro 1, Seowon-Gu, Cheongju, Chungbuk 28644, Republic of Korea.

E-mail address: bamhan@chungbuk.ac.kr (J. Jeon)

Abstract

In this study, we collected lightning data recorded in the *Joseon-wangjo-sillok*, one of the Korean history books, and discuss the characteristics of the long term variations and distribution of lightning based on the data. Although historical data such as lightning records are fragmentary, they are important information of solar activity on a long term scale. We found that there is a difference between the monthly distribution of lightning recorded in the *Joseon-wangjo-sillok* and the monthly distribution of modern observations. This difference of distribution could be understood to reflect that the purpose of viewpoint of the observers is different between the past and the present. Nevertheless, it is a very interesting result that the periodicity calculated from the records of lightning recorded in the *Joseon-wangjo-sillok* is similar to the solar cycle which is widely known as almost periodically 11 years.

Key words: history and philosophy of astronomy, lightning, solar activity

Download English Version:

https://daneshyari.com/en/article/8139417

Download Persian Version:

https://daneshyari.com/article/8139417

Daneshyari.com