

Philological and scientific assessment of aurora records in historical documents

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We discuss the methodology for the assessment of reliability of historical records of extraordinary natural phenomena by combining philological and scientific analyses. Records of natural phenomena in historical literature are important sources for earth and planetary sciences. Assessment of the reliability the information such as the date, place, scale of the phenomenon is the essential process to use such records as scientific data. In this presentation, we will introduce the process of examining the reliability of historical records by philological and scientific methods, taking the records of aurora display in Japanese Edo era as an example. We show that scientific and philological methods work together to improve the accuracy and reliability of the information extracted from the historical records. The results provide valuable insights for both natural sciences and history, enabling reciprocal and therefore sustainable collaborative research.

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