

## Influence of solar wind on the Earth's climate and the ancient civilizations

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### 1. Mechanism of weather effects of Earth's rotation and rotation

The Earth's rotation, daily weather changes move along the latitudes and spread to the same latitude, and its weather range is moving the Earth in a cycle of several days from west to east along longitude. The irradiation of the Sun and the solar wind collide with the Earth at an angle according to the tilt state of the Earth's rotation axis. The motion of H<sup>+</sup> in the solar wind is absorbed into the atmosphere by collision with molecules over the atmosphere that the average free path is micron meters on the ground. The molecules in that atmosphere orbit the Earth. There is. Solar winds passing at speed of 500km/s through the east side of the Earth's atmosphere are more effective than the western deceleration effect, so the weather is moving from east to west. The conventional theory is that the solar wind prevents the solar wind, but it is not possible to explain why the atmosphere rotates counterclockwise than the surface of the Earth rotating in the counterclockwise direction.

### 2. Extraction and representation of the effect of the Earth's precession movement on the weather

The change by the inclination of the Earth's rotation axis with the Earth's orbit is one revolution per day, and the change of the rotation axis by the precession movement rotates once in 26,000 years. The Earth's precession movement is one-26,000th of the orbital cycle. We investigate climate changes caused by the precession movement of the Earth's rotational axis on a time scale of hundreds of years. Therefore, we average the change due to the rotation by continuous millennial units, and we consider the influence of the change of the rotation axis of the precipitation motion in the coordinates of the time progression of the point. The current direction of the Earth's rotation axis is 23.4°, and after 26,000 years the rotation axis returns to 23.4°.

### 3. The influence of the Earth's precession movement on human activity

Archaeology and history have revealed that changes in the irradiation angle of sunlight and solar wind have affected human activities due to changes in global wind direction, localized climate deterioration and dryness.

#### 3.1 B.C.11,000yrs [*Inclination angle of the axis of rotation of the precession movement: -24°*]

The Earth was subjected to solar winds from northwest to southwest, and glaciers developed in the northern hemisphere. The global winter season gradually turned to spring, the glacier receded, and due to global warming, humans began to settle in some places.

#### 3.2 B.C. 4,500yrs [*Inclination angle of the axis of rotation of the precession movement: 0°*]

The earth was irradiated by the sun in the center of the equator, and the flow of the global atmosphere became the era of the warm earth heading for the due west. In Japan, the rise in sea level peaked around B.C. 4,000yrs due to high temperatures during the age of marine transgression. However, hundreds of years later, the precession movement season was revived from summer to autumn, so buildings such as stone sarks and temples were built to know the season depending on the position of the sun. Cities have emerged, not only trades of agricultural products, but also temples have been created, and religious events have been held. Around B.C.3100yrs, the era of city-state competition for supremacy began in Mesopotamia.

#### 3.3 B.C. 3,000yrs [*Inclination angle of the axis of rotation of the precession movement: 5.5°*]

In Egypt, the B.C. 3,100yrs. The state was unified in 2850. Around B.C.2,500yrs, the Indus civilization occurred in the Indus side basin. Around B.C.2,200yrs, the area in front of the sun advanced to the Tropic of Cancer side, and the Sahara region of Africa became dry due to the effect of solar wind from southwest to northeast. As the dry atmosphere flowed to the west from the Sahara, a large area such as Palestine, Egypt, Mesopotamia, the Indus River basin, and the Tibetan Plateau fell into a state of prolonged water shortage. Many ancient civilizations have collapsed.

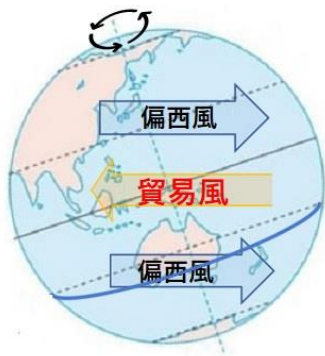
#### 3.4 A.D. 2,000yrs [*Inclination angle of the axis of rotation of the precession movement: 23°*]

Soon, the effect of solar wind from southwest to northeast reaches its maximum. However, the effects of global warming due to human activities have become very large, and it is urgent to elucidate the mechanism of the effects.

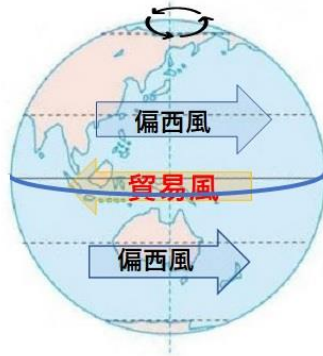
### 4. Summary

The method of expressing the influence on the weather due to the precession movement of the rotational axis of the Earth was described in this report. It clarified that solar wind is affecting the Earth's climate and the influence of the precession movement of the Earth has affected to human's history.

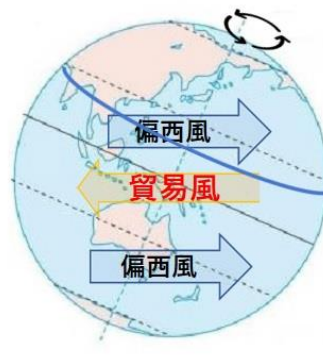
**Keywords:** Climate change, Precession, Solar wind, Ice age, Stone circle, ancient civilization.



[B.C. 11,000]



[B.C. 4,500]



[A.D. 2,000]

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