



The reason of abnormal rotation of atmosphere of a planet Venus

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It is known that atmosphere of Venus rotates in the same direction, as a planet, but the period of rotation of a planet about 240 terrestrial days, and the period of rotation of an upper atmosphere – approximately 4 days.

Thus, whole atmosphere rotates faster surfaces of a planet and at the expense of a friction should transfer to a planet the moment of quantity of movement. Hence, on atmosphere the external constant moment of forces should operate.

In work the model of formation of the external moment is considered, allowing to explain superrotation and occurrence retrograde atmosphere rotations.

At the heart of model experimentally confirmed effect rotational ponderomotive instability which consists in the following lies. Any spherical or the cylindrical symmetric body having the initial moment of quantity of movement concerning an axis of symmetry, perpendicular to a falling homogeneous light stream, will be rotationally unstable. The reason of it that points of a surface symmetric concerning a stream will have different temperature: the point which has left a shade, has smaller temperature in comparison with another which was heated by a stream. As the tangential component of force of light pressure is proportional to the factor of absorption growing with growth of temperature, there is the mechanical moment accelerating initial rotation of a body.

The mechanism of formation of a difference in factors of absorption of the symmetric concerning a direction on the Sun of sites of atmosphere of Venus more difficult, but the idea of attraction of forces of light pressure has appeared fruitful.

It is shown that initial circulation of atmosphere (a cell of Hedli), imposed on planet rotation, leads to thermal asymmetry, asymmetry of factors of reflection and absorption of a sunlight and, hence, to a difference of forces of light pressure. Even in a case when the difference in albedo makes less than one percent, and the area where there is a difference albedo, no more than 10 % from all area of a disk of a planet, the difference of light pressure during an order of billion years can untwist atmosphere till observable speeds.

Atmosphere circulation, having begun with a cell of Hedli, it will gradually be replaced with circular zone circulation. Cloud layer heights also differ for morning and evening terminators that also increases the moment of forces of light pressure.