

INTERNAL RELATIONS BETWEEN THE SOLAR PLASMA PARAMETERS AT 1 AU AND WITH THE GEOMAGNETIC ACTIVITY

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We study internal relation and correlation between the plasma parameters observed near 1 AU during the last three cycles. The solar wind proton density N is positively correlated with both of its speed V and temperature T during the odd solar cycle and negatively correlated with them during the even cycles. The linear relation between T and V is independent upon the solar cycle. The solar wind speed V and entropy S as well as the interplanetary magnetic field B are correlated with the geomagnetic activity as characterized by the geomagnetic activity index A_p . The geomagnetic activity is well correlated with the product VB .