

## DERIVING ACR SHOCK SPECTRUM FROM OBSERVATIONS OF THE ENERGETIC NEUTRAL ATOMS

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One of the sources of the energetic neutral atoms (ENA) in the heliosphere are the low-energy (up to few  $10^2$  keV) anomalous cosmic ray (ACR) ions in the outer heliosphere, close to and beyond the solar wind termination shock. The ENAs can penetrate into the inner solar system, and, if observed, provide the information about the ACR distribution in the source region. Using the results of numerical simulations of the ACR spatial and energy distributions in the heliosphere, we derive approximate relations between the ENA energy spectrum as observed at the orbit of the Earth and the ACR spectrum near the solar wind termination shock. With some assumptions about the parameters of the heliosphere, these relations allow one to obtain the ACR shock spectrum from the observed ENA spectrum. We apply this method to the data from CELIAS/HSTOF and discuss the results for the ACR spectrum.