



Size distribution of aerosols attached by cosmogenic nuclide Be-7 in the atmosphere at the TA telescope station

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Abstract: Be-7 is a familiar cosmogenic nuclide in the atmosphere. Since aerosols with the Be-7 are fallen down from the upper troposphere to the ground, it is possible to investigate the altitude distribution of the Be-7s from the size distribution of aerosols attached by the Be-7s. Probably there are the aerosols of small size in the upper altitude.

Therefore, using an Andersen air sampler, we sampled separately the aerosols by 5 classes from $0.3\mu\text{m}$ to $7.0\mu\text{m}$ at the TA telescope station. It is because the TA station supplies the weather data and the data of cosmic rays to us. For each class of samples, the concentrations of Be-7 are measured using HPGe gamma-ray detector at the 20m underground laboratory of Institute for Cosmic Ray Research, University of Tokyo. The size of each aerosol particle is measured by the picture image. In the results, the diameters of the almost all particles are smaller than $5.0\mu\text{m}$.

We report the relationship between the aerosol sizes and the Be-7 concentrations.