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Visualization of Radiation Intensity Distribution in Space Using Augmented Reality

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In recent years, the use of radiation has been increasing in various fields. However, because radiation is invisible, it is difficult to tell which places have high radiation doses and which places have low doses. Therefore, there is a risk of exposure when using radiation.
In this research, we conducted a basic experiment to visualize the radiation intensity distribution in space using AR (augmented reality) technology. We installed RI (radio isotope) and shielding objects in the space and measured the non-uniform radiation distribution. Furthermore, the measured radiation intensity distribution was superimposed on real space using AR (augmented reality) technology. However, humans perceive visual information as two-dimensional image data. Therefore, we created a display that changes the displayed part depending on the time. Based on the acquired distribution data, a sphere was superimposed on the measurement location, and the color of the sphere changed depending on the intensity of the dose. At that time, by sequentially displaying information from the front to the back according to the passage of time, the observer can observe the information on the back side without being obstructed by the information on the front side, and it is possible to express it in a way that shows the overall distribution.

Type of presence

Presence online

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