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Development of 3D visualization tool for KMA (Korea Meteorological Administration) numerical model

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The Korea Meteorological Administration has developed a tool that can visualize various numerical model data in three dimensions by combining them with spatial information to support forecasters' weather analysis work.

The 3D visualization tool is a precise analysis tool that can compare and analyze weather data according to time, space, and altitude.

An open-source 3D visualization engine (CesiumJS) was applied to display numerical model data on 3D spatial information.

Spatial information displays major spatial information (national and administrative boundaries, major roads, rivers, etc.) and a three-dimensional numerical elevation model.

The numerical model data was developed to express the precursor model (ECMWF) and the local model (LDAPS), but it was flexibly implemented to express other numerical model data.

It is expected that more three-dimensional and precise analysis will be possible by combining numerical model data with spatial information and analyzing it in three dimensions.