



Visualization of real-time simulations of the atmosphere for education

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Visualizing the three-dimensional evolution of the atmosphere in real time can be motivating for students and a challenging for all people interested in weather and climate. Recently, the Icelandic Meteorological Office has started to provide a large collection of output from operational numerical models on the web in real-time. The products consist of plots of basic parameters such as pressure, temperature, winds and humidity as well as a series of functions of these such as vorticity, potential vorticity, thermal winds, turbulent fluxes and turbulence kinetic energy. The plots are suitable as a tool to deal with a wide range of tasks in dynamic meteorology, including elements such as barotropic and baroclinic flows, planetary to short-scale waves, orographic disturbances, quasi-geostrophic theory and atmospheric fronts. The plots illustrate processes ranging from mesoscale to hemispheric scale and are used increasingly for educational purposes. The plotting tools are VisualWeather, Magics++ and GrADS and the web address is brunnur.vedur.is/kort/spakort.