

## Development of the weather teaching materials of the clouds using a video image, a weather chart and a satellite cloud picture

# Shunji Mouri[1]

[1] Earth Sci., Akita Univ

If observation of clouds is the place which can see empty, it is one of the natural observation which anyone can perform at any time. According to the junior high school government guidelines for teaching, the target of the science field is what it observes about a phenomenon and acquisition of observation skill, training of the consideration capability of an observation result, a scientific view, and a view are supported for. The contents of the weather and its change are with observing generating of clouds, relating with change of atmospheric pressure, temperature, and humidity, and catching, and relating with warmth and the cold and catching based on the observation result of the weather change accompanying front passage. Moreover, it is what observation of clouds is performed for about cloud cover, a cloud shape, height, direction, and a state according to the ground weather survey indicator of the Meteorological Agency. It is desirable understanding the feature of the clouds which appear on a season or weather conditions, and grasping change of the state of clouds and transition of the weather also in between at the time of the last observation and observation is supposed.

Though observation of clouds is simple, at the meteorological observatory, it is one of the weather survey business performed every day, and advanced and special contents are also included. For this reason, it is thought observation of clouds not only raises the interest concern about the meteorology and natural science to a juvenile student, but that has the possibility of training to a meteorologist or a certificated weather forecaster.

However, since clouds change with a long time factor, it is difficult for them to catch the situation of change in observation by viewing, and to make it develop into deep consideration. It is thought that change of clouds can be easily caught now by recording change of clouds on a video image, and changing and observing a time factor. Moreover, it is thought by adding ground weather survey data, a ground weather chart, an upper air chart, and a satellite cloud picture, and developing and utilizing the weather teaching materials which caught these complexly and on many sides that it can develop not only into an understanding of generating of local clouds but into synthetic study of a global weather phenomenon.

In this research, the image of clouds was photoed and the relation with the situation of the kind and state of the clouds which can compare and observe a ground weather chart, an upper air chart, and a satellite cloud picture, the terrestrial distribution of atmospheric pressure and the upper weather state, and the clouds of a circumference area was clarified. Photoing the image of clouds using the web camera and the personal computer, weather chart which measured the kind of clouds, height, the state, and the move direction, and the satellite cloud picture used the data published from the weather operating support center. The wide range state of clouds was judged from. Satellite cloud picture which judged atmospheric pressure, humidity, a wind direction, and wind velocity high up in the sky from. Upper air chart which judged the position of a terrestrial distribution of atmospheric pressure and front from the ground weather chart.