College, visited the office to have the instrumental equipment, weather map, and map-making process explained to them.

Mr. E. C. Vose, Section Director, Parkersburg, W. Va., delivered a talk on meteorology and the Weather Bureau on September 14, 1905, and another before the Farmers Grange, at Green Sulphur Springs, on the work of the Weather Bureau relative to agriculture, about September 30.

Mr. F. J. Walz, District Forecaster, Louisville, Ky., reports under date of November 1, 1905, that he gave a talk to the students of Loretto Academy, Loretto, Ky., on October 27, on the subject of meteorology, methods of weather forecasting, and the practical uses of the Weather Bureau.

He also reports that he gave a talk on the subject of meteorology and the work of the Weather Bureau to the students of Bethlehem Academy, St. Johns, Ky., on October 30.

Mr. R. F. Young, Section Director, Helena, Mont., reports that on October 25, 1905, he addressed the students of the Science Department of the Montana College, Deer Lodge, Mont., on the subject of the weather map.

METEOROLOGY IN COLLEGES AND UNIVERSITIES.

Prof. George Severance, Assistant Agriculturist at the State Agricultural Experiment Station, Pullman, Wash., reports:

We are giving a two-fifths course in meteorology to freshman college students; that is, two lessons per week for eighteen weeks. Regular students here carry four daily subjects. We have been using Davis's Elementary Meteorology, but find it scarcely adapted for so short a course.

Rev. J. A. Bauman, of the Department of Mathematics of Muhlenberg College, Allentown, Pa., states:

Muhlenberg College has had meteorology on its list of required studies for quite a number of years. This year radical changes have been made in the curriculum, and now meteorology is an elective study in the senior year. A fair proportion of the next senior class has elected it.

Heretofore we simply studied and discussed Davis's Elementary Meteorology, but this year and henceforth I propose taking meteorology up more practically, and any help will be welcome. It is possible we shall get some of the instruments needed. We have two good barometers, one mercurial, the other aneroid. The teacher of physics is interested, and asked for additional instruments. I hope, therefore, that we will soon be well equipped for the work. It was a surprise to me that so many elected the subject. It indicates interest and has produced necessity for a wider treatment of the subject.

The following is extracted from the Chattanooga News of September 14, 1905:

At a cost of $45,000 the city of Chattanooga has built one of the best adapted high school buildings in the south. The building has a capacity of 500 pupils.

On the third floor a special room for the study of meteorology has been set apart. A stairway leads from this room to an observation platform on top of the building almost directly over the main entrance.

The high school will be equipped with the best meteorological apparatus that can be secured, and will have everything necessary to a thorough knowledge of the subject.

METEOROLOGY IN GERMAN UNIVERSITIES.

In the MONTHLY WEATHER REVIEW for July, 1905, page 321, we have published a list of the German universities that distinctly recognize meteorology as a part of the course in geography or geology. Other universities, however, treat of meteorology as a branch of physics and others again as a branch of mathematics. We compile the following items from a full list of courses of instruction given on pages 459–463 of the Jahresbericht of the German Mathematical Association for September, 1905:

Strassburg.—Professor Hergesell: Physics of the earth; the form and mechanics of the earth. Becker: Determination of the orbits of meteors, comets, and planets. Wislicenus: Photometry of the sky.

Stuttgart.—Professor Hammer: Barometric hypsometry.

Tuebingen.—Professor Waitz: Theoretical physics, section 2, meteorology.

Doubtless, many other lecturers on mathematics and physics touch upon our meteorological problems, especially those who lecture on hydrodynamics and thermodynamics, but we have omitted their names in the absence of any special indication of the range of their lectures. However, the following list includes some of those from whom we have reason to expect that some branch of meteorology will be touched upon:

Berlin.—Knoblauch: Analytical mechanics. Helmert: Force of gravity and the figure of the earth. Scheiner: Introduction to astrophysics. Weinstein: The figure and the temperature of the earth and the mechanical theory of heat. Planck: Theory of heat and the radiation of heat. Boernstein: The construction and use of physical apparatus.

Bonn.—Monnichmeyer: The method of least squares. Bucherer: The interference and polarization of light.

Breslau.—Lummer: General physics. Meyer: Energetics and thermodynamics. Schaefer: Visible and invisible light.

Dresden.—Helm: Analytical mechanics; special chapters on mathematical physics. Toepler: Elastic oscillations and acoustics.

Freiberg in Baden.—Koenigsberger: Elements of partial differential equations and their applications to physics; the kinetic theory of gases; introduction to independent work in theoretical physics. Mayer: Mechanical theory of heat and its applications.

Greifswald.—Engel: Analytical mechanics. Schreber: Thermodynamics, with applications to heat engines.

Hanover.—Reinherts: Higher geodesy.

Heidelberg.—Koenigsberger: Analytical mechanics. Wolf: Theory and results of spectrum analysis. Pockels: Theoretical physics. Weber: Vector analysis and its applications to theoretical physics.

Carlsruhe.—Schur: Descriptive geometry and graphic methods. Ludwig: Photogrammetry.

Kiel.—Weber: Electrodynamics. Becker: Radioactivity and cathode radiations.

Leipsic.—Neumann: Seminary in physics. Marx: Ionization of gases.

Rostock.—Kuemmel: Introduction to the mathematical treatment of scientific questions.

Strassburg:—Reye: Physical seminary. Weber: Mathematical seminary.

UNUSUALLY EARLY SNOW IN ALASKA.

The surveying parties of the U. S. Geological Survey having been engaged in central Alaska during the summer in the valley of the Yukon River, were driven from their work about the 15th of September by heavy snow, such as was entirely unexpected at that season of the year, and only after great hardships did the men reach civilization alive. One can but wonder whether this early Alaskan snow is to be followed by an early winter or severe winter in lower latitudes on the North American Continent. At the present writing (November 28, 1905) the phenomenal area of low pressure extending from the north Pacific to the Lake region would seem to suggest that there has been an unusual movement or extension eastward of the subpermanent area of low pressure that usually stretches from Sitka westward over the Aleutian Islands as a narrow belt in November, but a larger area in December and January. The circulation around this area of low pressure is usually spoken of as determining the character of the weather on the Pacific coast and giving rise to the centers of low pressure that advance eastward over the United States and Canada, so that our weather is determined as much by its extent and location as by the high pressures that move southward over the interior of our continent.