two of the rare cases of inversion of the viscera were sent from the Charité, actinography revealing the inverted displacement of the organs, their size and motions, with the greatest distinctness.

PROFESSOR GOTCH, Waynflete professor of physiology at Oxford, in his annual report states that the following research work has been in progress during the present year: (1) The Professor and Mr. G. J. Burch. Upon the Electromotive properties of Malapterurus electricus, being a continuation of previous work on the subject. (2) The Professor. On the Tendon Effect and on the Influence of Temperature upon Excitability and Conductivity. (3) The Regius Professor of Medicine. On Muscular Contraction. (4) Dr. J. S. Haldane and Professor Lorrain Smith. On the Oxygen Tension of Arterial Blood, the Detection of Carbonic Oxide in Air and Blood, the Action of Nitrites upon Blood, etc. (5) Dr. Mann. On the Changes in Nerve Cells Associated with their Activity. (6) Mr. W. H. Vernon. On the Respiratory changes of Cold-blooded Animals. (7) Miss Huie. On the Changes in the Cells of Drosera. (8) Professor Sherrington and Mr. J. S. Macdonald. On the Neuro-muscular Mechanism of Respiration. (9) Mr. Buddicom. On the Effect of Ether and other Gases upon Nerve Excitability, etc. (10) Mr. W. E. Stainer. On the peptic properties of Pitcher-plant liquid.

UNIVERSITY AND EDUCATIONAL NEWS.

THE University of Berlin has set an example in maintaining academic freedom by electing as Rector for the coming year Professor Gustav Schmoller, who is supposed to have incurred the enmity of the Emperor by the character of his lectures on political economy.

THE Paris correspondent of the London *Times* states that under the law of July 10, 1896, decrees have been issued for the government of universities. Each university is to have a council consisting of the rector, the heads of faculties, and two delegates of each faculty elected triennially by the professors. The council, subject in certain cases to the approval of the supreme education council, will have control over the teaching, discipline, and property of the university. It will, however, have merely a consultative voice on the finances, and on the creation, abolition or transformation of professorships, for the State will continue to pay the stipends. The maintenance of buildings, on the other hand, will fall on the university, and must be defrayed from students' fees or from endowments. The State takes the fees for examinations and State diplomas, but all other fees go to the university treasury. It will, therefore, be to the interest of each university to attract as many students as possible. The receipts of Paris University are estimated at 600,000f. and of Lyons at 130,000f., but Besançon and Clermont have at present only 700f. or 800f., and will obviously have to solicit subsidies either from the State or from local bodies. Failing this, the smaller universities are likely to succumb. One of the features of the new system is that a student will, as in Germany, be able to migrate from one university to another without lengthening his studies or delaying his degree.

THE Swiss government has for several years offered *courses de vacance* or university extension courses at Lausanne and Geneva, which have been attended by numbers of American, English and other foreign students. The Department of Public Instruction has now decided to supplement the courses given by the Faculty of Letters by adding to the program scientific and historical excursions, with lectures given gratuitously by university professors.

AT the meeting of the London County Council on July 20th the Technical Educational Board presented their report for the preceding quarter. It stated that arrangements had been made with King's College and University College for evening courses of instruction, to be given to persons who are engaged during the day, in civil engineering, mechanical engineering, architecture, natural philosophy, pure mathematics, electrical engineering, magnetic and electric currents, the strength of materials, the principles of practical physiology, experimental physics, and the teaching of mathematics. Arrangements had also been made for a Saturday morning course to teachers to be held at Bedford College. In the teachers' courses the aim would be to explain the best educational methods of teaching the respective

subjects to their pupils and not to prepare the teachers to pass examinations. The payments made by the Board during the quarter amounted to about $100,000.

Degrees of a 'Chicago National University' have been for sale in London. The *Times* states that it has "received a telegram from Mr. Francis Harkins, the Chancellor of the Chicago National University, stating that that university repudiates agents who offer degrees on payment of a guinea." There are five hundred colleges and universities in the United States entitled to confer degrees, but the 'Chicago National University' is not one of them.

Miss Martha Veeder has been appointed professor of mathematics at Huguenot College, Cape Colony.

M. Jumelle has been made assistant professor of botany, and M. Beaulard assistant professor of physics in the faculty of sciences of Grenoble, and M. Brunhes has been made professor of physics in the faculty of sciences of Dijon.

DISCUSSION AND CORRESPONDENCE.

METEOROLOGICAL OBSERVATIONS DURING AN ATLANTIC VOYAGE.

To the Editor of Science: A few notes of meteorological interest, made during a recent voyage from New York to Rio de Janeiro, may not be unwelcome to the readers of Science. The trip itself is one which cannot fail to interest anyone who has a knowledge of meteorology, for the steamer route crosses several of the great wind and calm belts of the world, and the characteristic features of each belt are brought into striking contrast as the ship passes from prevailing westerlies into 'horse latitudes,' and then successively through N. E. trades, 'doldrums' and S. E. trades, the voyage ending in the 'horse latitude' belt of the southern hemisphere. A teacher of meteorology who has the good fortune to take this voyage must constantly feel how grand an opportunity the trip would give him to teach the great facts of this science to a class of students, if he could only take his class with him. It would indeed be field-work, if such an expression may be used, on a magnificent scale.

The formation of cumulus clouds over islands has been noted by many observers in different parts of the world, but is always of interest. On June 8th, early in the afternoon, the ship was some distance to the eastward of Bermuda. The sky, except in the west, was covered with strato-cumulus clouds, and the wind was light from S. S. W. On the western horizon the sky was lighter, and the sun was shining on the low clouds. In this direction, which was that in which Bermuda lay, could be seen a considerable number of cumulus clouds, radiating from below the western horizon, and moving across the sky to the N. E. These were evidently coming from the island, for in no other part of the sky were there any other cumulus clouds to be seen. The cumuli diminished rapidly in size as they increased their distance from their place of origin, and they were lost sight of as the ship's course took her farther away from the island. Another observation of cumulus clouds formed over land was made on the morning of June 23d, when about 10 miles off shore north of Bahia. There was a splendid development of cumuli over the land, the shore-line to the north and south being outlined in the sky by the clouds, while over the ocean there were only a few scattered trade cumuli.

On June 9th (noon position 29°43′ N., 59°23′ W.), between 3 and 4 p. m., there was a fine opportunity to study the growth and mechanism of an advancing thunderstorm. These storms, as the writer has pointed out in an account of the thunderstorms of New England, advance, when well developed, in a long line (storm-front), but their activity is not the same all along this line. In some places where there is more active convectional ascent the rain and thunder and lightning are more severe, while at other points along the same storm-front there may be no rainfall, and the clouds may even seem to break away. It is these apparent breaks along the storm-front which give rise to the common statement that thunderstorms 'divide' over an observer, when in reality there is no true division. On the day in question the thunderstorm when first noted was a single large cumulo-nimbus cloud to the west, and the heaviest rain could distinctly be