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Dingen. In selten einheitlicher Demonstration traten alle Redner ohne Unterschied der Partei für die klare Kompetenzausscheidung und das *Primat der zivilen Instanzen* ein. Der Bundesrat anerkannte denn die Berechtigung dieses Standpunktes auch damit, dass er eine Verstärkung des Einflusses der Pressevertreter in der massgebenden Pressestelle des Armeestabes und eine engere Fühlungnahme der Kontrolle mit dem Bundesrat zusagte. Eine Reorganisation der Presse kontrolle, welche die Superiorität der Zivilgewalt wahrt, ist damit versprochen, und der Genehmigung des bundesrätlichen Presseerlasses stand so nichts mehr im Wege.

Die Pressedebatte wurde aber zur noch viel eindrucksvollern Demonstration für die *Aufrechterhaltung der Pressefreiheit* und gegen alle Bestrebungen auf Gleichschaltung. Hinter die geschlossene öffentliche Meinung stellte sich auch der Bundesrat mit der erneuten Erklärung, dass er den Begriff der Gesinnungsneutralität für den einzelnen Bürger und also auch für die Presse ablehne. Entspannend wirkte auch die Versicherung des Bundesrates, dass das Verbot des Rauschning-Buches nicht auf deutschen Druck zurückgehe.

In einem Zeitpunkte, wo ungewisse Frühjahrsereignisse von grossem Ausmass vor der Türe stehen, ist es wertvoll, dass der schweizerische Volkswille in einer entscheidenden Landesfrage so deutlich und eindrucksvoll nach innen und aussen kundgegeben wurde. Die Pressefreiheit ist eine Maxime, mit der die demokratische und freiheitliche Schweiz steht oder fällt.

THE RESEARCH STATION AT JUNGFRAUJOCH.

(" *Discovery* " 1940.)

At the end of the last century permission was given to a Swiss company to construct a railway to the summit of the Jungfrau (14,000ft.). It took more than ten years to complete the tunnel leading to the Jungfraujoch (11,000 ft.) at a cost of over £600,000, so that a continuation of the tunnel to the summit appeared impracticable. Although the erection of a scientific station on the Jungfraujoch had been one of the conditions the Swiss Government had made in permitting the building of the railway, it was not until 1928 that plans were completed and the necessary capital secured. The *International Research Station* was finally opened in 1931, after the majority of European governments and scientific academies had subscribed towards its endowment. It is built on an artificial platform hewn out of a steep rock face and is accessible only through a system of tunnels connecting it with the railway terminus and the glacier. The Research Station offers comfortable accommodation for about twenty people and, in addition to a library, contains laboratories for physical, chemical and physiological work.

What is the purpose of having a research laboratory at this altitude? This question can best be answered by giving a short account of some of the work which has been carried out at the Jungfraujoch since the Research Station came into being. Decisive advances which would have been impossible without its existence have been achieved in such divers subjects as physiology, physics, astronomy and glaciology.

In physiology the study of *mountain sickness* is of considerable importance owing to the bearing which it has on the general theory of respiration. The symptoms of mountain sickness include headache, shortness of breath, depression and, in severe cases, nausea and loss of consciousness. They are all directly attributable to lack of oxygen. Healthy individuals become acclimatized to the height and feel perfectly normal again after a few days. This acclimatization is achieved by a large increase in the number of red blood corpuscles, and by deeper breathing. The precise mechanism of adaptation is of great interest and has been studied by physiologists working on the Jungfraujoch and accompanying Mount Everest expeditions.

Nearly all the physical investigations carried out at the Jungfraujoch are concerned with the study of radiations which reach the surface of the earth from outside and undergo alterations in the course of their passage through the atmosphere. The Research Station has been most useful for the study of *cosmic rays*, a radiation of greater penetrating power than any hitherto known. At sea-level cosmic rays are known to occur in showers which are spread over large areas. It has been suspected that these showers are secondary phenomena produced by collisions between fast particles of cosmic origin with atoms in the atmosphere. Obviously one of the most important tests of this theory is the study of the variations of the properties of the showers at different altitudes.

It is generally known that the intensity of the ultra-violet radiation of the sun at high altitudes is greater than at sea-level. Astronomers make use of this fact for studying the *ultra-violet spectra* of celestial objects. An article in the February 1940 issue of this journal described how these spectra can tell us something about the temperature and the composition of the surface of a star. Another subject for astronomic research is the observation of *sun-spots*. At sea-level, the hot air rising from the surface of the earth produces disturbances in the atmosphere which cause images of sunspots in the telescope to flicker, making their photographs blurred. The Jungfraujoch is mostly surrounded by snow; hence the heating of the atmosphere by the earth is negligible, and the apparent flickering of the sun-spots much reduced. It may perhaps be pointed out that sun-spot variations are not of purely academic interest, because they are intimately connected with terrestrial magnetic storms and consequent disturbances in wireless transmission.

Glaciology has always suffered from the difficult conditions under which scientists had to work, especially in arctic and antarctic regions. Using the Jungfraujoch as a basis, it has now become possible to bring much more powerful weapons to bear upon the problem. Most glaciological problems are connected with conditions in the interior of the glacier which can be reached by descending into crevasses, by excavating artificial shafts or by drilling boreholes. In a recent expedition all these methods have been used extensively with the view of obtaining a picture of the density and temporature distribution in the glacier, and of elucidating the mechanism of glacier flow.

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