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EX AEDIBVS ACADEMICIS IN CIVITATE VATICANA

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HISTORICAL NOTES TO THE DISCOVERY OF THE COSMIC RADIATION

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SVMMARIVM — Breviter exponit Auctor nonnulla quae ipse reminiscitur de radiorum cosmicorum inventione.

I did not have the privilege to make a balloon ascent in the company of his Excellency Professor Hess that day when he made the fundamental discovery of the existence of a Cosmic Radiation. But I had several times occasion during those times to make balloon ascents under his leadership starting from Vienna. I had opportunity to admire his great capacity to master the flight of the balloon, to construct his apparatus and make his measurements with great accuracy and skill.

It was among others on an Easter day when we started from Vienna with the intention to land in Lower Austria. From the height of the balloon a military band walking in the streets of the capital looked like a group of toy soldiers. The afternoon we wished to descend in the vicinity of a village in Lower Austria, the first step of the descent being to throw out a rope. As it was a holiday all inhabitants of the village were out-of-

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doors and noticing the rope thrown out thought that they were supposed to pull the rope down. Soon all the inhabitants — against an admonition — were hanging on the rope and creating a dangerous situation for us. We risked to land on the roof of a house with possibly serious consequences both for the house ad for ourselves. This situation induced Professor Hess to command: 2 sand sacks have to be thrown over board! I acted as commanded with the result that the balloon got a powerful lift and the inhabitants of the village as a result of this lift were lying on their noses. We landed later far from the village.

It was in 1912 that Professor Hess observed that the ionization measured in a closed vessel increases markedly when the balloon reaches a height of 1,000 metres and at a height of 5,000 metres it is many times that observed at sea level. This induced him to conclude that a penetrating radiation is coming in from the outer space which is responsible for the increased ionization observed.

In 1931 a minor observatory was erected by him on the 2,300 metres high mountain Hafelekar in the vicinity of Innsbruck where extended studies of the cosmic radiation were made by Professor Hess. He observed among others small diurnal variations in the intensity of the cosmic radiation dependent on the solar time and still smaller ones depending on the star time. Pronounced variations between day and night values were observed by him as well.

These were the beginnings of a very extended and most important branch of physics as demonstrated by the numerous illuminating papers read during these days. This development must be an immense satisfaction to Professor Hess, its ingenious initiator.