

Auguste Piccard's exploration of the stratosphere

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Appel aux bourgeois de la commune de Froideville

Le village de Froideville se prépare à célébrer les 1^{er} et 2 septembre 1984 le 700^e anniversaire de sa fondation.

Parmi d'autres manifestations, nous cherchons à réunir les membres de toutes les familles originaires de Froideville, soit entre autre les BURNAT – CLERC – DELISLE – GREPIN – MARTIN – MICHON – REYMOND – THUILLARD – VITTOZ.

A cet effet, nous nous permettons de contacter tous les porteurs des patronymes cités ci-dessus, et

dont nous avons relevé les adresses dans les annuaires téléphoniques de Suisse, et nous prions ceux qui sont originaires de Froideville de bien vouloir répondre à notre appel. A chacune de ces adresses, nous avons envoyé une circulaire et une carte d'inscription.

A ceux de nos combourgeois habitant hors de Suisse, nous adressons le présent appel et les prions de communiquer au plus vite au secrétariat municipal, CH-1055 Froideville, toute information permettant de les atteindre. De plus,

nous les prions de transmettre cette information aux personnes de leur famille qui n'auraient pas été atteintes.

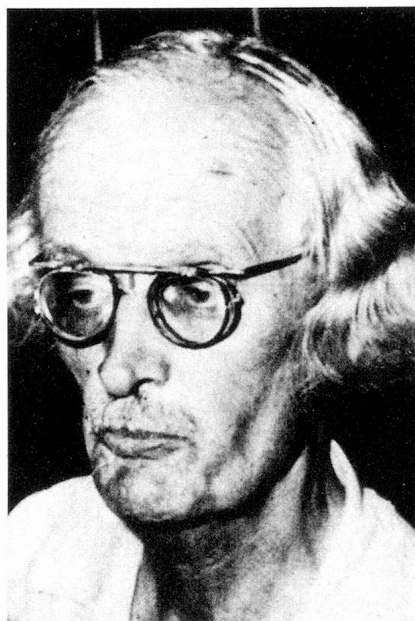
A tous ceux que ces manifestations commémoratives pourraient intéresser, nous transmettrons ultérieurement le programme, tous renseignements et bulletins d'inscription. D'avance, nous vous remercions de vos réponses et, espérons avoir le plaisir de vous rencontrer dans notre village.

*Pour la commission des bourgeois
M. Covassini*

Auguste Piccard's Exploration of the Stratosphere

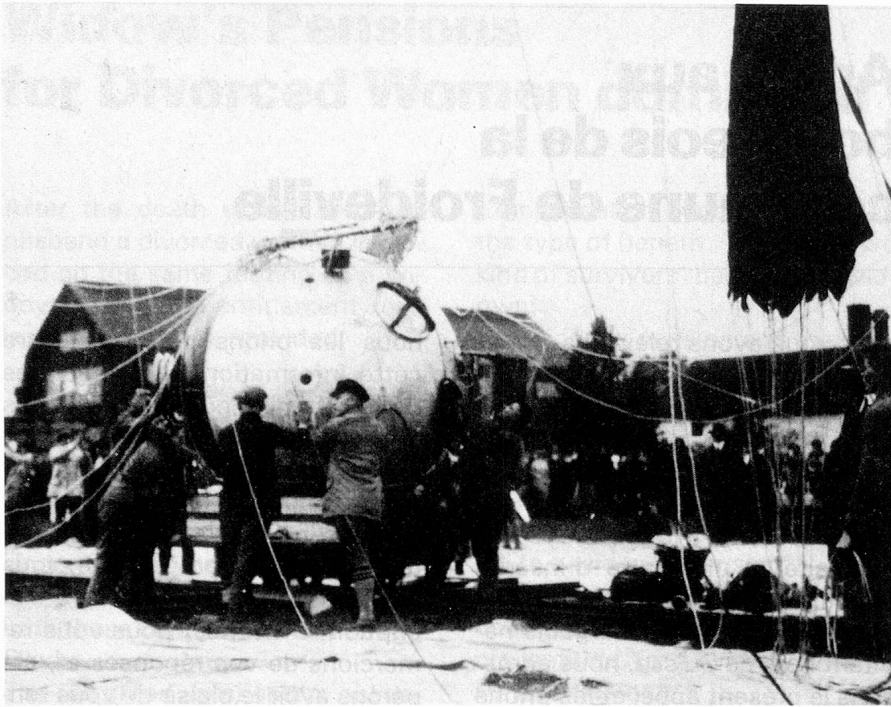
Nowadays when travelling in comfort in a jet-propelled plane to more or less remote destinations, one hardly realizes that a mere fifty years have passed since the Swiss scientist Auguste Piccard laid the foundation for the development of the pressurized cabin by his two flights into the stratosphere. Auguste Piccard was born in Basle in 1884. As professor of physics first at the Federal Institute of Technology in Zurich and later in Brussels, he concentrated his interest more and more on research of the cosmic rays whose energy potential surpasses that of any other source of energy. But in order to research these rays thoroughly, one had to

Auguste Piccard (Photo Keystone)



observe them before they merged with the molecules of the earth's atmosphere, in other words in the stratosphere itself which extends at an altitude of 10 to 17 km above the surface of the earth.

The exploration of the stratosphere was already in full swing at the end of the 'twenties' and the beginning of the 'thirties'. By means of unmanned balloons which rose up to 33 km, one was able to get first results. But at that time, ascending in a manned balloon was unthinkable, for man cannot survive without protection in the low oxygen contents and the extremely low temperatures. Auguste Piccard remembered a circus event in his childhood and



Piccard's Flight into the Stratosphere (Photo Keystone)

realized that a hermetically sealed capsule might be the answer to these problems. The capsule would be propelled into the stratosphere by a balloon. On 26th May 1931, the capsule was ready in Augsburg, Bavaria, for its first test flight. The initial start had to be interrupted because of strong winds. Next morning, the preparations for the start were taken again. The ground crew let the balloon rise without informing the two pilots, Auguste Piccard and Paul Kipfer. This rather amateurish start could have been disastrous, for an instrument had been dislodged in the bad winds the day before, and a leak had been caused. The two pilots managed to overcome the deadly hazard with great difficulty. The adventure was, however, not yet at an end. Due to a jammed valve, the descent did not proceed according to plan, and the two men very nearly ran out of oxygen. It was only when the sunset brought some cooling that the balloon was brought down at the

very last minute. And even then, the flight did not end as planned, for the longer stay in high altitudes meant that the balloon was a long way from the landing patch, and it touched down on a glacier above Obergurgel in Austria. In-

Stamp commemorating Auguste Piccard



spite of all the difficulties which accompanied the first flight, it was an unqualified success. A little more than a year later, in August 1932, Piccard repeated his experiment, this time without any incident.

Piccard's invention was soon put to practical use. In 1940, nine years after his first test flight, the American airline TWA introduced the first plane with a pressurized cabin, a Boeing Contellation. From this evolved the modern method of travel in high altitudes; it was due to Auguste Piccard, for he laid the basis for this development with his experiments.

Once his exploration of the stratosphere had been successfully accomplished, Auguste Piccard turned his attention to a new undertaking. After establishing the use of his capsule in the stratosphere, he wanted to explore the depths of the sea by means of the principle of the pressurized cabin. The outbreak of the Second World War and difficulties in finding the necessary finances delayed the construction of the mesoscaph.

It was not until 1953 that all the obstacles were overcome. Off the isle of Capri, Auguste Piccard and his son Jacques made a first test in a specially built boat. Another seven years had to pass before Jacques Piccard, together with the American Donald Walsh, descended to the deepest spot of the sea, the Marianas Trench in the Pacific not far from the American territory of Guam. Auguste Piccard, by that time 76 years old, did not himself take part in the experiment, but he had the satisfaction of still enjoying the success of the test. After exploring the stratosphere, he also became the explorer of the seas. When he died in March 1962 in Lausanne, he completed a rich and rewarding life.

Jörg Kistler