

## ESSAY

## On Its Centenary, Celebrating a Ride That Advanced Physics

By BILL BREISKY

BAD SAAROW-PIESKOW, Germany — Precisely where Victor Hess, his electroscopes and his hot-air balloon touched down is a mystery.

What is known is that Hess and his crew of two landed shortly after noon, exactly 100 years ago, in a pasture somewhere near this little town in eastern Germany, and that a farmer brought the three men in a horse-drawn carriage to the Pieskow railway station, where they took a train to Berlin. That evening they boarded a night train home to Vienna.

The physicist Michael Walter says he tried to find some reporting of the event in local newspapers at that time, "but there was nothing."

Today, there is something: an international symposium of physicists in Bad Saarow-Pieskow, to celebrate the centennial of the discovery of cosmic rays by Victor Francis Hess.

Dr. Walter, of the Institute for Theoretical Physics in Zurich, will be on hand because he helped organize the conference. And I will be on hand because Victor Hess was best known to me as Grandpa.

We will witness the unveiling of an erratic stone block that declares in German: "In commemoration of the discovery of cosmic radiation. On Aug. 7, 1912, the Austrian physicist Victor F. Hess landed near Pieskow in a hydrogen balloon. In his flight from Northern Bohemia, which took him up to an elevation as high as 5,300 meters [17,400 feet], he furnished proof of a penetrating ionizing radiation from outer space. For the discovery of cosmic radiation, V. F. Hess was awarded the Nobel Prize in Physics in 1936."

Technically (and he was a technical man) Victor Hess was my step-grandfather — the man my grandmother married in 1920 after the death of her first husband, a major in the Austrian Army. My baby brother, Arthur, and I didn't meet him and our grandmother, Berta, until 1932. My father, Victor's stepson, had suffered what he later called a nervous breakdown after losing his engineering job in Pittsburgh in the Great Depression; the Hesses offered us sanctuary in their apartment in Innsbruck, Austria.

It was a troubled sanctuary. Young



FORAY Victor F. Hess, center, departing from Vienna about 1911, was awarded the Nobel Prize in Physics in 1936.

Nazis, the Austrian Home Guard and young Bolsheviks were fighting in the streets — "at times right outside our window," my mother reported in a letter home. But there were good times, including a visit to Professor Hess's new cosmic radiation observatory on Mount Hafelekar in Innsbruck. In the Hafelekar Guest Book, there's an entry in my mother's handwriting on June 14, 1932: "The top of the morning, and the top of the world! — Laura Breisky and Billy, Pittsburgh, Pa., U.S.A."

In 1934, back in Pittsburgh, Laura Breisky died, of breast cancer.

By 1938 we had moved to Baltimore, and Hitler had moved into Austria. The Nazis confiscated Grandpa's Nobel earnings — he had been an outspoken anti-Nazi — and my grandparents fled to Switzerland, virtually penniless. But he was soon offered a full professorship at Fordham University.

The Hesses spent Christmas in Baltimore that year, and I began a bond with my grandfather — one that lasted until his death, 26 Christmases later.

Albert Einstein noted in a speech at the opening of the 1939 New York World's Fair that a true pioneer in the work on cosmic rays was "Professor Victor Hess of Austria, who, like so many others, has had to seek refuge in this hospitable country."

For the rest of their lives in hospitable America, the Hesses lived in an apartment in the Fleetwood section of Mount Vernon, N.Y. After they had settled in, Grandpa found an Austrian orthodontist to fit braces on my teeth. Thus I began a long series of train rides from Baltimore to New York to have them adjusted, and for a short holiday with my smiling grandfather, who would park his Plymouth on West 33rd Street and meet me at Penn Station.

As often as I could, I took the short train ride from Fleetwood to the Bronx to have lunch with him on a campus bench or in a Fordham Road restaurant that served an excellent fillet of sole for 40 cents. Those lunches might be followed by an afternoon of taking measurements on a Harlem River pier where we monitored his instruments and amused ourselves by tossing bits of raw sodium into the water and laughing at their explosive sizzle.

A couple of times, my brother and I accompanied him to the Inwood section of Manhattan, where he had permission from the City of New York to set up instruments to measure radiation in a subway station that sat beneath Fort Tryon Park and 400 feet of granite.

At home, Grandma was in charge, totally. She required her grandsons to clean every scrap off our plates — and she required her Nobel Prize-winning

husband to wear a butcher's apron at the dinner table, lest he spill gravy on the suit vest where he pocketed his Glenwood cigars, his pocket watch and his Chiclets gum.

Berta Hess died of cancer in Apartment 4A, but not before ordering her husband to "marry Elizabeth" — the woman who had nursed her in her final months.

Elizabeth called him "mein schatz" (my darling), introduced him to the whiskey sour, and was with him in April 1962, when John F. and Jacqueline Kennedy held a White House gala for Nobel

### The discovery of cosmic radiation high up in a hydrogen balloon.

laureates. He died two years later, of Parkinson's disease.

But now he lives again.

Grandpa Hess came alive for me in 2007, when I underwent proton-beam stereotactic radiosurgery for a benign brain tumor at Massachusetts General Hospital, and learned that the development of the particle accelerators that made my surgery possible was stimulated in large part by what my grandfather had discovered on his balloon flights.

He came alive once more when the Austrian physicist Peter Maria Schuster founded the Victor Franz Hess Society — to honor him in a country that had once expelled him — and invited my wife, Barbara, and me to the 2010 opening of a Hess museum in the beautiful town of Pöllau.

And today, eastern Germany.

We inhabited different worlds, and spoke different languages. He was born in the green heart of Austria, son of the chief forester to a prince, and was most comfortable when communicating in the languages of German, physics and mathematics. I was born in the smoky city of Pittsburgh, and schooled in the languages of English and journalism.

But my physicist grandfather and I were linked, and he taught me a journalism lesson that has served me well: "Never assume."

So I'm not assuming he would approve of the fuss being made this week over his balloon flights. But I suspect he would.