

XE 128.0366566
3-14-66

News Release

GRADUATE RESEARCH CENTER OF THE SOUTHWEST

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AD1-1471 X 25

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RELEASE ON RECEIPT

BERKNER DINNER WEDNESDAY NIGHT IN APPRECIATION OF HIS WORK IN CENTER'S EARLY YEARS; MANY FACETS OF 40-YEAR SCIENTIFIC CAREER RECALLED

An airplane's engines were sputtering in the intense Antarctic cold. No man had ever seen the glaciers and mountains of the forbidding landscape before. Much of the "extra" equipment aboard had been pushed out a hatch to help hold altitude.

There was some question, says Lloyd Berkner, whether Admiral Richard E. Byrd might decide that a six-foot, 200-pound radio operator should be the next item to go. There's a twinkle in his eyes as he tells the story. It's one of many from 40 years of a world-spanning career in engineering and science.

The past five years and more have been centered in Dallas, and at the Graduate Research Center of the Southwest. In appreciation for his work since the Center's founding, February 14, 1961, and the preliminary studies during more than three years preceding that date, a Wednesday night dinner will bring together many of his friends; among them, scientists, educators, and leaders of industry.

Doctor Berkner officially became president of GRC as its charter was issued in 1961, and also directed its scientific research programs. Under his guidance, a faculty and staff now numbering more than 300 have been assembled, to conduct fundamental research and to teach at post-doctoral and graduate level in space and Earth sciences, cosmology and astrophysics, stochastics (the mathematical rule-making for random events, such as the arrival of energetic particles at a detector), biology and genetics, and the effects of super-magnets on materials.

Doctor Berkner has asked, for reasons of health, to be relieved from both administrative assignments. Gifford K. Johnson became the GRC's second president a year ago, on March 17.

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BERKNER APPRECIATION -2-

Effective March 1, this year, research and teaching are progressing under faculty leadership. Doctor Berkner himself will remain as a member of the faculty, continuing his own study of the history of the Earth's atmosphere, and a host of other assignments related to science and education.

For example, he will speak next Saturday at a conference of the Independent Schools Association of the Southwest; this will follow his stint as chairman for the Center's Board of Trustees meeting Wednesday morning, and a day-and-a-half as chairman of the Regional Symposium on Development of Graduate Education in the Southwest. The latter two events are major parts of the GRC's Fifth Anniversary Celebration, as is the Appreciation Dinner.

It's a fairly typical Berkner week. A little over a month from now, he'll be on a national platform as the chairman of a panel discussion. The subject: "After Apollo (manned moon flight) -- What?" Members of the panel will be Dr. William Pickering, who heads Jet Propulsion Laboratory, the Mariner builders whose cameras took pictures of Mars; Dr. Bernard M. Oliver, president of Hewlett-Packard electronics and immediate past president of the world's largest professional society, the Institute of Electrical and Electronics Engineers; Dr. William E. Gordon of Cornell University; Dr. James B. Dickson III, National Institutes of Health, and Dr. Emanuel R. Piore, head of research for IBM and a member of the Center's board of trustees.

Berkner's schedule already carries into next December; he's helping organize a major, international aviation and space meeting.

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Wednesday night's dinner will see Mayor Erik Jonsson presiding, at the Dallas Statler-Hilton. Mr. Jonsson will represent both city and Center, the latter as chairman of the Board of Governors.

During the program, he will touch on such subjects as the memorable airplane flight of 1958, when he talked with Lloyd Berkner about the need for new strides in research and graduate education in the Southwest. From this talk, much of the Center's basic

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and regional structure evolved, and was furthered by a key meeting with Dallas/leaders on May 27, 1960. Berkner arrived in Dallas late that year to begin work on the then-new project.

He then was president of Associated Universities, the Ivy League university group responsible for operation of the Brookhaven National Laboratory and the National Radio Astronomy laboratory; president of the Institute of Radio Engineers, a predecessor of the IEEE, which has called him to lead next month's national discussion; the highest-ranking officer of the United States Naval Reserve; an officer of the National Academy of Sciences (currently, the treasurer); and the "father of the International Geophysical Year," history's greatest international co-operation in a scientific program.

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There'll be a reference to the Antarctic on Wednesday evening, in a special ceremony. Berkner recalls that it took 93 days for the 1928 Byrd expedition to reach the Antarctic continent's Ross Ice Shelf from New York, by sea.

Last October and last January, Dr. Martin Halpern of the Center's Geosciences Division joined a geological expedition on the Antarctic Peninsula -- only a few hundred miles from Berkner Island, which lies to the east. Doctor Halpern flew to his working site, near 75 degrees South, 72 degrees West, in little more than 40 hours, by way of Hawaii, Fiji, Pago Pago and Christ Church, New Zealand.

Doctor Halpern carried with him a Texas flag, which was flown during the expedition; his flight carried him past, but somewhat west of the South Pole, where Byrd had made the first overflight in November, 1929. One landing point was Byrd Station.

The flag, a bit wind-tattered and suitably autographed, will be presented to Robert B. Cullum, representing the State Fair of Texas, to go on exhibition there.

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Going back into the early Berkner story, his interest in science began when he built his amateur radio station in Sleepy Eye, Minn. He set a time record for the relay of messages between Hawaii and Hartford, Conn., the headquarters of the American Radio Relay League, using one of the first directional radio antennas ever built.

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BERKNER APPRECIATION -4-

He was still in high school. After graduation, he was first off to sea, as a Merchant Marine radio officer. Then, the University of Minnesota, where he was graduated in electrical engineering in 1927; perhaps typically, he heard his commencement exercises from under the grandstand. His job was to operate the primitive public address system.

He had been cadet lieutenant colonel of the engineering battalion, Reserve Officers Training Corps; but he also had enlisted in the Naval Reserve as a seaman, second class, for flight training. So, a year after graduation, rather than being a second lieutenant Army in the/engineers, he was a Navy ensign and aviator.

Joining the Byrd expedition of 1928 as a pilot and radio engineer, Berkner helped lay out Little America, got it on the air with high frequency communications reliable over long distances, and turned to research on ways to make the systems even more reliable.

In later years, he identified the F-1 layer of the ionosphere, a charged zone of the atmosphere that bounces back high frequency signals to return them Earth's surface at long distance.

In 1939, war threatened. Berkner had seen the first developments of radar, and he turned his skills to development of a proximity fuze, to make anti-aircraft shells explode near their targets even though they had not scored direct hits. He was called to active duty as a lieutenant commander, and put in charge of electronics engineering. He had a hand in developing very high frequency communications for aircraft and ships, airborne radar, the system known as IFF (Identification, Friend or Foe) that showed whether incoming aircraft were ours or the enemy's. He worked on electronic navigation aids.

Berkner supervised training and equipping of the first night fighter squadron, at a time when night flights from carriers were considered too hazardous to be practical. He followed the squadron aboard the "Big E" -- USS Enterprise -- and stayed until the ship was put out of action by suicide bombers in fighting off Okinawa.

World War II was barely over in 1946, and a new Department of Defense needed someone to set up its research and development arm. Berkner became the executive secretary.

BERKNER APPRECIATION -5-

Responsible jobs kept coming. In 1949, special assistant to the Secretary of State to help NATO (North American Treaty Alliance) development, and its military assistance program. Within the year, Berkner had written a report which resulted in the appointment of an Assistant Secretary of State for Science and the assignment of scientific attaches to major embassies.

He worked on Project East River, a major civil defense program; on Project Troy, which used a then-new "scattering" phenomena of radio waves to establish highly-reliable communications and led to the Distant Early Warning (DEW) Line of radar stations across the Arctic, linked by the new technique.

It was during this period that Doctor Berkner suggested, at a meeting of scientists in the home of Dr. James Van Allen, that all the world's scientists should get together in a year of intensive data-gathering and study of the Earth and space. This was the inception of the International Geophysical Year 1957-58, and of various extensions in co-operation such as the recent International Year of the Quiet Sun.

In 1951, Berkner was chosen as president of Associated Universities, from where he eventually came to the Graduate Research assignment.

But along the way, the diplomats called for him again. And again, there was a linkage to the Antarctic. He was a leading consultant on the treaty by which Antarctica was declared a demilitarized continent, and territorial claims were barred. When the atomic test-ban treaty was considered, he was picked to head a panel on seismic improvements, to determine whether cheaters could be caught.

Then came the new tasks at the Graduate Research Center of the Southwest; to bring to life an institution envisioned by Erik Jonsson and Co-Founders Cecil H. Green and Eugene McDermott, to perform fundamental research and broaden graduate education in the Southwest, with emphasis on co-operation with universities and post-doctoral education -- all, as the charter says, "in the public interest."