Dedication of the

NUCLEAR REACTOR

LABORATORY

University of Illinois

Urbana, Illinois · October 21, 1960

MAJOR EVENTS

11:00 a.m.	REGISTRATION FACULTY LOUNGE, 222 ILLINI UNION
12:00 noon	DEDICATION LUNCHEON BALLROOM, ILLINI UNION
2:00 p.m.	OPEN HOUSE AT THE NUCLEAR REACTOR LABORATORY
3:00 p.m.	SYMPOSIUM ON THE FUTURE OF NUCLEAR ENGINEERING 138 ELECTRICAL ENGINEERING BUILDING
5:00 p.m.	COFFEE HOUR 165 ELECTRICAL ENGINEERING BUILDING
6:00 p.m.	BANQUET BALLROOM, ILLINI UNION
8:30 p.m.	FORUM ON THE ENGINEERING OF THE FUTURE as illustrated by developments in Nuclear Engineering BALLROOM, ILLINI UNION

ACKNOWLEDGMENTS

The members of the Nuclear Committee wish to express their appreciation for the fine cooperation of the Education and Training Branch of the Division of Reactor Development, U. S. Atomic Energy Commission, and the Research Board of the University of Illinois, in making this installation possible. They would also like to acknowledge the excellent cooperation of the General Atomic Division of the General Dynamics Corporation, their workers and subcontractors.

The members of the Committee also want to express their gratitude to the Engineering Science Division of the National Science Foundation, for assistance in increasing the research potential of the Reactor.

The University Architect's office supervised the building construction. The conceptual design was made by Richardson, Severns, Scheeler and Associates. The engineering design was made by Clark, Daily, and Dietz. The general contractor was Kuhne-Simmons Company, Inc.

12:00 n. DEDICATION LUNCHEON

BALLROOM OF THE ILLINI UNION

DEDICATION CEREMONY

Ross J. Martin, *Chairman*

PROGRAM

Introduction of Guests

The Significance of the Nuclear Engineering Program and Reactor

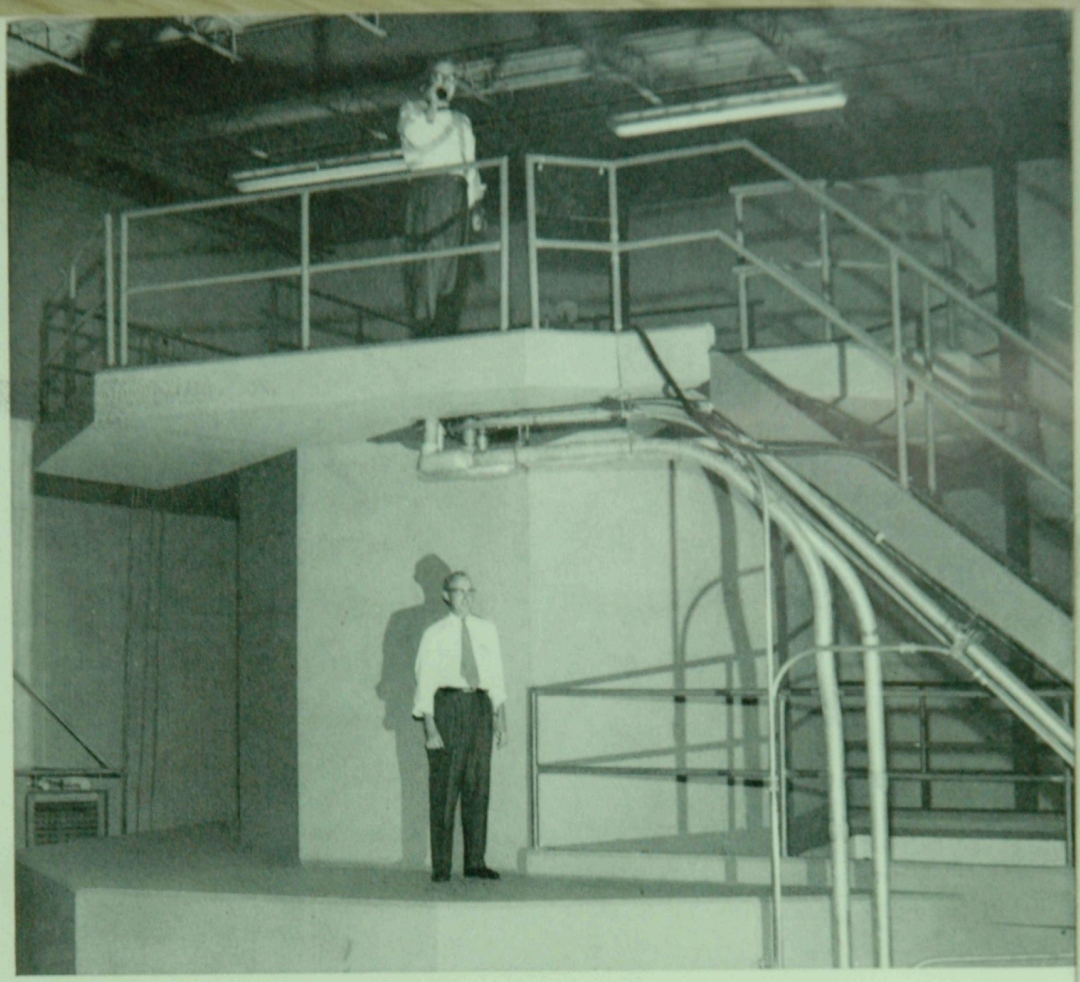
William L. Everitt, *Dean, College of Engineering, University of Illinois*

Frederick T. Wall, *Dean, Graduate College, University of Illinois*

Albert Graff, *Manager, Small Reactor Division, General Atomic Division, General Dynamics Corporation*

Honorable Melvin Price, *Representative and Member Joint Committee on Atomic Energy*

David D. Henry, *President, University of Illinois*



The ILLINOIS
TRIGA Mark II
Nuclear Reactor

Nuclear
Reactor
Laboratory

2:00 p.m. OPEN HOUSE AT THE NUCLEAR REACTOR LABORATORY

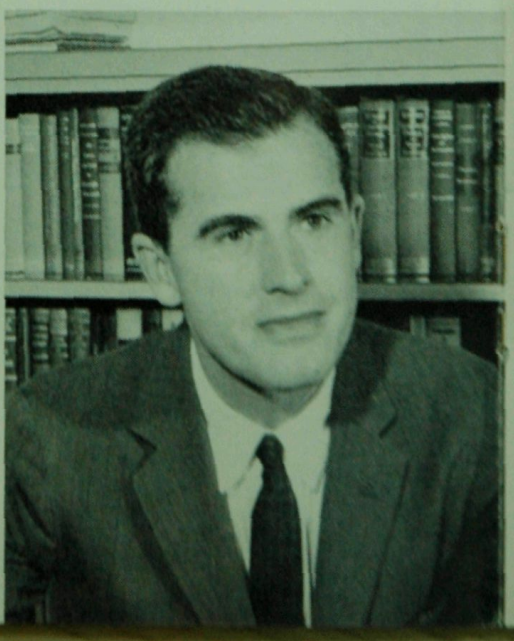
Manufacturer:	General Atomic Division of General Dynamics Corporation
Reactor:	TRIGA Mark II
Licensed Operating Power:	100 kw.
Fuel:	Sixty 20% enriched U^{235} fuel elements, totalling approximately 2 kilograms U^{235}
Control:	Three boron carbide filled rods
Moderator:	65% zirconium hydride 35% water
Reflector:	Graphite — 12 inches around the sides and 4 inches top and bottom
Shield:	Radial — 7.5 feet of concrete, s.g. = 2.75 Vertical — 16 feet of water Weight of concrete approximately 1,000,000 lbs.
*Experimental facilities:**	Four 6 in. horizontal beam ports One 4 x 4 x 5.5 ft. graphite thermal column One 40 position rotary specimen rack One 1.33 in. ID central thimble One pneumatic transfer system for short-lived isotopes One 8 x 10 x 12 ft. bulk shielding facility
Thermal Neutron Fluxes (100 kw.):	Central thimble — 3×10^{12} n/cm^2 sec. Rotary specimen rack — 7×10^{11} n/cm^2 sec.
Building:	44 x 80 feet and 37 feet tall

* Reactors of this type have demonstrated the capability of being pulsed to peak powers above 1000 megawatts for durations of 30 to 40 milliseconds. The reactor fuel limits the peak powers by its nuclear properties and returns the reactor power to a normal operating level.

VISITING SPEAKERS

DR. JAMES A. PHILLIPS received his B.S. in mathematics and physics at Carleton College, Minnesota, his M.S. and Ph.D. in physics at the University of Illinois. In 1944-45 he was Technical Supervisor with Tennessee Eastman Company on the Manhattan Project, working with the Calutron separating U^{235} from uranium. Since 1949 he has been at the Los Alamos Scientific Laboratory, as Group Leader in the Physics Division since 1955. Dr. Phillips served as a U. S. representative to the Second International Conference on Peaceful Uses of Atomic Energy in 1958.

LEONARD J. KOCH is Deputy Director of the Reactor Engineering Division, Argonne National Laboratory. He holds a B.S. degree in Mechanical Engineering from Illinois Institute of Technology. Mr. Koch was Associate Project Engineer for development, design, and initial operation of the EBR-I and was present when the world's first production of electricity from atomic energy was generated by that plant in 1951. Following the EBR-I assignment, he served as Project Coordinator for the Experimental Breeder Reactor II development program and was appointed Project Manager for EBR-II in 1956, a position which he still holds. Mr. Koch was a contributor to the 1955 and 1958 Geneva Conferences on the Peaceful Uses of Atomic Energy.



DR. ROBERT W. PIDD, formerly professor of physics at the University of Michigan, is project manager of the direct conversion program at General Dynamics Corporation's General Atomic Division in San Diego, California. Dr. Pidd graduated from the University of Michigan in 1943, received his master's degree in physics there in 1944, and his doctorate there in 1947. At Michigan he directed the final construction of the University's 100 MEV synchrotron and made early measurements of the size of the atomic nucleus by electron scattering.

3:00 p.m. SYMPOSIUM ON THE FUTURE OF NUCLEAR ENGINEERING

138 ELECTRICAL ENGINEERING BUILDING

FELIX T. ADLER, *Professor of Physics and Nuclear Engineering,* Chairman

Presentation of Papers

"BREEDER REACTORS AND THEIR CAPABILITIES"
DR. LEONARD KOCH, *Director, Breeder Reactor Program and Deputy Director, Reactor Engineering Division of Argonne National Laboratories*

"THE PROBLEMS AND FUTURE OF FUSION"
DR. JAMES A. PHILLIPS, *Group Leader, Controlled Thermonuclear Reactions Project at the Los Alamos Laboratories*

"DIRECT CONVERSION OF NUCLEAR ENERGY"
DR. ROBERT PIDD, *Project Manager, Direct Conversion, General Atomic Division of General Dynamics*

Discussions will be held following each paper. Questions from the audience are invited.

6:00 p.m. BANQUET PROGRAM

BALLROOM OF THE ILLINI UNION

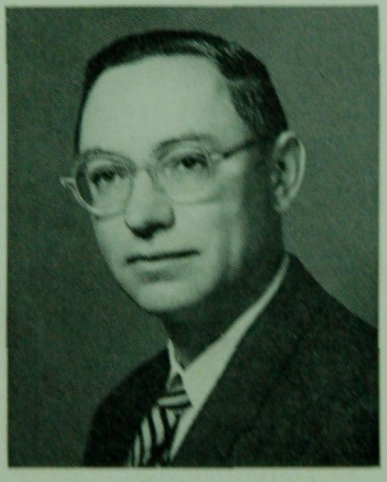
WILLIAM L. EVERITT, *Dean of the College of Engineering*, Chairman

Introduction of distinguished visitors

Address

"EDUCATION FOR HERE AND NOW"

DR. ERIC A. WALKER, *President, Pennsylvania State University*



DR. ERIC A. WALKER received his doctorate in engineering from Harvard in 1935. He taught mathematics and was head of Electrical Engineering at Tufts University 1933-40, was head of Electrical Engineering at the University of Connecticut 1940-42, and worked with the Harvard Underwater Sound Laboratory 1942-45. At Pennsylvania State University he was head of Electrical Engineering and Director, Ordnance Research Laboratory 1945-51, dean of Engineering and Architecture 1951-56, vice-president 1956, and president since October 1, 1956. Dr. Walker was vice-chairman of the President's Committee for Scientists and Engineers 1956-58, and chairman of the National Science Foundation's Committee for Engineering, 1951-53. He is a member of the National Science Board of the National Science Foundation and president of the American Society for Engineering Education.

8:30 p.m. FORUM ON THE ENGINEERING OF THE FUTURE

as illustrated by developments in Nuclear Engineering

BALLROOM OF THE ILLINI UNION

WILLIAM L. EVERITT, *Dean of the College of Engineering,* Moderator

Topics of Discussion

"CONTROLS AND MEASUREMENTS IN MODERN ENGINEERING SYSTEMS"

GILBERT FETT, *Professor of Electrical Engineering*

"NEW MATERIALS FOR NEW NEEDS"

ROBERT J. MAURER, *Professor of Physics*

"THE ENERGY RESOURCES OF TOMORROW"

MARVIN E. WYMAN, *Professor of Nuclear Engineering*

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