

January-December 1948

January

February

March

April

May

June

July

August

September

October

November

December

January

Date	Caption	Dept.	Photographer	Number
1-2	H. M. Goulding, locksmith, at work in his shop.	Mines	R. F. Smith	1-1-8
1-5	Fission product materials emitting high levels of radiation are processed inside a thick walled concrete cell. This shows the apparatus on the outside wall where all operations are performed by remote control. G. W. Parker and J. M. Davis are checking the radiation emitted thru an opening using a radiation instrument called a "cutie pie".	B Meyer	M. H. Bull	1-2-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-3-8
1-5	J. N. Butler is shown operating high pressure equipment for chemically separating radioactive phosphorous from sulfur which has been irradiated from the pile. The radioactive phosphorous is produced from the sulfur by bombardment with neutrons.	B Meyer	M. H. Bull	1-4-8
1-5	J. E. Collier is operating apparatus for separating radioactive carbon from calcium nitrate which has been bombarded in the chain-reacting pile. Since the energy of the radiation emitted by the C14 is low, no heavy shield is required.	B Meyer	M. H. Bull	1-5-8
1-5	View as seen through a periscope inside a hot cell showing complex equipment necessary for chemically processing highly radioactive material behind thick concrete walls. All operations must be done from the outside and the operator can only look into the cell thru special periscopes.	B Meyer	M. H. Bull	1-6-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-7-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-8-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-9-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-10-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-11-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-12-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-13-8
1-5	Deflector and ion source assembly cyclotron vacuum chamber.	B Meyer	M. H. Bull	1-14-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-15-8
1-5	Caption needed.	B Meyer	M. H. Bull	1-16-8
1-6	Concrete and sand being loaded into transit mix truck for use at pile.	Pile	R. F. Smith	1-17-8

Date	Caption	Dept.	Photographer	Number
1-6	Chemistry laboratory layout.	Chemistry	R. F. Smith	1-18-8
1-6	Corridor desk space which extends the length of the building.	Chemistry	R. F. Smith	1-19-8
1-6	Exterior of seven chemistry buildings.	Chemistry	R. F. Smith	1-20-8
1-6	Top view of electronic counter.	Electronic	R. F. Smith	1-21-8
1-6	Front view of electronic counter.	Electronic	R. F. Smith	1-22-8
1-6	Back view of electronic counter.	Electronic	R. F. Smith	1-23-8
1-7	Schematic plan and cross section of betatron.	Accel	M. H. Bull	1-24-8
1-7	Tube showing field focusing in linear accelerator.	Accel	M. H. Bull	1-25-8
1-7	Plan view of synchrotron and lamination section.	Accel	M. H. Bull	1-26-8
1-7	Plan view of synchrotron chamber and dees.	Accel	M. H. Bull	1-27-8
1-7	Curve indicating accelerator phase change in cyclotron.	Accel	M. H. Bull	1-28-8
1-7	Ion envelope for synchrotron.	Accel	M. H. Bull	1-29-8
1-7	B-t curves for synchrotron.	Accel	M. H. Bull	1-30-8
1-7	Schematic view of accelerating tubes for linear accelerator.	Accel	M. H. Bull	1-31-8
1-7	T-t curve showing acceleration phase stability region.	Accel	M. H. Bull	1-32-8
1-7	V-t curve showing accelerating period.	Accel	M. H. Bull	1-33-8
1-7	Electrostatic field focusing for cyclotron.	Accel	M. H. Bull	1-34-8
1-7	Plan view of ion path in cyclotron.	Accel	M. H. Bull	1-35-8
1-7	Bct curve for synchrotron showing acceleration period.	Accel	M. H. Bull	1-36-8
1-7	Fft curve showing acceleration period in cyclotron.	Accel	M. H. Bull	1-37-8
1-7	Section of cyclotron magnet indicating field focusing.	Accel	M. H. Bull	1-38-8
1-7	Snow pictures and grounds maintenance.	Grounds	E. J. Hunter	1-39-8 thru 1-57-8
1-7	Chapel across the street from T-477.	Grounds	R. J. Walton	1-58-8
1-7	South gate at Brookhaven.	Grounds	R. J. Walton	1-59-8
1-7	Brookhaven as seen from tower.	Grounds	R. F. Walton	1-60-8
1-8	L. F. Nims, Biology.	Portrait	J. F. Garfield	1-61-8
1-7	Deserted baseball field and stands as covered with snow.	Grounds	R. J. Walton	1-62-8
1-7	Brookhaven Avenue looking east showing snow.	Grounds	R. J. Walton	1-63-8

Date	Caption	Dept.	Photographer	Number
1-7	Transformer site under cover of snow.	Grounds	R. J. Walton	1-64-8
1-7	Research library showing snow.	Grounds	R. J. Walton	1-65-8
1-7	Police headquarters under cover of snow.	Grounds	R. J. Walton	1-66-8
1-7	Police headquarters showing snow.	Grounds	R. J. Walton	1-67-8
1-12	Miss Belle Groginsky allows the demonstrator pass 225,000 volts from the Van de Graaff generator thru her body. Voltage causes hair to stand straight out. Burdick Junior High School, Stamford, Connecticut.	AEEExhibit	R. F. Smith	1-68-8
1-12	Demonstrator removing vial of radium from lead pig to be placed in pile model.	AEEExhibit	R. F. Smith	1-69-8
1-12	Miss Alfriede Maure's hair stands out straight as 225,000 volts pass thru her body from the Van de Graaff generator.	AEEExhibit	R. F. Smith	1-70-8
1-12	Lecturer giving demonstration of soil radioactivity at the Atomic Energy Exhibit held at Stamford, Conn.	AEEExhibit	R. F. Smith	1-71-8
1-12	John Roberts gets a taste of the 225,000 volts from the Van de Graaff generator on exhibit at Stamford, Connecticut.	AEEExhibit	R. F. Smith	1-72-8
1-12	P. M. Morse	Portrait	J. F. Garfield	1-73-8
1-12	P. M. Morse	Portrait	J. F. Garfield	1-74-8
1-12	P. M. Morse	Portrait	J. F. Garfield	1-75-8
1-12	Snow pictures and grounds maintenance.	Grounds	E. J. Hunter	1-76-8 thru 1-79-8
1-13	Graph and pendulum diagram illustrating stabile acceleration period.	Accel	M. H. Bull	1-80-8
1-13	Synchrotron lamination.	Accel	M. H. Bull	1-81-8
1-13	Air core magnet section.	Accel	M. H. Bull	1-82-8
1-13	Frequency impedence and capacitance frequency curves for rotating condenser in cyclotron.	Accel	M. H. Bull	1-83-8
1-13	2.5 Bev synchrotron plan and section view.	Accel	M. H. Bull	1-84-8
1-13	Time energy and cost energy curves for 2.5 bev synchrotron.	Accel	M. H. Bull	1-85-8
1-13	Proton energy orbit radius curves at 15 kilogauss.	Accel	M. H. Bull	1-86-8
1-13	Basic design parameters for 2.5 Bev synchrotron.	Accel	M. H. Bull	1-87-8

Date	Caption	Dept.	Photographer	Number
1-13	High impedance accelerating system for 10 Bev synchrotron.	Accel	M. H. Bull	1-88-8
1-13	10 Bev synchrotron injection system.	Accel	M. H. Bull	1-89-8
1-13	10 Bev synchrotron and building.	Accel	M. H. Bull	1-90-8
1-13	Estimated field strength vs orbit radius in 240" cyclotron.	Accel	M. H. Bull	1-91-8
1-13	Accelerating cavity circuit diagram for 240" cyclotron.	Accel	M. H. Bull	1-92-8
1-13	Radial variation of 240" magnet model field strength.	Accel	M. H. Bull	1-93-8
1-13	10 Bev synchrotron ejection schematic.	Accel	M. H. Bull	1-94-8
1-13	Capacity vs time curve for 8" condenser in 240" cyclotron.	Accel	M. H. Bull	1-95-8
1-13	Resonant cavity for 240" cyclotron.	Accel	M. H. Bull	1-96-8
1-13	B vs f curves for synchrotron.	Accel	M. H. Bull	1-97-8
1-13	Magnetization and efficiency curves for 240" magnet model.	Accel	M. H. Bull	1-98-8
1-13	High impedance accelerating system for 2.5 Bev synchrotron.	Accel	M. H. Bull	1-99-8
1-13	10 Bev lamination cross section.	Accel	M. H. Bull	1-100-8
1-13	Block diagram of experimental test circuit used in 240" cyclotron.	Accel	M. H. Bull	1-101-8
1-13	R vs T_m curve.	Accel	M. H. Bull	1-102-8
1-13	Bf vs t curve for 2.5 Bev synchrotron.	Accel	M. H. Bull	1-103-8
1-13	Bf vs t curve for 10.0 synchrotron.	Accel	M. H. Bull	1-104-8
1-13	Air core magnet cross section.	Accel	M. H. Bull	1-105-8
1-15	Chemistry laboratory floor plan.	Chemistry	M. H. Bull	1-106-8
1-19	Magnet structure.	Accel	M. H. Bull	1-107-8
1-19	1/16 scale model magnet for 240" cyclotron.	Accel	M. H. Bull	1-108-8
1-19	Cross section of resonant cavity.	Accel	M. H. Bull	1-109-8
1-19	Full scale model condenser.	Accel	M. H. Bull	1-110-8
1-19	Control system block diagram.	Accel	M. H. Bull	1-111-8
1-19	240" cyclotron vacuum chamber.	Accel	M. H. Bull	1-112-8
1-19	Section A-A vacuum chamber, flange connection.	Accel	M. H. Bull	1-113-8
1-19	240" cyclotron shim contour.	Accel	M. H. Bull	1-114-8
1-19	Top section of resonant cavity.	Accel	M. H. Bull	1-115-8
1-19	Condenser shaft, bearings and coupling.	Accel	M. H. Bull	1-116-8
1-19	Principles of magnetic accelerators.	Accel	M. H. Bull	1-117-8
1-19	Partial front view section of resonant cavity.	Accel	M. H. Bull	1-118-8
1-16	Pole shot.	Met	R. J. Walton	1-119-8
1-16	Pole shot.	Met	R. J. Walton	1-120-8
1-15	Payroll clerk Diana Manne.	Mines	R. F. Smith	1-121-8
1-15	Payroll clerk Diana Manne.	Mines	R. F. Smith	1-122-8

Date	Caption	Dept.	Photographer	Number
1-14	Bowling alleys taken for Isotopics.	Recrea	Smith & Walton	1-123-8
1-15	A. M. Macaulay in old uniform.	Police &	J. F. Garfield	1-124-8
1-15	A. M. Macaulay in new uniform.	Security	J. F. Garfield	1-125-8
1-20	2.5 Bev proton synchrotron.	Accel	M. H. Bull	1-126-8
1-20	2.5 Bev proton synchrotron preliminary building sketch.	Accel	M. H. Bull	1-127-8
1-20	10.0 Bev proton synchrotron.	Accel	M. H. Bull	1-128-8
1-20	Cyclotron coils and chamber.	Accel	M. H. Bull	1-129-8
1-20	Synchro-cyclotron laboratory.	Accel	M. H. Bull	1-130-8
1-20	Graph paper, 10 x 10 to the $\frac{1}{2}$ inch.		M. H. Bull	1-131-8
1-21	Copy of National Safety Council Accident cartoon.	Safety	M. H. Bull	1-132-8
1-21	Induction accelerator materials table for synchrotron.	Accel	M. H. Bull	1-133-8
1-21	Pole piece arrangement for high pressure cloud chamber.	Accel	M. H. Bull	1-134-8
1-16	Pole in field opposite T-102.	Met	R. J. Walton	1-135-8
1-16	Smoke and towers.	Met	Meteorology	1-136-8 thru 1-145-8
1-16	K. D. Hartzell.	Portrait	J. F. Garfield	1-146-8
1-26	Particle tracks for physics.	Salant	R. F. Smith	1-147-8 thru 1-151-8
1-26	Caption needed.	Physics	M. H. Bull	1-152-8
1-26	Caption needed.	Physics	M. H. Bull	1-153-8
1-26	Figure 10 - Effective stopping area, A (E) of cloud chamber as a function of meson energy.	Physics	M. H. Bull	1-154-8
1-26	Figure 6 - Locus of track endings, 300 Mev mesons.	Physics	M. H. Bull	1-155-8
1-26	Figure 8 - Locus of track endings, 500 Mev mesons.	Physics	M. H. Bull	1-156-8
1-26	Figure 4 - Schematic cross section of high pressure cloud chamber.	Physics	M. H. Bull	1-157-8
1-26	Particle tracks for physics.	Salant	R. F. Smith	1-158-8

Date	Caption	Dept.	Photographer	Number
1-26	Schematic of the hydraulic control system for the high pressure cloud chamber.	Cloud Chamber	M. H. Bull	1-159-8
1-27	Brookhaven National Lab seal.	Seal	M. H. Bull	1-160-8
1-28	Star negative.	Salant	R. F. Smith	1-161-8
1-28	The relation of concentration of A b emitted in a sphere of 1×10^3 cm radius to the specific ionization in that sphere immersed in a solution containing 1 millicure of activity of ML.		M. H. Bull	1-162-8
1-28	The relation of ionization density to energy of B particles from data "Radiations and Radioactive Substances"		M. H. Bull	1-163-8
1-28	by Rutherford, Chadwick and Ellis. Ionization density in an infinite slab of thickness R (formula).		M. H. Bull	1-164-8
1-28	Total ionization in a sphere, etc.		M. H. Bull	1-165-8
1-28	Ionization in a sphere of radius chart.		M. H. Bull	1-166-8
1-28	Brookhaven National Lab seal.	Seal	M. H. Bull	1-167-8
1-21	American Museum of Natural History. John Jameson, Assistant Treasurer of AUI, demonstrates the Van de Graaff generator with the assistance of Jean Klein.	AEEExhibit	R. F. Smith	1-168-8
1-21	Dr. J. Sachs demonstrating the use of radio isotopes as tagged atoms in tracer experiments.	AEEExhibit	R. F. Smith	1-169-8
1-21	Dr. P. M. Morse and Dr. M. Salisbury Director of Public Information, being interviewed by NBC announcer.	AEEExhibit	R. F. Smith	1-170-8
1-21	John Jameson and Jean Klein pose for news photographers while demonstrating the Van de Graaff generator.	AEEExhibit	R. F. Smith	1-171-8
1-21	Dr. Robert Patterson explains the working of the atomic pile model to Dr. Morse Salisbury.	AEEExhibit	R. F. Smith	1-172-8
1-29	Meteorology smoke run.	Met	Meteorology	1-173-8 thru 1-181-8

Date	Caption	Dept.	Photographer	Number
1-30	Copy negative from New York Times photo taken on the opening day of the Atomic Energy Exhibit in New York.	AEE Exhibit	M. H. Bull	1-182-8
1-30	Formula compiled by Rubin.	Rubin-Bio	M. H. Bull	1-183-8
1-30	Copy of tracks Groups One, two, three.	Salant	Smith & Walton	1-184-8 thru 1-204-8
1-30	Deleted by A. P. Christoffersen on December 10, 1949. Refer to Neg.No. 12-54-8.	Deleted	Deleted	1-205-8
1-30	Meteorology smoke run.	Met	Meteorology	1-206-8 thru 1-211-8
1-29	Long shot of pole holding weather instruments showing workmen putting finishing touches on installation.	Met	R. J. Walton	1-212-8
1-15	Slide # A 692A - (A)	Sparrow Biology	R. F. Smith	1-213-8
	Slide # A 672B (8)	Sparrow	R. F. Smith	1-214-8
1-19	Slide # A 692-A (D)	Sparrow	R. F. Smith	1-215-8
1-19	Slide # A 929-P (A)	Sparrow	R. F. Smith	1-216-8
1-19	Slide # A 692A (E)	Sparrow	R. F. Smith	1-217-8
1-28	Slide No. A 929 Q (C)	Sparrow	R. F. Smith	1-218-8
1-28	Slide # A 929 Q (A)	Sparrow	R. F. Smith	1-219-8
1-28	Slide # A 929 Q (B)	Sparrow	R. F. Smith	1-220-8
1-28	Slide # A 9299 D	Sparrow	R. F. Smith	1-221-8
1-28	Slide # A-929-Q	Sparrow	R. F. Smith	1-222-8

February

Date	Caption	Dept.	Photographer	Number
2-2	Copy of floor areas of buildings by type of use, December 30, 1947.	Hartzell	M. H. Bull	2-1-8
2-3	Assorted sizes of the Brookhaven National Lab seal.	Seal	M. H. Bull	2-2-8 thru 2-8-8
2-4	Organization chart of the Medical Department.	Medical	M. H. Bull	2-9-8
2-4	K. D. Hartzell	Portrait	J. F. Garfield	2-10-8
2-4	Geiger counter chamber.	Patent	R. F. Smith	2-11-8
2-9	Aluminum welding specimen before testing. Number 1.	NucReac	J. F. Garfield	2-12-8
2-9	Number 3	NucReac	J. F. Garfield	2-13-8
2-9	Number 4	NucReac	J. F. Garfield	2-14-8
2-9	Number 9	NucReac	J. F. Garfield	2-15-8
2-9	Number 12	NucReac	J. F. Garfield	2-16-8
2-11	Page 856 of Nature. The masses of the incident particles.	Physics	M. H. Bull	2-17-8
2-11	Alpha particle tracks.	Physics	M. H. Bull	2-18-8
2-11	Alpha particle tracks.	Physics	M. H. Bull	2-19-8
2-11	Alpha particle tracks.	Physics	M. H. Bull	2-20-8
2-11	Primary meson track with secondary light particle.	Physics	M. H. Bull	2-21-8
2-11	Copy negative - tracks.	Physics	M. H. Bull	2-22-8
2-11	Copy negative - tracks.	Physics	M. H. Bull	2-23-8
2-11	Copy negative - tracks.	Physics	M. H. Bull	2-24-8
2-11	Copy negative - tracks.	Physics	M. H. Bull	2-25-8
2-11	Copy negative - tracks.	Physics	M. H. Bull	2-26-8
2-11	Showing interior of other cloudchamber laboratory.	Physics	M. H. Bull	2-27-8
2-5	Snow scene taken facing north from Brookhaven Avenue showing rear of T-118 and comparative size of snow drift to auto.	Hunter	R. J. Walton	2-28-8
2-5	Snow scene showing Sno-Go machine wading snow into truck. Shot taken facing west on Brookhaven Avenue.	Hunter	R. J. Walton	2-29-8
2-5	Showing long shot of Brookhaven Ave. facing west with snow banked up on both sides of the street and gainst buildings.	Hunter	R. J. Walton	2-30-8

Date	Caption	Dept.	Photographer	Number
2-13	Figure 2 - These beta-ray tracks were taken by C. T. R. Wilson of Cambridge, England. The electrons are photo-electrically released and hence receive the full energy of the incident photons here fully 30,000 electron volts.	Physics	M. H. Bull	2-31-8
2-32	Cloud photograph.		M. H. Bull	2-32-8
2-13	Figure 6 - In the upper picture a 500,000,000 electron volt cosmic ray hits a nucleus of an atom in the brass piece above the chamber, and three positive and three negative electrons result. (Positives bend to the right in the direct left-hand image).	Physics	M. H. Bull	2-33-8
2-13	Photograph (Figure 19) of a dying cosmic ray - a mesotron.	Physics	M. H. Bull	2-34-8
2-13	Copy of "Registry of Stills" (Front)	Legal	J. F. Garfield	2-35-8
2-13	Copy of "Registry of Stills" (Back)	Legal	J. F. Garfield	2-36-8
2-17	Organization chart.	Hartzell	A. P. Christfsn	2-37-8
2-10	Chemistry building looking north for Dr. Miller's report.	Chemistry	R. F. Smith	2-38-8
2-17	High voltage x-ray machine now in operation in the Biology Department. This machine is used to bombard or irradiate cultures of bacteria for mutant formation study. The same machine is used on botanical specimens for cytological experiments.	Biology	R. F. Smith	2-39-8
2-17	Paul Steinglass, Associate Scientist in the Biology department, operating the high voltage machine. The x-ray machine is used for radiating cultures of bacteria for mutant formation study. This same machine is also used to bombard the roots of flowers, as well as bulbs, for cytological experiments.	Biology	R. F. Smith	2-40-8
2-17	General view of the bacteriology department. Cultures are prepared and incubated here for mutant formation study.	Biology	R. F. Smith	2-41-8
2-18	Desk space and paper work area of the Chemistry laboratory.	Chemistry	R. F. Smith	2-42-8

Date	Caption	Dept.	Photographer	Number
2-19	Meteorology smoke run.	Met	Meteorology	2-43-8 thru 2-46-8
2-17	Showing T-51 (it was moved up from Brookhaven Avenue) in the process of being set on its new foundation. It is to be used as headquarters for the Meteorology group. The new site is one-half mile past the carpenter shop (west) on Brookhaven Avenue.	Met	R. J. Walton	2-47-8 thru 2-48-8
2-20	Figure 3 - Tracks of a particles from thorium in a Wilson chamber showing two ranges.	Johnson	M. H. Bull	2-49-8
2-20	Figure 2 - Tracks.	Johnson	M. H. Bull	2-50-8
2-20	Miss Suffolk.	Mines	R. J. Walton	2-51-8
2-20	Miss Suffolk.	Mines	R. J. Walton	2-52-8
2-20	Miss Suffolk.	Mines	R. J. Walton	2-53-8
2-24	Copy of Brookhaven Zoning Map.	Hartzell	M. H. Bull	2-54-9
2-25	Rhizome of trillium erectum and bud. (Rhizome is an underground stem.) Trillium erectum is a wild flower and is being used by Dr. Sparrow in his experiments on the x-ray treatment of plant cells.	Biology	R. F. Smith	2-55-8
2-25	Closeup of trillium bud. Outer scales are cut away to show floral parts. It is this part of the plant that the biologist is interested in. The stamens will be removed and their contents squeezed onto microscope slides to examine the chromosomes within the cells and the effect of radiation on them.	Biology	R. F. Smith	2-56-8
2-25	Closeup of stamens. One stamen in removed from the bud and the contents squeezed onto a glass. Microscope slide is made for examination.	Biology	R. F. Smith	2-57-8
2-25	Withdrawn at the request of Biology.			2-58-8
2-25	Stamen contents being stained with carmine for examination under the microscope. The carmine stains the chromosomes and makes their structure visible under the microscope.	Biology	R. F. Smith	2-59-8

Date	Caption	Dept.	Photographer	Number
2-25	Eric Christensen studies the various stages of pollen development in the Trillium plant. Biologists at Brookhaven use Trillium extensively in the experiments because its chromosomes are relatively large, facilitating study.	Biology	R. F. Smith	2-60-8
2-25	Dr. Arnold H. Sparrow exposes trillium plants to x-ray so that subsequent studies can be made of the effects of such radiation on the plant's cell structure.	Biology	R. F. Smith	2-61-8
2-25	Photomicrograph (Dark field X 27) of cross section of trillium erectum bud. Print magnification 54 X.	Biology	R. F. Smith	2-62-8
2-25	Photomicrograph (Bright field 27 X) of trillium erectum bud cross section. Print 54 X.	Biology	R. F. Smith	2-63-8
2-25	Label for classified prints "Secret".	Pho	R. J. Walton	2-64-8
2-25	Captions needed on slide negatives.		M. H. Bull	2-65-8 thru 2-75-8
2-26	Cross section of trillium erectum stamen (Bright field). Neg. Mag. 47 X and Print Mag. 100 X.	Biology	R. F. Smith	2-76-8
2-26	Meteorology smoke run.	Met	Meteorology	2-77-8 thru 2-84-8
2-27	Dr. Jacob Sachs with phosphorous precipitate.	Biology	R. F. Smith	2-85-8
2-27	Dr. Leon M. Sharpe with assistant Anne Torrey at electroplate machine made here at the laboratory which plates out radioactive iron for granitative analysis.	Biology	R. F. Smith	2-86-8
2-27	Dr. Abraham Edelman inspects test rat with nembutol preparatory to experiment with Edward P. Sparapani assists.	Biology	R. F. Smith	2-87-8
2-27	Dr. Martin Gibbs takes a reading on the Soxhlet ether extractor in his lab.	Biology	R. F. Smith	2-88-8
2-27	Dr. R. A. Steele and L. A. Attolenghi dissect a plant moist chamber. The chamber was built on the base by the woodworking shop and prevents the loss of moisture during dissecting.	Biology	R. F. Smith	2-89-8

Date	Caption	Dept.	Photographer	Number
2-27	Dr. Leslie F. Nims inspecting Dr. B. Rubin's new lyophilizer.	Biology	R. F. Smith	2-90-8
2-27	Kelsye M. Garces, Personnel Records.	Mines	R. F. Smith	2-91-8
2-27	Sydney Thompson, Chemistry.	Mines	R. F. Smith	2-92-8
2-27	Meteorology smoke run.	Met	Meteorology	2-93-8 thru 2-99-8
2-2	General view of rear of T-463 at 46 Bell Avenue. This building is going to be converted for use by Biology. plans call for a greenhouse to be built onto the center portion of the rear of the building.	Biology	R. J. Walton	2-100-8
2-2	View of T-51 at 71 Brookhaven Avenue being made ready to be moved to its new site. It is to be made into headquarters for Meteorology.	Met	R. J. Walton	2-101-8
2-2	T-51 in the process of being moved to its new site for use by the Meteorology Department.	Met	R. J. Walton	2-102-8 thru
2-2	General view of land being cleared to make way for an observation post and buildings to house met. equipment.	Met	R. J. Walton	2-108-8 2-109-8 and
2-2	General view of land being cleared to make way for the meteorology building. The building which will occupy this site is T-51 and is in the process of being moved from its present site at 71 Brookhaven Avenue.	Met	R. J. Walton	2-110-8 2-111-8
2-2	General foundation view and cleared land. This is in preparation for the erection of a 400' tower.	Met	R. J. Walton	2-112-8
2-5-	Slide A-502-A-	A. Spanow	R. F. Smith	2-113-8
2-13-	Slide A-694L - E95	"	"	2-114-8

Date	Caption	Dept.	Photographer	Number
2-2	Slide # A 929 Q (E)	Sparrow Biology	R. F. Smith	2-115-8
2-2	Slide # A 929 Q (F)	Sparrow	R. F. Smith	2-116-8
2-2	Slide # A 929 Q (H)	Sparrow	R. F. Smith	2-117-8
2-2	Slide # A 929 Q (G)	Sparrow	R. F. Smith	2-118-8
2-2	Slide # A 929 Q (I)	Sparrow	R. F. Smith	2-119-8
2-3	Slide # A 144 E (D)	Sparrow	R. F. Smith	2-120-8
2-3	Slide # A 144 E (B)	Sparrow	R. F. Smith	2-121-8
2-3	Slide # A 144 E (A)	Sparrow	R. F. Smith	2-122-8
2-3	Slide # A 144 E (E)	Sparrow	R. F. Smith	2-123-8
2-3	Slide # A 833 H (A)	Sparrow	R. F. Smith	2-124-8
2-3	Slide # A 833 H (B)	Sparrow	R. F. Smith	2-125-8
2-10	Slide # A 672 B	Sparrow	R. F. Smith	2-126-8
2-13	Slide # A 692A E65	Sparrow	R. F. Smith	2-127-8
2-13	Slide # A 692A (B) E 65	Sparrow	R. F. Smith	2-128-8
2-13	Slide # A 692 A (C)	Sparrow	R. F. Smith	2-129-8 2-129-8
2-13	Slide # A 692 A (D)	Sparrow	R. F. Smith	2-129-8 2-130-8
2-13	Slide # A 692 A (E72)	Sparrow	R. F. Smith	2-129-8 2-131-8
2-13	Slide # A 672B8 (E97)	Sparrow	R. F. Smith	2-129-8 2-132-8
2-13	Slide # A 936M E 103	Sparrow	R. F. Smith	2-129-8 2-133-8
2-20	Slide # A 572-E	Sparrow	R. F. Smith	2-129-8 2-134-8
2-3	Slide # A-144-E C	Sparrow	R. F. Smith	2-135-8
2-10	Slide # A-672-B	Sparrow	R. F. Smith	2-136-8

March

Date	Caption	Dept.	Photographer	Number
3-2	Magnetic accelerator types.	Accel	M. H. Bull	3-1-8
3-2	Constant frequency cyclotron, synchrotron cyclotron, betatron, synchrotron.	Accel	M. H. Bull	3-2-8
3-1	Meteorology smoke run.	Met	Meteorology	3-3-8 thru 3-9-8
3-3	Figure 1.20 - Change of element of elastic medium in simple expansion.	P.Morse	M. H. Bull	3-10-8
3-3	Figure 1.21 - Change of element of elastic medium in simple shear as given by dyadic D equals $\frac{1}{2} e (ii-jj)$.	P.Morse	M. H. Bull	3-11-8
3-3	Figure 1.23 - Change of element of elastic medium in torsion as given in Eq. (1.6.25).	P.Morse	M. H. Bull	3-12-8
3-3	Micron scale.	Electronic	M. H. Bull	3-13-8
3-3	J. Garafola of the Graphite Shop.	Mines	R. F. Smith	3-14-8
3-4	Scientific Cooperation Chart.	Hartzell	M. H. Bull	3-15-8
3-4	Organization for Atomic Development.	Hartzell	M. H. Bull	3-16-8
3-1	Aluminum welding specimen after being tested. Number 1.	NucReac	R. J. Walton	3-17-8
3-1	Number 3.	NucReac	R. J. Walton	3-18-8
3-1	Number 4.	NucReac	R. J. Walton	3-19-8
3-1	Number 9.	NucReac	R. J. Walton	3-20-8
3-1	Number 12.	NucReac	R. J. Walton	3-21-8
3-1	Aluminum welding specimen after being tested after salt has been cleaned off.			
	Number 1.	NucReac	R. J. Walton	3-22-8
3-1	Number 3.	NucReac	R. J. Walton	3-23-8
3-1	Number 4.	NucReac	R. J. Walton	3-24-8
3-1	Number 9.	NucReac	R. J. Walton	3-25-8
3-1	Number 12.	NucReac	R. J. Walton	3-26-8
3-5	Site plan basic data estimated as of 11-1-48.	Hartzell	M. H. Bull	3-27-8
3-5	BNL proposed zoning map.	Hartzell	M. H. Bull	3-28-8
3-5	Laboratory personnel by departments.	Hartzell	M. H. Bull	3-29-8
3-5	Geographical distribution of Brookhaven's Scientific & Scientific Consultant personnel March 1, 1948.	Hartzell	M. H. Bull	3-30-8
3-5	Plan of Meteorology & Monitoring net now under construction.	Hartzell	M. H. Bull	3-31-8

Date	Caption	Dept.	Photographer	Number
3-5	Location of scientific and direct service units.	Hartzell	M. H. Bull	3-32-8
3-5	Approaches to Brookhaven National Lab.	Hartzell	M. H. Bull	3-33-8
3-5	Biology's grid.	Biology	M. H. Bull	3-34-8
3-8	Organization chart.	Hartzell	M. H. Bull	3-35-8
3-9	High voltage supply - front view.	Electronics	R. F. Smith	3-36-8
3-9	High voltage supply - top view.	Electronics	R. F. Smith	3-37-8
3-9	High voltage supply - bottom view.	Electronics	R. F. Smith	3-38-8
3-10	Meteorology smoke run.	Met	Meteorology	3-39-8 thru 3-54-8
3-5	Closup shot of foundation for tower.	Met	R. J. Walton	3-55-8
3-5	Long shot showing foundation and the surrounding area of site for tower to be used by Meteorology.	Met	R. J. Walton	3-56-8
3-5	Long shot of buildings to be used for monitoring stations are shown at the construction site.	Monsta	R. J. Walton	3-57-8
3-5	Buildings that will be used to house monitoring equipment are shown at the construction site prior to being moved to positions around the lab.	Monsta	R. J. Walton	3-58-8
3-5	First monitoring station set up in field by north gate. Note that the wires have not been hooked up.	Monsta	R. J. Walton	3-59-8
3-5	Showing construction on T-463 which will be used for the biology department.	Biology	R. J. Walton	3-60-8 thru 3-63-8
3-5	Shot of sign: "Meteorological Towers Project".	Met	R. J. Walton	3-64-8 3-65-8
3-11	Copy of D. C. Milliamsperes.	Chris	M. H. Bull	3-66-8
3-11	Basic pattern of a dehybrid four factor cross.	Biology	M. H. Bull	3-67-8
3-11	Basic pattern of a monohybrid two factor cross.	Chris Biology	M. H. Bull	3-68-8
3-11	Illustration of orandom sorting of chromosomes.	Chris Biology	M. H. Bull	3-69-8

Date	Caption	Dept.	Photographer	Number
3-12	Photomicrograph of 16 mm cloud chamber film showing clock. 44.8 X	Cloud Chamber	R. F. Smith	3-70-8
3-12	Photomicrograph of 16 mm cloud chamber film showing scale. 44.8 X	Cloud Chamber	R. F. Smith	3-71-8
3-12	Photomicrograph of 16 mm film showing clock. 44.8 X	Electronics	R. F. Smith	3-72-8
3-12	Copy of chart - Figure 59 - diagram to illustrate the redistribution of genes in reproduction.	Biology	M. H. Bull	3-73-8
3-12	Dr. Arnold H. Sparrow, Biology	Portrait	J. F. Garfield	3-74-8
3-12	Dr. Arnold H. Sparrow, Biology	Portrait	J. F. Garfield	3-75-8
3-12	March 10, Women's Bowling League showing left to right: P. Still, F. Bat-	Recrea Recrea	R. F. Smith	3-76-8
3-11	AEC volley ball team in action.		R. F. Smith	3-77-8
3-16	Periodical reading room.	Library	R. F. Smith	3-78-8
3-17	High voltage x-ray generator.		M. H. Bull	3-79-8
3-17	A special remote manipulation employed in sampling very radioactive solutions.	Clinton Lab	M. H. Bull	3-80-8
3-17	Drs. Paul Tompkins and Waldo Cohn discuss the operation of this device which makes it possible to open a bottle and draw a sample of its radioactive contents from a safe distance. The bottle is buried in the heavy lead block, only the top sticking out. Operations, behind the lead shield, may be viewed in the mirror. This is typical of many devices developed on the Manhattan Project to handle safely highly radioactive materials.			
3-17	At the operating face of a shielded fission product separation unit, Dr. Edward Tompkins tries a reaction while Mr. Clinton Vannoman notes is progress thru a periscope. Recording instruments permit careful control of the processes.			

Date	Caption	Dept.	Photographer	Number
3-17	<p>Start of a neutron bombardment for producing radioisotopes in the Clinton chain-reacting uranium pile. Dr. Waldo Cohn demonstrates how samples of the material are inserted in the pile to make them radioactive. After the little container filled with the material to be bombarded is fitted into the holes of the graphite carrier block, the block will be pushed into the center of the pile. (Mr. Barker holds the block). The pile is not operating when this is done so that intense radiation does not leak out thru the carrier charging hole. Concrete protective walls surround the pile and the holes thru it are normally plugged to prevent escape of radiation. Note use of lead bricks around carrier hole for shielding from radiation and use of gloves and tongs.</p>	Clinton Lab	M. H. Bull	3-82-8
3-17	<p>Removal of radioactive material from the pile at the end of the neutron bombardment period. Here Dr. Ralph Overman, with a long holder, removes a bombarded sample from the carrier block which has just been pulled from the pile. Mrs. Weber measures the samples radioactive strength to check on the safety of handling it. The carrier blocks is pulled into a lead shield to protect the workers from radiation of other samples in the carrier. Here again the pile is not operating since a hole is open thru the shield.</p>	Clinton Lab	M. H. Bull	3-83-8
3-17	<p>Side wall of the hot cubicle whose roof is shown in Photo 10. Here is the remote control and viewing equipment for carrying out inside the concrete-walled cubicle such processes as the separation of desired fission elements from the pile uranium. This operation is not concerned with plutonium extraction, but is for obtaining radioisotopes to be used in scientific experiments. George Parker, supervisor of Fission Product Separations at Clinton Lab describes to Dr. C. Coryoll the operation of the units. Gordon Hobert is looking into a periscope to observe the process of the initial dissolving process as it takes place behind two foot thick concrete walls, while in the rear Mr. Stack operates the control of an extractor. Dr. Corvoll and associate did much of</p>			

Date	Caption	Dept.	Photographer	Number
3-17	product chemistry. Highly active materials from the pile are taken to special hot labs for extraction of the desired pure isotopes. Here is the start of an operation in a hot lab. Paul Shallert, working very rapidly with very long-handled tongs, introduces the active material thru the roof of a special concrete-walled small room or cubicle. The material drops down inside the cubicle to chemical processing units which can be operated completely and safely from outside the cubicle.	Clinton Lab	M. H. Bull	3-84-8
3-17	While pile isoperating, various physical experiments can safely be performed outside thick radiation shields. One face of the Clinton pile is shown here which is equipped with holes for experimental purposes (as well as for introduction of materials to be bombarded). Dr. Ralph Overman and P. B. Orr are demonstrating a physics experiment with a defined beam of radiation emerging thru a small hole (#20) in the shield. Note that the other experimental holes are plugged and a thick house of lead bricks (in foreground) stops the radiation beam after passing the experimental device.	Clinton Lab	M. H. Bull	3-85-8
3-17		Clinton Lab	M. H. Bull	3-86-8
3-18	Meteorology smoke run.	Met	Meteorology	3-87-8 thru 3-94-8
3-16	Margaret Crane tries her skill at locating the radioactive frog. This new device will be used at the Atomic Energy Exhibit.	AEEExhibit	R. F. Smith	3-95-8
3-16	Closeup of radioactive frogs showing detail of Geiger counter. The device is to be used in the Atomic Energy Exhibit. By sliding the counter back & forth, the spectators can locate the radioactive frog. Frogs have been injected with radio-strontium.	AEEExhibit	R. F. Smith	3-96-8
3-18	Monitoring shack.	Monsta	R. F. Smith	3-97-8

Date	Caption	Dept.	Photographer	Number
3-18	Placement of particle plates in airplane.	Cloud Chamber	R. F. Smith	3-98-8 thru 3-101-8
3-18	Floor plan of Biology laboratory.	Biology	M. H. Bull	3-102-8
3-18	Plot plan, floor plan and elevation of greenhouse.	Biology	M. H. Bull	3-103-8
3-18	Floor plan of Biology laboratory.	Biology	M. H. Bull	3-104-8
3-19	Dramatic Club.	Recrea	J. F. Garfield	3-105-8
3-19	Dramatic Club.	Recrea	J. F. Garfield	3-106-8
3-19	Bowling league - Men's Dormitory A	Recrea	J. F. Garfield	3-107-8
3-19	Bowling league - Men's Dormitory A	Recrea	J. F. Garfield	3-108-8
3-19	Bowling league - Purchasing	Recrea	J. F. Garfield	3-109-8
3-19	Bowling league - Purchasing	Recrea	J. F. Garfield	3-110-8
3-19	Micron scale.	Electronics	M. H. Bull	3-111-8
3-19	Caption needed.		M. H. Bull	3-112-8
3-19	Caption needed.		M. H. Bull	3-113-8
3-22	Grounds progress and maintenance.	Grounds	E. J. Hunter	3-114-8 thru 3-142-8
3-22	North gate monitoring station looking northeast.	Monsta	R. F. Smith	3-143-8
3-22	North gate monitoring station looking southeast.	Monsta	R. F. Smith	3-144-8
3-22	Photomicrograph shows surface finish standards (Mu polish 2) Micro tessar oblique illumination, Mag X 12.		R. F. Smith	3-145-8
3-22	Photomicrograph showing surface finish standards (metal) 16mm Bl. Grind, Mag. 12 X micro tessar.		R. F. Smith	3-146-8
3-22	Photomicrograph showing metal surface standard finish - 12 X micro tessar oblique illumination (500 mu grind).		R. F. Smith	3-147-8
3-22	Photomicrograph showing metal surface finish standard (500 mu grind) Mag. 12 X micro tessar vertical illumina- tions.		R. F. Smith	3-148-8

Date	Caption	Dept.	Photographer	Number
3-22	Photomicrograph showing metal surface finish standard (16 mu Bl Grind) Mag 12 X micro tessar vertical illumination.		R. F. Smith	3-149-8
3-22	Photomicrograph showing metal surface finish standard (2 mu polish) Mag 12 X micro tessar vertical illumination.		R. F. Smith	3-150-8
3-22	Photomicrograph showing metal surface finish standard (500 Mu Grind) Mag 52.8 X vertical illumination.		R. F. Smith	3-151-8
3-22	Photomicrograph showing metal surface finish standard (16 Mu Bl Grind) Mag 52.8 X vertical illumination.		R. F. Smith	3-152-8
3-22	Photomicrograph showing metal surface finish standard (2 mu polish) Mag 52.8 X vertical illumination.		R. F. Smith	3-153-8
3-22	Photomicrograph showing metal finish standard (500 mu grind) Mag 52.8 X ultra-pack illumination.		R. F. Smith	3-154-8
3-22	Photomicrograph showing metal surface finish standard (16 mu Bl grind) Mag 52.8 X, ultra-pack illumination.		R. F. Smith	3-155-8
3-22	Photomicrograph showing metal surface finish standard (2 mu polish) Mag 52.8 X ultra-pack illumination.		R. F. Smith	3-156-8
3-22	March 17, 1948 Women's bowling league Administration #2.	Recrea	R. F. Smith	3-157-8
3-22	March 17, 1948 Women's bowling league Communicats.	Recrea	R. F. Smith	3-158-8
3-22	Margaret Crane operates the Geiger Miller counter to locate the radioactive frogs.	AEEExhibit	R. F. Smith	3-159-8
3-22	Relative sensitivity of trillium chromosomes to x-ray breakage at various stages of microsporogenesis (dosage in all cases was 50 R).	Biology	M. H. Bull	3-160-8
3-22	Stage x-rayed.	Biology	M. H. Bull	3-161-8
3-22	Caption needed.	Biology	M. H. Bull	3-162-8
3-23	Closeup of Dr. B. Rubin's lyophilizer for Patent Department.	Biology	Smith & Walton	3-163-8
3-23	General view of lyophilizer designed by B. Rubin for use for the rapid dehydration of bacteria.	Biology	Smith & Walton	3-164-8
3-23	Meteorology smoke run.	Met	Meteorology	3-165-8 thru 3-171-8

Date	Caption	Dept.	Photographer	Number
3-24	Arthur J. Garritano	Mines	M. H. Bull	3-172-8
3-24	Bowling awards.	Mines	M. H. Bull	3-173-8
3-29	Meteorology smoke run.	Met	Meteorology	3-174-8 thru 3-181-8
3-29	Grounds progress and maintenance.	Grounds	E. J. Hunter	3-182-8 thru 3-189-8
3-30	Meteorology smoke run.	Met	Meteorology	3-190-8 thru 3-197-8
3-25	AEC bowling team.	Recrea	R. J. Walton	3-198-8
3-30	Pump.	Electronics	R. F. Smith	3-199-8
3-30	Pump.	Electronics	R. F. Smith	3-200-8
3-31	Ernest G. Ball of Particle Physics loosens the huge bolts which secure the frontal plate of a high pressure cloud chamber used in the investigation of cosmic rays. This chamber is equivalent to one of a diameter of 200 feet operated at normal temps.	Cloud Chamber	R. F. Smith	3-201-8
3-29	Long shot showing construction of greenhouse showing relation to T-463.	Biology	R. J. Walton	3-202-8
3-29	Long shot showing construction of greenhouse.	Biology	R. J. Walton	3-203-8
3-29	Monitoring station set up at the sewage disposal plant.	Monsta	R. J. Walton	3-204-8
3-29	Chief Crozier.	Portrait	J. F. Garfield	3-205-8
3-29	Chief Crozier.	Portrait	J. F. Garfield	3-206-8

April

Date	Caption	Dept.	Photographer	Number
4-1	Flower spike taken from Demerec in the Journal of Heredity.	Biology	M. H. Bull	4-1-8
4-1	Induced mutation in barley.	Biology	M. H. Bull	4-2-8
4-1	Abnormal embryos produced by irradiation of grasshopper egg compared with normal types.	Biology	M. H. Bull	4-3-8
4-1	Mutations in Drosophila resulting from radium irradiation.	Biology	M. H. Bull	4-4-8
4-1	Mutations produced in Drosophila by x-rays.	Biology	M. H. Bull	4-5-8
4-1	Robert P. Brown, Photography, whose score of 600 pins took first place for three game series.	Recrea	R. F. Smith	4-6-8
4-1	Robert V. Dvorak, Electronics, winner of high game score with record of 234 pins, and holder of highest average of 176.	Recrea	R. F. Smith	4-7-8 and 4-8-8
4-1	Stephen M. Takatas, Fire Department, runner-up for high average with score of 160.	Recrea	R. F. Smith	4-9-8 and 4-10-8
4-1	Katherine Boysen, Administration #2, rolled 203 to win first place for high game score, and winner of second place with an individual score of 141.	Recrea	R. F. Smith	4-11-8
4-1	Margaret Chiuchiolo, Accelerator, winner of a trophy for a high average of 142.	Recrea	R. F. Smith	4-12-8 and 4-13-8
4-5	Copy - "Why Take a Chance?"	Safety	M. H. Bull	4-14-8
4-2	Photo-electric densitometer for testing smoke density - front view.	Met	Smith & Walton	4-15-8
4-2	Photo-electric densitometer for testing smoke density - rear view.	Met	Smith & Walton	4-16-8
4-2	Roger Syler is testing anemometer at bench in workshop.	Met	Smith & Walton	4-17-8
4-2	Meteorology recording panel records temperature, wind velocity and direction.	Met	Smith & Walton	4-18-8
4-2	Meteorology plotting room with (right) H. Bohnhorst and (left) D. Mazzearella. Course of weather is plotted from these maps for the entire country.	Met	Smith & Walton	4-19-8
4-2	Philip H. Lowry plotting weather course from map.	Met	Smith & Walton	4-20-8
4-1	Synchrotron model.	Milian	R. J. Walton	4-21-8
4-1	Model synchrotron before being painted. Shown are the two men who built the model. Job took about three weeks.	Milian	R. J. Walton	4-22-8

Date	Caption	Dept.	Photographer	Number
4-7	Meteorology smoke run.	Met	Meteorology	4-23-8 thru 4-38-8
4-8	Copy of star tracks for Hornbostel.	Physics	M. H. Bull	4-39-8
4-7	Woody Kamen seated at his desk which was decorated for him in honor of his bewildering offspring.	Recrea	R. J. Walton	4-40-8
4-9	Model maker shown putting together wooden laminations composing synchro-cyclotron.	Cyclotron	R. J. Walton	4-42-8
4-9	Indirect viewer. Platform with two mirrors (one adjustable) to be used in hot labs so that people working with radioactive material will not have to view the material directly.	Nuclear Reactor	R. J. Walton	4-42-8
4-9	Photo of a one-half scale model of a section of the pile.	Nuclear Reactor	R. J. Walton	4-43-8 and 4-44-8
4-9	Photo shows seventeen mounting boards which are to be used to mount recording cameras for the monitoring stas.	Monsta	R. J. Walton	4-45-8
4-13	Frank G. Scott, technician, releasing pilot balloon. After balloon is released, its flight is checked with the Theodite to determine wind conditions.	Met	R. F. Smith	4-46-8
4-13	Fred Bartlett checking the autocall which recalls wind velocity and direction. Atop the thermoscreen is an anemometer and wind direction indicator.	Met	R. F. Smith	4-47-8
4-13	Fred Bartlett making hourly weather observation. He is whirling a Psychrometer to determine relative humidity and also studying clouds. The thermoscreen houses maximum and minimum thermometers and a hygro-thermograph.	Met	R. F. Smith	4-48-8
4-13	Weather pole showing instruments.	Met	R. F. Smith	4-49-8
4-13	Weather pole showing shields and thermohms (thermohms are connected to instruments in main building and record temperatures at various levels above the ground).	Met	R. F. Smith	4-50-8

Date	Caption	Dept.	Photographer	Number
4-14	Cloud formation at peak shortly before the rapid disintegration of the mushroom shape and as column starts to fall.	Army-Navy Task Force	M. H. Bull	4-51-8
4-14	Cloud formation at peak shortly before the rapid disintegration of the mushroom shape and as column of water starts to fall.	Army-Navy Task Force	M. H. Bull	4-52-8
4-14	Rising column of water enters the first phase of characteristic mushroom. At the base of the column of water, in the left foreground is cruiser Salt Lake City; in right foreground is Jap ship Nagato.	Army-Navy Task Force	M. H. Bull	4-53-8
4-14	Radioactivity above the clouds. To observers, the atomic mushroom at the Able Day explosion over Bikini lagoon looked like a giant peach ice cream cone. This photo was taken from the Crossroads photo plane and shows the radioactive cloud still boiling up towards its maximum height of 35,000 feet. Note the shock wave circle sweeping out around the lagoon.	Army-Navy Task Force	M. H. Bull	4-54-8
4-14	What goes up must come down. Tons of water thrown up out of Bikini Lagoon by the Baker Day blast shower down on the Crossroad target fleet. The spreading circle of radioactive materials is shown sweeping out in an ever widening ring over the target ships. This pic was taken by an automatic camera that was mounted in one of the Bikini towers.	Army-Navy Task Force	M. H. Bull	4-55-8
4-14	It flies thru the air with the greatest of heat. The atom bomb burst, in its test of the fleet. Looking for all the world like a giant cauliflower head suspended to an ever widening neck, Bikini's bellowing cloud of flame and smoke was caught in its various stage formations. (By a Navy patrol bomber flying just beyond range of the deadly explosion) This was taken within several minutes of the detonation and represents the first series of aerial view to be flown to the U. S. for publication.	Army-Navy Task Force	M. H. Bull	4-56-8
	NO NEGATIVE			4-57-8
4-15	Figure 37 - Detail of G-M tube counter for C14 assembly.		M. H. Bull	4-58-8

Date	Caption	Dept.	Photographer	Number
4-15	Diagram for Bell jar G-M tube.		M. H. Bull	4-59-8
4-15	Cross-section view of cylinder type G-M tube.		M. H. Bull	4-60-8
4-15	Ionization voltage relations.		M. H. Bull	4-61-8
4-15	Typical G-M tube geometry.		M. H. Bull	4-62-8
4-15	Absorption curve for C14 radiation.		M. H. Bull	4-63-8
4-15	Formula		M. H. Bull	4-64-8
4-15	Grignard preparation & carbonation unit		M. H. Bull	4-65-8
4-15	Carbonation apparatus.		M. H. Bull	4-66-8
4-15	Formula		M. H. Bull	4-67-8
4-16	Dr. Wolf L. Pajes, Electronics	Portrait	R. F. Smith	4-68-8
4-16	Dr. Wolf L. Pajes, Electronics	Portrait	R. F. Smith	4-69-8
4-25	Synthesis of Tyrosine labelled with C14.	Biology	M. H. Bull	4-70-8
4-25	Decarboxylation of alpha keto esters using carbonyl labelled ethyl pyruvate.	Biology	M. H. Bull	4-71-8
4-25	The synthesis of phenanthrene.	Biology	M. H. Bull	4-72-8
4-25	The synthesis of 1,2,5,6 di-benzanthrene in the 9 position with C-14.	Biology	M. H. Bull	4-73-8
4-25	Extractor of compounds containing C14.	Biology	M. H. Bull	4-74-8
4-25	Formula	Biology	M. H. Bull	4-75-8
4-25	Radioactive testosterone containing C14 in Ring A.	Biology	M. H. Bull	4-76-8
4-25	Apparatus for carbonation of metalated organic compounds.	Biology	M. H. Bull	4-77-8
4-25	Average relative sensitivity of trillium chromosomes to x-ray breakage.	Biology	M. H. Bull	4-78-8
4-25	View B - Insert shows enlarged view of flower bud cut open to reveal enclosed anthers. (Incision is made along the dotted line in View A) Refer to 4-79-8 B and 4-80-8.	Biology	M. H. Bull	4-79-8 A
4-25	Combined 4-79-8 A and 4-80-8	Biology	M. H. Bull	4-79-8 B
4-25	Rhizome and flower bud shown in its dormant winter condition. (Refer to 4-79-8 A and 4-79-8 B)	Biology	M. H. Bull	4-80-8
4-25	Making radioactive vitamins at the Los Alamos laboratory.	Los Alamos	M. H. Bull	4-81-8
4-25	A process of synthesizing organic compounds labelled with c14.	Biology	M. H. Bull	4-82-8
4-25	Meson tracks.	Physics	M. H. Bull	4-83-8
4-25	Meson tracks.	Physics	M. H. Bull	4-84-8

Date	Caption	Dept.	Photographer	Number
4-20	A wooden scale model of a proposed hot cell to be used by scientists when working with high level radioactive matter. Test tubes or other apparatus hung on the pipe web will be operated by remote control after cell has been sealed by means of the interlocking gradations in the front panel. Optical fixtures will enable observation of activity within the cell.	Nuclear Reactor	R. J. Walton	4-85-8 and 4-86-8
4-26	Radioactive frogs.	AEExhibit	R. F. Smith	4-87-8
4-26	Plasma-Counts per minute per MgP		M. H. Bull	4-88-8
4-26	Muscle-Counts per minute per MgPX10.		M. H. Bull	4-89-8
4-26	Counts per minute per MgPX001.			
4-26	Copy of Pile building drawing.	Pile	M. H. Bull	4-90-8
4-26	Copy of line drawing of Pile building.	Pile	M. H. Bull	4-91-8
4-26	Copy of pencil drawing of Pile bldg.	Pile	M. H. Bull	4-92-8
4-27	Graph		M. H. Bull	4-93-8
4-27	Neutron Heuun Differential Cross-Section.		M. H. Bull	4-94-8
4-27	Graph		M. H. Bull	4-95-8
4-27	Protron helium scattering differential cross-section.		M. H. Bull	4-96-8
4-27	Self-absorption of Fe ⁵⁵ .		M. H. Bull	4-97-8
4-27	Self-absorption of Fe ⁵⁹ .		M. H. Bull	4-98-8
4-27	Helium (neutron) angular distribution co-efficients (experimental).		M. H. Bull	4-99-8
4-27	Differential RaFe G-M tubes.		M. H. Bull	4-100-8
4-27	Comparison of p-He and n-He differential cross sections of 8-90 and 8-49.		M. H. Bull	4-101-8
4-27	The effect of amino acids on the trypanocidal activity of Parasorbic acid in Vitro at 25° for 20 hours. (Table VIII)		M. H. Bull	4-102-8
4-27	Table VIII continued.		M. H. Bull	4-103-8
4-27	Table VIII continued.		M. H. Bull	4-104-8
4-27	Beginning of Table VIII.		M. H. Bull	4-105-8
4-27	The influence of calcium pantothenate, pantolactone, and alanine of the trypanocidal activity of parasorbic acid.		M. H. Bull	4-106-8
4-27	The effect of combination of amino acid on the trypanocidal effect of parasorbic acid at room temp for 20 hours.		M. H. Bull	4-107-8
4-27	Formula		M. H. Bull	4-108-8

Date	Caption	Dept.	Photographer	Number
4-27	The influence of time relationships on reversing effect of 0.1% etc.		M. H. Bull	4-109-8
4-27	Plot plan of pile site.	Pile	R. J. Walton	4-110-8
4-20	(Left) Richard Safford and (Right) Dr. Alan Thorndyke placing cover on cloud chamber cameras and auxiliary equipment mounted for balloon flight.	Cloud Chamber	R. F. Smith	4-111-8
4-20	Cloud chamber cameras and auxiliary equipment mounted for balloon flight. Closeup side view.	Cloud Chamber	R. F. Smith	4-112-8
4-20	Cloud chamber cameras and auxiliary equipment mounted for balloon flight. Top and side view.	Cloud Chamber	R. F. Smith	4-113-8
4-20	Cloud chamber cameras and auxiliary equipment mounted for balloon flight. Top view.	Cloud Chamber	R. F. Smith	4-114-8
4-20	Arnold M. Roesch checking cloud chamber in trailer laboratory.	Cloud Chamber	R. F. Smith	4-115-8
4-20	A technician checks equipment before it is sealed in an egg-shaped container, known as a gondola, and sent aloft to record temperature and pressure controls for subsequent cosmic ray balloon flights.	Cloud Chamber	R. F. Smith	4-116-8
4-26	Model of Cosmotron in the Research Staff building.	Cosmo	Garfield & Smith	4-117-8
4-26	Dr. Livingston with Cosmotron model.	Cosmo	Garfield & Smith	4-118-8
4-26	Hand holding figure to show the scale of model Cosmotron.	Cosmo	Garfield & Smith	4-119-8
4-27	Table I - Radioactive isotopes of common biologically important elements arranged according to hal-life.	Biology	M. H. Bull	4-120-8
4-27	Table II - Radioactive isotopes of common biologically important elements arranged according to energy of emitted particles.	Biology	M. H. Bull	4-121-8
4-27	Concerning mesons.	Physics	M. H. Bull	4-122-8
4-27	Chart for slide.	Physics	M. H. Bull	4-123-8
4-27	Electroplating for the plating out of radioactive organic material (break-down of chamber).	Sharpe Biology	R. F. Smith	4-124-8

Date	Caption	Dept.	Photographer	Number
4-27	Counting equipment copper discs containing radioactive material which has been plated out by Dr. Sharpe's equipments is placed in a counter and amount of radiation is measured.	Sharpe Biology	R. F. Smith	4-125-8
4-27	Dr. Sharpe's organic electroplating equipment. Anna M. Torrey checks the apparatus.	Sharpe Biology	R. F. Smith	4-126-8
4-26	"Princess"	Met	R. F. Smith	4-127-8
4-26	H. Bohnhorst is in plane measuring temperature.	Met	R. F. Smith	4-128-8
4-29	Meteorology smoke run.	Met	Meteorology	4-129-8 thru 4-151-8
4-30	Copper disc used with Dr. Sharpe's organic electroplating equipment.	Sharpe Biology	R. F. Smith	4-152-8
4-30	3 Bev Synchrotron magnet end section.	Accel	M. H. Bull	4-153-8
4-30	Formulae	Biology	M. H. Bull	4-154-8
4-30	Table 4 - Average fractional activities number of subjects.	Biology	M. H. Bull	4-155-8
4-30	Table 3 - Average maximum unit activities of subjects.	Biology	M. H. Bull	4-156-8
4-30	Depression in fractional activity based on food components.	Biology	M. H. Bull	4-157-8
4-30	Chart	Biology	M. H. Bull	4-158-8
4-30	Brookhaven National Laboratory firemen fight fire near Rocky Point one mile north of Route 25.	Fire Dept	R. J. Walton	4-159-8 and 4-160-8
4-30	Erection of meteorological tower.	Met	R. J. Walton	4-161-8
4-30	Long shot of makeup of hot cell with door closed.	Nuclear Reactor	R. J. Walton	4-162-8
4-30	Long shot of makeup of hot cell with door open.	Nuclear Reactor	R. J. Walton	4-163-8
4-30	Medium shot of makeup of hot cell with doors open.	Nuclear Reactor	R. J. Walton	4-164-8
4-30	View of hot cell with doors open showing interior of cell.	Nuclear Reactor	R. J. Walton	4-165-8

Date	Caption	Dept.	Photographer	Number
4-30	View A and B of Rhizome and flower bud.	Biology	M. H. Bull	4-166-8
4-16	Face injury of Ferguson workman.	Medical	R. F. Smith	4-167-8
4-26	Slide # A 1459C E101	Sparrow Biology	R. F. Smith	4-168-8
4-26	Slide # A 1459C E100	Sparrow	R. F. Smith	4-169-8
4-26	Slide # A 1148E E108	Sparrow	R. F. Smith	4-170-8
4-26	Slide # A 1148E E109			
4-26	Slide # A 1148E E106	Sparrow	R. F. Smith	4-171-8
4-26	Slide # 1148E E104	Sparrow	R. F. Smith	4-172-8
4-26	Slide # 1148E E105	Sparrow	R. F. Smith	4-173-8
4-26	Slide 1148E E107	Sparrow	R. F. Smith	4-174-8
4-26	Slide # A-1459-C E93	Sparrow	R. F. Smith	4-175-8

May

Date	Caption	Dept.	Photographer	Number
5-3	Model plant for isotope separation.		M. H. Bull	5-1-8
5-3	Chromosomes (copy).		M. H. Bull	5-2-8
5-4	Margie Crane of Administration tries to locate the radioactive frogs at Patchogue High School.	AEEExhibit	R. F. Smith	5-3-8 and 5-4-8
5-6	The influence of calcium panthothenate, pantolactone and analine on the trypanocidal activity of parasorbic acid.	Biology	M. H. Bull	5-5-8
5-6	The effect of amino acids on the trypanocidal activity of parasorbic acid in vitro at 25° C for 20 hours.	Biology	M. H. Bull	5-6-8 thru 5-9-8
5-4	Pre-amplifier assembly.	Monsta	R. F. Smith	5-10-8
5-4	Pre-amplifier assembly.	Monsta	R. F. Smith	5-11-8
5-3	View of mockup of hot cell with doors open.	Nuclear Reactor	R. J. Walton	5-12-8
5-3	View of mockup of hot cell with doors closed.	Nuclear Reactor	R. J. Walton	5-13-8
4-15	Interior of T-304 to illustrate the before stage of building modification.	Buildings	R. J. Walton	5-14-8
4-15	Interior of T-323.	Buildings	R. J. Walton	5-15-8
4-15	Interior of T-337.	Buildings	R. J. Walton	5-16-8
4-15	Interior of T-355.	Buildings	R. J. Walton	5-17-8
5-7	Face injury of D. G. Clareus.	Medical	R. F. Smith	5-18-8
5-7	Biology greenhouse, view southwest.	Biology	RFS and RJW	5-19-8
5-10	Fingerprints	Police		5-20-8
5-10	Fingerprints	and		thru
5-10	Fingerprints	Security	J. F. Garfield	5-24-8
5-11	Princess temperature trace from 0300 to 0500 - February 24, 1948.	Met	R. F. Smith	5-25-8
5-11	Temperature at three levels on Princess.	Met	R. F. Smith	5-26-8
5-11	Weather map.	Met	R. F. Smith	5-27-8
5-11	Weather map - February 24, 1948.	Met	R. F. Smith	5-28-8
5-11	Flite 47 - March 31, 1948.	Met	R. F. Smith	5-29-8

Date	Caption	Dept.	Photographer	Number
5-11	BNL daily mean temp. for February	Met	R. F. Smith	5-30-8
5-11	Daily mean deviations from BNL. Flite 46 - March 31, 1948.	Met	R. F. Smith	5-31-8
5-11	Grounds progress and maintenance.	Grounds	E. J. Hunter	5-32-8 thru 5-43-8
5-11	Meteorology smoke run.	Met	Meteorology	5-44-8 thru 5-60-8
5-11	Patchogue Advance newspaper clippings.	Meader	R. J. Walton	5-61-8 thru 5-85-8
5-12	Meteorology smoke run.	Met	Meteorology	5-86-8 thru 5-97-8
5-12	Henry Wright, Pho. and Graphic Arts	Mines	R. F. Smith	5-98-8
5-12	William Ware, Vehicle Maintenance.	Mines	R. F. Smith	5-99-8
5-12	Mary Dargan, Library	Mines	R. F. Smith	5-100-8
5-12	Mary Dargan, Library	Mines	R. F. Smith	5-101-8
5-12	Mildred Hirst, Medical	Mines	R. F. Smith	5-102-8
5-12	Mildred Hirst, Medical	Mines	R. F. Smith	5-103-8
5-14	Copy of "Nuts? Sure! So is the guy who disregards safety rules."	Safety	Paul Simack	5-104-8
5-17	Relative P ³² uptake in resting and contracting muscles.	Biology	M. H. Bull	5-105-8
5-17	Relative P ³² in rest and recovery from muscular activity.	Biology	M. H. Bull	5-106-8
5-17	Time course of P ³² contents of plasma and liver phosphorous.	Biology	M. H. Bull	5-107-8
5-17	Effective of insulin on P ³² uptake by phosphate compounds of muscle glucose given to all groups.	Biology	M. H. Bull	5-108-8
5-17	Time course of P ³² uptake in resting muscle.	Biology	M. H. Bull	5-109-8
5-12	Showing construction of meteorological towers.	Met	R. J. Walton	5-110-8 thru 5-114-8

Date	Caption	Dept.	Photographer	Number
5-17	Front-face injury-Smith, Ferguson	Medical	R. F. Smith	5-115-8
5-17	Right-	Medical	R. F. Smith	5-116-8
5-17	Left -	Medical	R. F. Smith	5-117-8
5-17	Left -Clareus, Electronics-face injury	Medical	R. F. Smith	5-118-8
5-17	Right-	Medical	R. F. Smith	5-119-8
5-17	Front-	Medical	R. F. Smith	5-120-8
5-17	Girls from Hewlett School visiting Meteorology: Virginia Robertson Tina Gonzales Anne Hawkins Gretchen Harlines Carlene Chittenden	Met	R. F. Smith	5-121-8
5-12	Fire department brush fire equipment, Indian pumps.	Fire	R. F. Smith	5-122-8
5-12	Fire department at water hole testing hose.	Fire	R. F. Smith	5-123-8
5-18	A technician works on a model magnet being built to provide experimental data for a large magnet which will be- come part of the lab's cosmotron. When this huge nuclear "racetrack" is completed, it will whirl protons at energies of two to three billion electron volts.	Accel	R. F. Smith	5-124-8
5-18	1/12 scale magnet model with multiple turn coil, proton synchrotron.	Accel	R. F. Smith	5-125-8
5-18	Ralph Kassner operating automatic curve plotting equipment for magnet fields with 1/12 scale, synchrotron magnet model.	Accel	R. F. Smith	5-126-8
5-18	Edward Maher throwing switch on Helm- holz coil used in magnet calibrations.	Accel	R. F. Smith	5-127-8
5-18	Hans Kalbach placing metal to be evap- orated on tungsten filament in evap- orator.	Accel	R. F. Smith	5-128-8
5-18	Capacity test model of pickup elect- rode design.	Accel	R. F. Smith	5-129-8
5-18	William Bell throwing switch on con- trol panel of 24-cell submarine storage battery, battery room.	Accel	R. F. Smith	5-130-8
5-18	Machinery part of experimental ion source.	Accel	R. F. Smith	5-131-8
5-18	Electron beam model and pickup elect- rode used in induced voltage tests.	Accel	R. F. Smith	5-132-8
5-18	Hans Kalbach preparing to operate bell jar & high vacuum system for evap- orating metal films.	Accel	R. F. Smith	5-133-8

Date	Caption	Dept.	Photographer	Number
5-18	Frank Janik finishing magnet model coils for Model #2.	Accel	R. F. Smith	5-134-8
5-19	Girls softball team practice.	Recrea	R. F. Smith	5-135-8
5-19	Girls softball team practice.	Recrea	R. F. Smith	5-136-8
5-18	Rifle team instruction.	Recrea	R. F. Smith	5-137-8
5-19	Retrieving arrows at archery practice.	Recrea	R. F. Smith	5-138-8
5-19	Archery practice.	Recrea	R. F. Smith	5-139-8
5-18	Dynamic condenser - top view.		J. F. Garfield	5-140-8
5-18	Electrometer power - rear view.		J. F. Garfield	5-141-8
5-18	Supply - bottom view - cover off.		J. F. Garfield	5-142-8
5-18	Supply - front view.		J. F. Garfield	5-143-8
5-18	Supply - bottom view - cover on.		J. F. Garfield	5-144-8
5-24	Precipitation indicator.	Met	R. J. Walton	5-145-8
5-24	Precipitation indicator.	Met	R. J. Walton	5-146-8
5-19	Firemen drilling on use of hoses.	Fire	R. J. Walton	5-147-8
5-19	Firemen drilling on use of hoses.	Fire	R. J. Walton	5-148-8
5-19	Firemen extinguish a blazing pan of oil with chemical foam.	Fire	R. J. Walton	5-149-8
5-19	Firemen drilling on use of hoses.	Fire	R. J. Walton	5-150-8
5-18	The first official baseball game between the Carpenter Shop and Nuclear Reactor Project.	Recrea	R. J. Walton	5-151-8 thru 5-155-8
5-21	Meteorology smoke run.	Met	Meteorology	5-156-8 thru 5-161-8
5-24	Six inch lead glass viewer used on gloved hood, shielded gamma box.	67 HealthPro	M. H. Bull	5-162-8
5-24	Remote control sampler and evaporator micro-manipulator used in gloved hood, shielded gamma box.	68 HealthPro	M. H. Bull	5-163-8
5-24	Remote control sampler and evaporating micro-manipulator used in gloved hood, shielded gamma box.	69 HealthPro	M. H. Bull	5-164-8
5-24	Remote control sampler and evaporating micro-manipulator used in gloved hood, shielded gamma box.	70 HealthPro	M. H. Bull	5-165-8
5-24	Remote control sampler and evaporating micro-manipulator used in gloved hood, shielded gamma box.	71 HealthPro	M. H. Bull	5-166-8

Date	Caption	Dept.	Photographer	Number
5-24	Shielding checking apparatus.	72 HealthPro	M. H. Bull	5-167-8
5-24	Assembly of front panel, manipulators and apparatus outside of shielding of gloved hood, shielded gamma box.	73 HealthPro	M. H. Bull	5-168-8
5-24	Assembly of front panel, manipulators and apparatus outside of shielding of gloved hood, shielded gamma box.	74 HealthPro	M. H. Bull	5-169-8
5-24	Assembly of front panel, manipulators and apparatus outside of shielding of gloved hood, shielded gamma box.	75 HealthPro	M. H. Bull	5-170-8
5-24	Assembly of front panel, manipulators and apparatus outside of shielded gloved hood and gamma box.	76 HealthPro	M. H. Bull	5-171-8
5-24	Hot cave, straight type, under construction.	Chem 408	M. H. Bull	5-172-8
5-24	Hot cave, straight type, exhaust and ventilating system.	Chem 411	M. H. Bull	5-173-8
5-24	Hot cave, straight type, remote control centrifuge, pipettes, stirring and apparatus used in run.	Chem 413	M. H. Bull	5-174-8
5-24	Same as Chem 413.	Chem 414	M. H. Bull	5-175-8
5-24	Gloved hood, alpha chemistry.	Chem 431	M. H. Bull	5-176-8
5-24	Gloved hood, alpha chemistry.	Chem 432	M. H. Bull	5-177-8
5-24	Hot cave, straight type, hot cave manipulator M2 used for remote control of tray.	Chem 435	M. H. Bull	5-178-8
5-24	Hot cave, straight type, tray.	Chem 437	M. H. Bull	5-179-8
5-24	Hot cave, straight type, view of remote control centrifuge and remote dissolving apparatus thru cylindrical periscope as used in run.	Chem 442	M. H. Bull	5-180-8
	NO NEGATIVE			5-181-8
5-24	Hot cave, straight type, experimental setup tray with remote control apparatus as viewed from front of cave thru top mirrors.	Chem 443	M. H. Bull	5-182-8
5-24	Hot cave, straight type, cave during run.	Chem 445	M. H. Bull	5-183-8
5-24	Hot cave, straight type, cave on completion.	Chem 448	M. H. Bull	5-184-8
5-24	Hot cave, straight type, cylindrical view.	Chem 449	M. H. Bull	5-185-8
5-24	A gloved hood setup in hot cave room.	Chem 451	M. H. Bull	5-186-8
5-24	A gloved hood setup with automatic sampler.	Chem 467	M. H. Bull	5-187-8
5-24	A typical standard gloved hood and accessories.	Chem 469	M. H. Bull	5-188-8
5-24	Werner-type gloved hood and setup.	Chem 554	M. H. Bull	5-189-8
5-24	Werner-type gloved hood and setup.	Chem 555	M. H. Bull	5-190-8
5-24	Werner-type gloved hood and setup.	Chem 557	M. H. Bull	5-191-8

Date	Caption	Dept.	Photographer	Number
5-24	Radioactive storage pit, storage tank and covers.	Chem 561	M. H. Bull	5-192-8
5-24	Radioactive storage waste, sampler and level gage assembly.	Chem 562	M. H. Bull	5-193-8
5-24	Radioactive storage waste, tanks and covers.	Chem 563	M. H. Bull	5-194-8
5-24	Decontamination dolly and box used to decontaminate hoods and other equipment.	Chem 564	M. H. Bull	5-195-8
5-24	Pile area mockup.	Pile	J. F. Garfield	5-196-8
5-19	Showing center section of door of hot cell. Note that the door section now has four steps instead of six.	Nuclear Reactor	R. J. Walton	5-197-8
5-19	Closeup of rubber tubing in place on hot cell door. The tube has not been inflated with gas. Note that there is still gap enough to allow a pencil to be passed between door and box.	Nuclear Reactor.	R. J. Walton	5-198-8
5-19	Closeup of rubber tubing in place on hot cell door after tube has been inflated forming a seal between door and box. Note that the pencil cannot be passed through.	Nuclear Reactor	R. J. Walton	5-199-8
5-24	Model of hot cell mockup with doors open.	Nuclear Reactor	R. F. Smith	5-200-8
5-24	Model of hot cell mockup. Doors open and cell out.	Nuclear Reactor	R. F. Smith	5-201-8
5-24	Model of hot cell mockup with hand opening doors to show scale.	Nuclear Reactor	R. F. Smith	5-202-8
5-24	Model of hot cell mockup with doors closed.	Nuclear Reactor	R. F. Smith	5-203-8
5-25	Trillium erectum flower.	Sparrow	R. F. Smith	5-204-8
5-25	Mary Dargan, Library	Mines	R. F. Smith	5-205-8
5-25	Nite shift firemen at ambulance.	Fire	R. F. Smith	5-206-8
5-25	Nite shift firemen using fog nozzle and deck gun.	Fire	R. F. Smith	5-207-8
5-26	Meteorology smoke run.	Met	Meteorology	5-208-8 thru 5-229-8

Date	Caption	Dept.	Photographer	Number
5-27	Counts per minute per MG P XO.01.	Biology	M. H. Bull	5-230-8
5-27	Relative sensitivity of trillium chromosomes to x-ray breakage at various stages of microsporogenesis.	Biology	M. H. Bull	5-231-8
5-27	Table I	Biology	M. H. Bull	5-232-8
5-27	Table I continued.	Biology	M. H. Bull	5-233-8
5-27	Approximate time in days required for various stages of microsporogenesis in trillium erectum at 4-6°C.	Biology	M. H. Bull	5-234-8
5-27	Table III.	Biology	M. H. Bull	5-235-8
5-27	Fingerprints.	Police		5-236-8
5-27	Fingerprints.	and		thru
5-27	Fingerprints.	Security	R. F. Smith	5-237-8
5-27	Particle track - Photomicrograph 1100X	Physics	R. F. Smith	5-238-8
5-27	30 prong star, photomicrograph 400 X.	Physics	R. F. Smith	5-239-8
5-27	Jim Moore of Personnel congratulates Lewis Linto of the police department who won first place in golf tourney.	Recrea	R. F. Smith	5-240-8
5-28	Grounds progress and maintenance.	Grounds	E. J. Hunter	5-241-8 thru 5-247-8
5-28	Roll 20 meteorology smoke run.	Met	Meteorology	5-248-8 thru 5-255-8
5-28	Roll 21 meteorology smoke run.	Met	Meteorology	5-256-8 thru 5-262-8

June

Date	Caption	Dept.	Photographer	Number
6-2	Copy of map showing universities and laboratories.	Hartzell	M. H. Bull	6-1-8
5-27	Long overall shot of temporary laboratory for the Tracer Chemistry Group. Left foreground is A. Weinstein weighing mica on an analytical balance. In the center background can be seen Irving Greenberg.	Chemistry	R. J. Walton	6-2-8
5-27	By means of a Geiger counter, this chemist is following a tagged isotope thru a chemical process.	Chemistry	R. J. Walton	6-3-8
6-3	Roll 22 meteorology smoke run.	Met	Meteorology	6-4-8 thru 6-11-8
6-3	This is a device for observing and manipulating bacteria colonies which are radioactive and so small that they must be viewed thru a stereoscopic microscope. This apparatus was designed to protect the observer from radiation to insure sterility for the colony and to make the entire operation convenient.	Biology	R. F. Smith	6-12-8
6-3	Technician operating bacteria colony picking apparatus design by Dr. B. Rubin. The entire instrument is constructed of lucite and coated optical flats.	Biology	R. F. Smith	6-13-8
6-3	Nuclimeter.	Biology	R. F. Smith	6-14-8
6-3	Nuclimeter.	Biology	R. F. Smith	6-15-8
6-3	Left foreground - hot lab. Back (left to right)-air stack, fan house, pile building.	Pile	R. F. Smith	6-16-8
6-4	Roll 23 meteorology smoke run.	Met	9-21-6 METEOROLOGY METEOROLOGY	6-17-8 thru 6-24-8
6-3	Dr. Sharpe's electro-plating equipment. Taken for Jewett of the Patent.	Biology	R. F. Smith	6-25-8

Date	Caption	Dept.	Photographer	Number
6-8	Grounds progress and maintenance.	Grounds	E. J. Hunter	6-26-8 thru 6-31-8
6-8	Roll 24 meteorology smoke run.	Met	Meteorology	6-32-8 thru 6-37-8
6-8	Cloud Chamber Balloon Flight.	Cloud Chamber	A. Thorndyke	6-38-9 thru 6-68-8
6-8	Preparations for balloon flight.	Cloud Chamber	A. Thorndyke	6-69-8 thru 6-75-8
6-8	Injured index finger of Mr. Leaf.	Medical	R. F. Smith	6-76-8
6-9	Lucity colony picker with storage cover on.	Rubin	R. F. Smith	6-77-8
6-9	With cover off.	Rubin	R. F. Smith	6-78-8
6-9	With cover on.	Rubin	R. F. Smith	6-79-8
6-9	Lucite protective device for radio- active solutions.	Rubin	R. F. Smith	6-80-8
6-9	Lucite protective device for radio- active solutions.	Rubin	R. F. Smith	6-81-8
6-9	Lucite protective device for test tubes containing radioactive solutions.	Rubin	R. F. Smith	6-82-8
6-9	Lucite protective device for radio- active solutions.	Rubin	R. F. Smith	6-83-8
6-10	Temperature May 6 and May 14 flights.	Met	Paul Simack	6-84-8
6-10	Holding inflated bubble.	CldChm	A. Thorndyke	6-85-8
6-10	No caption.	CldChm	A. Thorndyke	6-86-8
6-10	Preparations for launching first flite.	CldChm	A. Thorndyke	6-87-8
6-10	Final preparations on gondola for the first flite.	CldChm	A. Thorndyke	6-88-8
6-10	First flite going up.	CldChm	A. Thorndyke	6-89-8
6-10	First flite going up.	Cld Chm	A. Thorndyke	6-90-8
6-10	Inflation cart with helium bottles ready to begin inflating.	CldChm	A. Thorndyke	6-91-8
6-10	Balloon leaving ground on first flite.	CldChm	A. Thorndyke	6-92-8
6-10	Rebuilt cloud chamber assembly in trailer prior to flight.	CldChm	A. Thorndyke	6-93-8
6-10	Final preparations of first flite.	Cldchm	A. Thorndyke	6-94-8
6-10	Inflation cart with helium bottles.	CldChm	A. Thorndyke	6-95-8
6-10	Holding bubble, first flight.	CldChm	A. Thorndyke	6-96-8

Date	Caption	Dept.	Photographer	Number
6-11	Angular distributions.		M. H. Bull	6-97-8
6-11	Thin yield, long range.		M. H. Bull	6-98-8
6-9	Exterior: T-3	Buildings	R. J. Walton	6-99-8
6-9	T-3	Buildings	R. J. Walton	6-100-8
6-9	T-30	Buildings	R. J. Walton	6-101-8
6-9	T-50	Buildings	R. J. Walton	6-102-8
6-9	T-126	Buildings	R. J. Walton	6-103-8
6-9	T-127	Buildings	R. J. Walton	6-104-8
6-9	T-128	Buildings	R. J. Walton	6-105-8
6-9	T-134	Buildings	R. J. Walton	6-106-8
6-9	T-135	Buildings	R. J. Walton	6-107-8
6-9	T-142	Buildings	R. J. Walton	6-108-8
6-9	T-159	Buildings	R. J. Walton	6-109-8
6-9	T-170	Buildings	R. J. Walton	6-110-8
6-9	T-178	Buildings	R. J. Walton	6-111-8
6-9	T-181	Buildings	R. J. Walton	6-112-8
6-9	T-184	Buildings	R. J. Walton	6-113-8
6-9	T-257	Buildings	R. J. Walton	6-114-8
6-9	T-258	Buildings	R. J. Walton	6-115-8
6-9	T-259	Buildings	R. J. Walton	6-116-8
6-9	T-293	Buildings	R. J. Walton	6-117-8
6-9	T-420	Buildings	R. J. Walton	6-118-8
6-9	T-422	Buildings	R. J. Walton	6-119-8
6-9	T-424	Buildings	R. J. Walton	6-120-8
6-9	T-434 and T-435	Buildings	R. J. Walton	6-121-8
6-9	T-459	Buildings	R. J. Walton	6-122-8
6-9	T-460	Buildings	R. J. Walton	6-123-8
6-9	T-475	Buildings	R. J. Walton	6-124-8
6-9	T-477	Buildings	R. J. Walton	6-125-8
6-11	Various views of meteorological towers construction.	Met.	R. J. Walton	6-126-8 thru 6-130-8
6-14	Copy negative of "Find the Radioactive Frogs".	AEEExhibit	M. H. Bull	6-131-8
6-14	Norman Beers and assistants on steel structure of weather tower.	Met	R. F. Smith	6-132-8
6-14	Norman Beers and assistants on the weather tower examining weather instrument arm.	Met	R. F. Smith	6-133-8
6-14	Norman Beers and assistants examining weather instrument arm on tower.	Met	R. F. Smith	6-134-8
6-14	Norman Beers holding wind direction indicator.	Met	R. F. Smith	6-135-8
6-14	Norman Beers at plotting table.	Met	R. F. Smith	6-136-8

Date	Caption	Dept.	Photographer	Number
6-14	Norman Beers at plotting table.	Met	R. F. Smith	6-137-8
6-14	Norman Beers at plotting table in Meteorology (profile).	Met	R. F. Smith	6-138-8
6-14	Norman Beers.	Met	R. F. Smith	6-139-8
6-14	Photo shows three iron workers ascending to top of tower via cable. They are in the last stage of construction on the 420' tower. (About 300')	Met	R. J. Walton	6-140-8
6-16	Roll 25 meteorology smoke run.	Met	Meteorology	6-141-8 thru 6-147-8
6-16	Roll 26 meteorology smoke run.	Met	Meteorology	6-148-8 thru 6-155-8
6-17	Faulkner Lacey, Electronics technician adjusting coil tap on the 30 mc 2 KW high power oscillator in laboratory.	Electron	R. F. Smith	6-156-8
6-16	% of anaphases showing bridges.	Sparrow	Paul Simack	6-157-8
6-16	Total number of anaphases present.	Sparrow	Paul Simack	6-158-8
6-17	View of T-527 showing sinks on other side of partition and counter (view (looking east).	Buildings	R. F. Smith	6-159-8
6-17	Spider in lens of monitor camera.	Monsta	R. F. Smith	6-160-8
6-17	T-527 Source storage showing lead pigs and general view of interior of building looking east.	Nuclear Reactor	R. F. Smith	6-161-8
6-17	Looking west and showing storage of instruments for the handling of radioactive materials.	Nuclear Reactor	R. F. Smith	6-162-8
6-17	Equipment in T-527 for handling of radioactive materials.	Nuclear Reactor	R. F. Smith	6-163-8
6-17	Aerial of newly constructed greenhouse.	Biology	R. J. Walton	6-164-8
6-17	Aerial of newly constructed greenhouse.	Biology	R. J. Walton	6-165-8
6-24	Slide negative.		M. H. Bull	6-166-8

Date	Caption	Dept.	Photographer	Number
6-15	Overall of biology greenhouse.	Biology	R. J. Walton	6-167-8
6-15	Overall of biology greenhouse.	Biology	R. J. Walton	6-168-8
6-24	Vacuum equipment for microwave spectrograph.	Nuclear Moments	R. F. Smith	6-169-8
6-24	Source for microwave spectrograph.	Nuclear Moments	R. F. Smith	6-170-8
6-24	Microwave spectrograph.	Nuclear Moments	R. F. Smith	6-171-8
6-24	Micro-chemistry instruments.	Steele	R. F. Smith	6-172-8
6-24	Micro-chemistry instruments.	Chemistry	R. F. Smith	6-173-8
6-24	Centrifuge blocks for micro-chemistry.	Chemistry	R. F. Smith	6-174-8
6-24	Weighted flask holder for radio carbon.	Steele	R. F. Smith	6-175-8
6-24	Micro-glassware rocks.	Steele	R. F. Smith	6-176-8
6-24	Moist chamber showing copper gasket and rubber glove which permit use of hands without breaking moist seal.	Steele	R. F. Smith	6-177-8
6-15	Exterior: T-94 Special Materials	Buildings	R. J. Walton	6-178-8
6-15	T-193 Bank	Buildings	R. J. Walton	6-179-8
6-15	T-212	Buildings	R. J. Walton	6-180-8
6-15	T-261 Storage	Buildings	R. J. Walton	6-181-8
6-15	T-333 Clinic	Buildings	R. J. Walton	6-182-8
6-15	T-427 NucReactor Storage	Buildings	R. J. Walton	6-183-8
6-15	T-461 Gym	Buildings	R. J. Walton	6-184-8
6-15	T-461 Gym from northeast	Buildings	R. J. Walton	6-185-8
6-15	T-525 and T-526 NucReactor storage.	Buildings	R. J. Walton	6-186-8
6-15	T-301 Medical office	Buildings	R. J. Walton	6-187-8
6-15	T-461 from southwest.	Buildings	R. J. Walton	6-188-8
6-15	T-462 Shops from soeast	Buildings	R. J. Walton	6-189-8
6-15	T-478 Swimming pool from west.	Buildings	R. J. Walton	6-190-8
6-24	Pulse generator of nucleometer.		M. H. Bull	6-191-8
6-28	Roll 27 meteorology smoke run.	Met	Meteorology	6-192-8 thru 6-198-8
6-28	Microscope stage, front view.	Physcis	R. F. Smith	6-199-8
6-28	Microscope stage, top view.	Physics	R. F. Smith	6-200-8
6-28	Microscope stage, 3/4 view.	Physics	R. F. Smith	6-201-8
6-29	Roll 28 smoke run.	Met	Meteorology	6-202-8 thru 6-205-8

Date	Caption	Dept.	Photographer	Number
6-29	Grounds progress and maintenance.	Grounds	E. J. Hunter	6-206-8 thru 6-213-8
6-29	Grounds progress and maintenance.	Grounds	E. J. Hunter	6-214-8 thru 6-221-8
6-29	Electronic relay - top view.	Met	R. F. Smith	6-222-8
6-29	Electronic relay - bottom view.	Met	R. F. Smith	6-223-8
6-30	Particle tracks for Particle Physics.	Physics	R. F. Smith	6-224-8
6-30	Particle tracks for Progress Report.	Physics	R. F. Smith	6-225-8
6-30	Time delay.	Pidd	M. H. Bull	6-226-8
6-30	Time in U sec. (These were made for Electronics)	Pidd	M. H. Bull	6-227-8
6-30	"Three Causes of Accidents"	Safety	M. H. Bull	6-228-8
6-29	Potato plants that were treated by radiation.	Biology	R. J. Walton	6-229-8
6-29	Medium shot of potato plants that were treated by radiation. Plants in the first row on left received one dose. Last row on right is the control.	Biology	R. J. Walton	6-230-8
6-29	Long shot of potato garden planted by Biology to test effects of radiation on the potato plant.	Biology	R. J. Walton	6-231-8

Date	Caption	Dept.	Photographer	Number
June 18-'48	File Progress on 120 mm film	Reactor	R. F. Smith	6-232-8 thru 6-255-8
6-7	Slide # A 1163G E109	Sparrow Biology	R. F. Smith	6-256-8
6-7	Slide # A 1163 G	Sparrow	R. F. Smith	6-257-8
6-7	Slide # A 1136T	Sparrow	R. F. Smith	6-258-8
6-30	Slide # A 1182 G E70	Sparrow	R. F. Smith	6-259-8

July

Date	Caption	Dept.	Photographer	Number
7-1	Particle track for progress report.	Physics	R. F. Smith	7-1-8
7-2	Slide for Dr. Sparrow	Biology	M. H. Bull	7-2-8
7-2	Slide for Dr. Sparrow	Biology	M. H. Bull	7-3-8
7-2	Slide for Dr. Sparrow	Biology	M. H. Bull	7-4-8
7-1	Exterior: T-102	Buildings	R. J. Walton	7-5-8
7-1	T-109	Buildings	R. J. Walton	7-6-8
7-1	T-112	Buildings	R. J. Walton	7-7-8
7-1	T-117	Buildings	R. J. Walton	7-8-8
7-1	T-118 (Rear)	Buildings	R. J. Walton	7-9-8
7-1	T-122	Buildings	R. J. Walton	7-10-8
7-7	Lucite test tube holders for use with radioactive bacteria.	Rubin	R. F. Smith	7-11-8
7-7	New tractor and plow (3/4 front)	Grounds	R. F. Smith	7-12-8
7-7	New tractor with plow lowered and in position.	Grounds	R. F. Smith	7-13-8
7-7	New tractor and plow showing plow raised.	Grounds	R. F. Smith	7-14-8
7-7	Closeup of plow.	Grounds	R. F. Smith	7-15-8
7-7	Rear view showing swing device.	Grounds	R. F. Smith	7-16-8
7-7	Ultra-violet chamber - top view showing UV tubes.	Rubin	R. F. Smith	7-17-8
7-7-48	Quartz flask and holder for ultra-violet chamber.	Rubin	R. F. Smith	7-18-8
7-7	Ultra-violet chamber and quartz flask and holder, front view.	Rubin	R. F. Smith	7-19-8
7-1	Overall shot of both meteorological towers.	Met	R. J. Walton	7-20-8
7-1	Grounds progress and maintenance.	Grounds	E. J. Hunter	7-21-8 thru 7-26-8
7-7	Roll 29 smoke run.	Met	Meteorology	7-27-8 thru 7-34-8
7-9	New York (Suffolk County) Moriches Quadrangle, U. S. Department of Interior Geological survey.	Geology	M. H. Bull	7-35-8

Date	Caption	Dept.	Photographer	Number
7-7	Interior of receiving room in T-100 showing crowded conditions.	Buildings	R. J. Walton	7-36-8
7-7	Interior of receiving room in T-100 showing crowded conditions.	Buildings	R. J. Walton	7-37-8
7-7	Exterior of T-100 showing loading platform.	Buildings	R. J. Walton	7-38-8
7-6	Closeup of drive mechanism for monitoring station camera.	Monsta	R. J. Walton	7-39-8
7-6	Photographic recording setup in monitoring station.	Monsta	R. J. Walton	7-40-8
7-6	AC and battery operated GM tube rate-meter assembly.	Monsta	R. J. Walton	7-41-8
7-6	Vibrating ree electrometer assembly ionization chamber - top vibrating reed and pre-amp assembly.	Monsta	R. J. Walton	7-42-8
7-6	GM tube assembly component and photo panel; in back corner can be seen leads to tubes on roof.	Monsta	R. J. Walton	7-43-8
7-6	GM tube assembly panel with low voltage supply - high voltage supply with three scales of eight scales.	Monsta	R. J. Walton	7-44-8
7-7	X-22 ionization chamber.	Monsta	R. J. Walton	7-45-8
7-6	Beta-sensitive X-22 ionization chamber.	Monsta	R. J. Walton	7-46-8
7-6	Vibrating ree electrometer assembly brown potentiometer (recorder)	Monsta	R. J. Walton	7-47-8
7-6	GM tube assembly showing tube mounting on roof of monitoring shack.	Monsta	R. J. Walton	7-48-8
7-9	Roll 30 smoke run.	Met	Meteorology	7-49-8 thru 7-55-8
7-9	Roll 31 smoke run.	Met	Meteorology	7-56-8 thru 7-63-8
7-9	Roll 32 smoke run.	Met	Meteorology	7-64-8 thru 7-70-8
7-9	Roll 33 smoke run.	Met	Meteorology	7-71-8 thru 7-78-8
7-9	Copy of a gloved hood dry box.	HPhysics	M. H. Bull	7-79-8
7-8	Exterior of monsta, north gate.	Monsta	R. J. Walton	7-80-8
7-8	Exterior of monsta, north gate.	Monsta	R. J. Walton	7-81-8

Date	Caption	Dept.	Photographer	Number
7-8	Railroad siding at transformer site.	Pile	R. J. Walton	7-82-8
7-8	Railroad siding at transformer site.	Pile	R. J. Walton	7-83-8
7-8	Traffic headed out South Gate at 1630.	Police and Security	R. J. Walton	7-84-8 thru 7-87-8
7-8	Patrolman A. Macauley gives a ticket for violation of speed limit.	Police & Security	R. J. Walton	7-88-8 7-89-8
7-14	Effect of anerobic tetanus on P ³² distribution.	Biology	M. H. Bull	7-90-8
7-14	Effect of glucose administration on relative turnover rates of phosphate compounds in muscles of post absorp- tive and fasted cats.	Biology	M. H. Bull	7-91-8
7-14	Relative P ³² contents of P compounds in muscles of cats and frogs.	Biology	M. H. Bull	7-92-8
7-13	Cosmotron model.	Cosmotron	R. J. Walton	7-93-8
7-13	Aluminum braising discs.	Cooke	M. H. Bull	7-94-8
7-14	Amount of radiation per day indicated by the height of columns and by the scale of numbers at the left.	Biology	M. H. Bull	7-95-8
7-14	First floor plan of T-144.	HPhysics	M. H. Bull	7-96-8
7-14	Second floor plan of T-144.	HPhysics	M. H. Bull	7-97-8
7-14	First floor plan of T-144.	HPhysics	M. H. Bull	7-98-8
7-14	Second floor plan of T-145.	HPhysics	M. H. Bull	7-99-8
7-13	Five views of camera for Cloud Chamber.	Cloud Chamber	R. J. Walton	7-100-8 thru 7-104-8
7-14	Accident scene at South Gate.	Police &	J. F. Garfield	7-105-8
7-14	Accident scene at South Gate.	Security	J. F. Garfield	7-106-8
7-15	Scale		M. H. Bull	7-107-8
7-16	Patients being given physiotherapy treatment in new dispensary.	Medical	R. F. Smith	7-108-8

Date	Caption	Dept.	Photographer	Number
7-16	Patient having ankle strapped in new dispensary.	Medical	R. F. Smith	7-109-8
7-16	Nurse and technician fluoroscoping patient in new dispensary.	Medical	R. F. Smith	7-110-8
7-16	Technician x-raying patient in new x-ray wing.	Medical	R. F. Smith	7-111-8
7-16	General view of machine shop.	Shops	RJW and RFS	7-112-8
7-16	Small cloud chamber with back plate off.	Cloud Chamber	R. F. Smith	7-113-8
7-16	Back view of small cloud chamber.	CldChm	R. F. Smith	7-114-8
7-16	Front view of small cloud chamber.	CldChm	R. F. Smith	7-115-8
7-16	Copper tubing for cooling Nuclear Moments electro-magnet.	Cohen	R. F. Smith	7-116-8
7-16	Copper tape coil for nuclear moments electro-magnet.	Cohen	R. F. Smith	7-117-8
7-16	Electro-magnet for nuclear moments experiments with spool on.	Cohen	R. F. Smith	7-118-8
7-16	Electro-magnet for nuclear moments experiments without coils.	Cohen	R. F. Smith	7-119-8
7-16	Technician winds the pole of the electro-magnet which was made in the General Machine shop for use in the nuclear moments experiments.	Cohen	R. F. Smith	7-120-8
7-16	Every Brookhaven employee who works in (or even enters) an area where he may be exposed to radiation is required to wear one of these film badges and pencil-like ionization chambers. These are collected at regular intervals and read by the health physics division in order that no one may be exposed to more radiation than his system can tolerate.	HPhysics	R. F. Smith	7-121 8
7-16	Bill Herman of Health Physics at a minometer checking discharge of pocket chambers.	HPhysics	R. F. Smith	7-122-8
7-16	Mrs. Carole Moore, Health Physics, counting samples to detect radioactivity in the counting room.	HPhysics	R. F. Smith	7-123-8
7-16	Radioactive waste can.	HPhysics	R. F. Smith	7-124-8
7-16	Lucite containers and cabinet for radioactive materials.	HPhysics	R. F. Smith	7-125-8
7-16	Health Physics building.	HPhysics	R. F. Smith	7-126-8
7-16	Pipetting apparatus, closeup.	HPhysics	R. F. Smith	7-127-8

Date	Caption	Dept.	Photographer	Number
7-16	Pipetting apparatus - closeup.	HPhysics	R. F. Smith	7-128-8
7-16	Pipetting apparatus for radioactive material (view showing general safety layout).	HPhysics	R. F. Smith	7-129-8
7-16	Bottom view of alpha survey meter.	HPhysics	R. F. Smith	7-130-8
7-16	Top front view of alpha survey meter.	HPhysics	R. F. Smith	7-131-8
7-16	Beta gamma survey meter, Beckman model end view.	HPhysics	R. F. Smith	7-132-8
7-16	Beta gamma survey meter, Beckman model front view.	HPhysics	R. F. Smith	7-133-8
7-16	Beta gamma survey meter, gun type-side.	HPhysics	R. F. Smith	7-134-8
7-16	Beta gamma survey meter, rod open.	HPhysics	R. F. Smith	7-135-8
7-16	Beta gamma survey meter, rod closed.	HPhysics	R. F. Smith	7-136-8
7-16	Lab monitor - cap off.	HPhysics	R. F. Smith	7-137-8
7-16	Lab monitor - cap on.	HPhysics	R. F. Smith	7-138-8
7-16	Group of five Geiger counters.	HPhysics	R. F. Smith	7-139-8
7-16	Long-handled tweezers for radioactive material.	HPhysics	R. F. Smith	7-140-8
7-16	Tongs for radioactive material.	HPhysics	R. F. Smith	7-141-8
7-16	Long-handled holders for handling containers of radioactive substances.	HPhysics	R. F. Smith	7-142-8
7-16	William D. Evans	Mines	R. F. Smith	7-143-8
7-16	Mrs. Lorraine Kostuk	Mines	R. F. Smith	7-144-8
7-16	Robert A. McCleary	Mines	R. F. Smith	7-145-8
7-15	Thomas Marion and M. Chamberlain at the Bellport Golf Club.	Recrea	J. F. Garfield	7-146-8 thru 7-149-8
7-19	Diagram for slide.	Singleton	Darkroom	7-150-8
7-19	Graph - Mutation per Spike Pergeny %.	Singleton	Darkroom	7-151-8
7-19	Comparison of number of albino mutants (left column) with other seedling types in M2, N2, and X2 generations.	Singleton	Darkroom	7-152-8
7-19	Figure 4 - The percentage of mature M1 plants (unbroken line) and their average fertility (broken line) after treatments with nitrogen mustard.	Singleton	Darkroom	7-153-8
7-19	Common Mutants, Rare Mutants, Very Rare Mutants.	Singleton	Darkroom	7-154-8
7-19	Figure 3 - The percentage of Mature N1 plants (unbroken line) and their average fertility (broken line) after different neutron treatments.	Singleton	Darkroom	7-155-8
7-19	Diagram.	Singleton	Darkroom	7-156-8
7-19	Figure 2 - The percentage of mature X1 plants (unbroken line) and their average fertility (broken line) after different x-ray treatments.	Singleton	Darkroom	7-157-8

Date	Caption	Dept.	Photographer	Number
7-19	Figure 1 - The different germinability in laboratory (sand) and field (loam) cultures after treatment with nitrogen mustard.	Biology	Darkroom	7-158-8
7-19	Phenotype appearing when homozygous Phenotype appearing following combinations.	Biology	Darkroom	7-159-8
7-19	Treatment, Number of head progenies, Radiation-Chemical, Number of mutations.	Biology	Darkroom	7-160-8
7-19	Doodles A and B	Biology	Darkroom	7-161-8
7-19	Doodles 1 A and 1 C	Biology	Darkroom	7-162-8
7-19	Doodles	Biology	Darkroom	7-163-8
7-19	Background monitoring installation.	Cowan	M. H. Bull	7-164-8
7-19	Doodles	Biology	Darkroom	7-165-8
7-19	Ten columns	Biology	Darkroom	7-166-8
7-16	Photomicrograph of micro-wave track, Negative 20 X.	Physics	R. F. Smith	7-167-8
7-19	Phytic acid.	Biology	M. H. Bull	7-168-8
7-19	Metabolism of iron.	Biology	M. H. Bull	7-169-8
7-19	Figure 1 - The dotted aleurone character is shown by all seeds on this ear which came from self-pollinating a plant of al al Dt Dt constitution. Each colored area or dot represents a mutation of al to Al. The small range in size indicates that mutations of al occur late in the development of the aleurone.	Biology	Darkroom	7-170-8
7-19	Figure 6 - Effect of extreme low temperatures on x-ray tolerance. Barley seedlings 12 days after planting. Left, control. Center, dormant seeds irradiated in solid carbon dioxide (-80°C). Right, dormant seeds irradiated similarly at 23°C. The maximum intensity tolerated at -80°C is about 2/3 higher than at 23°C.	Biology	Darkroom	7-171-8
7-19	Two ears of corn.	Biology	Darkroom	7-172-8
7-19	Doodles C - D - E.	Biology	Darkroom	7-173-8
7-19	Treated potato field with control row in the background.	Biology	R. J. Walton	7-174-8

Date	Caption	Dept.	Photographer	Number
7-14	Overall of people in swimming pool at the Swim and Dance party.	Recrea	R. J. Walton	7-175-8
7-14	Alice Gewehr going off diving board.	Recrea	R. J. Walton	7-176-8
7-14	Alice Gewehr coming up ladder.	Recrea	R. J. Walton	7-177-8
7-14	Overall of people dancing in gym.	Recrea	R. J. Walton	7-178-8
7-14	Max Weiss and wife dancing.	Recrea	R. J. Walton	7-179-8
7-14	Arnold Gledhill and wife dancing.	Recrea	R. J. Walton	7-180-8
7-14	Overall shot of people dancing in gym at the Swim and Dance party.	Recrea	R. J. Walton	7-181-8
7-20	No iron.		Darkroom	7-182-8
7-20	1.16 cm		Darkroom	7-183-8
7-20	0.57 cm		Darkroom	7-184-8
7-20	1.85 cm		Darkroom	7-185-8
7-20	Equipment - biology	Dr. Gibbs	Darkroom	7-186-8
7-20	Equipment - biology	Dr. Gibbs	Darkroom	7-187-8
7-20	Equipment - biology	Dr. Gibbs	Darkroom	7-188-8
7-19	"Poppy" alpha survey meter.	HPhysics	R. F. Smith	7-189-8
7-20	Adrenal cholesterol.	Biology	Darkroom	7-190-8
7-20	Glycogen	Edelman	Darkroom	7-191-8
7-20	Adrenal weights	Edelman	Darkroom	7-192-8
7-20	Adrenal ascorbic acid.	Edelman	Darkroom	7-193-8
7-19	Pocket chambers, film badges and film rings.	Hphysics	R. F. Smith	7-194-8
7-19	Magnet for nuclear moments experiments.	Nuclear Moments	R. F. Smith	7-195-8
7-20	Corn at Yaphank.	Singleton	R. J. Walton	7-196-8
7-20	Corn at Yaphank.	Biology	R. J. Walton	7-197-8
7-20	Corn at Yaphank.	Singleton	R. J. Walton	7-198-8
7-19	Mrs. Lorraine Kostuk.	Mines	R. F. Smith	7-199-8
7-19	William D. Evans.	Mines	R. F. Smith	7-200-8
7-21	Diagram of equipment.	Sachs	M. H. Bull	7-201-8
7-21	Effect of glucose administration on P ³² content of phosphorylated hexoxes of resting muscles in cats.	Biology	M. H. Bull	7-202-8
7-21	Diagram of equipment.	Sachs	M. H. Bull	7-203-8

Date	Caption	Dept.	Photographer	Number
7-20	<p>This photograph shows a film ring, a visitor's film badge, and two pocket chambers.</p> <p>The film ring contains film with a partial cadmium shield and is worn in hot operations where the hand might get an exposure higher than the rest of the body.</p> <p>A film badge is used to monitor the exposure of personnel to beta and gamma radiation. It contains a film packet of two films, one more sensitive than the other in order to extend the reading scale. These are developed and their density read against calibration films which have been exposed to standard sources. The badge includes a partial cadmium shield as an aid in differentiating between beta and gamma radiation. It also seems to make the film more nearly independent of energy.</p> <p>The pen-like devices are monitoring instruments for gamma radiation. They are ionization chambers which are charged to about 150 volts. After use the remaining voltage is read as a measure of exposure. These chambers are more sensitive than the film badges and provide a daily check of exposure whereas the film badges are developed and read weekly. Two chambers are used because of the possibility of error due to leakage.</p>	HPhysics	M. H . Bull	7-205-8

Date	Caption	Dept.	Photographer	Number
7-21	Absorption of radioactive iron.	Biology Sharpe	M. H. Bull	7-204-8
7-20	Lab coat, pocket chamber, ring and film badges.	HPhysics	M. H. Bull	7-205-8
7-19	Marvin Fox and Karl Hartzell in the tennis finals.	Recrea	R. J. Walton	7-206-8 7-207-8
7-20	Traffic leaving through the South Gate at 1630.	Police & Security	R. J. Walton	7-208-8 <u>7-209-8</u>
7-20	Softball game Men's Dormitory vs Fire Department.	Recrea	R. J. Walton	7-210-8 thru 7-213-8
7-21	Biologists group picture.	Biology	R. J. Walton	7-214-8
7-21	Biologists group picture.	Biology	R. J. Walton	7-215-8
7-22	Brookhaven will have a proton accelerator which will whirl particles at energies of 3 billion electron volts. This is a model of the cosmotron which has been given this name because it will be able to create artificially the same effects as caused by cosmic rays.	Cosmotron	Deleted Deleted J. F. Garfield and R. J. Walton	7-216-8 7-217-8 7-218-8 7-219-8 7-220-8 7-221-8 7-222-8
7-21	Dramatic Group discussing Life and Half-Life at Brookhaven. Left to right - John Karas, Mary Dargan, Roy Sutter, Dorothy Lee.	Recrea	R. F. Smith	7-223-8
7-21	Dramatic Group discussing Life and Half-Life at Brookhaven. Left to right - Sam Millman, John Karas, Mary Dargan, Roy Sutter, President Dorothy Lee, Grace Well, George Cox.	Recrea	R. F. Smith	7-224-8
7-22	Organization chart.	Hphysics	M. H. Bull	7-225-8
7-22	Film badge calibration, Dupont type 552			
7-22	Film badge calibration, DuPont type 552. Calibration graph obtained by exposing the film to known amounts of exposure. Film densities from badges are compared to this graph to obtain	HPhysics	M. H. Bull	7-226-8

Date	Caption	Dept.	Photographer	Number
7-23	Tobacco: Distribution of radio phosphorous in tobacco leaves showing the particularly high concentration of phosphorous in growing tip.	Mac	M. H. Bull	7-227-8
7-23	That radioactivity can be transferred from parent to offspring is shown by this radioautograph of mouse embryo, with spinal column distinctly shown. Radioactive gold has been injected into the mother during a study of the treatment of arthritis.	Mac	M. H. Bull	7-228-8
7-23	Slide of tomato: Radio-sulfphu autograph of green tomato fruit. Plant absorbed $\text{Na}_2\text{S}^*\text{O}_4$ from the nutrient solution. Localization in the skin, vascular system walls of the large cells, and especially in the seeds, is shown.	Mac	M. H. Bull	7-229-8
7-23	Rat: Uptake of radioactive phosphorous by various organs and tissues are measured in this in vido technique by placing small Geiger counter tubes directly over the tissue. Here the relative activity is measured in the liver, cancer (tumor) and leg bone.	Mac	M. H. Bull	7-230-8
7-23	Five sections of sugar beet: Radioautograph of cross and longitudinal sections of surgare beet treated with $\text{Na}_2\text{S}^*\text{O}_2$ in the nutrient solution. The section at right with the complex pattern is crown tissue. The sulphur is principally in the cambium and phloen cells.	Mac	M. H. Bull	7-231-8
7-23	Half section of tomato: Radioautograph of a section of green tomato fruit. Plant absorbed S^*O_2 from the air thru the leaves. Localization in skin and vascular system is shown.	Mac	M. H. Bull	7-232-8
7-23	Sketch: Simplified outline of work being done with radioactive sulphur and penicillin in a joint project being carried on by the Veneral Disease Research Lab at Staten Island, New York, and the Lab. of Physical Biology of the National Inst. of Health.	Mac	M. H. Bull	7-233-8
7-23	Phosphate absorpction by plants. Fig. two. Percent of native and applied phosphates absorbed from soils of varying fertility.	Mac	M. H. Bull	7-234-8
7-23	Biosynthesis of sucrose.	Mac	M. H. Bull	7-235-8
7-23	Biosynthesis of sucrose, continued.	Mac	M. H. Bull	7-236-8

Date	Caption	Dept.	Photographer	Number
7-23	Diagram - biology.	Gibbs	M. H. Bull	7-237-8
7-23	Carbon dioxide, biosyn thesis apparatus.	Gibbs	M. H. Bull	7-238-8
7-23	Figure 2 - Complete apparatus for photosynthesis.	Gibbs	M. H. Bull	7-239-8
7-23	Figure 1 - Photosynthetic chamber, Erlenmeyer flask, and Florence flask.	Gibbs	M. H. Bull	7-240-8
7-26	Instrument for handling radioactive material.	HPhysics	R. F. Smith	7-241-8
7-26	Instrument for handling radioactive material.	HPhysics	R. F. Smith	7-242-8
7-26	Photo of potato field progress. Plant have been treated with x-rays for Genetic experiments.	Biology	R. F. Smith	7-243-8
7-26	Experimental corn. Plants have been treated with concentrations of radioactive phosphorous.	Biology	R. F. Smith	7-244-8
7-23	Particle track for checking automatic counting apparatus (Mag. 512.4 X) complete set of fields focused at various planes.	Physics	R. F. Smith	7-245-8 thru 7-249-8
7-26	Particle track photomicrograph for testing automatic counting equipment. X2800.	Physics	R. F. Smith	7-250-8
7-27	In ¹¹⁵ 54 minutes.	Hughes	M. H. Bull	7-251-8
7-27	Cu ⁶³ 12.8 hours.	Hughes	M. H. Bull	7-252-8
7-27	I ¹²⁷ 25 minutes.	Hughes	M. H. Bull	7-253-8
7-27	Mn ⁵⁵ 2.59 hours.	Hughes	M. H. Bull	7-254-8
7-27	Au ¹⁹⁷ 2.7 days	Hughes	M. H. Bull	7-255-8
7-27	Isotopic activation cross sections for fission neutrons.	Hughes	M. H. Bull	7-256-8
7-26	Photometric smoke detector - front.	Met	R. F. Smith	7-257-8
7-26	Photometric smoke detector - side.	Met	R. F. Smith	7-258-8
7-28	Huge nuclear machine which will whirl protons at the rate of three billion electron volts, a speed sufficient to generate artificial cosmic rays, will be used to obtain additional basic info about the nature and structure of the atom.	Cosmo	R. J. Walton	7-259-8

Date	Caption	Dept.	Photographer	Number
7-27	Dramatic Club discussing the script of the new play.	Recrea	J. F. Garfield	7-260-8
7-28	Scales.		M. H. Bull	7-261-8
7-28	Figures 2.11 - 1.18 - 2.10 - 1.19	PMMorse	M. H. Bull	7-262-8
7-28	Figures 1.22 - 2.8a - 2.8b - 1.12	PMMorse	M. H. Bull	7-263-8
7-28	Figure 1.6 - 1.16 - 1.9 - 1.13	PMMorse	M. H. Bull	7-264-8
7-28	Figure 1.3 - 1.24	PMMorse	M. H. Bull	7-265-8
7-28	Figure 2.20 - 2.19 - 2.17 - 2.16	PMMorse	M. H. Bull	7-266-8
7-28	Figure 1.1 - 2.26 - 2.27	PMMorse	M. H. Bull	7-267-8
7-28	Figure 2.21 - 2.23 - 2.25 - 2.22	PMMorse	M. H. Bull	7-268-8
7-28	Figure 2.4 - 2.2 - 2.6 - 2.3	PMMorse	M. H. Bull	7-269-8
7-28	Figure 1.8 - 1.10 - 1.15 - 2.1	PMMorse	M. H. Bull	7-270-8
7-28	Figure 2.13 - 2.18	PMMorse	M. H. Bull	7-271-8
7-28	Figure 2.5 - 2.14	PMMorse	M. H. Bull	7-272-8
7-28	Figure 1.7 - 2.9	PMMorse	M. H. Bull	7-273-8
7-28	Figure 1.2 - 1.17 - 2.7	PMMorse	M. H. Bull	7-274-8
7-28	Figure 1.14 - 2.24	PMMorse	M. H. Bull	7-275-8
7-28	Figure 2.15	PMMorse	M. H. Bull	7-276-8
7-28	Figure 1.11 - 1.5 - 2.12	PMMorse	M. H. Bull	7-277-8
7-20	Recreation trustees.	Recrea	R. F. Smith	7-278-8
7-30	Phytic acid.	Biology	M. H. Bull	7-279-8

August

Date	Caption	Dept.	Photographer	Number
8-2	Gag shot of corn for lecture at the Midsummer Dance.	Recrea	R. F. Smith	8-1-8
8-2	Gag shot of finger for same.	Recrea	R. F. Smith	8-2-8
8-2	Gag shot of group for same.	Recrea	R. F. Smith	8-3-8
8-2	Corn grass.	Singleton	R. F. Smith	8-4-8
8-2	Corn grass and normal corn.	Singleton	R. F. Smith	8-5-8
8-2	Corn rows.	Singleton	R. F. Smith	8-6-8
8-2	Closeup of corn grass.	Singleton	R. F. Smith	8-7-8
8-2	Controlling the length of the day by the use of black cloth.	Singleton	R. F. Smith	8-8-8
8-2	Closeup of top of corn grass plant.	Singleton	R. F. Smith	8-9-8
8-2	Corn grass showing entire plant.	Singleton	R. F. Smith	8-10-8
8-3	Slides for Midsummer Dance lecture. Secret	Recrea	Simack & Bull	8-11-8
8-3	Girl	Recrea	Simack & Bull	8-12-8
8-3	B and C	Recrea	Simack & Bull	8-13-8
8-3	Design # 73-X (Borscht)	Recrea	Simack & Bull	8-14-8
8-3	Proton - Electron - Neutron	Recrea	Simack & Bull	8-15-8
8-3	Girl	Recrea	Simack & Bull	8-16-8
8-3	Meson - Neutrino	Recrea	Simack & Bull	8-17-8
8-3	Man thumbing his nose.	Recrea	Simack & Bull	8-18-8
8-3	A	Recrea	Simack & Bull	8-19-8
8-3	Amount learned - work done.	Recrea	Simack & Bull	8-20-8
8-3	Before and after rabbit.	Recrea	Simack & Bull	8-21-8
8-4	Photomicrograph of protozoa from the intestinal tract of a termite. Live specimens in saline photographed in dark field. Negative magnification 378 X.	Biology	R. F. Smith	8-22-8
8-4	Photomicrograph of protozoa from the intestinal tract of a termite. Photograph made of a live specimen in saline solution in dark field. Negative magnification 378 X Print magnification 756 X	Biology	R. F. Smith	8-23-8
8-4	Copy of scale "Counts per Minute"	Monsta	M. H. Bull	8-24-8
8-5	Lead dioxide target.		Simack & Bull	8-25-8
8-5	Amperes coil current.		Simack & Bull	8-26-8
8-5	Sodium target.		Simack & Bull	8-27-8
8-5	CO60 source.		Simack & Bull	8-28-8
8-5	Silicon target.		Simack & Bull	8-29-8
8-5	Magnesium target.		Simack & Bull	8-30-8

Date	Caption	Dept.	Photographer	Number
8-5	Aluminum target.		Simack & Bull	8-31-8
8-5	Amperes coil current.		Simack & Bull	8-32-8
8-5	Phosphorous target.		Simack & Bull	8-33-8
8-5	Sulphur target.		Simack & Bull	8-34-8
8-5	Amperes coil current.		Simack & Bull	8-35-8
8-5	Beam, B-ray		Simack & Bull	8-36-8
8-5	Figure one.		Simack & Bull	8-37-8
8-5	Figure six.		Simack & Bull	8-38-8
8-5	Figure four.		Simack & Bull	8-39-8
8-5	Reaction - Q values (Mev)		Simack & Bull	8-40-8
8-6	Figure 8 - Cross section for photo fission of uranium. Because of approximations made in the analysis and uncertainty of the experimental data for low x-ray energies, this curve must be considered of only qualitative significance.		Paul Simack	8-41-8
8-6	Figure 8 - Approximate cross section for $Cu^{63} (r,n) Cu^{62}$ arbitrary units.		Paul Simack	8-42-8
8-6	Figure 7 - Approximate cross section for $Cl^{37} (r,n) Cl^{36}$ arbitrary units.		Paul Simack	8-43-8
8-4	Front view of magnet showing lamination before being charged with the current. (Note there is not much gap between lamination).	Green	R. J. Walton	8-44-8
8-4	Front view of magnet showing lamination after being charged with the current. (Note the gap between lamination).	Accel	R. J. Walton	8-45-8
8-4	Side view of magnet showing coils before and after being charged.	Green	R. J. Walton	8-46-8
8-4	Side view of magnet showing coils before and after being charged.	Accel	R. J. Walton	8-47-8
8-6	Special rolls smoke run.	Met	Meteorology	8-48-8 thru 8-63-8
8-9	Slide negatives Dependance of photo neutron energy on angle.		M. Herbert	8-64-8 thru 8-67-8
8-9	Studio photo of counting equipment.	Ele	R. F. Smith	8-68-8
8-9	Wiring layout of counting equipment.	Ele	R. F. Smith	8-69-8
8-9	Wiring layout of counting equipment.	Ele	R. F. Smith	8-70-8

Date	Caption	Dept.	Photographer	Number
8-9	Photomicrograph of protozoa from the intestines of termites. Live specimens in saline photographed at 1/4000 of a second. Negative magnification 96 X Print magnification 200 X.	Biology	R. F. Smith	8-71-8
8-10	Figure 10 - Disintegration curves of positive and negative mesons in Na F (Ticho and Schein).	Physics	M. H. Bull	8-72-8
8-10	Figure 13 - Experimental arrangement used by Piccioni to investigate the production of high energy photons by stopping of mesons in iron.	Physics	M. H. Bull	8-73-8
8-10	Table I.	Physics	M. H. Bull	8-74-8
8-10	Figure 14 - Experimental arrangement used by Sard et. al. to investigate the production of neutrons by the stopping of mesons in lead.	Physics	M. H. Bull	8-75-8
8-10	Figure 7 - Experimental arrangement used by Hink and Pontecorvo to investigate the production of high energy photons by the decay of mesons.	Physics	M. H. Bull	8-76-8
8-10	Figure 8 - Experimental arrangement used by Ticho and Schein to measure the disintegration curves of positive and negative mesons.	Physics	M. H. Bull	8-77-8
8-10	Figure 12 - Cloud chamber picture showing a meson which comes to rest in a 0.8 inch thick Al plate without giving rise to any visible secondary particle.	Physics	M. H. Bull	8-78-8
8-10	Figure 5 - Experimental arrangement used by Zar et. al. to measure the range of decay electrons.	Physics	M. H. Bull	8-79-8
8-11	Interior of monitoring station at Rock Hill. Long shot of Gurly wind velocity recorder.	Monsta	R. J. Walton	8-80-8
8-11	View taken inside monitoring station at Rock Hill, long shot showing Gurly wind velocity recorder.	Monsta	R. J. Walton	8-81-8
8-11	View taken inside the monitoring station at Rock Hill showing the technician changing the recording roll.	Monsta	R. J. Walton	8-82-8 and 8-83-8
8-11	Potato plants - center row.	Biology	R. F. Smith	8-84-8
8-11	Potato plants - east row.	Biology	R. F. Smith	8-85-8
8-11	Potato plants - west row.	Biology	R. F. Smith	8-86-8
8-11	Potato plants - radiated 19200 R.	Biology	R. F. Smith	8-87-8

Date	Caption	Dept.	Photographer	Number
8-11	Potato plants - radiated 4800 R.	Biology	R. F. Smith	8-88-8
8-11	Potato plants - control.	Biology	R. F. Smith	8-89-8
8-11	Potato plants - radiated 4800 R.	Biology	R. F. Smith	8-90-8
8-11	Potato plants - radiated 9600 R.	Biology	R. F. Smith	8-91-8
8-11	Potato plants looking northeast.	Biology	R. F. Smith	8-92-8
8-11	Potato field looking northwest.	Biology	R. F. Smith	8-93-8
8-11	Potato field looking northeast.	Biology	R. F. Smith	8-94-8
8-12	Pile mockup.			8-95-8
8-12	Pile mockup.			thru
8-12	Pile mockup. 8-101-8 declassified 11/15/56	Pile	M. H. Bull	8-101-8
8-13	Meteorology smoke run.	Met	Meteorology	8-102-8 thru 8-117-8
8-13	Figure 2 - Cloud chamber picture of a meson decay process occurring in the gas.	Rossi	M. H. Bull	8-118-8
8-13	Figure 3 - Cloud chamber picture of a meson decay process occurring in an aluminum plate.	Rossi	M. H. Bull	8-119-8
8-13	Figure 4 - Cloud chamber picture of a meson decay process occurring in an aluminum plate.	Rossi	M. H. Bull	8-120-8
8-16	Overall of people dancing at the Midsummer Dance.	Recrea	R. J. Walton	8-121-8
8-16	Crowd gathered around Joyce Mathews at bandstand while she sings.	Recrea	R. J. Walton	8-122-8
8-16	Thermo-couple gauge control, etc.	P Lee	M. H. Bull	8-123-8
8-16	Thermo-couple gauge control, etc.	P Lee	M. H. Bull	thru
8-16	Thermo-couple gauge control, etc.	P Lee	M. H. Bull	8-126-8
8-17	High pressure cloud chamber for cosmic rays operate at 200 atmospheres. In this photo, an electronic control rack is recently built at Bal. It makes the operation of the cloud chamber fully automatic. Left to right - William Tuttle, Robert Hoke.	Cloud Chamber	J. F. Garfield & Christoffersen	8-127-8
8-17	Aerial of chemistry buildings.	Chem	R. J. Walton	8-128-8

Date	Caption	Dept.	Photographer	Number
8-17	Aerial of chemistry buildings.	Chem	R. J. Walton	8-129-8
8-17	Aerial of chemistry buildings.	Chem	R. J. Walton	8-130-8
8-17	Meteorological tower looking up.	Met	J. F. Garfield	8-131-8
8-17	Observing weather instruments on top of tower with theolite prior to removal of indicating apparatus.	Met	J. F. Garfield	8-132-8
8-17	Meteorological tower and building.	Met	J. F. Garfield	8-133-8
8-17	Mounting weather instruments on lower booms on weather tower.	Met	J. F. Garfield	8-134-8
8-17	Mounting weather instruments on lower booms on weather tower.	Met	J. F. Garfield	8-135-8
8-18	This is an Atomic Pile Model.	AEE	Darkroom	8-136-8
8-18	The samples in this exhibit are the purified basic materials from which, by further extensive and complicated processes, the fissionable material is prepared.	Exhibit	Darkroom	8-137-8
8-18	Mr. Atom.	Exhibit	Dakroom	8-138-8
8-18	4 ways to separate U235 from U238.	Exhibit	Darkroom	8-139-8
8-18	Lecture tours start here at completion of film showing.	Exhibit	Darkroom	8-140-8
8-18	Mass spectrometer.	Exhibit	Darkroom	8-141-8
8-18	4 ways to separate U235 from U238.	Exhibit	Darkroom	8-142-8
8-18	The Van de Graff electrostatic generator at the Department of Terrestrial Magnetism of the Carnegie Institution of Washington.	Exhibit	Darkroom	8-143-8
8-18	Van de Graaff generator atom smasher.	Exhibit	Darkroom	8-144-8
8-18	Splitting the atom. (Oscilloscope)	Exhibit	Darkroom	8-145-8
8-18	Splitting the atom. Model of the Atomic Pile.	Exhibit	Darkroom	8-146-8
8-18	Radioactive tracers.	Exhibit	Darkroom	8-147-8
8-18	First atomic pile at Argonne National Laboratory.	Exhibit	Darkroom	8-148-8
8-18	The Cyclotron - the Big Bertha of the Atom Artillery.	Exhibit	Darkroom	8-149-8
8-18	Artillery of Atomics.	Exhibit	Darkroom	8-150-8
8-18	The Cyclotron - New Atom Smasher			
	Developed Cyclotron at control board of 8-ton cyclotron.	Exhibit	Darkroom	8-151-8
8-18	Immediate benefits to industry.	Exhibit	Darkroom	8-152-8
8-18	Who we are - Brookhaven is a fundamental research (nuclear) center.	Exhibit	Darkroom	8-153-8
8-18	Brookhaven National Laboratory is one of the centers for basic research in atomic energy financed by the Atomic Energy Commission.	Exhibit	Darkroom	8-154-8
8-18	Rays from the atom.	Exhibit	Darkroom	8-155-8

Date	Caption	Dept.	Photographer	Number
8-18	Splitting the atom.	Exhibit	Darkroom	8-156-8
8-18	Nature of the atom.	Exhibit	Darkroom	8-157-8
8-18	Atomic Energy.	Exhibit	Darkroom	8-158-8
8-18	Minerals and Mining - Raw Materials.	Exhibit	Darkroom	8-159-8
8-18	Atomic Pin Ball Machine.	Exhibit	Darkroom	8-160-8
8-18	The cyclotron.	Exhibit	Darkroom	8-161-8
8-18	Atom splitting machine.	Exhibit	Darkroom	8-162-8
8-18	Peacetime uses.	Exhibit	Darkroom	8-163-8
8-18	Periodic chart of the atoms.	Exhibit	Darkroom	8-164-8
8-18	Van de Graaff generator demonstration model of first electrostatic atom smasher.	Exhibit	Darkroom	8-165-8
8-18	Pitchblende to Plutonium.	Exhibit	Darkroom	8-166-8
8-18	The Cyclotron - Big Gun of science.	Exhibit	Darkroom	8-167-8
8-18	Radioactive isotopes as tracers in biology and medicine.	Exhibit	Darkroom	8-168-8
8-18	Nuclear transmutation chart.	Exhibit	Darkroom	8-169-8
8-18	Nuclear Energy exhibit loaned by BNL	Exhibit	Darkroom	8-170-8
8-18	There is no monopoly of uranium and thorium areas.	Exhibit	Darkroom	8-171-8
8-18	Find the radioactive frogs.	Exhibit	Darkroom	8-172-8
8-18	Find the radioactive frogs.	Exhibit	Darkroom	8-173-8
8-18	Aerial view of ace tower.	Met	J. F. Garfield	8-174-8
8-19	Slide negative.	Ingles	M. H. Bull	8-175-8
8-19	Cosmotron schematic.	Cosmo	M. H. Bull	8-176-8
8-23	Figure 2.20 - 1.4.	PMMorse	M. H. Bull	8-177-8
8-24	Meteorology smoke run.	Met	Meteorology	8-178-8 thru 8-197-8
8-24	Transferred to Private.	Physics	Physics	8-198-8 thru 8-210-8
8-11	Observation well drilling rig being set up.	Geology	R. J. Walton	8-211-8
8-11	Observation well drilling rig being set up.	Geology	R. J. Walton	8-212-8

Date	Caption	Dept.	Photographer	Number
8-26	Two diagrams.	Ingles	M. H. Bull	8-213-8
8-26	Upper curve - lower curve.	Ingles	M. H. Bull	8-214-8
8-26	Magnetic moments of the odd neutron nuclei.	Ingles	M. H. Bull	8-215-8
8-26	Diagram.	Ingles	M. H. Bull	8-216-8
8-26	Magnetic moments of the odd proton nuclei.	Ingles	M. H. Bull	8-217-8
8-27	Quadrant end section 3 Bev cosmotron.	Cosmo	M. H. Bull	8-218-8
8-27	Cross section of 3 Bev cosmotron.	Cosmo	M. H. Bull	8-219-8
8-27	Sectional drawing.	Cosmo	M. H. Bull	8-220-8
8-27	Diagram.	Cosmo	M. H. Bull	8-221-8
8-25	Materials Control softball team.	Recrea	R. J. Walon	8-222-8
8-27	Library lounge.	Library	R. F. Smith	8-223-8
8-27	Library lounge.	Library	R. F. Smith	8-224-8
8-27	Library exterior.	Library	R. F. Smith	8-225-8
8-27	Cloud chamber design specifications.	Cloud Chamber	Paul Simack	8-226-8
8-27	Cloud chamber diagram.	Cloud Chamber	Paul Simack	8-227-8
8-27	Overall shot of main recording panel in labratory.	Met	R. J. Walton	8-228-8
8-26	Photomicrographs Magnification 25.6 X.	Collins	R. F. Smith	8-229-8 thru 8-252-8
8-26	Men's Dormitory softball team.	Recrea	J. F. Garfield	8-253-8
8-25	Biology potato test planting.	Biology	J. F. Garfield	8-254-8
8-9	Coincidence synchroscope Model 115.		R. F. Smith	8-255-8
8-9	Variable spacing parallel plate counter.		R. F. Smith	8-256-8
8-9	Prallel plate counter coincidence set.		R. F. Smith	8-257-8
8-31	Micro oscilloscope track photomicrographs Mag. 25.6 X Slide 16 B.	Collins	R. F. Smith	8-258-8 thru 8-260-8

Date	Caption	Dept.	Photographer	Number
8-31	Group shot of meteorology on stairs leading up to observation platform.	Met	R. J. Walton	8-261-8
8-31	Group shot of meteorology section.	Met	R. J. Walton	8-262-8
8-31	Group shot of meteorology. Shelter and wind indicator on top of bldg.	Met	R. J. Walton	8-263-8
8-31	High ratio calibrating pump for smoke.	Met	R. J. Walton	8-264-8
8-31	Main recording panel for weather instrument.	Met	R. J. Walton	8-265-8
8-30	Figure 3 - Spectrum at strong fields, showing lines produced by molecules in five vibrational states.	Biology	Paul Simack	8-266-8
8-30	Figure 4 - Strong field spectrum showing the fine structure produced by the nuclear molecular interactions for molecules in several vibrational states.	Biology	Paul Simack	8-267-8
8-30	Figure 2 - Curve A, absorption of sodium (24) gamma-radiation scattered by magnesium.	Biology	Paul Simack	8-268-8
8-30	Figure 5 - Weak field spectra for two different values of the field.	Biology	Paul Simack	8-269-8
8-30	Figure 1 - Top and side views of experimental arrangement for measuring the absorption of a large angle scattered gamma radiation.	Biology	Paul Simack	8-270-8
8-30	Figure 4 - Absorption of sodium (24) gamma-radiation scattered by lead.	Biology	Paul Simack	8-271-8
8-31	Figure 2 - Two views of the C-field showing the basic features of the design.	Biology	Paul Simack	8-272-8
8-31	Figure 5 - Absorption of sodium (24) gamma-radiation scattered by mercury.	Biology	Paul Simack	8-273-8
8-31	Figure 3 - Absorption of sodium (24) gamma-radiation scattered by aluminum.	Biology	Paul Simack	8-274-8
8-30	Table IV - Table of t.		Paul Simack	8-275-8
8-30	Figure one.		Paul Simack	8-276-8
8-30	Figure two.		Paul Simack	8-277-8
8-6	Slide # A 1484H E102	Sparrow Biology	R. F. Smith	8-278-8
8-6	Slide # A 1442 G E 47	Sparrow	R. F. Smith	8-279-8
8-6	Slide # A 1442 G E 47	Sparrow	R. F. Smith	8-280-8
8-6	Slide # A 1442 H-B E 67	Sparrow	R. F. Smith	8-281-8
8-6	Slide # A 1442 H E99	Sparrow	R. F. Smith	8-282-8

September

Date	Caption	Dept.	Photographer	Number
9-1	Photomicrographs of micro oscillograph tracks. Magnification 25.6 X	Collins	R. F. Smith	9-1-8 thru 9-11-8
9-1	Photomicrographs of micro oscillograph tracks. Magnification 158.4 X	Collins	R. F. Smith	9-12-8 and 9-13-8
9-2	View from tower.	Met	Meteorology	9-14-8 9-15-8 9-16-8
9-2	Photomicrographs of micro oscillograph tracks. Magnification 25.6 X	Collins	R. F. Smith	9-17-8 thru 9-23-8
9-1	Police-Motor Pool and Fire Department playoff game showing M. Chuchiolo at bat.	Recrea	R. J. Walton	9-24-8
9-1	Police-Motor Pool and Fire Department playoff game.	Recrea	R. J. Walton	9-25-8
9-3	Exhibit at Grand Central Palace Visitor filling out form at the "Nuclear energy is here for good" panel.	Exhibit	R. F. Smith	9-26-8
9-3	Visitor taking full voltage from the Van de Graaf generator.	Exhibit	R. F. Smith	9-27-8
9-3	Tracer panel with Geiger counter.	Exhibit	R. F. Smith	9-28-8
9-3	What will nuclear energy do for man/ kind?	Exhibit	R. F. Smith	9-29-8
9-3	Nuclear energy is here for good.	Exhibit	R. F. Smith	9-30-8
9-3	The development of nuclear energy is your business.	Exhibit	R. F. Smith	9-31-8
9-3	For good, for ill, for life, for death.	Exhibit	R. F. Smith	9-32-8
9-3	Visitor using cloud chamber.	Exhibit	R. F. Smith	9-33-8
9-3	The Uranium exhibit.	Exhibit	R. F. Smith	9-34-8
9-3	The Van de Graaf generator.	Exhibit	R. F. Smith	9-35-8
9-3	Nuclear energy is here for good.	Exhibit	R. F. Smith	9-36-8
9-3	Spectators viewing sample of uranium.	Exhibit	R. F. Smith	9-37-8
9-3	The Atomic Nucleus.	Exhibit	R. F. Smith	9-38-8
9-3	Fire can be accidental.	Exhibit	R. F. Smith	9-39-8
9-3	Can man harness nuclear energy.	Exhibit	R. F. Smith	9-40-8
9-3	Spectator using Geiger counter at the tracer experiment panel.	Exhibit	R. F. Smith	9-41-8
9-3	Law of growth (slide).	Turkevich	M. H. Bull	9-42-8
9-3	Growth of nuclei (slide).	Turkevich	M. H. Bull	9-43-8
9-3	Formation of nuclei (slide).	Turkevich	M. H. Bull	9-44-8

Date	Caption	Dept.	Photographer	Number
9-3	Photomicrographs of micro oscillo- graph tracks. Magnification 25.6 X	Collins	R. F. Smith	9-45-8 thru 9-59-8
9-7	Target-Gamma ray energy (Mev) probable reaction.		M. H. Bull	9-60-8
9-8	Figure 13 - Energy level diagram and Zeeman splitting for CH ₃ Cl.	Roberts	Paul Simack	9-61-8
9-8	Figure 14 - The J equals 0-1 lines of CH ₃ Cl ³⁵ with and without magnetic field.	Roberts	Paul Simack	9-62-8
9-8	Partial list of frequencies of O. C. S. lines.	Roberts	Paul Simack	9-63-8
9-10	Slide for Dr. Friedlander.	Chemistry	Paul Simack	9-64-8
9-10	Slide for Dr. Friedlander.	Chemistry	Paul Simack	thru
9-10	Slide for Dr. Friedlander.	Chemistry	Paul Simack	9-70-8
9-10	Grounds progress and maintenance.	Grounds	E. J. Hunter	9-71-8 thru 9-74-8
9-13	Mrs. Salant passport picture.	Portrait	A. P. C.	9-75-8
9-13	Mrs. Salant passport picture.	Portrait	A. P. C.	9-76-8
9-13	Fingerprints taken from the screen at snack bar.	Police & Security	R. F. Smith	9-77-8
9-13	Force constant k, etc.	Friedlander	M. H. Bull	9-78-8
9-13	Total absorption, etc.	Friedlander	M. H. Bull	9-79-8
9-13	Set, etc.	Chemistry	M. H. Bull	9-80-8
9-13	Nuclear radius, etc.	Chemistry	M. H. Bull	9-81-8
9-14	3.0 Bev proton synchrotron.	Haworth	M. H. Bull	9-82-8
9-14	Potatoes from the experimental patch showing effects of radiation.	Biology	R. F. Smith	9-83-8
9-14	Long shot of beam in snack bar show- ing thief's hand prints.	Police & Security	R. F. Smith	9-84-8
9-14	Beam showing hand prints of snack bar bandit (closeup).	Police & Security	R. F. Smith	9-85-8

Date	Caption	Dept.	Photographer	Number
9-14	Closeup of cable on top of partition which left a print on the thief's trousers.	Police & Security	R. F. Smith	9-86-8
9-14	View showing chair against partition by which means thief scaled over to reach snack bar cash register.	Police & Security	R. F. Smith	9-87-8
9-14	View of counter in snack bar.		R. F. Smith	9-88-8
9-14	Closeup of window thru which thief entered snack bar.	Police & Security	R. F. Smith	9-89-8
9-14	Long shot of snack bar showing where thief entered the building thru the Ladies Room.	Police & Security	R. F. Smith	9-90-8
9-14	Cermaic thermometer shield - front.		R. F. Smith	9-91-8
9-14	Cermaic thermometer shield - side.		R. F. Smith	9-92-8
9-14	Cermaic thermometer shield - top.		R. F. Smith	9-93-8
9-14	Accelerator group shot.	Accel	Walton & Smith	9-94-8
9-21	Organization chart - July 1, 1948.	Hartzell	M. Herbert	9-95-8
9-21	Scientific chart - departments and projects.	Hartzell	M. Herbert	9-96-8
9-21	Cosmotron cutaway drawing.	Cosmotron	M. Herbert	9-97-8
9-21	An artist's drawing of the hot labs which are now under construction at Brookhaven. The scientists working in these buildings will use highly radioactive materials which will be supplied to them by the pile.			
9-21	Hot area looking south.	Nuclear Reactor	M. H. Bull	9-98-8
9-21	Main floor plan, hot area.	Nuclear Reactor	M. H. Bull	9-99-8
9-21	Ground floor plan, cold area.	Nuclear Reactor	M. H. Bull	9-100-8
9-21	Main floor plan, cold area.	Nuclear Reactor	M. H. Bull	9-101-8
9-21	Section thru east end.	Nuclear Reactor	M. H. Bull	9-102-8
9-21			M. H. Bull	9-103-8
9-27	Plants for biological use.	Gibbs	J. F. Garfield	9-104-8
9-27	Meteorology			9-105-8
	smoke			thru
	run.	Met	Meteorology	9-111-8
9-9	Accident scenes and closeup of the police car showing damage.	Police & Security	R. J. Walton	9-112-8 thru 9-117-8

Date	Caption	Dept.	Photographer	Number
9-28	Meteorology smoke run.	Met	Meteorology	9-118-8 thru 9-125-8
9-29	Figure 1.24 forces on faces of element of elastic medium, etc.	PMMorse	M. H. Bull	9-126-8
9-29	Golf picture - Frances Devine, Jean Brown, Robert Brown, Robert McKee.	Recrea	M. H. Bull	9-127-8
9-29	Copy of pile building oil painting.	Pile	M. H. Bull	9-128-8
9-29	Cosmic ray test rack.	Physics	R. F. Smith	9-129-8
9-29	Cosmic ray test rack.	Physics	R. F. Smith	9-130-8
9-29	Swimming pool attendants.	Mines	R. F. Smith	9-131-8
	No negative.			9-132-8
9-29	F. L. Crozier	Mines	R. F. Smith	9-133-8
9-29	Olga C. Vario - Vertical	Mines	R. F. Smith	9-134-8
9-29	Olga C. Vario - Horizontal	Mines	R. F. Smith	9-135-8
9-29	Geraldine B. Davison - Horizontal	Mines	R. F. Smith	9-136-8
9-29	Geraldine B. Davison - Vertical	Mines	R. F. Smith	9-137-8
9-29	M. Leonardi - Horizontal	Mines	R. F. Smith	9-138-8
9-29	M. Leonardi - Vertical	Mines	R. F. Smith	9-139-8
9-29	Robert J. Walton and pilot before the takeoff.	P & GA	R. F. Smith	9-140-8
9-29	Paul Simack at enlarger.	P & GA	R. F. Smith	9-141-8
9-30	Marshall Bull at copy camera.	P & GA	R. F. Smith	9-142-8
9-30	Margery Morse, Hank Wright and George Cox working in art department.	P & GA	R. F. Smith	9-143-8
9-30	Robert F. Smith at photomicrograph camera.	P & GA	R. F. Smith	9-144-8
9-30	Winner of Chip and Putt contest being presented with prize club.	Recrea	R. F. Smith	9-145-8
9-30	Potatoes which have been treated with x-ray before planting in experimental potato patch. Stunting effect of radiation is shown.	Biology	R. F. Smith	9-146-8
9-30	Vacuum resistance furnace.		M. H. Bull	9-147-8

Date	Caption	Dept.	Photographer	Number
9-30	The growth of E. Coli as a function of phosphorous concentration glucose 4.0 mg per cc.		M. H. Bull	9-148-8
9-30	Same - 8.0 mg per cc.		M. H. Bull	9-149-8
9-30	Same - 1 mg per cc.		M. H. Bull	9-150-8
9-30	Same - 2.0 mg per cc.		M. H. Bull	9-151-8
9-30	Atomic number times average of symmetric and antisymmetric interaction integrals per pair nucleons. Circles computed from transitions between odd isobars. Curves computed from location of valley of stable nuclei.		M. H. Bull	9-152-8
9-30	Same Completing 4 - Group Completing 3 - Group		M. H. Bull	9-153-8
9-30	Atomic number times average interaction integral per pair of nucleons in a diffuse sphere of nuclear matter units mev.		M. H. Bull	9-154-8
9-30	Atomic number times average of symmetric and antisymmetric interaction integrals per pair of nucleons atomic number A.		M. H. Bull	9-155-8
9-30	Figure 35: x-ray patterns of 0-8 Atomic % fe alloys treated below 1000°C.		M. H. Bull	9-156-8
9-30	Figure 66: x-ray patterns of 8-33 Atomic % fe alloys treated below 1000°C.		M. H. Bull	9-157-8
9-30	Construction uses of atomic energy include studies in which AEC sponsored radioisotopes are used to determine mineral deficiencies in levestock, etc.	Exhibit	M. H. Bull	9-158-8
9-30	Hope for future in the atomic field lies in intelligent discussions like this one in Stamford, Connecticut Methodist Church.	Exhibit	M. H. Bull	9-159-8
9-30	Pencil drawing of the pile complex.	Pile	M. H. Bull	9-160-8
9-30	Firemen's softball team.	Recrea	J. F. Garfield	9-161-8
9-30	Malcolm Herbert at Robertson camera.	P and GA	R. F. Smith	9-162-8
9-30	Harry Maile, Robert Brown, Andrew Brems all at work in Reproduction. (Joseph Whitaker)	P and GA	R. F. Smith	9-163-8
9-30	Adam Lasky at dryer.	P and GA	R. F. Smith	9-164-8
9-30	Closure of Adam Lasky at dryer.	P and GA	R. F. Smith	9-165-8

Date	Caption	Dept.	Photographer	Number
9-30	John F. Garfield at the Recordak (away from camera).	P and GA	R. F. Smith	9-166-8
9-30	John F. Garfield at the Recordak (face to camera).	P and GA	R. F. Smith	9-167-8
9-30	Robert F. Smith at photomicrograph camera.	P and GA	R. F. Smith	9-168-8
9-30	A. P. Christoffersen and F. Batvinis at desk.	P and GA	R. F. Smith	9-169-8
9-30	A. P. Christoffersen and F. Batvinis at files.	P and GA	R. F. Smith	9-170-8
10-6	Machining of contours of pole tips. Top surface being glyptoled. Gauging parallelism of pole tips. Completing assembly pie and stack. Molten iron, forging pole.		M. H. Bull M. H. Bull M. H. Bull M. H. Bull M. H. Bull	9-171-8 9-172-8 9-173-8 9-174-8 9-175-8
10-6	(Located in slide box) Development of Atomic Energy Map. This map shows the location of AEC installations as well as the colleges, universities and other research laboratories where work in Atomic Energy is being done.	Hartzell	M. H. Bull	9-176-8
9-2	Slide # A 1412D E94	Sparrow Biology	R. F. Smith	9-177-8
9-2	Slide # A 1227V (B)	Sparrow	R. F. Smith	9-178-8
9-2	Slide # A 1227V(C)	Sparrow	R. F. Smith	9-179-8
9-2	Slide # A 1227V XXX (A) E68	Sparrow	R. F. Smith	9-180-8
9-7	Slide # A 119D (a) E46	Sparrow	R. F. Smith	9-181-8
9-7	Slide # A 119D (B) E52	Sparrow	R. F. Smith	9-182-8

October

Date	Caption	Dept.	Photographer	Number
10-4	Power supply for Geiger counter, front.		R. F. Smith	10-1-8
10-4	Power supply for Geiger counter, top.		R. F. Smith	10-2-8
10-4	Power supply for Geiger counter, bottom.		R. F. Smith	10-3-8
10-4	Power supply for scaler, front.		R. F. Smith	10-4-8
10-4	Power supply for scaler, top.		R. F. Smith	10-5-8
10-4	Power supply for scaler, bottom.		R. F. Smith	10-6-8
10-8	Figure 2 - Parallel plate pulse and calibration.		Paul Simack	10-7-8
10-8	B. Coli colony mutants surrounded by enzyme which stimulates the growth of other cells.	Biology	R. F. Smith	10-8-8
10-8	Figure 5 - Thin walled parallel plate counter.		Paul Simack	10-9-8
10-8	Diagrams and drawings.	Teitel	Paul Simack	10-10-8 thru 10-27-8
10-11	Pencil drawing - interior.	Pile	Paul Simack	10-28-8
10-11	Pencil drawing - pile complex.	Pile	Paul Simack	10-29-8
10-11	Cyclotron progress south view.	Cyclotron	R. J. Walton	10-30-8 10-31-8
10-13	William A. Higinbotham	Portrait	J. F. Garfield	10-32-8
10-13	William A. Higinbotham	Portrait	J. F. Garfield	10-33-8
10-13	William A. Higinbotham	Portrait	J. F. Garfield	10-34-8
10-14	Lyle B. Borst			10-35-8
10-15	Lyle B. Borst			thru
10-14	Lyle B. Borst	Portrait	J. F. Garfield	10-39-8
10-4	Cyclotron building looking south(west).	Cyclotron	R. F. Smith	10-40-8
10-4	Cyclotron building looking south(east).	Cyclotron	R. F. Smith	10-41-8
10-4	Cyclotron building progress.			10-42-8
10-4	Cyclotron building progress.			thru
10-4	Cyclotron building progress.	Cyclotron	R. F. Smith	10-45-8

Date	Caption	Dept.	Photographer	Number
10-13	Visit of trustees and presidents of AUI (left to right) L. J. Haworth, D. D. Eisenhower, J. B. Conant.	Visit	J. F. Garfield	10-46-8
10-13	Presidents and trustees on stage in gym in connection with meeting.	Visit	R. F. Smith	10-47-8
10-14	Decrease of resistivity percent.	Biology	M. H. Bull	10-48-8
10-14	Yield stress for 0.02% plastic strain.	Biology	M. H. Bull	10-49-8
10-14	Decrease of resistivity percent.	Biology	M. H. Bull	10-50-8
10-14	Decrease of resistivity percent.	Biology	M. H. Bull	10-51-8
10-14	Torsional vibrations.	Biology	M. H. Bull	10-52-8
10-14	Resistivity - arbitrary units.	Biology	M. H. Bull	10-53-8
10-14	Graph - Strain 0.1%.	Biology	M. H. Bull	10-54-8
10-14	Longitudinal vibrations.	Biology	M. H. Bull	10-55-8
10-14	Fraction of substrate converted.	Biology	M. H. Bull	10-56-8
10-14	Free energy - critical shear stress.	Biology	M. H. Bull	10-57-8
10-14	Arbitrary units - resistivity	Biology	M. H. Bull	10-58-8
10-14	Resistivity ratio.	Biology	M. H. Bull	10-59-8
10-14	Young's modulus arbitrary units			
10-14	Rigidity modulus arbitrary units.	Biology	M. H. Bull	10-60-8
10-14	Breathing vs gas volume (filled cart-ridge).	Biology	M. H. Bull	10-61-8
10-14	Urine output cc, weight change grams.	Biology	M. H. Bull	10-62-8
10-14	Light molecule and heavy molecule.	Biology	M. H. Bull	10-63-8
10-14	Figure 2 - diagram.	Biology	M. H. Bull	10-64-8
10-14	Chart - Lactate-pyruvate.	Biology	M. H. Bull	10-65-8
10-14	Glucose, phosphorylated, glycogen, intermediate.	Biology	M. H. Bull	10-66-8
10-14	Glucose, glycogen, lactate, phospho-creative, adenosine triphosphate.	Biology	M. H. Bull	10-67-8
10-14	Conditions - lactate, pyruvate (brain) carbon dioxide (Blood) PH.	Biology	M. H. Bull	10-68-8
10-14	Formulae.	Biology	M. H. Bull	10-69-8
10-14	Used by brain, produced by brain and % glucose, oxygen, dioxide used.	Biology	M. H. Bull	10-70-8
10-14	Figure 1 - The survival of escherichia coli suspended in phosphate buffer in the presence of various concentrations of radioactive phosphorous.	Biology	M. H. Bull	10-71-8
10-14	This negative can be found in Particle Physics.	Physics	R. F. Smith	10-72-8
10-7	Cosmotron site looking north.	Cosmotron	R. F. Smith	10-73-8
10-7	Cosmotron site looking northwest.	Cosmotron	R. F. Smith	10-74-8
10-7	Cosmotron site looking north.	Cosmotron	R. F. Smith	10-75-8
10-7	Cosmotron site looking north.	Cosmotron	R. F. Smith	10-76-8

Date	Caption	Dept.	Photographer	Number
10-13	Presidents of AUI in the gym.	Visit	R. F. Smith	10-77-8
10-14	Wave numbers in cm-1, percent transmission, wave length in microns.	Chem	M. H. Bull	10-78-8
10-14	Schematic diagram of temperature control water bath.		M. H. Bull	10-79-8
10-14	Two charts of resistivity arbitrary units.		M. H. Bull	10-80-8
10-14	Cooling tank, brass tube, lever.		M. H. Bull	10-81-8
10-14	Face and body centered.		M. H. Bull	10-82-8
10-14	Cooling tank, hydraulic press.		M. H. Bull	10-83-8
10-14	Resistivity, arbitrary units.		M. H. Bull	10-84-8
10-14	Figure 1 - apparatus.	Turkevich	M. H. Bull	10-85-8
10-14	Closeup of electronic detector on the pile.	Electron	R. F. Smith	10-86-8
10-14	Overall of electronic detector on the pile.	Electron	R. F. Smith	10-87-8
10-13	Visit of trustees and presidents.		J. F. Garfield	10-88-8
10-13	Visit of trustees and presidents.		and	thru
10-13	Visit of trustees and presidents.	Visit	R. F. Smith	10-91-8
10-15	Test figures 3-11 Chromosome behavior in a bacterium (diagrammatic) 3-5 Normal cell division 6 Trinucleate cell (autogamy and reduction?) 7-8 first fusion division 9-10 Second fusion division 10-11 Fragmentation.	Biology	M. H. Bull	10-92-8
10-14	Impulses.		Paul Simack	10-93-8
10-13	Visit of trustees and presidents.		J. F. Garfield	10-94-8
10-13	Visit of trustees and presidents		and	thru
10-13	Visit of trustees and presidents.	Visit	R. F. Smith	10-107-8
10-15	Growth of E. Coli in P32.	Biology	Paul Simack	10-108-8
10-15	The retention of phosphorous in E. Coli.	Biology	Paul Simack	10-109-8

Date	Caption	Dept.	Photographer	Number
10-15	Summary of relative rates at room temperature.		M. H. Bull	10-110-8
10-15	Ratio of rate constants for isotope molecules.		M. H. Bull	10-111-8
10-15	Difference in activation energies for isotope molecules.		M. H. Bull	10-112-8
10-15	Evaluation of "Equilibrium Constant" of reacting molecules and activated complex.		M. H. Bull	10-113-8
10-15	Statistical treatment of reaction rates.		M. H. Bull	10-114-8
10-15	From K. A. Bisset in J. Hyg., 7-48.		M. H. Bull	10-115-8
10-15	A wooden scale model of a proposed hot cell with doors open to be used by scientists when working with high level radioactive materials. Samples will be placed inside the cell and will be manipulated by remote control after the cell has been sealed by means of the interlocking gradations in the front panels. Optical fixtures will enable to the scientist to observe the activity within the cell.	Nuclear Reactor	R. F. Smith	10-116-8
10-15	Model of hot cell with doors closed.	NucReac	R. F. Smith	10-117-8
10-19	Figure 47 - Guarded field ionization chamber to be used at elevated pressures, etc.		Paul Simack	10-118-8
10-19	Figure 49 - Cross section of typical ionization chamber.		Paul Simack	10-119-8
10-19	Chart - Proton energy (I) Mev range, CM - Ions per CM (II), in units of 10 ⁻⁶ .		Paul Simack	10-120-8
10-19	Atomic number of scatters.		Paul Simack	10-121-8
10-19	Diagram		Paul Simack	10-122-8
10-19	Residual range in air - CM at 15° C.		Paul Simack	10-123-8
10-19	Wall thickness, mm of graphite.		Paul Simack	10-124-8
10-19	Absorption of co-efficients of gamma rays in lead.		Paul Simack	10-125-8
10-19	Cyclotron drawing.	Merkle	M. H. Bull	10-126-8
10-20	Copy - Air map of site.	Geology	M. H. Bull	10-127-8
10-19	Overall view of cyclotron site facing south.	Cyclo	R. J. Walton	10-128-8 10-129-8

Date	Caption	Dept.	Photographer	Number
10-22	Inside of three cups on wind speed indicator showing corrosion by wind.	Met	R. J. Walton	10-130-8 10-131-8 10-132-8
10-20	Two glass graduate flasks connected by special base and socket clamp.	Biology	R. J. Walton	10-133-8
10-20	Glass vials.	Biology	R. J. Walton	10-134-8
10-20	Glass post and electric outline. Gas line comes through the hood.	Biology	R. J. Walton	10-135-8
10-20	Access part for gas line on hood.	Biology	R. J. Walton	10-136-8
10-20	Overall shot of hood made out of wood framing, transparent plastic sheeting, with lucite access parts.	Biology	R. J. Walton	10-137-8 and 10-138-8
10-25	30 day intervals - percentage of survivors vs final time for guinea pigs.	H Physics	M. H. Bull	10-139-8
10-25	Relative inefficiencies of ionizing radiations.	H Physics	M. H. Bull	10-140-8
10-25	Rat, March 28, 1945, 56085.	H Physics	M. H. Bull	10-141-8
10-25	Rat, November 15, 1944, 56085.	H Physics	M. H. Bull	10-142-8
10-25	Figure 1 - Separation of ion clusters in relation to the size of a virus particle 27 mm in diameter.	H Physics	M. H. Bull	10-143-8
10-26	Meteorology smoke run.	Met	Meteorology	10-144-8 thru 10-160-8
10-27	Pure N ₂ - positive wire. (University of California).	Miller	M. H. Bull	10-161-8
10-27	Dr. Ralph W. Singleton	Portrait	R. F. Smith	10-162-8
10-27	X-ray machine on right and meter racks used for code numbering of film badge.	H Physics	R. J. Walton	10-163-8
10-27	Rack for pocket meters.	H Physics	R. J. Walton	10-164-8
10-27	Overall view of pocket meter rack.	H Physics	R. J. Walton	10-165-8
10-27	Densitometer for testing film badges.	H Physics	R. J. Walton	10-166-8
10-27	Interior of darkroom showing sinks.	H Physics	R. J. Walton	10-167-8
10-27	Pocket meter rack.	H Physics	R. J. Walton	10-168-8
10-29	El. volts, boundary field, applied, resulting.		M. H. Bull	10-169-8
10-29	4.5 el. volts.		M. H. Bull	10-170-8
10-29	Graph in cm ³ coul -1.		M. H. Bull	10-171-8

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10-29	Temperature °C, atomic % fe, thermal points.	Teitel	M. H. Bull	10-172-8
10-29	Temperature °C, atomic % fe			
	Temperature °F, weight % be.	Teitel	M. H. Bull	10-173-8
10-29	Temperature °C, atomic % fe (1600).	Teitel	M. H. Bull	10-174-8
10-29	Temperature °C, atomic % fe, x-ray solubility determinations.	Teitel	M. H. Bull	10-175-8
10-29	Temperature °C, atomic % fe.	Teitel	M. H. Bull	10-176-8
10-29	Temperature °C, atomic % fe.	Teitel	M. H. Bull	10-177-8
10-22	Unloading section of the magnet for the cyclotron.	Cyclo	R. J. Walton	10-178-8
10-22	Core of the cyclotron magnet as it was put aboard a trailer truck.	Cyclo	R. J. Walton	10-179-8
10-22	Unloading sections of magnet for the cyclotron.	Cyclo	R. J. Walton	10-180-8
10-28	Corn from 35 mm transparencies.	Singleton	R. F. Smith	10-181-8
10-28	Tall corn from a 35 mm kodachrome.	Singleton	R. F. Smith	10-182-8
10-28	Short corn developed by biology.	Singleton	R. F. Smith	10-183-8
10-28	Short corn taken from a kodachrome transparency.	Singleton	R. F. Smith	10-184-8
10-29	J. B. H. Kuper, Electronics	Portrait	J. F. Garfield	10-185-8
10-29	J. B. H. Kuper, Electronics	Portrait	J. F. Garfield	10-186-8
10-29	Slide # A 144E	Sparrow Biology	R. F. Smith	10-187-8

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11-2	Figure 11 - Reaction between dissolved H_2O_2 (excess) under pile radiation.	Allan	M. H. Bull	11-1-8
11-2	Figure 6 - Water decomposition in pressure indicating ampoules.	Chem	M. H. Bull	11-2-8
11-2	Figure 8 - Effect of solutes on water decomposition in the pile.	Chem	M. H. Bull	11-3-8
11-2	Figure 2 - Balance between oxidant & reductant produced on irradiating water in the pile.	Chem	M. H. Bull	11-4-8
11-2	Figure 7 - Effect of temperature on water decomposition by pile radiation.	Chem	M. H. Bull	11-5-8
11-2	Figure 9 - Effect of pH on decomposition of 0.1 M cl solutions.	Chem	M. H. Bull	11-6-8
11-2	Figure 10 - Effect of pH on decomposition of cl solutions (120 hours in Clinton Pile.)	Chem	M. H. Bull	11-7-8
11-2	Figure 12 - Decomposition of water in solutions containing comparable amounts of H_2 and H_2O_2 .	Chem	M. H. Bull	11-8-8
11-2	Figure 4 - Gas pressure over water in aluminum can placed in Clinton Pile.	Chem	M. H. Bull	11-9-8
11-2	Figure 1 - Decomposition of water in the pile.	Chem	M. H. Bull	11-10-8
11-2	Figure 16 - Steady state concentration in solutions irradiated in the pile.	Chem	M. H. Bull	11-11-8
11-2	Figure 14 - Decomposition of water in solutions containing initially only: oxygen, H_2O_2 , hydrogen.	Chem	M. H. Bull	11-12-8
11-2	Figure 15 - Initial rate of peroxide disappearance in hydrogen saturated solutions.	Chem	M. H. Bull	11-13-8
11-2	Figure 5 - Determination of pressure in: Pressure - Indicated Ampoules.	Chem	M. H. Bull	11-14-8
11-2	Figure 17 - Plot of $K_1(H)$ VS (H_2O_2) for initial - formula - pile power.	Chem	M. H. Bull	11-15-8
11-2	Figure 3 - Ratio of peroxide to total oxidant produced in irradiation of water in the pile.	Allan	M. H. Bull	11-16-8
11-1	Closeup of tradescantia blossom showing buds.	Sparrow	R. F. Smith	11-17-8
11-1	Tradescantia blossom - closeup.	Sparrow	R. F. Smith	11-18-8
11-1	Frank German working amount canna plants in greenhouse.	Gibbs	R. F. Smith	11-19-8
11-1	General view of greenhouse.	Gibbs	R. F. Smith	11-20-8
11-1	Frank German (in charge of the greenhouse) shown with a canna plant.	Gibbs	R. F. Smith	11-21-8
11-1	Photo of a plant used by Dr. Gibbs in his experiment with radio carbon.	Biology	R. F. Smith	11-22-8
11-1	Photo of a Bryophyllum plant.	Gibbs	R. F. Smith	11-23-8
11-1	Photo of a tradescantia plant.	Sparrow	R. F. Smith	11-24-8

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11-1	Freak corn showing kernel growing among pollen pods.	Singleton	R. F. Smith	11-25-8
11-1	Closeup showing freak corn with the kernel growing among pollen pods.	Singleton	R. F. Smith	11-26-8
11-1	Clamping lead capsule around adrenal gland of rat to protect it from radiation in experiments.	Edelman	R. F. Smith	11-27-8
11-1	Lead clamp closed around adrenal gland of rat in experiments on radiation.	Edelman	R. F. Smith	11-28-8
11-1	Lead shields in place in rat.	Edelman	R. F. Smith	11-29-8
11-1	Photomicrograph of adrenal gland of rat. X 12	Edelman	R. F. Smith	11-30-8
11-1	Photomicrograph of adrenal gland of rat. X 12	Edelman	R. F. Smith	11-31-8
11-1	Photomicrograph of adrenal gland of rat. X 12	Edelman	R. F. Smith	11-32-8
11-1	Photomicrograph of adrenal gland of rat. X 12	Edelman	R. F. Smith	11-33-8
11-1	Photomicrograph of adrenal gland of rat.	Biology	R. F. Smith	11-34-8
11-2	Overall view of cyclotron building progress.	Cyclotron	R. J. Walton	11-35-8
11-2	Overall view of cyclotron building progress.	Cyclotron	R. J. Walton	11-36-8
11-3	Dr. Arnold H. Sparrow, Biology.	Portrait	J. F. Garfield	11-37-8
11-3	Dr. Arnold H. Sparrow, Biology.	Portrait	J. F. Garfield	11-38-8
10-20	Overall view of cyclotron building facing south.	Cyclotron	R. J. Walton	11-39-8 11-40-8
11-4	Deep well #1 drill bits.	Geology	J. F. Garfield	11-41-8
11-4	Well derrick.	Geology	J. F. Garfield	11-42-8
11-4	Bailing sand from screen.	Geology	J. F. Garfield	11-43-8
11-4	Core bits and core catchers.	Geology	J. F. Garfield	11-44-8
11-4	Mud pump assembly.	Geology	J. F. Garfield	11-45-8
11-4	Sampling flume and tailings pile.	Geology	J. F. Garfield	11-46-8
11-4	Washing bailer samples.	Geology	J. F. Garfield	11-47-8
11-4	Examining sand from screen.	Geology	J. F. Garfield	11-48-8
11-4	Hybrid corn and parent ears: the two small ears on either end are the parents.	Singleton	R. F. Smith	11-49-8
11-4	Lead capsule opened showing adrenal gland (Mag. 9 X). This is a duplicate black and white kodachrome.	Edelman	R. F. Smith	11-50-8

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11-5	M. G. White, Accelerator.	Portrait	J. F. Garfield	11-51-8
11-5	M. G. White, Accelerator.	Portrait	J. F. Garfield	11-52-8
11-5	M. G. White, Accelerator.	Portrait	J. F. Garfield	11-53-8
11-5	Bottom of glass oil diffusion pump.	Chemistry	R. F. Smith	11-54-8
11-5	Side of glass oil diffusion pump.	Chemistry	R. F. Smith	11-55-8
11-5	Side view with heating boots on of the glass oil diffusion pump.	Chemistry	R. F. Smith	11-56-8
11-8	Fraction of substrate converted.	Bigeleisen	M. H. Bull	11-57-8
11-8	Figure 1 - Experimental arrangement used by Thompson for measuring the energy of decay electrons.	Library	M. H. Bull	11-58-8
11-8	Figure 11 - Disintegration curves of positive and negative mesons in Al (Valley).	Library	M. H. Bull	11-59-8
11-8	Figure 6 - The absorption curve of decay electrons in polystyrene according to Steinberger.	Library	M. H. Bull	11-60-8
11-8	Figure 9 - Experimental arrangement used by Valley and Rossi to measure up positive and negative mesons.	Library	M. H. Bull	11-61-8
11-8	Figure 10 - Illustrating the principle of the Van de Graaff machine.	Kelly	M. H. Bull	11-62-8
11-8	Figure 39C - Diagram of the principle elements of the Lawrence cyclotron.	RA	M. H. Bull	11-63-8
11-8	Figure 7 - Illustrating the Sloan and Lawrence methods of producing high energy particles.	Kelly	M. H. Bull	11-64-8
11-8	Figure 39D - Assembly diagram showing the cyclotron D's and their mounting supports, the deflecting plate and the electrical supply connections.	Kelly	M. H. Bull	11-65-8
11-8	Cyclotron dimensions @ 16 Kg.	Kelly	M. H. Bull	11-66-8
11-8	War Department, Corps of Engineers, U. S. Army, Camp Upton and Vicinity Grid Zone "A".	Geology	M. H. Bull	11-67-8
11-9	Closeup of nose injury of Russell Bauer of the Ferguson Company.	Medical	R. F. Smith	11-68-8
11-10	Photomicrograph of adrenal gland from rat showing deposit of calcium. X110	Edelman	R. F. Smith	11-69-8

Date	Caption	Dept.	Photographer	Number
11-10	Photomicrograph of adrenal gland of rat showing infiltration of unknown foreign substance. X 110	Edelman	R. F. Smith	11-70-8
11-10	Photomicrograph of adrenal gland from rat showing blood vessel and abnormal cells. X 110	Edelman	R. F. Smith	11-71-8
11-10	Photomicrograph of cross section of adrenal gland of rat. X 12	Edelman	R. F. Smith	11-72-8
11-10	Photomicrograph of adrenal gland of rat showing infiltration of unknown foreign substance. X 600	Edelman	R. F. Smith	11-73-8
11-11	Wave numbers in cm^{-1} . Differential spectrum 1 vs 2.	Friedman	M. H. Bull	11-74-8
11-11	Differential spectrum 2 vs 1.	Friedman	M. H. Bull	11-75-8
11-11	Propane D-2.	Friedman	M. H. Bull	11-76-8
11-11	Propane D-1.	Friedman	M. H. Bull	11-77-8
11-11	3.5 Mev. electrostatic generator accelerator, view of inside of face plate.	Haworth	M. H. Bull	11-78-8
11-11	View of outside of face plate.	Haworth	M. H. Bull	11-79-8
11-11	View of inside of sphere.	Haworth	M. H. Bull	11-80-8
11-11	View of belts and supporting structure.	Haworth	M. H. Bull	11-81-8
11-11	Counts per minute.	Monsta	M. H. Bull	11-82-8
11-11	Days before dehiscing (Fig. 53). Germination of pollen irradiated at different stages by a constant dose of 800 r (Newcombe).	Singleton	M. H. Bull	11-83-8
11-11	Induction of sex-linked recessive lethals by different radiations, etc.	Singleton	M. H. Bull	11-84-8
11-11	Hours after radiation.	Singleton	M. H. Bull	11-85-8
11-11	View of wood forms set in place in preparation for pouring foundation in cosmotron.			
	Facing south	Cosmotron	R. J. Walton	11-86-8
	Facing west	Cosmotron	R. J. Walton	11-87-8
11-11	Overall view of foundation for the cyclotron magnet facing west.	Cyclotron	R. J. Walton	11-88-8
11-11	Electrical conduits laid in flooring in preparation for pouring concrete facing west.	Cyclotron	R. J. Walton	11-89-8
11-11	Overall view of front of cyclotron building facing northwest.	Cyclotron	R. J. Walton	11-90-8

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11-5	Harvest dance.	Recrea	M. H. Bull	11-91-8
11-5	Harvest dance.	Recrea	M. H. Bull	11-92-8
11-5	Harvest dance.	Recrea	M. H. Bull	11-93-8
11-12	European hornet being fed honey and radiobarium in experiments being conducted by biology.	Bowen	R. F. Smith	11-94-8 and 11-95-8
11-15	Corn grass shedding pollen as a result of a short day.	Singleton	R. F. Smith	11-96-8
11-15	Closeup of corn grass shedding pollen.	Singleton	R. F. Smith	11-97-8
11-15	Indeterminate rooted cutting.	Singleton	R. F. Smith	11-98-8
11-15	Closeup of pollen on indeterminate rooted cutting.	Singleton	R. F. Smith	11-99-8
11-15	Indeterminate rooted cutting.	Singleton	R. F. Smith	11-100-8
11-15	Indeterminate field plant dug and brought into greenhouse before the frost (shedding).	Singleton	R. F. Smith	11-101-8
11-15	Indeterminate field plant shedding, plant was dug and brought into greenhouse before the frost (pollen close-up).	Singleton	R. F. Smith	11-102-8
11-16	Modified Neher and Pickering quenching circuit to give negative output pulse.	Kuper	M. H. Bull	11-103-8
11-16	Schematic representation of an ionization chamber C, operating on rate of drimethod with an external electrometer E, etc.	Elect	M. H. Bull	11-104-8
11-16	Neher and Harper quenching circuit.	Elect	M. H. Bull	11-105-8
11-16	Modified Neher and Pickering quenching circuit to give positive output pulse.	Elect	M. H. Bull	11-106-8
11-16	"Scale of two" circuit for recording pulses.	Elect	M. H. Bull	11-107-8
11-16	Multivibrator quenching circuit devised by Getting.	Elect	M. H. Bull	11-108-8
11-16	Integrating circuit or counting rate meter.	Elect	M. H. Bull	11-109-8
11-16	Ionization chamber, electrometer, circuit, ionization chamber, electrometer, blancing circuit, feed back circuit, balancing circuit.	Kuper	M. H. Bull	11-110-8
11-16	John D. Jameson	Portrait	J. F. Garfield	11-111-8
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11-16	John D. Jameson			11-115-8

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11-9	Cyclotron progress.	Cyclotron	R. J. Walton	11-116-8
11-9	Cyclotron progress.	Cyclotron	R. J. Walton	11-117-8
11-16	Figure 1.1.2 Control rod arrangement schematic.	Binns	M. H. Bull	11-118-8
11-16	Figure 3.3.3 Coarse rod-position indicating system.	Binns	M. H. Bull	11-119-8
11-16	Figure 1.4.14 Thermocouple system for recording graphite temperature.	Binns	M. H. Bull	11-120-8
11-16	Figure 1.1.1 Orientation view of control and instrument systems.	Binns	M. H. Bull	11-121-8
11-16	Figure 1.1.6 Equipment arrangement on rod structure.	Binns	M. H. Bull	11-122-8
11-16	Figure 1.6.1 Building radiation monitors.	Binns	M. H. Bull	11-123-8
11-16	Figure 1.3.4 Rod-position recording system.	Binns	M. H. Bull	11-124-8
11-16	Figure 1.6 Stack air activity system.	Binns	M. H. Bull	11-125-8
11-16	Figure 1.3.1 Regulating-rod position indicating system.	Binns	M. H. Bull	11-126-8
11-16	Figure 1.2.1 Emergency rod system.	Binns	M. H. Bull	11-127-8
11-16	Figure 1.4.12 Thermopile system for recording reactorpower.	Binns	M. H. Bull	11-128-8
11-16	Figure 1.4.3 Neutron counting-rate system.	Binns	M. H. Bull	11-129-8
11-15	Overall view of cyclotron building progress facing south.	Cyclotron	R. J. Walton	11-130-8 11-131-8
11-16	Relative neutron intensity scattered by a thin graphite disc.	Seidel	M. H. Bull	11-132-8
11-16	Scattering cross section from single level B-W formula.	Physics	M. H. Bull	11-133-8
11-16	Absorption in B ¹⁰ of Co ⁵⁹ resonance neutrons.	Seidel	M. H. Bull	11-134-8
11-16	Scattering cross section from single level B-W formula.	Seidel	M. H. Bull	11-135-8
11-16	Absorption of resonance neutrons obtained by subtracting potential scattering.	Seidel	M. H. Bull	11-136-8
11-16	Schematic concrete pile shielding.	Seidel	M. H. Bull	11-137-8
11-16	Figure 1.4.13 Thermocouple system for recording metal cartridge temperature.	Binns	M. H. Bull	11-138-8
11-16	Figure 1.3.2 Emergency rod position indicating system.	Binns	M. H. Bull	11-139-8
11-16	Figure 1.1.7 Reactor instruments arrangements.	Binns	M. H. Bull	11-140-8

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11-16	Graphs and charts.	Barton	M. H. Bull	11-141-8 thru 11-144-8
11-17	Isotope effect in rupture of carbon-carbon bonds in malonic acid.	Chem	M. H. Bull	11-145-8
11-17	Isotope effect in rupture of carbon-carbon bonds in propane.	Chem	M. H. Bull	11-146-8
11-17	Isotope effect in rupture of carbon-carbon bonds in propane.	Chem	M. H. Bull	11-147-8
11-17	The specific activity of C*O ₂ formed in the decomposition of CH ₂ .	Chem	M. H. Bull	11-148-8
11-17	Decomposition of malonic acid.	Chem	M. H. Bull	11-149-8
11-17	Donald A. MacCornack	Portrait	J. F. Garfield	11-150-8
11-18	Cells (E. Christensen).	Biology	M. H. Bull	11-151-8
11-16	Overall view of construction of the foundation form for cosmotron.	Cosmotron	R. J. Walton	11-152-8
11-19	Meteorology smoke run.	Met	Meteorology	11-153-8 thru 11-173-8
10-26 and 10-27	Erection of the 60" cyclotron which was built by the Collins Radio Co. of Cedar Rapids, Iowa.	Cyclotron	R. J. Walton	11-174-8 thru 11-181-8
11-22	% of range.	Nuclear	R. J. Walton	11-182-8
11-22	Decay schemes.	Reactor	R. J. Walton	11-183-8
11-22	Characteristics of radiation.	Nuclear	R. J. Walton	11-184-8
11-22	mg/cm ² .	Reactor	R. J. Walton	11-185-8
11-23	Air monitor equipment for Carbon 14.	Ballentne	R. F. Smith	11-186-8
11-23	Air monitor equipment for Carbon 14.	Ballentne	R. F. Smith	11-187-8
11-17	Robert D. Shultz using apparatus whereby methyl iodide is exposed to units of ultraviolet light which split the molecules of this gas into several fragments.	Chem	J. F. Garfield	11-188-8
11-17	Dr. Cohen shown at apparatus.	Physics	J. F. Garfield	11-189-8

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11-17	Robert D. Shultz using apparatus whereby methyl iodide is exposed to units of ultraviolet light which split the molecules of this gas into several fragments.	Chem	J. F. Garfield	11-190-8
11-17	Dr. Raymond Davis studying the dynamics of equation in which active Ag ¹⁰⁷ recoil following the emission of neutrinos.	Chem	J. F. Garfield	11-191-8
11-17	Dr. V. W. Cohen shown at apparatus.	Physics	J. F. Garfield	11-192-8
11-17	Dr. Norman Elliott at apparatus used for studying the arrangement of the electrons in the various shells surrounding the nuclei of the heavy elements and the magnetic properties which are determined by this electronic structure.	Chem	J. F. Garfield	11-193-8 and 11-194-8
17	Dr. Raymond Davis studying the dynamic of equation in which active Ag ¹⁰⁷ recoil following the emission of neutrinos.	Chem	J. F. Garfield	11-195-8
17	Chemistry apparatus.	Chem	J. F. Garfield	11-196-8
19	This is a typical corner of the Accelerator laboratory where proposed solutions to problems encountered in the design of the accelerators are tested for feasibility.	Accel	J. F. Garfield and R. J. Walton	11-197-8 thru 11-201-8
11-23	Revised drawing of pile interior.	Pile	P. Simack	11-202-8 ✓
11-23	Mean ray, adjacent ray, displaced line, focal line.	Barton	P. Simack	11-203-8
11-23	Target chamber, pole piece, plate camera, primary analyzer, ion beam.	Barton	P. Simack	11-204-8
11-24	Pre-amplifier quench circuit, back.	Clareus	R. F. Smith	11-205-8
11-24	Pre-amplifier quench circuit, front.	Clareus	R. F. Smith	11-206-8
11-24	Pre-amplifier quench circuit, inside.	Clareus	R. F. Smith	11-207-8
11-24	Scale of 8 scaler.	Clareus	R. F. Smith	11-208-8
11-24	Figure 5 - Mecanism de la spiralisati- on d'apres Huskins et Smith (1935).	Christen	M. H. Bull	11-209-8
11-24	Figure 6	Christen	M. H. Bull	11-210-8
11-24	Figure 1 (V. Bowen).	Biology	M. H. Bull	11-211-8

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11-24	Figure 5 - Self-absorption corrections.	Turkevich	M. H. Bull	11-212-8
11-24	Figure 9 - Time in minutes.	Turkevich	M. H. Bull	11-213-8
11-24	Figure 8 - Time in minutes.	Turkevich	M. H. Bull	11-214-8
11-24	Figure 6 - Change of pressure and activity with time at 735°C.	Turkevich	M. H. Bull	11-215-8
11-24	Figure 4 - Counting rate vs pressure.	Turkevich	M. H. Bull	11-216-8
11-24	Figure 7 - Change of pressure and activity with time at 848°C.	Turkevich	M. H. Bull	11-217-8
11-24	Electronic time lapse equipment for motion picture camera, cover on.	Electronic	R. F. Smith	11-218-8
11-24	Cover off showing timing cams.	Electronic	R. F. Smith	11-219-8
11-24	Back view.	Electronic	R. F. Smith	11-220-8
11-24	Showing right side of camera on mount.	Electronic	R. F. Smith	11-221-8
11-24	Showing camera mount on left side.	Electronic	R. F. Smith	11-222-8
11-24	Showing wiring arrangement.	Electronic	R. F. Smith	11-223-8
11-24	Incident beam drawings.	Physics	M. H. Bull	11-224-8
11-18	Rehearsing "Life and Half-Life".	Recrea	R. J. Walton	11-225-8
11-17	Installing coil on the cyclotron magnet.	Cyclotron	R. J. Walton	11-226-8
11-17	Installing coil on magnet facing west.	Cyclotron	R. J. Walton	11-227-8
11-17	Installing coil on magnet facing east.	Cyclotron	R. J. Walton	11-228-8
11-17	Installing coil on magnet facing east.	Cyclotron	R. J. Walton	11-229-8
11-26	Part of thesis.	Bowen	M. H. Bull	11-230-8
11-26	Part of thesis.	Biology	M. H. Bull	11-231-8
11-29	Photomicrograph of adrenal gland of rat. Mag. 12 X - Bright field.	Edelman	R. F. Smith	11-232-8
11-28	Photomicrograph of adrenal gland of rat. Mag. 12 X - Dark field.	Edelman	R. F. Smith	11-233-8
11-30	Figure 10 - RF supply schematic.	Electronic	Bull & Simack	11-234-8
11-30	Figures 1A and 1B.	Electronic	Bull & Simack	11-235-8
11-30	Figure 2.	Electronic	Bull & Simack	11-236-8
11-30	Figure 3.	Electronic	Bull & Simack	11-237-8
11-30	Figure 4.	Electronic	Bull & Simack	11-238-8
11-30	Figure 5.	Electronic	Bull & Simack	11-239-8
11-30	Figure 9 B.	Electronic	Bull & Simack	11-240-8
11-30	Figure 13.	Electronic	Bull & Simack	11-241-8
11-30	Figure 7.	Electronic	Bull & Simack	11-242-8
11-30	Figure 8.	Electronic	Bull & Simack	11-243-8

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11-30	Figure 11 - RF supply w/regulator.	Electron	Bull & Simack	11-244-8
11-30	Figure 12	Electron	Bull & Simack	11-245-8
11-30	Figure 6	Electron	Bull & Simack	11-246-8
11-30	Figure 15	Electron	Bull & Simack	11-247-8
11-30	Figure 14 (All for W. Higinbotham)	Electron	Bull & Simack	11-248-8
11-30	Body weight.	Edelman	M. H. Bull	11-249-8
11-30	Adrenal weight.	Edelman	M. H. Bull	11-250-8
11-30	Cholesterol content of various tissue.	Edelman	M. H. Bull	11-251-8
11-30	Pituitary weight.	Edelman	M. H. Bull	11-252-8
11-30	Liver glycogen.	Edelman	M. H. Bull	11-253-8
11-30	Ascorbic acid content of various tissues.	Edelman	M. H. Bull	11-254-8
11-30	(a) Infra-red spectrum of deuterio carbon liquid product. (b) Infra-red spectrum of hydrocarbon liquid product.	Thompson Chemistry	M. H. Bull	11-255-8
	NO NEGATIVE			11-256-8
	NO Negative			11-257-8
11-30	(a) Infra-red spectrum of methane CP. (b) Infra-red spectrum of deuterio methane.	Thompson Chemistry	M. H. Bull	11-258-8
	NO NEGATIVE			11-259-8
11-30	Infra-red spectrum of saturated and unsaturated deuterio carbon gas products. Infra-red spectrum of saturated deuterio carbon gases present.	Thompson Chemistry	M. H. Bull	11-260-8
11-30	Propane.	Thompson	M. H. Bull	11-261-8
11-30	Infra-red spectrum of deuterio carbon gas products.	Thompson	M. H. Bull	11-262-8
11-29	Choral group.	Recreation	M. H. Bull	11-263-8
11-29	Choral group.	Recreation	M. H. Bull	11-264-8
11-30	Orthospirale-Anorthospirale.	Christen	M. H. Bull	11-265-8
11-30	Drawing of above.	Biology	M. H. Bull	11-266-8
11-29	Camera recording setup in monitoring station shack.	Monsta	R. J. Walton	11-267-8
11-29	Camera recording setup in monitoring station shack.	Monsta	R. J. Walton	11-268-8

Date	Caption	Dept.	Photographer	Number
11-31	Danny Ryan bowling.	Recreation	R. J. Walton	11-269-8
11-31	George Eldred bowling.	Recreation	R. J. Walton	11-270-8
11-31	Theodore G. Robinson bowling.	Recreation	R. J. Walton	11-271-8
11-49	Monitoring station film.	Physics	Monitoring sta.	11-272-8
11-4				
11-4	Slide # A 929Q (B)	Sparrow Biology	R. F. Smith	11-273-8
11-4	Slide # A929Q (A)	Sparrow	R. F. Smith	11-274-8
11-17	Slide # A 929P E56	Sparrow	R. F. Smith	11-275-8
11-17	Slide # A 718 D # 3 E52	Sparrow	R. F. Smith	11-276-8
11-17	Slide # A 718 D X # 4 E55	Sparrow	R. F. Smith	11-277-8
11-17	Slide # A 1295 H E57	Sparrow	R. F. Smith	11-278-8
11-17	Slide # A 718 #2 E54	Sparrow	R. F. Smith	11-279-8
11-17	Slide # A 718D #1 E53	Sparrow	R. F. Smith	11-280-8
11-18	Slide # A 603 G E84	Sparrow	R. F. Smith	11-281-8
11-30	Slide # A 159-0	Sparrow	R. F. Smith	11-282-8
11-30	Slide # A 159-0 E92	Sparrow	R. F. Smith	11-283-8
11-30	Slide # A 820 -E-1 E91	Sparrow	R. F. Smith	11-284-8
11-30	Slide # A 820-E-2 E89	Sparrow	R. F. Smith	11-285-8
11-30	Slide # A 820-F E61	Sparrow	R. F. Smith	11-286-8
11-30	Slide # A 820-E-3 E88	Sparrow	R. F. Smith	11-287-8

December

Date	Caption	Dept.	Photographer	Number
12-1	Slide negatives for Dr. Coryell of Mass. Institute of Technology.	Chemistry	M. H. Bull	12-1-8 thru 12-6-8
12-1	E. J. Bergin, Transportation	Mines	R. F. Smith	12-7-8
12-1	Cora L. Gray, BM	Mines	R. F. Smith	12-8-8
12-1	Dr. Nelson M. Blackman	Mines	R. F. Smith	12-9-8
12-1	P. Agnetti, AM	Mines	R. F. Smith	12-10-8
12-2	Plot to determine energy of activation for various reaction mixtures in $\text{Ma ClO}_4 \text{ HClO}_4$.	Chemistry	M. H. Bull	12-11-8
12-2	Sodium perchlorate. Perchloric acid mixtures of total ionic strength 6 formal.	Chemistry	M. H. Bull	12-12-8
12-2	Triangles refer to entropy of activation, circles to energy.	Chemistry	M. H. Bull	12-13-8
12-2	The acidity function (straight line has unit slope).	Chemistry	M. H. Bull	12-14-8
12-2	Relative number of atoms of A, B, C, D present at any time (Case I).	Chemistry	M. H. Bull	12-15-8
12-2	μ	Chemistry	M. H. Bull	12-16-8
12-2	Chloride ion formal concentration.	Chemistry	M. H. Bull	12-17-8
12-3	This recent photo shows the 184 inch, 4,000 ton University of California cyclotron in an advanced stage of construction. The huge rectangular structure (the low side of which is concealed by the flooring) is the main portion of the electro-magnet, while the two round objects in the rectangle are the coils and pole faces of the electro-magnet. (The electro-magnet contains 3700 tons of steel, 300 tons of copper wiring.) The accelerating chamber, a window of which can be seen open in the very center of the picture is between the pole faces. The two cylindrical objects in the center foreground are pumps used to create a vacuum within the accelerating chamber. Two round objects (lower right) are pole faces, the last to be installed. Man standing in one gives an idea of the size of the cyclotron. Size of the cyclotron (184 inches) is the diameter of the pole faces.	University of Calif	M. H. Bull	12-18-8
12-2	Inside view of thermohm shield.	Met	R. J. Walton	12-19-8

Date	Caption	Dept.	Photographer	Number
12-2	Outside view of thermohm shield.	Met	R. J. Walton	12-20-8
12-2	Side view of thermohm shield.	Met	R. J. Walton	12-21-8
12-6	Dr. Fackenthal, President of AUI.	Portrait	R. F. Smith	12-22-8
12-7	Chloride dependance.	Dodson	M. H. Bull	12-23-8
12-7	Determination of experimental activation energy.	Dodson	M. H. Bull	12-24-8
12-7	Exchange function for various concentrations, etc.	Dodson	M. H. Bull	12-25-8
12-7	Receprocal rate function $\frac{1}{4}$ molal hours.	Dodson	M. H. Bull	12-26-8
12-7	Sodium perchlorate. Perchloric acid mixtures of total ionic strength 6 formal.	Dodson	M. H. Bull	12-27-8
12-7	Technician working with infra-red evaporator.	Block	R. F. Smith	12-28-8
12-7	Water sample equipment used to determine amount of radioactive contamination in water.	Health Physics	R. F. Smith	12-29-8
12-7	Air sampling equipment to determine amount of radioactive dust in the air. Dust is drawn thru filter and contents analyzed.	Block Health Physics	R. F. Smith	12-30-8
12-7	Cloud chamber - 3/4 view showing back.	Cloud Chamber	R. F. Smith	12-31-8
12-7	Cloud chamber - 3/4 view showing the curved plexiglass on the viewing panel.	Cloud Chamber	R. F. Smith	12-32-8
12-7	Cosmotron progress facing east.	Cosmotron	R. J. Walton	12-33-8
12-7	Cosmotron progress facing west.	Cosmotron	R. J. Walton	12-34-8
12-7	Cosmotron progress.	Cosmotron	R. J. Walton	12-35-8
12-7	Cosmotron progress.	Cosmotron	R. J. Walton	12-36-8
12-8	Order of Thallous-Thallic exchange reaction.	Dodson	M. H. Bull	12-37-8
12-8	Exchange with hydrolyzed thallic ion 2.	Dodson	M. H. Bull	12-38-8
12-8	Chloride catalysis of Thallous-Thallic exchange 2.	Dodson	M. H. Bull	12-39-8
12-8	Time behavior of exchange reaction at chemical equilibrium.	Dodson	M. H. Bull	12-40-8
12-8	Exchange with hydrolyzed tallic ion 1.	Dodson	M. H. Bull	12-41-8
12-8	Chloride ctalysis of thallous-thallic exchange 1.	Dodson	M. H. Bull	12-42-8

Date	Caption	Dept.	Photographer	Number
12-8	Constants for thalious-thallic exchange in HClO ₄ NaClO ₄ solutions of ionic strength 6.0.	Dodson	M. H. Bull	12-43-8
12-8	Alice in Wonderland slide series			
12-7	Photograph of the data panel to which all the information from the various radiation detectors are relayed, included on the board are clocks and a calendar to accurately define the time and date of the data being recorded. An inside and outside temperature gage is included.	Monsta	R. J. Walton	12-53-8
	Brookhaven.	Hartzell	M. H. Bull	12-54-8
12-10	Health Physics slide.	Block	M. H. Bull	12-55-8
12-10	Health Physics slide.	Block	M. H. Bull	12-56-8
12-10	Grounds progress and maintenance.	Grounds	E. J. Hunter	12-57-8 thru 12-72-8
12-10	Cyclotron construction progress.	Cyclotron	R. J. Walton	12-73-8 thru 12-76-8
12-13	Time in hours.	HPhysics	M. H. Bull	12-77-8
12-13	Formula - pole edge.	Hafner	M. H. Bull	12-78-8
12-13	Design data: Magnet (Armco iron) Coil (Each winding).	Hafner	M. H. Bull	12-79-8
12-10	View of hospital private room with oxygen tent in place.	Medical	R. F. Smith	12-80-8
12-10	Dr. R. C. Anderson investigating a new synthetic method for introducing Carbon 14 into complex organic molecules.	Chemistry	R. F. Smith	12-81-8

Date	Caption	Dept.	Photographer	Number
12-10	Dr. Lewis Freedman with apparatus used for the new synthesis of tracer containing compounds.	Chemistry	R. F. Smith	12-82-8
12-10	Dr. H. C. Thomas using a large capacity balance in the preparation of a solution of radioactive aluminum bromide for use in a study of chemical kinetics.	Chemistry	R. F. Smith	12-83-8
12-10	Dr. Julius Hastings and Dr. Oliver Schaeffer operating a mass spectrometer to study the forces which hold molecules together.	Chemistry	R. F. Smith	12-84-8
12-10	Dr. G. Friedlander placing a sample of radioactive nickel under a Geiger counter enclosed in a lead shield to measure its radioactivity. The box behind the lead shield contains the power supply and the scaling circuit for the Geiger counter.	Chemistry	R. F. Smith	12-85-8
12-10	Dr. Norman Elliott with apparatus for studying the magnetism of uranium and plutonium.	Chemistry	R. F. Smith	12-86-8
12-14	Absorber.	Piccioni	M. H. Bull	12-87-8
12-14	Meteorological tower.	Met	R. J. Walton	12-88-8
12-16	Potato garden (7-243-8)	Biology	M. H. Bull	12-89-8
12-16	Potato garden (6-230-8)	Biology	M. H. Bull	12-90-8
12-16	Warren Miller	Portrait	J. F. Garfield	12-91-8
12-16	Warren Miller	Portrait	J. F. Garfield	12-92-8
12-16	Everett Hafner	Portrait	J. F. Garfield	12-93-8
12-16	Professor Hansteen	Portrait	J. F. Garfield	12-94-8
12-16	Professor Hansteen	Portrait	J. F. Garfield	12-95-8
12-16	Figure 3 - Mockup of CEE cam follower Cam.	Accel	M. H. Bull	12-96-8
12-16	Coil above mercury pot.	Accel	M. H. Bull	12-97-8
12-16	Tuning coil.	Accel	M. H. Bull	12-98-8
12-16	Pencil drawing of cosmotron and building.	Cosmotron	J. F. Garfield	12-99-8
12-16	Everett Hafner	Portrait	J. F. Garfield	12-100-8

Date	Caption	Dept.	Photographer	Number
12-17	Figure 4 c - Filled distribution in a crystal with space charge.	Whittemore	P. Simack	12-101-8
12-17	Figure 15 - Experimental saturation curve.	Whittemore	P. Simack	12-102-8
12-17	Figure 17 - Idiolyzed voltage pulse produced at S by no electrons freed at the cathode of the crystal.	Whittemore	P. Simack	12-103-8
12-20	Snow pictures after the first storm.	Grounds	R. J. Walton	12-104-8 thru 12-107-8
12-23	Front view of methane flow beta counter.	Elect	R. J. Walton	12-108-8
12-23	Side view of methane flow beta counter	Elect	R. J. Walton	12-109-8
12-28	Radioautographs for biology.	Moses	J. F. Garfield	12-110-8 12-111-8 12-112-8
12-28	P32 decay curve, 3800 volts, gain full - December 15, 1948.	Bernstein	M. H. Bull	12-113-8
12-28	(1) Cathode (2) Center Wire (3) Coated glass bead, etc.	Bernstein	M. H. Bull	12-114-8
12-28	Methane flow beta counter counting rate vs voltage W. B. November 23, '48.	Bernstein	M. H. Bull	12-115-8
12-28	Pictures of the automobile accident that occurred on December 24, 1948.	Police & Security	R. J. Walton	12-116-8 thru 12-124-8
12-28	Glass equipment. (Delete 12-128-8, 12-130-8 and 12-131-8).	Biology	R. J. Walton	12-125-8 thru 12-131-8
12-28	First glass diffusion pump.	Glass	R. J. Walton	12-132-8
12-28	Second glass diffusion pump.	Blowing	R. J. Walton	12-133-8
12-28	H. H. Goldsmith	Portrait	J. F. Garfield	12-134-8
12-28	H. H. Goldsmith			thru
12-28	H. H. Goldsmith			12-137-8
12-29	Sample test film from the monitoring station camera.	Monsta	M. H. Bull	12-138-8

Date	Caption	Dept.	Photographer	Number
12-1	Slide # A 124-C-13 E72	Sparrow	R. F. Smith	12-139-8
12-1	Slide # A 124-C-9 E75	Sparrow	R. F. Smith	12-140-8
12-1	Slide # A 124-C-8 E 76	Sparrow	R.F. Smith	12-141-8
12-1	Slide # A 124-C-7 E77	Sparrow	R. F. Smith	12-142-8
12-1	Slide # A 124-C-1 E82	Sparrow	R. F. Smith	12-143-8
12-1	Slide # A 124-C-6 E78	Sparrow	R. F. Smith	12-144-8
12-1	Slide # A 124-C-11 E62	Sparrow	R. F. Smith	12-145-8
12-1	Slide # A 124-C-3 E81	Sparrow	R. F. Smith	12-146-8
12-1	Slide # A 124-C-4 E80	Sparrow	R. F. Smith	12-147-8
12-1	Slide # A 124-C-2 E64	"	"	12-148-8
12-1	Slide # A 124-C-10 E74	"	"	12-149-8
12-1	Slide # ^A 124- C-12 E73	B	"	12-150-8
12-1	Slide # A124-C-15 E60	"	"	12-151-8
12-1	Slide "# A124-C-14 E83	"	"	12-152-8
12-7	Slide # A 155-G-46 E87	"	"	12-153-8
12-7	Slide # A 820-C E85	"	"	12-154-8
12-7	Slide # A 1215-F E63	B	"	12-155-8
12-7	Slide # A 1215-D E86	"	"	12-156-8
12-1	Slide # A-124-C 5 E79	Sparrow	R.F. Smith	12-157-8

If you find that you must make a correction to any material that follows, please make a notation on a separate piece of paper and notify me.