



HOTLINE

PRINCETON PLASMA PHYSICS LABORATORY

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September 22, 1981

Neutral Beam Moved To Test Cell

The first TFTR neutral beam was moved from the 1-H building to the TFTR neutral beam test cell recently, culminating a concerted effort by several laboratory departments.

The neutral beam unit was moved with its interior components intact. A crew from McHugh Brothers of Andalusia, PA, supervised by Don Kling, used a 175-ton mobile crane in the 1-H building to lift the unit onto a 75ft. long flatbed tractor trailer. The loading was completed September 2.

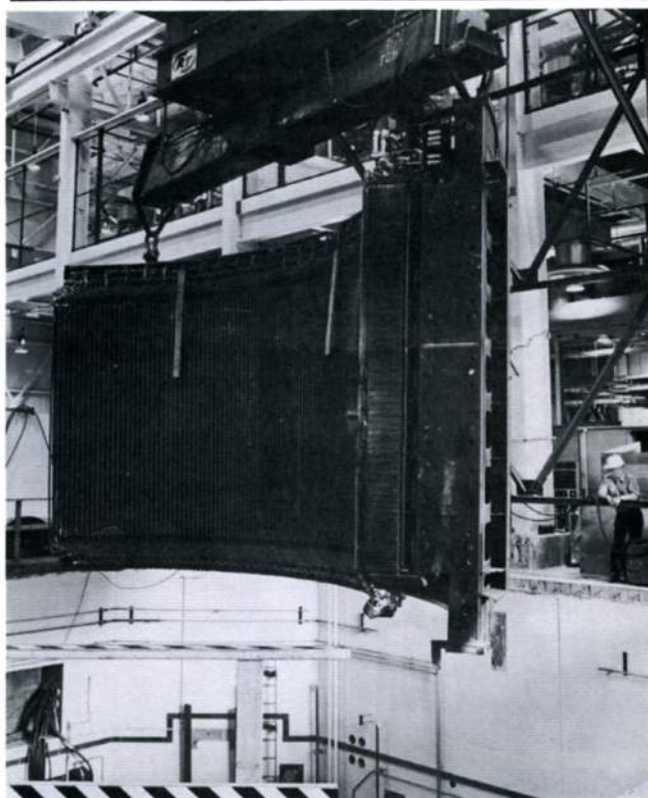
The 70-ton unit, which sat 20 ft. 6 in. high above the road bed, began its journey to C-Site at 9:30 a.m. Sept. 3. Al Swain, construction coordinator for PPL, explained that the procedure was "a very delicate move, because the equipment inside the neutral beam is delicate, and the entire unit is topheavy. It was a very high consequence move."

Al emphasized that the operation was not a one-man job. "The trailer was escorted by men in front and in back. PPL Transportation Services laid down steel plates over bad areas of the road. The University landscaping crew went with us to cut down low branches. Safety and Security were escorting the entire move. It was like a plan for an invasion, where each group knew exactly what to do at all times."

After "several tight turns", according to Al, the unit was backed into the neutral beam test cell room. It was removed from the trailer by the 75-ton bridge crane within the building, and placed in temporary position. It will next be used in the three-source power test.

Al offered his thanks to Ben Prichard, head of the TFTR neutral beam branch; Rolf Brocker and the neutral beam assembly group; Harry Howe of Safety; Jim Kopliner and Captain Goodwin of Security; Henry Miller, Pat Zeedyk, John Kessler and the crew of Transportation Services; Lou Pizzarello and the University landscaping crew; Jim Ruddy of Procurement; and the Vacuum Shop.

(Pictures on next page)



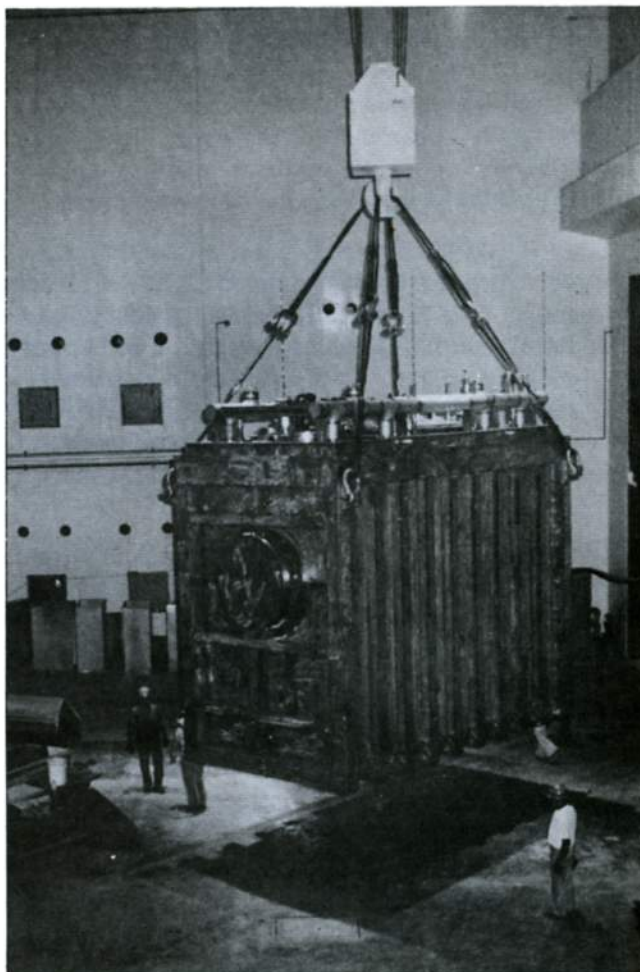
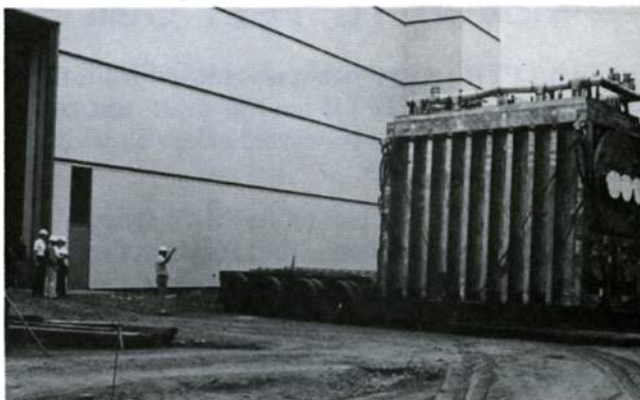
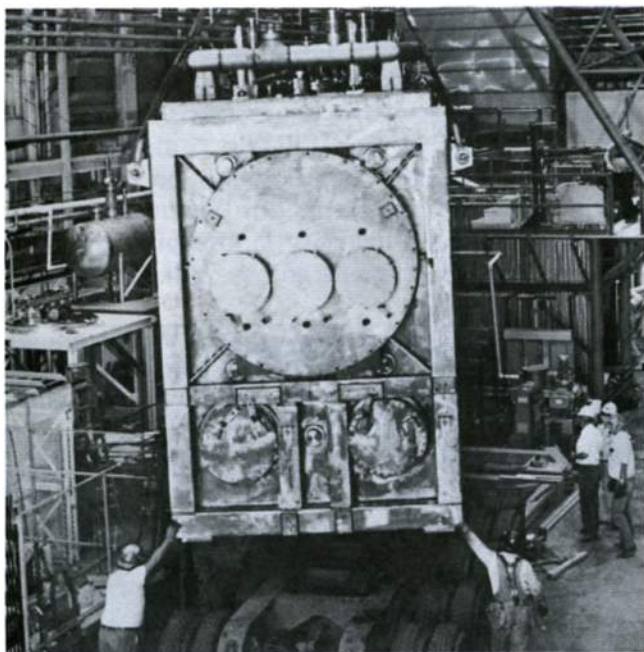
A section of a TFTR MG stator, damaged in last December's accident, is lifted from the pit in the TFTR MG area. All three segments of the stator have been removed from the site. Engineers from General Electric are assessing possible damage to the rotor of the set.

Symposium Scheduled

The Technology Department Symposium will be held on Tuesday, September 22 in the Melvin B. Gottlieb auditorium, LOB at 4 p.m.

Dr. Kees Bol, Head of PDX at PPL, will speak on "The Poloidal Divertor Experiment Results to Date and Further Plans." In addition to the scientific results that have been attained, Dr. Bol will also discuss some of the engineering problems that have cropped up.

The moving of the TFTR neutral beam. (Counter-clockwise from left) The unit is lifted by crane and placed on a flat-bed tractor-trailer. After squeezing through the door at the 1-H building, the trailer gingerly made its way through several tight turns on the way to C-Site. The entourage, including the escort walking beside the trailer, stopped on the road to clear tree branches before proceeding. At the TFTR site, the unit was backed into the neutral beam test cell, and taken off the trailer by the crane within the building.



Loan Rates Rise

Personal loans obtained through the Princeton University Employees' Federal Credit Union will now carry an interest rate of 17 percent.

The increase in interest rates was approved by the credit union's Board of Directors. Car loans will carry 16 to 17 percent rates, while used car loans will include a 17.5 percent interest rate.

Loan applications are available to employees who have been credit union members for three full months. A schedule of the new rates is available at the credit union office.

Course Begins

A new course in experimental plasma diagnostics began at PPL September 14.

Nine guest lecturers from PPL's experimental staff will cover topics ranging from plasma probes to fusion reactions, with approximately three lectures devoted to each topic. Lectures in the course are open to all students and the laboratory public.

The course meets twice a week on Mondays and Thursdays, from 1:15 to 2:15 p.m. in the Melvin B. Gottlieb auditorium. Dr. Norton Bretz will speak on laser scattering Sept. 21, with Kevin McGuire beginning a series of three lectures on electric and magnetic probes Sept. 24.

The idea for the course was proposed last spring by plasma physics graduate students who noted a major gap in the regular curriculum. Students instrumental in suggesting and planning this promising new course were Fred Wysocki and John Goree, who enlisted organizational help from Dr. S. von Goeler and Dr. T.H. Stix.

Energy Conservation

Did you know that each 40 watt light costs approximately \$10 per year to operate during working hours? That may not seem like a major expense, but PPL has over 20,000 40 watt lights. That amounts to quite a lighting bill!

The laboratory's Energy Awareness committee urges all employees to concentrate on turning off electric lights when not in use.

Lost and Found

An unspecified amount of cash was found in the C-Site parking lot near the modules September 7. To claim it, contact Security with the exact amount involved.

Luncheon Planned



Former Secretarial and Office Support Staff (SOSS) chairwoman Flo Short passes the gavel on to the group's new chairwoman, Muriel Strohl, during the SOSS's luncheon meeting September 15.

The Secretarial Office Support Staff (SOSS) held their annual luncheon meeting September 15 in the Melvin B. Gottlieb auditorium.

Laboratory Director Dr. Harold Furth discussed future laboratory plans at the luncheon, and Dee Hurley provided special entertainment.

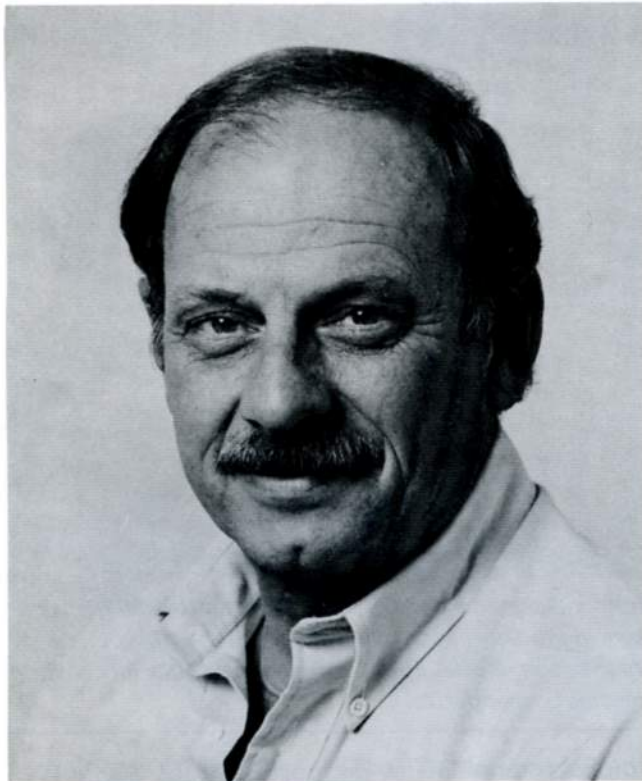
The new SOSS officers were introduced during the meeting. Muriel Strohl is chairwoman of the organization, with Ann O'Day as vice-chairwoman, Anne Golden as recording secretary, and Dolores Bergmann as corresponding secretary.

Seminar committee members include Edna Willis, Leigh Ann Fares, Gloria Pollitt, Mal Pulaski, Dottie Pulyer, Helen Quinn and Flo Short.

Soaring Openings

The Soaring Society of Princeton University has limited openings for its fall flying season. Society membership is open to all Princeton University employees, and entitles members to use of society soaring facilities at the Forrestal airstrip. A membership fee is charged per semester, with an additional charge made per tow when flying. Flying instructions are also available through the society.

Anyone interested in membership should call society secretary Howard Strauss at 452-6045 for further information and an application.



Terry Birch joined the Information Services Branch as a technical specialist in the Graphic Services Section September 14. He attended Duke University, and was employed as a senior artist/designer for Educational Testing Services for 15 years. Terry's duties include airbrush work, artist's renderings, and the design and layout of brochures and other publications.

Bowling News

Two full-time members and several substitutes are needed for the PPL Women's Bowling League. Teams bowl every Wednesday evening at Colonial Lanes in Lawrenceville. Interested bowlers should contact league president Kim Prutky at ext. 2559 or league secretary Bobbie Cruiser at ext. 2101.



The PPL library offers the resources you need for locating people and places.

ENCYCLOPEDIA OF ASSOCIATIONS, 15th EDITION—

This large volume is the major source for detailed information on American and several European organizations. It is a guide to specific subjects, including non-profit, commercial, and volunteer organizations. Athletic, hobby, fraternal, cultural, legal, scientific, and many other organizations are also covered. Information includes addresses, telephone numbers, directors, size, scope and functions of each organization. An extremely useful book to consult for information in this subject. Detroit: Gale Research Co., 1980.

NATIONAL ZIP CODE AND POST OFFICE DIRECTORY—

Some of the most interesting subjects covered are special postal services, organization information, Army and Air Force post offices, Navy FPO's, parcel weights and limits, Mailgram services and a great deal more. Many new zip codes have been added, and some deletions have been made; it is therefore useful to consult this volume for the latest information and regulations pertaining to speeding up your mail. Washington: U. S. Postal Service, 1980.

TELEPHONE BOOKS—

The library now houses a very complete collection of New Jersey telephone books, sixteen books of major cities throughout the United States and books for London, Rome and Munich. Through the cooperation of the Telecommunications Department, we shall increase the scope and size of this collection as reader demand requires.



Al Swain, coordinator of construction at PPL, greets former astronaut Neil Armstrong during his recent visit to the laboratory. Armstrong interviewed Lyman Spitzer and former laboratory director Melvin Gottlieb as part of a fusion energy film being made by the Slaner Foundation.

Art Display

Portraits in a variety of media are part of an art exhibit by Liz Schweber on display through October in the B-Site cafeteria.

Liz is the fourth artist to display her works in the cafeteria. Other exhibits have featured art by Peter Allen, Gary Saretzky and Jan Olmez. Artists interested in future exhibits should contact cafeteria manager Terri Temkin at ext. 3471.

The cafeteria is open from 7:30 to 10:30 a.m. and from 11:30 a.m. to 1:30 p.m. daily.

Recreation Activities

If you are in charge of any recreation activity (golf, softball, bowling, etc.), or if you plan to organize a group that will be requesting money from the FY 82 Morale Fund, please call Meg Gilbert in Personnel, ext. 2036.

The PPL Hotline is issued by the Princeton University Plasma Physics Laboratory, a research facility supported by the U. S. Department of Energy. Correspondence should be directed to PPL Information Services, Module 2, C-Site, James Forrestal Campus, ext. 2754.

ppl people

HEROIC USS LAFFEY PRESERVED



This photograph of Ray during his days on the Laffey will be part of the built-in exhibit on the ship, now permanently enshrined in Patriot's Point, South Carolina.

Ray Pressburger of Plant Maintenance went to a Navy reunion recently, a reunion that was much more than old buddies seeing each other again. The reunion coincided with the enshrinement of Ray's ship, the Laffey, at Patriot's Point, South Carolina.

The ship, the subject of the book "The Ship That Would Not Die", became famous in World War II

for surviving a withering attack by Kamakazis near Okinawa. Her performance, and that of her crew, earned the Laffey the Presidential Unit Citation, the highest honor the Navy can bestow on a ship.

The Laffey was towed by tugboats from Charleston to her berth at Patriot's Point, a ride that was especially emotional for Ray. He was on the Laffey

when she steamed out of the Bath, Maine shipyard "so I was on her first and her last ride." Ray reported that some 95 World War II crew members and their families attended the enshrinement ceremonies. They were joined by Laffey crew members from before and after the war, making the day a truly "family" affair. Ray's daughter and son accompanied their dad and his shipmates on the trip.

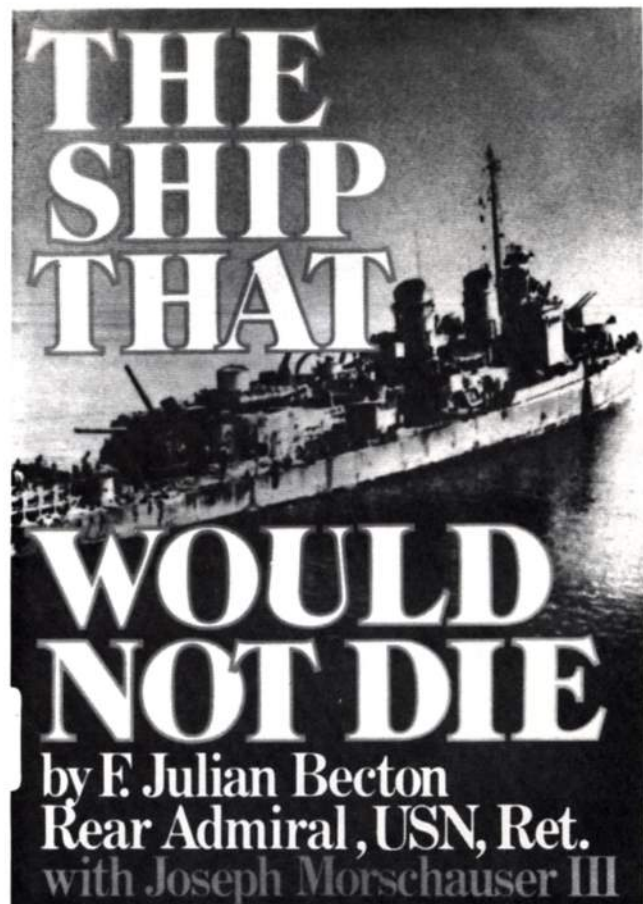
The Laffey is berthed at the heart of what will eventually be a recreation complex. Approximately two million dollars is being spent to renovate the Patriot's Point pier area, and plans call for a motel complex, golf course and park to surround it. Each ship enshrined there will serve as its own museum, with built-in displays chronicling the deeds of their crews.

Ray was just 20 years old when he was assigned to the Laffey as a coxswain. His duties involved sailing the ship's launch on various missions. One memorable trip is included in Rear Admiral F. Julian Becton's book, "The Ship That Would Not Die".

The Laffey had docked off the coast of Leyte Island in the Pacific, just prior to the invasion of Ormoc Bay. Ray was asked to ferry the Laffey's doctor to the hospital ship HOPE, which was in port nearby. As he waited for the doctor to finish his business on the HOPE, Ray was requested to pick up several HOPE doctors from a barge full of wounded troops. The light was fading as he reached the barge, which was several feet above his boat. To prevent injury to his passengers, he caught and steadied each one as they jumped into the launch. The final jumper landed unsteadily, and Ray clasped him across the chest to keep him upright. Only it wasn't a "him"—it was a Navy nurse!

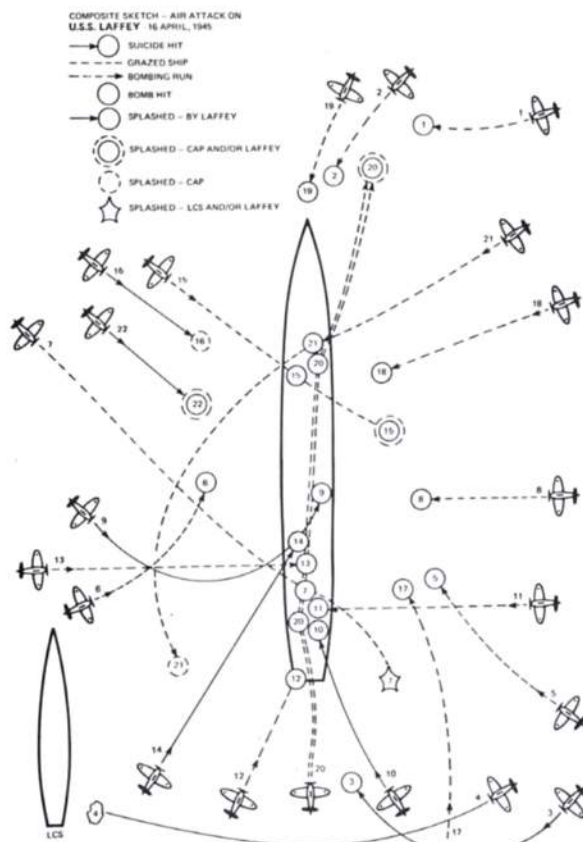
"I didn't think anyone remembered about that nurse," Ray chuckled recently, adding that he was surprised to find himself mentioned—several times—in Admiral Becton's book. There is a good relationship between the two men, dating from Ray's days as then-Captain Becton's private boatcoxswain. "I got to know the admiral very well," he explains. "When we have our reunions, we always set aside one evening for just the two of us to meet and reminisce."

A good deal of the reminiscing at any Laffey reunion mainly concerns the events of April 16, 1945. On that day, the Laffey was attacked by 22 Kamakazis within 79 minutes as she steamed toward



Okinawa. She was part of a "picket" line, a group of ships stationed in front of the Navy's main fleet to detect enemy planes on radar and shoot them down before they reached the bulk of the naval forces. No other ship of its size in U.S. naval history had ever been subjected to such an onslaught and survived, but the Laffey managed to stay afloat and return to port.

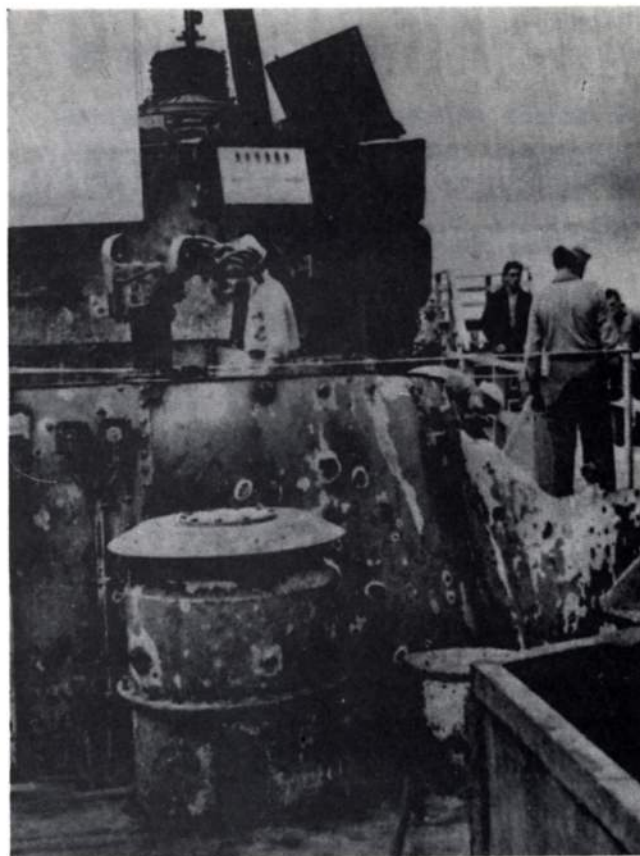




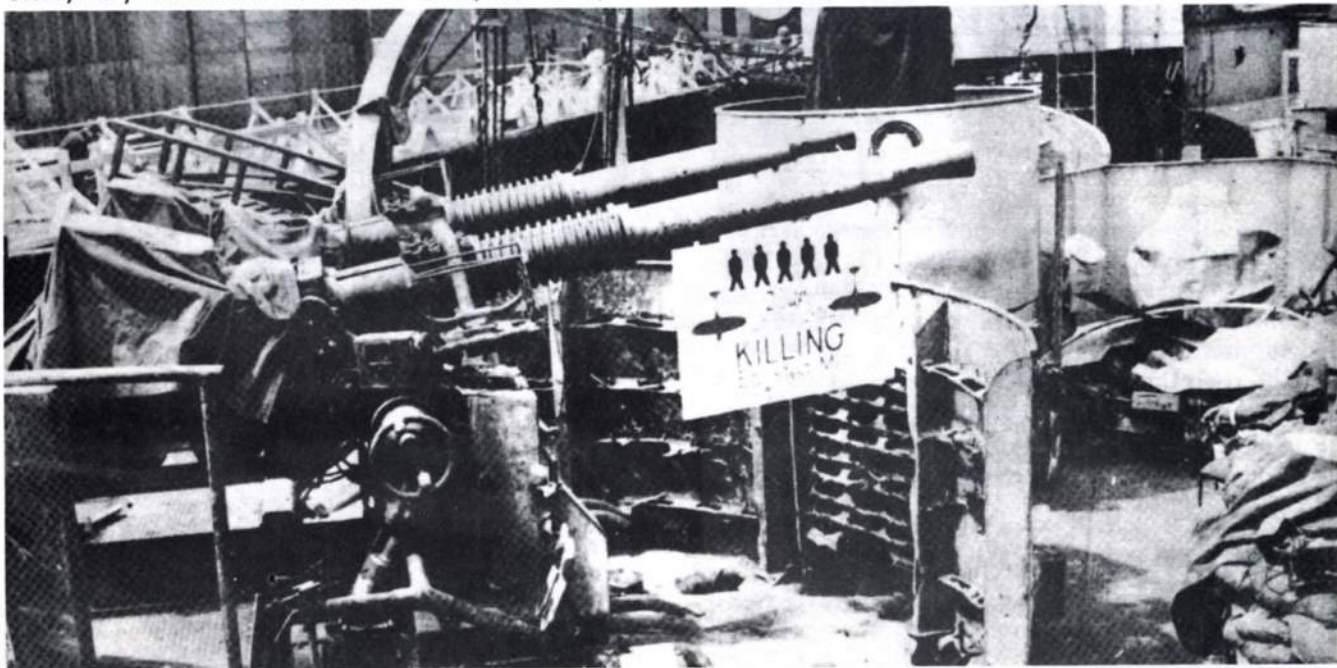
Overhead diagram illustrating the courses followed by the twenty-two Kamikazes that attacked the *Laffey* at radar picket station number 1 north of Okinawa on April 16, 1945. Overall, about fifty Japanese planes were in her area on that terrible morning.

(From the book "The Ship That Would Not Die" by F. Julian Becton, Rear Admiral, U.S.N., Ret. with Joseph Morschauser III. Published by Prentice-Hall, Inc., Englewood Cliffs, N.J. 07632.)

The early morning hours on that day had been clear, Ray recalled. About 8:30 a.m., however,



things took a radical change for the worse: a cloud of Kamakazis descended on the ships. Massed too thickly to be counted individually on radar, a portion of this group broke away and headed towards the *Laffey*. Four planes were shot down as the Kamakazis approached, but approximately 22 planes broke through the *Laffey*'s air cover and attacked the ship.

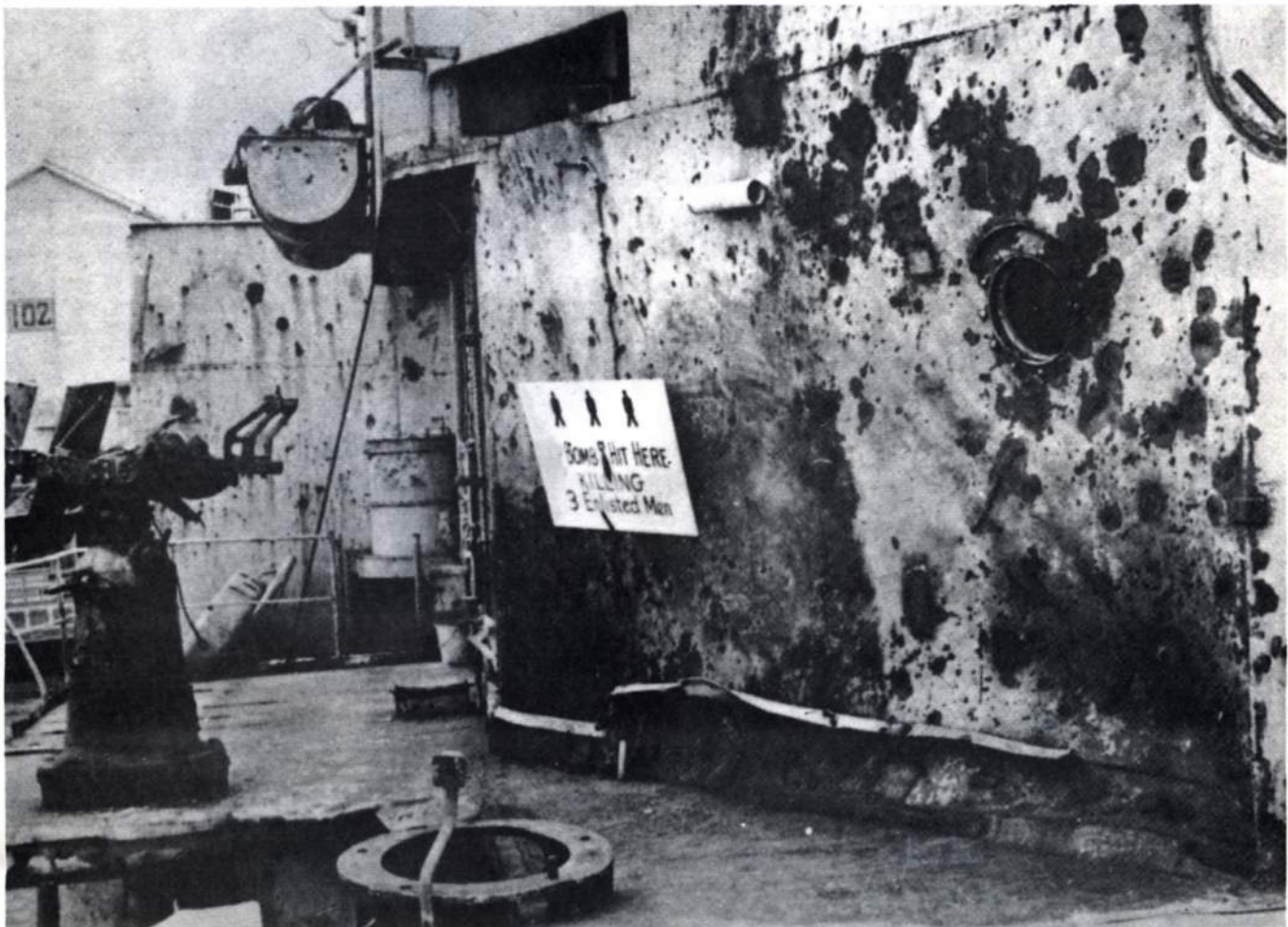


Ten planes in all were shot down, and seven crash dived into various sections of the ship. Many of the planes carried bombs, which went off on impact with the Laffey's decks. The ship also took four direct bomb hits.

Flaming gasoline from the planes was strewn across the ship, and flaming debris caused numerous injuries. The ship's rudder became jammed, limiting her to steaming in circles, and flooding occurred belowdecks. Most of her gun mounts were destroyed severely curtailing Laffey's firepower. In fact, Ray's gun was the only one on the starboard side of the ship that remained firing.

If damage to the ship was considerable, the injuries to her crew were more serious. Thirty-two men were killed in the attack, with 70 more sustaining serious injuries.

The attack was especially tragic for Ray, whose best friend was killed in the fighting. George Falotico was firing a gun only a short distance from Ray's when an on coming plane dropped a bomb directly at his feet. Falotico was killed



instantly, and the flash from the explosion burned most of the exposed skin on Ray's body. Ray also suffered a severe schrapnel wound in his arm.

In recognition of the "extraordinary heroism in action" of both ship and crew, the Laffey was awarded the Presidential Unit Citation. The citation concludes that "the courage, superb seamanship and indomitable determination of her officers and men enabled the Laffey to defeat the enemy under almost insurmountable odds, and her brilliant performance in this action reflects the highest credit upon herself..."

Ray's Laffey was the second ship of that name to receive a Presidential Unit Citation in the same war. The first Laffey was sunk by the Japanese during the Battle of Guadalcanal in 1942. The second Laffey, commissioned in 1944, had her first combat mission off the Normandy beaches, providing pre-invasion fire support to landing troops. Prior to her assignment at Radar Picket Station No. 1, she saw action at Cherbourg and at the Normandy landing. Laffey also participated in combat in the Philippines, at Mindaro, Lingayen Gulf, Iwo Jima, Okinawa, and in the first two carrier raids on Japan.

The Laffey served as an observation ship for the Bikini Atoll nuclear bomb tests, and was active in the Korean conflict. The ship received a Meritorious Unit Citation for its work as a screening destroyer and radar picket ship with the Sixth Fleet during the Jordanian civil war.

When the Laffey was decommissioned in 1975, her crew was determined not to let her be forgotten. Forming themselves into the Laffey Association, they began investigation the possibility of enshrining the ship at a suitable location. That dream became a reality when the Laffey joined the Yorktown, the submarine Claymore, and the nuclear ship Savannah at Patriot's Point.

With enshrinement accomplished, the group wants to restore the ship to its "fighting trim". That task includes replacing a gun that was removed, as well as other renovations required to return the Laffey to her commissioning condition.

Ray feels the common goal has helped keep old crew members united. "We find as the years go by that we do more and more together," he contends. "We all have a good time together."



He hopes to one day unite his entire family with his Laffey "family." "I'd like to take my entire family down there when the motel is opened. Then my kids and grandkids can see the Laffey, go through her and get a feel for what it was like, and put names to faces. It will make what we did back there mean that much more."