

STATION (----) PRESENTS "WOMEN IN THE NEWS," A SPECIAL PROGRAM DEDICATED TO WOMEN WHO MAKE NEWS IN THE WORLD OF INDUSTRY, IN SPORTS, SOCIETY, THE ARTS AND IN THE HOME. PREPARED TODAY BY VIAIAN SANDE OF THE NEW YORK BUREAU OF UNITED PRESS RADIO. AND NOW...

GIRL ATOM-SPLITTER

LESS THAN A DECADE AGO, MIRIAM LEVIN'S MOTHER WOULDN'T LET HER FIX AN ELECTRIC IRON...AFRAID SHE MIGHT CROSS THE WIRES AND GET A SHOCK.

NOW MISS LEVIN WORKS WITH EIGHT-MILLION ELECTRON VOLTS AT HER FINGERTIPS...MORE THAN ENOUGH TO KILL A MAN...ENOUGH TO DISINTEGRATE AN ATOM. MISS LEVIN IS THE ONLY WOMAN IN THE NATION WHO OPERATES A CYCLOTRON. SHE RUNS COLUMBIA UNIVERSITY'S PUPIN CYCLOTRON, THE FIRST TO SPLIT AN ATOM.

NINE YEARS AGO, THE COMELY MISS LEVIN---SHE'S BLONDE, BLUE-EYED AND RETICENT---WAS GRADUATED FROM HUNTER COLLEGE WITH A DEGREE IN MUSIC.

THE WAR WAS ON, AND MIRIAM LEVIN SAYS, "I WANTED TO DO SOMETHING IMPORTANT FOR THE WAR EFFORT." AFTER A SHORT STINT AS A CIVILIAN RESEARCH ASSISTANT WITH THE U.S. ARMY SIGNAL CORPS, AT FORT MONMOUTH, NEW JERSEY, SHE APPLIED FOR A JOB AT COLUMBIA UNIVERSITY.

SAYS MIRIAM, "I KEPT HEARING WHISPERINGS ABOUT SECRET RESEARCH BEING CONDUCTED UNDER THE CAMPUS."

THAT WAS FIVE YEARS AFTER DR. JOHN DUNNING, PIONEER ATOMIC PHYSICIST AND NOW DEAN OF THE SCHOOL OF ENGINEERING, MADE HISTORY BY SPLITTING THE URANIUM ATOM IN THE PUPIN CYCLOTRON, THUS COMPLETING THE FIRST NUCLEAR FISSION EXPERIMENT IN THE UNITED STATES.

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"THE LAB WAS SHORT OF HELP," SAYS MIRIAM. "MOST OF THE BOYS WERE IN THE SERVICES. I GOT A JOB."

WITHIN A MATTER OF MONTHS, THE GIRL WHOSE FAMILY HAD CAREFULLY GROOMED HER FOR A MUSICAL CAREER, LEFT HER BABY GRAND PIANO FOR A CAREER AT THE ELECTRONIC KEYBOARD OF THE CYCLOTRON. SHE SAYS SHE FOUND SHE HAD A KNACK FOR HANDLING MACHINERY, AND IT GAVE HER A WONDERFUL FEELING OF POWER.

NOW SHE BOSSES THE ENTIRE CYCLOTRON.

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MORE WOMEN IN NEWS (UPR5) XXX CYCLOTRON.
THE PHYSICS LABS ARE PLASTERED WITH DANGER SIGNS WHICH GROW STRONGER AS YOU NEAR THE CYCLOTRON ITSELF. THE BOARD MIRIAM OPERATES IN THE CONTROL ROOM IS A SIX FOOT, THREE-SIDED AFFAIR, WITH ENOUGH DIALS, KNOBS AND SWITCHES, TO MAKE AN AIRPLANE PILOT DIZZY. MOUNTAINS OF MACHINERY WHICH SEND POWER TO THE CYCLOTRON SHOW BEHIND A GLASS WALL. THE GENERATING ROOM---ACROSS THE PASSAGE FROM THE CONTROL ROOM---CAN PRODUCE 50-THOUSAND VOLTS OF ELECTRICITY. AND FARTHER DOWN THE BASEMENT IS THE CYCLOTRON ITSELF---SURROUNDED BY STAGGERED TANKS OF WATER TO HOLD IN RADIOACTIVITY.

MIRIAM WEARS A WHITE LAB COAT AT WORK, AND A FILM BADGE---WHICH MEASURES THE AMOUNT OF RADIOACTIVITY SHE'S BEEN EXPOSED TO, TOO MUCH EXPOSURE RATES A VACATION. SHE DOESN'T WEAR BOBBY PINS IN HER HAIR---THE MAGNETIC FORCE OF THE MACHINERY PULLS THEM OUT.

THE YOUNG ATOM SPLITTER'S JOB RANGES FROM SETTING UP GOVERNMENT EXPERIMENTS FOR THE ATOMIC ENERGY COMMISSION, EXPERIMENTS FOR THE UNIVERSITY AND OTHER SCIENTIFIC AGENCIES, COLLECTING AND COMPOUNDING DATA, AND DOING HER OWN REPAIR JOBS. MIRIAM CHANGES FILAMENTS, FIXES LEAKS, AND SEES THAT THE MACHINE IS RUNNING PROPERLY AT ALL TIMES. SHE MIGHT EASILY LOSE HER LIFE IF SHE CROSSED THE WRONG WIRES. AND SHE SOMETIMES LOSES SLEEP WHEN THE CYCLOTRON RUNS ALL NIGHT...WHICH IT FREQUENTLY DOES. SHE'S ON CALL, LIKE A DOCTOR, IF ANYTHING SHOULD GO WRONG.

MIRIAM, WHO HAS TAKEN SOME COURSES IN NUCLEAR PHYSICS AND MATH SINCE SHE GOT INTERESTED IN THE CYCLOTRON, HAS MADE A PERSONAL CONTRIBUTION TO ATOMIC SCIENCE, THOUGH SHE'S MODEST ABOUT IT. SHE DESIGNED A FILAMENT---SHAPED LIKE A HAIRPIN---WHICH INCREASED THE CYCLOTRON'S INTENSITY BY MORE THAN THREE TIMES.

ASKED HOW HER PARENTS FEEL ABOUT HER WORKING IN SUCH DANGEROUS SURROUNDINGS, MIRIAM SAYS, "THEY DON'T KNOW IT'S DANGEROUS. I TELL THEM I'M EXPOSED TO LESS RADIATION THAN MOST PEOPLE GET IN THE CITY FROM COSMIC RADIATION." WHICH IS TRUE. EXCEPT, OF COURSE, WHEN SHE LEAVES THE CONTROL ROOM FOR REPAIR WORK NEAR, OR ON, THE CYCLOTRON ITSELF, AFTER IT'S BEEN RUNNING FULL TILT. THEN, SAYS MIRIAM, "I'M VERY CAREFUL."

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THE PUPIN CYCLOTRON ON THE COLUMBIA CAMPUS ORIGINALLY WAS CONSTRUCTED IN 1938. IT WAS REBUILT AND IMPROVED IN 1940. BEFORE ATOMIC STOCKPILES WERE BUILT UP AT BROOKHAVEN, LONG ISLAND, AND OAK RIDGE, TENNESSEE. IT SUPPLIED RADIO-ACTIVE ISOTOPES TO THE MEDICAL WORLD FOR USE IN THE DETECTION OF VARIOUS BODY AILMENTS, AS WELL IN THE TREATMENT OF CANCER.

MISS LEVIN SAYS SHE USED TO THINK OF THOSE JOBS AS "ROUTINE" COMPARED WITH SOME OF THE EXPERIMENTAL WORK SHE WAS DOING FOR THE ATOMIC ENERGY COMMISSION. BUT ONE DAY SHE CHANGED HER MIND ABOUT THAT. SHE GOT A LETTER FROM A MAN WHO HAD EXPECTED TO DIE. HE'D BEEN TREATED WITH ISOTOPES PRODUCED AT THE PUPIN LABORATORIES, AND HE WAS BACK AT WORK. "THAT WAS ONE OF THE BIGGEST THRILLS OF MY LIFE," SHE SAYS.

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