Blossoms pop from trees as spring comes to the Arts Quadrangle.

New Electron Ring Proposed Here
Would Be 7 Times Size of Present Ring

Physicists at the university's Wilson Synchrotron Laboratory are studying the feasibility of establishing a major national research facility in Tompkins County to investigate elementary particle physics.

The facility, if built, would include a horizontal, circular tunnel some three and one-half miles in circumference to house an electron storage ring; a second circular tunnel of about one-half mile in circumference to house a synchrotron; a five-story office and laboratory building, and eight smaller structures.

Called CESR II, the facility would be similar to (but several times larger and more powerful than) CESR I, the Cornell Electron Storage Ring now operated by the university as a federally funded research center.

A rural area northeast of the Tompkins County Airport and about three miles from the Cornell campus is under study as a possible site for the facility.

Projected cost of the project is approximately $200 million in 1980 dollars.

Critical to the success of the project are two factors: The availability of federal funds for design and construction, and the development by Cornell researchers of high technology devices known as superconducting microwave cavities.

Although CESR II has been in the preliminary planning stage since 1979 and a conceptual engineering study has been completed, physicists at Cornell do not expect to make a formal request for federal funding until 1982, with 1984 set as the earliest possible starting date for construction and 1986 as the earliest completion date.

Microwave cavities are needed to accelerate electrons and particles of the opposite charge, positrons, around the storage ring at nearly the speed of light. Research efforts underway at Cornell since 1969 are aimed at developing superconducting microwave cavities made of niobium metal and cooled nearly to absolute zero with liquid helium. Compared to conventional microwave devices made of copper, the superconducting cavities have the potential of producing greater accelerating fields while consuming about 50 times less power.

A prototype superconducting cavity has been built and will be tested in CESR I, which began operation in 1979. Research and development on the new devices is expected to continue through 1983. If successful, this would be the first major application of the technology.

Biochemist Wins Award

Cornell biochemist Gerald R. Fink received the U.S. Steel Foundation Award in Molecular Biology from the National Academy of Sciences in Washington Monday.

The award, which carries a $5,000 prize, was bestowed on Fink for his outstanding contributions to molecular biology, particularly his research on the genetics of yeast.

He was cited for "opening vistas of genetic analysis by the development of new methods, in particular, the development and utilization of molecular cloning in yeast."

Fink is one of two researchers to receive the award this year.

Fink came to the State College of Agriculture and Life Sciences in 1967. He recently was named the American Cancer Society Professor of Molecular Biology, a lifetime endowment supported by the society.

Editor of "Gene" and "Molecular and General Genetics," Fink is the author of more than 50 scientific articles, and former associate editor of "Genetics" and the "Journal of Bacteriology." He has served on several study panels including an American Cancer Society panel on virology and cell biology, a National Foundation panel on genetic biology, and a National Institutes of Health panel on environmental mutagenesis.

A native of Brooklyn, Fink earned the B.S. at Amherst College (1962), and the M.S. (1964) and Ph.D. (1965) in genetics at Yale University.

Before coming to Cornell, he worked as a postdoctoral fellow at Yale and the National Institutes of Health.
CESR II Would Have $30 Million Annual Budget

Continued from Page 1

to an accelerator for elementary particle science.

As many as 400 scientists from

2. Why is the CESR II instrument

needed?

The CESR II instrument is needed
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One of the primary aims of sci-

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