CHRONOLOGY

Easter at Its Latest

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➤ EASTER this year will be the latest it is possible for the celebration to occur —April 25. Only once since the beginning of the nineteenth century—in 1886 —has Easter occurred so late, and it will not come this late again until some time after the year 2000.

Easter comes "the first Sunday after the first full moon after the twenty-first of March," which basis of calculation accounts for its changeable date. Because of its traditional relationship to the Jewish feast of the Passover, a fixed date for the observance of Easter has never been universally accepted.

The feast of the Passover celebrates the liberation of the Hebrews from Egyptian bondage. It was on the first day of this festival that Jesus and his disciples ate the Last Supper. The next day, Friday, was the day of the Crucifixion and the following Sunday the day on which Our Lord arose from the dead — the first Easter. According to modern reckoning this occurred on April 9, 30 A.D.

There is no mention of the observance of the Easter festival in the New Testament, but the Passover continued to be celebrated. It had now been given a new significance for the converts from Judaism.

According to the decision of the Council of Nicaea, in 325 A.D., Easter can be celebrated on any Sunday from March 22 until April 25. The Council actually used the vernal equinox as the basis for calculations instead of specifying March 21. The vernal equinox, which is the time when the sun crosses from the south to the north side of the equator, does not always fall on March 21. It may occur the day before or the day after. Whenever spring comes to the northern hemisphere on March 20 and the full moon occurs the following day, a Saturday, Easter will be on March 22. This has happened a number of times since 1800.

This year the full moon and the beginning of spring coincide, so Easter could not occur until the first Sunday after April 20. This happens to be Sunday, April 25, and Easter is thirty-five days delayed in reaching us.

Inaccuracies crept into the calendar throughout the ages so that toward the end of the sixteenth century spring was beginning on March 11 instead of March 21. The Gregorian correction of the calendar in 1582, designed to straighten out this inaccuracy, was accepted by the Western but not by the Eastern branches of the church. Since that time Easter for the Eastern and Western believers has been calculated on a different basis.

This year, however, the two do coincide, and all Christendom is celebrating Easter on April 25.

The inconvenience of an oscillating Easter has long been felt, particularly by commercial concerns and educational institutions. In several countries there has been an attempt under way for some time to make Easter a less variable feast day. But Easter is a Christian celebration observed throughout the world, and until a change in the method of calculating the date is universally accepted, this movement will be unsuccessful.

Science News Letter, April 24, 1943

PHYSICS

New Fluorescent Material Makes Ultraviolet Seen

➤ WARM YELLOW radiance is given off by a new fluorescent material which possesses the power of absorbing invisible ultraviolet rays and transforming them into visible light. It is expected to have wide application in the future lighting of homes, stores, factories and theatres. The yellow glow is more agreeable to many persons than the harder, bluish-white light produced by most present fluorescent lamps.

"The new material not only produces a light of a radically new color, but it also retains, unlike previous fluorescents, the power to emit light even if the materials contain impurities in the form of iron or nickel," it was announced by the American Optical Company, in whose laboratory the new discovery was made by Dr. W. A. Weyl.

The substance glows without the addition to its composition of an activating agent like manganese, a necessary element in present fluorescents.

FLUORESCENT — This new fluorescent material illuminates the face of the discoverer, Dr. W. A. Weyl, of the American Optical Company and Pennsylvania State College, with a warm yellow light when it is exposed to ultraviolet light from the lamp at the right.

Zinc oxide and vanadium pentoxide, combined by a controlled low-temperature heating process, are used in the new fluorescent substance. The material may be made more economically and easily in comparison with those previously discovered. It is still a laboratory development and not yet available to the public.

Dr. Weyl is a member of the research staff of the American Optical Company and also is professor of glass technology at Pennsylvania State College.

Science News Letter, April 24, 1943

Watermelons will be less plentiful this year, as only approximately one-half as much acreage is being planted as the average for the past ten years; more essential war crops are being grown instead.

● RADIO

Saturday, May 1, 1:30 p.m., EWT

"Adventures in Science" with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Bart J. Bok, of Harvard College Observatory, will give the last of a series of three talks on Science From Shipboard.