

aluminum bombarded by the alpha rays of polonium, a method previously discovered by Prof. Joliot and his wife, Mme. Irene Curie-Joliot, daughter of the discoverers of radium. The method gives both positrons and electrons, five of the former to three of the latter. The numbers were counted by a sort of detective-adding machine called a Geiger-Müller counter. The source was placed between the pole pieces of an electromagnet, which caused the emitted particles to whirl about and progress along a curved path to a lead plate by which they were absorbed, and which emitted the resulting radiation. It was so arranged that when the electric current traversed the coils of the magnet in one direction, only the positrons arrived at the lead plate. When the current was reversed, only the electrons arrived. In this case, nothing unusual happened.

But when positrons fell on the plate, photons were produced, each of half a million volts energy, and double in number the number of positrons arriving. Furthermore, it was calculated that the average life of the positrons created and destroyed in this experiment was the hundred thousandth part of a second.

Thus Prof. Dirac's theory seems to be confirmed in all its parts, and the positron may well claim to be the shortest-lived entity in the universe.

*Science News Letter, February 17, 1934*

The vicious career of one man-eating lion in India was believed to be explained when an examination of the dead animal's skull showed an old bone injury causing partial paralysis of the lower jaw. This may have caused the animal to attack natives rather than fight large animals.

MEDICINE

### Change of Machine Oil May Lessen Skin Cancer

**S**KIN cancer among textile workers, known as mule spinner's cancer, may be lessened by changing the quality of lubricating oil used on textile machinery, it appears from studies made by Dr. C. C. Twort and J. W. Twort of the Manchester (England) Committee on Cancer. This type of cancer is due to the irritation of the skin by the constant soaking of one spot on the clothing with oil as the worker tends his machine.

In their report, published in *The Lancet*, the Manchester investigators state that the cancer-producing property of the mineral oil is closely related to its refractivity constant. This term, referring to the oil's ability to bend light waves, is used by physicists and chemists to indicate its type.

The refined grades of oil used on textile machinery have greater cancer-producing power than crude oil, the Tworts found. Treating oils with sulfur dioxide profoundly lowers their refractivity. So the Manchester scientists suggest this treatment or careful selection of lubricating oils as a means of reducing the amount of cancer among textile workers.

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ARCHAEOLOGY

### Tombs Found in Burial City of Indian Kings

**E**XPLORING at Mitla, beautiful Indian city where Zapotec Indian kings and priests were buried, Mexican archaeologists have discovered two tombs. Both tombs had been sacked, the archaeologists found.

One tomb, found in the backyard of a modern Indian dwelling, still contained thirteen copper bells, a broken painted vessel, and numerous batches of bones. The bones apparently were once arranged around the walls with skulls on top. The other tomb, found under a mound, still contained some Zapotec pottery, human bones, bits of turquoise and jade, and two fancy gold beads the size of marbles.

Mitla, still noted for its beautiful temple adorned with stone mosaics, was in its ancient heyday a city of the dead. Local tradition held that Mitla was the entrance to Hades. Caves under the city, said to be vast and rambling, were used as tombs.

*Science News Letter, February 17, 1934*

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