75 Influence of Strong Magnetic Fields on the Electrocardiogram of Squirrel Monkeys (Saimiri sciureus). D.E. Beischer and J.C. Knepton, Jr.
Aerospace Med. 35, 939-944 (Oct. 1964).

Man may be exposed to strong magnetic fields over prolonged periods of time if plans to apply such fields for reasons of a technical nature in future space ships are realized. Experiments with subhuman primates are necessary in preparation for systematic investigation of possible effects of such fields on man. A study of the performance of the heart in a strong magnetic field is of special interest. Electrocardiograms (ECG) of 4 monkeys were recorded during exposure of the animals to magnetic fields of 20,000 to 70,000 gauss. Neither breathing rate nor R wave amplitude of the ECG was affected. A decrease in the heart rate, an increase in the degree of sinus arrhythmia, and a considerable augmentation of the amplitude of the T wave are newly observed biomagnetic effects. The influence of strong magnetic fields on electrical processes in living matter is stressed. -- Authors' abst.

RADIOACTIVITY AND X-RADIATION

76 X-Ray Hazard in Small-Animal Veterinary Practice. A. Schmidt and L.B. Leppard.
Can. J. Public Health 55, 287-293 (July, 1964).

In the latter months of 1962, a tour of 10 small animal clinics was undertaken to investigate radiation hazards that might possibly be connected with the typical use of x-ray installations. Although a properly aligned and filtered x-ray tube is not a completely innocuous device, the hazard is small. A lead apron and gloves are likely to prevent acute injuries, even in the case of moderately high workloads or of low workloads and less favorable technical conditions. The accepted practice of wearing lead gloves and apron indicates that the profession is aware of the radiation hazard to some degree. The authors have tried to show, however, that the omission of filtration, beam-limiting diaphragms and cones could change a relatively harmless operation into a dangerous one, and that in practice conditions can easily arise where 0.25 mm. lead (contained in the normal lead garment) would not prevent exposures in excess of the limit values recommended by such bodies as the International Commission on Radiological Protection. -- Public Health Eng. Absts.

77 Disposal of High-Level Radioactive Wastes. R. Eliassen.
J. Water Pollution Control Fed. 36, 201-216 (Feb. 1964).

The present temporary and unsatisfactory disposal methods for nuclear wastes, and the need for a more reliable method at a reasonable cost are discussed. The failing points and inefficiencies of current methods of disposal are cited. Results are given of a recent study to incorporate the wastes into glass at high temperatures. An analysis of the problems that were confronted in the study and in the solutions is presented. As a result of the study, glass can be produced that will provide the necessary degree of security needed in high-level radioactive waste disposal by a method that can cope with the anticipated growth of the nuclear power industry. There are 21 references. -- Public Health Eng. Absts.

ENVIRONMENTAL MEASUREMENTS

78 An Auto Exhaust Proportional Sampler. R. Smith, A.H. Rose, Jr., and R. Kruse.
Intern. J. Air and Water Poll. 8, 427-440 (Sept. 1964).

This paper concerns the development of an instrument to obtain a proportional sample of auto exhaust gas in the sampling line to maintain it at a fixed percentage of the carburetor