ment of Terrestrial Magnetism of the Carnegie Institution of Washington, and by various cooperating magnetic observatories, institutions and individuals. One magnetic observatory, that at Agincourt, near Toronto, Canada, lies within the shadow belt. The Coast and Geodetic Survey magnetic observatory at Cheltenham, Maryland, is also very favorably situated, being within 200 miles of the southern edge of the path. The observatories of Great Britain lie near the path, although the sun will set while still eclipsed at those stations.

The general scheme of work is as follows:

1. *Simultaneous magnetic observations* of any or all the elements, according to the instruments at the observer's disposal, every minute from January 24, 1925, $11^h\ 58^m$ to $18^h\ 02^m$ Greenwich civil mean time.

(To insure the highest degree of accuracy, the observer should begin work early enough to have everything in complete readiness in proper time. *Past experience has shown it to be essential that the same observer make the readings throughout the entire interval.* If possible, similar observations for the same interval of time as on January 24 should be made on January 23 and 25.)

2. At *magnetic observatories* all necessary precautions should be taken to insure that the self-recording instruments will be in good operation not only during the proposed interval, but also for some time before and after, and eye-readings should be taken in addition wherever it is possible and convenient. (*It is recommended that, in general, the magnetograph be run on the usual speed throughout the interval, and that, if a change in recording speed be made, every precaution possible be taken to guard against instrumental changes likely to affect the continuity of the base-line.*)

3. *Atmospheric-electric observations* are desirable to the fullest extent possible with the available equipment and personnel. Observations of potential gradient are most easily provided for and most conveniently taken; in addition to these, observations (preferably for both signs) of either conductivity or ionic content are also very desirable. Full notes regarding cloud and wind conditions and, if possible, observations for both temperature and relative humidity should accompany the atmospheric-electric observations. These observations should cover the same interval as the magnetic observations. The value of the observations on the day of the eclipse will be greatly increased if similar observations can be made during the same time of day on two or three days before and after the eclipse.

4. *Meteorological observations* in accordance with the observer's equipment should be made at convenient periods (as short as possible) through the interval. It is suggested that, at least, temperature be read every fifth minute (directly after the magnetic reading for that minute).

5. *Observers in the belt of totality* are requested to take the magnetic reading every 30 seconds during the interval, 10 minutes before to 10 minutes after the time of totality, and to read temperature also every 30 seconds, between the magnetic readings.

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A METHOD OF MAKING PERMANENT SMEARS OF POLLEN MOTHER CELLS

IN some recent work on *Ginkgo biloba* excellently fixed preparations of pollen mother cells in mitosis were obtained by the rapid and simple method outlined below. The desired stage of the anthers was determined by Belling's aceto-carmine method (Belling, J. (1921) *American Naturalist* 55: 573–4). A very thin film of albumin fixative was spread on a slide; then the anther was crushed and its contents distributed upon the slide with a scalpel as evenly as possible. When this was done, the slide was placed in a Coplin jar containing Flemming's medium fixative for 24 hours, washed 5 hours in running water, bleached in hydrogen peroxide and dehydrated and stained with safranin and light green. This method seems worth testing on other plants, since with it permanent records can be kept of material which has been studied by Belling's method. Such records are exceedingly useful for demonstration purposes, since even if the desired plants are in good condition, which can not always be the case, considerable time is consumed in making new preparations for each visiting scientist who wishes to see the actual material described in some published work.

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OSMOSIS DEMONSTRATION FOR CLASSES IN BIOLOGY

IN the article, "Osmosis demonstration for biology classes," by Mr. Benjamin C. Gruenberg (SCIENCE, LX, 1555, October 17, 1924), there is described a very excellent method for preparing celloidin bags for this demonstration. There is just one addition to this method, which our technician has found a big assistance.

This is in the preparation of the bottles before