the radioactive particulate matter is not evenly distributed throughout the liver or spleen, but is concentrated in RE cells. Therefore, the dose of radiation absorbed by RE cells in these organs will be higher than in the case of uniform distribution (*5*). Furthermore, the claim of the earlier literature that there is a rapid regenerative tendency of the RE system based on qualitative histological observations appears not to be confirmed by more recent investigations in this laboratory.

The significant role of the RE system in serum globulin synthesis, antibody production, fat metabolism, infections, general resistance, etc., is fairly well established despite the fact that much more quantitative work is desirable. If one considers the RE system as being highly radiosensitive, it would appear to be a matter of great importance to point out at this time the danger of injecting intravenously radioactive colloids for diagnostic purposes in humans.

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Terminology of Atmospheric Shells

IT might be interesting, in view of the confusion now existing in the terminology of the various atmospheric shells, to indicate the system now employed by the Geophysics Research Directorate. This system considers that the atmosphere is divided into six "spheres" or shells, not necessarily either spherical or concentric. The approximate altitude ranges of these shells and the names of the dividing surfaces are shown in Table 1.

It should be noted that a "dividing surface" may have appreciable thickness and hence not be strictly a surface. In the case of the tropopause, for example, this thickness may be several kilometers and in the case of the chemopause it may, perhaps, be 10 km or more. Figure 1 diagrammatically portrays the nomenclature adopted.

TABLE 1

ATMOSPHERIC SUBDIVISIONS

Atmospheric region	Altitude (km)	Dividing surface*
Troposphere	0–11	Tropopause
Stratosphere	11–32	Stratopause
Chemosphere	32–80	Chemospause
Ionosphere	80–400	Ionopause
Mesosphere	400–1000	Mesopause
Exosphere	Above 1000	

* Between the shell concerned and the next higher shell.

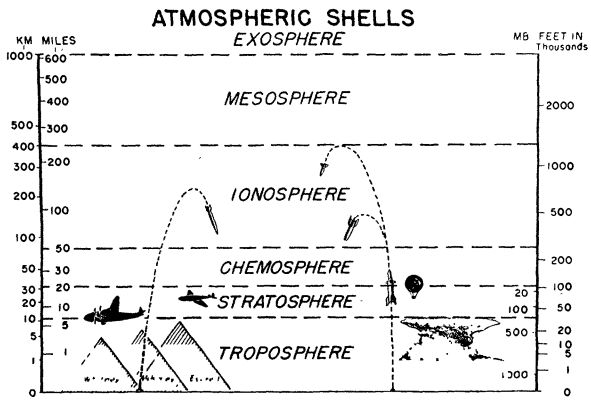

FIG. 1.

The various altitudes given represent mean conditions at middle latitudes.

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Book Reviews

Introduction to Organic Chemistry. Leland A. Underkofler. New York: D. Van Nostrand, 1953. 352 pp. $4.25.

Professor Underkofler's text is designed specifically for very short courses in organic chemistry and for students in colleges of agriculture, home economics, and nursing. As such, much of the detailed treatment considered desirable for science or chemistry majors is omitted. On the other hand, the book is not simply a descriptive exposition of well-known organic materials but includes discussions of carefully selected principles and practices of the science. The interested student will attain a working knowledge of structural chemistry, systematic nomenclature, and synthetic methods. Reaction mechanisms and the electronic concepts of valence and resonance are scarcely considered. Biochemical topics have been kept to a minimum since it is expected that they will be considered in subsequent courses.