

FIG. 5-3. Graphs of the radial wave functions  $R_{nl}(r)$  for  $n = 1, 2,$  and  $3$  and  $l = 0, 1, 2$ .

<sup>1</sup> Note that in the discussion of the Bohr theory the distance of the electron from the center of mass was designated by  $r$ . In the present discussion, however,  $r$  refers to the distance of the electron from the nucleus.

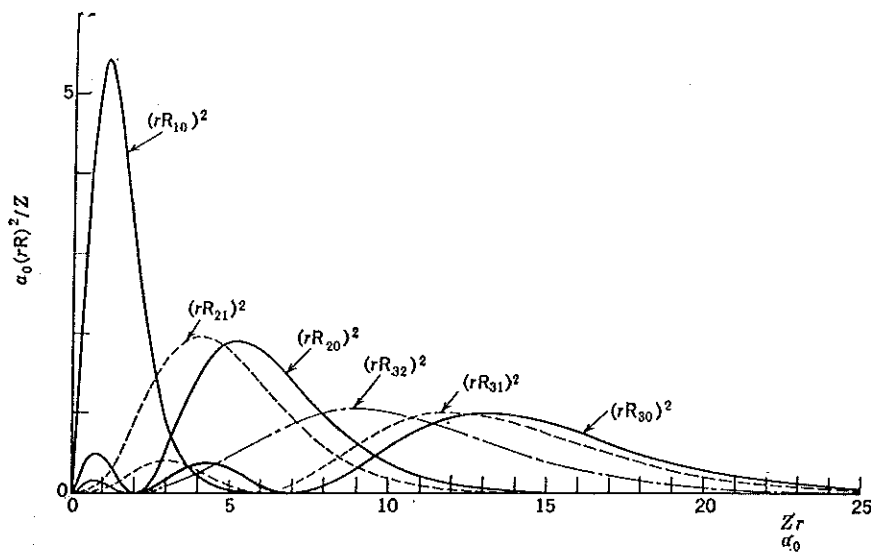
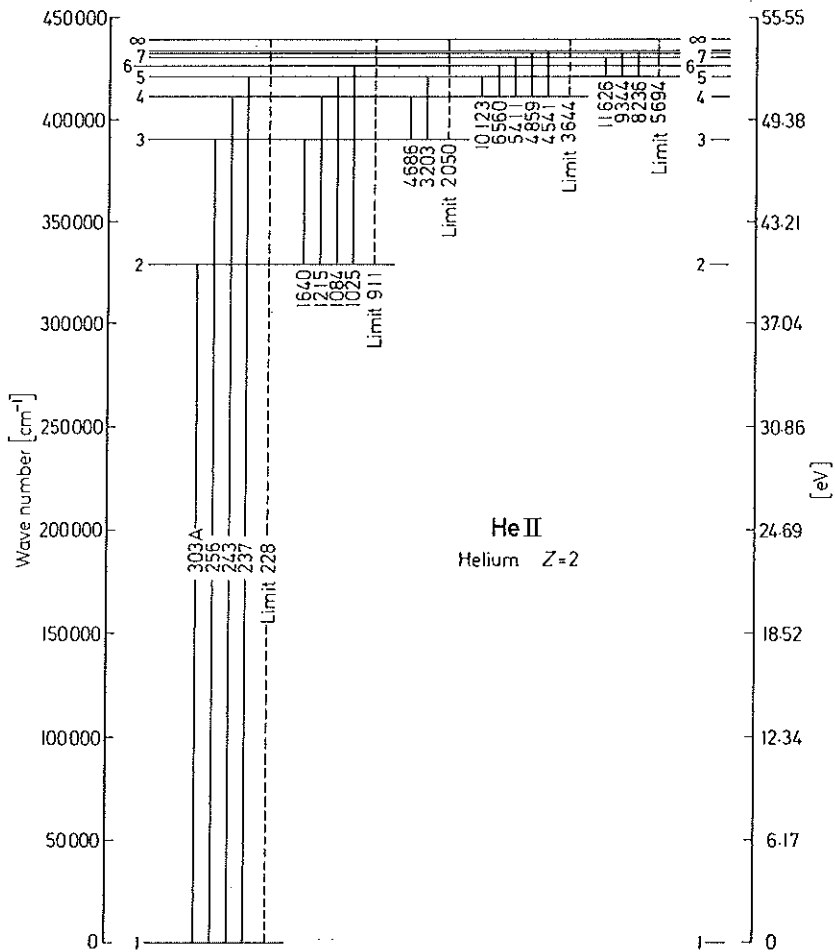
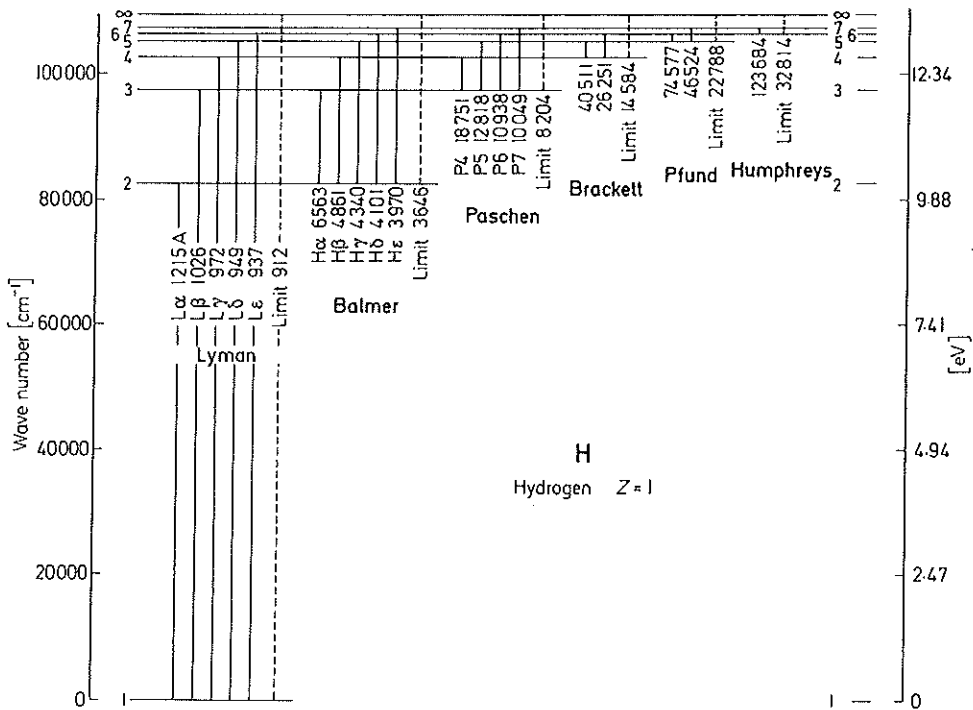
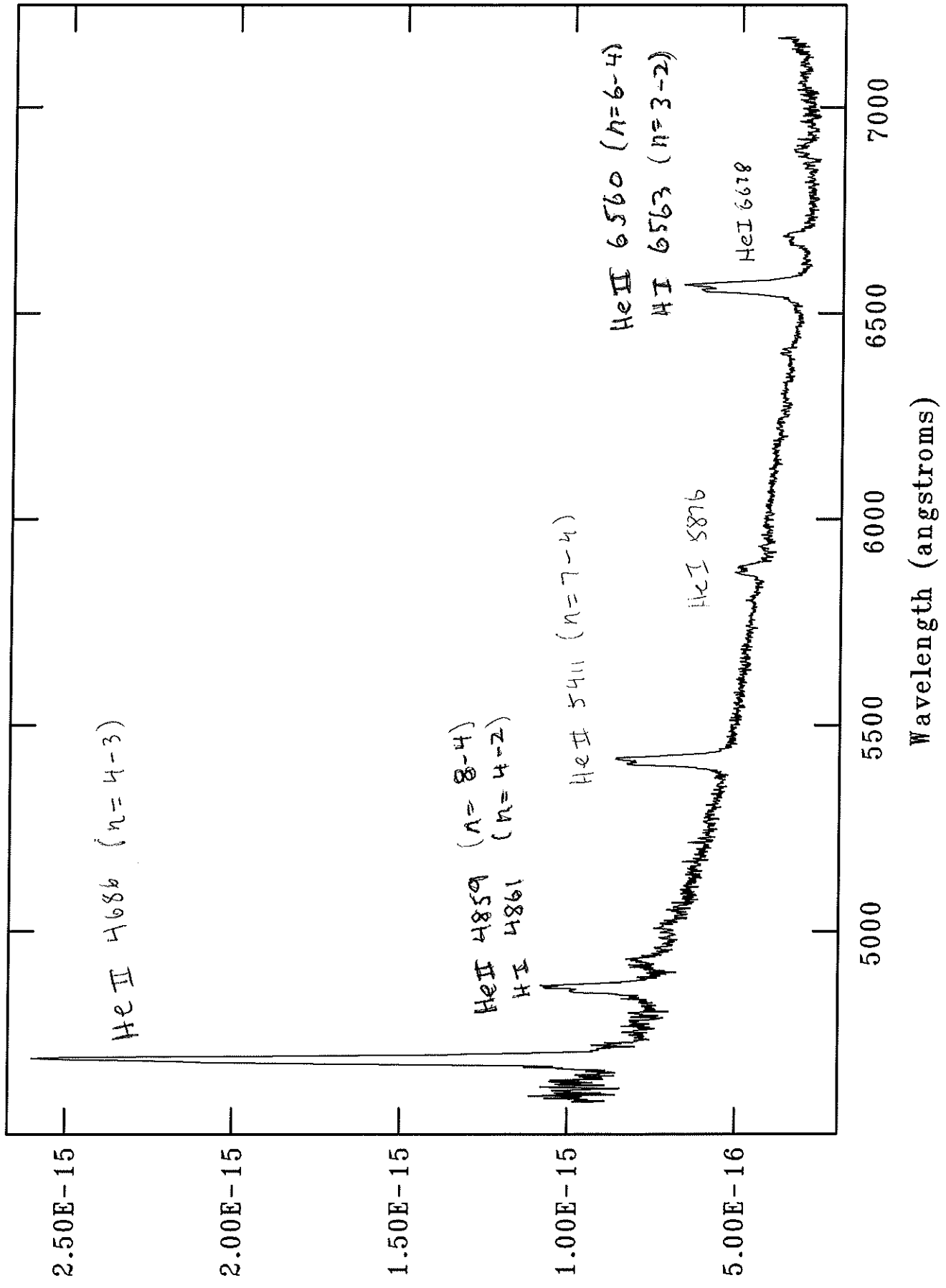


FIG. 5-4. Graphs of the radial probability density  $r^2[R_{nl}(r)]^2$  for the wave functions of Fig. 5-3.

Figures 5-3 and 5-4 show  $R_{nl}(r)$  and  $r^2[R_{nl}(r)]^2$  for several values of  $n$  and  $l$ .

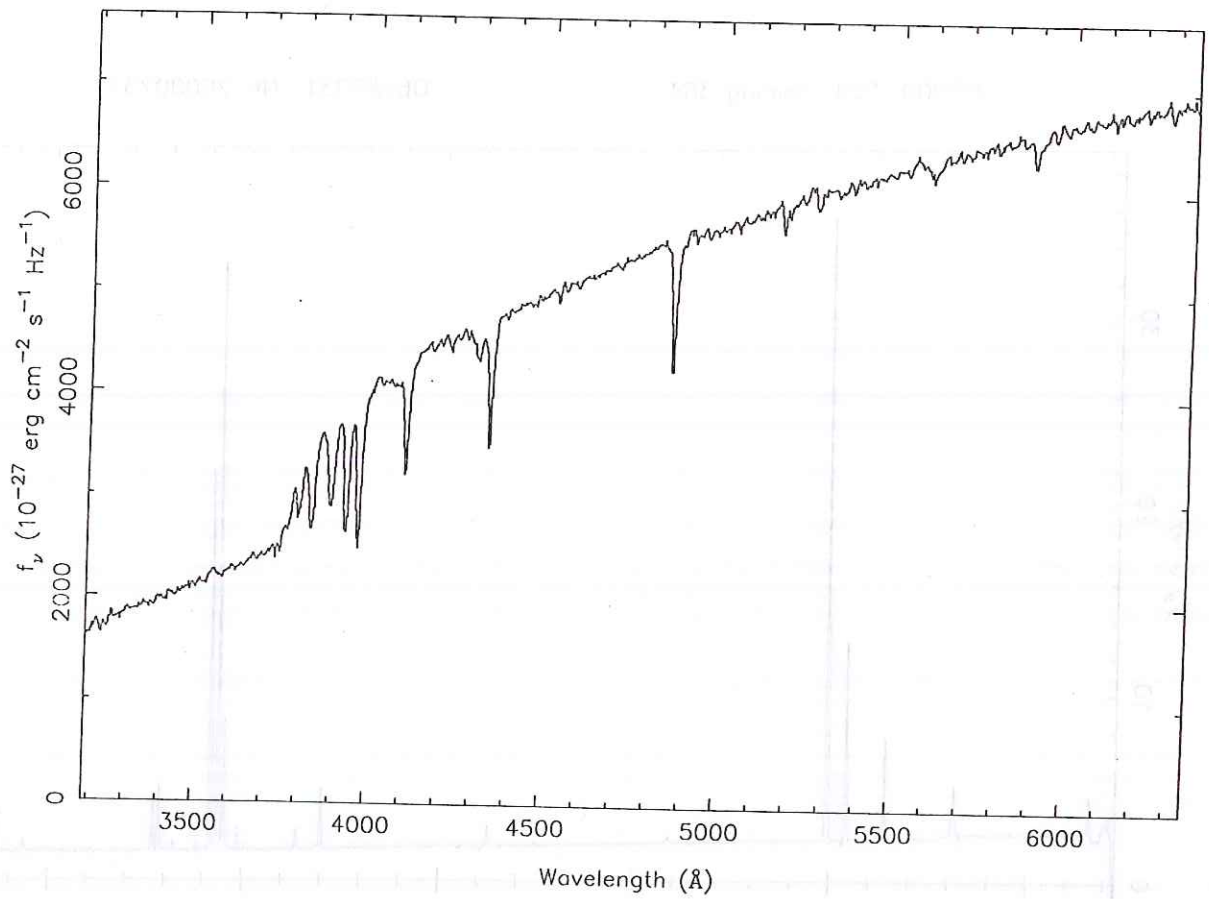


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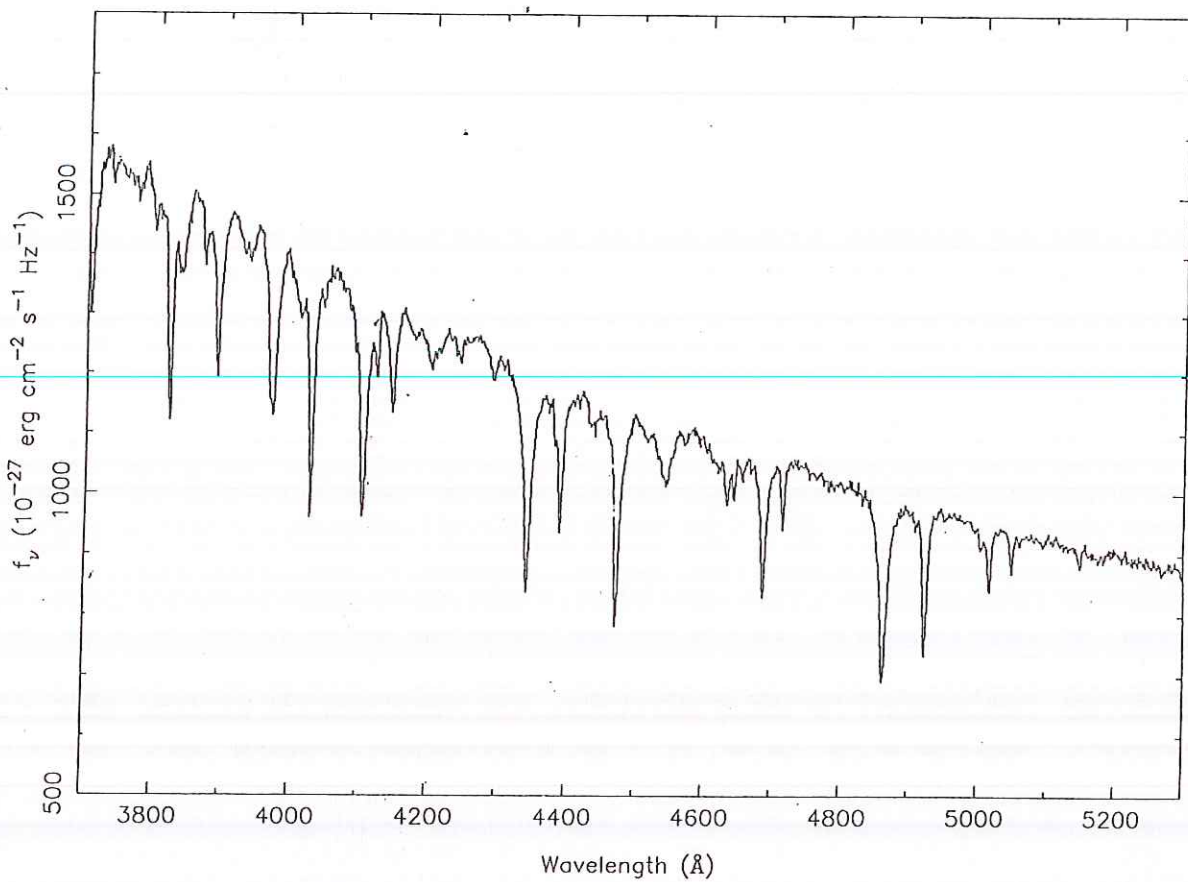
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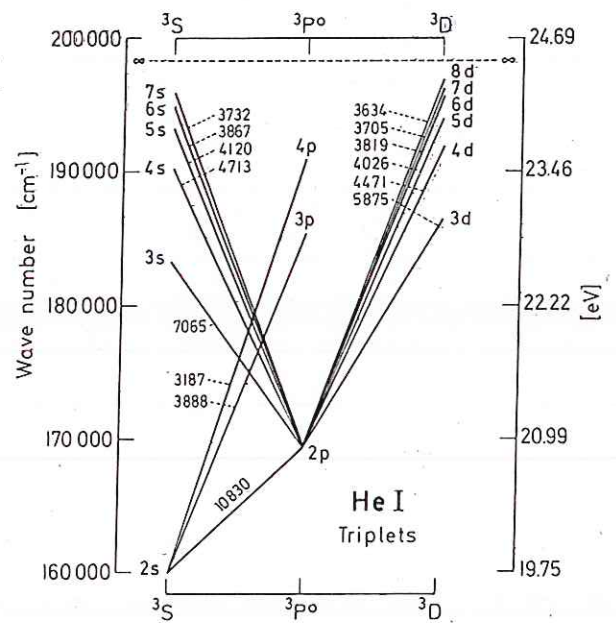
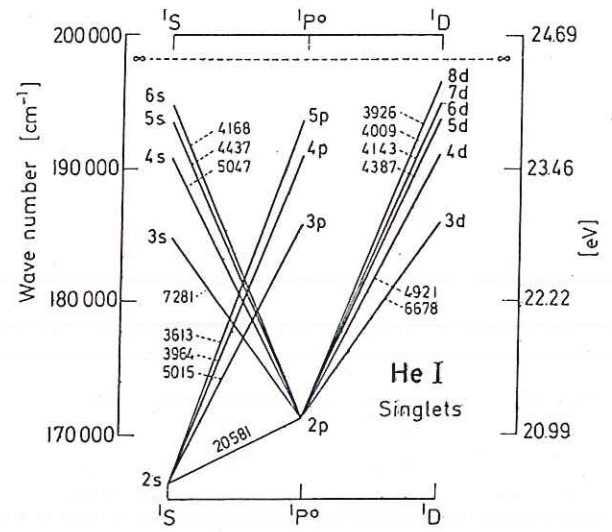
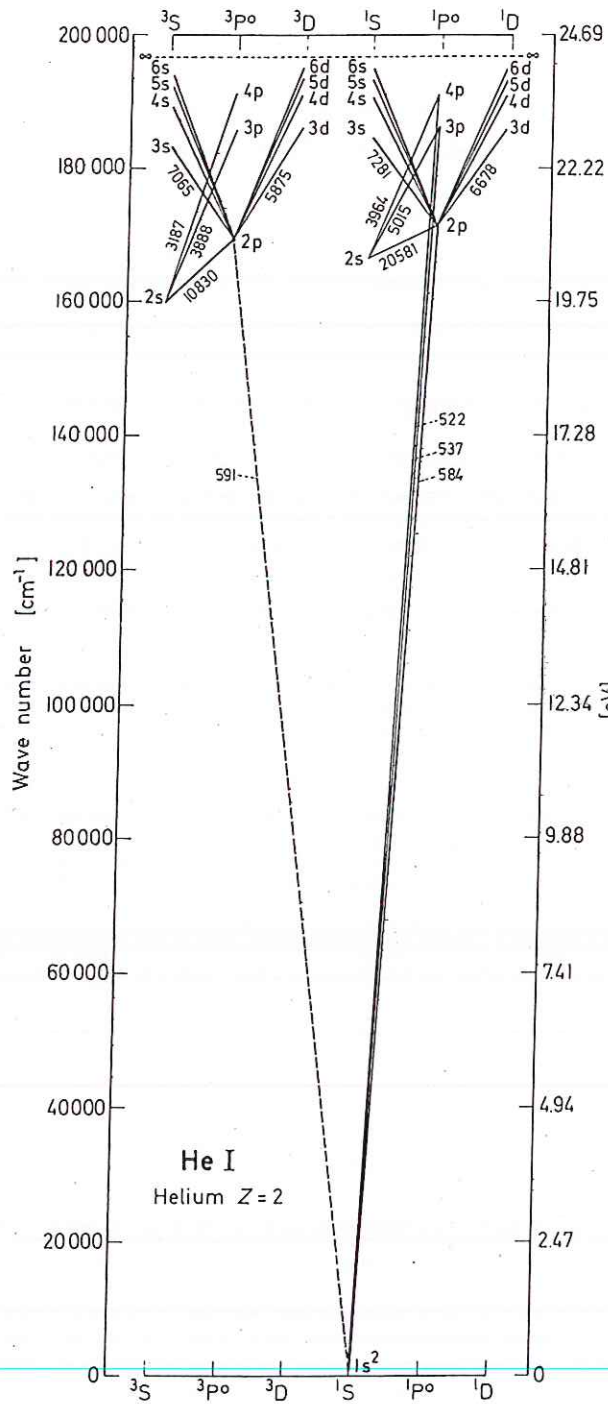


Fig. 13. Grotrian diagrams (continued)

