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Short title: Any *l*-state solutions of the Woods-Saxon potential in arbitrary dimensions within the new improved quantization rule.

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Review text:

The trick with the lowering of the order of differential equation is applied replacing the standard Schroedinger quantum Woods-Saxon bound-state eigenvalue problem by its Riccati-equation representation. The related oscillation theorems and an efficient approximation of the centrifugal term are then used for an efficient approximate evaluation and study of degeneracies between levels with various orbital quantum numbers and spatial dimensions.