The nature of the light variability of the silicon star HR 7224

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We simulate the light variability of the silicon star HR 7224. For this purpose we use the TLUSTY model atmospheres calculated for the appropriate silicon and iron abundances to obtain the emergent flux and to predict the rotationally modulated light curve of the star. We show that the light variation of the star can be explained as a result of i) the uneven surface distribution of the elements, ii) the flux redistribution from the ultraviolet to the visible part of the spectrum, and iii) rotation of the star. We show that the silicon bound-free transitions and iron bound-bound transitions provide the main contribution to the flux redistribution. We confirm that numerous iron lines significantly contribute to the well-known depression at 5200 Å and discuss the connection between iron abundance and the value of peculiarity index a.