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Title: Finding Vacancies in a Defected Crystal

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This program aims to find vacancies in a crystal that has been defected by radiation in order to facilitate determination of the structural integrity of the crystal. These vacancies are found by minimizing a potential field that is the distance to the nearest atom at every point. The final algorithm runs in $O(n^2)$ where n is the number of atoms in the crystal if the assumption that n is proportional to the volume of the crystals made. An important constraint on the positions of the virtual atoms used to denote the gaps are that the outer radius of its voronoi polyhedron (R_{cc}) must be less than the distance to the nearest neighbor (R_{nn}).