

Calculation of the Isotope Shifts on  $5S_{1/2} \rightarrow 4D_{3/2, 5/2}$  Transitions of  $^{87, 88}\text{Sr}^+$

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**Abstract:** A simple method is applied to calculating the isotope shifts (ISs) on  $5S_{1/2} \rightarrow 4D_{3/2, 5/2}$  transitions of  $^{87, 88}\text{Sr}^+$ . First we have calculated the ISs of lower transitions on a series of alkali-like systems such as  $\text{B}^{2+}$ ,  $\text{Ca}^+$  and  $\text{Ba}^+$ , which are in agreement with other works. Then the ISs on  $5S_{1/2} \rightarrow 4D_{3/2, 5/2}$  transitions of  $^{87, 88}\text{Sr}^+$ , which are useful to study the  $\text{Sr}^+$  optical frequency standard, are evaluated.

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Key words: isotope shift, specific mass shift, normal mass shift, field shift

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