

Representations of $U(1)$ and $SU(2)$ groups by correlated dichotomic probability distributions

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In the recent papers [1–3] the simple probability representation of qubit states and observables was introduced. It is well known that geometrically Lie group $U(1)$ is isomorphic to a circle S^1 and $SU(2)$ is isomorphic to a sphere S^3 . The present report demonstrates how using the aforementioned qubit probability representation to construct a parametrization of groups $U(1)$ and $SU(2)$ based on correlated dichotomic probability distributions.

References

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- [3] V. N. Chernega, O. V. Man'ko, V. I. Man'ko, J. Russ. Las. Res. **39**, 2 (2018).