## 24th Australian Institute of Physics Congress



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## Optimal mitigation of random-telegraph-noise dephasing by spectator-qubit

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We develop optimal measurement and control strategies for spectator-qubits(SQ) to mitigate data-qubit dephasing caused by a random telegraph process. Our findings show that the SQ, like Dynamical Decoupling and Quantum Error Correction, may effectively increase the coherence of the data-qubit.

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