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γ-rays following the β-decay of $^{62}$Ga and the strength of the superallowed transition J.R. LESLIE, I.S. TOWNER, Queen’s University, C. ANDREOIU, P.E. GARRETT, B.H. HYLAND, A.A. PHILLIPS, M.A. SCHUMAKER, C.E. SVENSSON, J.J. VALIENTE-DOBIN, University of Guelph, A. ANDREYEV, G.C. BALL, P. BRICAULT, M. DOMBSKY, G. HACKMAN, D. MELCONIAN, A.C. MORTON, C.J. PEARSON, TRIUMF, D. CROSS, Simon Fraser University, J.A. BECKER, LLNL — As part of an ongoing study of superallowed β-decay at TRIUMF, we have measured the intensity and energy of γ-rays following the β-decay of $^{62}$Ga. During a beam on period of 10 s., a total of approximately $3 \times 10^8$ atoms of $^{62}$Ga, from the Resonant Laser Ionisation Source at the ISAC facility, was implanted into a collector tape at the centre of the SCEPTAR/8π arrays. Before and after the beam on period, 2 s. of data were taken to assess backgrounds and the build up of long-lived activities. After each counting cycle the tape was moved in order to transport the implanted atoms to a shielded location. Substantial reduction in the Bremsstrahlung induced background were achieved by vetoing events in which the β-rays and γ-rays were observed in corresponding detectors. Singles β and coincident β-γ events were recorded. The intensities of β-rays feeding of low lying states in $^{62}$Zn and a γ-decay scheme of $^{62}$Zn are proposed. The data are compared to shell model predictions of energies and transition strengths. Predictions of charge dependent effects are tested against the deduced superallowed transition probability.

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