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High temperature annealing of irradiated LGADs

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LGADs irradiated up to 6e15 n/cm2 with reactor neutrons were annealed at high temperatures between 300C and 450C. Annealing was for 30 minutes in steps of 50C. CV measurements were made after each annealing step and a significant increase of gain layer depletion voltage was observed. Charge collection and timing resolution were measured with electrons from Sr-90 showing beneficial effect of short term high temperature annealing of irradiated LGADs.

Primary authors: HOWARD, Alissa Shirley-Ann (Jozef Stefan Institute (SI)); HITI, Bojan (C); KRAMBERGER, Gregor (Jozef Stefan Institute (SI)); MANDIC, Igor (Jozef Stefan Institute (SI)); NOVAK, Brigita (Jožef Stefan Institute); MIKUZ, Marko (Jozef Stefan Institute (SI)); CINDRO, Vladimir (Jozef Stefan Institute (SI)); KLJUN, Žan (Jožef Stefan Institute)

Presenter: KRAMBERGER, Gregor (Jozef Stefan Institute (SI))

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