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## Development of Neganov-Luke light detectors for a rare event experiment

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We report on the recent progress in Neganov–Luke light detector (NLLD) development. The electrodes to generate electric field for Neganov-Luke phonon amplification is configured in a pair of comb-shaped Al electrodes fabricated on one side of a silicon wafer served as a light absorber. A metallic magnetic calorimeter (MMC) is adopted to measure the temperature increase of the absorber wafer. The NLLD was implemented with a scintillating crystal for simultaneous detection of heat and light signals. Clear and monotonic amplification of light signals was resulted with the bias voltage incensement across the electrodes. An amplification factor of 7 was obtained with 80 V bias voltage in the light signals while no difference in signal amplitude and noise was found in the heat measurement channel.

### Less than 5 years of experience since completion of Ph.D

Y

### Student (Ph.D., M.Sc. or B.Sc.)

N

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