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# Developments in the Spherical Proportional Counter for NEWS-G

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The NEWS-G collaboration utilises the novel technology of the Spherical Proportional Counter (SPC) to conduct a direct search for low mass Dark Matter (DM) candidates. The SPC comprises a grounded metallic spherical vessel with a central spherical readout anode. In the ideal geometry, the radial electric field within the detector varies as $1/r^2$, however, the details of the support structure of the anode substantially influence its exact form. The understanding of the electric field is crucial to the successful operation of the detector, as it directly impacts the electron drift times and the uniformity of the detector gain. The detector will be presented with an emphasis on the developments in sensor design to improve electric field uniformity, including studies of the effects of geometry and bias voltage on the electric field.

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