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## Fluid flow monitoring using optically pumped magnetometers

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Monitoring blood circulation, known as hemodynamic monitoring, is vital for assessing patient health. However, obtaining detailed blood flow information non-invasively remains a challenge. To address this, we developed a system that uses strong permanent magnets and optically pumped magnetometers to detect the flow of a pulsed liquid. Our setup enables us to track polarised water moving through a tube and determine its flow velocity. The measured values align well with predictions based on polarisation and magnetisation decay models. These early results demonstrate the potential of this method for future blood flow studies.

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