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## Measuring the viscosity of tritium

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Experimental values for the viscosity of tritium are still unknown in literature. Values to be found are ab initio calculated values, which are only valid for 300 K and higher. For lower temperatures, only values extrapolated from hydrogen and deuterium exist, with an uncertainty of 5-10 %. The viscosity of tritium is an important parameter, needed for gas dynamics simulations, for example in fusion science and particle physics experiments. We have now developed a Cryogenic Viscosity Measurement Apparatus (Cryo-ViMA), based on a spinning rotor gauge (SRG), with which we are able to measure the viscosity of tritium between 77 K and 300 K, with an uncertainty of 2 % without any systematic corrections. By including systematic corrections concerning the temperature and the pressure, the uncertainty on the measurements can even be reduced down to 1 %. This poster presents the final setup, the measurement procedure and first results from the cold commissioning in a narrow temperature range.

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