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LIQUID MICROJET MASS SPECTROMETRY

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We have recently developed a novel liquid microjet ion source coupled to a time-of-flight mass spectrometer. This instrument is to be used for the *in vacuo* analysis of environmental water samples. The liquid injector is a small a micron-sized channel through which liquid is pumped into a vacuum chamber. The injector operates at flow velocities of 3 to 4m/s and a volume of only a few microlitres per minute. At the exit of the injector an applied high voltage initiates the ionisation process. In the first instance we are focussing our attention on the analysis of inorganic ions such as phosphate and nitrate in ground and surface water samples. Future effort will be invested in analysing organic environmental contaminants. This poster presents details on the instrument construction as well as early results from our studies into ion formation processes in liquid microjets.