



1. Title:	Characterization of ionic debris interaction with a buffer gas in the frame of debris mitigation issues.
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### 3. Abstract body:

The debris emission from EUV plasma sources is still one of the biggest problems of EUV lithography. Most of the debris mitigation systems (DMS) under development nowadays are based on the use of a low pressure buffer gas to capture at least the atomic component of the debris stream.

Here authors demonstrate that the physics of interaction of the atomic debris with a gas is more complex than what expected: the gas motion induced by the debris momentum, the formation of new aggregates from the originally emitted debris, and the velocity distribution of such clusters must be taken into account in order to develop high efficiency DMS.

Experimental results, obtained with different diagnostics, aimed at the characterization of the above mentioned physical processes are presented and discussed.