Strong-field ionization of arbitrarily oriented H_2^+ molecules

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Experimental studies of molecules in intense laser fields are most often performed on a randomly oriented ensemble of molecules. On the other hand, in most theoretical ab initio calculations on H_2^+, the internuclear axis is chosen to coincide with the laser polarization direction. We will discuss some effects that occur when the molecule is not oriented parallel to the field axis. The theoretical method relies on a full three dimensional solution of the time dependent Schrödinger equation.