VELOCITY-MAPPED ION IMAGING OF METHYL NITRITE PHOTODISSOCIATION

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Methyl nitrite, CH_3 ONO, was photodissociated at 355 nm in a velocity-map ion imaging apparatus. The NO photoproduct was detected through state-resolved 1+1' resonance-enhanced multiphoton ionization. The NO products are highly oriented in the laboratory frame, indicating perpendicular transition and a prompt dissociation. The velocities of the NO products reveal that methyl nitrite undergoes rapid predissociation after 355 nm excitation.