Title:	Probing the excited state dynamics of Venus: origin of dual-emission in fluorescent proteins
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Abstract:	Fluorescent proteins exhibit interesting excited state photochemistry, leading to bright fluorescence emission that renders their versatile biological role and wide use as biomarkers. A molecular-level mechanism of the excited state dynamics is desirable to pinpoint the origin of the bright fluorescence of these proteins. Here we present studies on a yellow fluorescent protein variant, Venus, and investigate the photophysics behind the dual fluorescence emission upon UV excitation. Based on our studies, we propose that the unique nature of the potential energy surface is responsible for the observation of minor fluorescence in Venus which is not seen in wild type GFP.
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