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Forward-modelling of UV observables from the turbulent heating in coronal loops

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We model both the heating (anisotropic turbulence driven by Alfvén waves) and the cooling processes (convection, conduction, and radiation based on atomic physics) in a coronal loop. The heating is intermittent and sufficient to heat the loop at temperatures of more than a million degrees, with realistic values of the amplitude of the forcing (corresponding to motions of the photospheric footpoints of the loop). We show that including the feedback of the cooling on the heating processes is important in such models. Finally we forward-model the spectral line profiles of the UV emission of this loop and their time evolution, in order to be able to find signatures of heating processes in observations from space observatories such as Hinode and STEREO.