The mixing layer in the HH 110 outflow

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ABSTRACT

Turbulent mixing layers are expected to arise during the coupling between the flow of a stellar jet (mostly atomic gas) and its molecular environment. In this study is presented an analysis of optical (tracing the jet gas) and NIR (tracing the warm molecular gas) observations of the HH 110 flow. The observations are interpreted in the context of the thermal structure that is predicted by a turbulent mixing layer. It is found that the model reproduces remarkably well the spatial intensity distribution of the Hα, [S-n] and H_2 2.121μ m emission lines across the jet (perpendicular to its flow)).