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SED MODELING OF 10 MASSIVE YOUNG STELLAR OBJECTS

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Abstract

In this paper, we present the spectral energy distributions (SEDs) modeling of ten massive young stellar objects (MYSOs) and subsequently estimated different physical and structural/geometrical parameters for each of the ten central YSO outflow candidates along with their associated circumstellar disks and infalling envelopes. The SEDs for each of the MYSOs been reconstructed by using 2MASS, MSX, IRAS, IRAC & MIPS, SCUBA, WISE, SPIRE and IRAM data, with the help of a SED Fitting Tool that uses a grid of 2D radiative transfer models. Using the detailed analysis of SEDs and subsequent estimation of physical and geometrical parameters for the central YSO sources along with its circumstellar disks and envelopes, the cumulative distribution of the stellar, disk and envelope parameters can be analysed. This leads to a better understanding of massive star formation processes in their respective star forming regions in different molecular clouds.

Keywords: stars: massive, stars: pre-main-sequence, radiative transfer, SED: SED Fitting Tool

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