

## Molecular Shocks in Herbig-Haro 1

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We present low resolution, infrared spectroscopic observations (1.2- 2.4 $\mu$ m) near two optical condensations (A & G) of the leading working surface of Herbig-Haro object 1, in order to study the nature of their molecular shocks. Condensation A spectra show several molecular hydrogen lines, besides the strong (1,0) S(1) 2.121 $\mu$ m and (2,1) S(1) 2.247 $\mu$ m lines, as well as [FeII] 1.257 $\mu$ m and [FeII] 1.644 $\mu$ m. Condensation G does not show H<sub>2</sub> lines, but its [Fe II] lines are as strong as those in A. We compare the H<sub>2</sub> column densities of HH 1A, with those predicted by J-type and C-type shock models. It is difficult to distinguish between these models given our observations. From the [Fe II] lines we estimate an extinction of  $A_v = 6.7 \pm 1.4$  magnitudes (or an  $E(B - V)$  of 2.23 $\pm$ 0.4 magnitudes), which is higher than what it is obtained from the [S II] lines measurements.

Accepted by Revista Mexicana de Astronomía y Astrofísica