

## UV image processing to detect diffuse clouds

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### Abstract

The presence of diffuse clouds along the Galaxy is under consideration as far as they are related to stellar formation and their physical properties are not well understood.

The signal received from most of these structures in the UV images is minimal compared to the point sources. The presence of noise in these images makes hard the analysis because the Signal-to-Noise ratio is proportionally much higher in these areas.

However, the digital processing of the images shows that it is possible to enhance and target these clouds. Typically, this kind of treatment is done on purpose for specific research areas and the Astrophysicist's work depends on the computer tools and its possibilities for enhancing a particular area based on a prior knowledge.

Automating this step is the goal of our work to make easier the study of these structures in UV images. In particular we have used the GALEX survey images in the aim of learning to automatically detect such clouds and be able of unsupervised detection and graphic enhancement to log them.

Our experiments show the existence of some evidences in the UV images that allow the systematic computing and open the chance to generalize the algorithm to find these structures in universe areas where they have not been recorded yet.