Segmentation of Moon Image Using
Gravitational Symbolic Clustering

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Abstract. Clustering of the multispectral image data requires the approximate apriori information. The generation of the ground truth labels for multispectral image requires apriori information and approximations. Labels generated for multispectral images most of the times are approximations which drift away from the actual results. Unsupervised classification algorithms is the best way to cluster such data.

We have presented the gravitation method of classification of symbolic data to multispectral images. We have analyzed the agglomerative gravitation clustering for different image datasets. A divisive gravitational clustering technique has been proposed for multispectral images. Both the method incorporates of the data reduction technique to derive reduced symbolic data from the multispectral image. The method yielded improved performance when tested with other conventional clustering techniques.

Keywords: Cluster Coglomerative strength, Global coglomerative strength, Gravitational Clustering, Symbolic objects, Cluster Index, Composite symbolic objects, Mutual pairs, Data reduction technique.