all ImageSegmentation.java methods applied to a few pairs of images that are panoramic sets or stereo image sets with the goal of finding best segmentation for finding blobs to make matchable contours.

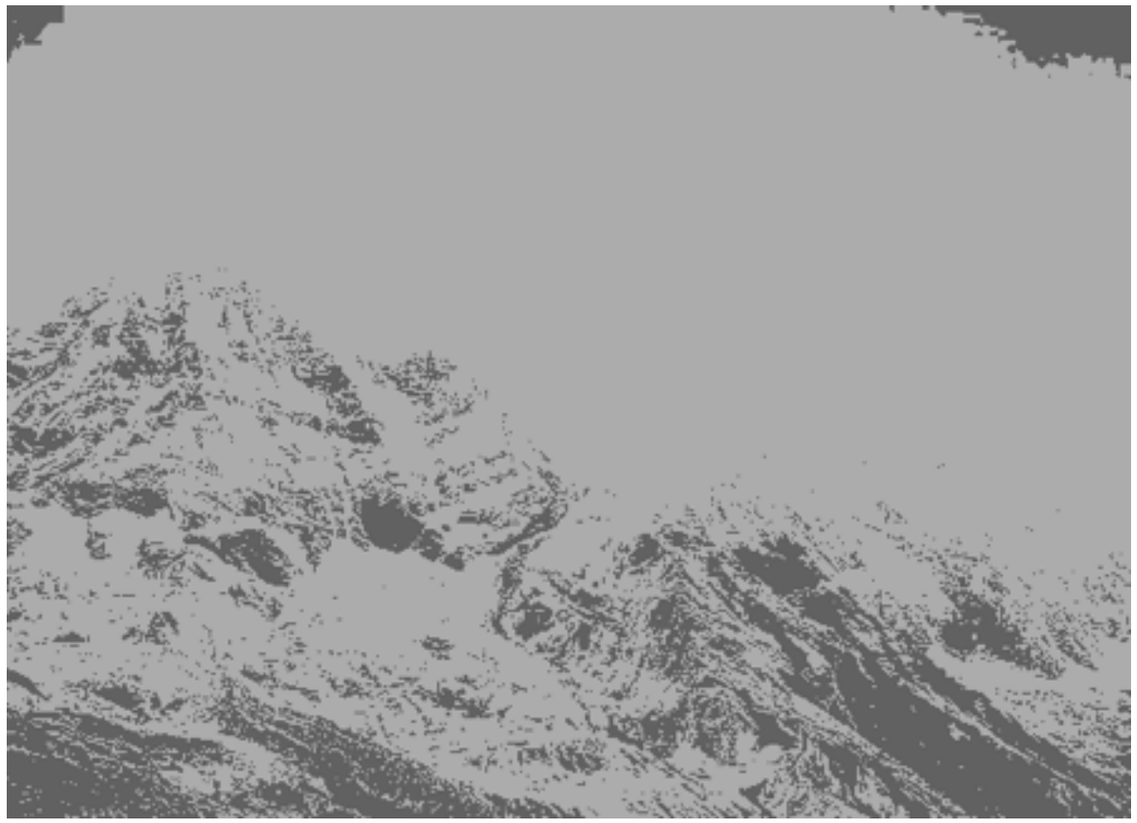
summary of next pages:

for brown & lowe 2003, best was KMPP w/ k=2
for Venturi, best was PolarCIEXYAndFrequency
for books, best was KMPP w/ k=2, 3 or 8

Venturi has lots of texture, so attempting a low resolution segmentation first is faster (the polar ciexy and frequency segmentation is O(N)… check that).

Books best matchable features w/o illumination and projection differences are the text. The text needs further processing such as adaptive mean thresholding.

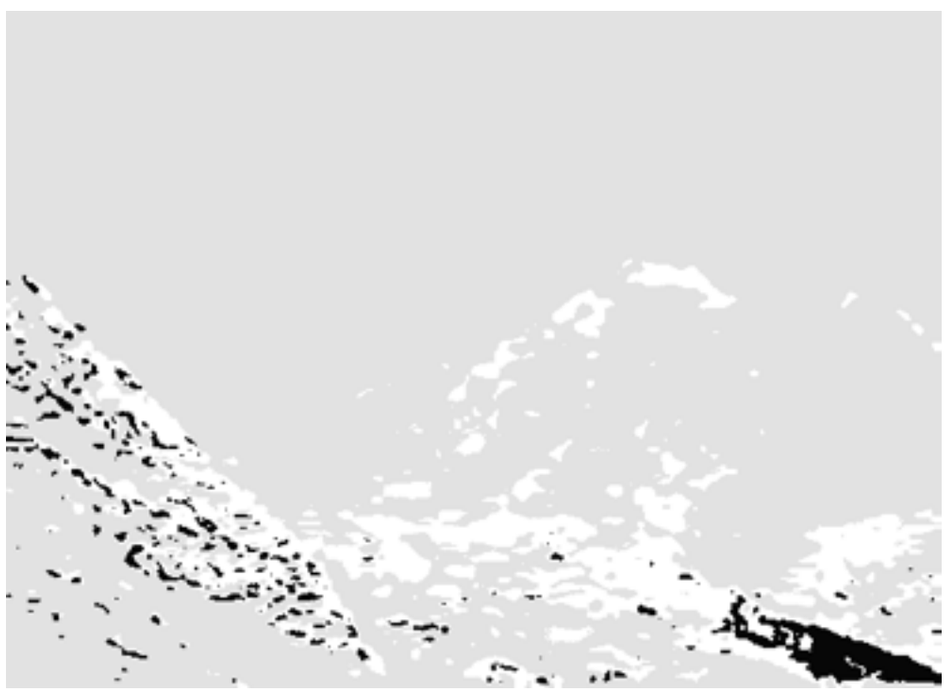
```
int kBands = 2; imageSegmentation.applyUsingKMPP(gsImg1, kBands);
```

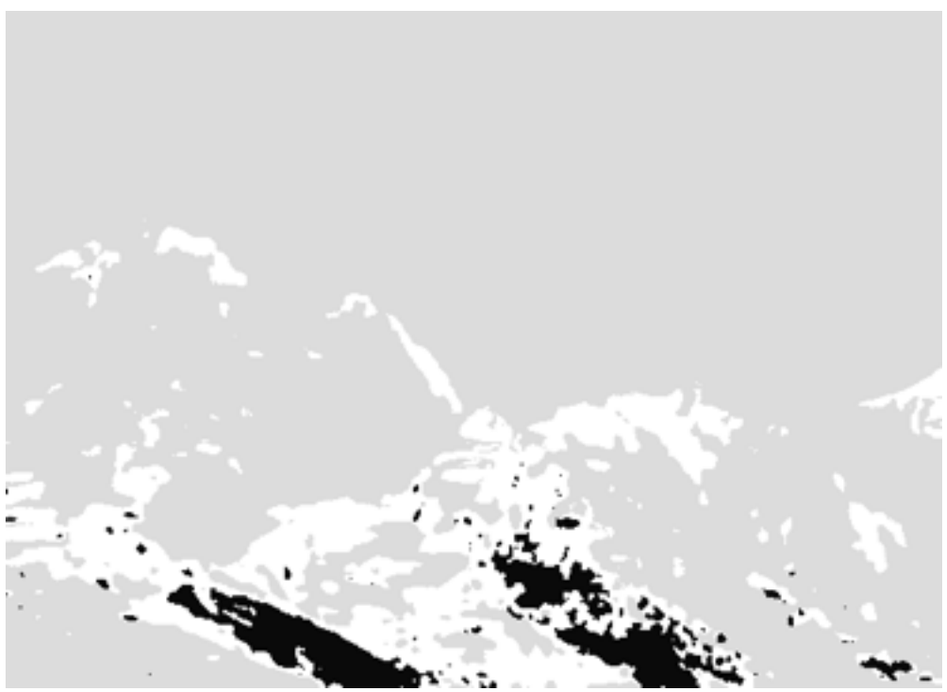


```
int kBands = 3; imageSegmentation.applyUsingKMPP(gsImg1, kBands);
```

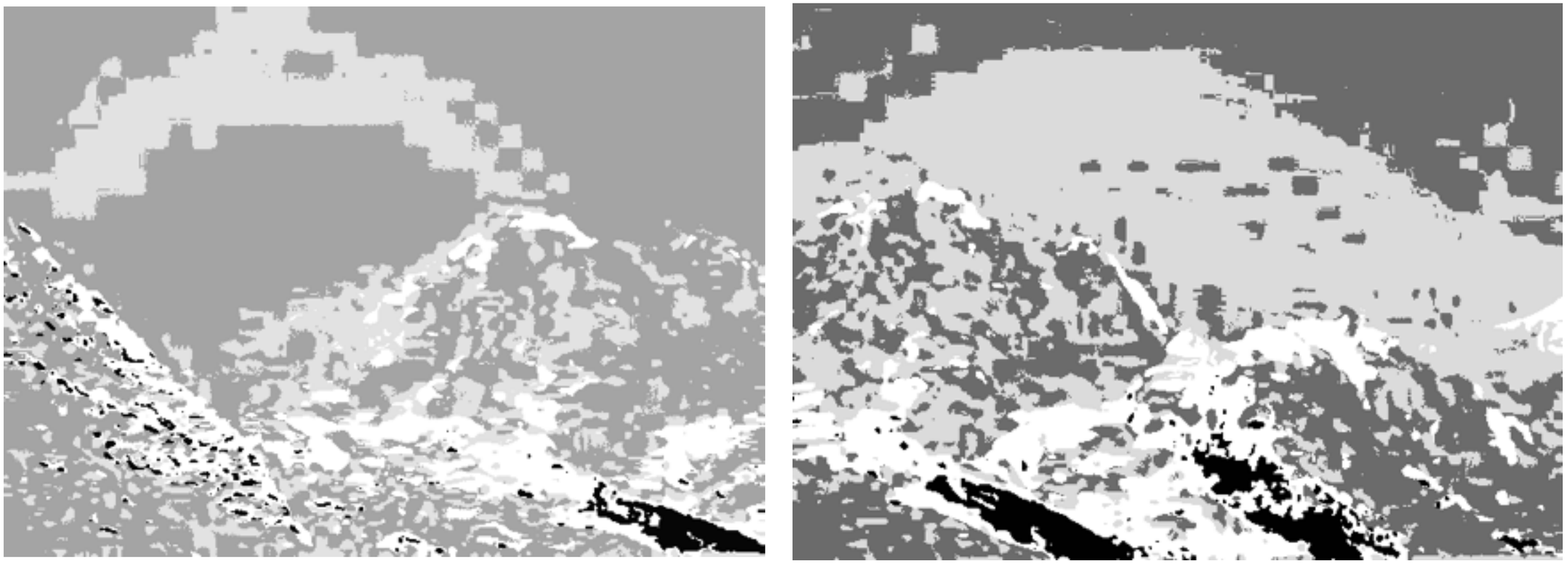
int kBands = 8; imageSegmentation.applyUsingKMPP(gsImg1, kBands);

int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);

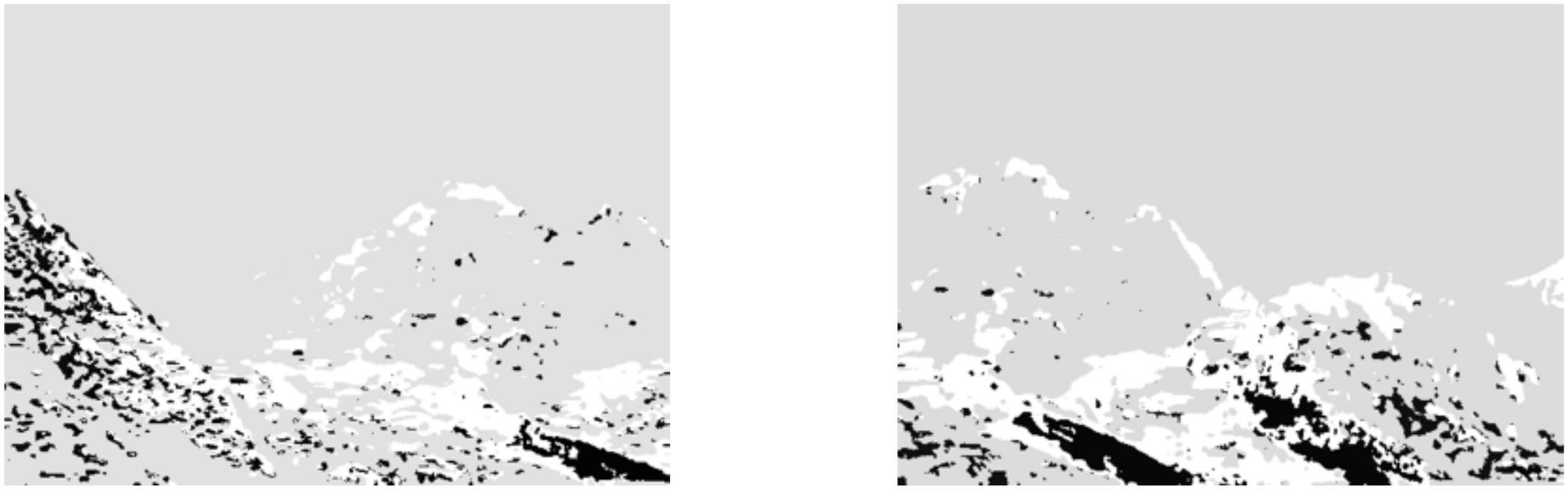




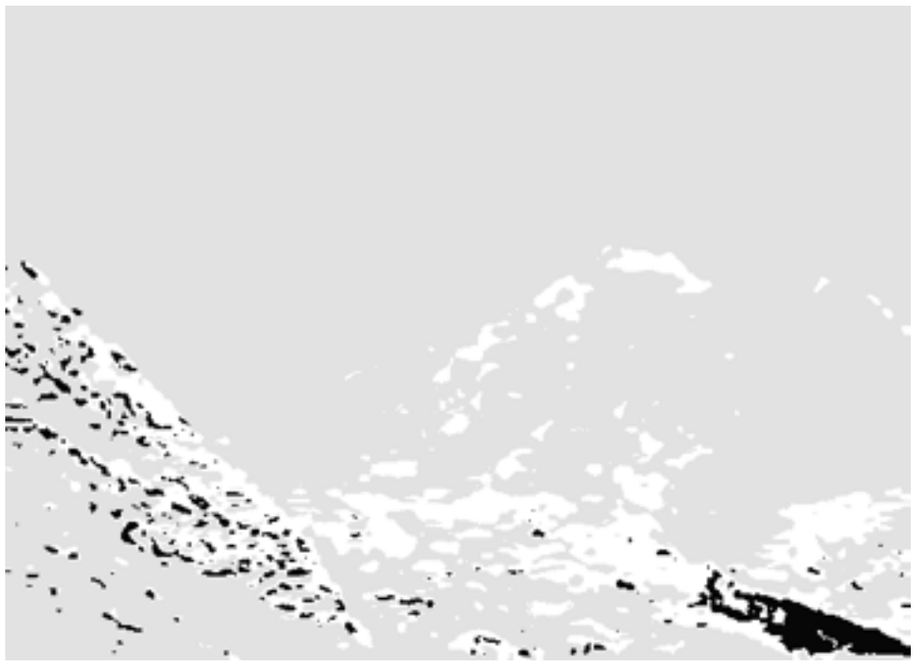
```
int kBands = 3; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);
```

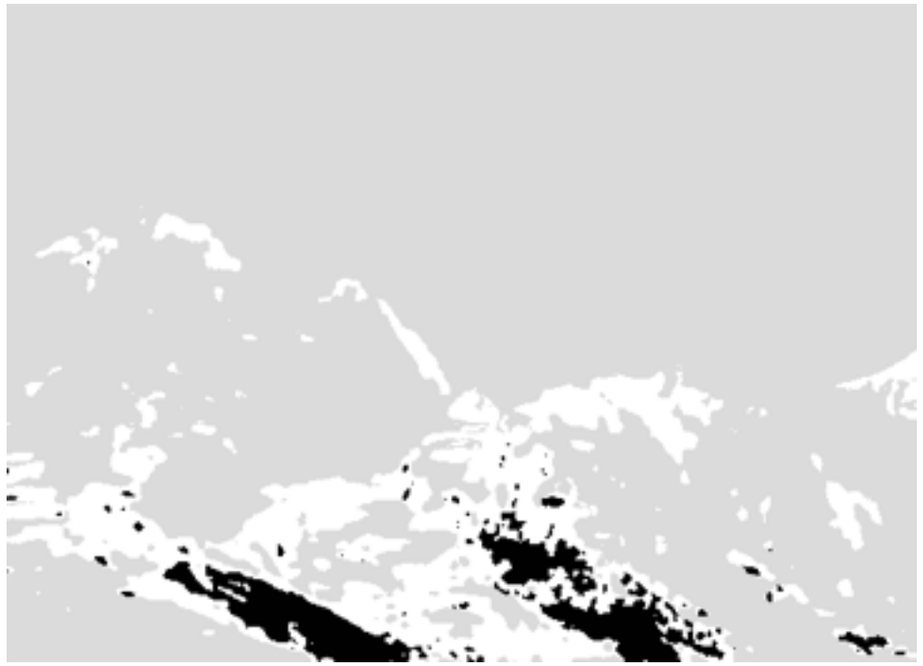


```
int kBands =8; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);
```

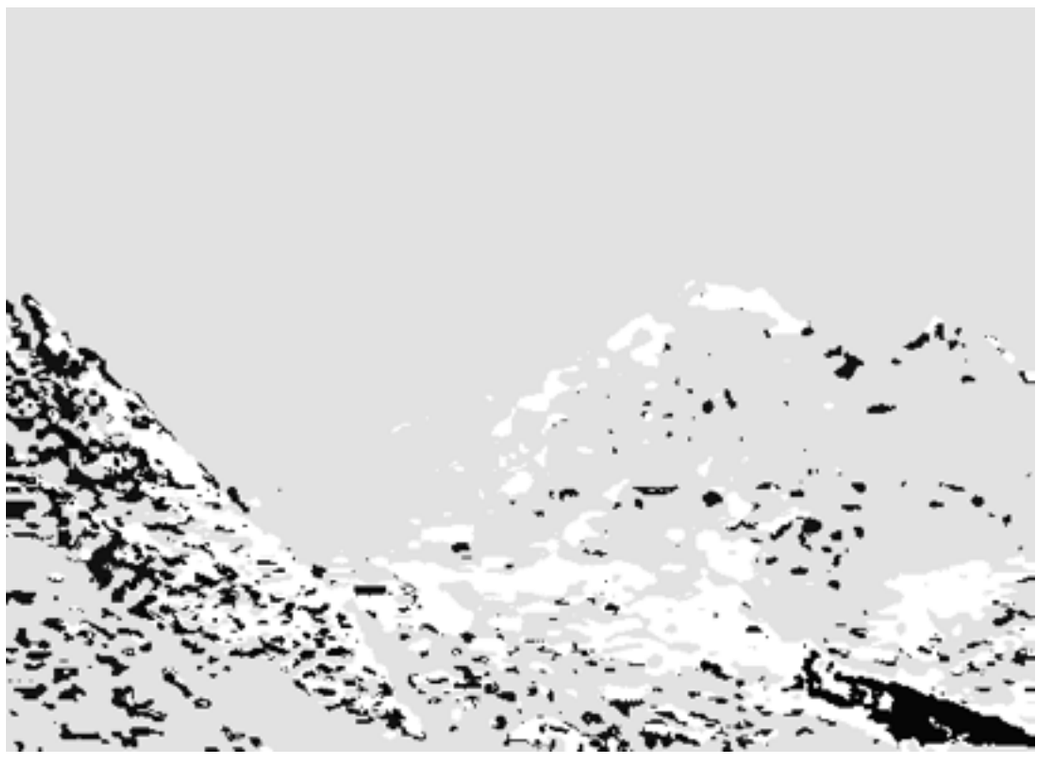


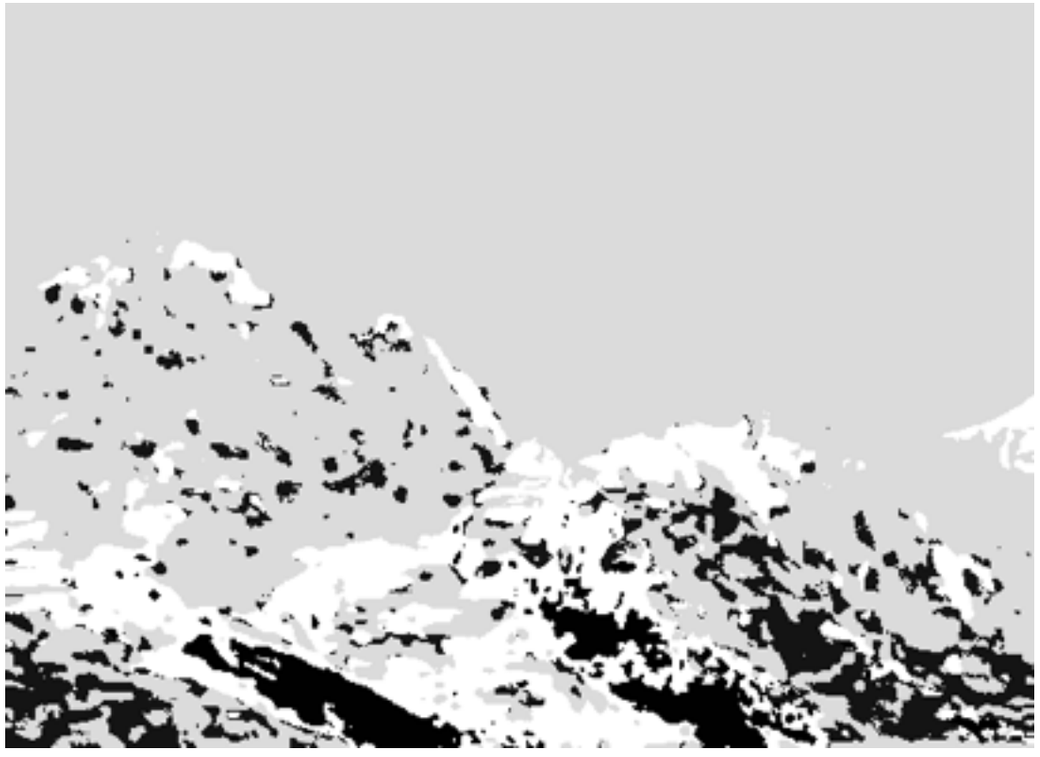
```
int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);
```



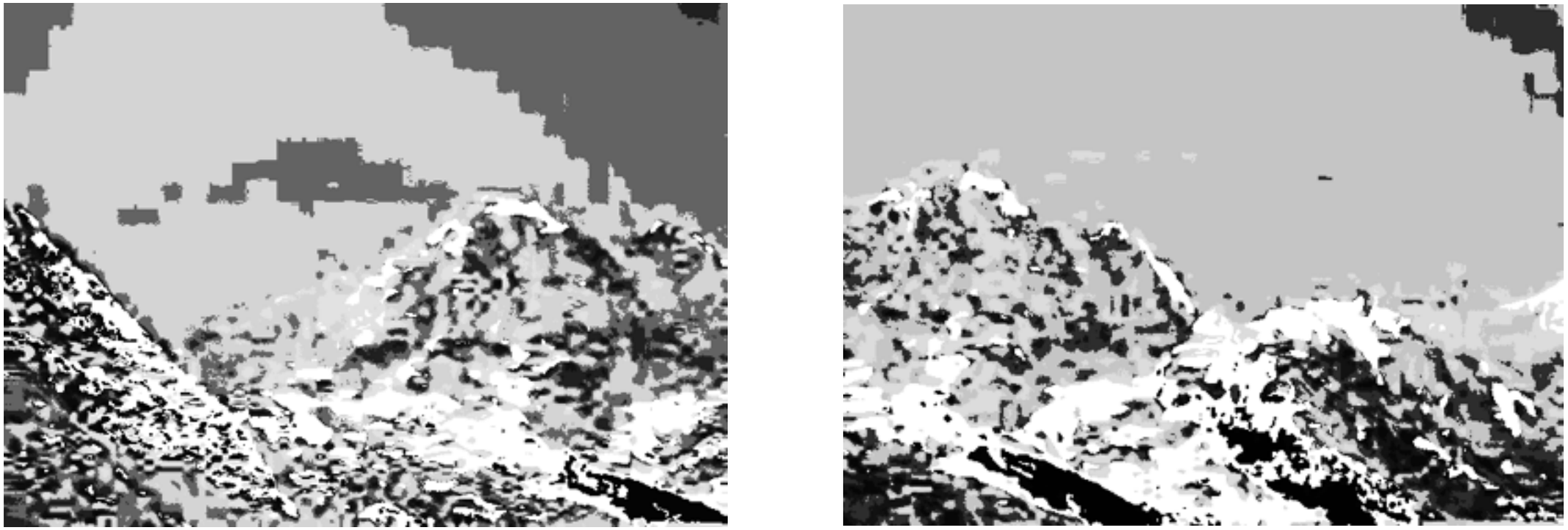


```
int kBands = 3; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);
```



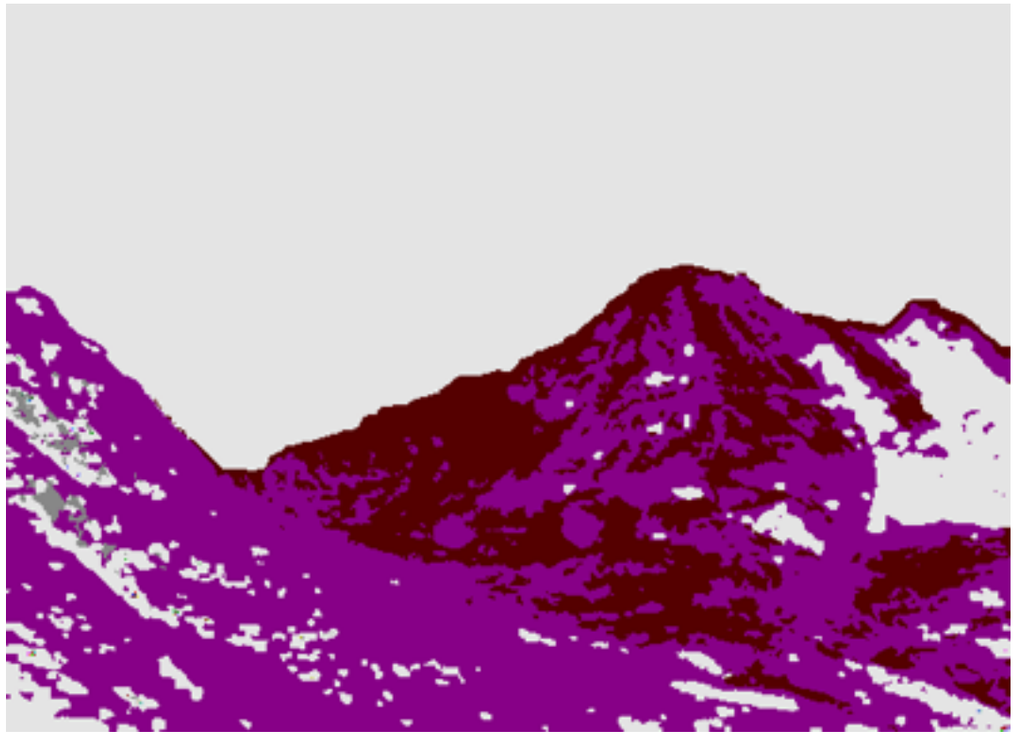


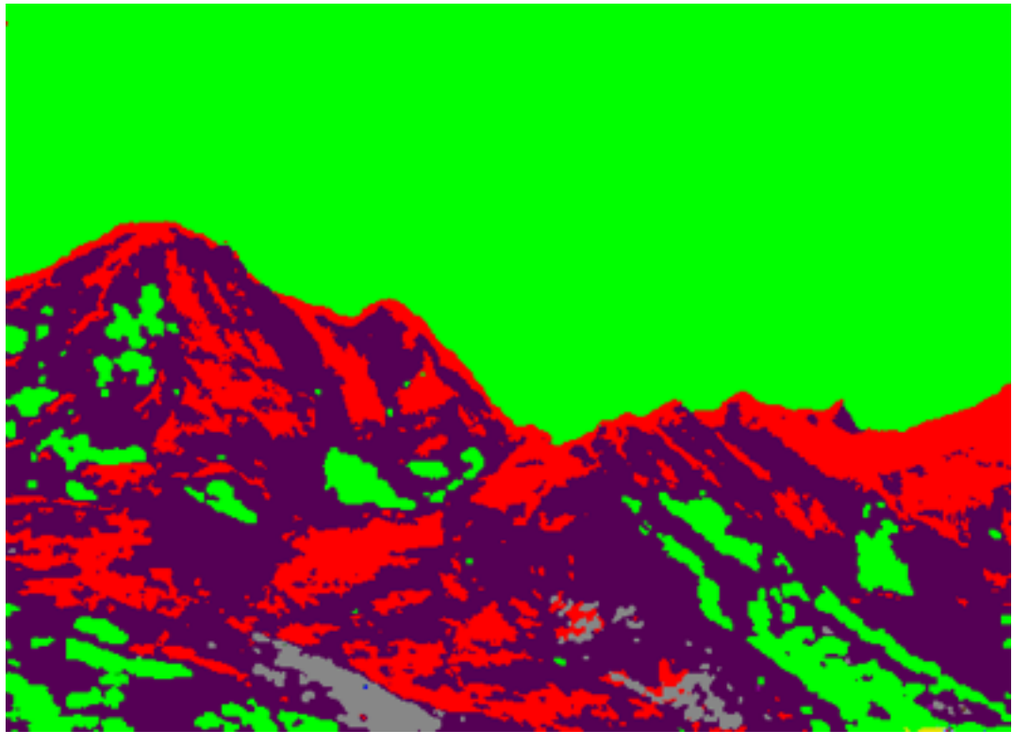
int kBands = 8; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);



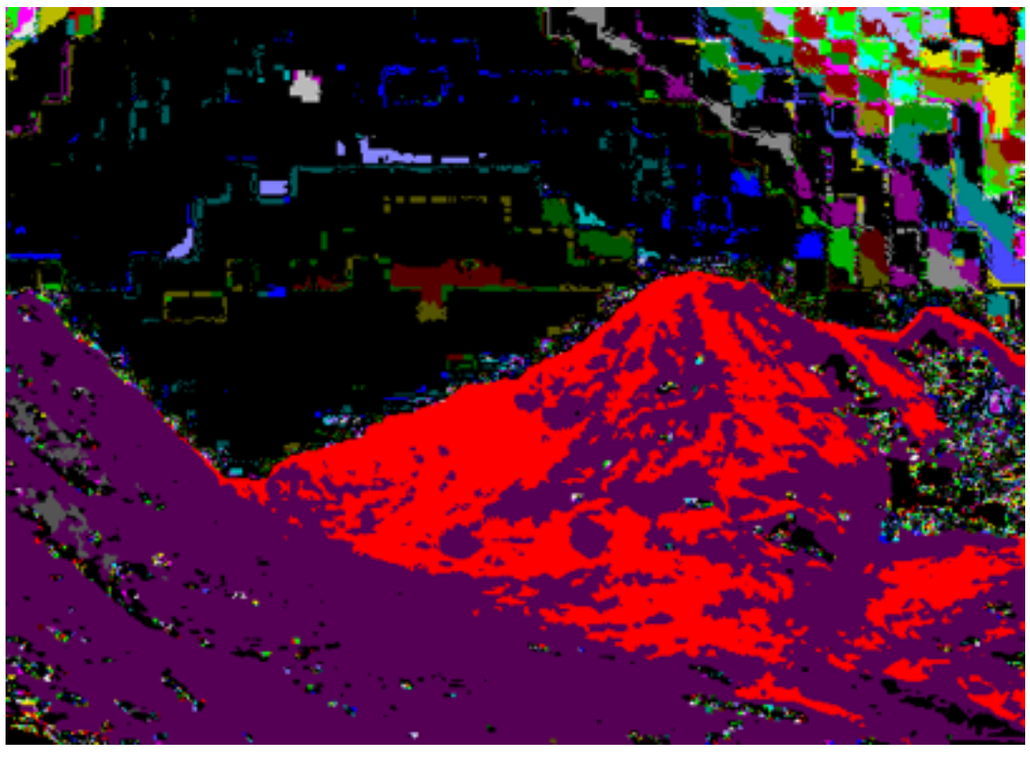
int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenHistogram(gsImg1, kBands);

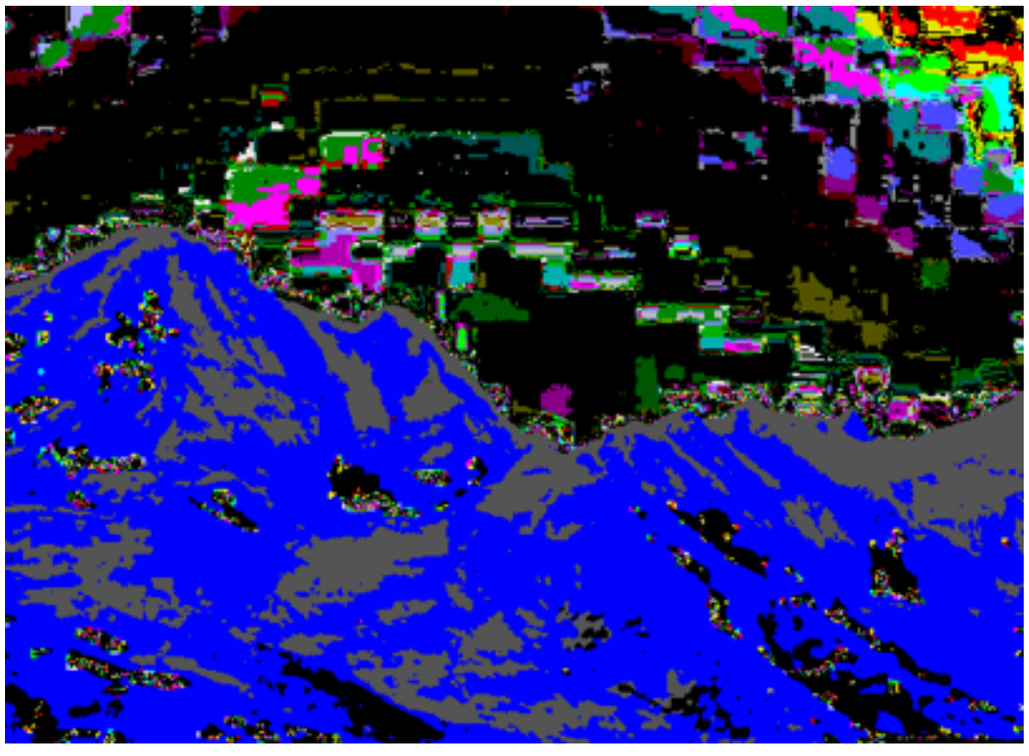
```
imageSegmentation.calculateUsingCIEXYAndClustering(gsImg1, true);
```



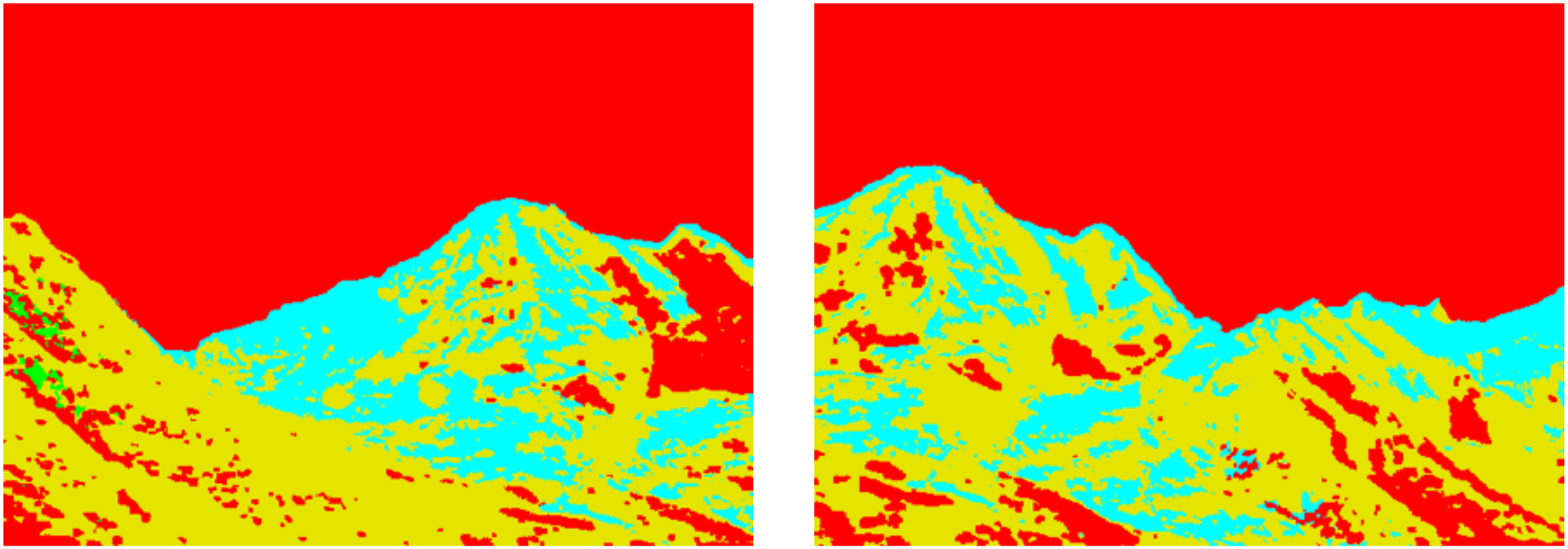


```
imageSegmentation.calculateUsingPolarCIEXYAndClustering(gsImg1, true);
```

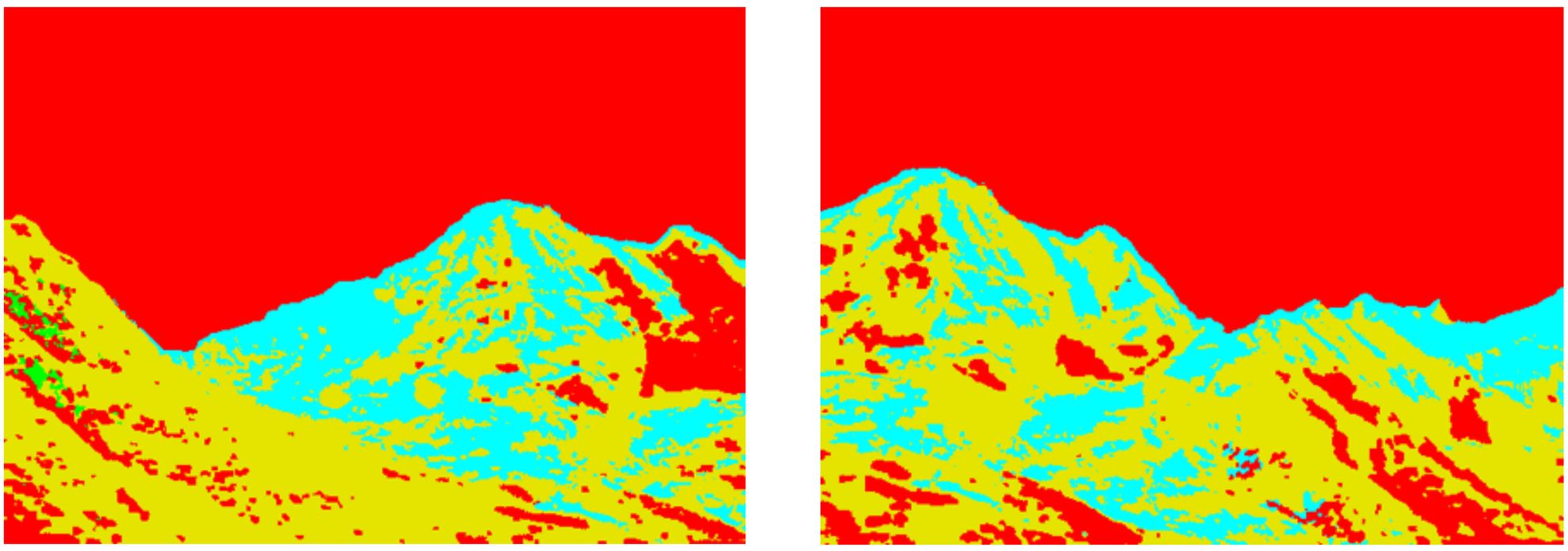




```
imageSegmentation.calculateUsingPolarCIEXYAndFrequency(gsImg1, true);
```



```
imageSegmentation.calculateUsingPolarCIEXYAndFrequency(gsImg1, 0.2f, true);
```



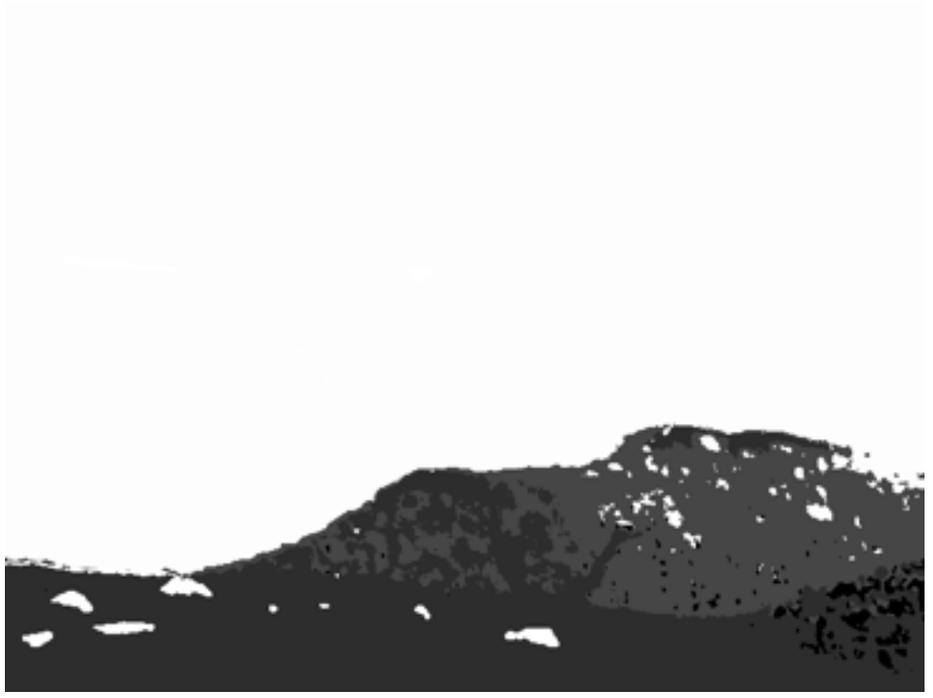
```
int kBands = 2; imageSegmentation.applyUsingKMPP(gsImg1, kBands);
```

```
int kBands = 3; imageSegmentation.applyUsingKMPP(gsImg1, kBands);
```

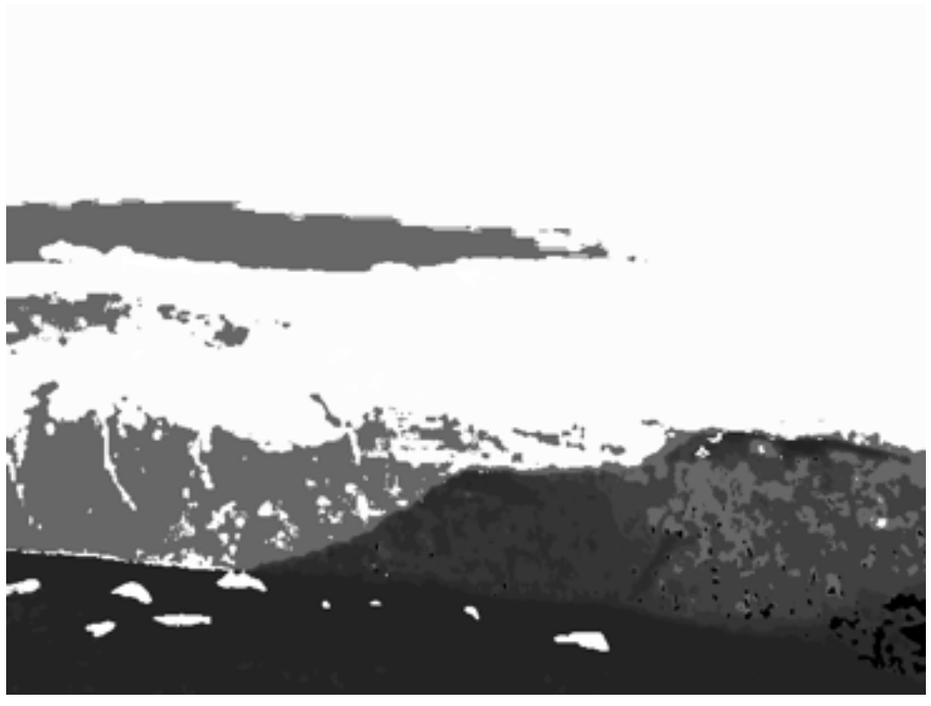
```
int kBands = 8; imageSegmentation.applyUsingKMPP(gsImg1, kBands);
```

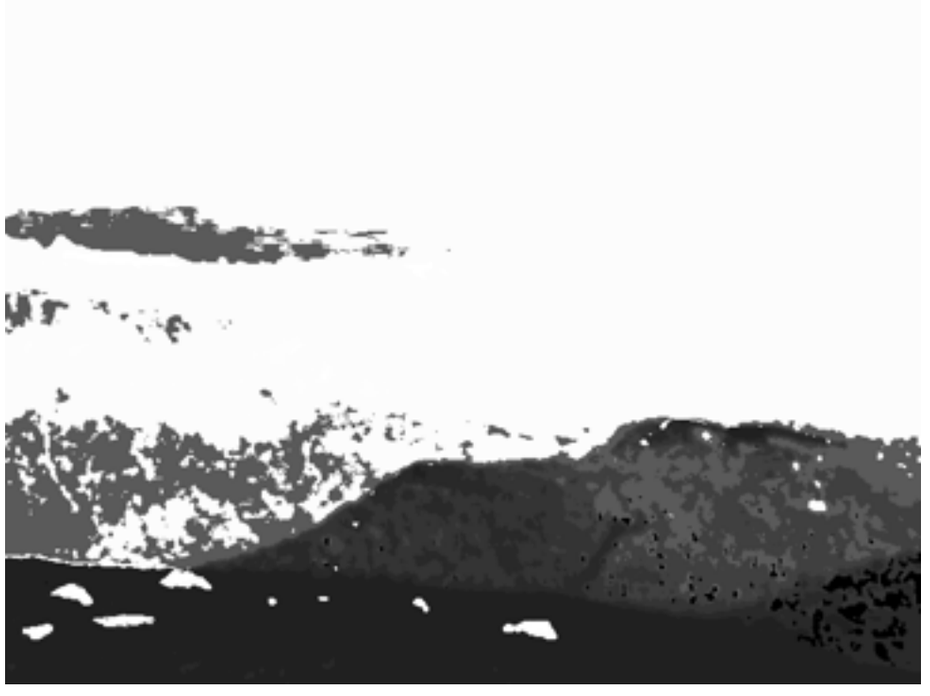
```
int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);
```

int kBands = 3; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);



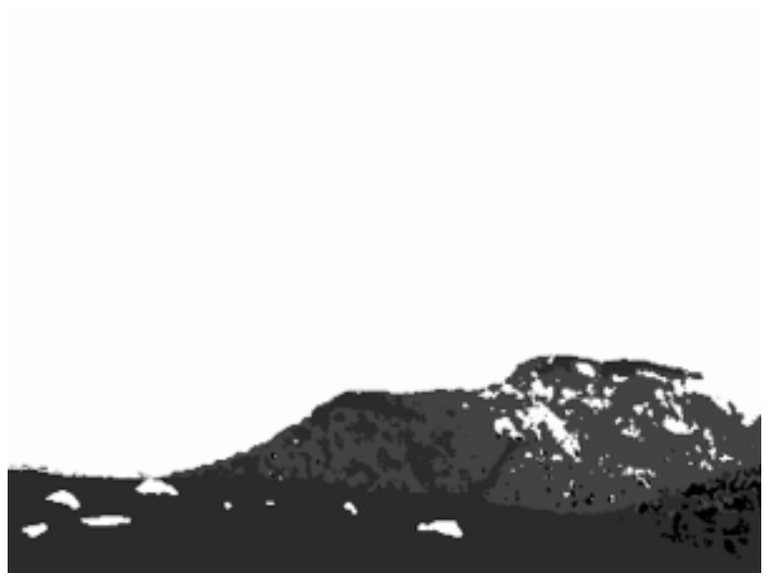
int kBands = 8; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);



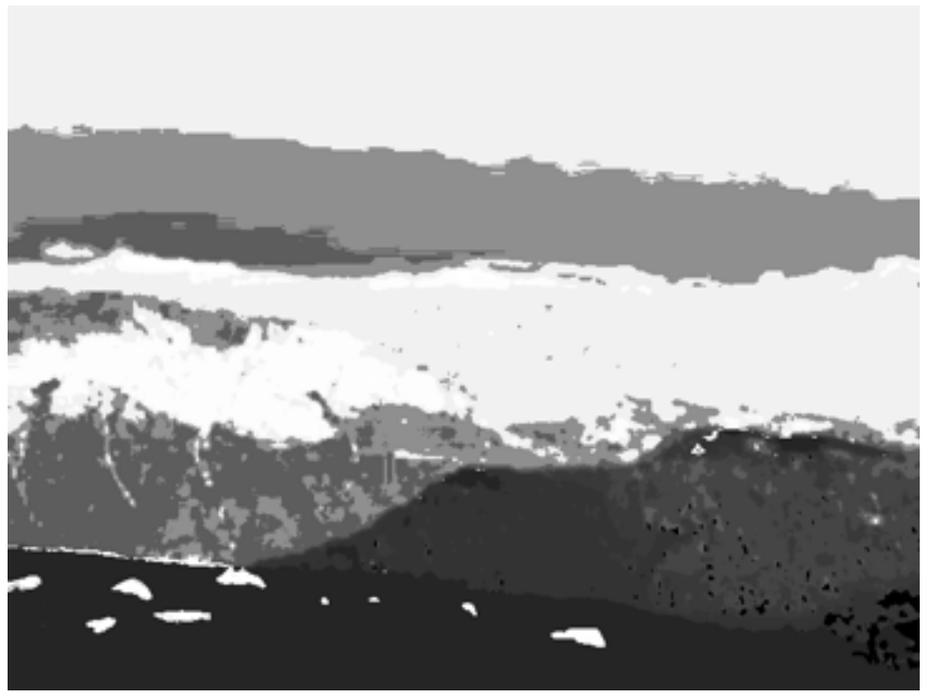


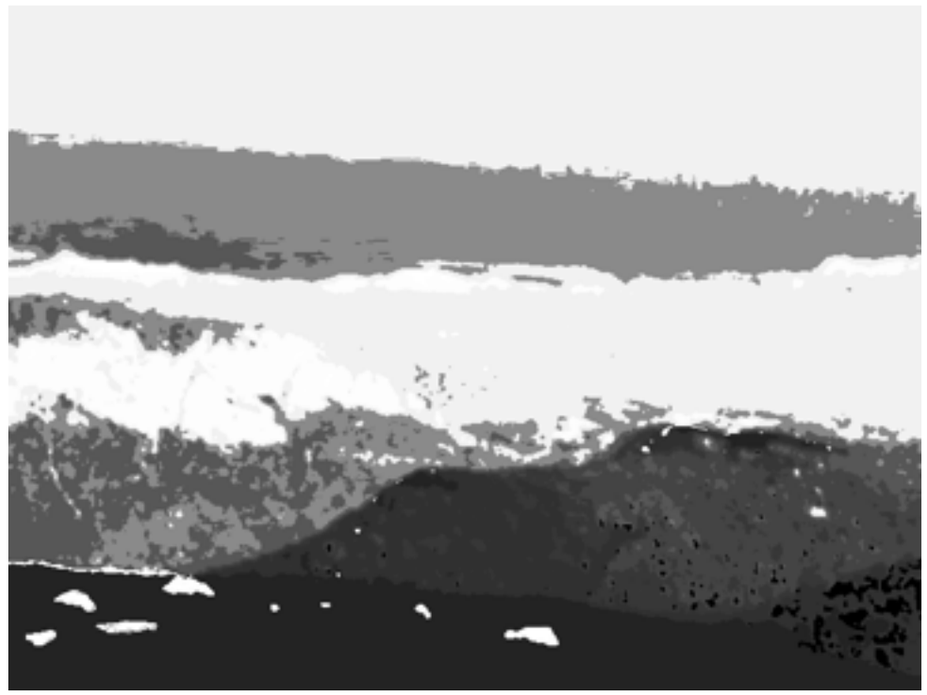
int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);

int kBands =3; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);



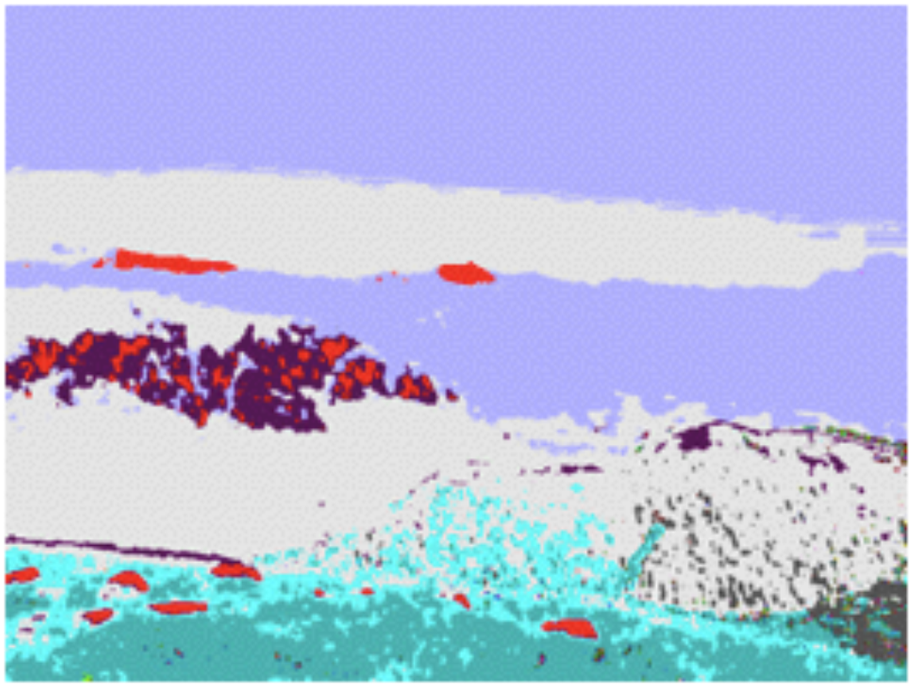
int kBands =8; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq

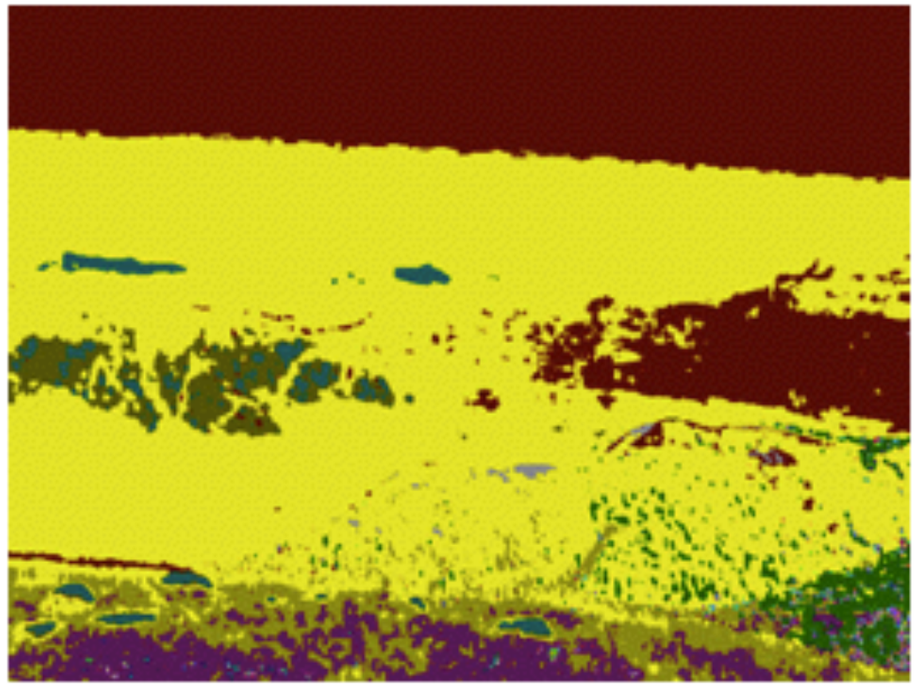




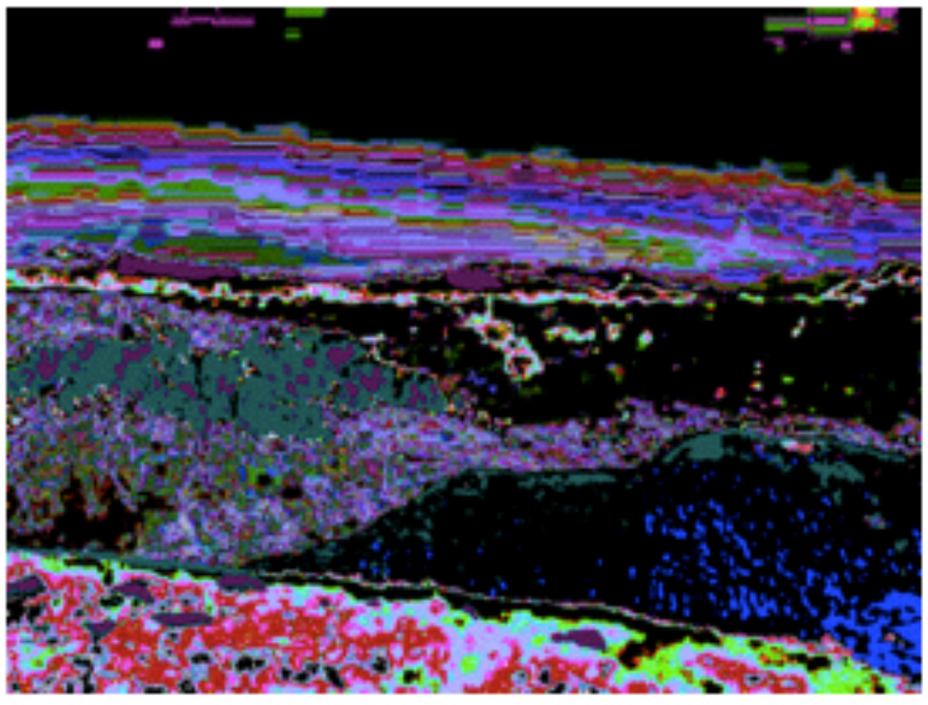
int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenHistogram(gsImg1, kBands);

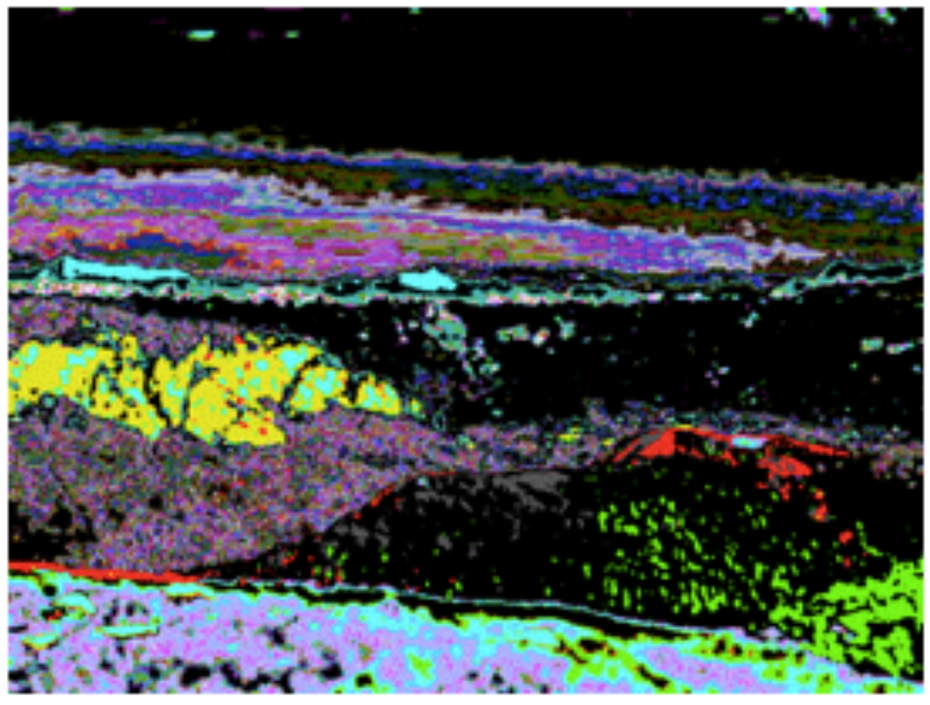
imageSegmentation.calculateUsingCIEXYAndClustering(gsImg1, true);



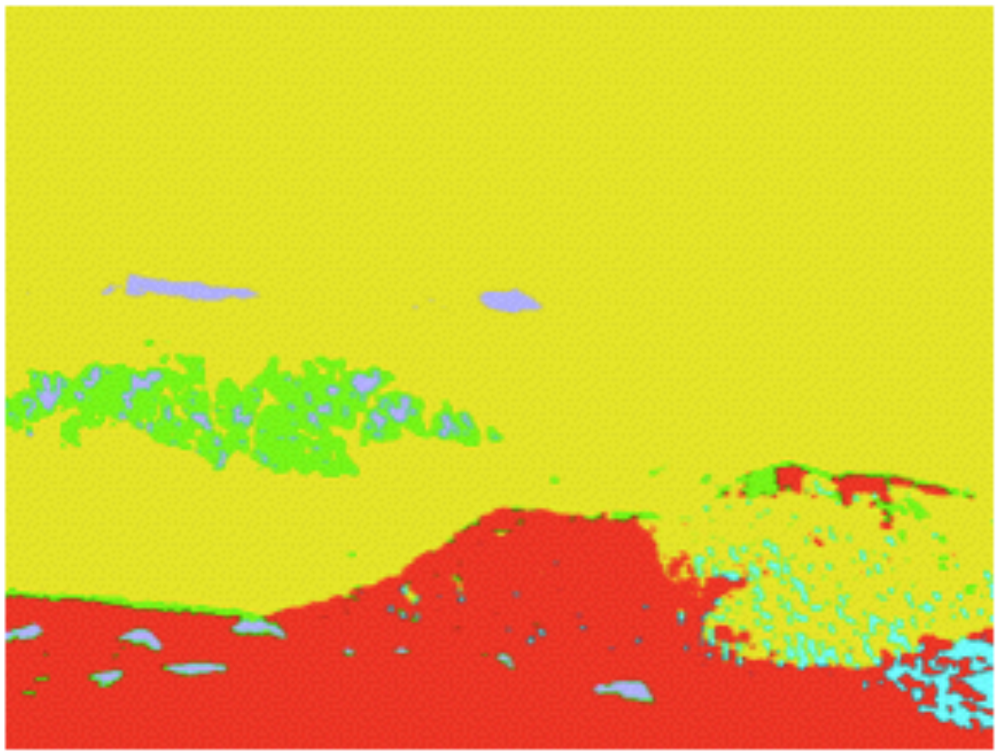


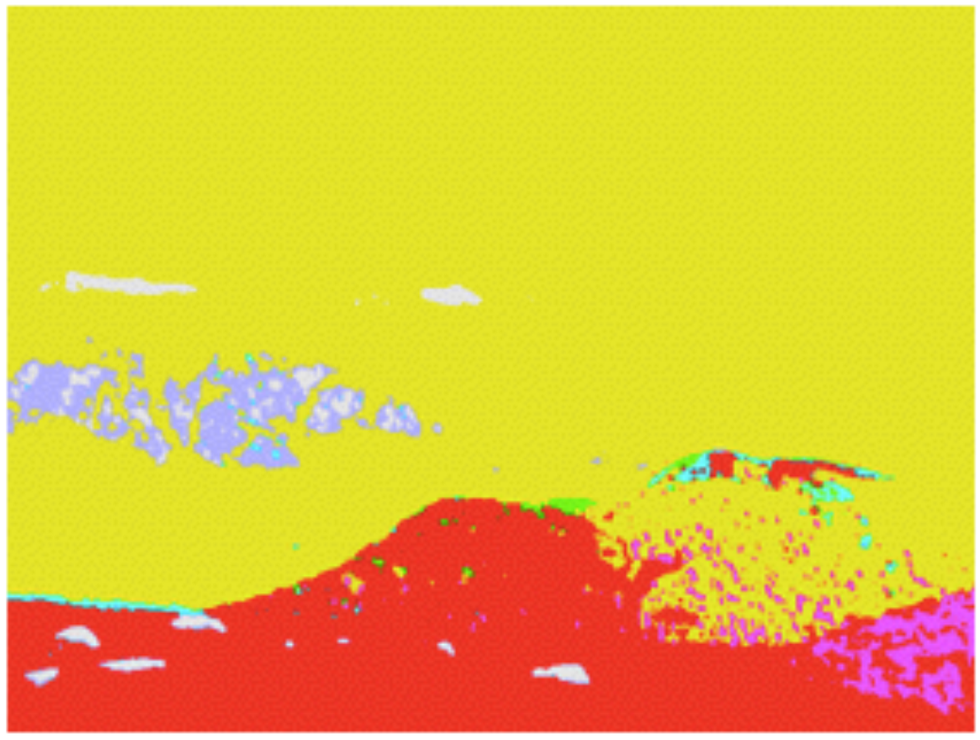
imageSegmentation.calculateUsingPolarCIEXYAndClustering(gsImg1, true);



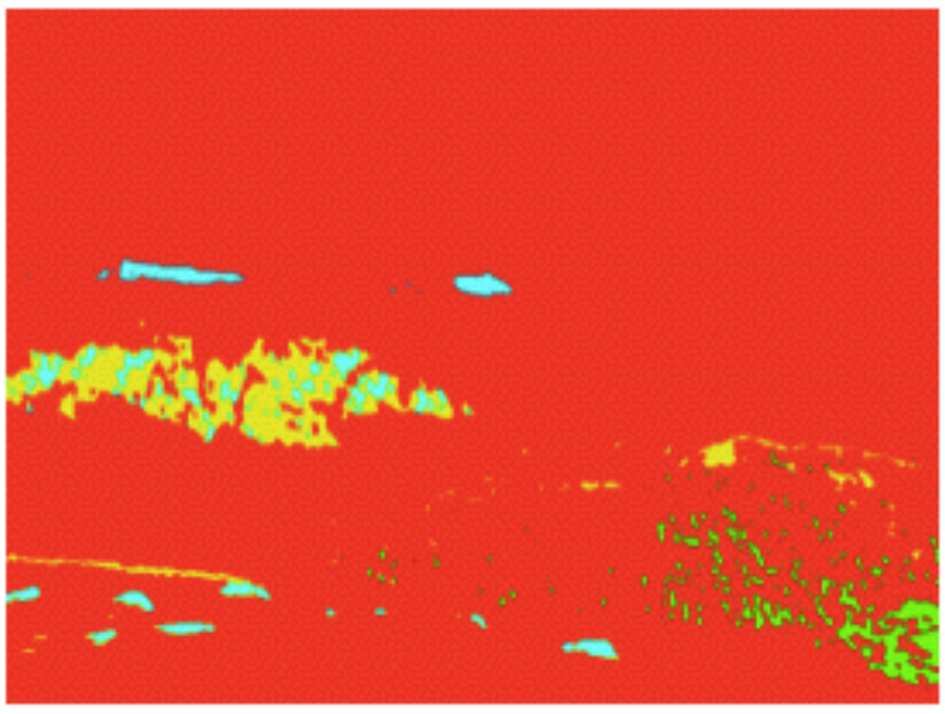


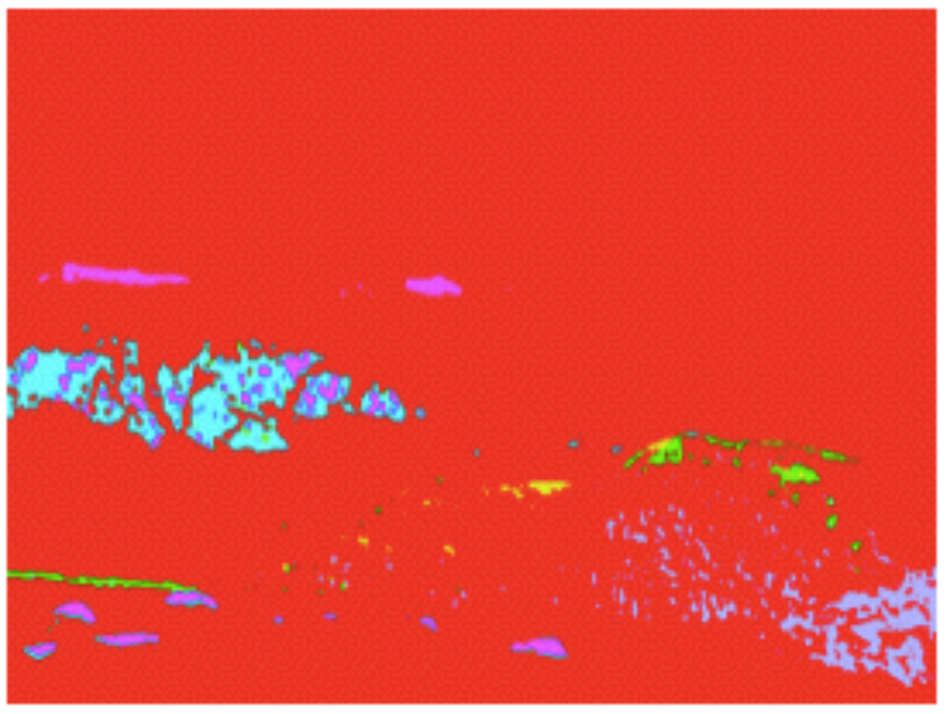
imageSegmentation.calculateUsingPolarCIEXYAndFrequency(gsImg1, true);



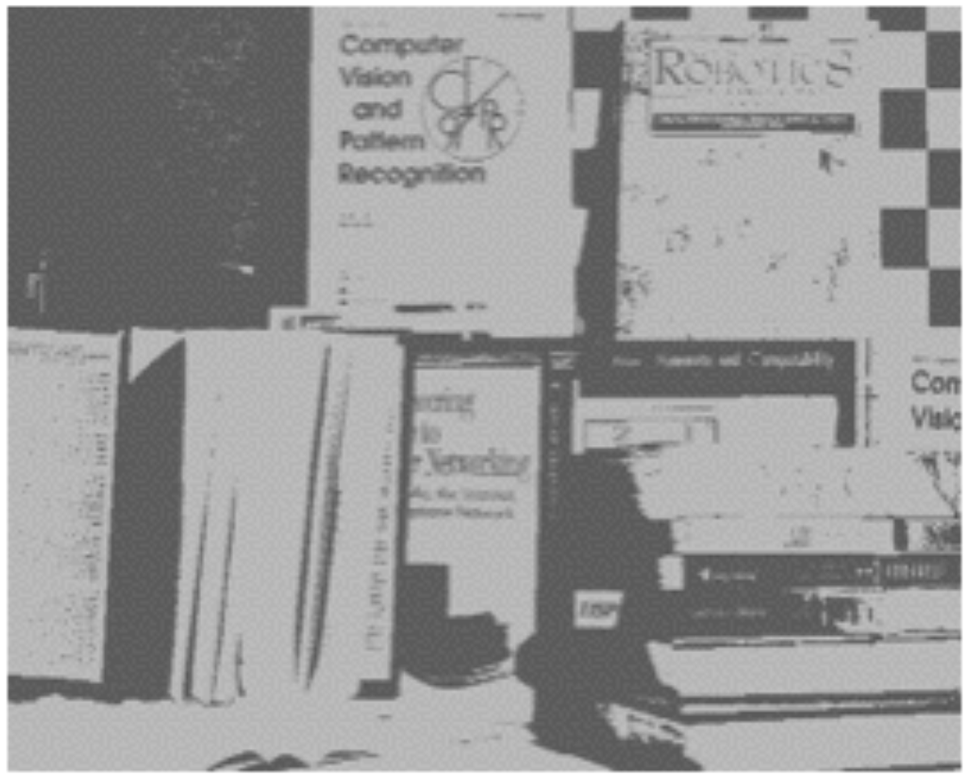


imageSegmentation.calculateUsingPolarCIEXYAndFrequency(gsImg1, 0.2f, true);

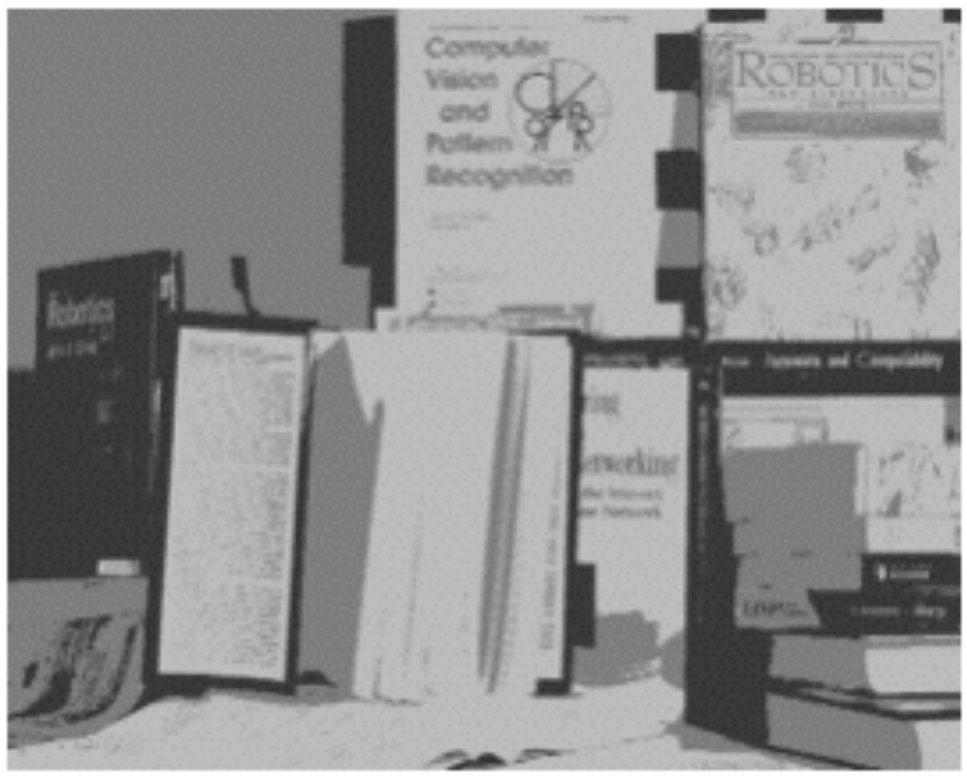


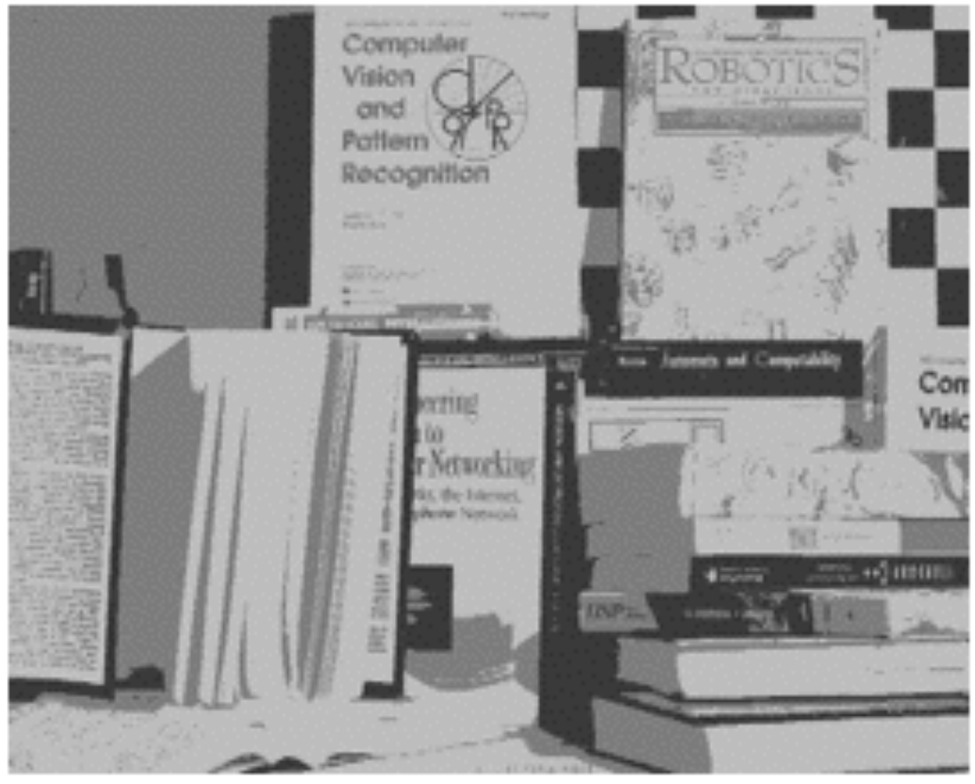


int kBands = 2; imageSegmentation.applyUsingKMPP(gsImg1, kBands);

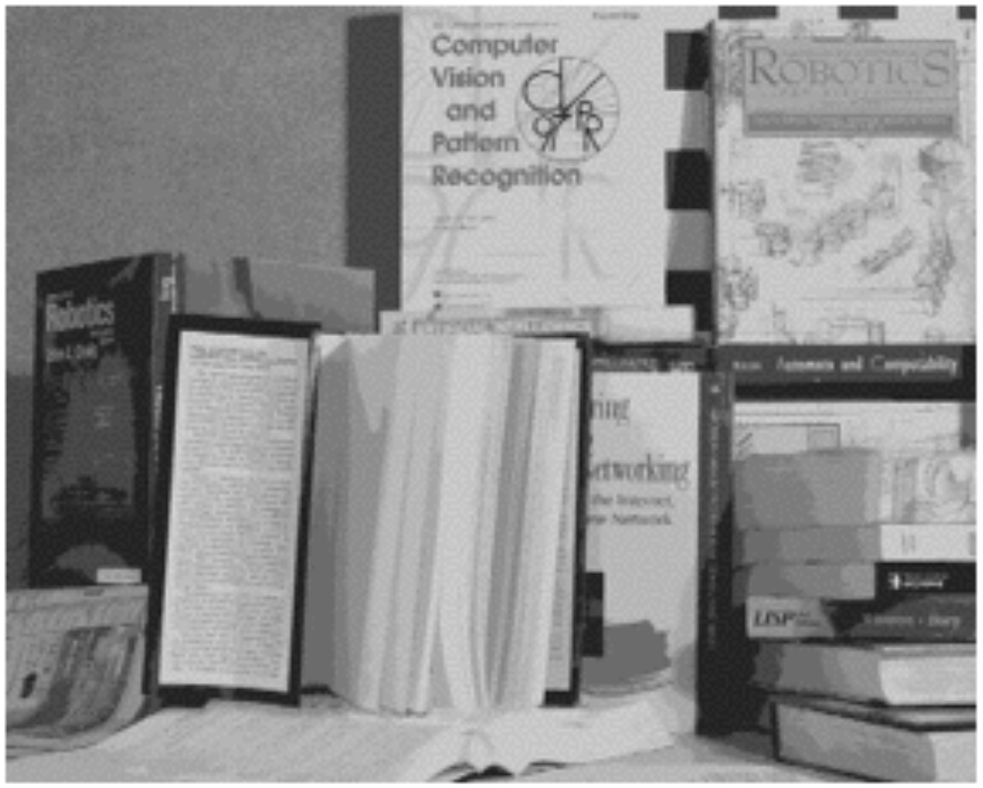


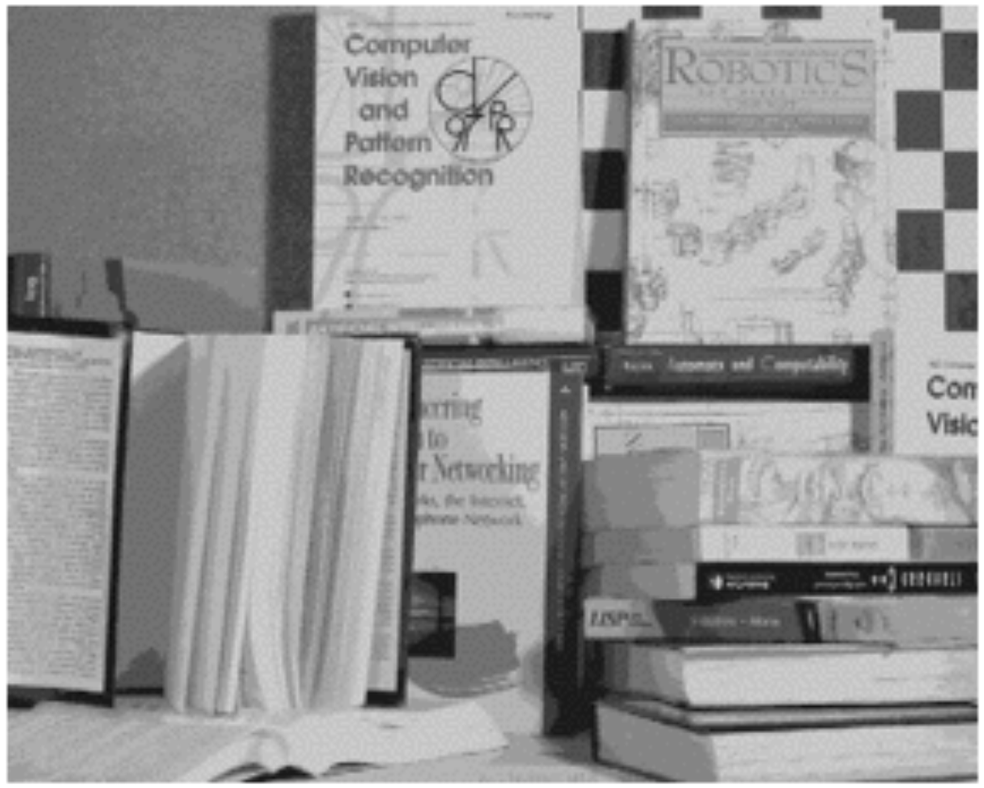
int kBands = 3; imageSegmentation.applyUsingKMPP(gsImg1, kBands);



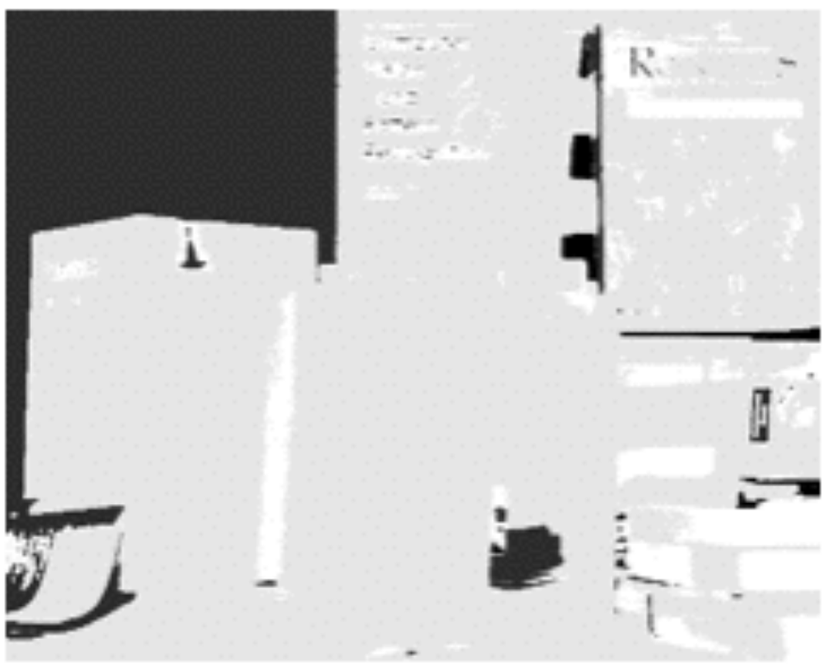


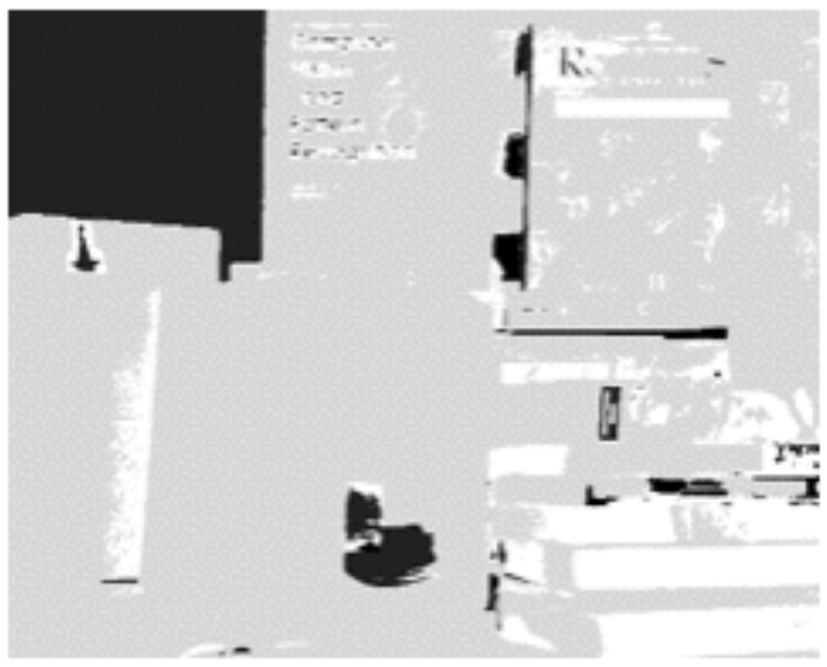
int kBands = 8; imageSegmentation.applyUsingKMPP(gsImg1, kBands);



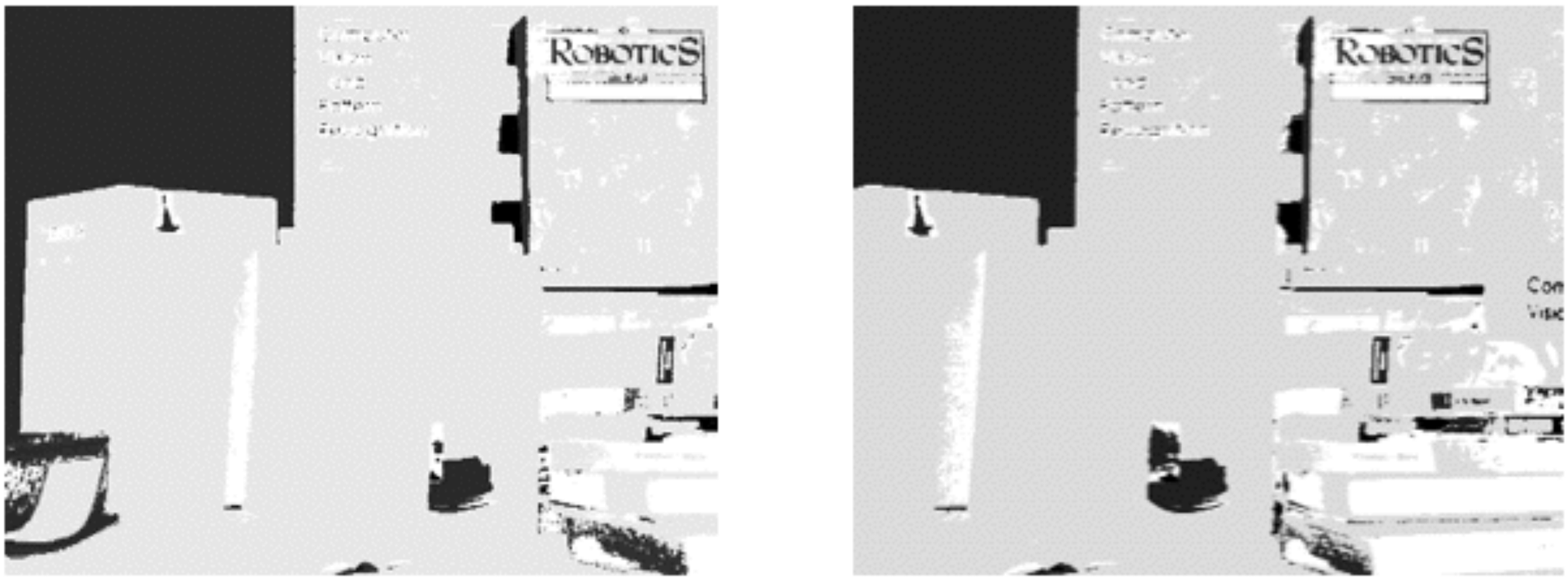


int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);

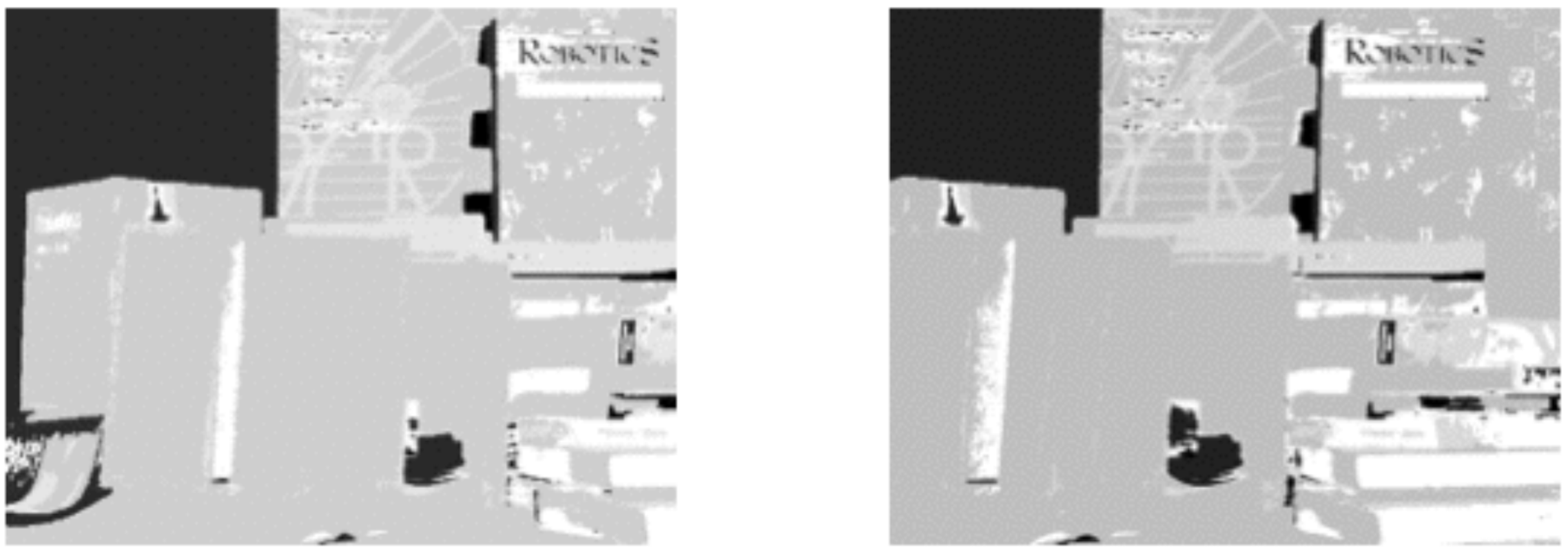




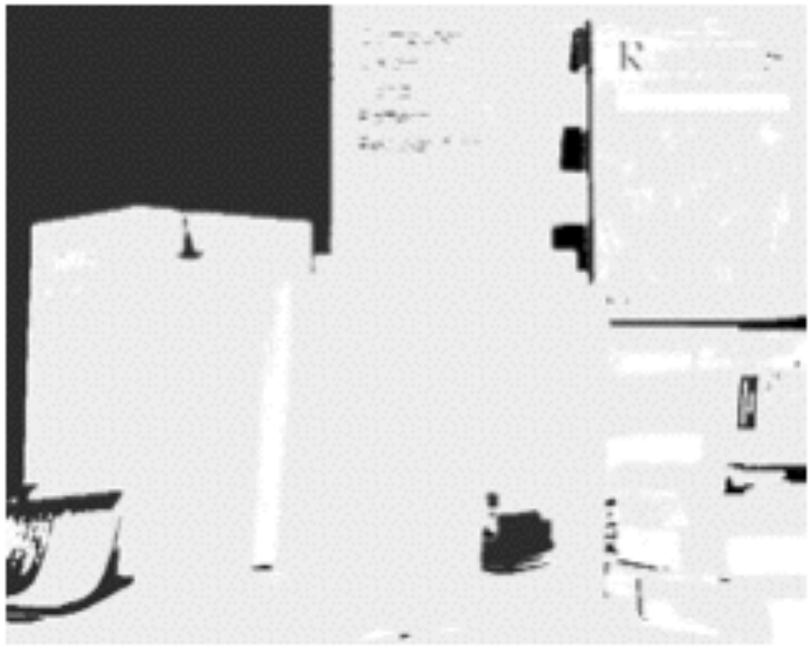
int kBands = 3; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);



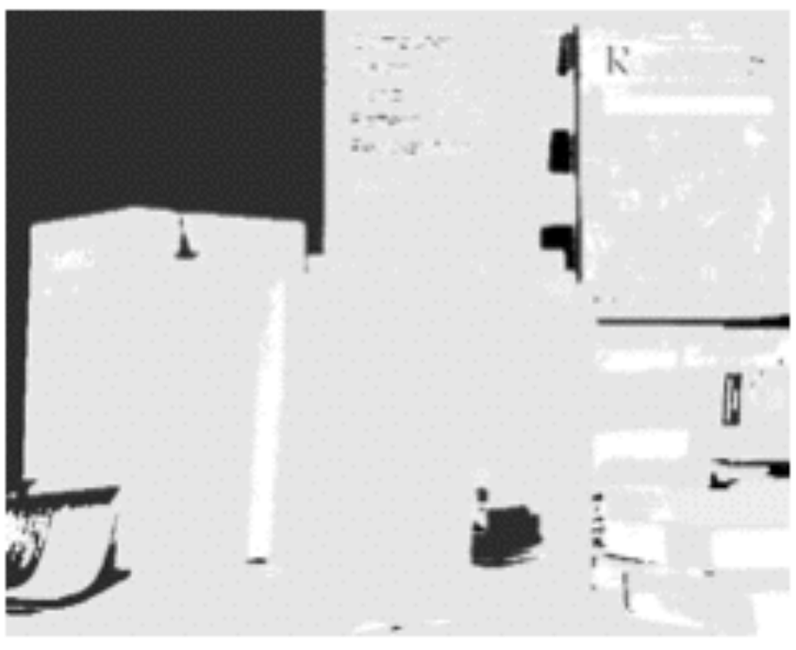
int kBands = 8; imageSegmentation.applyUsingCIEXYPolarThetaThenHistEq(gsImg1, kBands);

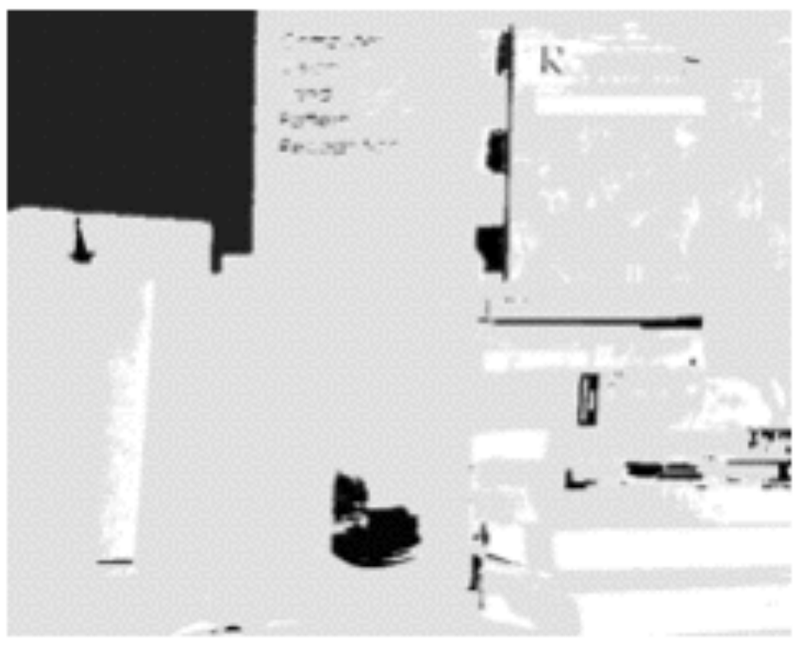


int kBands = 2; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);

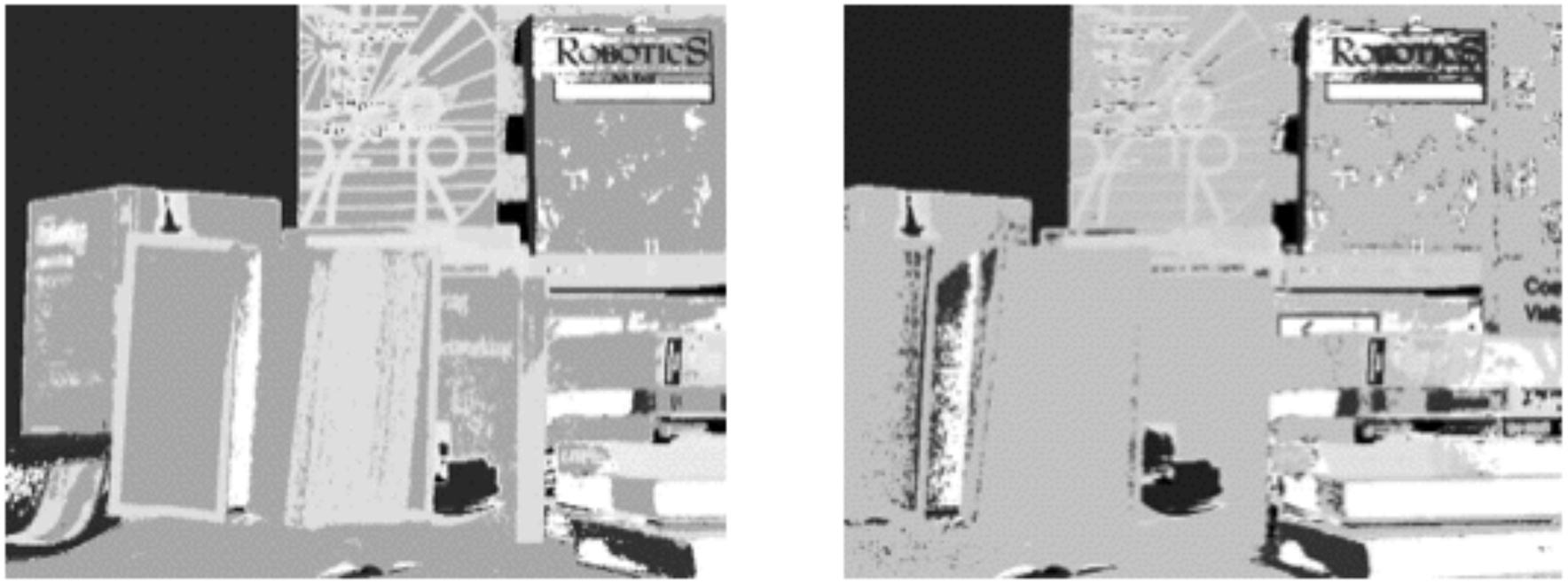


int kBands = 3; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);

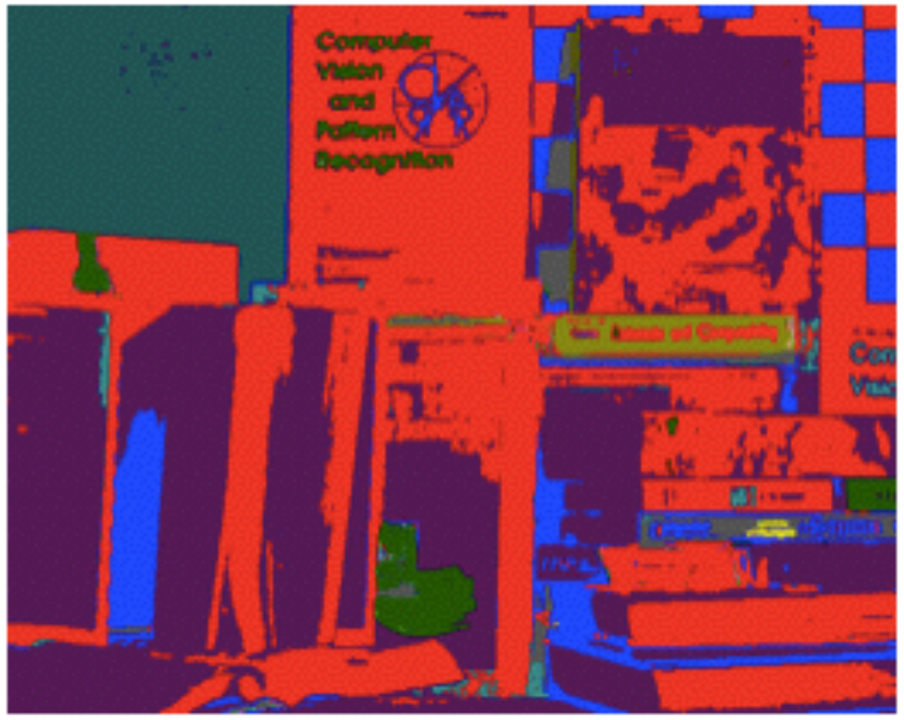




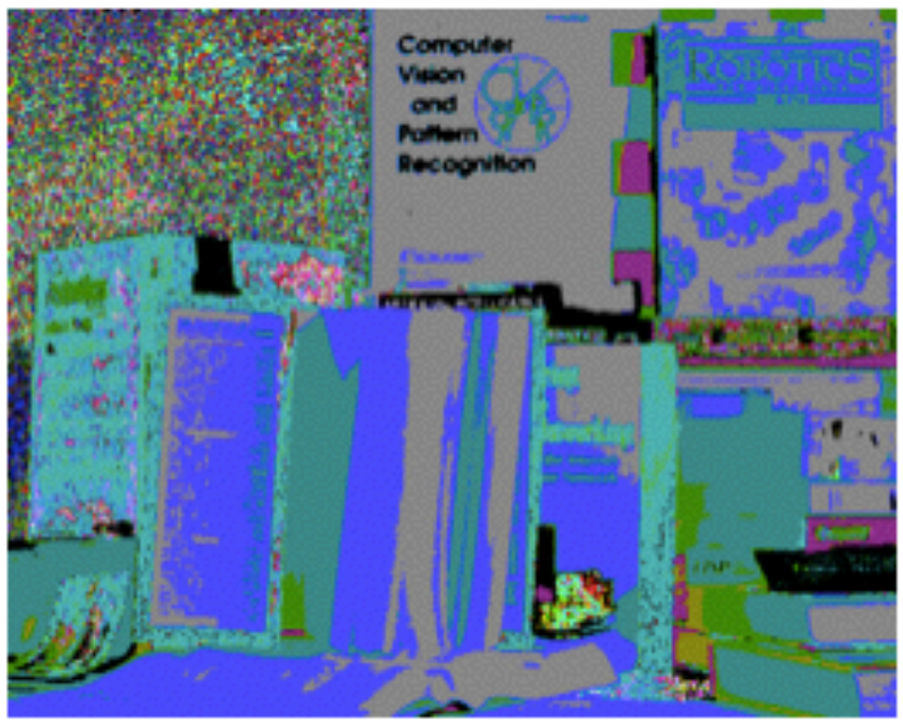
int kBands = 8; imageSegmentation.applyUsingCIEXYPolarThetaThenKMPPThenHistEq(gsImg1, kBands);

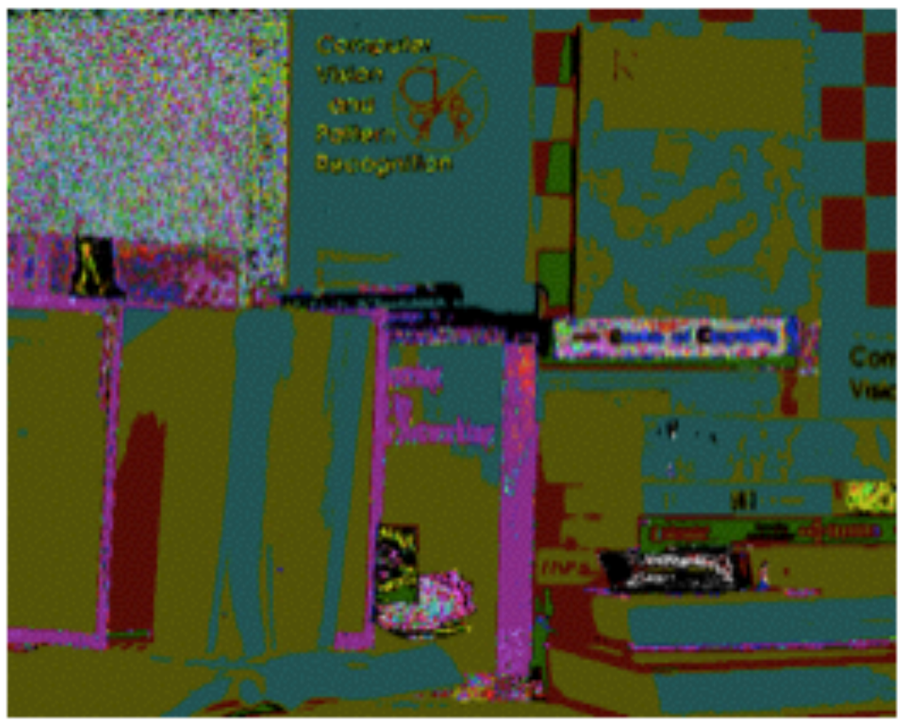


imageSegmentation.calculateUsingCIEXYAndClustering(gsImg1, true);

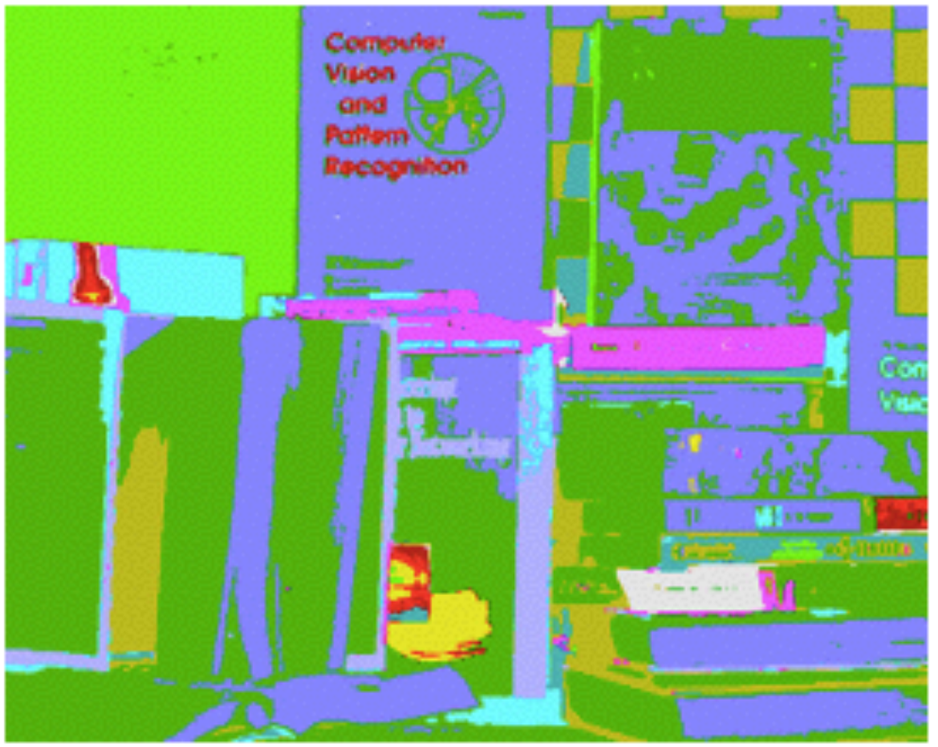


imageSegmentation.calculateUsingPolarCIEXYAndClustering(gsImg1, true);

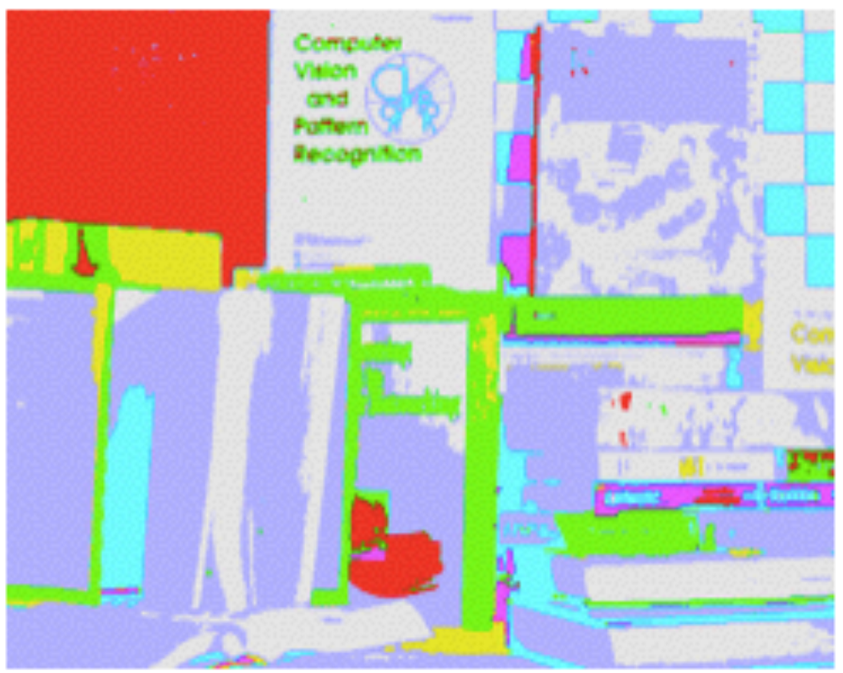




imageSegmentation.calculateUsingPolarCIEXYAndFrequency(gsImg1, true);



imageSegmentation.calculateUsingPolarCIEXYAndFrequency(gsImg1, 0.2f, true);



```
int kBands = 2; imageSegmentation.applyUsingKMPP(gsImg1, kBands);
zoom in
```