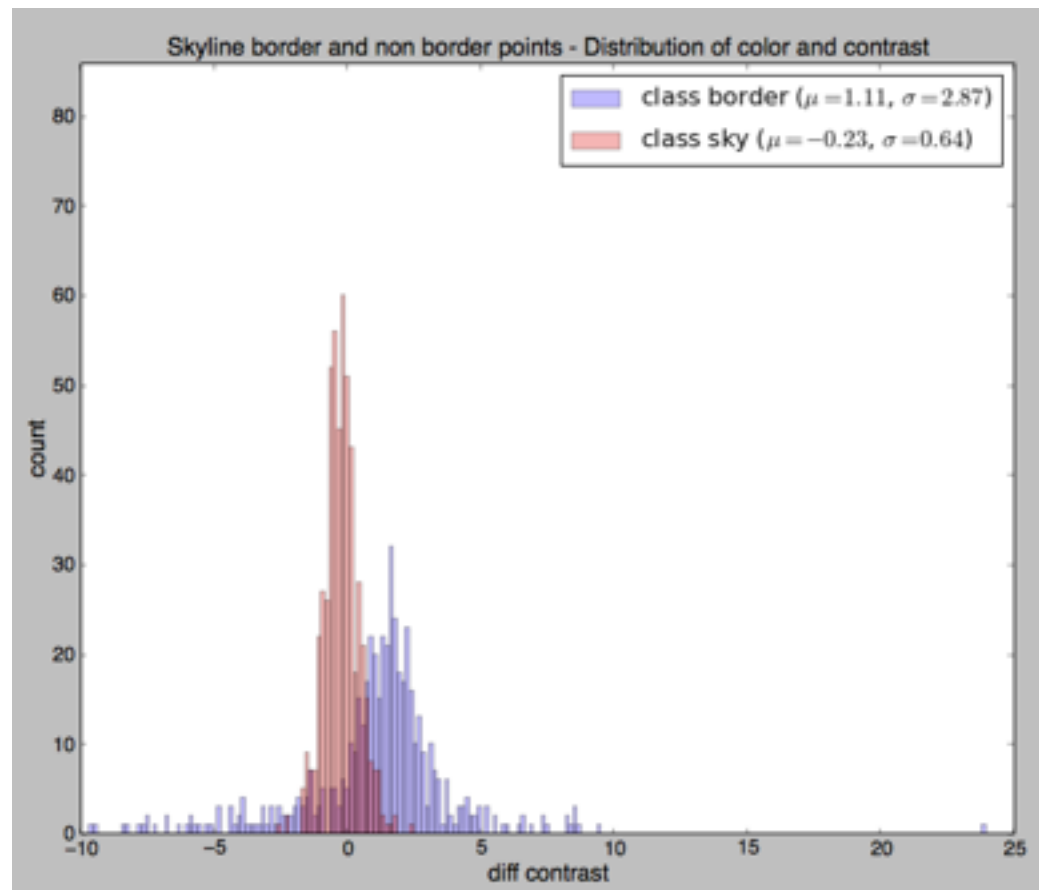
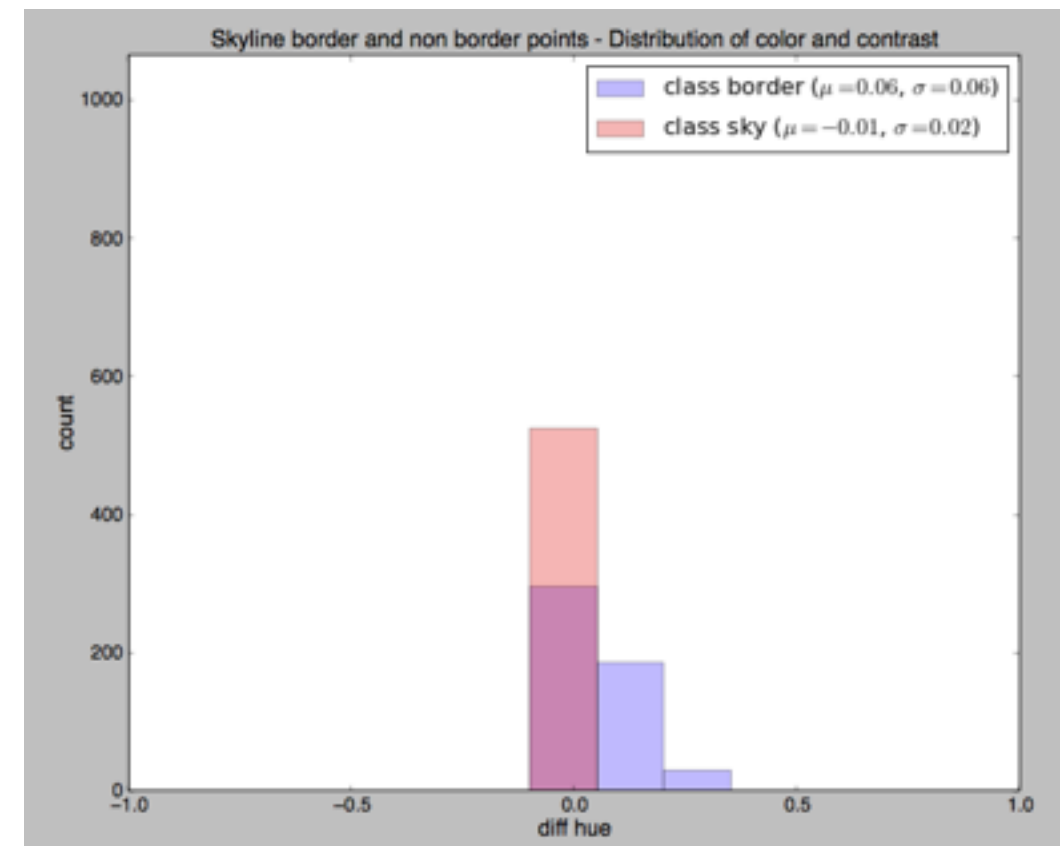
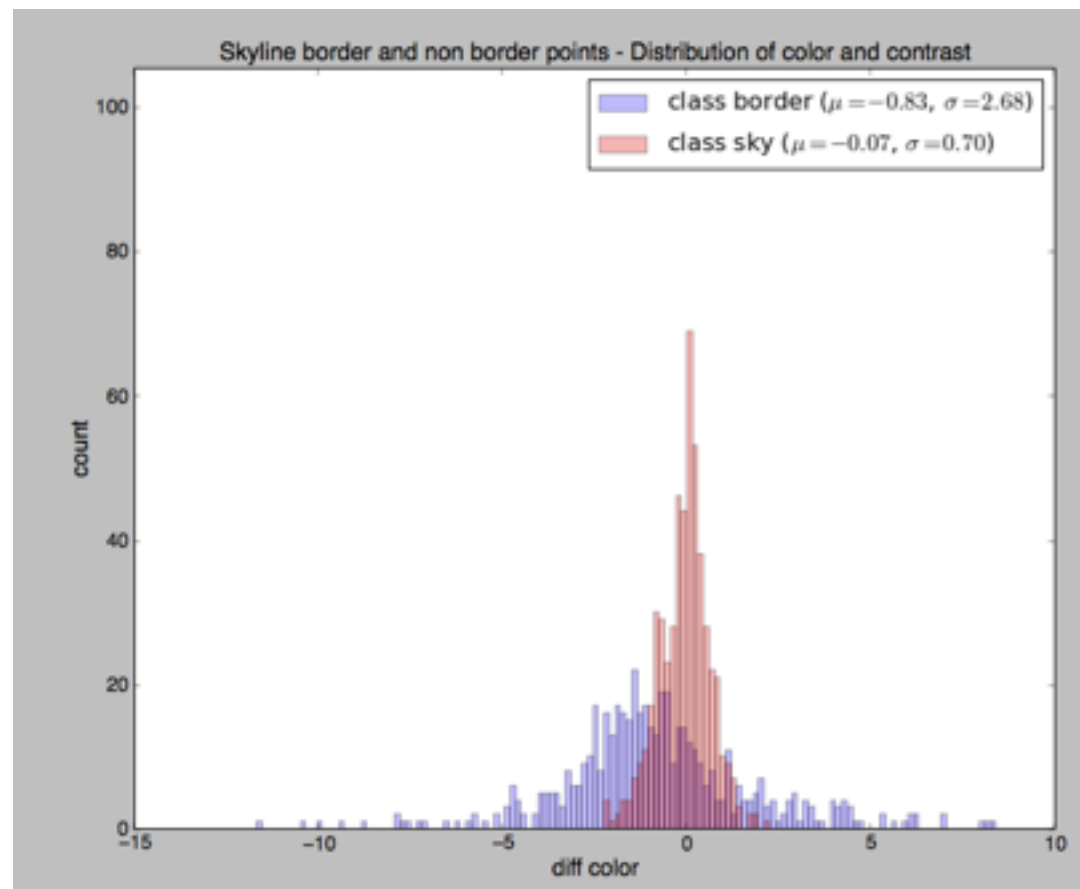
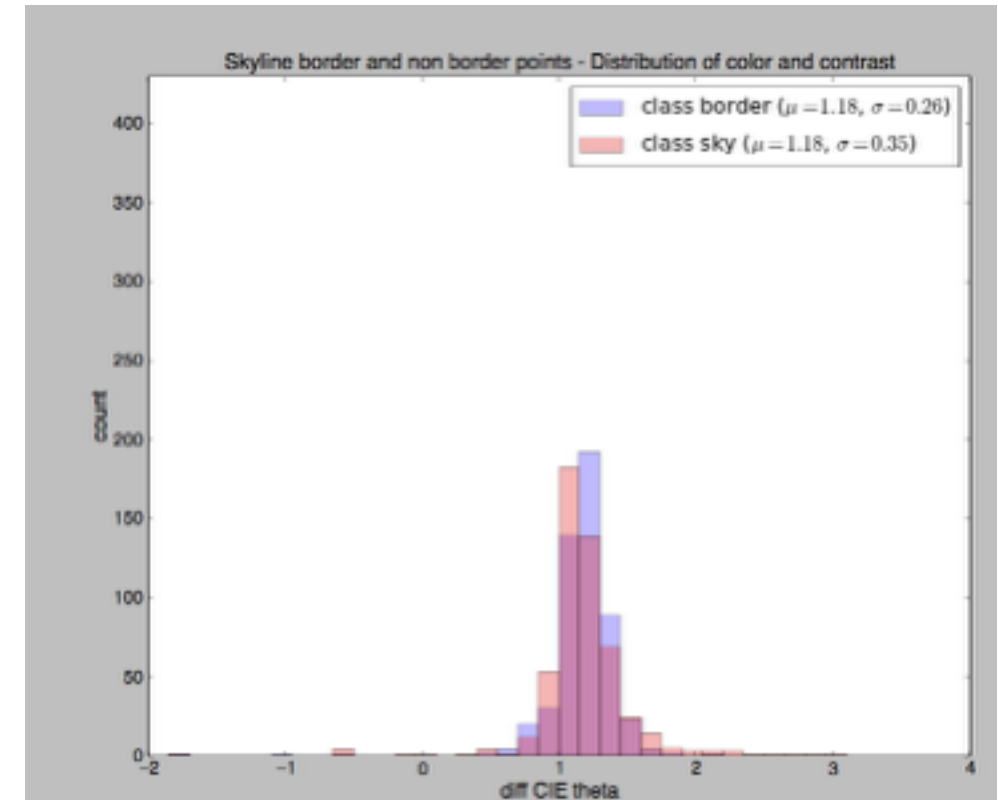


LDA look at difference in contrast, hue, blue or red, and CIE theta, all divided by their respective standard deviations.

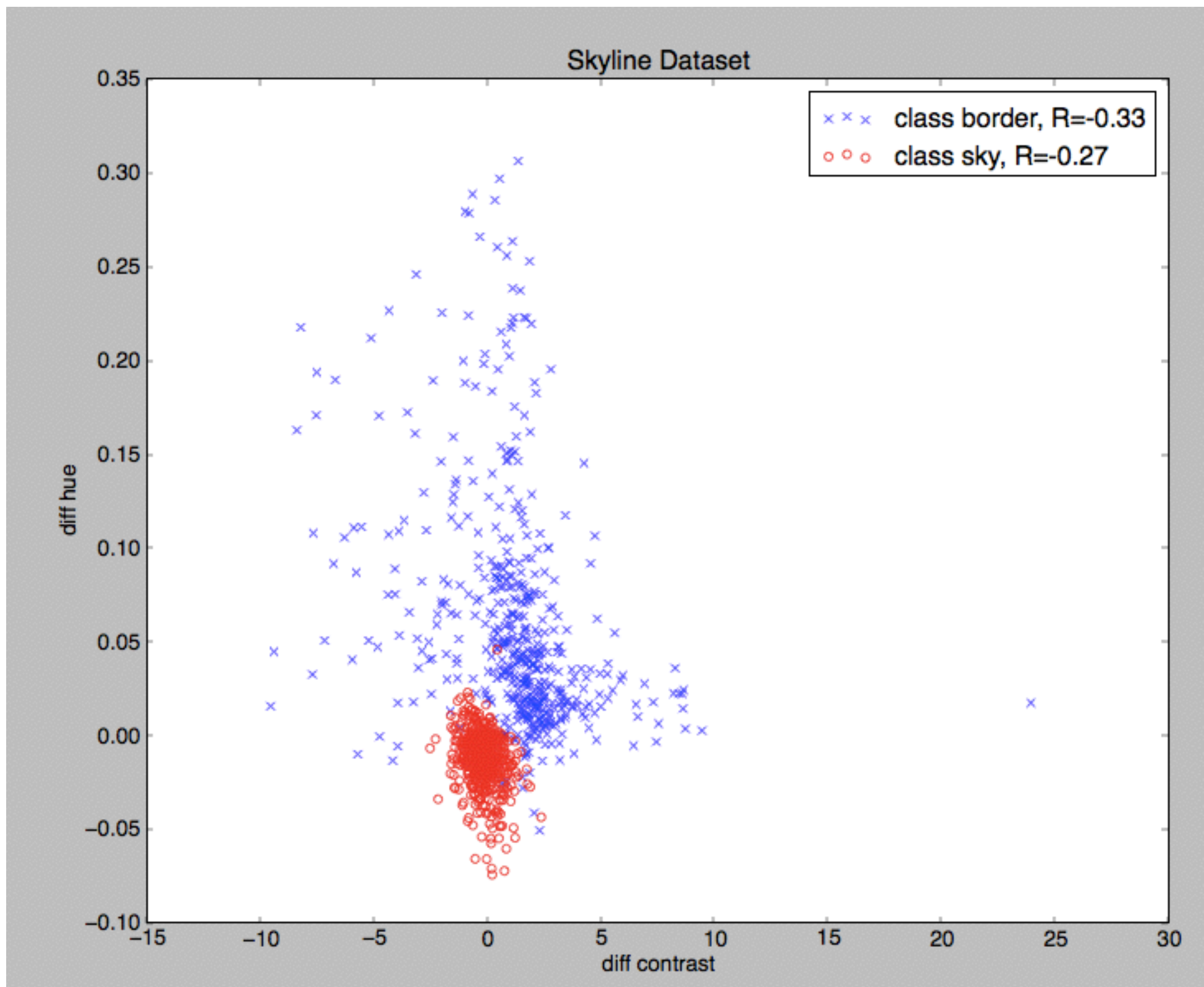
Brown & Lowe 2003, image 1



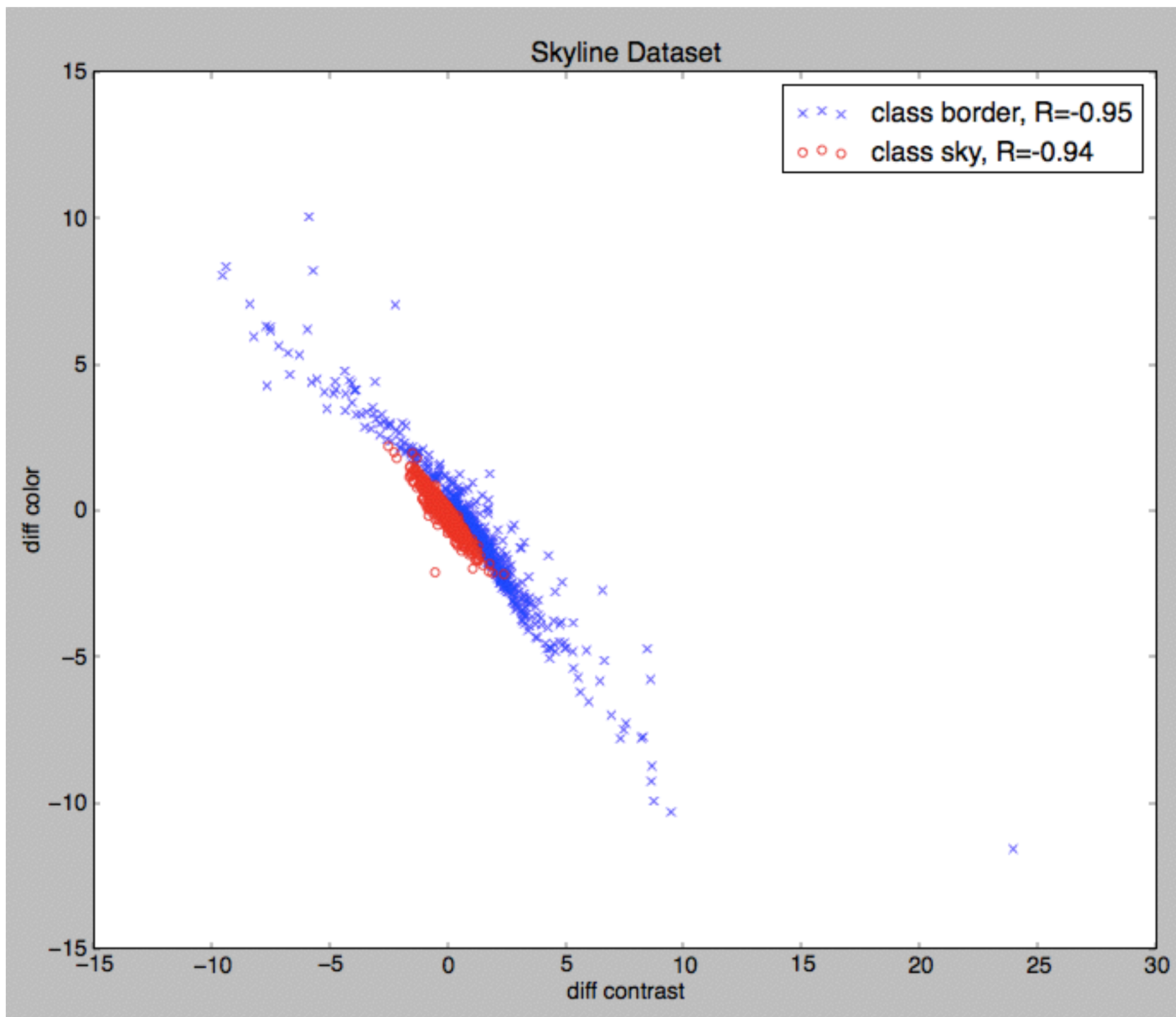
*note: the largest contrasts were removed from analysis for plot visibility



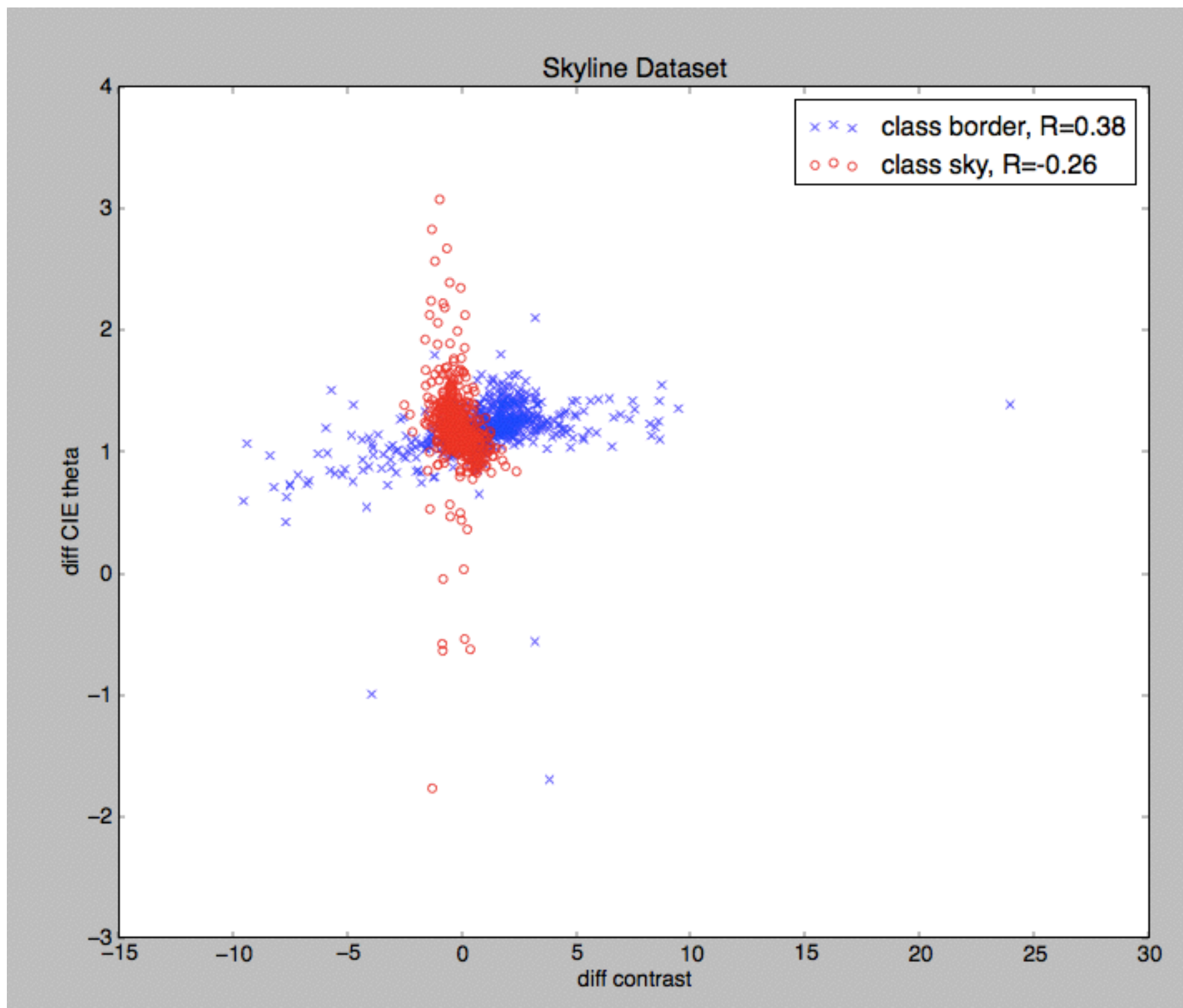
Brown & Lowe 2003, image 1



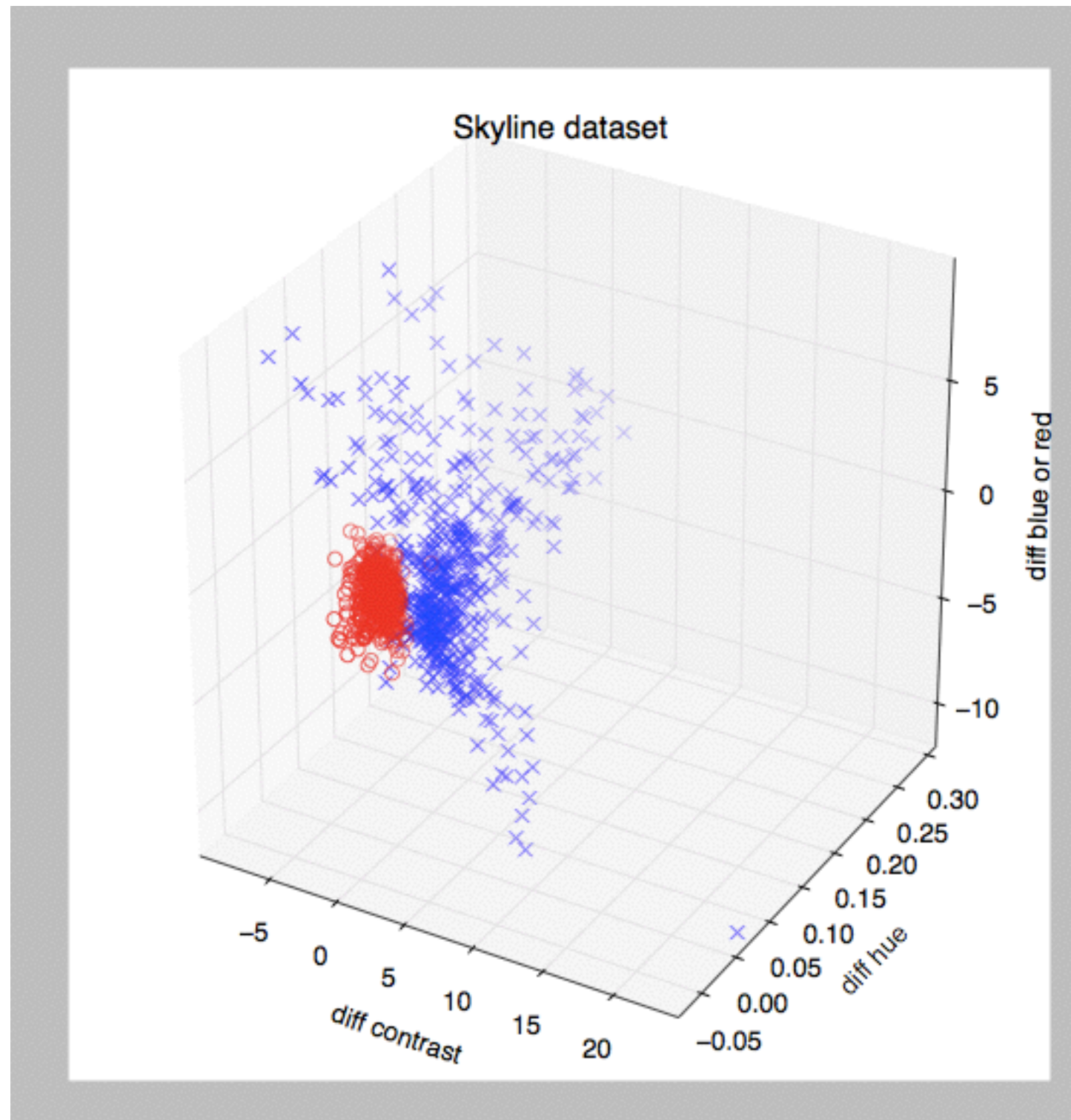
Brown & Lowe 2003, image 1



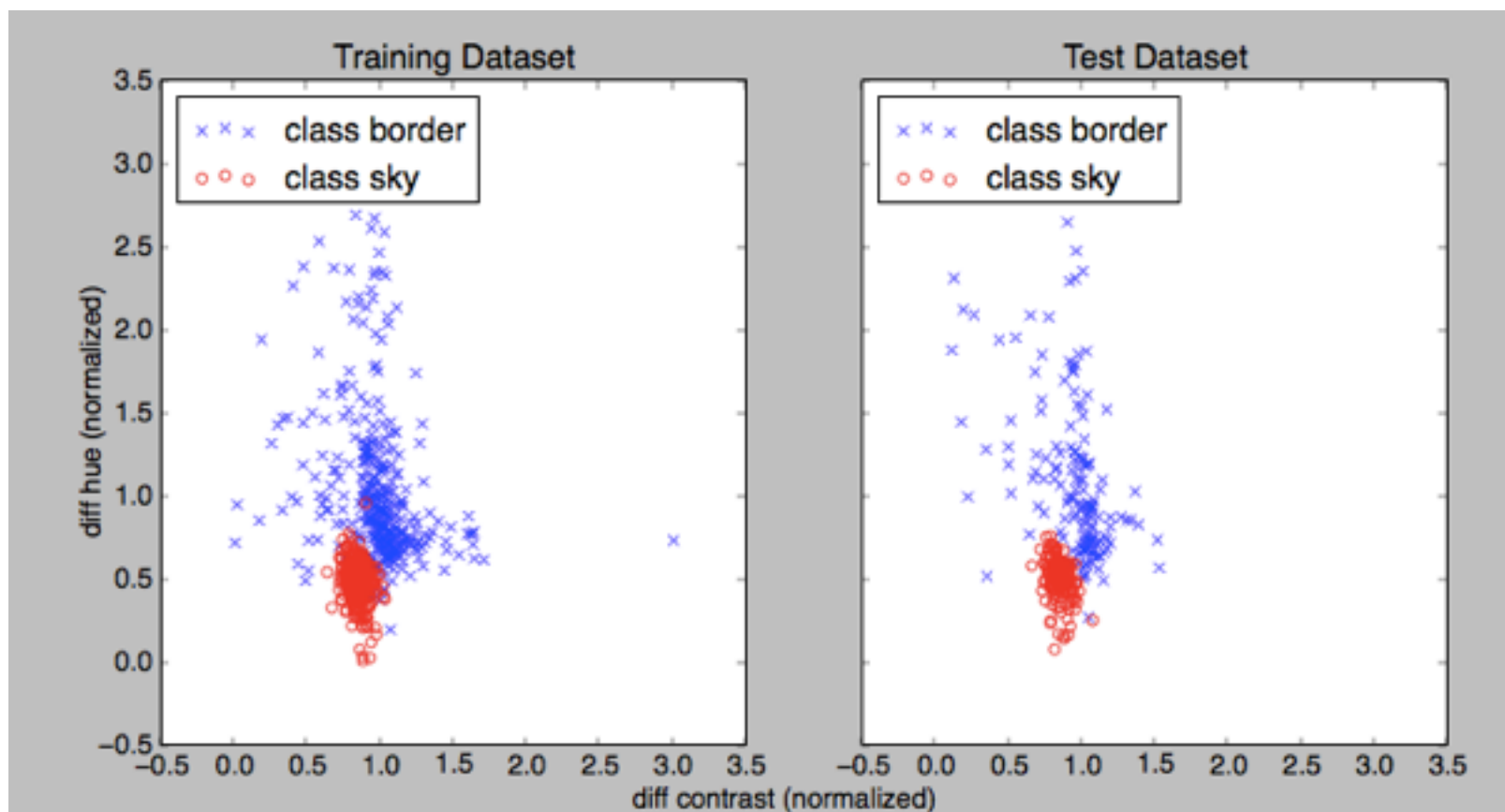
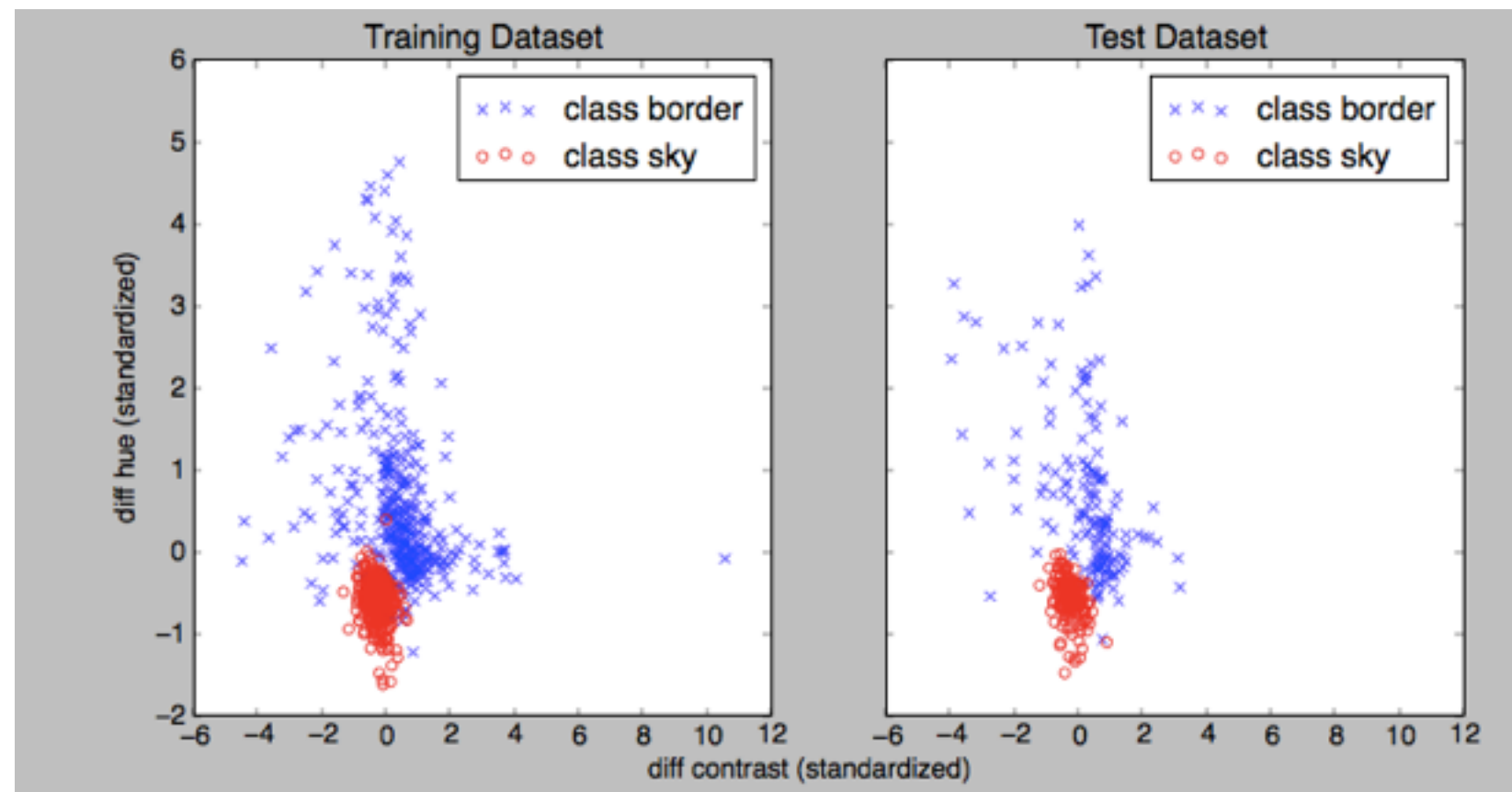
Brown & Lowe 2003, image 1



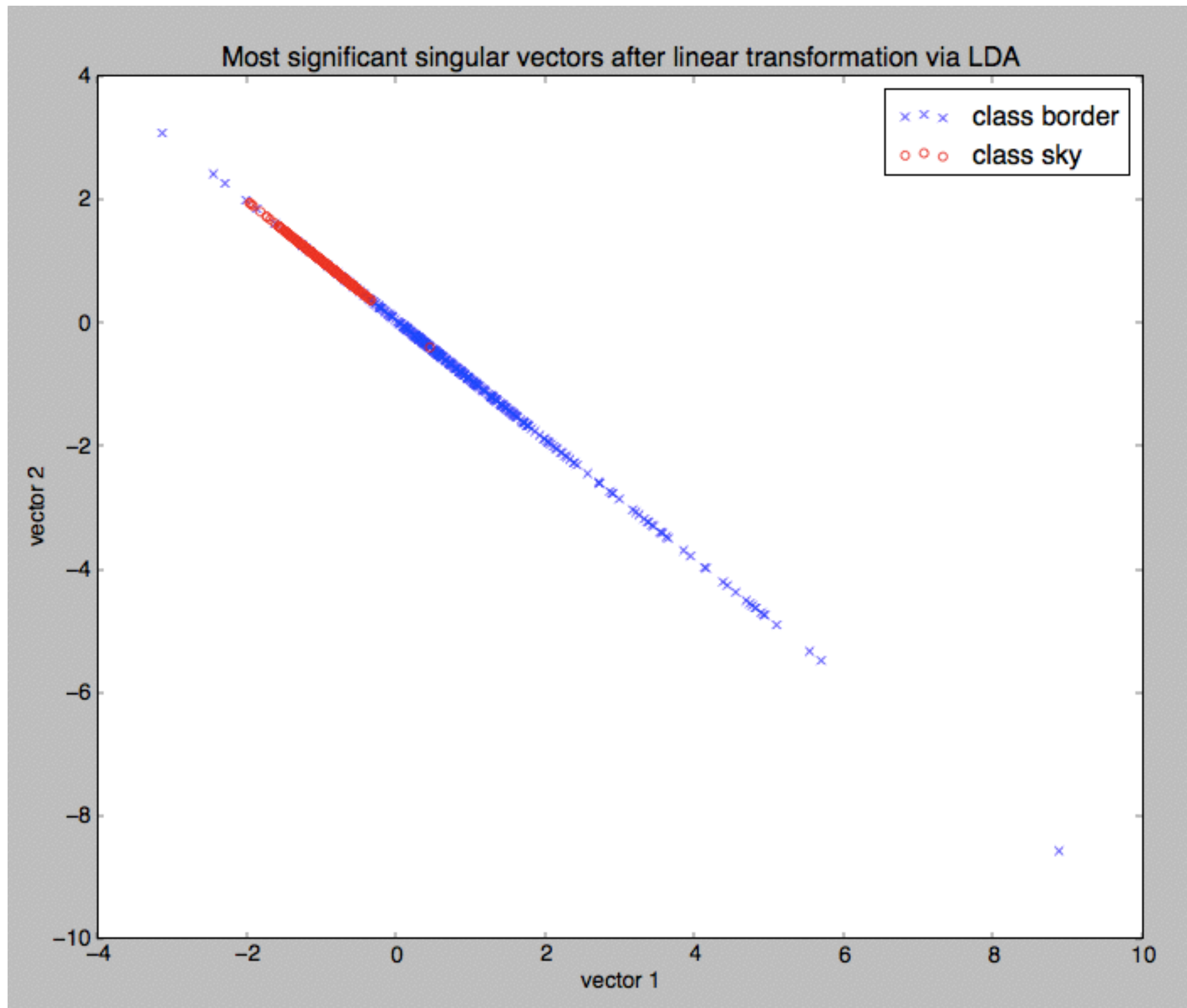
Brown & Lowe 2003, image 1



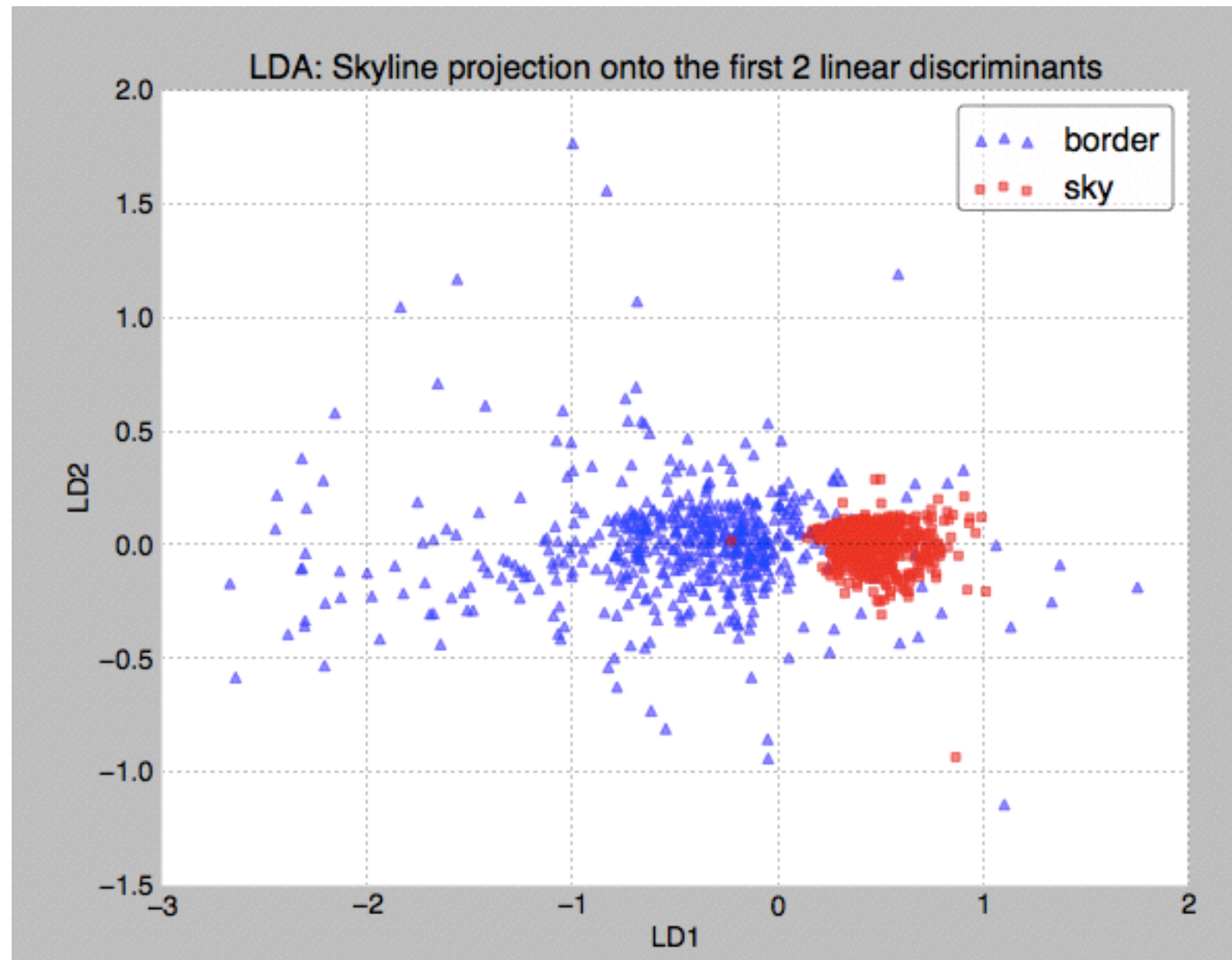
Brown & Lowe 2003, image 1



Brown & Lowe 2003, image 1



Brown & Lowe 2003, image 1



Mean Vector class 1: [0.3219 0.6334 -0.1949]

Mean Vector class 2: [-0.3127 -0.6153 0.1894]

```
('within-class Scatter Matrix:\n',  
array([[ 929.0412, -256.3866, -924.4859],  
       [-256.3866, 630.4283, 296.2583],  
       [-924.4859, 296.2583, 994.8667]]))  
('between-class Scatter Matrix:\n',  
array([[ 311.9914, 613.8395, -188.773 ],  
       [ 613.8395, 1207.8298, -371.5872],  
       [-188.773 , -371.5872, 114.5147]]))
```

Eigenvector 1:

```
[[-0.7296]  
 [-0.5264]  
 [-0.4365]]
```

Eigenvalue 1: 3.36e+00

Eigenvector 2:

```
[[-0.8083]  
 [ 0.5043]  
 [ 0.304 ]]
```

Eigenvalue 2: -1.78e-17

Eigenvector 3:

```
[ [ 0.6804]  
 [-0.1237]  
 [ 0.7224]]
```

Eigenvalue 3: 4.66e-03

ok

Eigenvalues in decreasing order:

3.36159544502

0.00466279798653

1.7822517108e-17

Variance explained:

eigenvalue 1: 99.86%

eigenvalue 2: 0.14%

eigenvalue 3: 0.00%

```
('Matrix W:\n', array([[-0.7296, -0.5264, -0.4365],  
                       [ 0.6804, -0.1237, 0.7224]]))
```