

# Upload the .json file of your colormap here

Choose File 4D.json

## Colormap



## Global Distances

The cell (i,j) contains the distance between the i-th and j-th color of the color map, which are displayed on the diagonal.

CieLAB 1976



Maximum = 68.29  
Average = 34.28  
Minimum = 0  
Deviation = 17.17

CieLAB 2000



Maximum = 38.67  
Average = 21.42  
Minimum = 0  
Deviation = 9.7

CieCAM 2002

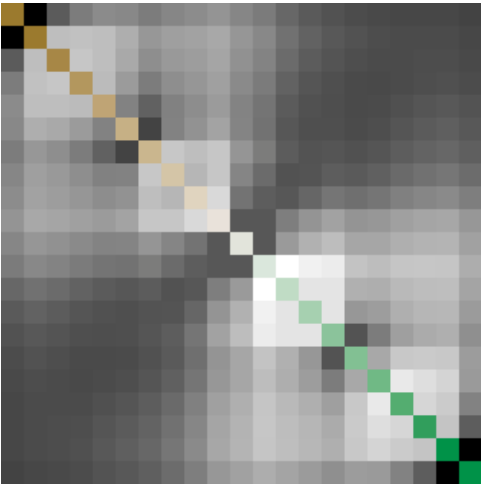


Maximum = 46.56  
Average = 22.51  
Minimum = 0  
Deviation = 10.81

## Global Speeds

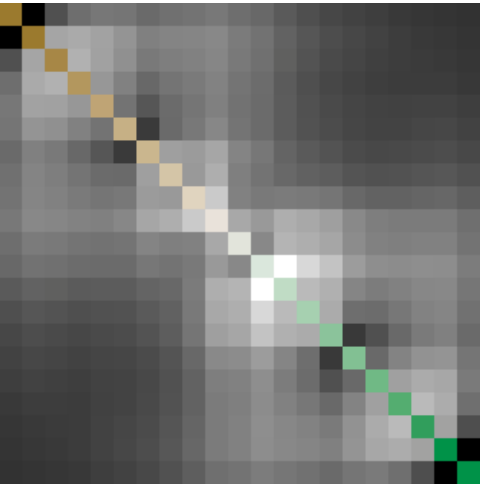
The cell (i,j) contains the ratio of the distance between the i-th and j-th color of the color map and the difference of their corresponding values. The higher the global speed, the better the global discriminative power of the colormap.

CieLAB 1976



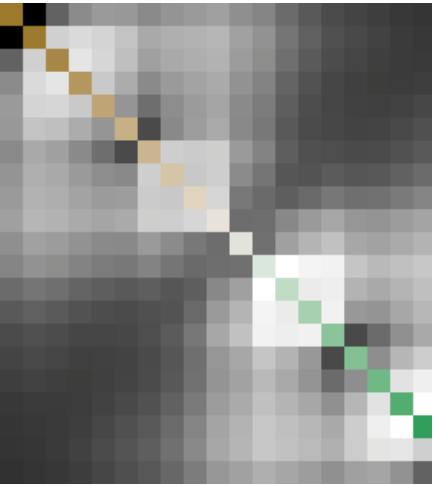
Maximum = 199.05  
Average = 108.13

CieLAB 2000



Maximum = 150.34  
Average = 69.28

CieCAM 2002



Maximum = 135.77  
Average = 74.25

Minimum = 0  
Deviation = 37.15

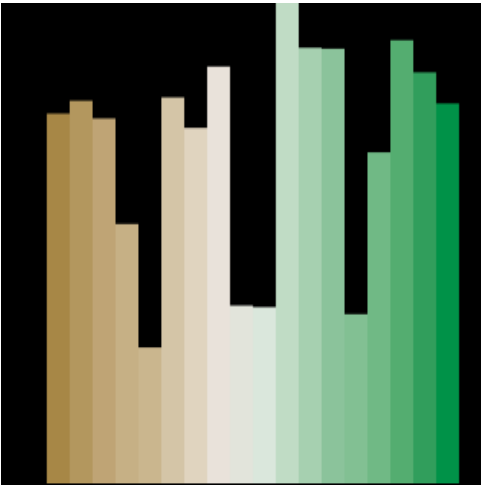
Minimum = 0  
Deviation = 23.43

Minimum = 0  
Deviation = 28.89

## Local Speeds

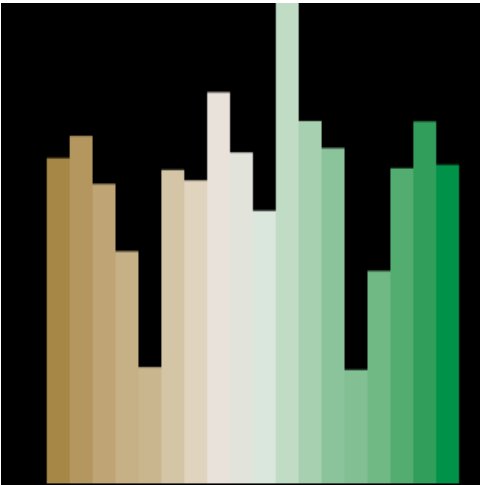
The height of each column  $i$  shows the ratio of the distance between the  $i$ -th and  $(i+1)$ -st color of the color map and the difference of their corresponding values. The higher the local speed, the higher is the colormap's local discriminative power in this area.

CieLAB 1976



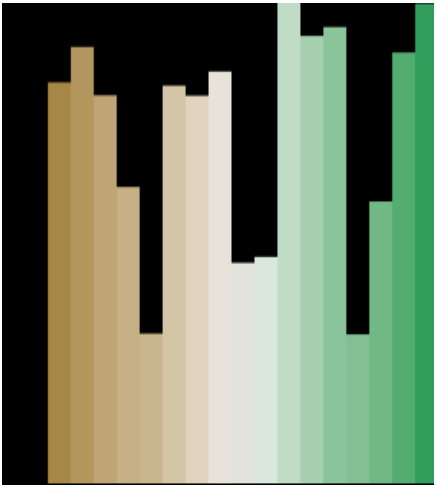
Maximum = 199.05  
Average = 126.76  
Minimum = 0  
Deviation = 58.88

CieLAB 2000



Maximum = 150.34  
Average = 85.16  
Minimum = 0  
Deviation = 38.3

CieCAM 2002

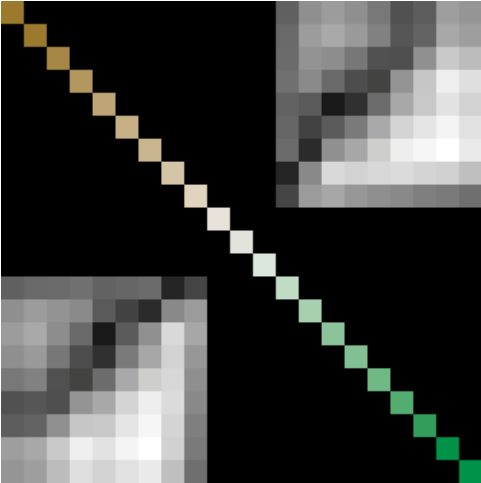


Maximum = 135.77  
Average = 91.11  
Minimum = 0  
Deviation = 41.49

## Global Triangle Distance Difference

The cell  $(i,j)$  contains the absolute value of the minimum of  $|c(i)-c(j)|-|c(i)-c(k)|$  over all  $k$  between  $i$  and  $j$  ( $i < k < j$ ). As long as it is positive, the middle color is closer to each of the two outer ones than they are to each other. That means, the colormap has an intuitive order everywhere between  $i$  and  $j$ . That is why, we only plot the values that are negative, i.e. where the global, intuitive order is violated.

CieLAB 1976



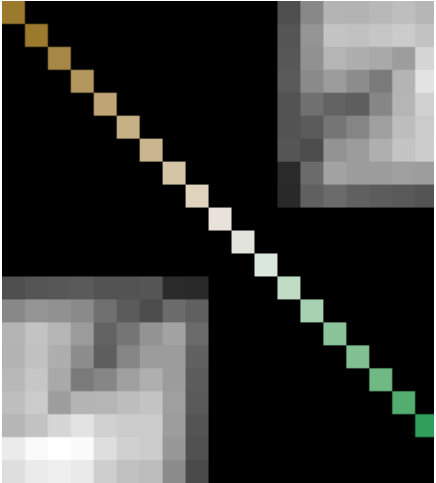
Minimum = -18.4

CieLAB 2000



Minimum = -10.84

CieCAM 2002



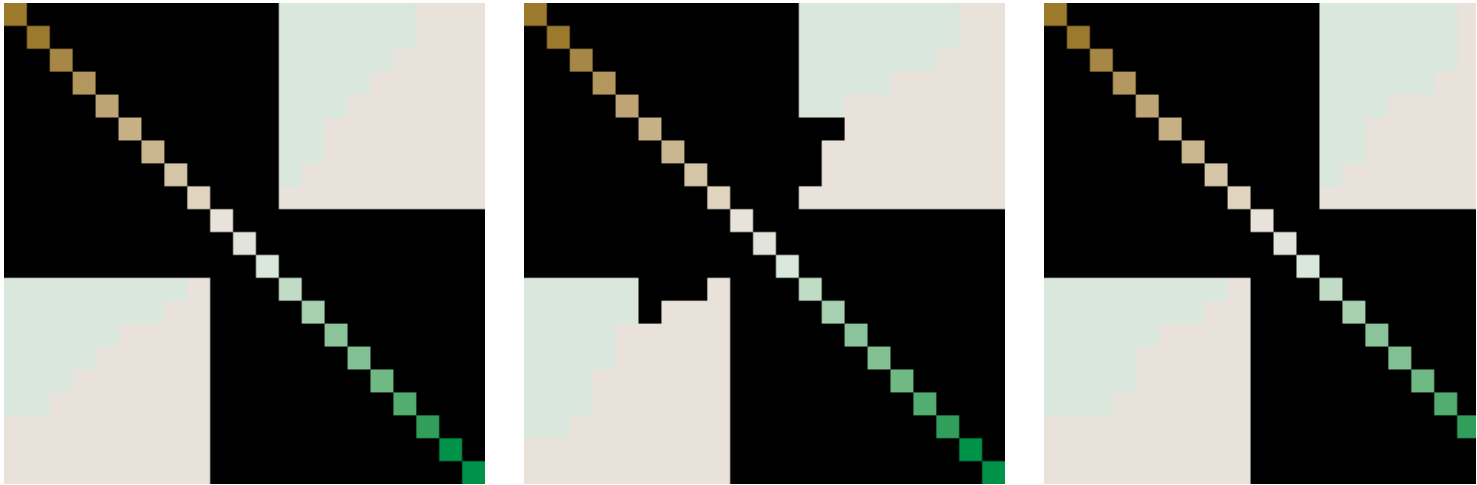
Minimum = -21.37

If there are  $k$  between  $i$  and  $j$  that violates the intuitive order, we plot the color  $c(k)$  that does so the most, i.e. the one that produces the minimum displayed in the visualization above

CieLAB 1976

CieLAB 2000

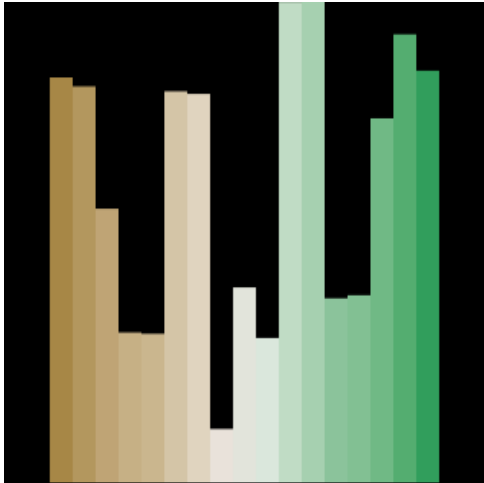
CieCAM 2002



## Local Triangle Distance Difference

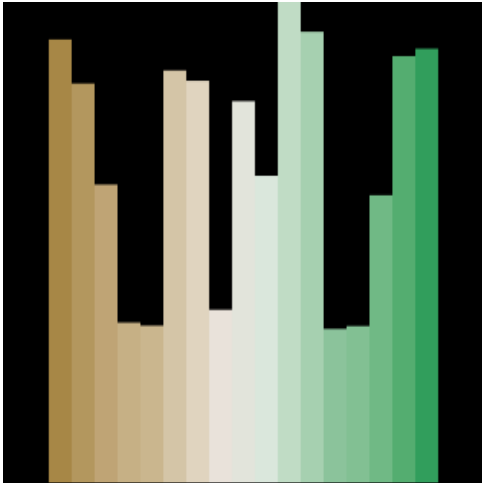
The height of each column  $i$  shows the absolute value of the minimum of  $|c(i)-c(i-1)|-|c(i+1)-c(i-1)|$  and  $|c(i+1)-c(i)|-|c(i+1)-c(i-1)|$ . As long as it is positive, the middle color  $c(i)$  is closer of the two outer ones than theses are to each other. That means, the colormap has a local, intuitive order in this area. The bars strat at zero.

CieLAB 1976



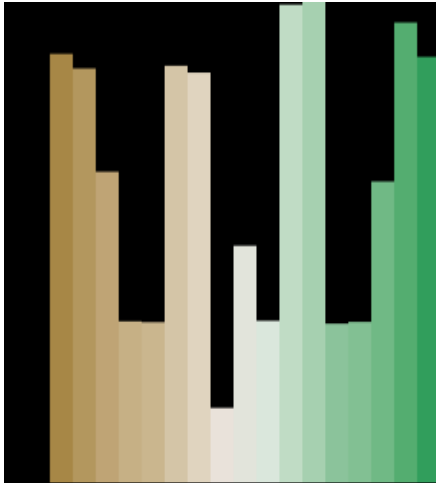
Minimum = -0.01

CieLAB 2000



Minimum = 0

CieCAM 2002



Minimum = 0

## Stress

The stress is a global measure of how much the average color difference deviates from the corresponding value differences.

CieLAB 1976

Stress = 54.25

CieLAB 2000

Stress = 80.19

CieCAM 2002

Stress = 63.94

## The Values for Copying

Columns are separated with "," and if applicable rows with ";" and the third tensor direction with ":".

Color Measure \ Distance Metric

Global Distances

CieLAB 1976

0,0,7.66,15.52,23.01,28.2

CieLAB 2000

0,0,5.09,10.47,15.01,18.4

CieCAM 2002

0,0,5.67,11.8,17.26,21.37

Global Speeds

0,0,76.69,103.52,115.09,

0,0,50.98,69.85,75.08,73

0,0,56.7,78.66,86.33,85.4

Local Speeds

0,0,153.38,158.69,151.37

0,0,101.96,108.87,93.91,

0,0,113.4,123.4,109.76,8

Triangle Distance Differences

0,0,0,0,0,0,0,0,0,0,0,0

0,0,0,0,0,0,0,0,0,0,0,0

0,0,0,0,0,0,0,0,0,0,0,0

Min Triangle Distance Differences

0,0,0,0,0,0,0,0,0,0,-7.

0,0,0,0,0,0,0,0,0,0,-3.

0,0,0,0,0,0,0,0,0,0,-7.

Local Triangle Distance Difference

0,0,75.94,74.27,51.42,28

0,0,50.34,45.35,33.91,18

0,0,56.3,54.39,40.86,21.2