

Gernot Hoffmann  
PS-Swatch Spot

Colors by Lab numbers  
Coated  
1137 Color Patches

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# Introduction

■ This document contains on page 3 to 14 altogether 1137 color patches (spot colors, coated), each one defined by CIELab values.

The Lab values are written under each patch. Additionally the RGB numbers were calculated for sRGB and AdobeRGB(98) and written in the patches. Lab values are valid for reference white D50, but sRGB and AdobeRGB(98) use D65 white point.

In order to get matching values in Photoshop, a chromatic adaptation transform (Bradford) was applied. This is accurate within  $\pm 1$  unit of 255, with a few exceptions.

For tests by Photoshop choose the appropriate RGB working space and open a page of the PDF in Lab mode, providing a sufficient resolution. Check Lab and RGB numbers by Info Palette.

A color is out of gamut for an RGB space if at least one value is negative or greater than 255. Because of clipping this is indicated by 0 or 255.

■ Page 15 and 16 show the patches in the CIE chromaticity diagram. The Lab colors are at correct positions in xy-coordinates, but for the gamut test the chromatic adaptation transform was applied. A few colors are outside the gamut triangle but nevertheless in-gamut for the RGB space.

■ Page 17 shows a suggestion for an 'optimal' RGB working space and printer inks CMY, M+Y, C+Y, C+M for ISO Coated and an inkjet.

■ Page 18 and 19 show the colors for the common IT8.7/2 target which is used for scanner and camera calibration. The gamut is not extraordinarily large. These colors are obviously relevant for practical color reproduction.

■ Page 20 to 31 show planes of constant Lab hue and the nearest spot colors, if the distance is not larger than 10 Lab units ( $dE \leq 10$ ).

This PDF is not a spot document. That means, it does not contain 1137 spot plates. In fact it will be printed by CMYK. It depends entirely on the quality of the RIP whether the Lab colors are correctly reproduced.

The document was not authorized by any manufacturer of color systems.

Thanks to *Roger Breton* for providing a method how to generate a list of common spot colors by Lab values.

More about CIELab (1.6 MB):

<http://www.fho-emden.de/~hoffmann/cielab03022003.pdf>

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s a  
251 243  
222 222  
0 0

YELLOW  
88.93 -3.6 111.13

s a  
0 0  
34 39  
158 153

REFLEX-BLUE  
19.41 29.94 -72.51

s a  
224 191  
0 0  
138 134

Hexachrome-Magenta  
48.49 81.28 -11.86

s a  
130 125  
115 115  
25 39

105  
49.02 -1.27 48.05

s a  
250 241  
220 219  
69 84

115  
88.66 -0.86 73.28

s a  
184 170  
136 134  
0 10

125  
60.21 11.77 70.02

s a  
241 233  
214 213  
94 102

128  
86.36 -0.26 61.15

s a  
228 205  
127 126  
0 0

138  
63.91 34.64 81.33

s a  
241 230  
200 199  
102 108

141  
83.07 6.52 53.86

s a  
254 230  
115 114  
0 0

151  
66.25 53.29 85.76

s a  
254 243  
212 211  
0 0

YELLOW-012  
86.59 2.59 114.22

s a  
0 0  
132 131  
207 204

PROCESS-BLUE  
48.01 -34.4 -55.5

s a  
0 0  
138 136  
210 207

Hexachrome-Cyan  
50.06 -36.31 -53.75

s a  
246 241  
229 229  
97 106

106  
90.7 -5.66 64.7

s a  
254 242  
206 205  
0 21

116  
85.34 6.62 91.94

s a  
161 151  
125 125  
9 33

126  
55.06 7.33 58.34

s a  
241 231  
205 203  
69 82

129  
83.89 3.28 68.69

s a  
181 164  
112 111  
0 0

139  
54.02 23.3 66.43

s a  
240 226  
186 185  
70 81

142  
79.33 11.99 63.72

s a  
230 204  
110 110  
0 0

152  
60.81 43.97 76.51

s a  
254 229  
91 92  
0 0

ORANGE-021  
62.78 63.39 94.36

s a  
0 0  
175 173  
138 138

GREEN  
60.09 -78.37 2.26

s a  
0 46  
166 165  
66 75

Hexachrome-Green  
57.41 -78.3 36.55

s a  
248 242  
224 224  
47 70

107  
89.49 -3.84 80.53

s a  
204 191  
157 155  
0 0

117  
67.72 9.16 83.63

s a  
243 238  
225 224  
165 167

1205  
90.2 0.04 31.86

s a  
242 224  
172 170  
0 0

130  
75.64 18.24 86.48

s a  
123 114  
87 87  
16 30

140  
40.15 10.96 43.21

s a  
240 222  
170 169  
36 54

143  
75.23 18.98 71.78

s a  
192 171  
103 103  
0 19

153  
53.53 32.45 62.89

s a  
252 218  
60 62  
47 51

WARM-RED  
57.26 71.36 54.34

s a  
50 51  
43 47  
36 41

BLACK  
18.25 2.57 5.76

s a  
33 38  
34 39  
35 40

Hexachrome-Black  
13.31 -0.17 -1.21

s a  
252 242  
217 216  
0 17

108  
87.77 0.01 94.43

s a  
177 166  
138 137  
0 0

118  
60.1 7.37 72.2

s a  
246 239  
221 220  
147 149

1215  
89.07 1.59 39.67

s a  
211 193  
144 142  
0 0

131  
65.33 19.02 79.57

s a  
251 239  
207 206  
139 141

1345  
86.04 9.62 39.89

s a  
237 212  
128 127  
0 0

144  
65.34 37.81 78.77

s a  
153 137  
84 84  
7 24

154  
43.59 26.41 50.4

s a  
243 209  
43 47  
68 69

RED-032  
54.19 73.67 39.29

s a  
241 241  
222 221  
0 0

PROCESS-YELLOW  
88.73 -3.97 102.51

s a  
241 239  
234 234  
133 138

100  
91.89 -7.69 49.41

s a  
253 241  
209 208  
0 0

109  
85.85 4.36 99.08

s a  
137 130  
116 116  
26 40

119  
49.93 1.31 48.76

s a  
254 240  
199 198  
70 82

1225  
83.91 11.23 68.71

s a  
166 154  
122 121  
0 15

132  
54.66 11.15 63.88

s a  
253 239  
200 199  
123 126

1355  
84.38 12.78 45.75

s a  
207 186  
119 118  
0 0

145  
59.1 30.5 71.1

s a  
254 242  
180 178  
122 124

1485  
80.63 26.37 42.17

s a  
211 180  
0 0  
96 94

RUBINE-RED  
44.17 78.06 7.45

s a  
212 180  
0 0  
108 105

PROCESS-MAGENTA  
45.03 77.56 1.48

s a  
244 241  
234 233  
96 106

101  
91.79 -8.52 65.97

s a  
219 206  
173 172  
0 0

110  
73.39 7.04 93.34

s a  
247 240  
222 221  
119 125

120  
89.11 0.0 53.01

s a  
254 238  
178 177  
0 27

1235  
79.03 21.72 85.33

s a  
113 106  
89 89  
20 32

133  
39.41 4.9 40.65

s a  
254 239  
183 181  
82 90

1365  
80.39 21.25 60.41

s a  
160 144  
96 96  
0 19

146  
47.42 22.11 56.42

s a  
254 242  
150 148  
59 68

1495  
74.37 40.99 65.1

s a  
230 197  
18 25  
157 153

RHODAMINE-RED  
52.09 78.9 -17.59

s a  
0 0  
157 156  
217 214

PROCESS-CYAN  
57.36 -38.35 -45.83

s a  
248 242  
228 228  
0 0

102  
90.24 -7.14 99.62

s a  
174 164  
142 141  
0 0

111  
60.77 3.51 74.52

s a  
249 241  
219 218  
110 117

121  
88.63 1.19 56.63

s a  
198 183  
145 144  
0 31

1245  
64.27 13.12 68.93

s a  
249 239  
214 213  
130 134

134  
87.45 5.14 45.97

s a  
254 236  
153 152  
0 28

1375  
73.93 35.43 80.81

s a  
113 106  
88 88  
33 41

147  
39.28 5.85 34.75

s a  
254 237  
114 113  
0 0

1505  
67.27 56.15 90.35

s a  
183 157  
40 45  
189 184

PURPLE  
46.06 67.53 -46.86

s a  
26 32  
26 32  
27 32

PROCESS-BLACK  
9.46 0.3 -0.55

s a  
251 243  
222 222  
0 0

YELLOW-C.1  
88.93 -3.6 111.13

s a  
152 144  
127 126  
0 20

112  
54.36 1.83 61.9

s a  
252 241  
211 210  
80 91

122  
86.62 4.79 67.48

s a  
171 159  
130 129  
15 36

1255  
57.34 9.61 59.49

s a  
254 240  
199 198  
91 99

135  
84.03 12.16 60.38

s a  
214 191  
118 117  
0 0

1385  
59.82 33.8 74.26

s a  
251 239  
207 206  
154 155

148  
86.33 10.55 32.51

s a  
254 229  
91 92  
0 0

ORANGE-021-C.1  
62.78 63.39 94.36

s a  
77 68  
7 15  
167 162

VIOLET  
24.35 52.58 -69.79

s a  
254 246  
222 221  
0 0

Hexachrome-Yellow  
89.27 -1.52 102.8

s a  
200 191  
171 170  
0 0

103  
71.05 -0.12 90.35

s a  
247 241  
224 223  
89 100

113  
89.51 -2.79 66.53

s a  
254 240  
199 198  
36 59

123  
83.66 10.75 79.08

s a  
131 122  
100 100  
18 33

1265  
44.71 7.4 46.64

s a  
254 239  
187 185  
57 70

136  
81.14 18.36 71.23

s a  
157 141  
96 96  
3 24

1395  
46.87 21.34 53.82

s a  
254 237  
198 197  
136 138

149  
84.26 14.91 39.36

s a  
203 177  
77 78  
0 0

1525  
50.39 48.8 74.08

s a  
0 0  
28 33  
165 160

BLUE-072  
19.4 37.51 -76.8

s a  
254 235  
112 112  
0 0

Hexachrome-Orange  
66.78 56.45 89.5

s a  
172 164  
149 148  
0 0

104  
62.37 -0.93 74.51

s a  
249 241  
223 222  
80 92

114  
89.19 -1.91 69.97

s a  
233 216  
170 169  
0 0

124  
74.31 15.22 84.1

s a  
240 234  
222 222  
130 134

127  
88.76 -2.79 47.26

s a  
254 236  
159 158  
0 0

137  
75.04 31.96 87.53

s a  
107 98  
70 71  
20 30

1405  
33.49 13.01 34.97

s a  
254 237  
169 168  
79 86

150  
77.49 28.4 59.09

s a  
148 129  
62 64  
0 0

1535  
38.08 34.73 53.01

s	a
81	73
38	42
11	20

1545  
21.03 19.12 25.88

s	a
254	234
135	134
69	74

1575  
70.55 45.66 56.9

s	a
194	170
80	81
14	28

167  
49.35 44.67 56.05

s	a
254	235
139	137
123	123

170  
71.86 46.46 30.42

s	a
227	196
57	60
42	47

179  
52.17 64.85 50.01

s	a
250	231
176	174
193	191

1767  
79.42 29.56 2.6

s	a
234	200
0	0
55	57

185  
50.21 76.47 41.56

s	a
118	103
41	45
57	59

195  
29.14 35.3 8.58

s	a
228	198
75	76
109	108

198  
55.39 61.61 15.37

s	a
143	123
32	37
71	71

208  
33.26 48.09 5.95

s	a
238	231
214	213
174	175

155  
87.12 4.25 22.94

s	a
254	229
106	105
0	24

1585  
64.71 57.09 74.1

s	a
109	97
47	50
18	26

168  
28.25 27.17 31.46

s	a
254	228
98	98
66	70

171  
63.8 61.56 51.21

s	a
191	165
53	56
42	47

180  
44.81 55.08 40.08

s	a
252	221
101	101
130	128

1777  
63.78 60.25 15.58

s	a
210	179
12	20
52	54

186  
45.48 69.5 36.74

s	a
244	229
189	188
211	209

1895  
82.3 22.85 -2.98

s	a
218	187
14	21
63	64

199  
47.41 71.68 32.46

s	a
117	102
38	42
64	65

209  
28.68 36.9 3.13

s	a
239	226
193	191
136	138

156  
81.34 11.68 34.93

s	a
218	191
92	93
8	26

1595  
55.6 47.88 63.36

s	a
254	236
162	161
139	139

1625  
76.71 35.05 27.92

s	a
253	220
69	70
6	21

172  
58.32 68.85 69.23

s	a
123	107
41	45
35	40

181  
29.93 35.91 23.95

s	a
248	215
64	66
94	93

1787  
57.49 70.59 28.18

s	a
177	151
25	31
51	54

187  
39.11 58.89 27.8

s	a
246	224
156	154
189	186

1905  
74.58 37.74 -2.3

s	a
192	164
1	6
51	53

200  
41.31 66.08 31.68

s	a
249	228
159	157
203	200

210  
75.99 38.85 -7.9

s	a
238	217
155	153
79	85

157  
71.62 27.07 51.97

s	a
162	142
74	75
18	29

1605  
42.85 34.96 47.44

s	a
254	234
142	140
111	112

1635  
72.2 44.13 37.33

s	a
214	186
68	70
27	35

173  
51.21 56.77 54.83

s	a
254	232
157	156
176	174

1765  
75.66 39.03 6.63

s	a
243	209
43	47
68	69

RED-032-C.1  
54.19 73.67 39.29

s	a
126	109
35	39
49	52

188  
29.64 40.4 15.02

s	a
241	211
84	85
138	135

1915  
59.66 63.99 5.02

s	a
157	134
25	31
51	53

201  
34.96 53.17 21.73

s	a
249	222
123	122
183	179

211  
68.33 53.67 -7.86

s	a
233	206
107	107
18	34

158  
60.68 46.66 65.66

s	a
134	118
62	64
18	28

1615  
35.68 29.6 39.38

s	a
254	230
107	107
60	65

1645  
65.37 57.67 56.09

s	a
153	133
51	54
22	30

174  
37.08 42.42 40.66

s	a
254	229
133	132
154	152

1775  
70.53 48.77 11.28

s	a
207	177
34	39
50	52

1797  
46.09 65.2 38.48

s	a
249	227
161	159
188	186

189  
75.94 36.08 0.22

s	a
228	194
0	0
79	79

1925  
48.88 76.48 25.11

s	a
136	117
33	38
52	54

202  
31.45 44.48 15.74

s	a
243	211
76	77
153	150

212  
59.19 68.46 -4.61

s	a
204	179
88	89
7	25

159  
52.59 44.78 60.59

s	a
254	238
194	193
169	169

162  
83.77 19.38 21.36

s	a
254	223
81	82
3	22

1655  
60.44 65.55 71.03

s	a
113	100
51	54
36	41

175  
29.92 27.25 22.97

s	a
249	216
68	70
90	90

1785  
58.03 69.2 30.98

s	a
163	140
39	44
50	53

1807  
37.74 50.97 25.9

s	a
248	220
118	117
156	153

190  
66.54 53.33 4.71

s	a
203	173
0	0
70	70

1935  
43.79 69.81 23.05

s	a
234	217
171	169
202	199

203  
76.86 27.21 -6.27

s	a
231	198
22	29
119	116

213  
51.43 76.23 4.27

s	a
162	143
78	79
17	29

160  
43.69 33.16 48.44

s	a
254	236
155	154
112	113

163  
74.92 37.12 40.19

s	a
229	199
72	73
0	16

1665  
54.34 60.19 66.32

s	a
254	237
173	172
184	183

176  
79.6 32.59 7.54

s	a
239	206
34	39
51	54

1788  
52.68 73.99 46.65

s	a
93	83
38	43
40	44

1817  
23.83 25.78 11.74

s	a
242	209
64	66
113	111

191  
56.6 69.64 15.38

s	a
170	145
12	20
62	63

1945  
37.16 59.66 17.88

s	a
231	206
123	122
170	167

204  
65.44 46.65 -5.33

s	a
208	178
6	14
101	99

214  
45.78 71.51 6.84

s	a
96	87
53	56
23	31

161  
27.47 17.6 27.0

s	a
254	233
126	125
66	71

164  
68.87 49.81 56.66

s	a
167	145
59	61
15	25

1675  
40.93 43.8 47.72

s	a
254	233
129	128
141	139

177  
70.35 51.9 18.77

s	a
214	183
29	35
40	44

179

s	a
231	205
111	111
183	179

218  
63.6 53.28 -15.31

s	a
175	148
0	0
97	95

227  
36.93 68.21 -4.57

s	a
242	225
175	174
224	221

236  
79.26 30.49 -14.56

s	a
197	167
0	0
153	148

2395  
42.66 79.08 -30.38

s	a
122	106
35	40
101	100

249  
30.51 43.28 -18.45

s	a
146	130
73	75
156	153

258  
43.35 40.77 -32.16

s	a
107	92
24	30
121	118

2612  
27.12 45.5 -36.63

s	a
165	152
120	119
201	198

2577  
57.51 29.82 -36.08

s	a
80	71
33	38
144	140

267  
25.53 40.23 -53.98

s	a
174	172
172	171
220	218

270  
72.01 8.23 -24.21

s	a
223	191
36	41
138	135

219  
51.04 72.96 -8.24

s	a
137	117
4	12
82	81

228  
30.03 53.37 -6.27

s	a
238	214
135	134
210	206

237  
69.9 47.58 -20.92

s	a
169	143
0	0
131	127

2405  
36.43 70.43 -27.08

s	a
228	217
191	190
231	229

250  
81.68 18.51 -14.83

s	a
109	94
28	34
115	113

259  
27.64 43.82 -32.08

s	a
89	79
38	42
90	89

2622  
24.57 30.07 -20.86

s	a
133	119
72	74
179	175

2587  
42.41 40.96 -47.27

s	a
76	69
35	40
127	123

268  
24.2 34.39 -45.11

s	a
147	145
144	143
209	206

271  
62.17 12.17 -33.17

s	a
211	180
0	0
96	94

RUBINE-RED-C.1  
44.17 78.06 7.45

s	a
105	91
29	34
67	68

229  
24.98 36.9 -4.61

s	a
230	201
84	85
190	186

238  
59.25 65.34 -26.08

s	a
152	128
0	0
117	114

2415  
32.78 64.1 -24.22

s	a
218	201
156	155
224	221

251  
72.37 31.98 -25.27

s	a
99	87
32	38
99	98

260  
25.7 37.08 -24.99

s	a
200	188
159	157
215	212

2563  
70.79 23.19 -22.81

s	a
89	77
5	13
140	136

2597  
23.58 49.83 -54.64

s	a
71	66
40	44
101	99

269  
22.85 25.18 -30.9

s	a
120	118
115	115
194	190

272  
51.78 16.66 -41.26

s	a
174	148
0	0
87	86

220  
36.95 65.95 1.92

s	a
246	226
167	165
217	214

230  
77.64 35.54 -13.03

s	a
222	191
47	51
175	170

239  
53.05 73.36 -26.8

s	a
130	111
0	0
99	97

2425  
28.5 54.76 -19.68

s	a
201	178
101	101
209	205

252  
58.44 51.84 -38.64

s	a
89	79
30	36
85	85

261  
22.94 33.11 -20.24

s	a
179	164
124	123
199	196

2573  
60.0 32.08 -30.93

s	a
79	69
6	14
123	120

2607  
20.46 45.07 -48.68

s	a
191	185
175	173
226	223

2635  
74.22 13.52 -23.76

s	a
37	39
23	30
122	119

273  
16.77 31.34 -54.34

s	a
149	127
0	0
74	74

221  
31.68 58.08 2.03

s	a
245	218
119	119
200	196

231  
67.6 55.99 -18.75

s	a
199	170
32	37
153	149

240  
46.63 69.26 -24.11

s	a
233	220
183	182
228	225

243  
80.31 24.0 -15.02

s	a
183	157
40	45
189	184

PURPLE-C.1  
46.06 67.53 -46.86

s	a
81	73
35	40
74	74

262  
21.93 26.15 -14.1

s	a
153	136
81	82
177	173

2583  
46.82 42.2 -38.88

s	a
76	67
15	23
112	109

2617  
19.92 39.88 -42.73

s	a
170	163
148	147
220	216

2645  
65.68 19.39 -33.46

s	a
32	35
20	27
102	100

274  
13.6 26.8 -46.69

s	a
108	94
24	30
64	65

222  
24.84 39.66 -2.45

s	a
238	206
66	68
176	172

232  
57.7 72.34 -20.42

s	a
174	148
8	17
129	126

241  
39.61 65.2 -21.21

s	a
230	213
163	161
223	220

244  
75.11 32.67 -20.19

s	a
170	146
29	35
175	170

253  
42.1 65.6 -44.83

s	a
210	197
166	165
227	224

2562  
73.95 24.37 -24.55

s	a
126	110
41	45
151	147

2593  
34.44 48.71 -43.17

s	a
67	60
18	25
93	92

2627  
17.32 33.41 -34.63

s	a
145	136
115	115
209	205

2655  
54.76 27.4 -44.87

s	a
30	33
19	26
87	86

275  
11.64 23.0 -40.4

s	a
242	219
145	144
207	204

223  
72.35 43.25 -15.58

s	a
230	197
18	25
157	153

RHODAMINE-RED-C.1  
52.09 78.9 -17.59

s	a
122	105
24	30
86	85

242  
28.43 45.5 -11.8

s	a
223	201
130	129
213	209

245  
67.04 45.41 -26.98

s	a
150	129
36	40
153	149

254  
37.97 56.79 -38.42

s	a
194	178
133	132
218	214

2572  
64.34 34.94 -34.5

s	a
106	91
24	30
127	123

2603  
27.18 46.36 -39.97

s	a
214	210
202	201
233	231

263  
83.27 8.46 -13.71

s	a
121	111
82	83
197	193

2665  
43.99 36.13 -55.36

s	a
36	39
28	33
68	69

276  
13.29 13.22 -24.59

s	a
239	211
108	107
190	186

224  
64.34 58.03 -18.23

s	a
201	171
0	0
128	125

233  
43.75 74.89 -13.58

s	a
238	226
196	194
229	227

2365  
83.71 19.59 -10.52

s	a
198	169
8	16
173	168

246  
46.15 74.3 -37.01

s	a
113	99
39	44
108	106

255  
29.81 39.63 -24.25

s	a
165	145
76	77
198	194

2582  
48.46 51.23 -48.49

s	a
97	85
24	30
114	111

2613  
24.95 42.46 -35.6

s	a
188	181
168	166
228	225

264  
72.34 16.79 -27.96

s	a
77	68
7</	



s	a
37	33
0	0
147	143

2735  
14.09 53.87 -74.77

s	a
23	31
31	36
87	86

2766  
14.25 13.46 -35.78

s	a
0	39
72	74
190	186

2728  
33.53 19.91 -68.65

s	a
0	0
37	41
105	103

281  
15.32 8.89 -46.32

s	a
164	176
206	204
235	233

291  
80.55 -9.17 -19.41

s	a
0	0
84	85
165	161

2945  
32.76 -8.15 -55.2

s	a
166	181
218	217
235	234

2975  
83.97 -14.32 -14.37

s	a
0	0
132	131
207	204

PROCESS-BLUE-C.1  
48.01 -34.4 -55.5

s	a
0	22
70	72
81	81

316  
25.5 -25.13 -14.27

s	a
54	123
204	203
217	216

319  
75.35 -36.51 -18.17

s	a
31	31
0	0
123	120

2745  
12.0 43.6 -63.23

s	a
190	194
208	207
235	234

2707  
82.92 -2.02 -15.72

s	a
0	0
23	29
158	153

2738  
18.3 38.77 -74.32

s	a
0	13
33	38
78	78

282  
12.61 2.21 -32.53

s	a
108	132
179	178
231	229

292  
70.09 -12.1 -33.59

s	a
0	0
60	63
111	109

2955  
22.83 -9.92 -37.77

s	a
67	119
191	189
232	230

2985  
71.99 -25.27 -31.2

s	a
0	0
114	113
178	175

307  
41.51 -32.78 -48.96

s	a
112	148
211	210
227	226

3105  
79.23 -27.09 -17.54

s	a
0	0
151	149
171	169

320  
52.57 -62.26 -27.8

s	a
27	29
2	9
104	102

2755  
10.26 35.67 -53.93

s	a
163	170
191	189
235	233

2717  
76.52 -2.19 -25.28

s	a
0	9
28	34
123	120

2748  
15.48 24.43 -57.51

s	a
148	160
191	190
232	230

283  
75.59 -7.4 -25.53

s	a
0	0
73	74
183	178

293  
30.51 7.36 -69.36

s	a
0	13
50	53
82	81

2965  
18.33 -10.87 -25.81

s	a
0	54
162	161
224	221

2995  
60.36 -30.7 -45.02

s	a
0	0
89	90
131	128

308  
32.24 -30.38 -35.33

s	a
0	110
197	196
219	217

3115  
72.57 -36.7 -23.51

s	a
0	0
130	129
147	145

321  
45.61 -55.64 -24.4

s	a
26	29
13	21
85	84

2765  
9.73 24.99 -41.73

s	a
53	81
121	120
217	213

2727  
50.59 3.95 -56.16

s	a
0	16
30	35
104	102

2758  
14.21 16.65 -47.42

s	a
110	130
171	169
229	226

284  
67.74 -8.07 -35.69

s	a
0	0
54	57
128	125

294  
21.67 0.79 -50.25

s	a
118	145
198	197
233	231

297  
75.9 -18.35 -25.61

s	a
0	0
118	118
204	201

3005  
44.26 -23.58 -59.72

s	a
0	12
56	59
71	72

309  
19.97 -21.23 -16.0

s	a
0	44
175	173
206	204

3125  
62.94 -47.62 -31.48

s	a
0	0
112	111
123	122

322  
39.88 -45.78 -18.77

s	a
196	197
204	202
233	231

2706  
82.19 1.89 -15.53

s	a
0	0
28	33
165	160

BLUE-072-C.1  
19.4 37.51 -76.8

s	a
3	21
29	35
79	79

2768  
12.12 8.39 -34.22

s	a
0	57
120	120
212	208

285  
48.45 -4.43 -56.86

s	a
0	0
46	49
99	97

295  
17.36 -2.96 -38.9

s	a
64	113
181	180
230	228

298  
69.1 -22.01 -34.52

s	a
0	0
97	97
161	157

3015  
35.98 -24.52 -47.6

s	a
105	143
208	207
230	228

310  
78.25 -26.82 -20.34

s	a
0	0
146	145
185	182

3135  
51.72 -53.49 -36.82

s	a
0	14
97	97
103	103

323  
34.85 -37.73 -14.27

s	a
148	150
161	159
225	222

2716  
67.18 6.86 -34.5

s	a
0	0
36	40
124	121

2747  
17.17 18.65 -55.6

s	a
168	176
198	197
233	231

277  
78.75 -4.45 -21.06

s	a
0	0
55	58
173	168

286  
25.3 18.55 -71.82

s	a
0	20
41	45
66	67

296  
14.77 -7.87 -20.57

s	a
0	73
161	160
225	222

299  
60.92 -24.61 -44.48

s	a
0	0
74	75
110	108

3025  
26.95 -23.34 -30.55

s	a
0	106
194	193
225	223

311  
71.73 -34.88 -27.66

s	a
0	0
121	121
150	147

3145  
43.23 -46.52 -29.5

s	a
150	172
217	216
218	217

324  
82.54 -21.59 -7.69

s	a
69	76
86	87
198	194

2726  
40.47 21.97 -61.9

s	a
0	19
36	41
101	99

2757  
15.74 10.42 -42.62

s	a
138	150
180	179
231	228

278  
71.92 -4.83 -30.42

s	a
0	0
57	60
152	149

287  
24.45 9.59 -61.09

s	a
146	163
201	199
233	231

2905  
78.1 -12.23 -22.23

s	a
0	0
105	105
199	195

300  
40.2 -14.22 -62.91

s	a
0	14
60	62
81	81

3035  
21.75 -19.49 -19.85

s	a
0	0
167	166
211	208

312  
60.37 -45.58 -37.79

s	a
0	0
102	102
124	122

3155  
36.29 -41.09 -24.66

s	a
71	125
199	198
199	198

325  
73.61 -36.01 -10.87

s	a
30	37
36	40
173	168

2736  
24.03 38.66 -73.95

s	a
14	28
36	40
69	70

2767  
14.05 1.78 -24.17

s	a
66	94
138	137
220	217

279  
56.11 -2.55 -49.38

s	a
0	0
49	52
130	127

288  
20.53 7.53 -53.7

s	a
101	130
182	180
230	228

2915  
70.42 -15.21 -32.59

s	a
0	0
84	85
155	152

301  
31.84 -14.94 -50.91

s	a
164	181
220	219
233	232

304  
84.51 -16.46 -12.62

s	a
0	0
146	145
197	194

313  
52.32 -46.92 -42.77

s	a
0	0
79	80
93	93

3165  
28.34 -32.48 -17.83

s	a
0	0
99	99
90	90

329  
34.52 -51.43 -6.48

s	a
52	126
212	211
202	202

3255  
77.18 -43.07 -7.59

s	a
0	0
127	126
100	101

3288  
44.43 -60.73 1.82

s	a
149	171
217	215
199	199

337  
81.85 -24.77 1.28

s	a
0	26
174	172
104	107

3405  
59.67 -80.76 20.27

s	a
25	47
71	72
44	49

350  
26.6 -21.82 11.08

s	a
81	124
189	188
68	79

360  
68.71 -49.71 49.46

s	a
80	100
136	135
14	37

370  
51.48 -33.11 51.08

s	a
212	215
225	224
60	78

380  
86.74 -18.67 73.35

s	a
179	180
188	187
0	0

390  
73.66 -17.27 89.87

s	a
0	35
82	83
77	78

330  
30.01 -29.84 -4.98

s	a
0	76
196	194
182	181

3265  
69.32 -58.72 -8.51

s	a
0	23
104	104
83	85

3298  
36.93 -47.75 1.13

s	a
119	151
209	208
188	188

338  
77.97 -31.79 1.32

s	a
0	38
119	118
74	78

3415  
42.19 -54.04 13.51

s	a
167	186
229	228
194	194

351  
86.22 -25.94 10.5

s	a
11	97
173	171
40	57

361  
61.83 -57.46 52.42

s	a
75	82
96	96
29	40

371  
38.08 -16.5 33.9

s	a
201	206
220	219
0	47

381  
84.23 -21.82 83.24

s	a
150	148
146	145
0	0

391  
59.46 -9.27 71.81

s	a
117	153
218	217
217	216

3242  
81.11 -31.11 -9.1

s	a
0	0
176	174
156	155

3275  
60.97 -71.58 -6.45

s	a
0	33
66	68
54	57

3308  
23.94 -25.87 1.32

s	a
0	80
177	175
139	139

339  
63.2 -56.11 6.51

s	a
0	43
101	101
67	71

3425  
36.46 -41.55 10.0

s	a
135	166
224	223
176	177

352  
82.87 -35.94 14.92

s	a
41	91
150	149
38	53

362  
54.86 -47.79 46.54

s	a
216	221
234	234
162	164

372  
90.3 -14.81 33.12

s	a
187	193
211	210
0	0

382  
80.71 -24.55 88.43

s	a
128	125
121	120
0	16

392  
50.16 -6.13 58.54

s	a
70	130
211	210
210	209

3252  
77.43 -38.82 -11.11

s	a
0	29
148	147
133	132

3285  
52.42 -58.31 -5.72

s	a
179	194
232	231
223	222

331  
88.17 -18.85 -1.52

s	a
0	0
149	147
95	98

340  
51.37 -72.5 13.76

s	a
0	38
71	73
48	53

3435  
25.87 -27.73 7.48

s	a
107	149
219	218
161	162

353  
79.94 -43.76 18.52

s	a
51	87
136	135
38	51

363  
50.36 -41.13 42.12

s	a
204	211
232	231
132	137

373  
88.41 -21.05 45.14

s	a
160	162
171	169
0	0

383  
67.31 -17.2 78.09

s	a
237	236
235	235
141	146

393  
91.91 -9.03 45.53

s	a
0	59
187	186
184	183

3262  
66.22 -58.51 -14.12

s	a
0	28
124	123
109	110

3295  
44.24 -50.72 -4.16

s	a
158	181
229	228
218	217

332  
86.16 -24.73 -1.9

s	a
0	31
120	119
85	87

341  
42.47 -54.45 7.88

s	a
166	182
220	219
192	192

344  
83.67 -22.37 8.1

s	a
0	47
170	169
55	67

354  
58.48 -81.35 42.42

s	a
51	76
112	111
34	45

364  
41.96 -32.27 35.01

s	a
187	198
228	227
94	104

374  
85.83 -28.47 58.88

s	a
140	140
144	143
0	0

384  
57.96 -12.5 68.13

s	a
234	233
232	231
63	81

394  
90.15 -12.89 76.12

s	a
0	0
161	160
157	156

3272  
55.77 -71.15 -14.86

s	a
0	37
75	76
64	66

3305  
27.32 -27.44 -0.5

s	a
70	134
217	216
198	198

333  
79.0 -43.76 -2.55

s	a
0	41
106	106
78	80

342  
38.2 -43.7 6.27

s	a
136	161
212	211
174	175

345  
79.36 -30.79 10.93

s	a
0	48
149	147
50	61

355  
51.8 -70.51 37.78

s	a
202	209
228	227
161	163

365  
87.57 -17.14 29.95

s	a
138	161
211	209
0	29

375  
77.44 -42.91 80.95

s	a
111	109
106	106
17	33

385  
44.39 -5.49 45.52

s	a
229	228
228	227
0	25

395  
88.58 -14.65 93.47

s	a
0	0
133	132
127	127

3282  
46.61 -58.21 -11.36

s	a
121	152
209	208
199	198

3248  
78.41 -29.59 -3.66

s	a
0	0
175	173
138	138

GREEN-C.1  
60.09 -78.37 2.26

s	a
0	43
83	84
62	66

343  
30.61 -30.65 5.12

s	a
93	134
200	199
151	152

346  
73.58 -41.14 14.93

s	a
0	46
114	114
43	52

356  
40.55 -52.75 28.45

s	a
161	177
214	213
102	109

366  
84.96 -22.8 37.64

s	a
105	116
143	141
0	20

376  
68.31 -39.44 76.45

s	a
229	230
233	232
110	118

386  
90.44 -13.3 58.32

s	a
222	221
222	221
0	0

396  
86.39 -15.62 102.1

s	a
0	20
91	92
85	86

3292  
32.61 -39.43 -6.03

s	a
68	123
198	196
183	182

3258  
72.74 -39.32 -3.73

s	a
0	0
152	151
120	121

334  
52.9 -69.13 2.05

s	a
129	162
225	224
198	198

3375  
83.12 -34.23 3.71

s	a
0	37
149	148
67	74

347  
51.79 -72.71 29.39

s a  
240 238  
234 234  
119 126

3935  
91.64 -9.03 55.71

s a  
151 147  
143 141  
134 134

403  
59.94 2.02 5.47

s a  
55 55  
43 47  
39 44

412  
18.97 5.21 4.48

s a  
168 167  
170 168  
171 170

422  
69.61 -0.33 -0.99

s a  
66 71  
76 77  
86 87

432  
31.99 -2.43 -7.44

s a  
179 180  
188 186  
190 189

442  
75.64 -2.78 -2.47

s a  
179 175  
170 168  
164 163

WARM-GRAY-5  
70.28 2.55 4.2

s a  
189 188  
189 188  
191 190

COOL-GRAY-4  
76.92 0.06 -0.89

s a  
61 60  
45 49  
32 38

BLACK-4  
20.4 6.22 11.34

s a  
213 211  
212 210  
193 192

454  
84.64 -2.02 9.53

s a  
239 236  
229 228  
0 46

3945  
89.75 -10.53 89.74

s a  
123 119  
114 113  
104 104

404  
48.7 2.4 6.47

s a  
200 199  
200 199  
194 193

413  
80.73 -0.75 2.91

s a  
145 145  
147 146  
149 148

423  
61.1 -0.46 -1.23

s a  
31 39  
40 44  
47 51

433  
15.7 -2.19 -6.3

s a  
152 154  
162 161  
166 164

443  
66.14 -3.18 -3.25

s a  
170 166  
160 159  
154 153

WARM-GRAY-6  
66.88 2.78 4.46

s a  
178 176  
178 177  
180 179

COOL-GRAY-5  
72.82 0.01 -1.07

s a  
70 66  
48 51  
50 54

BLACK-5  
22.68 10.6 2.42

s a  
92 87  
71 72  
24 33

4485  
31.84 5.55 30.72

s a  
236 233  
225 224  
0 0

3955  
88.22 -10.43 102.74

s a  
100 97  
90 91  
81 82

405  
39.21 2.66 6.99

s a  
182 180  
182 180  
175 174

414  
74.04 -1.02 3.65

s a  
120 120  
123 122  
125 124

424  
51.58 -0.61 -1.6

s a  
212 207  
201 200  
205 204

434  
82.13 4.24 -0.56

s a  
123 125  
133 132  
137 136

444  
54.91 -3.26 -3.58

s a  
158 154  
148 147  
141 140

WARM-GRAY-7  
62.28 3.1 5.03

s a  
176 174  
176 175  
179 177

COOL-GRAY-6  
72.15 0.06 -1.39

s a  
16 26  
28 34  
39 43

BLACK-6  
9.75 -2.73 -9.14

s a  
132 125  
109 109  
43 51

4495  
47.63 3.37 39.27

s a  
234 230  
220 219  
0 0

3965  
86.84 -9.49 106.89

s a  
50 51  
43 47  
36 41

BLACK-C.1  
18.25 2.57 5.76

s a  
157 156  
158 156  
149 148

415  
64.94 -1.28 4.4

s a  
86 88  
89 90  
91 92

425  
37.9 -0.77 -1.74

s a  
199 194  
186 184  
191 189

435  
76.82 5.75 -0.95

s a  
78 81  
84 85  
87 88

445  
35.57 -2.15 -2.78

s a  
145 141  
134 133  
126 126

WARM-GRAY-8  
56.88 3.32 5.6

s a  
159 158  
160 158  
163 161

COOL-GRAY-7  
65.95 0.04 -1.63

s a  
64 65  
60 62  
56 58

BLACK-7  
25.73 1.23 3.21

s a  
155 149  
136 134  
71 76

4505  
57.49 1.47 37.11

s a  
187 180  
168 166  
0 0

3975  
68.78 -3.73 84.49

s a  
202 198  
194 193  
191 190

406  
79.21 2.35 2.57

s a  
135 134  
136 135  
126 126

416  
56.61 -1.56 5.16

s a  
35 41  
38 42  
39 43

426  
14.99 -0.74 -1.54

s a  
183 177  
166 164  
172 171

436  
69.82 7.19 -1.14

s a  
62 65  
67 69  
66 68

446  
28.0 -2.23 -0.63

s a  
136 132  
124 123  
116 116

WARM-GRAY-9  
53.16 3.54 5.94

s a  
146 145  
147 146  
151 149

COOL-GRAY-8  
61.27 0.04 -1.92

s a  
71 71  
62 64  
39 45

448  
26.95 1.34 15.49

s a  
179 174  
164 162  
110 112

4515  
67.91 0.06 30.02

s a  
155 149  
137 136  
0 0

3985  
57.45 -2.12 67.76

s a  
185 181  
176 174  
172 171

407  
72.65 3.16 3.03

s a  
111 111  
112 111  
101 102

417  
47.08 -1.79 5.75

s a  
211 211  
214 213  
217 216

427  
85.53 -0.58 -1.92

s a  
131 124  
109 108  
116 115

437  
48.47 10.11 -0.32

s a  
50 54  
53 56  
50 53

447  
22.08 -1.73 1.67

s a  
122 118  
110 110  
102 102

WARM-GRAY-10  
47.68 3.86 6.44

s a  
132 132  
134 133  
137 136

COOL-GRAY-9  
55.98 0.06 -2.19

s a  
78 76  
68 70  
38 44

449  
29.48 0.63 19.9

s a  
199 194  
187 186  
144 144

4525  
76.23 -0.64 23.57

s a  
105 101  
91 91  
6 25

3995  
39.24 -0.28 44.18

s a  
165 161  
154 152  
150 149

408  
64.62 4.01 3.43

s a  
89 90  
90 91  
80 81

418  
38.3 -1.97 5.91

s a  
196 195  
199 198  
204 202

428  
80.38 -0.82 -2.58

s a  
82 78  
63 65  
65 67

438  
28.93 9.12 2.18

s a  
223 221  
220 219  
217 216

WARM-GRAY-1  
87.98 0.82 1.6

s a  
105 102  
92 93  
84 85

WARM-GRAY-11  
40.48 4.17 6.87

s a  
112 111  
113 113  
117 116

COOL-GRAY-10  
47.84 0.03 -2.51

s a  
82 81  
73 74  
37 43

450  
31.4 0.16 22.86

s a  
212 208  
203 202  
169 169

4535  
81.94 -0.96 18.38

s a  
205 202  
200 199  
195 194

400  
81.07 1.04 3.21

s a  
148 143  
135 134  
131 130

409  
57.59 4.66 3.96

s a  
32 37  
34 39  
28 34

419  
12.95 -1.81 3.34

s a  
168 168  
174 172  
180 179

429  
70.88 -1.29 -4.1

s a  
69 67  
53 56  
53 56

439  
24.12 7.33 2.57

s a  
217 215  
213 212  
210 209

WARM-GRAY-2  
85.75 1.09 2.06

s a  
225 224  
225 224  
225 224

COOL-GRAY-1  
89.69 0.1 -0.11

s a  
98 98  
99 99  
104 103

COOL-GRAY-11  
42.16 0.15 -2.9

s a  
160 157  
155 154  
117 118

451  
63.84 -2.73 20.84

s a  
223 220  
217 216  
193 193

4545  
86.87 -1.03 12.42

s a  
188 185  
182 180  
176 175

401  
74.58 1.42 3.94

s a  
123 118  
108 108  
104 104

410  
47.11 5.49 4.44

s a  
203 202  
203 202  
203 202

420  
81.98 -0.22 -0.07

s a  
135 136  
143 142  
151 149

430  
59.11 -1.77 -5.45

s a  
55 55  
44 48  
42 46

440  
19.47 5.2 3.0

s a  
201 198  
195 194  
190 189

WARM-GRAY-3  
79.41 1.73 3.15

s a  
214 213  
214 213  
215 214

COOL-GRAY-2  
85.84 0.11 -0.44

s a  
58 59  
50 53  
32 38

BLACK-2  
21.57 1.26 13.12

s a  
181 179  
178 176  
146 146

452  
72.29 -2.87 16.9

s a  
101 97  
84 85  
22 33

455  
36.81 2.2 36.73

s a  
173 169  
166 164  
159 158

402  
68.59 1.7 4.51

s a  
98 94  
82 83  
78 79

411  
36.68 5.89 4.97

s a  
185 184  
187 185  
187 186

421  
75.82 -0.28 -0.59

s a  
96 99  
106 106  
116 115

431  
44.53 -2.31 -6.95

s a  
202 203  
209 208  
210 209

441  
83.49 -2.17 -1.53

s a  
190 186  
182 180  
176 175

WARM-GRAY-4  
74.67 2.19 3.79

s a  
201 199  
201 200  
202 201

COOL-GRAY-3  
81.09 0.07 -0.56

s a  
40 46  
48 51  
40 44

BLACK-3  
19.11 -5.24 4.07

s a  
199 197  
197 196  
172 172

453  
79.47 -2.52 12.98

s a  
153 145  
128 127  
11 34

456  
54.74 2.58 57.31



s	a
178	168
146	144
0	26

457  
62.23 4.14 68.35

s	a
212	207
196	195
161	162

467  
80.07 1.91 19.67

s	a
156	138
78	79
27	36

470  
42.72 30.77 43.19

s	a
198	189
170	168
159	158

4735  
71.95 9.41 9.42

s	a
106	94
45	49
35	40

483  
27.58 27.03 20.12

s	a
216	196
133	131
152	150

493  
65.05 34.66 4.11

s	a
233	224
203	202
209	208

503  
84.57 11.42 0.85

s	a
128	111
44	48
68	69

506  
31.9 38.42 5.48

s	a
231	218
186	184
222	220

516  
80.52 21.18 -11.66

s	a
89	81
44	48
94	93

519  
26.14 27.47 -20.93

s	a
219	213
201	200
103	109

458  
81.27 -2.82 50.57

s	a
223	219
213	211
187	187

468  
85.59 0.53 13.71

s	a
183	161
83	84
19	31

471  
48.24 38.76 52.89

s	a
212	205
190	189
182	180

4745  
78.88 6.83 7.27

s	a
159	137
45	49
34	39

484  
37.37 47.07 35.0

s	a
231	215
167	166
183	181

494  
75.36 25.98 1.55

s	a
67	61
29	35
31	36

4975  
16.85 18.44 8.0

s	a
212	194
141	140
167	165

507  
66.84 30.22 -2.16

s	a
235	226
203	202
227	226

517  
85.13 14.65 -7.8

s	a
104	92
48	52
115	113

520  
30.21 33.46 -28.11

s	a
224	219
210	209
125	129

459  
84.24 -3.47 43.99

s	a
76	69
36	41
19	27

4625  
20.01 18.13 20.03

s	a
227	209
154	153
107	109

472  
70.56 24.44 36.42

s	a
221	216
206	204
198	197

4755  
83.91 4.65 5.54

s	a
219	188
34	39
31	36

485  
48.35 68.09 51.69

s	a
237	223
185	184
198	197

495  
80.36 20.6 0.74

s	a
133	119
74	75
81	82

4985  
39.08 26.11 7.32

s	a
227	212
174	172
194	191

508  
76.53 22.3 -2.32

s	a
75	68
37	42
62	63

5115  
21.02 20.75 -7.74

s	a
172	160
133	132
185	182

521  
60.84 22.37 -21.74

s	a
229	225
219	218
151	153

460  
87.27 -3.82 34.68

s	a
145	131
90	91
52	57

4635  
44.23 20.28 31.41

s	a
237	223
185	183
151	151

473  
79.41 16.08 24.88

s	a
81	75
50	53
39	44

476  
24.69 13.45 12.92

s	a
235	214
149	148
135	134

486  
70.81 31.84 21.81

s	a
238	227
196	195
207	205

496  
83.38 16.59 0.56

s	a
161	146
104	103
112	111

4995  
50.52 24.42 5.33

s	a
231	219
186	184
203	201

509  
80.14 18.89 -2.16

s	a
111	100
65	67
100	99

5125  
34.42 24.52 -11.98

s	a
190	180
159	157
201	198

522  
69.43 17.51 -17.54

s	a
232	230
227	226
180	181

461  
89.83 -3.5 23.57

s	a
176	162
126	125
92	94

4645  
57.61 16.81 26.81

s	a
239	227
197	196
169	169

474  
83.01 12.23 20.02

s	a
94	85
47	51
37	42

477  
26.01 20.75 16.55

s	a
236	219
171	170
158	157

487  
76.23 23.0 16.67

s	a
79	72
42	46
40	45

497  
22.31 16.96 8.95

s	a
182	168
131	130
139	137

5005  
60.27 21.13 3.86

s	a
234	223
195	194
209	208

510  
82.78 16.01 -1.66

s	a
136	125
93	94
128	125

5135  
45.42 22.37 -11.92

s	a
202	194
178	176
211	209

523  
75.59 13.46 -13.72

s	a
86	81
63	65
34	41

462  
28.87 7.94 21.39

s	a
193	180
149	147
119	120

4655  
65.44 14.13 22.23

s	a
239	231
209	207
186	186

475  
86.08 8.64 15.3

s	a
114	101
54	57
40	45

478  
30.92 25.96 21.3

s	a
236	223
188	187
176	175

488  
80.58 16.31 12.82

s	a
104	93
51	54
47	51

498  
28.82 23.9 13.92

s	a
207	196
169	167
175	173

5015  
72.98 15.4 2.28

s	a
96	85
36	40
77	77

511  
24.9 31.82 -11.79

s	a
161	151
126	125
155	152

5145  
57.08 18.07 -10.19

s	a
218	212
203	201
224	222

524  
83.46 8.22 -8.43

s	a
110	101
73	75
32	40

463  
34.91 13.01 30.34

s	a
209	199
174	172
150	150

4665  
73.99 10.71 17.41

s	a
82	75
40	44
33	38

4695  
22.18 19.61 14.0

s	a
173	160
127	126
107	107

479  
57.71 16.3 18.44

s	a
236	226
204	203
195	194

489  
84.8 10.29 8.94

s	a
118	105
57	60
50	53

499  
32.48 26.78 17.72

s	a
218	209
188	186
192	191

5025  
79.09 11.81 1.81

s	a
125	108
35	40
112	110

512  
31.48 45.72 -24.03

s	a
192	184
166	165
188	186

5155  
71.22 12.57 -7.54

s	a
70	65
41	45
59	61

5185  
21.1 16.22 -5.48

s	a
133	121
88	88
36	44

464  
41.88 15.6 37.03

s	a
221	213
194	193
176	175

4675  
80.66 7.67 12.85

s	a
127	114
76	78
62	65

4705  
38.42 20.53 18.0

s	a
201	192
170	169
154	154

480  
72.27 9.91 12.5

s	a
89	80
38	42
40	44

s	a
198	191
176	175
189	187

5225  
74.34 9.69 -3.65

s	a
44	46
38	42
75	75

5255  
17.54 10.62 -22.32

s	a
148	150
161	159
194	191

535  
66.1 0.87 -18.76

s	a
191	196
212	211
230	229

545  
83.82 -4.43 -11.84

s	a
0	0
64	66
87	87

548  
22.84 -24.12 -22.33

s	a
189	195
212	211
216	215

5513  
83.45 -7.29 -4.72

s	a
35	62
96	96
72	75

554  
36.49 -25.32 7.54

s	a
168	173
188	187
181	180

5575  
74.85 -8.34 1.19

s	a
26	39
49	52
38	43

5605  
18.4 -12.08 4.25

s	a
117	145
198	197
189	188

570  
74.65 -27.59 -3.69

s	a
213	207
197	195
206	205

5235  
81.18 7.05 -2.6

s	a
67	67
60	63
104	102

5265  
27.89 11.41 -24.8

s	a
165	167
177	175
205	202

536  
72.01 0.23 -15.74

s	a
0	22
36	41
56	58

5395  
12.97 -6.93 -16.69

s	a
92	113
152	150
176	174

549  
59.54 -14.9 -19.46

s	a
207	210
222	221
224	223

5523  
87.49 -4.92 -3.06

s	a
22	63
106	105
78	81

555  
39.64 -30.7 8.26

s	a
192	195
207	206
202	201

5585  
82.07 -6.04 0.89

s	a
92	98
112	112
97	97

5615  
45.56 -10.58 6.08

s	a
157	175
215	214
208	207

571  
81.98 -20.25 -2.97

s	a
223	219
212	211
218	217

5245  
86.12 4.78 -1.46

s	a
88	87
83	84
124	122

5275  
37.21 9.57 -22.78

s	a
190	191
199	197
218	216

537  
80.06 -0.05 -10.74

s	a
63	77
101	101
126	125

5405  
40.9 -8.09 -18.8

s	a
133	145
176	175
197	195

550  
69.49 -11.25 -15.69

s	a
21	38
53	56
50	53

5467  
19.78 -12.71 -2.15

s	a
117	131
163	161
143	142

556  
63.34 -19.34 5.16

s	a
211	213
221	220
217	216

5595  
87.42 -3.71 0.54

s	a
112	117
131	130
116	116

5625  
53.1 -9.43 5.52

s	a
180	192
223	222
218	217

572  
85.83 -15.21 -2.27

s	a
82	74
40	44
92	91

525  
24.05 26.69 -22.78

s	a
133	131
130	129
163	160

5285  
55.66 6.76 -17.17

s	a
210	210
215	214
227	225

538  
86.06 -0.13 -6.38

s	a
88	99
122	121
147	145

5415  
49.52 -7.39 -17.65

s	a
160	169
193	192
210	208

551  
76.2 -8.73 -12.3

s	a
61	72
90	91
88	89

5477  
36.27 -11.83 -2.42

s	a
152	161
186	184
171	170

557  
72.78 -14.34 3.63

s	a
34	51
71	72
62	65

560  
27.35 -15.85 1.0

s	a
154	157
168	167
157	156

5635  
67.76 -6.91 3.95

s	a
192	202
227	226
221	221

573  
87.69 -12.35 -1.44

s	a
96	84
33	38
126	123

526  
26.88 40.19 -40.49

s	a
170	168
167	166
192	190

5295  
69.59 4.67 -12.31

s	a
0	19
43	47
71	71

539  
15.63 -7.89 -22.65

s	a
124	132
151	150
172	170

5425  
61.22 -5.96 -14.35

s	a
184	190
207	206
220	218

552  
81.99 -6.26 -8.94

s	a
100	107
125	124
123	122

5487  
50.5 -9.59 -2.13

s	a
173	180
200	199
188	187

558  
78.45 -11.18 2.84

s	a
18	58
97	97
88	89

561  
36.75 -25.53 -1.82

s	a
177	179
188	187
179	178

5645  
75.43 -5.46 3.0

s	a
66	72
80	81
37	44

574  
32.15 -11.43 23.29

s	a
113	98
35	39
160	156

527  
31.96 49.58 -53.06

s	a
192	190
190	189
208	206

5305  
77.72 3.33 -8.78

s	a
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48	52
94	93

540  
17.9 -7.28 -34.51

s	a
166	170
185	183
200	198

5435  
74.11 -4.22 -10.27

s	a
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40	44
47	51

5463  
13.63 -14.33 -9.57

s	a
142	146
161	159
159	158

5497  
64.84 -7.11 -1.64

s	a
192	197
212	211
203	202

559  
83.36 -7.99 1.83

s	a
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120	119
112	112

562  
44.87 -31.3 -4.43

s	a
189	190
198	197
190	189

5655  
79.23 -4.55 2.82

s	a
87	96
116	116
46	55

575  
45.64 -20.2 34.09

s	a
168	155
118	117
207	203

528  
57.71 32.9 -38.68

s	a
213	212
212	211
222	221

5315  
85.31 1.99 -5.15

s	a
0	0
61	63
121	118

541  
23.33 -7.26 -43.42

s	a
189	192
203	201
214	212

5445  
80.91 -3.11 -7.4

s	a
0	54
99	99
109	108

5473  
37.57 -22.9 -13.62

s	a
170	172
184	183
184	182

5507  
73.91 -5.36 -1.54

s	a
27	42
57	59
48	52

5535  
21.51 -13.77 1.93

s	a
116	139
185	184
180	178

563  
70.63 -23.69 -4.65

s	a
204	205
211	210
204	203

5665  
84.07 -3.29 2.48

s	a
102	114
142	141
58	66

576  
54.79 -25.29 39.06

s	a
198	188
165	163
224	221

529  
72.47 20.8 -25.34

s	a
39	44
43	47
57	59

532  
17.76 1.32 -9.83

s	a
94	114
153	152
201	198

542  
60.9 -9.77 -30.97

s	a
205	207
215	214
223	221

5455  
85.45 -2.24 -5.18

s	a
80	102
142	140
151	149

s	a
208	210
219	219
184	185

580  
86.14 -8.7 15.88

s	a
141	141
145	144
80	85

5767  
58.92 -8.86 33.86

s	a
222	222
225	224
138	142

586  
88.0 -10.37 42.1

s	a
237	235
233	232
164	166

601  
91.61 -6.19 33.89

s	a
216	211
203	202
69	82

611  
81.15 -6.6 64.83

s	a
210	212
222	221
217	217

621  
87.6 -4.78 0.7

s	a
75	119
184	183
209	207

631  
69.55 -26.64 -22.42

s	a
0	0
113	113
177	174

641  
41.22 -33.28 -48.92

s	a
156	160
176	174
205	203

651  
71.14 -2.36 -17.47

s	a
0	0
56	59
145	141

661  
24.53 10.55 -56.44

s	a
65	69
73	75
37	44

5743  
29.95 -8.42 20.27

s	a
167	167
171	169
116	118

5777  
68.8 -7.9 28.1

s	a
227	227
229	228
159	161

587  
89.67 -8.48 33.97

s	a
238	236
232	231
141	145

602  
91.13 -7.28 44.71

s	a
197	190
178	176
0	26

612  
72.48 -4.19 78.16

s	a
190	194
210	208
203	202

622  
82.55 -7.86 0.77

s	a
0	71
158	156
191	188

632  
58.65 -33.8 -29.04

s	a
207	209
217	216
229	228

642  
86.43 -2.06 -7.13

s	a
114	122
142	141
183	180

652  
58.33 -2.72 -24.6

s	a
0	0
38	42
125	122

662  
17.68 16.85 -55.36

s	a
94	96
101	101
56	61

5753  
41.54 -8.71 24.23

s	a
193	193
196	195
154	154

5787  
78.28 -6.26 20.93

s	a
76	75
69	71
22	32

5815  
29.46 -2.15 28.48

s	a
236	233
226	225
92	103

603  
89.09 -8.26 64.41

s	a
179	172
157	156
0	0

613  
65.26 -1.9 77.46

s	a
157	165
187	186
178	177

623  
73.69 -11.83 1.09

s	a
0	0
123	122
163	160

633  
44.89 -37.06 -34.53

s	a
196	199
210	209
226	225

643  
83.82 -2.6 -9.68

s	a
41	62
88	88
141	138

653  
36.39 -1.97 -34.77

s	a
222	219
216	215
228	227

663  
87.33 3.52 -5.15

s	a
112	113
119	118
73	77

5763  
48.67 -8.37 24.3

s	a
208	207
210	209
178	178

5797  
83.53 -4.8 15.74

s	a
127	123
119	118
47	55

5825  
49.66 -3.8 39.46

s	a
233	228
218	217
28	59

604  
86.52 -7.78 81.59

s	a
227	226
224	223
192	192

614  
89.04 -2.81 16.42

s	a
121	132
160	158
148	147

624  
62.83 -15.9 1.58

s	a
0	0
98	98
139	137

634  
35.55 -33.4 -35.34

s	a
148	155
176	175
206	203

644  
70.7 -4.77 -18.5

s	a
0	27
49	52
100	99

654  
19.93 1.75 -35.57

s	a
216	213
209	208
224	223

664  
84.89 4.61 -6.83

s	a
146	147
152	151
112	113

5773  
61.76 -7.23 20.37

s	a
218	218
220	219
196	196

5807  
87.28 -3.57 11.64

s	a
158	155
151	150
84	89

5835  
62.19 -4.55 35.87

s	a
224	217
201	200
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605  
81.18 -4.47 97.9

s	a
222	220
218	217
175	176

615  
86.63 -3.45 21.4

s	a
81	98
129	128
115	115

625  
50.45 -19.64 2.16

s	a
171	186
221	220
233	232

635  
85.05 -14.65 -11.44

s	a
115	126
151	149
189	186

645  
60.98 -5.46 -24.05

s	a
0	21
36	40
82	82

655  
14.23 3.8 -32.61

s	a
198	194
187	186
212	210

665  
77.58 7.33 -10.94

s	a
173	173
178	177
146	146

5783  
71.74 -5.95 16.1

s	a
96	94
89	90
19	32

581  
37.72 -3.7 38.71

s	a
174	171
169	167
109	112

5845  
68.67 -4.58 31.61

s	a
215	206
188	186
0	0

606  
76.66 -1.89 97.74

s	a
216	213
210	209
158	159

616  
83.79 -3.89 26.68

s	a
28	55
85	85
70	72

626  
32.17 -22.26 3.03

s	a
142	165
213	212
232	230

636  
81.22 -19.71 -16.63

s	a
86	100
129	128
173	170

646  
52.41 -5.86 -28.39

s	a
212	214
221	220
234	233

656  
87.98 -1.25 -7.6

s	a
164	159
148	147
185	182

666  
63.96 11.52 -16.73

s	a
190	190
194	192
167	167

5793  
77.69 -4.9 12.95

s	a
136	134
134	133
0	26

582  
54.79 -8.91 60.24

s	a
199	196
195	194
151	151

5855  
78.48 -4.01 22.97

s	a
234	232
231	231
193	193

607  
91.38 -3.8 19.07

s	a
202	198
193	192
126	128

617  
77.88 -4.32 35.15

s	a
1	27
44	48
35	40

627  
15.28 -17.11 1.84

s	a
91	133
200	199
228	226

637  
75.27 -26.5 -23.94

s	a
17	52
86	86
138	135

647  
34.75 -5.28 -35.43

s	a
193	196
209	207
232	230

657  
83.2 -2.01 -13.52

s	a
124	117
102	102
149	146

667  
47.03 15.97 -22.51

s	a
207	207
210	209
189	189

5803  
83.7 -3.59 9.8

s	a
172	173
180	179
0	30

583  
70.95 -15.83 75.09

s	a
211	209
208	207
172	172

5865  
83.17 -3.42 18.45

s	a
233	231
230	229
178	179

608  
90.66 -4.8 25.5

s	a
179	175
167	166
79	86

s	a
231	221
194	193
221	219

671  
82.53 16.79 -8.09

s	a
184	167
116	115
158	155

681  
57.57 32.02 -10.79

s	a
232	224
206	205
211	209

691  
85.19 9.79 1.16

s	a
230	208
142	141
162	160

701  
69.01 35.86 4.38

s	a
211	181
39	44
58	60

711  
47.41 65.38 35.14

s	a
229	214
173	172
133	134

721  
75.55 17.19 28.95

s	a
121	108
63	65
14	25

731  
33.79 23.65 38.6

s	a
240	222
171	170
4	41

7409  
75.41 17.95 77.39

s	a
171	150
71	73
86	86

7419  
44.75 42.81 13.05

s	a
226	216
194	192
211	209

7429  
81.68 13.93 -4.06

s	a
225	209
166	165
206	203

672  
74.94 27.06 -11.4

s	a
157	138
73	74
121	119

682  
43.62 40.01 -10.34

s	a
227	217
194	192
200	199

692  
81.55 13.12 1.28

s	a
213	188
99	99
124	122

702  
57.18 47.35 9.04

s	a
249	237
206	204
174	174

712  
86.05 12.69 21.88

s	a
213	195
142	141
88	91

722  
65.78 23.69 39.99

s	a
100	89
49	52
12	23

732  
26.94 21.58 32.15

s	a
253	232
166	165
117	119

7410  
76.46 29.19 39.0

s	a
159	136
33	38
67	67

7420  
36.46 52.33 13.73

s	a
219	206
170	168
194	192

7430  
74.88 21.51 -5.14

s	a
218	198
138	137
190	186

673  
67.4 36.81 -13.67

s	a
124	107
35	40
81	80

683  
30.12 41.79 -5.48

s	a
216	202
167	166
177	175

693  
73.48 19.51 2.27

s	a
186	161
56	59
78	78

703  
44.75 53.53 18.54

s	a
252	237
193	192
151	152

713  
83.08 17.98 29.88

s	a
193	173
113	112
47	55

723  
56.1 28.56 48.7

s	a
240	236
228	227
196	196

7401  
91.04 0.65 17.29

s	a
227	210
162	160
89	93

7411  
72.07 19.79 47.44

s	a
102	89
21	28
46	49

7421  
22.82 37.21 6.7

s	a
209	191
143	141
174	171

7431  
66.9 29.09 -5.65

s	a
206	182
98	98
163	160

674  
56.96 48.95 -14.61

s	a
230	222
202	201
216	215

684  
84.29 11.91 -3.3

s	a
203	188
145	143
157	155

694  
66.39 24.17 2.88

s	a
162	139
38	42
49	52

704  
37.2 50.87 26.07

s	a
254	234
176	174
121	123

714  
78.79 25.03 39.97

s	a
155	137
75	76
0	16

724  
41.93 31.52 52.19

s	a
236	231
219	218
161	163

7402  
88.1 -0.28 30.79

s	a
209	188
120	120
49	57

7412  
60.05 31.69 52.72

s	a
241	232
212	211
220	218

7422  
87.69 11.18 0.04

s	a
191	170
103	102
141	139

7432  
55.09 39.4 -4.9

s	a
182	157
42	46
121	119

675  
43.37 60.03 -10.3

s	a
225	215
188	187
208	206

685  
80.22 16.18 -4.9

s	a
178	160
104	104
120	118

695  
53.13 31.35 4.86

s	a
242	234
215	214
223	221

705  
88.56 10.82 -0.25

s	a
250	226
149	148
74	80

715  
71.9 34.62 55.33

s	a
130	114
57	60
0	14

725  
34.05 29.88 44.99

s	a
234	225
205	204
125	128

7403  
83.73 3.03 43.6

s	a
217	194
120	120
38	49

7413  
61.0 34.35 58.31

s	a
229	203
105	105
143	140

7423  
61.22 51.87 3.89

s	a
177	154
67	69
113	111

7433  
45.63 48.72 -1.87

s	a
163	138
0	4
90	88

676  
35.61 60.62 -2.34

s	a
219	206
174	172
199	197

686  
76.0 19.96 -6.11

s	a
149	131
70	71
84	84

696  
40.71 35.19 8.26

s	a
244	232
199	198
211	209

706  
84.81 17.71 0.54

s	a
241	214
123	122
18	36

716  
64.86 42.45 68.99

s	a
231	223
206	205
187	186

726  
84.66 6.86 12.93

s	a
243	234
212	211
38	63

7404  
85.88 -0.23 79.65

s	a
191	170
100	100
23	36

7414  
52.91 33.6 55.5

s	a
228	197
57	60
126	124

7424  
53.71 68.5 2.91

s	a
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95	94

7434  
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210	209
223	222

677  
86.34 8.45 -4.0

s	a
198	181
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169	167

687  
63.75 28.87 -8.1

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63	65

697  
33.86 34.93 11.28

s	a
246	228
176	174
193	191

707  
79.07 28.23 2.17

s	a
222	195
95	95
0	0

717  
56.57 47.76 75.6

s	a
224	213
189	187
163	162

727  
79.28 10.07 18.15

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236	224
193	192
0	0

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80.3 4.73 96.74

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189	188
177	176

7415  
80.41 13.94 12.04

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7425  
45.19 60.27 7.68

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32.61 47.06 -1.46

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83.64 11.14 -5.39

s	a
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688  
54.92 34.31 -9.26

s	a
239	230
208	207
215	213

698  
86.42 12.27 0.8

s	a
246	222
143	142
166	164

708  
71.38 41.49 5.76

s	a
207	181
82	83



s a  
181 170  
145 143  
192 188

7439  
64.82 20.37 -19.14

s a  
56 53  
30 35  
49 52

7449  
15.58 15.5 -7.35

s a  
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153 152  
186 183

7459  
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137 134

7469  
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210 209  
134 137

7479  
75.18 -54.73 25.82

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106 128  
170 169  
77 84

7489  
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237 235  
231 231  
208 207

7499  
91.94 -1.02 12.34

s a  
220 207  
173 172  
114 116

7509  
74.38 12.31 37.2

s a  
93 88  
73 74  
60 63

7519  
32.95 7.12 11.2

s a  
192 187  
178 177  
167 166

7529  
73.78 3.49 7.43

s a  
160 149  
122 122  
168 165

7440  
56.58 21.32 -18.77

s a  
186 186  
193 192  
220 218

7450  
78.34 1.58 -14.61

s a  
0 0  
142 141  
203 200

7460  
51.11 -43.1 -48.09

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102 101  
129 127

7470  
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198 196  
123 126

7480  
69.59 -66.15 23.56

s a  
103 116  
145 143  
64 71

7490  
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228 225  
220 219  
192 192

7500  
88.07 -0.5 15.01

s a  
203 187  
143 141  
67 73

7510  
64.43 18.09 48.57

s a  
235 224  
196 195  
185 184

7520  
82.54 13.14 11.05

s a  
166 160  
150 148  
136 135

7530  
63.32 4.61 9.76

s a  
155 140  
98 98  
197 193

7441  
51.39 37.17 -43.12

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134 143  
165 164  
225 222

7451  
67.46 0.52 -34.25

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197 194

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s a  
144 170  
223 222  
220 219

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84 92

7481  
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7491  
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7501  
85.0 1.31 16.74

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177 159  
107 107  
22 36

7511  
52.52 24.03 54.43

s a  
202 192  
170 168  
159 158

7521  
72.42 10.75 10.02

s a  
130 124  
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93 94

7531  
48.22 6.01 12.6

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139 121  
54 57  
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7442  
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127 131  
144 143  
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107 137  
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191 190

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138 140

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190 189  
151 151

7502  
78.37 3.39 22.81

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161 144  
89 90  
9 26

7512  
46.04 26.54 52.13

s a  
188 170  
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102 103

7522  
57.08 27.28 20.63

s a  
100 95  
80 81  
62 65

7532  
35.93 6.63 13.62

s a  
215 213  
214 212  
231 229

7443  
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157 156  
216 213

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93 92

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147 146

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54 59

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195 194  
146 147

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115 116

7503  
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228 216  
185 184  
170 170

7513  
78.97 14.09 13.65

s a  
175 157  
102 102  
96 96

7523  
51.89 29.59 16.93

s a  
73 70  
55 58  
41 46

7533  
25.13 6.31 12.21

s a  
185 184  
186 185  
223 220

7444  
76.59 5.02 -18.43

s a  
98 112  
141 140  
185 182

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174 187  
218 217  
218 217

7464  
84.2 -14.75 -5.11

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0 53  
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144 142

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175 174  
140 140

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143 135  
114 113  
86 88

7504  
50.53 9.13 20.0

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217 203  
168 166  
143 143

7514  
73.05 16.15 19.93

s a  
170 151  
90 90  
79 80

7524  
48.05 32.4 21.78

s a  
215 213  
212 211  
201 200

7534  
85.06 -0.03 5.69

s a  
163 160  
159 157  
197 194

7445  
66.9 7.59 -19.27

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61 74  
93 94  
178 174

7455  
40.86 9.72 -49.27

s a  
80 129  
200 199  
190 189

7465  
74.02 -36.89 -5.5

s a  
80 99  
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136 135

7475  
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222 224  
230 229  
216 215

7485  
90.59 -4.56 5.97

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127 130  
142 140  
44 55

7495  
56.45 -15.57 47.69

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129 120  
94 94  
60 64

7505  
43.36 11.61 25.21

s a  
204 189  
146 145  
117 118

7515  
66.11 19.87 24.72

s a  
160 146  
110 109  
88 89

7525  
51.43 18.68 20.62

s a  
193 190  
187 186  
170 169

7535  
76.23 -0.02 9.54

s a  
147 144  
140 139  
207 204

7446  
61.14 13.71 -33.93

s a  
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121 121  
183 180

7456  
52.23 7.77 -34.31

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179 178  
194 192

7466  
63.87 -53.53 -23.38

s a  
0 46  
84 85  
90 90

7476  
31.94 -22.26 -10.21

s a  
195 204  
227 226  
166 168

7486  
86.87 -18.71 26.14

s a  
96 103  
119 118  
1 28

7496  
46.91 -19.19 50.64

s a  
237 232  
222 221  
194 194

7506  
89.38 1.77 15.97

s a  
158 141  
85 86  
45 51

7516  
44.84 28.26 36.67

s a  
143 125  
58 60  
27 35

7526  
36.54 35.74 36.64

s a  
170 166  
162 161  
140 140

7536  
67.13 0.09 12.59

s a  
96 91  
74 75  
125 123

7447  
35.75 18.35 -25.88

s a  
208 212  
227 227  
236 235

7457  
89.27 -5.66 -6.35

s a  
0 0  
171 170  
188 186

7467  
60.54 -57.21 -24.93

s a  
36 58  
85 86  
100 100

7477  
33.65 -13.46 -13.98

s a  
146 170  
221 221  
110 117

7487  
81.67 -39.21 46.36

s a  
114 111  
106 105  
78 80

7497  
45.05 -0.19 16.9

s a  
249 238  
211 210  
165 166

7507  
87.18 8.8 28.13

s a  
131 116  
61 64  
26 34

7517  
35.23 28.79 35.02

s a  
220 218  
217 216  
205 204

7527  
86.75 -0.28 6.27

s a  
178 178  
183 181  
175 174

7537  
73.91 -2.76 3.07

s a  
85 81  
64 66  
90 90

7448  
30.47 13.33 -12.05

s a  
120 140  
183 182  
208 206

7458  
71.04 -16.21 -19.3

s a  
0 46  
117 117  
157 155

7468  
44.45 -24.62 -32.0

s a  
169 188  
229 229  
203 203

7478  
86.58 -23.83 6.4

s a  
101 142  
210 208  
61 76

7488  
75.72 -51.98 59.85

s a  
71 74  
77 78  
38 45

7498  
31.68 -7.94 22.15

s a  
228 218  
192 191  
145 146

7508  
80.32 8.48 29.06

s a  
110 102  
79 80  
71 73

7518  
37.12 12.56 10.48

s a  
208 204  
198 197  
190 189

7528  
80.76 2.59 5.57

s a  
160 161  
167 165  
159 158

7538  
67.82 -3.47 3.26



s	a
156	155
158	157
155	154

7539  
65.08 -1.29 1.41

s	a
92	143
221	220
71	85

802  
78.87 -57.29 59.31

s	a
254	234
51	54
132	129

812  
61.12 81.69 11.51

s	a
136	132
125	124
111	111

8003  
53.35 2.53 9.23

s	a
109	109
110	109
115	114

7540  
46.58 0.55 -3.07

s	a
254	254
231	231
2	54

803  
92.5 -1.61 90.12

s	a
232	199
20	27
173	169

813  
53.0 80.2 -25.86

s	a
150	141
119	118
105	105

8021  
52.98 11.06 12.81

s	a
221	221
226	225
230	229

7541  
89.71 -1.29 -2.8

s	a
254	254
160	158
68	76

804  
81.25 50.07 69.86

s	a
124	116
96	97
205	201

814  
48.02 30.84 -53.49

s	a
151	139
107	107
120	119

8062  
50.42 19.34 -0.01

s	a
172	176
191	189
199	197

7542  
76.11 -5.44 -6.51

s	a
254	254
86	87
94	94

805  
68.3 76.9 43.1

s	a
138	131
117	117
74	78

871  
50.73 3.72 26.91

s	a
135	129
116	116
138	136

8100  
51.5 10.56 -9.01

s	a
162	164
172	171
182	180

7543  
70.08 -2.16 -6.38

s	a
254	225
21	28
170	166

806  
58.7 86.34 -14.85

s	a
141	133
116	115
76	79

872  
50.73 5.76 25.98

s	a
92	103
126	125
145	143

8201  
50.9 -8.78 -14.35

s	a
132	135
145	144
158	156

7544  
59.62 -2.68 -8.65

s	a
212	181
6	14
176	172

807  
48.86 77.56 -34.48

s	a
143	134
115	114
78	81

873  
50.67 7.38 24.88

s	a
109	118
141	140
138	137

8281  
56.3 -12.05 -2.59

s	a
80	86
98	98
114	113

7545  
40.58 -3.64 -11.56

s	a
0	56
174	173
150	150

808  
61.52 -61.15 -2.58

s	a
144	135
111	111
78	80

874  
49.88 9.9 23.96

s	a
122	126
138	137
110	111

8321  
55.82 -10.32 13.11

s	a
59	66
76	77
92	92

7546  
31.56 -3.57 -11.83

s	a
225	225
227	227
0	46

809  
88.18 -15.47 87.87

s	a
147	136
107	107
78	80

875  
49.22 13.54 23.12

s	a
31	41
46	50
59	61

7547  
18.3 -3.26 -10.49

s	a
254	254
206	205
17	52

810  
88.21 18.62 87.02

s	a
149	136
99	99
66	69

876  
47.06 18.47 27.37

s	a
0	39
167	165
216	213

801  
60.83 -39.8 -40.09

s	a
254	254
117	117
81	84

811  
73.13 66.63 55.63

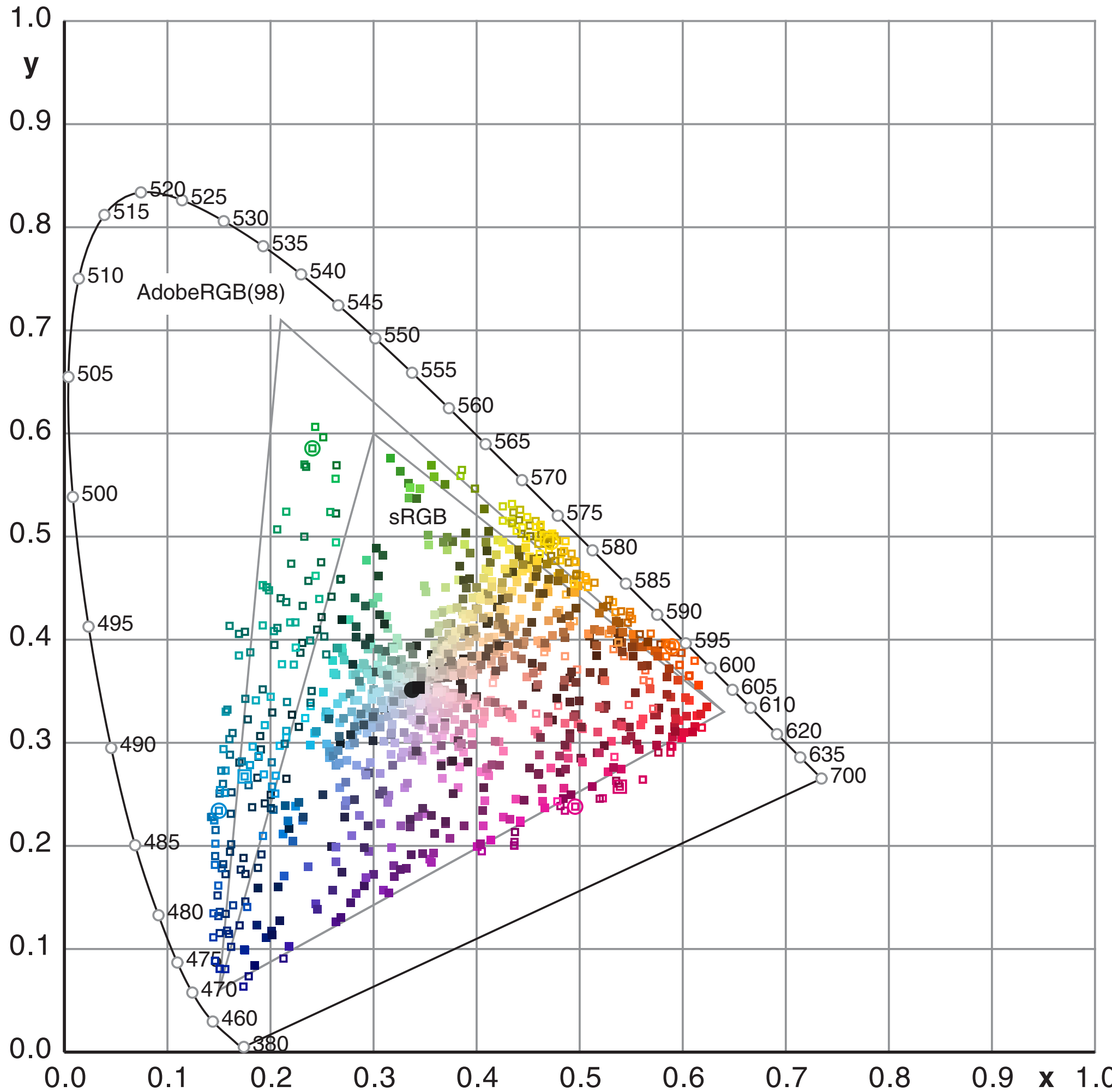
s	a
145	145
149	148
153	152

877  
61.73 -0.91 -2.59

# Spot colors in the CIE chromaticity diagram

For sRGB

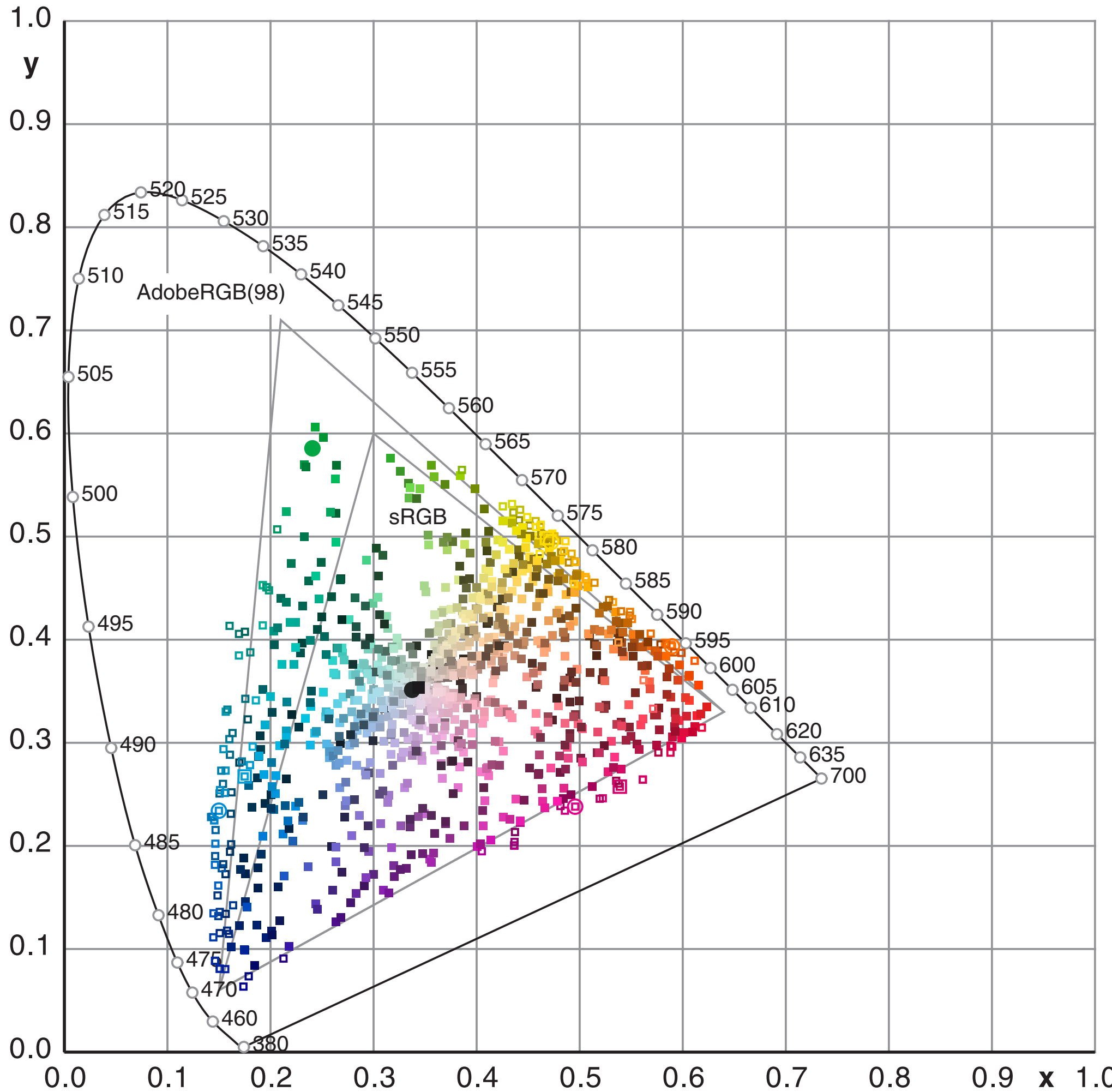
- |              |              |
|--------------|--------------|
| Filled       | In gamut     |
| Stroked      | Out of gamut |
| Small square | Spot color   |
| Big square   | CMYK         |
| Big circle   | CMYKOG       |



# Spot colors in the CIE chromaticity diagram

For AdobeRGB(98)

- |              |                   |
|--------------|-------------------|
| Filled       | In gamut          |
| Stroked      | Out of gamut      |
| Small square | Spot color        |
| Big square   | CMYK              |
| Big circle   | CMYKOG Hexachrome |



OptiRGB

Primaries in the table

Gamma=2.2

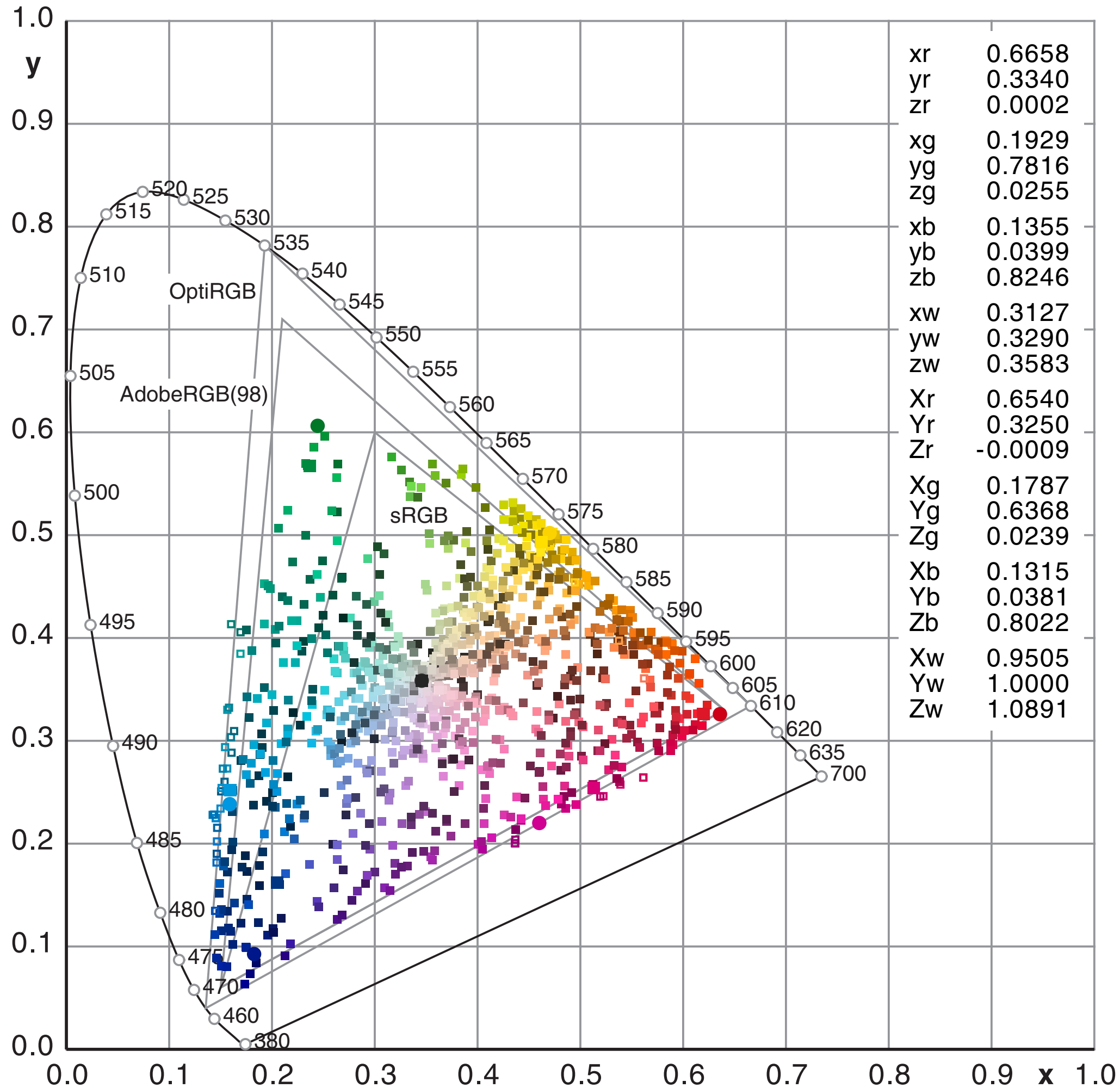
D65

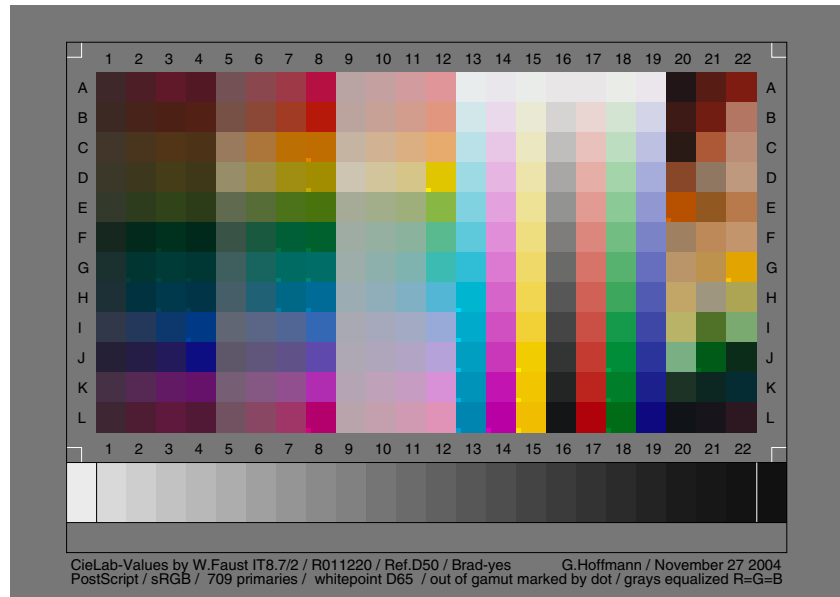
Spot colors and printer inks in the CIE chromaticity diagram

For OptiRGB

Filled	In gamut
Stroked	Out of gamut

Square	Spot color
Big Square	ISO Coated CMYK
Big Circle	Inkjet Mutoh RJ 6100



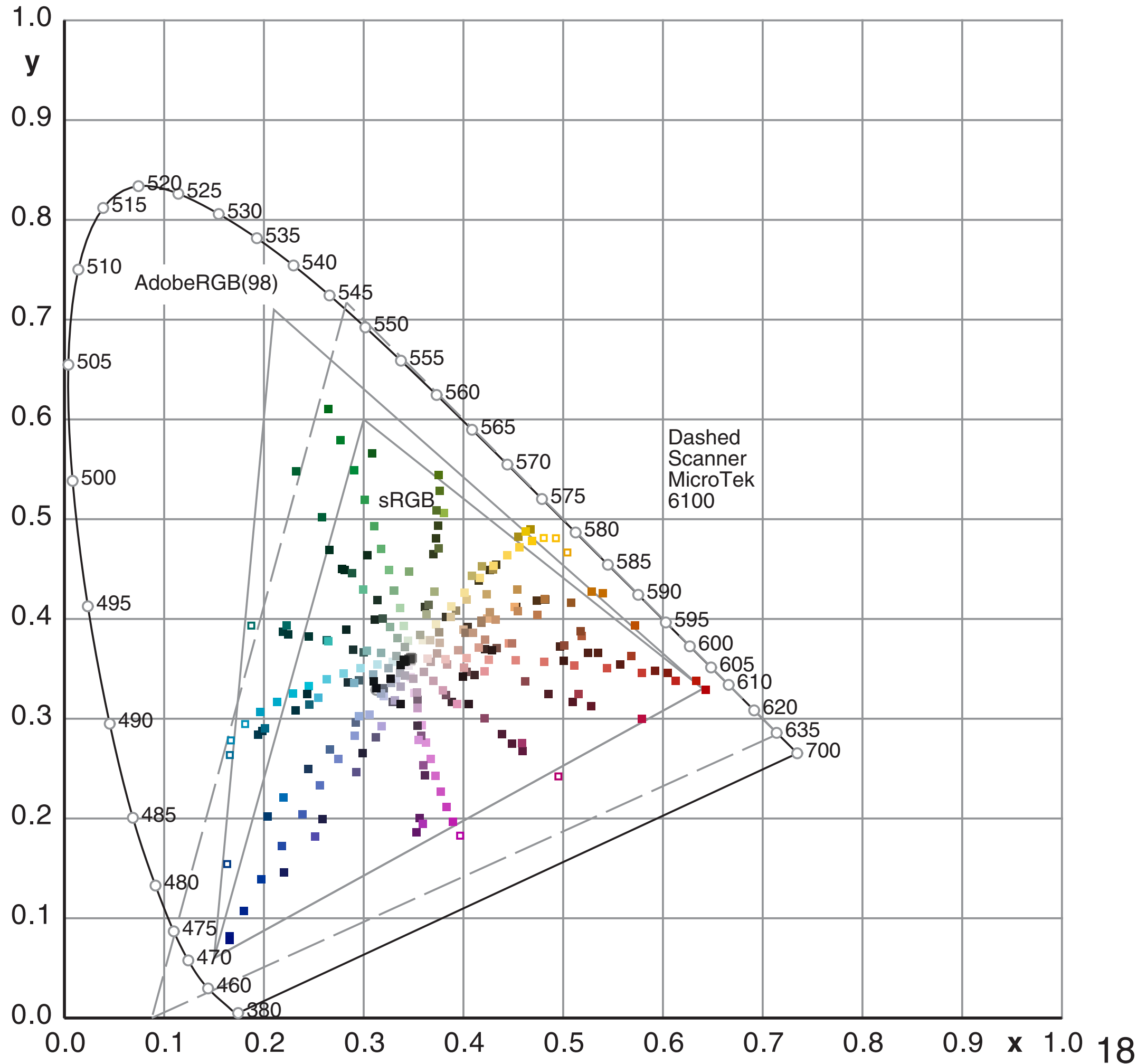


The target above, which is used in many docs by the author, was made by the reference file for a real target, using measured Lab values. The chromaticity diagram shows these measured Lab values.

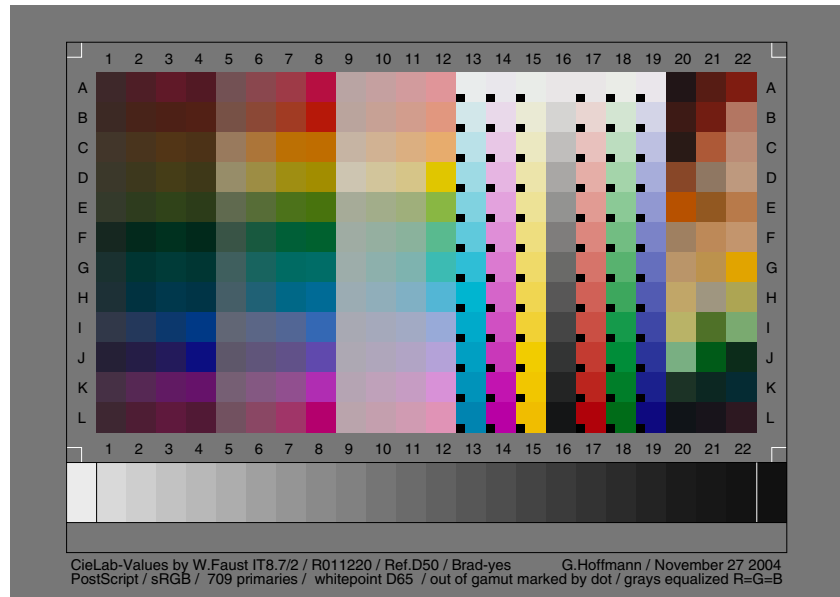
### IT8.7/2 colors in the CIE chromaticity diagram

For AdobeRGB(98)

- Filled            In gamut
- Stroked          Out of gamut
- Small square    Target color







The target above, which is used in many docs by the author, was made by the reference file for a real target, using measured Lab values.

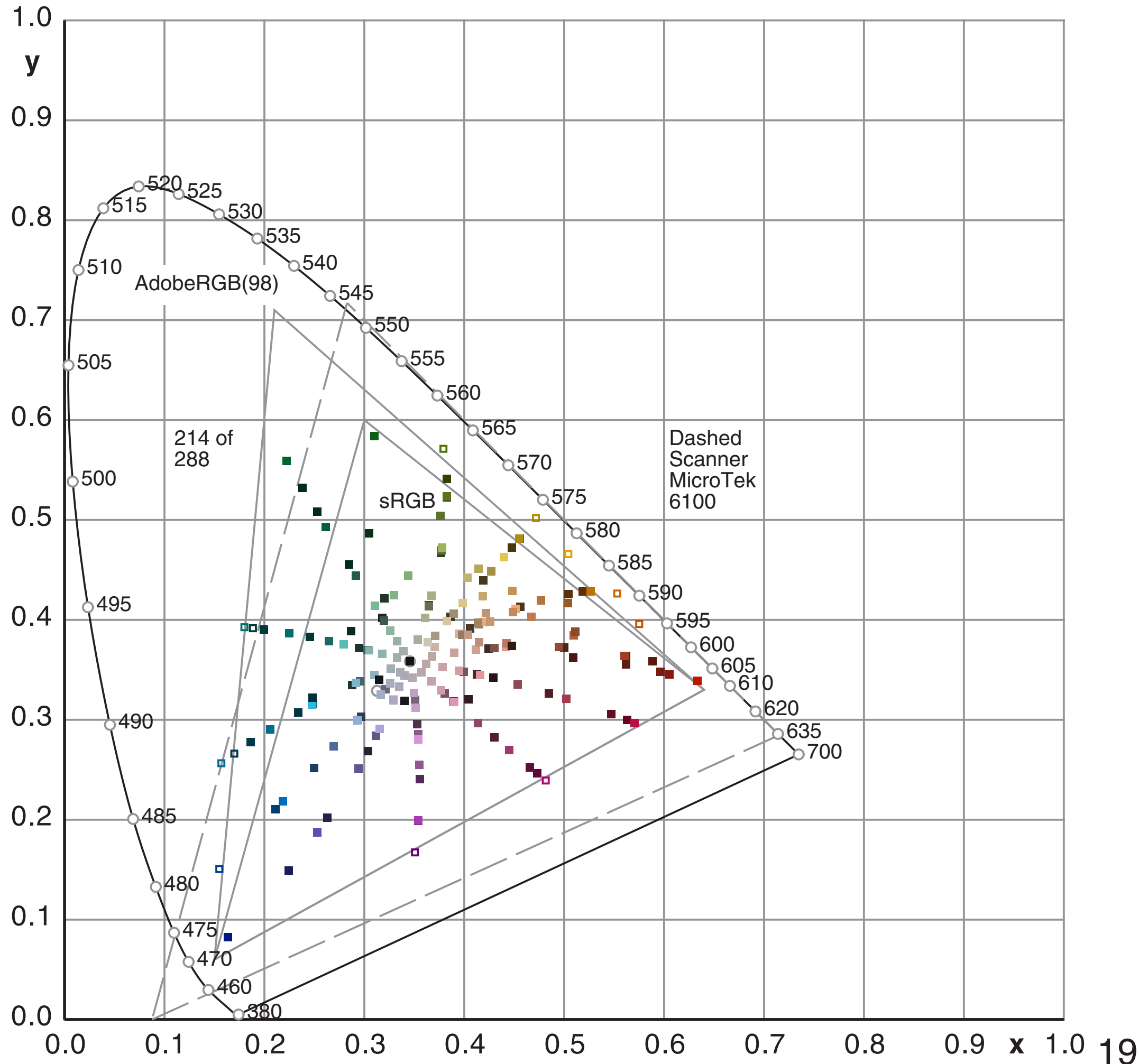
The chromaticity diagram shows a subset of 214 of 288 IT8.7/2 colors according to the standard.

For the remaining colors GS0, GS23 and six step wedges (marked by a black square in the target) reference values are not available. Information by courtesy of *Wolf Faust*.

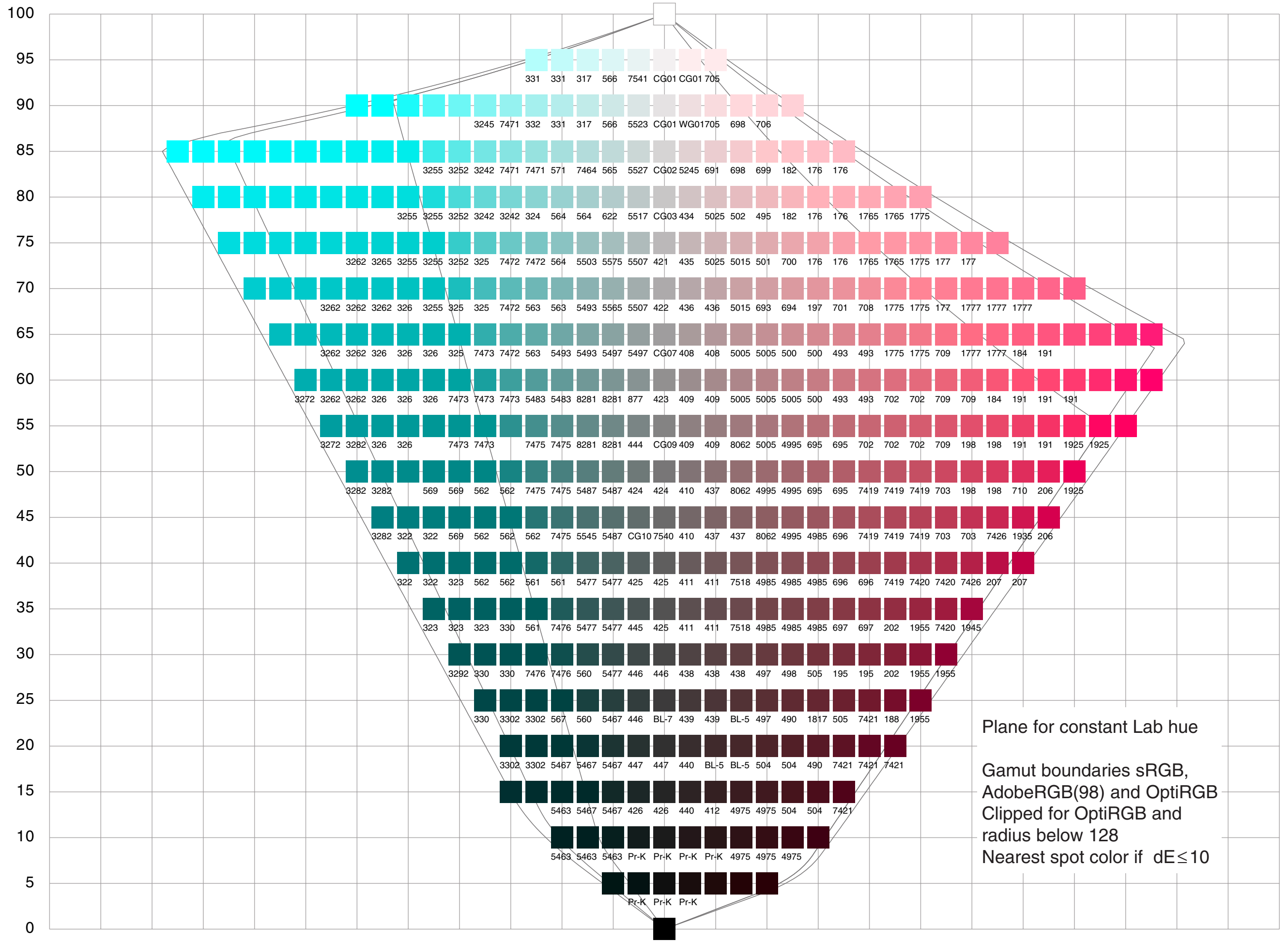
### IT8.7/2 colors in the CIE chromaticity diagram

For AdobeRGB(98)

- Filled            In gamut
- Stroked         Out of gamut
- Small square    Target color



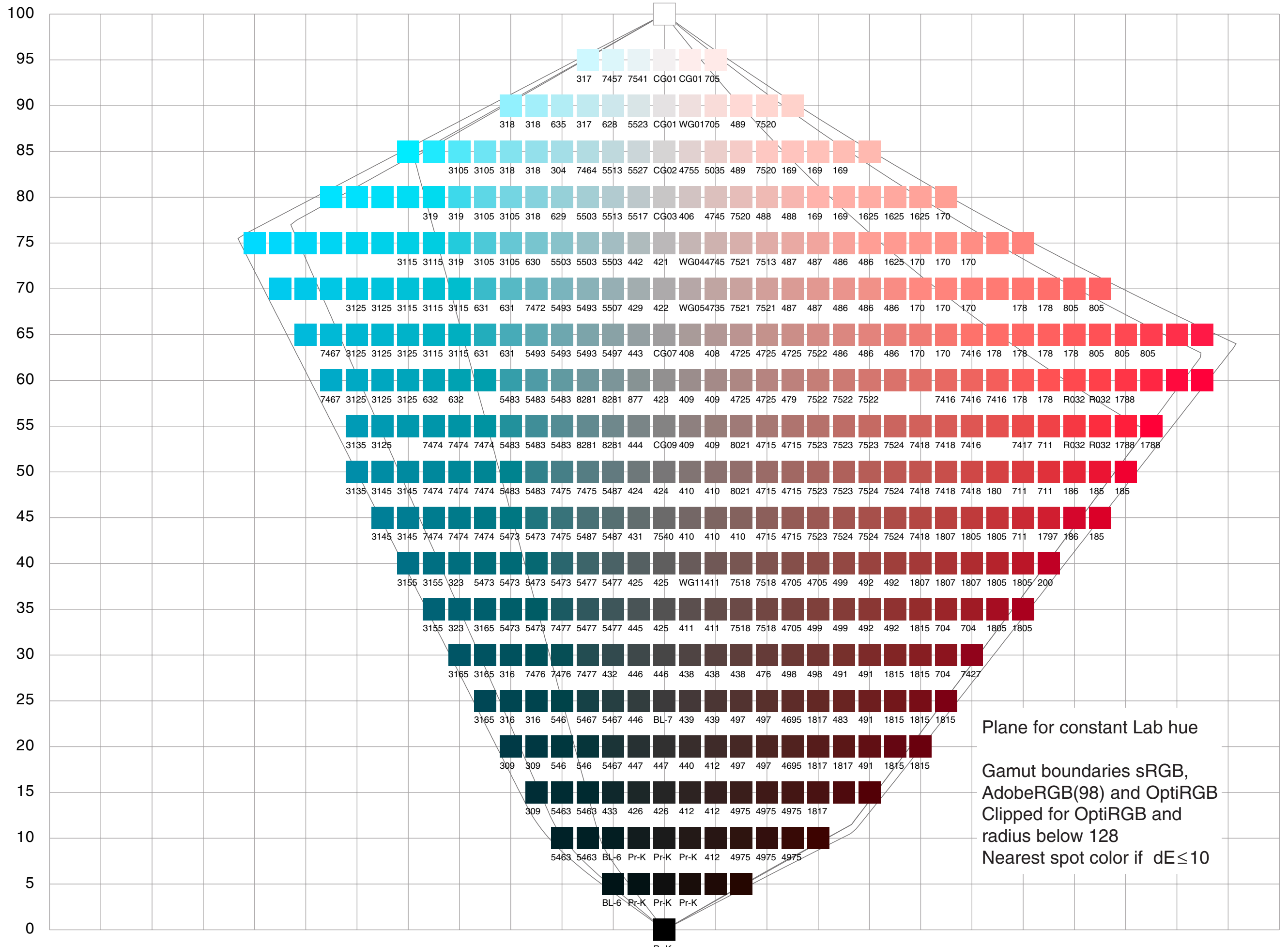




Plane for constant Lab hue  
 Gamut boundaries sRGB,  
 AdobeRGB(98) and OptiRGB  
 Clipped for OptiRGB and  
 radius below 128  
 Nearest spot color if  $dE \leq 10$

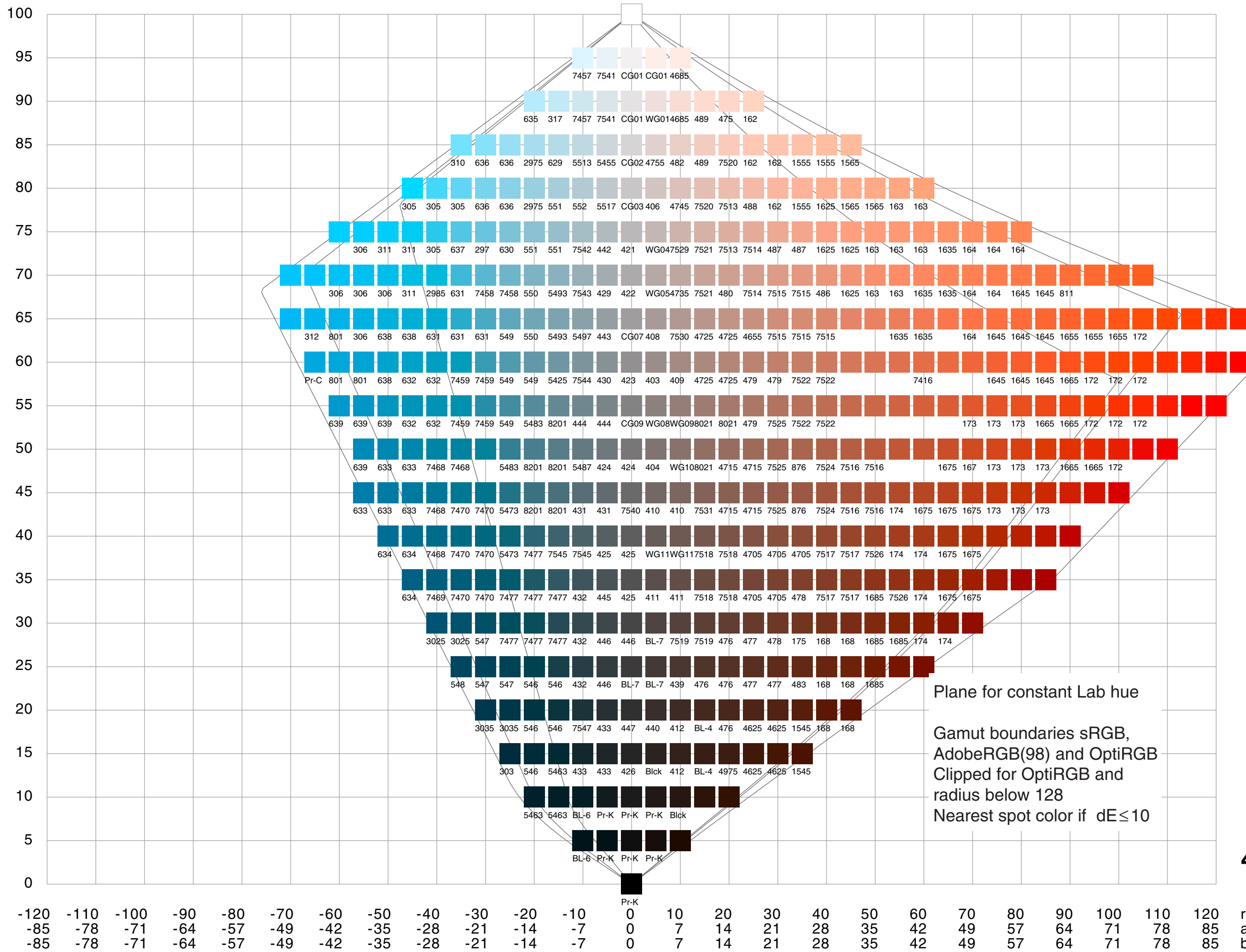
-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	r
-116	-106	-97	-87	-77	-68	-58	-48	-39	-29	-19	-10	0	10	19	29	39	48	58	68	77	87	97	106	116	a
-31	-28	-26	-23	-21	-18	-16	-13	-10	-8	-5	-3	0	3	5	8	10	13	16	18	21	23	26	28	31	b

15°



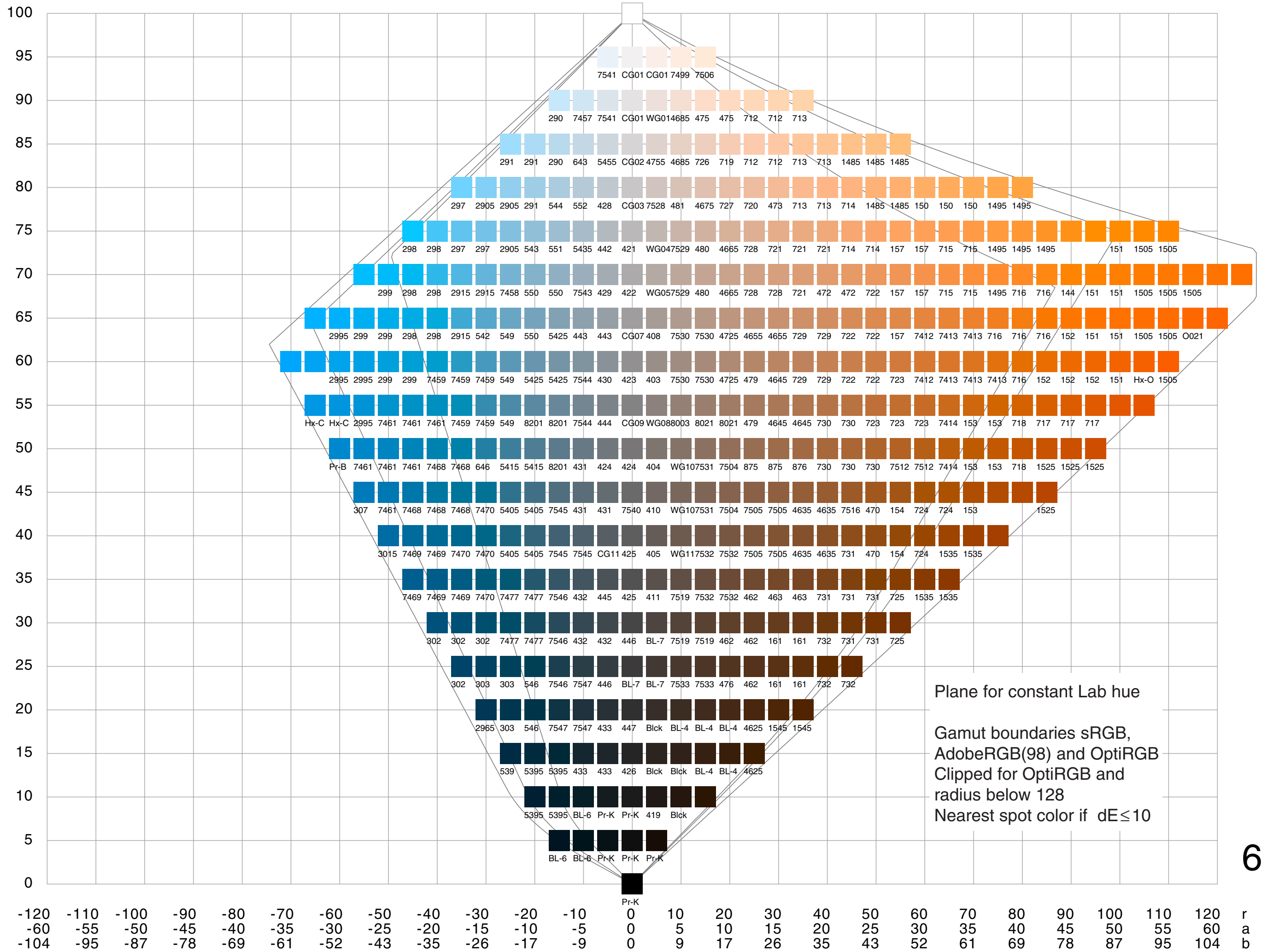
-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	r
-104	-95	-87	-78	-69	-61	-52	-43	-35	-26	-17	-9	0	9	17	26	35	43	52	61	69	78	87	95	104	a
-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	b

30°

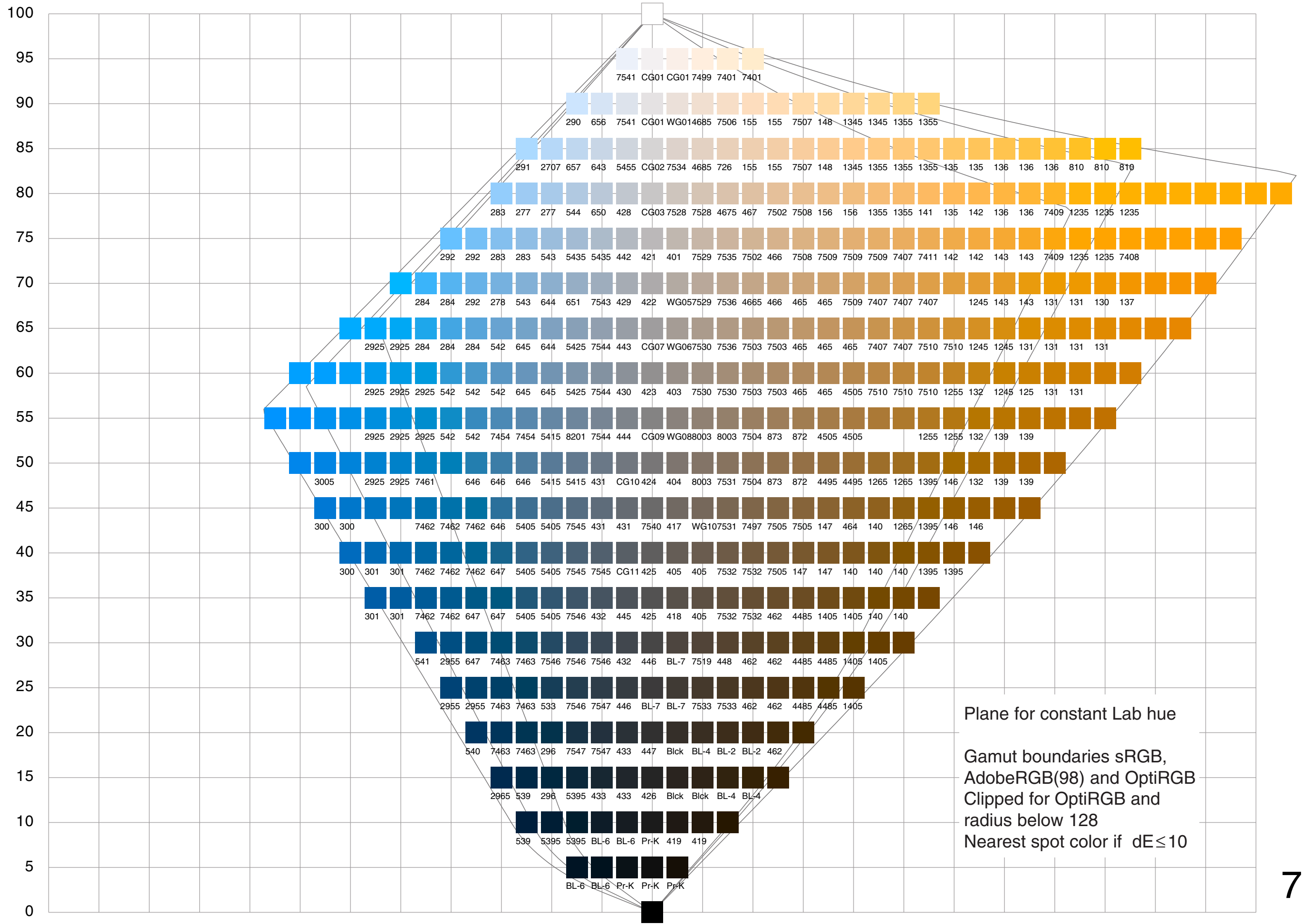


45°





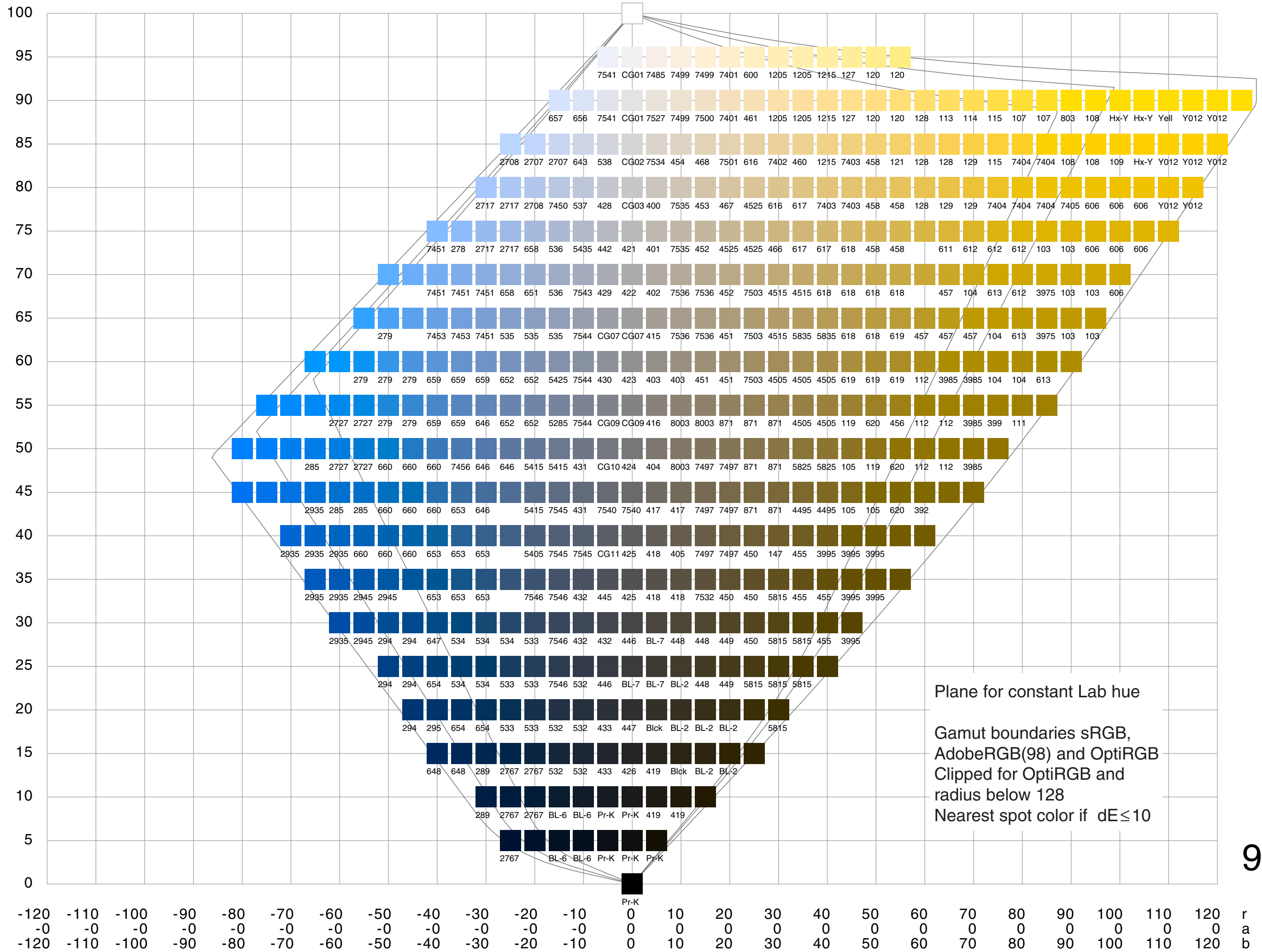
60°



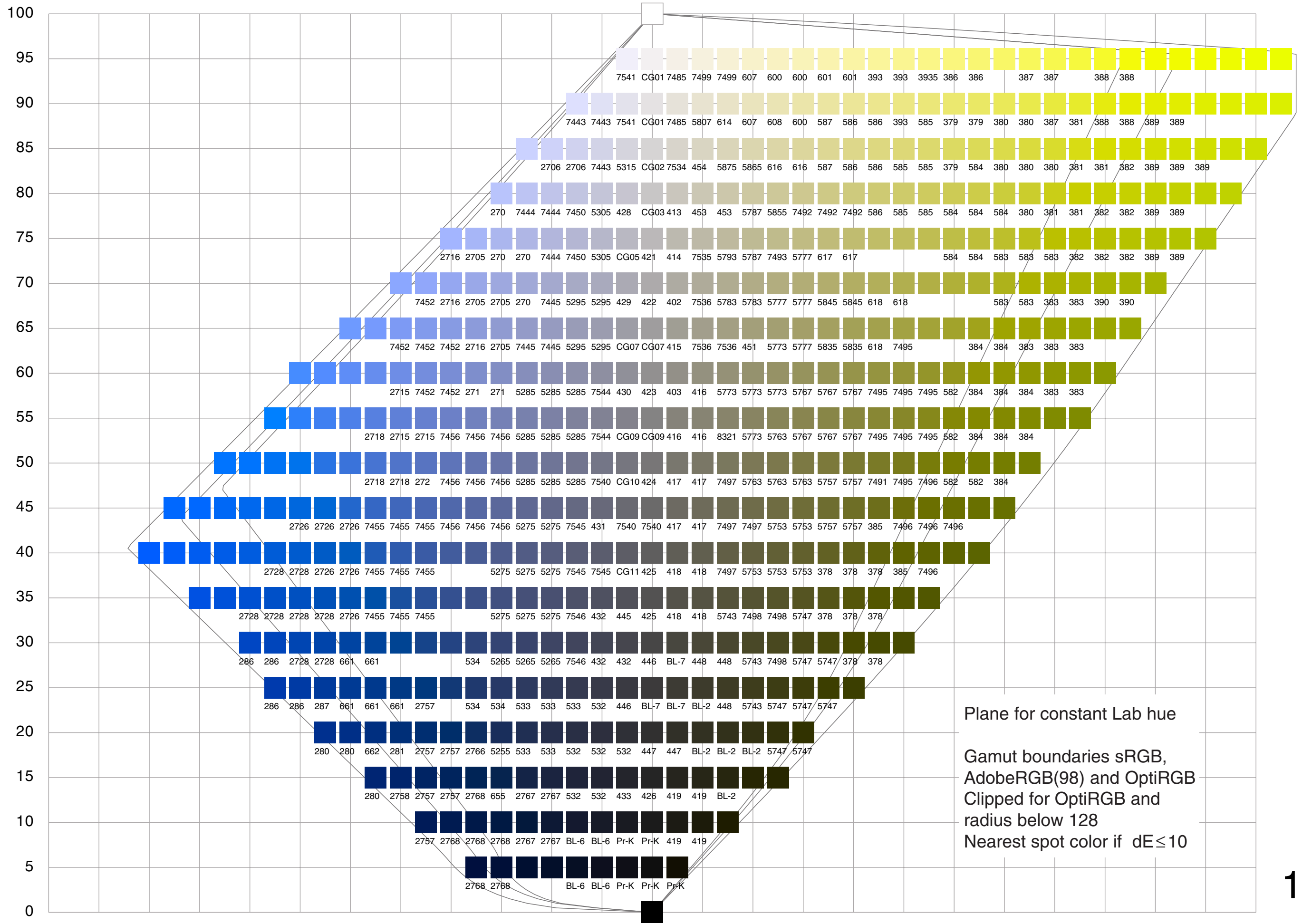
-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	r
-31	-28	-26	-23	-21	-18	-16	-13	-10	-8	-5	-3	0	3	5	8	10	13	16	18	21	23	26	28	31	a
-116	-106	-97	-87	-77	-68	-58	-48	-39	-29	-19	-10	0	10	19	29	39	48	58	68	77	87	97	106	116	b

75°

25



90°

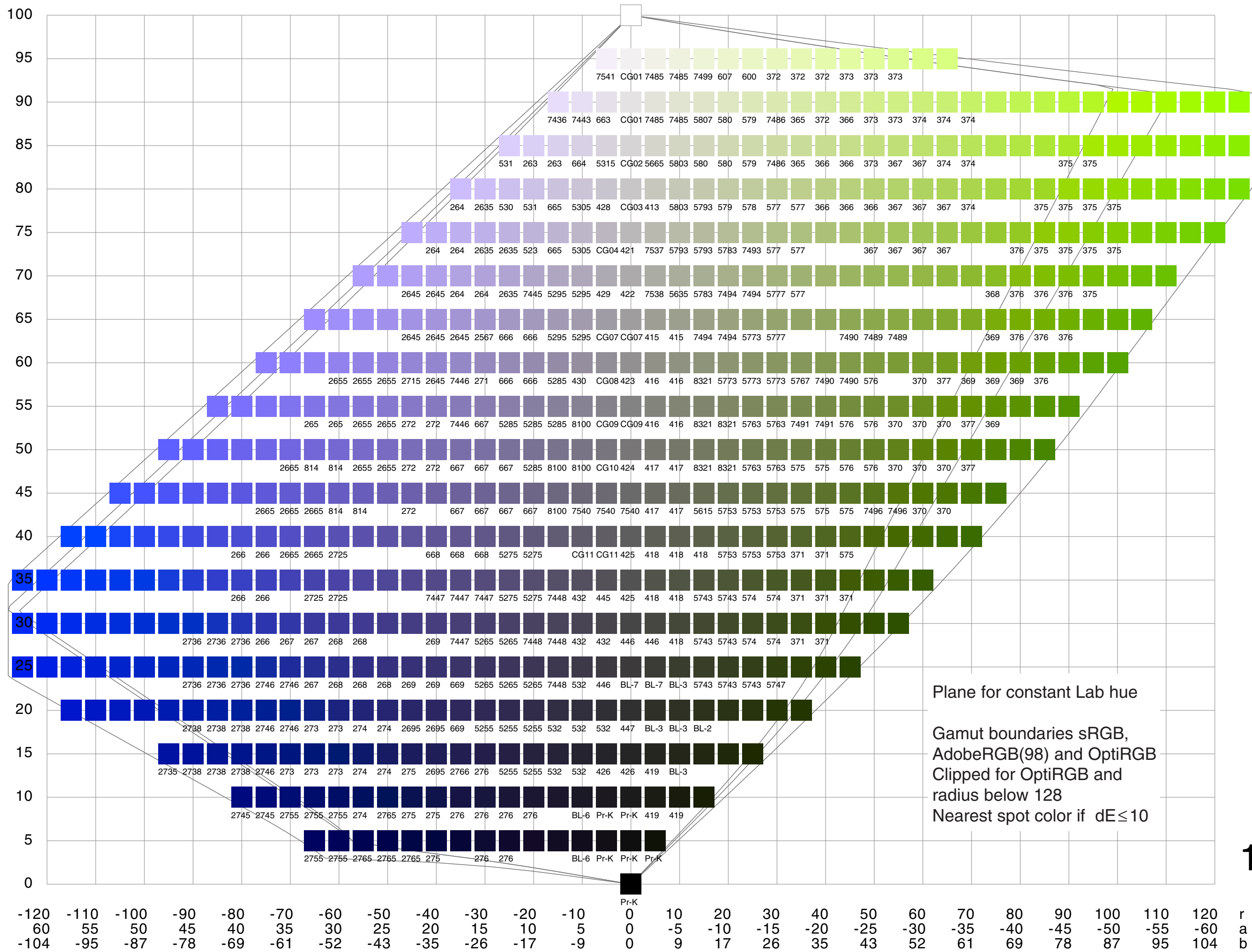


Plane for constant Lab hue

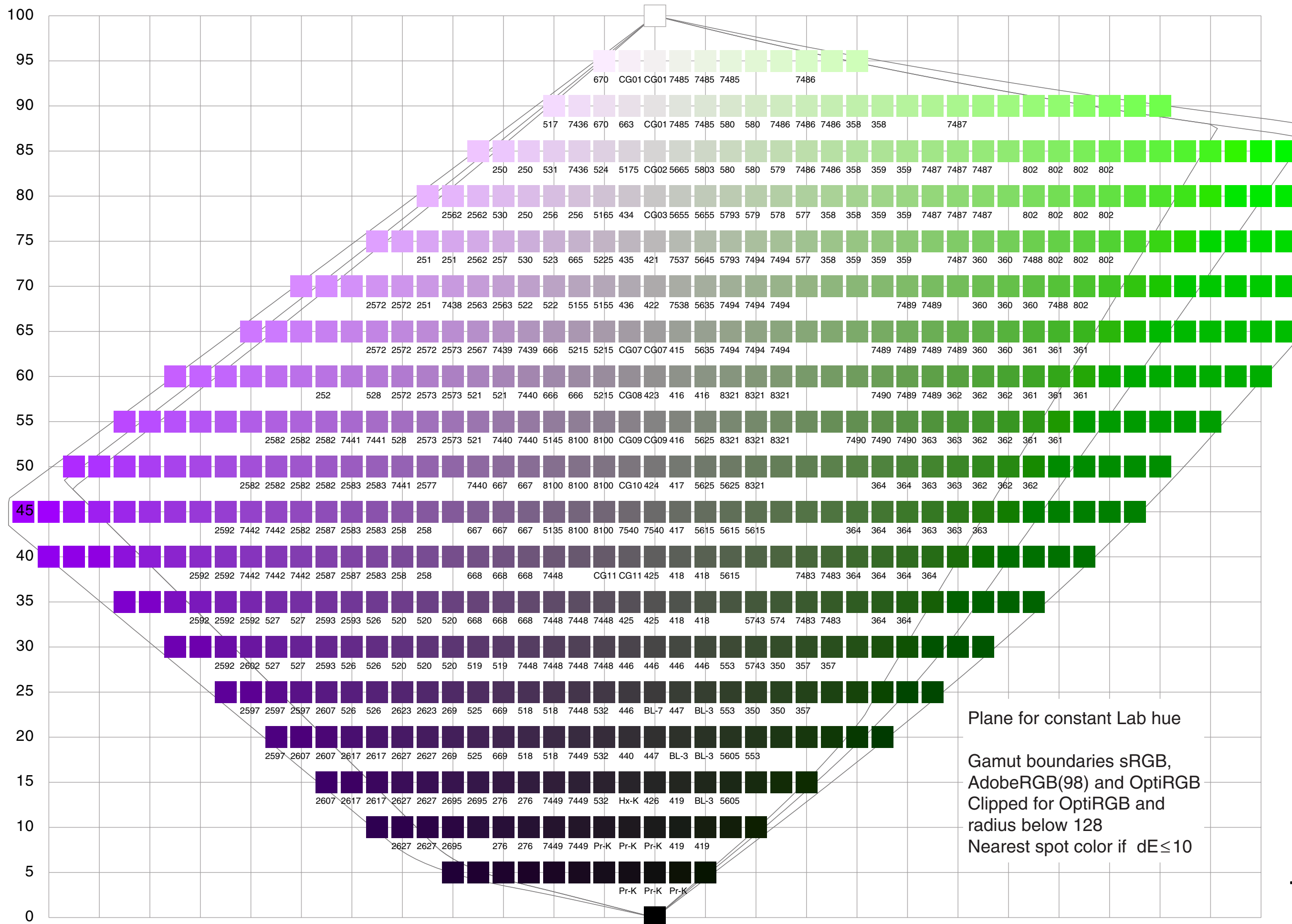
Gamut boundaries sRGB,  
AdobeRGB(98) and OptiRGB  
Clipped for OptiRGB and  
radius below 128  
Nearest spot color if  $dE \leq 10$

-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	r
31	28	26	23	21	18	16	13	10	8	5	3	0	-3	-5	-8	-10	-13	-16	-18	-21	-23	-26	-28	-31	a
-116	-106	-97	-87	-77	-68	-58	-48	-39	-29	-19	-10	0	10	19	29	39	48	58	68	77	87	97	106	116	b

105°  
27



120°



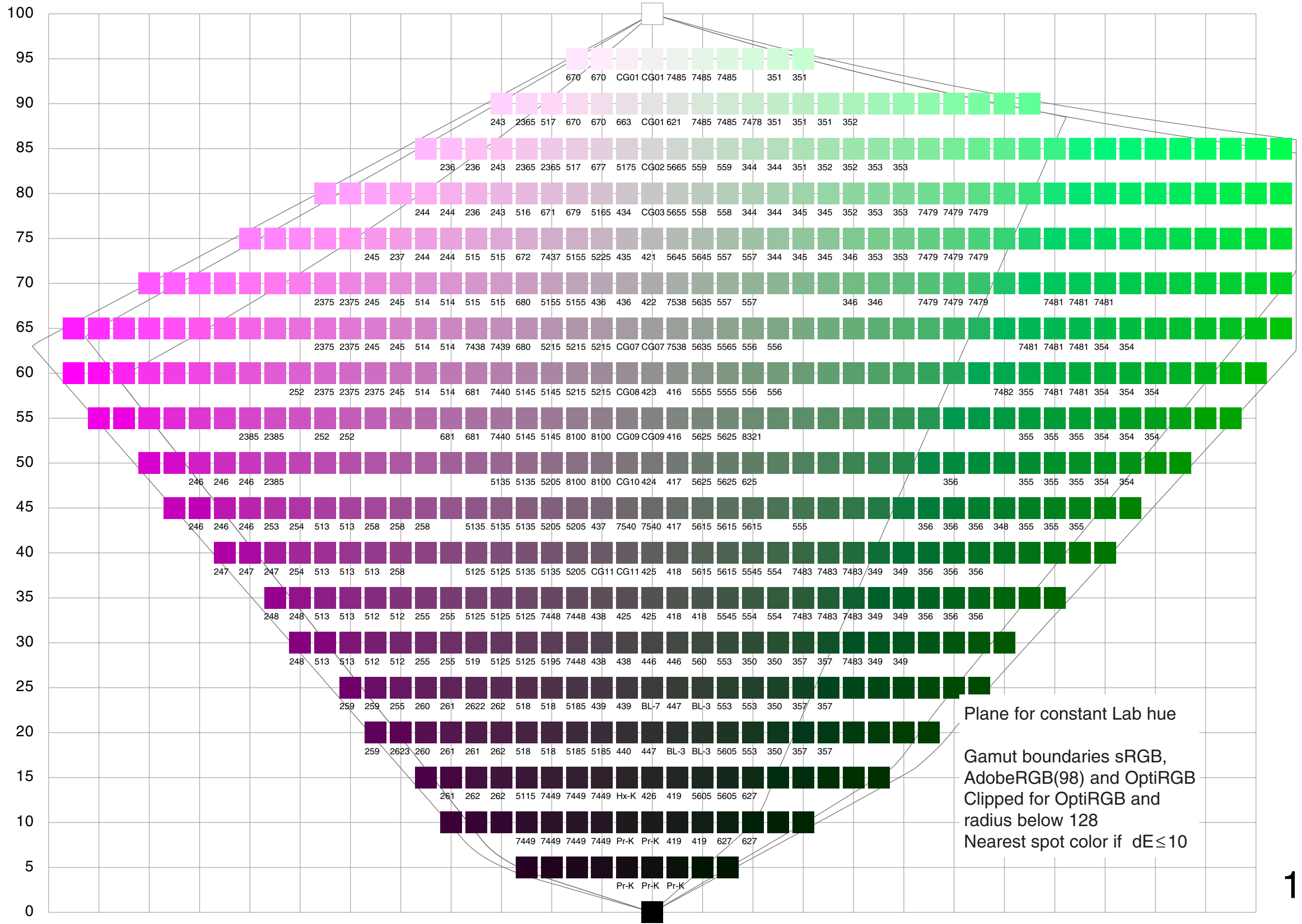
Plane for constant Lab hue

Gamut boundaries sRGB,  
 AdobeRGB(98) and OptiRGB  
 Clipped for OptiRGB and  
 radius below 128  
 Nearest spot color if  $dE \leq 10$

135°

-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	r
85	78	71	64	57	49	42	35	28	21	14	7	0	-7	-14	-21	-28	-35	-42	-49	-57	-64	-71	-78	-85	a
-85	-78	-71	-64	-57	-49	-42	-35	-28	-21	-14	-7	0	7	14	21	28	35	42	49	57	64	71	78	85	b

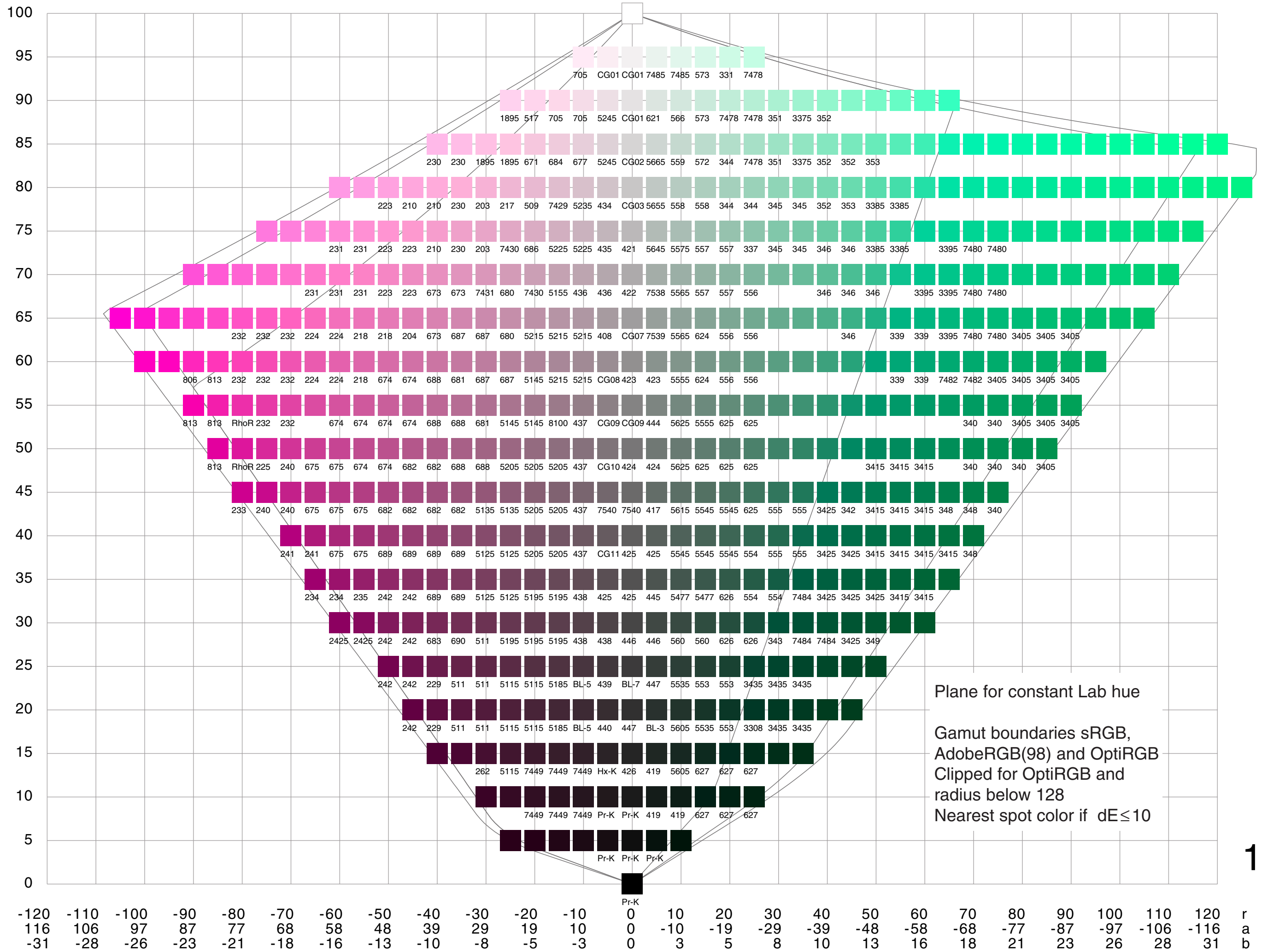




-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	r
104	95	87	78	69	61	52	43	35	26	17	9	0	-9	-17	-26	-35	-43	-52	-61	-69	-78	-87	-95	-104	a
-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60	b

150°

30



165°

