

NCS DIGITAL ATLAS 1950

# ATLAS

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Edition 1 2007

# NCS Digital Atlas

The NCS Digital Atlas is a colour atlas that visualizes all the 1 950 NCS Original colours specified in CMYK and positioned in the NCS Colour Space. To make the NCS Digital Atlas, the NCS Palette Creative has been used to specify the colours. The NCS Palette Creative is a set of colour libraries which gives you access to the NCS colours in your different computer software, regardless of whether it is for your monitor, for your colour printer or for a printing press.

The NCS Digital Atlas contains the standardized 1 950 NCS Original colours and includes the 200 New Colours introduced 2004. These colours have been placed in their right positions in the NCS Colour Space to get a clear overview of the colours. 184 of the colours lie in intermediate steps in the light area, and the size of the colour samples has been adapted to fit in their positions in the NCS Colour Triangles.

To get the most out of the NCS Digital Atlas we recommend that you work with it in combination with a colour tool from NCS 1950 Original Colour Sample Collection (e.g. an NCS Atlas or an NCS Block) as well as the NCS Palette Creative.

Use the NCS Digital Atlas as a reference point and as a tool to orientate and compare the colours on the screen or the print-out with a coated NCS colour sample. Then you can see the shifting of the colours and can specify the colours on the basis of that.

The NCS Digital Atlas in combination with NCS Palette Creative is useful for all kind of digital colour selection and colour design, for architects and designers and for regular computer users. With the digital colour palettes, it is easy to select and specify the correct NCS colours in your drawing-, image processing- or layout program. You can easily change the NCS colours on different objects, e.g. scanned-in houses and environments, directly on your monitor.

## Colour Differences

Depending on limitations in the printing technique, differences can arise between the printed result of the NCS Digital Atlas and the nearest NCS colour sample. For technical reasons, variations between the monitor and NCS Original colour samples can also occur. When communicating colour, always refer to the NCS notation and an NCS Original colour sample to be certain to get the best colour accuracy.

Print-outs from different computer printers often vary a lot depending on the printing technique (e.g. laser or inkjet). The colour settings in the print-driver, the operation system and the application also influence the printed colours. Therefore it is important to adjust these settings to simulate a four-colour print on matt-coated paper. The best is also to work in CMYK mode in the application to avoid unnecessary colour conversions to and from RGB. Note that the colour on the screen may look slightly different comparing to the NCS colour sample because of the conversion from CMYK into RGB.

The NCS System describes the whole colour space, but does not guarantee that all colours in the NCS Digital Atlas can be produced in all imaginable materials and qualities by all manufacturers. In doubtful cases, we recommend that you consult the manufacturer of the material of interest before the colour is ordered. For NCS products and retailers, please visit the NCS web site [www.ncscolour.com](http://www.ncscolour.com).

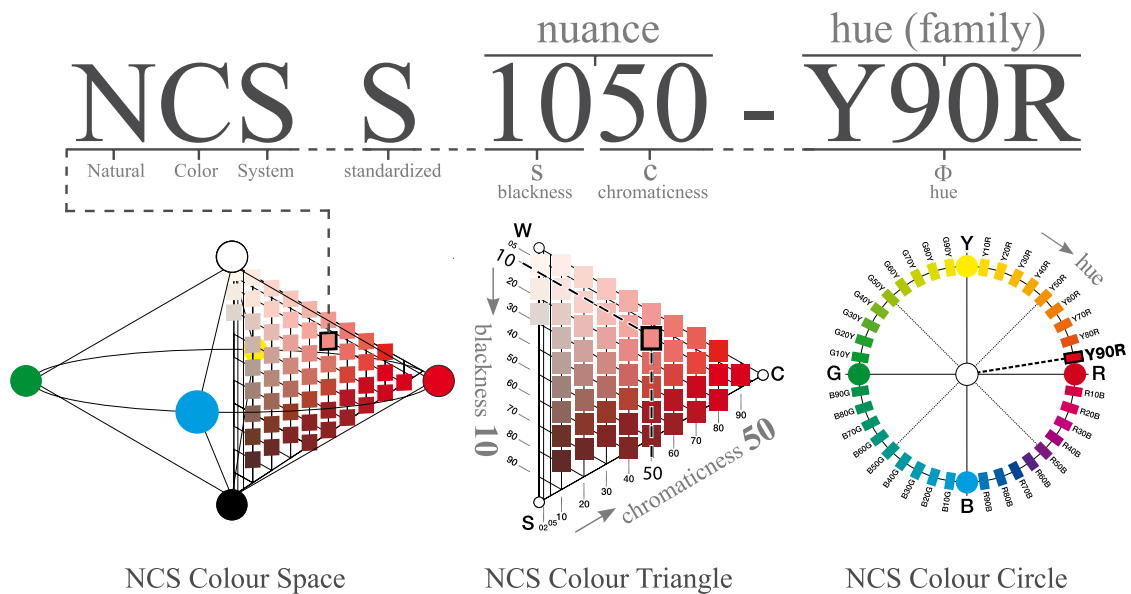
# The NCS<sup>®</sup> System

NCS - Natural Color System<sup>®</sup> is a system with the help of which all possible surface colours (not fluorescent or metallic colours) can be described. That facilitates and guarantees exact colour navigation in design, communication and production. The NCS system is illustrated by an NCS Colour Atlas containing 1950 colour samples. Today, the NCS is one of the most widely used colour-describing systems in the world and has acquired international scientific acknowledgement. Besides, it is a Swedish, Norwegian, Spanish and South African national standard. NCS colour samples hold world-leading colour quality to provide exact colour match between different productions of colour samples, in order to make sure that the colour is always the same.

The letter S preceding the complete NCS notation (NCS S 1050-Y90R) means that the NCS sample is a standardized NCS colour sample issued by the Scandinavian Colour Institute, the NCS Quality Centre, and that it follows the NCS Quality Management system according to the Edition 2.

The variables in the NCS notations are built entirely on visually observable properties of the colours. In the NCS notation for the colour NCS S 1050-Y90R, the first two digits indicate the percentage of visual blackness in the colour. The next two digits indicate the colour's chromaticness, i.e. how strong the colour is. The letter-number combination after the hyphen indicates the colour's hue, i.e. which chromatic attributes are included and the relation between these. In this case, it is a yellow hue with 90% redness.

The NCS can also be illustrated graphically in a three-dimensional model, where the blackness and chromaticness are given in an equilateral triangle and the hue on a circle. A point in the triangle and a line on the circumference of the circle provide an unequivocal description of a colour. The colour NCS S 1050-Y90R is marked in the triangle and in the circle below. For more information, please visit: [www.ncscolour.com](http://www.ncscolour.com).



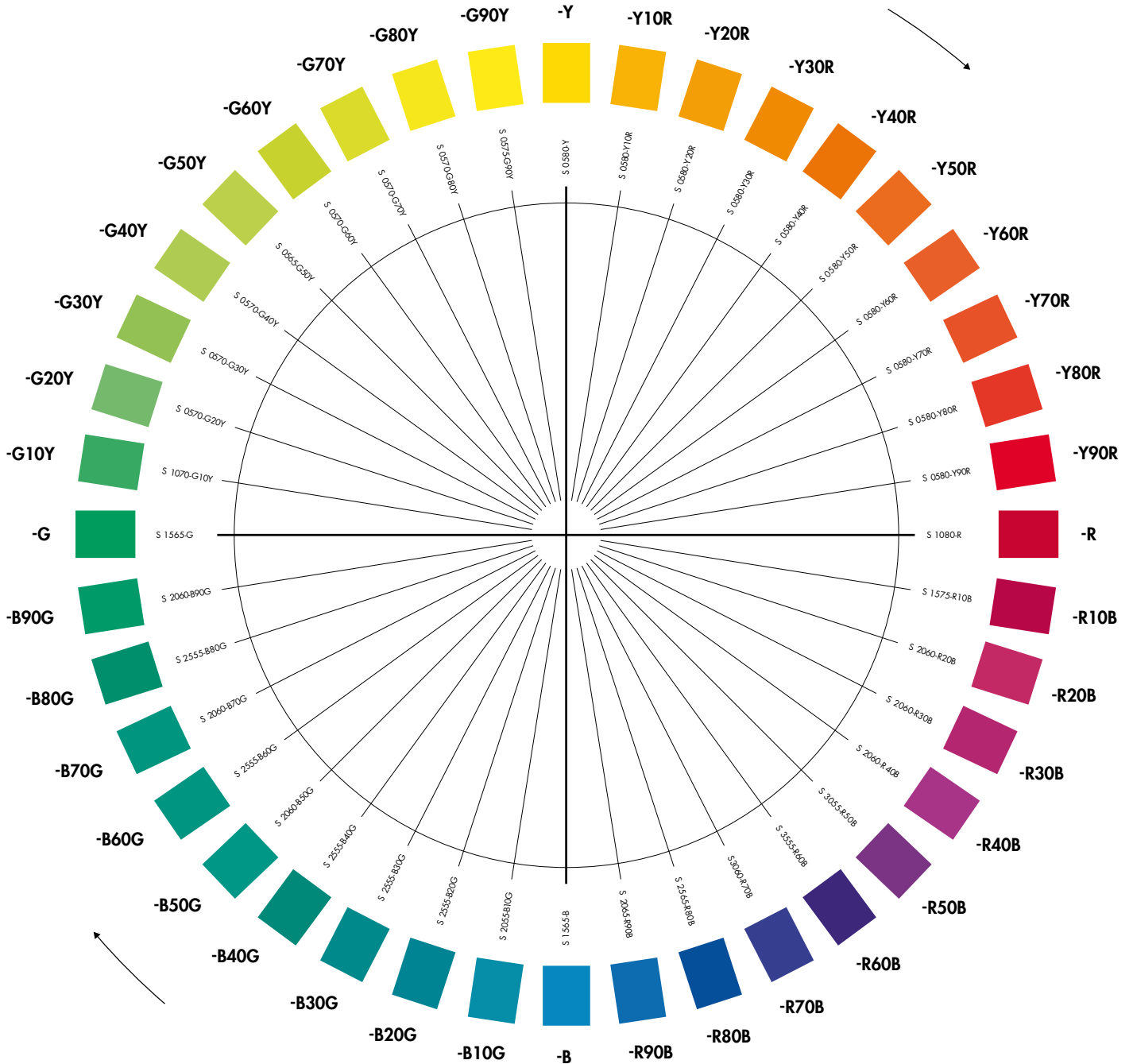
## The Natural Color System<sup>®</sup> - the key to your colour solutions

The visual NCS colour system makes it easy to visualize, design, select, communicate, document and manufacture any colour rationally, accurately and consistently. The NCS notation has a true visual meaning and can be understood and communicated globally.

NCS has created an exceptional tool for design, marketing, sales, communication and production, integrated in one system for multiple material industries. Simply: One system - one colour - one notation - any material.

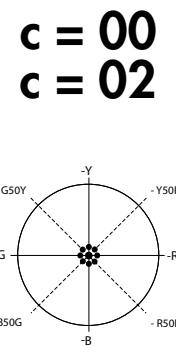
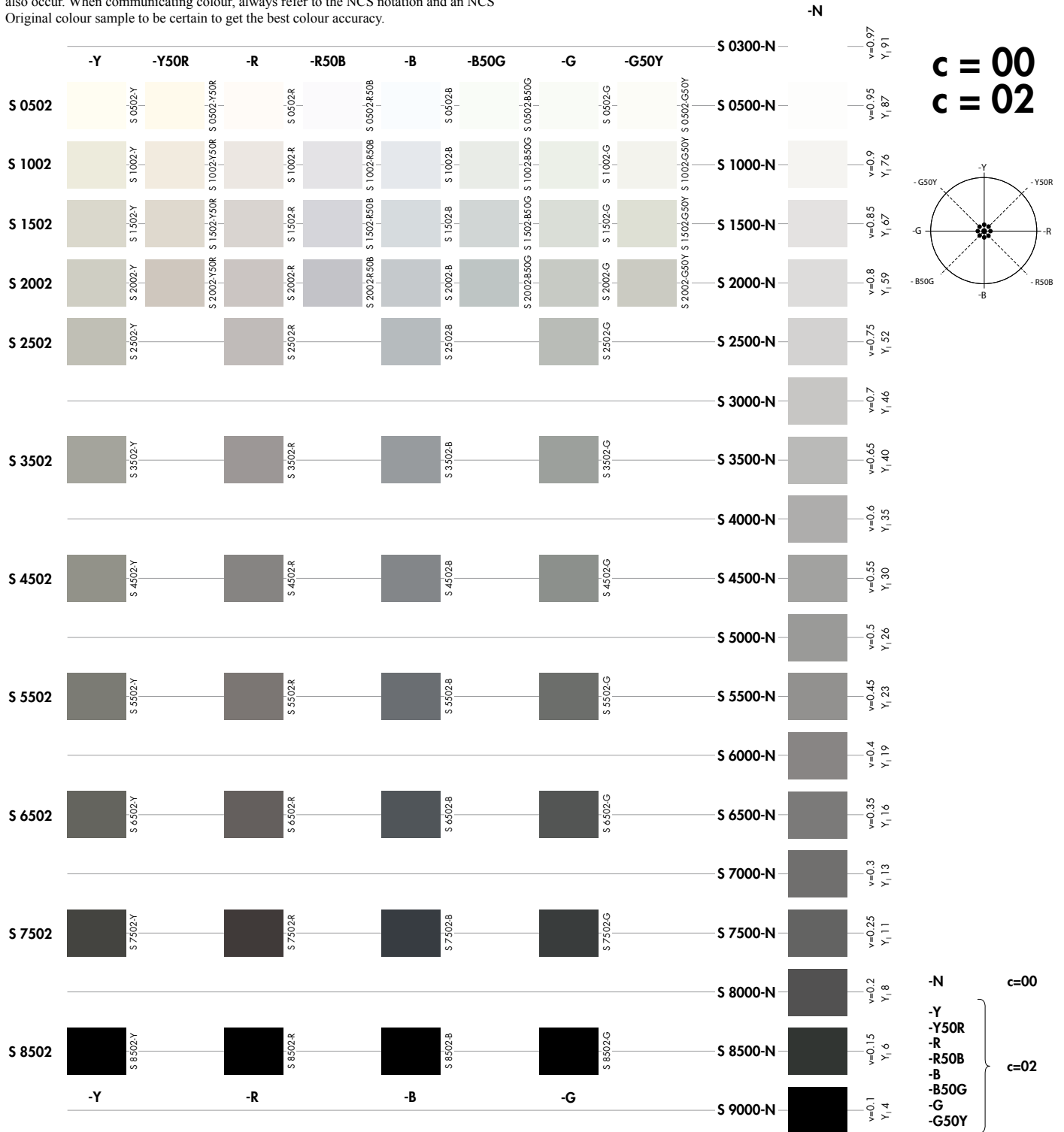
# NCS DIGITAL ATLAS 1950

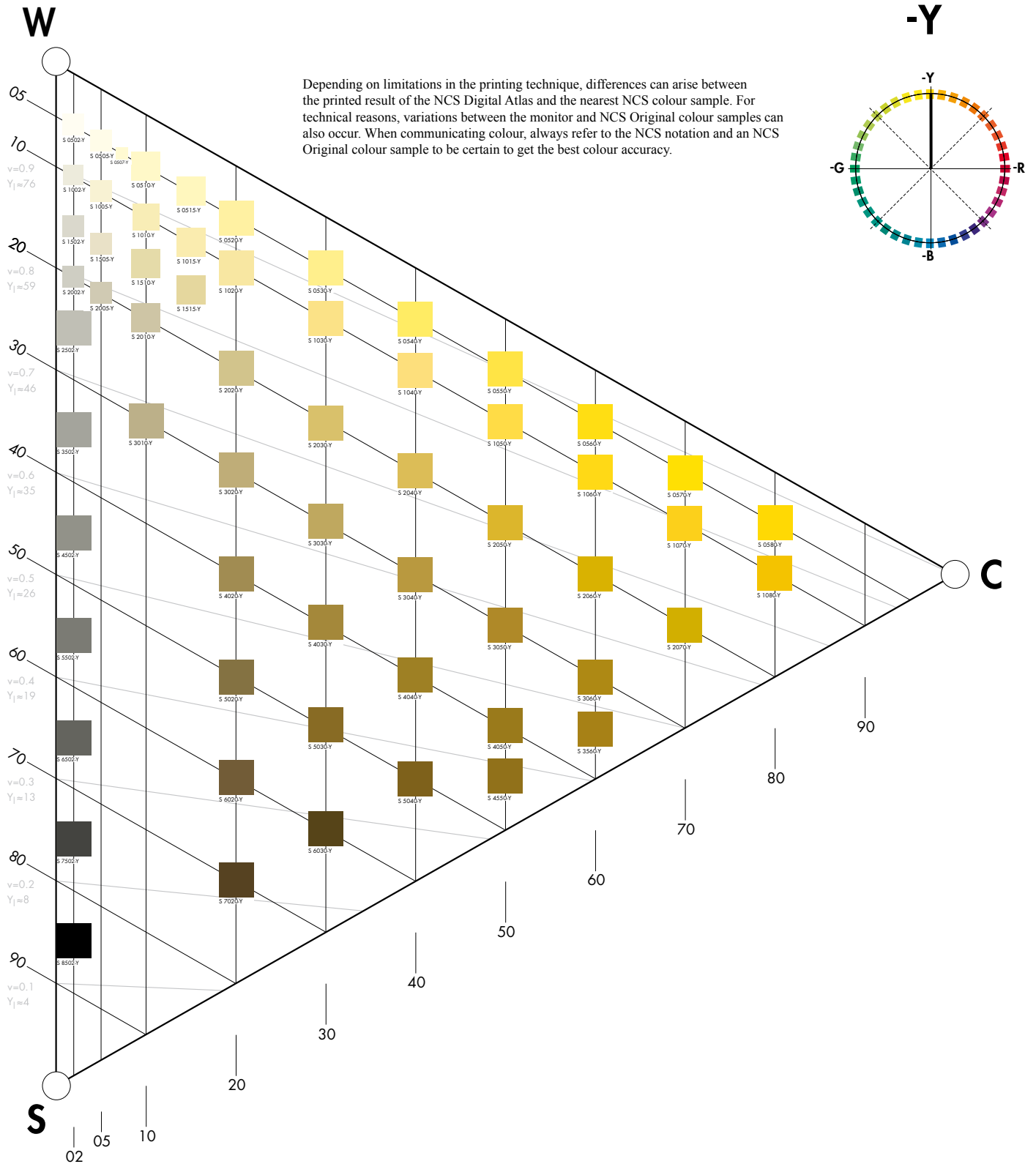
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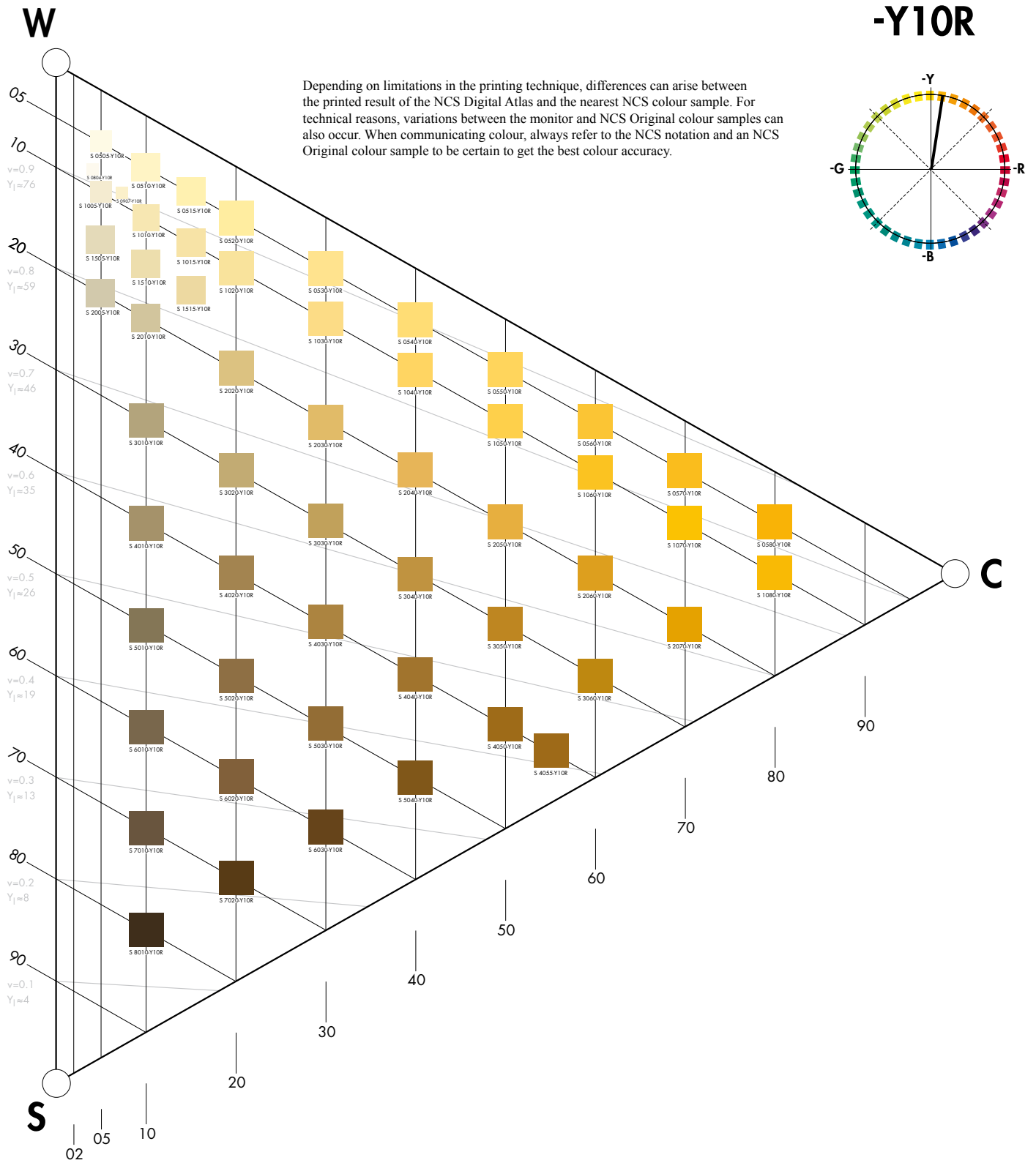


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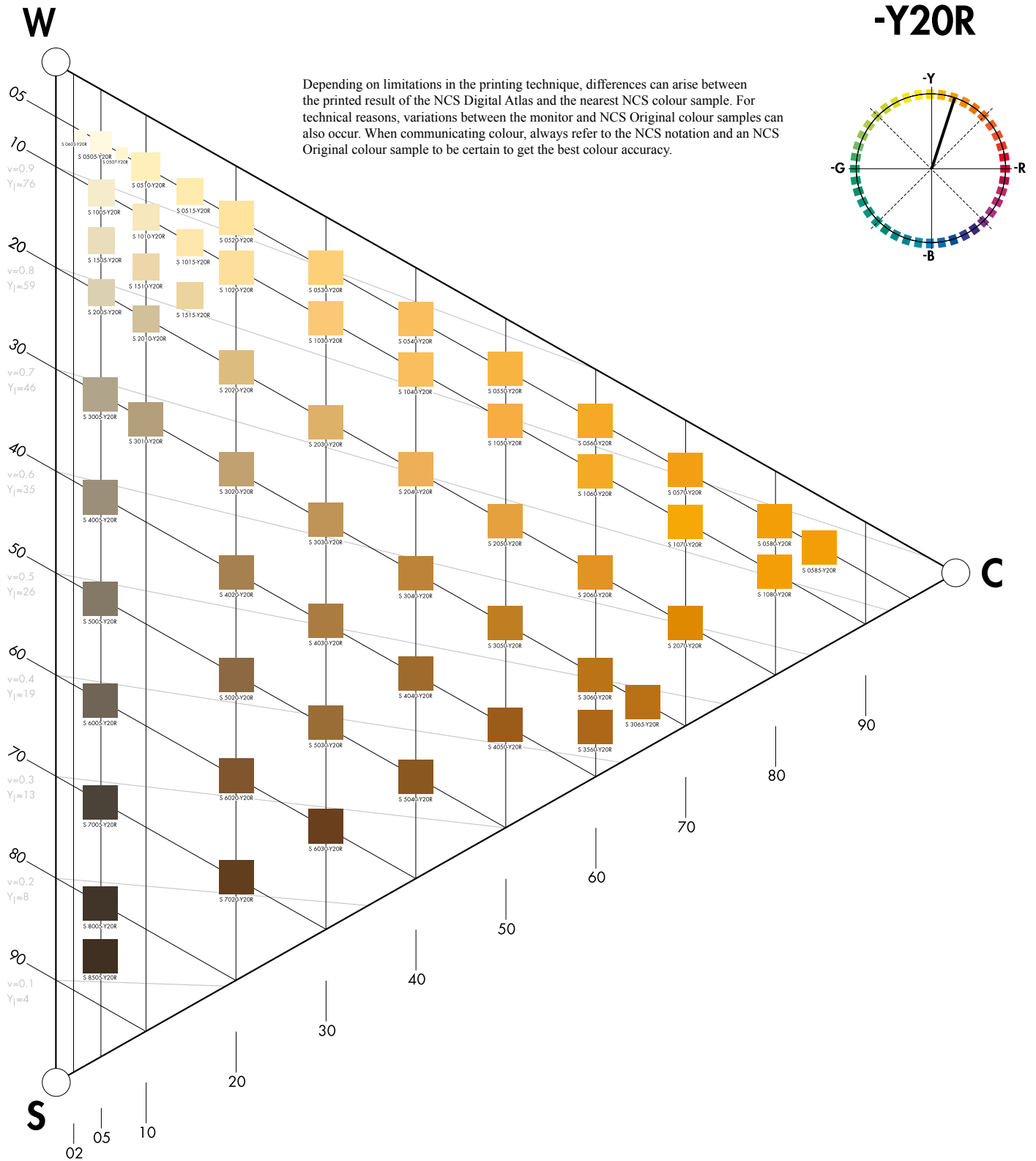


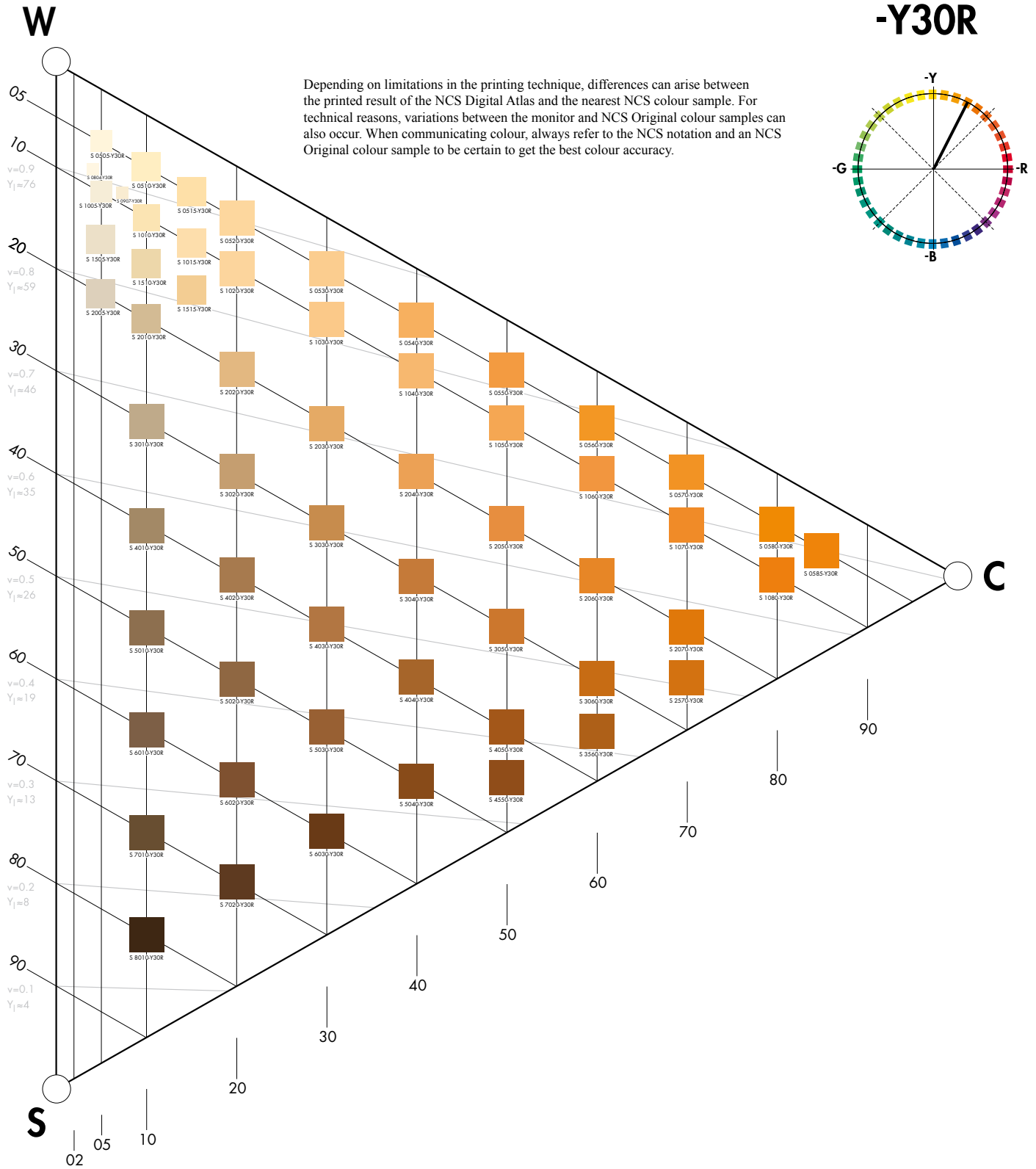


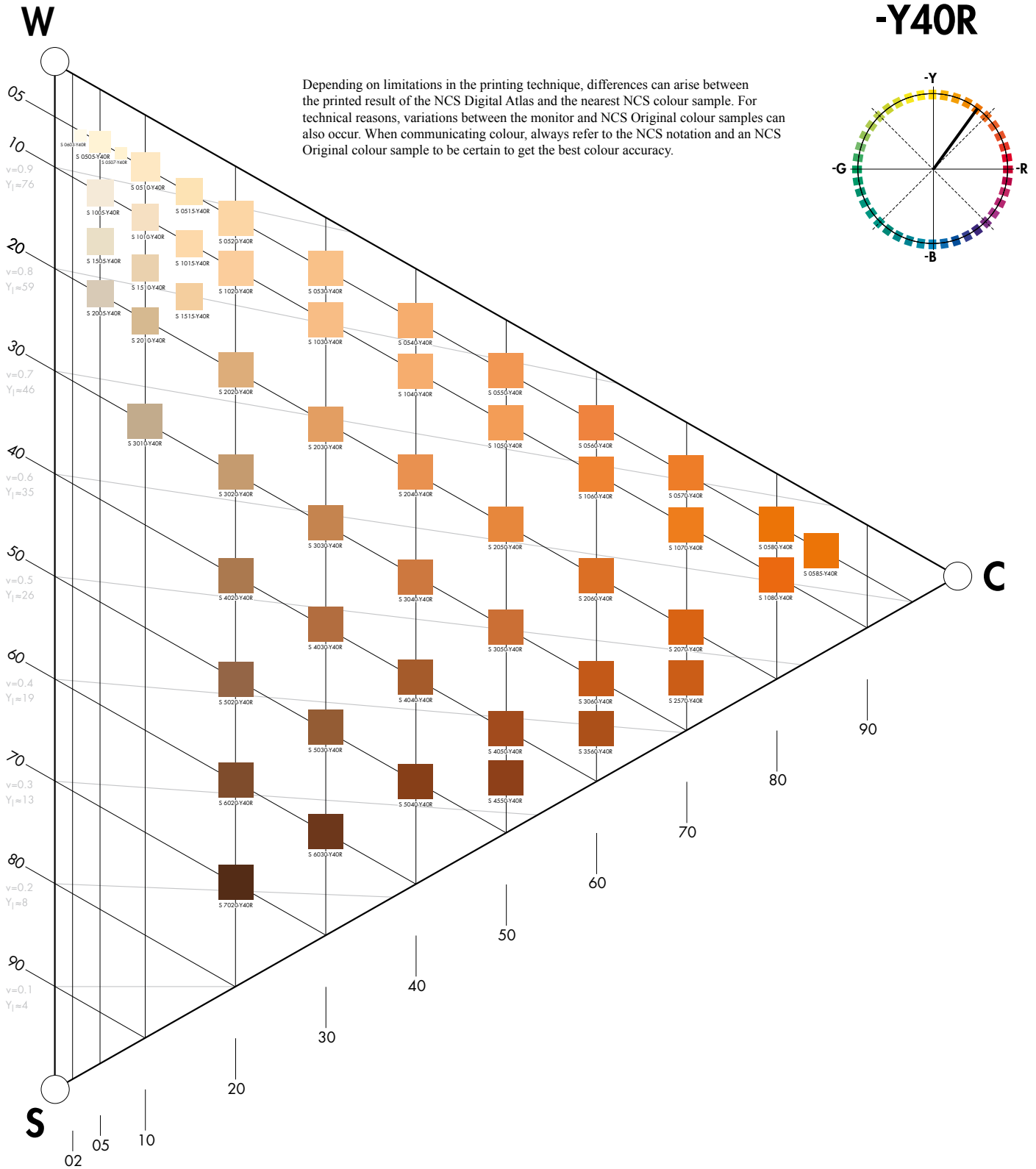


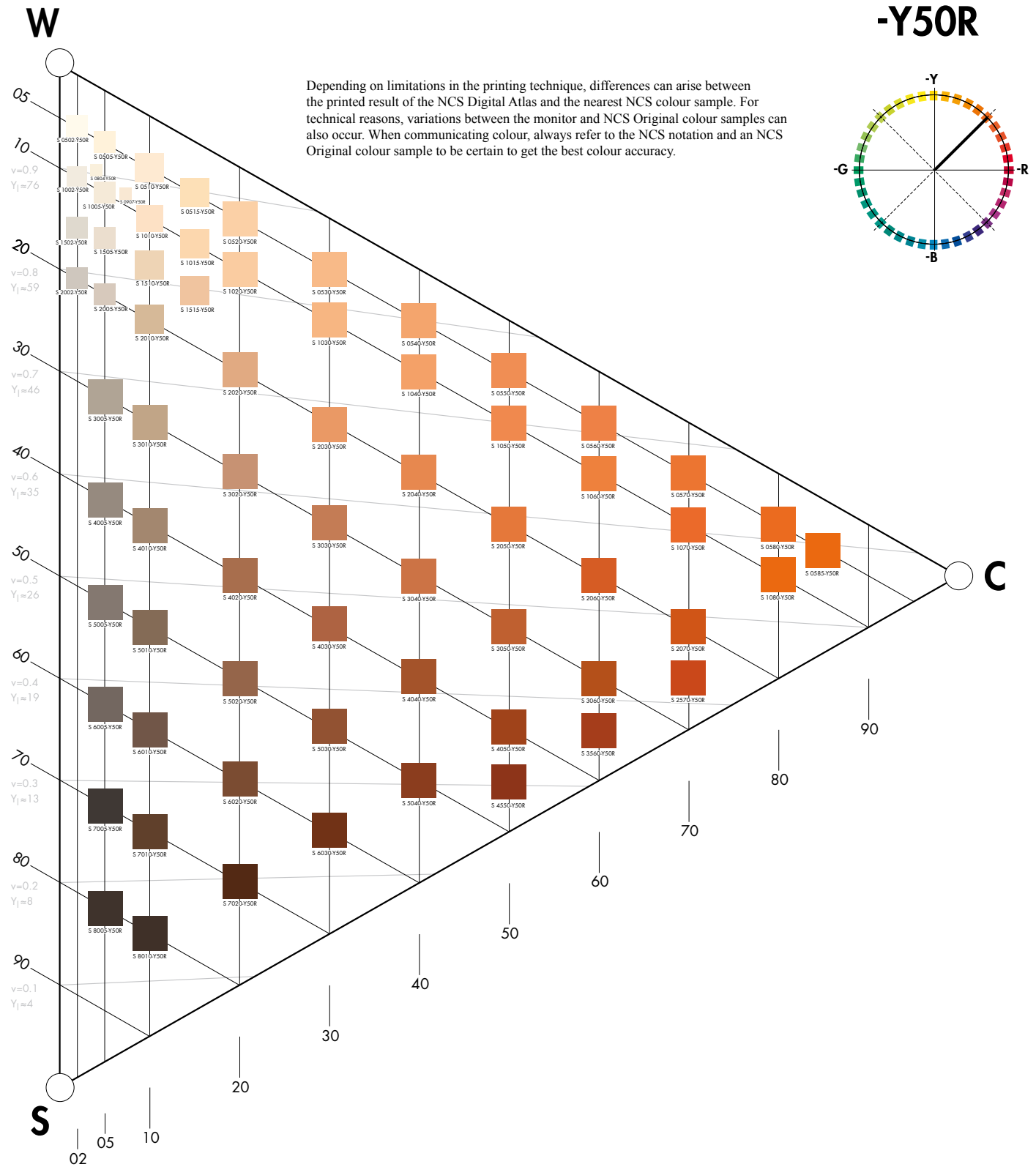
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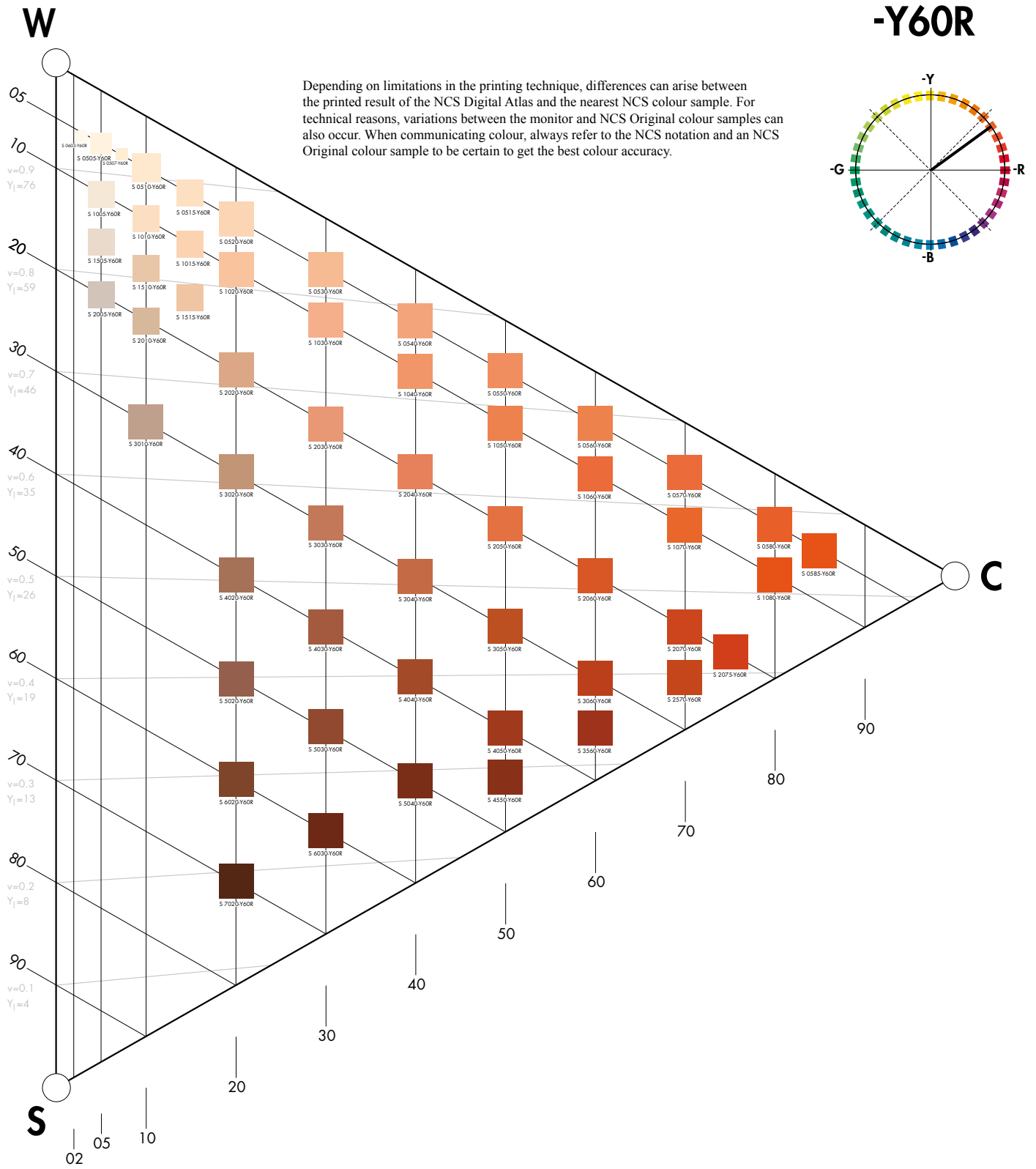


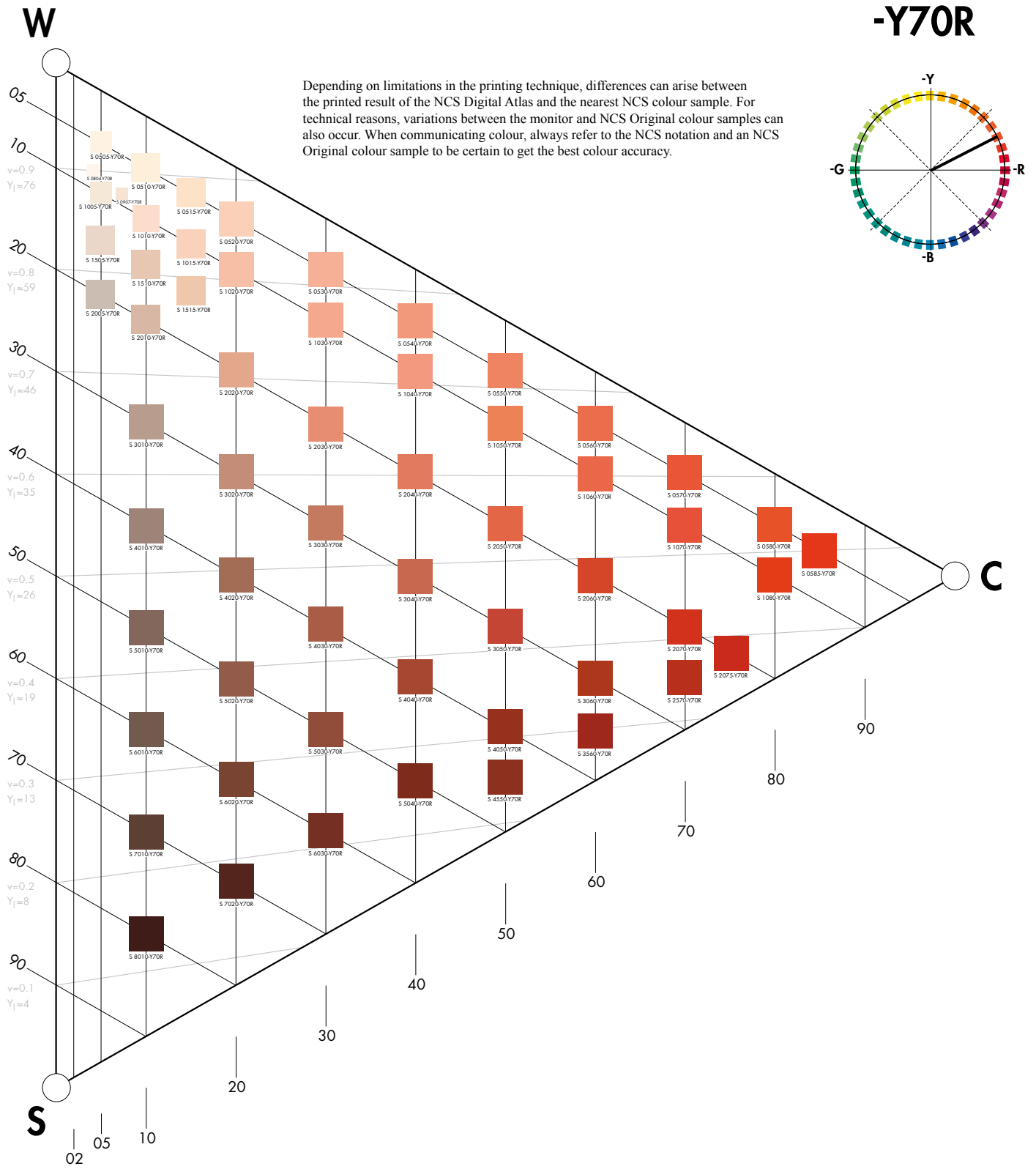




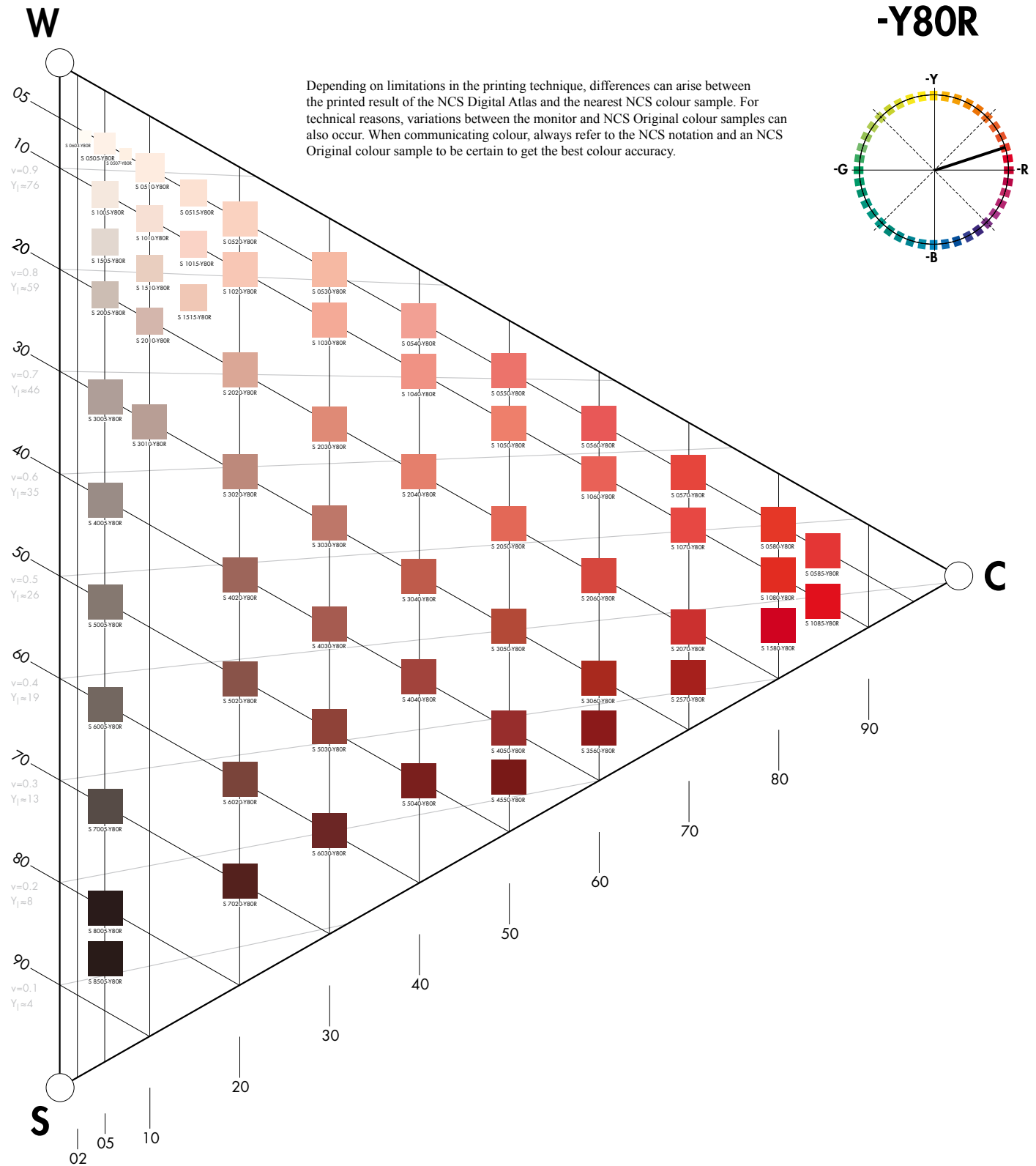




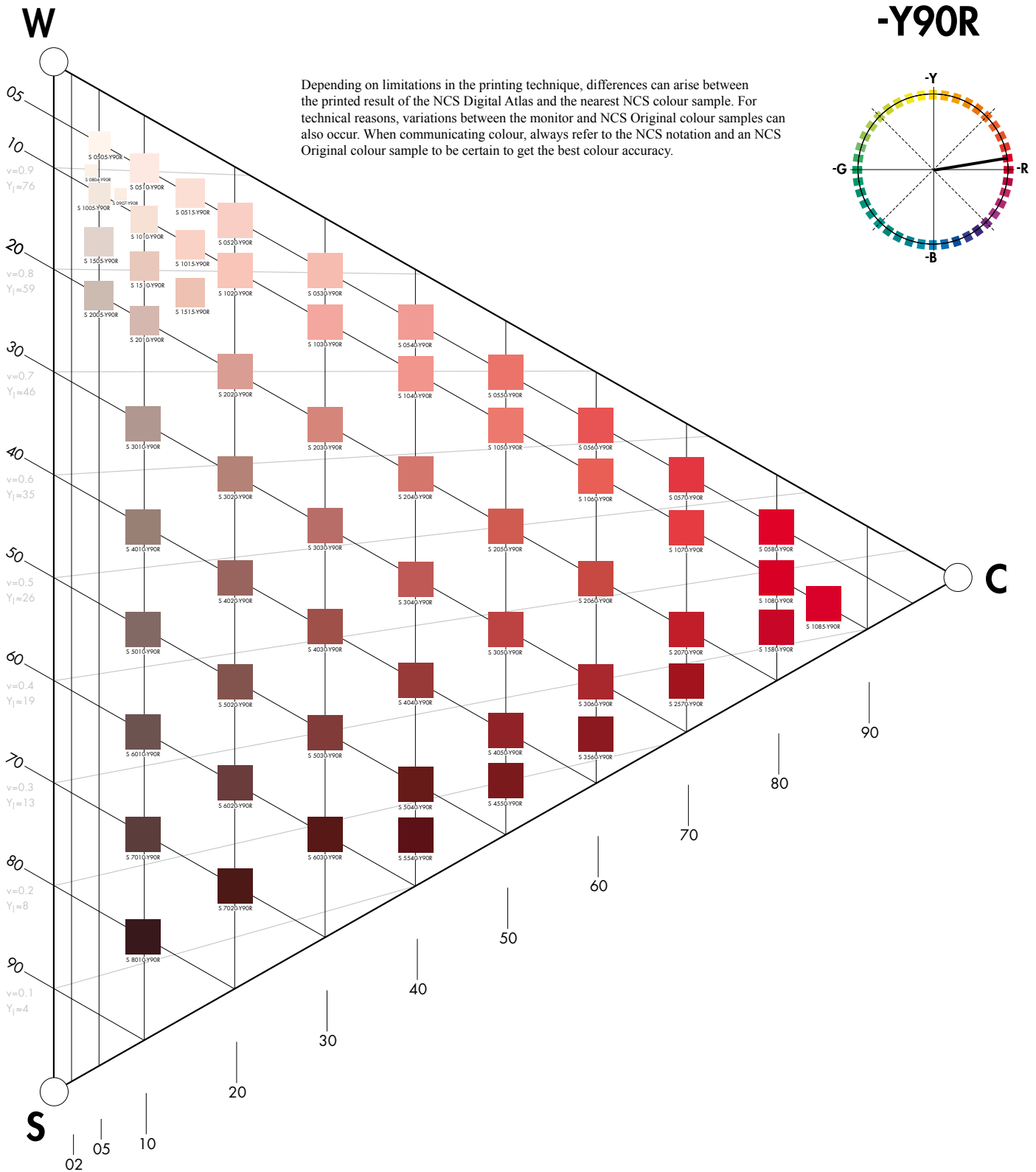




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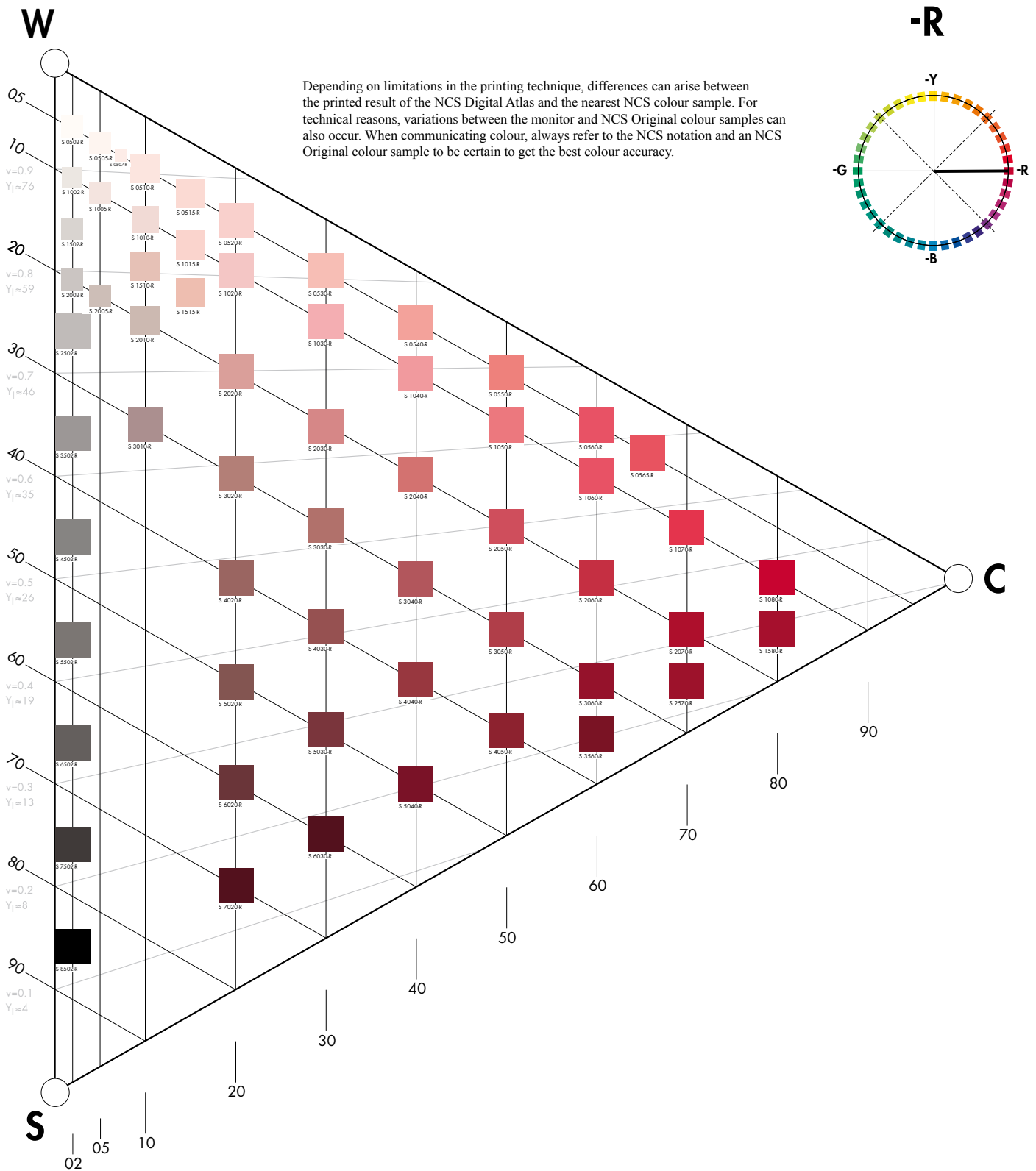


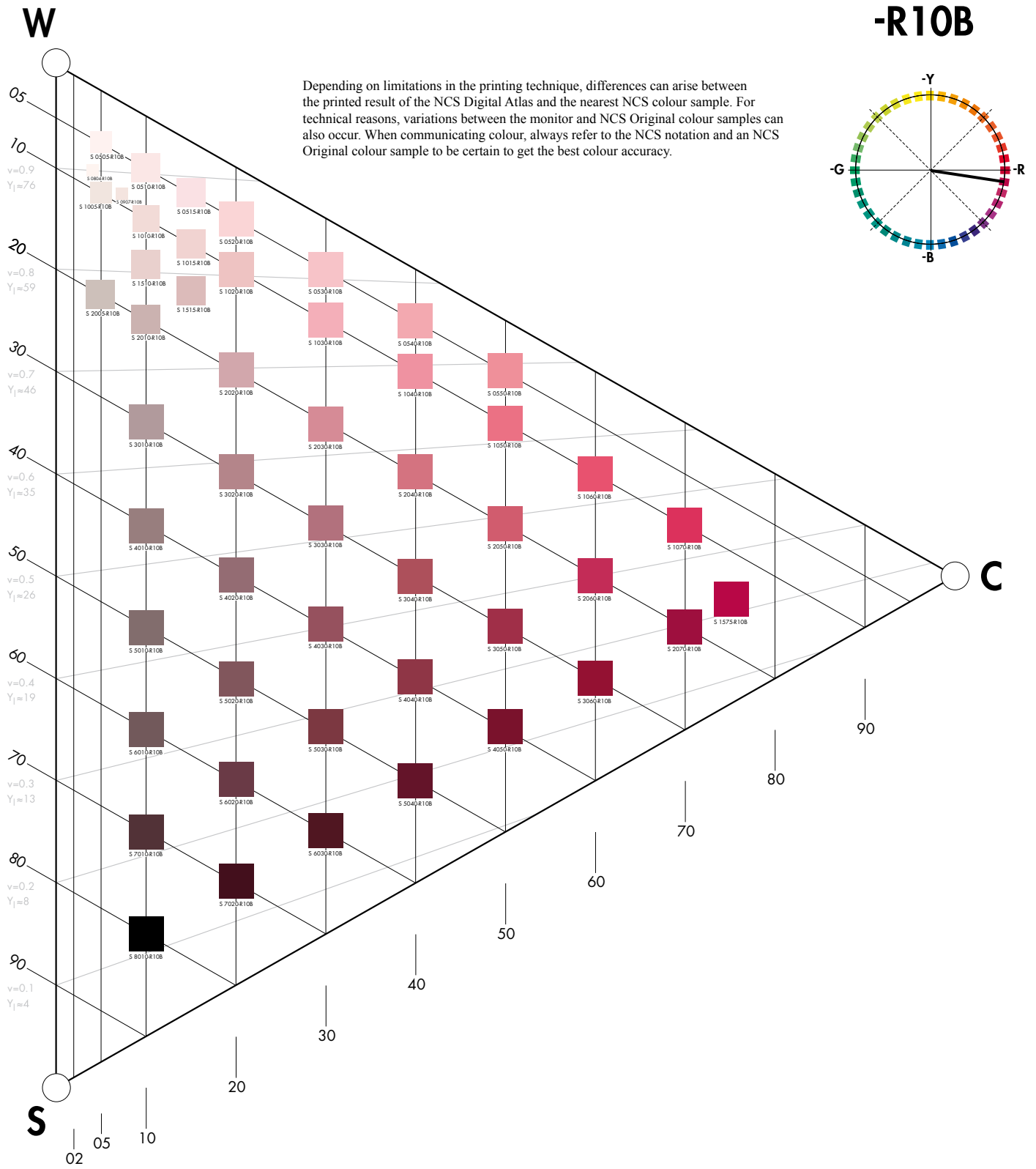
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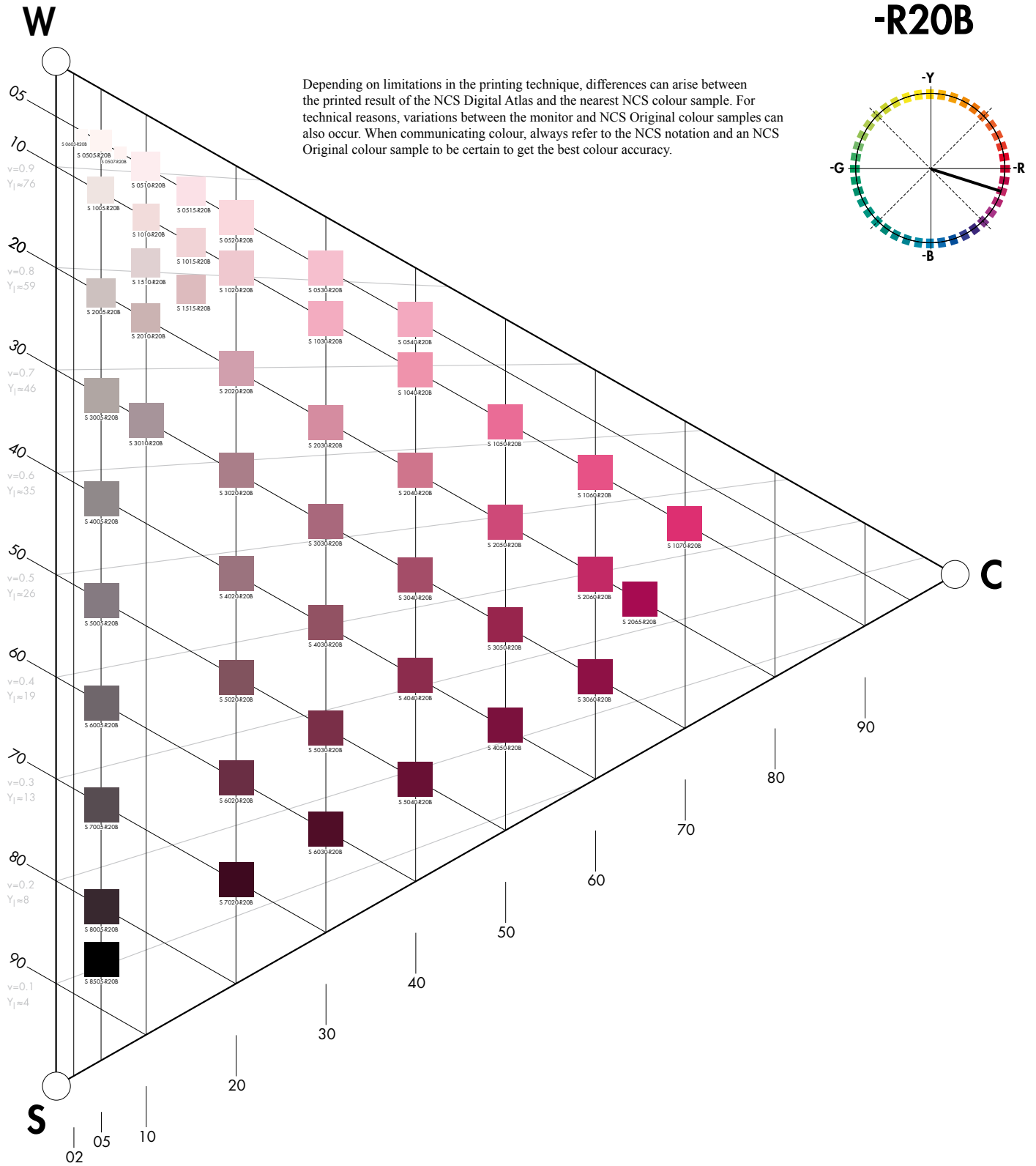


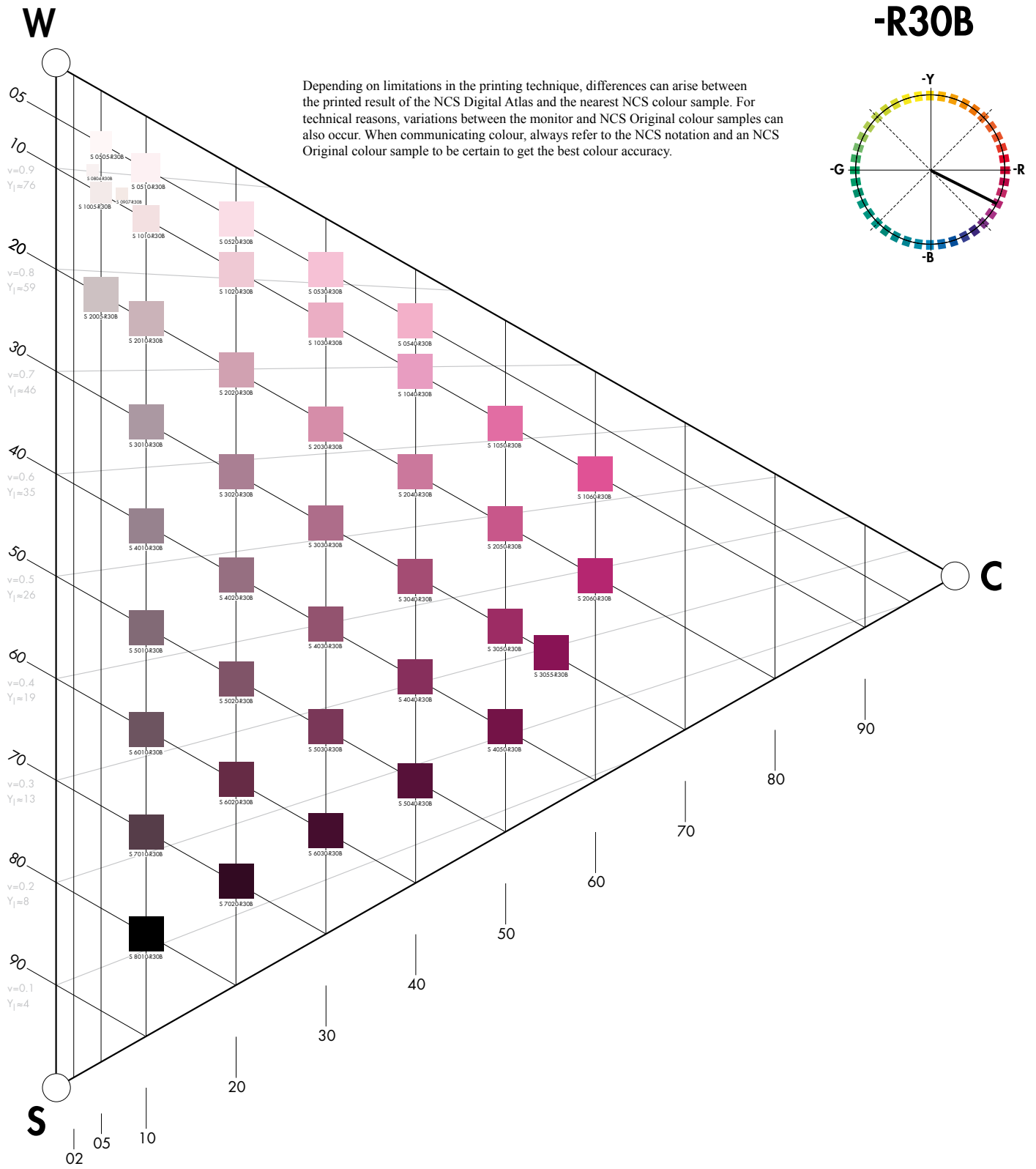


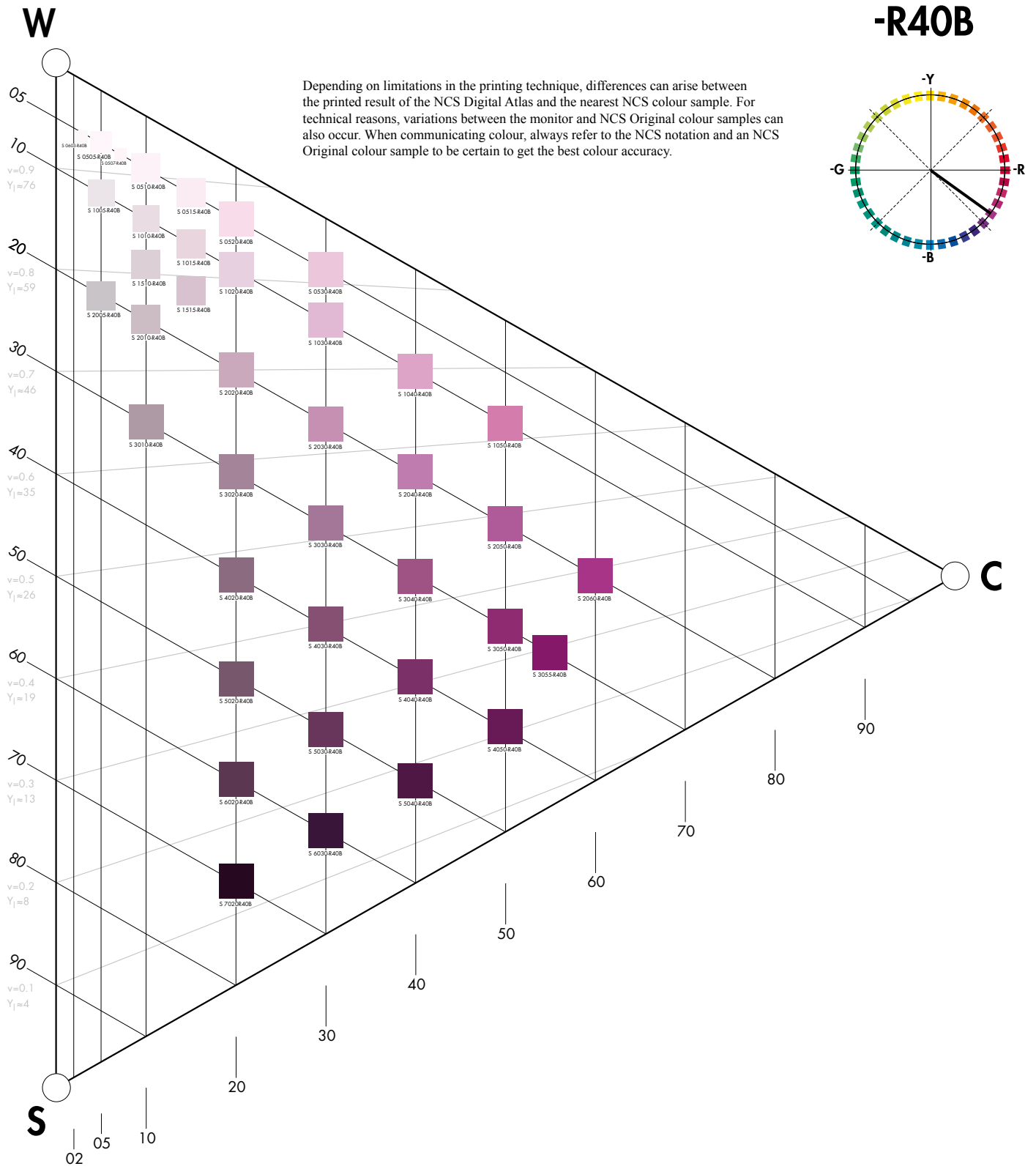
NCS DIGITAL ATLAS 1950



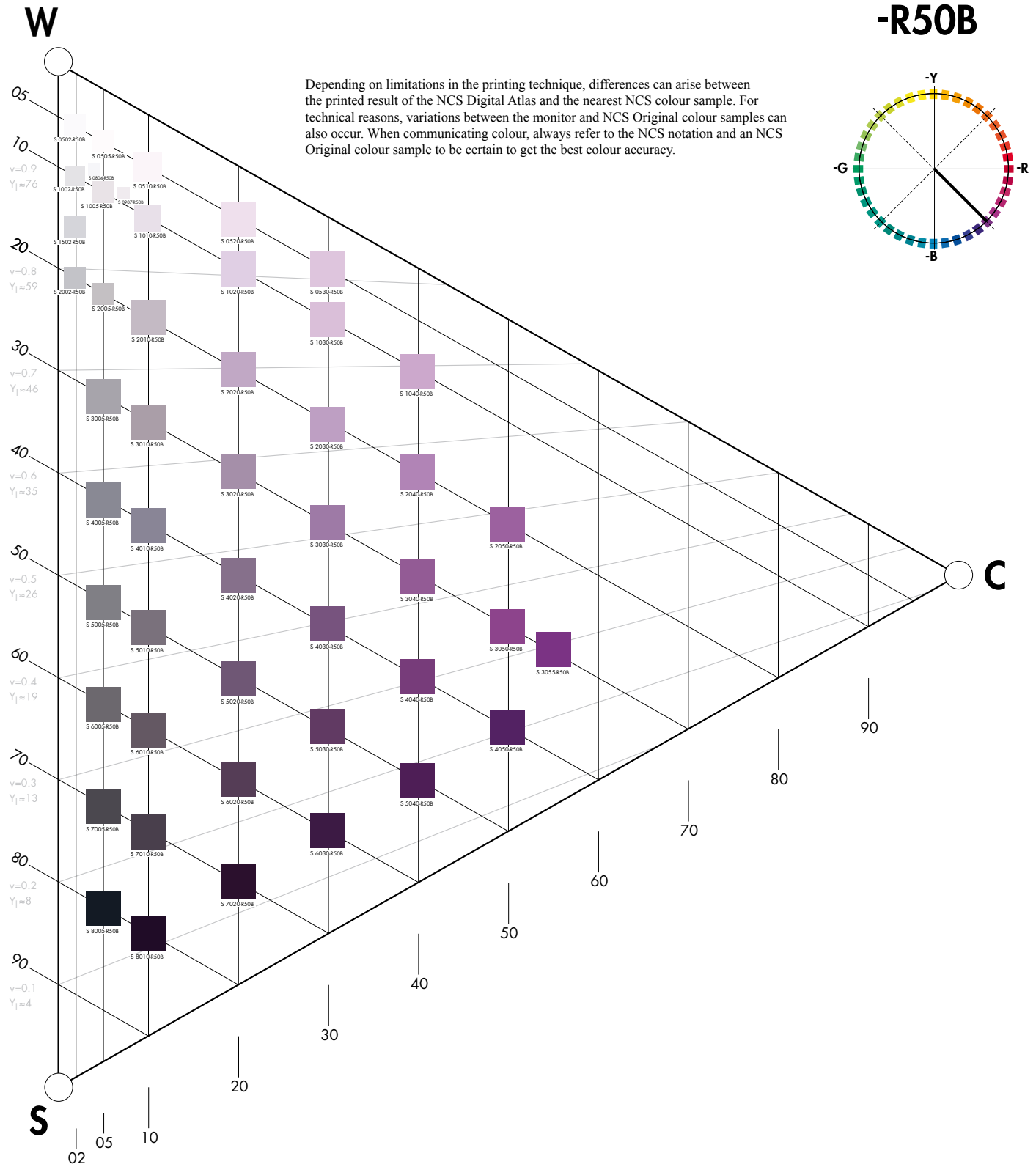




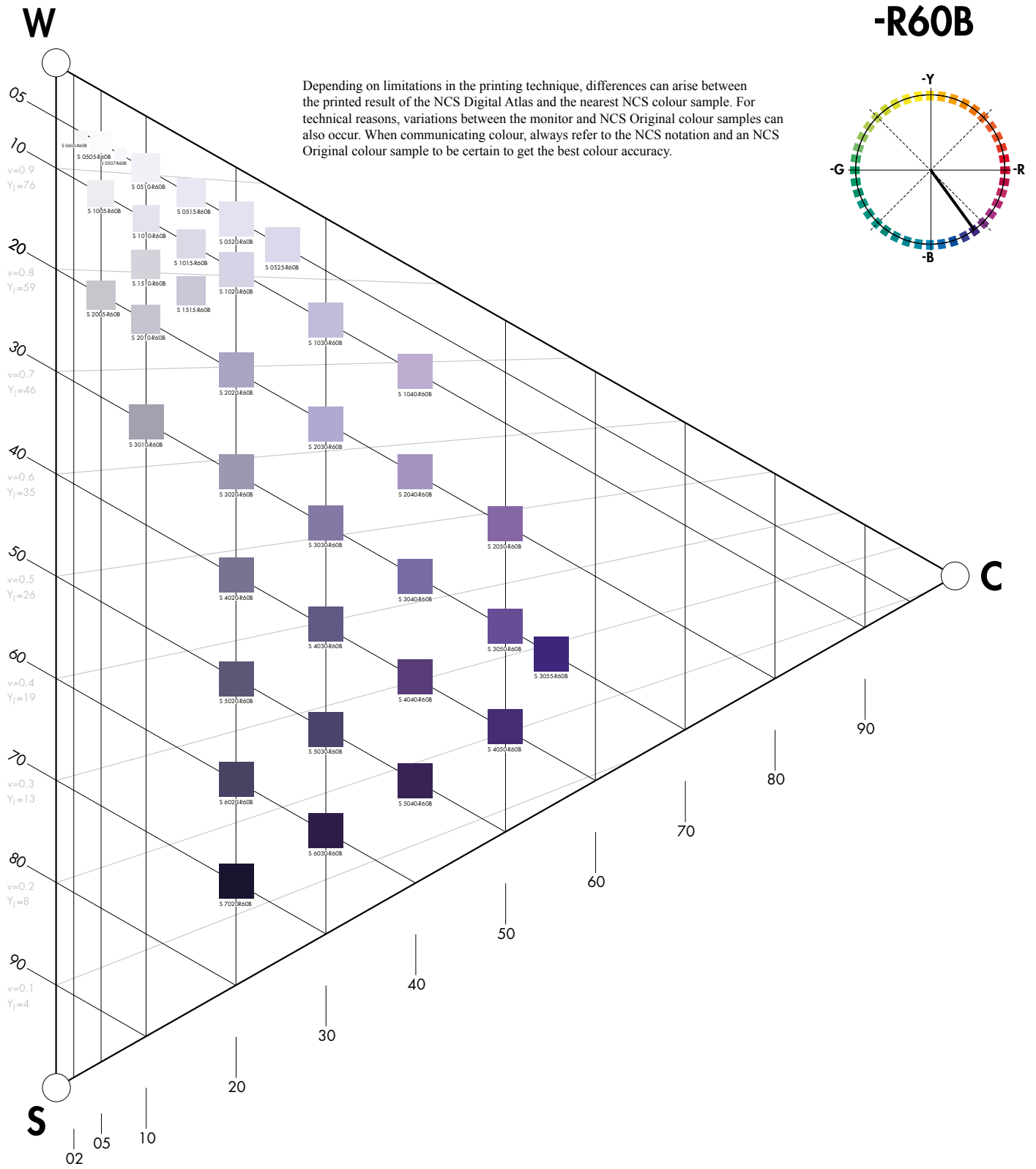


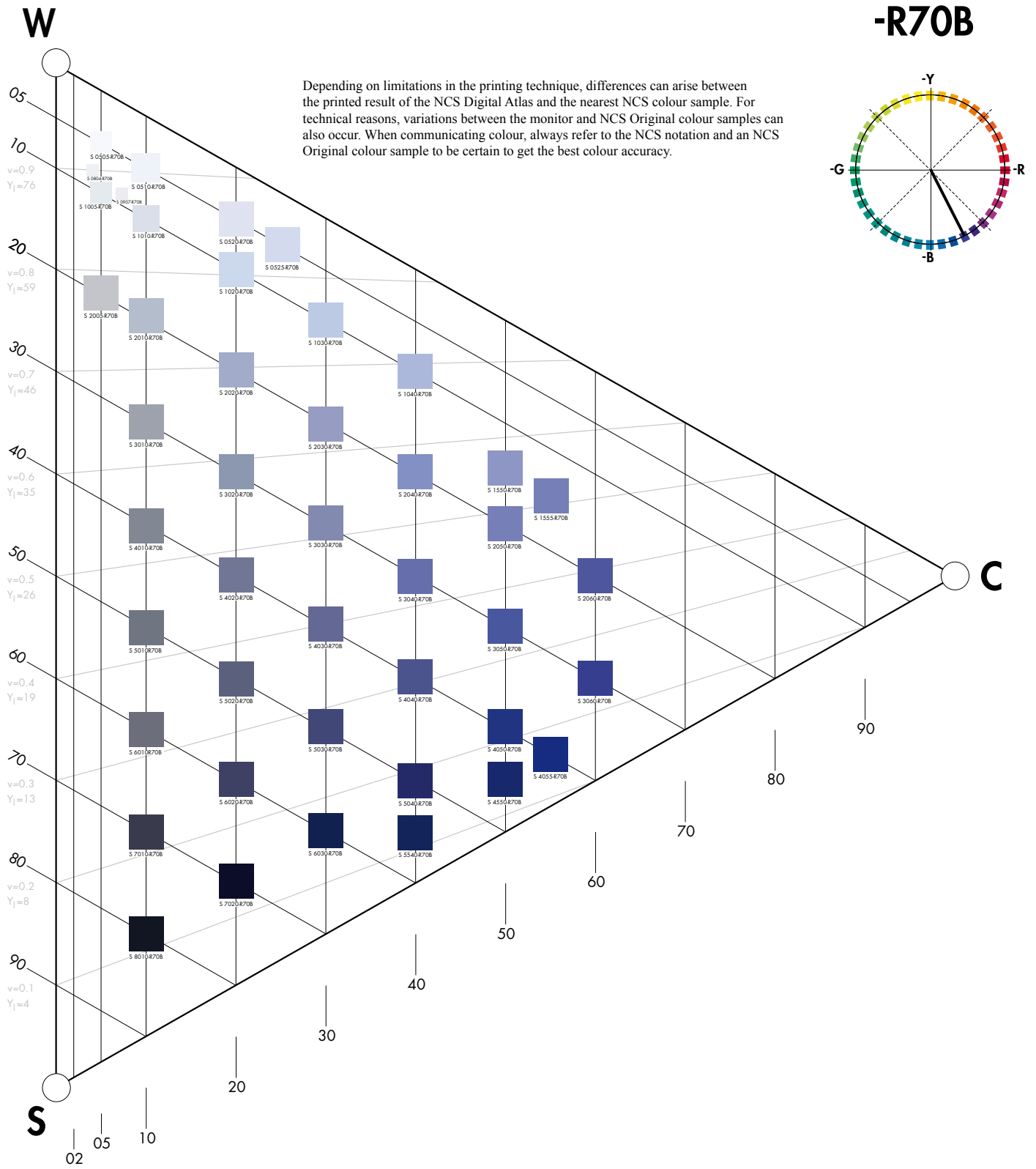


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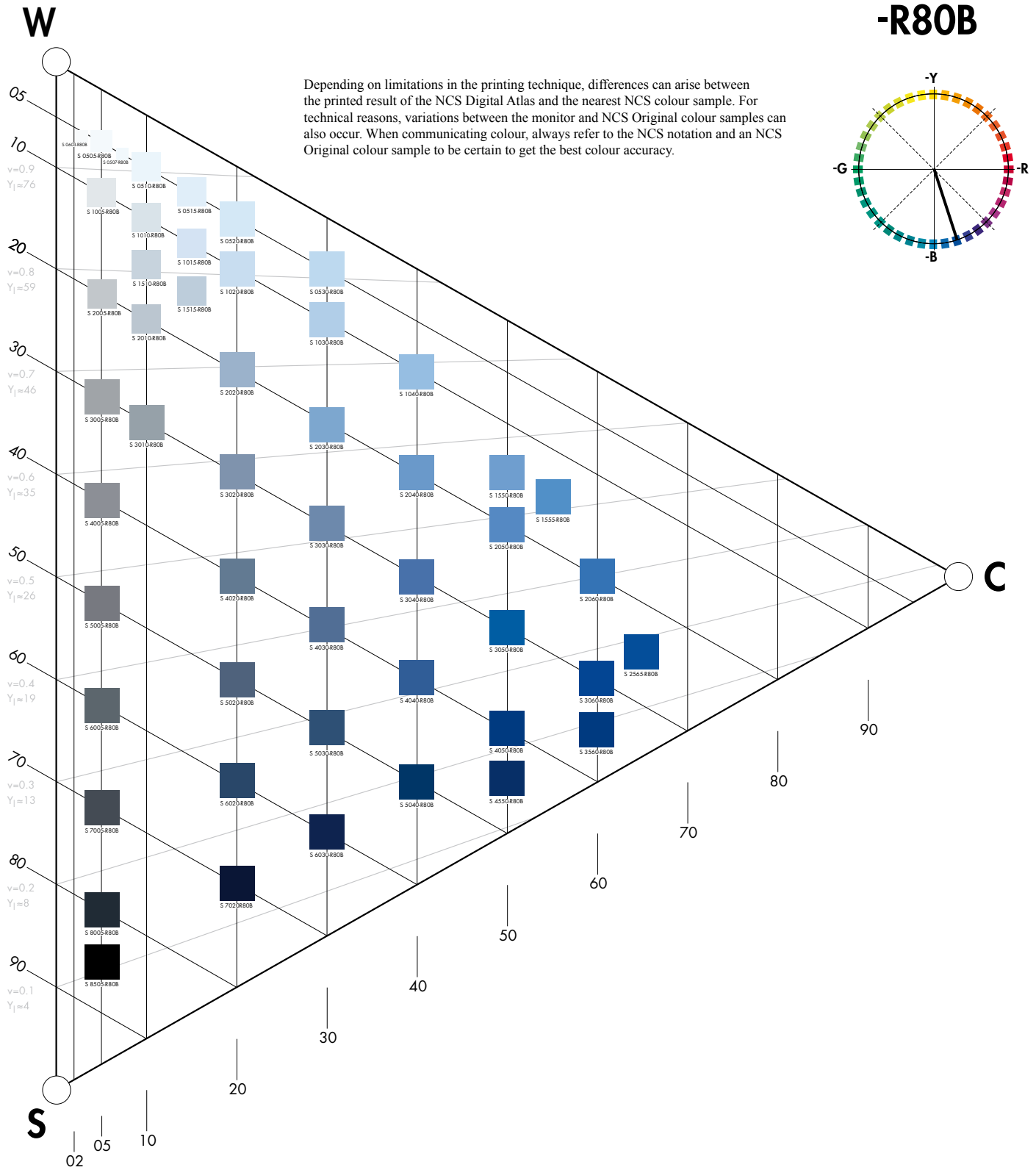
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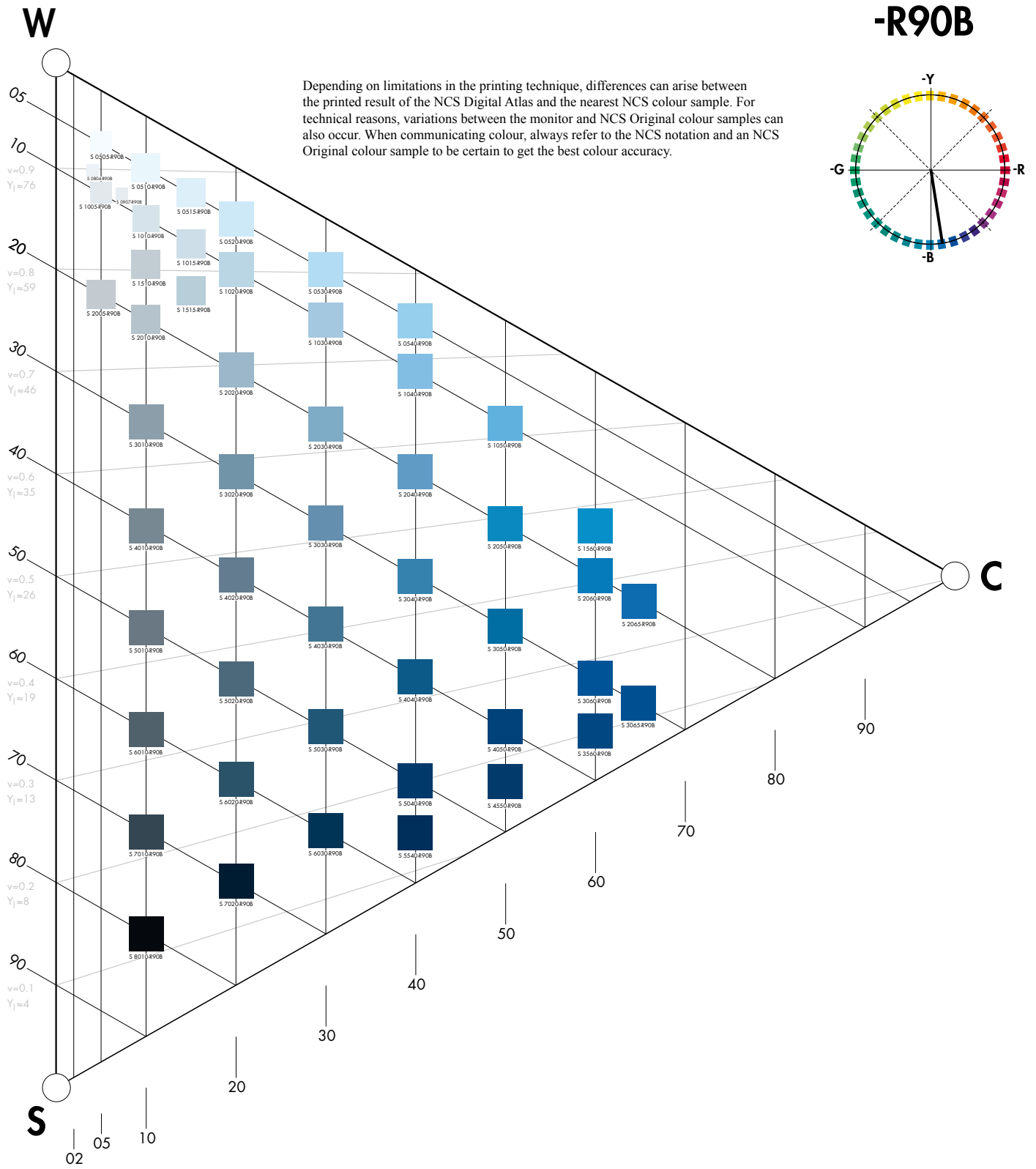


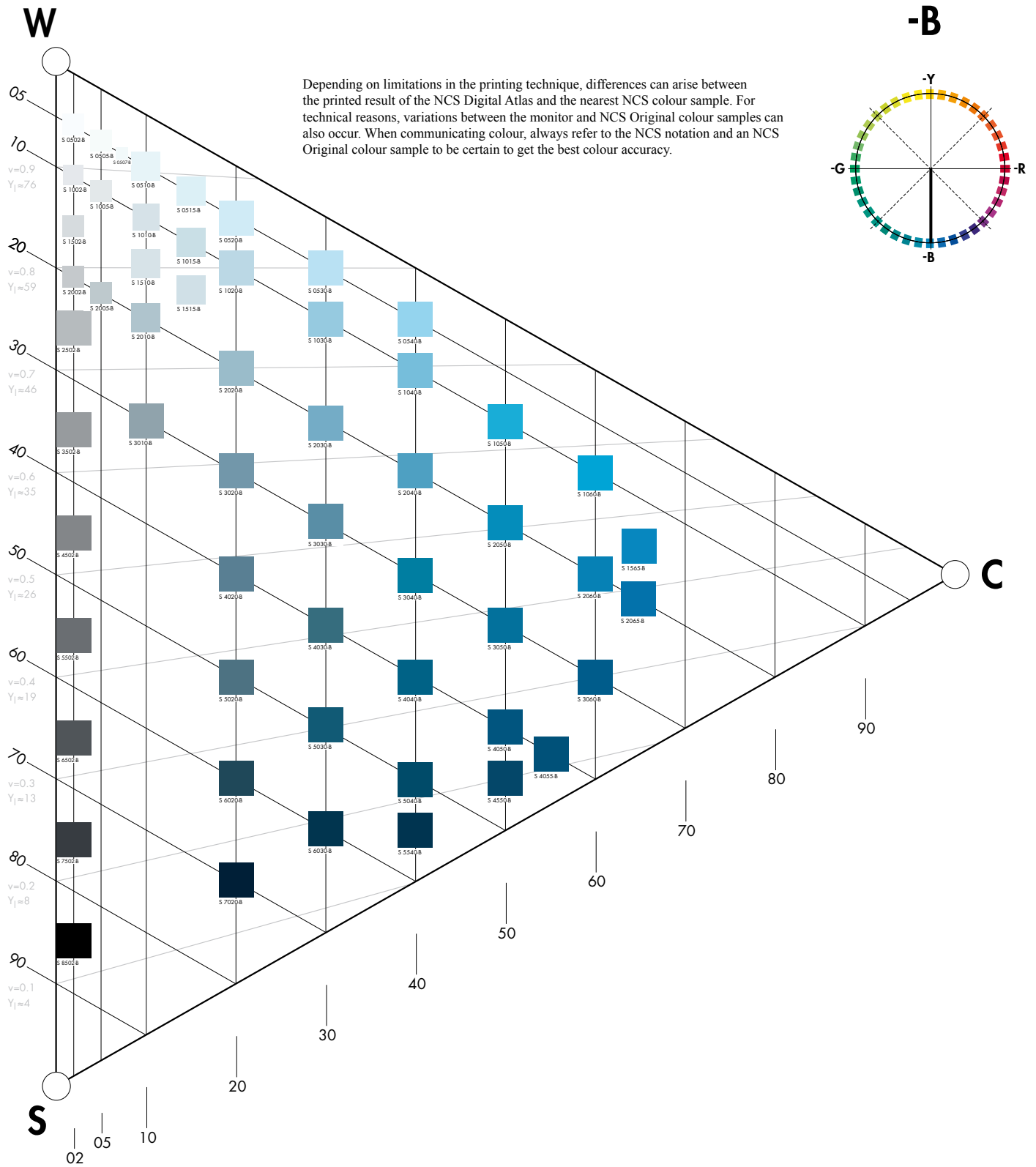


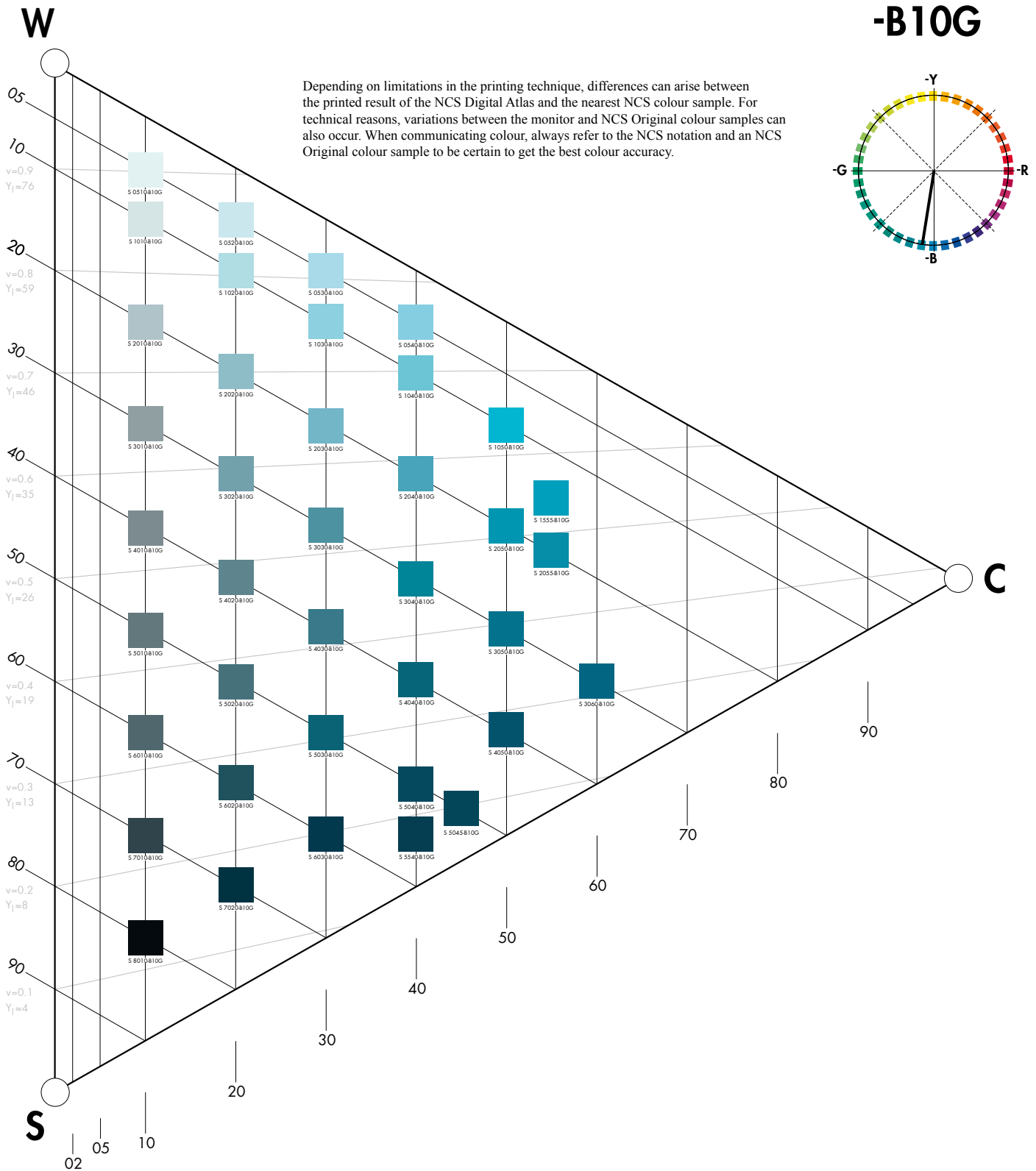
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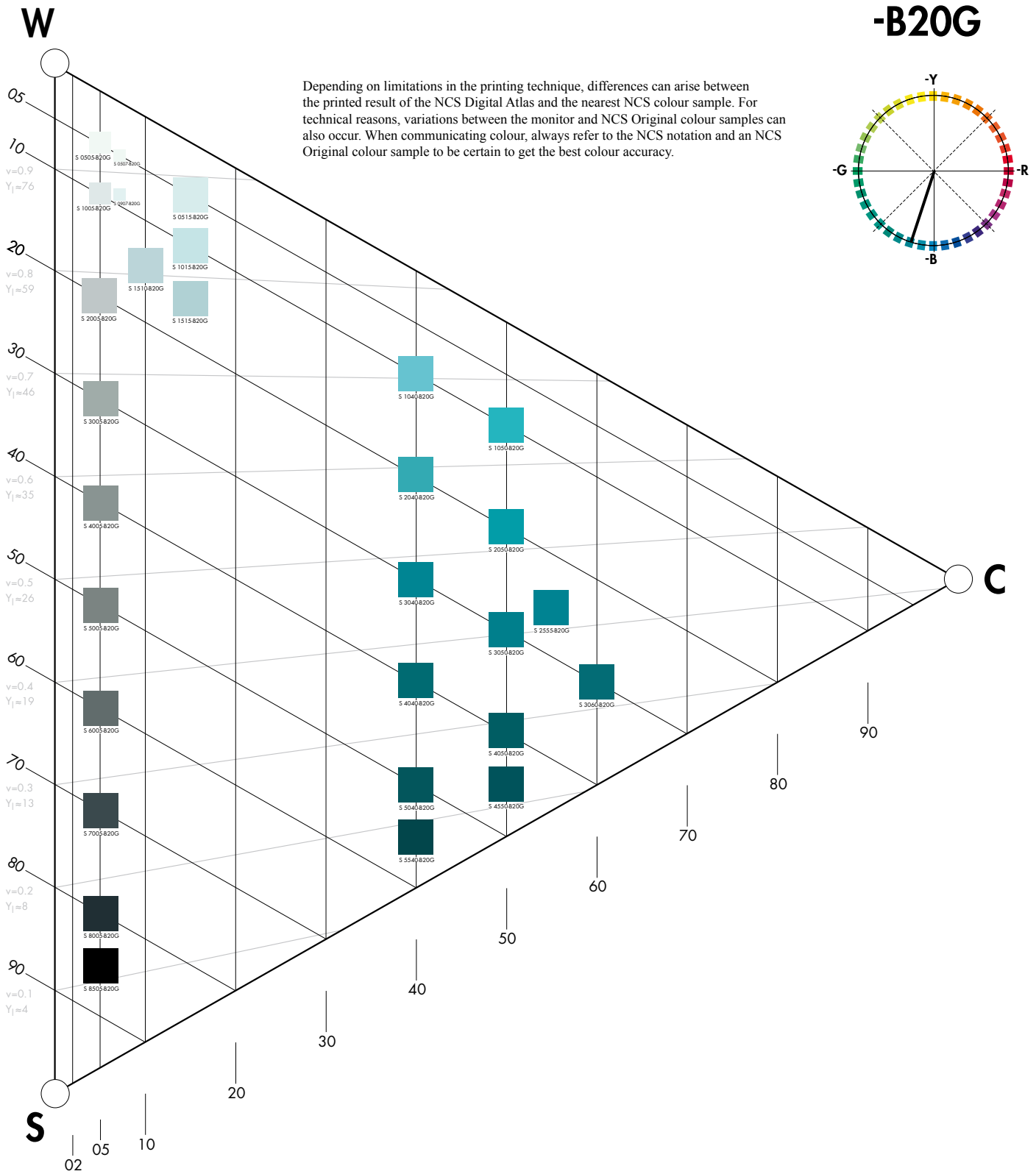


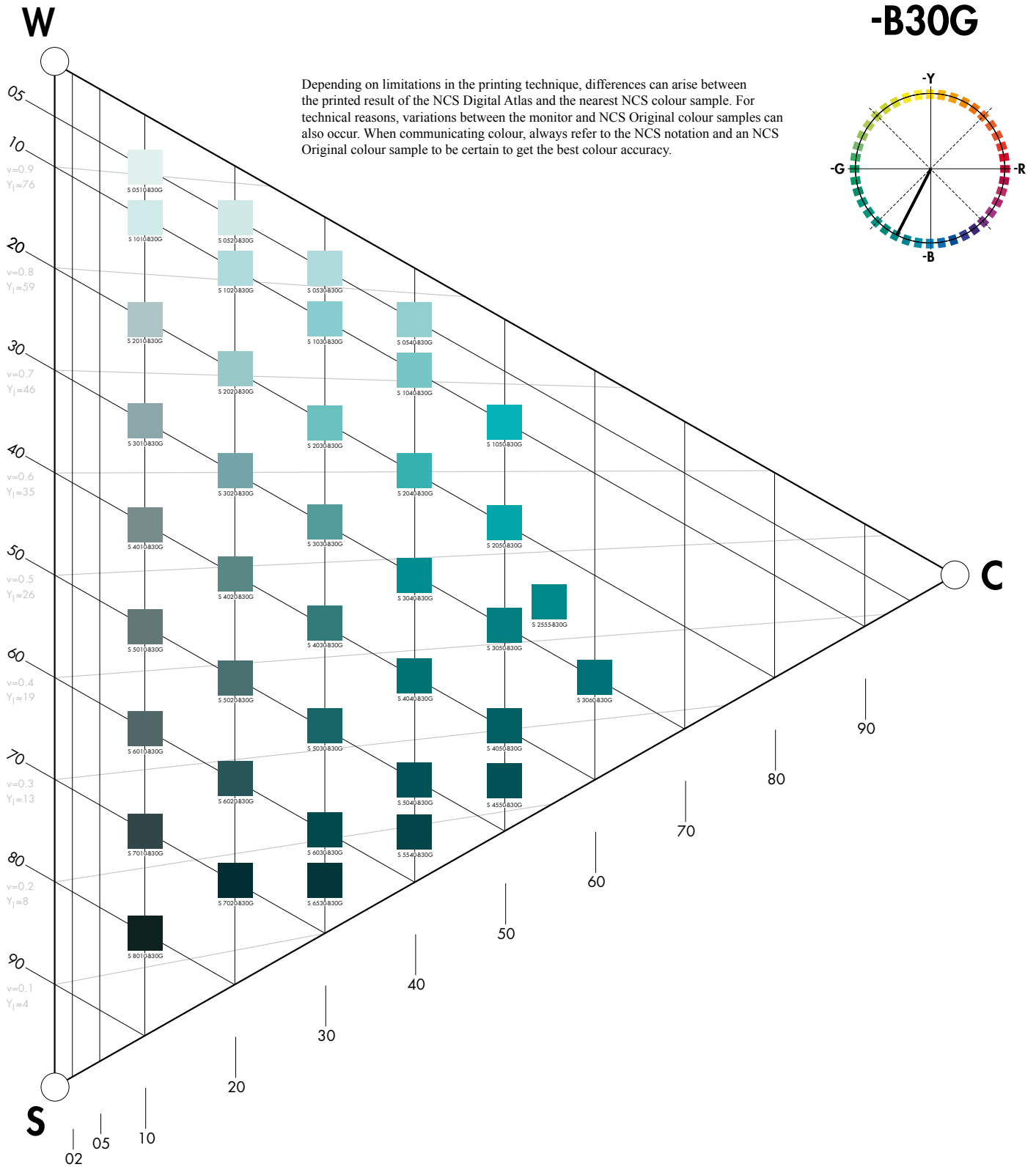


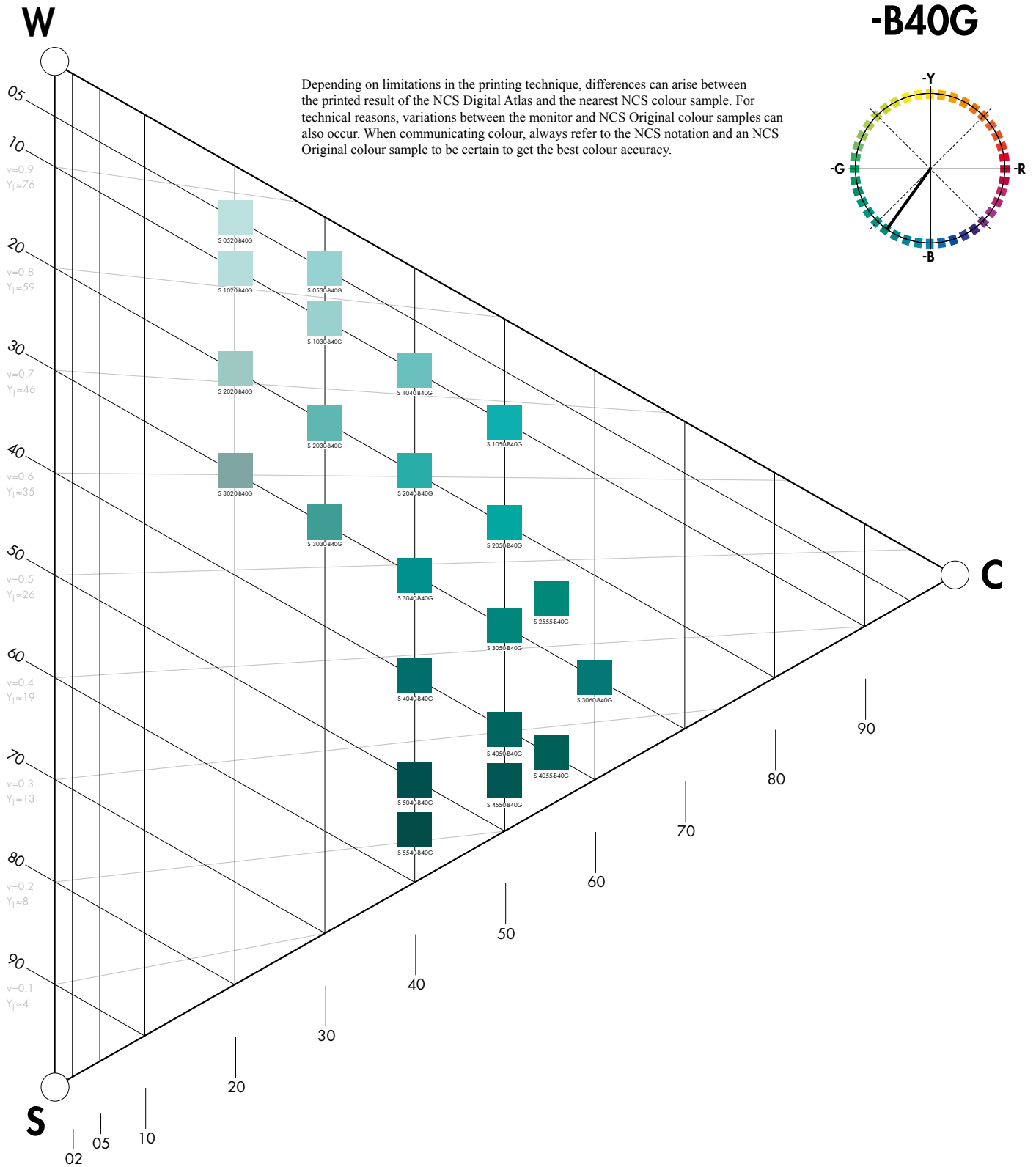


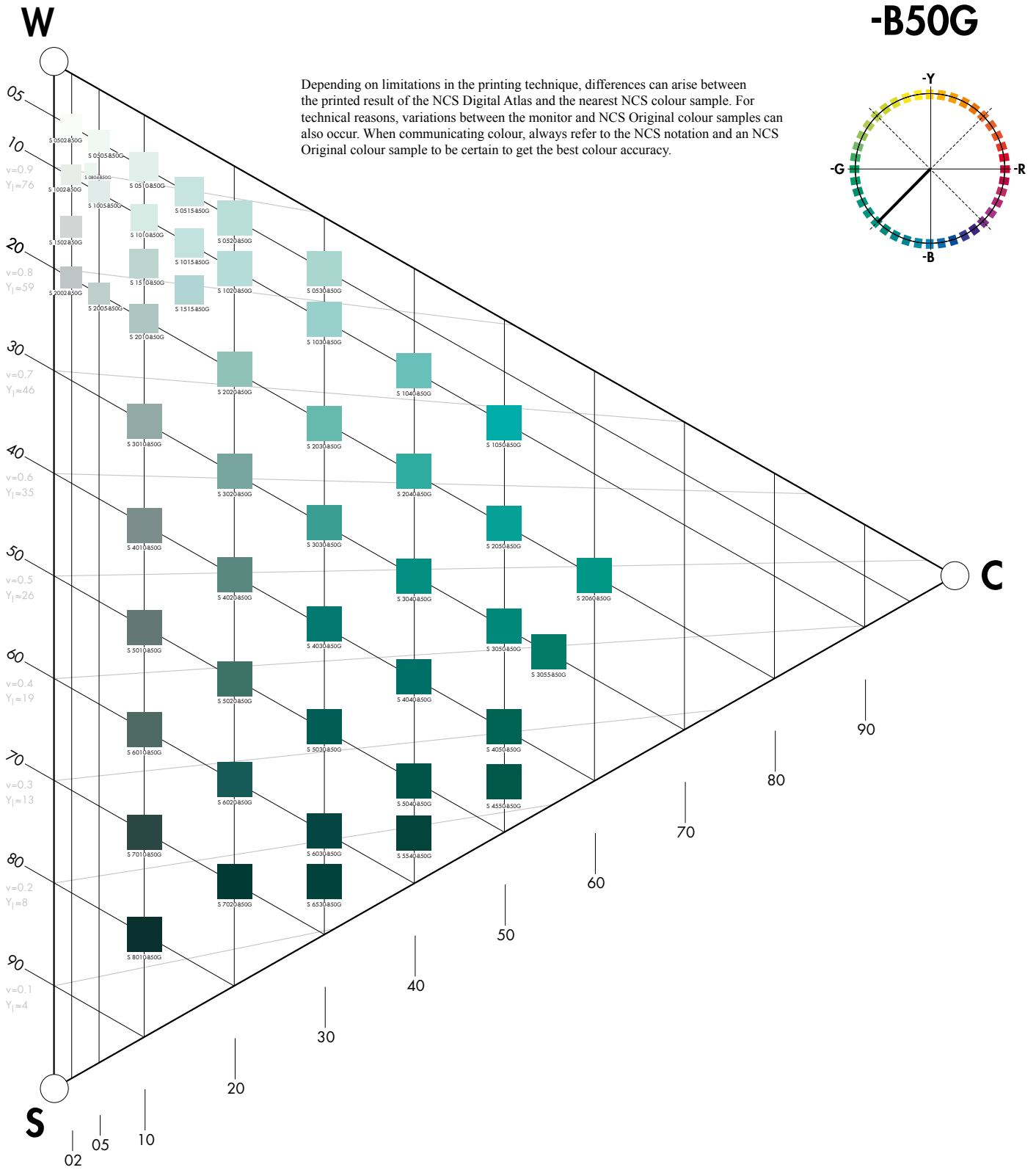




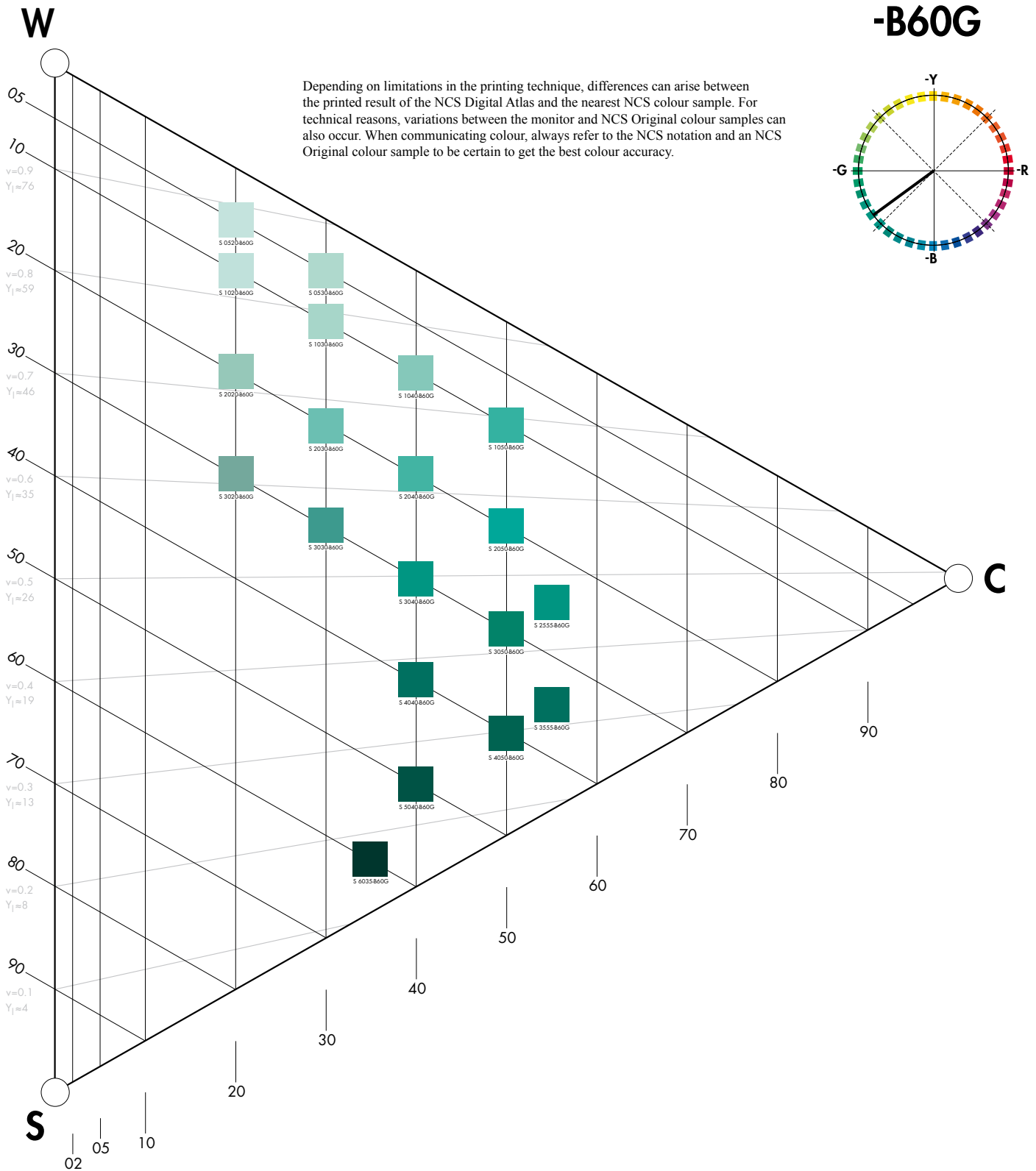




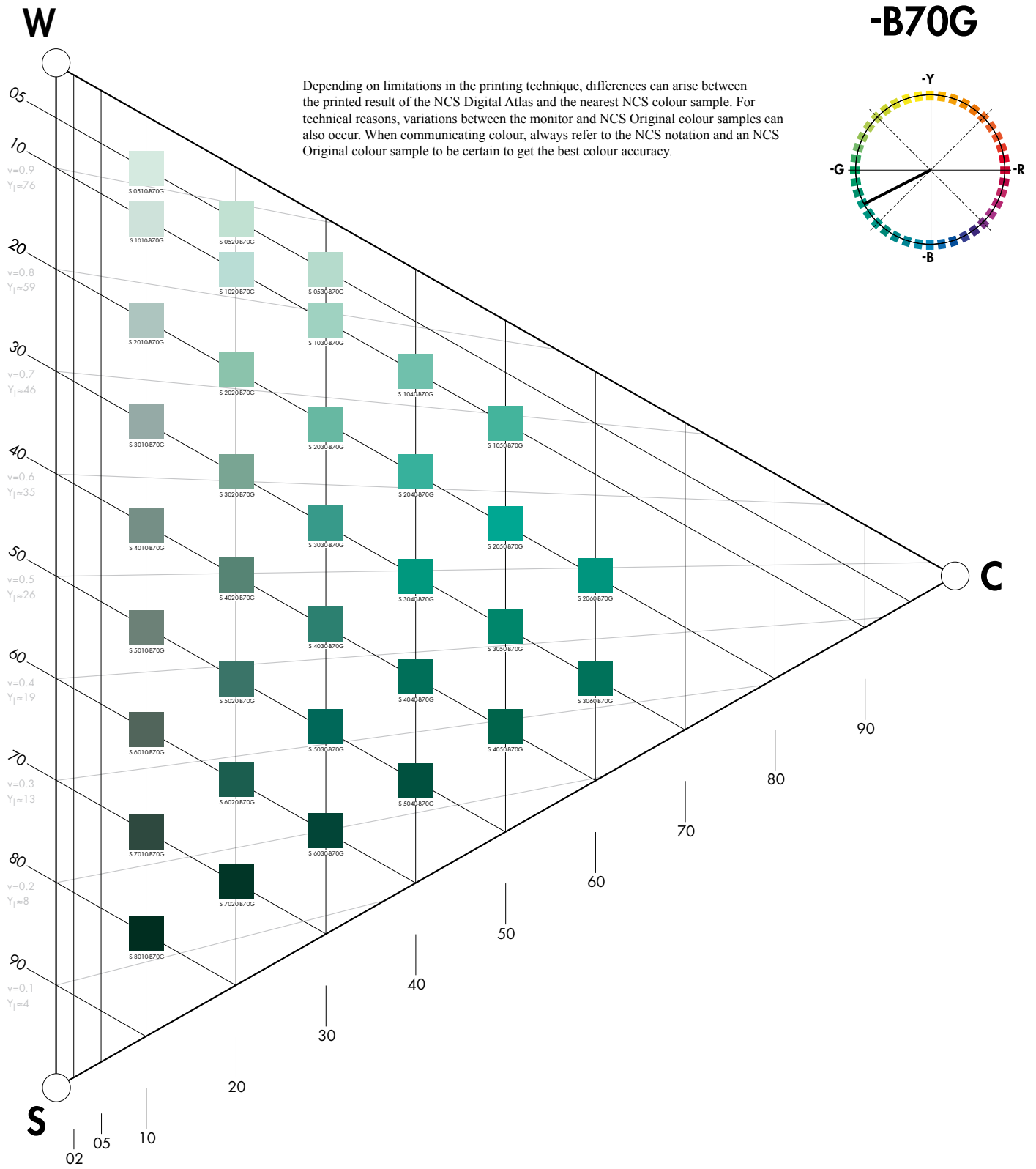


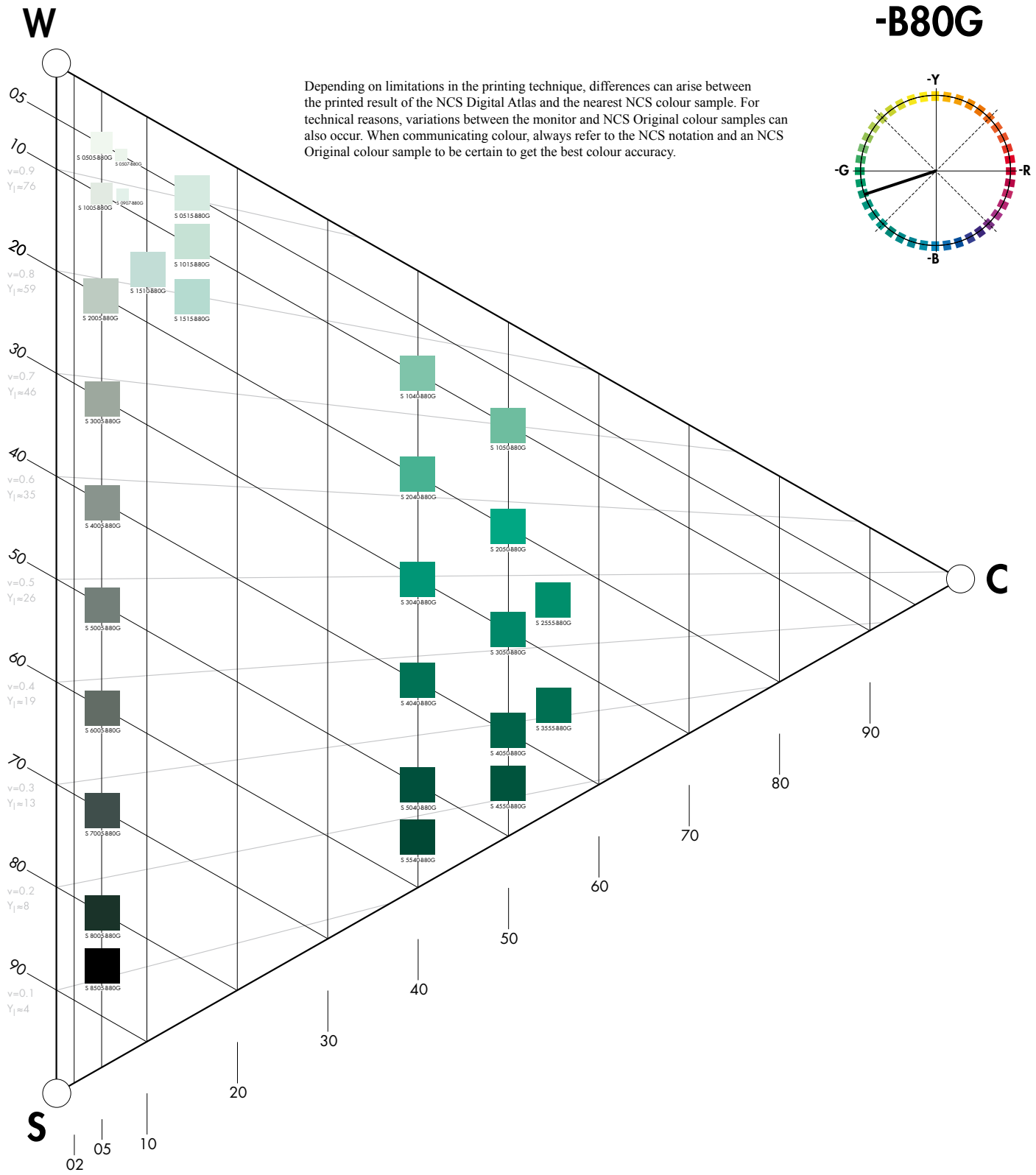


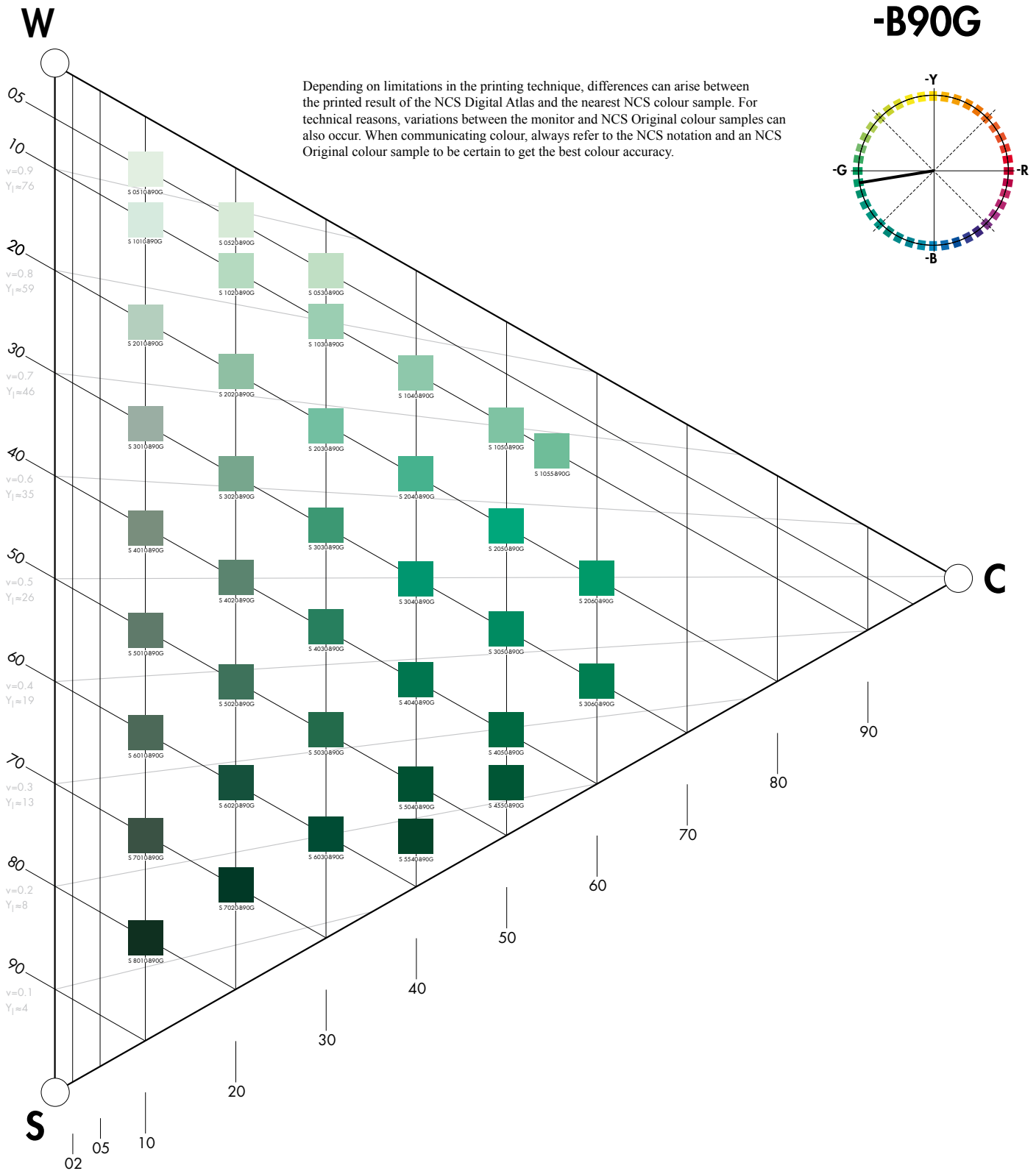


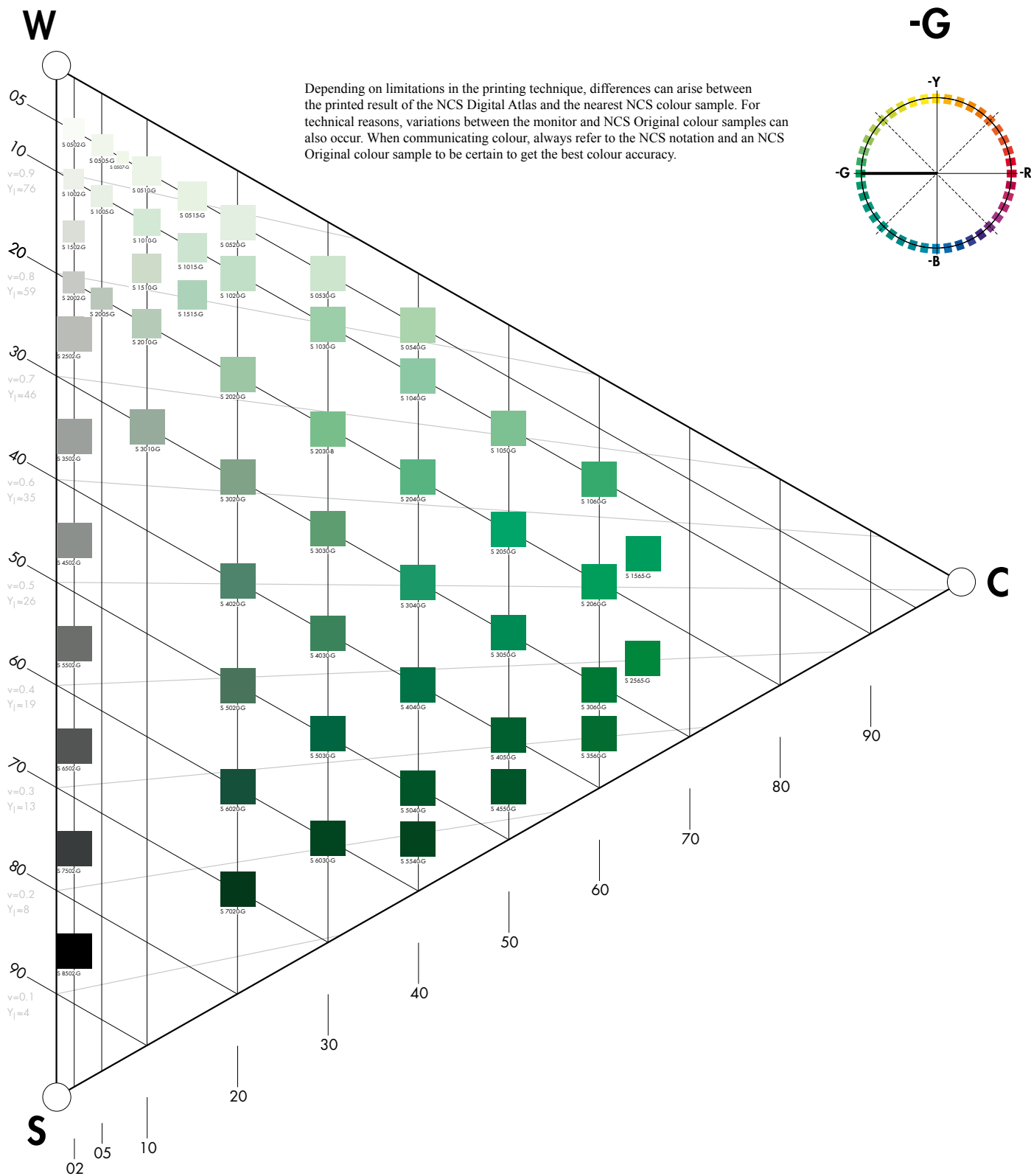


-B70G

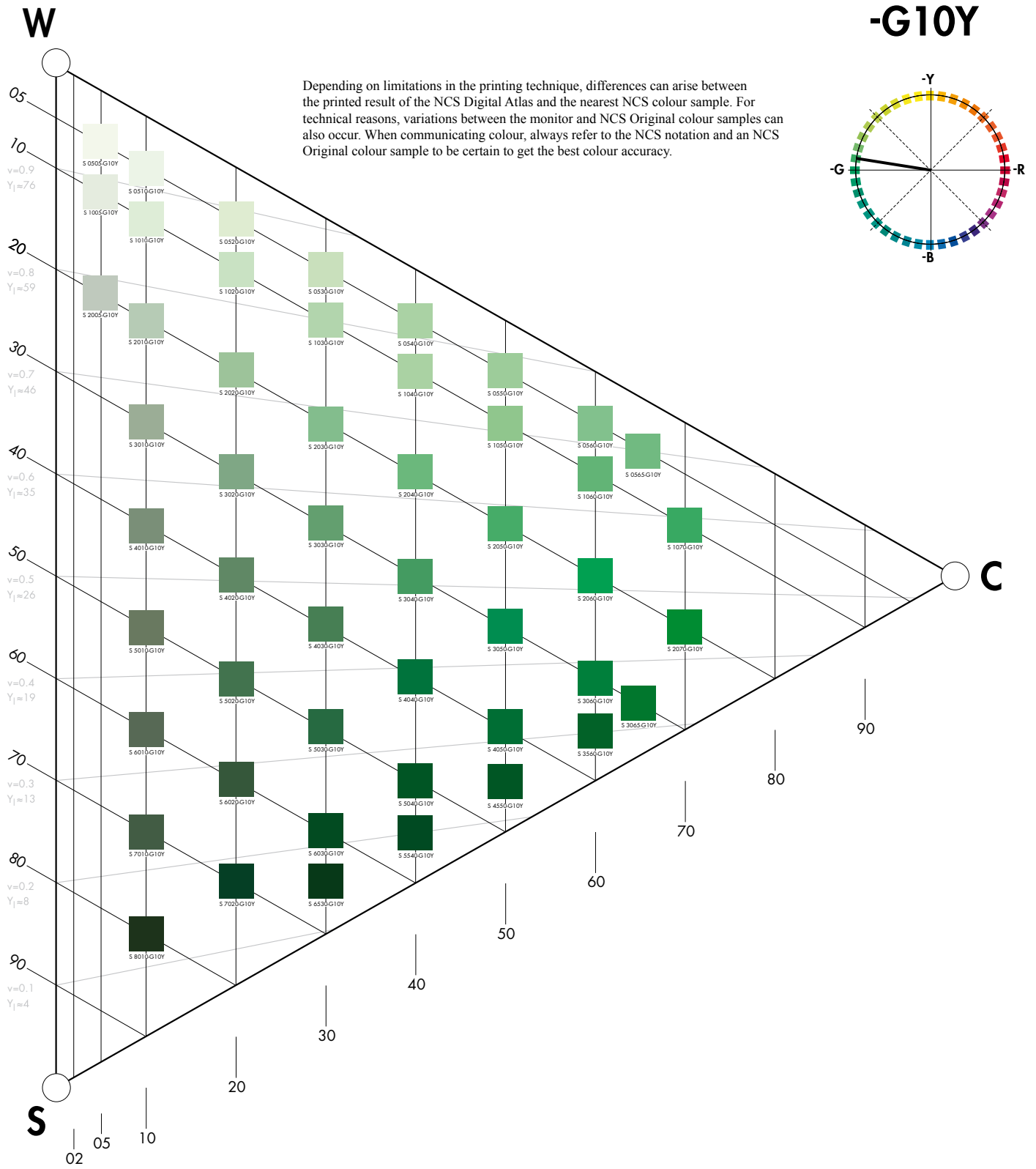




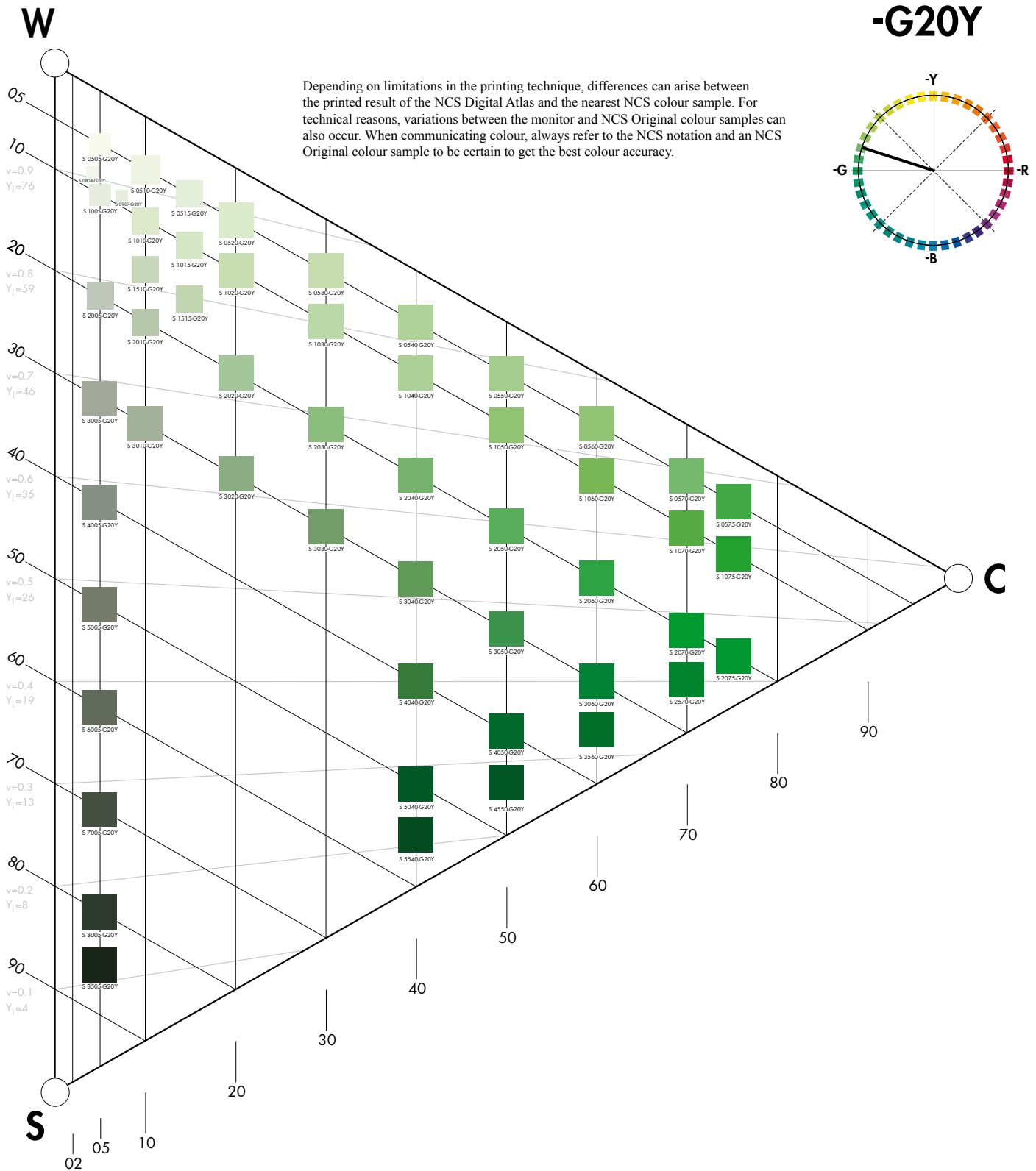


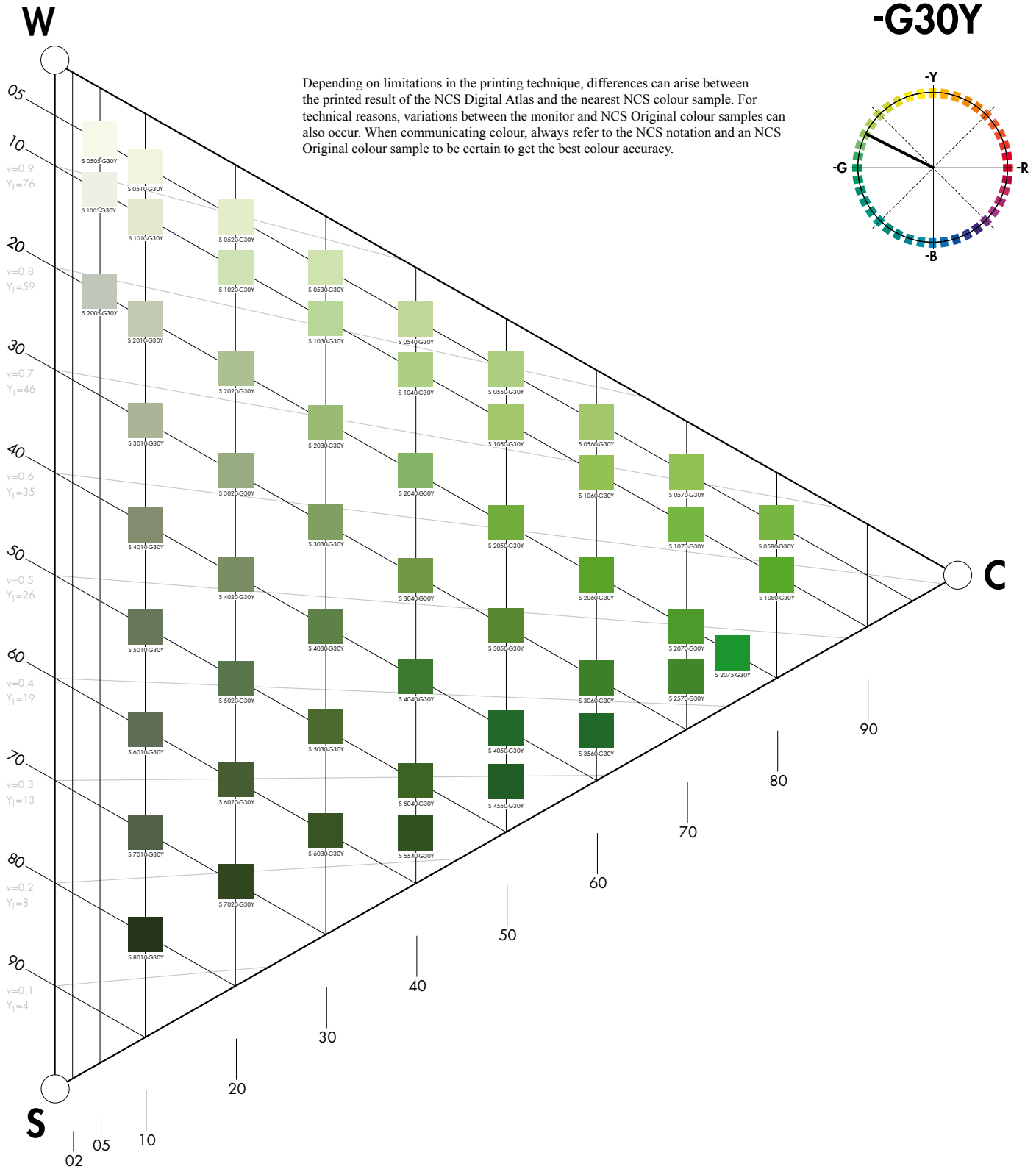


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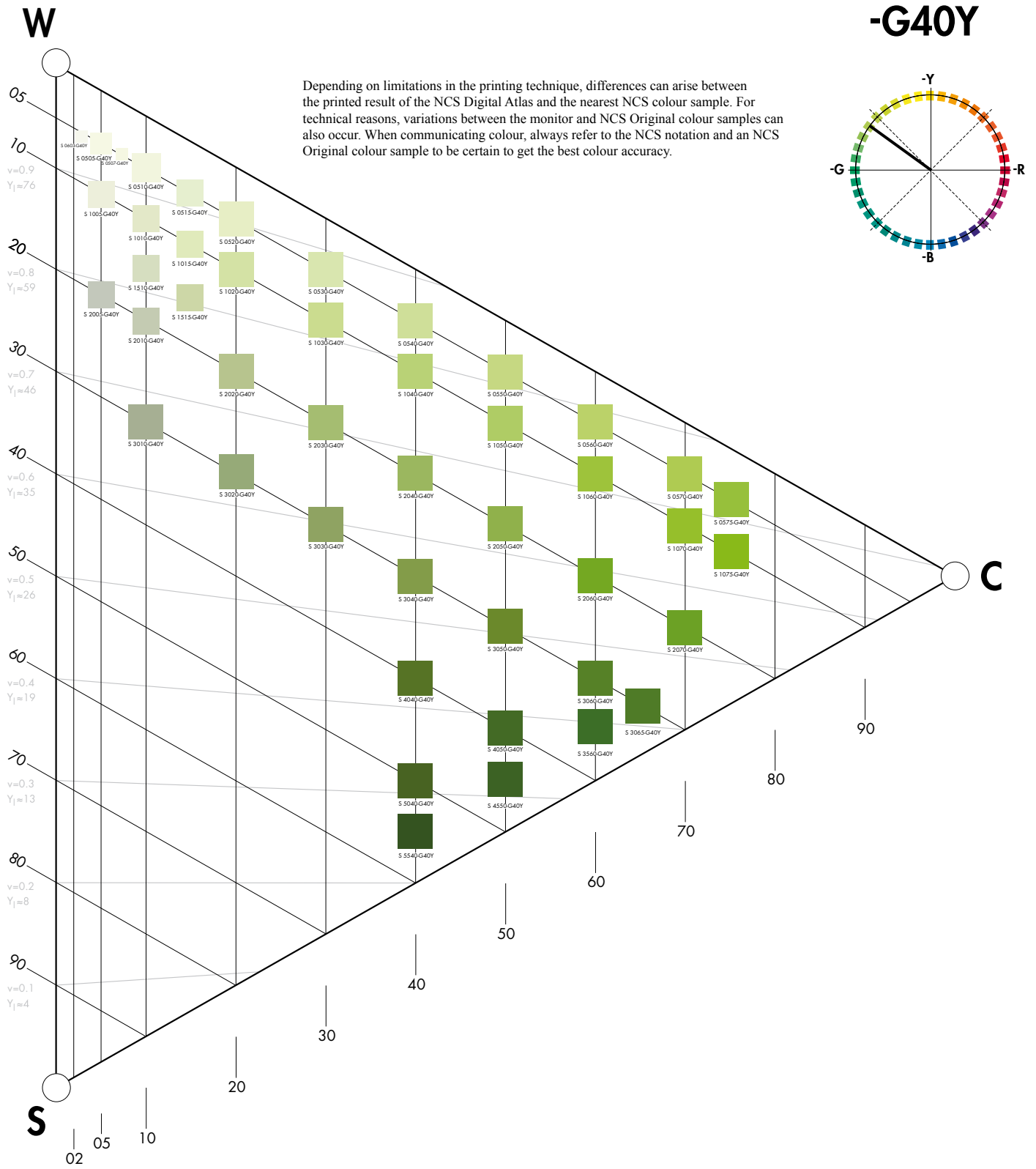


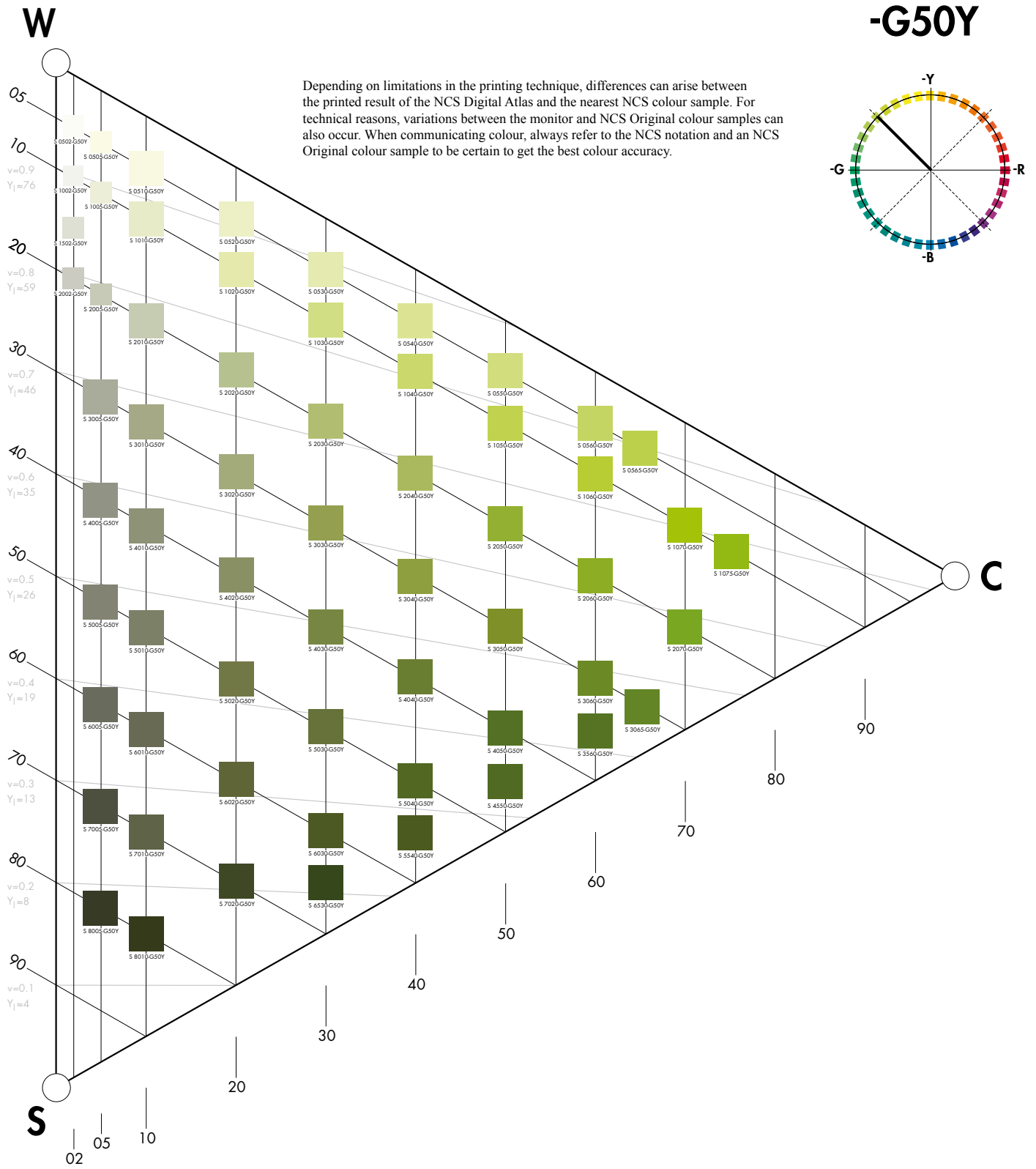
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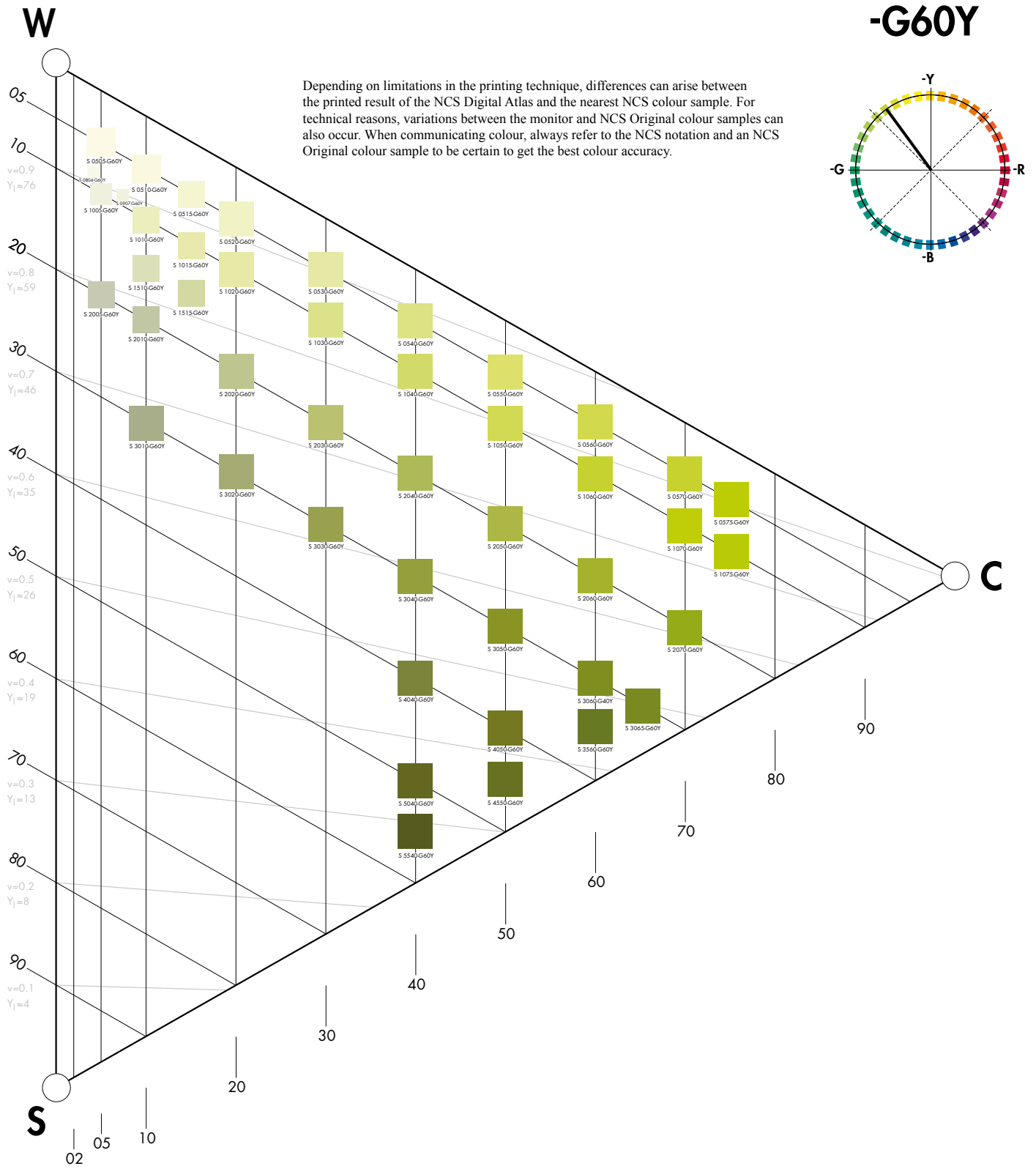


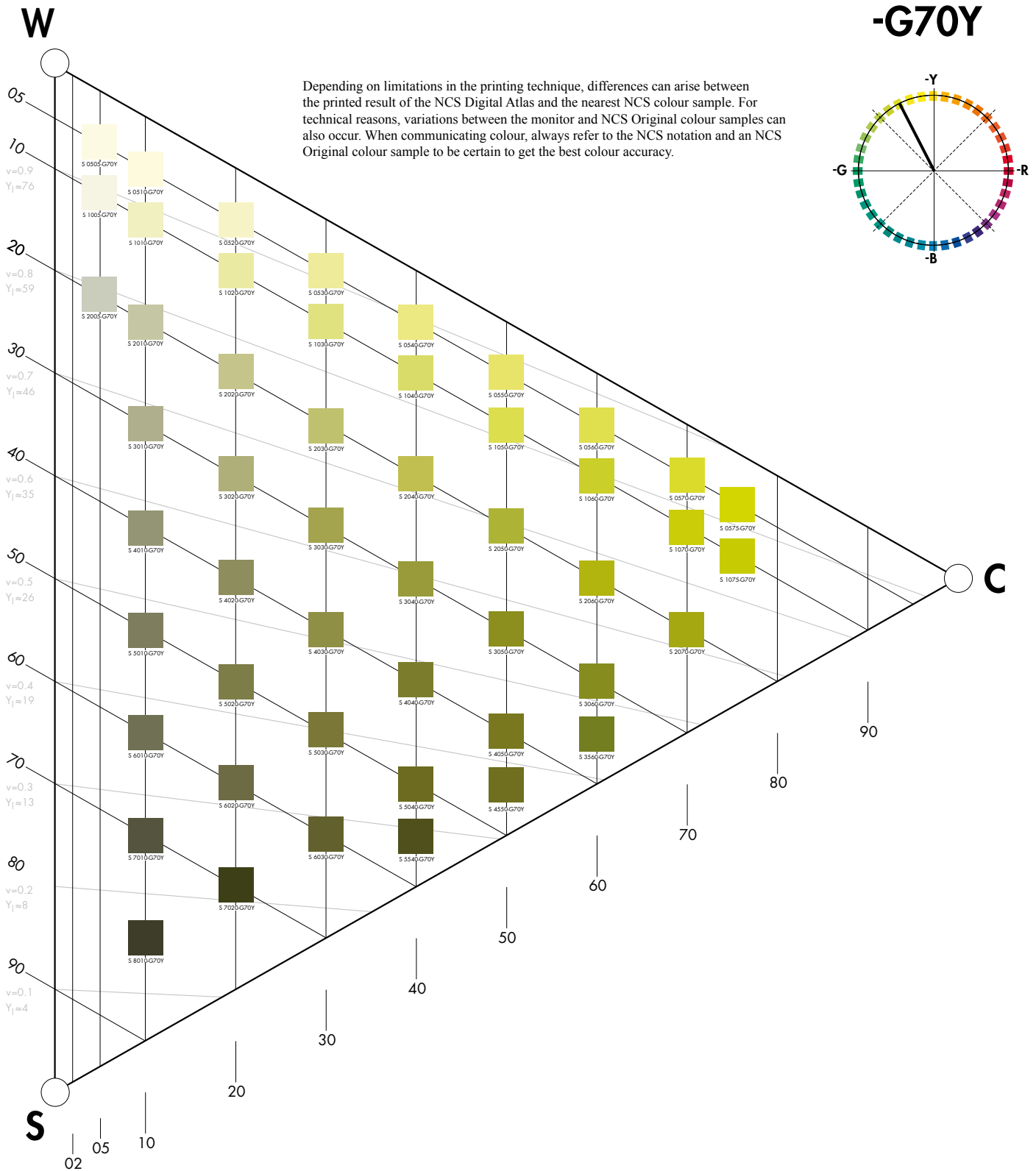


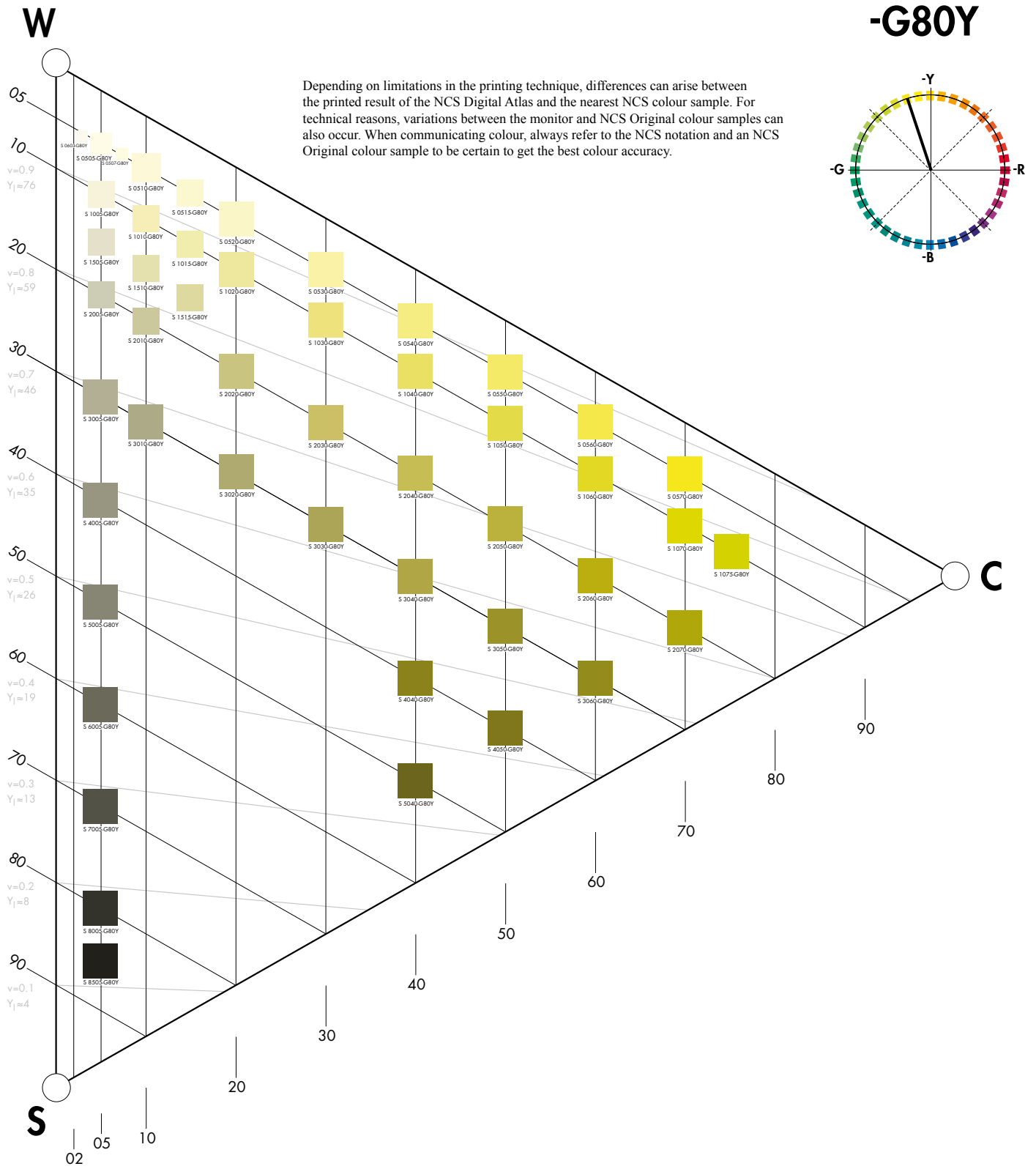


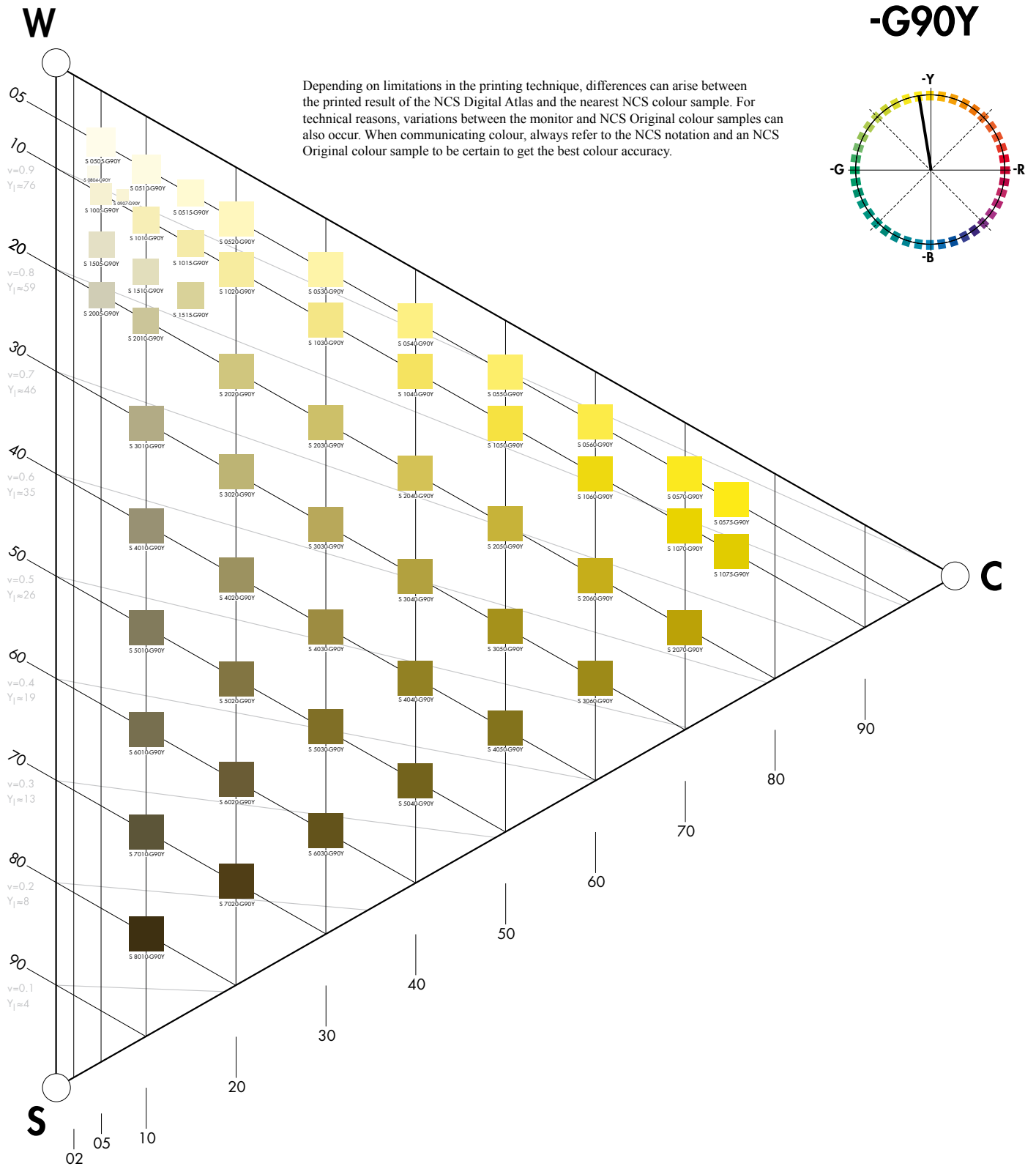




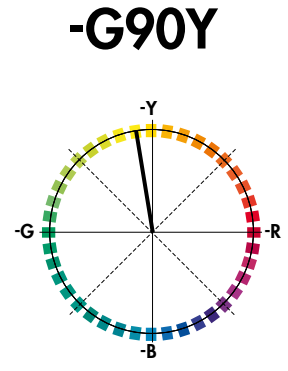








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# NCS – CMYK – RGB

## Translation Table

For your service, we have included approximate CMYK and RGB values for all of the 1 950 NCS Original colours. The CMYK values are exactly the same as those found in the NCS Palette Creative's digital colour libraries and the NCS Digital Atlas. The CMYK values are meant for offset printing on matt-coated paper, for more information see "NCS - CMYK - RGB". This translation table can also be used to find the nearest RGB value for a specific NCS colour.

We recommend you to use CMYK values when possible, since the resulting colour on screen or in print will often deviate from the standard NCS colour sample when using RGB. The resulting colour depends on the actual screen, printer and software drivers used.

NCS	C	M	Y	K	R	G	B
S 0300-N	0	0	0	0	255	255	255
S 0500-N	0	0	1	1	252	252	251
S 1000-N	0	0	2	6	242	242	240
S 1500-N	0	1	2	14	224	223	222
S 2000-N	0	1	2	18	216	216	215
S 2500-N	0	1	2	23	206	205	204
S 3000-N	0	1	3	29	192	191	190
S 3500-N	0	1	3	36	176	176	175
S 4000-N	0	1	3	41	165	165	164
S 4500-N	0	1	4	47	151	151	150
S 5000-N	0	1	4	51	142	142	141
S 5500-N	0	2	5	55	133	133	131
S 6000-N	0	2	5	60	122	121	119
S 6500-N	0	2	5	65	109	109	107
S 7000-N	0	2	5	70	96	96	94
S 7500-N	0	2	5	75	84	84	82
S 8000-N	0	2	5	82	67	66	65
S 8500-N	10	0	15	92	38	40	36
S 9000-N	15	0	25	100	17	20	16
S 0502-Y	0	0	8	0	255	253	242
S 1002-Y	0	0	10	10	234	232	219
S 1502-Y	0	0	10	20	213	211	199
S 2002-Y	0	0	10	25	201	200	189
S 2502-Y	0	0	10	33	184	183	173
S 3502-Y	0	0	11	46	154	155	146
S 4502-Y	0	0	12	55	134	134	126
S 5502-Y	0	0	12	65	109	109	102
S 6502-Y	0	0	12	75	85	85	79
S 7502-Y	0	0	12	88	53	52	48
S 8502-Y	0	0	15	100	21	19	17
S 0502-Y50R	0	2	10	0	255	250	237
S 1002-Y50R	0	3	10	7	240	233	221
S 1502-Y50R	0	4	10	17	218	212	202
S 2002-Y50R	0	5	10	25	200	193	185
S 0502-R	0	2	3	0	255	251	248
S 1002-R	0	3	5	10	233	228	223

There are technical limitations of printing colours. These limitations become apparent, when the lightest and the most chromatic NCS colour samples in the orange, purple and green area are matched to CMYK values. Colours, which the four-colour printing technique does not manage to reproduce exactly, have been highlighted in grey in this table. These colours are divided into two classes. In the list, the light grey indicates colours with a legible deviation from the NCS Original colour sample.

The darker grey indicates colours with an even greater deviation between expected outcome and the NCS colour sample. For colours of both classes, a representative CMYK value, which is judged to be the visually closest to the NCS Original colour sample, has been selected. For more information see "Technical Limitations of Printing".

NCS	C	M	Y	K	R	G	B
S 1502-R	0	4	5	20	212	207	204
S 2002-R	0	5	5	27	195	190	188
S 2502-R	0	5	5	32	185	180	178
S 3502-R	0	5	5	50	145	141	141
S 4502-R	0	5	5	60	122	119	118
S 5502-R	0	6	10	65	108	105	101
S 6502-R	0	8	10	75	84	80	77
S 7502-R	0	9	10	90	47	44	42
S 8502-R	0	10	10	100	22	18	18
S 0502-R50B	2	2	0	0	252	251	253
S 1002-R50B	2	2	0	12	225	226	229
S 1502-R50B	4	4	0	18	209	209	214
S 2002-R50B	4	4	0	28	188	189	194
S 0502-B	3	0	0	0	250	253	255
S 1002-B	4	0	0	10	227	232	234
S 1502-B	4	0	0	18	210	215	218
S 2002-B	4	0	0	27	191	196	199
S 2502-B	4	0	0	35	174	179	182
S 3502-B	4	0	0	50	141	145	148
S 4502-B	4	0	0	60	118	122	124
S 5502-B	7	0	0	70	91	95	97
S 6502-B	9	0	0	80	67	71	73
S 7502-B	12	0	0	90	41	45	47
S 8502-B	30	0	0	100	9	17	21
S 0502-B50G	3	0	4	0	250	253	248
S 1002-B50G	4	0	5	8	231	235	230
S 1502-B50G	7	0	5	19	203	211	208
S 2002-B50G	8	0	5	28	182	191	189
S 0502-G	3	0	5	0	250	253	247
S 1002-G	5	0	8	5	235	240	231
S 1502-G	5	0	8	15	214	219	211
S 2002-G	5	0	8	25	193	198	191
S 2502-G	5	0	8	33	176	181	176
S 3502-G	5	0	8	47	145	150	146
S 4502-G	5	0	8	55	128	132	129
S 5502-G	5	0	8	70	92	95	92

# NCS DIGITAL ATLAS 1950

NCS	C	M	Y	K	R	G	B
S 6502-G	5	0	8	80	70	72	69
S 7502-G	10	0	8	90	43	46	44
S 8502-G	10	0	20	100	19	20	17
S 0502-G50Y	2	0	5	0	252	253	247
S 1002-G50Y	2	0	5	5	240	242	235
S 1502-G50Y	3	0	10	15	218	220	208
S 2002-G50Y	3	0	10	25	196	199	189
S 0505-Y	0	0	14	0	255	251	231
S 0507-Y	0	0	25	0	255	249	214
S 0510-Y	0	0	30	0	255	248	202
S 0515-Y	0	0	35	0	255	246	190
S 0520-Y	0	3	46	0	255	238	167
S 0530-Y	0	3	55	0	255	235	146
S 0540-Y	0	3	70	0	254	230	107
S 0550-Y	0	7	80	0	253	221	78
S 0560-Y	0	10	90	0	253	215	44
S 0570-Y	0	8	100	0	250	213	0
S 0580-Y	0	12	100	0	249	207	0
S 1005-Y	0	0	20	5	245	240	211
S 1010-Y	0	1	35	5	244	234	181
S 1015-Y	0	3	38	4	246	233	176
S 1020-Y	0	4	43	5	244	229	163
S 1030-Y	0	8	55	3	246	222	138
S 1040-Y	0	10	60	2	249	221	128
S 1050-Y	0	12	80	0	254	215	76
S 1060-Y	0	13	90	0	252	211	43
S 1070-Y	0	17	90	2	247	202	39
S 1080-Y	0	20	100	5	236	188	0
S 1505-Y	0	2	20	12	229	223	196
S 1510-Y	0	2	35	15	222	213	165
S 1515-Y	0	4	40	15	221	209	154
S 2005-Y	0	2	20	25	200	196	173
S 2010-Y	0	4	28	25	198	190	158
S 2020-Y	0	5	43	24	200	187	134
S 2030-Y	0	10	60	20	205	184	103
S 2040-Y	0	14	70	18	208	179	83
S 2050-Y	0	18	86	18	206	169	38
S 2060-Y	0	18	95	20	199	163	0
S 2070-Y	0	16	100	23	193	159	0
S 3010-Y	0	6	36	35	175	165	128
S 3020-Y	0	10	48	33	177	161	109
S 3030-Y	0	12	60	33	175	155	88
S 3040-Y	0	20	75	35	168	138	54
S 3050-Y	0	25	85	40	156	122	25
S 3060-Y	0	25	95	40	156	121	0
S 3560-Y	0	28	100	43	152	116	0
S 4020-Y	0	15	60	47	144	126	71
S 4030-Y	0	20	75	45	147	121	46
S 4040-Y	0	23	85	48	139	110	19

NCS	C	M	Y	K	R	G	B
S 4050-Y	0	25	90	50	134	104	0
S 4550-Y	0	28	100	53	129	99	0
S 5020-Y	0	17	60	60	116	100	56
S 5030-Y	0	27	82	58	118	91	20
S 5040-Y	0	30	90	62	106	79	0
S 6020-Y	0	25	60	68	98	79	44
S 6030-Y	0	28	100	80	62	48	0
S 7020-Y	0	30	70	80	67	50	18
S 0505-Y10R	0	1	15	0	255	249	229
S 0510-Y10R	0	3	30	0	255	244	200
S 0515-Y10R	0	4	40	0	255	239	179
S 0520-Y10R	0	6	46	0	255	235	165
S 0530-Y10R	0	11	53	0	255	226	146
S 0540-Y10R	0	13	63	0	255	220	122
S 0550-Y10R	0	17	72	0	255	213	98
S 0560-Y10R	0	25	85	0	253	195	54
S 0570-Y10R	0	29	91	0	251	187	34
S 0580-Y10R	0	34	100	0	248	175	0
S 0804-Y10R	0	1	8	1	253	249	239
S 0907-Y10R	0	3	25	3	249	238	203
S 1005-Y10R	0	3	20	6	243	234	206
S 1010-Y10R	0	5	35	5	243	229	180
S 1015-Y10R	0	7	40	5	242	224	168
S 1020-Y10R	0	8	45	4	245	224	159
S 1030-Y10R	0	13	55	2	250	219	138
S 1040-Y10R	0	17	70	0	255	213	102
S 1050-Y10R	0	20	78	0	255	205	78
S 1060-Y10R	0	26	90	0	251	192	40
S 1070-Y10R	0	26	98	0	249	188	0
S 1080-Y10R	0	30	100	0	248	181	0
S 1505-Y10R	0	4	25	15	222	212	180
S 1510-Y10R	0	5	35	10	232	219	171
S 1515-Y10R	0	8	40	10	231	213	159
S 2005-Y10R	0	5	25	23	203	193	165
S 2010-Y10R	0	6	33	24	200	189	151
S 2020-Y10R	0	12	50	18	210	187	125
S 2030-Y10R	0	20	62	15	216	179	100
S 2040-Y10R	0	27	70	10	225	175	85
S 2050-Y10R	0	30	80	10	222	167	61
S 2060-Y10R	0	35	91	14	209	149	24
S 2070-Y10R	0	36	100	10	225	157	0
S 3010-Y10R	0	10	40	38	167	153	115
S 3020-Y10R	0	15	50	30	182	159	107
S 3030-Y10R	0	20	62	30	180	150	83
S 3040-Y10R	0	30	75	30	176	133	56
S 3050-Y10R	0	38	90	30	175	120	18
S 3060-Y10R	0	37	100	30	181	126	0
S 4010-Y10R	0	15	45	45	150	133	96
S 4020-Y10R	0	25	60	45	146	118	69

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NCS	C	M	Y	K	R	G	B
S 4030-Y10R	0	30	72	40	156	119	54
S 4040-Y10R	0	37	80	45	145	102	35
S 4050-Y10R	0	43	94	45	145	92	0
S 4055-Y10R	0	44	100	45	149	95	0
S 5010-Y10R	0	15	45	60	117	104	74
S 5020-Y10R	0	30	60	54	127	98	58
S 5030-Y10R	0	35	72	52	130	95	43
S 5040-Y10R	0	43	90	60	113	71	2
S 6010-Y10R	0	20	45	65	106	90	65
S 6020-Y10R	0	36	62	60	114	83	48
S 6030-Y10R	0	45	82	72	83	51	11
S 7010-Y10R	0	27	47	72	90	72	51
S 7020-Y10R	0	45	90	79	68	41	0
S 8010-Y10R	0	35	60	90	46	33	18
S 0505-Y20R	0	2	17	0	255	248	225
S 0507-Y20R	0	3	25	0	255	245	211
S 0510-Y20R	0	5	35	0	255	240	189
S 0515-Y20R	0	8	40	0	255	234	177
S 0520-Y20R	0	11	45	0	255	228	163
S 0530-Y20R	0	21	60	0	255	209	122
S 0540-Y20R	0	30	70	0	255	192	95
S 0550-Y20R	0	35	80	0	251	179	67
S 0560-Y20R	0	40	90	0	248	166	34
S 0570-Y20R	0	45	95	0	244	154	10
S 0580-Y20R	0	45	100	0	244	154	0
S 0585-Y20R	0	45	100	0	244	153	0
S 0603-Y20R	0	1	12	0	255	250	234
S 1005-Y20R	0	4	22	5	244	234	204
S 1010-Y20R	0	5	30	5	244	231	189
S 1015-Y20R	0	10	40	0	255	231	175
S 1020-Y20R	0	15	45	0	255	222	159
S 1030-Y20R	0	25	60	0	255	203	120
S 1040-Y20R	0	30	70	0	255	192	94
S 1050-Y20R	0	39	80	0	250	172	66
S 1060-Y20R	0	40	90	0	248	167	34
S 1070-Y20R	0	40	100	0	245	163	0
S 1080-Y20R	0	45	100	0	244	153	0
S 1505-Y20R	0	5	25	12	228	217	185
S 1510-Y20R	0	10	35	10	231	212	168
S 1515-Y20R	0	12	40	10	231	207	156
S 2005-Y20R	0	6	25	19	212	201	173
S 2010-Y20R	0	10	35	23	201	184	146
S 2020-Y20R	0	20	50	16	214	180	122
S 2030-Y20R	0	27	60	15	214	169	101
S 2040-Y20R	0	35	70	5	235	171	87
S 2050-Y20R	0	38	80	10	219	153	61
S 2060-Y20R	0	45	90	10	215	137	33
S 2070-Y20R	0	50	100	10	221	131	0
S 3005-Y20R	0	7	30	40	164	155	129

NCS	C	M	Y	K	R	G	B
S 3010-Y20R	0	15	40	38	166	147	113
S 3020-Y20R	0	22	50	30	181	150	104
S 3030-Y20R	0	30	62	30	176	136	79
S 3040-Y20R	0	40	78	30	173	119	48
S 3050-Y20R	0	45	90	28	178	112	20
S 3060-Y20R	0	50	95	30	175	102	0
S 3065-Y20R	0	52	100	30	179	101	0
S 3560-Y20R	0	52	100	37	164	93	0
S 4005-Y20R	0	10	30	50	142	132	111
S 4020-Y20R	0	30	60	43	149	115	69
S 4030-Y20R	0	38	70	40	154	109	55
S 4040-Y20R	0	43	80	45	143	94	34
S 4050-Y20R	0	55	95	45	143	75	0
S 5005-Y20R	0	12	30	60	119	109	92
S 5020-Y20R	0	35	60	55	125	92	56
S 5030-Y20R	0	40	72	48	139	96	46
S 5040-Y20R	0	50	85	55	123	71	16
S 6005-Y20R	0	13	30	70	95	86	72
S 6020-Y20R	0	46	70	60	113	72	36
S 6030-Y20R	0	55	80	70	89	47	15
S 7005-Y20R	0	15	30	85	60	53	43
S 7020-Y20R	0	47	74	75	78	48	19
S 8005-Y20R	0	20	40	90	48	40	29
S 8505-Y20R	0	30	50	90	47	35	23
S 0505-Y30R	0	4	19	0	255	245	220
S 0510-Y30R	0	7	30	0	255	239	198
S 0515-Y30R	0	14	40	0	255	225	170
S 0520-Y30R	0	19	44	0	255	216	158
S 0530-Y30R	0	24	49	0	255	206	144
S 0540-Y30R	0	38	68	0	254	178	95
S 0550-Y30R	0	48	80	0	247	153	59
S 0560-Y30R	0	49	91	0	244	148	30
S 0570-Y30R	0	51	91	0	243	143	27
S 0580-Y30R	0	55	100	0	240	132	0
S 0585-Y30R	0	58	98	0	240	126	0
S 0804-Y30R	0	4	15	0	255	246	226
S 0907-Y30R	0	6	20	3	249	236	210
S 1005-Y30R	0	4	16	5	245	235	214
S 1010-Y30R	0	10	35	2	251	228	182
S 1015-Y30R	0	15	38	0	255	224	174
S 1020-Y30R	0	20	43	0	255	214	159
S 1030-Y30R	0	26	51	0	255	203	138
S 1040-Y30R	0	34	61	0	254	186	111
S 1050-Y30R	0	42	72	0	253	169	81
S 1060-Y30R	0	50	80	0	247	149	58
S 1070-Y30R	0	55	90	0	243	135	28
S 1080-Y30R	0	60	98	0	239	121	0
S 1505-Y30R	0	5	20	10	233	222	196
S 1510-Y30R	0	10	35	10	231	211	167

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NCS	C	M	Y	K	R	G	B
S 1515-Y30R	0	20	45	5	241	203	147
S 2005-Y30R	0	7	20	18	214	203	181
S 2010-Y30R	0	15	37	22	202	179	141
S 2020-Y30R	0	26	49	12	221	178	126
S 2030-Y30R	0	35	62	10	223	164	99
S 2040-Y30R	0	42	70	5	233	158	83
S 2050-Y30R	0	51	79	6	225	135	60
S 2060-Y30R	0	55	90	5	224	125	32
S 2070-Y30R	0	60	100	8	222	113	0
S 2570-Y30R	0	60	100	15	206	104	0
S 3010-Y30R	0	15	35	32	179	160	129
S 3020-Y30R	0	28	50	27	185	147	104
S 3030-Y30R	0	40	68	25	184	128	71
S 3040-Y30R	0	50	78	25	180	109	48
S 3050-Y30R	0	55	85	20	188	105	35
S 3060-Y30R	0	60	100	22	192	96	0
S 3560-Y30R	0	60	100	35	166	82	0
S 4010-Y30R	0	23	45	45	148	124	92
S 4020-Y30R	0	37	60	42	150	109	68
S 4030-Y30R	0	46	70	35	162	104	55
S 4040-Y30R	0	53	82	40	151	85	30
S 4050-Y30R	0	62	98	40	155	72	0
S 4550-Y30R	0	62	100	50	136	63	0
S 5010-Y30R	0	30	50	55	126	98	69
S 5020-Y30R	0	40	60	53	127	89	55
S 5030-Y30R	0	50	72	48	136	82	41
S 5040-Y30R	0	60	90	55	122	56	1
S 6010-Y30R	0	35	50	62	111	83	60
S 6020-Y30R	0	50	68	60	112	67	37
S 6030-Y30R	0	60	85	70	89	41	4
S 7010-Y30R	0	35	60	72	88	64	37
S 7020-Y30R	0	51	71	76	76	44	21
S 8010-Y30R	0	50	80	90	45	27	3
S 0505-Y40R	0	5	21	0	255	243	215
S 0507-Y40R	0	6	23	0	255	242	211
S 0510-Y40R	0	10	28	0	255	235	199
S 0515-Y40R	0	12	35	0	255	230	184
S 0520-Y40R	0	20	40	0	255	215	165
S 0530-Y40R	0	30	50	0	255	195	136
S 0540-Y40R	0	40	60	0	254	175	109
S 0550-Y40R	0	50	70	0	251	151	77
S 0560-Y40R	0	59	80	0	244	128	50
S 0570-Y40R	0	61	90	0	242	122	26
S 0580-Y40R	0	65	100	0	236	109	0
S 0585-Y40R	0	65	100	0	236	109	0
S 0603-Y40R	0	2	12	0	255	249	233
S 1005-Y40R	0	5	15	5	244	233	214
S 1010-Y40R	0	13	25	3	248	223	194
S 1015-Y40R	0	18	38	0	255	219	171

NCS	C	M	Y	K	R	G	B
S 1020-Y40R	0	25	42	0	255	205	156
S 1030-Y40R	0	32	51	0	255	191	132
S 1040-Y40R	0	40	60	0	254	175	109
S 1050-Y40R	0	47	70	0	252	158	80
S 1060-Y40R	0	59	85	0	244	128	42
S 1070-Y40R	0	61	95	0	240	120	0
S 1080-Y40R	0	70	100	0	236	98	0
S 1505-Y40R	0	6	20	11	230	218	194
S 1510-Y40R	0	15	30	10	231	205	172
S 1515-Y40R	0	20	40	5	241	204	157
S 2005-Y40R	0	9	20	20	210	196	176
S 2010-Y40R	0	19	39	20	205	176	137
S 2020-Y40R	0	30	50	15	213	165	118
S 2030-Y40R	0	41	62	10	220	152	95
S 2040-Y40R	0	50	70	5	230	141	77
S 2050-Y40R	0	55	80	5	226	128	55
S 2060-Y40R	0	64	90	10	209	100	26
S 2070-Y40R	0	70	100	10	214	88	0
S 2570-Y40R	0	70	100	18	198	81	0
S 3010-Y40R	0	17	35	30	184	161	131
S 3020-Y40R	0	30	50	27	184	143	102
S 3030-Y40R	0	45	65	25	181	119	71
S 3040-Y40R	0	55	75	20	186	106	55
S 3050-Y40R	0	60	80	20	185	96	44
S 3060-Y40R	0	70	98	22	189	76	0
S 3560-Y40R	0	70	100	35	163	64	0
S 4020-Y40R	0	40	60	40	153	107	68
S 4030-Y40R	0	52	70	35	159	93	52
S 4040-Y40R	0	60	80	40	148	75	31
S 4050-Y40R	0	70	90	40	148	56	4
S 4550-Y40R	0	72	100	50	133	48	0
S 5020-Y40R	0	45	58	50	133	87	59
S 5030-Y40R	0	51	71	50	131	77	40
S 5040-Y40R	0	70	90	54	122	43	0
S 6020-Y40R	0	55	70	60	112	61	33
S 6030-Y40R	0	65	80	68	94	40	14
S 7020-Y40R	0	64	80	80	68	30	6
S 0505-Y50R	0	6	18	0	255	243	219
S 0510-Y50R	0	10	20	0	255	236	212
S 0515-Y50R	0	15	32	0	255	226	186
S 0520-Y50R	0	24	38	0	255	208	165
S 0530-Y50R	0	34	49	0	255	187	134
S 0540-Y50R	0	44	59	0	254	166	106
S 0550-Y50R	0	54	69	0	250	141	76
S 0560-Y50R	0	60	75	0	246	126	61
S 0570-Y50R	0	65	85	0	241	112	36
S 0580-Y50R	0	70	95	0	236	98	2
S 0585-Y50R	0	70	100	0	236	97	0
S 0804-Y50R	0	4	15	3	248	239	219

# NCS DIGITAL ATLAS 1950

NCS	C	M	Y	K	R	G	B
S 0907-Y50R	0	8	18	3	249	233	211
S 1005-Y50R	0	5	15	5	244	233	215
S 1010-Y50R	0	15	25	0	255	228	199
S 1015-Y50R	0	20	35	0	255	216	175
S 1020-Y50R	0	25	40	0	255	206	161
S 1030-Y50R	0	36	51	0	255	183	128
S 1040-Y50R	0	46	61	0	254	161	99
S 1050-Y50R	0	56	71	0	248	136	71
S 1060-Y50R	0	60	80	0	244	125	50
S 1070-Y50R	0	70	90	0	238	99	22
S 1080-Y50R	0	70	100	0	235	97	0
S 1505-Y50R	0	8	15	10	233	219	203
S 1510-Y50R	0	15	28	8	235	209	179
S 1515-Y50R	0	25	37	5	239	195	158
S 2005-Y50R	0	10	15	20	209	195	183
S 2010-Y50R	0	19	34	20	205	177	145
S 2020-Y50R	0	34	46	12	218	164	125
S 2030-Y50R	0	47	60	5	233	149	97
S 2040-Y50R	0	55	70	5	228	130	73
S 2050-Y50R	0	62	80	5	223	113	51
S 2060-Y50R	0	73	90	11	203	80	23
S 2070-Y50R	0	75	100	14	203	73	0
S 2570-Y50R	0	80	100	17	197	60	0
S 3005-Y50R	0	10	20	40	165	155	141
S 3010-Y50R	0	21	36	30	182	154	126
S 3020-Y50R	0	38	45	25	187	136	107
S 3030-Y50R	0	50	60	25	180	112	76
S 3040-Y50R	0	58	70	20	186	102	61
S 3050-Y50R	0	65	80	25	174	82	39
S 3060-Y50R	0	72	100	30	171	64	0
S 3560-Y50R	0	80	100	37	156	45	0
S 4005-Y50R	0	13	20	52	136	125	115
S 4010-Y50R	0	25	37	45	148	123	102
S 4020-Y50R	0	48	58	40	151	96	66
S 4030-Y50R	0	58	65	35	158	86	56
S 4040-Y50R	0	65	80	40	147	67	30
S 4050-Y50R	0	75	100	40	151	52	0
S 4550-Y50R	0	80	100	50	132	37	0
S 5005-Y50R	0	14	20	60	119	109	101
S 5010-Y50R	0	27	40	60	116	94	75
S 5020-Y50R	0	45	54	50	133	88	63
S 5030-Y50R	0	59	69	50	129	68	40
S 5040-Y50R	0	72	85	52	124	43	10
S 6005-Y50R	0	17	20	68	100	89	83
S 6010-Y50R	0	35	40	68	98	74	61
S 6020-Y50R	0	53	62	62	108	62	40
S 6030-Y50R	0	72	90	66	98	33	0
S 7005-Y50R	0	15	20	90	47	41	37
S 7010-Y50R	0	45	58	75	81	53	34

NCS	C	M	Y	K	R	G	B
S 7020-Y50R	0	67	85	80	67	27	0
S 8005-Y50R	0	25	30	90	47	38	32
S 8010-Y50R	0	30	35	90	48	37	30
S 0505-Y60R	0	6	15	0	255	243	224
S 0507-Y60R	0	8	20	0	255	240	214
S 0510-Y60R	0	11	21	0	255	234	208
S 0515-Y60R	0	15	27	0	255	227	196
S 0520-Y60R	0	21	31	0	255	215	182
S 0530-Y60R	0	35	42	0	255	186	146
S 0540-Y60R	0	45	51	0	253	162	118
S 0550-Y60R	0	55	61	0	251	140	91
S 0560-Y60R	0	60	71	0	247	127	68
S 0570-Y60R	0	70	80	0	240	100	44
S 0580-Y60R	0	75	90	0	235	87	22
S 0585-Y60R	0	80	100	0	231	72	0
S 0603-Y60R	0	3	10	0	255	248	236
S 1005-Y60R	0	7	15	5	244	231	213
S 1010-Y60R	0	16	25	0	255	226	198
S 1015-Y60R	0	22	33	0	255	213	177
S 1020-Y60R	0	30	39	0	255	196	157
S 1030-Y60R	0	40	45	0	253	174	134
S 1040-Y60R	0	51	59	0	252	149	98
S 1050-Y60R	0	60	70	0	248	127	70
S 1060-Y60R	0	70	80	0	240	100	44
S 1070-Y60R	0	71	89	0	238	97	25
S 1080-Y60R	0	80	100	0	231	72	0
S 1505-Y60R	0	10	15	10	232	216	201
S 1510-Y60R	0	20	30	10	229	196	167
S 1515-Y60R	0	25	35	5	240	196	163
S 2005-Y60R	0	11	15	22	205	190	178
S 2010-Y60R	0	22	33	18	209	176	148
S 2020-Y60R	0	35	41	15	212	159	129
S 2030-Y60R	0	48	51	5	234	149	113
S 2040-Y60R	0	58	61	5	228	124	86
S 2050-Y60R	0	65	75	5	223	107	58
S 2060-Y60R	0	75	90	10	205	77	24
S 2070-Y60R	0	82	94	15	195	55	6
S 2075-Y60R	0	86	100	10	208	50	0
S 2570-Y60R	0	80	100	20	191	58	0
S 3010-Y60R	0	25	30	30	181	150	132
S 3020-Y60R	0	34	43	28	183	138	110
S 3030-Y60R	0	52	57	25	180	109	79
S 3040-Y60R	0	61	68	23	179	93	60
S 3050-Y60R	0	73	90	25	175	64	11
S 3060-Y60R	0	82	100	25	179	50	0
S 3560-Y60R	0	85	100	40	150	35	0
S 4020-Y60R	0	45	50	42	149	100	77
S 4030-Y60R	0	60	65	40	147	77	51
S 4040-Y60R	0	70	80	40	146	60	28

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NCS	C	M	Y	K	R	G	B
S 4050-Y60R	0	80	90	40	146	39	5
S 4550-Y60R	0	82	90	52	125	29	3
S 5020-Y60R	0	50	50	50	132	83	65
S 5030-Y60R	0	65	70	50	128	60	36
S 5040-Y60R	0	80	90	60	110	27	0
S 6020-Y60R	0	60	70	60	111	56	31
S 6030-Y60R	0	80	90	67	95	24	0
S 7020-Y60R	0	70	80	80	68	25	4
S 0505-Y70R	0	7	13	0	255	242	226
S 0510-Y70R	0	8	17	0	255	240	219
S 0515-Y70R	0	15	23	0	255	228	202
S 0520-Y70R	0	25	27	0	255	208	184
S 0530-Y70R	0	40	39	0	254	174	145
S 0540-Y70R	0	50	48	0	254	153	120
S 0550-Y70R	0	59	59	0	251	131	92
S 0560-Y70R	0	69	69	0	245	106	68
S 0570-Y70R	0	79	81	0	237	78	41
S 0580-Y70R	0	80	90	0	233	72	21
S 0585-Y70R	0	90	100	0	224	47	7
S 0804-Y70R	0	5	8	0	255	245	236
S 0907-Y70R	0	10	17	4	247	228	209
S 1005-Y70R	0	7	15	5	244	231	213
S 1010-Y70R	0	18	20	0	255	221	202
S 1015-Y70R	0	24	26	0	255	210	187
S 1020-Y70R	0	32	33	0	255	193	166
S 1030-Y70R	0	43	41	0	255	168	139
S 1040-Y70R	0	51	46	0	255	151	124
S 1050-Y70R	0	60	65	0	249	128	80
S 1060-Y70R	0	71	71	0	244	101	63
S 1070-Y70R	0	81	79	0	236	75	48
S 1080-Y70R	0	88	100	0	226	52	3
S 1505-Y70R	0	12	15	10	231	212	199
S 1510-Y70R	0	20	25	10	229	197	176
S 1515-Y70R	0	25	30	5	240	196	170
S 2005-Y70R	0	12	15	25	198	182	172
S 2010-Y70R	0	23	26	18	209	175	158
S 2020-Y70R	0	38	40	10	222	161	135
S 2030-Y70R	0	52	50	5	233	140	111
S 2040-Y70R	0	60	59	7	222	119	88
S 2050-Y70R	0	70	70	5	223	98	65
S 2060-Y70R	0	82	88	10	203	64	30
S 2070-Y70R	0	90	100	10	205	42	3
S 2075-Y70R	0	92	100	15	194	35	8
S 2570-Y70R	0	90	100	25	177	35	4
S 3010-Y70R	0	22	25	35	172	147	133
S 3020-Y70R	0	40	40	27	183	131	111
S 3030-Y70R	0	52	52	25	180	110	86
S 3040-Y70R	0	63	62	22	183	94	69
S 3050-Y70R	0	80	75	20	183	64	48

NCS	C	M	Y	K	R	G	B
S 3060-Y70R	0	84	90	33	160	39	11
S 3560-Y70R	0	90	90	40	146	26	14
S 4010-Y70R	0	27	25	47	144	119	110
S 4020-Y70R	0	47	50	43	146	95	74
S 4030-Y70R	0	60	60	38	152	80	59
S 4040-Y70R	0	72	72	38	150	62	41
S 4050-Y70R	0	84	90	45	138	31	7
S 4550-Y70R	0	82	84	50	129	34	15
S 5010-Y70R	0	32	30	60	116	91	83
S 5020-Y70R	0	53	50	50	131	78	63
S 5030-Y70R	0	63	61	50	129	64	47
S 5040-Y70R	0	82	84	58	114	28	11
S 6010-Y70R	0	30	35	68	99	78	67
S 6020-Y70R	0	60	60	62	107	55	40
S 6030-Y70R	0	76	71	63	104	37	25
S 7010-Y70R	0	45	45	76	79	52	42
S 7020-Y70R	0	70	64	80	68	28	19
S 8010-Y70R	0	65	50	90	46	20	16
S 0505-Y80R	0	7	10	0	255	242	231
S 0507-Y80R	0	8	12	0	255	241	227
S 0510-Y80R	0	10	12	0	255	238	225
S 0515-Y80R	0	16	17	0	255	226	210
S 0520-Y80R	0	24	23	0	255	211	192
S 0530-Y80R	0	36	33	0	255	185	162
S 0540-Y80R	0	48	35	0	255	164	153
S 0550-Y80R	0	67	49	0	250	120	113
S 0560-Y80R	0	78	58	0	242	90	89
S 0570-Y80R	0	85	75	0	233	71	60
S 0580-Y80R	0	90	90	0	226	52	32
S 0585-Y80R	0	90	80	0	227	56	50
S 0603-Y80R	0	2	5	0	255	250	244
S 1005-Y80R	0	7	10	5	243	231	221
S 1010-Y80R	0	15	15	2	251	223	211
S 1015-Y80R	0	23	20	0	255	212	198
S 1020-Y80R	0	29	27	0	255	200	179
S 1030-Y80R	0	43	36	0	255	171	151
S 1040-Y80R	0	54	41	0	255	150	137
S 1050-Y80R	0	62	52	0	251	128	107
S 1060-Y80R	0	74	59	0	244	102	91
S 1070-Y80R	0	84	70	0	235	75	68
S 1080-Y80R	0	93	95	0	222	42	25
S 1085-Y80R	0	98	100	0	218	29	22
S 1505-Y80R	0	7	10	15	222	211	203
S 1510-Y80R	0	17	20	10	230	203	187
S 1515-Y80R	0	25	25	5	240	197	179
S 1580-Y80R	0	100	95	10	198	18	26
S 2005-Y80R	0	12	15	25	198	182	172
S 2010-Y80R	0	22	20	20	206	175	165
S 2020-Y80R	0	35	32	15	213	161	144

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NCS	C	M	Y	K	R	G	B
S 2030-Y80R	0	52	45	10	222	136	117
S 2040-Y80R	0	60	50	5	234	126	109
S 2050-Y80R	0	70	59	5	228	103	87
S 2060-Y80R	0	82	70	10	206	70	61
S 2070-Y80R	0	90	80	15	191	48	43
S 2570-Y80R	0	95	100	35	158	23	11
S 3005-Y80R	0	15	15	40	165	150	143
S 3010-Y80R	0	22	20	35	173	149	140
S 3020-Y80R	0	40	35	30	177	127	114
S 3030-Y80R	0	52	43	28	177	108	96
S 3040-Y80R	0	68	60	25	176	83	67
S 3050-Y80R	0	75	70	30	164	65	48
S 3060-Y80R	0	90	90	35	155	29	16
S 3560-Y80R	0	95	90	50	126	14	15
S 4005-Y80R	0	15	15	50	141	129	124
S 4020-Y80R	0	50	42	45	142	90	80
S 4030-Y80R	0	60	50	40	150	81	70
S 4040-Y80R	0	75	60	40	149	60	54
S 4050-Y80R	0	85	70	45	137	39	37
S 4550-Y80R	0	95	90	60	107	11	10
S 5005-Y80R	0	15	20	60	119	108	100
S 5020-Y80R	0	55	45	55	123	71	63
S 5030-Y80R	0	70	60	50	130	57	47
S 5040-Y80R	0	90	80	60	108	19	17
S 6005-Y80R	0	17	20	68	100	89	82
S 6020-Y80R	0	60	50	62	109	58	50
S 6030-Y80R	0	80	62	68	94	30	27
S 7005-Y80R	0	20	20	80	73	62	58
S 7020-Y80R	0	75	60	80	67	24	19
S 8005-Y80R	0	40	25	95	35	22	22
S 8505-Y80R	0	40	30	95	35	23	21
S 0505-Y90R	0	6	8	0	255	245	236
S 0510-Y90R	0	12	10	0	255	233	226
S 0515-Y90R	0	17	15	0	255	224	213
S 0520-Y90R	0	26	19	0	255	207	197
S 0530-Y90R	0	35	26	0	255	190	178
S 0540-Y90R	0	50	33	0	255	161	157
S 0550-Y90R	0	67	50	0	250	120	112
S 0560-Y90R	0	80	60	0	240	85	84
S 0570-Y90R	0	90	70	0	230	55	63
S 0580-Y90R	0	100	90	0	217	16	35
S 0804-Y90R	0	5	10	2	251	241	229
S 0907-Y90R	0	8	10	2	252	237	227
S 1005-Y90R	0	8	10	5	243	229	220
S 1010-Y90R	0	15	15	2	252	224	211
S 1015-Y90R	0	25	20	0	255	209	196
S 1020-Y90R	0	30	24	0	255	199	185
S 1030-Y90R	0	45	30	0	255	171	164
S 1040-Y90R	0	53	36	0	255	155	149

NCS	C	M	Y	K	R	G	B
S 1050-Y90R	0	64	49	0	252	127	115
S 1060-Y90R	0	75	60	0	243	99	89
S 1070-Y90R	0	88	70	0	232	63	65
S 1080-Y90R	0	100	90	5	207	16	33
S 1085-Y90R	0	100	85	5	208	11	37
S 1505-Y90R	0	10	10	15	221	207	200
S 1510-Y90R	0	20	20	10	229	197	183
S 1515-Y90R	0	28	25	5	239	192	176
S 1580-Y90R	0	100	85	15	189	7	33
S 2005-Y90R	0	14	15	25	197	179	171
S 2010-Y90R	0	22	18	20	206	176	168
S 2020-Y90R	0	40	30	15	214	153	144
S 2030-Y90R	0	52	40	15	211	130	119
S 2040-Y90R	0	60	45	15	209	115	106
S 2050-Y90R	0	72	58	15	201	88	78
S 2060-Y90R	0	80	65	18	190	69	63
S 2070-Y90R	0	95	80	20	181	31	39
S 2570-Y90R	0	100	90	37	150	10	24
S 3010-Y90R	0	23	20	38	166	141	134
S 3020-Y90R	0	41	34	35	166	118	108
S 3030-Y90R	0	57	39	30	173	99	96
S 3040-Y90R	0	70	50	25	179	81	79
S 3050-Y90R	0	80	60	25	176	63	62
S 3060-Y90R	0	90	72	35	155	36	40
S 3560-Y90R	0	95	80	50	126	17	24
S 4010-Y90R	0	25	25	50	139	116	107
S 4020-Y90R	0	49	36	47	139	89	84
S 4030-Y90R	0	65	50	43	144	71	65
S 4040-Y90R	0	78	60	45	140	52	49
S 4050-Y90R	0	90	70	48	132	29	34
S 4550-Y90R	0	93	80	60	107	14	18
S 5010-Y90R	0	30	25	60	117	93	88
S 5020-Y90R	0	51	39	58	118	73	68
S 5030-Y90R	0	70	50	58	116	51	49
S 5040-Y90R	0	90	78	70	83	12	7
S 5540-Y90R	0	100	80	75	70	3	4
S 6010-Y90R	0	35	25	70	93	70	68
S 6020-Y90R	0	58	35	70	92	50	51
S 6030-Y90R	0	90	80	77	69	11	0
S 7010-Y90R	0	45	30	78	76	50	48
S 7020-Y90R	0	80	60	83	57	16	12
S 8010-Y90R	0	60	30	92	41	18	20
S 0505-R	0	6	6	0	255	244	239
S 0507-R	0	10	8	0	255	238	232
S 0510-R	0	14	10	0	255	231	226
S 0515-R	0	20	14	0	255	220	213
S 0520-R	0	25	15	0	255	211	207
S 0530-R	0	34	23	0	255	193	185
S 0540-R	0	47	31	0	255	167	162

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NCS	C	M	Y	K	R	G	B
S 0550-R	0	61	41	0	254	135	132
S 0560-R	0	80	45	0	241	82	104
S 0565-R	0	80	50	0	241	83	97
S 1005-R	0	10	8	5	244	227	222
S 1010-R	0	15	10	6	241	217	213
S 1015-R	0	24	15	0	255	213	209
S 1020-R	0	29	15	2	252	200	201
S 1030-R	0	42	20	0	255	178	184
S 1040-R	0	51	26	0	255	159	167
S 1050-R	0	65	37	0	253	125	134
S 1060-R	0	80	45	0	241	82	103
S 1070-R	0	90	60	0	231	52	74
S 1080-R	0	100	75	15	191	0	42
S 1510-R	0	25	20	10	228	189	179
S 1515-R	0	30	25	5	240	188	174
S 1580-R	0	100	70	35	155	0	37
S 2005-R	0	12	12	25	198	183	176
S 2010-R	0	15	15	25	197	178	170
S 2020-R	0	40	25	15	217	156	153
S 2030-R	0	52	30	15	214	132	134
S 2040-R	0	62	40	15	210	112	112
S 2050-R	0	78	45	15	201	76	89
S 2060-R	0	90	60	18	188	45	62
S 2070-R	0	100	75	30	163	0	36
S 2570-R	0	100	70	40	146	0	34
S 3010-R	0	27	15	40	161	133	134
S 3020-R	0	43	32	35	166	115	109
S 3030-R	0	52	35	35	163	101	99
S 3040-R	0	68	40	32	165	78	84
S 3050-R	0	80	50	32	164	57	66
S 3060-R	0	100	65	45	137	0	35
S 3560-R	0	100	65	60	109	0	26
S 4020-R	0	49	32	47	139	90	88
S 4030-R	0	62	40	48	135	71	71
S 4040-R	0	80	50	45	140	49	56
S 4050-R	0	90	60	50	129	28	39
S 5020-R	0	50	35	58	117	74	71
S 5030-R	0	72	40	61	111	47	53
S 5040-R	0	100	60	60	109	0	28
S 6020-R	0	65	35	70	93	44	49
S 6030-R	0	90	50	80	59	3	10
S 7020-R	0	90	50	80	59	3	10
S 0505-R10B	0	7	5	0	255	243	239
S 0510-R10B	0	13	6	0	255	234	234
S 0515-R10B	0	16	5	0	255	228	233
S 0520-R10B	0	24	9	0	255	215	220
S 0530-R10B	0	32	12	0	255	199	207
S 0540-R10B	0	45	19	0	255	172	183
S 0550-R10B	0	55	25	0	255	150	164

NCS	C	M	Y	K	R	G	B
S 0804-R10B	0	6	5	0	255	245	241
S 0907-R10B	0	10	7	5	244	228	224
S 1005-R10B	0	7	7	7	239	228	222
S 1010-R10B	0	15	10	5	244	219	215
S 1015-R10B	0	20	10	5	244	211	211
S 1020-R10B	0	28	14	5	244	197	198
S 1030-R10B	0	42	15	0	255	180	194
S 1040-R10B	0	55	20	0	255	151	172
S 1050-R10B	0	68	30	0	252	117	140
S 1060-R10B	0	80	37	0	242	80	114
S 1070-R10B	0	90	42	5	217	49	90
S 1510-R10B	0	17	10	10	232	206	204
S 1515-R10B	0	25	13	15	219	182	183
S 1575-R10B	0	100	45	25	176	0	62
S 2005-R10B	0	11	10	25	198	184	180
S 2010-R10B	0	20	12	25	196	171	169
S 2020-R10B	0	33	13	20	205	160	167
S 2030-R10B	0	50	20	15	215	137	150
S 2040-R10B	0	62	27	15	210	111	127
S 2050-R10B	0	72	35	15	204	88	106
S 2060-R10B	0	90	37	20	184	39	80
S 2070-R10B	0	100	42	40	149	0	54
S 3010-R10B	0	22	10	38	166	144	147
S 3020-R10B	0	40	17	35	167	122	129
S 3030-R10B	0	52	18	35	164	102	116
S 3040-R10B	0	70	37	35	160	72	82
S 3050-R10B	0	85	40	40	149	41	65
S 3060-R10B	0	100	55	45	139	0	41
S 4010-R10B	0	27	15	50	139	115	116
S 4020-R10B	0	42	15	50	135	97	105
S 4030-R10B	0	62	25	48	136	71	84
S 4040-R10B	0	78	37	50	132	48	63
S 4050-R10B	0	100	50	60	111	0	34
S 5010-R10B	0	27	15	60	117	97	97
S 5020-R10B	0	47	20	60	114	75	81
S 5030-R10B	0	70	35	61	111	49	57
S 5040-R10B	0	90	40	72	82	7	28
S 6010-R10B	0	32	15	68	98	77	79
S 6020-R10B	0	60	17	70	92	47	59
S 6030-R10B	0	82	38	82	59	10	19
S 7010-R10B	0	50	20	82	66	40	44
S 7020-R10B	0	80	30	88	45	6	14
S 8010-R10B	0	90	20	100	29	1	6
S 0505-R20B	0	6	4	0	255	245	243
S 0507-R20B	0	7	3	0	255	243	242
S 0510-R20B	0	10	3	0	255	239	241
S 0515-R20B	0	17	3	0	255	227	235
S 0520-R20B	0	22	6	0	255	219	227
S 0530-R20B	0	35	6	0	253	193	212



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NCS	C	M	Y	K	R	G	B
S 0540-R20B	0	45	7	0	248	168	196
S 0603-R20B	0	3	2	0	255	249	248
S 1005-R20B	0	7	5	8	237	227	224
S 1010-R20B	0	15	7	5	244	220	220
S 1015-R20B	0	20	7	5	244	211	216
S 1020-R20B	0	26	8	5	243	201	209
S 1030-R20B	0	43	8	0	251	174	199
S 1040-R20B	0	55	10	0	248	147	182
S 1050-R20B	0	71	11	0	242	108	159
S 1060-R20B	0	80	15	0	239	83	142
S 1070-R20B	0	90	20	5	216	46	113
S 1510-R20B	0	12	5	15	221	204	205
S 1515-R20B	0	25	10	15	218	182	186
S 2005-R20B	0	10	7	25	198	187	185
S 2010-R20B	0	20	10	25	196	171	172
S 2020-R20B	0	37	7	20	197	152	166
S 2030-R20B	0	50	10	15	204	133	156
S 2040-R20B	0	60	15	18	198	110	136
S 2050-R20B	0	80	15	15	198	68	117
S 2060-R20B	0	90	20	20	184	35	96
S 2065-R20B	0	100	20	35	156	0	75
S 3005-R20B	0	10	8	40	166	157	155
S 3010-R20B	0	20	5	43	155	138	143
S 3020-R20B	0	40	10	40	155	115	127
S 3030-R20B	0	55	10	39	154	93	115
S 3040-R20B	0	70	15	40	150	67	95
S 3050-R20B	0	88	25	45	139	28	68
S 3060-R20B	0	94	22	50	129	2	61
S 4005-R20B	0	10	5	55	132	125	126
S 4020-R20B	0	40	10	48	138	102	113
S 4030-R20B	0	60	15	50	132	71	90
S 4040-R20B	0	82	20	52	127	36	68
S 4050-R20B	0	100	15	60	114	0	56
S 5005-R20B	0	15	0	60	120	111	117
S 5020-R20B	0	50	15	60	114	72	83
S 5030-R20B	0	75	15	62	109	40	65
S 5040-R20B	0	100	10	70	95	0	47
S 6005-R20B	0	15	0	70	95	87	92
S 6020-R20B	0	70	10	70	92	37	58
S 6030-R20B	0	100	5	82	62	0	28
S 7005-R20B	0	20	0	80	72	63	68
S 7020-R20B	0	90	0	90	44	2	20
S 8005-R20B	0	30	0	92	42	31	36
S 8505-R20B	0	45	0	100	21	1	10
S 0505-R30B	0	5	2	0	255	246	247
S 0510-R30B	0	8	2	0	255	242	244
S 0520-R30B	0	20	2	0	254	220	233
S 0530-R30B	0	34	2	0	250	192	217
S 0540-R30B	0	42	2	0	246	174	205

NCS	C	M	Y	K	R	G	B
S 0804-R30B	0	4	2	4	246	240	240
S 0907-R30B	0	7	5	5	243	232	229
S 1005-R30B	0	6	3	6	241	232	232
S 1010-R30B	0	13	5	5	243	223	224
S 1020-R30B	0	26	4	5	240	200	213
S 1030-R30B	0	40	3	5	232	170	196
S 1040-R30B	5	50	0	0	233	151	197
S 1050-R30B	5	70	0	0	221	100	164
S 1060-R30B	5	80	0	0	217	73	151
S 2005-R30B	0	10	5	25	199	187	188
S 2010-R30B	0	20	5	25	195	171	178
S 2020-R30B	0	36	5	20	198	153	170
S 2030-R30B	0	50	3	15	202	133	163
S 2040-R30B	0	58	0	20	189	111	149
S 2050-R30B	0	73	0	20	185	79	130
S 2060-R30B	5	90	0	25	169	32	110
S 3010-R30B	0	20	0	41	161	144	154
S 3020-R30B	0	40	0	40	156	117	137
S 3030-R30B	0	55	0	36	159	98	128
S 3040-R30B	0	70	0	40	149	68	107
S 3050-R30B	5	85	0	40	145	39	97
S 3055-R30B	15	100	0	45	135	0	90
S 4010-R30B	0	25	0	50	140	120	132
S 4020-R30B	0	40	0	50	136	101	119
S 4030-R30B	0	60	0	50	132	73	102
S 4040-R30B	10	80	0	50	124	43	88
S 4050-R30B	15	100	0	58	116	0	75
S 5010-R30B	0	30	0	60	117	96	108
S 5020-R30B	0	50	0	60	113	73	93
S 5030-R30B	5	70	0	60	109	49	80
S 5040-R30B	25	100	0	70	81	0	53
S 6010-R30B	0	35	0	70	93	72	82
S 6020-R30B	0	70	0	72	88	35	59
S 6030-R30B	25	95	0	80	58	0	35
S 7010-R30B	0	40	0	80	72	51	60
S 7020-R30B	25	80	0	90	38	1	23
S 8010-R30B	0	45	0	100	21	1	10
S 0505-R40B	0	5	0	0	255	246	250
S 0507-R40B	0	6	0	0	255	246	250
S 0510-R40B	0	8	0	0	255	242	248
S 0515-R40B	0	11	0	0	255	237	245
S 0520-R40B	0	20	0	0	253	220	236
S 0530-R40B	5	30	0	0	245	196	227
S 0603-R40B	0	3	0	2	251	246	249
S 1005-R40B	0	5	0	10	232	226	230
S 1010-R40B	0	10	0	10	231	219	225
S 1015-R40B	0	15	0	10	229	210	220
S 1020-R40B	5	20	0	5	234	207	226
S 1030-R40B	10	35	0	0	239	185	225

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NCS	C	M	Y	K	R	G	B
S 1040-R40B	12	45	0	0	230	160	211
S 1050-R40B	15	62	0	0	215	119	185
S 1510-R40B	0	10	0	18	214	203	209
S 1515-R40B	3	20	0	15	213	190	205
S 2005-R40B	0	5	0	28	194	190	194
S 2010-R40B	0	14	0	25	197	183	191
S 2020-R40B	5	30	0	20	196	164	185
S 2030-R40B	15	48	0	11	199	139	184
S 2040-R40B	27	60	0	0	202	119	200
S 2050-R40B	35	75	0	0	184	83	183
S 2060-R40B	38	90	0	0	172	48	163
S 3010-R40B	0	20	0	40	163	146	156
S 3020-R40B	5	35	0	40	153	124	143
S 3030-R40B	20	50	0	27	158	114	152
S 3040-R40B	25	70	0	25	152	78	134
S 3050-R40B	35	88	0	25	141	44	125
S 3055-R40B	40	100	0	25	139	5	127
S 4020-R40B	10	40	0	50	127	99	119
S 4030-R40B	20	62	0	45	123	73	109
S 4040-R40B	35	82	0	40	122	47	110
S 4050-R40B	45	100	0	45	109	1	104
S 5020-R40B	10	45	0	60	108	78	97
S 5030-R40B	30	70	0	57	98	50	88
S 5040-R40B	50	100	0	60	84	0	83
S 6020-R40B	25	60	0	68	83	50	75
S 6030-R40B	60	100	0	68	59	0	65
S 7020-R40B	50	90	0	90	37	2	29
S 0505-R50B	0	3	0	0	255	250	253
S 0510-R50B	1	5	0	0	252	245	250
S 0520-R50B	6	15	0	0	248	227	247
S 0530-R50B	13	28	0	0	238	199	239
S 0804-R50B	3	2	0	2	246	246	249
S 0907-R50B	2	5	0	5	239	235	239
S 1005-R50B	1	5	0	10	231	226	230
S 1010-R50B	5	10	0	6	232	223	233
S 1020-R50B	13	22	0	0	236	209	245
S 1030-R50B	15	30	0	0	234	193	237
S 1040-R50B	22	40	0	0	221	170	231
S 2005-R50B	0	5	0	30	189	185	189
S 2010-R50B	5	14	0	25	191	180	191
S 2020-R50B	20	34	0	10	196	165	205
S 2030-R50B	25	40	0	5	200	158	215
S 2040-R50B	35	55	0	0	193	128	213
S 2050-R50B	45	70	0	0	169	87	193
S 3005-R50B	5	10	0	40	160	156	164
S 3010-R50B	5	17	0	39	161	150	161
S 3020-R50B	20	34	0	28	159	138	166
S 3030-R50B	35	52	0	15	160	117	175
S 3040-R50B	43	70	0	10	155	84	169

NCS	C	M	Y	K	R	G	B
S 3050-R50B	50	82	0	5	148	59	169
S 3055-R50B	60	90	0	5	129	38	163
S 4005-R50B	15	12	0	50	126	127	138
S 4010-R50B	20	22	0	45	129	124	141
S 4020-R50B	25	40	0	42	126	106	133
S 4030-R50B	40	60	0	38	112	77	121
S 4040-R50B	50	80	0	25	119	57	130
S 4050-R50B	70	100	0	30	86	0	124
S 5005-R50B	5	7	0	60	117	116	121
S 5010-R50B	10	20	0	60	110	102	113
S 5020-R50B	32	50	0	50	104	79	110
S 5030-R50B	45	70	0	50	94	54	100
S 5040-R50B	62	90	0	50	77	16	99
S 6005-R50B	3	10	0	70	93	89	94
S 6010-R50B	10	27	0	70	88	76	86
S 6020-R50B	32	52	0	68	77	55	79
S 6030-R50B	63	92	0	63	58	0	75
S 7005-R50B	10	15	0	82	62	58	63
S 7010-R50B	20	30	0	80	61	54	64
S 7020-R50B	62	90	0	80	39	0	45
S 8005-R50B	45	20	0	95	18	24	32
S 8010-R50B	60	70	0	90	29	7	36
S 0505-R60B	2	2	0	0	252	250	253
S 0507-R60B	3	4	0	0	249	246	251
S 0510-R60B	6	6	0	0	244	241	251
S 0515-R60B	10	9	0	0	238	234	250
S 0520-R60B	12	11	0	0	233	230	249
S 0525-R60B	17	15	0	0	223	220	245
S 0603-R60B	2	2	0	2	247	246	249
S 1005-R60B	4	4	0	5	236	235	240
S 1010-R60B	8	8	0	5	229	227	238
S 1015-R60B	12	12	0	5	221	217	234
S 1020-R60B	18	18	0	0	221	213	244
S 1030-R60B	27	28	0	0	203	191	236
S 1040-R60B	30	35	0	0	198	175	232
S 1510-R60B	8	8	0	15	209	207	217
S 1515-R60B	17	17	0	10	202	197	218
S 2005-R60B	5	5	0	25	193	192	199
S 2010-R60B	9	9	0	22	192	191	201
S 2020-R60B	30	30	0	13	171	162	198
S 2030-R60B	35	35	0	0	186	173	229
S 2040-R60B	40	45	0	0	178	148	221
S 2050-R60B	55	65	0	0	146	95	194
S 3010-R60B	15	15	0	35	157	155	169
S 3020-R60B	28	28	0	25	153	147	175
S 3030-R60B	47	49	0	17	133	115	170
S 3040-R60B	58	60	0	6	128	101	182
S 3050-R60B	70	78	0	0	111	68	175
S 3555-R60B	90	100	0	5	70	33	147



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NCS	C	M	Y	K	R	G	B
S 4020-R60B	38	35	0	40	113	109	138
S 4030-R60B	55	55	0	35	95	81	128
S 4040-R60B	65	75	0	30	89	59	123
S 4050-R60B	80	90	0	25	73	39	127
S 5020-R60B	47	45	0	50	86	78	111
S 5030-R60B	58	58	0	50	75	62	103
S 5040-R60B	80	95	0	45	56	16	103
S 6020-R60B	52	52	0	60	69	58	91
S 6030-R60B	79	89	0	60	44	17	83
S 7020-R60B	85	85	0	80	20	4	45
S 0505-R70B	4	2	0	0	248	249	253
S 0510-R70B	8	4	0	0	242	244	252
S 0520-R70B	15	10	0	0	227	230	248
S 0525-R70B	20	12	0	0	215	224	245
S 0804-R70B	3	2	0	5	238	239	243
S 0907-R70B	5	3	0	5	235	236	241
S 1005-R70B	5	2	0	8	229	232	237
S 1010-R70B	10	6	0	8	219	223	233
S 1020-R70B	23	12	0	0	208	221	243
S 1030-R70B	30	17	0	0	193	209	238
S 1040-R70B	37	25	0	0	177	190	229
S 1550-R70B	50	40	0	0	148	156	212
S 1555-R70B	60	50	0	0	125	131	197
S 2005-R70B	7	5	0	25	189	191	198
S 2010-R70B	19	9	0	22	175	184	199
S 2020-R70B	32	22	0	15	163	170	200
S 2030-R70B	42	32	0	10	152	158	199
S 2040-R70B	55	42	0	0	135	149	206
S 2050-R70B	60	50	0	0	125	131	197
S 2060-R70B	78	70	0	0	87	87	169
S 3010-R70B	15	10	0	38	150	154	165
S 3020-R70B	33	20	0	30	134	145	169
S 3030-R70B	45	35	0	20	130	135	175
S 3040-R70B	65	55	0	5	110	113	180
S 3050-R70B	80	70	0	0	81	88	167
S 3060-R70B	90	85	0	0	64	63	154
S 4010-R70B	20	12	0	50	120	125	137
S 4020-R70B	42	32	0	40	106	109	139
S 4030-R70B	55	47	0	30	100	97	142
S 4040-R70B	72	62	0	23	81	81	139
S 4050-R70B	95	90	0	10	52	53	137
S 4055-R70B	100	100	0	0	45	46	140
S 4550-R70B	100	100	0	20	39	39	124
S 5010-R70B	20	10	0	60	100	107	117
S 5020-R70B	45	35	0	52	84	86	113
S 5030-R70B	70	60	0	42	66	65	111
S 5040-R70B	90	85	0	40	44	42	105
S 5540-R70B	100	95	0	42	25	34	99
S 6010-R70B	22	17	0	60	99	101	113

NCS	C	M	Y	K	R	G	B
S 6020-R70B	60	50	0	60	60	58	91
S 6030-R70B	100	90	0	55	15	30	83
S 7010-R70B	40	30	0	80	49	50	63
S 7020-R70B	100	85	0	83	12	10	40
S 8010-R70B	50	30	0	95	19	22	32
S 0505-R80B	5	1	0	0	246	249	253
S 0507-R80B	7	1	0	0	244	249	253
S 0510-R80B	10	1	0	0	238	247	252
S 0515-R80B	15	2	0	0	228	242	250
S 0520-R80B	20	3	0	0	218	237	249
S 0530-R80B	30	7	0	0	194	223	242
S 0603-R80B	2	0	0	2	247	249	250
S 1005-R80B	5	1	0	10	225	229	233
S 1010-R80B	10	1	0	10	217	226	233
S 1015-R80B	20	6	0	0	216	233	247
S 1020-R80B	25	8	0	0	205	226	245
S 1030-R80B	35	12	0	0	182	212	237
S 1040-R80B	45	17	0	0	156	196	228
S 1510-R80B	15	4	0	15	197	209	219
S 1515-R80B	20	5	0	15	187	204	217
S 1550-R80B	60	30	0	0	116	165	211
S 1555-R80B	70	35	0	0	85	151	201
S 2005-R80B	5	0	0	28	187	193	196
S 2010-R80B	15	4	0	22	183	194	205
S 2020-R80B	35	14	0	17	153	177	202
S 2030-R80B	52	22	0	7	128	171	209
S 2040-R80B	60	30	0	4	112	159	205
S 2050-R80B	70	40	0	0	89	144	198
S 2060-R80B	80	50	0	0	63	124	185
S 2565-R80B	100	72	0	0	0	86	158
S 3005-R80B	5	0	0	45	150	156	159
S 3010-R80B	15	2	0	43	141	152	159
S 3020-R80B	40	20	0	30	122	141	168
S 3030-R80B	50	25	0	28	106	133	166
S 3040-R80B	73	49	0	10	81	115	173
S 3050-R80B	90	60	0	5	37	100	166
S 3060-R80B	100	80	0	0	19	74	152
S 3560-R80B	100	80	0	20	16	61	130
S 4005-R80B	10	5	0	52	128	132	138
S 4020-R80B	45	20	0	45	90	112	136
S 4030-R80B	60	35	0	35	78	104	142
S 4040-R80B	80	55	0	20	56	91	148
S 4050-R80B	100	80	0	20	17	61	131
S 4550-R80B	100	82	0	40	11	47	107
S 5005-R80B	10	5	0	62	107	110	116
S 5020-R80B	50	25	0	55	71	90	114
S 5030-R80B	70	40	0	52	45	74	109
S 5040-R80B	95	65	0	50	5	54	101
S 6005-R80B	20	5	0	70	80	88	94

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NCS	C	M	Y	K	R	G	B
S 6020-R80B	70	40	0	60	39	65	97
S 6030-R80B	100	80	0	59	3	35	82
S 7005-R80B	25	10	0	80	56	62	69
S 7020-R80B	100	70	0	80	3	21	49
S 8005-R80B	35	10	0	92	26	33	39
S 8505-R80B	70	15	0	100	0	12	21
S 0505-R90B	5	0	0	0	246	251	253
S 0510-R90B	11	0	0	0	236	247	252
S 0515-R90B	16	1	0	0	226	242	251
S 0520-R90B	23	1	0	0	212	237	249
S 0530-R90B	35	2	0	0	186	226	243
S 0540-R90B	45	5	0	0	158	212	235
S 0804-R90B	5	0	0	5	235	241	244
S 0907-R90B	5	0	0	8	229	235	238
S 1005-R90B	5	0	0	10	225	231	235
S 1010-R90B	12	0	0	10	213	226	233
S 1015-R90B	16	1	0	10	205	222	232
S 1020-R90B	25	1	0	10	188	216	229
S 1030-R90B	35	5	0	10	167	203	223
S 1040-R90B	52	13	0	0	136	195	226
S 1050-R90B	62	15	0	0	109	183	219
S 1510-R90B	10	0	0	23	190	200	206
S 1515-R90B	20	0	0	18	182	204	214
S 1560-R90B	80	30	0	0	43	149	199
S 2005-R90B	7	0	0	25	190	198	202
S 2010-R90B	15	0	0	26	175	191	198
S 2020-R90B	30	5	0	23	153	180	197
S 2030-R90B	44	5	0	23	125	169	191
S 2040-R90B	60	20	0	14	99	155	192
S 2050-R90B	78	28	0	10	47	140	187
S 2060-R90B	90	40	0	0	0	131	188
S 2065-R90B	100	48	0	0	0	117	179
S 3010-R90B	24	5	0	40	134	150	162
S 3020-R90B	40	5	0	40	108	141	158
S 3030-R90B	52	16	0	30	97	138	167
S 3040-R90B	70	23	0	25	60	128	166
S 3050-R90B	82	35	0	25	21	110	156
S 3060-R90B	100	60	0	15	0	89	152
S 3065-R90B	100	60	0	20	0	85	146
S 3560-R90B	100	60	0	30	0	76	133
S 4010-R90B	25	5	0	52	109	124	135
S 4020-R90B	40	12	0	50	92	115	132
S 4030-R90B	60	17	0	45	64	108	135
S 4040-R90B	80	40	0	40	28	88	130
S 4050-R90B	100	60	0	40	0	67	120
S 4550-R90B	100	55	0	52	0	60	105
S 5010-R90B	25	5	0	60	96	109	118
S 5020-R90B	45	10	0	60	70	96	112
S 5030-R90B	70	25	0	57	36	82	110

NCS	C	M	Y	K	R	G	B
S 5040-R90B	100	60	0	50	0	58	105
S 5540-R90B	100	60	0	60	0	48	90
S 6010-R90B	30	5	0	70	71	85	93
S 6020-R90B	60	15	0	67	41	76	94
S 6030-R90B	92	40	0	70	0	51	81
S 7010-R90B	40	10	0	80	45	59	69
S 7020-R90B	90	30	0	90	0	24	41
S 8010-R90B	100	20	0	98	0	7	13
S 0505-B	5	0	2	0	247	252	251
S 0507-B	7	0	2	0	244	251	251
S 0510-B	12	0	2	0	235	248	251
S 0515-B	17	0	2	0	226	245	251
S 0520-B	22	0	2	0	216	241	249
S 0530-B	32	0	2	0	194	232	244
S 0540-B	45	0	2	0	162	221	238
S 1005-B	5	0	1	10	225	231	233
S 1010-B	12	0	1	10	212	226	231
S 1015-B	18	0	1	10	202	223	231
S 1020-B	25	0	1	10	189	218	229
S 1030-B	40	0	1	10	157	206	223
S 1040-B	52	0	2	10	127	195	216
S 1050-B	70	0	1	10	71	176	207
S 1060-B	80	0	0	10	7	166	203
S 1510-B	11	0	1	10	215	228	232
S 1515-B	15	0	1	10	208	225	232
S 1565-B	95	5	0	20	0	135	178
S 2005-B	10	0	1	25	186	196	200
S 2010-B	20	0	1	24	171	192	200
S 2020-B	31	0	1	24	151	184	196
S 2030-B	47	0	0	25	116	169	188
S 2040-B	60	3	0	24	87	158	184
S 2050-B	80	4	0	25	0	139	174
S 2060-B	90	8	0	25	0	130	170
S 2065-B	100	20	0	25	0	116	162
S 3010-B	20	0	0	42	136	154	162
S 3020-B	40	2	0	40	108	144	160
S 3030-B	52	4	0	40	84	133	154
S 3040-B	72	4	0	40	37	122	150
S 3050-B	83	10	0	40	0	113	146
S 3060-B	100	20	0	45	0	93	132
S 4020-B	45	5	0	50	84	118	135
S 4030-B	58	0	5	58	54	101	115
S 4040-B	80	10	0	52	0	96	124
S 4050-B	100	10	0	55	0	86	118
S 4055-B	100	10	0	58	0	82	113
S 4550-B	100	4	0	68	0	70	95
S 5020-B	45	0	0	60	70	103	116
S 5030-B	70	10	0	62	28	84	106
S 5040-B	90	5	0	68	0	71	95

# NCS DIGITAL ATLAS 1950

NCS	C	M	Y	K	R	G	B
S 5540-B	100	5	0	80	0	45	64
S 6020-B	58	0	0	78	29	63	75
S 6030-B	90	10	0	80	0	46	66
S 7020-B	100	15	0	90	0	26	40
S 0510-B10G	14	0	5	0	233	249	249
S 0520-B10G	25	0	6	0	211	242	247
S 0530-B10G	39	0	6	0	180	230	240
S 0540-B10G	50	0	9	0	151	220	232
S 1010-B10G	15	0	5	8	212	231	232
S 1020-B10G	36	0	10	0	188	235	240
S 1030-B10G	48	0	10	0	157	223	233
S 1040-B10G	58	0	15	0	128	214	223
S 1050-B10G	73	0	15	0	69	195	212
S 1555-B10G	83	0	17	10	0	166	186
S 2010-B10G	20	0	5	24	170	192	196
S 2020-B10G	41	0	10	17	144	193	200
S 2030-B10G	52	0	10	15	120	186	198
S 2040-B10G	63	0	12	20	83	167	181
S 2050-B10G	80	0	15	20	0	152	172
S 2055-B10G	90	0	20	20	0	145	164
S 3010-B10G	20	0	7	43	134	151	153
S 3020-B10G	45	0	10	33	110	156	164
S 3030-B10G	58	0	13	35	80	142	153
S 3040-B10G	73	0	15	37	36	130	145
S 3050-B10G	90	0	15	42	0	114	136
S 3060-B10G	100	0	15	47	0	103	127
S 4010-B10G	20	0	5	54	113	127	130
S 4020-B10G	43	0	10	50	88	123	130
S 4030-B10G	60	0	11	50	59	114	126
S 4040-B10G	80	0	15	55	0	99	114
S 4050-B10G	100	0	15	60	0	85	106
S 5010-B10G	30	0	10	60	90	110	112
S 5020-B10G	50	0	10	58	67	105	113
S 5030-B10G	70	0	10	60	28	94	109
S 5040-B10G	92	0	15	70	0	70	85
S 5045-B10G	100	0	18	70	0	68	82
S 5540-B10G	100	0	20	75	0	58	70
S 6010-B10G	35	0	10	67	72	93	96
S 6020-B10G	60	0	10	72	35	74	83
S 6030-B10G	90	0	10	80	0	49	64
S 7010-B10G	40	0	10	83	39	57	59
S 7020-B10G	81	0	11	85	0	40	50
S 8010-B10G	100	0	10	98	0	19	24
S 0505-B20G	7	0	5	0	243	252	246
S 0507-B20G	8	0	5	0	242	251	246
S 0515-B20G	20	0	8	0	223	247	247
S 0907-B20G	15	0	6	0	232	250	249
S 1005-B20G	10	0	5	7	223	235	232
S 1015-B20G	28	0	10	0	206	242	242

NCS	C	M	Y	K	R	G	B
S 1040-B20G	60	0	18	0	122	213	219
S 1050-B20G	72	0	25	0	78	200	204
S 1510-B20G	25	0	9	10	189	220	221
S 1515-B20G	30	0	10	10	180	217	219
S 2005-B20G	10	0	5	25	185	196	195
S 2040-B20G	70	0	25	10	74	182	186
S 2050-B20G	83	0	30	10	0	168	173
S 2555-B20G	93	0	30	25	0	137	147
S 3005-B20G	15	0	10	38	151	164	161
S 3040-B20G	80	0	24	32	0	134	144
S 3050-B20G	85	0	28	33	0	130	139
S 3060-B20G	100	0	37	40	0	114	120
S 4005-B20G	15	0	10	50	128	139	136
S 4040-B20G	80	0	29	50	0	107	112
S 4050-B20G	100	0	38	52	0	97	101
S 4550-B20G	100	0	35	60	0	87	93
S 5005-B20G	15	0	10	58	111	121	119
S 5040-B20G	95	0	35	60	0	87	92
S 5540-B20G	100	0	38	70	0	68	71
S 6005-B20G	20	0	10	68	85	96	95
S 7005-B20G	30	0	10	82	49	61	62
S 8005-B20G	35	0	10	92	25	36	38
S 8505-B20G	50	0	10	100	1	16	20
S 0510-B30G	15	0	8	0	231	250	246
S 0520-B30G	23	0	11	0	217	246	243
S 0530-B30G	36	0	15	0	190	238	236
S 0540-B30G	47	0	20	0	162	229	226
S 1010-B30G	22	0	9	0	218	245	244
S 1020-B30G	36	0	15	0	190	238	236
S 1030-B30G	50	0	20	0	155	226	224
S 1040-B30G	56	0	25	0	136	221	215
S 1050-B30G	74	0	29	0	67	198	198
S 2010-B30G	25	0	10	20	168	197	197
S 2020-B30G	40	0	17	10	159	211	208
S 2030-B30G	60	0	27	0	123	217	211
S 2040-B30G	70	0	32	3	79	197	190
S 2050-B30G	85	0	37	0	0	184	180
S 2555-B30G	92	0	40	20	0	144	142
S 3010-B30G	30	0	12	35	134	162	163
S 3020-B30G	45	0	16	30	114	161	164
S 3030-B30G	60	0	28	27	84	155	151
S 3040-B30G	80	0	35	25	0	144	142
S 3050-B30G	90	0	38	30	0	131	131
S 3060-B30G	100	0	40	35	0	120	123
S 4010-B30G	27	0	15	50	112	132	129
S 4020-B30G	50	0	25	45	84	128	124
S 4030-B30G	65	0	30	45	53	120	117
S 4040-B30G	80	0	36	45	0	115	113
S 4050-B30G	100	0	42	50	0	100	101

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NCS	C	M	Y	K	R	G	B
S 4550-B30G	100	0	40	60	0	86	88
S 5010-B30G	30	0	15	60	90	109	108
S 5020-B30G	50	0	25	58	67	104	101
S 5030-B30G	70	0	30	58	31	98	98
S 5040-B30G	100	0	40	60	0	86	88
S 5540-B30G	100	0	40	70	0	67	69
S 6010-B30G	35	0	15	68	71	91	91
S 6020-B30G	60	0	25	70	38	79	79
S 6030-B30G	90	0	40	70	0	70	69
S 6530-B30G	100	0	40	80	0	48	50
S 7010-B30G	40	0	15	82	42	59	60
S 7020-B30G	100	0	40	85	0	38	39
S 8010-B30G	50	0	35	95	15	30	26
S 0520-B40G	31	0	15	0	202	242	237
S 0530-B40G	45	0	19	0	167	231	228
S 1020-B40G	35	0	15	0	193	239	236
S 1030-B40G	45	0	21	0	168	232	225
S 1040-B40G	60	0	29	0	123	217	208
S 1050-B40G	75	0	35	0	59	199	191
S 2020-B40G	38	0	20	10	163	213	205
S 2030-B40G	61	0	31	5	109	203	193
S 2040-B40G	72	0	35	5	67	191	182
S 2050-B40G	84	0	41	0	0	186	175
S 2555-B40G	98	0	55	15	0	144	126
S 3020-B40G	41	0	21	30	121	163	158
S 3030-B40G	68	0	36	20	67	163	152
S 3040-B40G	82	0	40	20	0	151	143
S 3050-B40G	93	0	50	20	0	141	127
S 3060-B40G	98	0	48	30	0	125	119
S 4040-B40G	85	0	40	45	0	111	108
S 4050-B40G	100	0	50	45	0	106	99
S 4055-B40G	100	0	52	50	0	99	90
S 4550-B40G	100	0	50	57	0	89	83
S 5040-B40G	100	0	50	60	0	85	79
S 5540-B40G	100	0	50	65	0	77	71
S 0505-B50G	7	0	6	0	243	252	245
S 0510-B50G	15	0	10	0	231	250	242
S 0515-B50G	27	0	14	0	210	245	239
S 0520-B50G	33	0	17	0	197	241	234
S 0530-B50G	39	0	21	0	184	238	227
S 0804-B50G	10	0	7	0	240	252	245
S 1005-B50G	10	0	6	5	227	239	235
S 1010-B50G	20	0	12	0	223	248	241
S 1015-B50G	29	0	14	0	205	243	238
S 1020-B50G	35	0	18	0	193	241	232
S 1030-B50G	45	0	23	0	167	232	222
S 1040-B50G	60	0	30	0	122	217	206
S 1050-B50G	79	0	39	0	23	193	182
S 1510-B50G	25	0	14	10	190	221	215

NCS	C	M	Y	K	R	G	B
S 1515-B50G	33	0	15	5	185	228	224
S 2005-B50G	15	0	9	20	186	203	199
S 2010-B50G	25	0	14	20	168	197	192
S 2020-B50G	44	0	25	10	150	209	197
S 2030-B50G	60	0	34	5	112	205	189
S 2040-B50G	72	0	40	5	64	190	174
S 2050-B50G	83	0	45	5	0	177	160
S 2060-B50G	100	0	55	0	0	162	143
S 3010-B50G	27	0	15	35	138	164	160
S 3020-B50G	45	0	25	29	114	162	154
S 3030-B50G	69	0	38	19	64	165	152
S 3040-B50G	80	0	45	23	0	146	132
S 3050-B50G	90	0	50	21	0	142	127
S 3055-B50G	100	0	60	25	0	130	110
S 4010-B50G	25	0	15	50	114	133	129
S 4020-B50G	50	0	30	45	84	127	118
S 4030-B50G	80	0	43	40	0	121	111
S 4040-B50G	90	0	50	40	0	116	104
S 4050-B50G	100	0	60	45	0	104	88
S 4550-B50G	100	0	60	55	0	92	77
S 5010-B50G	30	0	20	60	90	109	104
S 5020-B50G	60	0	40	53	56	108	94
S 5030-B50G	80	0	45	58	0	93	83
S 5040-B50G	100	0	60	58	0	88	73
S 5540-B50G	100	0	60	70	0	66	55
S 6010-B50G	40	0	25	65	70	94	88
S 6020-B50G	70	0	40	63	22	88	80
S 6030-B50G	98	0	50	70	0	68	62
S 6530-B50G	100	0	52	72	0	64	57
S 7010-B50G	50	0	30	80	37	62	57
S 7020-B50G	90	0	50	80	0	50	44
S 8010-B50G	60	0	35	90	12	38	34
S 0520-B60G	28	0	16	0	209	245	236
S 0530-B60G	37	0	23	0	190	240	224
S 1020-B60G	30	0	16	0	203	243	235
S 1030-B60G	40	0	25	0	183	238	222
S 1040-B60G	52	0	32	0	149	228	208
S 1050-B60G	72	0	42	0	72	203	182
S 2020-B60G	44	0	29	6	158	218	199
S 2030-B60G	60	0	35	0	123	219	200
S 2040-B60G	70	0	41	0	82	206	185
S 2050-B60G	83	0	46	0	0	188	169
S 2555-B60G	100	0	58	0	0	163	139
S 3020-B60G	49	0	31	24	114	170	156
S 3030-B60G	68	0	40	22	65	159	144
S 3040-B60G	82	0	50	15	0	158	137
S 3050-B60G	92	0	60	23	0	135	109
S 3555-B60G	100	0	60	35	0	119	100
S 4040-B60G	90	0	55	40	0	115	97

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NCS	C	M	Y	K	R	G	B
S 4050-B60G	100	0	62	45	0	104	85
S 5040-B60G	98	0	60	60	0	85	70
S 6035-B60G	100	0	60	80	0	47	39
S 0510-B70G	20	0	15	0	223	249	235
S 0520-B70G	30	0	22	0	204	244	225
S 0530-B70G	35	0	24	0	195	242	223
S 1010-B70G	20	0	14	5	210	236	225
S 1020-B70G	33	0	20	0	198	243	230
S 1030-B70G	43	0	29	0	175	235	214
S 1040-B70G	59	0	38	0	129	220	195
S 1050-B70G	70	0	45	0	84	206	178
S 2010-B70G	25	0	15	20	169	197	191
S 2020-B70G	49	0	36	5	148	216	188
S 2030-B70G	60	0	40	5	115	206	180
S 2040-B70G	72	0	45	0	74	204	178
S 2050-B70G	82	0	50	0	0	190	163
S 2060-B70G	100	0	60	0	0	162	135
S 3010-B70G	25	0	15	35	142	165	160
S 3020-B70G	46	0	34	27	117	165	145
S 3030-B70G	70	0	43	20	58	160	141
S 3040-B70G	80	0	53	15	0	160	133
S 3050-B70G	92	0	61	20	0	140	111
S 3060-B70G	100	0	65	33	0	120	96
S 4010-B70G	35	0	25	46	108	135	125
S 4020-B70G	52	0	38	45	80	124	108
S 4030-B70G	70	0	46	38	44	128	109
S 4040-B70G	90	0	60	40	0	114	90
S 4050-B70G	100	0	68	45	0	103	79
S 5010-B70G	30	0	25	55	99	118	108
S 5020-B70G	62	0	40	50	54	112	98
S 5030-B70G	80	0	52	50	0	104	86
S 5040-B70G	100	0	65	60	0	83	65
S 6010-B70G	35	0	30	68	71	90	79
S 6020-B70G	70	0	50	61	25	90	72
S 6030-B70G	90	0	60	72	0	64	49
S 7010-B70G	50	0	40	79	38	63	52
S 7020-B70G	100	0	70	80	0	47	34
S 8010-B70G	70	0	60	90	2	34	22
S 0505-B80G	8	0	8	0	243	253	243
S 0507-B80G	10	0	10	0	240	251	240
S 0515-B80G	20	0	15	0	223	249	235
S 0907-B80G	14	0	10	0	233	251	242
S 1005-B80G	10	0	10	5	228	239	229
S 1015-B80G	28	0	20	0	211	245	230
S 1040-B80G	55	0	40	0	145	225	194
S 1050-B80G	60	0	45	0	130	219	184
S 1510-B80G	25	0	15	6	198	231	222
S 1515-B80G	35	0	22	0	194	242	227
S 2005-B80G	16	0	15	20	185	202	190

NCS	C	M	Y	K	R	G	B
S 2040-B80G	70	0	50	0	89	206	171
S 2050-B80G	80	0	58	0	30	192	151
S 2555-B80G	100	0	68	5	0	155	119
S 3005-B80G	15	0	15	40	147	160	151
S 3040-B80G	80	0	57	16	0	157	124
S 3050-B80G	90	0	62	20	0	142	110
S 3555-B80G	100	0	70	35	0	117	88
S 4005-B80G	15	0	15	50	127	138	131
S 4040-B80G	90	0	65	38	0	115	86
S 4050-B80G	100	0	70	45	0	103	77
S 4550-B80G	100	0	70	57	0	87	64
S 5005-B80G	17	0	15	60	105	115	110
S 5040-B80G	100	0	68	60	0	82	62
S 5540-B80G	100	0	70	68	0	70	51
S 6005-B80G	20	0	20	68	85	96	88
S 7005-B80G	30	0	20	80	53	66	62
S 8005-B80G	50	0	45	90	21	40	30
S 8505-B80G	70	0	60	100	0	18	9
S 0510-B90G	15	0	15	0	231	250	231
S 0520-B90G	20	0	20	0	221	249	221
S 0530-B90G	30	0	29	0	204	244	208
S 1010-B90G	20	0	16	0	223	249	232
S 1020-B90G	35	0	30	0	194	241	208
S 1030-B90G	45	0	37	0	170	234	198
S 1040-B90G	50	0	40	0	159	229	193
S 1050-B90G	55	0	44	0	144	224	184
S 1055-B90G	60	0	48	0	131	219	178
S 2010-B90G	29	0	24	10	183	217	196
S 2020-B90G	45	0	38	10	148	205	172
S 2030-B90G	59	0	44	0	133	221	186
S 2040-B90G	70	0	53	0	93	206	166
S 2050-B90G	80	0	62	0	41	192	145
S 2060-B90G	93	0	72	0	0	171	121
S 3010-B90G	25	0	20	32	146	169	158
S 3020-B90G	48	0	40	25	115	165	138
S 3030-B90G	70	0	57	20	63	157	119
S 3040-B90G	79	0	62	15	26	159	119
S 3050-B90G	92	0	70	15	0	146	104
S 3060-B90G	100	0	78	20	0	135	92
S 4010-B90G	30	0	30	48	111	132	115
S 4020-B90G	50	0	42	45	84	125	103
S 4030-B90G	72	0	60	37	43	125	92
S 4040-B90G	83	0	70	38	0	118	79
S 4050-B90G	100	0	80	40	0	108	72
S 4550-B90G	100	0	80	55	0	88	57
S 5010-B90G	40	0	35	55	86	113	97
S 5020-B90G	60	0	50	52	57	108	83
S 5030-B90G	71	0	63	52	33	102	69
S 5040-B90G	100	0	80	60	0	81	52

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NCS	C	M	Y	K	R	G	B
S 5540-B90G	100	0	80	70	0	62	39
S 6010-B90G	45	0	40	63	67	95	78
S 6020-B90G	70	0	57	70	18	74	53
S 6030-B90G	90	0	70	68	0	70	46
S 7010-B90G	45	0	40	75	49	72	58
S 7020-B90G	90	0	70	80	0	46	29
S 8010-B90G	60	0	60	90	12	37	23
S 0505-G	8	0	10	0	244	252	239
S 0507-G	8	0	12	0	245	252	236
S 0510-G	10	0	12	0	240	251	235
S 0515-G	12	0	15	0	237	251	231
S 0520-G	15	0	15	0	232	250	232
S 0530-G	25	0	25	0	214	247	214
S 0540-G	40	0	40	0	180	238	182
S 1005-G	8	0	10	4	234	242	231
S 1010-G	22	0	20	0	219	248	224
S 1015-G	25	0	23	0	214	247	219
S 1020-G	30	0	28	0	204	244	211
S 1030-G	45	0	41	0	169	233	185
S 1040-G	50	0	43	0	157	229	183
S 1050-G	56	0	52	0	137	222	160
S 1060-G	75	0	70	0	70	195	124
S 1510-G	17	0	20	10	204	222	200
S 1515-G	35	0	30	5	182	226	196
S 1565-G	90	0	78	0	0	175	114
S 2005-G	14	0	15	24	180	194	182
S 2010-G	25	0	25	15	179	205	182
S 2020-G	42	0	40	7	159	213	170
S 2030-G	58	0	55	0	130	218	153
S 2040-G	67	0	60	0	103	207	147
S 2050-G	80	0	72	0	50	189	126
S 2060-G	87	0	80	0	0	178	112
S 2565-G	100	0	95	10	0	146	80
S 3010-G	27	0	25	33	142	165	149
S 3020-G	41	0	40	30	120	158	128
S 3030-G	60	0	59	22	91	158	109
S 3040-G	77	0	67	15	42	160	110
S 3050-G	90	0	78	15	0	147	94
S 3060-G	100	0	95	25	0	125	68
S 3560-G	100	0	95	35	0	114	62
S 4020-G	58	0	47	42	72	125	100
S 4030-G	68	0	63	35	56	130	87
S 4040-G	80	0	75	42	0	113	68
S 4050-G	95	0	90	50	0	93	48
S 4550-G	100	0	93	55	0	85	46
S 5020-G	55	0	50	52	67	110	83
S 5030-G	80	0	72	52	0	98	62
S 5040-G	92	0	90	60	0	80	38
S 5540-G	100	0	98	70	0	60	28

NCS	C	M	Y	K	R	G	B
S 6020-G	70	0	60	70	18	73	51
S 6030-G	90	0	90	72	0	59	22
S 7020-G	90	0	90	80	0	44	15
S 0505-G10Y	7	0	10	0	246	253	239
S 0510-G10Y	10	0	13	0	241	251	234
S 0520-G10Y	17	0	24	0	231	249	215
S 0530-G10Y	27	0	34	0	213	244	195
S 0540-G10Y	40	0	44	0	182	237	172
S 0550-G10Y	45	0	49	0	169	234	160
S 0560-G10Y	55	0	54	0	138	222	151
S 0565-G10Y	60	0	60	0	120	213	136
S 1005-G10Y	9	0	12	5	230	239	224
S 1010-G10Y	17	0	20	0	229	249	221
S 1020-G10Y	27	0	30	0	210	245	203
S 1030-G10Y	37	0	40	0	189	240	182
S 1040-G10Y	40	0	45	0	183	237	169
S 1050-G10Y	50	0	55	0	156	228	146
S 1060-G10Y	65	0	65	0	103	206	125
S 1070-G10Y	75	0	75	0	65	192	108
S 2005-G10Y	12	0	15	23	185	197	184
S 2010-G10Y	24	0	25	16	179	203	180
S 2020-G10Y	40	0	43	10	159	205	157
S 2030-G10Y	52	0	52	5	136	207	146
S 2040-G10Y	62	0	62	0	115	211	132
S 2050-G10Y	72	0	72	0	77	196	113
S 2060-G10Y	85	0	85	0	0	177	93
S 2070-G10Y	98	0	100	5	0	152	74
S 3010-G10Y	25	0	30	32	146	167	143
S 3020-G10Y	45	0	45	25	121	165	128
S 3030-G10Y	58	0	59	22	95	158	108
S 3040-G10Y	70	0	69	17	67	159	100
S 3050-G10Y	80	0	78	20	14	145	85
S 3060-G10Y	90	0	90	25	0	130	64
S 3065-G10Y	100	0	100	25	0	124	63
S 3560-G10Y	100	0	100	45	0	99	49
S 4010-G10Y	30	0	35	47	113	133	111
S 4020-G10Y	50	0	52	42	88	128	92
S 4030-G10Y	62	0	64	42	64	121	77
S 4040-G10Y	80	0	82	40	0	116	59
S 4050-G10Y	90	0	90	40	0	110	53
S 4550-G10Y	100	0	100	55	0	85	41
S 5010-G10Y	30	0	40	58	94	111	88
S 5020-G10Y	60	0	62	50	61	110	72
S 5030-G10Y	71	0	71	52	34	102	60
S 5040-G10Y	90	0	97	60	0	84	30
S 5540-G10Y	90	0	90	68	0	68	28
S 6010-G10Y	35	0	40	65	76	95	76
S 6020-G10Y	55	0	60	70	46	79	50
S 6030-G10Y	80	0	88	70	0	68	20

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NCS	C	M	Y	K	R	G	B
S 6530-G10Y	90	0	100	80	0	48	13
S 7010-G10Y	45	0	50	70	57	81	58
S 7020-G10Y	72	0	72	80	0	52	26
S 8010-G10Y	50	0	70	90	19	40	15
S 0505-G20Y	5	0	10	0	248	252	238
S 0510-G20Y	9	0	16	0	244	252	229
S 0515-G20Y	14	0	20	0	235	250	221
S 0520-G20Y	18	0	28	0	230	248	207
S 0530-G20Y	29	0	40	0	211	242	182
S 0540-G20Y	39	0	50	0	190	237	158
S 0550-G20Y	44	0	55	0	176	232	145
S 0560-G20Y	50	0	65	0	159	222	117
S 0570-G20Y	60	0	70	0	122	211	102
S 0575-G20Y	75	0	90	0	52	183	51
S 0804-G20Y	5	0	10	2	244	248	235
S 0907-G20Y	10	0	15	4	231	241	222
S 1005-G20Y	8	0	13	5	232	239	223
S 1010-G20Y	15	0	25	3	227	240	205
S 1015-G20Y	22	0	30	0	222	246	202
S 1020-G20Y	29	0	39	0	210	243	185
S 1030-G20Y	34	0	43	0	200	240	174
S 1040-G20Y	40	0	51	0	187	236	155
S 1050-G20Y	50	0	67	0	160	221	112
S 1060-G20Y	60	0	80	0	125	205	75
S 1070-G20Y	70	0	90	0	79	189	45
S 1075-G20Y	80	0	100	0	0	173	16
S 1510-G20Y	20	0	28	10	200	218	186
S 1515-G20Y	28	0	35	5	196	227	182
S 2005-G20Y	10	0	15	25	186	194	181
S 2010-G20Y	23	0	29	18	177	198	170
S 2020-G20Y	39	0	45	8	166	210	155
S 2030-G20Y	50	0	60	5	144	207	124
S 2040-G20Y	58	0	68	6	117	194	104
S 2050-G20Y	68	0	78	2	88	192	83
S 2060-G20Y	78	0	90	2	32	175	61
S 2070-G20Y	82	0	100	5	0	165	29
S 2075-G20Y	88	0	100	5	0	161	52
S 2570-G20Y	90	0	100	20	0	140	50
S 3005-G20Y	11	0	20	40	153	161	145
S 3010-G20Y	20	0	30	32	155	170	143
S 3020-G20Y	39	0	46	26	133	167	125
S 3030-G20Y	50	0	60	28	107	151	97
S 3040-G20Y	60	0	72	23	89	150	81
S 3050-G20Y	72	0	80	20	56	147	75
S 3060-G20Y	85	0	95	25	0	135	48
S 3560-G20Y	90	0	100	38	0	117	41
S 4005-G20Y	15	0	20	52	123	132	121
S 4040-G20Y	70	0	82	40	42	120	51
S 4050-G20Y	82	0	92	47	0	106	32

NCS	C	M	Y	K	R	G	B
S 4550-G20Y	90	0	100	58	0	89	30
S 5005-G20Y	17	0	30	60	104	113	95
S 5040-G20Y	80	0	92	60	0	89	22
S 5540-G20Y	80	0	98	70	0	72	10
S 6005-G20Y	20	0	30	69	83	92	78
S 7005-G20Y	25	0	35	80	58	68	54
S 8005-G20Y	30	0	40	90	34	44	32
S 8505-G20Y	35	0	45	95	23	32	22
S 0505-G30Y	5	0	13	0	249	252	234
S 0510-G30Y	8	0	18	0	246	251	225
S 0520-G30Y	15	0	28	0	237	249	207
S 0530-G30Y	25	0	40	0	221	244	183
S 0540-G30Y	32	0	50	0	208	239	159
S 0550-G30Y	40	0	60	0	189	231	133
S 0560-G30Y	45	0	70	0	176	222	106
S 0570-G30Y	50	0	80	0	161	213	78
S 0580-G30Y	60	0	90	0	124	199	42
S 1005-G30Y	5	0	10	5	236	240	228
S 1010-G30Y	12	0	23	4	230	239	208
S 1020-G30Y	25	0	38	0	219	244	186
S 1030-G30Y	35	0	50	0	201	238	159
S 1040-G30Y	40	0	60	0	189	231	133
S 1050-G30Y	45	0	70	0	175	222	106
S 1060-G30Y	50	0	80	0	161	213	78
S 1070-G30Y	60	0	90	0	124	199	41
S 1080-G30Y	70	0	100	0	79	184	0
S 2005-G30Y	10	0	15	25	185	194	180
S 2010-G30Y	15	0	25	20	188	200	173
S 2020-G30Y	30	0	45	17	167	193	142
S 2030-G30Y	40	0	60	14	154	188	115
S 2040-G30Y	50	0	68	10	136	189	101
S 2050-G30Y	60	0	90	7	109	179	45
S 2060-G30Y	68	0	100	7	80	177	0
S 2070-G30Y	70	0	100	15	62	164	0
S 2075-G30Y	80	0	100	11	0	159	17
S 2570-G30Y	70	0	100	30	48	140	0
S 3010-G30Y	15	0	30	32	163	173	145
S 3020-G30Y	30	0	45	30	142	164	122
S 3030-G30Y	42	0	62	30	120	152	92
S 3040-G30Y	50	0	78	30	106	145	63
S 3050-G30Y	60	0	90	35	74	134	23
S 3060-G30Y	70	0	100	35	44	133	0
S 3560-G30Y	75	0	100	50	1	108	0
S 4010-G30Y	22	0	40	50	118	130	101
S 4020-G30Y	33	0	52	45	112	132	90
S 4030-G30Y	50	0	70	45	85	121	63
S 4040-G30Y	68	0	90	40	42	121	22
S 4050-G30Y	75	0	100	50	2	108	0
S 4550-G30Y	72	0	100	60	7	93	0



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NCS	C	M	Y	K	R	G	B
S 5010-G30Y	27	0	45	60	94	108	79
S 5020-G30Y	45	0	60	55	79	108	67
S 5030-G30Y	50	0	78	60	65	98	36
S 5040-G30Y	60	0	90	60	41	94	2
S 5540-G30Y	60	0	90	70	24	72	0
S 6010-G30Y	25	0	40	65	86	98	76
S 6020-G30Y	45	0	70	68	60	85	40
S 6030-G30Y	50	0	80	72	43	73	18
S 7010-G30Y	33	0	45	70	69	85	62
S 7020-G30Y	50	0	80	80	29	57	9
S 8010-G30Y	40	0	72	90	26	41	12
S 0505-G40Y	5	0	15	0	250	252	231
S 0507-G40Y	6	0	16	0	249	252	229
S 0510-G40Y	8	0	18	0	246	251	225
S 0515-G40Y	13	0	25	0	240	250	213
S 0520-G40Y	13	0	30	0	241	248	203
S 0530-G40Y	20	0	40	0	231	245	182
S 0540-G40Y	25	0	50	0	224	242	161
S 0550-G40Y	30	0	60	0	214	236	135
S 0560-G40Y	35	0	70	0	205	230	111
S 0570-G40Y	40	0	80	0	190	221	80
S 0575-G40Y	50	0	90	0	160	208	45
S 0603-G40Y	3	0	8	2	246	248	238
S 1005-G40Y	5	0	15	5	237	239	219
S 1010-G40Y	10	0	25	5	231	236	202
S 1015-G40Y	17	0	35	0	234	246	193
S 1020-G40Y	23	0	45	0	226	243	172
S 1030-G40Y	28	0	55	0	218	238	147
S 1040-G40Y	35	0	65	0	203	231	122
S 1050-G40Y	40	0	72	0	192	226	104
S 1060-G40Y	47	0	90	0	170	211	47
S 1070-G40Y	50	0	95	0	159	206	18
S 1075-G40Y	55	0	100	0	142	200	0
S 1510-G40Y	13	0	25	10	214	223	192
S 1515-G40Y	18	0	38	10	207	219	169
S 2005-G40Y	7	0	15	25	190	195	181
S 2010-G40Y	13	0	25	20	191	201	173
S 2020-G40Y	22	0	46	19	180	194	139
S 2030-G40Y	35	0	62	15	164	190	111
S 2040-G40Y	40	0	70	15	153	183	94
S 2050-G40Y	45	0	80	15	141	176	72
S 2060-G40Y	58	0	100	12	115	180	0
S 2070-G40Y	60	0	100	15	104	173	0
S 3010-G40Y	15	0	30	35	158	168	140
S 3020-G40Y	30	0	50	30	142	163	114
S 3030-G40Y	35	0	62	30	134	157	93
S 3040-G40Y	40	0	75	32	123	148	68
S 3050-G40Y	48	0	90	40	98	134	17
S 3060-G40Y	58	0	100	40	80	134	0

NCS	C	M	Y	K	R	G	B
S 3065-G40Y	60	0	100	43	70	127	0
S 3560-G40Y	65	0	100	50	47	113	0
S 4040-G40Y	50	0	90	52	75	112	5
S 4050-G40Y	60	0	100	55	55	107	0
S 4550-G40Y	60	0	100	60	51	102	0
S 5040-G40Y	50	0	90	63	57	92	0
S 5540-G40Y	58	0	100	70	36	78	0
S 0505-G50Y	3	0	15	0	252	252	231
S 0510-G50Y	4	0	17	0	251	251	227
S 0520-G50Y	10	0	30	0	246	249	203
S 0530-G50Y	15	0	40	0	239	245	183
S 0540-G50Y	20	0	52	0	234	243	157
S 0550-G50Y	25	0	62	0	226	239	132
S 0560-G50Y	30	0	72	0	215	232	106
S 0565-G50Y	35	0	82	0	203	224	76
S 1005-G50Y	5	0	17	5	237	239	216
S 1010-G50Y	8	0	26	5	235	237	202
S 1020-G50Y	15	0	42	0	240	246	179
S 1030-G50Y	25	0	60	0	225	238	136
S 1040-G50Y	28	0	70	0	220	234	110
S 1050-G50Y	32	0	80	0	210	227	81
S 1060-G50Y	37	0	90	0	197	218	49
S 1070-G50Y	45	0	100	0	173	207	0
S 1075-G50Y	50	0	100	3	154	200	0
S 2005-G50Y	5	0	17	25	193	196	178
S 2010-G50Y	10	0	25	21	195	201	172
S 2020-G50Y	22	0	45	20	177	191	138
S 2030-G50Y	27	0	60	18	174	189	113
S 2040-G50Y	30	0	70	19	166	182	91
S 2050-G50Y	43	0	90	16	145	176	42
S 2060-G50Y	47	0	95	15	140	179	17
S 2070-G50Y	55	0	100	15	121	177	0
S 3005-G50Y	6	0	20	40	160	164	146
S 3010-G50Y	12	0	37	38	156	161	126
S 3020-G50Y	20	0	47	33	154	165	116
S 3030-G50Y	28	0	70	35	139	152	74
S 3040-G50Y	35	0	80	32	134	152	58
S 3050-G50Y	37	0	90	40	119	140	19
S 3060-G50Y	48	0	100	40	105	140	0
S 3065-G50Y	52	0	100	40	95	138	0
S 3560-G50Y	50	0	100	53	81	116	0
S 4005-G50Y	6	0	20	52	133	136	122
S 4010-G50Y	13	0	35	50	129	135	108
S 4020-G50Y	20	0	50	48	124	134	91
S 4030-G50Y	35	0	72	47	108	126	59
S 4040-G50Y	40	0	82	50	96	119	37
S 4050-G50Y	50	0	95	55	72	109	0
S 4550-G50Y	50	0	100	58	72	106	0
S 5005-G50Y	5	0	25	60	117	119	102



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NCS	C	M	Y	K	R	G	B
S 5010-G50Y	10	0	35	60	112	116	92
S 5020-G50Y	20	0	60	60	102	109	62
S 5030-G50Y	30	0	70	60	92	105	49
S 5040-G50Y	45	0	90	62	68	97	0
S 5540-G50Y	40	0	90	70	58	80	0
S 6005-G50Y	8	0	25	70	91	94	81
S 6010-G50Y	10	0	36	70	90	93	72
S 6020-G50Y	20	0	65	70	82	89	43
S 6030-G50Y	35	0	80	72	61	77	17
S 6530-G50Y	45	0	90	80	33	56	0
S 7005-G50Y	10	0	35	82	63	66	50
S 7010-G50Y	15	0	45	72	81	87	60
S 7020-G50Y	30	0	70	82	48	59	22
S 8005-G50Y	15	0	50	90	42	45	27
S 8010-G50Y	20	0	70	90	37	44	14
S 0505-G60Y	2	0	15	0	253	251	230
S 0510-G60Y	3	0	18	0	252	251	225
S 0515-G60Y	6	0	25	0	250	249	216
S 0520-G60Y	8	0	30	0	248	248	203
S 0530-G60Y	15	0	45	0	240	244	172
S 0540-G60Y	20	0	60	0	235	241	135
S 0550-G60Y	20	0	70	0	232	234	106
S 0560-G60Y	25	0	80	0	223	229	80
S 0570-G60Y	30	0	90	0	211	221	47
S 0575-G60Y	35	0	100	0	198	214	0
S 0804-G60Y	2	0	10	2	248	248	235
S 0907-G60Y	5	0	16	3	242	244	222
S 1005-G60Y	4	0	14	5	239	240	221
S 1010-G60Y	9	0	33	2	242	243	193
S 1015-G60Y	10	0	40	3	238	238	177
S 1020-G60Y	13	0	44	1	240	242	173
S 1030-G60Y	20	0	58	0	235	242	141
S 1040-G60Y	25	0	70	0	225	235	109
S 1050-G60Y	25	0	78	0	223	230	86
S 1060-G60Y	31	0	90	0	210	221	48
S 1070-G60Y	34	0	98	0	200	215	0
S 1075-G60Y	37	0	100	0	194	213	0
S 1510-G60Y	10	0	30	10	220	224	184
S 1515-G60Y	15	0	40	10	213	221	166
S 2005-G60Y	6	0	20	25	192	195	173
S 2010-G60Y	10	0	30	24	189	194	159
S 2020-G60Y	18	0	45	20	185	195	139
S 2030-G60Y	20	0	60	20	183	191	111
S 2040-G60Y	28	0	72	20	168	182	86
S 2050-G60Y	28	0	80	20	168	179	68
S 2060-G60Y	33	0	90	20	161	177	38
S 2070-G60Y	40	0	100	20	156	181	0
S 3010-G60Y	12	0	35	36	159	165	131
S 3020-G60Y	17	0	50	35	154	162	109

NCS	C	M	Y	K	R	G	B
S 3030-G60Y	25	0	70	35	144	154	75
S 3040-G60Y	28	0	80	35	140	152	55
S 3050-G60Y	30	0	90	40	130	144	19
S 3060-G60Y	35	0	95	42	121	140	0
S 3065-G60Y	35	0	100	45	121	138	0
S 3560-G60Y	40	0	100	52	100	123	0
S 4040-G60Y	25	0	75	52	112	122	50
S 4050-G60Y	22	0	90	58	107	114	6
S 4550-G60Y	30	0	100	60	101	114	0
S 5040-G60Y	20	0	90	68	86	93	0
S 5540-G60Y	20	0	100	75	73	78	0
S 0505-G70Y	2	0	17	0	253	251	227
S 0510-G70Y	2	0	20	0	254	251	222
S 0520-G70Y	6	0	30	0	251	249	203
S 0530-G70Y	10	0	50	0	247	243	158
S 0540-G70Y	12	0	60	0	244	239	135
S 0550-G70Y	15	0	70	0	239	235	105
S 0560-G70Y	19	0	80	0	231	228	77
S 0570-G70Y	22	0	90	0	224	224	41
S 0575-G70Y	25	0	100	0	217	218	0
S 1005-G70Y	2	0	12	4	245	244	227
S 1010-G70Y	7	0	31	2	244	243	197
S 1020-G70Y	10	0	45	2	241	240	167
S 1030-G70Y	17	0	60	2	233	235	133
S 1040-G70Y	20	0	70	2	227	230	105
S 1050-G70Y	20	0	80	0	229	228	77
S 1060-G70Y	25	0	90	5	207	212	45
S 1070-G70Y	26	0	95	5	205	211	15
S 1075-G70Y	27	0	100	5	205	212	0
S 2005-G70Y	3	0	15	25	196	198	181
S 2010-G70Y	7	0	30	25	191	193	158
S 2020-G70Y	10	0	45	23	192	193	136
S 2030-G70Y	15	0	60	22	187	190	109
S 2040-G70Y	16	0	74	22	184	185	78
S 2050-G70Y	25	0	85	23	168	175	52
S 2060-G70Y	24	0	95	22	174	180	0
S 2070-G70Y	23	0	100	30	166	170	0
S 3010-G70Y	5	0	32	38	165	166	133
S 3020-G70Y	10	0	47	35	164	166	114
S 3030-G70Y	15	0	70	37	154	156	72
S 3040-G70Y	20	0	78	40	142	147	54
S 3050-G70Y	20	0	92	47	130	135	0
S 3060-G70Y	25	0	100	47	131	139	0
S 3560-G70Y	32	0	100	52	111	126	0
S 4010-G70Y	7	0	37	50	136	138	106
S 4020-G70Y	10	0	52	52	128	130	82
S 4030-G70Y	12	0	68	50	131	132	62
S 4040-G70Y	20	0	80	56	111	117	37
S 4050-G70Y	13	0	89	60	112	113	7

# NCS DIGITAL ATLAS 1950

NCS	C	M	Y	K	R	G	B
S 4550-G70Y	15	0	100	65	104	105	0
S 5010-G70Y	5	0	40	62	112	113	83
S 5020-G70Y	10	0	60	60	113	114	62
S 5030-G70Y	10	0	70	62	109	109	46
S 5040-G70Y	10	0	90	68	95	95	0
S 5540-G70Y	15	0	95	80	61	65	0
S 6010-G70Y	5	0	40	68	98	99	72
S 6020-G70Y	5	0	52	70	93	93	56
S 6030-G70Y	10	0	70	73	83	84	33
S 7010-G70Y	5	0	40	80	71	72	51
S 7020-G70Y	10	0	90	89	42	44	0
S 8010-G70Y	5	0	45	90	45	46	28
S 0505-G80Y	1	0	15	0	254	252	231
S 0507-G80Y	1	0	18	0	254	250	225
S 0510-G80Y	2	0	22	0	254	250	219
S 0515-G80Y	3	0	25	0	253	250	215
S 0520-G80Y	4	0	30	0	252	248	202
S 0530-G80Y	5	0	45	0	251	244	169
S 0540-G80Y	8	0	60	0	248	239	133
S 0550-G80Y	8	0	70	0	248	235	106
S 0560-G80Y	8	0	80	0	245	230	78
S 0570-G80Y	8	0	90	0	243	226	40
S 0603-G80Y	0	0	8	2	251	249	238
S 1005-G80Y	0	0	17	5	245	241	216
S 1010-G80Y	1	0	35	5	243	236	182
S 1015-G80Y	6	0	40	3	242	238	176
S 1020-G80Y	5	0	45	6	238	233	160
S 1030-G80Y	5	0	60	7	235	226	124
S 1040-G80Y	9	0	70	5	234	226	101
S 1050-G80Y	13	0	80	5	227	220	74
S 1060-G80Y	14	0	90	5	224	217	38
S 1070-G80Y	16	0	95	5	221	215	2
S 1075-G80Y	21	0	100	5	215	214	0
S 1505-G80Y	0	0	16	15	223	221	199
S 1510-G80Y	5	0	35	11	225	223	173
S 1515-G80Y	5	0	40	15	217	215	158
S 2005-G80Y	1	0	20	25	199	198	174
S 2010-G80Y	4	0	35	25	195	193	150
S 2020-G80Y	5	0	50	25	193	190	123
S 2030-G80Y	2	0	62	27	191	183	95
S 2040-G80Y	5	0	70	27	187	180	78
S 2050-G80Y	10	0	80	30	174	169	52
S 2060-G80Y	8	0	92	32	172	165	0
S 2070-G80Y	10	0	100	35	174	167	0
S 3005-G80Y	0	0	25	40	168	166	140
S 3010-G80Y	4	0	35	40	162	161	126
S 3020-G80Y	2	0	50	40	163	159	103
S 3030-G80Y	2	0	62	42	158	152	79
S 3040-G80Y	2	0	72	40	163	155	61

NCS	C	M	Y	K	R	G	B
S 3050-G80Y	3	0	83	50	140	133	27
S 3060-G80Y	7	0	92	52	132	128	0
S 4005-G80Y	0	0	25	52	139	138	117
S 4040-G80Y	0	0	90	58	124	117	0
S 4050-G80Y	0	0	100	63	116	109	0
S 5005-G80Y	0	0	25	60	121	120	102
S 5040-G80Y	0	0	92	72	89	85	0
S 6005-G80Y	0	0	25	72	92	91	76
S 7005-G80Y	0	0	25	82	68	68	55
S 8005-G80Y	0	0	25	93	39	39	30
S 8505-G80Y	0	0	25	96	31	31	24
S 0505-G90Y	0	0	13	0	255	252	234
S 0510-G90Y	0	0	18	0	255	250	225
S 0515-G90Y	0	0	25	0	255	249	214
S 0520-G90Y	0	0	35	0	255	246	190
S 0530-G90Y	0	0	45	0	255	242	169
S 0540-G90Y	0	0	60	0	254	237	137
S 0550-G90Y	0	0	70	0	253	232	106
S 0560-G90Y	0	0	80	0	252	229	77
S 0570-G90Y	0	0	90	0	251	225	47
S 0575-G90Y	0	0	100	0	250	222	0
S 0804-G90Y	0	0	10	2	251	248	234
S 0907-G90Y	0	0	20	4	247	243	213
S 1005-G90Y	0	0	20	6	243	239	209
S 1010-G90Y	0	0	35	6	244	235	180
S 1015-G90Y	0	0	40	7	241	232	168
S 1020-G90Y	0	0	45	6	244	233	159
S 1030-G90Y	0	0	55	8	240	227	133
S 1040-G90Y	0	0	70	8	239	223	95
S 1050-G90Y	0	0	80	8	239	220	68
S 1060-G90Y	0	0	90	12	227	207	27
S 1070-G90Y	0	0	95	15	221	201	0
S 1075-G90Y	0	0	100	18	217	197	0
S 1505-G90Y	0	0	20	15	223	219	192
S 1510-G90Y	1	0	25	15	222	218	184
S 1515-G90Y	1	0	40	20	210	204	149
S 2005-G90Y	0	0	20	25	201	199	174
S 2010-G90Y	0	0	35	28	193	189	145
S 2020-G90Y	0	0	50	26	198	190	121
S 2030-G90Y	0	2	60	27	193	182	98
S 2040-G90Y	0	3	70	24	199	184	80
S 2050-G90Y	0	5	80	30	182	165	48
S 2060-G90Y	0	8	90	30	179	158	12
S 2070-G90Y	0	9	100	35	168	147	0
S 3010-G90Y	0	2	35	40	166	161	125
S 3020-G90Y	0	2	50	35	176	168	108
S 3030-G90Y	0	5	62	37	169	156	82
S 3040-G90Y	0	5	75	40	161	147	52
S 3050-G90Y	0	10	90	46	143	126	3

# NCS DIGITAL ATLAS 1950

NCS	C	M	Y	K	R	G	B
S 3060-G90Y	0	9	100	50	139	123	0
S 4010-G90Y	0	4	35	52	137	132	103
S 4020-G90Y	0	5	50	50	141	133	85
S 4030-G90Y	0	8	70	50	139	126	53
S 4040-G90Y	0	10	85	55	125	110	15
S 4050-G90Y	0	10	100	61	111	98	0
S 5010-G90Y	0	5	40	62	115	109	80
S 5020-G90Y	0	10	60	62	113	103	55
S 5030-G90Y	0	15	80	62	108	93	23
S 5040-G90Y	0	15	90	68	89	76	0
S 6010-G90Y	0	5	45	67	103	98	66
S 6020-G90Y	0	15	60	72	88	77	41
S 6030-G90Y	0	20	90	75	70	58	0
S 7010-G90Y	0	10	50	78	76	70	43
S 7020-G90Y	0	30	90	83	55	41	0
S 8010-G90Y	0	35	90	90	43	31	0

# Colour Accuracy

Ignorance about colour, lack of better solutions etc. all combine to turn the choice and control of colour into a costly venture. Many of the different Colour Sample Collections on the market are being far from consistent. Often a colour may vary a great deal from one print to the next, which leads to miscommunication and the loss in marketing value, and the cost for customer claims are enormous.

Research behind the NCS - Natural Color System<sup>®</sup> has led to a logical system for all of the 10 million colours we can perceive. It simplifies colour specification and makes it possible to give exact notations for any colour. Using NCS, the exact notations, the globally leading colour accuracy and colour consistency on the NCS colour samples reduce the problem of the unacceptable colour variations of the past.

High colour accuracy is essential, if we desire a perfect colour appearance in the final product - the colour appearance our customers expect.

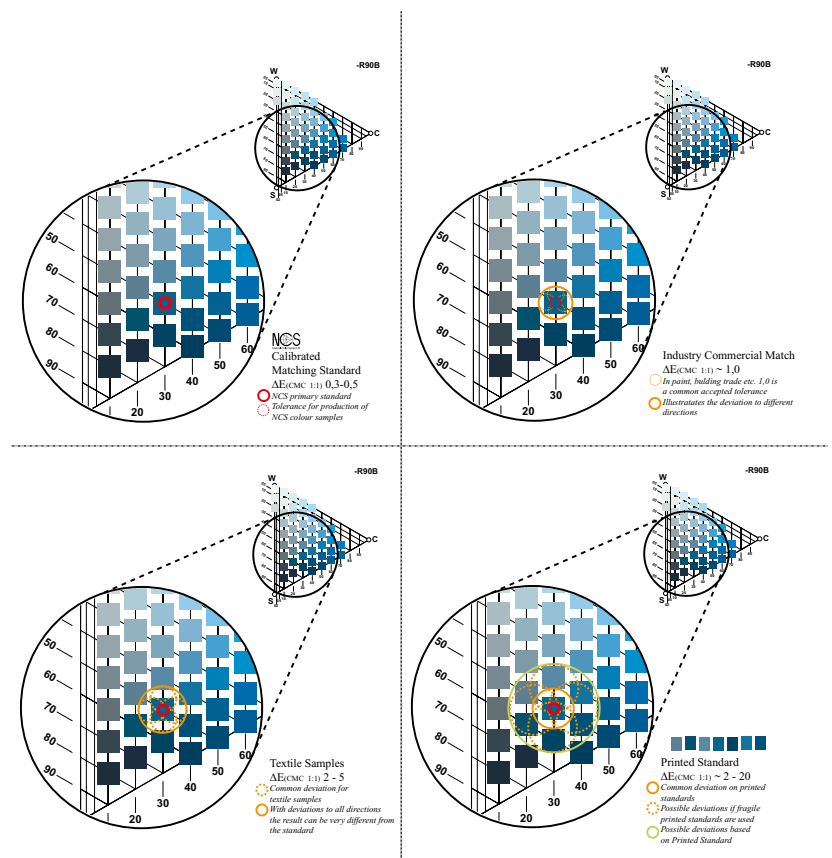


## How to Recognize Quality and Colour Accuracy

The visual appearance, i.e. how the colour looks to the eye, is the most important way to judge colour. However, industry often uses measured colour values, received from a spectrophotometer, to control the colour of the standard and the match.

The instrumental values are calculated into a  $\Delta E_{(CMC 1:1)}$  (Delta E) value. "E" is supposed to indicate the composite picture of the total colour difference (summation of the differences in lightness, chroma and hue). Ideally, the  $\Delta E_{(CMC 1:1)}$  is a perceptual indication of the size of the visual colour difference between two colours. It is the best means of technical assessment known today.

The Delta E scale starts at 0, where  $\Delta E_{(CMC 1:1)} = 0$  stands for no perceived difference at all. At  $\Delta E_{(CMC 1:1)} = 0,3$  the difference starts to become visible. In most printed sample collections only 20 % of the colour samples attain  $\Delta E_{(CMC 1:1)} = 2$ , the remaining 80% is even worse,  $\Delta E_{(CMC 1:1)} = 2-20$ . NCS has managed to diminish the unacceptable colour variations of the past, reaching almost zero,  $\Delta E_{(CMC 1:1)} = 0,3$ . Thanks to the NCS Quality Management colour tolerances are steadily being reduced. Do not forget, the human eye is still the most effective way to evaluate the visual appearance of a colour.



## NCS – CMYK – RGB

In the NCS Digital Atlas, the 1 950 NCS Original colours are converted into CMYK values. When using the NCS Digital Atlas you work with different colour spaces that mix the colours in different ways. This might result in different visual appearance of the colours depending on if you view them on a screen, an offset print, or comparing a regular print-out with an NCS colour sample.

### RGB

On a monitor, all colours are created with mixtures of red, green and blue light (RGB). Different monitors do not use the same red, green and blue primary colours, which is one of the reasons why the same RGB values can appear as different colours depending on different screens.

### CMYK

In four-colour print or in a computer printer, the colours are mixed from CMYK - cyan (blue), magenta (bluish red), yellow and black pigment. CMYK is a recipe how the colour should be mixed, and the visual appearance of the colour depends on what paper it is printed on. The primary colour for offset print usually follows the international standard. For computer printers there is no comparable standard.

### NCS

The Natural Color System<sup>®</sup> (NCS<sup>®</sup>) is the only colour system that describes colours exactly as we see them, which is why the system is easy to understand, logical and simple to use. Any of the millions of colours that exist can be defined within the NCS system and given a precise notation.

The NCS Original Colour Sample Collection includes 1 950 of these colours. The NCS colour samples are made of paper coated with completely covering semi-matt varnish paper.

When the NCS system is known, it is possible to judge the attributes of a colour by its notation. The NCS notations describe the purely visual properties of the colour and have nothing at all to do with the mixing of pigments or reflection curves etc.

## Technical Specifications

To get the most accurate colour match in all media, when using the NCS Palette and the NCS Digital Atlas, it is very important that the settings in the computer's operative system, software programs and print-drivers are adjusted to simulate the conditions that have been used to develop the CMYK values for the NCS 1 950 standard colours.

## CMYK Values

The CMYK values for the NCS colours in the NCS Palette, and used to make the NCS Digital Atlas, are based on and visually checked against the DCS<sup>®</sup> BOOK CMYK, Digital Colour Scale, (ISBN 3-9805793-5-2). This is an extensive printed colour scale based on the latest international standard for four-colour printing. This is a widely used professional colour scale. By basing the NCS Palette on the international standards for four-colour printing, we think this gives the best condition to reach an accurate colour reproduction also on screens and computer printers.

The technical specifications for the DCS<sup>®</sup> BOOK CMYK are as follows:

Screen: 60l/cm – 150 lpi

Screen angles	Cyan (C)	15°
	Magenta (M)	75°
	Yellow (Y)	90°
	Black (K)	45°

Uncertainty of tone values on films: max ±2%

Paper: BVS white, matt-coated, wood-free, 135g/m<sup>2</sup>

Tone value increase:

40% middle tone	16% ± 3% (CMY)
	19% ± 3% for K
80% shadow tone	12% ± 2% (CMY)
	14% ± 2% for K

Solid tone coloration: in accordance with DIN ISO 12647-2

Colour sequence: black – cyan – magenta – yellow

## CMYK Values for the NCS Colours

All colours in the NCS Digital Atlas are specified in terms of the percentages of yellow, magenta, cyan and black inks. CMYK values on the Palette are determined with 100% achromatic CMYK mixtures, which means that at least one of the chromatic elementary colours cyan, magenta, or yellow always is 0, as colour results in many printers will be much better that way.

In the NCS Palette Creative that have been used for the making of NCS Digital Atlas, the NCS Quality Centre has made extensive measurements of the DCS<sup>®</sup> BOOK and thereafter made individual visual controls of each colour to get the best visual colour match between the NCS colour sample and the closest CMYK value. Each and every NCS colour sample has been compared to the CMYK colours to find the best possible match.

### Measurement Values

The DCS<sup>®</sup> BOOK contains about 65 000 CMYK prints. Out of these a selection of 20 000 CMYK prints have been measured and calculated by the NCS Quality Centre. The measurements have then been evaluated and matched with the 1 950 NCS standard colours.

The CMYK colours have been measured in a Macbeth ColorEye 7000 spectrophotometer. That instrument is calibrated against the NCS reference instrument, a Zeiss DMC 26 spectrophotometer. The measurement geometry is d/8, SCI. CIE values are based on the standard illuminant D65 and the 1964 standard observer. Measured differences in colour reproduction are indicated in  $\Delta E_{CMC(1:1)}$  units.

### Visual Control

The accuracy of the measured and calculated colour matches with NCS Original colour samples has been checked as well as tested in a Laser- and Ink Jet printer. Each and every CMYK colour has then been visually compared with an NCS colour sample.

The outcome of the test print has been modified for best visual match to secure the best possible colour accuracy, when a colour is converted from a coated NCS colour sample to a CMYK value in the NCS Palette.

In the case where the measured- and calculated value and the value from the visual control differ, the values based on the visual control have been selected. This is because the visual appearance of a colour is the most important way to judge a colour.

## Technical Limitations of Printing

The NCS System is currently illustrated with 1 950 colour samples (manufactured with covering varnish paint on paper) evenly distributed over most of the colour space. In order to obtain exactly the right colour on all samples, some 25 different colour pigments are used today.

On a monitor, all colours are created with mixtures of red, green and blue light (RGB) and in four-colour print or in a printer, the colours are mixed from yellow, cyan (blue), magenta (bluish red) and black pigments or inks (CMYK). These techniques, which use only three or four different colours/pigments, can therefore only reproduce a reduced number of colours.

These limitations become apparent, when the lightest and the most chromatic NCS colour samples in the orange, purple and green area are matched to CMYK values. Colours, which the four-colour printing technique does not manage to reproduce exactly, have been highlighted in grey in the NCS Translation Table with the NCS – CMYK – RGB values. These colours are divided into two classes. In the list the light grey indicates colours with a legible deviation from the NCS Original colour sample. The darker grey indicates colours with an even greater deviation between expected outcome and the NCS colour sample. For colours of both classes, a representative CMYK value, which is judged to be the visually closest to the NCS Original colour sample, has been selected.

