

Ostwald optimal colours (o) of maximum (m) C _{AB} for D65, Y _w =100, Y _m =520_770, CIELAB data															%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code				%
0 405	32 561	80.85	-67.55	-32.54	74.98	0.1805	-0.1029	205.7	16 483	37 589	Cm				%
6 435	32 562	81.18	-81.89	-19.25	84.12	0.1732	-0.096	193.2	17 486	42 610					%
10 450	32 563	81.52	-109.06	11.43	109.66	0.1595	-0.0803	174.0	19 496	-1 496c					%
12 460	33 565	82.01	-120.74	33.26	125.23	0.1538	-0.0692	164.5	21 505	-1 505c					%
12 465	33 567	82.73	-118.76	34.5	123.67	0.1552	-0.0687	163.8	21 506	-1 506c					%
14 470	33 569	83.3	-123.47	57.53	136.22	0.1532	-0.0572	155.0	24 520	-1 520c					%
15 475	34 573	84.63	-118.73	70.39	138.03	0.1564	-0.0512	149.3	25 528	-1 528c	Gm				%
16 480	36 580	86.98	-107.21	84.2	136.33	0.1633	-0.0452	141.8	27 537	-1 537c					%
17 485	39 595	91.12	-80.53	100.07	128.45	0.1778	-0.0394	128.8	29 548	-1 548c					%
18 490	-1 490c	97.55	-23.15	119.05	121.28	0.2052	-0.0337	101.0	33 565	11 459	max				%
19 495	-1 495c	96.94	-20.63	125.42	127.1	0.2062	-0.0306	99.3	33 566	12 462					%
20 500	-1 500c	96.17	-17.33	131.15	132.29	0.2076	-0.0277	97.5	33 567	12 464					%
22 510	-1 510c	94.0	-8.24	140.17	140.41	0.2116	-0.0224	93.3	33 569	13 469					%
23 520	-1 519c	92.57	-2.53	142.99	143.01	0.2142	-0.0202	91.0	34 570	14 471	Ym				%
25 530	-1 529c	88.94	10.79	144.39	144.79	0.2205	-0.0165	85.7	34 573	15 475					%
27 540	-1 539c	84.43	25.54	141.4	143.69	0.2281	-0.0134	79.7	35 577	15 478					%
28 545	-1 544c	81.91	33.05	138.34	142.24	0.2322	-0.0121	76.5	35 579	15 479					%
29 550	-1 549c	79.2	40.58	134.51	140.5	0.2367	-0.0111	73.2	36 582	16 480					%
30 555	-1 554c	76.32	47.96	130.1	138.66	0.2413	-0.0103	69.7	36 584	16 481					%
32 560	-1 560c	70.18	61.63	120.13	135.02	0.2511	-0.0093	62.8	37 589	16 483					%
380	770	100.0	0.0	0.0	0.0	0.2154	-0.0861	0.0							%
Ostwald optimal colours (o) of maximum (m) C _{AB} for D65, Y _w =100, Y _m =770_520, CIELAB complementary															%
i ₁ , λ ₁	i ₂ , λ ₂	L* ₁₀₀	a* ₁₀₀	b* ₁₀₀	C* _{ab}	a'	b'	h _{ab}	i _d , λ _d	i _c , λ _c	Code				%
32 561	0 405	70.73	60.88	110.08	125.79	0.2505	-0.022	61.0	37 589	16 483	Rm				%
32 562	6 435	70.32	70.58	34.83	78.71	0.2562	-0.0659	26.2	42 610	17 486					%
32 563	10 450	69.88	85.85	-12.65	86.78	0.2653	-0.0935	351.6	-1 496c	19 496					%
33 565	12 460	69.24	92.89	-29.55	97.48	0.2698	-0.1035	342.3	-1 505c	21 505					%
33 567	12 465	68.27	94.84	-31.22	99.85	0.2716	-0.1046	341.7	-1 506c	21 506					%
33 569	14 470	67.49	99.24	-42.98	108.15	0.2748	-0.1119	336.5	-1 520c	24 520					%
34 573	15 475	65.52	102.87	-49.85	114.31	0.2784	-0.1167	334.1	-1 528c	25 528	Mm				%
36 580	16 480	61.69	107.96	-59.02	123.05	0.2848	-0.1241	331.3	-1 537c	27 537					%
39 595	17 485	53.22	112.99	-75.47	135.88	0.297	-0.1406	326.2	-1 548c	29 548					%
-1 490c	18 490	29.91	89.01	-117.0	147.01	0.3124	-0.2136	307.2	11 459	33 565	min				%
-1 495c	19 495	33.36	74.42	-112.09	134.55	0.2908	-0.1997	303.5	12 462	33 566					%
-1 500c	20 500	37.09	58.44	-106.44	121.43	0.2704	-0.1864	298.7	12 464	33 567					%
-1 510c	22 510	45.26	23.9	-93.37	96.38	0.2349	-0.1623	284.3	13 469	33 569					%
-1 519c	23 520	49.52	6.76	-86.32	86.58	0.2205	-0.152	274.4	14 471	34 570	Bm				%
-1 529c	25 530	58.0	-23.98	-72.06	75.95	0.1992	-0.1348	251.5	15 475	34 573					%
-1 539c	27 540	65.83	-46.7	-58.75	75.05	0.1868	-0.122	231.5	15 478	35 577					%
-1 544c	28 545	69.38	-54.68	-52.68	75.93	0.1833	-0.117	223.9	15 479	35 579					%
-1 549c	29 550	72.72	-60.59	-46.95	76.65	0.1812	-0.1126	217.7	16 480	36 582					%
-1 554c	30 555	75.82	-64.5	-41.62	76.77	0.1803	-0.1088	212.8	16 481	36 584					%
-1 560c	32 560	81.29	-66.96	-32.22	74.32	0.181	-0.1027	205.6	16 483	37 589					%
380	770	100.0	0.0	0.0	0.0	0.2154	-0.0861	0.0							%

rgb _{cab} and CIE data of a elementary hue circle according to CIE R1-47 for Ostwald colours for CIE illuminant D65																				
Yxy _{cabAB} ABC _{AB} LabC _{ab} h _{ab} data for relative spacing of elementary hue h _{ab} of CIELAB for CIE 2 degree observer																				
Elementary hue circle with 4 intended elementary hue angles: h _{ab} = 25.6, 92.4, 162.1, 271.5 of CIELAB, and 90 intended hue angles:																				
000, 001, ..., 089, CIELAB data of CIE test colours 9 (R): 40.0 58.9 28.3, 10 (Y): 81.3 -3.0 71.8, 11 (G): 52.2 -42.3 13.6, 12 (B): 30.5 1.2 -46.3																				
no.	ab	Y	x	y	a	b	c	ab	A	B	C _{ab}	h _{ab}	L*	a*	b*	C _{ab}	h _{ab}	rgb _{cab}	Code _{ab}	
000	40.0	7.0	0.443	0.255	1.735	-0.47	0.785	31.9	-1.4	32.0	357.4	70.0	82.3	-3.8	82.4	357.3	1.00	0.00	0.58	% B70R
001	40.1	7.0	0.445	0.257	1.73	-0.459	0.78	31.7	-0.9	31.8	358.2	70.0	81.9	-2.6	81.9	358.1	1.00	0.00	0.55	% B72R
002	40.2	7.0	0.448	0.259	1.725	-0.448	0.774	31.6	-0.5	31.6	359.0	70.0	81.5	-1.5	81.5	358.9	1.00	0.00	0.53	% B73R
003	40.8	6.45	0.45	0.262	1.719	-0.438	0.769	31.4	-0.1	31.4	359.8	70.0	81.0	-0.2	81.0	359.7	1.00	0.00	0.51	% B74R
004	40.8	6.453	0.453	0.264	1.714	-0.427	0.764	31.2	0.3	31.2	0.6	70.0	80.6	0.9	80.6	0.6	1.00	0.00	0.48	% B75R
005	40.8	6.455	0.456	0.266	1.709	-0.416	0.759	31.0	0.7	31.0	1.4	70.0	80.1	2.2	80.2	1.5	1.00	0.00	0.46	% B76R
006	40.8	6.458	0.458	0.268	1.704	-0.405	0.754	30.8	1.2	30.8	2.2	70.0	79.7	3.5	79.8	2.5	1.00	0.00	0.44	% B77R
007	40.8	6.461	0.461	0.271	1.698	-0.394	0.749	30.6	1.6	30.6	3.1	70.0	79.2	4.8	79.4	3.4	1.00	0.00	0.42	% B78R
008	40.9	6.463	0.463	0.273	1.693	-0.383	0.745	30.4	2.1	30.4	4.0	70.1	78.8	6.1	79.0	4.4	1.00	0.00	0.39	% B80R
009	40.9	6.466	0.466	0.276	1.688	-0.372	0.74	30.1	2.5	30.3	4.8	70.1	78.3	7.5	78.7	5.4	1.00	0.00	0.37	% B81R
010	40.9	6.469	0.469	0.278	1.683	-0.361	0.736	29.9	3.0	30.1	5.5	70.1	77.9	8.9	78.4	6.5	1.00	0.00	0.35	% B82R
011	40.9	6.471	0.471	0.281	1.677	-0.35	0.732	29.7	3.4	29.9	6.3	70.1	77.4	10.3	78.1	7.5	1.00	0.00	0.33	% B83R
012	40.9	6.474	0.474	0.283	1.672	-0.34	0.728	29.5	3.9	29.8	7.2	70.1	76.9	11.7	77.8	8.6	1.00	0.00	0.3	% B84R
013	40.9	6.477	0.477	0.286	1.667	-0.329	0.724	29.3	4.3	29.7	8.4	70.1	76.5	13.2	77.6	9.8	1.00	0.00	0.28	% B85R
014	41.0	6.48	0.48	0.289	1.662	-0.318	0.721	29.1	4.7	29.5	9.3	70.1	76.0	14.7	77.4	10.9	1.00	0.00	0.26	% B86R
015	41.0	6.483	0.483	0.291	1.656	-0.308	0.717	28.9	5.2	29.4	10.2	70.1	75.5	16.2	77.3	12.1	1.00	0.00	0.24	% B87R
016	41.0	6.486	0.486	0.294	1.651	-0.297	0.714	28.7	5.6	29.3	11.1	70.2	75.1	17.7	77.2	13.2	1.00	0.00	0.21	% B89R
017	41.0	6.489	0.489	0.297	1.646	-0.286	0.711	28.5	6.1	29.2	12.0	70.2	74.6	19.2	77.1	14.4	1.00	0.00	0.19	% B90R
018	41.0	6.492	0.3	0.4	1.641	-0.276	0.709	28.3	6.5	29.1	12.9	70.2	74.2	20.8	77.1	15.7	1.00	0.00	0.17	% B91R
019	41.0	6.495	0.302	0.636	-0.266	0.706	28.1	6.9	29.0	13.8	70.2	73.7	22.4	77.1	16.9	1.00	0.00	0.15	% B92R	
020	41.1	6.498	0.305	0.631	-0.256	0.704	27.9	7.3	28.9	14.7	70.2	73.3	24.1	77.1	18.1	1.00	0.00	0.12	% B93R	
021	41.1	6.501	0.308	0.626	-0.246	0.701	27.7	7.7	28.8	15.6	70.2	72.8	25.7	77.3	19.4	1.00	0.00	0.1	% B94R	
022	41.1	6.504	0.311	0.621	-0.236	0.699	27.5	8.1	28.7	16.5	70.2	72.4	27.4	77.4	20.7	1.00	0.00	0.08	% B95R	
023	41.1	6.507	0.314	0.616	-0.226	0.697	27.4	8.6	28.7	17.4	70.2	72.0	29.1	77.6	22.0	1.00	0.00	0.06	% B96R	
024	41.1	6.51	0.317	0.611	-0.216	0.696	27.2	9.0	28.6	18.3	70.2	71.5	30.8	77.7	23.3	1.00	0.00	0.03	% B98R	
025	41.1	6.514	0.319	0.606	-0.207	0.694	27.0	9.3	28.6	19.1	70.3	71.1	32.5	78.2	24.6	1.00	0.00	0.01	% B99R	
026	41.2	6.517	0.322	0.601	-0.198	0.693	26.8	9.7	28.5	20.0	70.3	70.7	34.3	78.6	25.9	1.00	0.00	0.00	% R00Y	
027	41.2	6.52	0.326	0.597	-0.187	0.692	26.6	10.2	28.5	20.9	70.3	70.3	36.4	79.2	27.4	1.00	0.00	0.02	% R02Y	
028	41.2	6.525	0.329	0.593	-0.176	0.692	26.5	10.6	28.5	21.9	70.3	69.9	38.7	79.9	28.9	1.00	0.03	0.00	% R03Y	
029	41.2	6.528	0.332	0.588	-0.165	0.693	26.3	11.1	28.6	22.8	70.3	69.5	40.9	80.7	30.4	1.00	0.04	0.00	% R05Y	
030	41.3	6.532	0.336	0.584	-0.155	0.693	26.2	11.5	28.6	23.8	70.3	69.1	43.2	81.5	31.9	1.00	0.06	0.00	% R06Y	
031	41.3	6.536	0.339	0.58	-0.145	0.693	26.0	11.9	28.6	24.6	70.4	68.8	45.5	82.5	33.4	1.00	0.08	0.00	% R08Y	
032	41.3	6.54	0.342	0.576	-0.136	0.694	25.9	12.3	28.7	25.5	70.4	68.4	47.8	83.5	34.9	1.00	0.09	0.00	% R09Y	
033	41.3	6.544	0.345	0.572	-0.127	0.694	25.7	12.7	28.7	26.3	70.4	68.1	50.1	84.5	36.3	1.00	0.11	0.00	% R11Y	
034	41.3	6.547	0.348	0.569	-0.118	0.695	25.6	13.1	28.7	27.1	70.4	67.7	52.4	85.6	37.7	1.00	0.12	0.00	% R12Y	
035	41.4	6.55	0.351	0.565	-0.11	0.695	25.4	13.4	28.8	27.8	70.4	67.4	54.7	86.8	39.0	1.00	0.13	0.00	% R13Y	
036	41.4	6.554	0.354	0.561	-0.102	0.696	25.3	13.8	28.8	28.5	70.4	67.1	57.0	88.1	40.3	1.00	0.15	0.00	% R15Y	
037	41.4	6.557	0.357	0.558	-0.094	0.696	25.1	14.1	28.8	29.2	70.4	66.7	59.4	89.3	41.6	1.00	0.16	0.00	% R16Y	
038	41.4	6.56	0.36	0.554	-0.087	0.697	25.0	14.4	28.9	29.9	70.4	66.4	61.7	90.7	42.9	1.00	0.18	0.00	% R18Y	
039	41.5	6.563	0.363	0.55	-0.08	0.697	24.9	14.7	28.9	30.5	70.5	66.1	64.0	92.0	44.0	1.00	0.19	0.00	% R19Y	
040	41.5	6.566	0.365	0.547	-0.074	0.697	24.7	14.9	28.9	31.1	70.5	65.8	66.3	93.4	45.2	1.00	0.21	0.00	% R21Y	
041	41.5	6.568	0.368	0.544	-0.068	0.698	24.6	15.2	29.0	31.7	70.5	65.5	68.7	94.9	46.3	1.00	0.22	0.00	% R22Y	
042	41.5	6.571	0.37	0.54	-0.062	0.698	24.5	15.4	29.0	32.2	70.5	65.2	71.0	96.4	47.4	1.00	0.24	0.00	% R24Y	
043	41.5	6.573	0.372	0.537	-0.057	0.698	24.4	15.7	29.0	32.7	70.5	64.9	73.2	97.9	48.4	1.00	0.25	0.00	% R25Y	
044	41.6	6.575	0.375	0.534	-0.052	0.698	24.3	15.9	29.0	33.2	70.5	64.6	75.5	99.4	49.4	1.00	0.27	0.00	% R27Y	
045	41.6	6.577	0.377	0.531	-0.047	0.698	24.1	16.1	29.0	33.7	70.6	64.3	77.8	100.9	50.4	1.00	0.28	0.00	% R28Y	
046	41.6	6.579	0.379	0.528	-0.043	0.698	24.0	16.3	29.0	34.1	70.6	64.0	80.0	102.5	51.3	1.00	0.3	0.00	% R30Y	
047	41.6	6.581	0.381	0.525	-0.039	0.698	23.9	16.5	29.0	34.5	70.6	63.7	82.2	104.1	52.2	1.00	0.31	0.00	% R31Y	
048	41.6	6.583	0.382	0.523	-0.035	0.698	23.8	16.8	29.1	34.9	70.6	63.5	84.4	105.7	53.0	1.00	0.33	0.00	% R33Y	
049	41.6	6.584	0.384	0.52	-0.032	0.698	23.7	16.8	29.1	35.2	70.6	63.3	86.6	107.3	53.8	1.00	0.34	0.00	% R34Y	
050	41.7	6.585	0.386	0.517	-0.029	0.697	23.6	16.9	29.1	35.6	70.6	63.0	88.8	108.9	54.6	1.00	0.36	0.00	% R36Y	
051	41.7	6.587	0.387	0.515	-0.026	0.697	23.5	17.0	29.0	35.9	70.6	62.8	90.9	110.5	55.3	1.00	0.37	0.00	% R37Y	
052	41.7	6.588	0.388	0.512	-0.023	0.697	23.4	17.1	29.0	36.2	70.6	62.6	93.0	112.1	56.0	1.00	0.39	0.00	% R39Y	
053	41.7	6.589	0.39	0.51	-0.02	0.696	23.3	17.3	29.0	36.5	70.6	62.3	95.0	113.7	56.7	1.00	0.4	0.00	% R40Y	
054	41.7	6.59	0.391	0.508	-0.018	0.696	23.2	17.4	29.0	36.7	70.7	62.1	97.0	115.2	57.3	1.00	0.42	0.00	% R42Y	
055	41.7	6.591	0.392	0.506	-0.016	0.695	23.1	17.5	29.0	37.0	70.7	61.9	99.0	116.8	57.9	1.00	0.43	0.00	% R43Y	
056	41.7	6.591	0.393	0.503	-0.014	0.695	23.1	17.4	29.0	37.2	70.7	61.7	100.9	118.3	58.5	1.00	0.45	0.00	% R45Y	
057	41.7	6.59																		

rgb* _{cab} and CIE data of a elementary hue circle according to CIE R1-47 for Ostwald colours for CIE illuminant D65																								
Yxy, rgb* _{AB} , ABC _{AB} , LabC* _{ahb} data for relative spacing of elementary hue h _{ab} of CIELAB for CIE 2 degree observer																								
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no.	ab	Y	x	y	a	b	c	ab	A	B	C	ab	h _{AB}	L*	a*	b*	C*	ab	h _{AB}	rgb*	ab	Code	ab	
990	80.7	0.483	0.509	0.938	-0.005	0.43	-0.1	34.7	34.7	90.3	92.0	-0.3	143.4	143.4	90.1	1.00	0.96	0.00	0.00	0.00	0.00	0.00	0.00	
991	81.9	0.479	0.512	0.935	-0.005	0.43	-1.2	35.2	35.2	92.0	92.5	-2.5	143.0	143.0	91.0	1.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	
992	83.5	0.474	0.516	0.919	-0.006	0.43	-2.6	35.8	35.9	94.1	93.2	-5.2	142.2	142.3	92.1	1.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	
993	84.8	0.47	0.519	0.906	-0.007	0.43	-3.7	36.3	36.5	95.8	93.8	-7.4	140.8	141.0	93.0	0.99	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
994	86.0	0.466	0.522	0.893	-0.008	0.43	-4.8	36.7	37.0	97.5	94.3	-9.6	138.9	139.2	93.9	0.97	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
995	87.3	0.462	0.524	0.881	-0.009	0.431	-6.0	37.1	37.6	99.2	94.8	-11.9	136.8	137.3	94.9	0.96	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
996	88.6	0.457	0.526	0.868	-0.011	0.432	-7.2	37.5	38.2	100.9	95.6	-14.1	134.5	135.3	96.0	0.94	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
997	89.8	0.453	0.528	0.857	-0.013	0.432	-8.3	37.9	38.8	102.6	95.9	-16.3	132.3	133.3	96.0	0.93	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
998	91.1	0.448	0.530	0.845	-0.015	0.432	-9.5	38.2	39.4	104.8	96.4	-18.5	129.5	130.8	98.1	0.91	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
999	92.0	0.444	0.53	0.836	-0.018	0.432	-10.4	38.3	39.7	105.2	96.8	-20.2	126.4	128.0	99.0	0.9	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
100	93.8	0.445	0.526	0.846	-0.021	0.426	-9.8	38.8	40.0	104.1	97.5	-18.6	123.6	125.0	98.5	0.89	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
101	93.8	0.435	0.529	0.822	-0.026	0.429	-12.0	38.4	40.2	107.3	97.5	-23.0	119.1	121.3	100.9	0.87	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
102	93.4	0.432	0.532	0.813	-0.026	0.431	-12.8	38.2	40.2	108.5	97.3	-24.7	118.5	121.0	101.8	0.86	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
103	92.9	0.429	0.534	0.804	-0.027	0.434	-13.6	37.9	40.3	109.7	97.2	-26.2	117.9	120.8	102.6	0.84	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
104	92.5	0.426	0.536	0.794	-0.027	0.436	-14.4	37.9	40.4	110.8	97.0	-28.2	117.3	120.6	103.5	0.83	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
105	92.0	0.423	0.539	0.785	-0.027	0.44	-15.2	37.5	40.5	112.0	96.8	-30.0	116.7	120.5	104.4	0.81	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
106	91.5	0.421	0.541	0.775	-0.028	0.443	-16.0	37.2	40.6	113.2	96.6	-31.8	115.9	120.5	105.3	0.8	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
107	91.0	0.416	0.544	0.765	-0.028	0.447	-16.8	37.0	40.7	114.4	96.4	-33.8	115.4	120.3	106.3	0.79	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
108	90.5	0.412	0.547	0.754	-0.029	0.451	-17.7	36.8	40.8	115.7	96.2	-35.7	114.8	120.2	107.3	0.77	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
109	90.0	0.409	0.549	0.744	-0.029	0.455	-18.5	36.5	40.9	116.9	96.0	-37.7	114.2	120.2	108.3	0.76	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
110	89.5	0.405	0.552	0.733	-0.03	0.459	-19.4	36.2	41.1	118.1	95.8	-39.8	113.5	120.3	109.3	0.74	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
111	88.9	0.401	0.555	0.722	-0.03	0.464	-20.2	36.0	41.3	119.3	95.5	-41.9	112.8	120.4	110.3	0.73	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
112	88.4	0.397	0.558	0.712	-0.031	0.469	-21.0	35.7	41.5	120.5	95.3	-44.0	112.0	120.5	111.4	0.71	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
113	87.8	0.393	0.561	0.701	-0.031	0.474	-21.9	35.4	41.6	121.6	95.1	-46.1	111.5	120.6	112.4	0.7	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
114	87.2	0.389	0.564	0.69	-0.032	0.48	-22.7	35.2	41.8	122.8	94.8	-48.3	110.8	120.8	113.5	0.69	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
115	86.7	0.385	0.567	0.679	-0.032	0.485	-23.5	34.9	42.1	123.9	94.6	-50.5	110.1	121.1	114.6	0.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
116	86.1	0.381	0.57	0.668	-0.033	0.491	-24.3	34.6	42.3	125.0	94.3	-52.7	109.3	121.4	115.7	0.66	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
117	85.5	0.377	0.573	0.657	-0.034	0.497	-25.0	34.3	42.5	126.1	94.1	-54.9	108.6	121.7	116.8	0.64	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
118	84.9	0.372	0.577	0.646	-0.034	0.503	-25.8	34.0	42.7	127.1	93.8	-57.1	107.9	122.1	117.8	0.63	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
119	84.3	0.368	0.58	0.635	-0.035	0.509	-26.5	33.7	42.9	128.2	93.6	-59.3	107.2	122.5	118.9	0.61	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
120	83.8	0.364	0.583	0.624	-0.035	0.515	-27.3	33.4	43.2	129.2	93.3	-61.5	106.5	123.0	120.0	0.6	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
121	83.2	0.359	0.586	0.613	-0.036	0.522	-28.0	33.2	43.4	130.3	93.1	-63.8	105.7	123.5	121.0	0.59	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
122	82.6	0.355	0.589	0.603	-0.037	0.528	-28.7	32.9	43.6	131.4	92.9	-65.9	105.0	124.0	122.1	0.57	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
123	82.0	0.351	0.592	0.592	-0.037	0.535	-29.3	32.6	43.9	131.9	92.8	-68.2	104.3	124.6	123.1	0.56	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
124	81.4	0.346	0.595	0.582	-0.038	0.541	-30.0	32.3	44.1	132.8	92.3	-70.3	103.5	125.2	124.1	0.54	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
125	80.8	0.342	0.598	0.572	-0.039	0.548	-30.6	32.0	44.3	133.6	92.0	-72.5	102.8	125.8	125.1	0.53	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
126	80.3	0.338	0.601	0.561	-0.039	0.554	-31.2	31.7	44.5	134.4	91.8	-74.6	102.1	126.5	126.1	0.51	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
127	79.7	0.333	0.604	0.552	-0.04	0.561	-31.7	31.5	44.7	135.2	91.5	-76.7	101.3	127.1	127.1	0.5	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
128	79.2	0.329	0.607	0.542	-0.041	0.567	-32.3	31.2	44.9	135.9	91.3	-78.8	100.6	127.8	128.0	0.48	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
129	78.6	0.325	0.61	0.532	-0.042	0.574	-32.8	30.9	45.1	136.7	91.0	-81.0	99.8	128.6	128.0	0.47	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
130	77.7	0.318	0.614	0.519	-0.043	0.583	-33.5	30.6	45.3	137.5	90.8	-83.9	98.5	129.4	130.4	0.46	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
131	76.9	0.312	0.617	0.506	-0.045	0.591	-34.1	30.0	45.4	138.6	90.2	-86.7	97.2	130.2	131.7	0.44	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
132	76.1	0.307	0.62	0.494	-0.046	0.599	-34.6	29.6	45.6	139.5	89.9	-89.2	95.9	131.0	132.9	0.43	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
133	75.3	0.301	0.623	0.483	-0.048	0.606	-35.1	29.2	45.7	140.2	89.5	-91.6	94.7	131.8	134.0	0.41	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
134	74.6	0.296	0.625	0.473	-0.049	0.613	-35.5	28.8	45.7	141.0	89.2	-93.9	93.4	132.5	135.1	0.4	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
135	73.9	0.291	0.627	0.464	-0.051	0.619	-35.9	28.4	45.8	141.8	88.9	-96.0	92.2	133.1	136.1	0.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
136	73.3	0.286	0.629	0.455	-0.052	0.625	-36.2	28.0	45.8	142.2	88.5	-98.0	91.0	133.7	137.1	0.37	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
137	72.6	0.282	0.631	0.447	-0.054	0.631	-36.5	27.6	45.8	142.8	88.2	-99.8	89.8	134.3	138.0	0.36	1.00	0.00	0.00	0.00	0.00	0.00	0	

rgb* _{cab} and CIE data of a elementary hue circle according to CIE R1-47 for Ostwald colours for CIE illuminant D65																			
Yxy, rgb* _{AB} , ABC _{AB} , LabC* _{ahb} data for relative spacing of elementary hue h _{ab} of CIELAB for CIE 2 degree observer																			
Elementary hue circle with 400 divided elementary hue angles: h _{ab} = 25.6, 92.4, 162.1, 271.5 of CIELAB, and 90 integer hue angles:																			
180, 181, ..., 269, CIELAB data of CIE test colours 9 (R): 40.0 58.9 28.3, 10 (Y): 81.3 -3.0 71.8, 11 (G): 52.2 -42.3 13.6, 12 (B): 30.5 1.2 -46.3																			
no.	ab	Y	x	y	a	b	c	AB	A	B	h _{ab}	L*	a*	b*	C*	h _{ab}	rgb*	Code	ab
180	59.2	0.168	0.394	0.416	-0.423	0.534	-31.6	0.7	31.6	178.6	81.4	-100.9	1.5	109.9	179.0	0.00	1.00	0.32	G168
181	59.1	0.168	0.397	0.422	-0.436	0.528	-31.2	0.8	31.2	180.0	81.3	-99.4	0.0	99.4	180.0	0.00	1.00	0.34	G178
182	59.1	0.167	0.391	0.427	-0.449	0.522	-30.9	-0.8	30.9	181.5	81.3	-98.0	-1.7	98.0	181.0	0.00	1.00	0.36	G188
183	59.1	0.167	0.386	0.433	-0.462	0.517	-30.5	-1.6	30.5	183.0	81.3	-96.5	-3.4	96.6	182.0	0.00	1.00	0.38	G198
184	59.0	0.167	0.38	0.439	-0.476	0.512	-30.1	-2.4	30.2	184.5	81.3	-95.0	-5.0	95.2	183.0	0.00	1.00	0.39	G198
185	59.0	0.166	0.374	0.445	-0.489	0.507	-29.8	-3.2	29.9	186.1	81.3	-93.6	-6.7	93.8	184.0	0.00	1.00	0.41	G208
186	59.0	0.166	0.368	0.451	-0.503	0.503	-29.4	-4.0	29.7	187.7	81.3	-92.1	-8.3	92.5	185.1	0.00	1.00	0.43	G218
187	58.9	0.166	0.363	0.457	-0.517	0.495	-29.0	-4.8	29.4	189.3	81.2	-90.6	-9.9	91.2	186.2	0.00	1.00	0.45	G228
188	58.9	0.166	0.358	0.463	-0.531	0.486	-28.7	-5.6	29.2	191.0	81.1	-89.2	-11.5	89.9	187.3	0.00	1.00	0.47	G238
189	58.9	0.165	0.352	0.469	-0.545	0.493	-28.3	-6.4	29.0	192.8	81.2	-87.7	-13.0	88.7	188.4	0.00	1.00	0.49	G248
190	58.9	0.165	0.347	0.475	-0.559	0.49	-27.9	-7.3	28.8	194.6	81.2	-86.3	-14.5	87.5	189.5	0.00	1.00	0.5	G258
191	58.8	0.165	0.343	0.481	-0.573	0.488	-27.5	-8.1	28.7	196.3	81.2	-84.9	-16.0	86.4	190.7	0.00	1.00	0.52	G268
192	58.8	0.165	0.338	0.487	-0.587	0.487	-27.2	-8.9	28.6	198.1	81.2	-83.5	-17.5	85.3	191.8	0.00	1.00	0.54	G278
193	58.8	0.164	0.333	0.493	-0.6	0.485	-26.8	-9.7	28.5	199.8	81.1	-82.2	-18.9	84.3	192.9	0.00	1.00	0.56	G288
194	58.7	0.164	0.328	0.5	-0.616	0.485	-26.4	-10.6	28.4	201.8	81.1	-80.6	-20.5	83.2	194.2	0.00	1.00	0.58	G298
195	58.6	0.164	0.323	0.507	-0.631	0.484	-26.0	-11.5	28.4	203.8	81.1	-79.0	-22.1	82.0	195.6	0.00	1.00	0.6	G308
196	58.6	0.163	0.318	0.513	-0.646	0.483	-25.6	-12.4	28.4	205.8	81.0	-77.4	-23.6	80.8	196.9	0.00	1.00	0.61	G308
197	58.5	0.163	0.315	0.52	-0.66	0.485	-25.2	-13.1	28.4	207.6	81.0	-76.1	-24.9	80.1	198.1	0.00	1.00	0.63	G318
198	58.5	0.163	0.311	0.525	-0.673	0.486	-24.8	-13.9	28.4	209.2	81.0	-74.8	-26.1	79.2	199.2	0.00	1.00	0.65	G328
199	58.4	0.163	0.308	0.531	-0.685	0.488	-24.4	-14.6	28.5	210.8	80.9	-73.6	-27.3	78.5	200.3	0.00	1.00	0.67	G338
200	58.3	0.163	0.304	0.536	-0.697	0.489	-24.1	-15.2	28.5	212.3	80.9	-72.4	-28.3	77.8	201.3	0.00	1.00	0.69	G348
201	58.3	0.163	0.302	0.541	-0.707	0.491	-23.8	-15.8	28.6	213.6	80.9	-71.4	-29.3	77.1	202.3	0.00	1.00	0.71	G358
202	58.3	0.163	0.299	0.546	-0.716	0.492	-23.5	-16.3	28.7	214.8	80.9	-70.4	-30.1	76.6	203.1	0.00	1.00	0.72	G368
203	58.2	0.163	0.297	0.551	-0.725	0.493	-23.2	-16.8	28.7	216.0	80.8	-69.5	-30.9	76.1	203.9	0.00	1.00	0.73	G378
204	58.2	0.163	0.295	0.554	-0.734	0.495	-23.0	-17.2	28.7	217.1	80.8	-68.6	-31.6	75.6	204.6	0.00	1.00	0.74	G378
205	58.2	0.163	0.293	0.557	-0.738	0.496	-22.8	-17.6	28.9	217.6	80.8	-68.0	-32.1	75.2	205.3	0.00	1.00	0.78	G398
206	58.6	0.164	0.292	0.563	-0.741	0.493	-22.6	-17.9	28.9	218.3	81.1	-66.9	-32.5	74.3	205.9	0.00	1.00	0.8	G408
207	57.5	0.162	0.289	0.562	-0.756	0.503	-22.3	-18.4	28.9	219.6	80.4	-66.6	-33.6	74.6	206.7	0.00	1.00	0.82	G418
208	56.2	0.16	0.286	0.561	-0.773	0.515	-21.8	-19.0	28.9	221.0	79.7	-66.3	-34.8	74.9	207.7	0.00	1.00	0.83	G418
209	54.9	0.158	0.282	0.56	-0.792	0.528	-21.4	-19.6	29.0	222.5	78.9	-66.0	-36.2	75.3	208.7	0.00	1.00	0.85	G428
210	53.5	0.155	0.278	0.559	-0.813	0.543	-20.9	-20.2	29.0	224.0	78.1	-65.6	-37.6	75.6	209.7	0.00	1.00	0.87	G438
211	52.0	0.153	0.274	0.558	-0.835	0.55	-20.4	-20.8	29.1	225.6	77.3	-65.2	-39.0	76.0	210.8	0.00	1.00	0.89	G448
212	50.7	0.15	0.269	0.557	-0.858	0.569	-19.9	-21.4	29.2	227.1	76.4	-64.5	-40.4	76.6	211.9	0.00	1.00	0.91	G458
213	49.3	0.148	0.265	0.557	-0.881	0.594	-19.4	-22.0	29.3	228.5	75.6	-64.4	-41.8	76.8	213.0	0.00	1.00	0.92	G468
214	48.2	0.146	0.262	0.558	-0.902	0.609	-18.9	-22.5	29.4	229.9	74.9	-63.7	-43.0	76.9	214.0	0.00	1.00	0.94	G478
215	47.2	0.144	0.258	0.559	-0.921	0.623	-18.4	-22.9	29.4	231.2	74.3	-63.0	-44.2	76.9	215.0	0.00	1.00	0.96	G488
216	46.2	0.143	0.255	0.561	-0.94	0.637	-17.9	-23.3	29.4	232.3	73.7	-62.1	-45.2	76.9	216.0	0.00	1.00	0.98	G498
217	45.4	0.142	0.252	0.564	-0.958	0.65	-17.5	-23.7	29.5	233.5	73.1	-61.3	-46.2	76.7	216.9	0.00	0.99	1.00	G508
218	44.5	0.141	0.249	0.566	-0.976	0.662	-17.0	-24.0	29.5	234.6	72.6	-60.4	-47.1	76.6	217.9	0.00	0.99	1.00	G518
219	43.7	0.14	0.246	0.569	-0.993	0.675	-16.6	-24.4	29.5	235.6	72.0	-59.5	-48.0	76.5	218.8	0.00	0.96	1.00	G528
220	42.9	0.139	0.243	0.57	-1.011	0.687	-16.2	-24.8	29.6	236.6	71.4	-58.6	-48.9	76.4	219.7	0.00	0.94	1.00	G538
221	42.1	0.138	0.24	0.575	-1.031	0.703	-15.8	-25.1	29.6	237.6	71.0	-57.7	-49.9	76.3	220.8	0.00	0.92	1.00	G538
222	41.3	0.137	0.237	0.578	-1.05	0.718	-15.3	-25.4	29.7	238.8	70.4	-56.7	-50.8	76.2	221.8	0.00	0.9	1.00	G548
223	40.6	0.136	0.234	0.582	-1.07	0.734	-14.9	-25.8	29.8	239.9	69.9	-55.7	-51.7	76.0	222.9	0.00	0.88	1.00	G558
224	39.8	0.135	0.231	0.586	-1.091	0.75	-14.4	-26.1	29.8	240.9	69.3	-54.6	-52.7	75.9	223.9	0.00	0.86	1.00	G568
225	39.3	0.135	0.229	0.589	-1.105	0.761	-14.2	-26.3	29.9	241.6	68.8	-53.9	-53.3	75.8	224.6	0.00	0.85	1.00	G578
226	38.7	0.134	0.227	0.591	-1.12	0.773	-13.9	-26.5	30.0	242.3	68.6	-53.2	-54.0	75.8	225.4	0.00	0.83	1.00	G588
227	38.6	0.134	0.225	0.59	-1.136	0.786	-13.5	-26.8	30.0	243.3	68.2	-52.4	-54.5	75.7	226.2	0.00	0.81	1.00	G598
228	37.6	0.133	0.222	0.599	-1.154	0.8	-13.2	-27.0	30.1	243.9	67.7	-51.4	-55.4	75.6	227.1	0.00	0.79	1.00	G608
229	37.0	0.133	0.22	0.603	-1.174	0.816	-12.8	-27.3	30.2	244.8	67.2	-50.3	-56.2	75.5	228.0	0.00	0.77	1.00	G618
230	36.3	0.132	0.217	0.609	-1.197	0.834	-12.3	-27.6	30.2	245.6	66.7	-49.0	-57.1	75.3	229.3	0.00	0.75	1.00	G628
231	35.5	0.131	0.213	0.616	-1.222	0.855	-11.8	-27.9	30.3	247.0	66.1	-47.5	-58.1	75.1	230.7	0.00	0.74	1.00	G628
232	34.9	0.131	0.211	0.622	-1.244	0.873	-11.4	-28.2	30.4	247.9	65.5	-46.3	-59.0	75.0	231.8	0.00	0.72	1.00	G638
233	34.4	0.131	0.209	0.626	-1.259	0.885	-11.1	-28.4	30.5	248.5	65.3	-45.4	-59.5	74.9	232.6	0.00	0.7	1.00	G648
234	34.0	0.13	0.207	0.631	-1.275	0.898	-10.8	-28.6	30.6	249.1	65.0	-44.5	-60.1	74.8	233.4	0.00	0.68	1.00	G658
235	33.6	0.13	0.205	0.635	-1.291	0.911	-10.5	-28.7	30.6	249.8	64.6	-43.6	-60.7	74.7	234.2	0.00	0.66	1.00	G668
236	33.2	0.13	0.203	0.64	-1.308	0.926	-10.2	-28.9	30.7	250.9	64.3	-42.6	-61.3	74.7	235.1	0.00	0.64	1.00	G678
237	32.7	0.13	0.201	0.645	-1.325	0.941	-9.9	-29.1	30.8	251.0	63.9	-41.6</							

rgb* _{ab} and CIE data of a elementary hue circle according to CIE R1-47 for Ostwald colours for CIE illuminant D65																			
Yxy, cab _{AB} , ABC _{AB} , LabC* _{ab} h _{ab} data for relative spacing of elementary hue h _{ab} of CIELAB for CIE 2 degree observer																			
Elementary hue circle with 4 intended elementary hue angles: h _{ab} = 25.6, 92.4, 162.1, 271.5 of CIELAB, and 90 intended hue angles:																			
270, 271, ..., 360, CIELAB data of CIE test colours 9 (R): 40.0 58.9 28.3, 10 (Y): 81.3 -3.0 71.8, 11 (G): 52.2 -42.3 13.6, 12 (B): 30.5 1.2 -46.3																			
no.	ab	Y	x	y	a	b	c	ab	A	B	C _{ab}	h _{ab}	L*	a*	b*	C* _{ab}	h _{ab}	rgb*	Code _{ab}
276	19.2	0.127	0.132	0.961	-2.238	1.893	0.2	-34.7	34.7	270.3	51.0	1.1	-83.8	83.8	270.7	0.00	0.02	1.00	G98B
271	18.9	0.127	0.133	0.974	-2.272	1.837	0.4	-34.8	34.8	270.7	50.6	2.4	-84.4	84.4	271.6	0.00	0.0	1.00	G99B
272	18.6	0.127	0.128	0.987	-2.307	1.817	0.6	-34.9	34.9	271.1	50.3	3.7	-84.4	85.0	272.4	0.0	0.00	1.00	B00R
273	18.4	0.127	0.127	1.0	-2.341	1.906	0.9	-35.0	35.1	271.5	49.9	4.9	-85.5	85.6	273.3	0.02	0.00	1.00	B01R
274	18.1	0.127	0.125	1.014	-2.375	1.94	1.1	-35.1	35.2	271.8	49.6	6.1	-86.6	86.2	274.1	0.04	0.00	1.00	B02R
275	17.8	0.127	0.123	1.03	-2.419	1.985	1.4	-35.3	35.3	272.3	49.2	7.7	-86.7	87.1	275.0	0.06	0.00	1.00	B03R
276	17.4	0.127	0.121	1.05	-2.471	2.038	1.7	-35.4	35.5	272.8	48.7	9.5	-87.5	88.0	276.1	0.07	0.00	1.00	B04R
277	17.0	0.127	0.119	1.07	-2.521	2.093	2.0	-35.6	35.6	273.3	48.3	11.1	-88.2	88.9	277.2	0.09	0.00	1.00	B05R
278	16.7	0.127	0.117	1.089	-2.57	2.139	2.3	-35.7	35.8	273.7	47.9	12.8	-89.0	89.8	278.2	0.11	0.00	1.00	B06R
279	16.4	0.128	0.115	1.08	-2.618	2.188	2.6	-35.8	35.9	274.1	47.5	14.4	-89.6	90.7	279.1	0.13	0.00	1.00	B06R
280	16.1	0.128	0.113	1.08	-2.667	2.238	2.8	-35.9	36.1	274.5	47.1	16.0	-90.3	91.7	280.0	0.14	0.00	1.00	B07R
281	15.8	0.128	0.111	1.149	-2.717	2.29	3.1	-36.1	36.2	274.9	46.7	17.6	-90.9	92.6	280.9	0.16	0.00	1.00	B08R
282	15.5	0.128	0.109	1.171	-2.769	2.344	3.4	-36.2	36.3	275.4	46.3	19.3	-91.6	93.6	281.9	0.18	0.00	1.00	B09R
283	15.1	0.129	0.107	1.195	-2.826	2.403	3.7	-36.3	36.5	275.8	45.8	21.2	-92.3	94.7	282.9	0.2	0.00	1.00	B10R
284	14.8	0.129	0.105	1.222	-2.888	2.468	4.0	-36.4	36.6	276.3	45.4	23.1	-93.0	95.9	283.9	0.21	0.00	1.00	B10R
285	14.4	0.129	0.103	1.252	-2.96	2.542	4.3	-36.5	36.8	276.8	44.9	25.3	-93.9	97.2	285.0	0.23	0.00	1.00	B11R
286	14.0	0.13	0.101	1.286	-3.038	2.624	4.7	-36.6	37.0	277.3	44.5	27.6	-94.6	98.7	286.2	0.25	0.00	1.00	B12R
287	13.7	0.13	0.098	1.322	-3.121	2.712	5.0	-36.8	37.1	277.8	43.8	29.9	-95.7	100.2	287.3	0.27	0.00	1.00	B13R
288	13.3	0.13	0.096	1.36	-3.21	2.804	5.4	-36.9	37.3	278.3	43.2	32.4	-96.6	101.9	288.5	0.28	0.00	1.00	B14R
289	12.9	0.131	0.093	1.4	-3.303	2.902	5.8	-37.0	37.5	278.9	42.6	34.8	-97.5	103.6	289.6	0.3	0.00	1.00	B15R
290	12.5	0.131	0.091	1.442	-3.401	3.005	6.1	-37.2	37.7	279.4	42.0	37.3	-98.5	105.3	290.7	0.32	0.00	1.00	B16R
291	12.1	0.132	0.088	1.486	-3.503	3.114	6.5	-37.3	37.8	279.9	41.4	39.8	-99.4	107.1	291.8	0.34	0.00	1.00	B17R
292	11.7	0.132	0.086	1.532	-3.609	3.226	6.8	-37.4	38.0	280.3	40.8	42.3	-100.4	108.9	292.8	0.35	0.00	1.00	B17R
293	11.3	0.133	0.084	1.58	-3.719	3.343	7.2	-37.5	38.2	280.8	40.3	44.8	-101.2	110.8	293.8	0.37	0.00	1.00	B18R
294	11.0	0.133	0.081	1.628	-3.833	3.465	7.5	-37.6	38.4	281.3	39.7	47.2	-102.2	112.6	294.8	0.39	0.00	1.00	B19R
295	10.7	0.133	0.079	1.68	-3.95	3.589	7.8	-37.7	38.5	281.7	39.1	49.7	-103.1	114.5	295.7	0.41	0.00	1.00	B20R
296	10.4	0.134	0.077	1.732	-4.069	3.716	8.1	-37.8	38.7	282.1	38.5	52.1	-104.0	116.4	296.6	0.42	0.00	1.00	B21R
297	10.1	0.134	0.075	1.785	-4.19	3.846	8.4	-37.9	38.8	282.5	38.0	54.4	-104.9	118.2	297.4	0.44	0.00	1.00	B22R
298	9.8	0.135	0.073	1.839	-4.312	3.977	8.7	-38.0	39.0	282.9	37.4	56.7	-105.8	120.0	298.2	0.46	0.00	1.00	B23R
299	9.4	0.135	0.071	1.906	-4.465	4.141	9.0	-38.1	39.1	283.3	36.8	59.4	-106.8	122.2	299.1	0.48	0.00	1.00	B24R
300	8.9	0.136	0.067	2.013	-4.707	4.401	9.5	-38.2	39.3	283.8	35.8	63.6	-108.3	125.6	300.4	0.49	0.00	1.00	B24R
301	8.5	0.136	0.064	2.111	-4.925	4.637	9.9	-38.3	39.5	284.5	35.0	67.1	-109.5	128.4	301.4	0.51	0.00	1.00	B25R
302	8.1	0.137	0.062	2.202	-5.123	4.852	10.2	-38.3	39.6	285.0	34.3	70.4	-110.6	131.0	302.4	0.53	0.00	1.00	B26R
303	7.8	0.138	0.06	2.287	-5.31	5.055	10.5	-38.3	39.8	285.3	33.7	72.9	-111.5	133.2	303.1	0.55	0.00	1.00	B27R
304	7.2	0.136	0.056	2.409	-5.715	5.477	10.6	-38.5	39.9	285.4	32.4	75.9	-113.5	136.5	303.7	0.56	0.00	1.00	B28R
305	6.4	0.131	0.05	2.589	-6.422	6.297	10.5	-38.7	40.1	285.3	30.5	79.6	-116.5	141.1	304.3	0.58	0.00	1.00	B29R
306	6.0	0.131	0.047	2.758	-6.887	6.7	10.8	-38.7	40.2	285.6	29.4	83.4	-118.2	144.7	305.2	0.6	0.00	1.00	B30R
307	6.0	0.138	0.048	2.878	-6.779	6.629	11.7	-38.5	40.2	286.9	29.5	87.7	-117.6	146.7	306.7	0.62	0.00	1.00	B31R
308	6.5	0.146	0.05	2.886	-6.338	6.212	12.5	-38.2	40.2	288.1	30.5	90.0	-115.7	146.6	307.8	0.63	0.00	1.00	B31R
309	6.8	0.153	0.053	2.876	-5.951	5.844	13.2	-38.0	40.2	289.2	31.5	91.3	-114.0	146.1	308.7	0.65	0.00	1.00	B32R
310	7.3	0.16	0.056	2.856	-5.572	5.479	14.0	-37.7	40.3	290.3	32.6	92.7	-112.2	145.6	309.5	0.67	0.00	1.00	B33R
311	7.8	0.168	0.059	2.836	-5.207	5.13	14.8	-37.5	40.3	291.5	33.7	94.1	-110.2	145.0	310.5	0.69	0.00	1.00	B34R
312	8.4	0.176	0.062	2.815	-4.857	4.799	15.7	-37.2	40.4	292.8	34.8	95.6	-108.2	144.3	311.4	0.7	0.00	1.00	B35R
313	9.0	0.184	0.066	2.794	-4.527	4.487	16.6	-36.9	40.5	294.2	36.0	97.0	-106.0	143.7	312.4	0.72	0.00	1.00	B36R
314	9.6	0.193	0.069	2.771	-4.215	4.196	17.6	-36.6	40.6	295.7	37.2	98.4	-103.8	143.1	313.4	0.74	0.00	1.00	B37R
315	10.3	0.202	0.073	2.748	-3.925	3.925	18.6	-36.2	40.7	297.2	38.5	99.8	-101.8	142.4	314.4	0.76	0.00	1.00	B38R
316	11.1	0.211	0.077	2.724	-3.654	3.675	19.7	-35.8	40.9	298.8	39.8	101.1	-99.3	141.8	315.5	0.77	0.00	1.00	B38R
317	11.9	0.221	0.081	2.7	-3.405	3.446	20.9	-35.4	41.2	300.5	41.1	102.5	-97.0	141.1	316.5	0.78	0.00	1.00	B39R
318	12.8	0.22	0.086	2.676	-3.174	3.237	22.1	-35.0	41.4	302.2	42.4	103.8	-94.4	140.5	317.6	0.81	0.00	1.00	B40R
319	13.7	0.239	0.09	2.652	-2.963	3.047	23.3	-34.6	41.7	303.9	43.8	105.1	-92.2	139.9	318.7	0.83	0.00	1.00	B41R
320	14.6	0.249	0.094	2.628	-2.769	2.874	24.5	-34.1	42.1	305.7	45.1	106.4	-89.8	139.3	319.8	0.84	0.00	1.00	B42R
321	15.6	0.258	0.099	2.605	-2.592	2.718	25.8	-33.7	42.4	307.5	46.4	107.6	-87.5	138.7	320.8	0.86	0.00	1.00	B43R
322	16.6	0.267	0.103	2.582	-2.431	2.578	27.1	-33.2	42.9	309.2	47.8	108.7	-85.1	138.1	321.9	0.88	0.00	1.00	B44R
323	17.6	0.276	0.107	2.56	-2.284	2.511	28.4	-32.7	43.3	311.0	49.1	109.8	-82.8	137.5	322.9	0.9	0.00	1.00	B45R
324	18.7	0.284	0.112	2.538	-2.151	2.337	29.8	-32.2	43.8	312.7	50.4	110.9	-80.4	137.0	324.0	0.91	0.00	1.00	B45R
325	19.8	0.292	0.116	2.516	-2.03	2.235	31.1	-31.6	44.4	314.4	51.6	111.8	-78.2	136.5	325.0	0.93	0.00	1.00	B46R
326	20.9	0.3	0.12	2.496	-1.922	2.143	32.4	-31.1	44.9	316.1	52.9	112.7	-76.0	136	326.0	0.95	0.00	1.00	B47R
327	23.0	0.313	0.128	2.442	-1.739	1.981	34.4	-30.0	45.7	318.8									