

# Chemical Hieroglyphs: Abstract Depiction of Complex Void Space Topology of Nanoporous Materials

Kevin Theisen,<sup>a</sup> Berend Smit,<sup>a,b</sup> Maciej Haranczyk<sup>c</sup>

<sup>a</sup>Department of Chemistry,  
University of California, Berkeley, CA 94720-1462

<sup>b</sup>Department of Chemical Engineering,  
University of California, Berkeley, CA 94720-1462

<sup>c</sup> Computational Research Division,  
Lawrence Berkeley National Laboratory,  
One Cyclotron Road, Mail Stop 50F-1650, Berkeley, CA 94720-8139

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This document contains topological rings (T-rings) representations of 191 zeolite frameworks contained in the International Zeolite Association (IZA) database. These structures used to obtain T-rings are hypothetical all-silica zeolites proposed by the IZA and may differ from experimentally determined structures.

## List of Figures

1	ABW	4	28	AWW	31	59	EPI	62	90	LAU	93
2	ACO	5	29	BCT	32	60	ERI	63	91	LEV	94
3	AEI	6	30	BEA	33	61	ESV	64	92	LIO	95
4	AEL	7	31	BEC	34	62	ETR	65	93	LIT	96
5	AEN	8	32	BIK	35	63	EUO	66	94	LOS	97
6	AET	9	33	BOF	36	64	EZT	67	95	LOV	98
7	AFG	10	34	BOG	37	65	FAR	68	96	LTA	99
8	AFI	11	35	BPH	38	66	FAU	69	97	LTF	100
9	AFN	12	36	BRE	39	67	FER	70	98	LTN	101
10	AFO	13	37	BSV	40	68	FRA	71	99	LTN	102
11	AFR	14	38	CAN	41	69	GIS	72	100	MAR	103
12	AFS	15	39	CAS	42	70	GIU	73	101	MAZ	104
13	AFT	16	40	CDO	43	71	GME	74	102	MEI	105
14	AFX	17	41	CFI	44	72	GON	75	103	MEL	106
15	AFY	18	42	CGF	45	73	GOO	76	104	MEP	107
16	AHT	19	43	CGS	46	74	HEU	77	105	MER	108
17	ANA	20	44	CHA	47	75	IFR	78	106	MFI	109
18	APC	21	45	CHI	48	76	IHW	79	107	MFS	110
19	APD	22	46	CLO	49	77	IMF	80	108	MON	111
20	AST	23	47	CON	50	78	ISV	81	109	MOR	112
21	ASV	24	48	CZP	51	79	ITE	82	110	MOZ	113
22	ATN	25	49	DAC	52	80	ITH	83	111	MRE	114
23	ATO	26	50	DDR	53	81	ITR	84	112	MSE	115
24	ATS	27	51	DFO	54	82	ITW	85	113	MSO	116
25	ATT	28	52	DFT	55	83	IWR	86	114	MTF	117
26	ATV	29	53	DOH	56	84	IWS	87	115	MTN	118
27	AWO	30	54	DON	57	85	IWV	88	116	MTT	119
			55	EAB	58	86	IWW	89	117	MTW	120
			56	EDI	59	87	JBW	90	118	MWW	121
			57	EMT	60	88	JRY	91	119	NAB	122
			58	EON	61	89	KFI	92	120	NAT	123

121	NES	124	139	RTH	142	157	SFS	160	175	TON	178
122	NON	125	140	RUT	143	158	SGT	161	176	TSC	179
123	NPO	126	141	RWR	144	159	SIV	162	177	TUN	180
124	NSI	127	142	RWY	145	160	SOD	163	178	UEI	181
125	OBW	128	143	SAO	146	161	SOF	164	179	UFI	182
126	OFF	129	144	SAS	147	162	SOS	165	180	UOS	183
127	OSI	130	145	SAT	148	163	SSF	166	181	UOZ	184
128	OSO	131	146	SAV	149	164	SSY	167	182	USI	185
129	OWE	132	147	SBE	150	165	STF	168	183	UTL	186
130	PAR	133	148	SBN	151	166	STI	169	184	VET	187
131	PAU	134	149	SBS	152	167	STO	170	185	VFI	188
132	PHI	135	150	SBT	153	168	STT	171	186	VNI	189
133	PON	136	151	SFE	154	169	STW	172	187	VSV	190
134	RHO	137	152	SFF	155	170	SVR	173	188	WEI	191
135	RON	138	153	SFG	156	171	SZR	174	189	WEN	192
136	RRO	139	154	SFH	157	172	TER	175	190	YUG	193
137	RSN	140	155	SFN	158	173	THO	176	191	ZON	194
138	RTE	141	156	SFO	159	174	TOL	177			

Figure 1: ABW

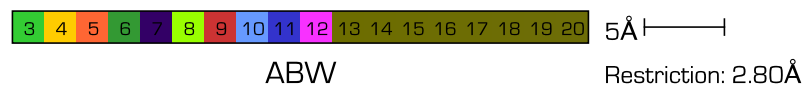


Figure 2: ACO

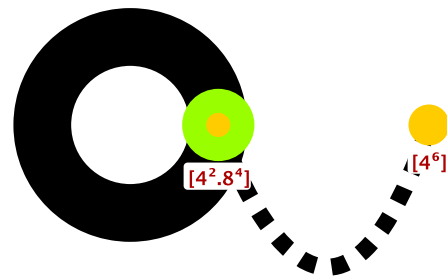
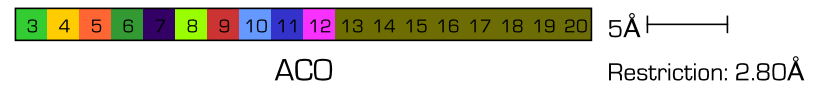


Figure 3: AEI

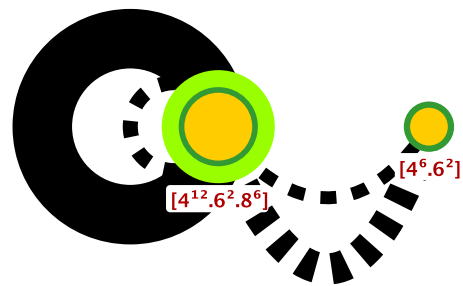
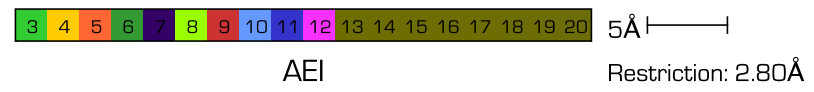


Figure 4: AEL

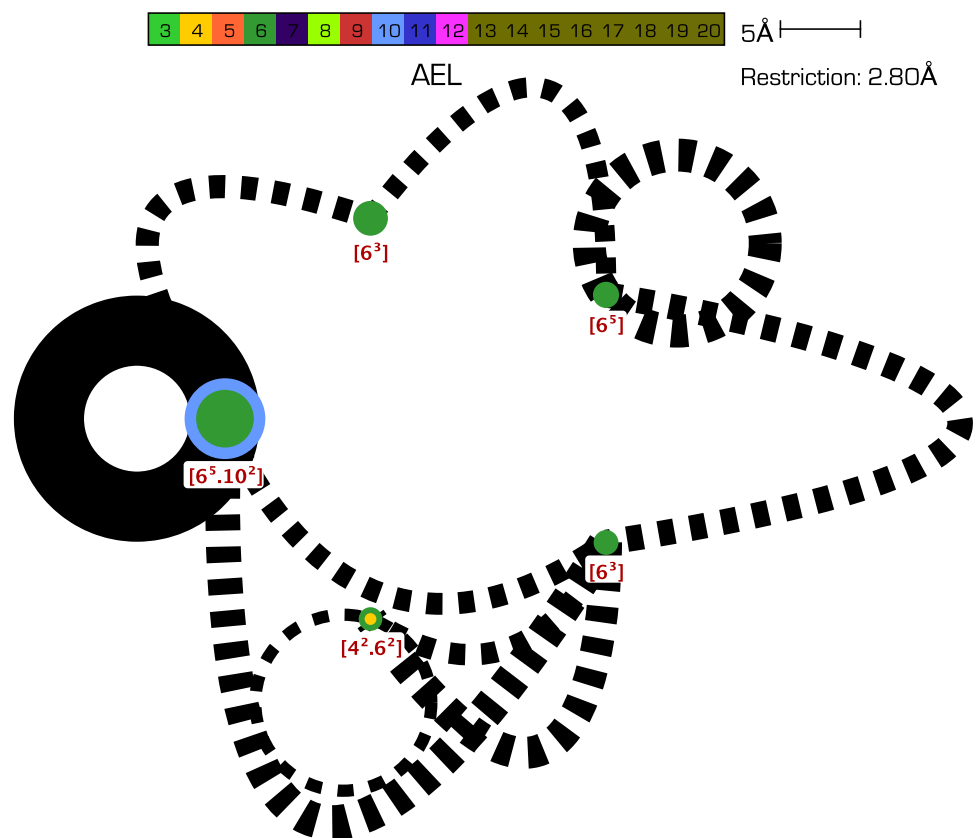


Figure 5: AEN

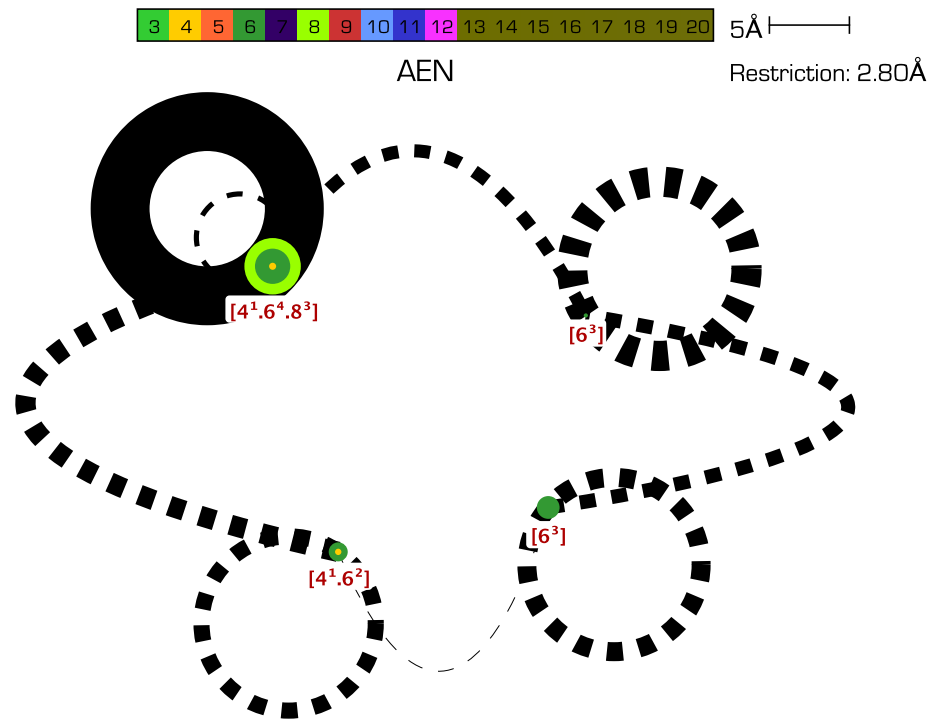




Figure 6: AET

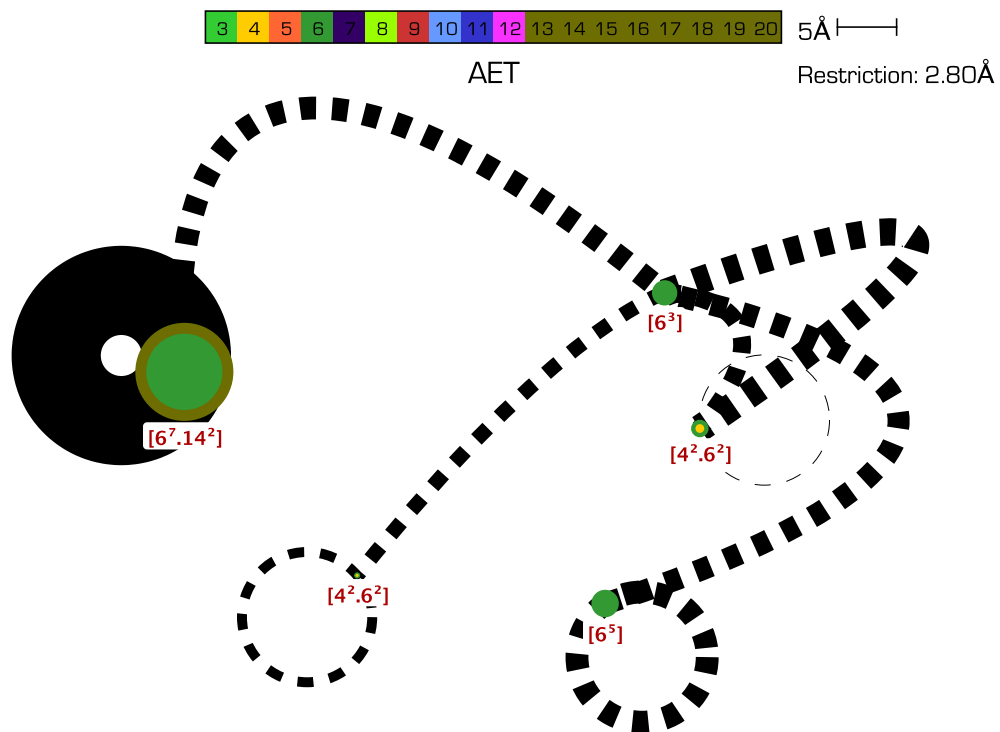


Figure 7: AFG

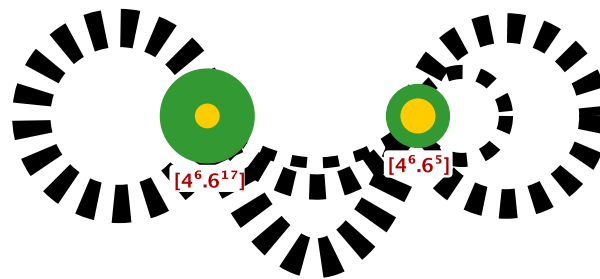
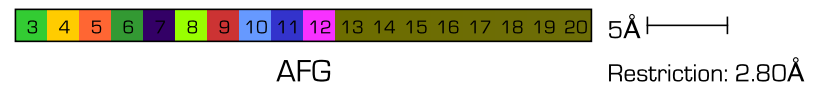


Figure 8: AFI

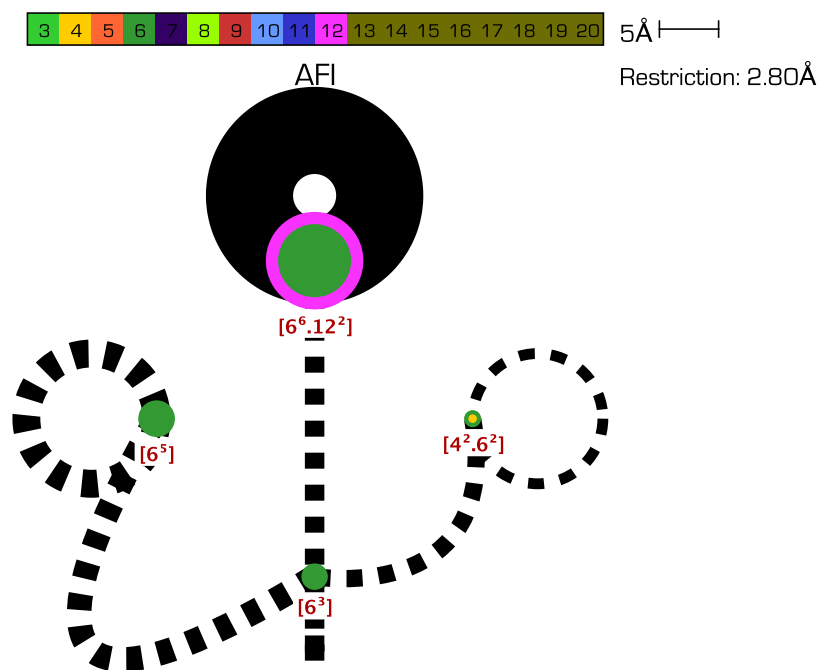


Figure 9: AFN

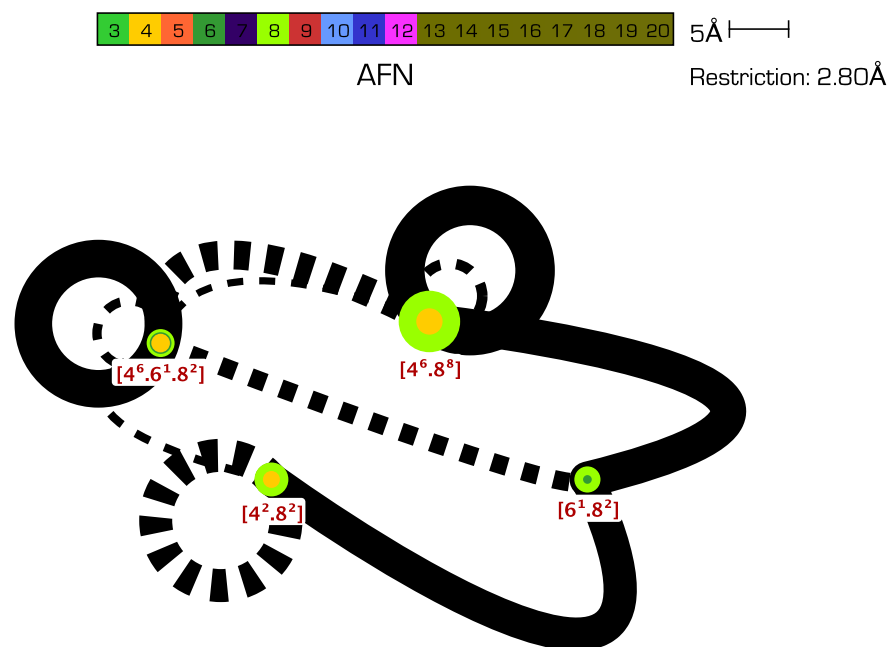


Figure 10: AFO

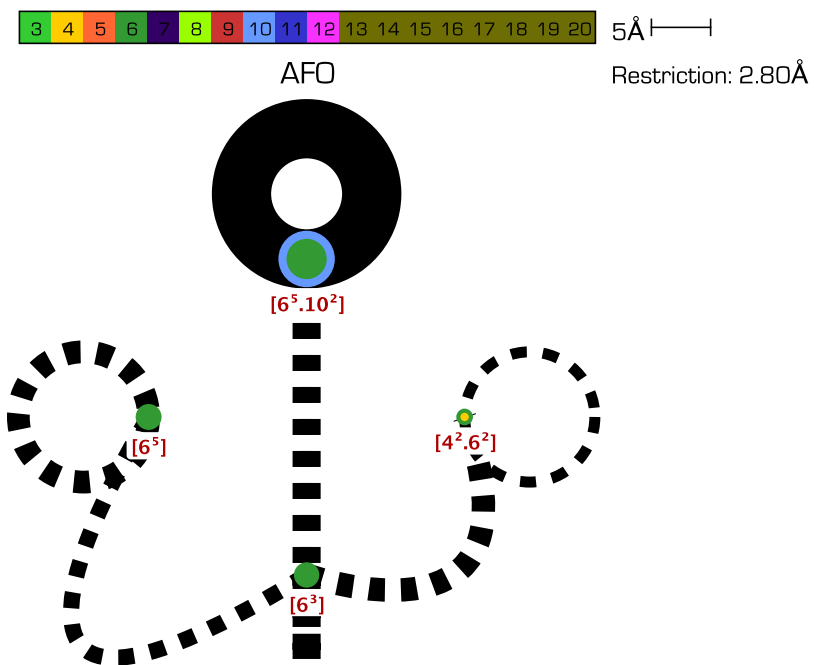


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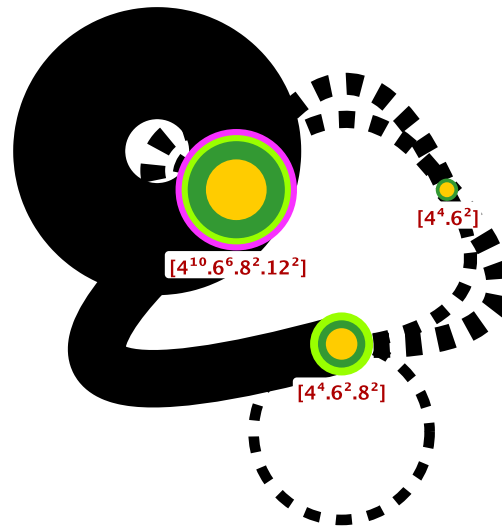
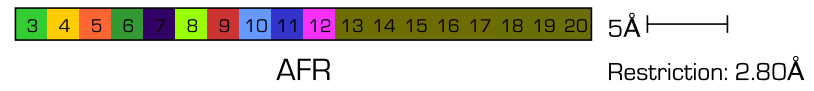


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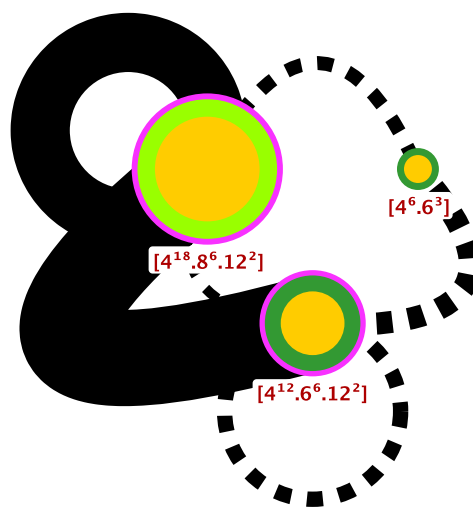
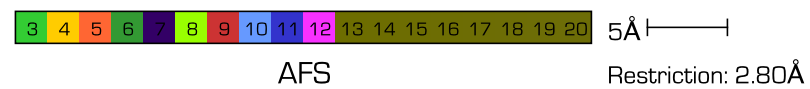


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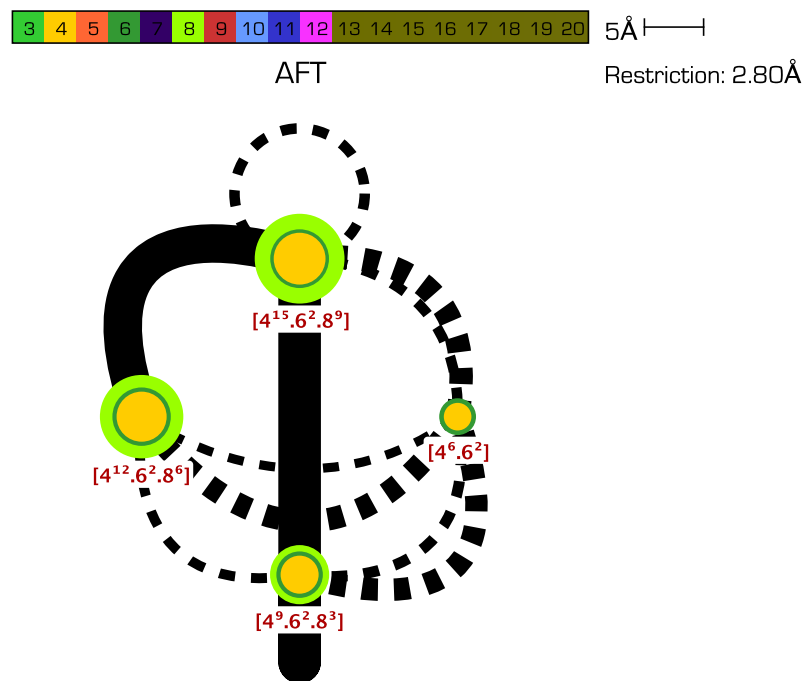




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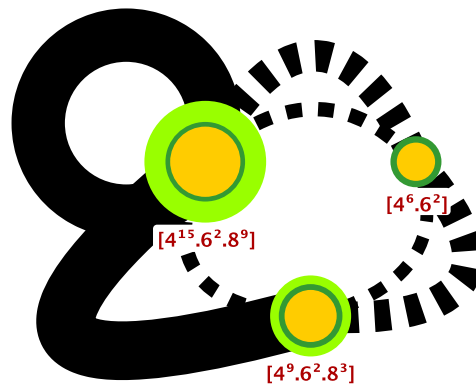
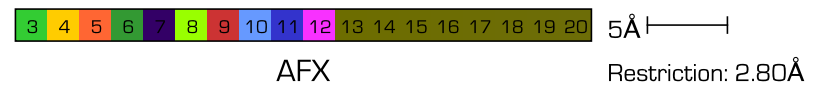


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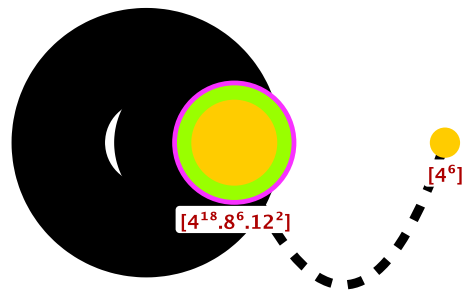
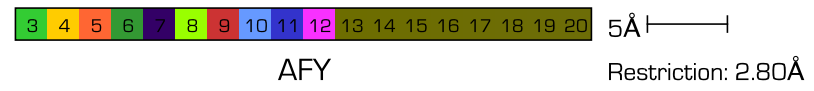


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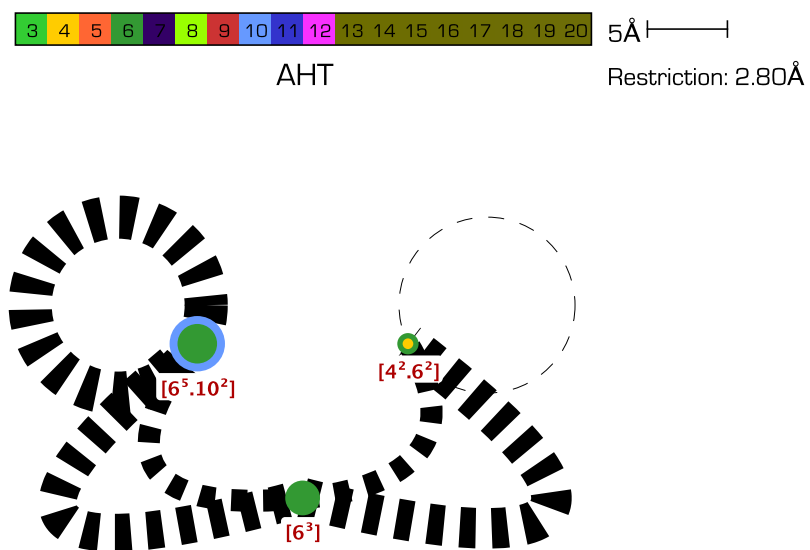


Figure 17: ANA

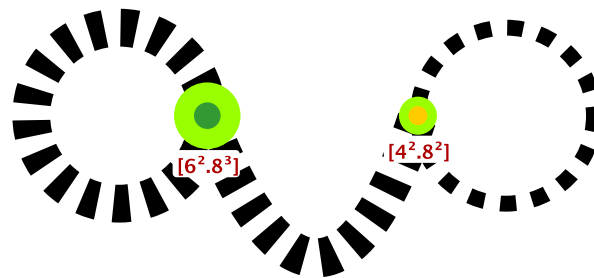
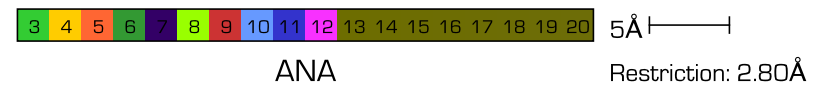


Figure 18: APC

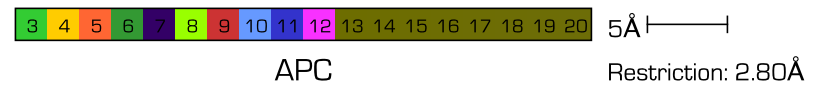


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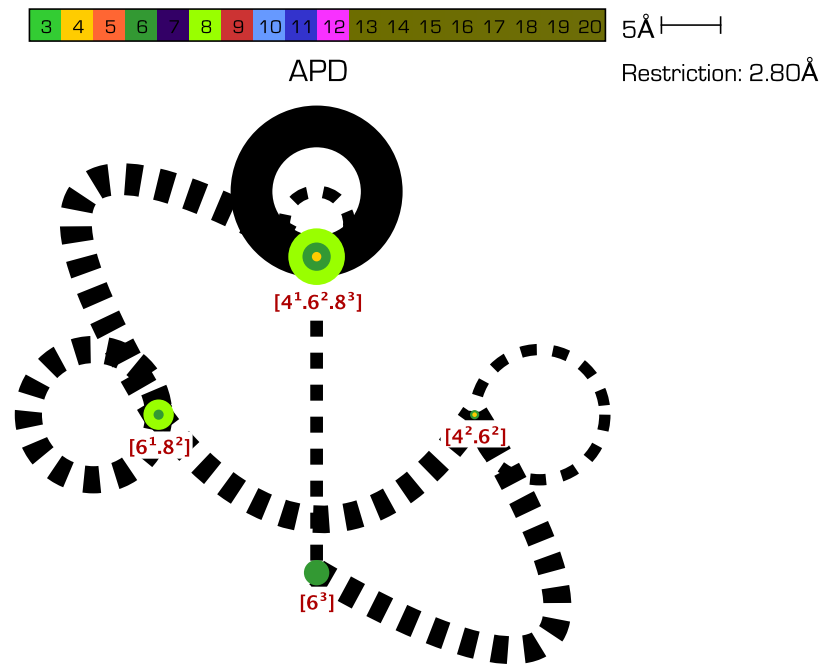


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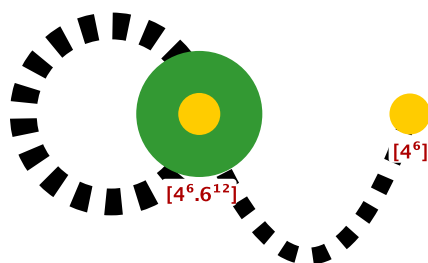
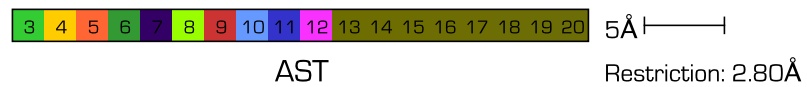


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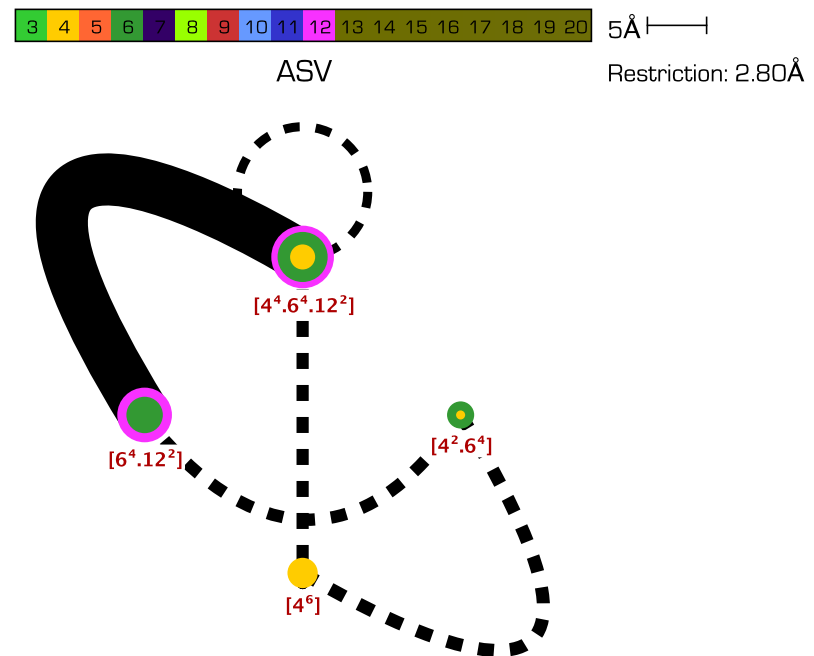




Figure 22: ATN

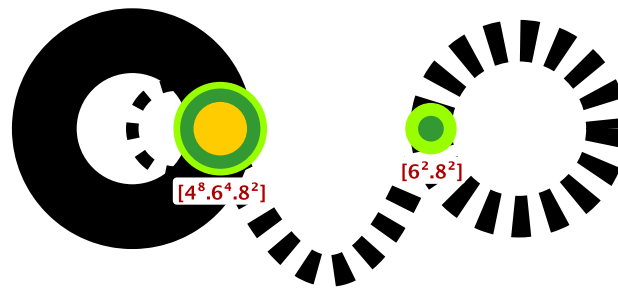
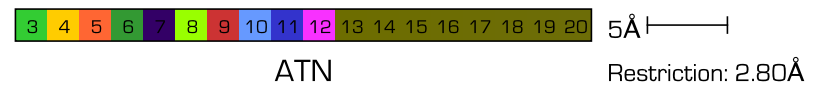




Figure 24: ATS

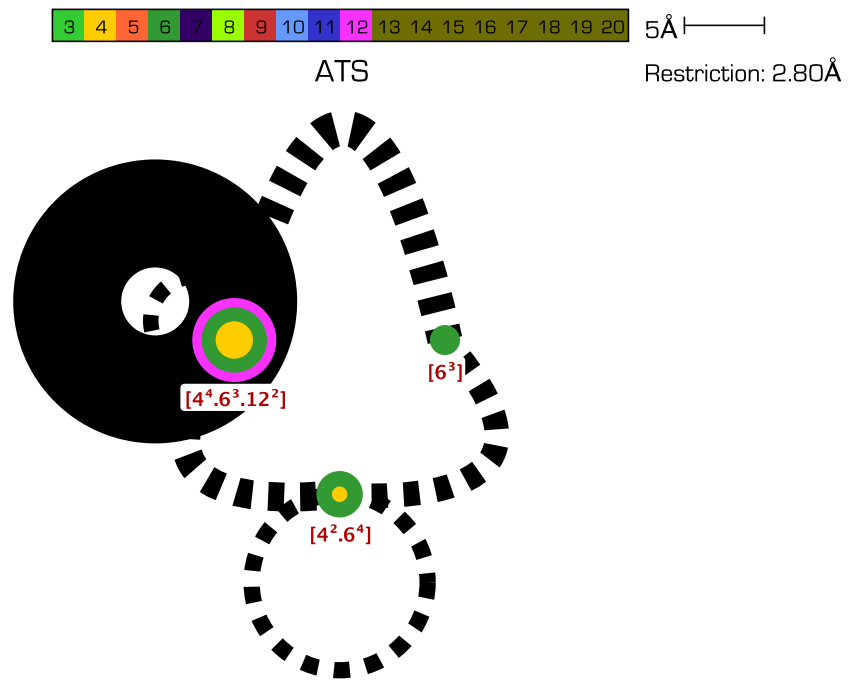


Figure 25: ATT

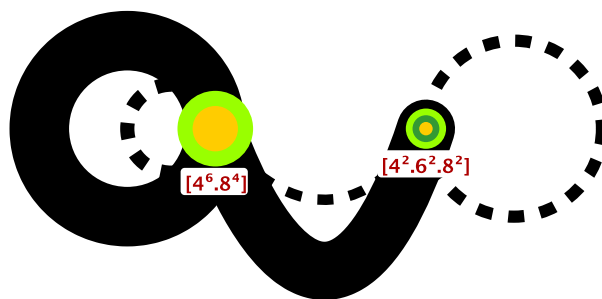
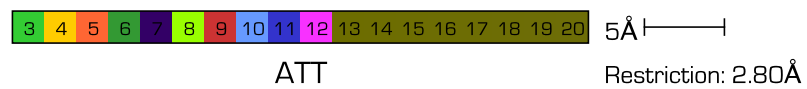


Figure 26: ATV

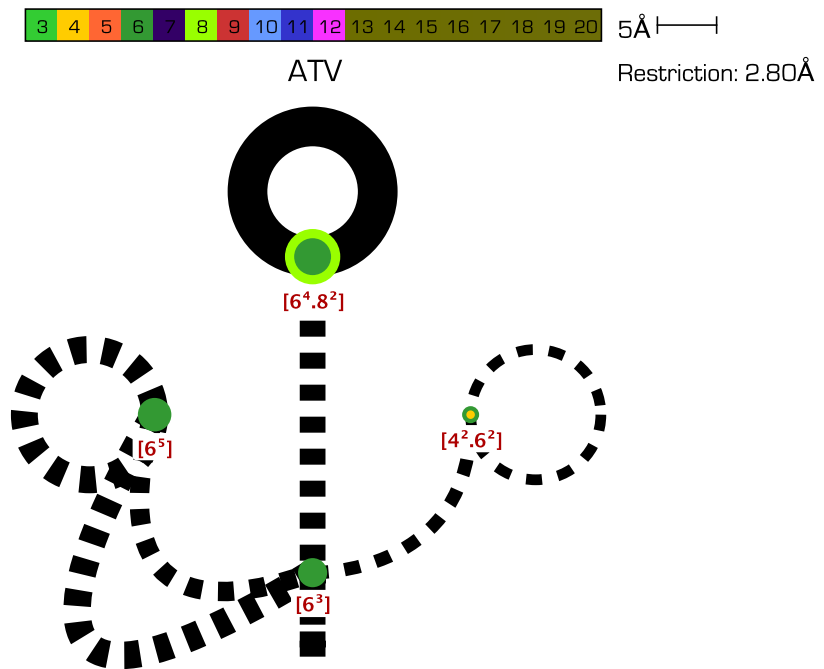


Figure 27: AWO

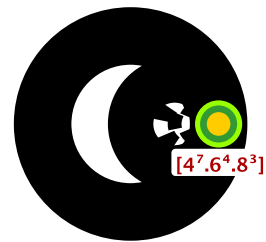
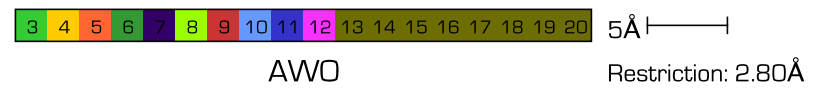


Figure 28: AWW

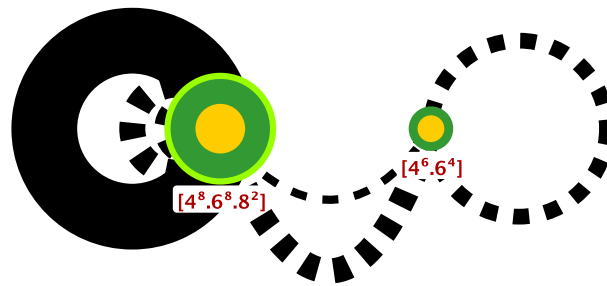
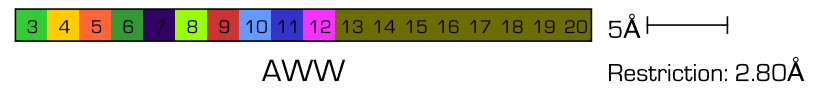


Figure 29: BCT

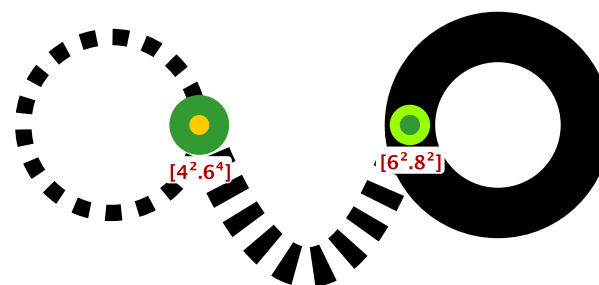
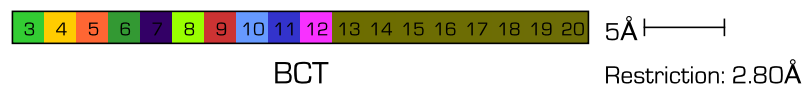




Figure 30: BEA

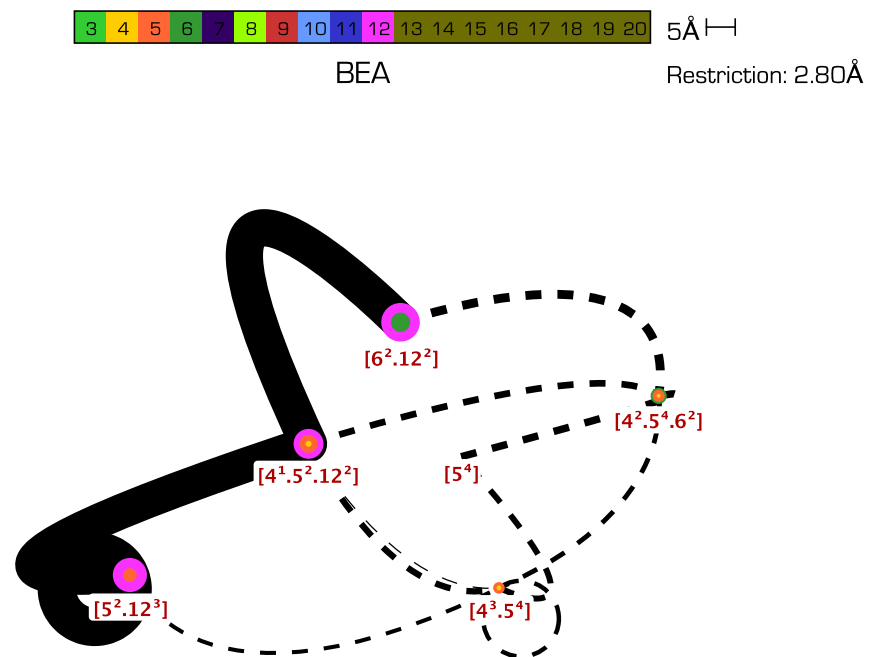


Figure 31: BEC

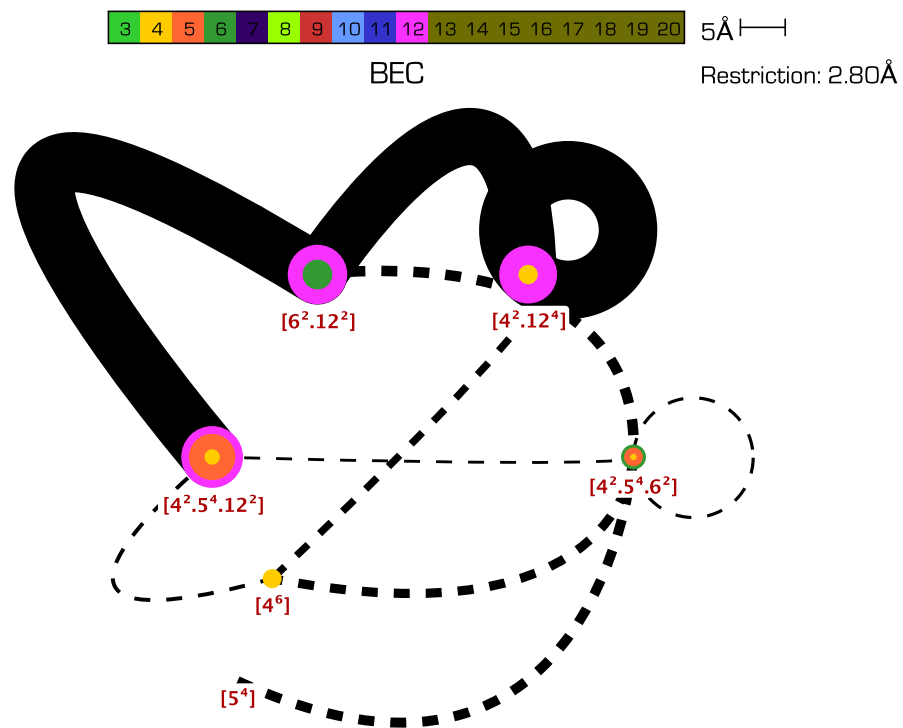


Figure 32: BIK

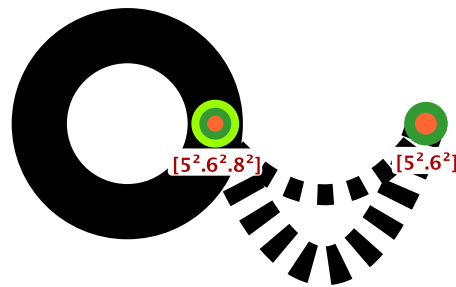
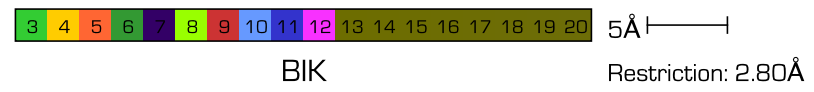


Figure 33: BOF

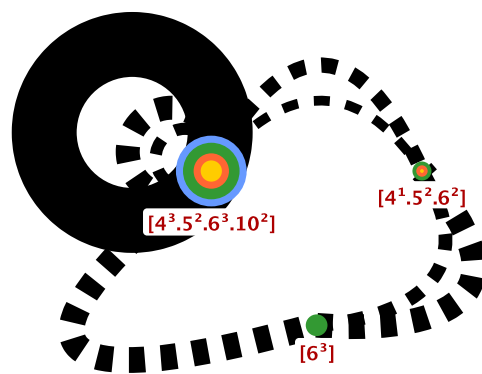
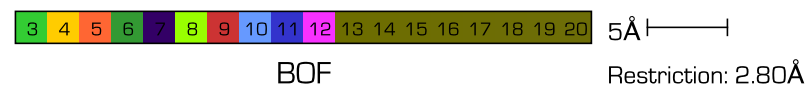




Figure 35: BPH

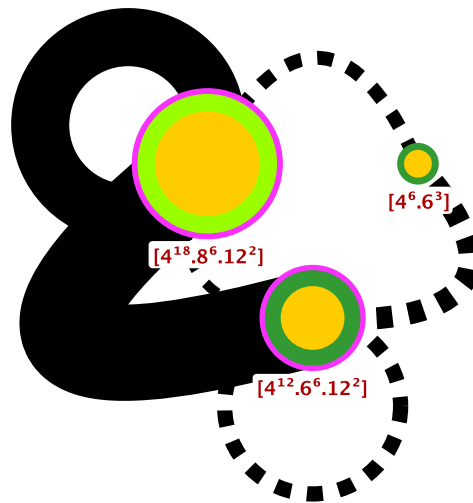
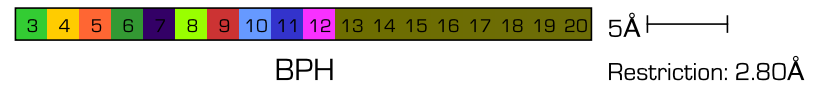


Figure 36: BRE

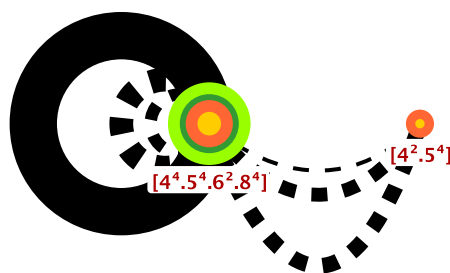
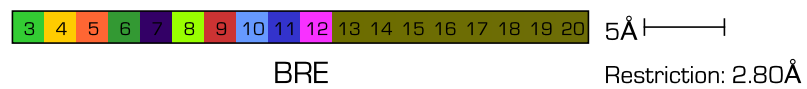


Figure 37: BSV

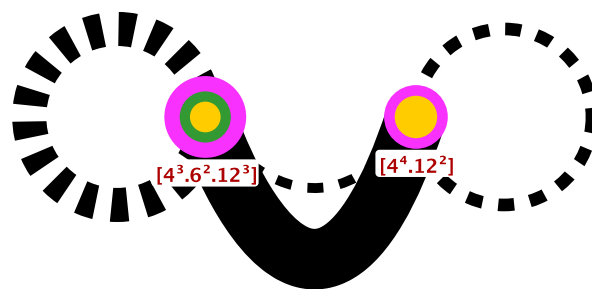
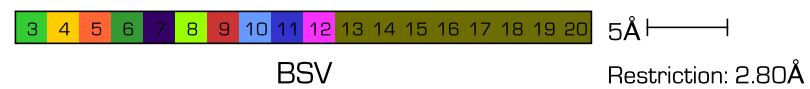




Figure 38: CAN

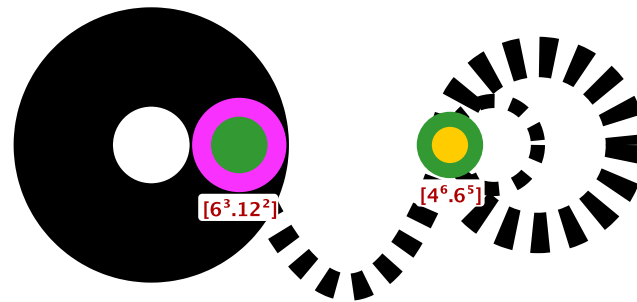
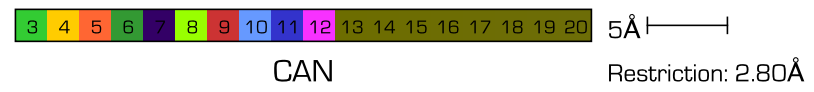


Figure 39: CAS

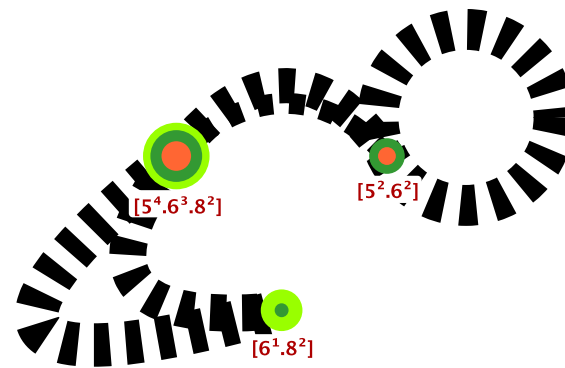
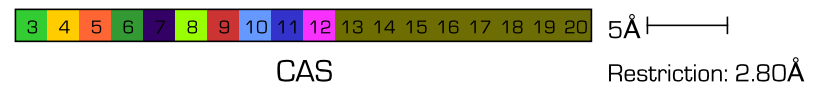


Figure 40: CDO

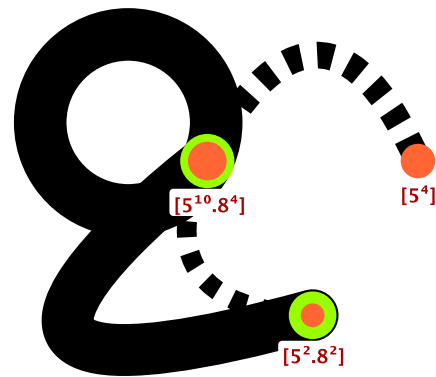
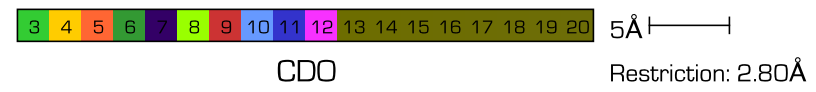


Figure 41: CFI

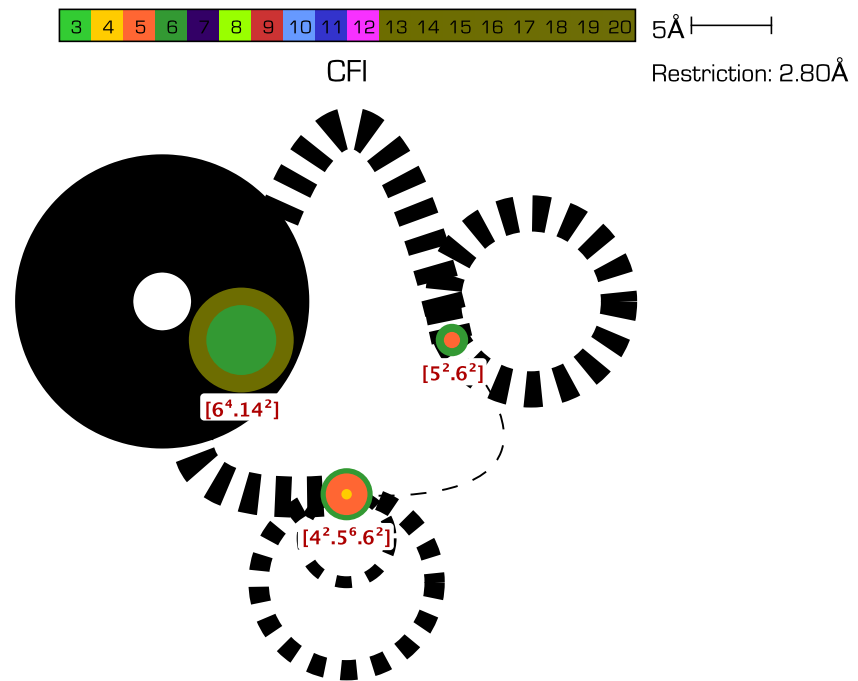


Figure 42: CGF

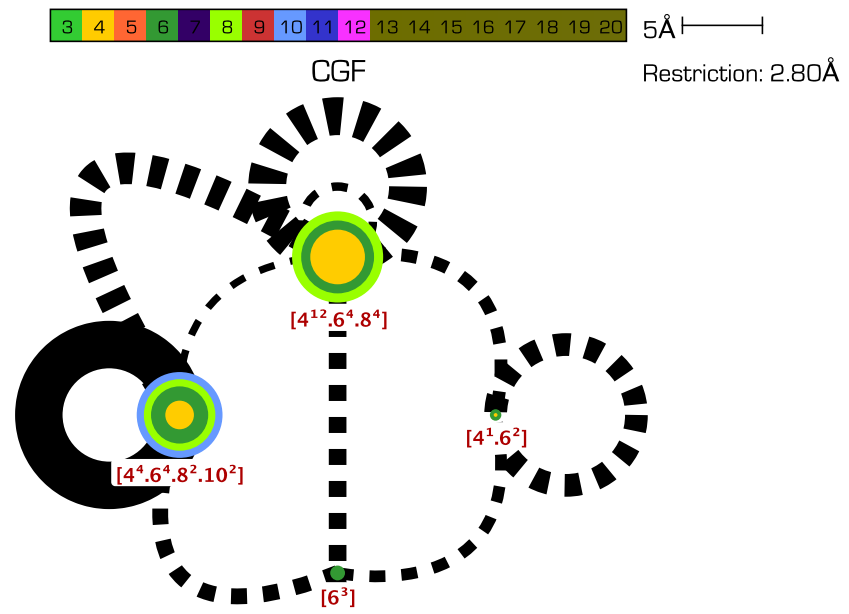


Figure 43: CGS

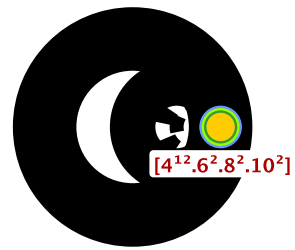
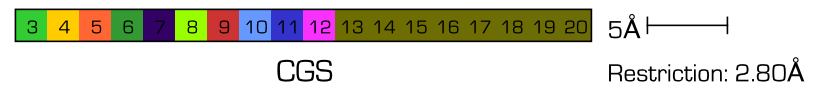


Figure 44: CHA

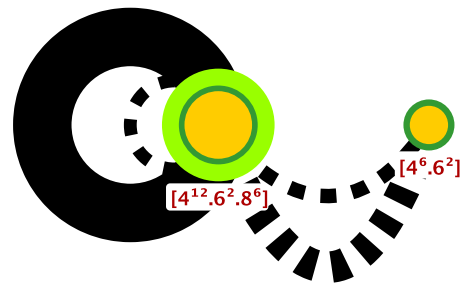
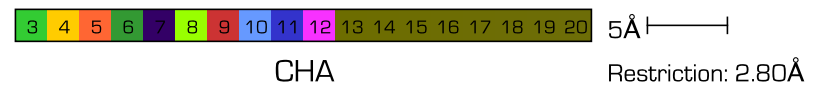


Figure 45: CHI

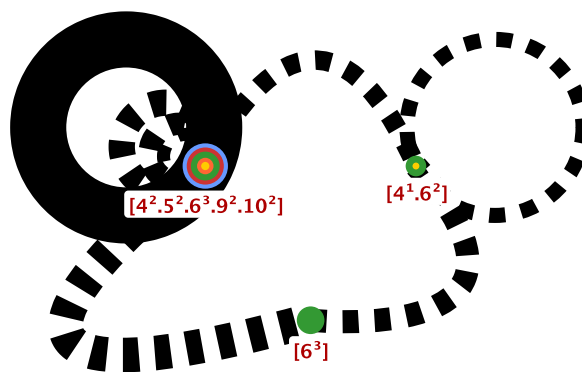
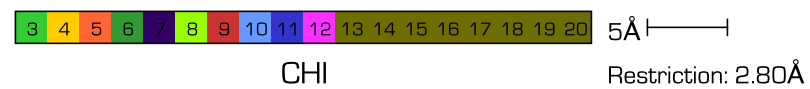




Figure 46: CLO

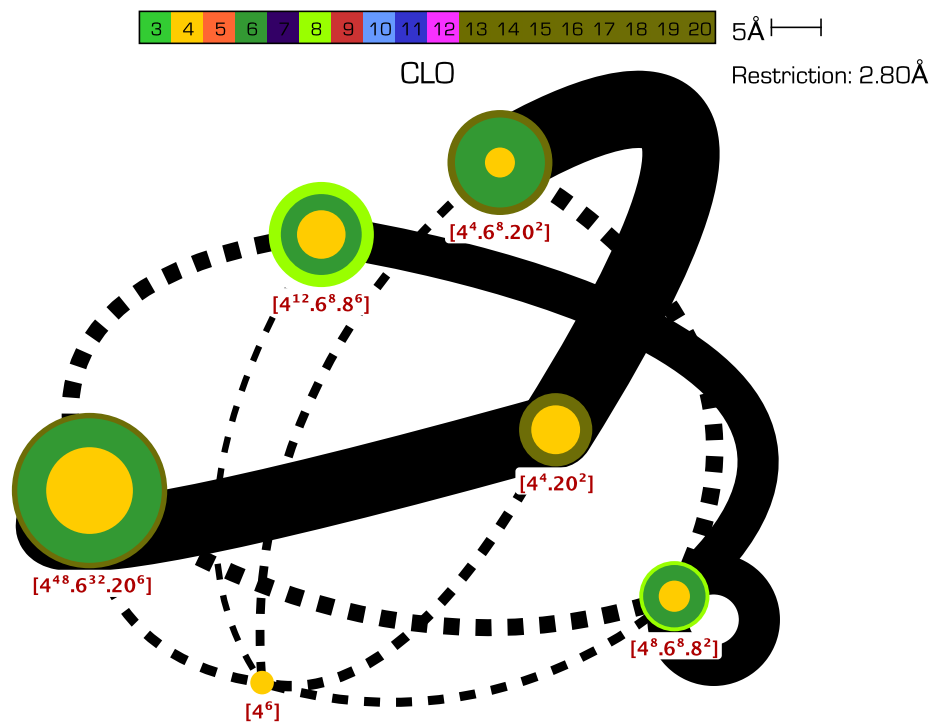


Figure 47: CON

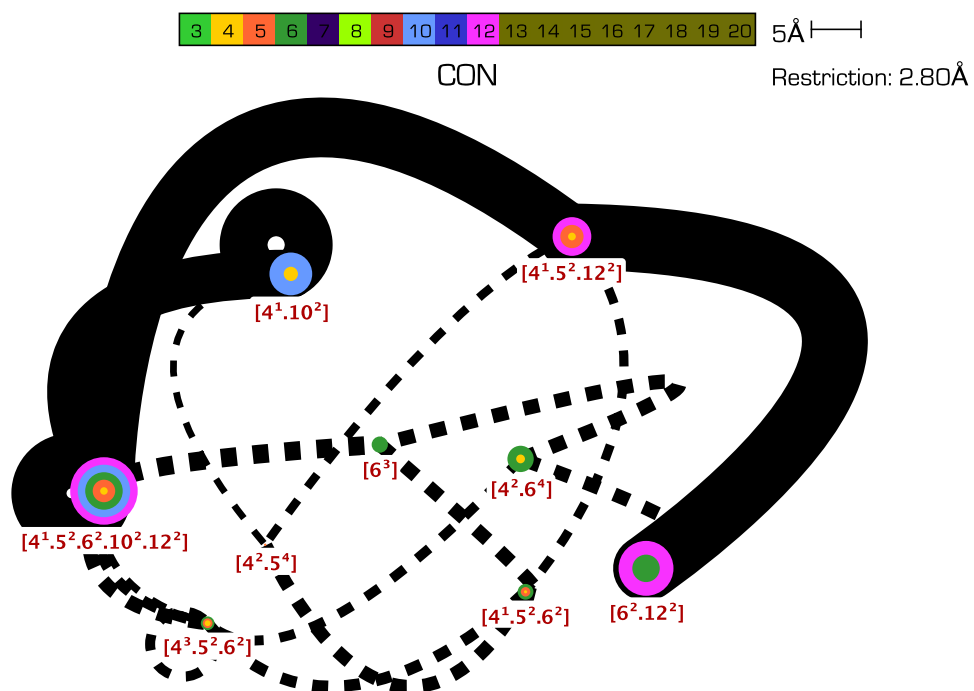


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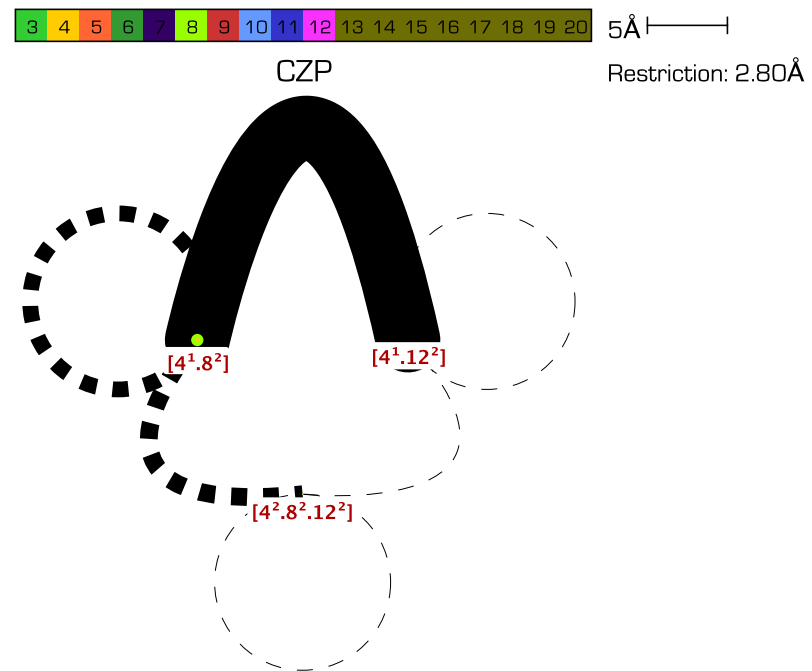


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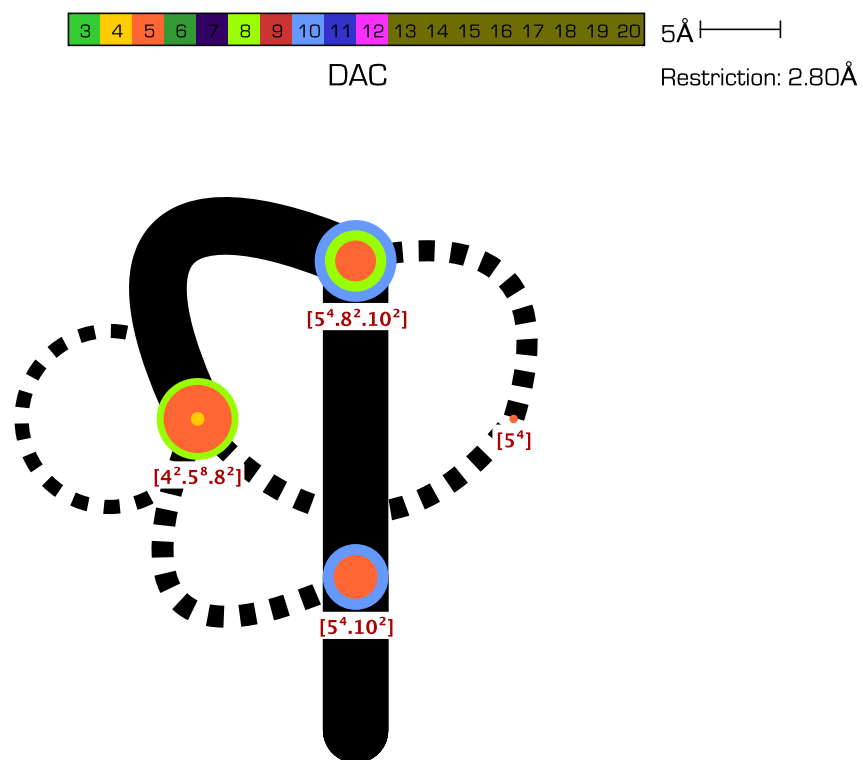


Figure 50: DDR

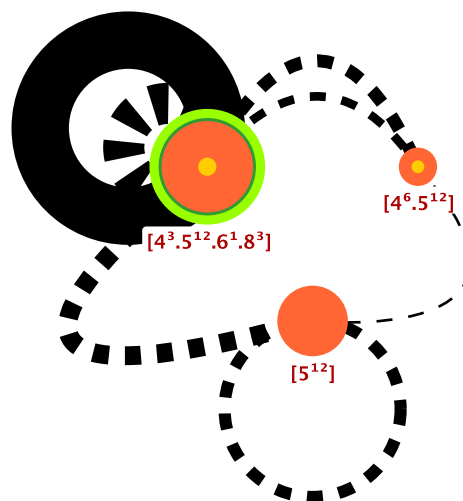
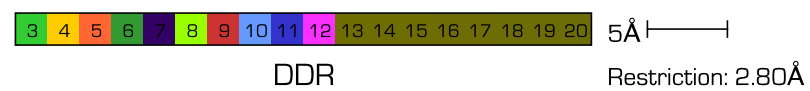


Figure 51: DFO

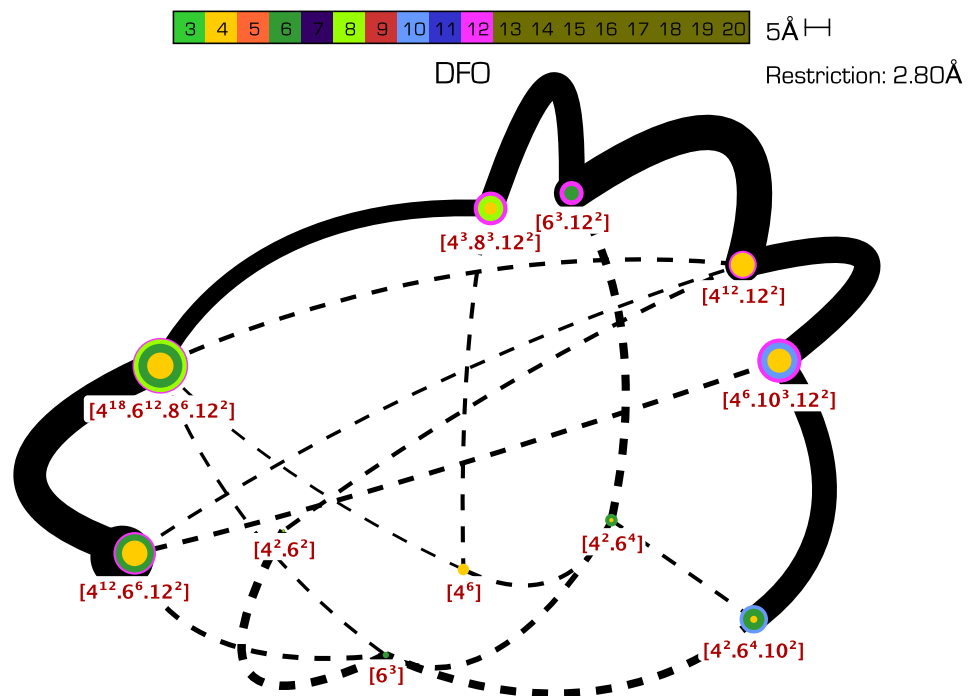


Figure 52: DFT

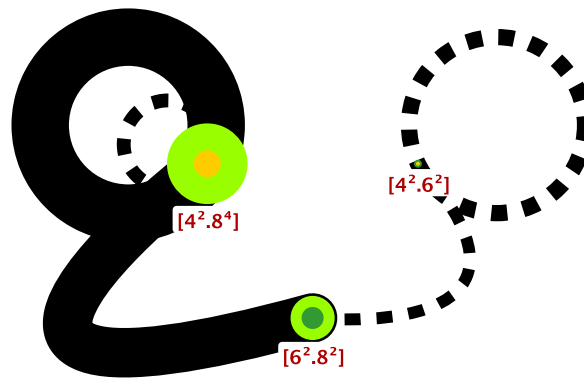
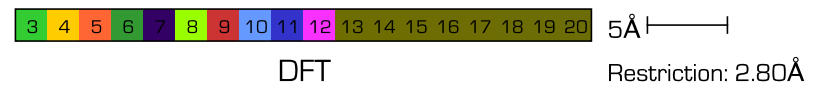


Figure 53: DOH

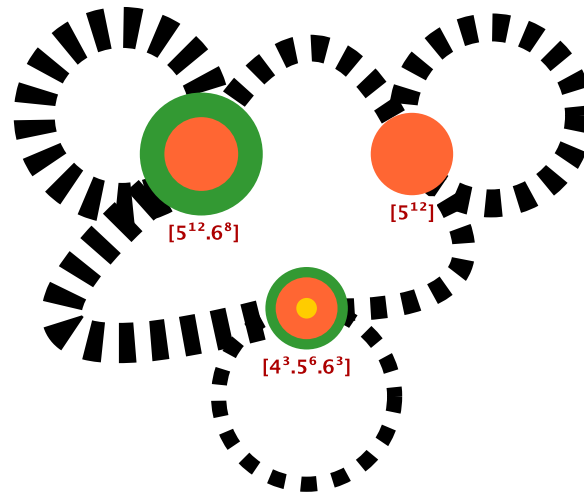
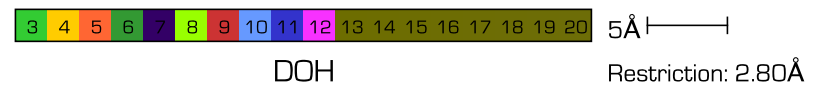




Figure 54: DON

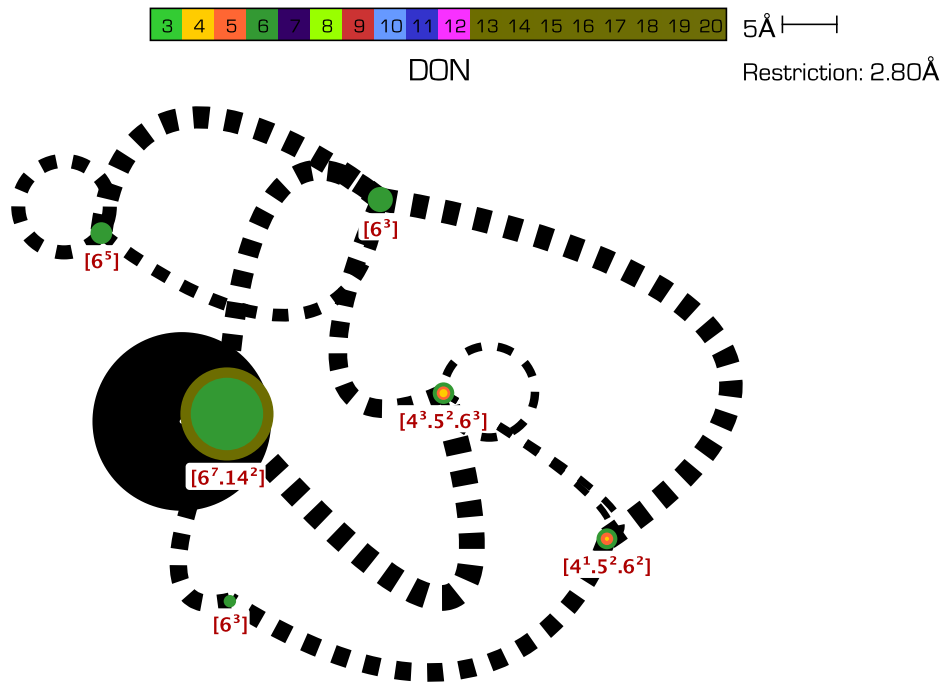


Figure 55: EAB

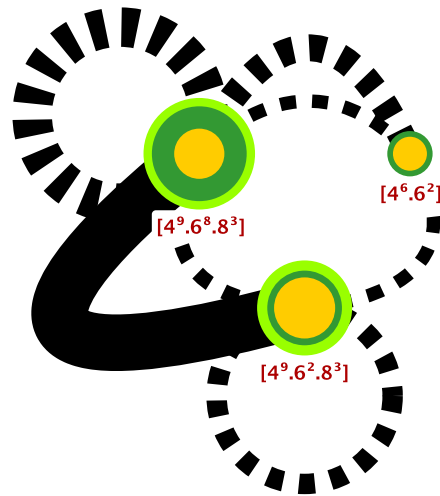
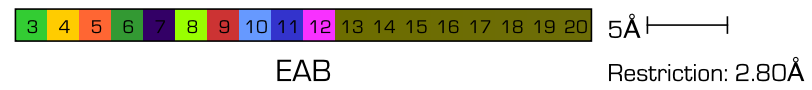


Figure 56: EDI

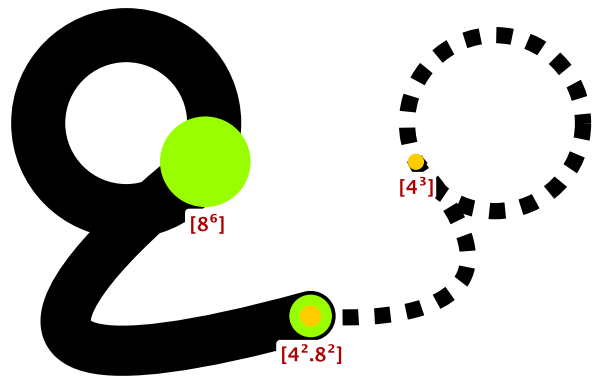
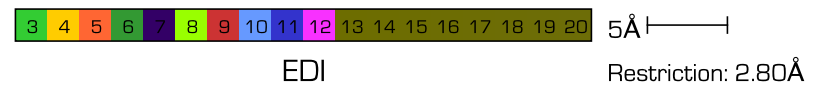


Figure 57: EMT

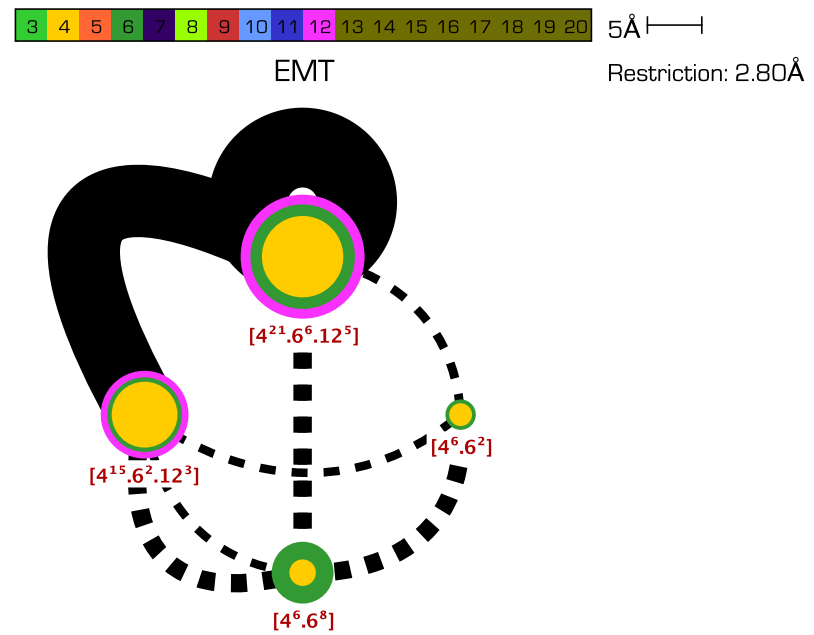


Figure 58: EON

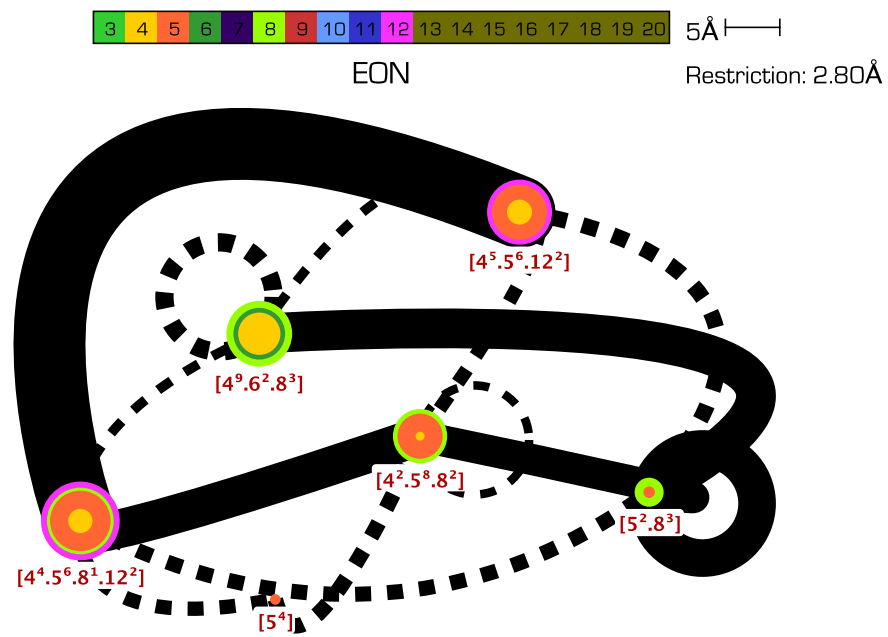


Figure 59: EPI

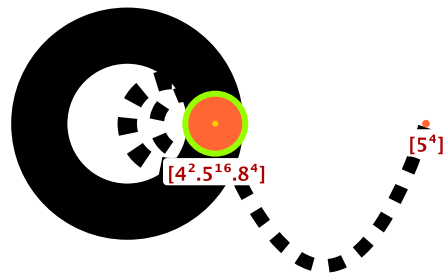
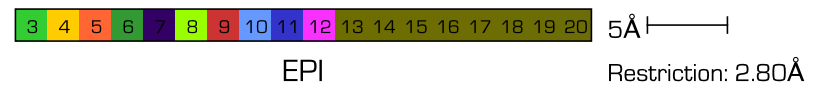


Figure 60: ERI

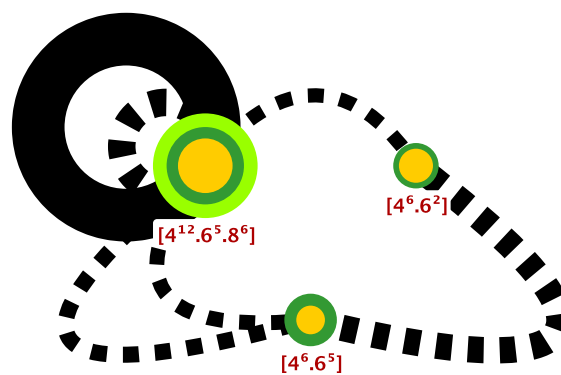
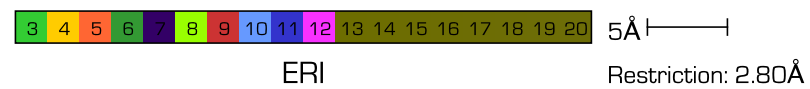


Figure 61: ESV

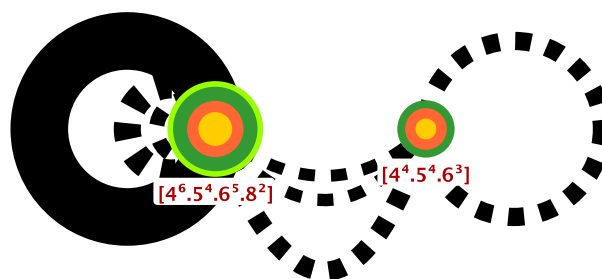
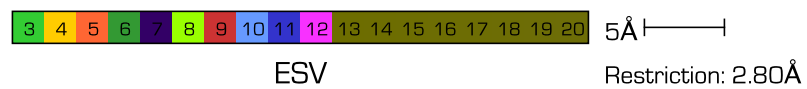




Figure 62: ETR

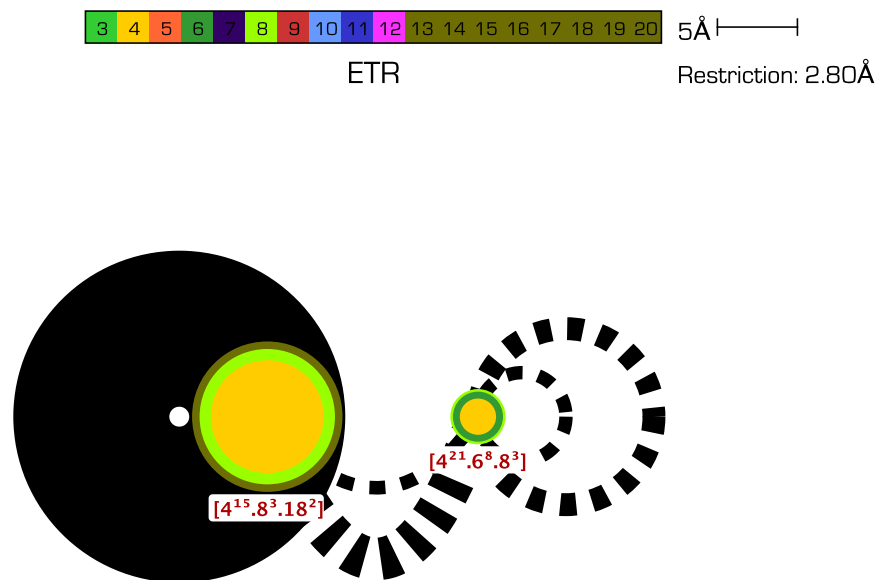


Figure 63: EUO

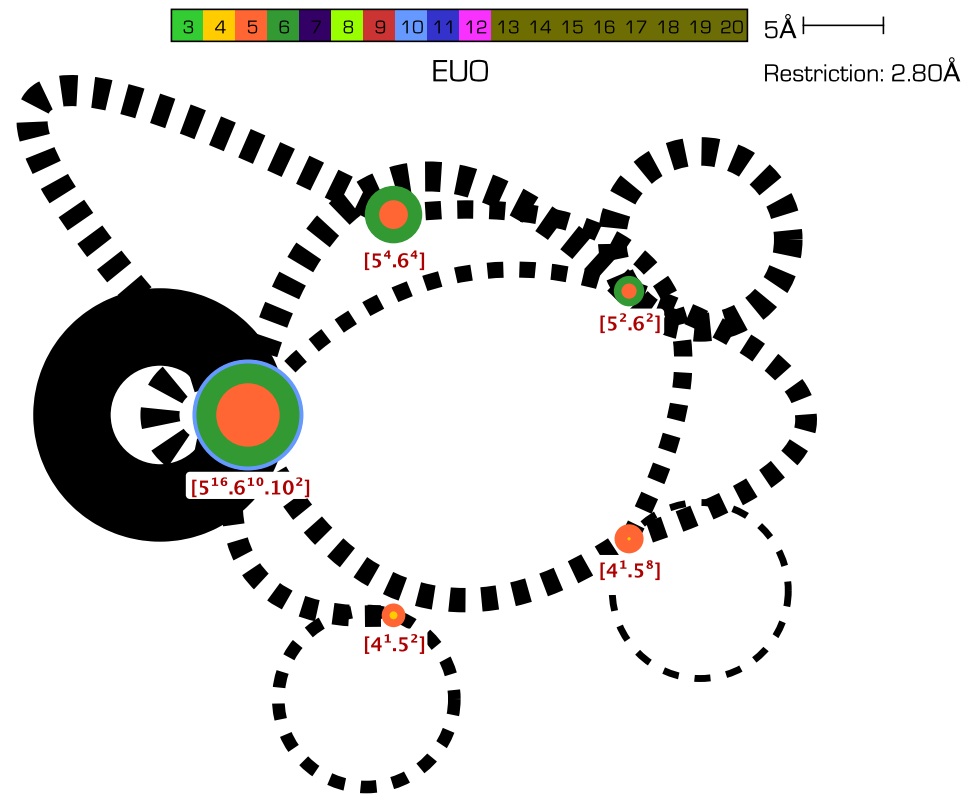


Figure 64: EZT

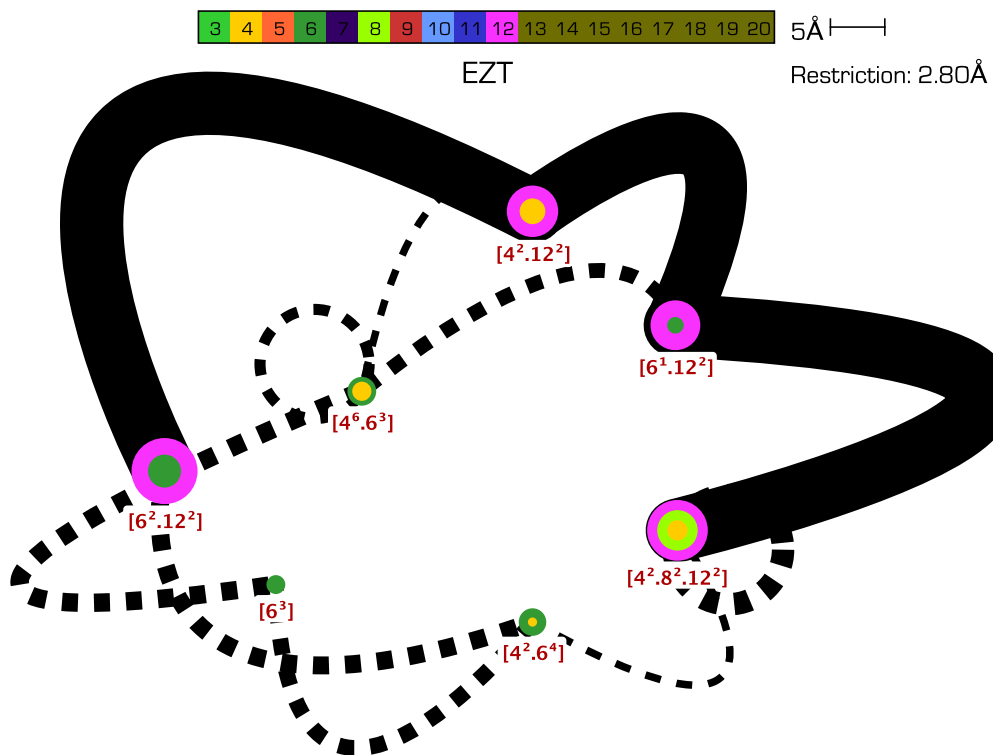


Figure 65: FAR

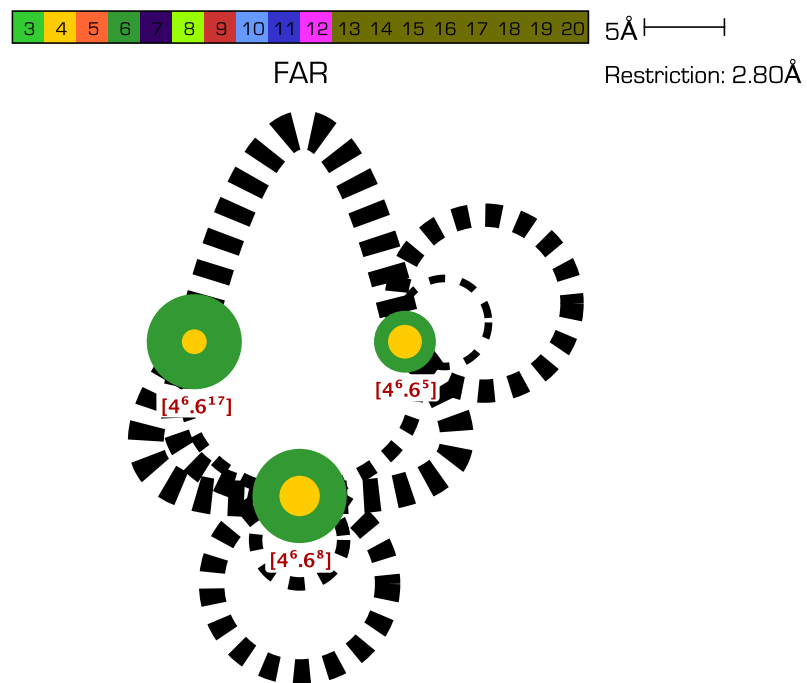


Figure 66: FAU

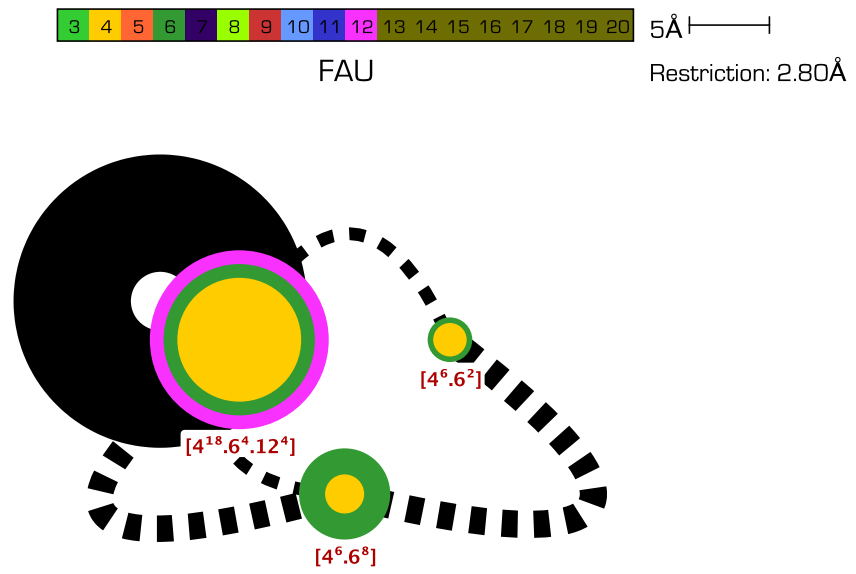


Figure 67: FER

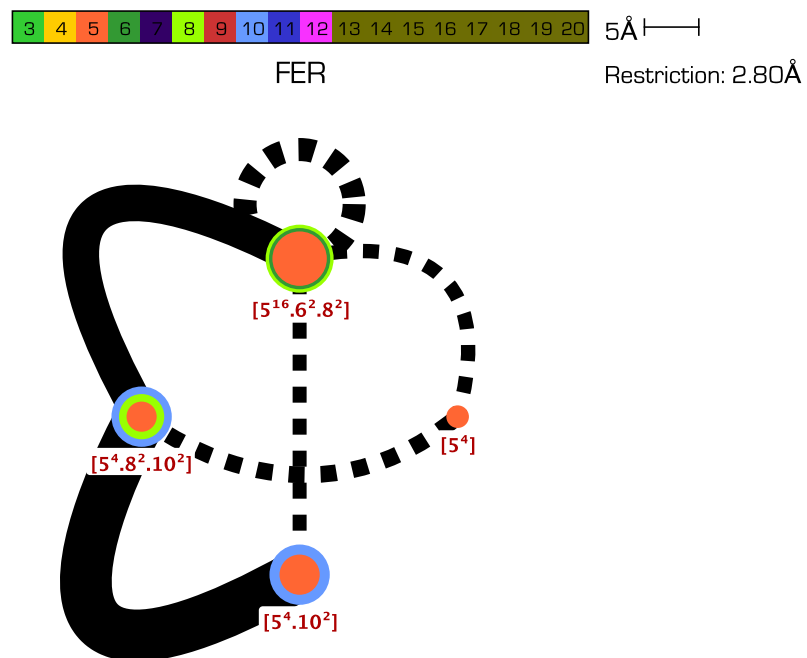


Figure 68: FRA

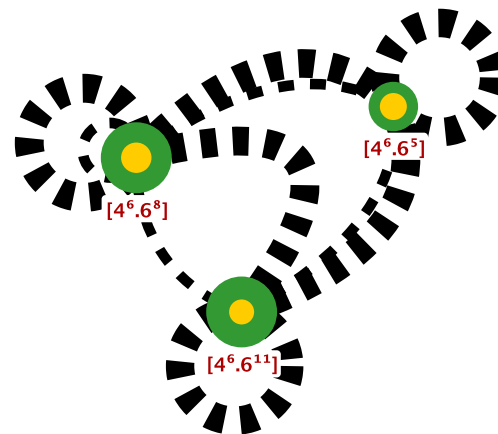
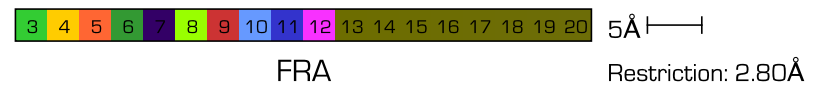


Figure 69: GIS

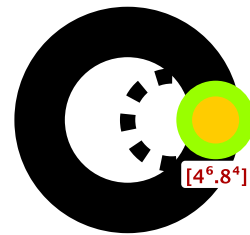
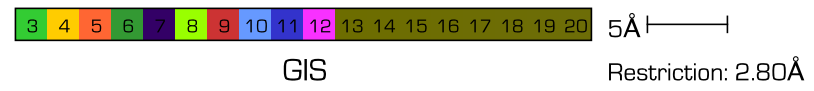




Figure 70: GIU

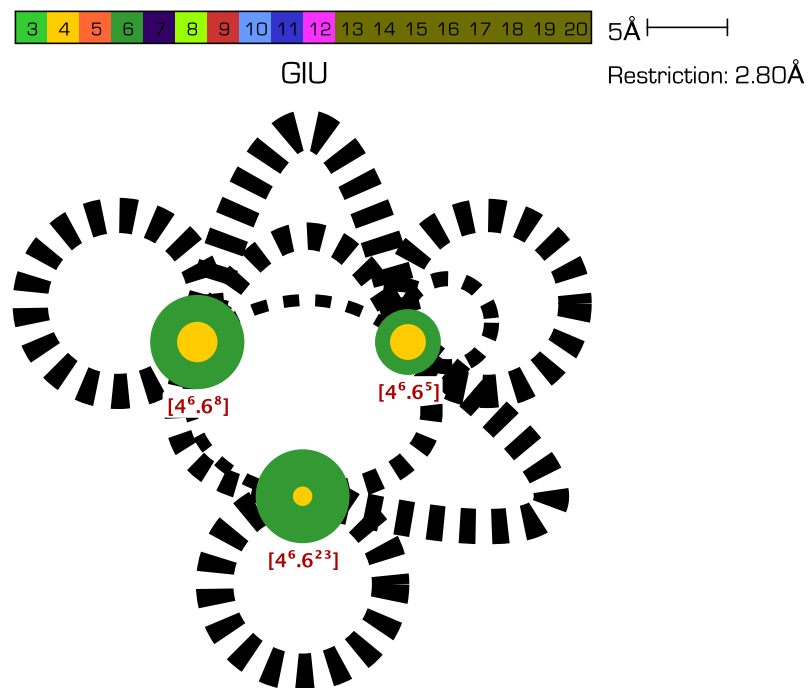


Figure 71: GME

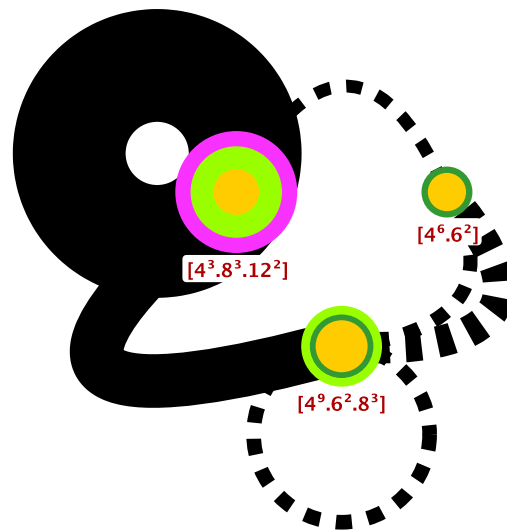
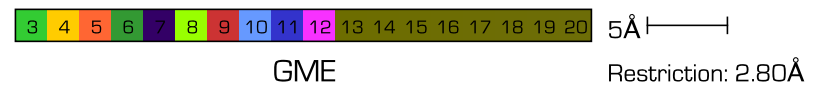


Figure 72: GON

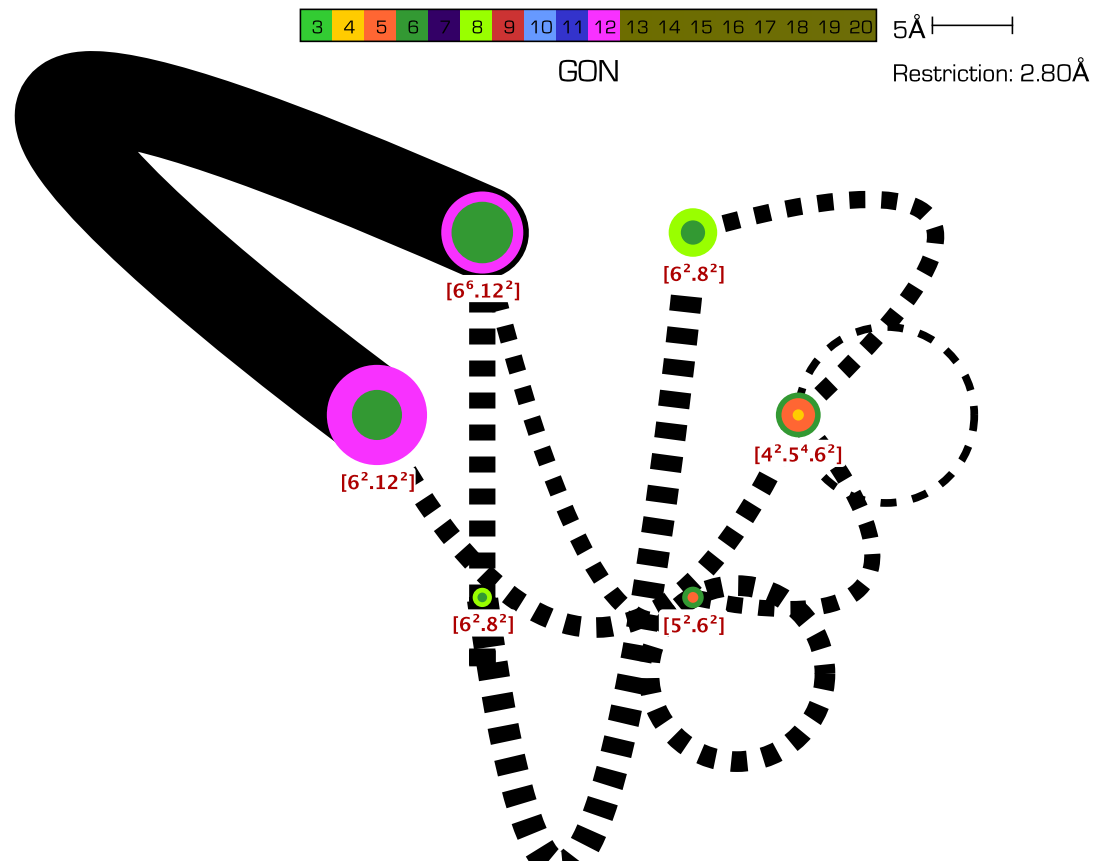


Figure 73: GOO

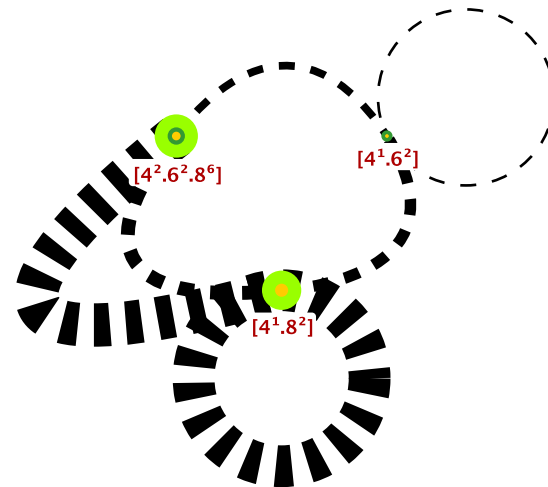
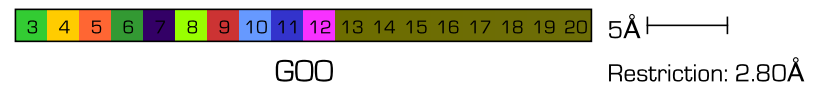


Figure 74: HEU

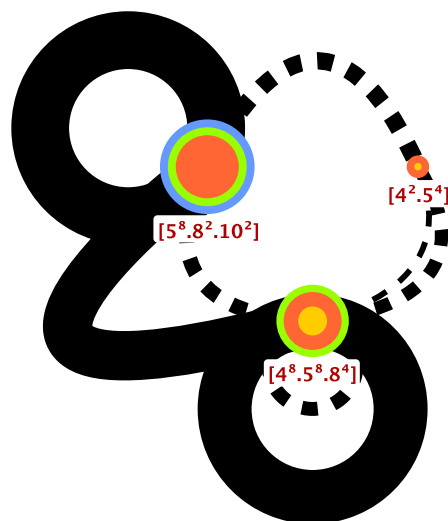
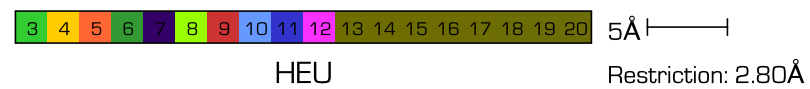


Figure 75: IFR

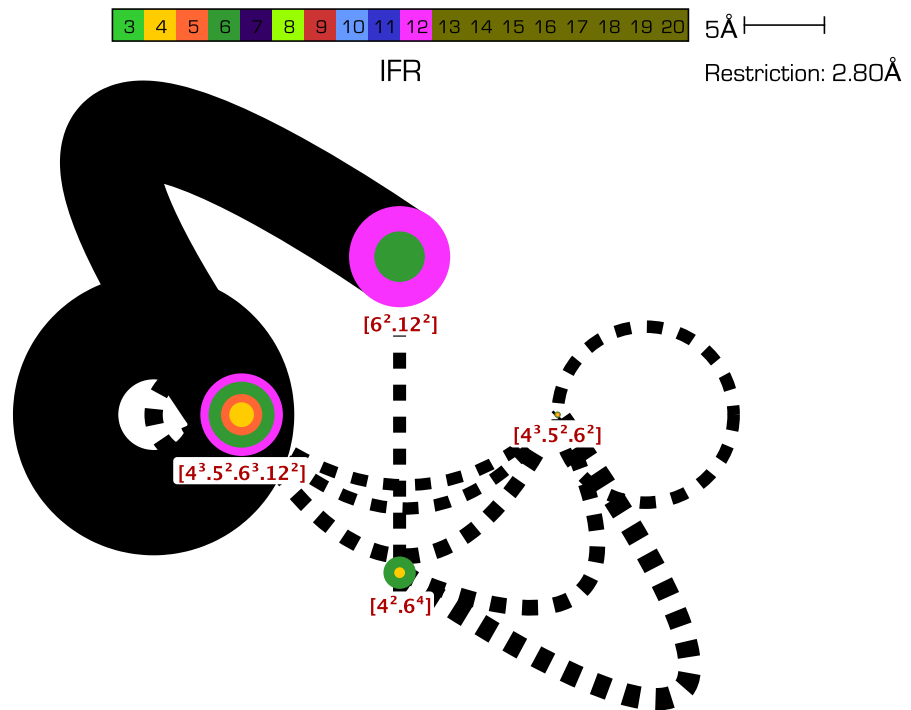


Figure 76: IHW

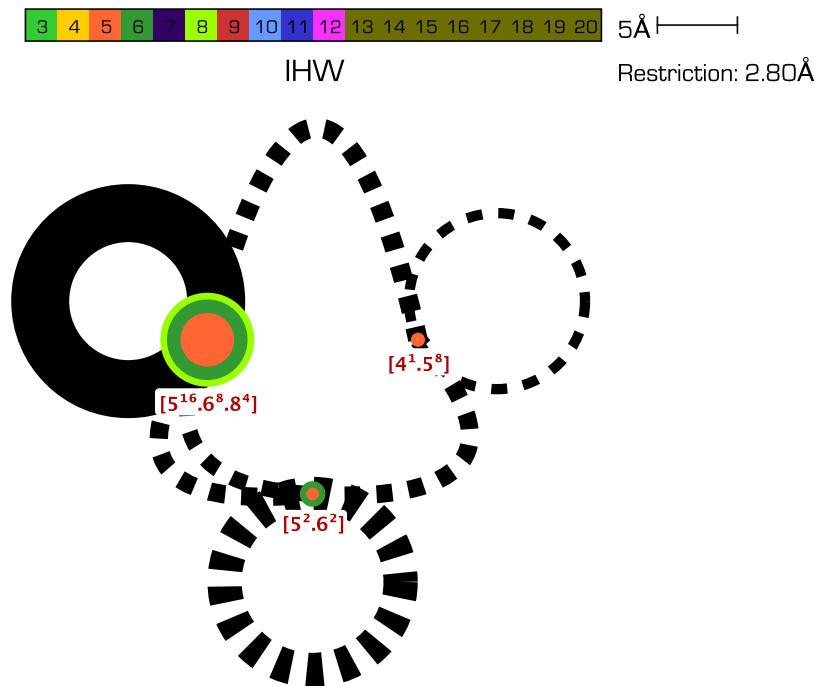


Figure 77: IMF

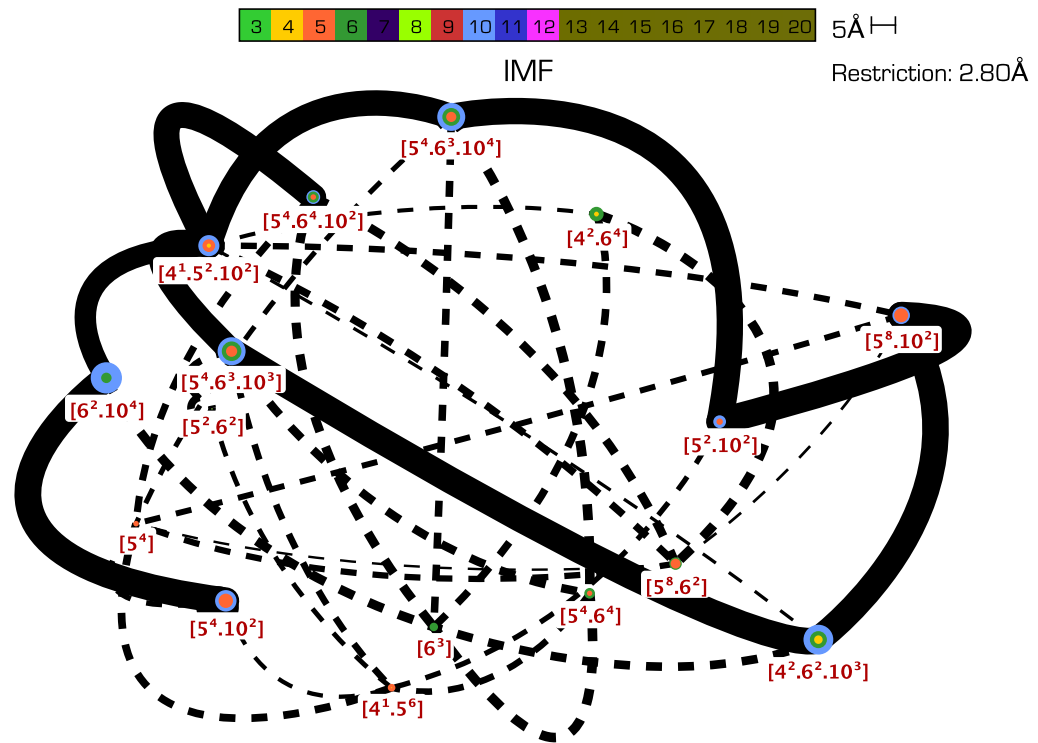




Figure 78: ISV

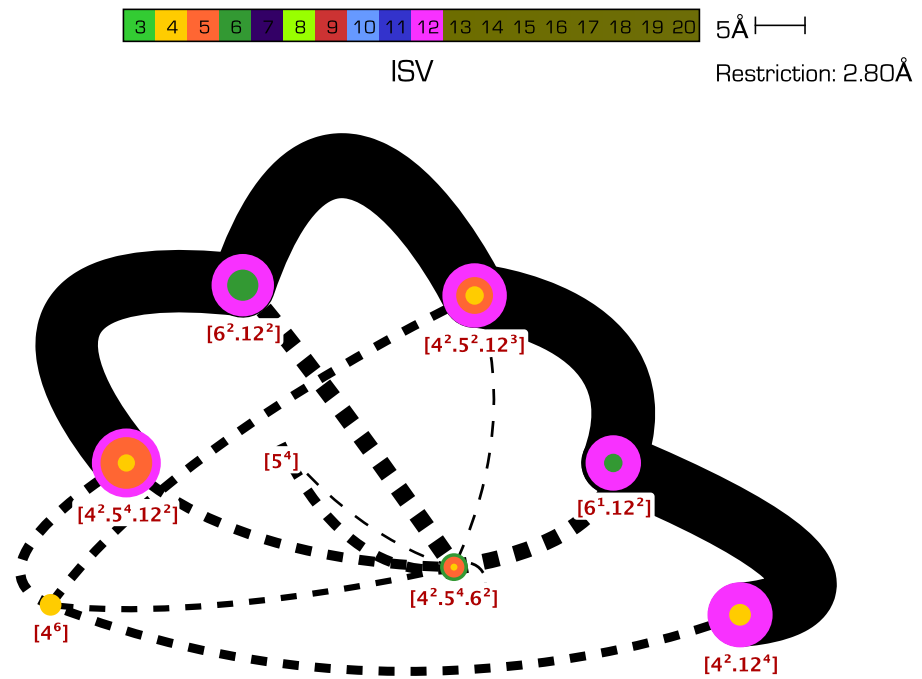
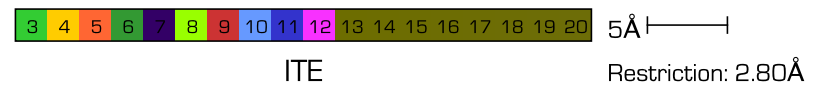


Figure 79: ITE



Restriction: 2.80Å

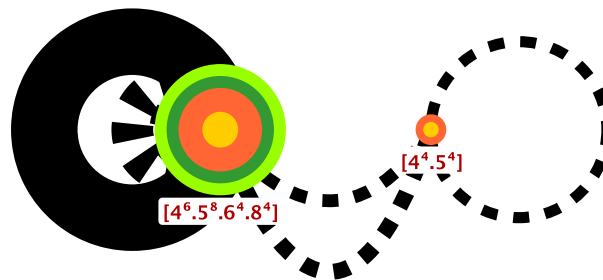


Figure 80: ITH

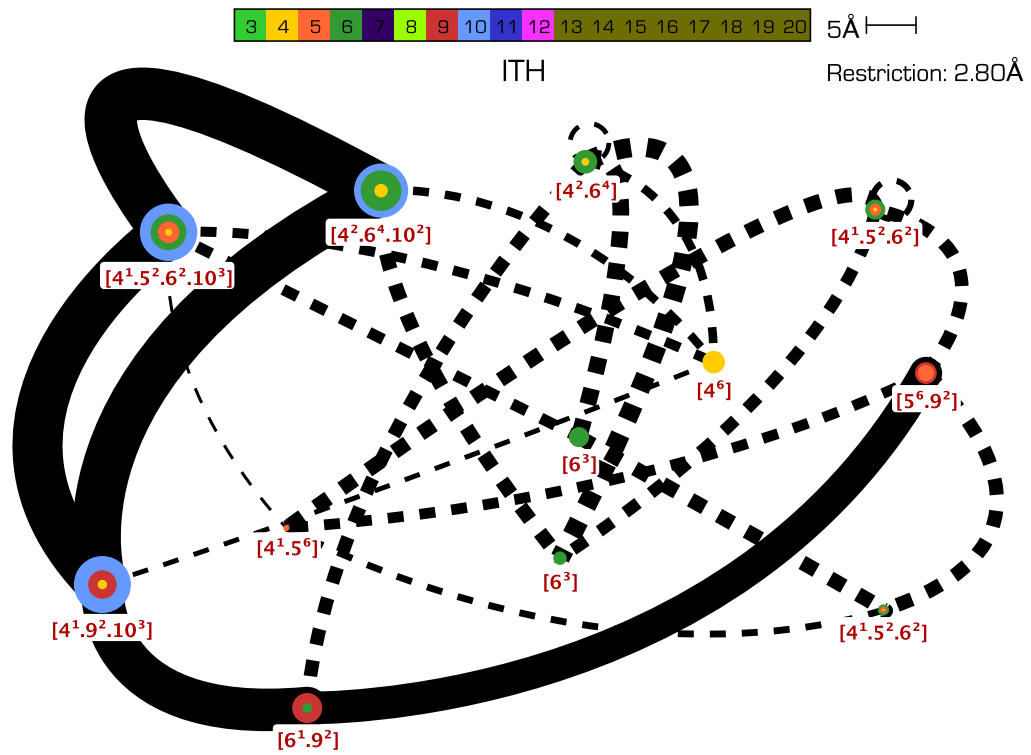


Figure 81: ITR

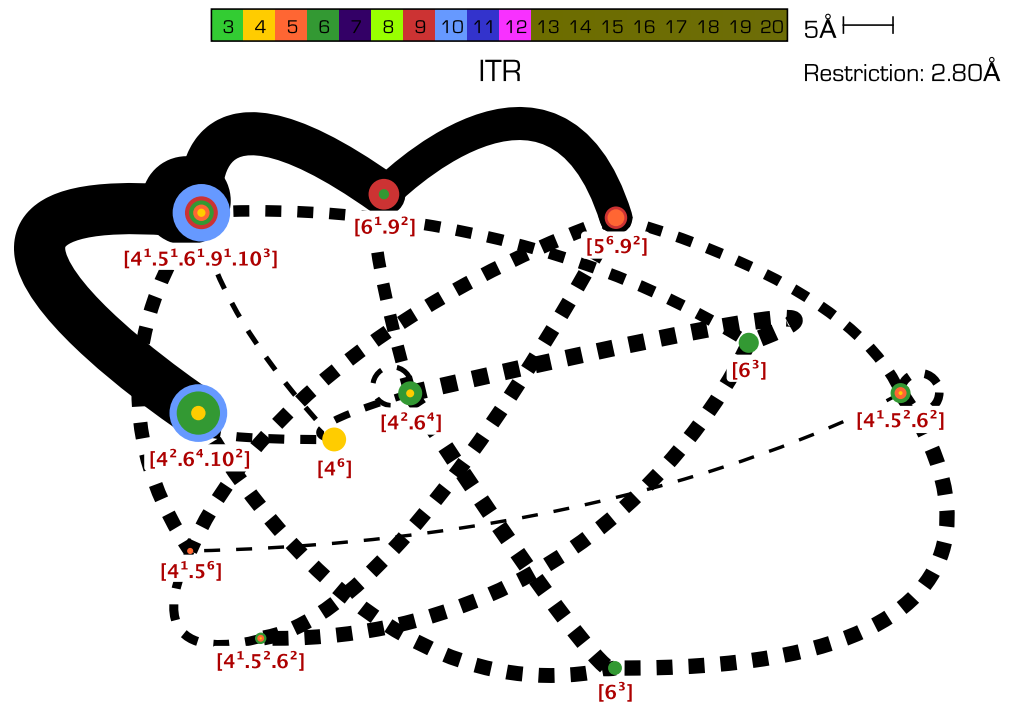


Figure 82: ITW

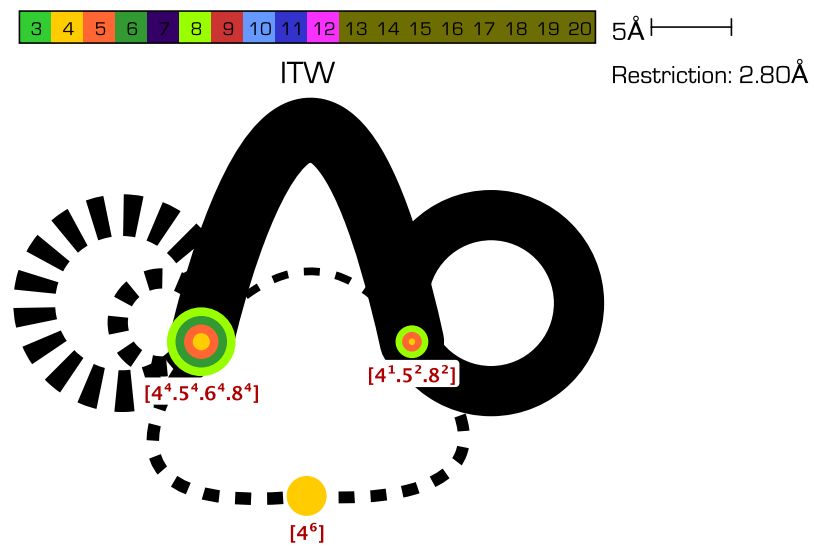


Figure 83: IWR

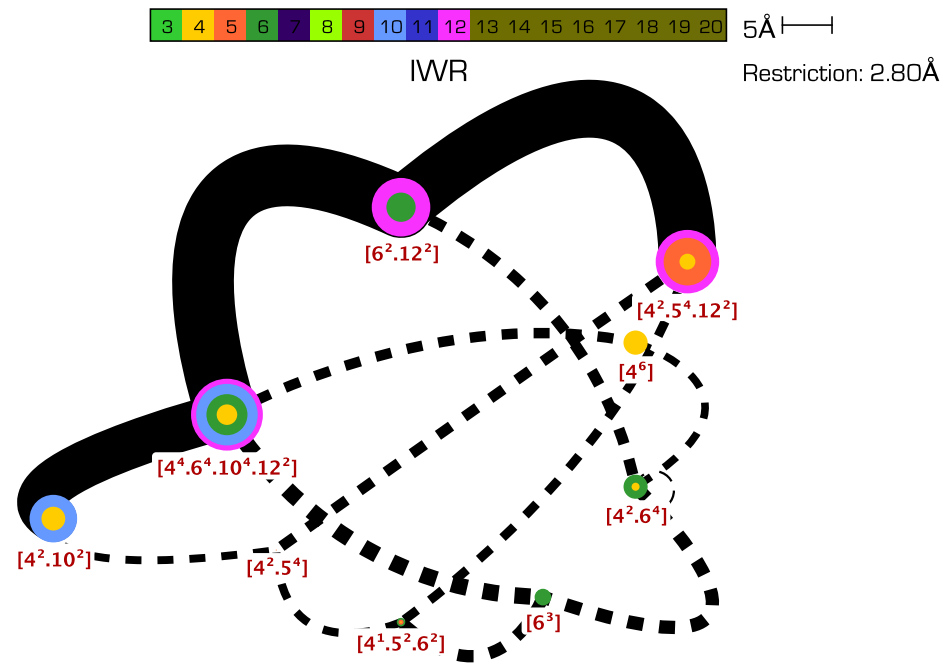


Figure 84: IWS

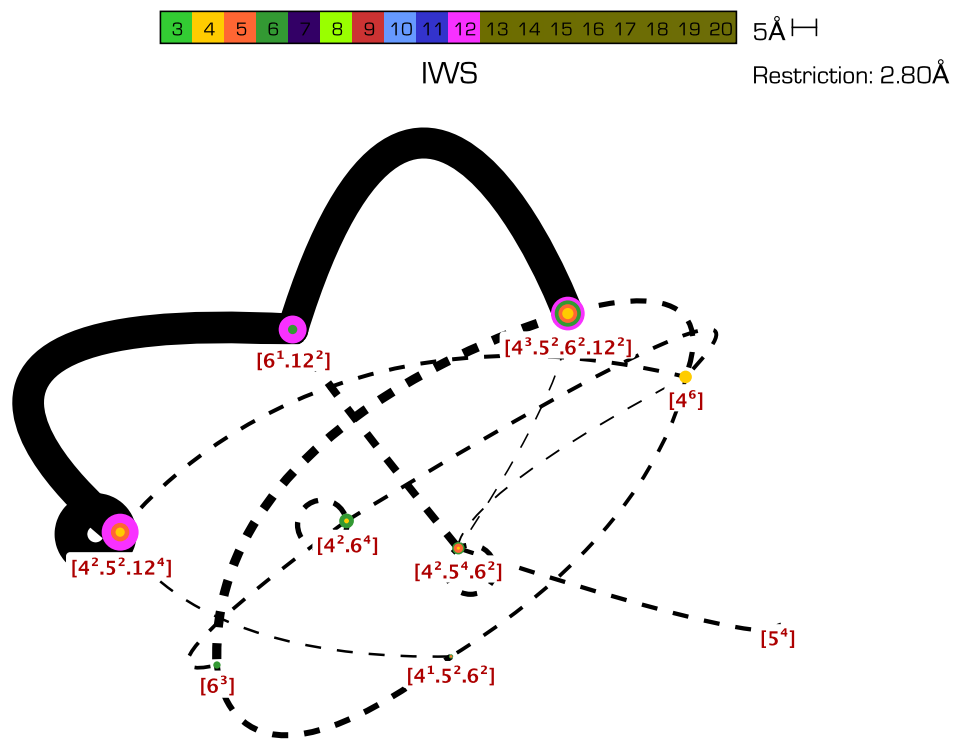


Figure 85: IWV

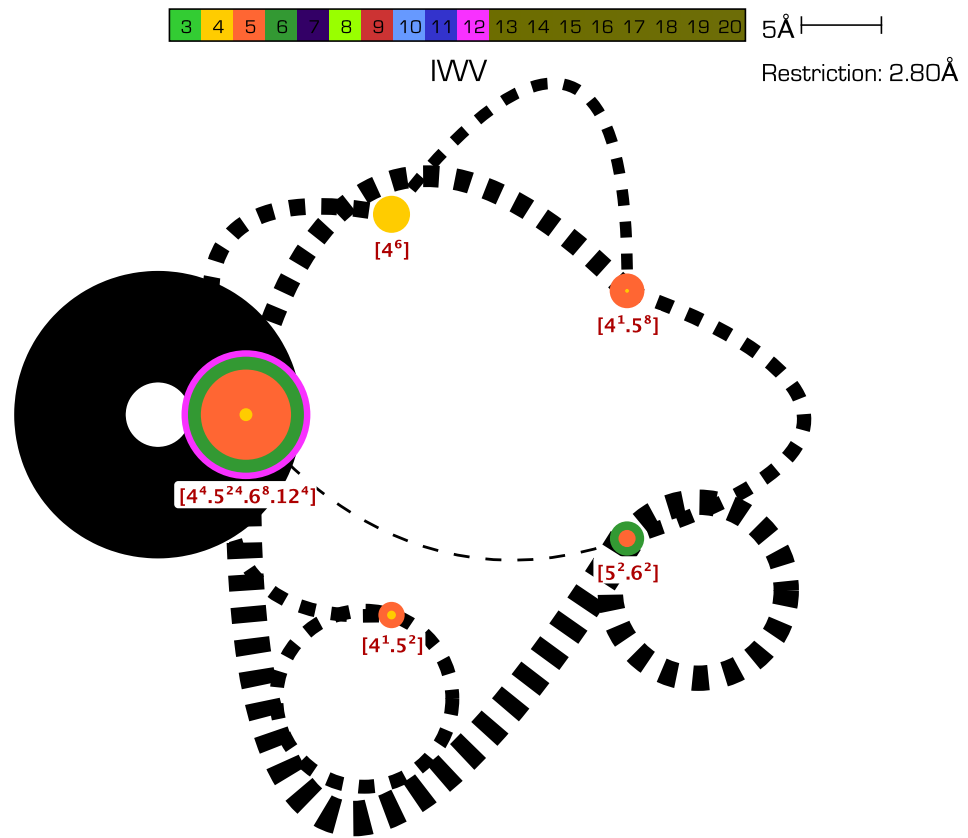




Figure 86: IWW

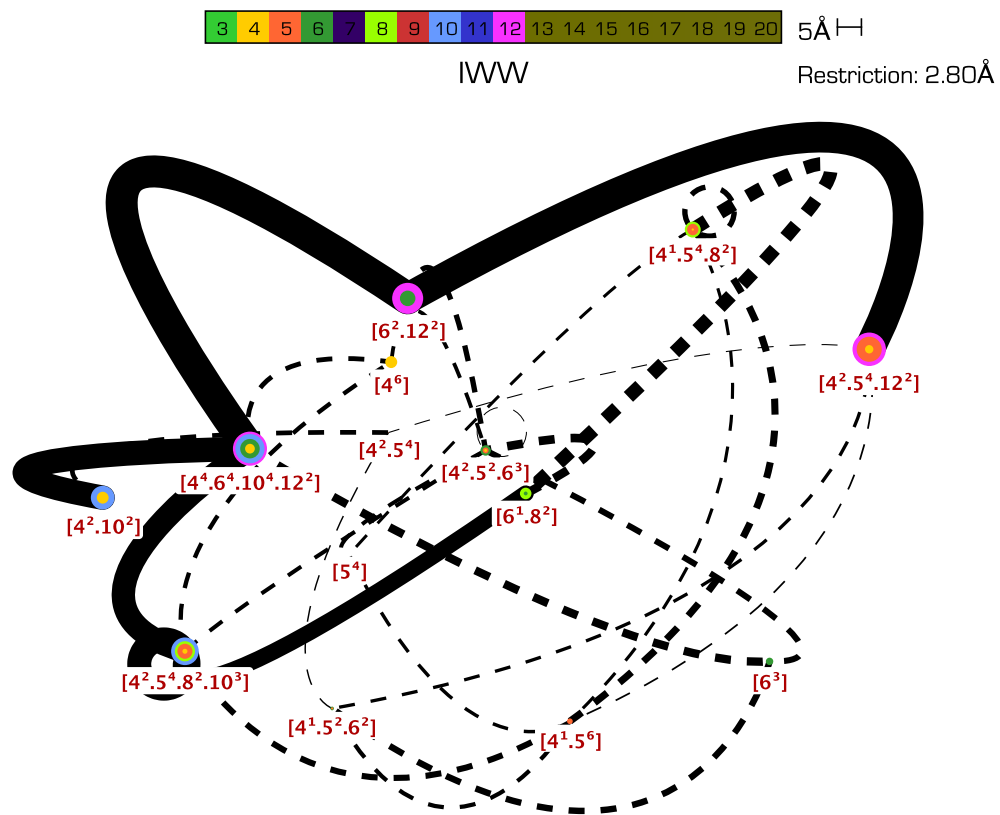


Figure 87: JBW

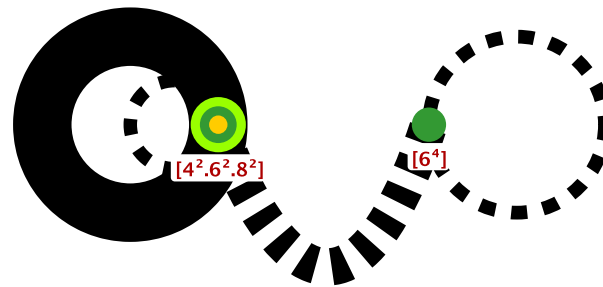
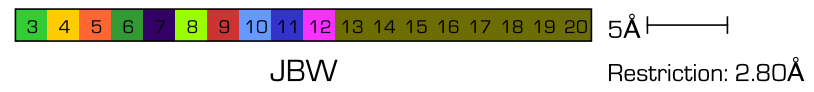


Figure 88: JRY

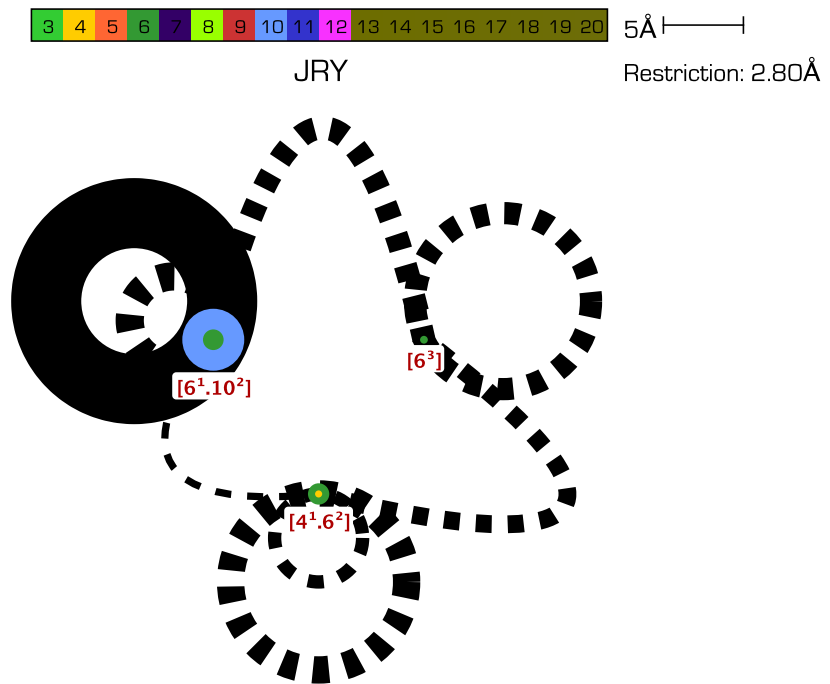


Figure 89: KFI

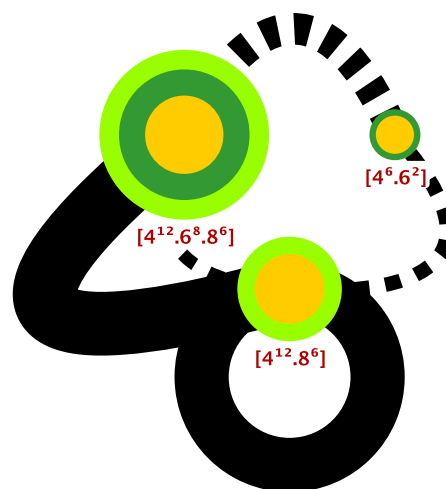
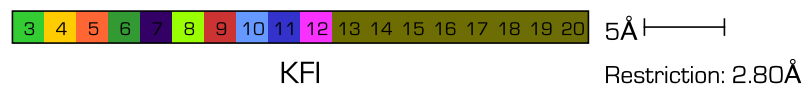


Figure 90: LAU

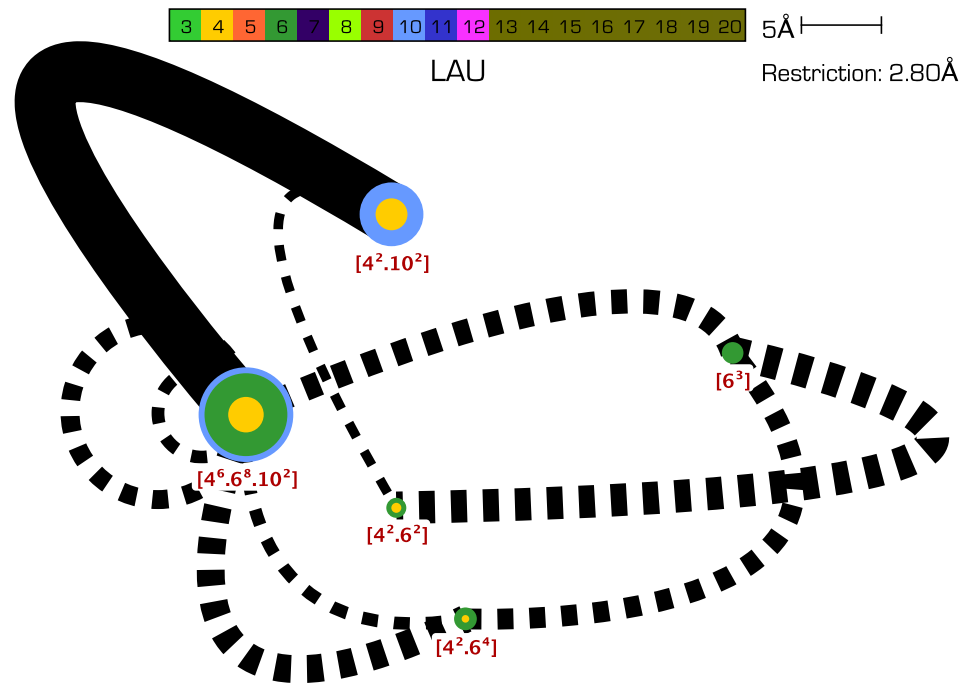


Figure 91: LEV

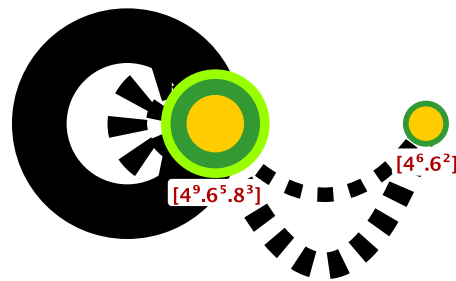
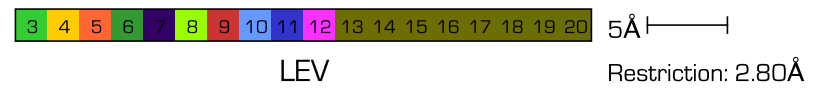


Figure 92: LIO

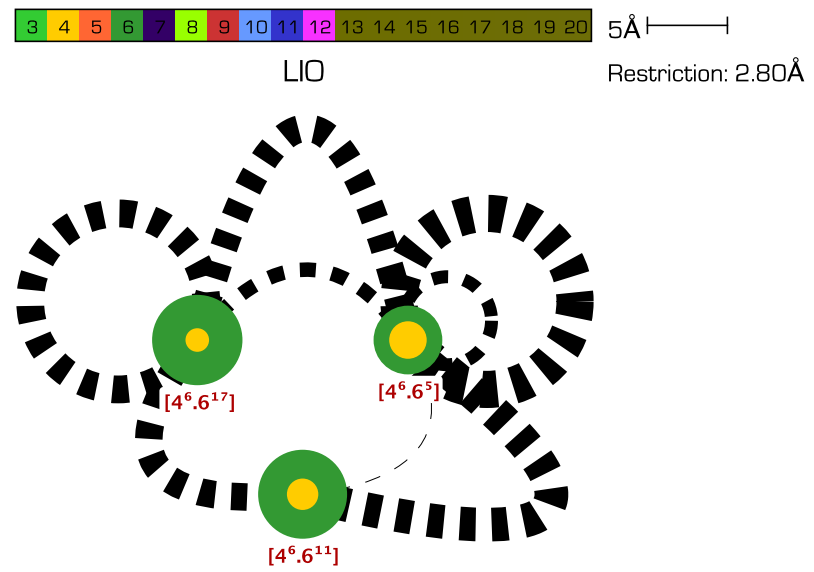


Figure 93: LIT

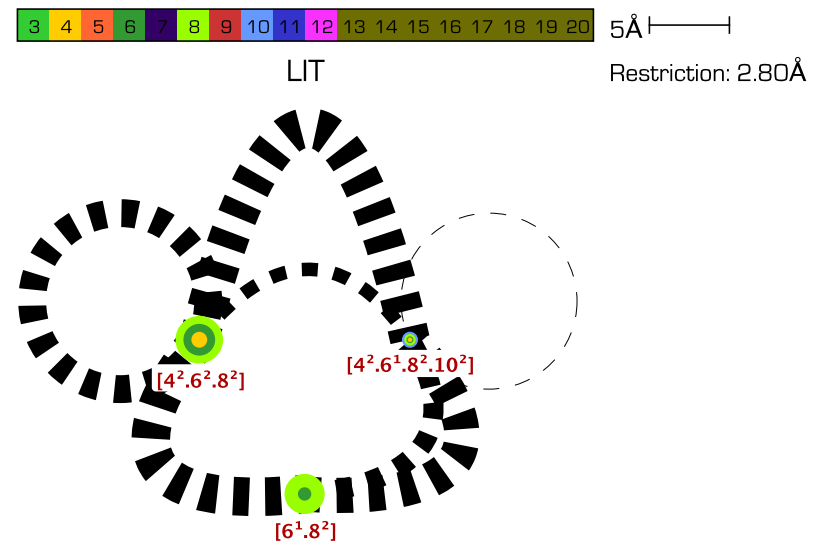
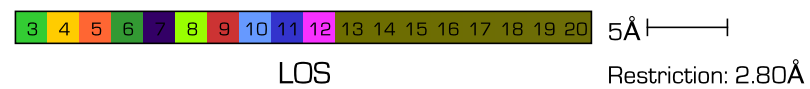




Figure 94: LOS



Restriction: 2.80 Å

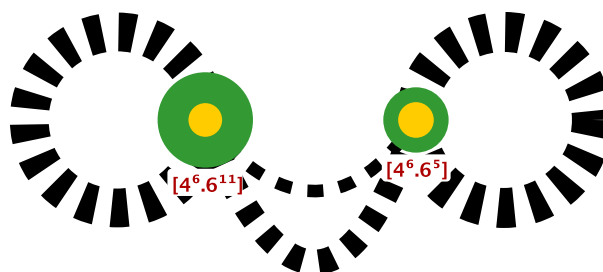


Figure 95: LOV

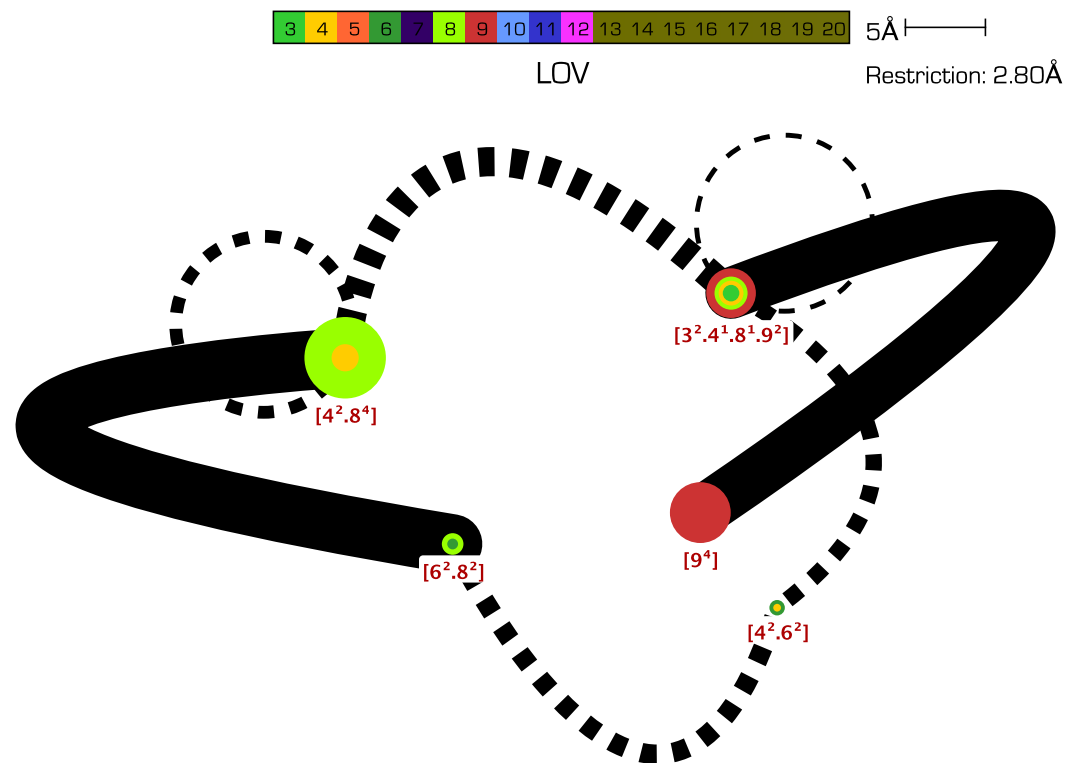


Figure 96: LTA

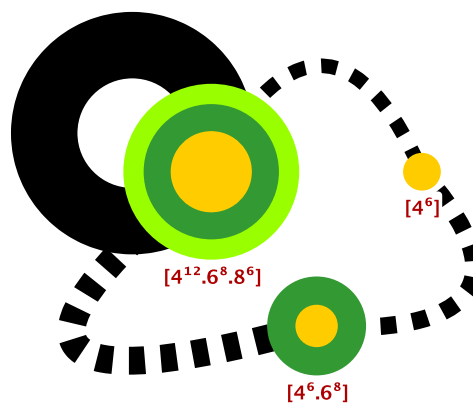
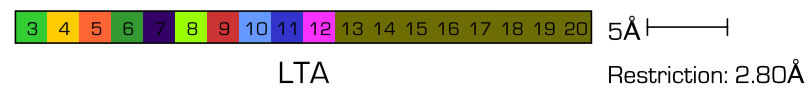


Figure 97: LTF

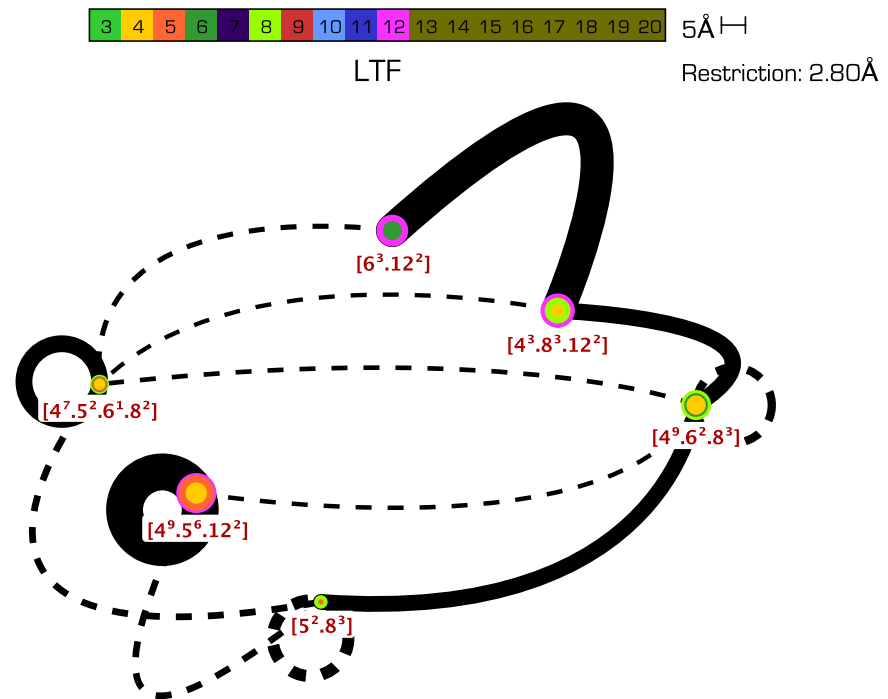


Figure 98: LTL

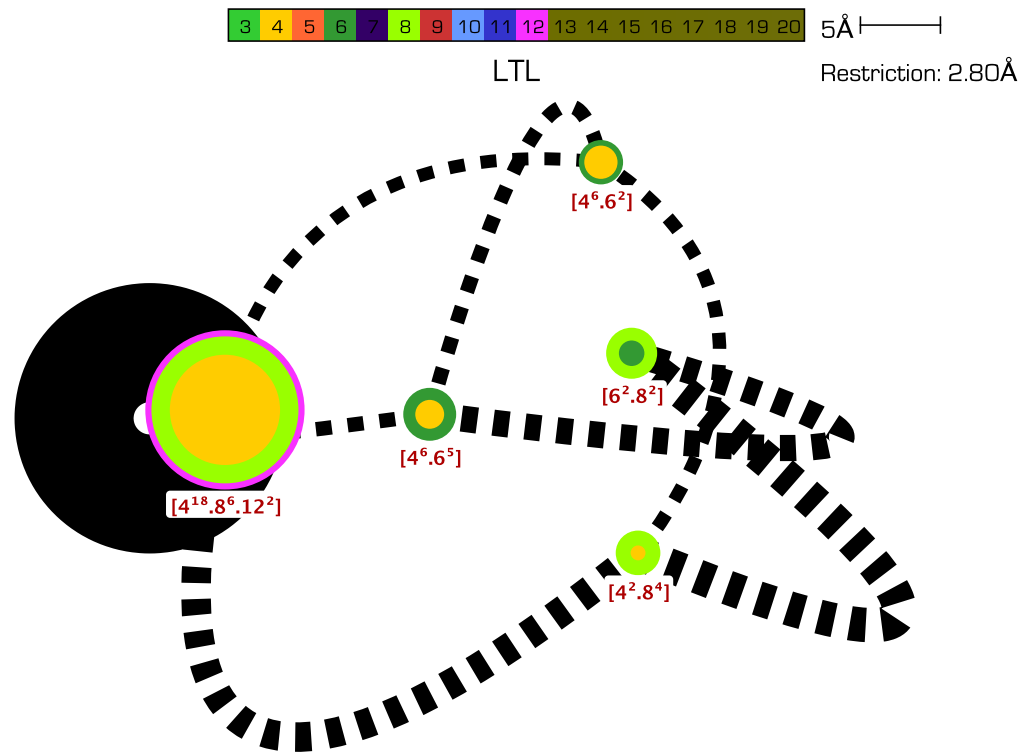


Figure 99: LTN

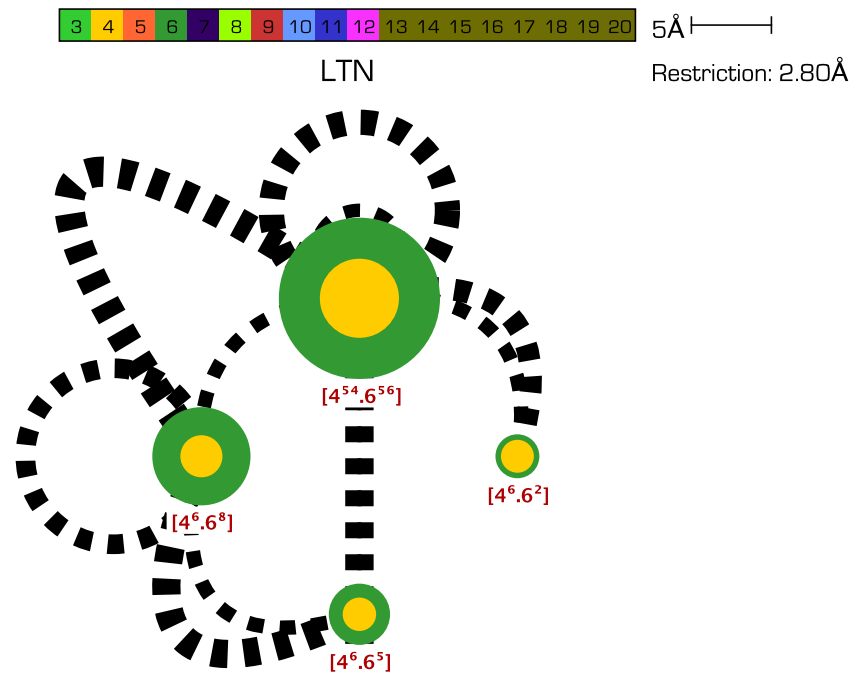


Figure 100: MAR

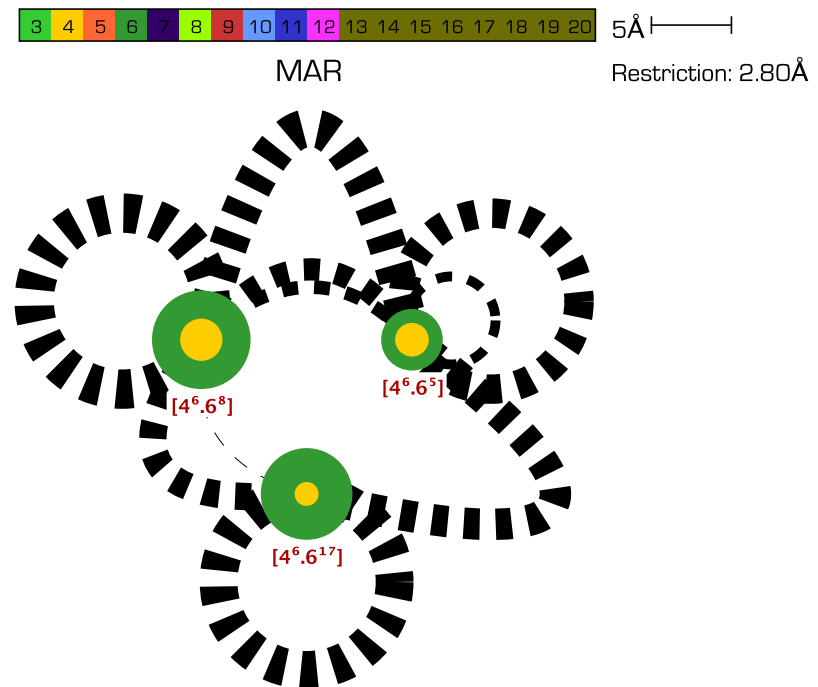


Figure 101: MAZ

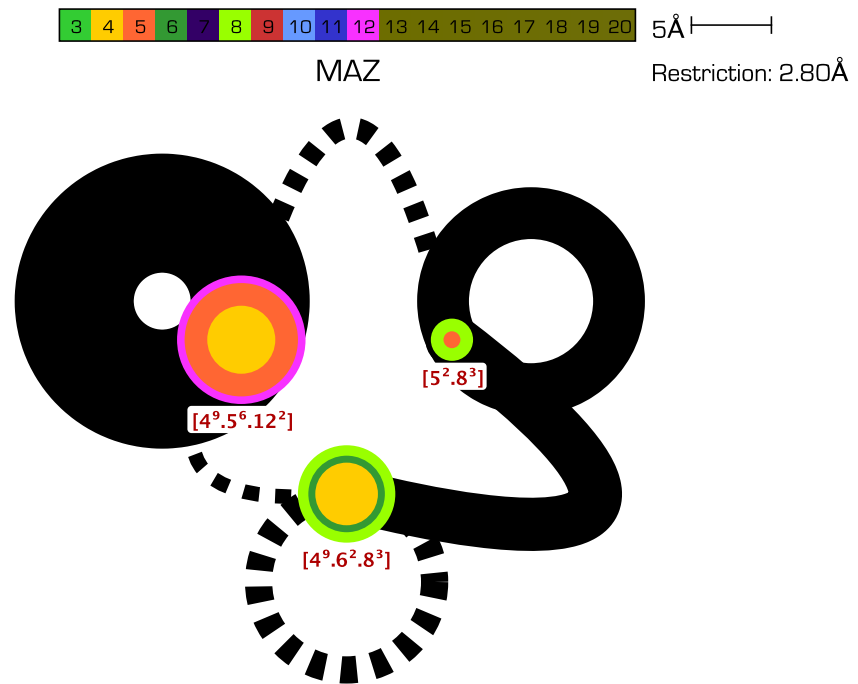




Figure 102: MEI

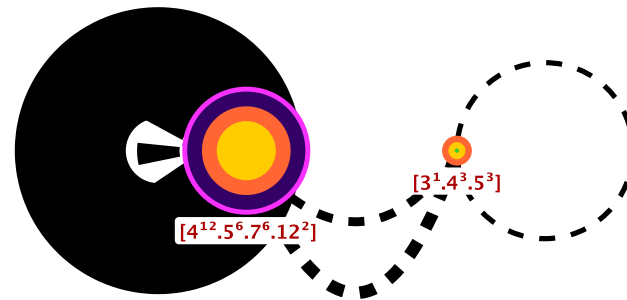
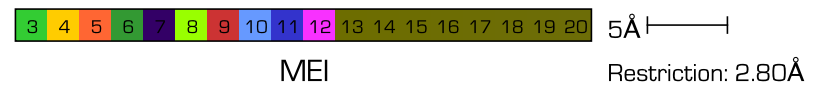


Figure 103: MEL

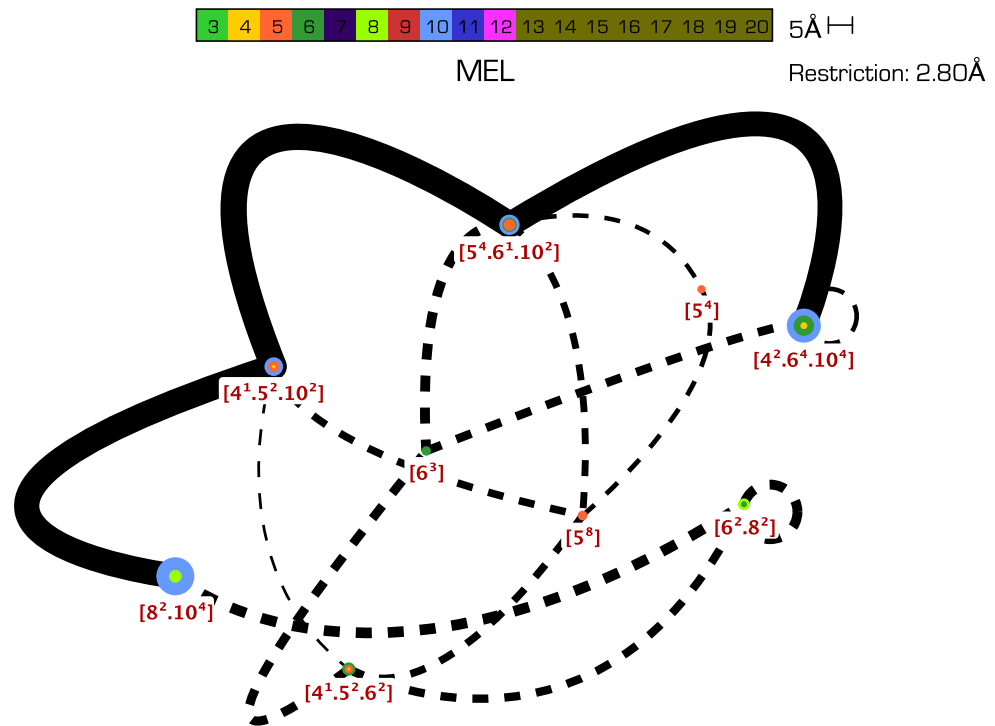


Figure 104: MEP

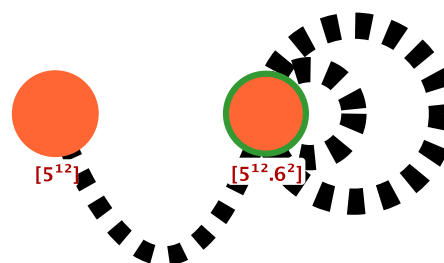
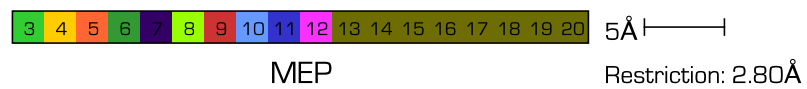


Figure 105: MER

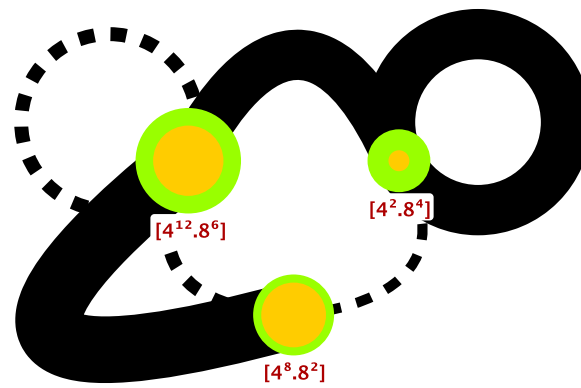
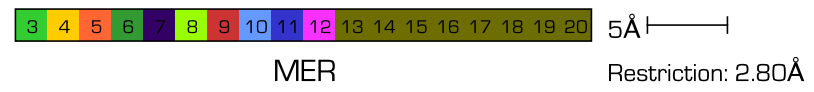


Figure 106: MFI

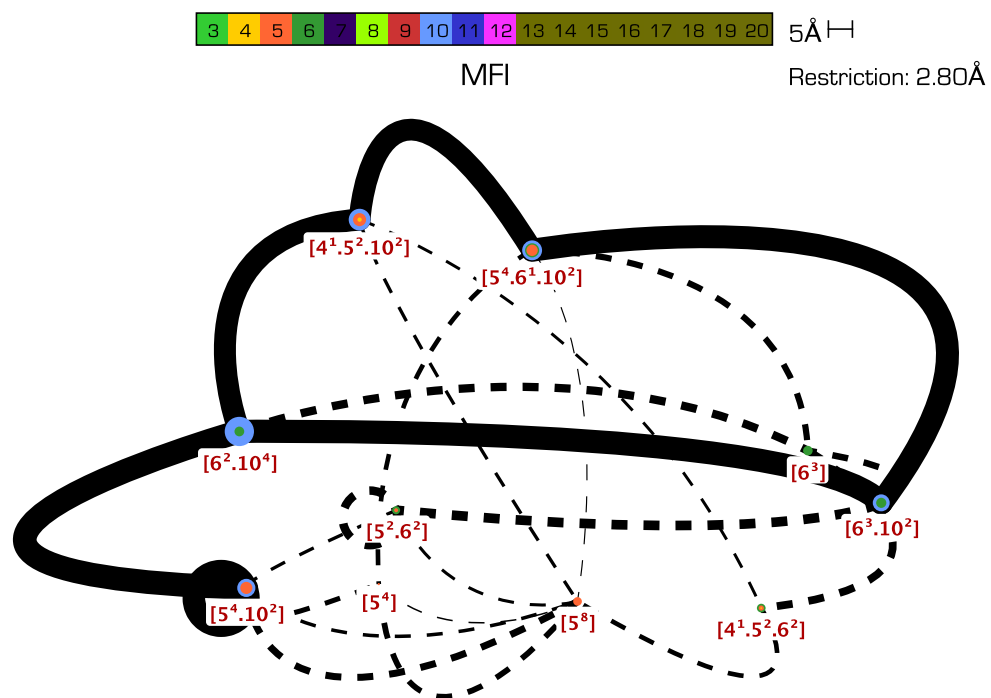


Figure 107: MFS

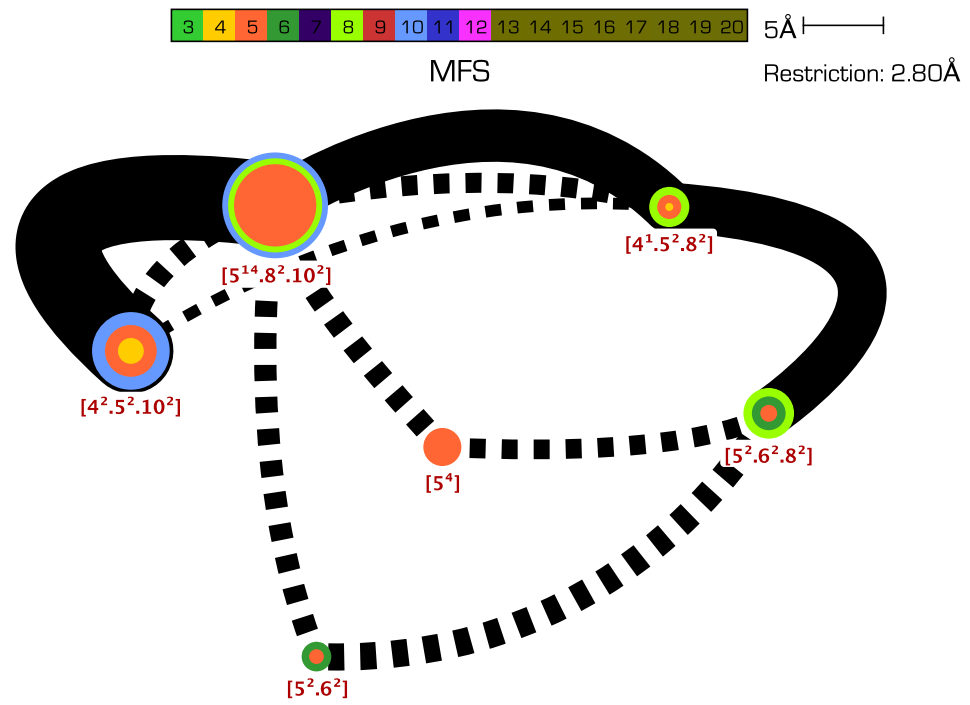


Figure 108: MON

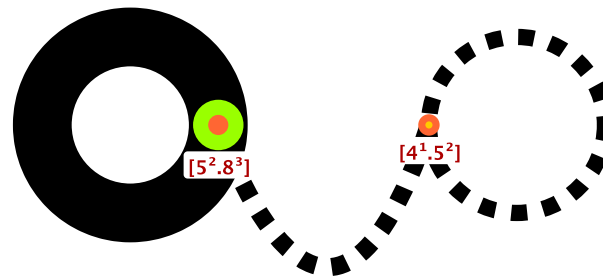
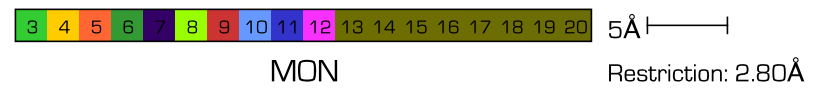


Figure 109: MOR

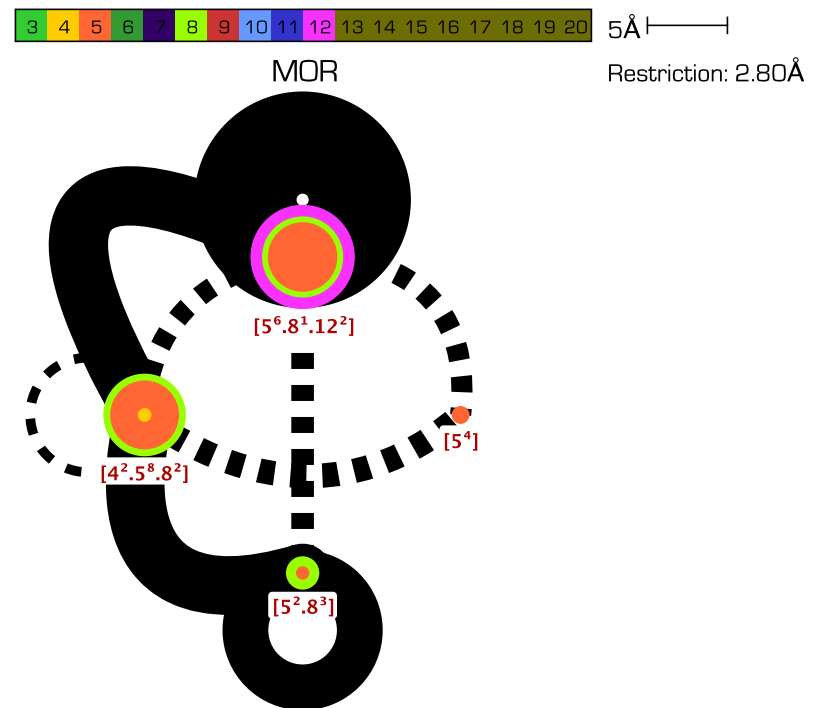




Figure 110: MOZ

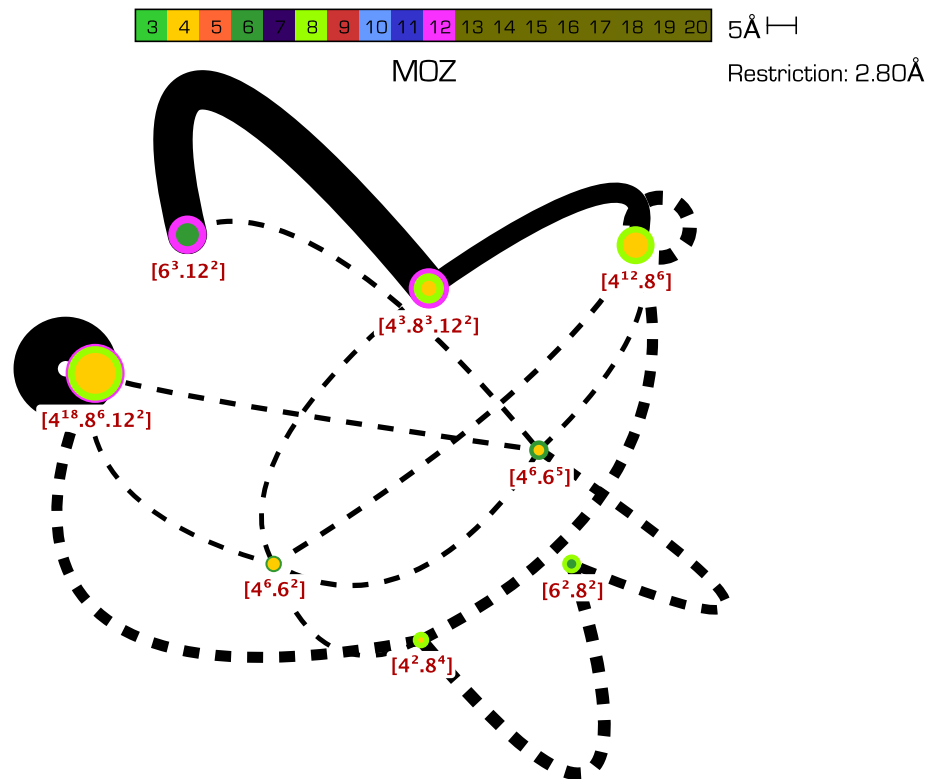


Figure 111: MRE

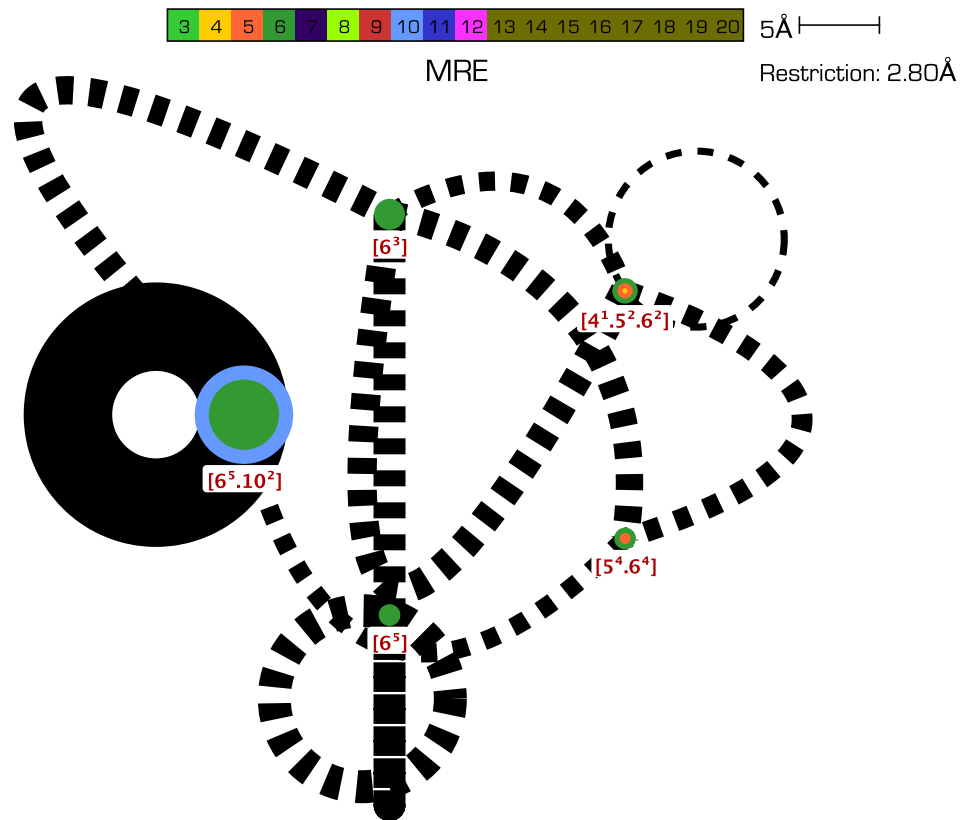


Figure 112: MSE

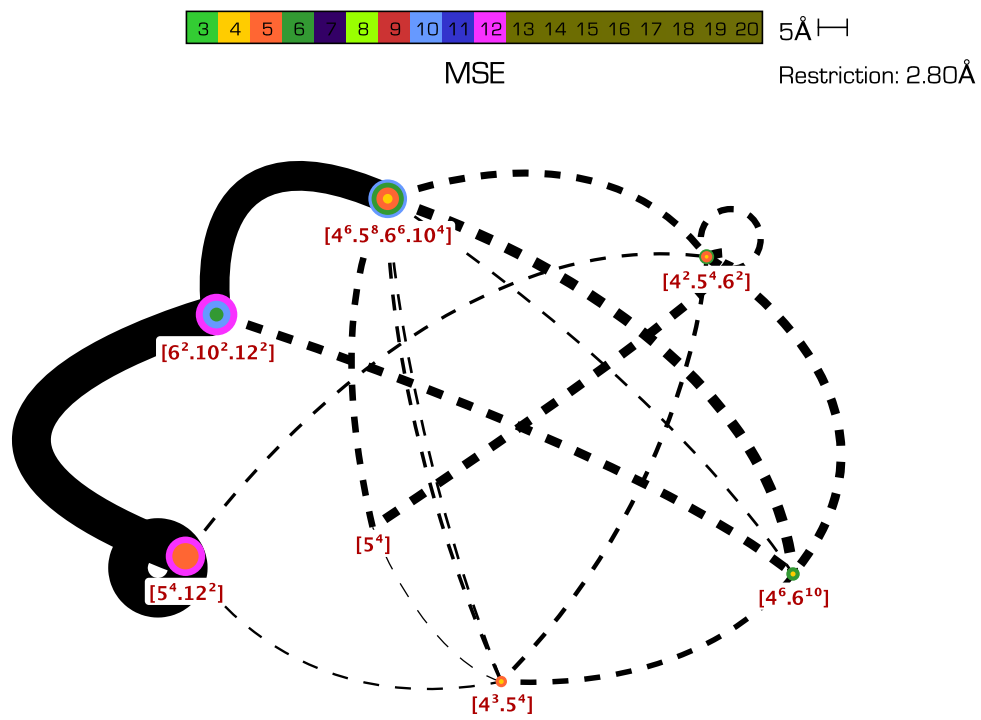


Figure 113: MSO

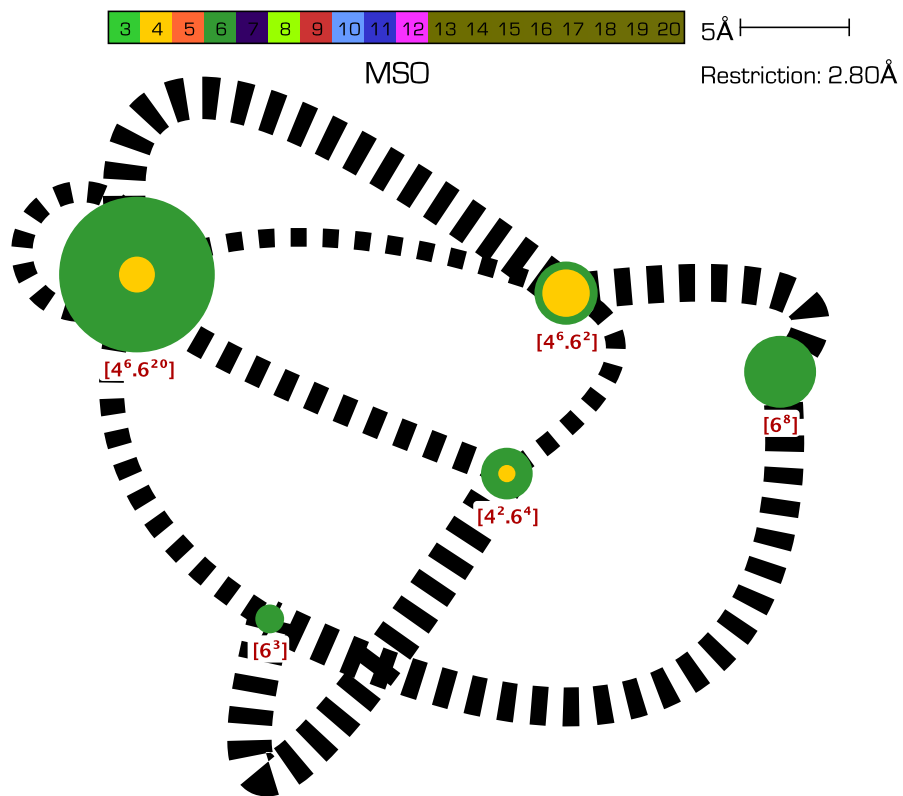


Figure 114: MTF

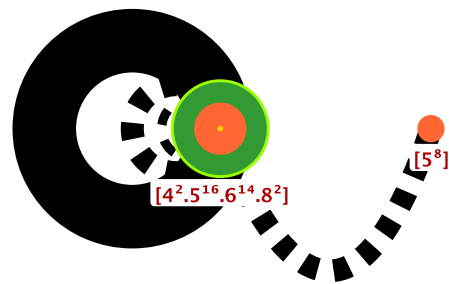
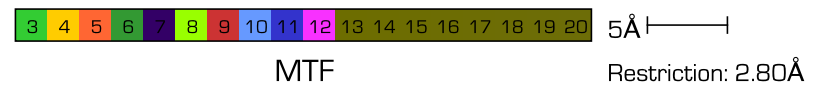


Figure 115: MTN

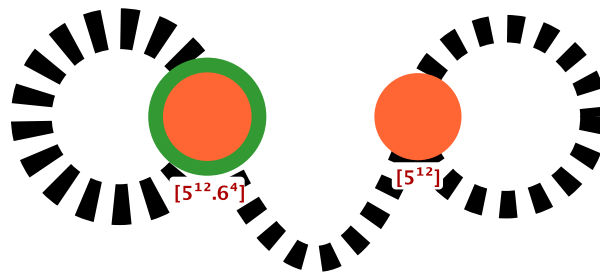
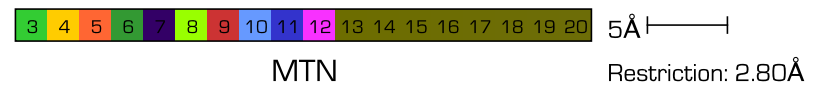


Figure 116: MTT

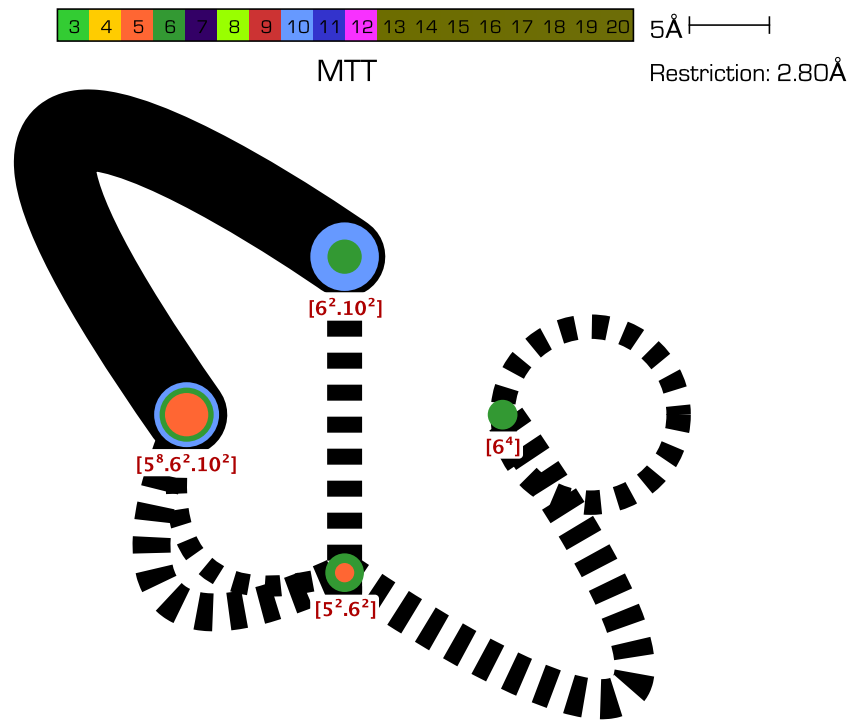


Figure 117: MTW

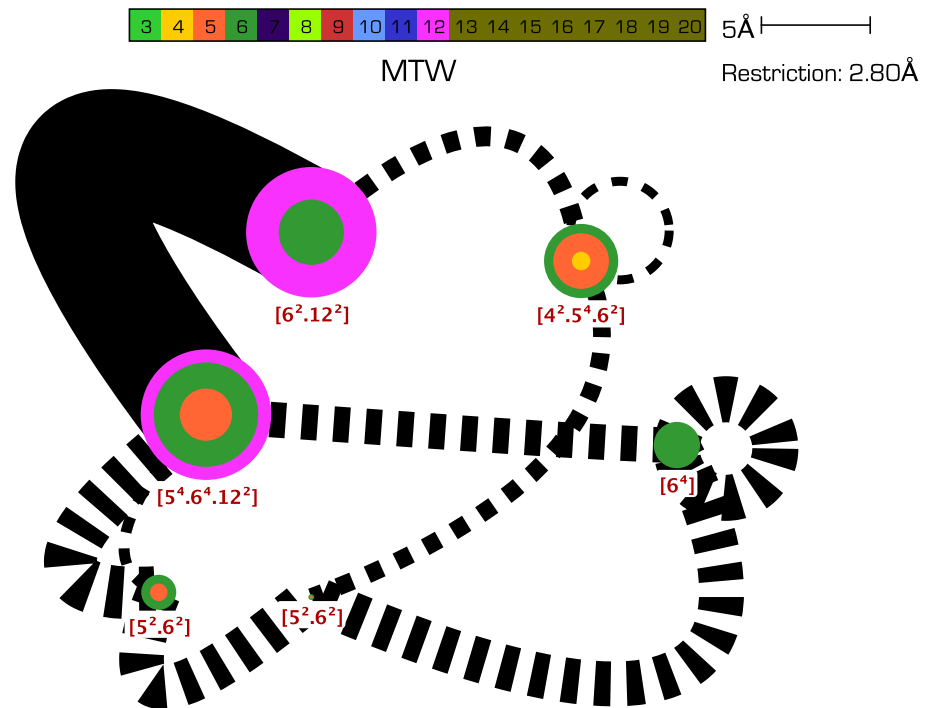




Figure 118: MWW

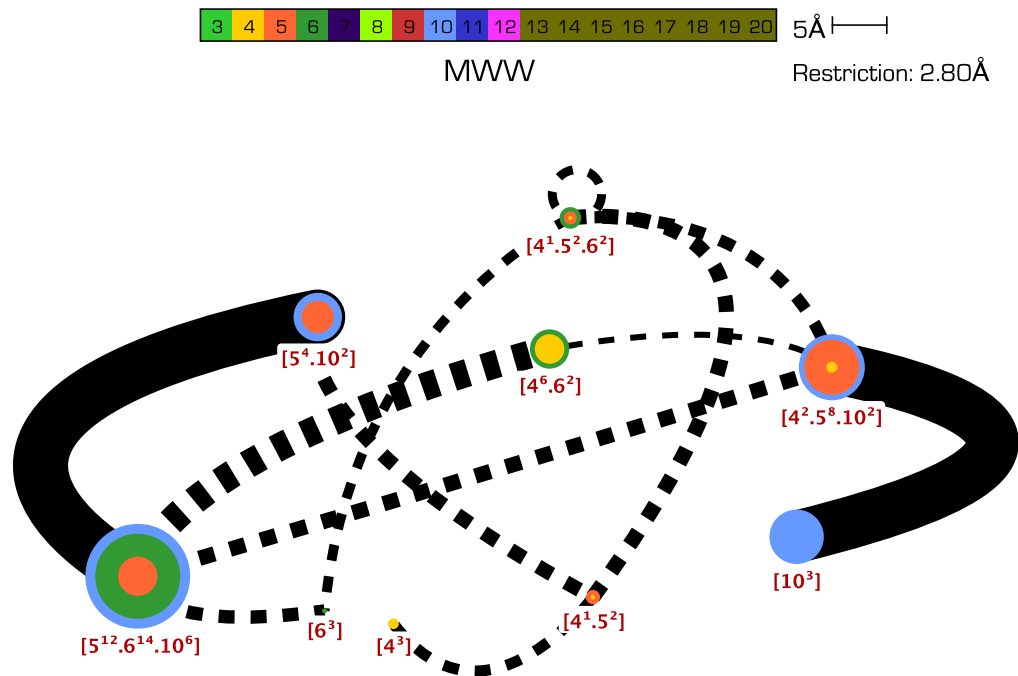


Figure 119: NAB

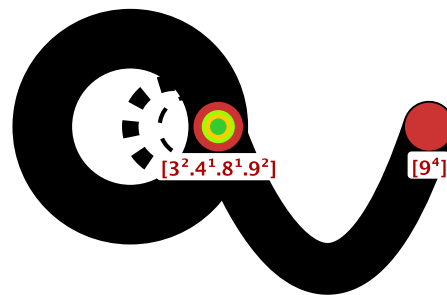
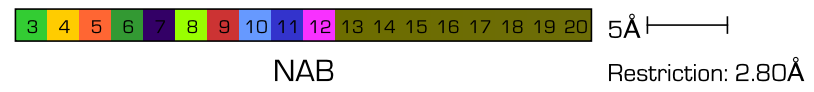


Figure 120: NAT

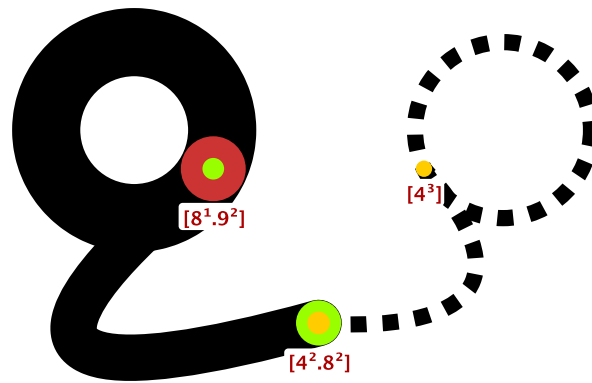
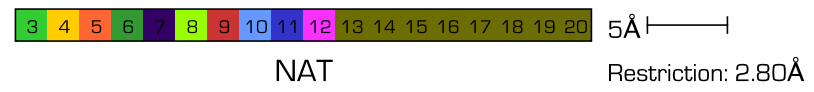


Figure 121: NES

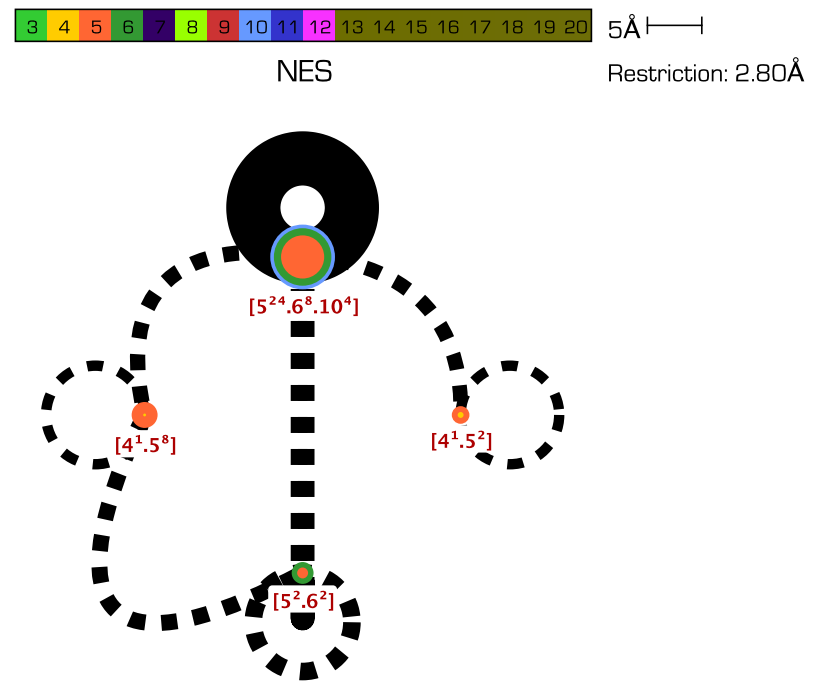


Figure 122: NON

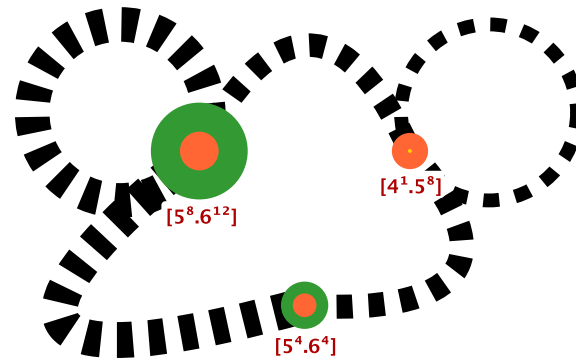
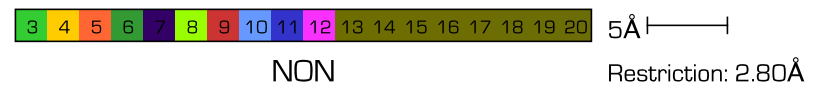


Figure 123: NPO

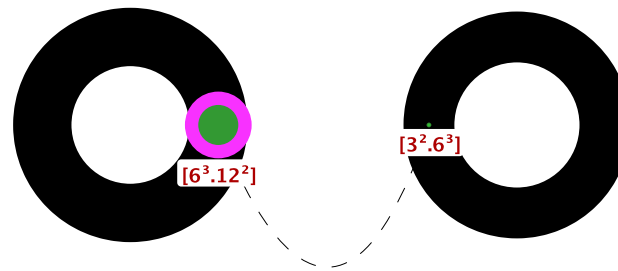
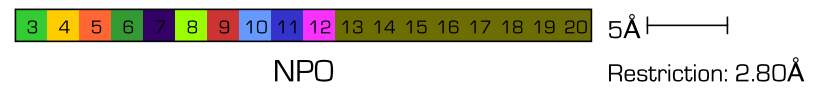


Figure 124: NSI

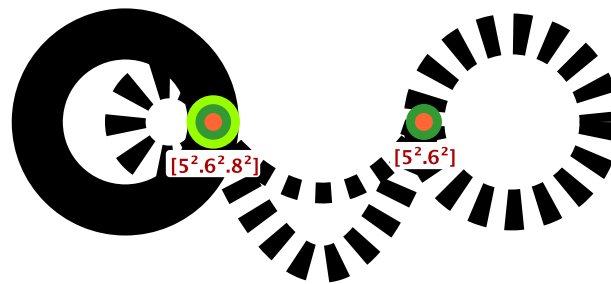
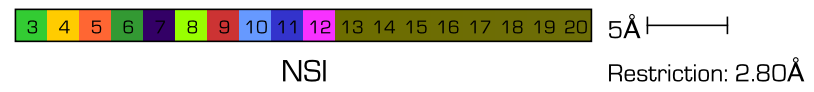


Figure 125: OBW

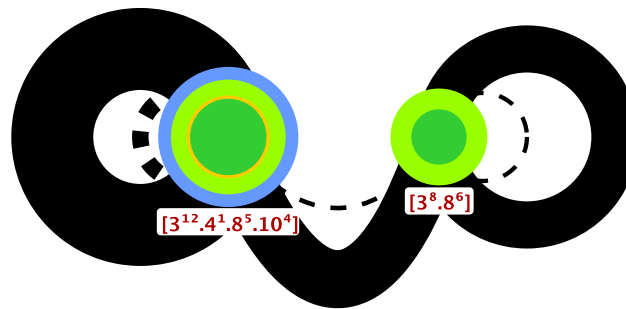
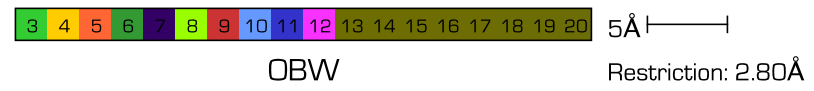




Figure 126: OFF

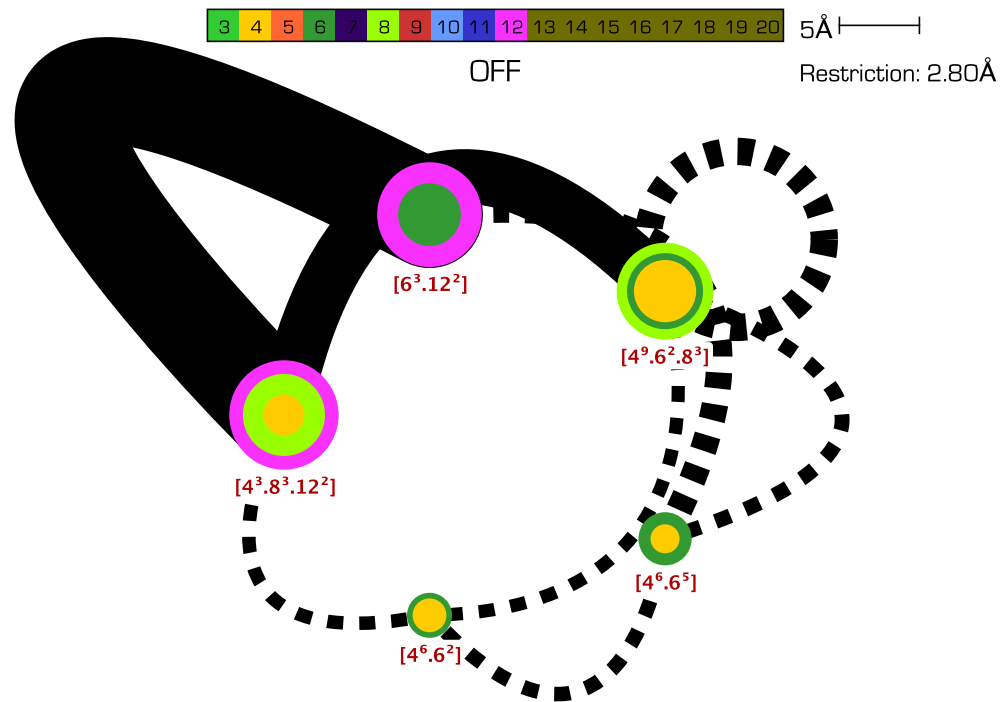


Figure 127: OSI

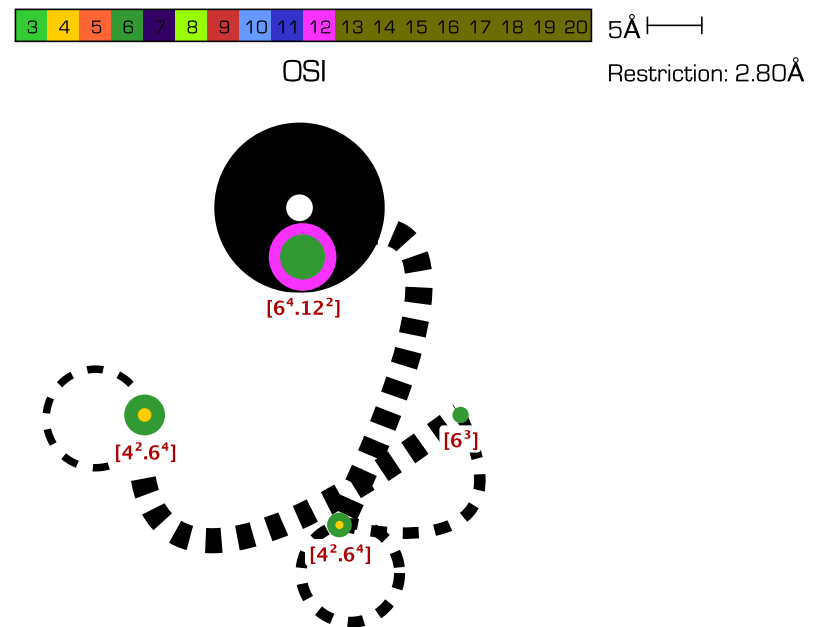


Figure 128: OSO

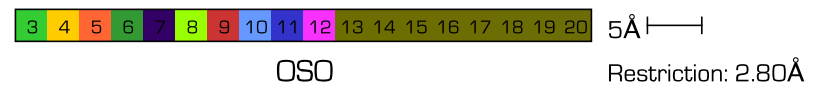


Figure 129: OWE

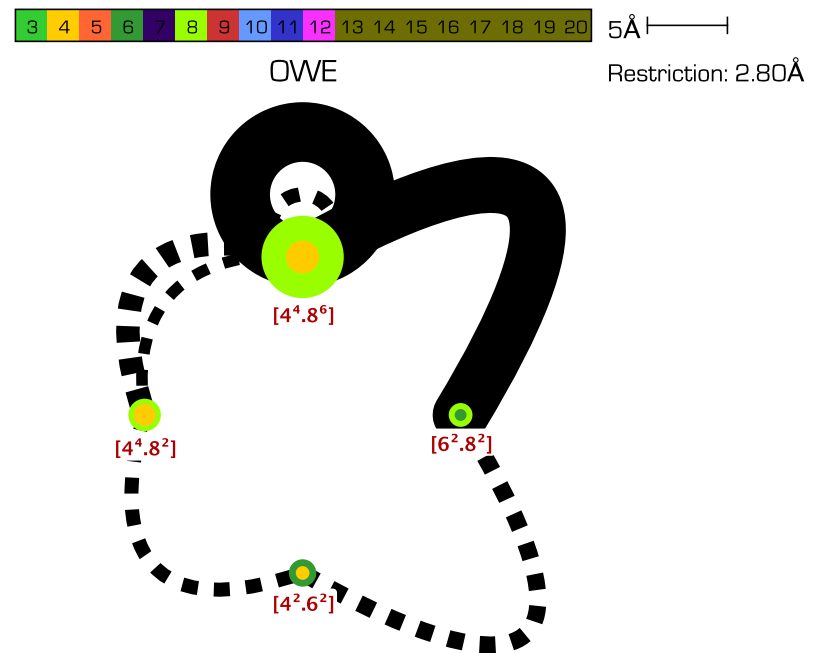


Figure 130: PAR

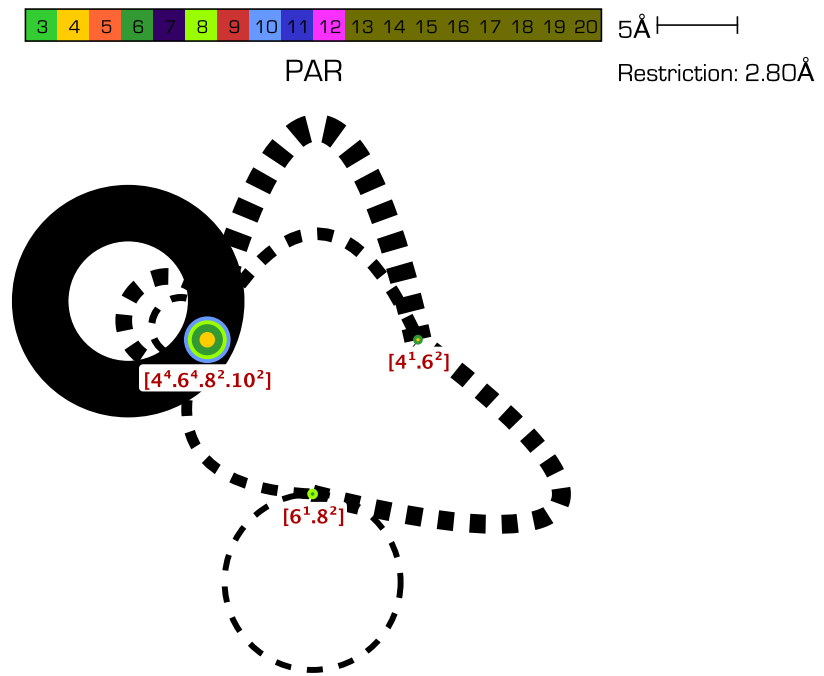


Figure 131: PAU

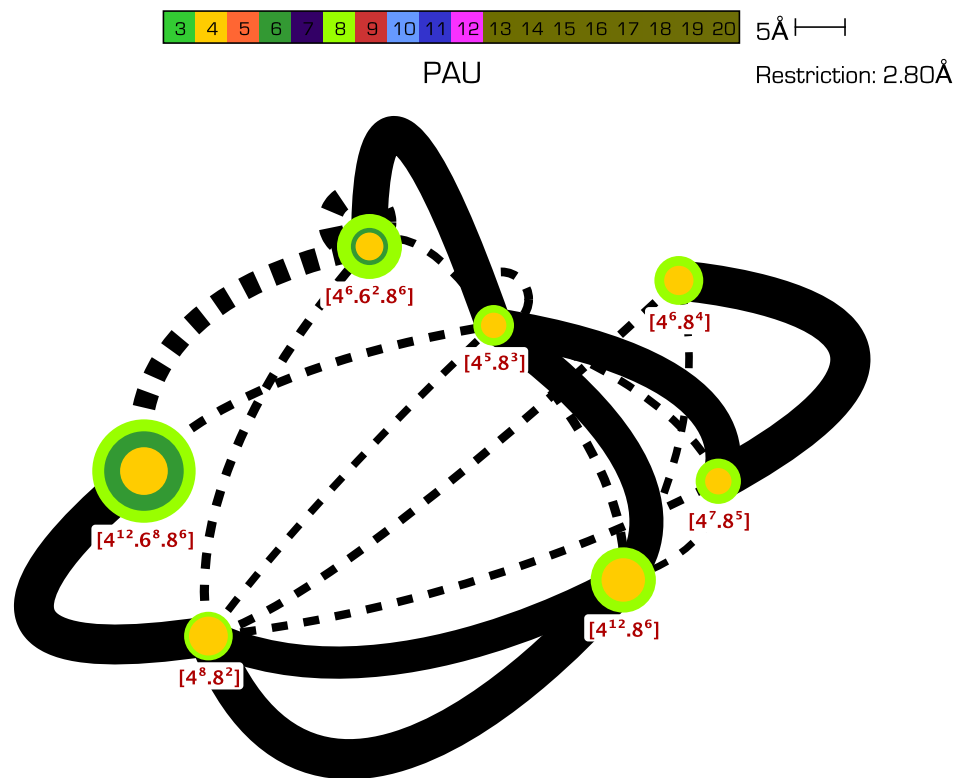


Figure 132: PHI

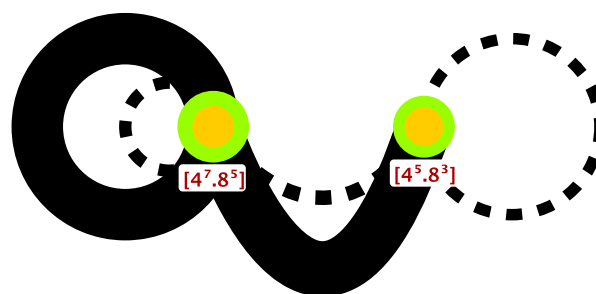
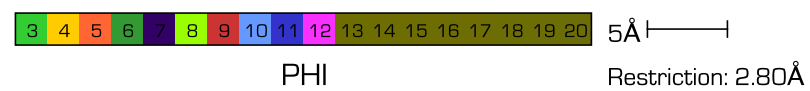


Figure 133: PON

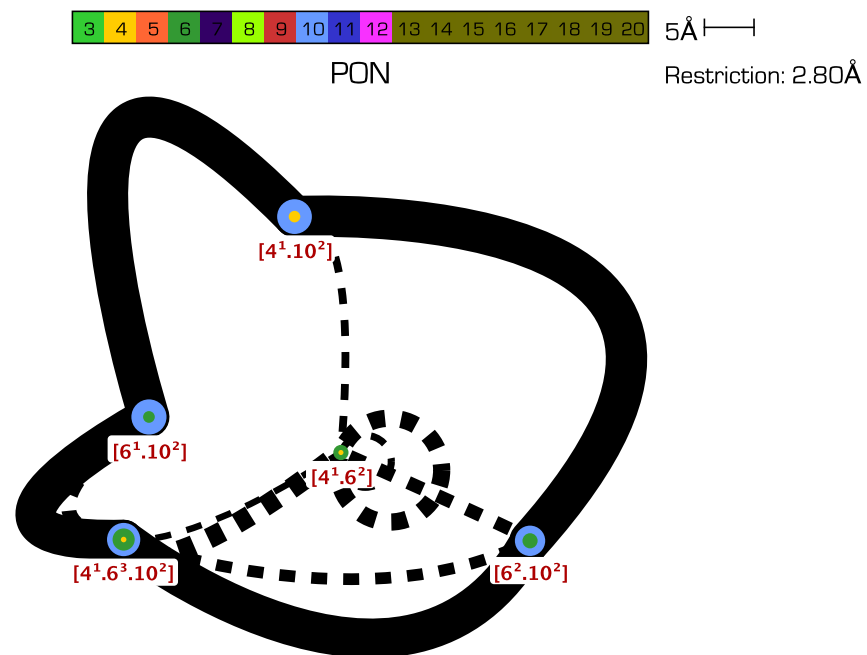




Figure 134: RHO

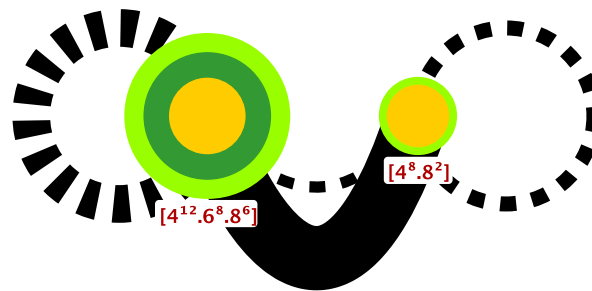
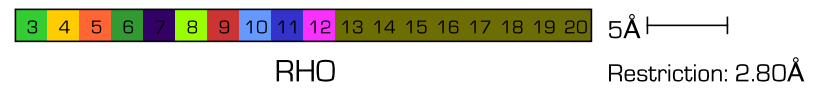


Figure 135: RON

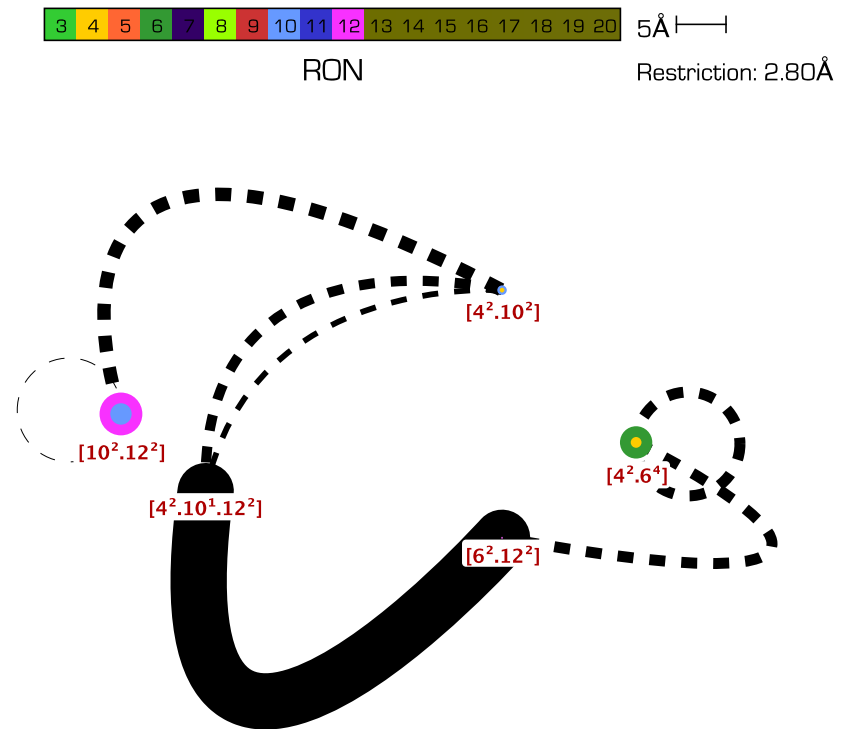


Figure 136: RRO

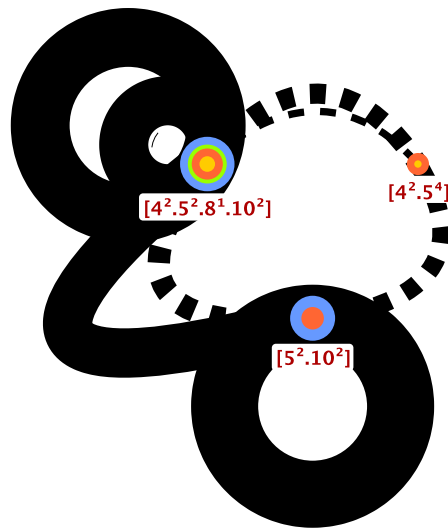
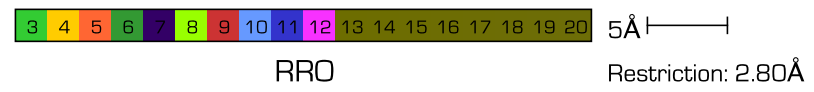


Figure 137: RSN

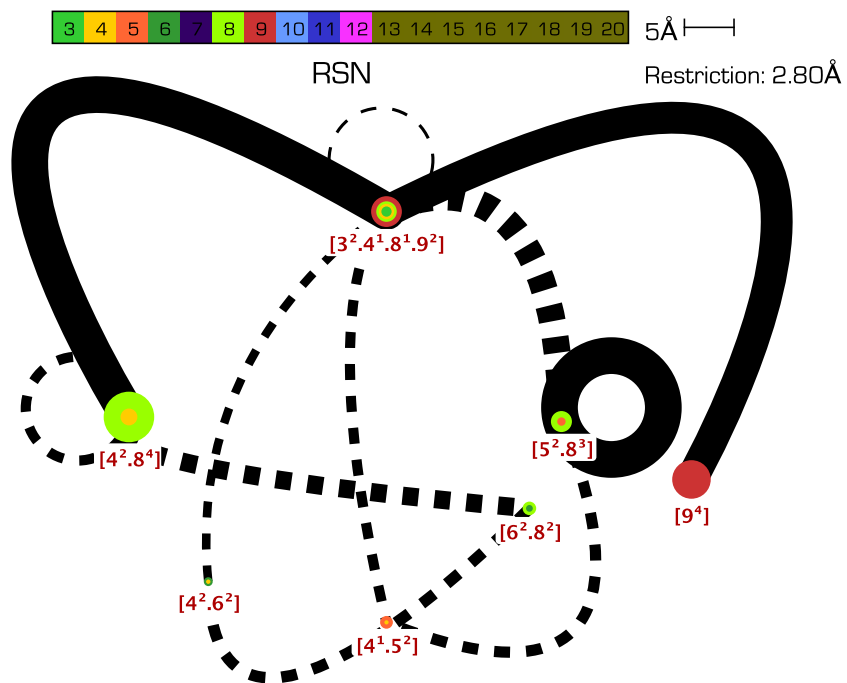


Figure 138: RTE

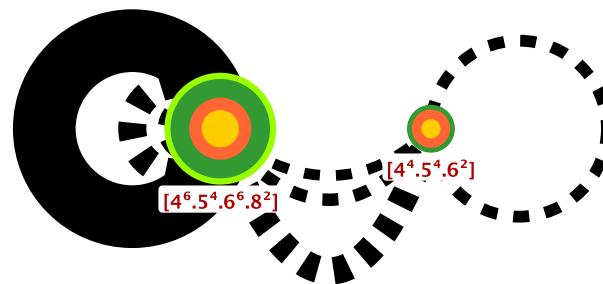
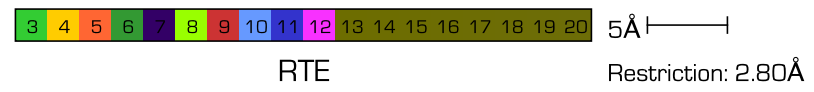


Figure 139: RTH

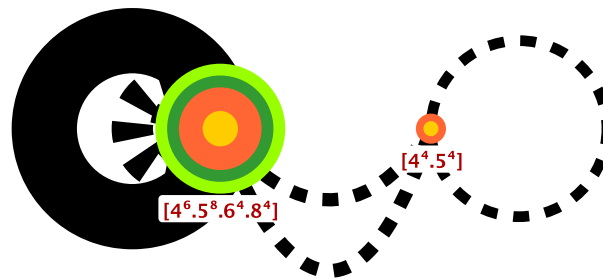
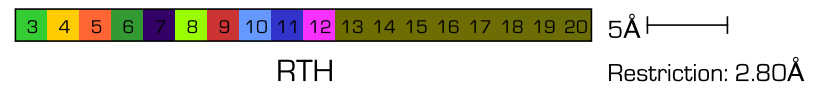


Figure 140: RUT

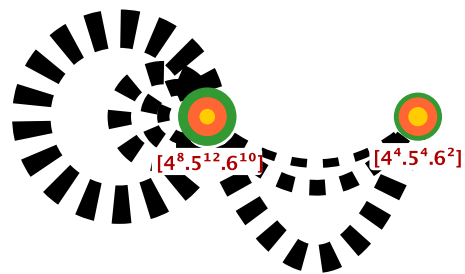
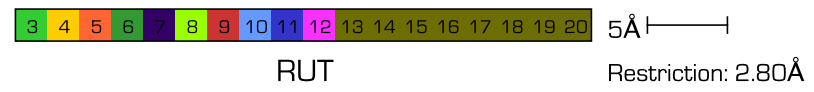


Figure 141: RWR

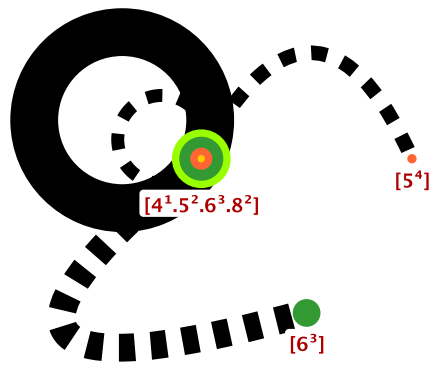
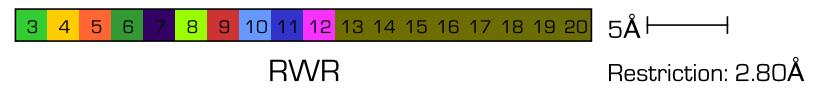




Figure 142: RWY

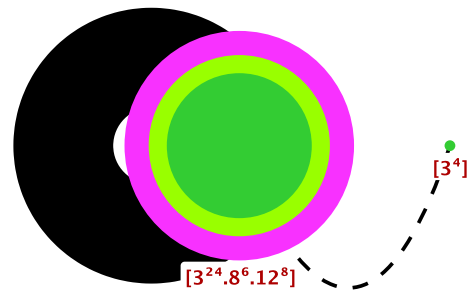
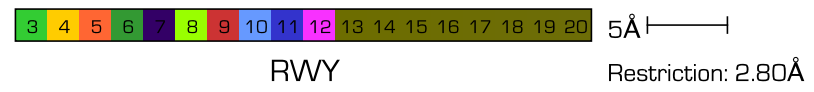


Figure 143: SAO

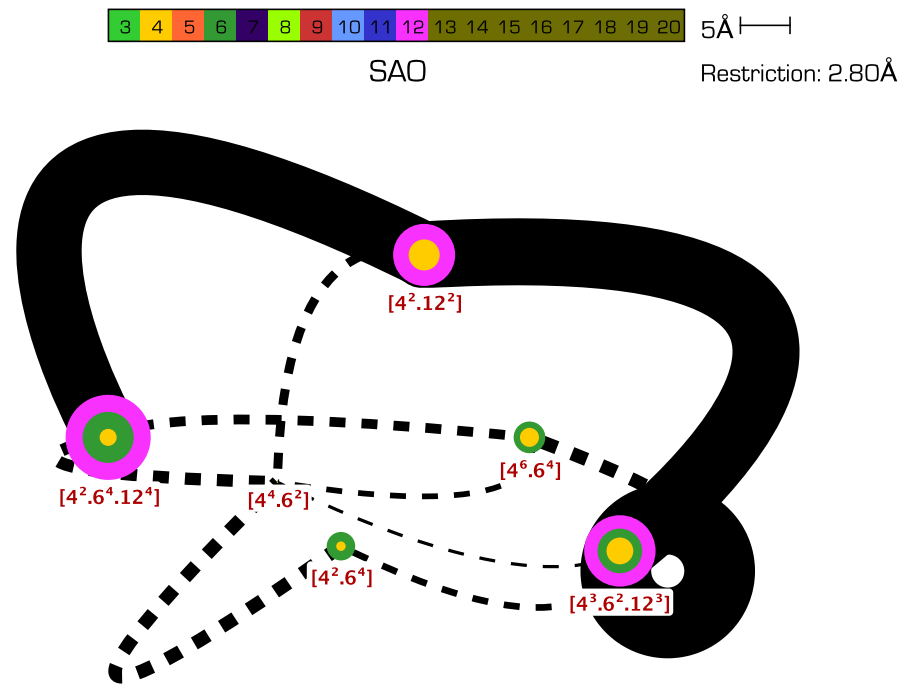


Figure 144: SAS

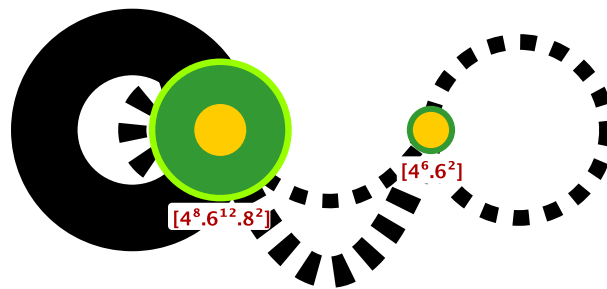
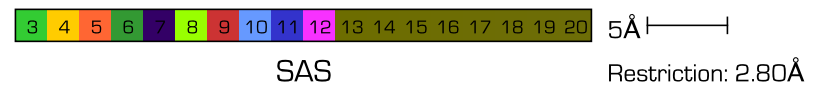


Figure 145: SAT

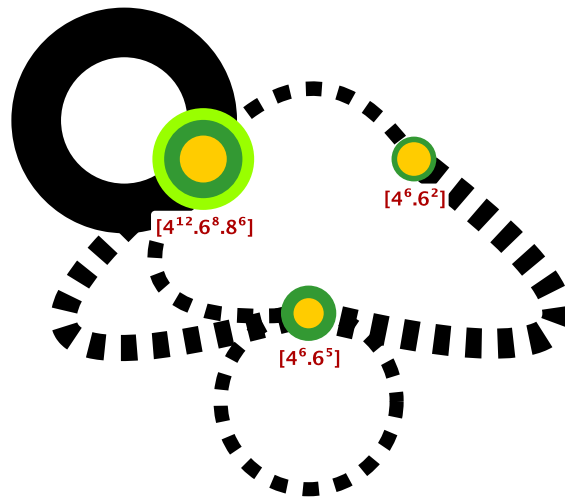
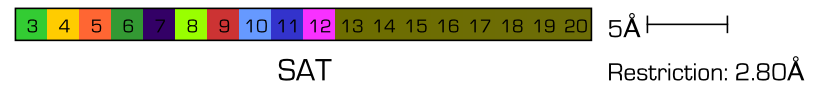


Figure 146: SAV

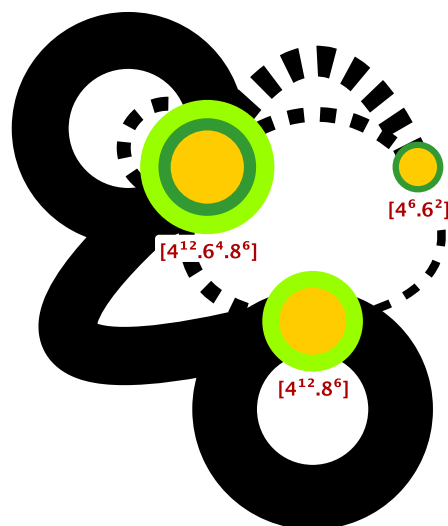
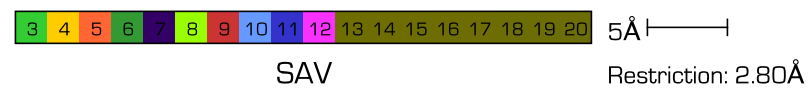


Figure 147: SBE

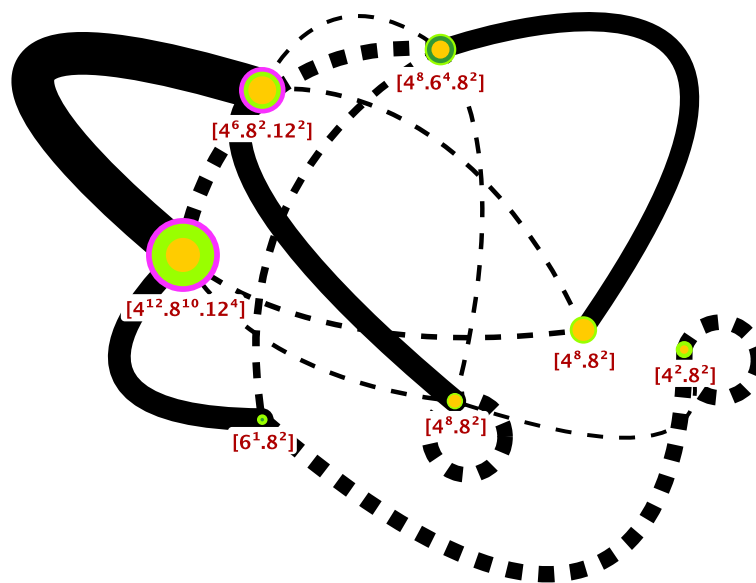
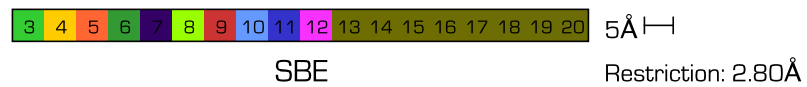


Figure 148: SBN

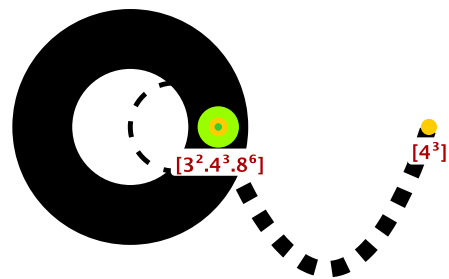
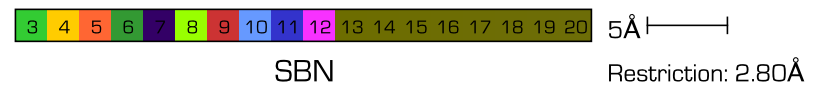


Figure 149: SBS

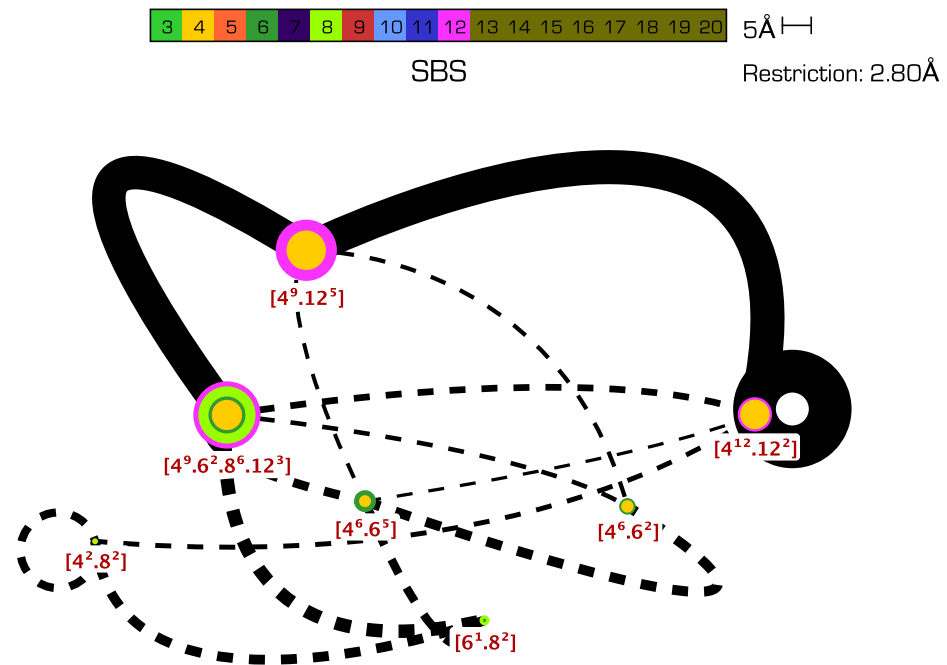




Figure 150: SBT

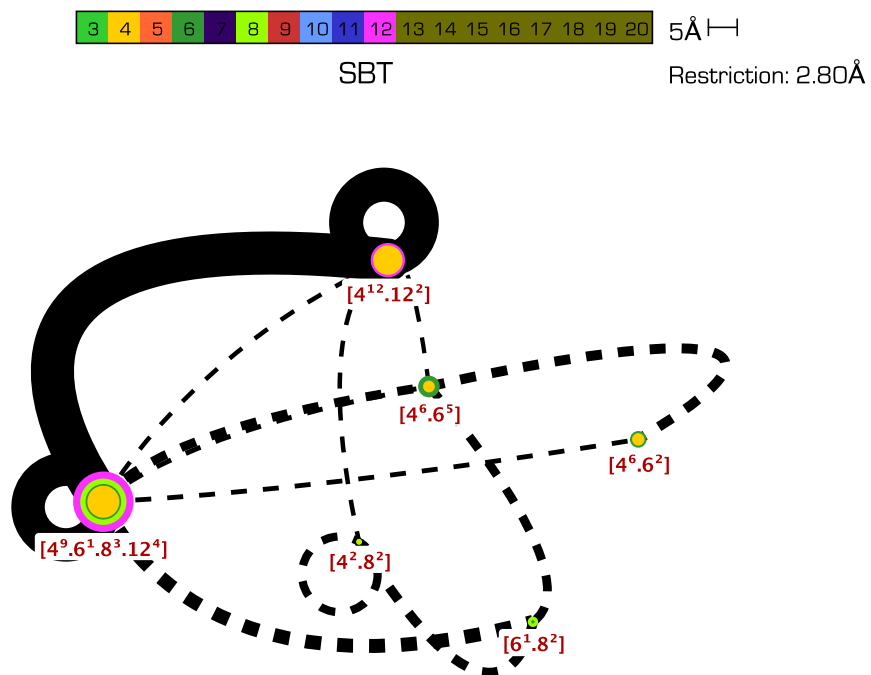


Figure 151: SFE

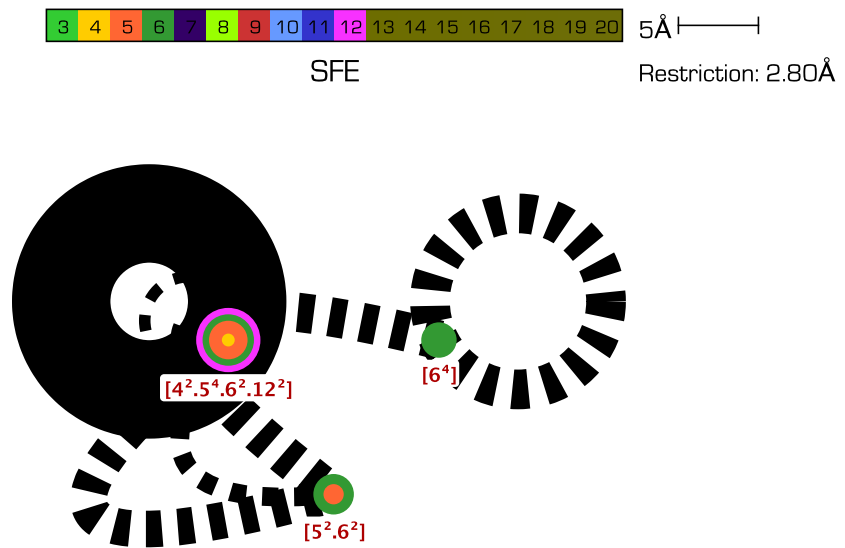


Figure 152: SFF

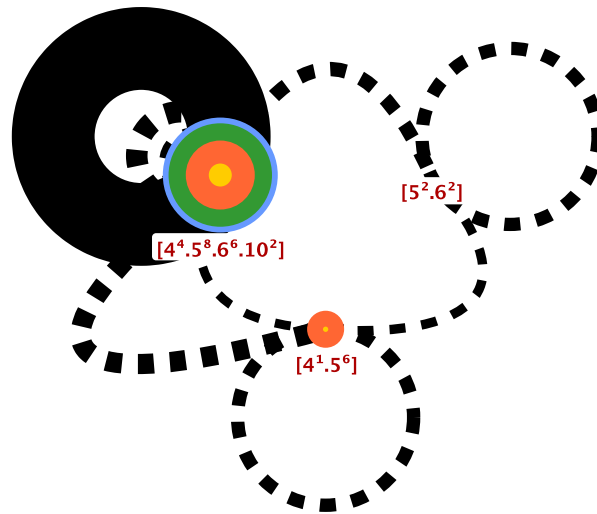
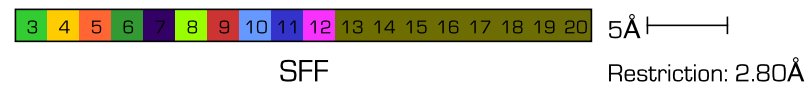


Figure 153: SFG

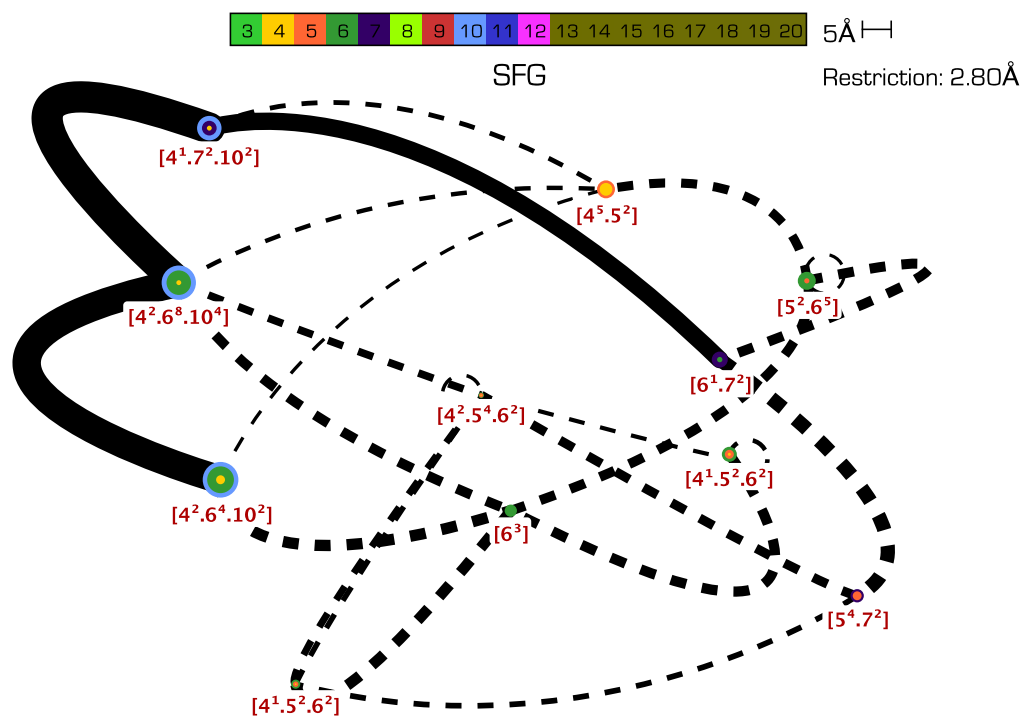




Figure 155: SFN

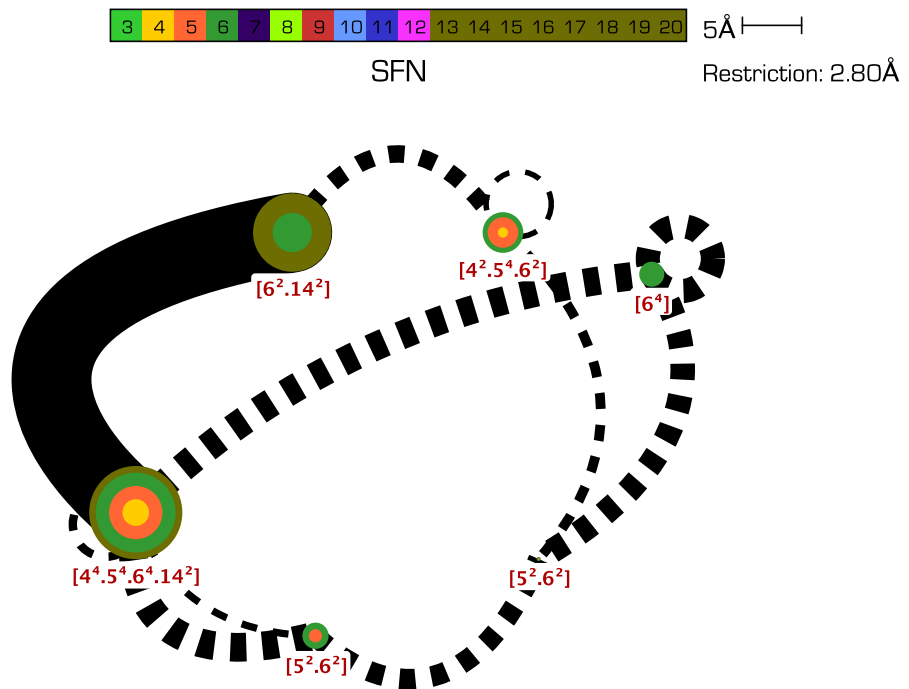


Figure 156: SFO

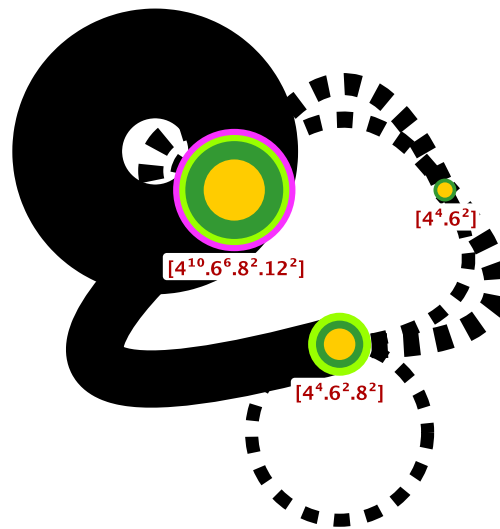
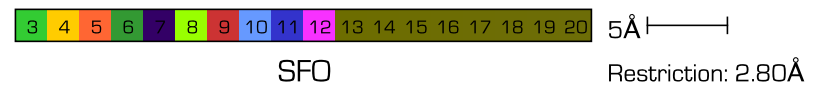


Figure 157: SFS

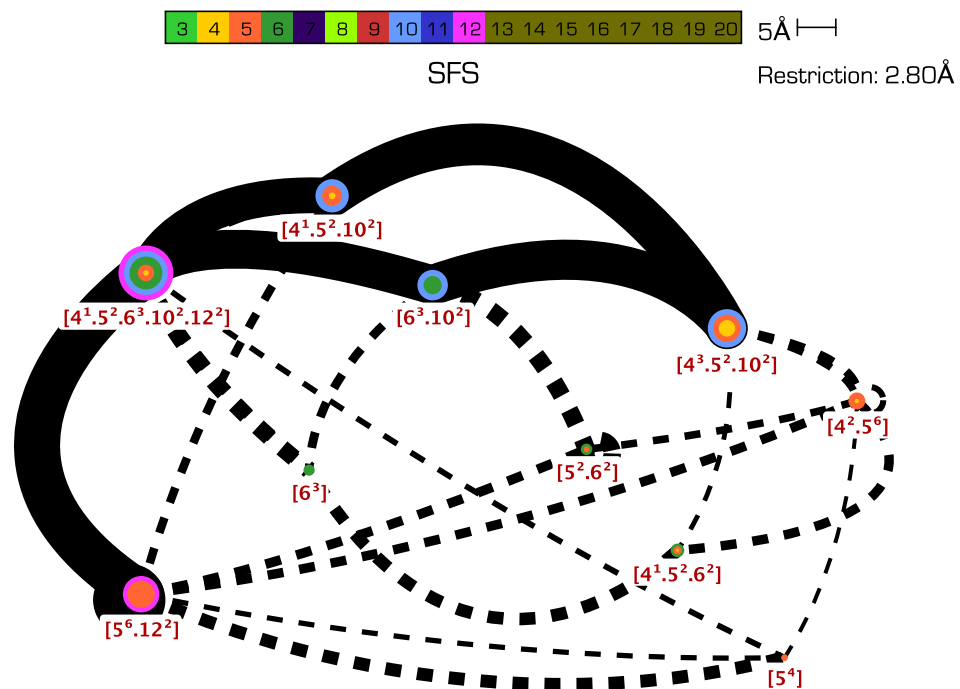




Figure 158: SGT

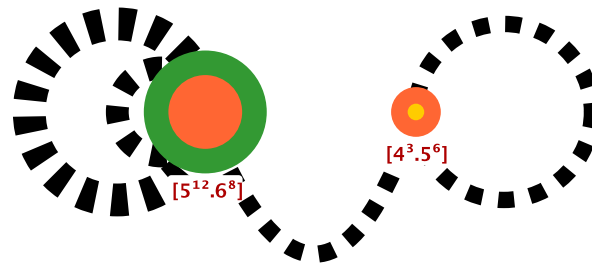
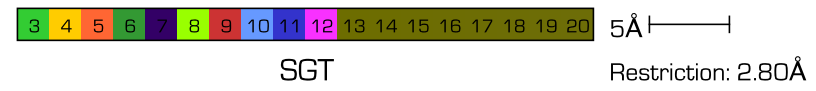


Figure 159: SIV

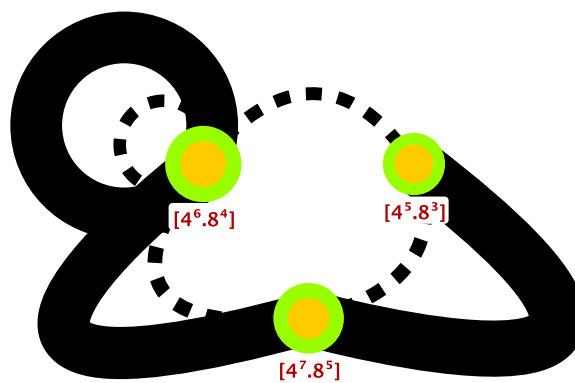
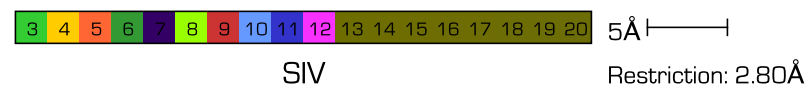


Figure 160: SOD

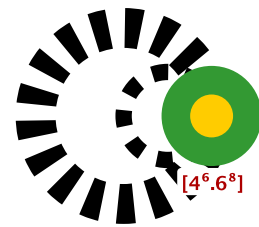
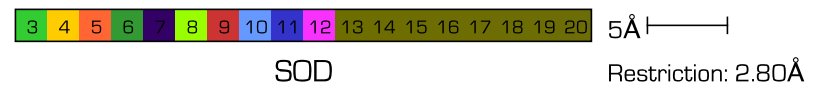


Figure 161: SOF

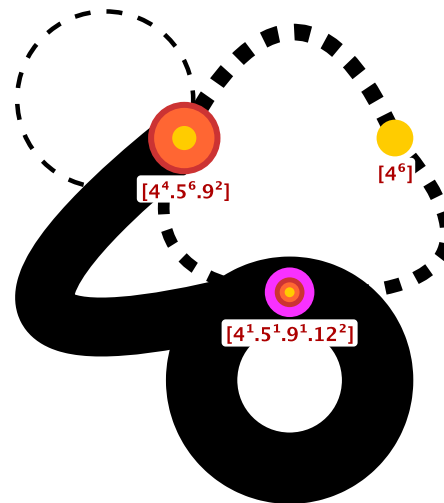
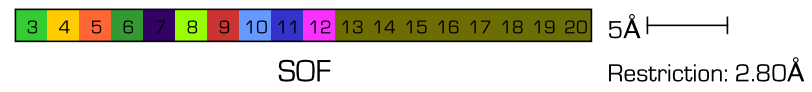


Figure 162: SOS

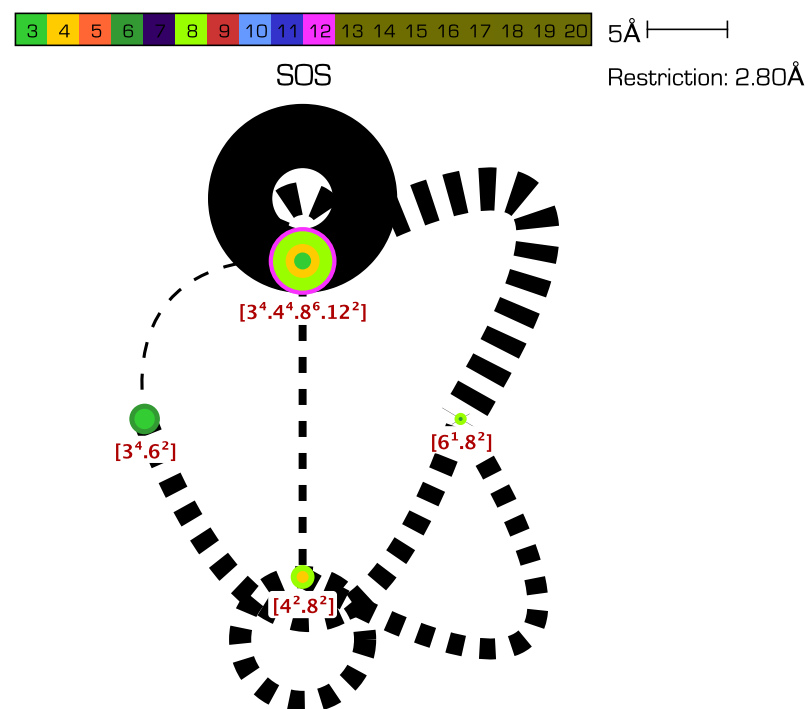


Figure 163: SSF

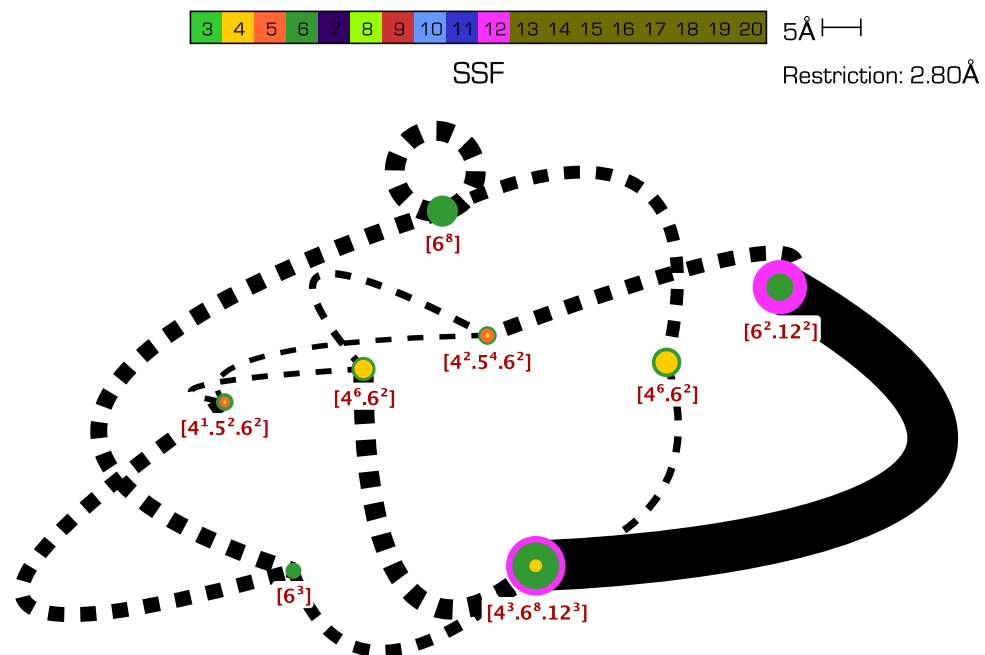


Figure 164: SSY

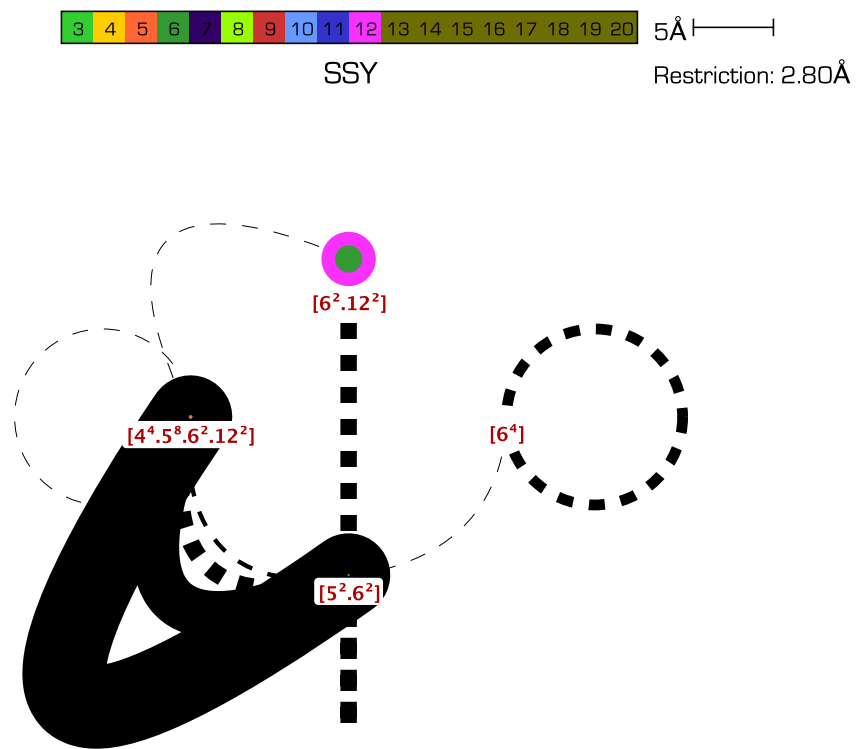


Figure 165: STF

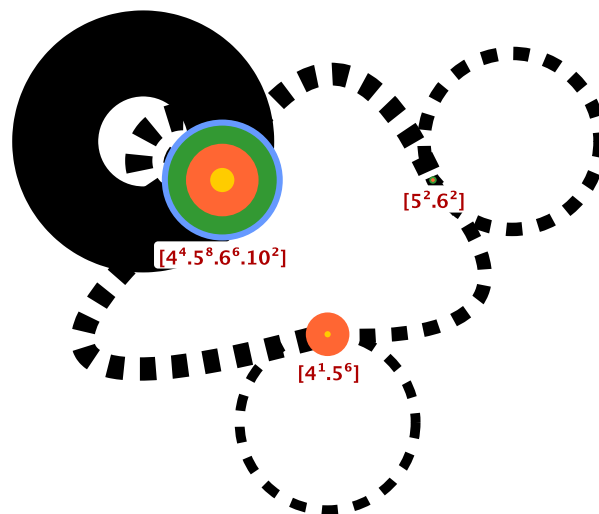
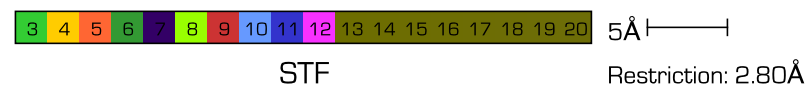




Figure 166: STI

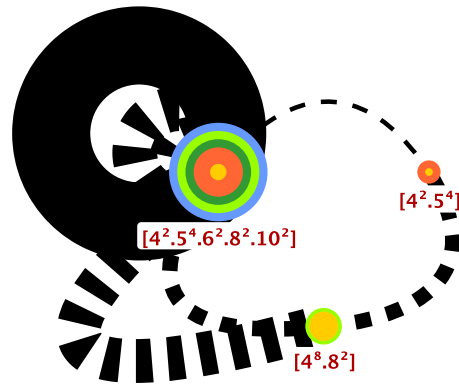
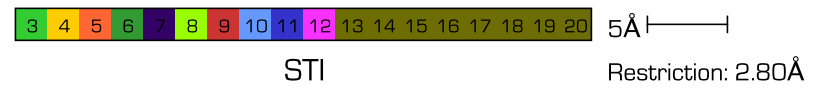


Figure 167: STO

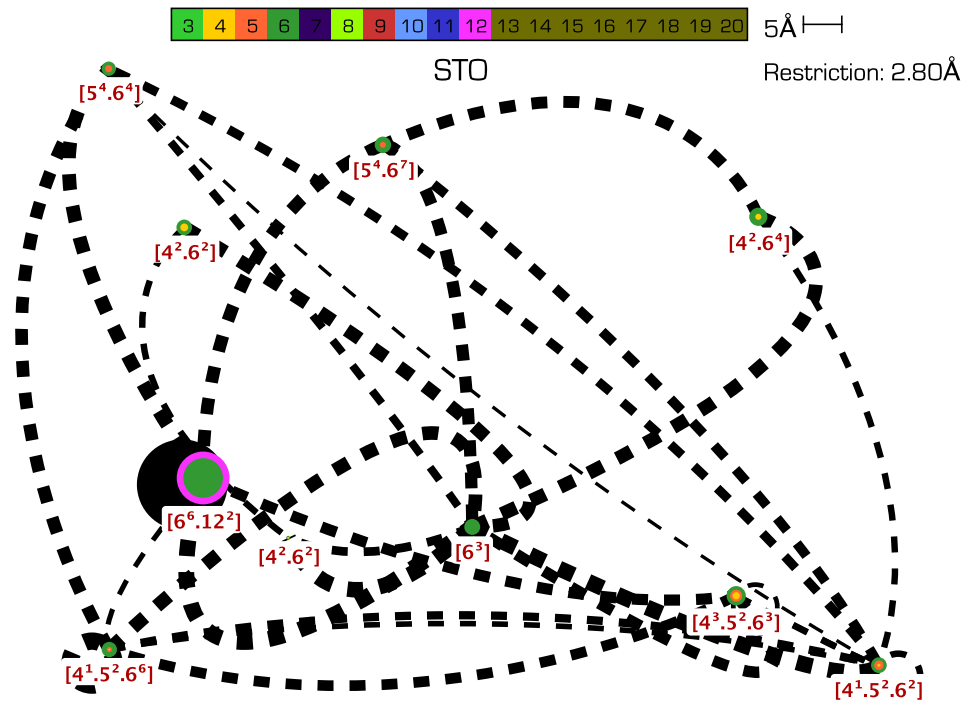


Figure 168: STT

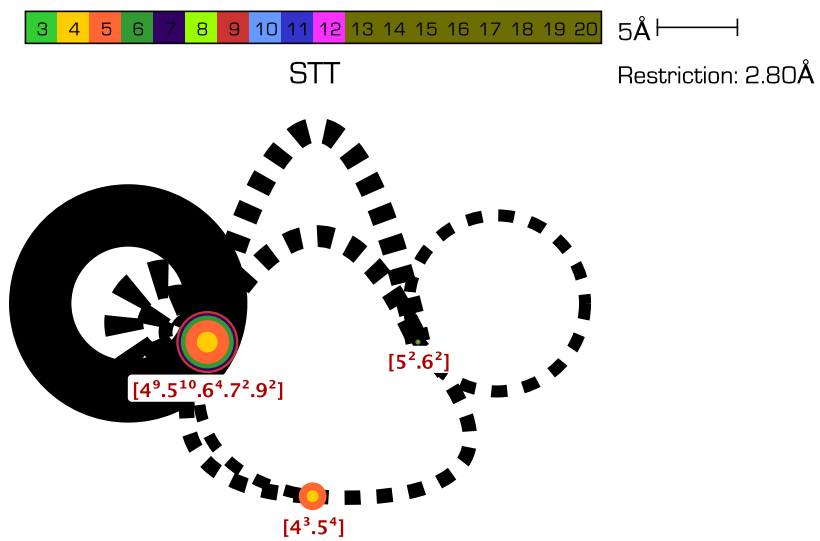


Figure 169: STW

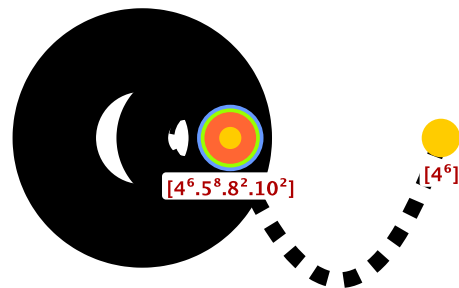
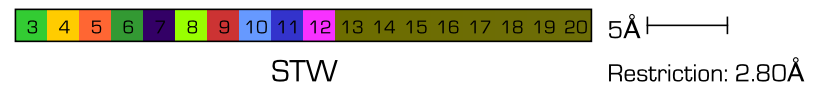


Figure 170: SVR

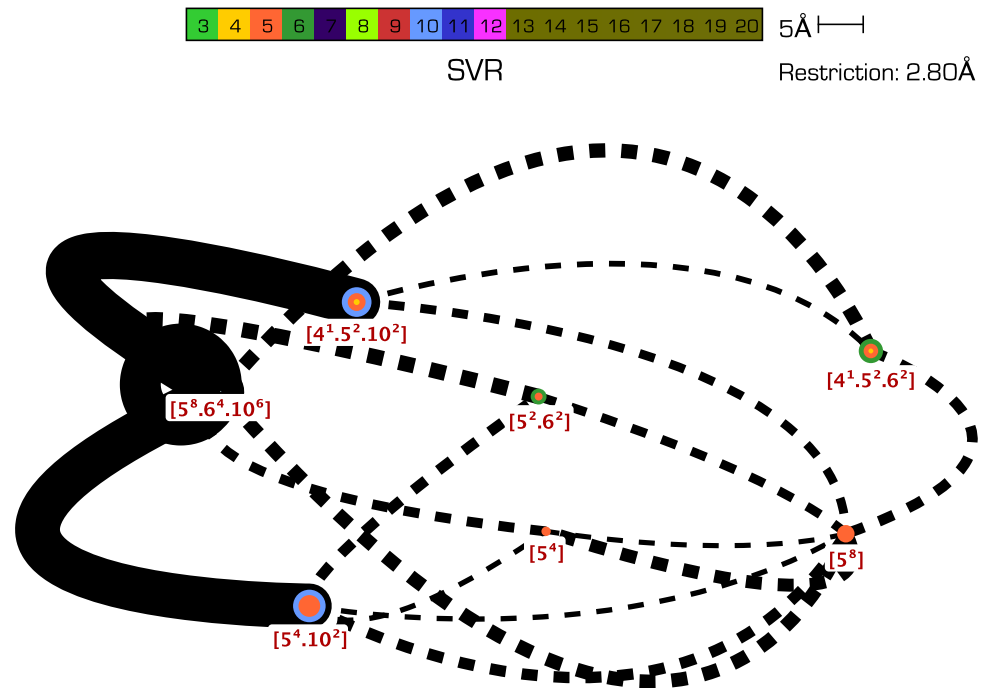


Figure 171: SZR

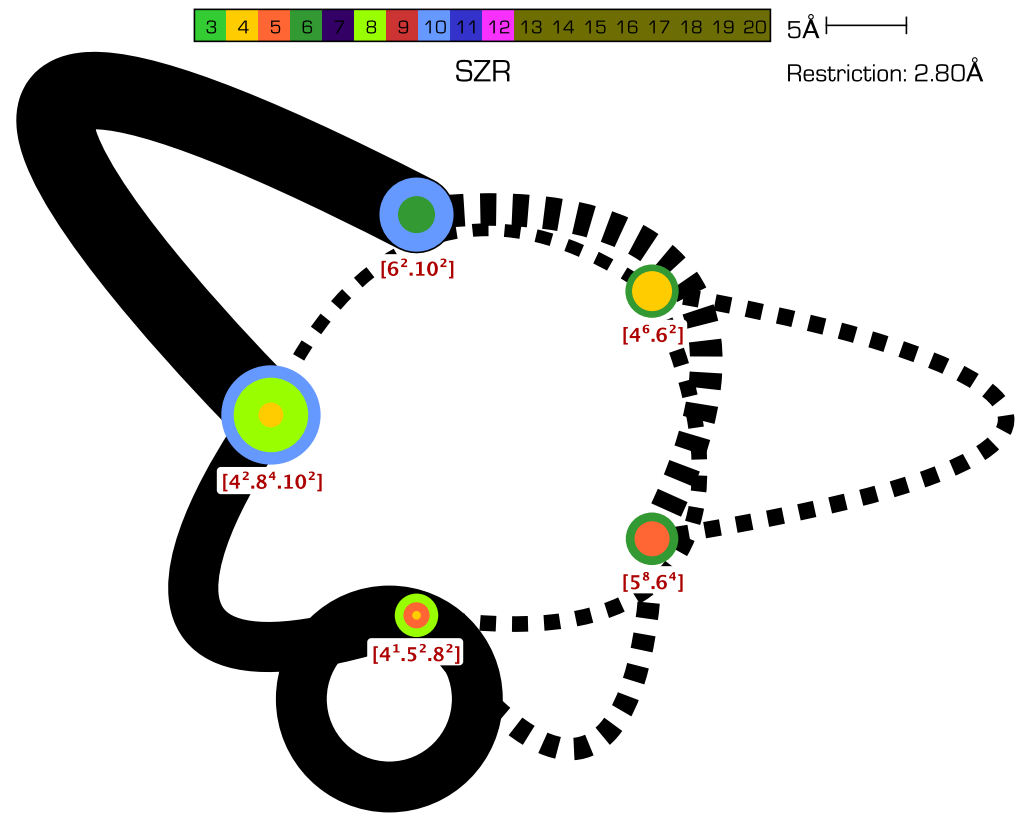


Figure 172: TER

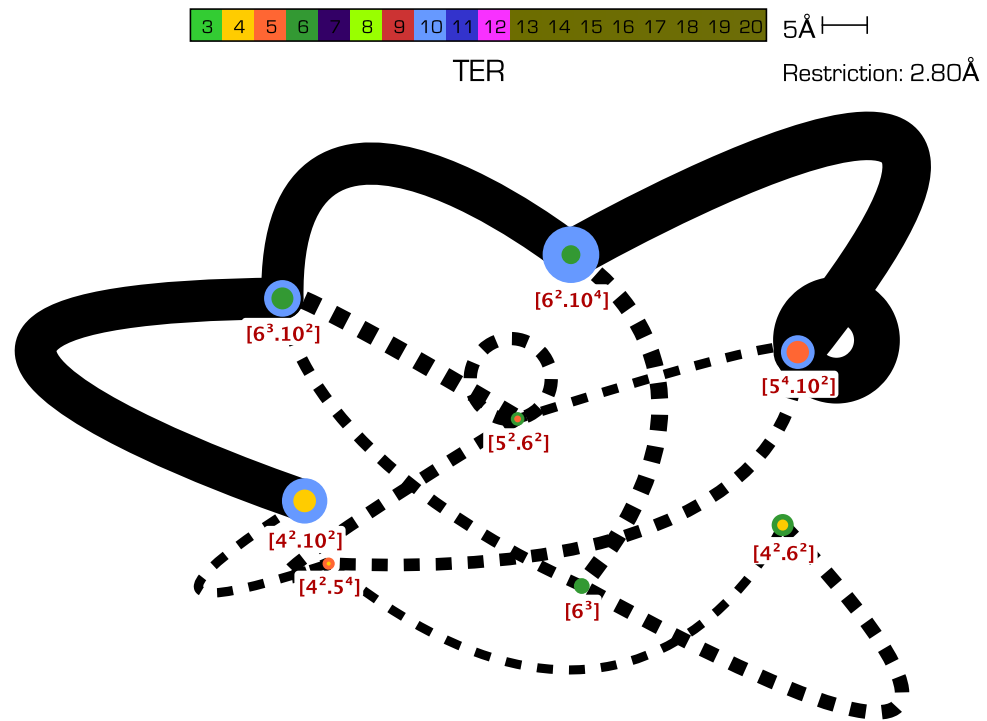


Figure 173: THO

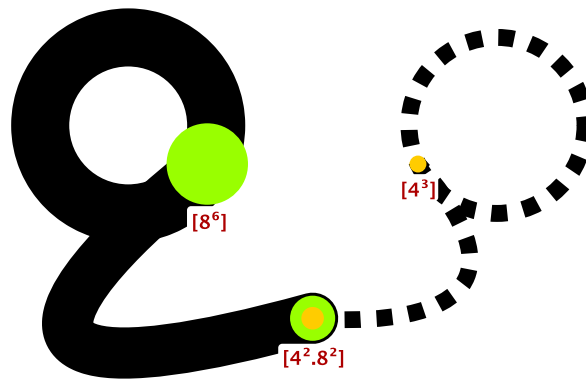
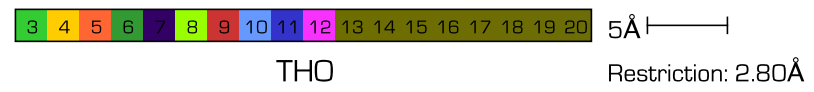




Figure 174: TOL

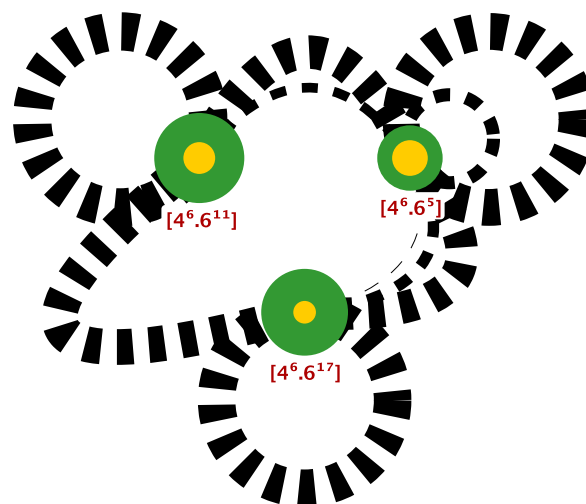
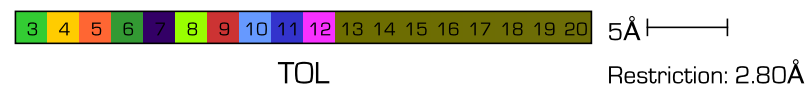
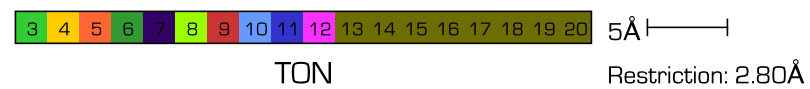


Figure 175: TON



Restriction: 2.80Å

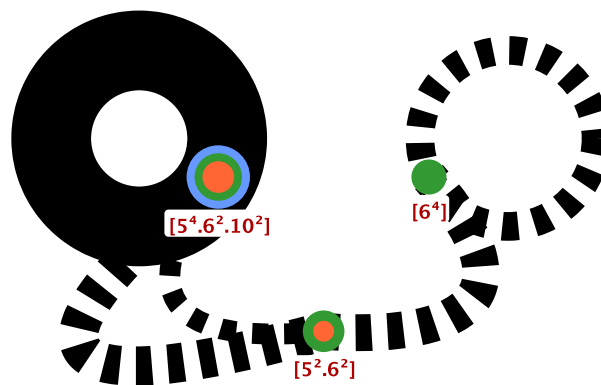


Figure 176: TSC

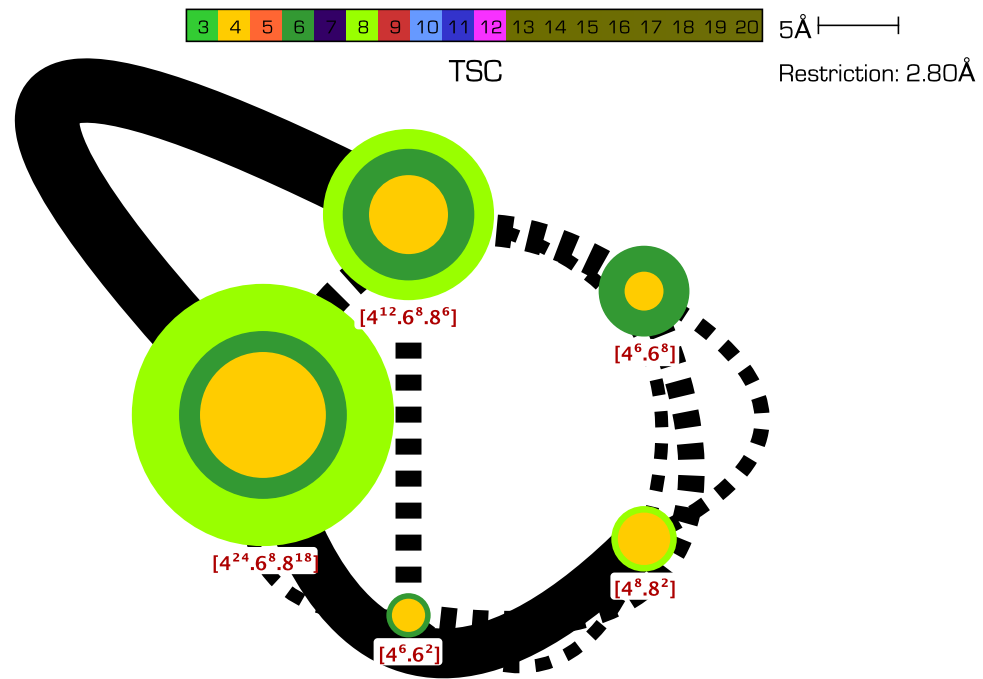


Figure 177: TUN

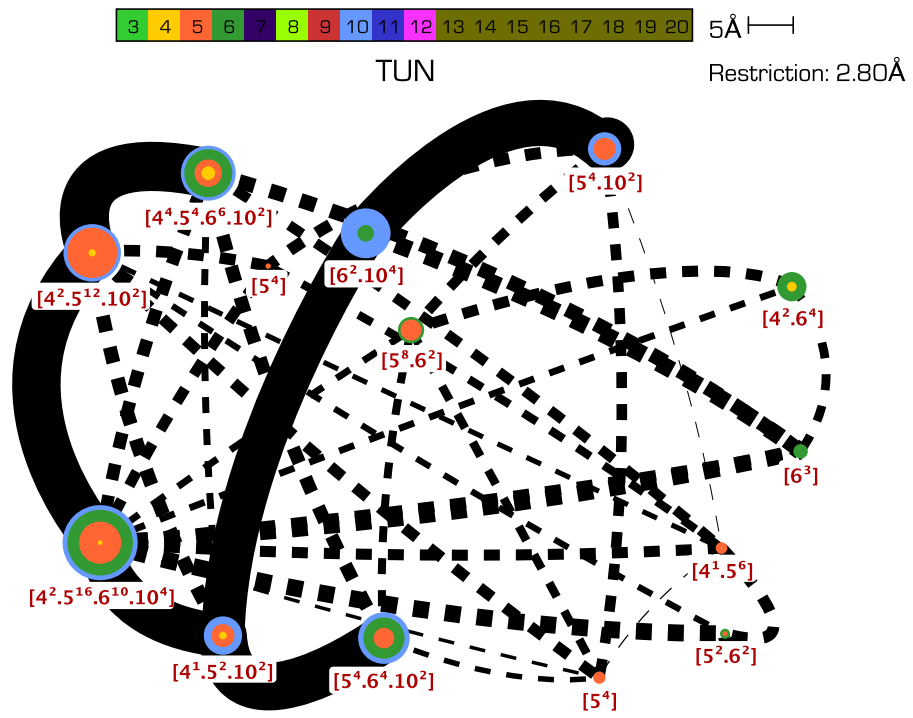


Figure 178: UEI

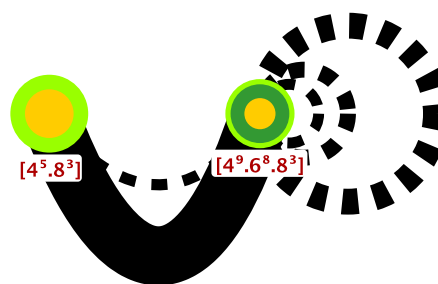
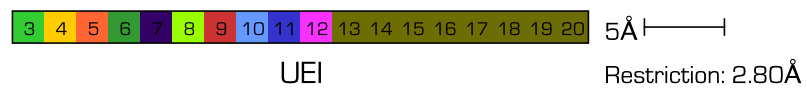


Figure 179: UFI

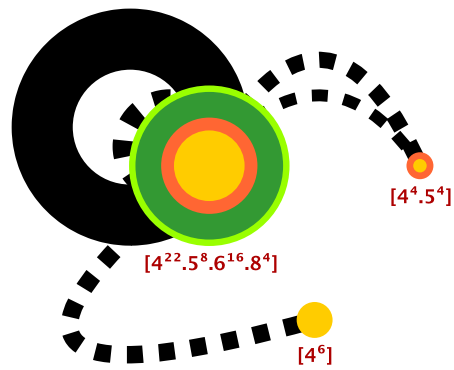
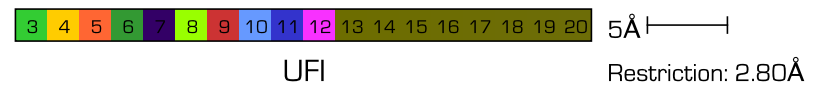


Figure 180: UOS

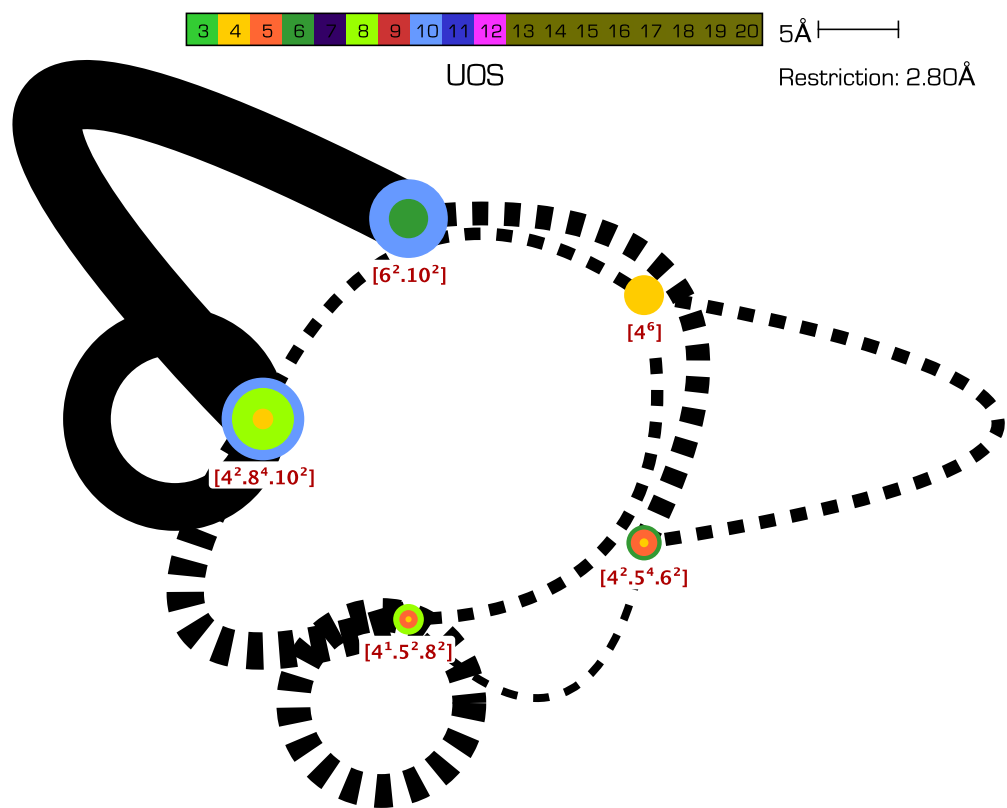


Figure 181: UOZ

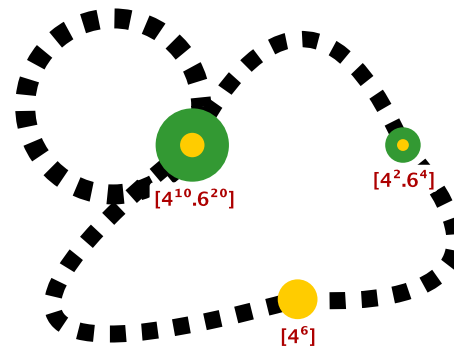
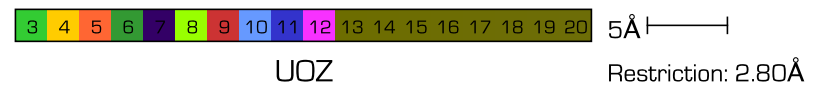




Figure 182: USI

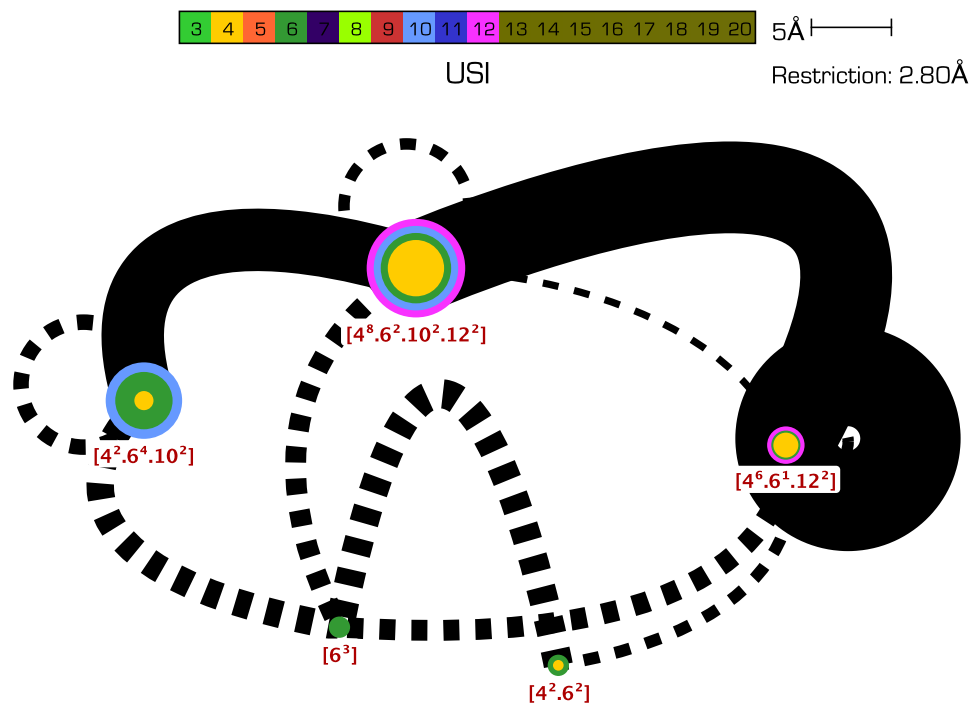


Figure 183: UTL

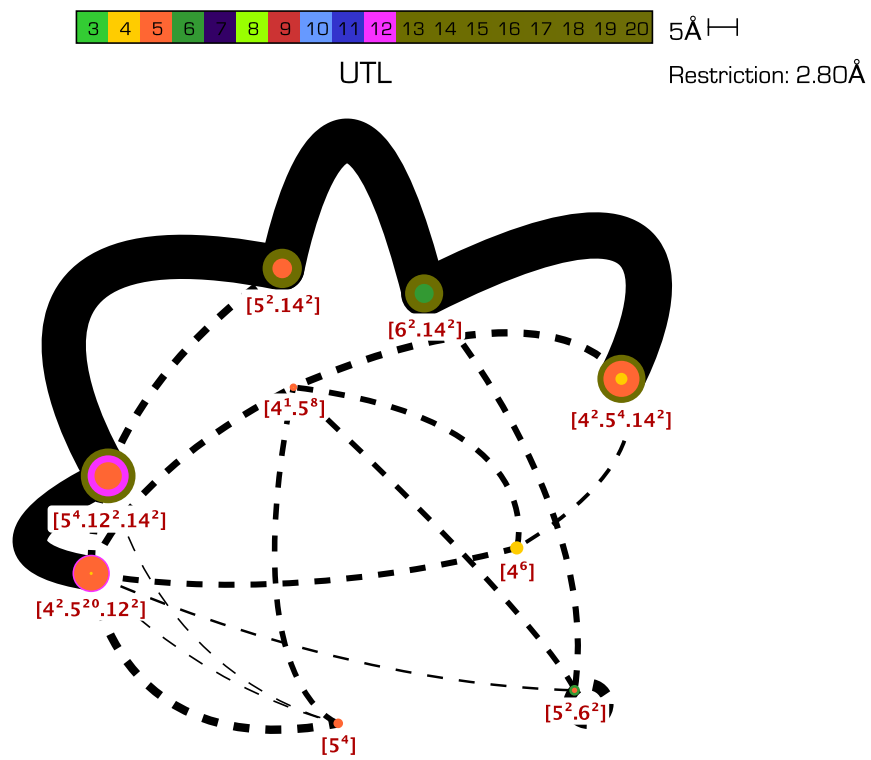


Figure 184: VET

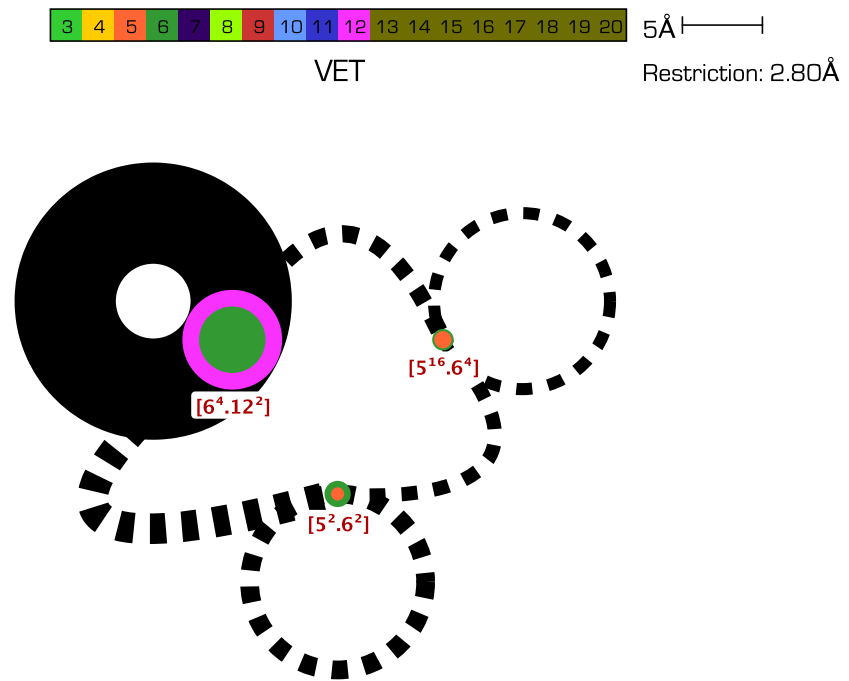


Figure 185: VFI

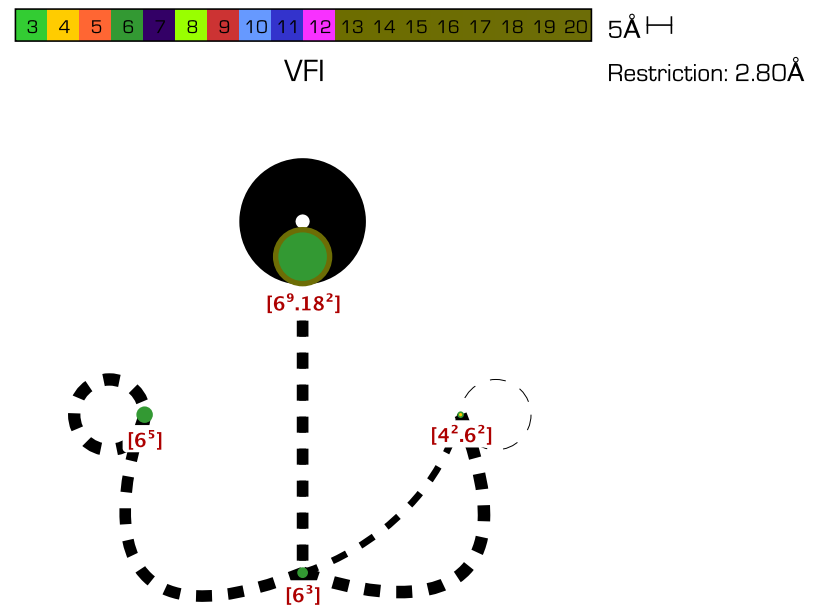


Figure 186: VNI

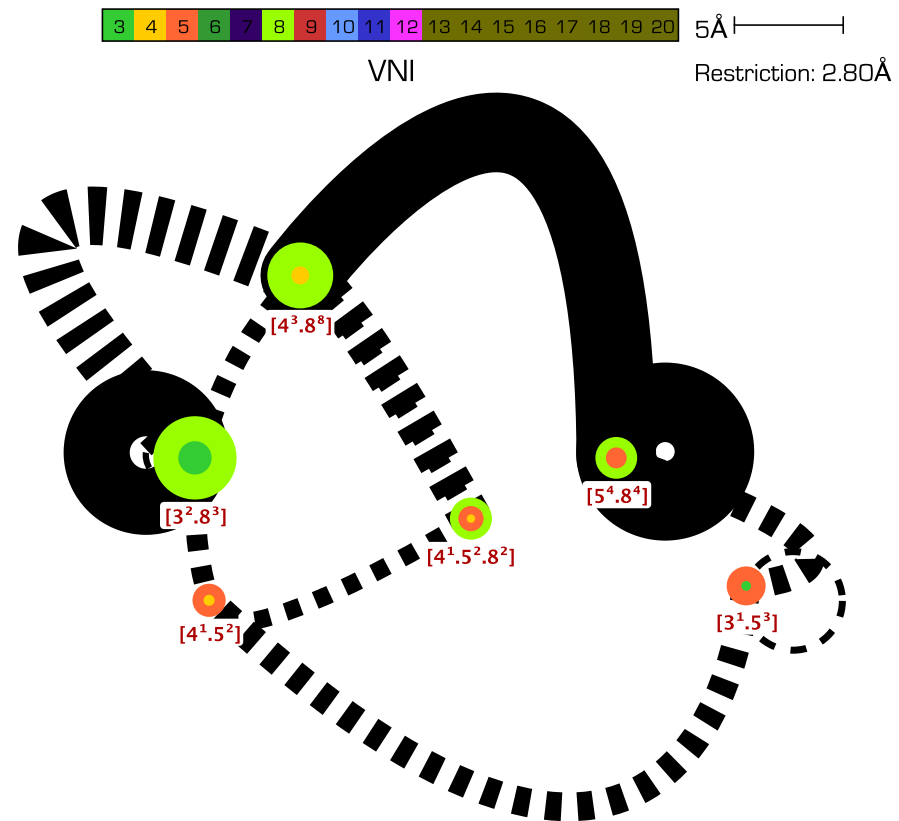


Figure 187: VSV

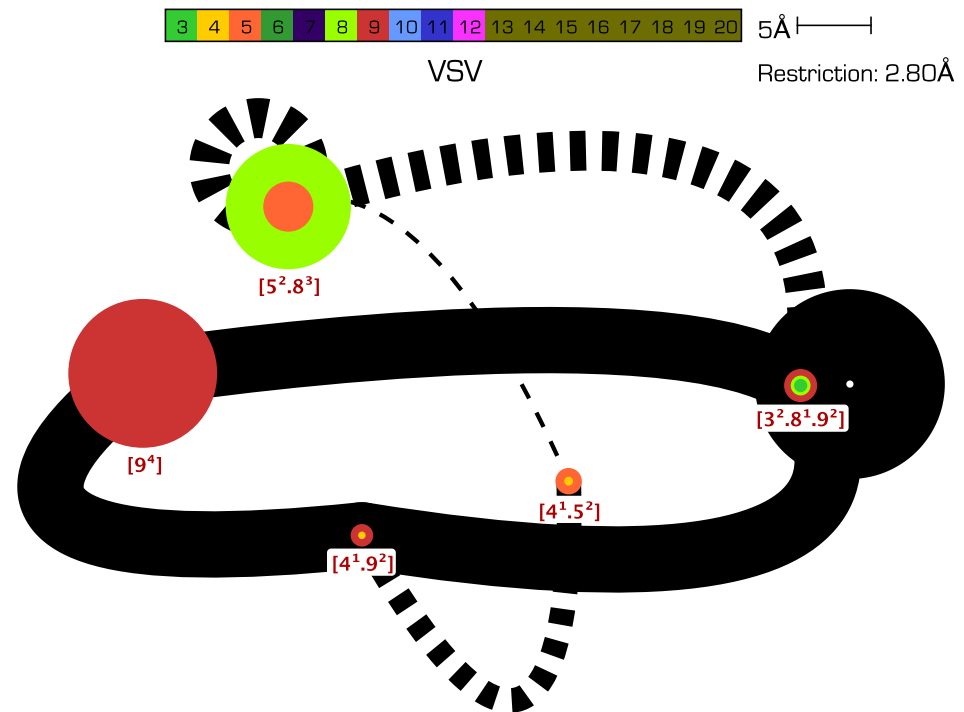


Figure 188: WEI

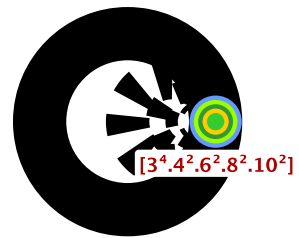
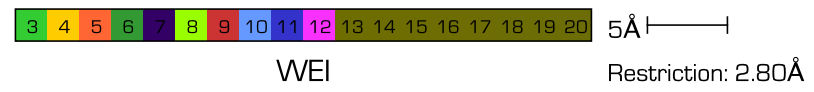


Figure 189: WEN

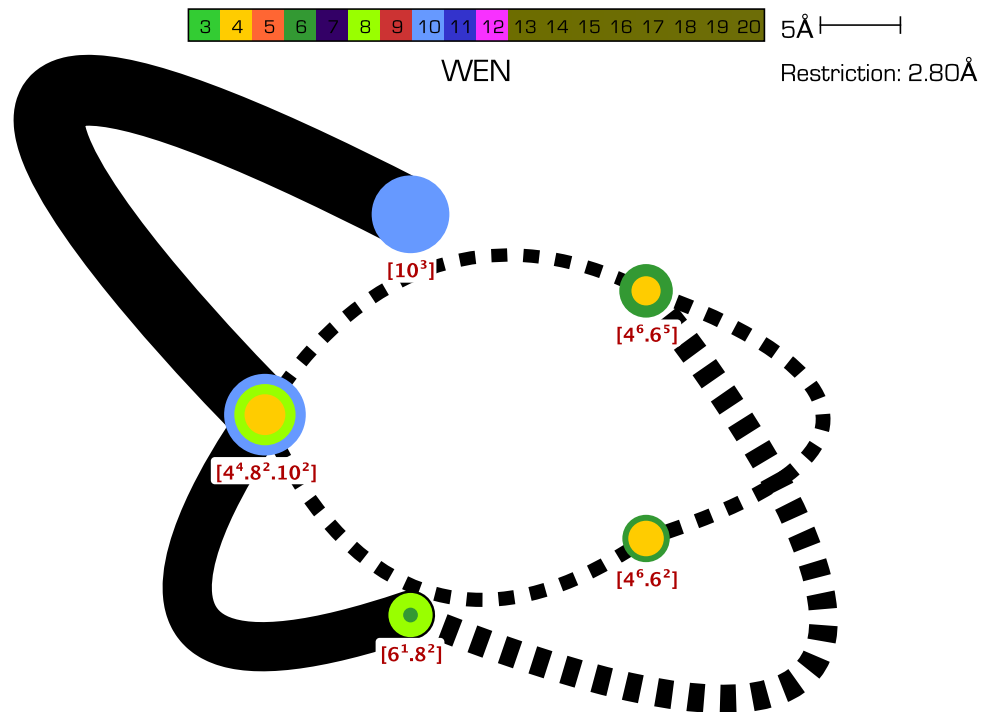




Figure 190: YUG

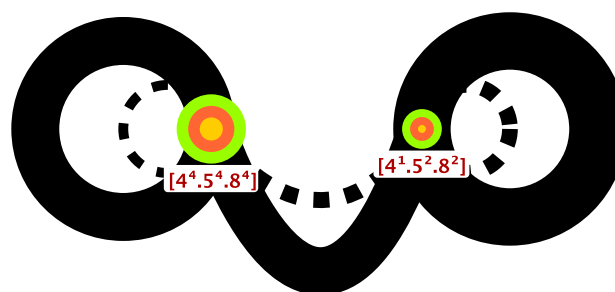
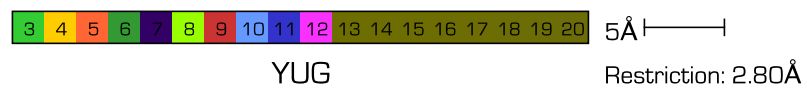


Figure 191: ZON

