

**ADDITIONAL DATA FOR THE ARTICLE 'THE SEARCH FOR
ALTERNATING SURGERIES'**

KENNETH L. BAKER, MARC KEGEL, AND DUNCAN MCCOY

TABLE 1. The census
knots in \mathcal{D} .

Knot	$\rho(K)$	N
$t01834$	$[7, 7, 5, 2]$	130
$o9_03412$	$[11, 7, 4, 4]$	206
$t04003$	$[7, 7, 4, 2]$	120
$v0570$	$[5, 5, 5, 3]$	87
$o9_15633$	$[12, 7, 4, 3, 2]$	224
$o9_08852$	$[14, 8, 6, 3, 3]$	317
$t09455$	$[7, 7, 3, 3, 3]$	128
$t04382$	$[10, 6, 3, 3]$	157
$o9_26791$	$[11, 6, 3, 2]$	172
$o9_08042$	$[7, 7, 7, 4, 3, 3]$	184
$v1832$	$[6, 5, 3, 3]$	82
$t00855$	$[8, 8, 5, 3]$	165
$o9_35549$	$[11, 11, 5, 5, 3, 2]$	307
$o9_13182$	$[6, 6, 6, 5, 2, 2, 2]$	147
$t05663$	$[8, 7, 4, 3]$	141
$v1628$	$[7, 4, 3, 3]$	86
$v2215$	$[5, 5, 4, 3, 2]$	81
$t10681$	$[11, 5, 5, 3, 2]$	186
$o9_02350$	$[10, 10, 7, 3, 3, 2]$	273
$o9_08765$	$[7, 7, 7, 4, 2]$	169
$o9_05357$	$[11, 8, 3, 3, 2, 2]$	213
$o9_13508$	$[13, 6, 4, 3]$	233
$o9_16157$	$[9, 9, 9, 5, 3, 2]$	283
$v0740$	$[4, 4, 4, 4, 3, 2]$	79
$o9_12144$	$[10, 9, 3, 3, 3]$	211
$o9_11248$	$[11, 4, 4, 4]$	173
$o9_35736$	$[11, 11, 6, 3, 3]$	299
$o9_27155$	$[11, 5, 3, 2]$	161
$t01424$	$[9, 9, 5, 4, 2, 2]$	213
$t03979$	$[8, 6, 3, 2]$	115
$o9_03932$	$[9, 5, 5]$	136
$o9_23955$	$[7, 7, 7, 4]$	167
$v0082$	$[5, 5, 5, 2]$	82
$o9_02772$	$[9, 2, 2, 2]$	96
$t10643$	$[6, 6, 6, 5, 3, 2]$	148
$v0847$	$[7, 4, 4]$	85
$o9_16748$	$[7, 7, 7, 5, 3, 2]$	187
$o9_39394$	$[8, 7, 4, 2, 2]$	139
$t09016$	$[9, 5, 4, 3, 2]$	137
$o9_05860$	$[10, 10, 3, 3, 3, 2]$	233
$v0223$	$[7, 7, 4, 3, 2]$	129
$o9_27261$	$[8, 8, 7, 3, 3, 2]$	201
$o9_28113$	$[6, 6, 6, 6, 5, 3, 2]$	184

Knot	$\rho(K)$	N
$t01216$	$[10, 4, 3, 3]$	137
$o9_03526$	$[6, 5, 5]$	91
$o9_35772$	$[6, 6, 4, 3, 3]$	109
$s407$	$[7, 4, 2, 2]$	75
$t02639$	$[11, 7, 4, 3, 2]$	201
$o9_05229$	$[12, 5, 5, 2]$	201
$o9_03032$	$[9, 7, 2, 2, 2, 2]$	148
$v2024$	$[6, 6, 5, 2, 2]$	107
$o9_14364$	$[7, 7, 6, 2, 2]$	144
$o9_24149$	$[7, 7, 7, 3, 3, 3]$	177
$o9_08647$	$[14, 5, 5, 4, 2, 2]$	272
$o9_04313$	$[13, 6, 5, 2, 2]$	240
$o9_12919$	$[11, 5, 4, 2]$	168
$v1839$	$[9, 5, 3, 2]$	121
$t05674$	$[6, 6, 6, 5, 2, 2]$	143
$v1966$	$[8, 6, 3, 3]$	121
$v0497$	$[8, 5, 3, 3]$	110
$o9_14495$	$[10, 7, 3, 3, 2, 2]$	177
$o9_23023$	$[9, 9, 5, 4, 3, 2]$	218
$o9_13400$	$[8, 8, 7, 2, 2, 2]$	191
$t01598$	$[11, 5, 4, 2, 2]$	172
$t09852$	$[6, 5, 3]$	73
$o9_05970$	$[13, 8, 5, 3]$	270
$t10985$	$[11, 6, 3, 3]$	178
$t04019$	$[5, 5, 4, 4]$	86
$t01636$	$[11, 4, 4, 3, 2]$	168
$o9_13188$	$[6, 6, 6, 6, 4, 3]$	172
$v0573$	$[5, 5, 5, 2, 2, 2]$	89
$o9_13056$	$[11, 8, 4, 4]$	221
$o9_23263$	$[11, 4, 4, 3, 3]$	174
$o9_35320$	$[6, 6, 5, 4, 2]$	119
$o9_23977$	$[9, 8, 3, 3, 3]$	175
$o9_13125$	$[10, 7, 4, 3]$	177
$o9_24886$	$[14, 6, 6, 3, 3]$	289
$v1300$	$[7, 3]$	62
$t01318$	$[9, 4, 3, 2, 2]$	116
$o9_13952$	$[13, 5, 5, 2, 2]$	229
$v0330$	$[7, 2, 2]$	60
$o9_06248$	$[11, 11, 4, 4, 2, 2]$	284
$o9_08776$	$[14, 6, 5, 3, 2]$	272
$t06440$	$[8, 8, 3, 3, 3]$	158
$o9_03586$	$[7, 7, 7, 2, 2, 2, 2]$	165
$o9_14376$	$[10, 10, 6, 3, 3]$	257
$o9_01680$	$[8, 8, 8, 3, 2, 2]$	211
$o9_12757$	$[5, 5, 5, 5, 5, 3, 3]$	146
$v1921$	$[8, 5, 2, 2]$	99

Knot	$\rho(K)$	N	Knot	$\rho(K)$	N
<i>t08111</i>	[5, 5, 3, 3, 2]	74	<i>o9_13537</i>	[11, 6, 5, 2, 2, 2]	196
<i>o9_28746</i>	[11, 5, 5, 3, 3]	192	<i>o9_11999</i>	[13, 7, 5, 2, 2]	253
<i>o9_11570</i>	[11, 3, 3, 3, 3]	160	<i>t05578</i>	[9, 8, 3, 3, 2]	169
<i>o9_06154</i>	[9, 9, 5, 3, 2, 2]	206	<i>v1718</i>	[8, 3, 3, 3]	94
<i>t02238</i>	[8, 8, 3, 3]	149	<i>v1620</i>	[4, 4, 4, 3, 3]	69
<i>v1547</i>	[7, 4, 2]	71	<i>o9_34403</i>	[8, 6, 3]	112
<i>t00434</i>	[7, 7, 7, 4, 3, 2]	178	<i>t02404</i>	[9, 5, 3, 2, 2]	125
<i>t05538</i>	[5, 5, 5, 4, 3, 2]	106	<i>o9_18007</i>	[7, 7, 6, 4, 3]	162
<i>m144</i>	[3, 3, 3, 2, 2]	37	<i>o9_30790</i>	[13, 6, 6, 3, 3]	262
<i>v2090</i>	[9, 4, 4, 2, 2]	123	<i>o9_08006</i>	[11, 8, 3, 3, 3]	215
<i>o9_02655</i>	[9, 9, 4, 3, 2, 2]	197	<i>t02378</i>	[11, 4, 4, 2, 2]	163
<i>m276</i>	[5, 4, 2, 2]	51	<i>o9_32257</i>	[7, 6, 3]	97
<i>o9_15997</i>	[13, 9, 4, 3, 2]	281	<i>v0939</i>	[5, 5, 4, 2]	72
<i>o9_11560</i>	[11, 11, 6, 5, 3, 2]	318	<i>t03864</i>	[7, 7, 4, 3, 2, 2]	133
<i>o9_02386</i>	[10, 10, 6, 4, 3]	264	<i>o9_22663</i>	[9, 5, 5, 2, 2]	141
<i>t04102</i>	[7, 7, 3, 3, 2, 2]	126	<i>s344</i>	[6, 4, 3]	64
<i>t05425</i>	[6, 6, 5, 3, 3]	118	<i>t02398</i>	[8, 8, 5, 3, 2, 2]	172
<i>o9_12693</i>	[5, 5, 5, 4, 4]	111	<i>t00324</i>	[3, 3, 3, 3, 3, 3, 2, 2]	64
<i>o9_29436</i>	[9, 9, 8, 3, 3, 2]	250	<i>t03956</i>	[7, 6, 2, 2]	95
<i>o9_01953</i>	[5, 5, 5, 5, 5, 3]	137	<i>o9_30375</i>	[11, 6, 5, 3, 3]	203
<i>t06463</i>	[9, 9, 5, 3, 2]	202	<i>o9_23961</i>	[10, 7, 3, 3, 3]	179
<i>o9_28529</i>	[13, 7, 4, 3]	246	<i>o9_28153</i>	[9, 9, 5, 2, 2]	197
<i>o9_14079</i>	[13, 4, 4, 4, 2, 2]	227	<i>o9_01955</i>	[5, 5, 5, 5, 5, 2, 2, 2]	139
<i>v0114</i>	[5, 5, 5, 3, 2, 2]	94	<i>o9_24592</i>	[8, 5, 2]	96
<i>v0407</i>	[8, 3, 3, 2, 2]	92	<i>m270</i>	[5, 3, 3]	46
<i>o9_16181</i>	[13, 8, 5, 3, 3]	279	<i>o9_04269</i>	[5, 5, 5, 5, 4, 2]	122
<i>o9_15506</i>	[11, 7, 4, 3, 2, 2]	205	<i>s582</i>	[4, 4, 3, 3]	53
<i>m071</i>	[5, 2]	32	<i>o9_28810</i>	[9, 9, 4, 4, 3, 2]	209
<i>t00932</i>	[8, 8, 5, 3, 3]	174	<i>o9_02786</i>	[4, 4, 4, 4, 4, 3, 2, 2]	99
<i>o9_09808</i>	[13, 9, 4, 4, 2, 2]	292	<i>t05564</i>	[6, 6, 6, 4, 3]	136
<i>v0434</i>	[8, 5, 3]	101	<i>m240</i>	[4, 3, 3]	37
<i>t03607</i>	[10, 4, 4, 3]	144	<i>o9_18633</i>	[11, 5, 5, 2, 2, 2]	185
<i>t01949</i>	[8, 7, 2, 2, 2]	127	<i>t06570</i>	[8, 8, 5, 2, 2]	163
<i>s104</i>	[7, 3, 2, 2]	68	<i>t00873</i>	[8, 8, 3, 2, 2]	147
<i>s800</i>	[5, 5, 3, 3]	71	<i>t05239</i>	[11, 5, 3, 3]	167
<i>v1392</i>	[7, 3, 2]	64	<i>o9_35682</i>	[6, 6, 5, 3]	109
<i>t08403</i>	[9, 4, 2, 2]	107	<i>t03709</i>	[7, 7, 4, 3, 3]	135
<i>o9_24889</i>	[9, 9, 7, 3, 3]	232	<i>o9_01584</i>	[8, 8, 8, 3, 3, 2, 2]	220
<i>o9_05426</i>	[7, 7, 7, 7, 3, 3, 2]	220	<i>s294</i>	[5, 4, 2]	47
<i>o9_05618</i>	[12, 7, 5, 2, 2, 2]	232	<i>v1980</i>	[5, 3, 3, 2]	49
<i>o9_18209</i>	[7, 7, 7, 4, 4]	183	<i>o9_13666</i>	[11, 7, 3, 3]	191
<i>o9_04431</i>	[13, 7, 6, 2, 2, 2]	268	<i>o9_14831</i>	[8, 3, 2]	80
<i>s086</i>	[3, 3, 3, 3, 2, 2]	46	<i>o9_05483</i>	[7, 7, 7, 7, 4, 2, 2]	222
<i>o9_16065</i>	[14, 9, 5, 4, 2, 2]	328	<i>o9_00168</i>	[5, 5, 5, 5, 5, 3, 2, 2]	144
<i>o9_22477</i>	[8, 3, 3, 3, 2]	97	<i>v1716</i>	[7, 3, 3, 2, 2]	77
<i>t05426</i>	[11, 6, 5, 3, 2]	197	<i>t01037</i>	[5, 5, 5, 5, 2, 2, 2]	114

Knot	$\rho(K)$	N
$t05658$	[7, 6, 4, 3]	113
$t01292$	[10, 6, 4, 3]	164
$o9_22925$	[6, 6, 5, 4, 2, 2]	123
$s369$	[6, 5, 2, 2]	71
$s068$	[5, 5, 3, 2, 2]	69
$m016$	[3, 2, 2]	19
$t11852$	[6, 5, 3, 3, 2]	85
$m082$	[3, 3, 2, 2]	28
$o9_07945$	[12, 7, 5, 3, 2]	233
$o9_24183$	[14, 8, 5, 3, 2]	300
$v1690$	[7, 4, 3, 2, 2]	84
$o9_02735$	[9, 9, 9, 5, 4, 2, 2]	294
$o9_19130$	[7, 6, 5, 2, 2]	120
$o9_21918$	[5, 5, 5, 3, 3, 2]	99
$t01646$	[11, 6, 5, 2, 2]	192
$t00729$	[7, 7, 2, 2]	109
$o9_33526$	[7, 4, 4, 2, 2]	91
$v3354$	[6, 6, 5, 3, 2]	112
$o9_27480$	[11, 4, 4]	157
$o9_08224$	[7, 7, 7, 3, 2]	162
$v0398$	[7, 5, 2, 2, 2]	88
$o9_08828$	[13, 5, 5, 3, 3]	240
$o9_22698$	[9, 9, 4, 2, 2]	188
$o9_08477$	[4, 4, 4, 4, 4, 3, 3]	101
$v2759$	[7, 4]	69
$o9_16642$	[11, 11, 6, 4, 2, 2]	304
$v1077$	[7, 7, 3, 3, 2]	122
$o9_03802$	[11, 3, 3, 3]	151
$t01757$	[7, 7, 2, 2, 2, 2]	116
$o9_03133$	[11, 3, 3, 3, 2, 2]	158
$o9_13403$	[11, 7, 4, 2]	192
$t00826$	[8, 8, 3, 3, 2, 2]	156
$t02470$	[10, 7, 3, 2, 2]	168
$t03566$	[7, 7, 3]	111
$t09313$	[7, 7, 6, 3, 3]	155
$t02104$	[9, 4, 4, 2]	119
$o9_27392$	[7, 7, 7, 6, 3, 3]	204
$o9_03313$	[11, 8, 3, 3]	206
$t06001$	[7, 7, 4, 4]	134
$o9_14018$	[13, 7, 6, 3, 3]	275
$m118$	[4, 3, 2]	31
$o9_17450$	[11, 6, 4, 2]	179
$o9_10696$	[9, 4]	102
$o9_13639$	[8, 8, 6, 3, 2]	179
$t04228$	[9, 7, 3, 3]	151
$o9_16356$	[8, 8, 8, 3, 3, 3]	222

Knot	$\rho(K)$	N
$t04721$	[7, 7, 6, 2, 2, 2]	148
$s665$	[5, 5, 4, 2, 2]	76
$o9_14716$	[7, 7, 7, 6, 2, 2, 2]	197
$t08267$	[8, 7, 3, 3, 2]	137
$o9_03108$	[9, 2, 2, 2, 2, 2]	103
$o9_05562$	[13, 5, 5, 3, 2, 2]	238
$o9_11845$	[8, 7, 2, 2, 2, 2]	131
$t09704$	[8, 8, 6, 3, 3]	185
$t00423$	[7, 7, 7, 3, 2, 2]	166
$t01690$	[11, 7, 4, 2, 2]	196
$o9_02255$	[10, 10, 3, 3, 2, 2]	228
$o9_04106$	[12, 5, 5, 2, 2, 2]	208
$t02537$	[7, 7, 7, 3, 3, 2]	171
$t01125$	[10, 3, 3, 2, 2]	128
$m194$	[5, 3]	37
$o9_04245$	[13, 5, 5, 3]	231
$o9_23660$	[11, 7, 4]	190
$t10230$	[6, 4, 3, 3]	73
$t02567$	[7, 7, 7, 4, 2, 2]	173
$t01033$	[5, 5, 5, 5, 3]	112
$o9_02706$	[9, 9, 9, 4, 3, 2]	274
$o9_12736$	[9, 8, 4, 4]	181
$v1728$	[6, 5, 2, 2, 2]	75
$o9_16920$	[8, 5, 3, 3, 2]	113
$o9_24534$	[9, 4, 4, 4]	133
$o9_25595$	[10, 3, 3, 3, 3]	139
$t03713$	[7, 7, 3, 2]	113
$t04180$	[5, 5, 5, 5, 4, 2, 2]	126
$o9_03162$	[11, 11, 4, 4, 3, 2]	289
$s346$	[7, 3, 3, 2]	73
$v0945$	[8, 5, 3, 2, 2]	108
$o9_09213$	[5, 5, 5, 5, 5, 4, 2, 2]	151
$o9_02696$	[9, 9, 5, 4, 2]	209
$o9_12412$	[10, 7, 3, 2]	164
$o9_04435$	[9, 8, 2, 2, 2, 2]	163
$o9_13720$	[10, 10, 4, 4, 3]	244
$m103$	[5, 3, 2, 2]	44
$v0165$	[3, 3, 3, 3, 3, 2, 2]	55
$o9_06301$	[11, 11, 7, 4, 3, 2]	322
$o9_05021$	[8, 8, 8, 3, 3]	213
$v1940$	[7, 6, 3, 3]	106
$o9_22607$	[9, 5]	111
$o9_01436$	[7, 7, 7, 2, 2]	158
$v1709$	[7, 5, 3, 2]	89
$t03781$	[4, 4, 4, 4, 3, 3]	85
$o9_14974$	[11, 8, 3, 2, 2]	204

Knot	$\rho(K)$	N	Knot	$\rho(K)$	N
<i>o9_29246</i>	[8, 8, 8, 6, 3, 3]	249	<i>t10462</i>	[9, 4, 4, 3, 2]	128
<i>o9_08875</i>	[13, 8, 5, 2, 2]	268	<i>s042</i>	[5, 5, 2]	57
<i>o9_12971</i>	[6, 6, 6, 5, 3, 3]	154	<i>v0759</i>	[8, 3, 3]	85
<i>o9_12873</i>	[14, 5, 5, 3, 2]	261	<i>v1986</i>	[6, 6, 4, 3]	100
<i>t08201</i>	[7, 4, 4, 2]	87	<i>o9_02340</i>	[10, 10, 4, 3, 3]	237
<i>o9_14136</i>	[9, 5, 4, 4]	142	<i>o9_37941</i>	[6, 6, 5, 3, 3, 2]	121
<i>t07348</i>	[6, 5, 4, 2, 2]	87	<i>o9_00815</i>	[7, 7, 7, 7, 4, 3, 2]	227
<i>o9_33585</i>	[8, 6, 3, 3, 2]	124	<i>t05390</i>	[6, 6, 5, 2, 2, 2]	111
<i>o9_20219</i>	[10, 8, 3, 3, 2]	188	<i>s336</i>	[4, 4, 3, 2, 2]	51
<i>t01850</i>	[8, 5, 4]	109	<i>v2930</i>	[7, 3, 3, 3]	79
<i>o9_08302</i>	[7, 7, 7, 4, 3, 2, 2]	182	<i>o9_18813</i>	[9, 6, 4, 2]	139
<i>v0220</i>	[7, 7, 3, 2, 2]	117	<i>o9_00133</i>	[5, 5, 5, 5, 5, 2]	132
<i>t00787</i>	[7, 7, 5, 2, 2, 2]	137	<i>t01368</i>	[9, 5, 4, 2]	128
<i>m281</i>	[4, 4, 3, 2]	47	<i>o9_11685</i>	[10, 3, 3, 3, 2, 2]	137
<i>o9_14599</i>	[13, 6, 6, 2, 2, 2]	255	<i>t09267</i>	[7, 7, 4]	118
<i>o9_03833</i>	[9, 7, 2, 2]	141	<i>o9_26604</i>	[9, 6, 4, 2, 2]	143
<i>t00110</i>	[5, 5, 5, 5, 2]	107	<i>o9_16319</i>	[9, 9, 9, 4, 4, 2, 2]	285
<i>t09954</i>	[6, 5, 4, 2]	83	<i>s684</i>	[5, 4, 3, 2]	56
<i>t01440</i>	[4, 4, 4, 4, 4, 3, 2]	95	<i>t06605</i>	[9, 9, 4, 4, 2, 2]	204
<i>t00146</i>	[5, 5, 5, 5, 3, 2, 2]	119	<i>o9_04205</i>	[12, 7, 5, 2]	225
<i>m198</i>	[5, 2, 2, 2]	39	<i>o9_29529</i>	[8, 7, 5, 3, 2]	153
<i>s367</i>	[4, 4, 4, 3, 2]	63	<i>t01268</i>	[10, 7, 3, 3, 2]	173
<i>v0741</i>	[9, 5, 4, 2, 2]	132	<i>o9_22129</i>	[10, 3, 3]	122
<i>o9_06060</i>	[9, 9, 4, 4, 2]	200	<i>o9_16141</i>	[11, 11, 5, 5, 2, 2]	302
<i>o9_27737</i>	[10, 7, 3]	162	<i>o9_13649</i>	[11, 4, 4, 2]	159
<i>o9_12519</i>	[5, 5, 5, 5, 4, 3, 2]	131	<i>v1810</i>	[5, 5, 5, 4, 2, 2]	101
<i>o9_30721</i>	[7, 7, 4, 4, 2]	136	<i>o9_00797</i>	[7, 7, 7, 7, 3, 2, 2]	215
<i>o9_03149</i>	[11, 11, 6, 5, 2, 2]	313	<i>o9_13052</i>	[8, 8, 5, 4]	173
<i>o9_03188</i>	[11, 11, 7, 4, 2, 2]	317	<i>t01863</i>	[10, 3, 3, 3, 2]	133
<i>s769</i>	[6, 5, 3, 2]	76	<i>o9_06128</i>	[10, 10, 7, 3, 2, 2]	268
<i>o9_05177</i>	[8, 8, 8, 5, 3, 2, 2]	236	<i>o9_07893</i>	[12, 5, 4, 3, 2]	200
<i>o9_13433</i>	[12, 5, 5, 3, 2]	209	<i>v0715</i>	[9, 4, 3, 2]	112
<i>o9_02794</i>	[4, 4, 4, 4, 4, 4, 3, 2]	111	<i>o9_01765</i>	[8, 8, 8, 5, 3, 3]	238
<i>m239</i>	[4, 3, 2, 2]	35	<i>o9_03288</i>	[11, 4, 3, 3]	158
<i>v2325</i>	[5, 5, 5, 3, 3]	96	<i>t02099</i>	[5, 5, 5, 4, 2]	97
<i>o9_03118</i>	[11, 11, 5, 4, 2, 2]	293	<i>o9_11467</i>	[11, 11, 5, 3, 3]	288
<i>o9_16527</i>	[8, 8, 8, 5, 2, 2]	227	<i>s308</i>	[5, 5, 2, 2, 2]	64
<i>o9_07943</i>	[7, 7, 7, 3]	160	<i>v0709</i>	[5, 4, 4]	61
<i>t06525</i>	[7, 7, 5, 3, 2]	138	<i>o9_08771</i>	[14, 9, 5, 3, 2]	317
<i>t09580</i>	[9, 5, 2, 2]	116	<i>v0424</i>	[8, 3, 2, 2]	83
<i>v0554</i>	[7, 2, 2, 2, 2]	67	<i>o9_31165</i>	[11, 7, 4, 3, 3]	207
<i>o9_01496</i>	[7, 7, 7, 5, 2, 2, 2]	186	<i>o9_12459</i>	[8, 7, 4, 4]	149
<i>o9_07790</i>	[11, 3, 3, 2, 2]	149	<i>o9_12892</i>	[11, 4, 4, 3, 2, 2]	172
<i>t01422</i>	[4, 4, 4, 4, 3, 2, 2]	83	<i>o9_21893</i>	[7, 4, 4, 3]	93
<i>o9_09465</i>	[13, 4, 4, 3, 2]	216	<i>o9_13604</i>	[6, 6, 6, 6, 5, 2, 2]	179
<i>o9_12230</i>	[11, 9, 3, 3, 3]	232	<i>o9_08831</i>	[7, 7, 7, 3, 3, 2, 2]	175

Knot	$\rho(K)$	N
<i>v</i> 0765	[7, 5, 2]	81
<i>o</i> 9.04438	[13, 8, 5, 3, 2, 2]	277
<i>o</i> 9.28592	[8, 8, 7, 4, 3]	205
<i>t</i> 05118	[11, 6, 4, 2, 2]	183
<i>s</i> 114	[7, 4, 3, 2]	80
<i>o</i> 9.03622	[7, 7, 7, 5, 2]	179
<i>t</i> 04244	[11, 5, 5, 2, 2]	181
<i>v</i> 0912	[7, 6, 2, 2, 2]	99
<i>o</i> 9.11795	[10, 3, 3, 2]	124
<i>v</i> 1109	[7, 7, 4, 2, 2]	124
<i>o</i> 9.00644	[3, 3, 3, 3, 3, 3, 2, 2]	73
<i>v</i> 0707	[4, 4, 4, 3, 2, 2]	67
<i>t</i> 01409	[9, 9, 4, 3, 2]	193
<i>t</i> 05695	[5, 5, 5, 5, 3, 3]	121
<i>o</i> 9.01621	[8, 8, 8, 5, 3]	229
<i>s</i> 301	[5, 5, 3]	62

TABLE 2. The hyperbolic integer alternating surgeries

knot	slope	branching set	knot	slope	branching set	knot	slope	branching set
v_{1392}	$(-2, 1)$	K_{10a119}	v_{1547}	$(-2, 1)$	L_{10a80}	v_{1690}	$(-2, 1)$	L_{10a106}
v_{1716}	$(2, 1)$	K_{10a98}	v_{1728}	$(2, 1)$	K_{10a95}	t_{03713}	$(-2, 1)$	L_{11a328}
t_{03864}	$(2, 1)$	K_{11a215}	t_{03956}	$(-2, 1)$	L_{11a377}	t_{04003}	$(-2, 1)$	K_{11a158}
t_{04102}	$(2, 1)$	L_{11a239}	t_{05390}	$(-2, 1)$	K_{11a296}	t_{09580}	$(-1, 1)$	K_{11a148}
t_{10230}	$(1, 1)$	K_{10a97}	t_{10462}	$(-1, 1)$	L_{11a321}	t_{11556}	$(-1, 1)$	L_{9a20}
t_{11852}	$(1, 1)$	K_{10a45}	$o_{9.08224}$	$(2, 1)$	$K_{12a1178}$	$o_{9.08302}$	$(2, 1)$	$L_{12a1298}$
$o_{9.08765}$	$(-2, 1)$	L_{12a987}	$o_{9.08831}$	$(-2, 1)$	K_{12a977}	$o_{9.11685}$	$(2, 1)$	$K_{12a1169}$
$o_{9.11795}$	$(-2, 1)$	K_{12a952}	$o_{9.11845}$	$(-2, 1)$	$K_{12a1238}$	$o_{9.12412}$	$(2, 1)$	K_{12a660}
$o_{9.12892}$	$(-2, 1)$	L_{12a998}	$o_{9.12919}$	$(-2, 1)$	$K_{12a1236}$	$o_{9.13182}$	$(-2, 1)$	$K_{12a1262}$
$o_{9.13403}$	$(-2, 1)$	K_{12a262}	$o_{9.13537}$	$(-2, 1)$	L_{12a912}	$o_{9.13649}$	$(2, 1)$	$L_{12a1313}$
$o_{9.14364}$	$(-2, 1)$	$K_{12a1047}$	$o_{9.14495}$	$(-2, 1)$	K_{12a617}	$o_{9.15506}$	$(2, 1)$	K_{12a349}
$o_{9.17450}$	$(-2, 1)$	L_{12a821}	$o_{9.18633}$	$(-2, 1)$	K_{12a779}	$o_{9.23977}$	$(1, 1)$	K_{12a989}
$o_{9.26791}$	$(-1, 1)$	K_{12a321}	$o_{9.27155}$	$(1, 1)$	L_{12a923}	$o_{9.27261}$	$(-1, 1)$	K_{12a635}
$o_{9.28153}$	$(1, 1)$	$L_{12a1133}$	$o_{9.28746}$	$(-1, 1)$	$L_{12a1097}$	$o_{9.28810}$	$(1, 1)$	K_{12a403}
$o_{9.30375}$	$(1, 1)$	K_{12a284}	$o_{9.32132}$	$(0, 1)$	K_{10a45}	$o_{9.32257}$	$(1, 1)$	L_{11a313}
$o_{9.32588}$	$(0, 1)$	L_{10a106}	$o_{9.33526}$	$(-1, 1)$	K_{10a72}	$o_{9.34403}$	$(-1, 1)$	K_{11a137}
$o_{9.35320}$	$(0, 1)$	K_{11a312}	$o_{9.35682}$	$(1, 1)$	K_{11a295}	$o_{9.35772}$	$(-1, 1)$	K_{11a320}
$o_{9.37754}$	$(1, 1)$	L_{10a76}	$o_{9.37941}$	$(-1, 1)$	K_{11a115}	$o_{9.39394}$	$(1, 1)$	K_{11a217}
$o_{9.39451}$	$(1, 1)$	K_{10a99}	$o_{9.43001}$	$(0, 1)$	L_{10a71}	$o_{9.43679}$	$(0, 1)$	K_{11a227}
$o_{9.43953}$	$(0, 1)$	K_{11a304}	$o_{9.44054}$	$(0, 1)$	L_{11a229}			

DEPARTMENT OF MATHEMATICS, UNIVERSITY OF MIAMI, CORAL GABLES, FL 33146, USA
Email address: k.baker@math.miami.edu

HUMBOLDT-UNIVERSITÄT ZU BERLIN, RUDOWER CHAUSSEE 25, 12489 BERLIN, GERMANY.

RUHR-UNIVERSITÄT BOCHUM, UNIVERSITÄTSSTRASSE 150, 44780 BOCHUM, GERMANY
Email address: kegemarc@math.hu-berlin.de, kegelmarc87@gmail.com

DÉPARTEMENT DE MATHÉMATIQUES, UNIVERSITÉ DU QUÉBEC À MONTRÉAL, CANADA
Email address: mc_coy.duncan@uqam.ca

TABLE 3. The lens space surgeries

knot	slope	lens space	knot	slope	lens space	knot	slope	lens space
$m016$	$(-1, 1)$	$L(19, 7)$	$m016$	$(0, 1)$	$L(18, 5)$	$m071$	$(-1, 1)$	$L(31, 11)$
$m071$	$(0, 1)$	$L(32, 7)$	$m082$	$(0, 1)$	$L(27, 8)$	$m103$	$(0, 1)$	$L(43, 12)$
$m118$	$(-1, 1)$	$L(30, 11)$	$m118$	$(0, 1)$	$L(31, 12)$	$m144$	$(0, 1)$	$L(36, 11)$
$m194$	$(0, 1)$	$L(37, 10)$	$m198$	$(1, 1)$	$L(39, 16)$	$m239$	$(0, 1)$	$L(34, 13)$
$m240$	$(1, 0)$	$L(37, 10)$	$m270$	$(1, 0)$	$L(45, 19)$	$m276$	$(1, 0)$	$L(50, 19)$
$m281$	$(1, 1)$	$L(46, 17)$	$s042$	$(0, 1)$	$L(57, 16)$	$s068$	$(0, 1)$	$L(68, 19)$
$s086$	$(0, 1)$	$L(45, 14)$	$s104$	$(-1, 1)$	$L(68, 19)$	$s104$	$(0, 1)$	$L(67, 18)$
$s114$	$(-1, 1)$	$L(79, 29)$	$s114$	$(0, 1)$	$L(80, 31)$	$s294$	$(0, 1)$	$L(47, 13)$
$s336$	$(-1, 1)$	$L(50, 19)$	$s344$	$(1, 0)$	$L(63, 17)$	$s346$	$(0, 1)$	$L(73, 27)$
$s367$	$(1, 1)$	$L(62, 23)$	$s369$	$(1, 0)$	$L(71, 21)$	$s407$	$(0, 1)$	$L(75, 29)$
$s665$	$(0, 1)$	$L(75, 29)$	$s684$	$(0, 1)$	$L(55, 21)$	$s800$	$(0, 1)$	$L(70, 29)$
$v0082$	$(0, 1)$	$L(82, 23)$	$v0114$	$(0, 1)$	$L(93, 25)$	$v0165$	$(0, 1)$	$L(54, 17)$
$v0220$	$(0, 1)$	$L(116, 45)$	$v0220$	$(1, 1)$	$L(117, 43)$	$v0223$	$(0, 1)$	$L(129, 49)$
$v0223$	$(1, 1)$	$L(128, 47)$	$v0330$	$(1, 1)$	$L(59, 24)$	$v0407$	$(0, 1)$	$L(91, 27)$
$v0424$	$(1, 0)$	$L(83, 19)$	$v0434$	$(0, 1)$	$L(101, 30)$	$v0497$	$(1, 0)$	$L(109, 45)$
$v0554$	$(1, 1)$	$L(67, 29)$	$v0707$	$(-1, 1)$	$L(66, 25)$	$v0709$	$(1, 0)$	$L(61, 13)$
$v0715$	$(1, 0)$	$L(112, 31)$	$v0740$	$(1, 1)$	$L(78, 29)$	$v0741$	$(1, 0)$	$L(131, 50)$
$v0759$	$(0, 1)$	$L(85, 26)$	$v0847$	$(1, 0)$	$L(84, 25)$	$v0912$	$(1, 0)$	$L(98, 27)$
$v1300$	$(0, 1)$	$L(61, 16)$	$v1392$	$(-1, 1)$	$L(64, 23)$	$v1547$	$(-1, 1)$	$L(71, 26)$
$v1709$	$(0, 1)$	$L(89, 34)$	$v1810$	$(0, 1)$	$L(100, 39)$	$v1832$	$(0, 1)$	$L(81, 31)$
$v1839$	$(0, 1)$	$L(121, 46)$	$v1921$	$(0, 1)$	$L(99, 29)$	$v1980$	$(0, 1)$	$L(49, 18)$
$v1986$	$(0, 1)$	$L(99, 29)$	$v2215$	$(0, 1)$	$L(80, 31)$	$v2325$	$(0, 1)$	$L(95, 39)$
$v2930$	$(0, 1)$	$L(79, 23)$	$t00110$	$(0, 1)$	$L(107, 25)$	$t00146$	$(0, 1)$	$L(118, 25)$
$t00324$	$(0, 1)$	$L(63, 20)$	$t00423$	$(-1, 1)$	$L(166, 49)$	$t00423$	$(0, 1)$	$L(165, 49)$
$t00434$	$(0, 1)$	$L(178, 49)$	$t00434$	$(1, 1)$	$L(177, 49)$	$t00826$	$(0, 1)$	$L(155, 46)$
$t00855$	$(0, 1)$	$L(165, 49)$	$t00873$	$(1, 0)$	$L(147, 62)$	$t00932$	$(1, 0)$	$L(173, 64)$
$t01125$	$(0, 1)$	$L(127, 27)$	$t01216$	$(1, 0)$	$L(137, 37)$	$t01268$	$(0, 1)$	$L(173, 64)$
$t01292$	$(1, 0)$	$L(163, 44)$	$t01318$	$(0, 1)$	$L(115, 34)$	$t01368$	$(0, 1)$	$L(128, 47)$
$t01409$	$(1, 0)$	$L(193, 81)$	$t01422$	$(-1, 1)$	$L(82, 31)$	$t01424$	$(1, 0)$	$L(212, 81)$
$t01440$	$(1, 1)$	$L(94, 35)$	$t01598$	$(1, 0)$	$L(171, 50)$	$t01636$	$(0, 1)$	$L(167, 46)$
$t01646$	$(1, 0)$	$L(192, 71)$	$t01690$	$(0, 1)$	$L(196, 75)$	$t01850$	$(1, 0)$	$L(108, 23)$
$t01863$	$(0, 1)$	$L(133, 36)$	$t01949$	$(1, 0)$	$L(127, 29)$	$t02104$	$(0, 1)$	$L(119, 50)$
$t02378$	$(0, 1)$	$L(163, 62)$	$t03979$	$(0, 1)$	$L(115, 34)$	$t04180$	$(0, 1)$	$L(125, 49)$
$t04244$	$(1, 0)$	$L(181, 70)$	$t04382$	$(0, 1)$	$L(157, 46)$	$t04721$	$(1, 0)$	$L(147, 41)$
$t05425$	$(0, 1)$	$L(117, 43)$	$t05538$	$(0, 1)$	$L(105, 41)$	$t05564$	$(0, 1)$	$L(135, 41)$
$t05658$	$(1, 0)$	$L(112, 31)$	$t05695$	$(0, 1)$	$L(120, 49)$	$t06001$	$(1, 0)$	$L(133, 39)$
$t08403$	$(0, 1)$	$L(107, 41)$	$t09580$	$(0, 1)$	$L(116, 45)$	$o9_00133$	$(0, 1)$	$L(132, 25)$
$o9_00168$	$(0, 1)$	$L(143, 25)$	$o9_00644$	$(0, 1)$	$L(72, 23)$	$o9_00797$	$(-1, 1)$	$L(215, 49)$
$o9_00797$	$(0, 1)$	$L(214, 49)$	$o9_00815$	$(-1, 1)$	$L(226, 49)$	$o9_00815$	$(0, 1)$	$L(227, 49)$
$o9_01584$	$(0, 1)$	$L(219, 64)$	$o9_01621$	$(0, 1)$	$L(229, 64)$	$o9_01680$	$(1, 0)$	$L(211, 64)$
$o9_01765$	$(1, 0)$	$L(237, 64)$	$o9_02255$	$(0, 1)$	$L(227, 84)$	$o9_02340$	$(1, 0)$	$L(237, 64)$
$o9_02350$	$(0, 1)$	$L(273, 100)$	$o9_02386$	$(1, 0)$	$L(263, 71)$	$o9_02655$	$(0, 1)$	$L(196, 75)$
$o9_02696$	$(0, 1)$	$L(209, 80)$	$o9_02706$	$(1, 0)$	$L(274, 81)$	$o9_02735$	$(1, 0)$	$L(293, 81)$
$o9_02772$	$(-1, 1)$	$L(95, 41)$	$o9_02786$	$(-1, 1)$	$L(98, 37)$	$o9_02794$	$(1, 1)$	$L(110, 41)$
$o9_03108$	$(-1, 1)$	$L(103, 46)$	$o9_03118$	$(1, 0)$	$L(292, 111)$	$o9_03133$	$(0, 1)$	$L(157, 36)$
$o9_03149$	$(1, 0)$	$L(313, 119)$	$o9_03162$	$(0, 1)$	$L(288, 119)$	$o9_03188$	$(0, 1)$	$L(317, 121)$
$o9_03288$	$(1, 0)$	$L(158, 37)$	$o9_03313$	$(0, 1)$	$L(206, 63)$	$o9_03412$	$(1, 0)$	$L(205, 61)$
$o9_03526$	$(1, 0)$	$L(91, 16)$	$o9_03802$	$(0, 1)$	$L(151, 45)$	$o9_03932$	$(1, 0)$	$L(135, 31)$
$o9_04313$	$(1, 0)$	$L(240, 71)$	$o9_04431$	$(1, 0)$	$L(267, 79)$	$o9_04435$	$(1, 0)$	$L(162, 35)$
$o9_07893$	$(0, 1)$	$L(199, 55)$	$o9_07945$	$(0, 1)$	$L(233, 89)$	$o9_08647$	$(1, 0)$	$L(271, 75)$
$o9_08771$	$(1, 0)$	$L(317, 121)$	$o9_08828$	$(0, 1)$	$L(239, 70)$	$o9_08875$	$(0, 1)$	$L(268, 99)$
$o9_09213$	$(0, 1)$	$L(150, 59)$	$o9_10696$	$(1, 0)$	$L(101, 21)$	$o9_11999$	$(1, 0)$	$L(253, 74)$
$o9_12459$	$(1, 0)$	$L(148, 41)$	$o9_12519$	$(0, 1)$	$L(130, 51)$	$o9_12757$	$(0, 1)$	$L(145, 59)$
$o9_12873$	$(0, 1)$	$L(261, 100)$	$o9_12971$	$(0, 1)$	$L(153, 55)$	$o9_13052$	$(1, 0)$	$L(172, 39)$
$o9_13125$	$(1, 0)$	$L(177, 49)$	$o9_13188$	$(0, 1)$	$L(171, 53)$	$o9_13433$	$(0, 1)$	$L(209, 80)$
$o9_13666$	$(1, 0)$	$L(191, 56)$	$o9_13952$	$(0, 1)$	$L(229, 94)$	$o9_14716$	$(0, 1)$	$L(196, 55)$
$o9_14831$	$(-1, 1)$	$L(79, 28)$	$o9_18007$	$(0, 1)$	$L(161, 45)$	$o9_18209$	$(0, 1)$	$L(182, 53)$
$o9_21893$	$(1, 0)$	$L(93, 25)$	$o9_22129$	$(0, 1)$	$L(121, 35)$	$o9_22477$	$(0, 1)$	$L(97, 35)$
$o9_24534$	$(1, 0)$	$L(133, 30)$	$o9_25595$	$(0, 1)$	$L(139, 42)$	$o9_26791$	$(0, 1)$	$L(172, 63)$
$o9_27155$	$(0, 1)$	$L(161, 61)$						

TABLE 4. The integer alternating surgeries to Seifert fibered spaces with base S^2 and three exceptional fibers which are not lens spaces. The column titled *filled manifold* shows the Seifert invariants in Regina's notation.

knot	slope	filled manifold	branching set	knot	slope	filled manifold	branching set
<i>m082</i>	(1, 1)	(2, 1)(2, 1)(5, 2)	<i>L8a3</i>	<i>m103</i>	(-1, 1)	(2, 1)(2, 1)(3, 8)	<i>L9a16</i>
<i>m144</i>	(-1, 1)	(2, 1)(3, 1)(5, 2)	<i>K9a9</i>	<i>m194</i>	(1, 1)	(2, 1)(2, 1)(7, 2)	<i>L9a7</i>
<i>m198</i>	(0, 1)	(2, 1)(3, 1)(4, 3)	<i>L9a24</i>	<i>m240</i>	(-1, 1)	(2, 1)(2, 1)(5, 4)	<i>L9a12</i>
<i>m270</i>	(1, 1)	(2, 1)(3, 2)(4, 3)	<i>L9a23</i>	<i>m276</i>	(1, 1)	(2, 1)(3, 2)(3, 5)	<i>K9a5</i>
<i>m281</i>	(0, 1)	(2, 1)(3, 2)(5, 2)	<i>K9a4</i>	<i>s042</i>	(1, 1)	(2, 1)(2, 1)(3, 11)	<i>L10a41</i>
<i>s068</i>	(-1, 1)	(2, 1)(3, 2)(3, 8)	<i>K10a17</i>	<i>s086</i>	(-1, 1)	(2, 1)(4, 1)(5, 2)	<i>L10a67</i>
<i>s301</i>	(0, 1)	(2, 1)(3, 1)(4, 7)	<i>L10a72</i>	<i>s301</i>	(1, 1)	(2, 1)(3, 2)(7, 2)	<i>K10a9</i>
<i>s308</i>	(-1, 1)	(2, 1)(2, 1)(7, 9)	<i>L10a19</i>	<i>s308</i>	(0, 1)	(3, 1)(3, 2)(4, 3)	<i>K10a42</i>
<i>s344</i>	(1, 1)	(2, 1)(2, 1)(9, 7)	<i>L10a10</i>	<i>s346</i>	(1, 1)	(2, 1)(2, 1)(13, 5)	<i>L10a29</i>
<i>s367</i>	(0, 1)	(3, 1)(3, 2)(5, 2)	<i>K10a37</i>	<i>s369</i>	(-1, 1)	(2, 1)(3, 2)(4, 7)	<i>L10a59</i>
<i>s407</i>	(-1, 1)	(2, 1)(3, 2)(8, 3)	<i>L10a60</i>	<i>s582</i>	(-1, 1)	(2, 1)(2, 1)(9, 4)	<i>L10a40</i>
<i>s582</i>	(0, 1)	(2, 1)(3, 1)(7, 3)	<i>K10a82</i>	<i>s769</i>	(0, 1)	(3, 2)(3, 2)(4, 3)	<i>K10a40</i>
<i>s769</i>	(1, 0)	(2, 1)(2, 1)(7, 12)	<i>L10a30</i>	<i>v0082</i>	(1, 1)	(2, 1)(3, 1)(3, 11)	<i>K11a58</i>
<i>v0114</i>	(1, 1)	(2, 1)(3, 2)(4, 11)	<i>L11a190</i>	<i>v0165</i>	(1, 1)	(2, 1)(5, 1)(5, 2)	<i>K11a62</i>
<i>v0330</i>	(0, 1)	(2, 1)(3, 1)(6, 5)	<i>L11a274</i>	<i>v0398</i>	(0, 1)	(2, 1)(3, 1)(9, 7)	<i>K11a118</i>
<i>v0398</i>	(1, 1)	(2, 1)(2, 1)(5, 17)	<i>L11a94</i>	<i>v0424</i>	(1, 1)	(2, 1)(4, 3)(5, 4)	<i>L11a186</i>
<i>v0497</i>	(1, 1)	(2, 1)(4, 3)(7, 5)	<i>L11a151</i>	<i>v0554</i>	(0, 1)	(3, 1)(3, 1)(5, 4)	<i>L11a383</i>
<i>v0570</i>	(0, 1)	(3, 1)(3, 1)(4, 7)	<i>K11a340</i>	<i>v0570</i>	(1, 1)	(2, 1)(4, 3)(7, 2)	<i>L11a154</i>
<i>v0573</i>	(-1, 1)	(2, 1)(3, 1)(7, 9)	<i>K11a153</i>	<i>v0573</i>	(0, 1)	(3, 1)(4, 3)(4, 3)	<i>L11a296</i>
<i>v0709</i>	(1, 1)	(2, 1)(3, 1)(6, 5)	<i>L11a274</i>	<i>v0715</i>	(-1, 1)	(3, 2)(3, 2)(4, 7)	<i>K11a107</i>
<i>v0740</i>	(0, 1)	(3, 2)(4, 1)(5, 2)	<i>K11a133</i>	<i>v0741</i>	(1, 1)	(3, 2)(3, 2)(5, 8)	<i>L11a268</i>
<i>v0765</i>	(-1, 1)	(2, 1)(2, 1)(9, 11)	<i>L11a43</i>	<i>v0765</i>	(0, 1)	(3, 1)(3, 2)(5, 4)	<i>K11a201</i>
<i>v0847</i>	(-1, 1)	(2, 1)(5, 2)(5, 4)	<i>K11a60</i>	<i>v0912</i>	(1, 1)	(3, 1)(3, 2)(4, 7)	<i>K11a139</i>
<i>v0939</i>	(0, 1)	(2, 1)(2, 1)(11, 7)	<i>L10a28</i>	<i>v0945</i>	(0, 1)	(2, 1)(3, 1)(7, 12)	<i>K11a94</i>
<i>v1077</i>	(0, 1)	(2, 1)(3, 2)(8, 11)	<i>L11a160</i>	<i>v1077</i>	(1, 1)	(2, 1)(3, 2)(13, 5)	<i>K11a35</i>
<i>v1109</i>	(-1, 1)	(2, 1)(2, 1)(13, 18)	<i>L11a113</i>	<i>v1109</i>	(0, 1)	(3, 2)(3, 2)(8, 3)	<i>K11a134</i>
<i>v1300</i>	(1, 0)	(2, 1)(4, 1)(5, 4)	<i>L11a200</i>	<i>v1620</i>	(0, 1)	(3, 1)(3, 1)(7, 3)	<i>K11a361</i>
<i>v1620</i>	(1, 1)	(2, 1)(2, 1)(13, 4)	<i>L11a75</i>	<i>v1628</i>	(0, 1)	(2, 1)(3, 1)(4, 11)	<i>L11a191</i>
<i>v1628</i>	(1, 0)	(2, 1)(5, 2)(5, 4)	<i>K11a60</i>	<i>v1690</i>	(-1, 1)	(2, 1)(3, 2)(5, 8)	<i>K10a3</i>
<i>v1716</i>	(1, 1)	(2, 1)(2, 1)(11, 8)	<i>L10a25</i>	<i>v1718</i>	(-1, 1)	(2, 1)(4, 3)(7, 3)	<i>L11a189</i>
<i>v1718</i>	(0, 1)	(2, 1)(5, 2)(7, 3)	<i>K11a63</i>	<i>v1728</i>	(1, 1)	(2, 1)(4, 3)(5, 3)	<i>L10a57</i>
<i>v1940</i>	(0, 1)	(2, 1)(4, 3)(5, 7)	<i>L11a155</i>	<i>v1940</i>	(1, 0)	(2, 1)(3, 2)(9, 7)	<i>K11a16</i>
<i>v1966</i>	(0, 1)	(3, 2)(4, 3)(5, 3)	<i>K11a87</i>	<i>v1966</i>	(1, 0)	(2, 1)(2, 1)(11, 19)	<i>L11a77</i>
<i>v2024</i>	(0, 1)	(2, 1)(5, 3)(7, 3)	<i>K11a10</i>	<i>v2024</i>	(1, 1)	(2, 1)(4, 3)(5, 7)	<i>L11a155</i>
<i>v2090</i>	(-1, 1)	(3, 2)(3, 2)(5, 7)	<i>K11a78</i>	<i>v2090</i>	(0, 1)	(2, 1)(5, 2)(8, 5)	<i>L11a157</i>
<i>v2759</i>	(0, 1)	(2, 1)(3, 1)(9, 4)	<i>K11a260</i>	<i>v2759</i>	(1, 1)	(2, 1)(3, 1)(10, 3)	<i>L11a259</i>
<i>v3354</i>	(1, 1)	(3, 2)(3, 2)(7, 3)	<i>K11a202</i>	<i>t00110</i>	(1, 1)	(2, 1)(3, 2)(4, 13)	<i>L12a647</i>
<i>t00146</i>	(-1, 1)	(2, 1)(3, 2)(5, 14)	<i>K12a158</i>	<i>t00324</i>	(-1, 1)	(2, 1)(5, 2)(6, 1)	<i>L12a896</i>
<i>t00729</i>	(-1, 1)	(2, 1)(2, 1)(5, 22)	<i>L12a410</i>	<i>t00729</i>	(0, 1)	(2, 1)(3, 1)(11, 9)	<i>K12a591</i>
<i>t00787</i>	(0, 1)	(2, 1)(3, 1)(14, 11)	<i>L12a872</i>	<i>t00787</i>	(1, 1)	(2, 1)(3, 2)(5, 17)	<i>K12a118</i>
<i>t00873</i>	(1, 1)	(2, 1)(4, 3)(9, 7)	<i>L12a492</i>	<i>t00932</i>	(-1, 1)	(2, 1)(4, 3)(11, 8)	<i>L12a595</i>
<i>t01033</i>	(0, 1)	(3, 1)(4, 1)(4, 7)	<i>L12a1058</i>	<i>t01033</i>	(1, 1)	(2, 1)(5, 4)(7, 2)	<i>K12a420</i>
<i>t01037</i>	(-1, 1)	(2, 1)(4, 1)(7, 9)	<i>L12a530</i>	<i>t01037</i>	(0, 1)	(3, 1)(4, 3)(5, 4)	<i>K12a1028</i>
<i>t01125</i>	(1, 1)	(2, 1)(2, 1)(23, 9)	<i>L12a339</i>	<i>t01216</i>	(1, 1)	(2, 1)(2, 1)(19, 15)	<i>L12a187</i>
<i>t01268</i>	(1, 1)	(2, 1)(2, 1)(31, 12)	<i>L12a221</i>	<i>t01292</i>	(1, 1)	(2, 1)(2, 1)(23, 18)	<i>L12a327</i>
<i>t01409</i>	(1, 1)	(3, 2)(3, 2)(7, 12)	<i>L12a932</i>	<i>t01424</i>	(-1, 1)	(3, 2)(3, 2)(8, 13)	<i>K12a281</i>
<i>t01440</i>	(0, 1)	(3, 2)(5, 1)(5, 2)	<i>K12a619</i>	<i>t01598</i>	(-1, 1)	(2, 1)(3, 2)(10, 17)	<i>L12a887</i>
<i>t01636</i>	(1, 1)	(2, 1)(3, 2)(18, 7)	<i>L12a888</i>	<i>t01646</i>	(-1, 1)	(2, 1)(3, 2)(11, 19)	<i>K12a98</i>
<i>t01690</i>	(1, 1)	(2, 1)(3, 2)(21, 8)	<i>K12a95</i>	<i>t01757</i>	(-1, 1)	(2, 1)(2, 1)(9, 20)	<i>L12a269</i>
<i>t01757</i>	(0, 1)	(3, 1)(5, 2)(5, 4)	<i>K12a752</i>	<i>t01834</i>	(-1, 1)	(2, 1)(3, 2)(9, 11)	<i>K12a62</i>
<i>t01834</i>	(0, 1)	(3, 1)(5, 3)(5, 4)	<i>L12a1323</i>	<i>t01850</i>	(1, 1)	(2, 1)(3, 1)(11, 9)	<i>K12a591</i>
<i>t01863</i>	(1, 1)	(2, 1)(3, 1)(18, 7)	<i>L12a889</i>	<i>t01949</i>	(1, 1)	(3, 1)(3, 2)(5, 9)	<i>L12a1292</i>
<i>t02099</i>	(-1, 1)	(2, 1)(3, 1)(11, 7)	<i>K11a257</i>	<i>t02238</i>	(0, 1)	(2, 1)(3, 1)(7, 19)	<i>K12a238</i>
<i>t02378</i>	(-1, 1)	(3, 1)(3, 2)(13, 5)	<i>L12a1299</i>	<i>t02398</i>	(0, 1)	(3, 1)(3, 2)(7, 12)	<i>K12a524</i>
<i>t02404</i>	(0, 1)	(2, 1)(2, 1)(19, 12)	<i>L11a62</i>	<i>t02470</i>	(0, 1)	(2, 1)(3, 2)(11, 15)	<i>K12a112</i>
<i>t02470</i>	(1, 1)	(2, 1)(3, 2)(18, 7)	<i>L12a888</i>	<i>t02537</i>	(-1, 1)	(2, 1)(4, 3)(13, 5)	<i>L12a599</i>
<i>t02537</i>	(0, 1)	(3, 1)(3, 2)(8, 11)	<i>K12a445</i>	<i>t02567</i>	(-1, 1)	(2, 1)(3, 1)(13, 18)	<i>K12a240</i>
<i>t02567</i>	(0, 1)	(3, 2)(4, 3)(8, 3)	<i>L12a964</i>	<i>t02639</i>	(0, 1)	(3, 2)(3, 2)(13, 5)	<i>K12a229</i>
<i>t02639</i>	(1, 1)	(2, 1)(2, 1)(21, 29)	<i>L12a256</i>	<i>t03566</i>	(0, 1)	(2, 1)(3, 1)(4, 15)	<i>L12a678</i>
<i>t03566</i>	(1, 0)	(2, 1)(5, 4)(7, 2)	<i>K12a420</i>	<i>t03607</i>	(0, 1)	(2, 1)(3, 1)(19, 8)	<i>K12a436</i>
<i>t03607</i>	(1, 1)	(2, 1)(2, 1)(25, 11)	<i>L12a350</i>	<i>t03709</i>	(0, 1)	(3, 1)(3, 2)(4, 11)	<i>K12a376</i>
<i>t03709</i>	(1, 0)	(2, 1)(5, 4)(8, 3)	<i>L12a615</i>	<i>t03713</i>	(-1, 1)	(2, 1)(3, 2)(5, 13)	<i>K11a11</i>
<i>t03781</i>	(0, 1)	(3, 1)(4, 1)(7, 3)	<i>K12a1243</i>	<i>t03781</i>	(1, 1)	(2, 1)(2, 1)(17, 4)	<i>L12a289</i>
<i>t03864</i>	(1, 1)	(3, 2)(3, 2)(5, 8)	<i>L11a268</i>	<i>t03956</i>	(-1, 1)	(2, 1)(5, 3)(5, 4)	<i>K11a7</i>
<i>t04003</i>	(-1, 1)	(2, 1)(2, 1)(11, 19)	<i>L11a77</i>	<i>t04019</i>	(-1, 1)	(2, 1)(3, 1)(11, 5)	<i>K12a843</i>
<i>t04019</i>	(0, 1)	(2, 1)(4, 1)(9, 4)	<i>L12a646</i>	<i>t04102</i>	(1, 1)	(2, 1)(3, 2)(11, 8)	<i>K11a31</i>
<i>t04228</i>	(0, 1)	(2, 1)(4, 3)(7, 10)	<i>L12a676</i>	<i>t04228</i>	(1, 0)	(2, 1)(3, 2)(13, 10)	<i>K12a144</i>
<i>t05118</i>	(-1, 1)	(2, 1)(5, 2)(7, 12)	<i>K12a175</i>	<i>t05118</i>	(0, 1)	(2, 1)(5, 3)(12, 5)	<i>L12a702</i>
<i>t05239</i>	(0, 1)	(3, 2)(4, 3)(7, 4)	<i>K12a368</i>	<i>t05239</i>	(1, 0)	(2, 1)(4, 3)(7, 12)	<i>L12a600</i>
<i>t05390</i>	(-1, 1)	(2, 1)(4, 3)(7, 5)	<i>L11a151</i>	<i>t05426</i>	(0, 1)	(3, 2)(4, 3)(8, 5)	<i>L12a972</i>
<i>t05426</i>	(1, 0)	(2, 1)(5, 3)(7, 12)	<i>K12a21</i>	<i>t05578</i>	(0, 1)	(4, 3)(4, 3)(5, 3)	<i>L12a962</i>
<i>t05578</i>	(1, 0)	(2, 1)(3, 1)(11, 19)	<i>K12a258</i>	<i>t05663</i>	(0, 1)	(3, 2)(5, 2)(5, 4)	<i>L12a1105</i>
<i>t05663</i>	(1, 0)	(2, 1)(3, 1)(9, 16)	<i>K12a329</i>	<i>t05674</i>	(-1, 1)	(2, 1)(4, 3)(7, 9)	<i>L12a501</i>
<i>t05674</i>	(0, 1)	(3, 1)(5, 3)(7, 3)	<i>K12a749</i>	<i>t06440</i>	(0, 1)	(3, 2)(5, 2)(7, 3)	<i>K12a568</i>

TABLE 5. Table 4 continued.

knot	slope	filled manifold	branching set	knot	slope	filled manifold	branching set
<i>t06463</i>	(0, 1)	(2, 1)(5, 2)(8, 13)	<i>L12a516</i>	<i>t06525</i>	(0, 1)	(2, 1)(5, 3)(8, 5)	<i>L11a159</i>
<i>t06570</i>	(0, 1)	(2, 1)(5, 2)(7, 10)	<i>K12a194</i>	<i>t06605</i>	(0, 1)	(3, 2)(5, 2)(8, 5)	<i>K12a263</i>
<i>t07348</i>	(0, 1)	(2, 1)(3, 2)(8, 5)	<i>L10a61</i>	<i>t08111</i>	(0, 1)	(2, 1)(3, 2)(8, 3)	<i>L10a60</i>
<i>t08201</i>	(0, 1)	(3, 2)(3, 2)(5, 3)	<i>K10a38</i>	<i>t08267</i>	(0, 1)	(2, 1)(2, 1)(21, 13)	<i>L11a55</i>
<i>t09016</i>	(0, 1)	(2, 1)(2, 1)(13, 21)	<i>L11a78</i>	<i>t09267</i>	(0, 1)	(3, 1)(3, 2)(10, 3)	<i>K12a577</i>
<i>t09313</i>	(0, 1)	(2, 1)(3, 2)(16, 7)	<i>L12a718</i>	<i>t09455</i>	(0, 1)	(2, 1)(3, 1)(10, 13)	<i>L12a926</i>
<i>t09704</i>	(0, 1)	(2, 1)(2, 1)(19, 27)	<i>L12a292</i>	<i>t09852</i>	(0, 1)	(2, 1)(2, 1)(13, 5)	<i>L10a29</i>
<i>t10230</i>	(0, 1)	(2, 1)(2, 1)(11, 7)	<i>L10a28</i>	<i>t10462</i>	(0, 1)	(2, 1)(5, 3)(7, 5)	<i>K11a1</i>
<i>t10643</i>	(1, 1)	(3, 2)(3, 2)(10, 3)	<i>K12a648</i>	<i>t10681</i>	(0, 1)	(2, 1)(3, 2)(12, 17)	<i>L12a709</i>
<i>t10985</i>	(-1, 1)	(3, 2)(5, 3)(7, 3)	<i>L12a1286</i>	<i>o9_00133</i>	(-1, 1)	(2, 1)(3, 2)(5, 16)	<i>K13a633</i>
<i>o9_00168</i>	(1, 1)	(2, 1)(3, 2)(6, 17)	<i>L13a2992</i>	<i>o9_00644</i>	(-1, 1)	(2, 1)(5, 2)(7, 1)	<i>K13a646</i>
<i>o9_01436</i>	(0, 1)	(2, 1)(3, 1)(16, 13)	<i>L13a4220</i>	<i>o9_01436</i>	(1, 1)	(2, 1)(3, 1)(5, 22)	<i>K13a666</i>
<i>o9_01496</i>	(-1, 1)	(2, 1)(4, 3)(5, 17)	<i>L13a1884</i>	<i>o9_01496</i>	(0, 1)	(2, 1)(3, 1)(19, 15)	<i>K13a3215</i>
<i>o9_01680</i>	(1, 1)	(2, 1)(4, 3)(13, 10)	<i>L13a2083</i>	<i>o9_01765</i>	(-1, 1)	(2, 1)(4, 3)(15, 11)	<i>L13a1850</i>
<i>o9_01953</i>	(0, 1)	(3, 1)(4, 3)(5, 6)	<i>K13a4562</i>	<i>o9_01953</i>	(1, 1)	(2, 1)(6, 5)(7, 2)	<i>L13a2843</i>
<i>o9_01955</i>	(0, 1)	(3, 1)(4, 3)(6, 5)	<i>L13a4298</i>	<i>o9_01955</i>	(1, 1)	(2, 1)(5, 1)(7, 9)	<i>K13a1536</i>
<i>o9_02255</i>	(1, 1)	(2, 1)(2, 1)(41, 16)	<i>L13a597</i>	<i>o9_02340</i>	(-1, 1)	(2, 1)(2, 1)(33, 26)	<i>L13a957</i>
<i>o9_02350</i>	(1, 1)	(2, 1)(2, 1)(49, 19)	<i>L13a949</i>	<i>o9_02386</i>	(-1, 1)	(2, 1)(2, 1)(37, 29)	<i>L13a500</i>
<i>o9_02706</i>	(-1, 1)	(3, 2)(3, 2)(10, 17)	<i>K13a2041</i>	<i>o9_02735</i>	(1, 1)	(3, 2)(3, 2)(11, 18)	<i>L13a4183</i>
<i>o9_02772</i>	(0, 1)	(3, 1)(3, 1)(7, 6)	<i>L13a5041</i>	<i>o9_02794</i>	(0, 1)	(3, 2)(5, 2)(6, 1)	<i>K13a2427</i>
<i>o9_03032</i>	(-1, 1)	(2, 1)(2, 1)(7, 30)	<i>L13a1210</i>	<i>o9_03032</i>	(0, 1)	(3, 1)(3, 1)(11, 9)	<i>K13a3004</i>
<i>o9_03108</i>	(0, 1)	(3, 1)(4, 1)(6, 5)	<i>L13a4297</i>	<i>o9_03118</i>	(-1, 1)	(2, 1)(3, 2)(17, 29)	<i>K13a299</i>
<i>o9_03149</i>	(1, 1)	(2, 1)(3, 2)(18, 31)	<i>L13a2812</i>	<i>o9_03162</i>	(1, 1)	(2, 1)(3, 2)(31, 12)	<i>K13a296</i>
<i>o9_03188</i>	(1, 1)	(2, 1)(3, 2)(34, 13)	<i>L13a2823</i>	<i>o9_03288</i>	(1, 1)	(2, 1)(5, 4)(9, 4)	<i>K13a3453</i>
<i>o9_03412</i>	(1, 1)	(2, 1)(5, 4)(12, 5)	<i>L13a2528</i>	<i>o9_03526</i>	(-1, 1)	(2, 1)(4, 1)(7, 6)	<i>L13a2127</i>
<i>o9_03586</i>	(-1, 1)	(2, 1)(3, 1)(9, 20)	<i>K13a1584</i>	<i>o9_03586</i>	(0, 1)	(3, 1)(5, 4)(7, 3)	<i>L13a5059</i>
<i>o9_03622</i>	(-1, 1)	(2, 1)(4, 3)(9, 11)	<i>L13a1604</i>	<i>o9_03622</i>	(0, 1)	(3, 1)(5, 4)(7, 4)	<i>K13a4311</i>
<i>o9_03833</i>	(-1, 1)	(2, 1)(2, 1)(11, 24)	<i>L13a768</i>	<i>o9_03833</i>	(0, 1)	(3, 1)(5, 2)(6, 5)	<i>K13a2317</i>
<i>o9_03932</i>	(1, 1)	(2, 1)(6, 5)(7, 2)	<i>L13a2843</i>	<i>o9_04106</i>	(0, 1)	(3, 1)(3, 2)(13, 10)	<i>K13a2807</i>
<i>o9_04205</i>	(0, 1)	(3, 1)(3, 2)(14, 11)	<i>K13a2110</i>	<i>o9_04245</i>	(0, 1)	(2, 1)(3, 1)(15, 26)	<i>K13a2857</i>
<i>o9_04269</i>	(-1, 1)	(2, 1)(4, 1)(11, 7)	<i>L12a634</i>	<i>o9_04313</i>	(1, 1)	(3, 2)(4, 3)(7, 10)	<i>K13a1458</i>
<i>o9_04431</i>	(1, 1)	(3, 2)(4, 3)(8, 11)	<i>L13a3104</i>	<i>o9_04435</i>	(1, 1)	(3, 2)(4, 1)(5, 9)	<i>K13a1220</i>
<i>o9_04438</i>	(0, 1)	(2, 1)(3, 1)(18, 31)	<i>L13a2960</i>	<i>o9_05021</i>	(0, 1)	(3, 1)(3, 1)(7, 19)	<i>K13a2832</i>
<i>o9_05177</i>	(0, 1)	(3, 1)(4, 3)(7, 12)	<i>K13a1941</i>	<i>o9_05229</i>	(0, 1)	(3, 1)(4, 3)(9, 7)	<i>K13a2122</i>
<i>o9_05357</i>	(0, 1)	(2, 1)(3, 1)(10, 27)	<i>L13a2981</i>	<i>o9_05426</i>	(-1, 1)	(2, 1)(5, 4)(13, 5)	<i>K13a817</i>
<i>o9_05426</i>	(0, 1)	(3, 2)(4, 1)(8, 11)	<i>L13a3443</i>	<i>o9_05483</i>	(-1, 1)	(2, 1)(4, 1)(13, 18)	<i>L13a2133</i>
<i>o9_05483</i>	(0, 1)	(3, 2)(5, 4)(8, 3)	<i>K13a1432</i>	<i>o9_05562</i>	(0, 1)	(3, 1)(3, 1)(11, 19)	<i>K13a2841</i>
<i>o9_05618</i>	(0, 1)	(3, 1)(5, 3)(9, 7)	<i>K13a2002</i>	<i>o9_05860</i>	(-1, 1)	(2, 1)(5, 2)(18, 7)	<i>L13a2837</i>
<i>o9_05860</i>	(0, 1)	(2, 1)(3, 2)(11, 26)	<i>K13a523</i>	<i>o9_05970</i>	(0, 1)	(3, 1)(3, 2)(11, 19)	<i>L13a4371</i>
<i>o9_06060</i>	(0, 1)	(2, 1)(2, 1)(19, 31)	<i>L12a226</i>	<i>o9_06128</i>	(-1, 1)	(2, 1)(5, 3)(18, 7)	<i>L13a2838</i>
<i>o9_06128</i>	(0, 1)	(3, 2)(3, 2)(11, 15)	<i>K13a1818</i>	<i>o9_06154</i>	(0, 1)	(2, 1)(3, 2)(19, 12)	<i>K12a83</i>
<i>o9_06248</i>	(-1, 1)	(2, 1)(2, 1)(21, 50)	<i>L13a1153</i>	<i>o9_06248</i>	(0, 1)	(3, 2)(5, 2)(13, 5)	<i>K13a788</i>
<i>o9_06301</i>	(-1, 1)	(2, 1)(3, 2)(21, 29)	<i>K13a332</i>	<i>o9_06301</i>	(0, 1)	(3, 2)(5, 3)(13, 5)	<i>L13a4461</i>
<i>o9_07790</i>	(-1, 1)	(2, 1)(6, 5)(7, 3)	<i>L13a2991</i>	<i>o9_07790</i>	(0, 1)	(2, 1)(5, 2)(11, 5)	<i>K13a653</i>
<i>o9_07943</i>	(0, 1)	(3, 1)(3, 1)(4, 15)	<i>K13a4569</i>	<i>o9_07943</i>	(1, 0)	(2, 1)(5, 4)(10, 3)	<i>L13a2937</i>
<i>o9_08006</i>	(-1, 1)	(2, 1)(7, 3)(9, 7)	<i>K13a1044</i>	<i>o9_08006</i>	(0, 1)	(2, 1)(5, 2)(16, 7)	<i>L13a2240</i>
<i>o9_08042</i>	(0, 1)	(3, 1)(4, 3)(4, 11)	<i>L13a3474</i>	<i>o9_08042</i>	(1, 0)	(2, 1)(5, 4)(11, 4)	<i>K13a3452</i>
<i>o9_08224</i>	(1, 1)	(3, 1)(3, 2)(5, 13)	<i>L12a1239</i>	<i>o9_08302</i>	(1, 1)	(3, 2)(4, 3)(5, 8)	<i>K12a219</i>
<i>o9_08477</i>	(0, 1)	(3, 1)(5, 1)(7, 3)	<i>K13a4871</i>	<i>o9_08477</i>	(1, 1)	(2, 1)(2, 1)(21, 4)	<i>L13a699</i>
<i>o9_08765</i>	(-1, 1)	(2, 1)(3, 1)(11, 19)	<i>K12a258</i>	<i>o9_08776</i>	(0, 1)	(3, 2)(4, 3)(11, 7)	<i>K13a1209</i>
<i>o9_08776</i>	(1, 0)	(2, 1)(2, 1)(25, 43)	<i>L13a1062</i>	<i>o9_08831</i>	(-1, 1)	(2, 1)(4, 3)(11, 8)	<i>L12a595</i>
<i>o9_08852</i>	(0, 1)	(3, 2)(4, 3)(13, 8)	<i>K13a1205</i>	<i>o9_08852</i>	(1, 0)	(2, 1)(2, 1)(29, 50)	<i>L13a996</i>
<i>o9_09465</i>	(-1, 1)	(3, 2)(5, 2)(5, 9)	<i>K13a1850</i>	<i>o9_09465</i>	(0, 1)	(2, 1)(5, 2)(14, 9)	<i>L13a2859</i>
<i>o9_09808</i>	(-1, 1)	(3, 2)(5, 2)(7, 12)	<i>L13a3286</i>	<i>o9_09808</i>	(0, 1)	(2, 1)(5, 2)(19, 12)	<i>K13a565</i>
<i>o9_10696</i>	(0, 1)	(3, 1)(4, 1)(6, 5)	<i>L13a4297</i>	<i>o9_11248</i>	(1, 0)	(2, 1)(7, 3)(10, 3)	<i>L13a2940</i>
<i>o9_11248</i>	(1, 1)	(2, 1)(7, 3)(9, 4)	<i>K13a3593</i>	<i>o9_11467</i>	(0, 1)	(3, 2)(4, 3)(12, 7)	<i>L13a3188</i>
<i>o9_11467</i>	(1, 0)	(2, 1)(7, 5)(7, 12)	<i>K13a809</i>	<i>o9_11560</i>	(0, 1)	(3, 2)(4, 3)(13, 8)	<i>K13a1205</i>
<i>o9_11560</i>	(1, 0)	(2, 1)(7, 5)(8, 13)	<i>L13a1896</i>	<i>o9_11570</i>	(0, 1)	(3, 1)(5, 2)(9, 4)	<i>K13a2804</i>
<i>o9_11570</i>	(1, 1)	(2, 1)(5, 4)(10, 3)	<i>L13a2937</i>	<i>o9_11685</i>	(1, 1)	(2, 1)(3, 1)(14, 11)	<i>L12a872</i>
<i>o9_11795</i>	(-1, 1)	(2, 1)(2, 1)(17, 14)	<i>L12a326</i>	<i>o9_11845</i>	(-1, 1)	(3, 1)(5, 3)(5, 4)	<i>L12a1323</i>
<i>o9_12144</i>	(0, 1)	(3, 1)(4, 3)(7, 10)	<i>K13a4563</i>	<i>o9_12144</i>	(1, 0)	(2, 1)(4, 3)(13, 10)	<i>L13a2083</i>
<i>o9_12230</i>	(0, 1)	(4, 3)(4, 3)(7, 4)	<i>L13a3468</i>	<i>o9_12230</i>	(1, 0)	(2, 1)(3, 1)(15, 26)	<i>K13a2857</i>
<i>o9_12412</i>	(1, 1)	(2, 1)(3, 2)(14, 11)	<i>L12a870</i>	<i>o9_12693</i>	(-1, 1)	(2, 1)(3, 1)(16, 5)	<i>L13a4353</i>
<i>o9_12693</i>	(0, 1)	(3, 1)(4, 1)(9, 4)	<i>K13a4273</i>	<i>o9_12736</i>	(0, 1)	(3, 1)(3, 2)(11, 9)	<i>L13a3633</i>
<i>o9_12736</i>	(1, 0)	(2, 1)(5, 4)(7, 9)	<i>K13a1390</i>	<i>o9_12892</i>	(-1, 1)	(3, 1)(3, 2)(7, 12)	<i>K12a524</i>
<i>o9_12919</i>	(-1, 1)	(4, 3)(4, 3)(5, 3)	<i>L12a962</i>	<i>o9_13056</i>	(0, 1)	(3, 2)(5, 4)(8, 3)	<i>K13a1432</i>
<i>o9_13056</i>	(1, 0)	(2, 1)(3, 1)(14, 25)	<i>L13a2954</i>	<i>o9_13182</i>	(-1, 1)	(2, 1)(4, 3)(9, 7)	<i>L12a492</i>
<i>o9_13400</i>	(-1, 1)	(3, 1)(5, 2)(5, 9)	<i>L13a4477</i>	<i>o9_13400</i>	(0, 1)	(2, 1)(7, 4)(9, 4)	<i>K13a3456</i>
<i>o9_13403</i>	(-1, 1)	(3, 2)(3, 2)(7, 12)	<i>L12a932</i>	<i>o9_13508</i>	(0, 1)	(4, 3)(4, 3)(5, 7)	<i>L13a3090</i>
<i>o9_13508</i>	(1, 0)	(2, 1)(7, 4)(9, 7)	<i>K13a1042</i>	<i>o9_13537</i>	(-1, 1)	(4, 3)(5, 3)(5, 3)	<i>K12a215</i>
<i>o9_13604</i>	(-1, 1)	(2, 1)(4, 3)(9, 11)	<i>L13a1604</i>	<i>o9_13604</i>	(0, 1)	(4, 1)(5, 3)(7, 3)	<i>K13a878</i>
<i>o9_13639</i>	(0, 1)	(2, 1)(3, 2)(17, 10)	<i>K12a145</i>	<i>o9_13649</i>	(1, 1)	(2, 1)(3, 2)(9, 16)	<i>K12a81</i>
<i>o9_13720</i>	(0, 1)	(3, 1)(3, 2)(19, 8)	<i>K13a2004</i>	<i>o9_14018</i>	(0, 1)	(4, 3)(5, 2)(5, 8)	<i>K13a759</i>
<i>o9_14018</i>	(1, 0)	(2, 1)(8, 5)(9, 7)	<i>L13a1624</i>	<i>o9_14079</i>	(-1, 1)	(3, 2)(4, 3)(7, 9)	<i>K13a937</i>
<i>o9_14079</i>	(0, 1)	(3, 1)(5, 2)(11, 7)	<i>L13a4350</i>	<i>o9_14136</i>	(0, 1)	(3, 1)(5, 2)(6, 5)	<i>K13a2317</i>
<i>o9_14136</i>	(1, 0)	(2, 1)(4, 1)(5, 14)	<i>L13a2143</i>	<i>o9_14376</i>	(0, 1)	(2, 1)(3, 1)(19, 27)	<i>K13a1572</i>
<i>o9_14599</i>	(-1, 1)	(4, 3)(5, 2)(5, 7)	<i>K13a1248</i>	<i>o9_14599</i>	(0, 1)	(2, 1)(7, 3)(12, 7)	<i>L13a2383</i>
<i>o9_14974</i>	(0, 1)	(3, 2)(5, 2)(9, 4)	<i>L13a3322</i>	<i>o9_15633</i>	(0, 1)	(2, 1)(5, 3)(18, 8)	<i>K12a17</i>

TABLE 6. Table 5 continued.

knot	slope	filled manifold	branching set	knot	slope	filled manifold	branching set
<i>o9_15997</i>	(0, 1)	(3, 2)(5, 2)(11, 7)	<i>K13a2033</i>	<i>o9_16065</i>	(0, 1)	(2, 1)(5, 2)(13, 21)	<i>K13a581</i>
<i>o9_16141</i>	(0, 1)	(2, 1)(5, 3)(12, 17)	<i>L13a2527</i>	<i>o9_16157</i>	(0, 1)	(3, 1)(5, 2)(8, 13)	<i>K13a1470</i>
<i>o9_16181</i>	(0, 1)	(2, 1)(5, 2)(12, 17)	<i>L13a2226</i>	<i>o9_16319</i>	(0, 1)	(4, 3)(5, 2)(8, 5)	<i>L13a3098</i>
<i>o9_16356</i>	(0, 1)	(4, 3)(5, 2)(7, 3)	<i>K13a1469</i>	<i>o9_16527</i>	(0, 1)	(3, 1)(5, 2)(7, 10)	<i>K13a3098</i>
<i>o9_16642</i>	(0, 1)	(3, 2)(5, 3)(12, 5)	<i>K13a769</i>	<i>o9_16748</i>	(0, 1)	(3, 1)(5, 3)(8, 5)	<i>K12a220</i>
<i>o9_16920</i>	(-1, 1)	(2, 1)(3, 2)(5, 13)	<i>K11a11</i>	<i>o9_17450</i>	(-1, 1)	(3, 2)(4, 3)(7, 5)	<i>K12a275</i>
<i>o9_18813</i>	(0, 1)	(2, 1)(3, 2)(13, 8)	<i>K11a32</i>	<i>o9_19130</i>	(0, 1)	(2, 1)(3, 2)(11, 7)	<i>K11a34</i>
<i>o9_20219</i>	(0, 1)	(2, 1)(2, 1)(29, 18)	<i>L12a331</i>	<i>o9_21918</i>	(0, 1)	(3, 1)(3, 2)(8, 3)	<i>K11a108</i>
<i>o9_22607</i>	(0, 1)	(2, 1)(4, 1)(13, 4)	<i>L13a1949</i>	<i>o9_22607</i>	(1, 1)	(3, 1)(3, 1)(11, 5)	<i>K13a4839</i>
<i>o9_22663</i>	(-1, 1)	(3, 2)(3, 2)(8, 5)	<i>K11a100</i>	<i>o9_22698</i>	(0, 1)	(2, 1)(2, 1)(13, 34)	<i>L12a367</i>
<i>o9_22925</i>	(0, 1)	(2, 1)(5, 2)(8, 5)	<i>L11a157</i>	<i>o9_23023</i>	(0, 1)	(2, 1)(3, 2)(13, 21)	<i>K12a99</i>
<i>o9_23263</i>	(0, 1)	(2, 1)(7, 3)(9, 4)	<i>K13a3593</i>	<i>o9_23660</i>	(0, 1)	(2, 1)(8, 3)(9, 4)	<i>L13a1894</i>
<i>o9_23955</i>	(0, 1)	(3, 1)(4, 3)(10, 3)	<i>L13a4275</i>	<i>o9_23961</i>	(1, 1)	(2, 1)(3, 1)(7, 24)	<i>K13a3136</i>
<i>o9_23977</i>	(0, 1)	(2, 1)(7, 3)(8, 5)	<i>L12a626</i>	<i>o9_24149</i>	(0, 1)	(3, 1)(3, 1)(10, 13)	<i>K13a4830</i>
<i>o9_24183</i>	(1, 0)	(2, 1)(2, 1)(31, 44)	<i>L13a1362</i>	<i>o9_24592</i>	(0, 1)	(2, 1)(3, 2)(11, 3)	<i>K11a33</i>
<i>o9_24886</i>	(-1, 1)	(3, 2)(7, 3)(8, 5)	<i>K13a1227</i>	<i>o9_24889</i>	(0, 1)	(2, 1)(7, 3)(7, 10)	<i>K13a3134</i>
<i>o9_27261</i>	(0, 1)	(2, 1)(2, 1)(29, 21)	<i>L12a188</i>	<i>o9_27392</i>	(0, 1)	(2, 1)(3, 2)(23, 7)	<i>K13a238</i>
<i>o9_27480</i>	(0, 1)	(2, 1)(5, 2)(13, 4)	<i>K13a578</i>	<i>o9_27737</i>	(1, 1)	(2, 1)(3, 1)(13, 16)	<i>K13a3111</i>
<i>o9_28113</i>	(1, 1)	(3, 2)(3, 2)(13, 3)	<i>K13a2882</i>	<i>o9_28153</i>	(0, 1)	(2, 1)(5, 3)(7, 12)	<i>K12a21</i>
<i>o9_28529</i>	(1, 0)	(2, 1)(5, 3)(16, 7)	<i>L13a2219</i>	<i>o9_28592</i>	(-1, 1)	(3, 2)(5, 2)(9, 4)	<i>L13a3322</i>
<i>o9_28746</i>	(0, 1)	(2, 1)(3, 2)(17, 12)	<i>K12a82</i>	<i>o9_28810</i>	(0, 1)	(3, 2)(5, 3)(7, 5)	<i>L12a1072</i>
<i>o9_29246</i>	(0, 1)	(2, 1)(2, 1)(27, 35)	<i>L13a710</i>	<i>o9_29436</i>	(1, 1)	(4, 3)(5, 3)(7, 3)	<i>K13a842</i>
<i>o9_30375</i>	(0, 1)	(2, 1)(5, 2)(8, 13)	<i>L12a516</i>	<i>o9_30790</i>	(1, 1)	(3, 2)(5, 2)(7, 10)	<i>L13a4191</i>
<i>o9_32257</i>	(0, 1)	(2, 1)(3, 1)(11, 7)	<i>K11a257</i>	<i>o9_35682</i>	(0, 1)	(2, 1)(2, 1)(19, 8)	<i>L11a89</i>
<i>o9_35772</i>	(0, 1)	(2, 1)(2, 1)(17, 10)	<i>L11a109</i>				

 TABLE 7. The integer alternating surgeries to Seifert fibered spaces with base $\mathbb{R}P^2$ and two exceptional fibers which are not lens spaces. The row with the title filled manifold shows the Seifert invariants in Regina's notation.

knot	slope	filled manifold	branching set	knot	slope	filled manifold	branching set
<i>s684</i>	(1, 1)	(2, 1)(7, -5)	<i>L9a3</i>	<i>v1709</i>	(-1, 1)	(2, 1)(11, -8)	<i>L10a4</i>
<i>v1980</i>	(-1, 1)	(3, 1)(4, -1)	<i>L9a9</i>	<i>t11852</i>	(0, 1)	(3, 1)(7, -4)	<i>L10a49</i>
<i>o9_07893</i>	(-1, 1)	(2, 1)(25, -18)	<i>L12a29</i>	<i>o9_07945</i>	(-1, 1)	(2, 1)(29, -21)	<i>L12a26</i>
<i>o9_14831</i>	(0, 1)	(4, 1)(5, -1)	<i>L11a51</i>	<i>o9_16920</i>	(0, 1)	(4, 1)(7, -2)	<i>L11a54</i>
<i>o9_19130</i>	(1, 1)	(3, 1)(10, -7)	<i>L11a102</i>	<i>o9_22663</i>	(0, 1)	(5, 2)(7, -5)	<i>L11a104</i>
<i>o9_29529</i>	(0, 1)	(2, 1)(19, -11)	<i>L11a3</i>	<i>o9_34403</i>	(0, 1)	(4, 1)(7, -4)	<i>L11a50</i>
<i>o9_37941</i>	(0, 1)	(3, 1)(10, -7)	<i>L11a102</i>				

 TABLE 8. Integer alternating surgeries to graph manifolds. All are obtained by gluing together two Seifert fibered spaces with base D^2 and with 2 exceptional fibers. The columns titled *filled manifold* gives Regina's notation for the graph manifold.

knot	slope	filled manifold	branching set
<i>m239</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(3, 1)
<i>s294</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(4, 1)
<i>s336</i>	(-2, 1)	(2, 1)(3, 1)	(3, 1)(3, 1)
<i>s665</i>	(1, 1)	(2, 1)(2, 1)	(2, 1)(3, 2)
<i>s800</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(3, 2)
<i>v0407</i>	(1, 1)	(2, 1)(2, 1)	(2, 1)(3, 1)
<i>v0434</i>	(-1, 1)	(2, 1)(2, 1)	(2, 1)(3, 2)
<i>v0707</i>	(-2, 1)	(2, 1)(3, 1)	(3, 1)(4, 1)
<i>v0759</i>	(-1, 1)	(2, 1)(2, 1)	(2, 1)(3, 1)
<i>v0939</i>	(-1, 1)	(2, 1)(3, 1)	(3, 2)(4, 1)
<i>v0945</i>	(1, 1)	(2, 1)(2, 1)	(2, 1)(3, 2)
<i>v1810</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(3, 2)
<i>v1832</i>	(1, 1)	(2, 1)(4, 1)	(2, 1)(5, 3)
<i>v1839</i>	(-1, 1)	(2, 1)(2, 1)	(3, 2)(3, 2)
<i>v1921</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(4, 3)
<i>v1986</i>	(-1, 1)	(2, 1)(2, 1)	(2, 1)(7, 2)
<i>v2215</i>	(1, 1)	(2, 1)(3, 1)	(2, 1)(7, 2)
<i>v2325</i>	(-1, 1)	(2, 1)(3, 2)	(3, 1)(3, 1)
<i>v2930</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(4, 1)

TABLE 9. Table 8 continued.

knot	slope	filled manifold			branching set
$v3354$	$(0, 1)$	$(2, 1)(2, 1)$	$(2, 1)(5, 2)$	$[1, 1] - 1, 0]$	$L11a39$
$t00826$	$(1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(5, 2)$	$[0, -1]1, 2]$	$L12a100$
$t00855$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(5, 3)$	$[0, -1]1, 2]$	$L12a97$
$t01318$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(10, 3)$	$[-1, 1]0, 1]$	$L11a257$
$t01368$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(11, 3)$	$[-1, 1]0, 1]$	$K11a81$
$t01422$	$(-2, 1)$	$(2, 1)(3, 1)$	$(3, 1)(5, 1)$	$[-1, 1]0, 1]$	$K11a323$
$t02099$	$(-2, 1)$	$(2, 1)(3, 1)$	$(4, 1)(4, 3)$	$[-1, 1]0, 1]$	$L11a255$
$t02104$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 1)(7, 2)$	$[-1, 1]0, 1]$	$L11a234$
$t02238$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(5, 2)$	$[2, 1] - 1, 0]$	$L12a240$
$t02398$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(5, 3)$	$[2, 1] - 1, 0]$	$L12a239$
$t02404$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 2)(7, 2)$	$[-1, 1]0, 1]$	$K11a150$
$t03979$	$(-1, 1)$	$(2, 1)(4, 1)$	$(2, 1)(7, 4)$	$[-1, 1]0, 1]$	$L11a144$
$t04180$	$(-1, 1)$	$(2, 1)(3, 2)$	$(2, 1)(4, 1)$	$[1, 1] - 1, 0]$	$L12a524$
$t04244$	$(1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(7, 5)$	$[0, -1]1, 1]$	$L12a93$
$t04382$	$(1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(11, 3)$	$[0, -1]1, 0]$	$L12a90$
$t04721$	$(1, 1)$	$(2, 1)(2, 1)$	$(3, 1)(4, 3)$	$[0, -1]1, 1]$	$L12a250$
$t05425$	$(1, 1)$	$(2, 1)(4, 1)$	$(3, 1)(5, 3)$	$[-1, 1]0, 1]$	$L11a212$
$t05538$	$(-1, 1)$	$(2, 1)(4, 1)$	$(2, 1)(7, 2)$	$[-1, 1]0, 1]$	$L11a148$
$t05564$	$(-1, 1)$	$(2, 1)(2, 1)$	$(3, 1)(7, 2)$	$[0, -1]1, 0]$	$L12a202$
$t05658$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(9, 7)$	$[-1, 1]0, 1]$	$K11a167$
$t05695$	$(-1, 1)$	$(2, 1)(3, 2)$	$(3, 1)(4, 1)$	$[0, -1]1, 0]$	$K12a93$
$t06001$	$(-1, 1)$	$(2, 1)(4, 1)$	$(2, 1)(5, 2)$	$[0, -1]1, 0]$	$L12a523$
$t06440$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(4, 3)$	$[1, 1] - 1, 0]$	$L12a497$
$t06463$	$(1, 1)$	$(2, 1)(3, 2)$	$(3, 2)(3, 2)$	$[0, -1]1, 1]$	$K12a79$
$t06525$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(11, 8)$	$[-1, 1]0, 1]$	$K11a80$
$t06570$	$(-1, 1)$	$(2, 1)(4, 3)$	$(3, 1)(3, 2)$	$[0, -1]1, 0]$	$L12a602$
$t06605$	$(1, 1)$	$(2, 1)(2, 1)$	$(3, 2)(3, 2)$	$[-1, -1]2, 1]$	$L12a342$
$t07348$	$(-1, 1)$	$(2, 1)(5, 2)$	$(3, 1)(3, 1)$	$[-1, 1]0, 1]$	$K10a12$
$t08111$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 1)(4, 3)$	$[-1, 1]0, 1]$	$K10a106$
$t08201$	$(1, 1)$	$(2, 1)(3, 1)$	$(3, 1)(5, 2)$	$[-1, 1]0, 1]$	$L10a84$
$t08267$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(11, 8)$	$[-1, 1]0, 1]$	$K11a80$
$t08403$	$(-1, 1)$	$(2, 1)(4, 1)$	$(2, 1)(7, 2)$	$[-1, 1]0, 1]$	$L11a148$
$t09016$	$(-1, 1)$	$(2, 1)(5, 2)$	$(2, 1)(7, 2)$	$[-1, 1]0, 1]$	$K11a52$
$t09267$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(4, 1)$	$[0, -1]1, 1]$	$L12a529$
$t09313$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(5, 2)$	$[0, -1]1, 1]$	$K12a129$
$t09455$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 2)(4, 1)$	$[0, -1]1, 0]$	$K12a355$
$t09704$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 2)(5, 3)$	$[0, -1]1, 0]$	$K12a271$
$t09852$	$(1, 1)$	$(2, 1)(3, 1)$	$(3, 1)(4, 3)$	$[-1, 1]0, 1]$	$K10a106$
$t09954$	$(-1, 1)$	$(2, 1)(4, 1)$	$(2, 1)(5, 3)$	$[-1, 1]0, 1]$	$L10a55$
$t09954$	$(0, 1)$	$(2, 1)(3, 1)$	$(2, 1)(7, 3)$	$[-1, 1]0, 1]$	$K10a87$
$t10188$	$(0, 1)$	$(2, 1)(3, 1)$	$(2, 1)(5, 2)$	$[-1, 1]0, 1]$	$K9a6$
$t10643$	$(0, 1)$	$(2, 1)(2, 1)$	$(3, 1)(5, 2)$	$[1, 1] - 1, 0]$	$L12a363$
$t10681$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 2)(5, 3)$	$[0, -1]1, 0]$	$K12a271$
$t10985$	$(0, 1)$	$(2, 1)(3, 2)$	$(2, 1)(5, 2)$	$[1, 1] - 1, 0]$	$K12a57$
$t12753$	$(0, 1)$	$(2, 1)(3, 1)$	$(3, 2)(5, 3)$	$[-1, 1]0, 1]$	$L10a85$
$o9.01584$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(7, 3)$	$[0, -1]1, 2]$	$L13a339$
$o9.01621$	$(1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(7, 4)$	$[0, -1]1, 2]$	$L13a337$
$o9.02655$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(17, 5)$	$[-1, 1]0, 1]$	$K12a527$
$o9.02696$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(18, 5)$	$[-1, 1]0, 1]$	$L12a920$
$o9.02786$	$(-2, 1)$	$(2, 1)(3, 1)$	$(3, 1)(6, 1)$	$[-1, 1]0, 1]$	$K12a1095$
$o9.03133$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(4, 1)$	$[0, -1]1, 2]$	$L13a1959$
$o9.03313$	$(1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(5, 2)$	$[0, -1]1, 2]$	$K13a587$
$o9.03802$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(4, 1)$	$[2, 1] - 1, 0]$	$L13a1665$
$o9.04106$	$(1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(3, 1)$	$[-1, -1]4, 3]$	$L13a380$
$o9.04205$	$(1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(3, 2)$	$[-1, -1]4, 3]$	$L13a365$
$o9.04245$	$(-1, 1)$	$(2, 1)(3, 2)$	$(2, 1)(4, 3)$	$[0, -1]1, 2]$	$L13a1869$
$o9.04269$	$(-2, 1)$	$(2, 1)(3, 1)$	$(4, 1)(5, 4)$	$[-1, 1]0, 1]$	$K12a1011$
$o9.04438$	$(-1, 1)$	$(2, 1)(3, 2)$	$(2, 1)(5, 3)$	$[0, -1]1, 2]$	$K13a60$
$o9.05021$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(7, 3)$	$[2, 1] - 1, 0]$	$L13a765$
$o9.05177$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(7, 4)$	$[2, 1] - 1, 0]$	$L13a763$
$o9.05229$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(3, 1)$	$[-3, -1]4, 1]$	$L13a841$
$o9.05357$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(5, 2)$	$[2, 1] - 1, 0]$	$K13a427$
$o9.05562$	$(-1, 1)$	$(2, 1)(3, 2)$	$(2, 1)(4, 3)$	$[2, 1] - 1, 0]$	$L13a1595$
$o9.05618$	$(-1, 1)$	$(2, 1)(2, 1)$	$(2, 1)(3, 2)$	$[-3, -1]4, 1]$	$L13a790$
$o9.05970$	$(-1, 1)$	$(2, 1)(3, 2)$	$(2, 1)(5, 3)$	$[2, 1] - 1, 0]$	$K13a18$
$o9.06060$	$(1, 1)$	$(2, 1)(3, 1)$	$(5, 2)(7, 2)$	$[-1, 1]0, 1]$	$K12a318$
$o9.06154$	$(1, 1)$	$(2, 1)(3, 1)$	$(5, 3)(7, 2)$	$[-1, 1]0, 1]$	$L12a835$
$o9.08647$	$(1, 1)$	$(2, 1)(2, 1)$	$(3, 2)(7, 4)$	$[0, -1]1, 1]$	$L13a947$
$o9.08771$	$(1, 1)$	$(2, 1)(2, 1)$	$(3, 2)(8, 5)$	$[0, -1]1, 1]$	$L13a574$
$o9.08828$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(10, 7)$	$[0, -1]1, 0]$	$L13a2834$
$o9.08875$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(11, 8)$	$[0, -1]1, 0]$	$K13a803$
$o9.09213$	$(1, 1)$	$(2, 1)(3, 2)$	$(2, 1)(5, 1)$	$[1, 1] - 1, 0]$	$K13a176$
$o9.11999$	$(1, 1)$	$(2, 1)(2, 1)$	$(4, 3)(5, 2)$	$[0, -1]1, 1]$	$L13a572$
$o9.12459$	$(-1, 1)$	$(2, 1)(5, 1)$	$(2, 1)(7, 5)$	$[-1, 1]0, 1]$	$K12a440$
$o9.12519$	$(-1, 1)$	$(2, 1)(5, 1)$	$(2, 1)(7, 2)$	$[-1, 1]0, 1]$	$K12a365$
$o9.12757$	$(-1, 1)$	$(2, 1)(3, 2)$	$(3, 1)(5, 1)$	$[0, -1]1, 0]$	$L13a4367$
$o9.12873$	$(-1, 1)$	$(2, 1)(3, 1)$	$(3, 2)(5, 3)$	$[0, -1]1, 1]$	$L13a3024$
$o9.12971$	$(-1, 1)$	$(2, 1)(4, 1)$	$(4, 1)(5, 3)$	$[-1, 1]0, 1]$	$L12a558$
$o9.13052$	$(-1, 1)$	$(2, 1)(3, 1)$	$(2, 1)(9, 2)$	$[0, -1]1, 0]$	$K13a1413$

TABLE 10. Table 9 continued.

knot	slope	filled manifold			branching set
<i>o9_13125</i>	(1, 1)	(2, 1)(3, 1)	(2, 1)(14, 11)	$[-1, 1 0, 1]$	<i>L12a841</i>
<i>o9_13188</i>	(-1, 1)	(2, 1)(2, 1)	(4, 1)(7, 2)	$[0, -1 1, 0]$	<i>L13a674</i>
<i>o9_13433</i>	(1, 1)	(2, 1)(3, 1)	(2, 1)(18, 5)	$[-1, 1 0, 1]$	<i>L12a920</i>
<i>o9_13639</i>	(1, 1)	(2, 1)(4, 1)	(3, 2)(7, 4)	$[-1, 1 0, 1]$	<i>L12a689</i>
<i>o9_13666</i>	(1, 1)	(2, 1)(4, 1)	(2, 1)(7, 3)	$[0, -1 1, 0]$	<i>L13a1663</i>
<i>o9_13720</i>	(1, 1)	(2, 1)(2, 1)	(2, 1)(11, 3)	$[0, -1 1, 1]$	<i>L13a318</i>
<i>o9_13952</i>	(1, 1)	(2, 1)(7, 5)	(3, 1)(3, 1)	$[0, -1 1, 0]$	<i>L13a3554</i>
<i>o9_14364</i>	(-1, 1)	(2, 1)(2, 1)	(2, 1)(5, 4)	$[1, 1 0, -1]$	<i>L12a62</i>
<i>o9_14376</i>	(1, 1)	(2, 1)(2, 1)	(3, 2)(11, 3)	$[0, -1 1, 0]$	<i>L13a1116</i>
<i>o9_14495</i>	(-1, 1)	(2, 1)(2, 1)	(2, 1)(3, 2)	$[-1, -1 2, 3]$	<i>L12a66</i>
<i>o9_14716</i>	(-1, 1)	(2, 1)(3, 1)	(3, 1)(4, 3)	$[0, -1 1, 1]$	<i>K13a3243</i>
<i>o9_14974</i>	(1, 1)	(2, 1)(3, 1)	(2, 1)(5, 4)	$[1, 1 -1, 0]$	<i>K13a1545</i>
<i>o9_15506</i>	(1, 1)	(2, 1)(2, 1)	(2, 1)(3, 2)	$[-2, -1 3, 2]$	<i>L12a176</i>
<i>o9_15633</i>	(1, 1)	(2, 1)(3, 1)	(2, 1)(18, 13)	$[-1, 1 0, 1]$	<i>L12a921</i>
<i>o9_15997</i>	(-1, 1)	(2, 1)(2, 1)	(3, 2)(4, 3)	$[-1, -1 2, 1]$	<i>L13a707</i>
<i>o9_16065</i>	(-1, 1)	(2, 1)(3, 2)	(3, 2)(5, 3)	$[0, -1 1, 1]$	<i>L13a2968</i>
<i>o9_16141</i>	(-1, 1)	(2, 1)(3, 2)	(2, 1)(7, 5)	$[0, -1 1, 1]$	<i>K13a148</i>
<i>o9_16157</i>	(-1, 1)	(2, 1)(4, 3)	(3, 2)(3, 2)	$[0, -1 1, 1]$	<i>L13a1842</i>
<i>o9_16181</i>	(1, 1)	(2, 1)(7, 5)	(3, 1)(3, 2)	$[0, -1 1, 0]$	<i>K13a811</i>
<i>o9_16319</i>	(-1, 1)	(2, 1)(3, 1)	(3, 2)(3, 2)	$[-1, -1 2, 1]$	<i>K13a719</i>
<i>o9_16356</i>	(1, 1)	(2, 1)(4, 3)	(3, 1)(3, 1)	$[0, -1 1, 1]$	<i>L13a2089</i>
<i>o9_16527</i>	(1, 1)	(2, 1)(4, 3)	(3, 1)(4, 3)	$[0, -1 1, 0]$	<i>L13a1858</i>
<i>o9_16642</i>	(-1, 1)	(2, 1)(2, 1)	(2, 1)(7, 5)	$[-1, -1 2, 1]$	<i>L13a354</i>
<i>o9_16748</i>	(-1, 1)	(2, 1)(4, 1)	(2, 1)(11, 8)	$[-1, 1 0, 1]$	<i>L12a473</i>
<i>o9_18007</i>	(-1, 1)	(2, 1)(9, 2)	(3, 1)(3, 2)	$[-1, 1 0, 1]$	<i>L12a536</i>
<i>o9_18209</i>	(1, 1)	(2, 1)(5, 2)	(3, 1)(4, 1)	$[0, -1 1, 0]$	<i>K13a575</i>
<i>o9_18633</i>	(-1, 1)	(2, 1)(2, 1)	(3, 2)(4, 3)	$[1, 1 0, -1]$	<i>L12a184</i>
<i>o9_18813</i>	(1, 1)	(2, 1)(8, 3)	(3, 1)(3, 1)	$[-1, 1 0, 1]$	<i>L11a198</i>
<i>o9_20219</i>	(-1, 1)	(2, 1)(3, 1)	(2, 1)(15, 11)	$[-1, 1 0, 1]$	<i>K12a849</i>
<i>o9_21893</i>	(-1, 1)	(2, 1)(3, 1)	(3, 1)(5, 4)	$[-1, 1 0, 1]$	<i>L11a282</i>
<i>o9_21918</i>	(-1, 1)	(2, 1)(4, 1)	(3, 1)(4, 3)	$[-1, 1 0, 1]$	<i>L11a173</i>
<i>o9_22129</i>	(-1, 1)	(2, 1)(4, 1)	(2, 1)(5, 1)	$[0, -1 1, 0]$	<i>L13a1662</i>
<i>o9_22477</i>	(-1, 1)	(2, 1)(3, 1)	(4, 1)(4, 3)	$[-1, 1 0, 1]$	<i>L11a255</i>
<i>o9_22698</i>	(1, 1)	(2, 1)(7, 2)	(2, 1)(7, 2)	$[-1, 1 0, 1]$	<i>K12a353</i>
<i>o9_22925</i>	(-1, 1)	(3, 1)(3, 1)	(3, 1)(5, 2)	$[-1, 1 0, 1]$	<i>K11a232</i>
<i>o9_23023</i>	(1, 1)	(2, 1)(7, 2)	(2, 1)(8, 3)	$[-1, 1 0, 1]$	<i>L12a456</i>
<i>o9_23263</i>	(1, 1)	(2, 1)(3, 1)	(3, 1)(3, 1)	$[0, -1 1, 2]$	<i>L13a4177</i>
<i>o9_23660</i>	(1, 1)	(2, 1)(3, 1)	(3, 1)(3, 2)	$[0, -1 1, 2]$	<i>K13a1744</i>
<i>o9_23955</i>	(-1, 1)	(2, 1)(3, 1)	(3, 1)(4, 1)	$[0, -1 1, 1]$	<i>K13a3269</i>
<i>o9_23961</i>	(0, 1)	(2, 1)(4, 1)	(2, 1)(7, 2)	$[0, -1 1, 0]$	<i>L13a1655</i>
<i>o9_24149</i>	(-1, 1)	(2, 1)(3, 1)	(4, 1)(4, 3)	$[0, -1 1, 0]$	<i>L13a3083</i>
<i>o9_24183</i>	(1, 1)	(2, 1)(3, 1)	(3, 2)(8, 5)	$[0, -1 1, 0]$	<i>K13a888</i>
<i>o9_24534</i>	(-1, 1)	(2, 1)(5, 1)	(3, 1)(3, 1)	$[0, -1 1, 0]$	<i>L13a3661</i>
<i>o9_24592</i>	(-1, 1)	(2, 1)(3, 1)	(4, 1)(4, 3)	$[-1, 1 0, 1]$	<i>L11a255</i>
<i>o9_24886</i>	(0, 1)	(2, 1)(2, 1)	(2, 1)(13, 5)	$[1, 1 -1, 0]$	<i>L13a353</i>
<i>o9_24889</i>	(1, 1)	(2, 1)(3, 2)	(2, 1)(10, 3)	$[0, -1 1, 0]$	<i>L13a2793</i>
<i>o9_25595</i>	(-1, 1)	(2, 1)(4, 1)	(3, 1)(4, 1)	$[0, -1 1, 0]$	<i>L13a1946</i>
<i>o9_26604</i>	(0, 1)	(2, 1)(3, 1)	(2, 1)(12, 5)	$[-1, 1 0, 1]$	<i>L11a182</i>
<i>o9_26604</i>	(1, 1)	(2, 1)(5, 2)	(2, 1)(7, 5)	$[-1, 1 0, 1]$	<i>K11a27</i>
<i>o9_27392</i>	(-1, 1)	(2, 1)(5, 2)	(3, 1)(3, 1)	$[1, 1 -1, 0]$	<i>L13a3545</i>
<i>o9_27480</i>	(1, 1)	(2, 1)(3, 1)	(3, 1)(3, 1)	$[2, 1 -1, 0]$	<i>L13a3645</i>
<i>o9_27737</i>	(0, 1)	(2, 1)(4, 1)	(3, 2)(4, 1)	$[0, -1 1, 0]$	<i>L13a1963</i>
<i>o9_28113</i>	(0, 1)	(2, 1)(2, 1)	(4, 1)(5, 2)	$[1, 1 -1, 0]$	<i>L13a803</i>
<i>o9_28529</i>	(-1, 1)	(2, 1)(3, 1)	(3, 2)(5, 2)	$[0, -1 1, 1]$	<i>K13a780</i>
<i>o9_28592</i>	(0, 1)	(2, 1)(3, 1)	(2, 1)(7, 2)	$[1, 1 -1, 0]$	<i>K13a1156</i>
<i>o9_29246</i>	(-1, 1)	(3, 1)(3, 1)	(3, 2)(5, 3)	$[0, -1 1, 0]$	<i>K13a1903</i>
<i>o9_29436</i>	(0, 1)	(2, 1)(3, 1)	(2, 1)(8, 3)	$[1, 1 -1, 0]$	<i>L13a1612</i>
<i>o9_29529</i>	(1, 1)	(2, 1)(3, 1)	(2, 1)(13, 5)	$[-1, 1 0, 1]$	<i>K11a72</i>
<i>o9_30721</i>	(0, 1)	(2, 1)(2, 1)	(3, 2)(5, 3)	$[0, -1 1, 0]$	<i>L11a69</i>
<i>o9_30721</i>	(1, 1)	(3, 1)(3, 2)	(3, 1)(5, 2)	$[-1, 1 0, 1]$	<i>K11a157</i>
<i>o9_30790</i>	(0, 1)	(2, 1)(5, 3)	(2, 1)(7, 2)	$[0, -1 1, 0]$	<i>K13a9</i>
<i>o9_31165</i>	(0, 1)	(2, 1)(4, 1)	(2, 1)(5, 2)	$[1, 1 -1, 0]$	<i>L13a1668</i>
<i>o9_31165</i>	(1, 1)	(2, 1)(3, 1)	(3, 1)(3, 2)	$[2, 1 -1, 0]$	<i>K13a912</i>
<i>o9_33526</i>	(0, 1)	(2, 1)(5, 2)	(3, 1)(3, 2)	$[-1, 1 0, 1]$	<i>L10a69</i>
<i>o9_33585</i>	(-1, 1)	(2, 1)(3, 1)	(4, 3)(5, 2)	$[-1, 1 0, 1]$	<i>K11a130</i>
<i>o9_33585</i>	(0, 1)	(2, 1)(2, 1)	(2, 1)(5, 3)	$[0, -1 1, 1]$	<i>L11a30</i>
<i>o9_35320</i>	(-1, 1)	(2, 1)(4, 1)	(2, 1)(7, 5)	$[-1, 1 0, 1]$	<i>L11a149</i>
<i>o9_35549</i>	(0, 1)	(2, 1)(3, 2)	(2, 1)(5, 2)	$[-1, -1 2, 1]$	<i>K13a164</i>
<i>o9_35549</i>	(1, 1)	(3, 1)(3, 2)	(3, 2)(5, 3)	$[0, -1 1, 0]$	<i>L13a4597</i>
<i>o9_35736</i>	(0, 1)	(2, 1)(3, 2)	(3, 2)(5, 2)	$[1, 1 -1, 0]$	<i>L13a2540</i>
<i>o9_35736</i>	(1, 1)	(2, 1)(3, 1)	(3, 2)(5, 3)	$[1, 1 -1, 0]$	<i>K13a914</i>
<i>o9_39394</i>	(0, 1)	(2, 1)(3, 2)	(3, 2)(3, 2)	$[0, -1 1, 0]$	<i>L11a220</i>
<i>o9_40179</i>	(0, 1)	(2, 1)(3, 1)	(3, 2)(7, 4)	$[-1, 1 0, 1]$	<i>K11a298</i>

TABLE 11. The complete list of half-integral hyperbolic alternating surgeries along census knots.

knot	slope	branching set	knot	slope	branching set	knot	slope	branching set
<i>m</i> 082	(1, 2)	<i>K</i> 9a32	<i>m</i> 144	(−1, 2)	<i>K</i> 10a97	<i>m</i> 194	(1, 2)	<i>K</i> 10a97
<i>m</i> 198	(1, 2)	<i>K</i> 10a118	<i>m</i> 239	(−1, 2)	<i>K</i> 9a28	<i>m</i> 281	(1, 2)	<i>K</i> 10a66
<i>s</i> 086	(−1, 2)	<i>K</i> 11a345	<i>s</i> 294	(−1, 2)	<i>K</i> 10a77	<i>s</i> 301	(1, 2)	<i>K</i> 11a146
<i>s</i> 308	(−1, 2)	<i>K</i> 11a122	<i>s</i> 336	(−3, 2)	<i>K</i> 10a85	<i>s</i> 346	(1, 2)	<i>K</i> 11a160
<i>s</i> 367	(1, 2)	<i>K</i> 11a168	<i>s</i> 407	(−1, 2)	<i>K</i> 11a189	<i>s</i> 582	(−1, 2)	<i>K</i> 11a280
<i>s</i> 665	(1, 2)	<i>K</i> 11a114	<i>s</i> 684	(1, 2)	<i>K</i> 10a36	<i>s</i> 800	(−1, 2)	<i>K</i> 11a209
<i>v</i> 0165	(1, 2)	<i>K</i> 12a1063	<i>v</i> 0330	(1, 2)	<i>K</i> 12a1176	<i>v</i> 0398	(1, 2)	<i>K</i> 12a799
<i>v</i> 0407	(1, 2)	<i>K</i> 12a1060	<i>v</i> 0434	(−1, 2)	<i>K</i> 12a635	<i>v</i> 0554	(1, 2)	<i>K</i> 12a1235
<i>v</i> 0570	(1, 2)	<i>K</i> 12a1245	<i>v</i> 0573	(−1, 2)	<i>K</i> 12a1239	<i>v</i> 0707	(−3, 2)	<i>K</i> 11a256
<i>v</i> 0740	(1, 2)	<i>K</i> 12a781	<i>v</i> 0759	(−1, 2)	<i>K</i> 12a646	<i>v</i> 0765	(−1, 2)	<i>K</i> 12a751
<i>v</i> 0939	(−1, 2)	<i>K</i> 11a255	<i>v</i> 0945	(1, 2)	<i>K</i> 12a614	<i>v</i> 1077	(1, 2)	<i>K</i> 12a287
<i>v</i> 1109	(−1, 2)	<i>K</i> 12a470	<i>v</i> 1392	(−3, 2)	<i>K</i> 11a282	<i>v</i> 1547	(−3, 2)	<i>K</i> 11a290
<i>v</i> 1620	(1, 2)	<i>K</i> 12a1169	<i>v</i> 1690	(−3, 2)	<i>K</i> 11a101	<i>v</i> 1709	(−1, 2)	<i>K</i> 11a773
<i>v</i> 1716	(3, 2)	<i>K</i> 11a300	<i>v</i> 1718	(−1, 2)	<i>K</i> 12a1182	<i>v</i> 1728	(3, 2)	<i>K</i> 11a272
<i>v</i> 1810	(−1, 2)	<i>K</i> 12a308	<i>v</i> 1832	(1, 2)	<i>K</i> 11a136	<i>v</i> 1839	(−1, 2)	<i>K</i> 12a261
<i>v</i> 1921	(−1, 2)	<i>K</i> 12a1048	<i>v</i> 1980	(−1, 2)	<i>K</i> 10a88	<i>v</i> 1986	(−1, 2)	<i>K</i> 12a770
<i>v</i> 2024	(1, 2)	<i>K</i> 12a766	<i>v</i> 2090	(−1, 2)	<i>K</i> 12a310	<i>v</i> 2215	(1, 2)	<i>K</i> 11a138
<i>v</i> 2325	(−1, 2)	<i>K</i> 12a608	<i>v</i> 2759	(1, 2)	<i>K</i> 12a1169	<i>v</i> 2930	(−1, 2)	<i>K</i> 12a1258
<i>v</i> 3354	(1, 2)	<i>K</i> 12a604	<i>t</i> 00324	(−1, 2)	<i>K</i> 13a4578	<i>t</i> 00729	(−1, 2)	<i>K</i> 13a3026
<i>t</i> 00787	(1, 2)	<i>K</i> 13a2738	<i>t</i> 00826	(1, 2)	<i>K</i> 13a2435	<i>t</i> 00855	(−1, 2)	<i>K</i> 13a1915
<i>t</i> 01033	(1, 2)	<i>K</i> 13a4277	<i>t</i> 01037	(−1, 2)	<i>K</i> 13a4271	<i>t</i> 01125	(1, 2)	<i>K</i> 13a3911
<i>t</i> 01268	(1, 2)	<i>K</i> 13a1896	<i>t</i> 01318	(1, 2)	<i>K</i> 12a807	<i>t</i> 01368	(1, 2)	<i>K</i> 12a358
<i>t</i> 01422	(−3, 2)	<i>K</i> 12a858	<i>t</i> 01440	(1, 2)	<i>K</i> 13a2587	<i>t</i> 01636	(1, 2)	<i>K</i> 13a3939
<i>t</i> 01690	(1, 2)	<i>K</i> 13a2743	<i>t</i> 01757	(−1, 2)	<i>K</i> 13a2915	<i>t</i> 01834	(−1, 2)	<i>K</i> 13a2739
<i>t</i> 01863	(1, 2)	<i>K</i> 13a3748	<i>t</i> 02099	(−3, 2)	<i>K</i> 12a821	<i>t</i> 02104	(−1, 2)	<i>K</i> 12a670
<i>t</i> 02238	(−1, 2)	<i>K</i> 13a2380	<i>t</i> 02378	(−1, 2)	<i>K</i> 13a1806	<i>t</i> 02398	(−1, 2)	<i>K</i> 13a1983
<i>t</i> 02404	(−1, 2)	<i>K</i> 12a415	<i>t</i> 02470	(1, 2)	<i>K</i> 13a2082	<i>t</i> 02537	(−1, 2)	<i>K</i> 13a2460
<i>t</i> 02567	(−1, 2)	<i>K</i> 13a2737	<i>t</i> 02639	(1, 2)	<i>K</i> 13a794	<i>t</i> 03607	(1, 2)	<i>K</i> 13a1605
<i>t</i> 03713	(−3, 2)	<i>K</i> 12a360	<i>t</i> 03781	(1, 2)	<i>K</i> 13a3991	<i>t</i> 03864	(3, 2)	<i>K</i> 12a202
<i>t</i> 03956	(−3, 2)	<i>K</i> 12a919	<i>t</i> 03979	(−1, 2)	<i>K</i> 12a865	<i>t</i> 04003	(−3, 2)	<i>K</i> 12a455
<i>t</i> 04019	(−1, 2)	<i>K</i> 13a4402	<i>t</i> 04102	(3, 2)	<i>K</i> 12a407	<i>t</i> 04180	(−1, 2)	<i>K</i> 13a2187
<i>t</i> 04244	(2, 1)	<i>K</i> 13a1016	<i>t</i> 04382	(1, 2)	<i>K</i> 13a2731	<i>t</i> 04721	(2, 1)	<i>K</i> 13a4582
<i>t</i> 05118	(−1, 2)	<i>K</i> 13a1626	<i>t</i> 05390	(−3, 2)	<i>K</i> 12a1268	<i>t</i> 05425	(1, 2)	<i>K</i> 12a656
<i>t</i> 05538	(−1, 2)	<i>K</i> 12a559	<i>t</i> 05564	(−1, 2)	<i>K</i> 13a2522	<i>t</i> 05658	(2, 1)	<i>K</i> 12a631
<i>t</i> 05674	(−1, 2)	<i>K</i> 13a1655	<i>t</i> 05695	(−1, 2)	<i>K</i> 13a2869	<i>t</i> 06001	(−2, 1)	<i>K</i> 13a2963
<i>t</i> 06440	(−1, 2)	<i>K</i> 13a2202	<i>t</i> 06463	(1, 2)	<i>K</i> 13a1008	<i>t</i> 06525	(1, 2)	<i>K</i> 12a695
<i>t</i> 06570	(−1, 2)	<i>K</i> 13a2495	<i>t</i> 06605	(1, 2)	<i>K</i> 13a885	<i>t</i> 07348	(−1, 2)	<i>K</i> 11a233
<i>t</i> 08111	(−1, 2)	<i>K</i> 11a283	<i>t</i> 08201	(1, 2)	<i>K</i> 11a233	<i>t</i> 08267	(1, 2)	<i>K</i> 12a209
<i>t</i> 08403	(−1, 2)	<i>K</i> 12a346	<i>t</i> 09016	(−1, 2)	<i>K</i> 12a426	<i>t</i> 09267	(1, 2)	<i>K</i> 13a1011
<i>t</i> 09313	(1, 2)	<i>K</i> 13a1035	<i>t</i> 09455	(−1, 2)	<i>K</i> 13a1649	<i>t</i> 09580	(−1, 2)	<i>K</i> 12a637
<i>t</i> 09704	(−1, 2)	<i>K</i> 13a1282	<i>t</i> 09852	(1, 2)	<i>K</i> 11a289	<i>t</i> 09954	(−1, 2)	<i>K</i> 11a351
<i>t</i> 10230	(1, 2)	<i>K</i> 11a289	<i>t</i> 10462	(−1, 2)	<i>K</i> 12a588	<i>t</i> 10643	(1, 2)	<i>K</i> 13a1714
<i>t</i> 10681	(−1, 2)	<i>K</i> 13a1574	<i>t</i> 10985	(−1, 2)	<i>K</i> 13a1963	<i>t</i> 11852	(1, 2)	<i>K</i> 11a326
<i>o</i> 9_00644	(−1, 2)	<i>K</i> 14a16783	<i>o</i> 9_01436	(1, 2)	<i>K</i> 14a17856	<i>o</i> 9_01496	(−1, 2)	<i>K</i> 14a15197
<i>o</i> 9_01584	(−1, 2)	<i>K</i> 14a16756	<i>o</i> 9_01621	(1, 2)	<i>K</i> 14a16609	<i>o</i> 9_01953	(1, 2)	<i>K</i> 14a18519
<i>o</i> 9_01955	(1, 2)	<i>K</i> 14a18499	<i>o</i> 9_02255	(1, 2)	<i>K</i> 14a7592	<i>o</i> 9_02350	(1, 2)	<i>K</i> 14a7103
<i>o</i> 9_02655	(−1, 2)	<i>K</i> 13a1443	<i>o</i> 9_02696	(−1, 2)	<i>K</i> 13a761	<i>o</i> 9_02772	(−1, 2)	<i>K</i> 14a18477
<i>o</i> 9_02786	(−3, 2)	<i>K</i> 13a3307	<i>o</i> 9_02794	(1, 2)	<i>K</i> 14a12509	<i>o</i> 9_03032	(−1, 2)	<i>K</i> 14a11620
<i>o</i> 9_03108	(−1, 2)	<i>K</i> 14a19430	<i>o</i> 9_03133	(1, 2)	<i>K</i> 14a16622	<i>o</i> 9_03162	(1, 2)	<i>K</i> 14a10625
<i>o</i> 9_03188	(1, 2)	<i>K</i> 14a10099	<i>o</i> 9_03313	(1, 2)	<i>K</i> 14a10266	<i>o</i> 9_03586	(−1, 2)	<i>K</i> 14a19105
<i>o</i> 9_03622	(−1, 2)	<i>K</i> 14a17463	<i>o</i> 9_03802	(−1, 2)	<i>K</i> 14a19111	<i>o</i> 9_03833	(−1, 2)	<i>K</i> 14a10696
<i>o</i> 9_04106	(1, 2)	<i>K</i> 14a12339	<i>o</i> 9_04205	(1, 2)	<i>K</i> 14a7694	<i>o</i> 9_04245	(−1, 2)	<i>K</i> 14a10812
<i>o</i> 9_04269	(−3, 2)	<i>K</i> 13a3201	<i>o</i> 9_04438	(−1, 2)	<i>K</i> 14a8243	<i>o</i> 9_05021	(−1, 2)	<i>K</i> 14a11003
<i>o</i> 9_05177	(−1, 2)	<i>K</i> 14a11048	<i>o</i> 9_05229	(−1, 2)	<i>K</i> 14a12627	<i>o</i> 9_05357	(−1, 2)	<i>K</i> 14a11003
<i>o</i> 9_05426	(−1, 2)	<i>K</i> 14a10190	<i>o</i> 9_05483	(−1, 2)	<i>K</i> 14a9562	<i>o</i> 9_05562	(−1, 2)	<i>K</i> 14a10897
<i>o</i> 9_05618	(−1, 2)	<i>K</i> 14a9163	<i>o</i> 9_05860	(−1, 2)	<i>K</i> 14a8262	<i>o</i> 9_05970	(−1, 2)	<i>K</i> 14a6783
<i>o</i> 9_06060	(1, 2)	<i>K</i> 13a1328	<i>o</i> 9_06128	(−1, 2)	<i>K</i> 14a7129	<i>o</i> 9_06154	(1, 2)	<i>K</i> 13a1509
<i>o</i> 9_06248	(−1, 2)	<i>K</i> 14a2949	<i>o</i> 9_06301	(−1, 2)	<i>K</i> 14a6547	<i>o</i> 9_07790	(−1, 2)	<i>K</i> 14a17873
<i>o</i> 9_07893	(−1, 2)	<i>K</i> 13a3150	<i>o</i> 9_07945	(−1, 2)	<i>K</i> 13a1843	<i>o</i> 9_08006	(−1, 2)	<i>K</i> 14a11327
<i>o</i> 9_08224	(3, 2)	<i>K</i> 13a3634	<i>o</i> 9_08302	(3, 2)	<i>K</i> 13a3547	<i>o</i> 9_08477	(1, 2)	<i>K</i> 14a17811
<i>o</i> 9_08647	(2, 1)	<i>K</i> 14a8937	<i>o</i> 9_08765	(−3, 2)	<i>K</i> 13a3671	<i>o</i> 9_08771	(2, 1)	<i>K</i> 14a6761
<i>o</i> 9_08828	(−1, 2)	<i>K</i> 14a16699	<i>o</i> 9_08831	(−3, 2)	<i>K</i> 13a3803	<i>o</i> 9_08875	(−1, 2)	<i>K</i> 14a11069
<i>o</i> 9_09213	(1, 2)	<i>K</i> 14a7691	<i>o</i> 9_09465	(−1, 2)	<i>K</i> 14a7568	<i>o</i> 9_09808	(−1, 2)	<i>K</i> 14a10354
<i>o</i> 9_11248	(2, 1)	<i>K</i> 14a17871	<i>o</i> 9_11570	(1, 2)	<i>K</i> 14a16575	<i>o</i> 9_11685	(3, 2)	<i>K</i> 13a4143
<i>o</i> 9_11795	(−3, 2)	<i>K</i> 13a4228	<i>o</i> 9_11845	(−3, 2)	<i>K</i> 13a3487	<i>o</i> 9_11999	(2, 1)	<i>K</i> 14a11475
<i>o</i> 9_12412	(3, 2)	<i>K</i> 13a2257	<i>o</i> 9_12459	(−2, 1)	<i>K</i> 13a2345	<i>o</i> 9_12519	(−1, 2)	<i>K</i> 13a2254
<i>o</i> 9_12693	(−1, 2)	<i>K</i> 14a19195	<i>o</i> 9_12757	(−1, 2)	<i>K</i> 14a10775	<i>o</i> 9_12873	(−1, 2)	<i>K</i> 14a5793
<i>o</i> 9_12892	(−3, 2)	<i>K</i> 13a4426	<i>o</i> 9_12919	(−3, 2)	<i>K</i> 13a3486	<i>o</i> 9_12971	(−1, 2)	<i>K</i> 13a2347
<i>o</i> 9_13052	(−2, 1)	<i>K</i> 14a12642	<i>o</i> 9_13125	(2, 1)	<i>K</i> 13a1834	<i>o</i> 9_13182	(−3, 2)	<i>K</i> 13a4754
<i>o</i> 9_13188	(−1, 2)	<i>K</i> 14a12639	<i>o</i> 9_13400	(−1, 2)	<i>K</i> 14a17456	<i>o</i> 9_13403	(−3, 2)	<i>K</i> 13a2904
<i>o</i> 9_13433	(1, 2)	<i>K</i> 13a1734	<i>o</i> 9_13537	(−3, 2)	<i>K</i> 13a1664	<i>o</i> 9_13604	(−1, 2)	<i>K</i> 14a12420
<i>o</i> 9_13639	(1, 2)	<i>K</i> 13a4371	<i>o</i> 9_13649	(3, 2)	<i>K</i> 13a2011	<i>o</i> 9_13666	(2, 1)	<i>K</i> 14a19167
<i>o</i> 9_13720	(1, 2)	<i>K</i> 14a7490	<i>o</i> 9_13952	(1, 2)	<i>K</i> 14a10121	<i>o</i> 9_14079	(−1, 2)	<i>K</i> 14a4414

TABLE 12. Table 11 continued.

knot	slope	branching set	knot	slope	branching set	knot	slope	branching set
$o9_14364$	$(-3, 2)$	$K13a3952$	$o9_14376$	$(1, 2)$	$K14a6097$	$o9_14495$	$(-3, 2)$	$K13a2218$
$o9_14599$	$(-1, 2)$	$K14a12304$	$o9_14716$	$(-1, 2)$	$K14a18651$	$o9_14831$	$(-1, 2)$	$K12a864$
$o9_14974$	$(1, 2)$	$K14a11401$	$o9_15506$	$(3, 2)$	$K13a1178$	$o9_15633$	$(1, 2)$	$K13a2658$
$o9_15997$	$(-1, 2)$	$K14a10710$	$o9_16065$	$(-1, 2)$	$K14a7006$	$o9_16141$	$(-1, 2)$	$K14a5782$
$o9_16157$	$(-1, 2)$	$K14a5900$	$o9_16181$	$(1, 2)$	$K14a8736$	$o9_16319$	$(-1, 2)$	$K14a4566$
$o9_16356$	$(1, 2)$	$K14a18894$	$o9_16527$	$(1, 2)$	$K14a18817$	$o9_16642$	$(-1, 2)$	$K14a3526$
$o9_16748$	$(-1, 2)$	$K13a1775$	$o9_16920$	$(-1, 2)$	$K12a631$	$o9_17450$	$(-3, 2)$	$K13a2563$
$o9_18007$	$(-1, 2)$	$K13a2363$	$o9_18209$	$(1, 2)$	$K14a10774$	$o9_18633$	$(-3, 2)$	$K13a3082$
$o9_18813$	$(1, 2)$	$K12a696$	$o9_19130$	$(1, 2)$	$K12a857$	$o9_20219$	$(-1, 2)$	$K13a3718$
$o9_21893$	$(-2, 1)$	$K12a1199$	$o9_21918$	$(-1, 2)$	$K12a1228$	$o9_22129$	$(-1, 2)$	$K14a19388$
$o9_22477$	$(-1, 2)$	$K12a1231$	$o9_22607$	$(1, 2)$	$K14a19195$	$o9_22663$	$(-1, 2)$	$K12a316$
$o9_22698$	$(1, 2)$	$K13a1395$	$o9_22925$	$(-1, 2)$	$K12a309$	$o9_23023$	$(1, 2)$	$K13a713$
$o9_23263$	$(1, 2)$	$K14a17804$	$o9_23660$	$(1, 2)$	$K14a11215$	$o9_23955$	$(-1, 2)$	$K14a19194$
$o9_23961$	$(1, 2)$	$K14a12666$	$o9_23977$	$(1, 2)$	$K13a3677$	$o9_24149$	$(-1, 2)$	$K14a19179$
$o9_24183$	$(2, 1)$	$K14a3347$	$o9_24534$	$(-2, 1)$	$K14a18856$	$o9_24592$	$(-1, 2)$	$K12a1271$
$o9_24886$	$(-1, 2)$	$K14a7920$	$o9_24889$	$(1, 2)$	$K14a12495$	$o9_25595$	$(-1, 2)$	$K14a19452$
$o9_26604$	$(1, 2)$	$K12a793$	$o9_26791$	$(-1, 2)$	$K13a2340$	$o9_27155$	$(1, 2)$	$K13a1194$
$o9_27261$	$(-1, 2)$	$K13a2311$	$o9_27392$	$(-1, 2)$	$K14a3943$	$o9_27480$	$(1, 2)$	$K14a7535$
$o9_27737$	$(1, 2)$	$K14a12587$	$o9_28113$	$(1, 2)$	$K14a11153$	$o9_28153$	$(1, 2)$	$K13a1374$
$o9_28529$	$(-2, 1)$	$K14a3324$	$o9_28592$	$(-1, 2)$	$K14a7952$	$o9_28746$	$(-1, 2)$	$K13a2505$
$o9_28810$	$(1, 2)$	$K13a1132$	$o9_29246$	$(-1, 2)$	$K14a5848$	$o9_29436$	$(1, 2)$	$K14a10851$
$o9_29529$	$(1, 2)$	$K12a359$	$o9_30375$	$(1, 2)$	$K13a1092$	$o9_30721$	$(1, 2)$	$K12a467$
$o9_30790$	$(1, 2)$	$K14a7870$	$o9_31165$	$(1, 2)$	$K14a10885$	$o9_32257$	$(1, 2)$	$K12a993$
$o9_33526$	$(-1, 2)$	$K11a287$	$o9_33585$	$(-1, 2)$	$K12a340$	$o9_34403$	$(-1, 2)$	$K12a1198$
$o9_35320$	$(-1, 2)$	$K12a1217$	$o9_35549$	$(1, 2)$	$K14a3551$	$o9_35682$	$(1, 2)$	$K12a1081$
$o9_35736$	$(1, 2)$	$K14a6098$	$o9_35772$	$(-1, 2)$	$K12a966$	$o9_37941$	$(-1, 2)$	$K12a1005$
$o9_39394$	$(1, 2)$	$K12a765$						

 TABLE 13. The complete list of all exceptional half-integer alternating surgeries. All fillings are graph manifolds obtained by gluing together two Seifert fibered spaces with base D^2 and with 2 exceptional fibers. The columns titled *filled manifold* gives Regina's notation for the graph manifold.

knot	slope	filled manifold			branching set
$m016$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(3, 2)$	$[-1, 1 0, 1]$	$K8a14$
$m071$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(5, 4)$	$[-1, 1 0, 1]$	$K10a83$
$m103$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(7, 5)$	$[-1, 1 0, 1]$	$K10a50$
$m118$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(5, 3)$	$[-1, 1 0, 1]$	$K9a11$
$m240$	$(-2, 1)$	$(2, 1)(3, 1)$	$(3, 1)(4, 3)$	$[-1, 1 0, 1]$	$K10a106$
$m270$	$(2, 1)$	$(2, 1)(3, 1)$	$(3, 2)(5, 2)$	$[-1, 1 0, 1]$	$K10a47$
$m276$	$(2, 1)$	$(2, 1)(5, 2)$	$(2, 1)(5, 3)$	$[-1, 1 0, 1]$	$K10a11$
$s042$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(9, 7)$	$[-1, 1 0, 1]$	$K11a167$
$s068$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(11, 8)$	$[-1, 1 0, 1]$	$K11a80$
$s104$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(11, 7)$	$[-1, 1 0, 1]$	$K11a264$
$s114$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(13, 8)$	$[-1, 1 0, 1]$	$K11a71$
$s344$	$(2, 1)$	$(2, 1)(3, 1)$	$(3, 1)(7, 5)$	$[-1, 1 0, 1]$	$K11a149$
$s369$	$(-2, 1)$	$(2, 1)(5, 2)$	$(2, 1)(7, 4)$	$[-1, 1 0, 1]$	$K11a69$
$s769$	$(1, 1)$	$(2, 1)(5, 2)$	$(3, 2)(5, 2)$	$[-1, 1 0, 1]$	$K11a70$
$v0082$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(13, 10)$	$[-1, 1 0, 1]$	$K12a851$
$v0114$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(15, 11)$	$[-1, 1 0, 1]$	$K12a849$
$v0220$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(19, 12)$	$[-1, 1 0, 1]$	$K12a282$
$v0223$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(21, 13)$	$[-1, 1 0, 1]$	$K12a214$
$v0424$	$(2, 1)$	$(2, 1)(3, 1)$	$(3, 2)(9, 4)$	$[-1, 1 0, 1]$	$K12a944$
$v0497$	$(2, 1)$	$(2, 1)(3, 1)$	$(3, 2)(12, 5)$	$[-1, 1 0, 1]$	$K12a509$
$v0709$	$(2, 1)$	$(2, 1)(3, 1)$	$(4, 1)(5, 4)$	$[-1, 1 0, 1]$	$K12a1011$
$v0715$	$(-2, 1)$	$(2, 1)(5, 2)$	$(2, 1)(11, 7)$	$[-1, 1 0, 1]$	$K12a138$
$v0741$	$(2, 1)$	$(2, 1)(5, 2)$	$(2, 1)(13, 8)$	$[-1, 1 0, 1]$	$K12a191$
$v0847$	$(-2, 1)$	$(2, 1)(3, 1)$	$(4, 3)(7, 2)$	$[-1, 1 0, 1]$	$K12a606$
$v0912$	$(2, 1)$	$(2, 1)(7, 3)$	$(2, 1)(7, 4)$	$[-1, 1 0, 1]$	$K12a1008$
$v1300$	$(-1, 1)$	$(2, 1)(5, 1)$	$(3, 1)(4, 3)$	$[-1, 1 0, 1]$	$K12a1219$
$v1628$	$(-1, 1)$	$(2, 1)(7, 2)$	$(3, 1)(4, 3)$	$[-1, 1 0, 1]$	$K12a290$
$v1940$	$(-1, 1)$	$(2, 1)(5, 2)$	$(3, 1)(7, 5)$	$[-1, 1 0, 1]$	$K12a73$
$v1966$	$(-1, 1)$	$(2, 1)(5, 2)$	$(3, 2)(8, 3)$	$[-1, 1 0, 1]$	$K12a184$
$t00110$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(17, 13)$	$[-1, 1 0, 1]$	$K13a3353$
$t00146$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(19, 14)$	$[-1, 1 0, 1]$	$K13a3362$
$t00423$	$(-1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(27, 17)$	$[-1, 1 0, 1]$	$K13a3384$
$t00434$	$(1, 2)$	$(2, 1)(3, 1)$	$(2, 1)(29, 18)$	$[-1, 1 0, 1]$	$K13a3361$
$t00873$	$(2, 1)$	$(2, 1)(3, 1)$	$(3, 2)(16, 7)$	$[-1, 1 0, 1]$	$K13a2071$
$t00932$	$(-2, 1)$	$(2, 1)(3, 1)$	$(3, 2)(19, 8)$	$[-1, 1 0, 1]$	$K13a1907$
$t01216$	$(2, 1)$	$(2, 1)(3, 1)$	$(3, 1)(15, 11)$	$[-1, 1 0, 1]$	$K13a3907$

TABLE 14. Table 13 continued.

knot	slope	filled manifold			branching set
$t01292$	(2, 1)	(2, 1)(3, 1)	(3, 1)(18, 13)	$[-1, 1 0, 1]$	$K13a1805$
$t01409$	(2, 1)	(2, 1)(5, 2)	(2, 1)(19, 12)	$[-1, 1 0, 1]$	$K13a615$
$t01424$	(-2, 1)	(2, 1)(5, 2)	(2, 1)(21, 13)	$[-1, 1 0, 1]$	$K13a439$
$t01598$	(-2, 1)	(2, 1)(5, 2)	(2, 1)(17, 10)	$[-1, 1 0, 1]$	$K13a680$
$t01646$	(-2, 1)	(2, 1)(5, 2)	(2, 1)(19, 11)	$[-1, 1 0, 1]$	$K13a442$
$t01850$	(2, 1)	(2, 1)(3, 1)	(4, 1)(9, 7)	$[-1, 1 0, 1]$	$K13a2519$
$t01949$	(2, 1)	(2, 1)(7, 3)	(2, 1)(9, 5)	$[-1, 1 0, 1]$	$K13a3826$
$t03566$	(1, 1)	(2, 1)(9, 2)	(3, 1)(4, 3)	$[-1, 1 0, 1]$	$K13a1285$
$t03709$	(-1, 1)	(2, 1)(11, 3)	(3, 1)(4, 3)	$[-1, 1 0, 1]$	$K13a806$
$t04228$	(1, 1)	(2, 1)(5, 2)	(3, 1)(10, 7)	$[-1, 1 0, 1]$	$K13a221$
$t05239$	(-1, 1)	(2, 1)(11, 4)	(3, 2)(5, 2)	$[-1, 1 0, 1]$	$K13a1364$
$t05426$	(-1, 1)	(2, 1)(13, 5)	(3, 2)(5, 2)	$[-1, 1 0, 1]$	$K13a821$
$t05578$	(1, 1)	(2, 1)(7, 3)	(3, 2)(8, 3)	$[-1, 1 0, 1]$	$K13a715$
$t05663$	(-1, 1)	(2, 1)(5, 2)	(4, 3)(7, 2)	$[-1, 1 0, 1]$	$K13a607$
$o9.00133$	(-1, 2)	(2, 1)(3, 1)	(2, 1)(21, 16)	$[-1, 1 0, 1]$	$K14a13432$
$o9.00168$	(1, 2)	(2, 1)(3, 1)	(2, 1)(23, 17)	$[-1, 1 0, 1]$	$K14a13417$
$o9.00797$	(-1, 2)	(2, 1)(3, 1)	(2, 1)(35, 22)	$[-1, 1 0, 1]$	$K14a13298$
$o9.00815$	(-1, 2)	(2, 1)(3, 1)	(2, 1)(37, 23)	$[-1, 1 0, 1]$	$K14a13403$
$o9.01680$	(2, 1)	(2, 1)(3, 1)	(3, 2)(23, 10)	$[-1, 1 0, 1]$	$K14a14297$
$o9.01765$	(-2, 1)	(2, 1)(3, 1)	(3, 2)(26, 11)	$[-1, 1 0, 1]$	$K14a13889$
$o9.02340$	(-2, 1)	(2, 1)(3, 1)	(3, 1)(26, 19)	$[-1, 1 0, 1]$	$K14a7439$
$o9.02386$	(-2, 1)	(2, 1)(3, 1)	(3, 1)(29, 21)	$[-1, 1 0, 1]$	$K14a6987$
$o9.02706$	(-2, 1)	(2, 1)(5, 2)	(2, 1)(27, 17)	$[-1, 1 0, 1]$	$K14a2247$
$o9.02735$	(2, 1)	(2, 1)(5, 2)	(2, 1)(29, 18)	$[-1, 1 0, 1]$	$K14a2615$
$o9.03118$	(-2, 1)	(2, 1)(5, 2)	(2, 1)(29, 17)	$[-1, 1 0, 1]$	$K14a1536$
$o9.03149$	(2, 1)	(2, 1)(5, 2)	(2, 1)(31, 18)	$[-1, 1 0, 1]$	$K14a2613$
$o9.03288$	(2, 1)	(2, 1)(3, 1)	(4, 3)(13, 4)	$[-1, 1 0, 1]$	$K14a14831$
$o9.03412$	(2, 1)	(2, 1)(3, 1)	(4, 3)(17, 5)	$[-1, 1 0, 1]$	$K14a10105$
$o9.03526$	(-2, 1)	(2, 1)(3, 1)	(5, 1)(6, 5)	$[-1, 1 0, 1]$	$K14a16396$
$o9_03932$	(2, 1)	(2, 1)(3, 1)	(5, 4)(9, 2)	$[-1, 1 0, 1]$	$K14a11193$
$o9.04313$	(2, 1)	(2, 1)(7, 3)	(2, 1)(17, 10)	$[-1, 1 0, 1]$	$K14a14819$
$o9.04431$	(2, 1)	(2, 1)(7, 3)	(2, 1)(19, 11)	$[-1, 1 0, 1]$	$K14a5832$
$o9.04435$	(2, 1)	(2, 1)(9, 4)	(2, 1)(9, 5)	$[-1, 1 0, 1]$	$K14a14873$
$o9.07943$	(-1, 1)	(2, 1)(13, 3)	(3, 1)(4, 3)	$[-1, 1 0, 1]$	$K14a18265$
$o9.08042$	(1, 1)	(2, 1)(15, 4)	(3, 1)(4, 3)	$[-1, 1 0, 1]$	$K14a14990$
$o9.08776$	(1, 1)	(2, 1)(5, 2)	(3, 2)(18, 7)	$[-1, 1 0, 1]$	$K14a2564$
$o9.08852$	(1, 1)	(2, 1)(5, 2)	(3, 2)(21, 8)	$[-1, 1 0, 1]$	$K14a2653$
$o9.10696$	(-1, 1)	(2, 1)(5, 1)	(4, 1)(5, 4)	$[-1, 1 0, 1]$	$K14a18376$
$o9.11467$	(-1, 1)	(2, 1)(19, 7)	(3, 2)(5, 2)	$[-1, 1 0, 1]$	$K14a3771$
$o9.11560$	(-1, 1)	(2, 1)(21, 8)	(3, 2)(5, 2)	$[-1, 1 0, 1]$	$K14a3245$
$o9.12144$	(1, 1)	(2, 1)(7, 3)	(3, 1)(10, 7)	$[-1, 1 0, 1]$	$K14a17264$
$o9.12230$	(-1, 1)	(2, 1)(7, 3)	(3, 2)(11, 4)	$[-1, 1 0, 1]$	$K14a15078$
$o9.12736$	(1, 1)	(2, 1)(5, 2)	(4, 1)(9, 7)	$[-1, 1 0, 1]$	$K14a771$
$o9.13056$	(-1, 1)	(2, 1)(5, 2)	(4, 3)(11, 3)	$[-1, 1 0, 1]$	$K14a1548$
$o9.13508$	(1, 1)	(2, 1)(11, 4)	(3, 1)(7, 5)	$[-1, 1 0, 1]$	$K14a5545$
$o9.14018$	(1, 1)	(2, 1)(13, 5)	(3, 1)(7, 5)	$[-1, 1 0, 1]$	$K14a3045$
$o9.14136$	(-1, 1)	(2, 1)(7, 2)	(4, 1)(5, 4)	$[-1, 1 0, 1]$	$K14a5717$