

Obstacles (Manual Warmups)- 2nd order (kappa=3.1):

1.100-220-630 = 185.32 100-150, 220-260, 630-700
 2.110-230-638 = 314.58
 3.120-240-660 = 701.1
 4.128-249-682 = 202.06
 5.142-259-691 = 161.14

Solution: Use length scales based on intervals average for each dimension [10.5,9.75,15.25]
 therefore length scales: [10.4,9.65,15.15]

(B0 Trials) – kappa=3.1

Ranges	-ucb	Reward	GP_mean
1.102-248-698	-995	(637)	(29)
2.131-232-684	-1236	(465)	(428)*
3.116-251-698	-1222	(286)	(505)
4.103-239-699	-1262	(459)	(550)*
5.111-256-639	-1155	(-22)	(331)
6.132-224-652	-1204	(-75)	(419)
7.124-226-632	-1210	(107)	(422)
8.119-249-645	-1214	(417)	(424)*
9.116-251-675	-1288	(198)	(541)
10.101-253-675	-1241	(445)	(507)*
11.100-226-640	-1202	(332)	(495)
12.101-253-635	-1206	(-8)	(477)
13.100-257-670	-1185	(556)	(392)*
14.128-258-696	-1268	(-25)	(453)
15.124-259-683	-1231	(-26)	(404)
16.100-234-670	-1295	(234)	(501)
17.101-238-670	-1306	(672)	(517)*
2.131-232-684	-1236	(465)	(428)
4.103-239-699	-1262	(459)	(550)
8.119-249-645	-1214	(417)	(424)
10.101-253-675	-1241	(445)	(507)
13.100-257-670	-1185	(556)	(392)
17.101-238-670	-1306	(672)	(517)

Considering only the cases where rewards are close to GP pred means
 (Focus on proximity to reward vs max ucb due to rough surrogate)

I) Reward is high II) Surrogate mean is sufficiently close to it III)
 Rewards are not vastly different in last 3 evaluations during training
 (i.e. relatively similar)

Quadratic function (of max of last 3 rewards wrt intervals):

$$R = 3.028t_1^2 + 2.199t_2^2 + 1.611t_3^2 + 0.941t_4^2 + 4.985t_1t_2 + 1.279t_2t_3 + 2.951t_3t_4 + 3.136t_1t_4 + 2.650t_2t_4 + 0.453t_1t_3 - 1284277$$