

TABLE I: Predicted spectra of pentaquarks  $nnnn\bar{b}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$(nnnn\bar{b})^{I=2}$	$3/2^-$	5.96	6.916	4.22, 2.67, 1.11, -0.44, -1.99
	$1/2^-$	6.00	6.945	2.83, 1.76, 0.69, -0.39, -1.46
$(nnnn\bar{b})^{I=1}$	$5/2^-$	5.94	6.735	5.38, 2.20, -0.97
	$3/2^-$	5.92	6.717	1.61, 0.64, -0.34
		5.88	6.617	2.26, 0.94, -0.37
	$1/2^-$	5.91	6.633	1.46, 0.57, -0.31
		5.87	6.571	0.17, 0.11, 0.06
$(nnnn\bar{b})^{I=0}$	$3/2^-$	5.88	6.486	1.13
	$1/2^-$	5.82	6.450	0.66

TABLE II: Predicted spectra of pentaquarks  $nnnn\bar{b}$ .

State	$J^P$	$M_{bag}$	Threshold
$(nnnn\bar{b})^{I=2}$	$3/2^-$	6.916	$\Delta B^*(6.557)$ , $\Delta B(6.512)$
	$1/2^-$	6.945	$\Delta B^*(6.557)$
$(nnnn\bar{b})^{I=1}$	$5/2^-$	6.735	$\Delta B^*(6.557)$
	$3/2^-$	6.717	$\Delta B^*(6.557)$ , $\Delta B(6.512)$ , $NB^*(6.264)$
		6.617	
	$1/2^-$	6.633	$\Delta B^*(6.557)$ , $NB^*(6.264)$ , $NB(6.219)$
$(nnnn\bar{b})^{I=0}$		6.571	
	$3/2^-$	6.486	$NB^*(6.264)$
	$1/2^-$	6.450	$NB^*(6.264)$ , $NB(6.219)$

TABLE III: Predicted spectra of pentaquarks  $nnnn\bar{c}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$(nnnn\bar{c})^{I=2}$	$3/2^-$	6.05	3.495	3.81, 2.19, 0.57, -1.05, -2.67
	$1/2^-$	6.15	3.574	3.10, 2.00, 0.90, -0.20, -1.29
$(nnnn\bar{c})^{I=1}$	$5/2^-$	6.07	3.348	4.91, 1.66, -1.59
	$3/2^-$	6.06	3.320	4.38, 1.80, -0.77
		5.92	3.176	2.93, 1.00, -0.93
	$1/2^-$	6.07	3.255	1.50, 0.63, -0.25
		5.96	3.152	-0.04, -0.24, -0.45
$(nnnn\bar{c})^{I=0}$	$3/2^-$	6.02	3.105	0.57
	$1/2^-$	5.88	3.003	0.87

TABLE IV: Predicted spectra of pentaquarks  $nnnn\bar{c}$ .

State	$J^P$	$M_{bag}$	Threshold
$(nnnn\bar{c})^{I=2}$	$3/2^-$	3.495	$\Delta D^*(3.241)$ , $\Delta D(3.100)$
	$1/2^-$	3.574	$\Delta D^*(3.241)$
$(nnnn\bar{c})^{I=1}$	$5/2^-$	3.348	$\Delta D^*(3.241)$
	$3/2^-$	3.320	$\Delta D^*(3.241)$ , $\Delta D(3.100)$ , $ND^*(2.948)$
		3.176	
	$1/2^-$	3.255	$\Delta D^*(3.241)$ , $ND^*(2.948)$ , $ND(2.807)$
$(nnnn\bar{c})^{I=0}$		3.152	
	$3/2^-$	3.105	$ND^*(2.948)$
	$1/2^-$	3.003	$ND^*(2.948)$ , $ND(2.807)$

TABLE V: Predicted spectra of pentaquarks  $nnns\bar{b}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$(nnns\bar{b})^{I=3/2}$	$5/2^-$	5.95	6.836	5.68, 2.49, -0.69, -3.88
	$3/2^-$	6.00	7.033	2.36, 0.96, -0.45, -1.86
		5.94	6.823	4.33, 1.76, -0.81, -3.38
		5.88	6.763	5.45, 2.87, 0.29, -2.30
	$1/2^-$	6.04	7.060	1.48, 0.54, -0.39, -1.33
		5.90	6.800	0.21, 0.06, -0.09, -0.24
		5.88	6.767	3.02, 1.63, 0.25, -1.14
$(nnns\bar{b})^{I=1/2}$	$5/2^-$	5.97	6.884	2.50, -0.69
	$3/2^-$	5.95	6.865	2.18, -0.68
		5.91	6.764	0.77, -0.56
		5.87	6.662	2.12, 0.06
		5.84	6.496	0.86, -0.47
	$1/2^-$	5.94	6.778	0.69, -0.30
		5.90	6.700	-0.12, -0.02
		5.82	6.627	1.31, -0.05
		5.83	6.479	-0.34, -0.55
		5.76	6.433	0.91, 0.23

TABLE VI: Predicted spectra of pentaquarks  $nnns\bar{b}$ .

State	$J^P$	$M_{bag}$	Threshold		
$(nnns\bar{b})^{I=3/2}$	$5/2^-$	6.836	$\Sigma^* B^*(6.710), \Delta B_s^*(6.647)$		
		$3/2^-$	7.033	$\Sigma^* B^*(6.710), \Delta B_s^*(6.647), \Sigma^* B(6.665), \Delta B_s(6.599), \Sigma B^*(6.518)$	
		6.823			
		6.763			
	$1/2^-$	7.060	$\Sigma^* B^*(6.710), \Delta B_s^*(6.647), \Sigma B^*(6.518), \Sigma B(6.473)$		
			6.800		
			6.767		
			6.884	$\Sigma^* B^*(6.710)$	
	$(nnns\bar{b})^{I=1/2}$	$5/2^-$	$3/2^-$	6.865	$\Sigma^* B^*(6.710), \Sigma^* B(6.665), \Sigma B^*(6.518), \Lambda B^*(6.441), NB_s^*(6.354)$
				6.764	
		6.662			
		6.496			
$1/2^-$		6.778	$\Sigma^* B^*(6.710), \Sigma B^*(6.518), \Lambda B^*(6.441), \Sigma B(6.473), \Lambda B(6.396), NB_s(6.306)$		
			6.700		
			6.627		
			6.479		
	6.433				

TABLE VII: Predicted spectra of pentaquarks  $nnns\bar{c}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$(nnns\bar{c})^{I=3/2}$	$5/2^-$	6.09	3.461	5.22, 1.96, -1.30, -4.56
		6.09	3.615	1.90, 0.43, -1.03, -2.49
		6.08	3.447	4.15, 1.76, -0.63, -3.03
		5.93	3.334	5.45, 2.64, -0.16, -2.96
	$1/2^-$	6.19	3.689	1.75, 0.78, -0.19, -1.16
		6.06	3.430	0.68, 0.17, -0.33, -0.83
		5.96	3.347	2.16, 1.12, 0.08, -0.96
$(nnns\bar{c})^{I=1/2}$	$5/2^-$	6.10	3.496	1.97, -1.30
		6.09	3.465	2.20, -0.48
		5.96	3.324	0.53, -1.03
		6.02	3.282	1.59, -0.53
	$1/2^-$	5.99	3.124	0.33, -1.06
		6.09	3.396	0.94, -0.08
		6.00	3.288	-0.71, -0.62
		5.90	3.186	1.43, 0.12
		5.97	3.105	-0.75, -0.71
		5.78	2.980	0.96, 0.00

TABLE VIII: Predicted spectra of pentaquarks  $nnns\bar{c}$ .

State	$J^P$	$M_{bag}$	Threshold	
$(nnns\bar{c})^{I=3/2}$	$5/2^-$	3.461	$\Sigma^*D^*(3.394), \Delta D_s^*(3.344)$	
		3.615	$\Sigma^*D^*(3.394), \Delta D_s^*(3.344), \Sigma^*D(3.253), \Delta D_s(3.200), \Sigma D^*(3.202)$	
		3.447		
		3.334		
	$1/2^-$	3.689	$\Sigma^*D^*(3.394), \Delta D_s^*(3.344), \Sigma D^*(3.202), \Sigma D(3.061)$	
		3.430		
		3.347		
		$(nnns\bar{c})^{I=1/2}$	$5/2^-$	3.496
	$3/2^-$		3.465	$\Sigma^*D^*(3.394), \Sigma^*D(3.253), \Sigma D^*(3.202), \Lambda D^*(3.125), ND_s^*(3.051)$
			3.324	
3.282				
3.124				
$1/2^-$	3.396		$\Sigma^*D^*(3.394), \Sigma D^*(3.202), \Lambda D^*(3.125), \Sigma D(3.061), \Lambda D(2.984), ND_s(2.907)$	
	3.288			
	3.186			
	3.105			
	2.980			

TABLE IX: Predicted spectra of pentaquarks  $nnss\bar{b}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$(nnss\bar{b})^{I=1}$	$5/2^-$	5.99	7.004	2.80, -0.41, -3.61
		6.04	7.151	0.62, -0.54, -1.70
		5.97	6.988	2.16, -0.54, -3.25
		5.92	6.912	1.56, -0.15, -1.86
	$1/2^-$	5.90	6.802	2.31, 0.24, -1.83
		6.08	7.175	0.30, -0.46, -1.22
		5.95	6.924	1.29, 0.04, -1.20
		5.91	6.875	-0.22, -0.10, 0.02
		5.85	6.773	1.30, 0.01, -1.28
$(nnss\bar{b})^{I=0}$	$5/2^-$	6.00	7.036	-0.41
		5.98	7.016	-0.32
		5.94	6.910	-0.78
		5.86	6.681	-1.02
	$1/2^-$	5.96	6.923	-0.30
		5.92	6.829	-0.08
		5.84	6.661	-0.08
		5.79	6.611	-0.62

TABLE X: Predicted spectra of pentaquarks  $nns\bar{s}\bar{b}$ .

State	$J^P$	$M_{bag}$	Threshold
$(nns\bar{s}\bar{b})^{I=1}$	$5/2^-$	7.004	$\Xi^* B^*(6.858), \Sigma^* B_s^*(6.800)$
		7.151	$\Xi^* B^*(6.858), \Sigma^* B_s^*(6.800), \Xi^* B(6.813), \Sigma^* B_s(6.752), \Xi B^*(6.643), \Sigma B_s^*(6.608)$
		6.988	
		6.912	
		6.802	
	$1/2^-$	7.175	$\Xi^* B^*(6.858), \Sigma^* B_s^*(6.800), \Xi B^*(6.643), \Sigma B_s^*(6.608), \Xi B(6.598), \Sigma B_s(6.560)$
		6.924	
		6.875	
		6.773	
		6.611	
$(nns\bar{s}\bar{b})^{I=0}$	$5/2^-$	7.036	$\Xi^* B^*(6.858)$
		7.016	$\Xi^* B^*(6.858), \Xi^* B(6.813), \Xi B^*(6.643), \Lambda B_s^*(6.531)$
		6.910	
	$1/2^-$	6.681	$\Xi^* B^*(6.858), \Xi B^*(6.643), \Lambda B_s^*(6.531), \Lambda B_s(6.483)$
		6.923	
		6.829	
		6.661	
		6.611	

TABLE XI: Predicted spectra of pentaquarks  $nns\bar{s}\bar{c}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$(nns\bar{s}\bar{c})^{I=1}$	$5/2^-$	6.12	3.624	2.27, -1.00, -4.28
		6.13	3.737	0.20, -1.07, -2.33
		6.11	3.599	2.07, -0.39, -2.85
		5.97	3.485	1.24, -0.65, -2.53
		6.03	3.426	1.86, -0.31, -2.48
	$1/2^-$	6.22	3.806	0.60, -0.23, -1.05
		6.10	3.552	1.32, 0.15, -1.01
		6.00	3.464	-0.37, -0.49, -0.61
		5.91	3.343	1.19, 0.07, -1.06
$(nns\bar{s}\bar{c})^{I=0}$	$5/2^-$	6.13	3.648	-1.00
		6.12	3.613	-0.02
		5.98	3.471	-1.31
	$1/2^-$	6.00	3.304	-1.62
		6.11	3.540	0.06
		6.02	3.425	-0.83
		6.00	3.284	0.01
		5.80	3.152	-1.09

TABLE XII: Predicted spectra of pentaquarks  $nnss\bar{c}$ .

State	$J^P$	$M_{bag}$	Threshold
$(nnss\bar{c})^{I=1}$	$5/2^-$	3.624	$\Xi^* D^*(3.542), \Sigma^* D_s^*(3.497)$
		3.737	$\Xi^* D^*(3.542), \Sigma^* D_s^*(3.497), \Xi^* D(3.401), \Sigma^* D_s(3.353), \Xi D^*(3.327), \Sigma D_s^*(3.305)$
	$3/2^-$	3.599	
		3.485	
		3.426	
		3.806	$\Xi^* D^*(3.542), \Sigma^* D_s^*(3.497), \Xi D^*(3.327), \Sigma D_s^*(3.305), \Xi D(3.186), \Sigma D_s(3.161)$
		3.552	
		3.464	
		3.343	
	$1/2^-$	3.648	$\Xi^* D^*(3.542)$
		3.613	$\Xi^* D^*(3.542), \Xi^* D(3.401), \Xi D^*(3.327), \Lambda D_s^*(3.228)$
$(nnss\bar{c})^{I=0}$	$5/2^-$	3.648	$\Xi^* D^*(3.542)$
		3.613	$\Xi^* D^*(3.542), \Xi^* D(3.401), \Xi D^*(3.327), \Lambda D_s^*(3.228)$
	$3/2^-$	3.471	
		3.304	
		3.540	$\Xi^* D^*(3.542), \Xi D^*(3.327), \Lambda D_s^*(3.228), \Lambda D_s(3.084)$
		3.425	
		3.284	
		3.152	

TABLE XIII: Predicted spectra of pentaquarks  $sssn\bar{b}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$sssn\bar{b}$	$5/2^-$	6.02	7.176	-0.12, -3.34
		6.07	7.268	-0.72, -1.57
	$3/2^-$	6.00	7.156	0.01, -3.09
		5.96	7.049	-1.03, -1.57
		6.11	7.291	-0.61, -1.13
		5.98	7.063	-0.30, -1.13
		5.95	6.970	-0.19, 0.09

TABLE XIV: Predicted spectra of pentaquarks  $sssn\bar{b}$ .

State	$J^P$	$M_{bag}$	Threshold
$sssn\bar{b}$	$5/2^-$	7.176	$\Omega B^*(6.997), \Xi^* B_s^*(6.948)$
		7.268	$\Omega B^*(6.997), \Xi^* B_s^*(6.948), \Omega B(6.952), \Xi^* B_s(6.900), \Xi B_s^*(6.733)$
	$3/2^-$	7.156	
		7.049	
		7.291	$\Omega B^*(6.997), \Xi^* B_s^*(6.948), \Xi B_s^*(6.733), \Xi B_s(6.685)$
		7.063	
		6.970	

TABLE XV: Predicted spectra of pentaquarks  $sssn\bar{c}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$	
$sssn\bar{c}$	$5/2^-$	6.15	3.790	-0.70, -3.99	
		3/2 <sup>-</sup>	6.16	3.859	-1.16, -2.20
			6.13	3.754	0.53, -2.73
			6.00	3.620	-1.93, -2.21
	$1/2^-$	6.25	3.924	-0.32, -0.96	
			6.12	3.686	0.15, -0.96
			6.04	3.576	-1.13, -0.48

TABLE XVI: Predicted spectra of pentaquarks  $sssn\bar{c}$ .

State	$J^P$	$M_{bag}$	Threshold
$sssn\bar{c}$	$5/2^-$	3.790	$\Omega D^*(3.681), \Xi^* D_s^*(3.645)$
	$3/2^-$	3.859	$\Omega D^*(3.681), \Xi^* D_s^*(3.645), \Omega D(3.540), \Xi^* D_s(3.501), \Xi D_s^*(3.430)$
		3.754	
		3.620	
	$1/2^-$	3.924	$\Omega D^*(3.681), \Xi^* D_s^*(3.645), \Xi D_s^*(3.430), \Xi D_s(3.286)$
		3.686	
		3.576	

TABLE XVII: Predicted spectra of pentaquarks  $ssss\bar{b}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$ssss\bar{b}$	$3/2^-$	6.10	7.383	-1.50
	$1/2^-$	6.14	7.406	-1.09

TABLE XVIII: Predicted spectra of pentaquarks  $ssss\bar{b}$ .

State	$J^P$	$M_{bag}$	Threshold
$ssss\bar{b}$	$3/2^-$	7.383	$\Omega B_s^*(7.087), \Omega B_s(7.039)$
	$1/2^-$	7.406	$\Omega B_s^*(7.087)$

TABLE XIX: Predicted spectra of pentaquarks  $ssss\bar{c}$ .

State	$J^P$	$R_0$	$M_{bag}$	$\mu_{bag}$
$ssss\bar{c}$	$3/2^-$	6.19	3.980	-2.11
	$1/2^-$	6.28	4.043	-0.91

TABLE XX: Predicted spectra of pentaquarks  $ssss\bar{c}$ .

State	$J^P$	$M_{bag}$	Threshold
$ssss\bar{c}$	$3/2^-$	3.980	$\Omega D_s^*(3.784), \Omega D_s(3.640)$
	$1/2^-$	4.043	$\Omega D_s^*(3.784)$