

NOvA Experiment Status

All Experimenter's Meeting

Jaroslav Zalesak, Institute of Physics, Prague/FNAL

March 3, 2014

FarDet: LAST BLOCK IN PLACE



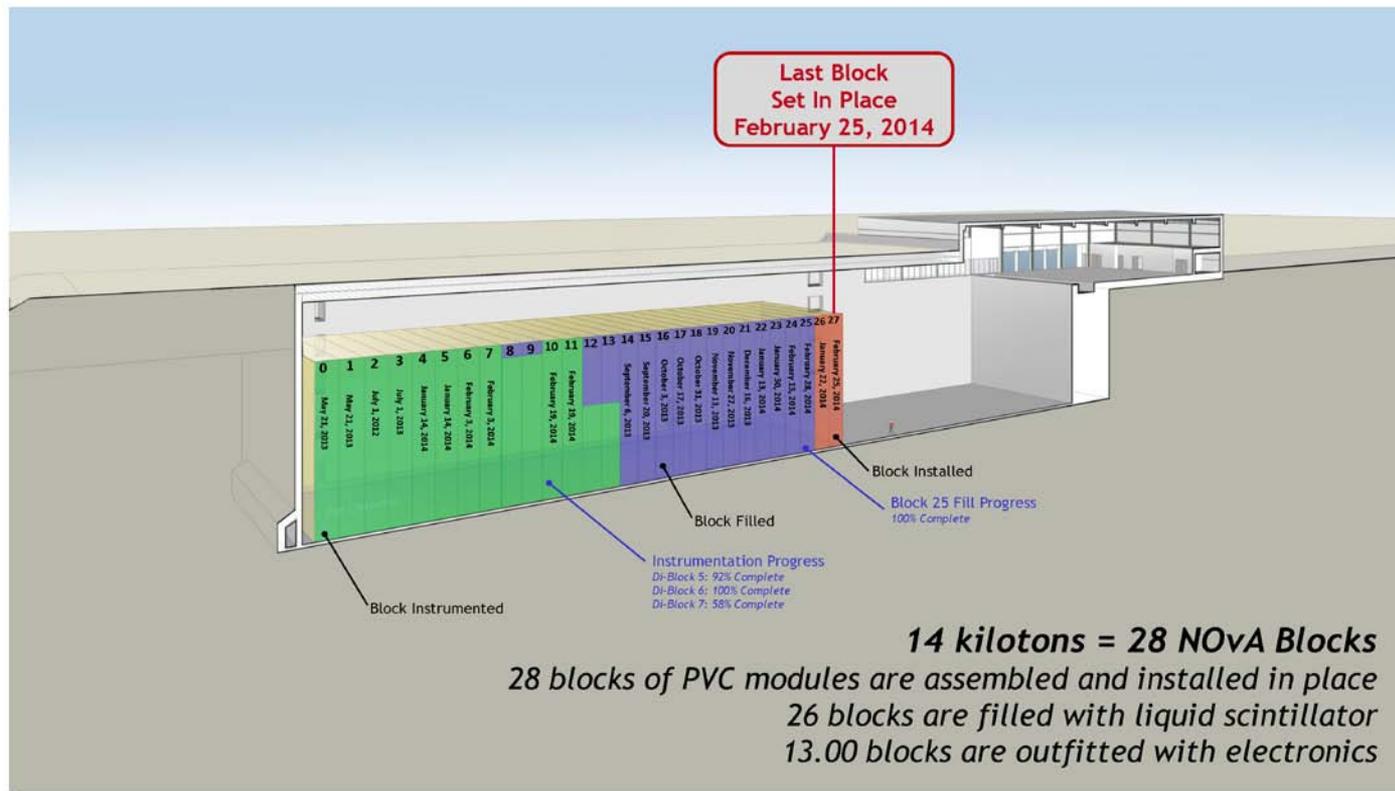
Milestone:
Last Block in place
Feb 26, 2014 at 4:55PM

FD: Detector Assembly Progress

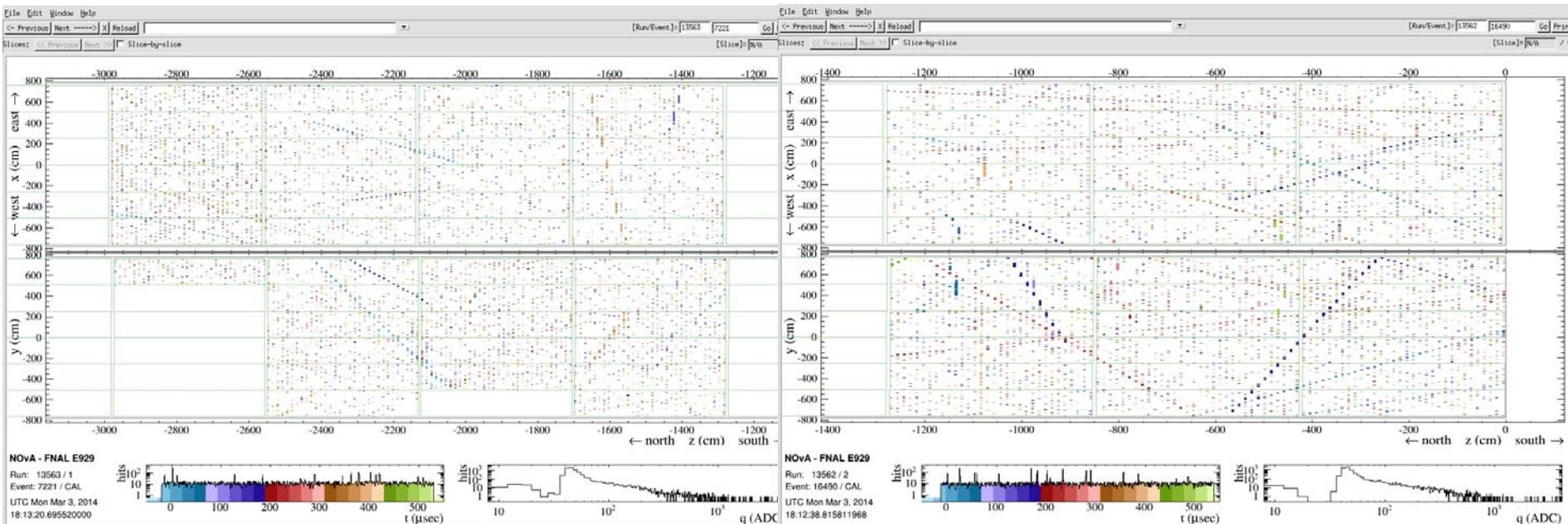


NOvA Far Detector Assembly Progress

Status Date: 03MAR14



FarDet: Data-Taking

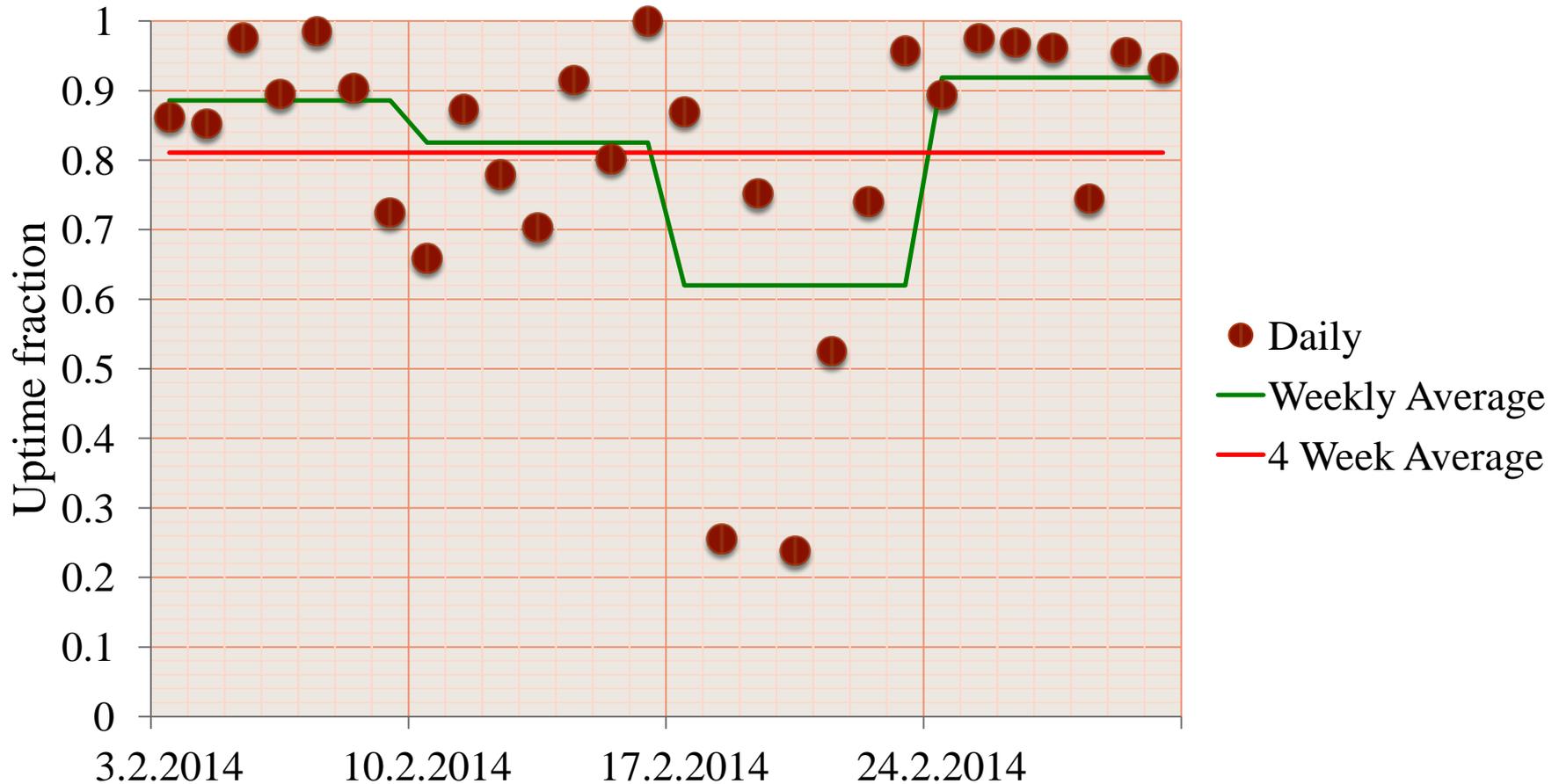


Partition 2 – Diblocks 4,5,6,7
Diblocks 4,5(top),6 cold APDs
5 (side), 7(top) full gain/warm
APDs installed on 6.5kTon

Partition 1 – diblocks 1,2,3
Running >99% active, cooled APDs
HV at full gain values
3 kTons detector mass

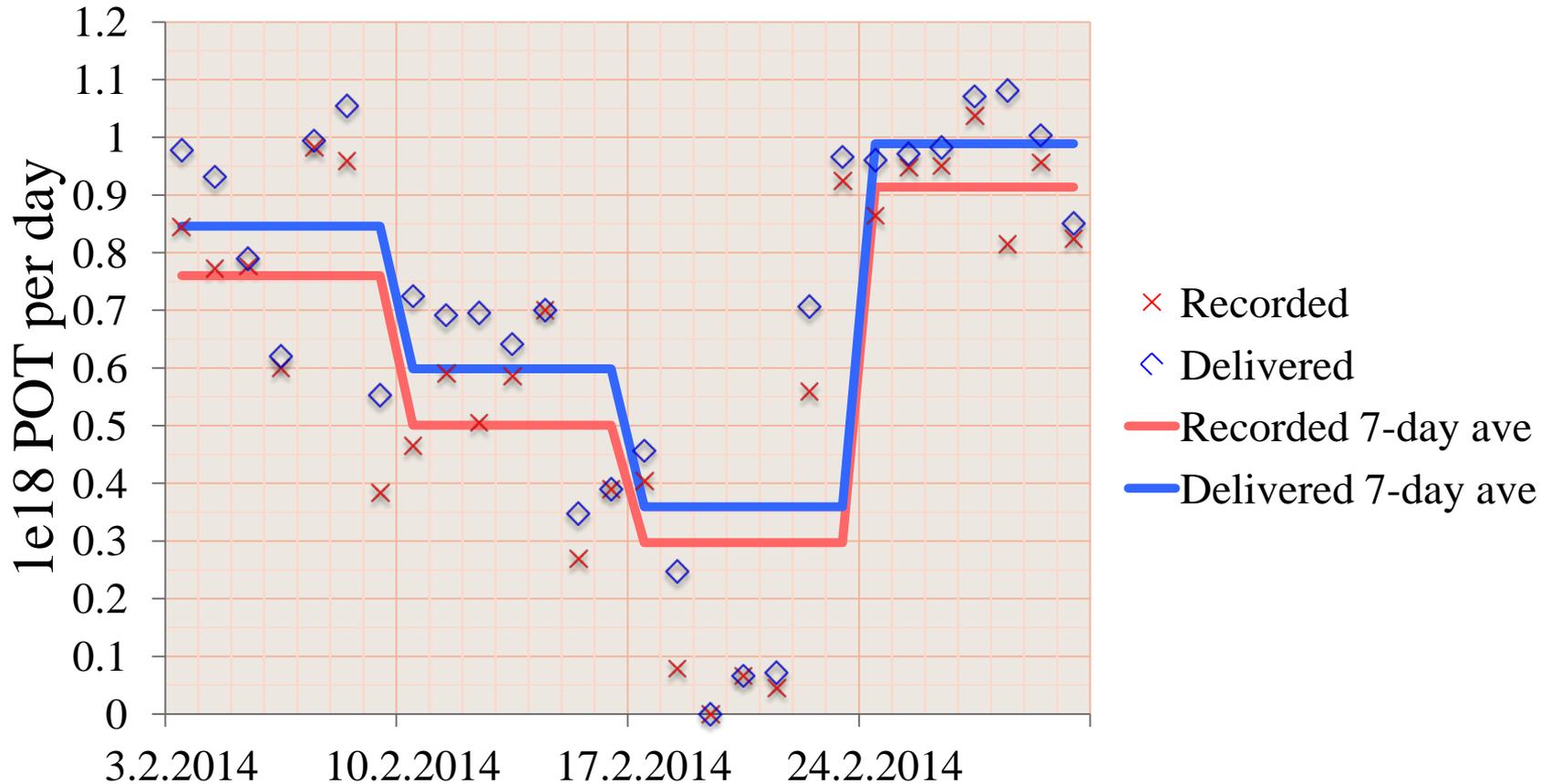
Partition 3 – running diblocks 8-12 (Front End Boards only)

FD: DAQ Uptime



- Plot for past 4 weeks
- Averaging little over 80% for 4 weeks, ~ 92% in past week
- Very good last week, only 1 water leak, smooth recovery from DAQ failures

FD: POTs delivered/recorded



- Plot for past 4 weeks
- Very good last week, we recorded in average 0.9 e18 pots/day with 92% efficiency

Summary



- 6.5 kTons of FarDet fully-instrumented with ~full gain
- 3 Partitions running
- 3 kTons stable with >99% active, cooled channels
- Only 1 water leak this week
- Very good performance of DAQ, uptime ~92 %
- We delivered $1e18$ POTs per day and 92% recorded
- When we are down to fix things we do better with the beam metric → we're live a larger fraction of the time when the beam is present.
- **Near Detector: Starting oil filling of detector last weak.**

FD: FarDet Outfitting Progress



Position	DiBlock													
	14	13	12	11	10	9	8	7	6	5	4	3	2	1
1	DCM Install	Filling	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail				
2	DCM Install	Filling	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail				
3	DCM Install	Filling	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail				
4	DCM Install	Filling	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail				
5	DCM Install	Filling	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail				
6	DCM Install	Filling	FEB Avail	FEB Avail	FEB Avail	FEB Avail	APD Install	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail
7	Filling	Filling	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail	APD Avail				
8	Filling	Filling	FEB Avail	APD Install	APD Avail									
9	Filling	Filling	FEB Avail	APD Install	APD Avail									
10	Filling	Filling	FEB Avail	APD Install	APD Avail									
11	Filling	Filling	FEB Avail	APD Install	APD Avail									
12	Filling	Filling	FEB Avail	APD Install	APD Avail	FEB Avail	APD Avail	APD Avail	APD Avail	APD Avail				

Vertical
Horizontal

Block Installation Status

Status	Block																											
	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Set	Filling	Filling	Filled																									

Today 3/3:
Complete top up on block 25 (26th block). Begin filling block 26 (27th block horizontals). Install APDs for DCM-2-07-08, DCM-2-07-10

Tuesday 3/4:
Install APDs for DCM-2-07-09, DCM-2-07-11.

Wednesday 3/5:
Install APDs for DCM-2-08-06, DCM-2-07-12

Weekend: run 1 partition, with all 12 di-blocks

Filling

Block 25 Vertical Modules

Position	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1
0	251	249	250	250	249	250	250	249	248	250	248	249	248	250	251	250
1	248	247	253	250	248	247	249	253	250	250	250	250	251	250	251	251
2	252	250	246	248	249	255	254	249	250	251	251	250	251	251	251	250
3	252	252	250	255	249	249	249	252	250	249	251	251	251	252	252	251
4	251	251	252	250	251	251	251	250	251	250	251	251	252	253	253	251
5	237	251	253	251	250	252	251	251	250	250	252	251	255	252	251	248
6	250	249	252	249	242	249	251	251	251	249	249	249	253	252	251	248
7	249	250	251	248	250	252	250	251	251	251	250	251	252	252	251	251
8	249	249	253	249	249	252	255	250	249	251	249	250	252	248	251	248
9	251	253	251	250	249	249	253	248	250	249	250	249	252	249	250	246
10	252	253	251	251	250	252	250	250	251	253	250	251	253	252	252	248
11	252	251	251	255	251	251	251	251	250	252	252	251	253	251	252	248

Block 25 Horizontal Modules

Position	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0
11	240	214	214	240	237	231	204	223	224	229	205	205	218	220	223	218
10	245	216	218	244	235	230	231	225	227	226	205	228	231	238	233	235
9	220	225	216	232	226	229	224	225	219	225	217	237	214	227	218	215
8	227	235	245	252	244	246	233	225	226	228	248	238	241	227	236	236
7	241	240	243	245	244	233	232	232	236	246	236	232	231	227	248	237
6	229	228	237	234	239	228	222	218	234	209	218	228	220	220	220	222
5	240	217	234	241	240	224	228	230	235	213	230	232	237	233	242	237
4	232	228	235	235	242	231	232	232	230	227	236	236	231	217	208	228
3	239	225	240	238	235	236	237	237	235	228	257	234	221	225	226	233
2	240	222	242	240	246	235	243	251	235	231	248	234	234	220	229	243
1	240	241	248	240	243	240	246	242	241	241	242	241	242	241	244	244
0	239	243	246	243	243	238	245	238	244	242	232	236	241	233	230	244

Block 24 Vertical Modules

Position	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1				
0	252	247	250	249	248	250	250	249	251	252	248	251	252	248	253	249	254	252	253	
1	247	251	249	247	250	250	250	249	253	253	249	252	253	252	252	254	251	251	251	
2	250	249	248	249	251	251	254	249	249	249	252	252	253	253	250	251	251	250	250	
3	248	250	247	248	252	250	253	252	250	249	251	250	252	252	249	250	252	252	249	250
4	250	250	250	249	251	251	252	248	252	251	252	251	250	249	251	247	250	249	248	248
5	248	247	251	250	251	251	252	252	252	252	252	251	253	249	251	251	249	250	249	248
6	249	250	247	250	251	254	251	254	251	253	251	252	253	251	250	251	248	248	248	248
7	246	249	250	249	251	250	254	249	250	253	250	246	250	246	250	247	250	248	248	248
8	252	248	251	248	251	251	247	251	252	247	253	251	253	250	252	251	251	251	251	250
9	251	252	252	250	253	253	249	251	252	253	252	251	252	249	251	252	249	251	250	250
10	250	254	254	249	251	252	250	253	254	253	253	253	253	252	254	252	253	251	251	250
11	249	252	251	249	255	251	251	252	251	249	251	252	253	253	252	249	252	252	252	253

Block 24 Horizontal Modules

Position	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0					
11	241	240	245	243	244	248	242	248	242	248	248	248	242	244	247	250	247	248	248	248	248
10	242	244	250	243	244	248	241	242	245	249	243	243	246	244	245	249	251	248	248	248	248
9	248	250	238	240	252	251	247	248	244	249	252	242	248	245	242	249	252	252	252	252	253
8	246	247	236	241	239	246	243	246	248	248	241	242	247	242	247	252	248	248	248	248	248
7	240	246	235	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245
6	237	241	239	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245
5	239	238	238	247	242	243	239	244	242	243	248	244	243	244	241	245	245	245	245	245	244
4	244	251	245	248	244	248	252	243	246	241	242	246	242	246	242	250	245	245	245	245	245
3	242	247	246	247	239	246	240	246	244	246	246	246	246	246	247	243	248	248	248	248	248
2	241	232	242	246	243	250	240	243	242	242	241	242	241	245	247	243	246	246	246	246	246
1	245	234	243	243	246	247	236	242	248	243	248	248	248	243	240	247	244	244	244	244	244
0	241	242	244	250	248	246	233	244	247	248	237	246	243	246	246	246	246	246	246	246	246