

Pathways toward the full NPS WF fitting

Goal 1: replay a few kinematics fully so we can start the calibration as soon as possible

- 6 cores, 5 consecutive samples up as input
- LD2, LH2, dummy, sparsification on
- Which kinematics?
 - Wassim (04-23) <https://hallcweb.jlab.org/elogs/NPS-RG1a-Analysis/123>
 - Show the longest reported duration in hours for one split
 - Green is less than 144h = 48 h*3 (assume gain of 3 with multi threading)
- Willing to have a few runs fail to analyze if they go over the wall time

hours to analyze one split
with one core

	5 sample	4 sample	4/5 samples
36_2	64	273	4.3
50_2_pp	68	168	2.5
60_4_b	83	300	3.6
60_3_b	84	213	2.5
60_2	84	249	3.0
60_3_p	89	266	3.0
50_2_p	92	198	2.2
36_2pp	94	238	2.5
50_1	96	250	2.6
50_4	97	240	2.5
36_2	98	273	2.8
36_3	104	209	2.0
60_3_a	105	243	2.3
60_4_a	111	427	3.8
50_1p	117	273	2.3
50_3p	118	309	2.6
60_3	123	276	2.2
60_1	129	355	2.8
50_0b	132	374	2.8
36_5	139	373	2.7
50_3pp	149	273	1.8
36_5_p	160	281	1.8
60_2b	167	453	2.7
25_3	169		
36_1	177		
36_4	182	426	2.3
25_4	198	483	2.4
25_1	204		
50_0	210	519	2.5
36_6	277	618	2.2
50_0a	345	657	1.9

Goal 2: Analyze long lead kinematics/runs

- Optimize gain by adding cores in multithreading versus wait time
- Apply an energy (amplitude) threshold on the blocks (1 or 2x2 or 3x3),
- Better pulse identification algorithm (to avoid the systematic fit in the coinc region)
- fitting only relevant pulses in the wf (?)
- pre-select event for fitting

Goal 3: Systematic studies of the fitting

- Analyze some kinematics with 4 consecutive samples up as input (eg effect of the 4vs5 samples, especially on asymmetric pion decays)
- ???