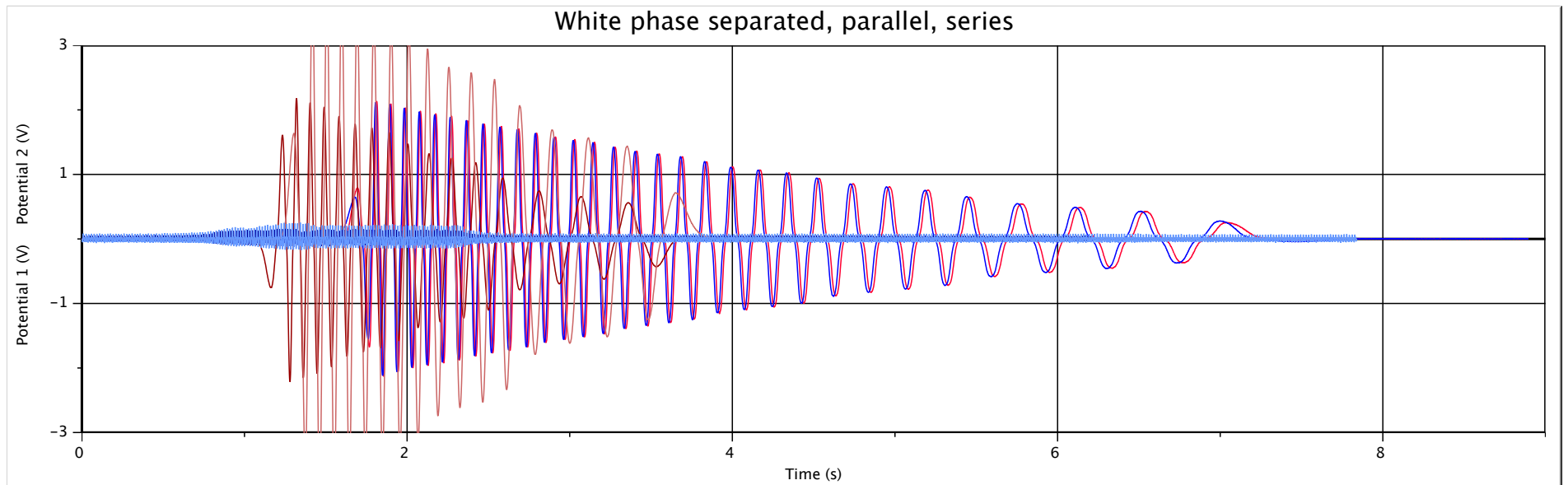


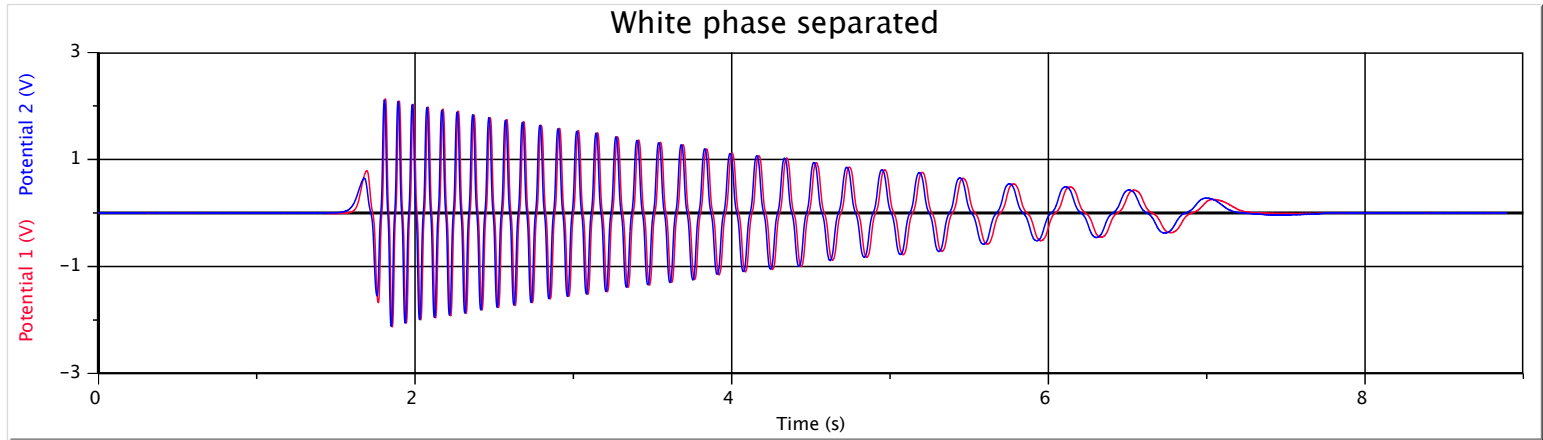
Testing of 150mm 8 pole Axial Flux PMA

Stator is 6 serpentine coils in 3 groups of two. Groups labeled White, Blue, Red

White coils tested at terminals 1(+), 2(-) and 3(-), 4(+)



	Latest		
	Time (s)	Pot 1 (V)	Pot 2 (V)
3461			
3462			
3463			
3464			
3465			
3466			
3467			
3468			
3469			
3470			
3471			
3472			
3473			
3474			
3475			
3476			
3477			
3478			
3479			



White Phase 2 coils recorded separately, open circuit V

measured across terminals 1,2,3,4,

1+ = V= 2- and

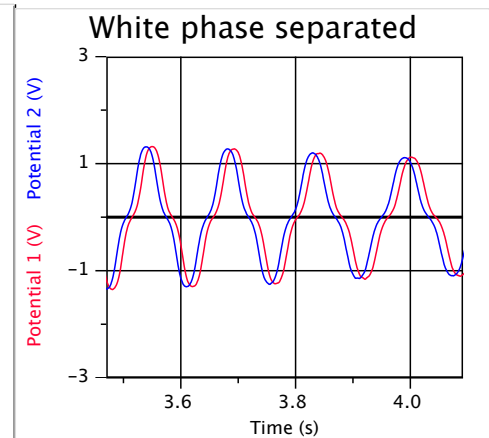
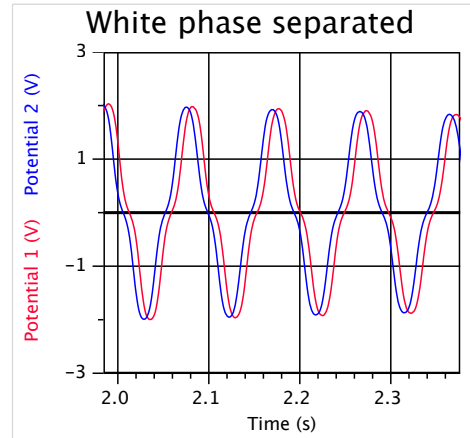
3+ = V= 4-

in 0.389 seconds per rotation and produced 2V
 $\text{rpm} = 60 / 0.389 = 154.242 \text{ rpm}$
 $\text{kV} = 2V / 154.242 = 0.0123 \text{ kV}$

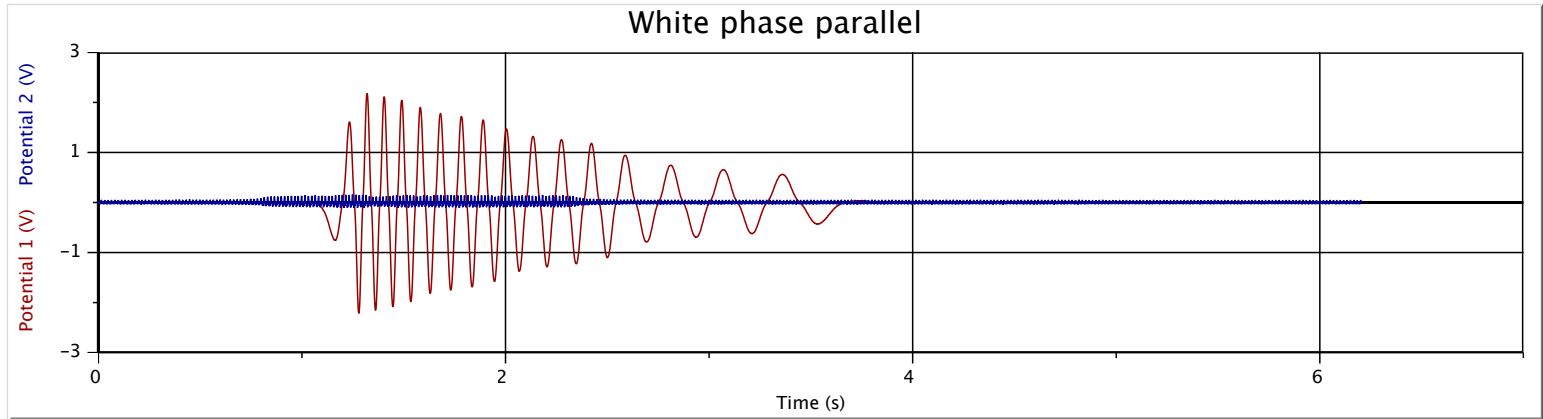
in 0.603 seconds per rotation produced 1.33V
 $\text{rpm} = 60 / 0.603 = 99.502$
 $\text{kV} = 1.33 / 99.502 = 0.0133$

Potential 1
0.014 V

Potential 2
0.063 V



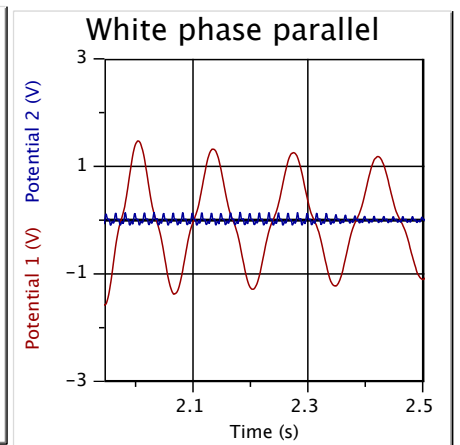
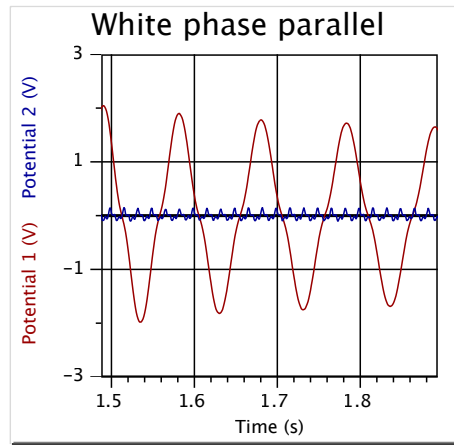
	Latest		
	Time (s)	Pot 1 (V)	Pot 2 (V)
1935			
1936			
1937			
1938			
1939			
1940			
1941			
1942			
1943			
1944			
1945			
1946			
1947			
1948			
1949			
1950			
1951			
1952			
1953			
1954			



White Phase 2 coils in parallel, open circuit V
 measured across terminals 1,2,3,4,
 1 and 4 combined and 2 and 3 combined

in 0.394 seconds per rotation and produced 1.9V
 $\text{rpm} = 60 / 0.394 = 152.284 \text{ rpm}$
 $\text{kV} = 2V / 152.284 = 0.031 \text{ kV}$

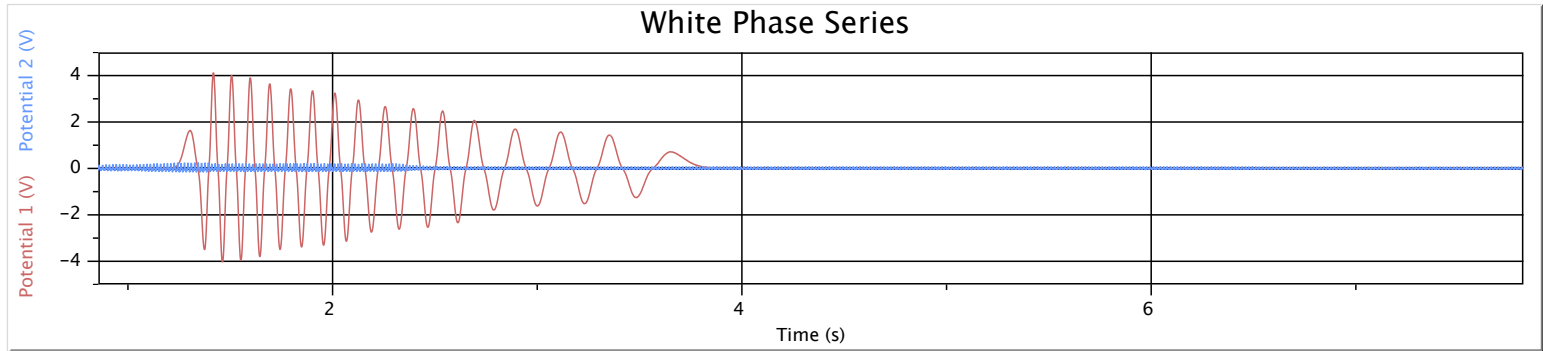
in 0.541 seconds per rotation produced 1.35V
 $\text{rpm} = 60 / 0.541 = 110.905 \text{ rpm}$
 $\text{kV} = 1.35 / 110.905 = 0.012.7$



Potential 1
 0.014 V

Potential 2
 0.063 V

	Latest		
	Time (s)	Pot 1 (V)	Pot 2 (V)
2106			
2107			
2108			
2109			
2110			
2111			
2112			
2113			
2114			
2115			
2116			
2117			
2118			
2119			
2120			
2121			
2122			
2123			
2124			
2125			



White Phase 2 coils in series, open circuit V

measured across terminals 1,2,3,4,

1 jumpered to 3 measured across 2- to 4+

in 0.377 seconds per rotation and produced 4V

$\text{rpm} = 60 / 0.377 = 159.15 \text{ rpm}$

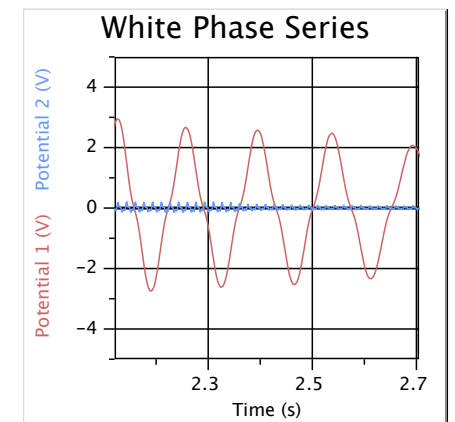
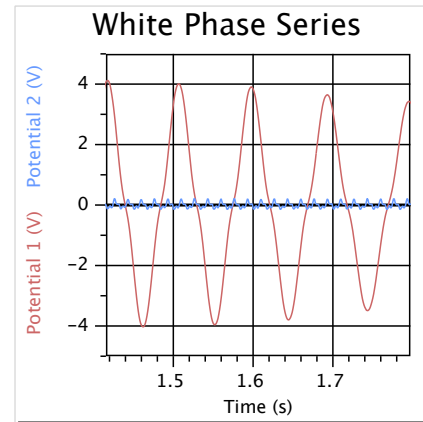
$\text{kV} = 4V / 159.15 = 0.025 \text{ kV}$

in 0.575 seconds per rotation produced 2.8V

$\text{rpm} = 60 / 0.575 = 104.34 \text{ rpm}$

$\text{kV} = 2.8 / 104.34 = 0.026 \text{ kV}$

Goal 12V at 50 rpm would mean $50/12 = 0.24 \text{ kV}$



Potential 1
0.014 V

Potential 2
0.063 V