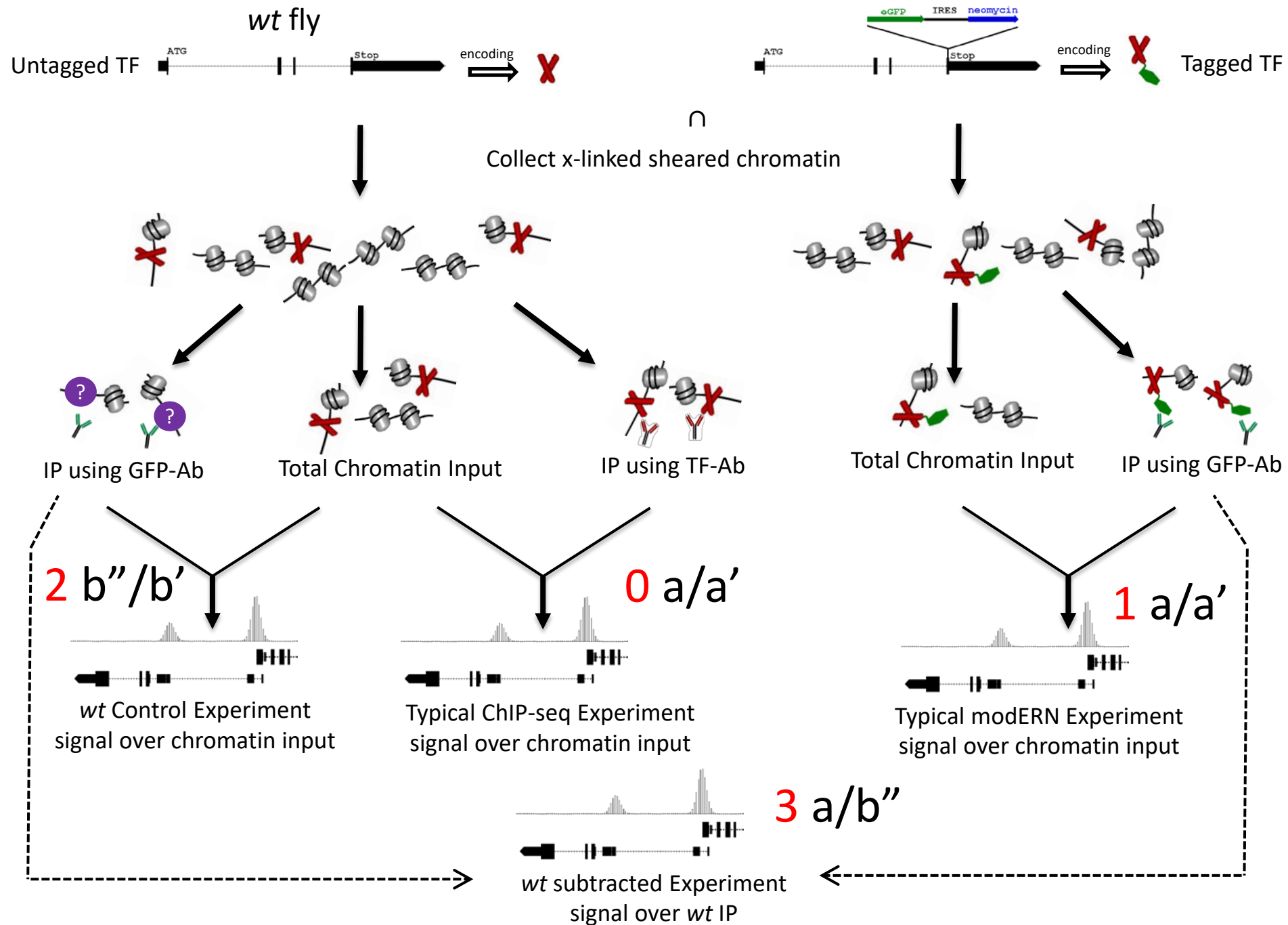
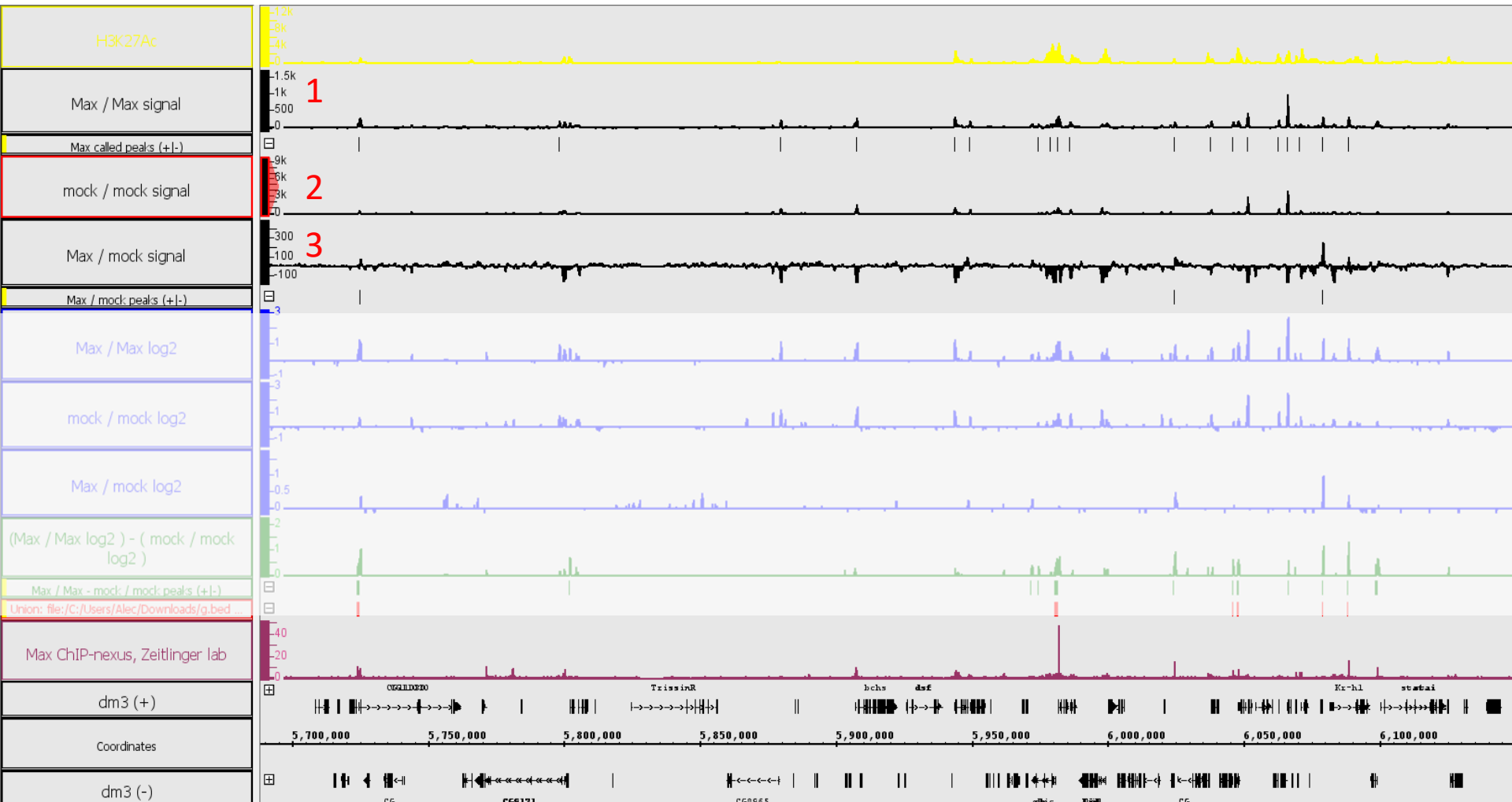


modERN

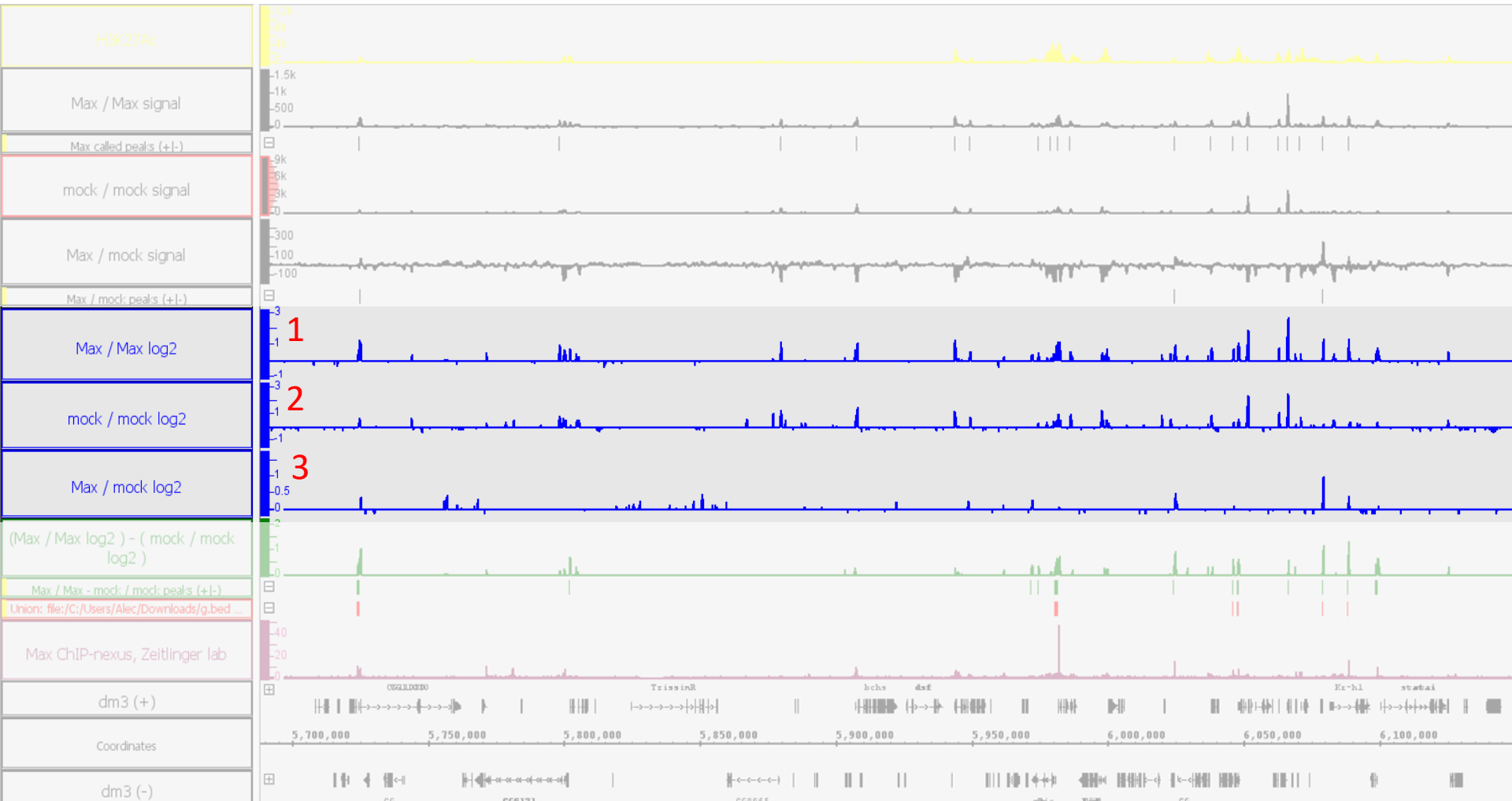
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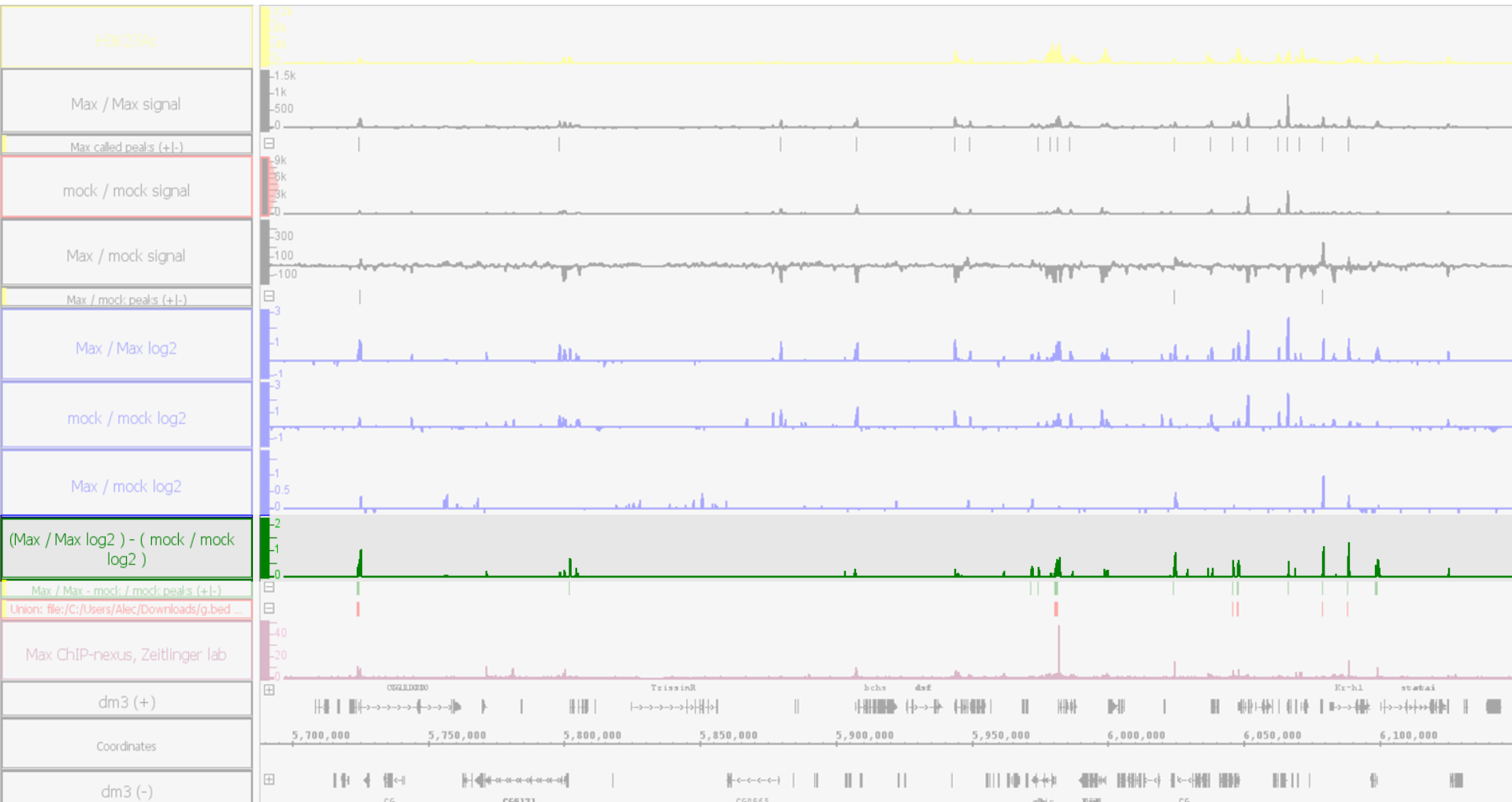
# Current processing



# spp log2 wigs



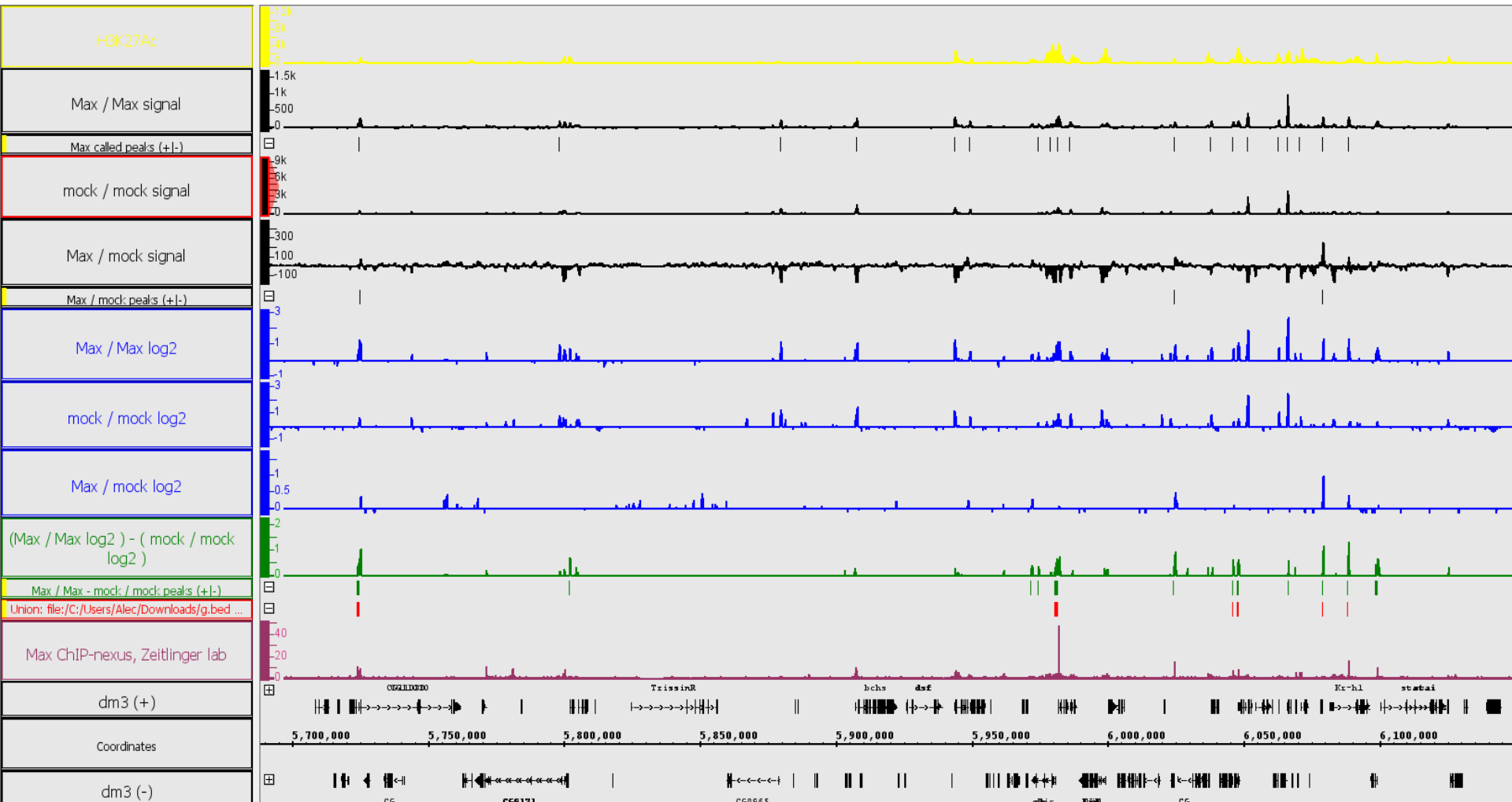
# Plot ( $\text{Max}_{\log_2 > 0} - \text{mock}_{\log_2}$ )




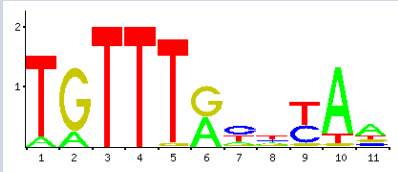

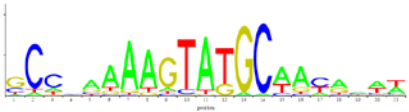

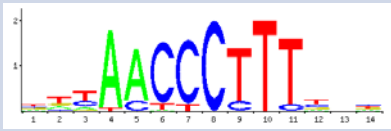


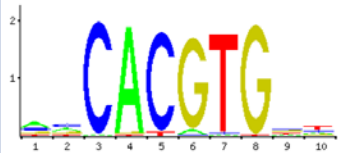
# Call Peaks from $\Delta\log_2$

- Took 100bp bins from wig files with  $\Delta\log_2$  signal  $> 0.23$ 
  - Should use a better method for threshold
- Squish these into regions and ignore single bin peak regions

# With $\Delta\log_2$ peaks


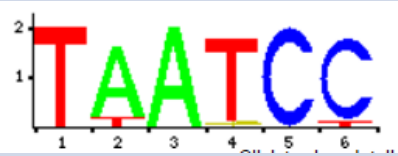

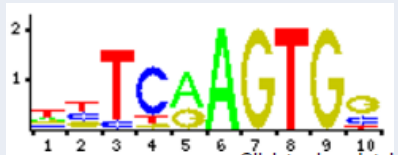

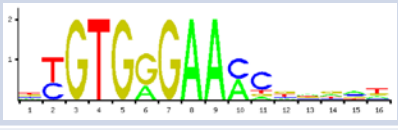
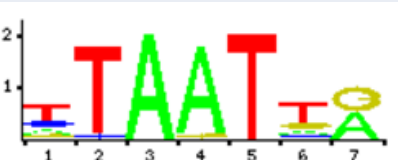
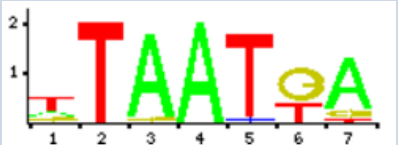


# Better a/b'' factors

	$\Delta\log_2$ <i>de novo</i> motif	Jaspar Motif	a/a' peaks	a/b'' peaks	Log2 method peaks	Peaks with motif
fkh	E=1.1e-017 		9305	5632	10599	TBD
su(Hw)	E=1.7e-051 		5475	2416	3055	TBD
Kr	E=1.4e-005  *		1920	1497	2276	TBD
odd	E=1.7e-005 	—	4319	506	2076	TBD
Max	E=1.1e-033 		4438	341	1383	TBD



# Problematic a/b'' factors

	$\Delta\log_2$ <i>de novo</i> motif	Jaspar Motif	a/a' peaks	a/b'' peaks	Log2 method peaks	Peaks with motif	
bcd	E=2.4e-007 		5787	145	1201	TBD	TBD
tin	E=9.5e-006 		5687	144	1427	TBD	TBD
su(H)	E=3.7e-032 		3570	84	291	132	
slou	None		2998	12	168	34	
btn	None		2146	12	39	1	9

# Summary

- Log2 yields more ‘correct’ motifs than a/b” method.
- Most E-values for incorrect motif’s > correct motifs

# Improvements

- Modify  $\Delta\log_2$  calculation
  - Negative mock  $\log_2$ , include or omit?
  - Arbitrary threshold, eg 2x? Use more sophisticated method?
- Need way to shrink width of peaks
  - Overlap new peaks with original peak calls and use summits
  - Use 500 bp window around max  $\Delta\log_2$
- Kr motif was predicted with best E-value by tweaking some of these parameters.