

UMBS-seq: Testing cfDNA

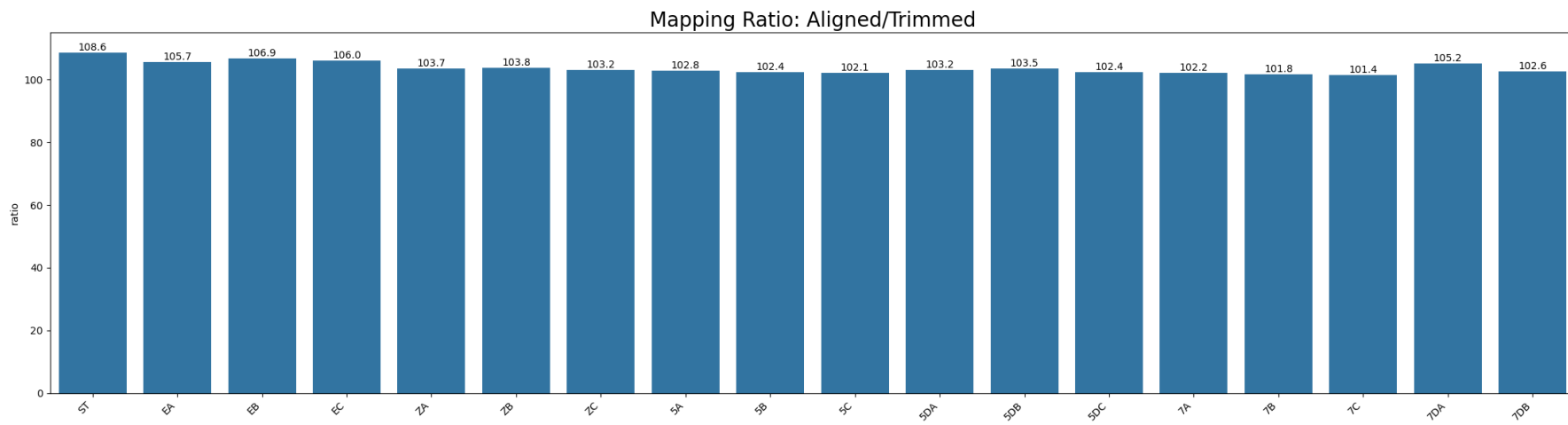
Investigator: Tanner Baldwin

Analysis: C. Bryan Daniels and Chang Ye

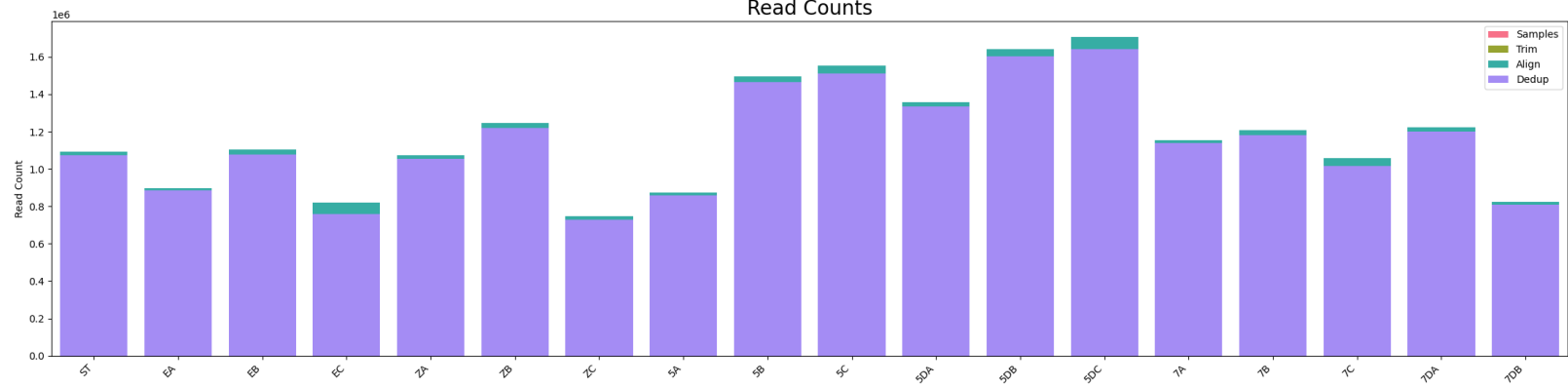
Supervisor: Qing Dai

September 8, 2024

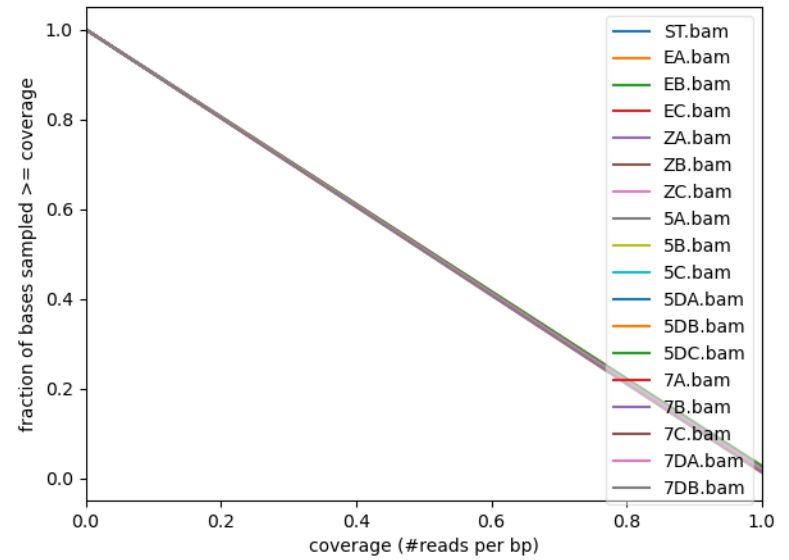
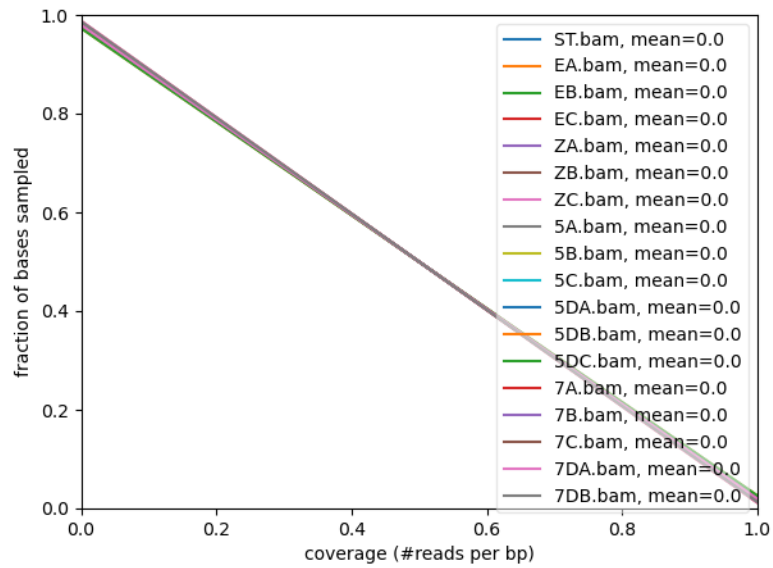
Sample ID	Recipe ID	Starting Material	Recipe	Time	Temperature
ST	-	0.5 ng	Only denaturing - no BS	-	-
EA	-	5 ng	EM-seq Kit Reagents	~4.5 hours	Varied
EB	-	0.5 ng	EM-seq Kit Reagents	~4.5 hours	Varied
EC	-	0.05 ng	EM-seq Kit Reagents	~4.5 hours	Varied
ZA	-	5 ng	Zymo DNA Methylation Gold Kit	10min/2.5hr	98 C / 64 C
ZB	-	0.5 ng	Zymo DNA Methylation Gold Kit	10min/2.5hr	98 C / 64 C
ZC	-	0.05 ng	Zymo DNA Methylation Gold Kit	10min/2.5hr	98 C / 64 C
5A	R8-4	5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	90 min	55 C
5B	R8-4	0.5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	90 min	55 C
5C	R8-4	0.05 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	90 min	55 C
5DA	R8-4	5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	90 min	55 C
5DB	R8-4	0.5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	90 min	55 C
5DC	R8-4	0.05 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	90 min	55 C
7A	R8-4	5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	20 min	75 C
7B	R8-4	0.5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	20 min	75 C
7C	R8-4	0.05 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	20 min	75 C
7DA	R8-4	5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	20 min	75 C
7DB	R8-4	0.5 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	20 min	75 C
7DC	R8-4	0.05 ng	R8-4 (300 µl 68% NH4BS + 6 µl 20M KOH)	20 min	75 C



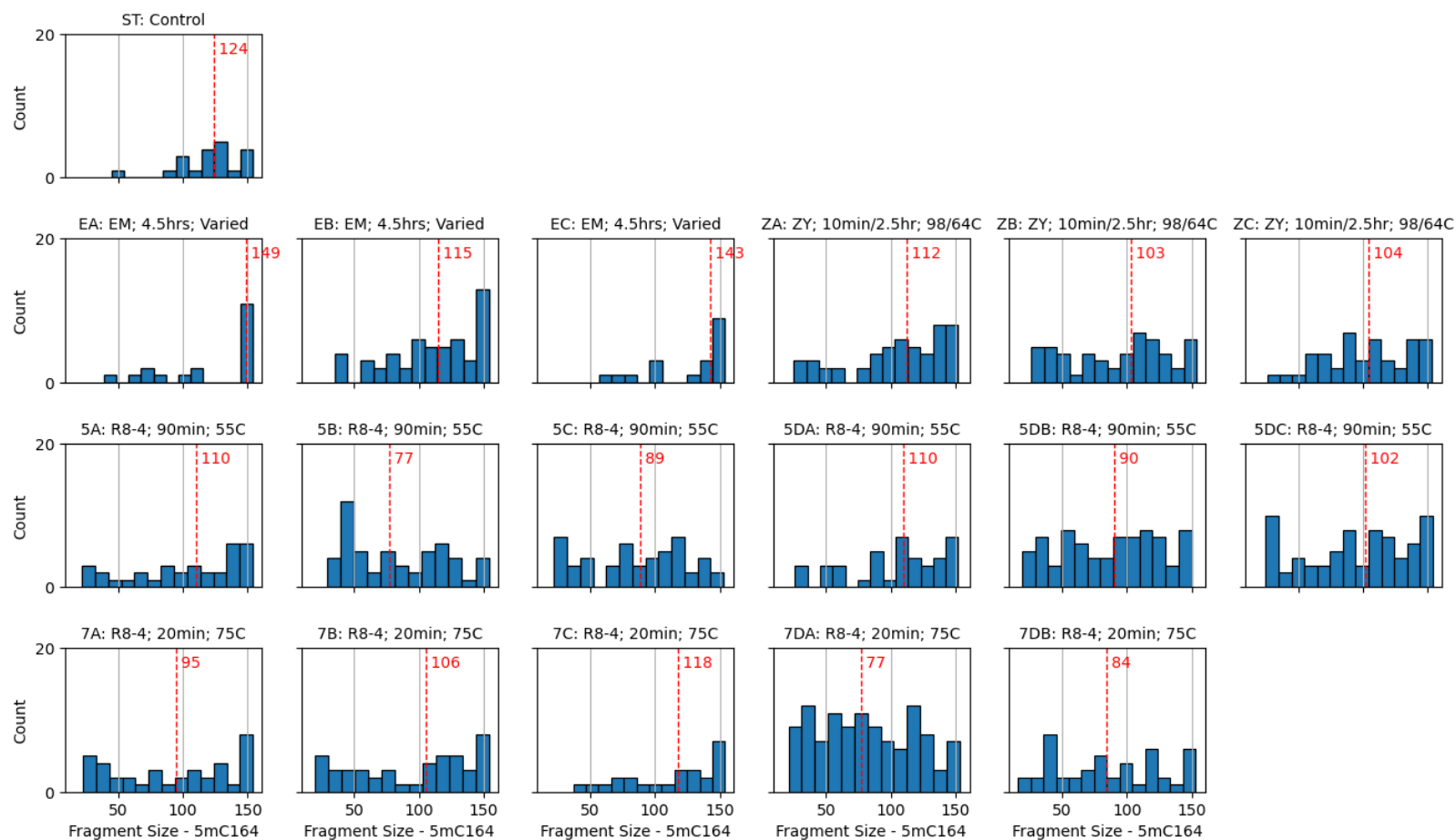
UBS-seq: Testing cfDNA with 164mer Model 08-08-2024



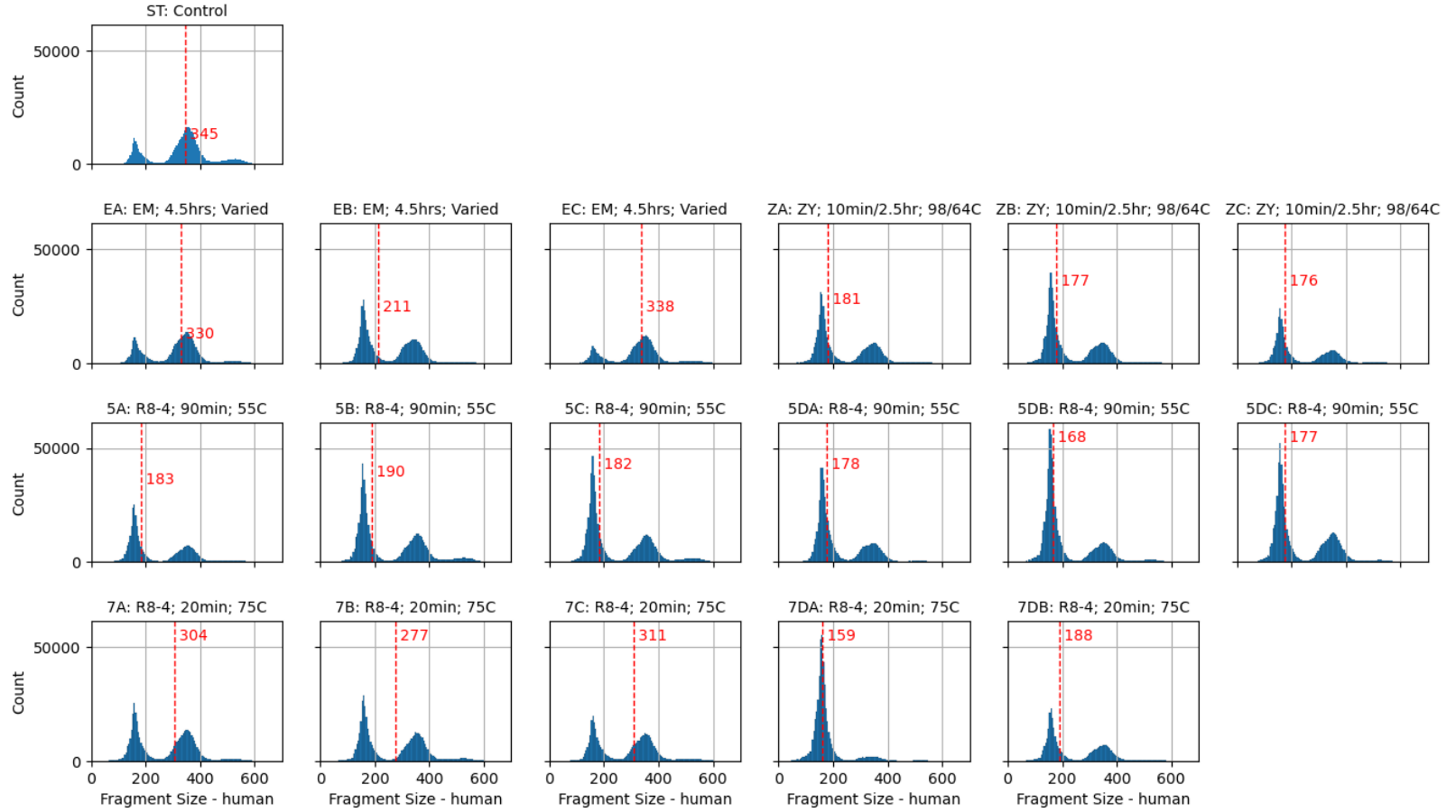
Read Coverage



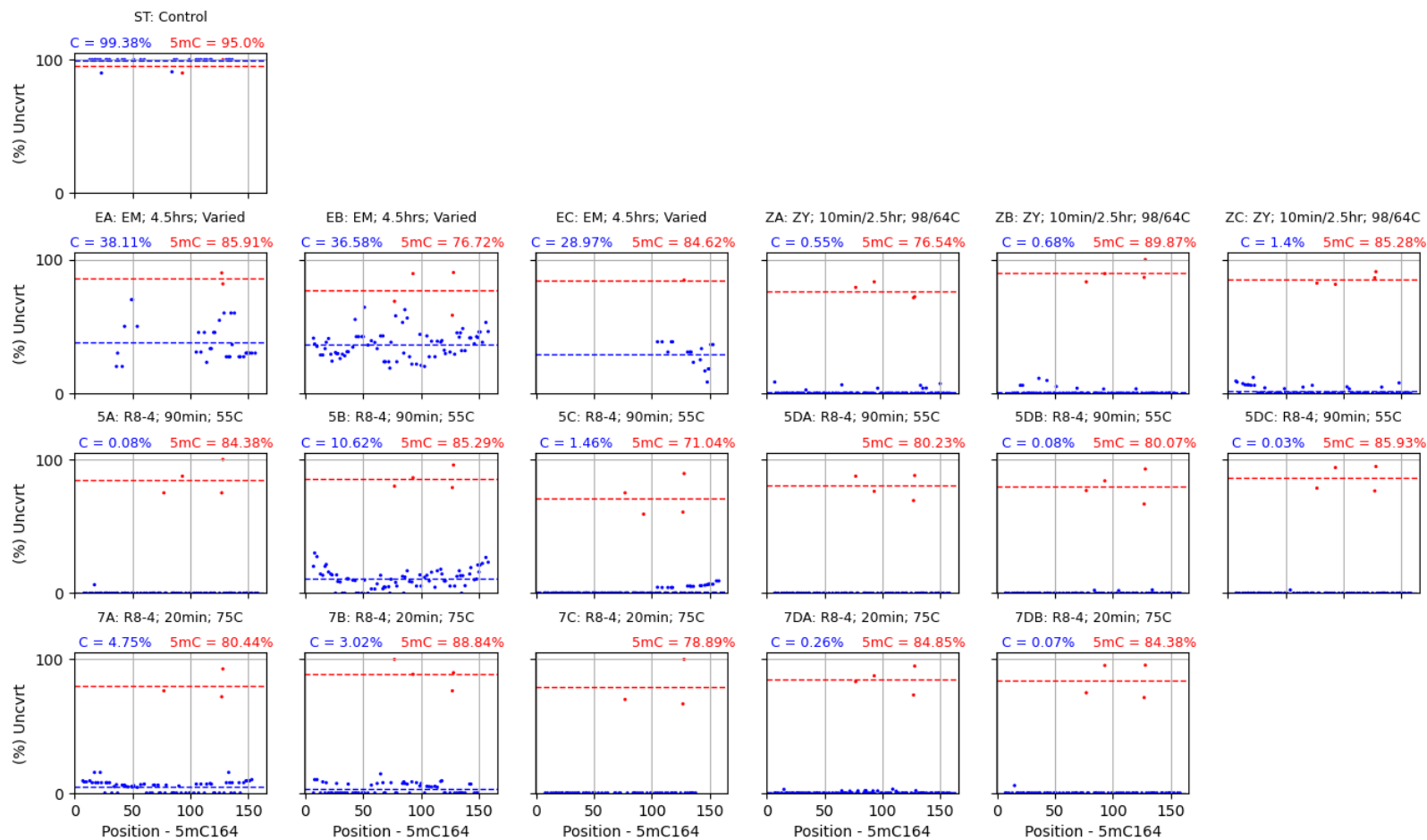
UBS-seq: Testing cfDNA with 164mer Model 08-08-2024
Read Length - 5mC164



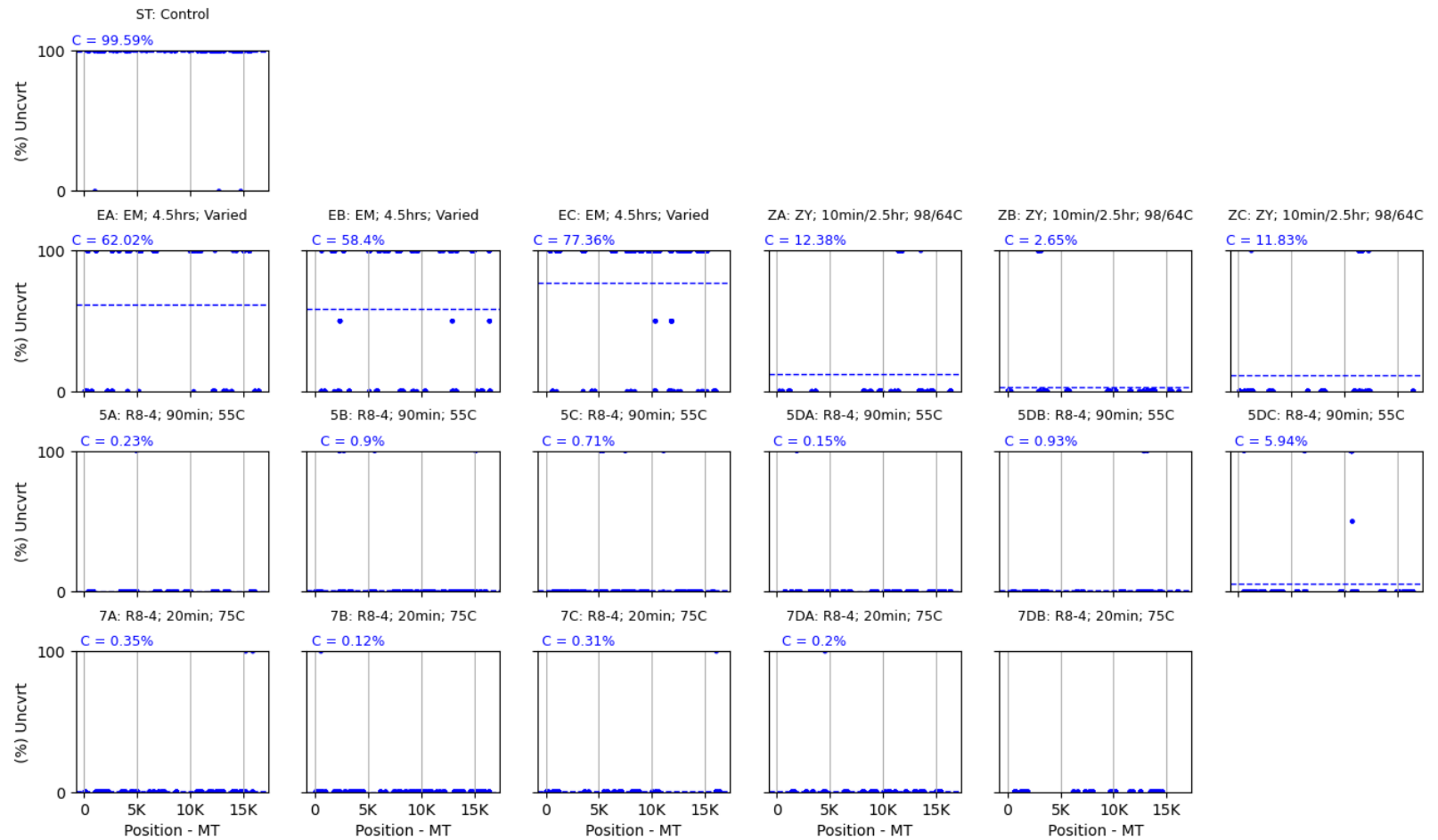
UBS-seq: Testing cfDNA with 164mer Model 08-08-2024
Read Length - human



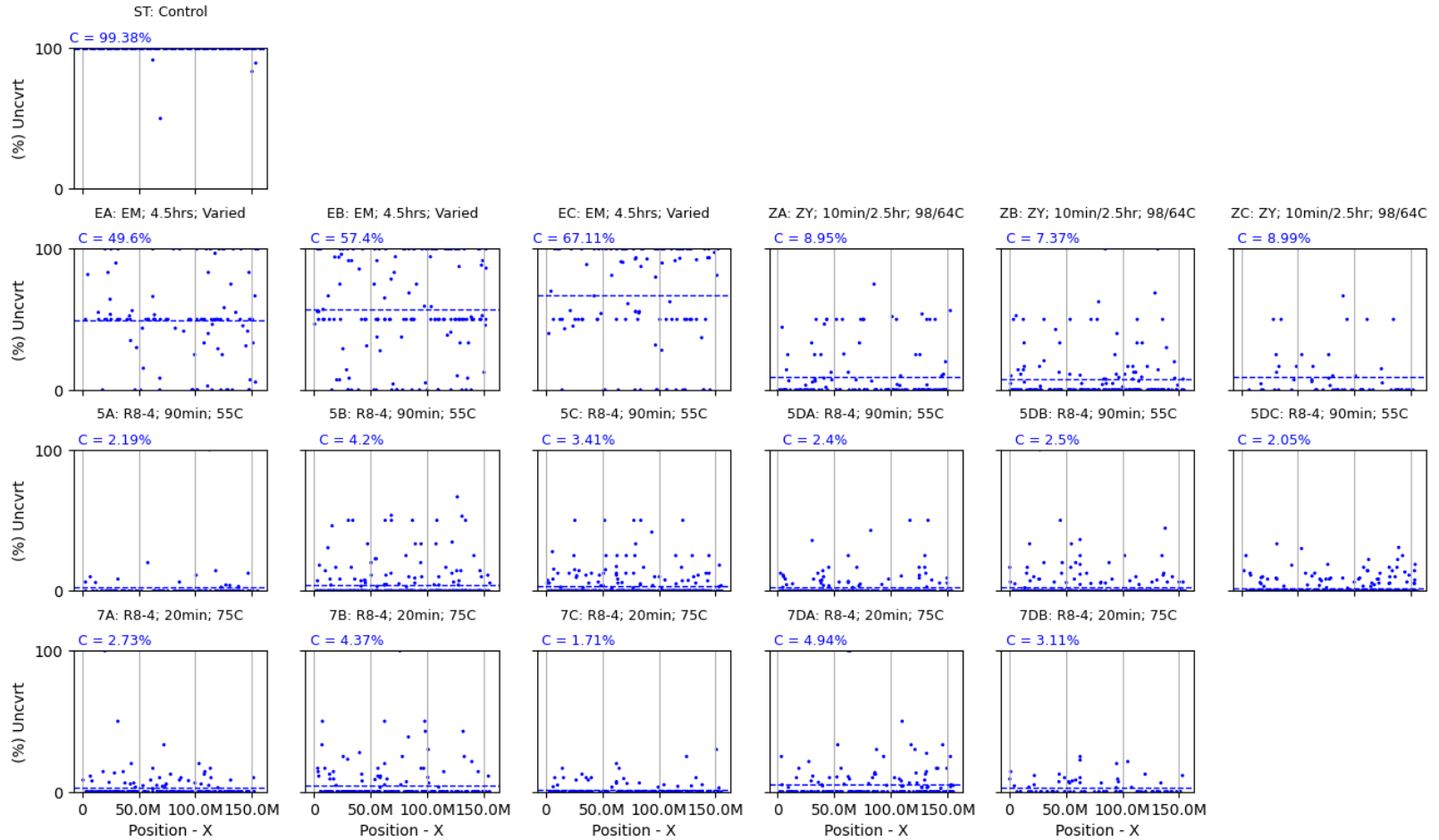
UBS-seq: Testing cfDNA with 164mer Model 08-08-2024
Unconverted Ratio
Un-Filtered
Depth ≥ 10 - 5mC164



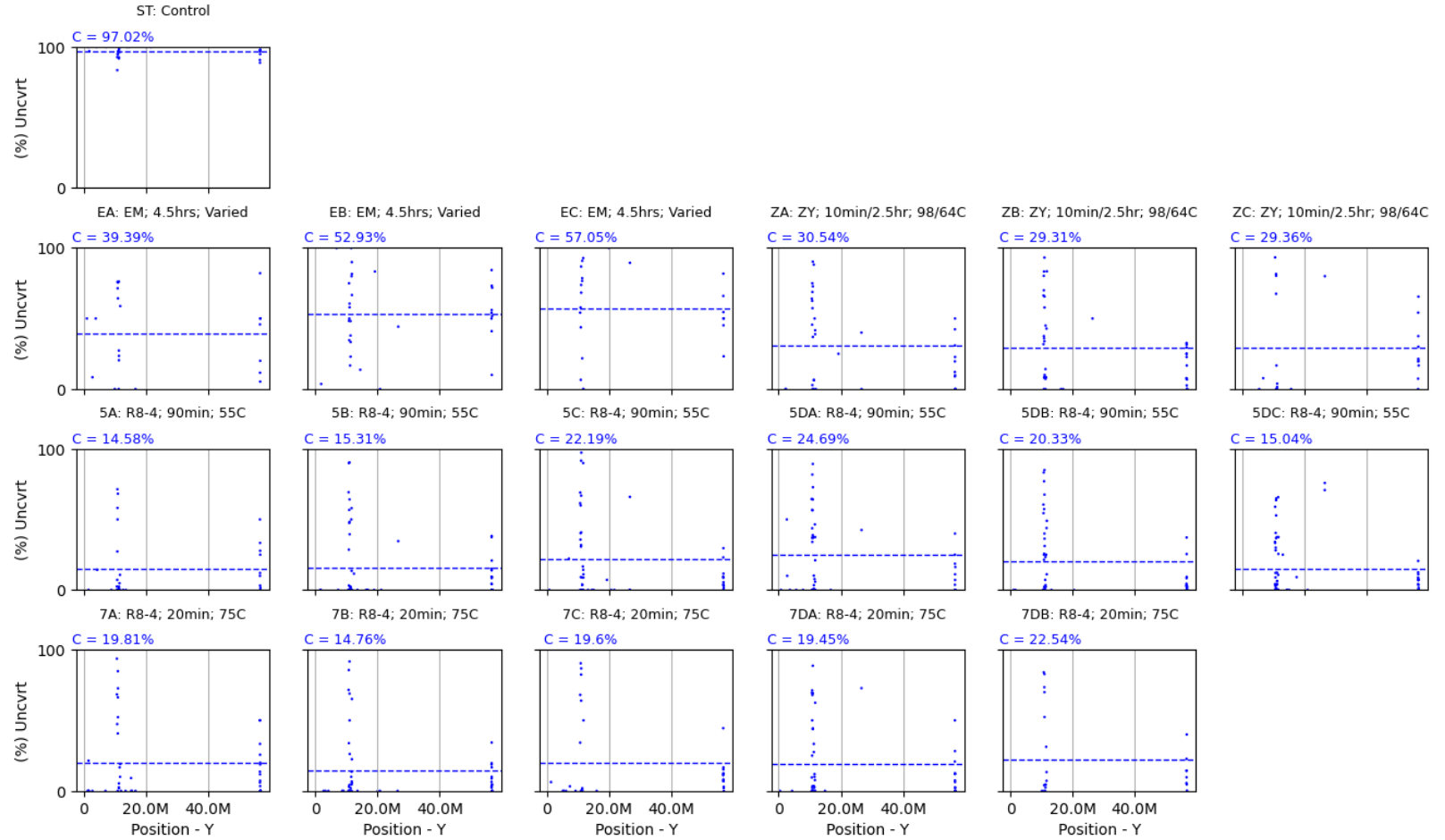
UBS-seq: Testing cfDNA with 164mer Model 08-08-2024
 Unconverted Ratio
 Human Mitochondria
 Depth ≥ 1 - MT



UBS-seq: Testing cfDNA with 164mer Model 08-08-2024
 Unconverted Ratio
 Human X Chromosome
 Depth ≥ 2 - X

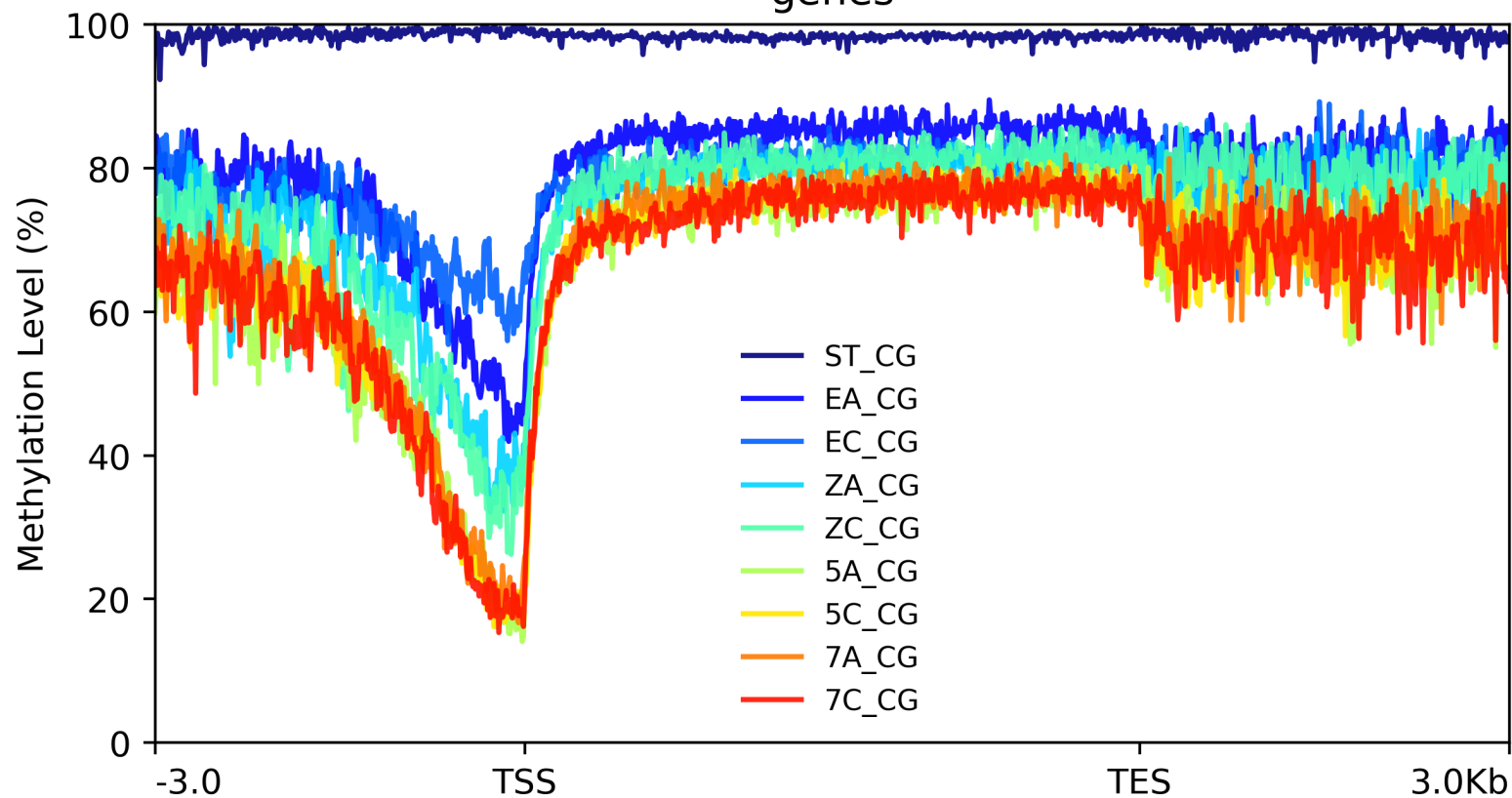


UBS-seq: Testing cfDNA with 164mer Model 08-08-2024
 Unconverted Ratio
 Human Y Chromosome
 Depth ≥ 2 - Y



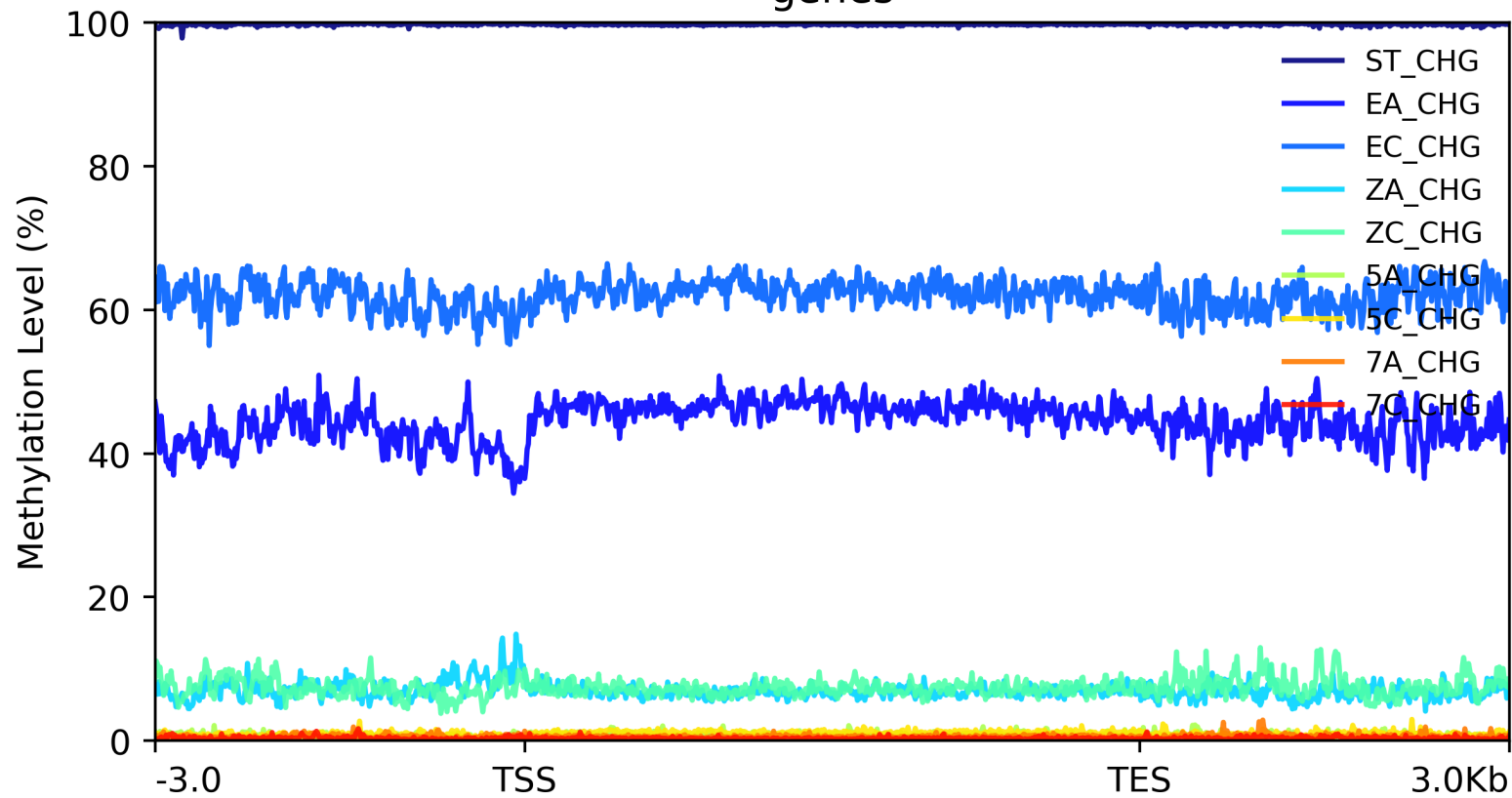
motif_groups - CpG Motif

genes



motif_groups - CHG Motif

genes



motif_groups - CHH Motif

genes

