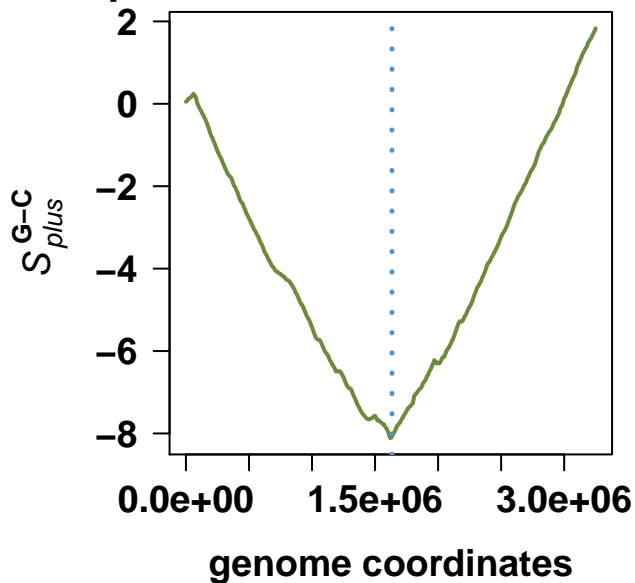
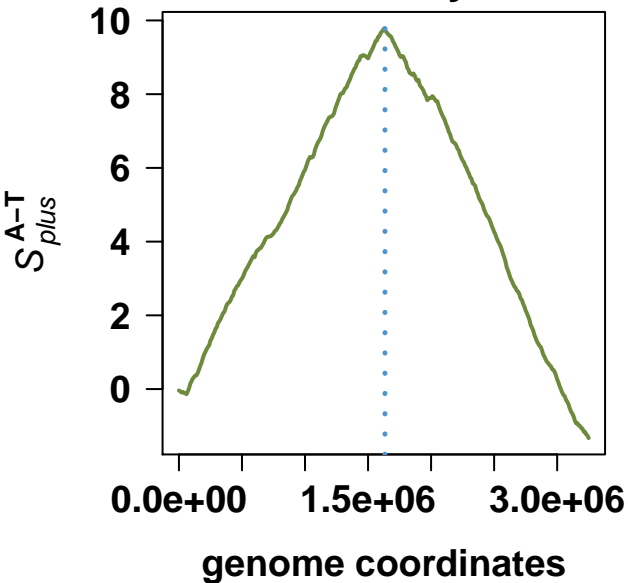
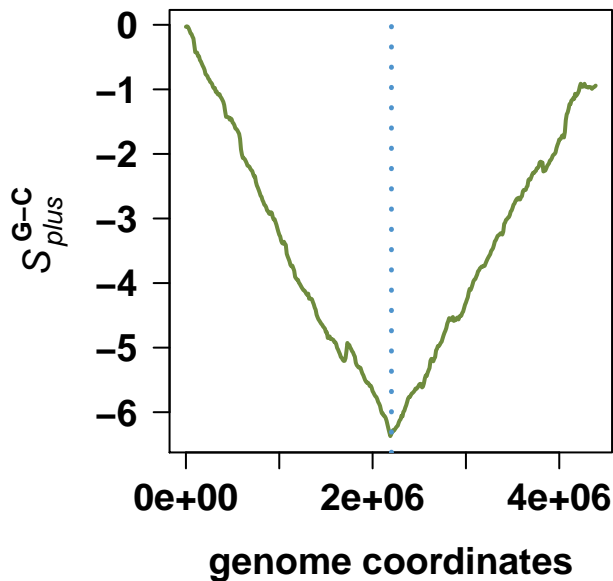
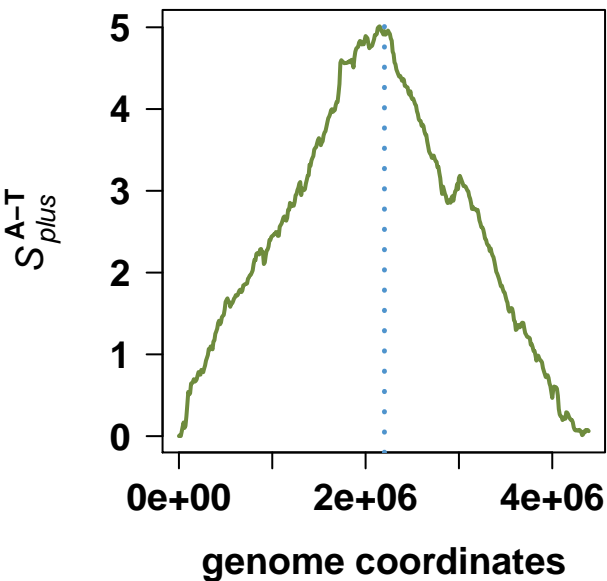


**Cumulative diagrams of mononucleotide skews ( $S_{\text{plus}}^{\text{A-T}}$  and  $S_{\text{plus}}^{\text{G-C}}$ ) along the plus (published) strand of all bacteria chromosomes in our collection. The vertical dotted blue line indicates the origin of replication (*ori*). The coordinates of all circular chromosomes are shifted so that the *ori* is placed at the middle of their published sequence.**

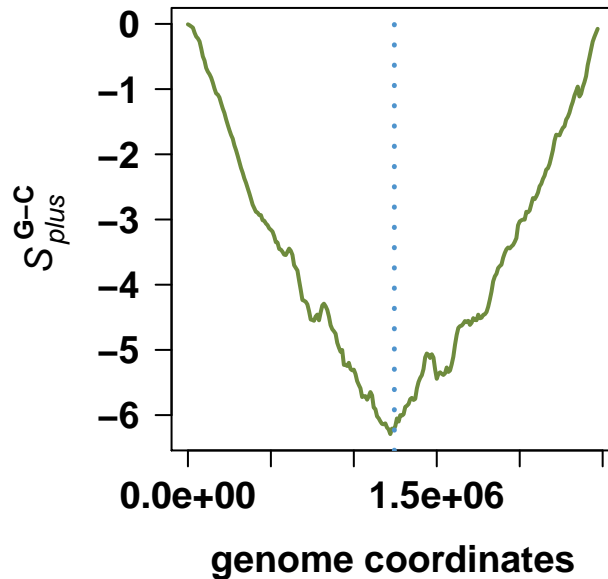
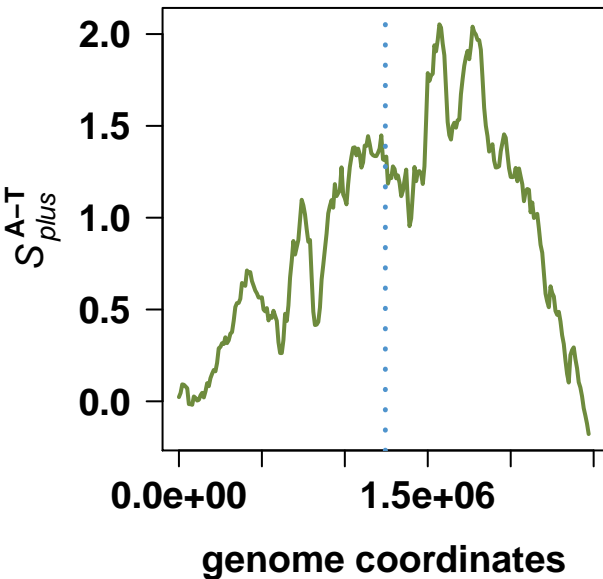
### Mycobacterium leprae TN



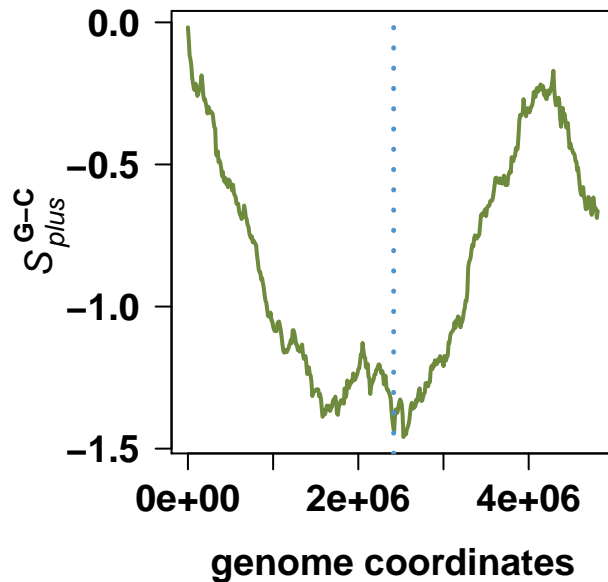
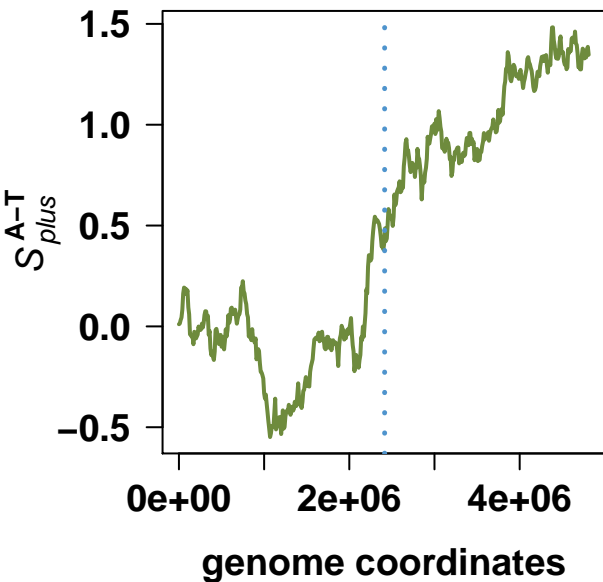
### Mycobacterium tuberculosis CDC1551



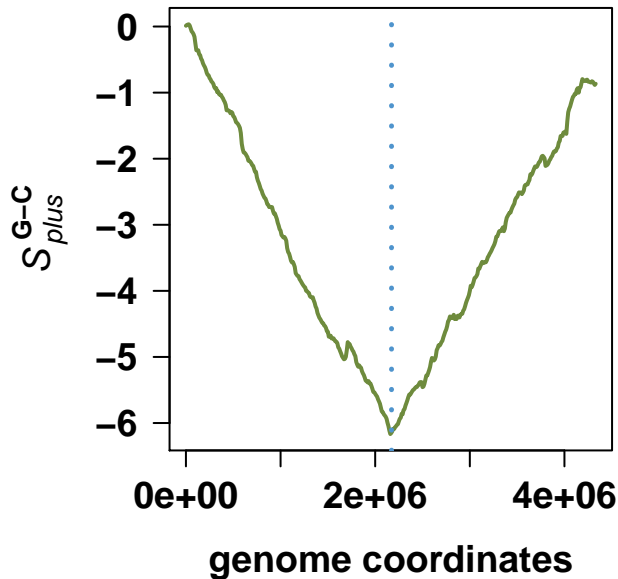
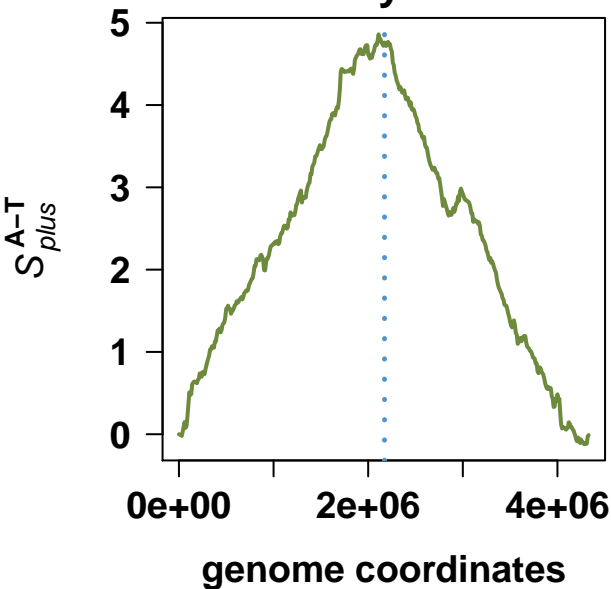
## Corynebacterium diphtheriae NCTC 13129



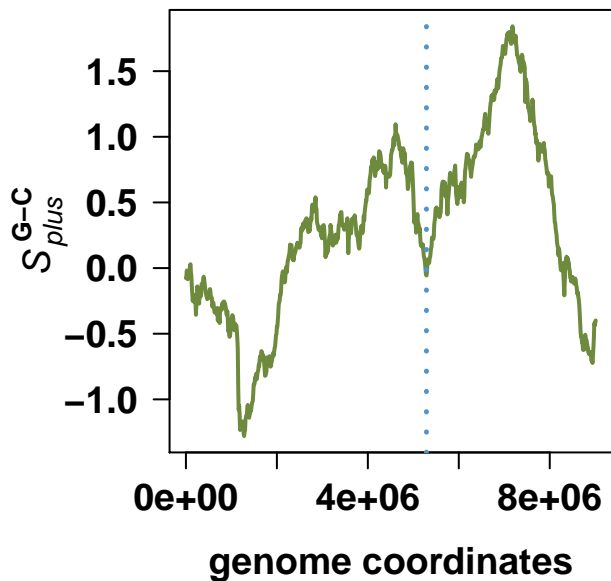
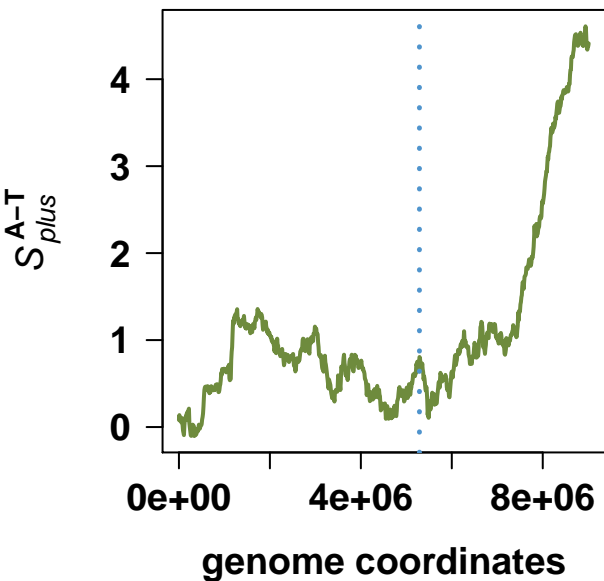
## Mycobacterium avium subsp. paratuberculosis K-10



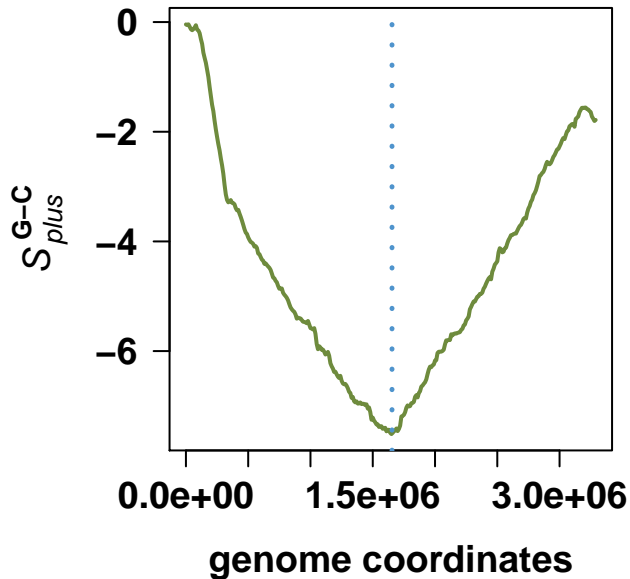
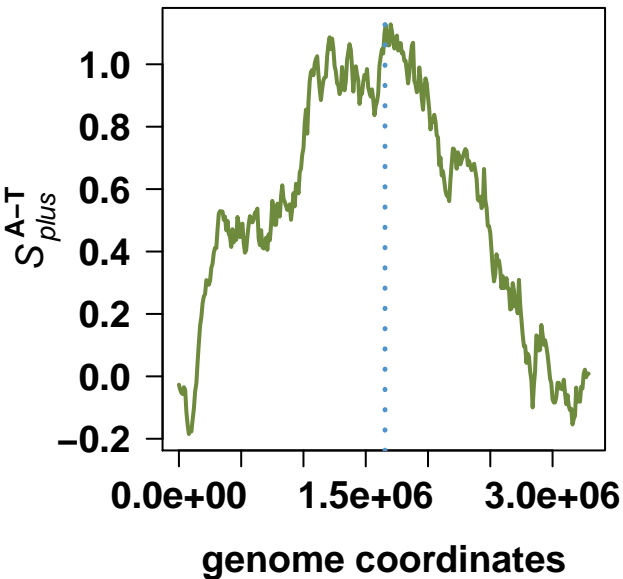
### **Mycobacterium bovis AF2122/97**



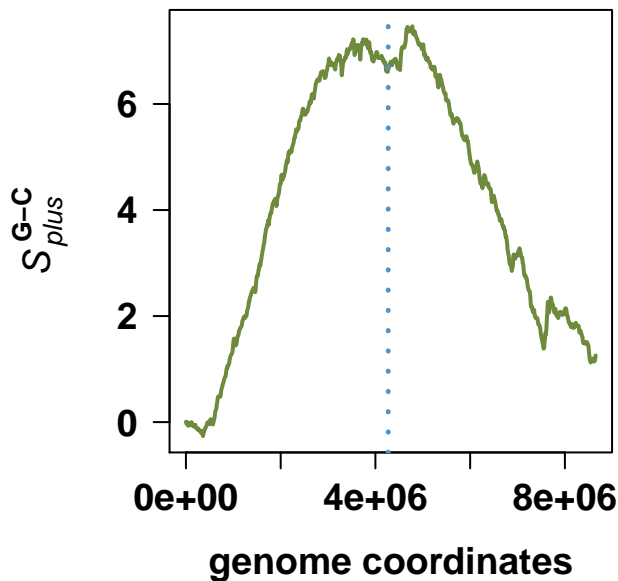
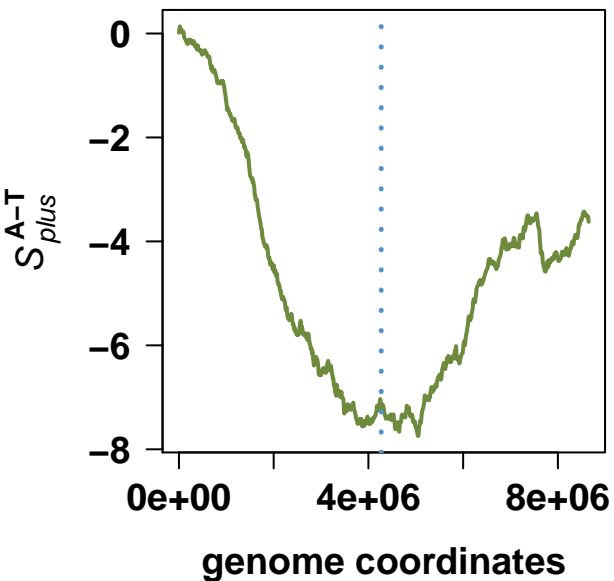
### **Streptomyces avermitilis MA-4680 = NBRC 14893**



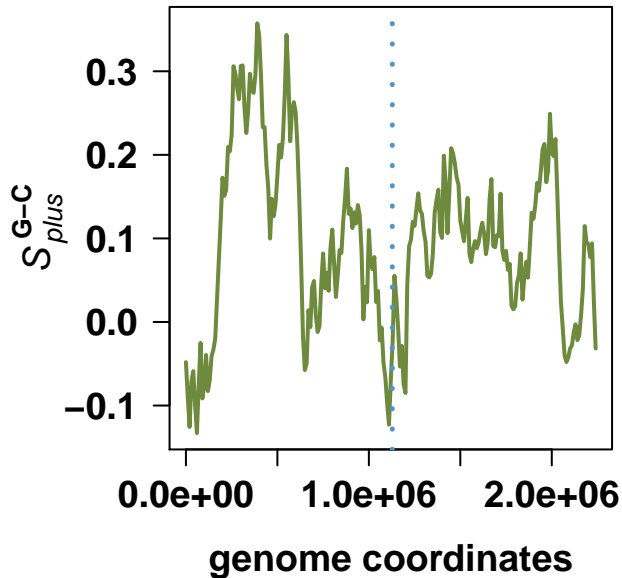
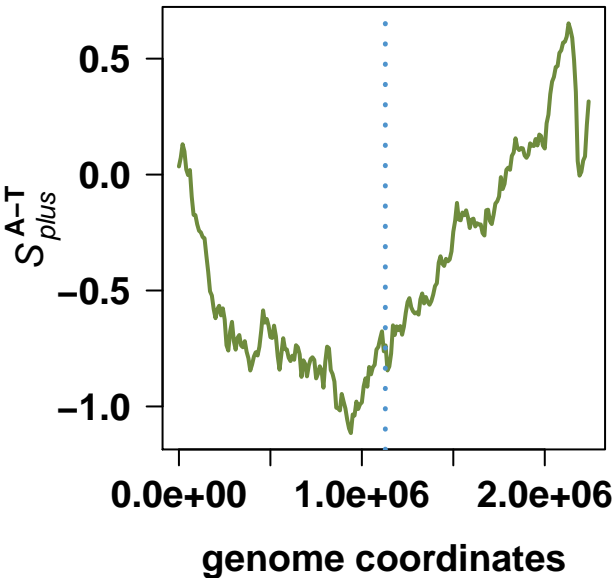
## Corynebacterium glutamicum ATCC 13032



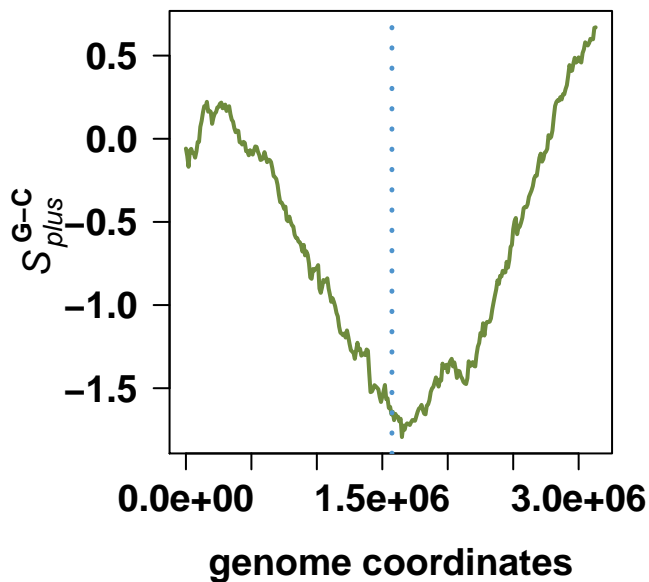
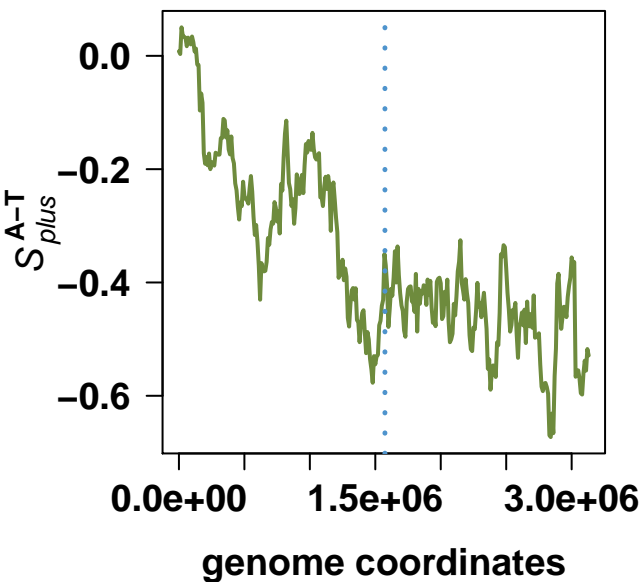
## Streptomyces coelicolor A3(2)



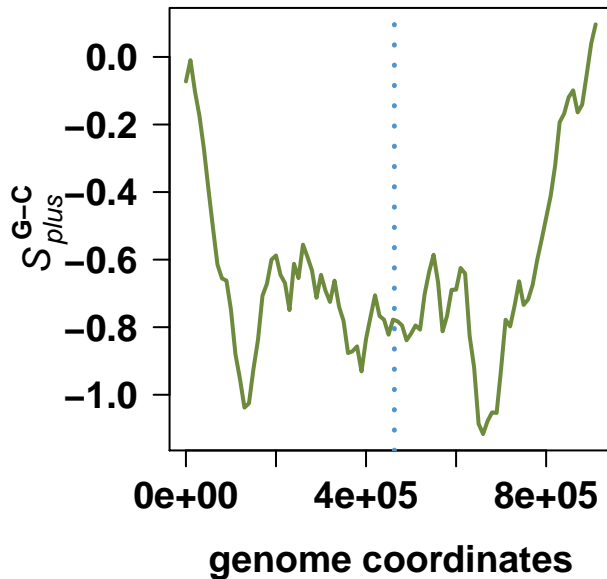
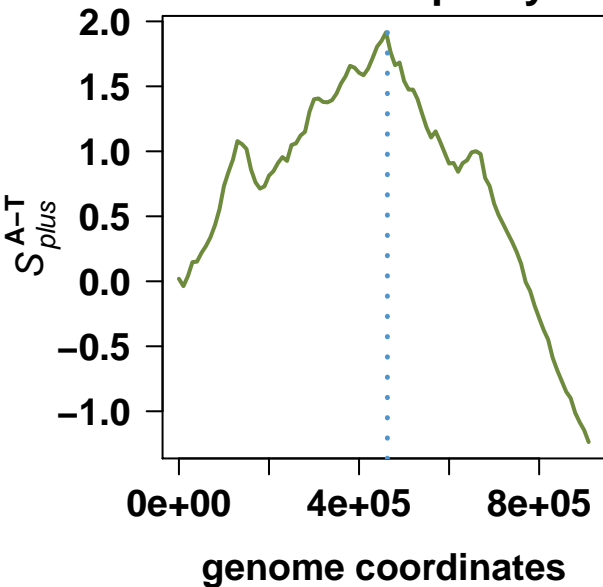
### **Bifidobacterium longum NCC2705**



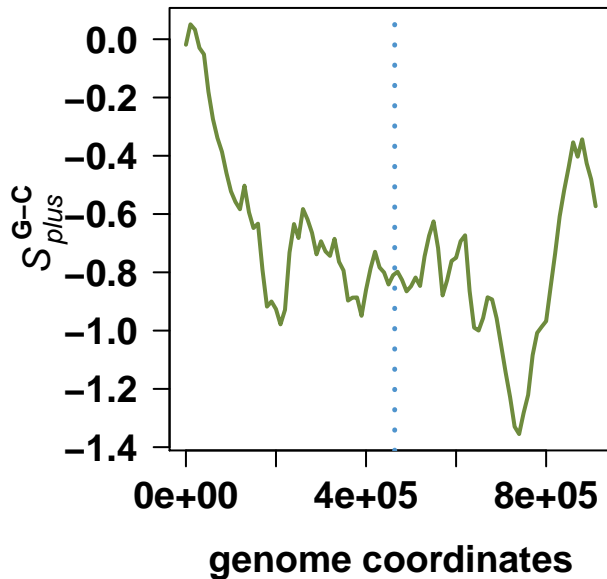
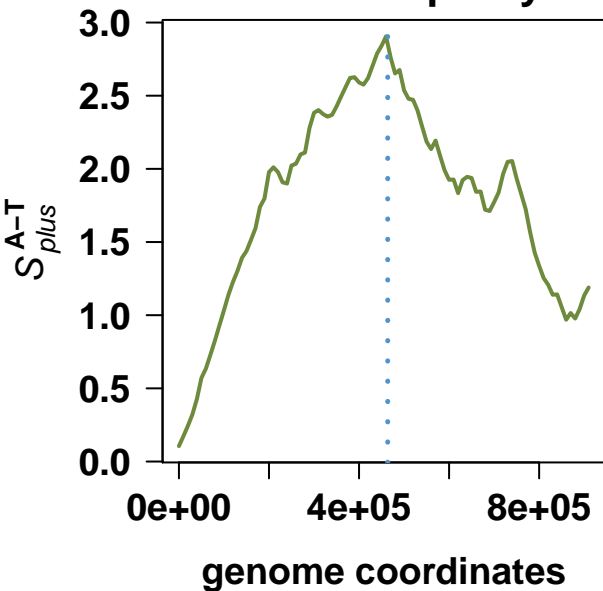
### **Corynebacterium efficiens YS-314**



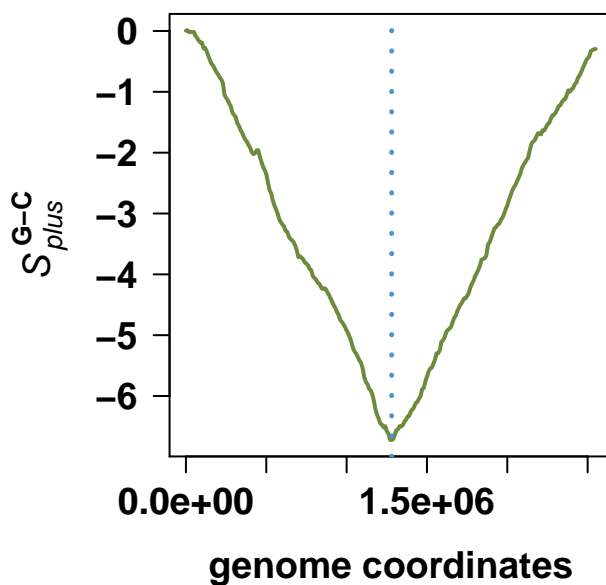
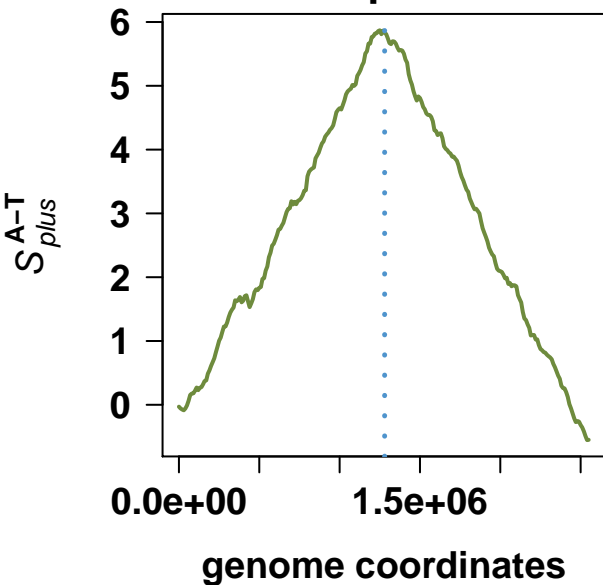
### *Tropheryma whipplei* TW08/27



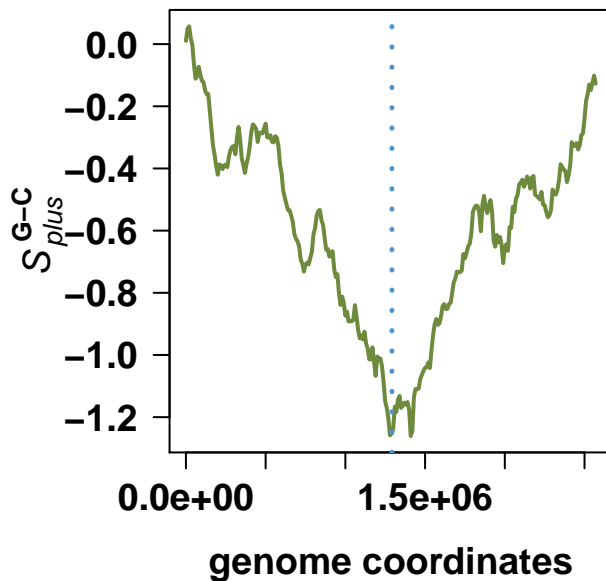
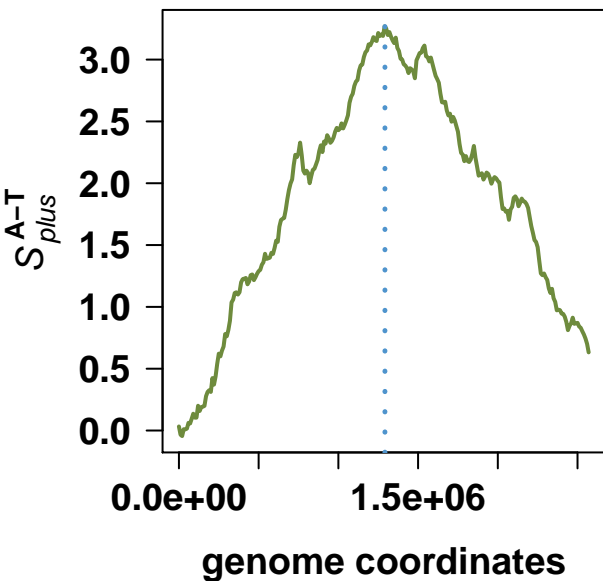
### *Tropheryma whipplei* str. Twist



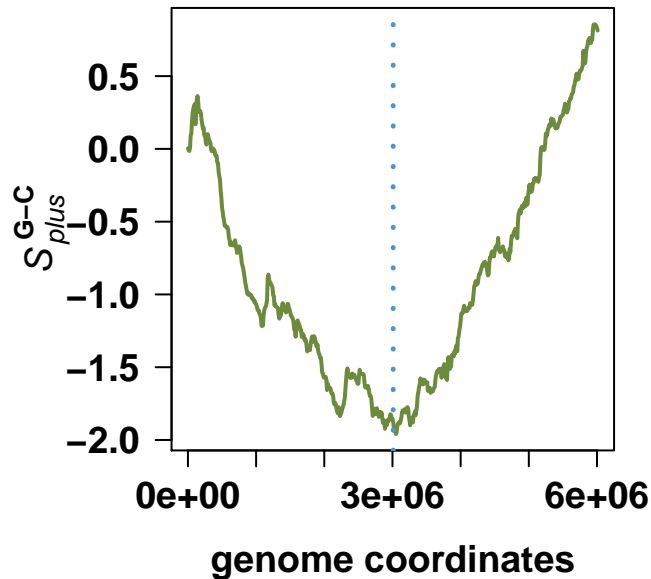
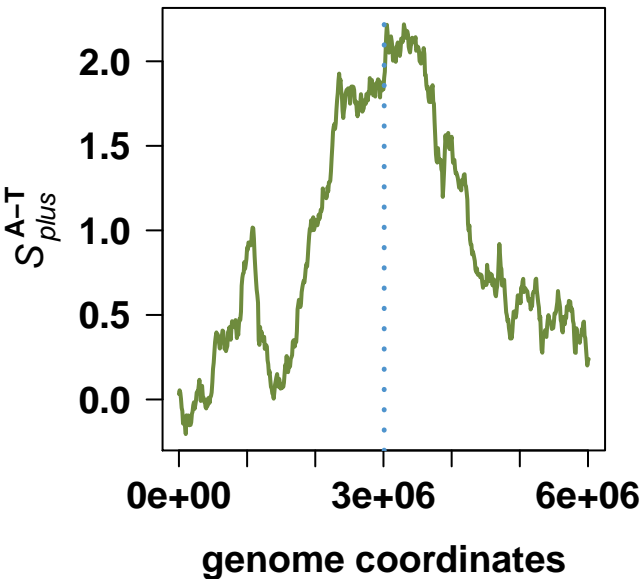
### Propionibacterium acnes KPA171202



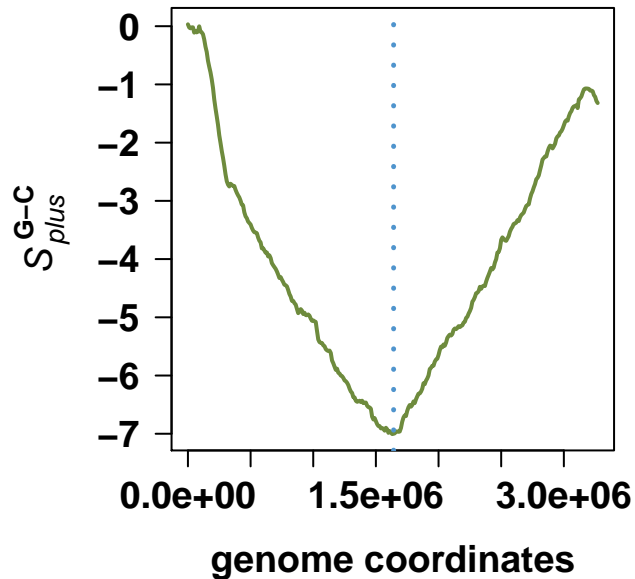
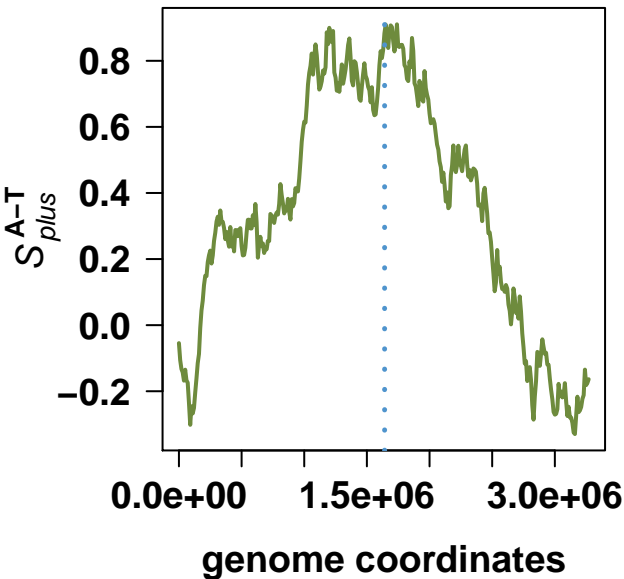
### Leifsonia xyli subsp. xyli str. CTCB07



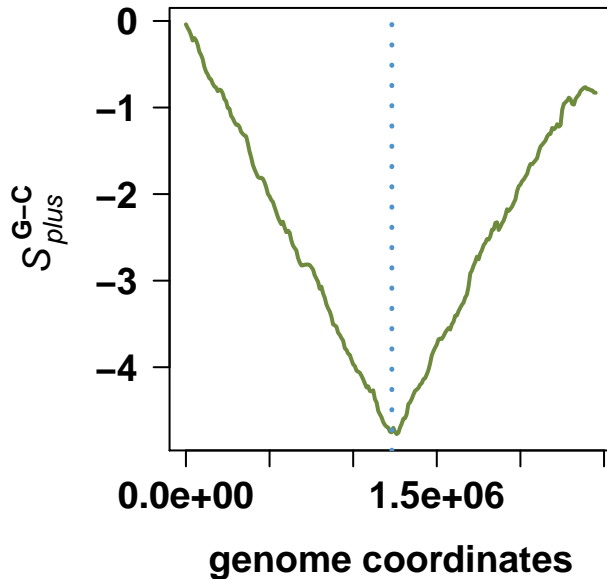
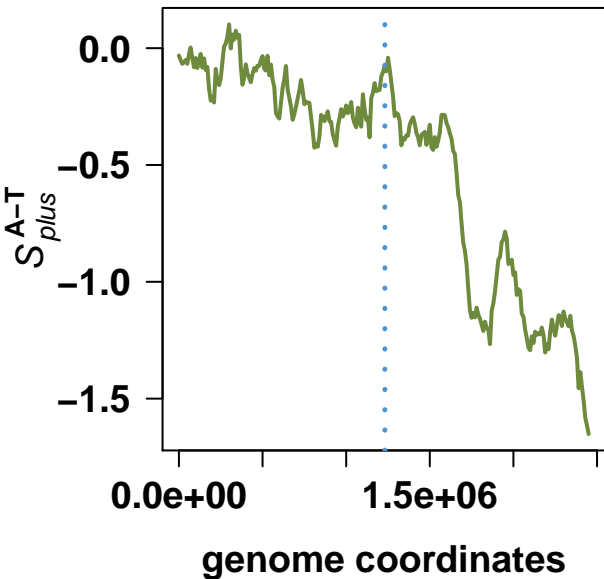
## *Nocardia farcinica* IFM 10152



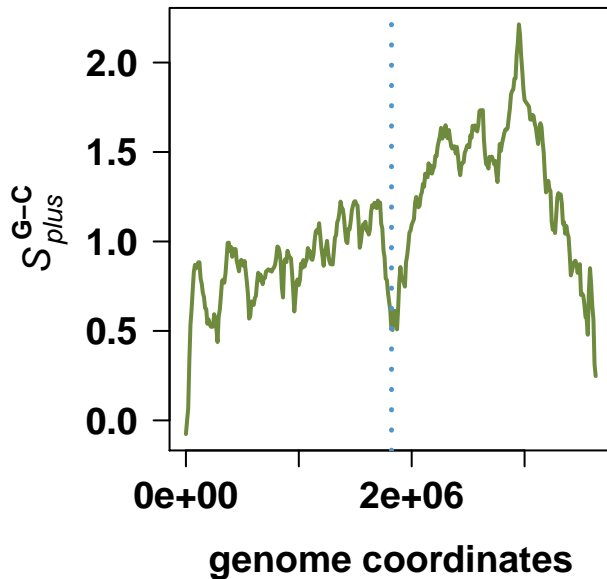
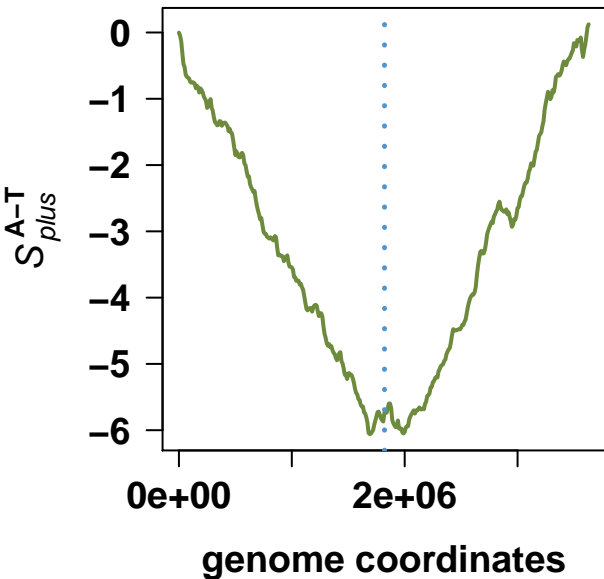
## *Corynebacterium glutamicum* ATCC 13032



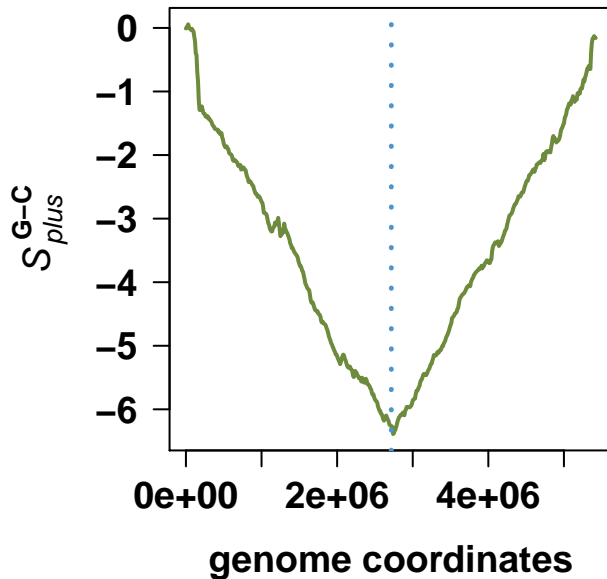
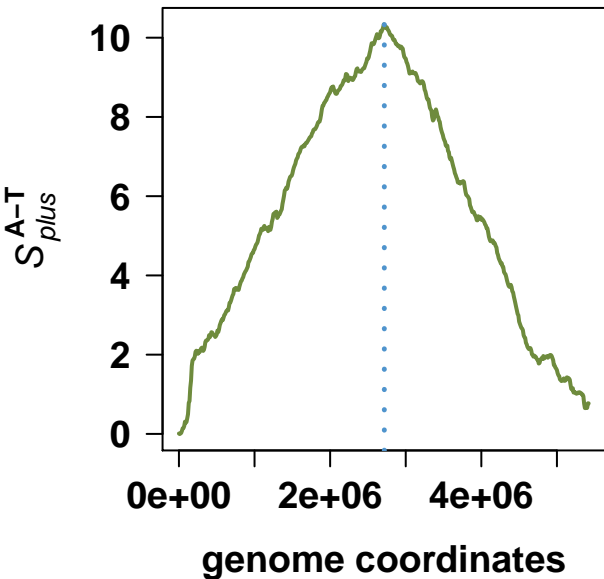
## Corynebacterium jeikeium K411



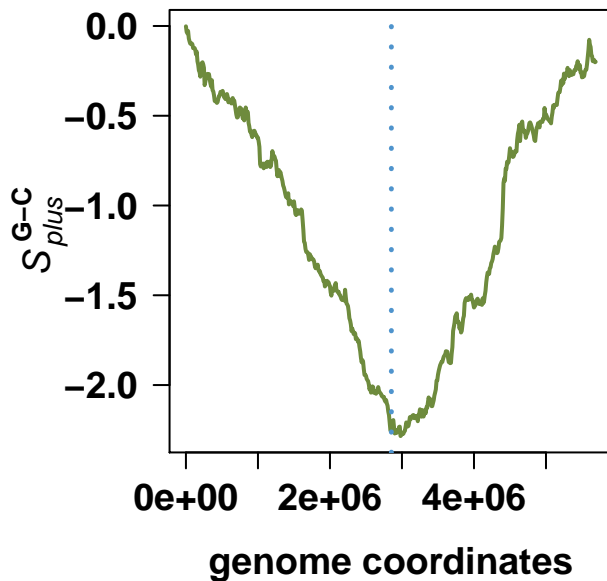
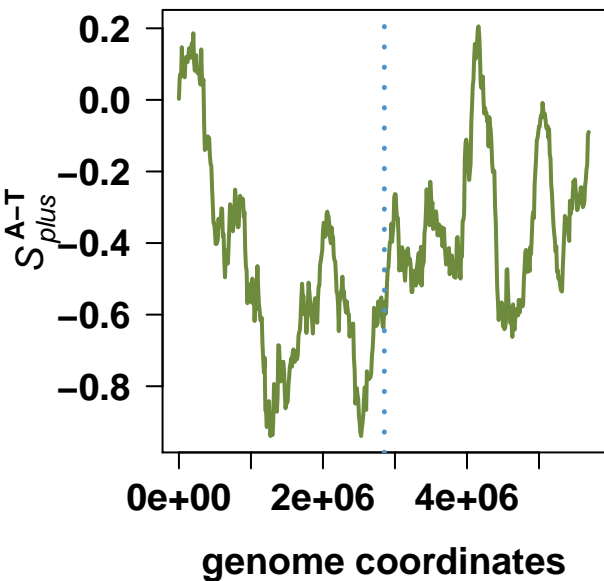
## Thermobifida fusca YX



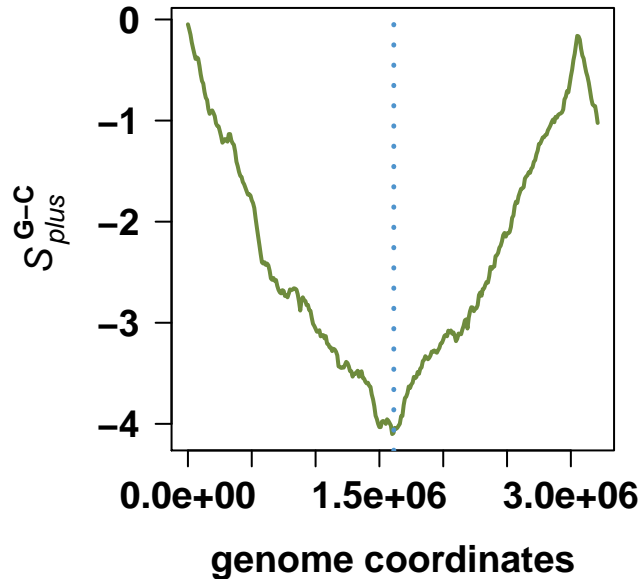
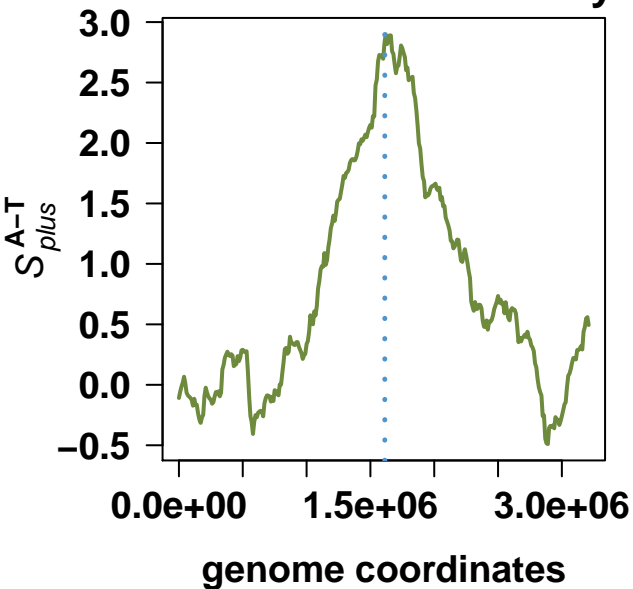
### Frankia sp. Ccl3



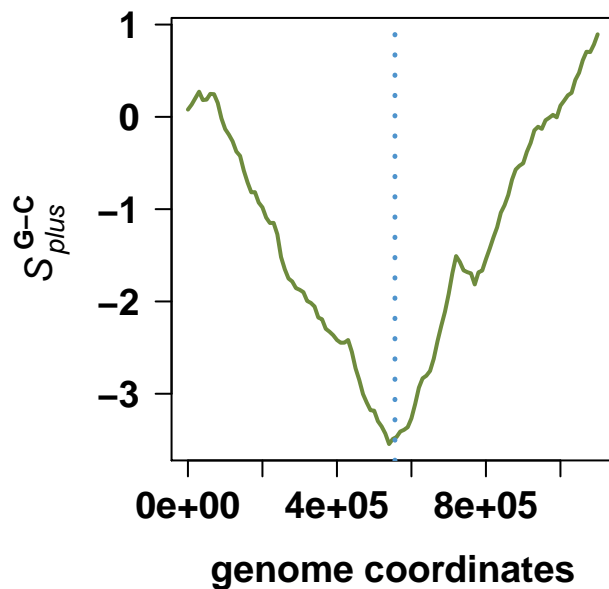
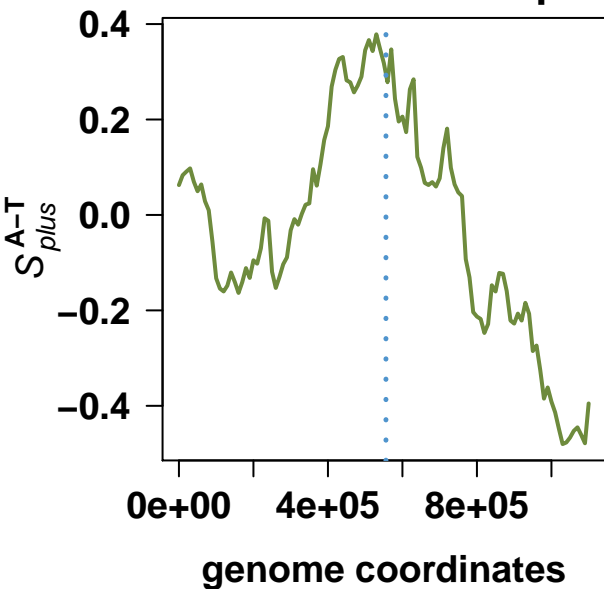
### Mycobacterium sp. MCS



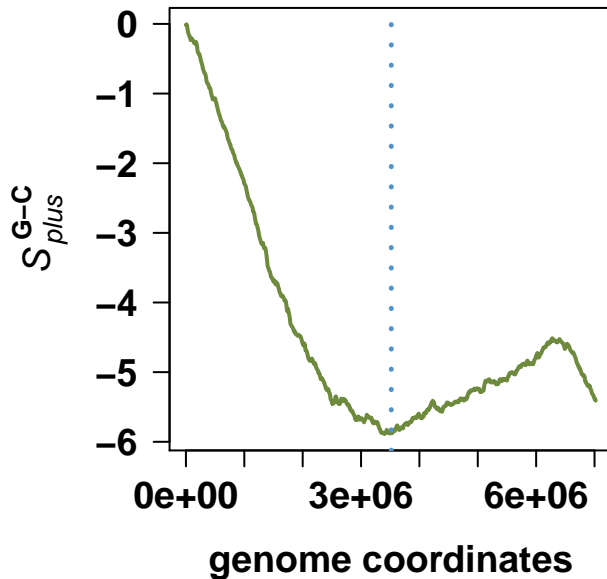
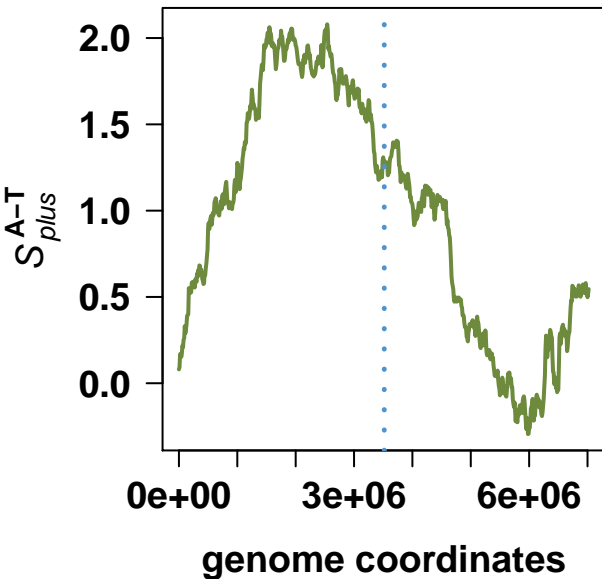
### *Rubrobacter xylanophilus* DSM 9941



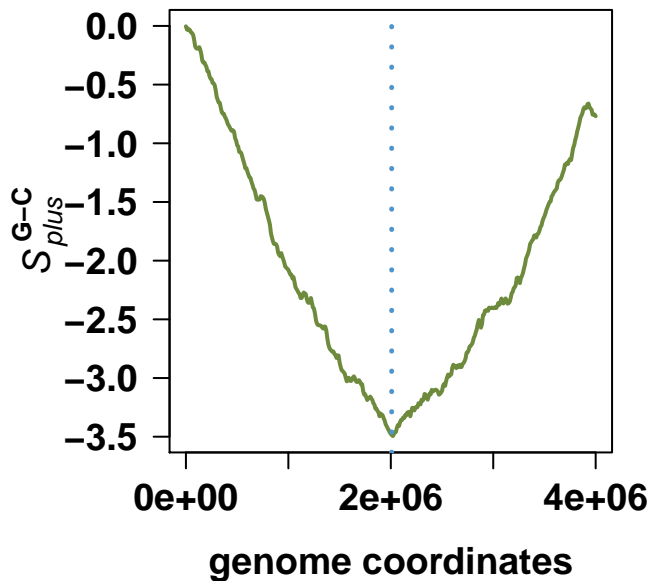
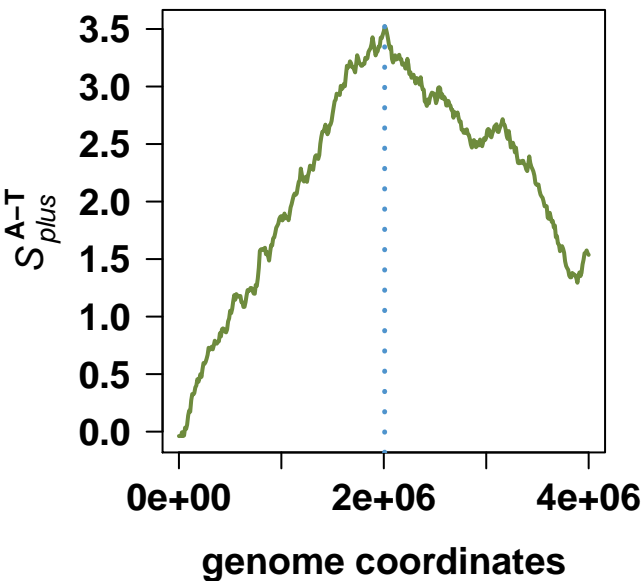
### *Rickettsia prowazekii* str. Madrid E



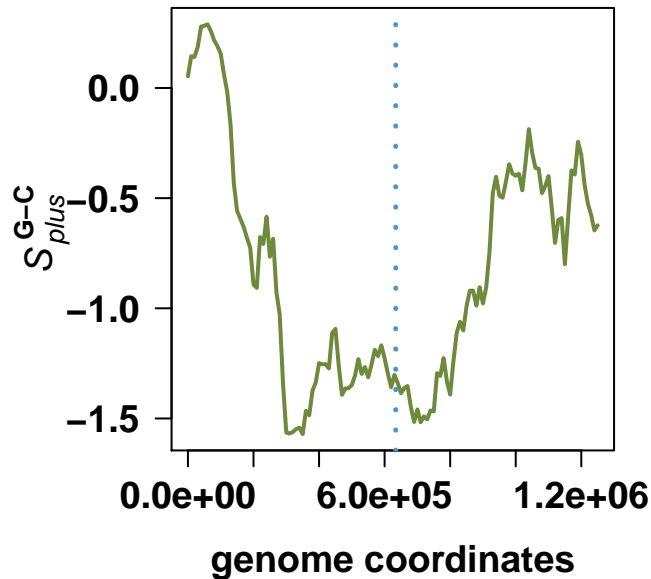
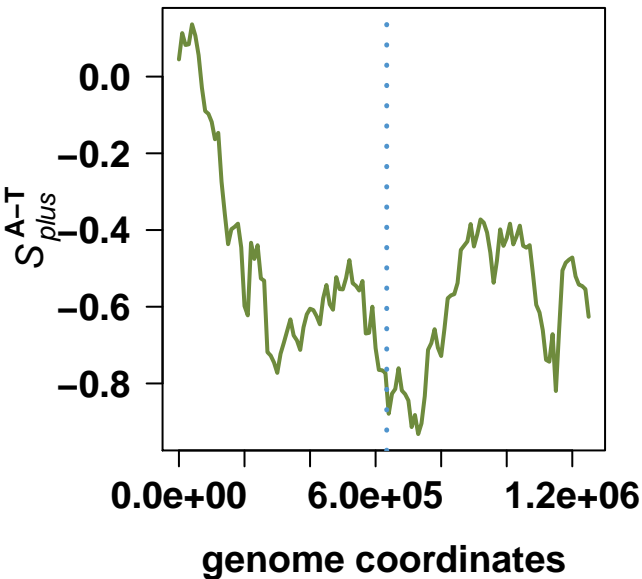
### Mesorhizobium loti MAFF303099



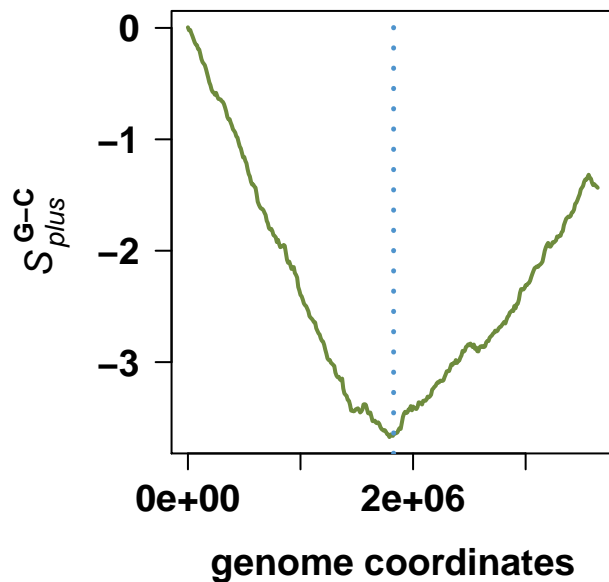
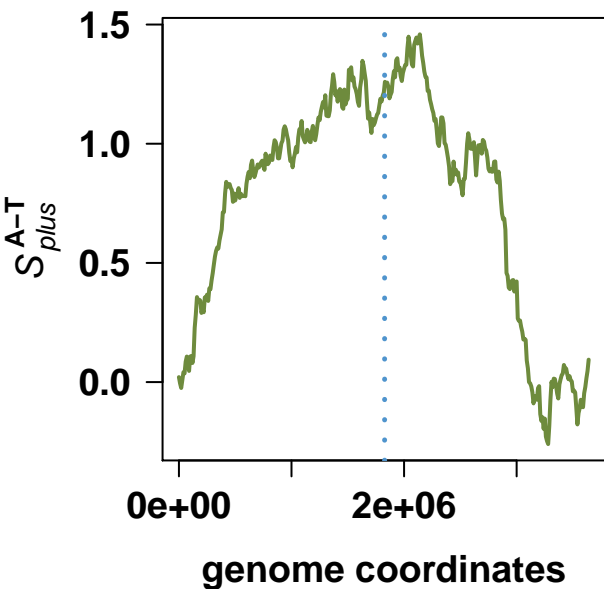
### Caulobacter crescentus CB15



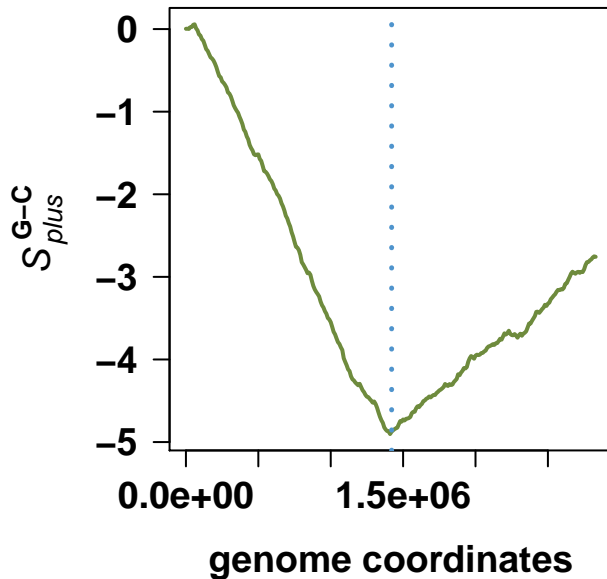
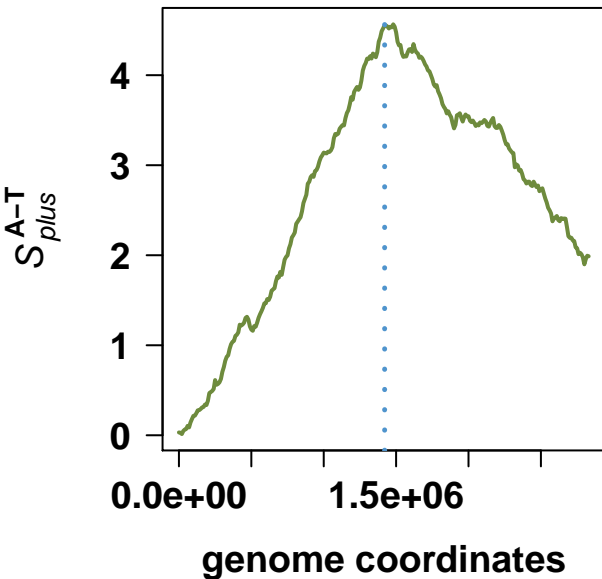
# Wolbachia endosymbiont of *Drosophila melanogaster*



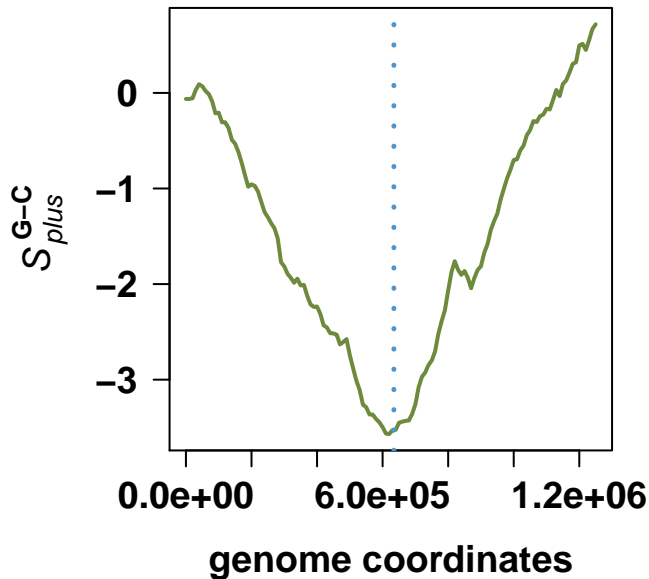
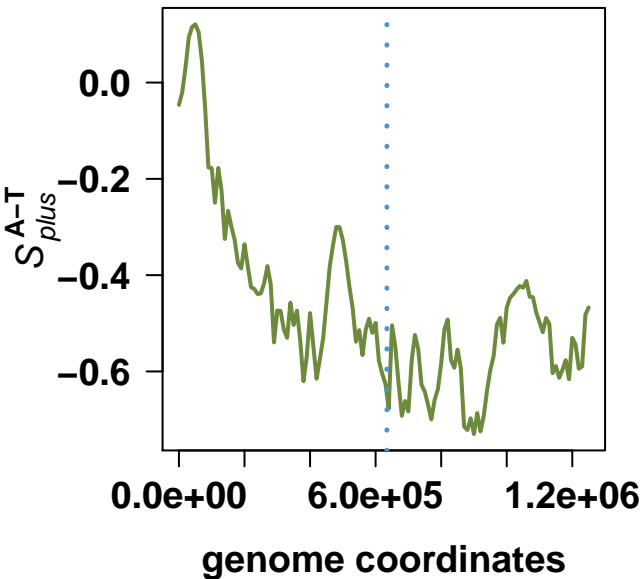
# *Sinorhizobium meliloti* 1021



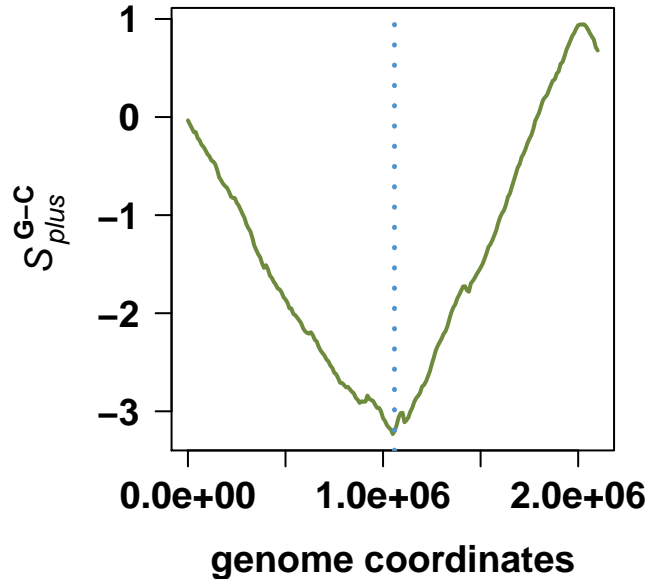
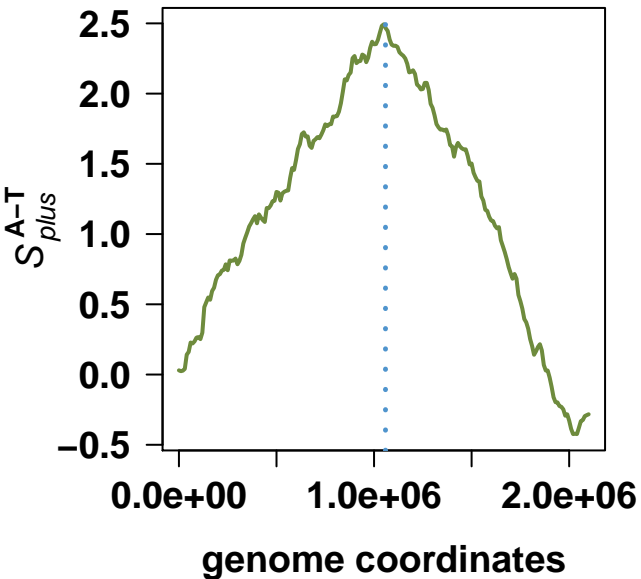
### Agrobacterium fabrum str. C58



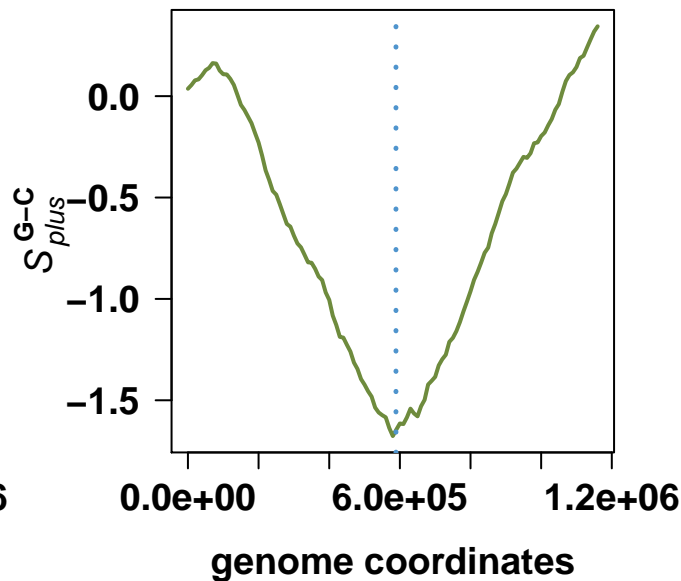
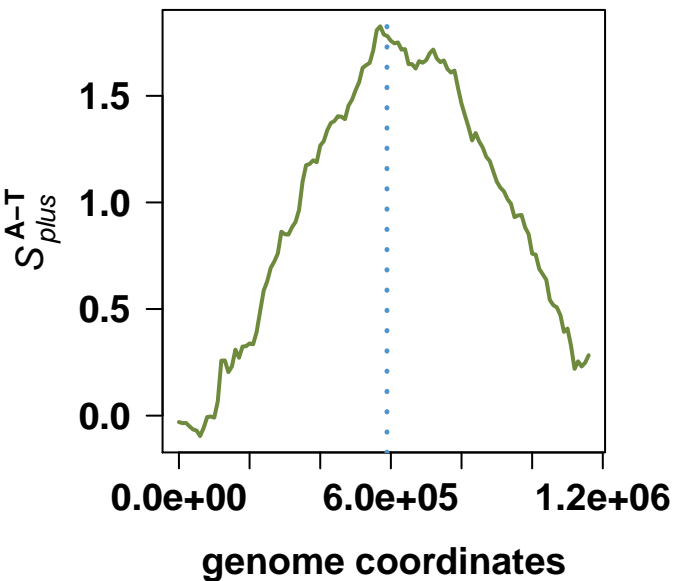
### Rickettsia conorii str. Malish 7



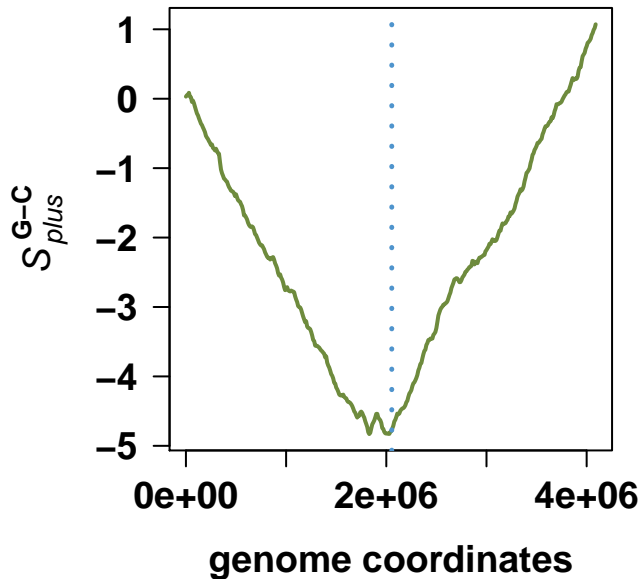
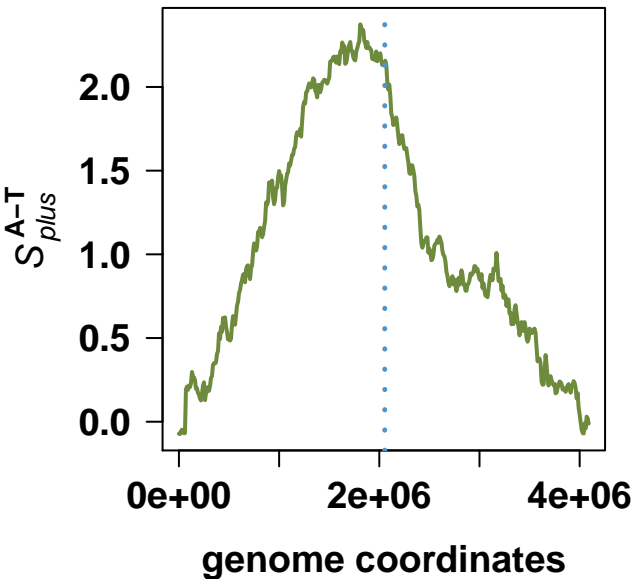
### Brucella melitensis bv. 1 str. 16M



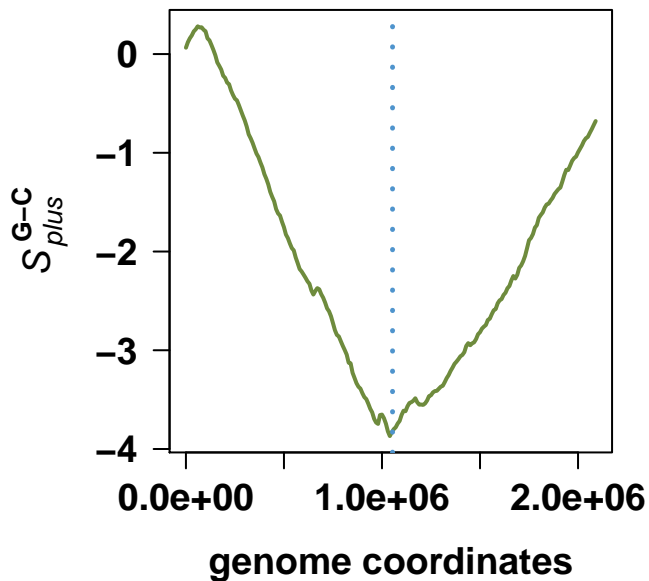
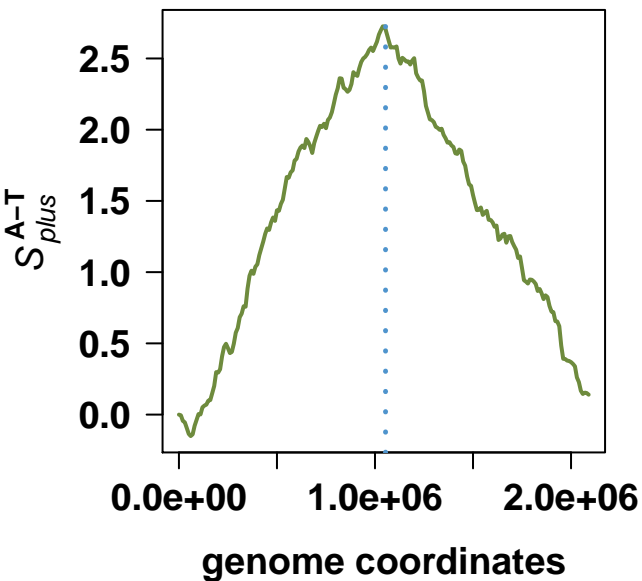
### Brucella melitensis bv. 1 str. 16M



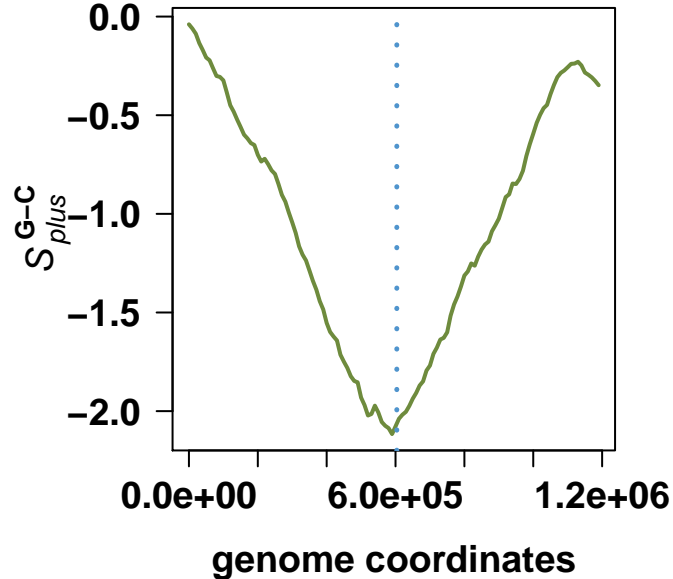
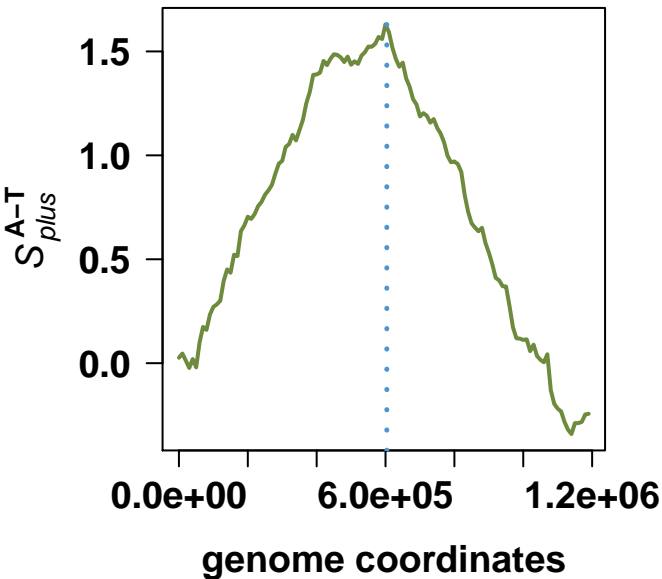
### *Ruegeria pomeroyi* DSS-3



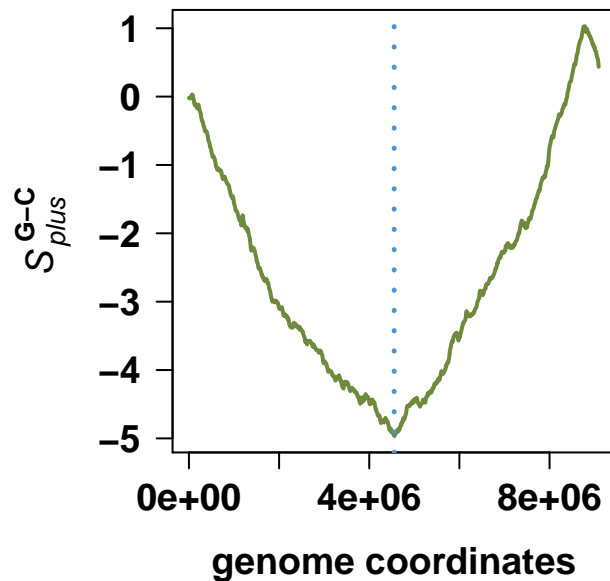
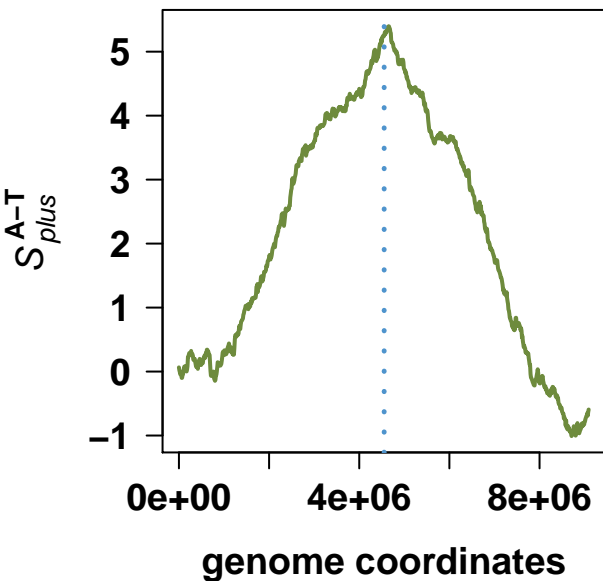
### *Brucella suis* 1330



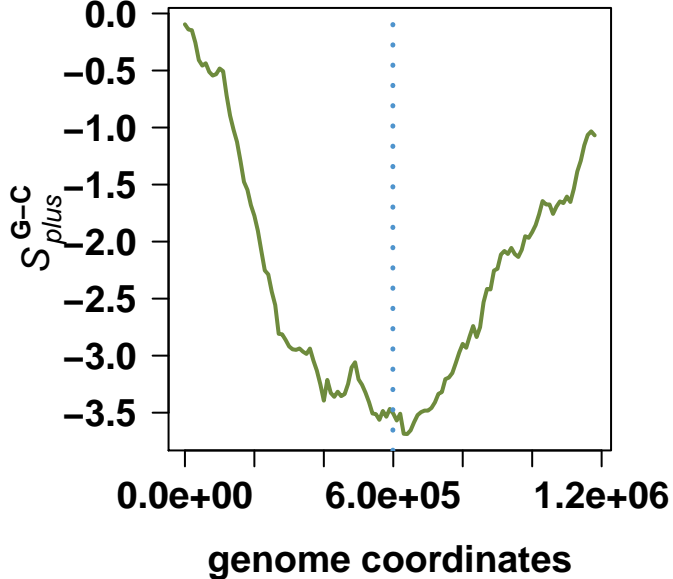
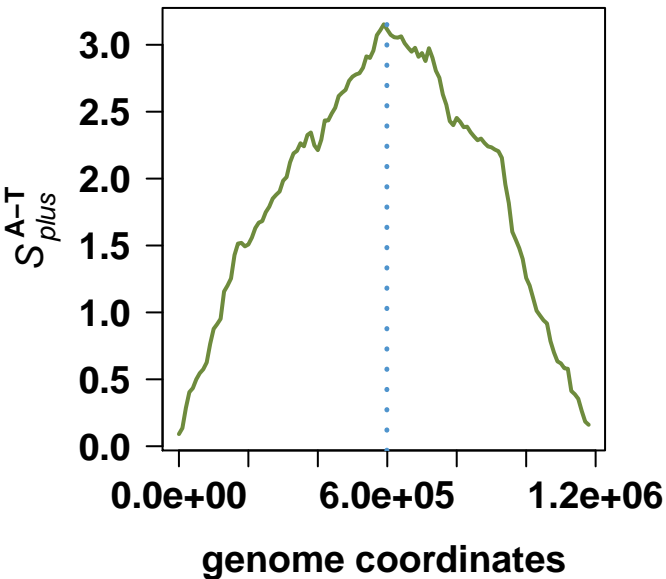
### **Brucella suis 1330**



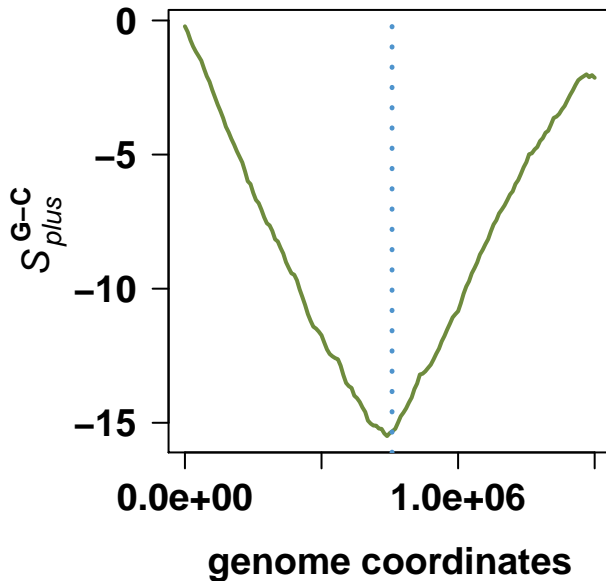
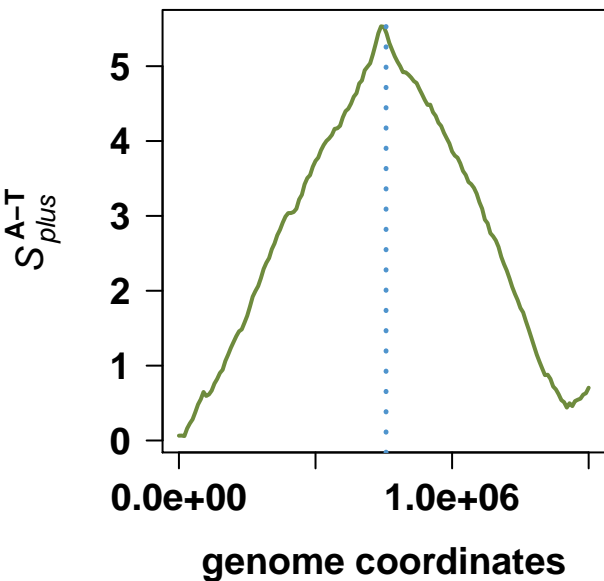
### **Bradyrhizobium diazoefficiens USDA 110**



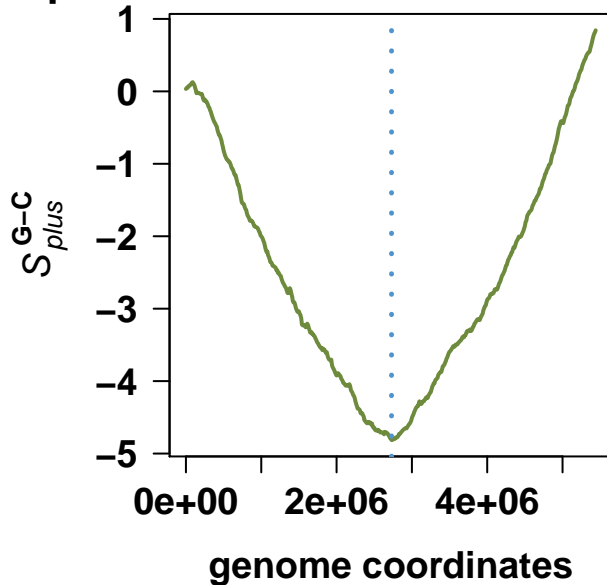
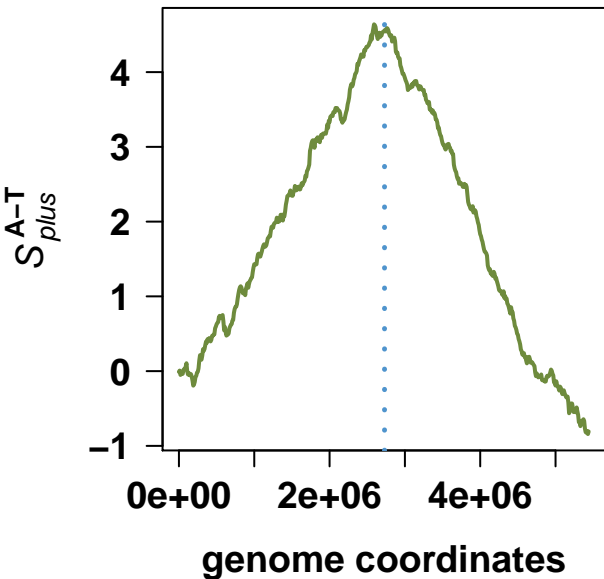
### Anaplasma marginale str. St. Maries



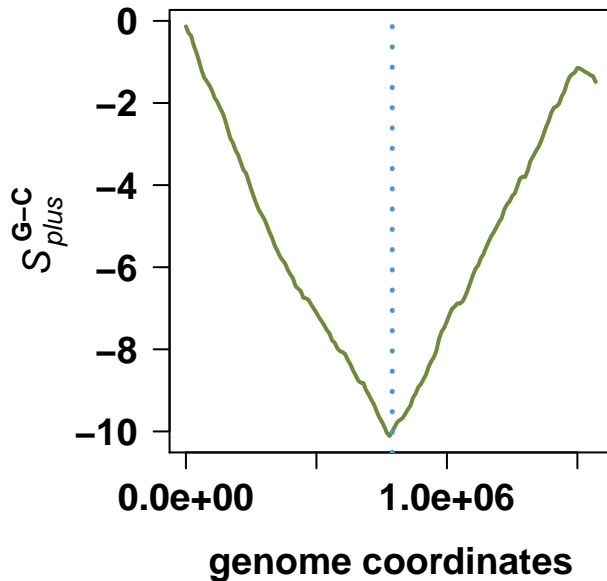
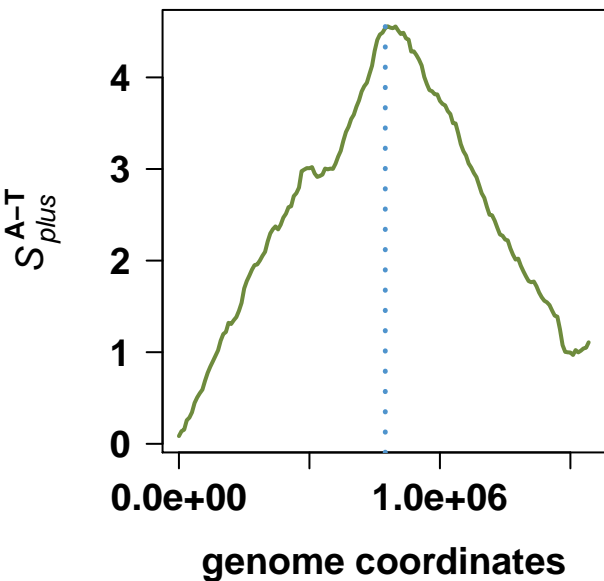
### Ehrlichia ruminantium str. Welgevonden



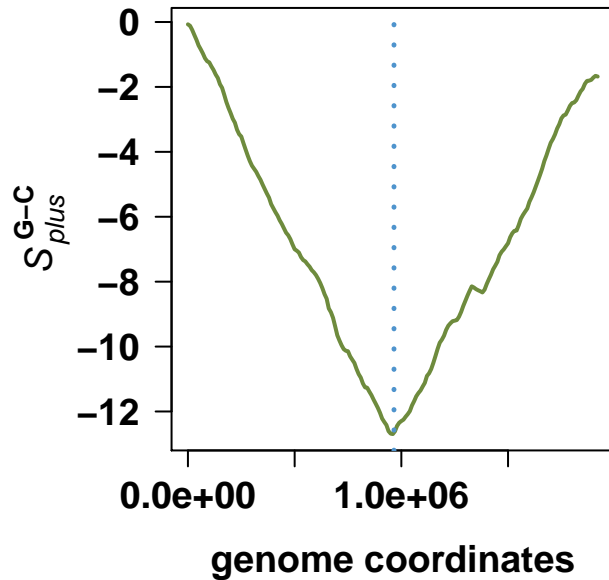
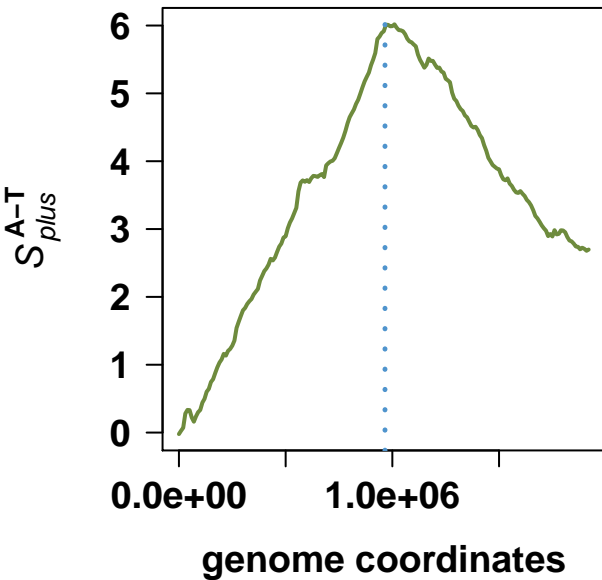
### Rhodopseudomonas palustris CGA009



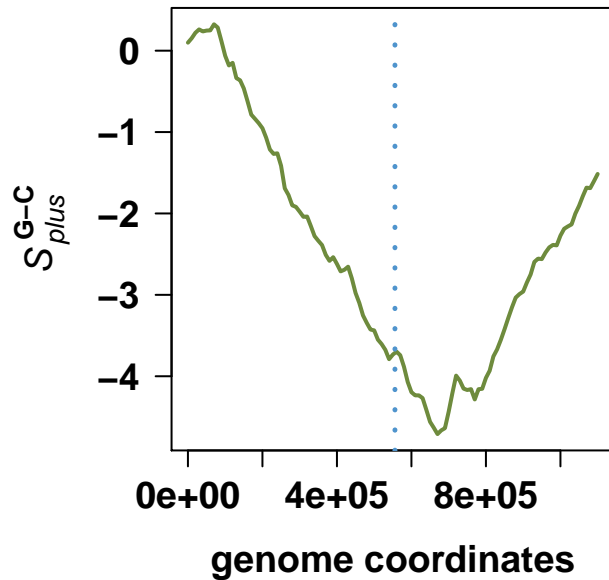
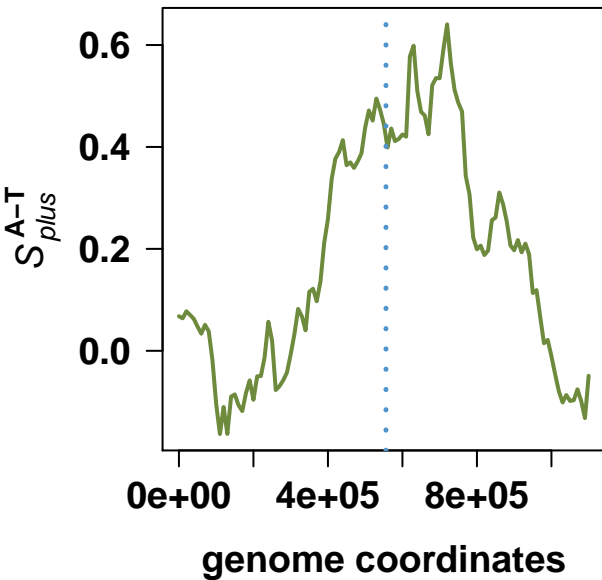
### Bartonella quintana str. Toulouse



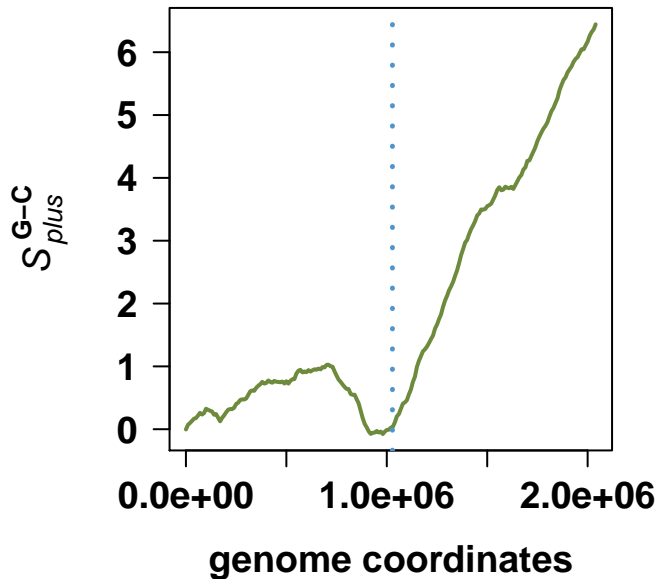
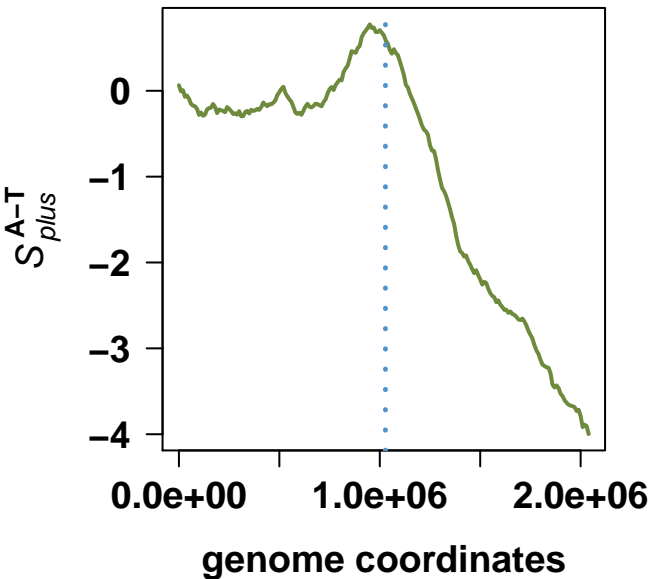
### ***Bartonella henselae* str. Houston-1**



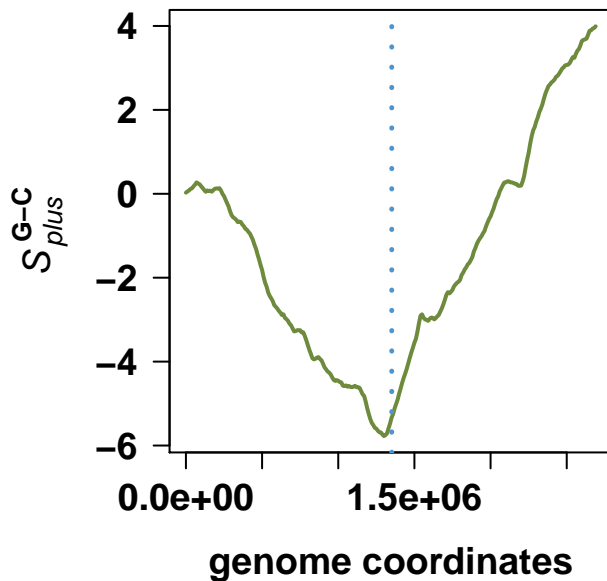
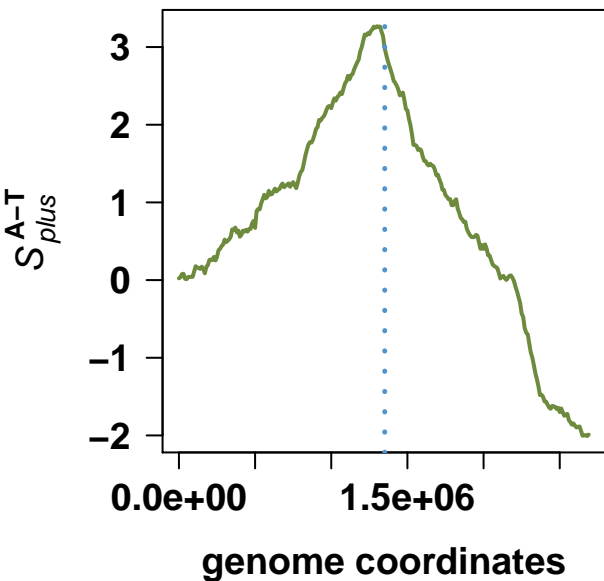
### ***Rickettsia typhi* str. Wilmington**



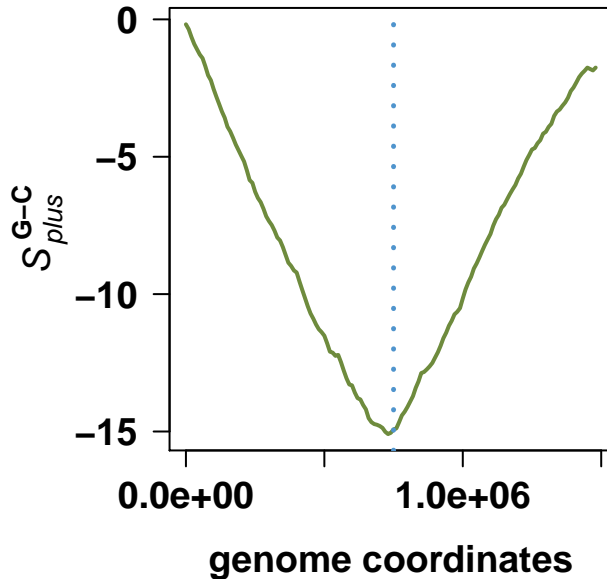
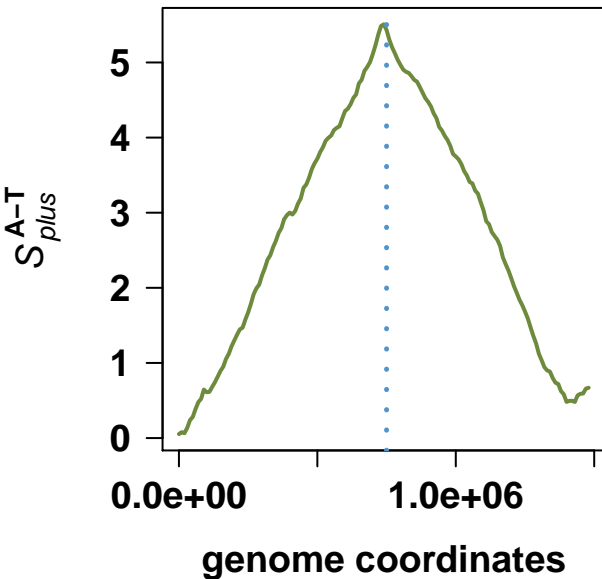
# Zymomonas mobilis subsp. mobilis ZM4 = ATCC 31821



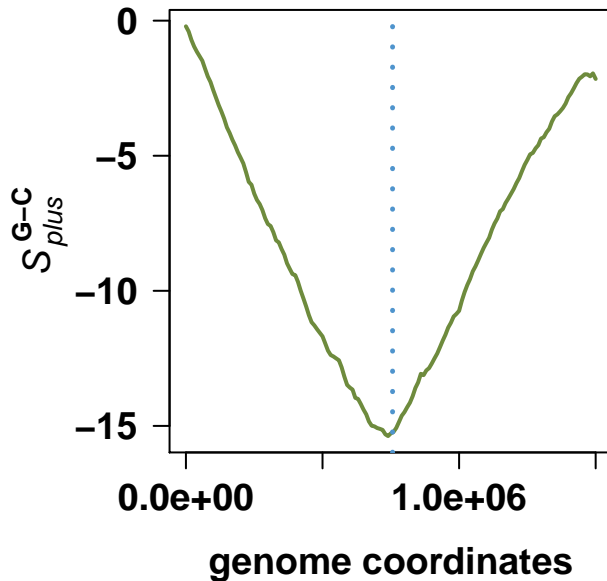
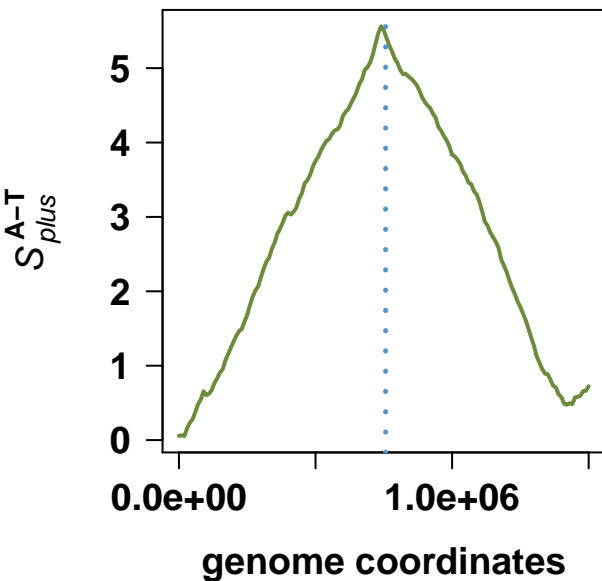
# Gluconobacter oxydans 621H



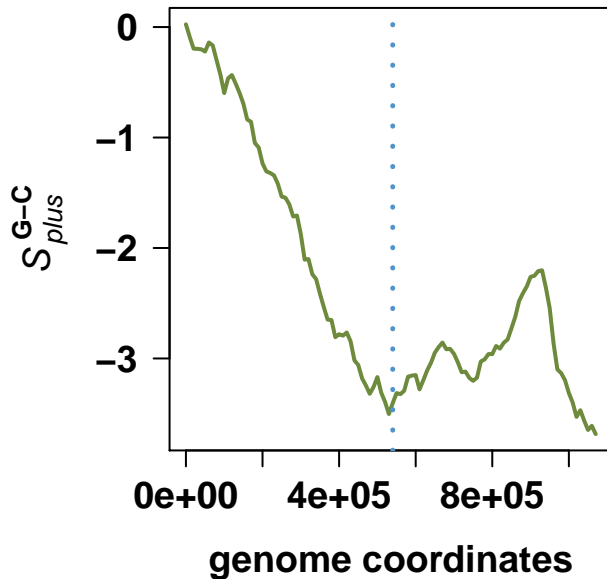
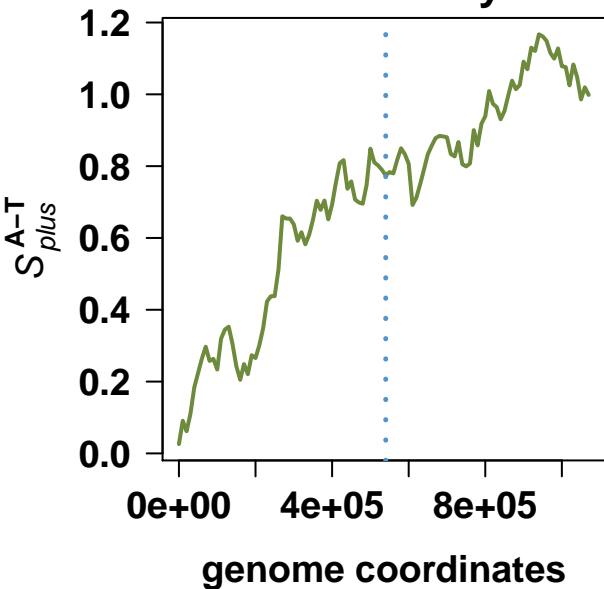
### *Ehrlichia ruminantium* str. Gardel



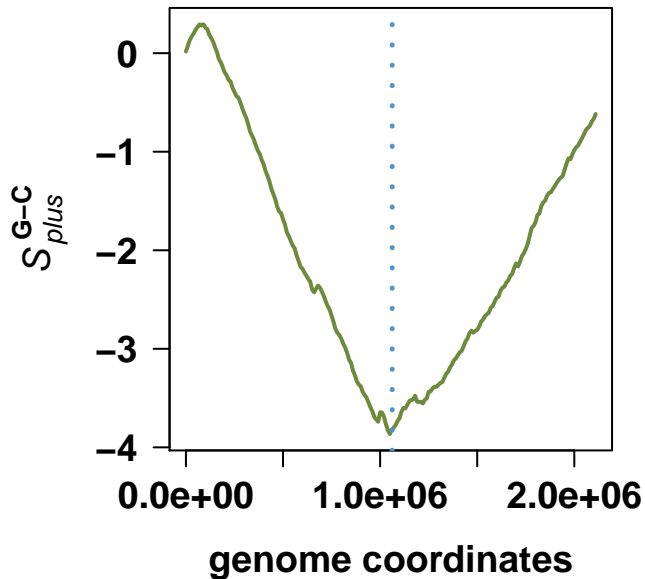
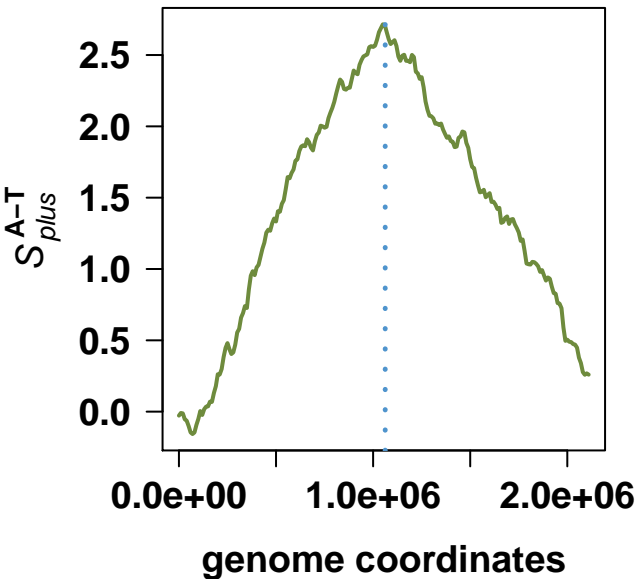
### *Ehrlichia ruminantium* str. Welgevonden



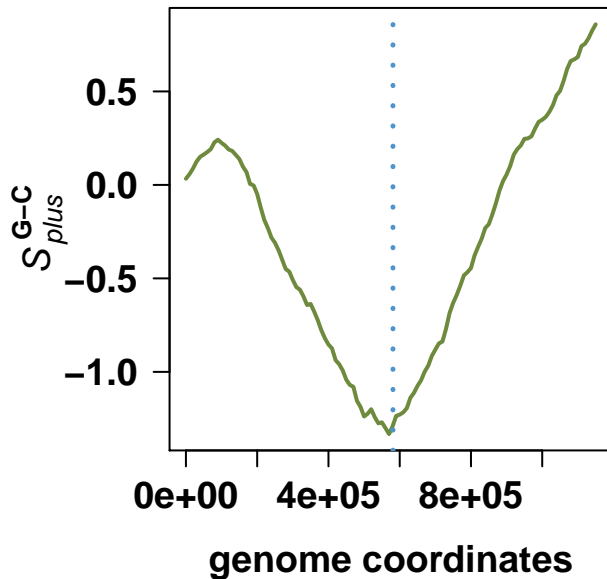
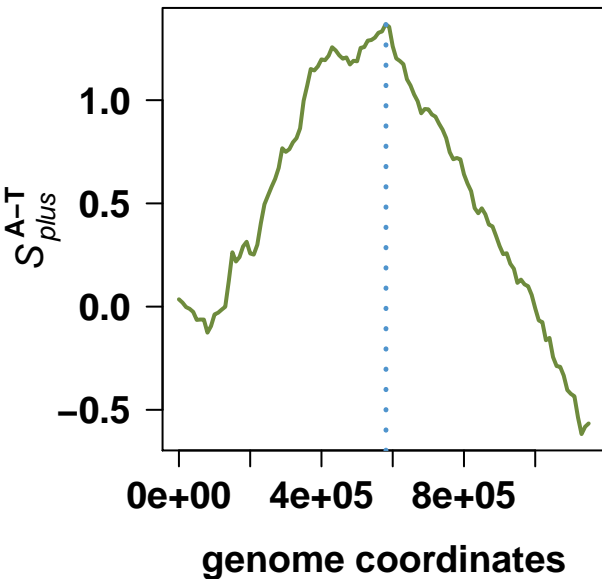
### Wolbachia endosymbiont strain TRS of *Brugia malayi*



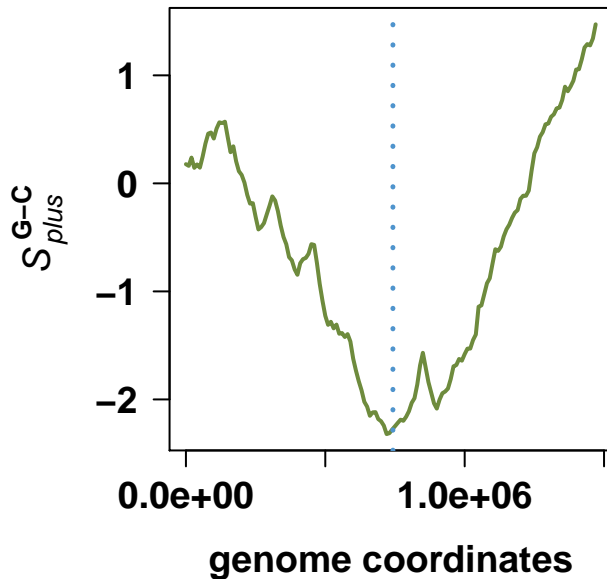
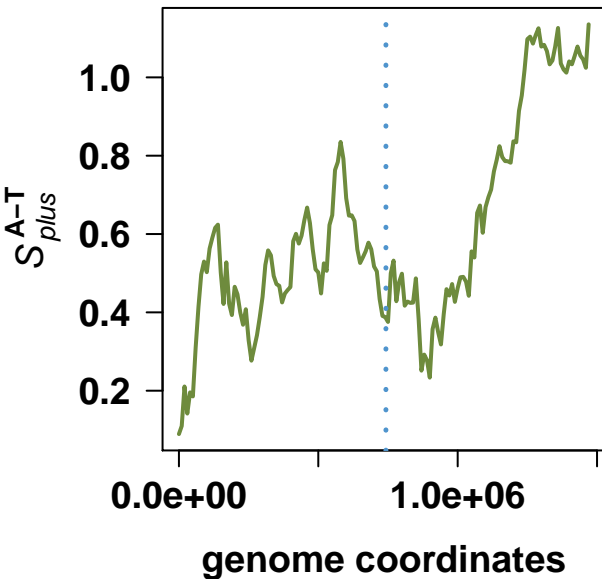
### *Brucella abortus* bv. 1 str. 9-941



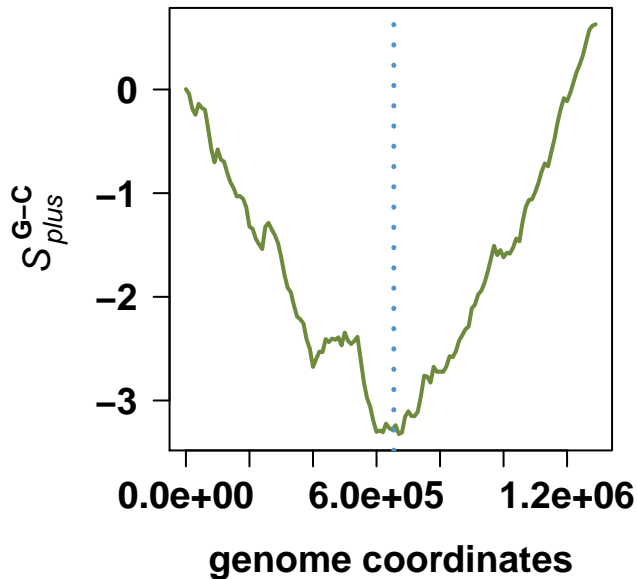
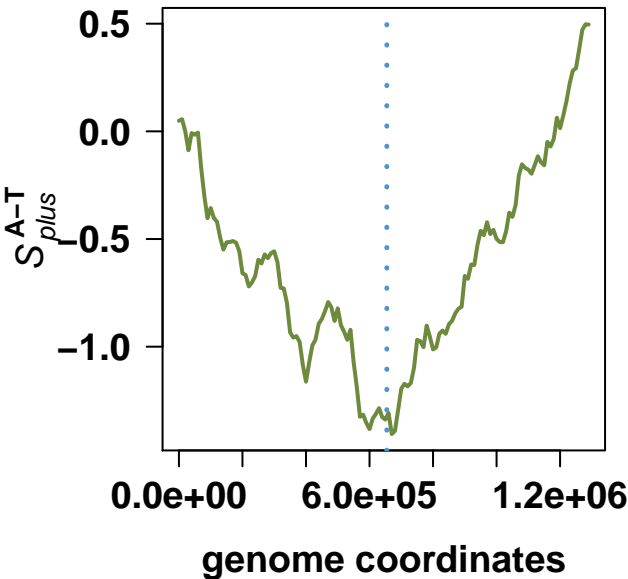
### **Brucella abortus bv. 1 str. 9-941**



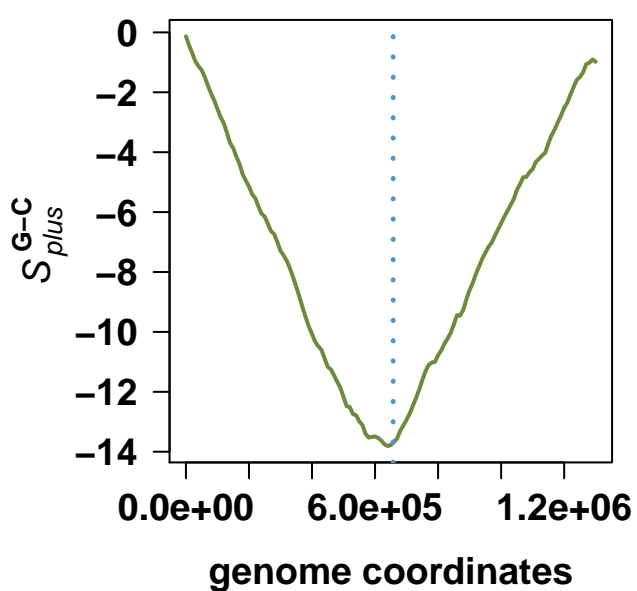
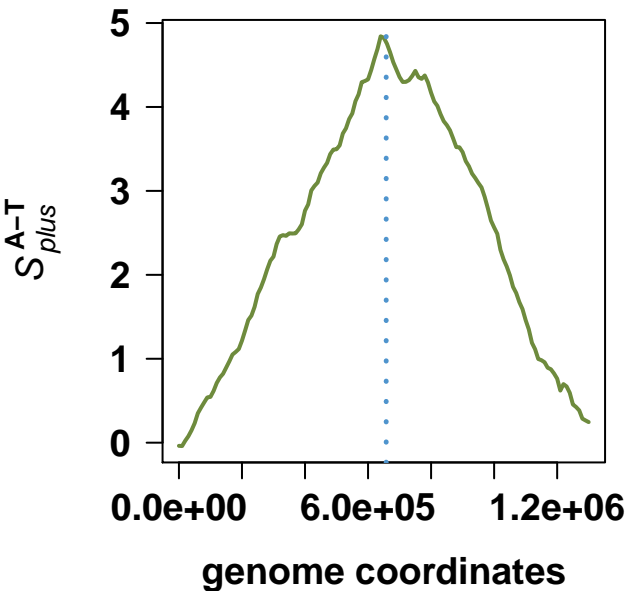
### **Rickettsia felis URRWXCAl2**



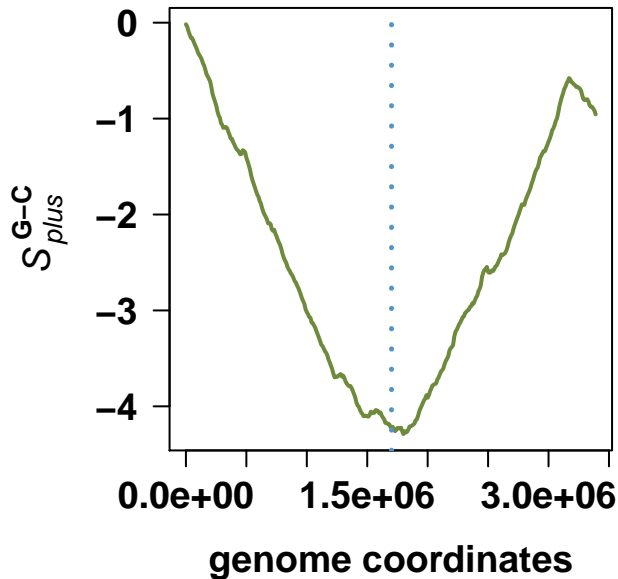
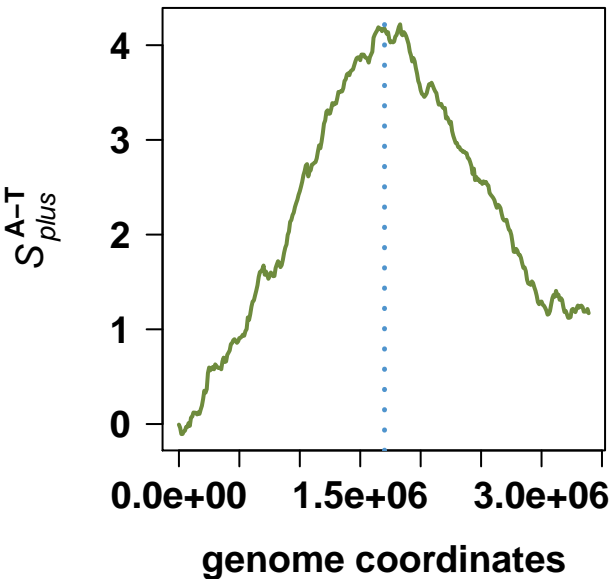
### Candidatus Pelagibacter ubique HTCC1062



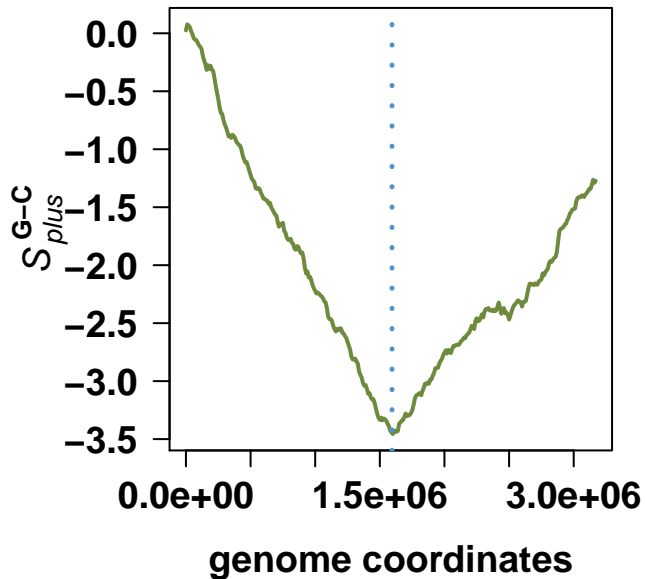
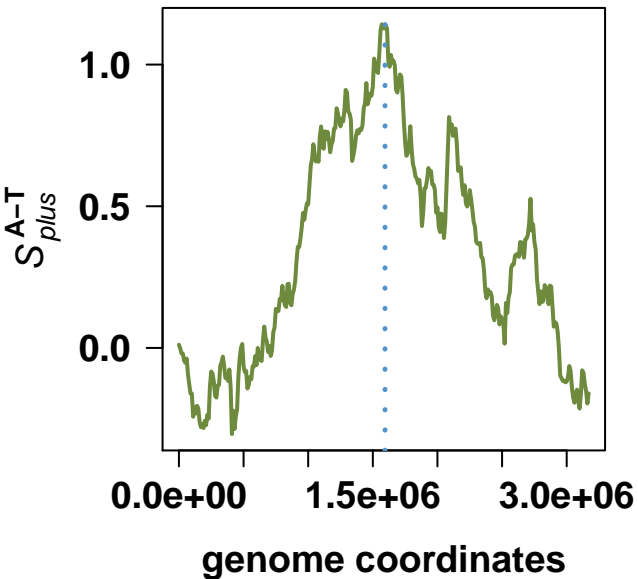
### Ehrlichia canis str. Jake



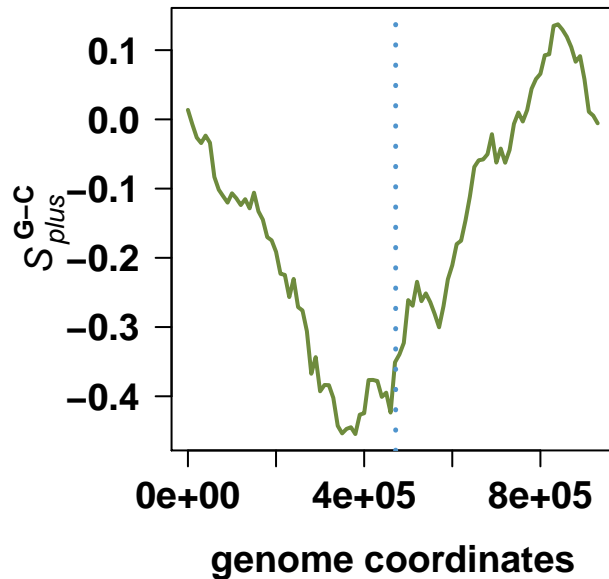
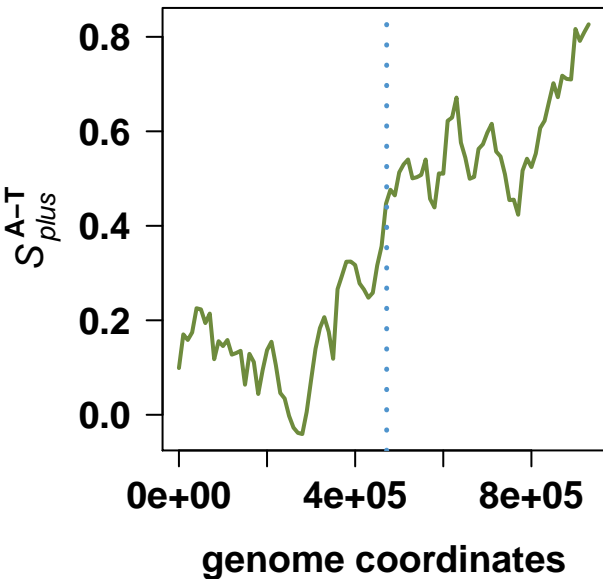
### *Nitrobacter winogradskyi* Nb-255



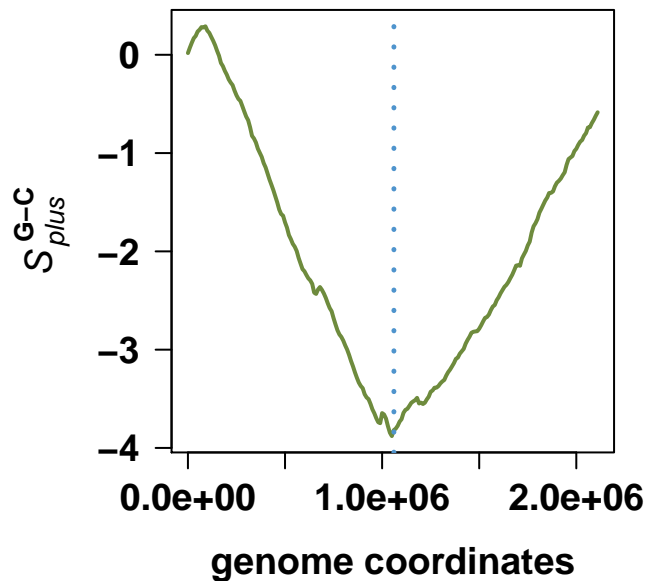
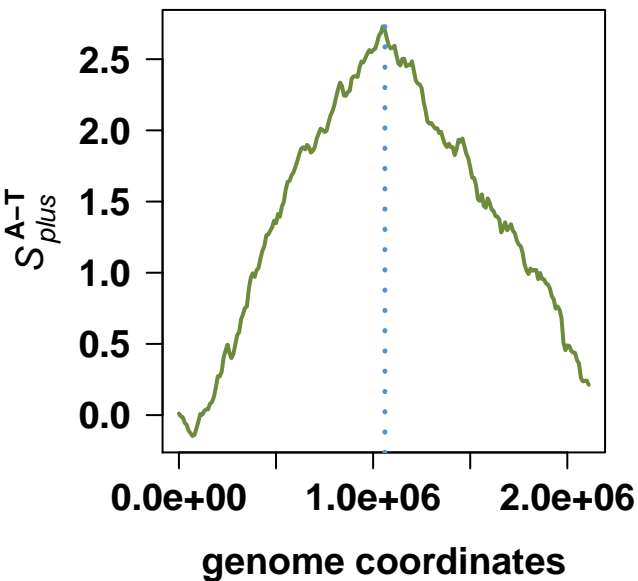
### *Rhodobacter sphaeroides* 2.4.1



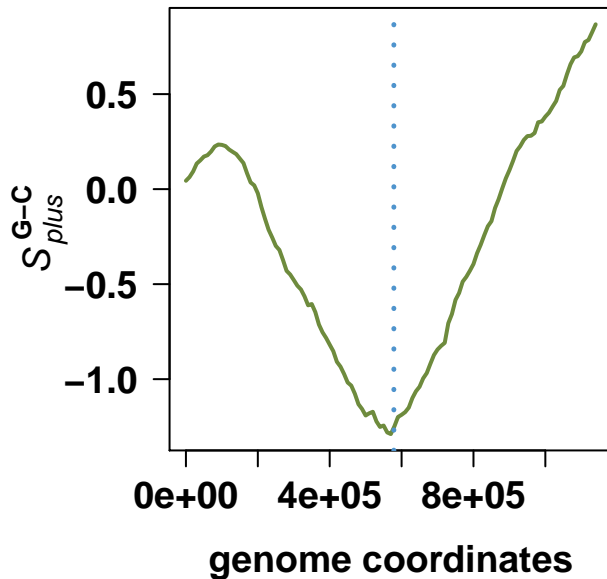
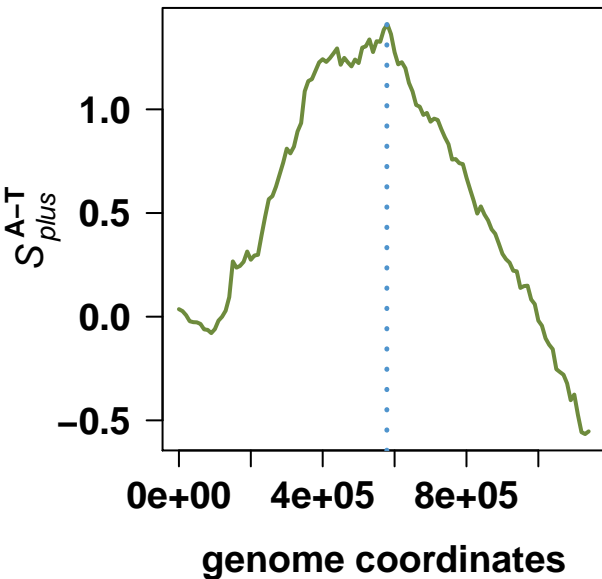
## Rhodobacter sphaeroides 2.4.1



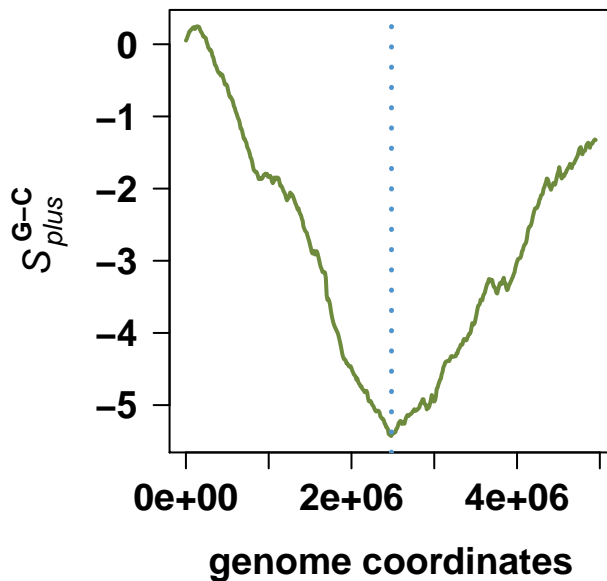
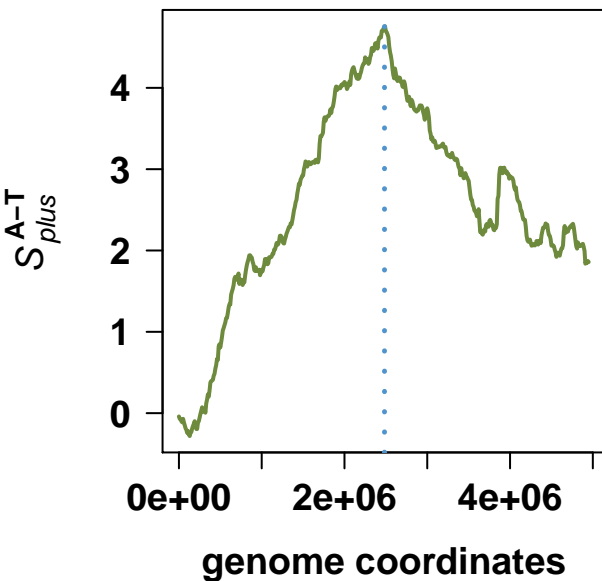
## Brucella abortus 2308



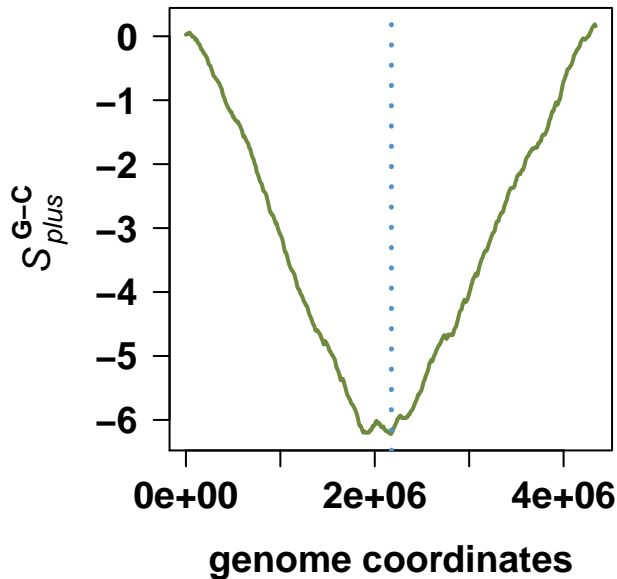
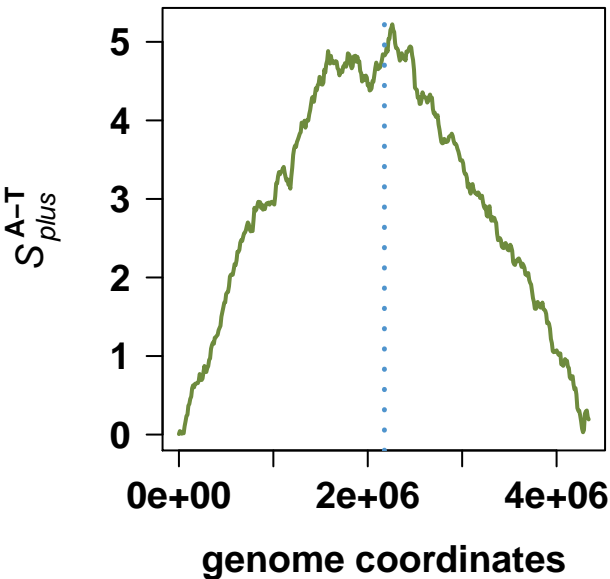
## *Brucella abortus* 2308



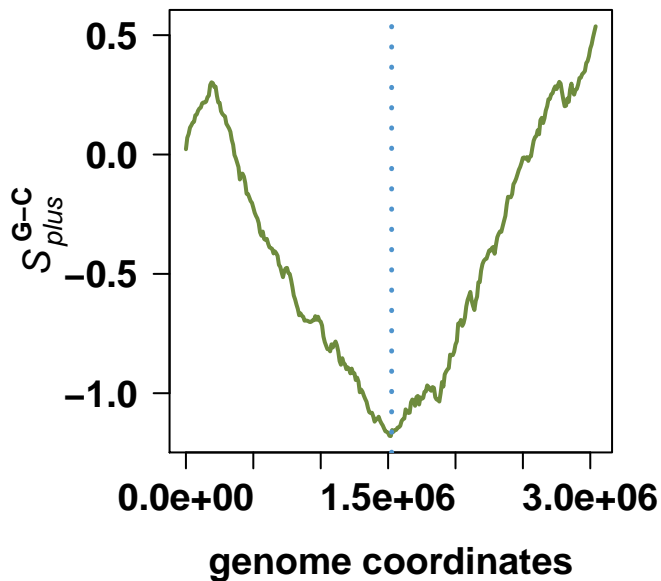
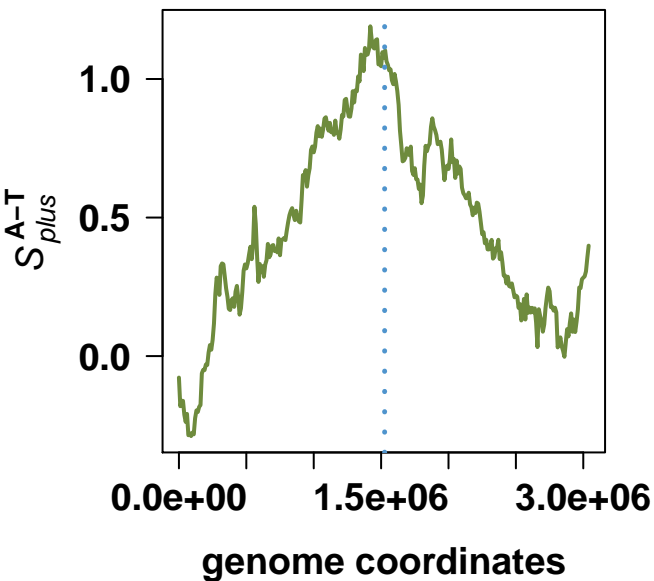
## *Magnetospirillum magneticum* AMB-1



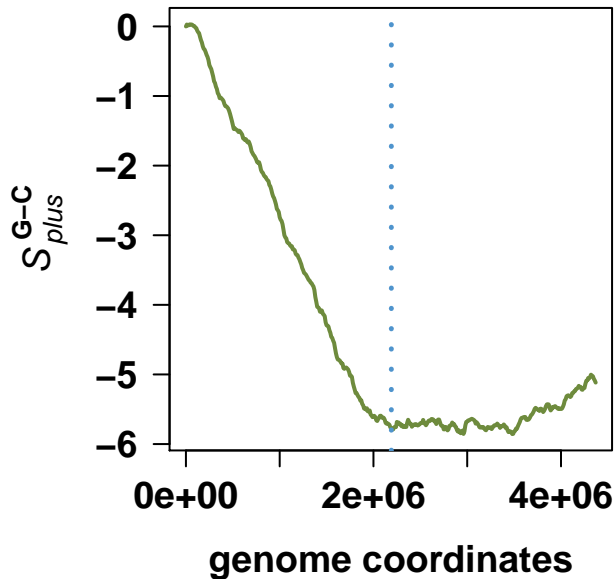
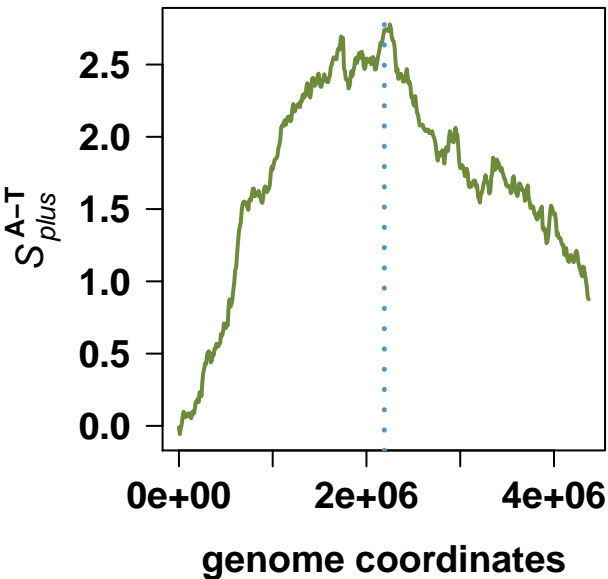
## Rhodospirillum rubrum ATCC 11170



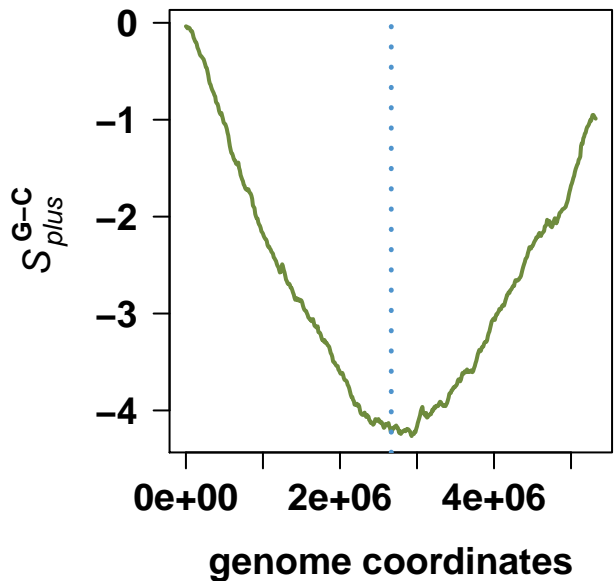
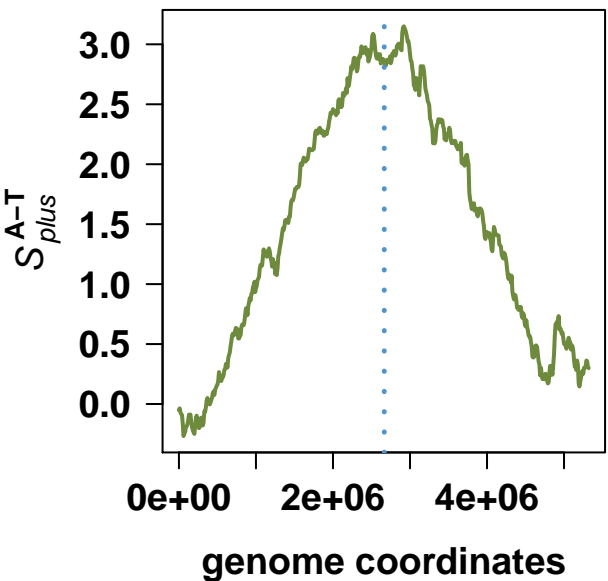
## Erythrobacter litoralis HTCC2594



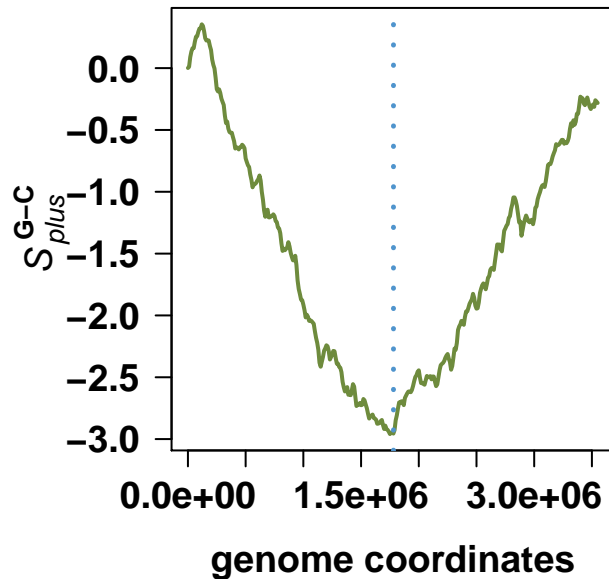
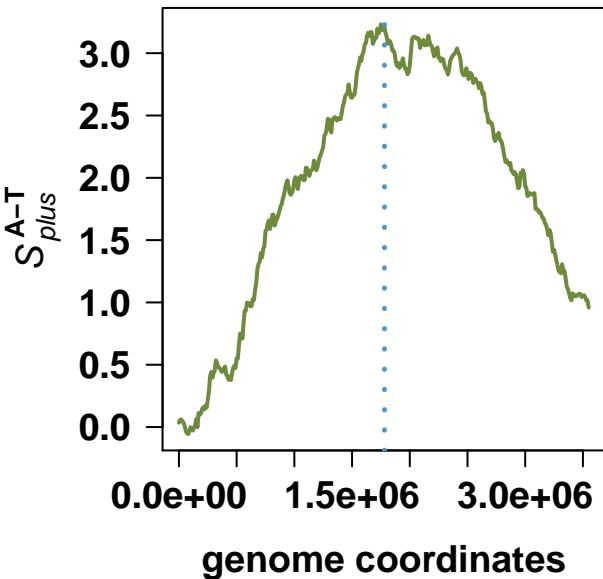
### Rhizobium etli CFN 42



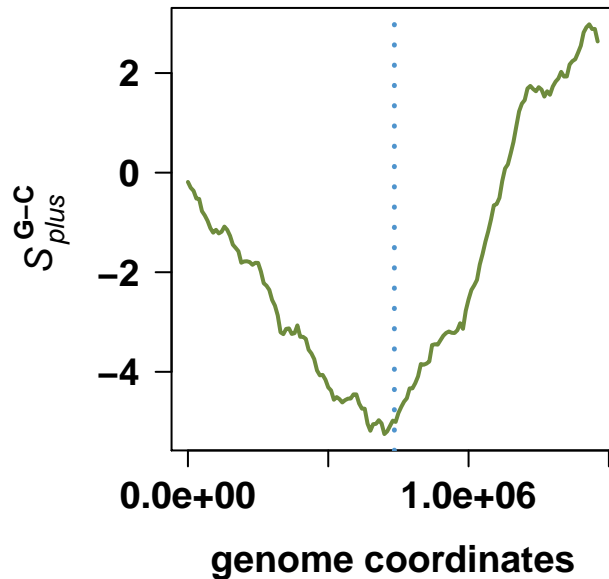
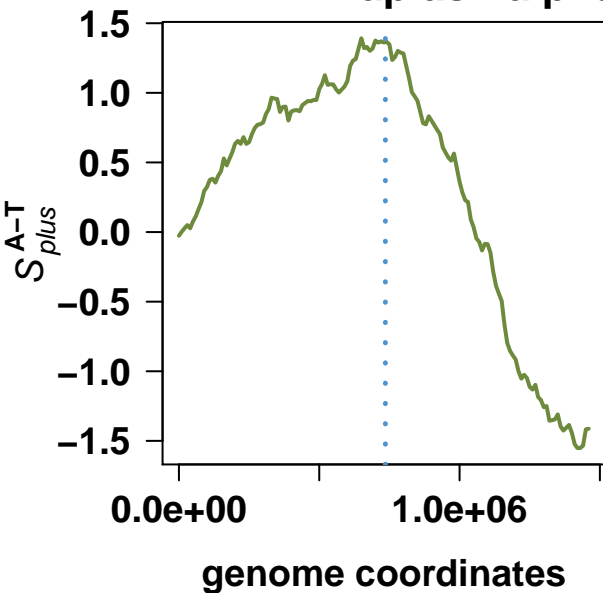
### Rhodopseudomonas palustris HaA2



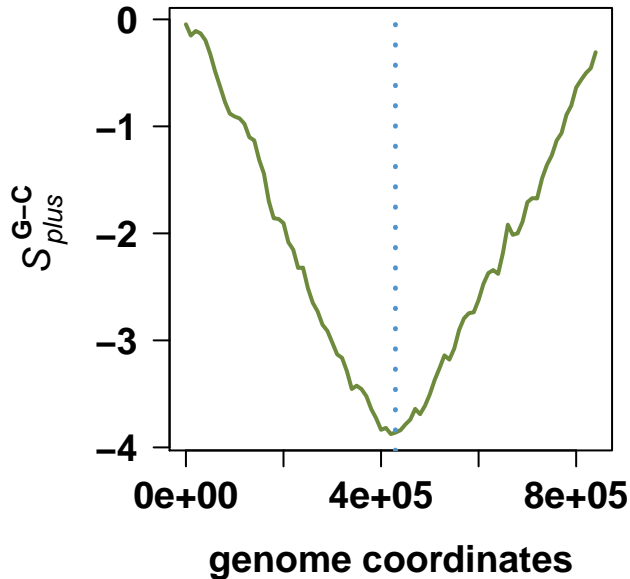
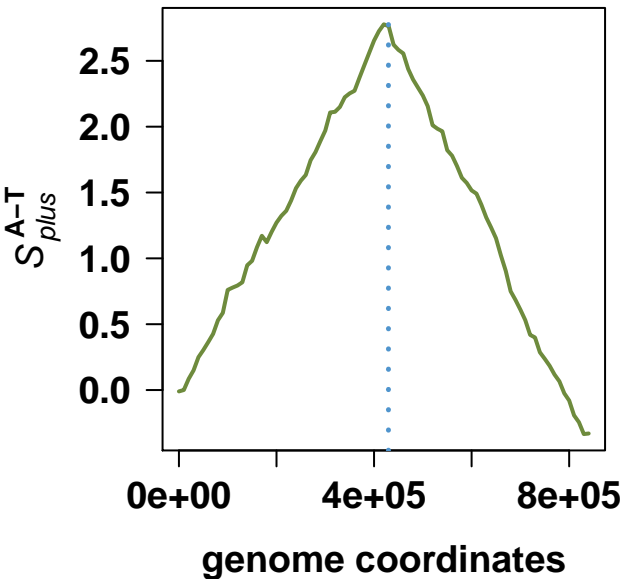
## Novosphingobium aromaticivorans DSM 12444



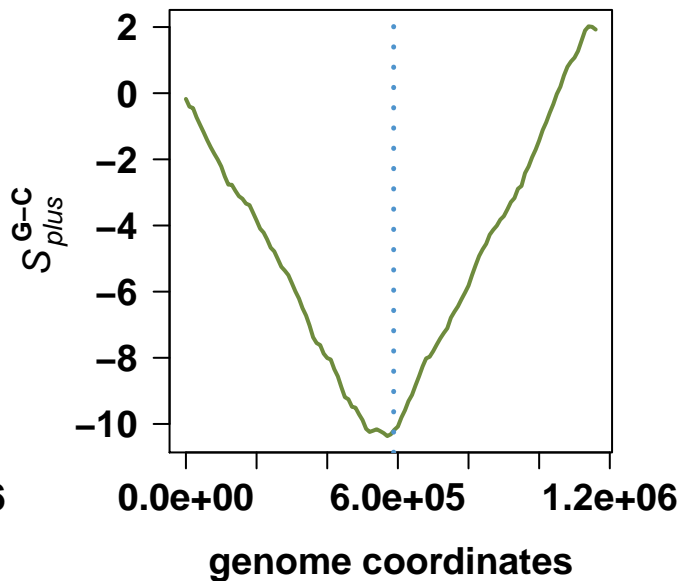
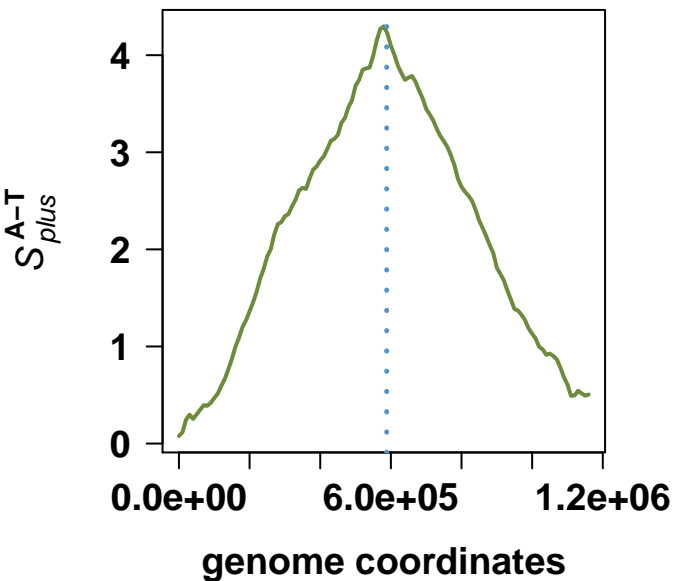
## Anaplasma phagocytophilum str. HZ



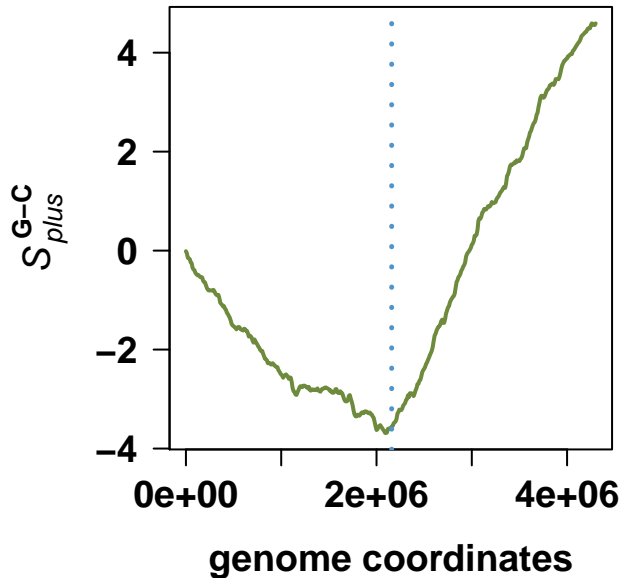
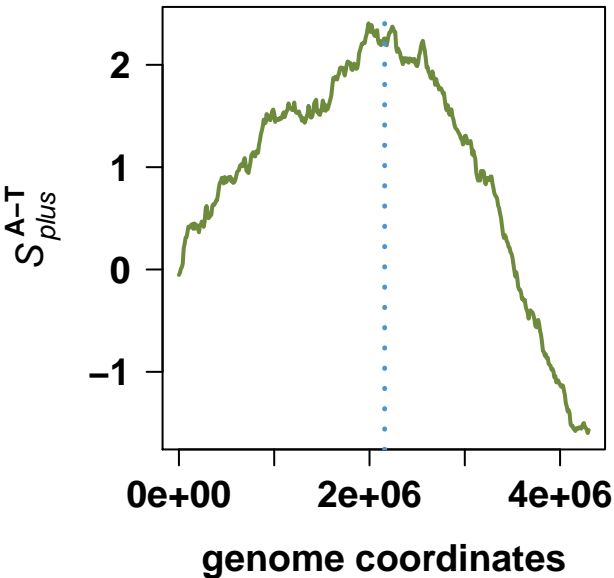
### Neorickettsia sennetsu str. Miyayama



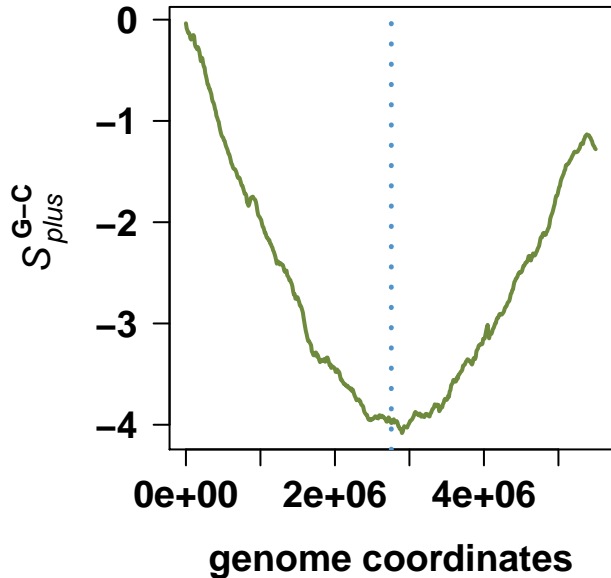
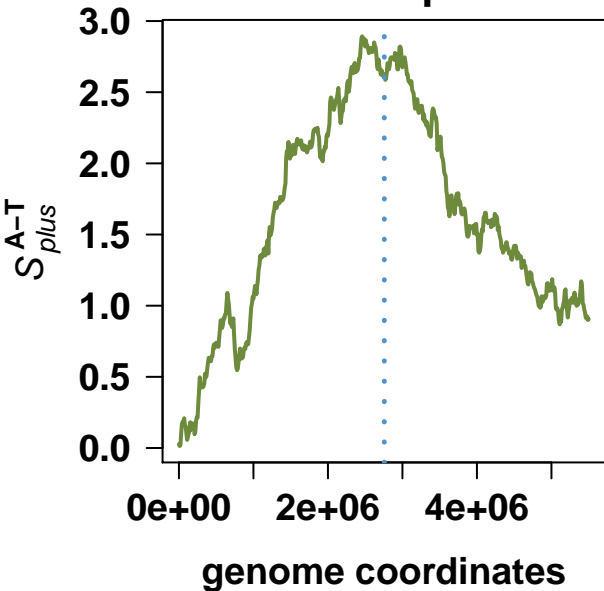
### Ehrlichia chaffeensis str. Arkansas



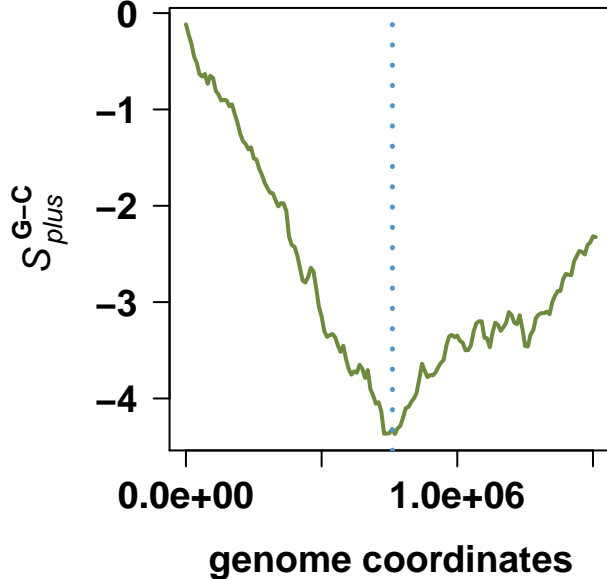
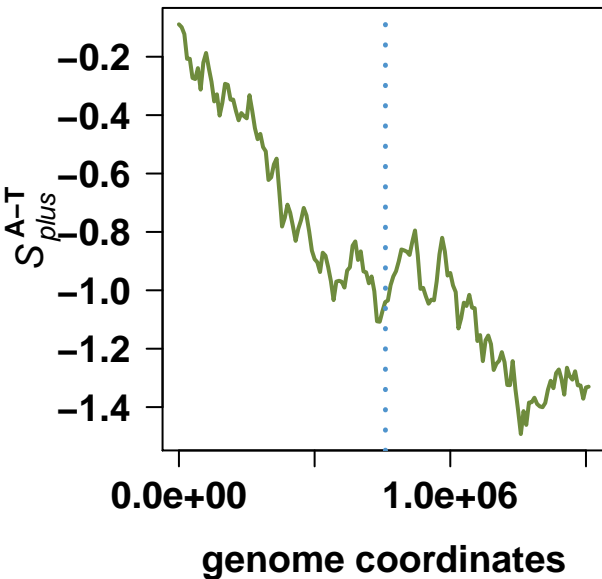
### Jannaschia sp. CCS1



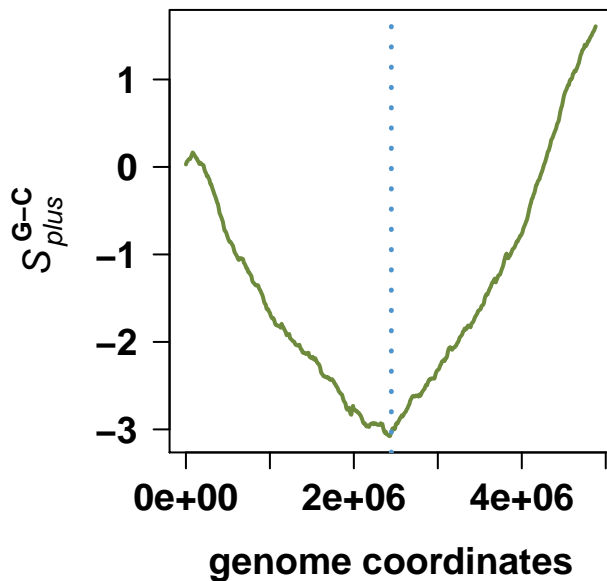
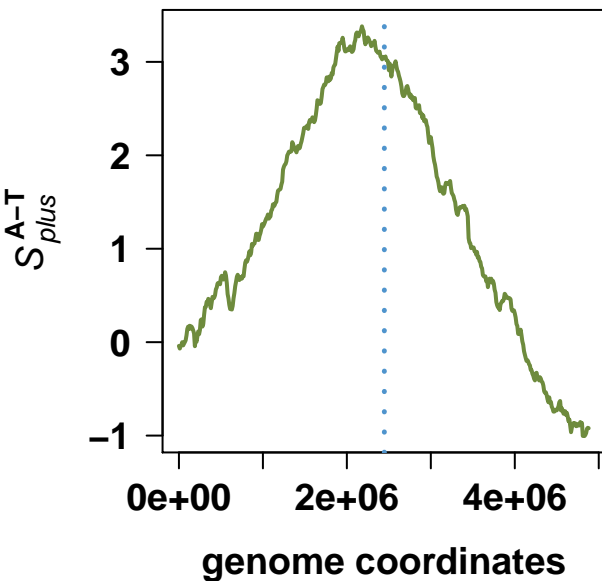
### Rhodopseudomonas palustris BisB18



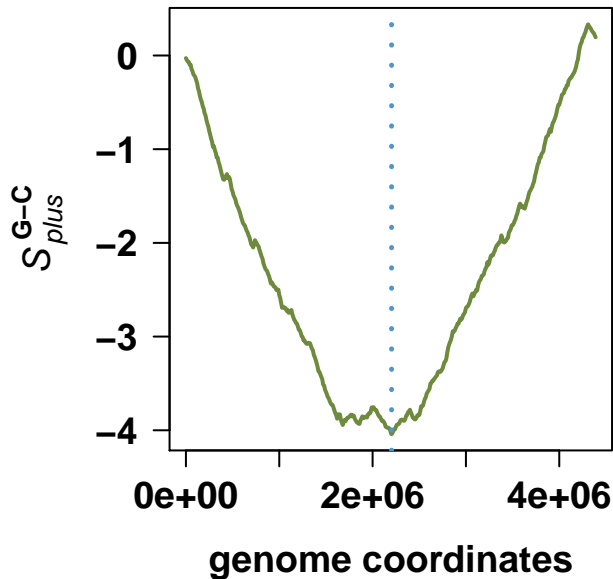
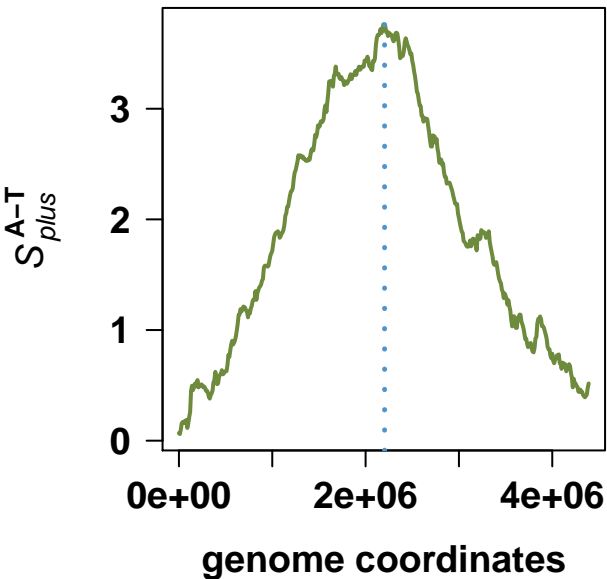
### *Rickettsia bellii* RML369-C



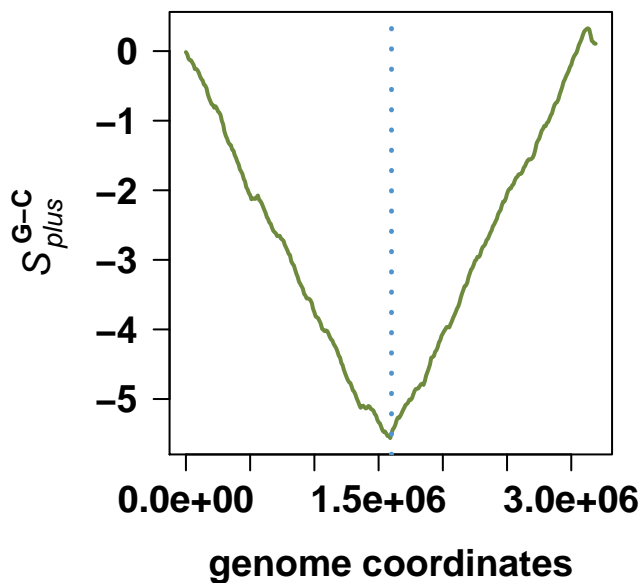
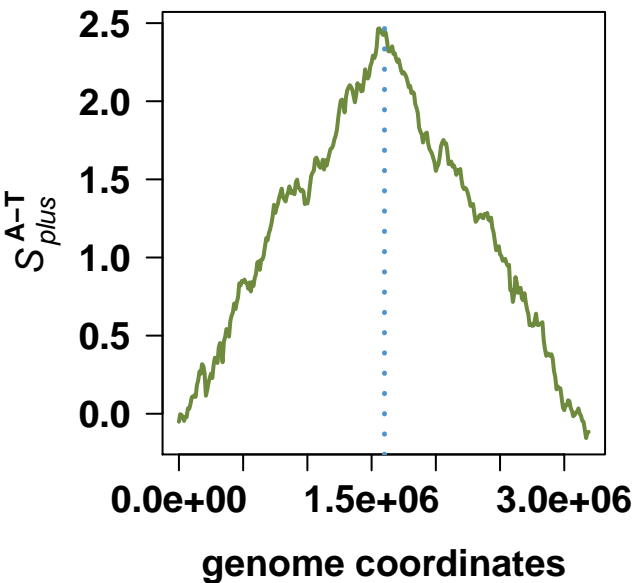
### *Rhodopseudomonas palustris* BisB5



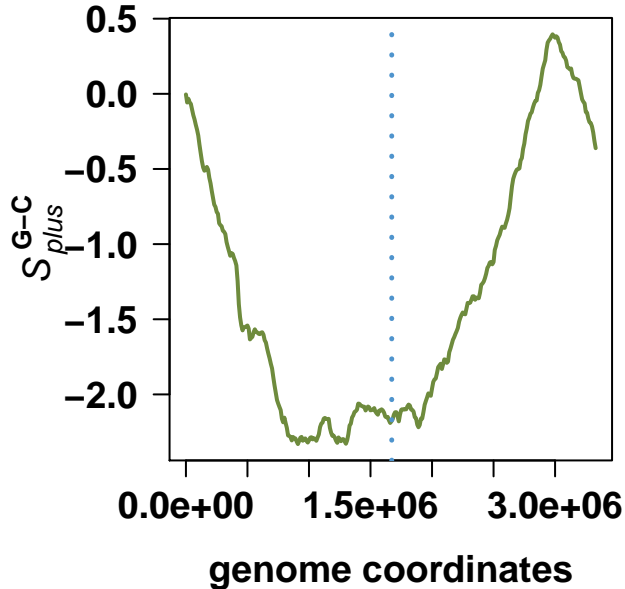
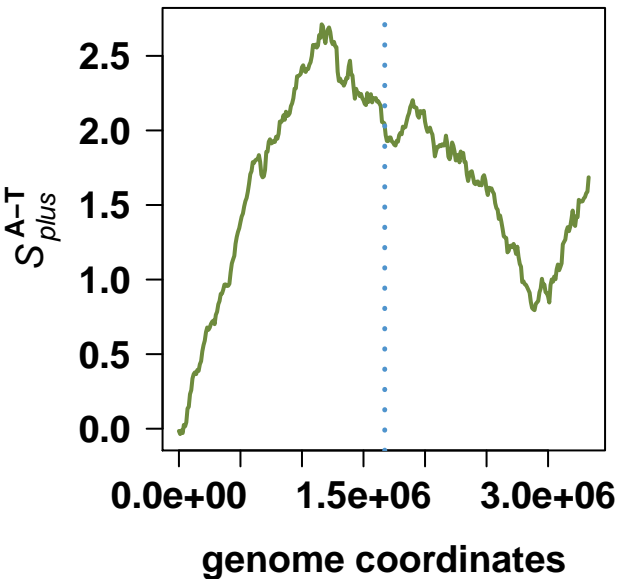
### Nitrobacter hamburgensis X14



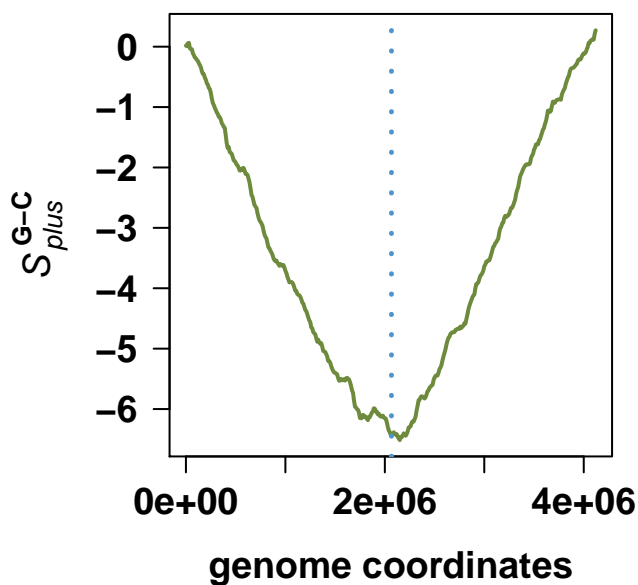
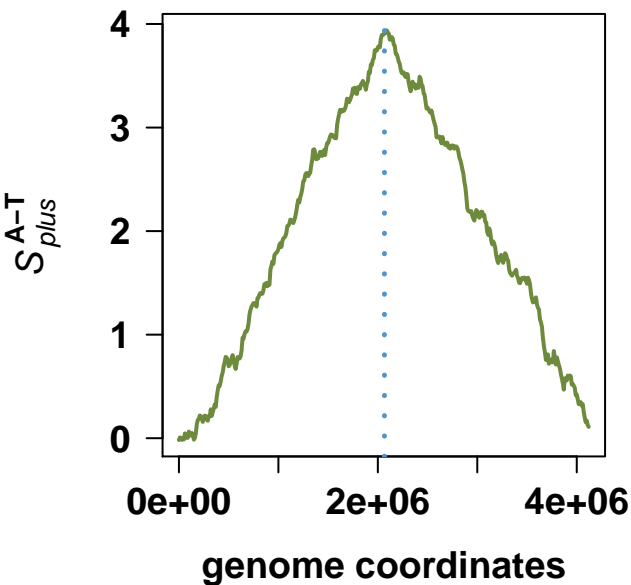
### Ruegeria sp. TM1040



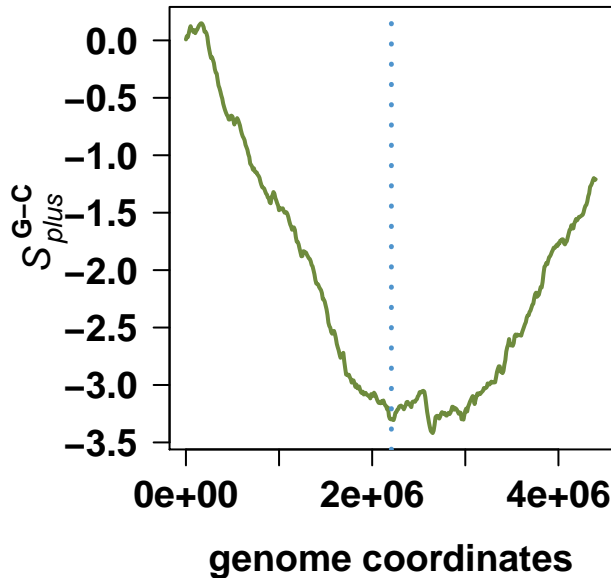
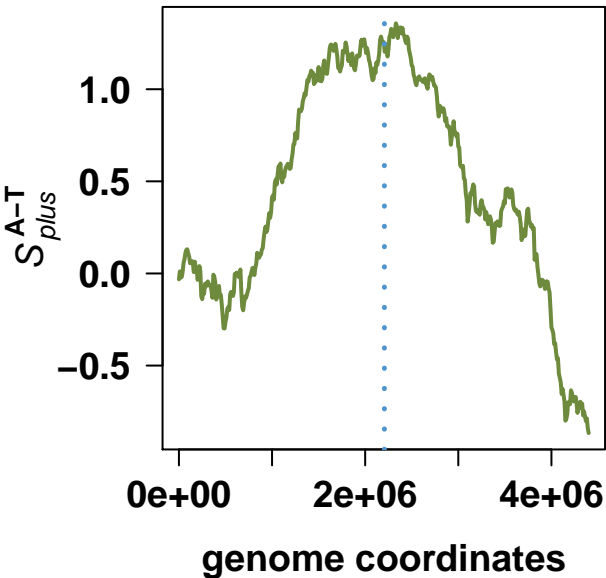
### *Sphingopyxis alaskensis* RB2256



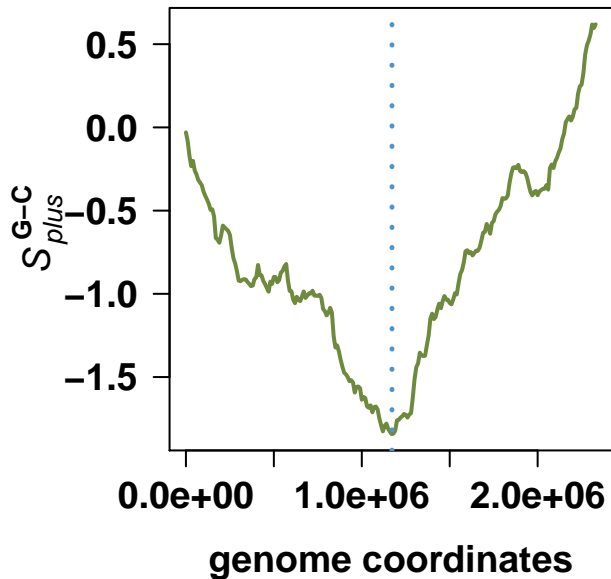
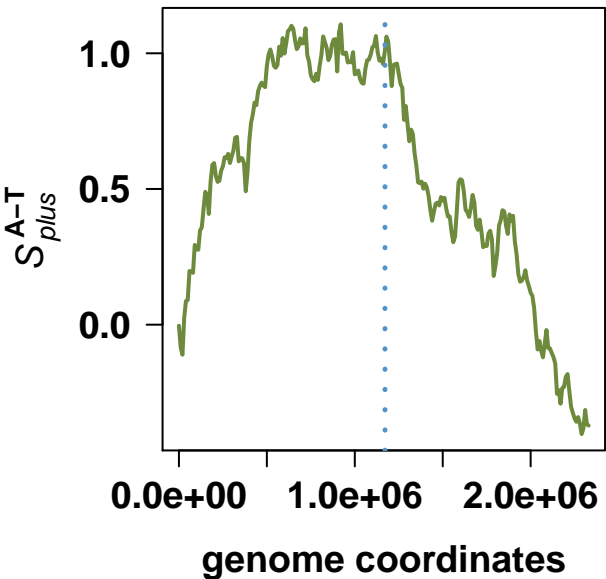
### *Roseobacter denitrificans* OCh 114



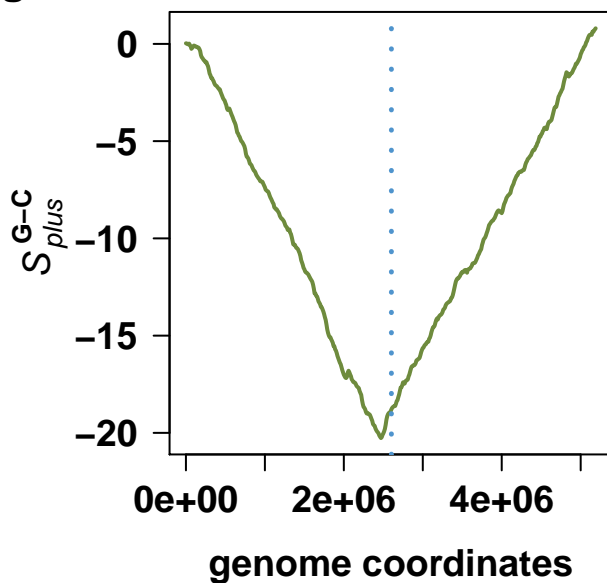
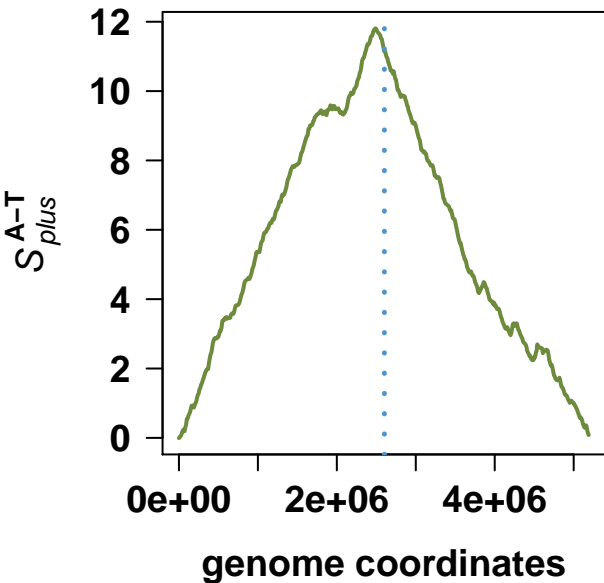
### Chelativorans sp. BNC1



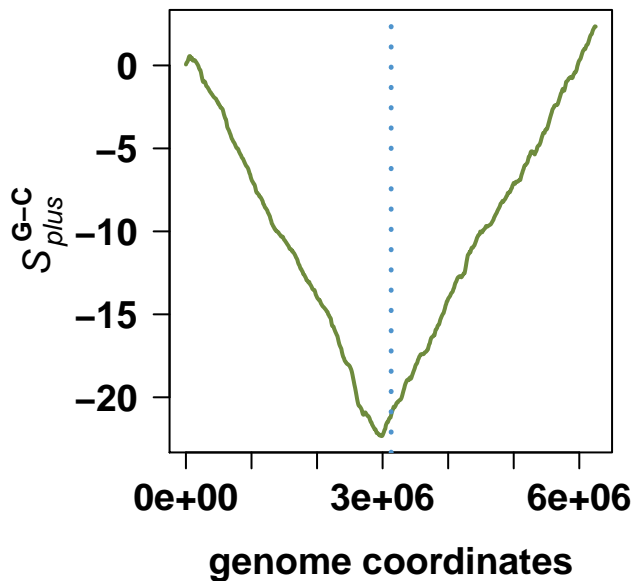
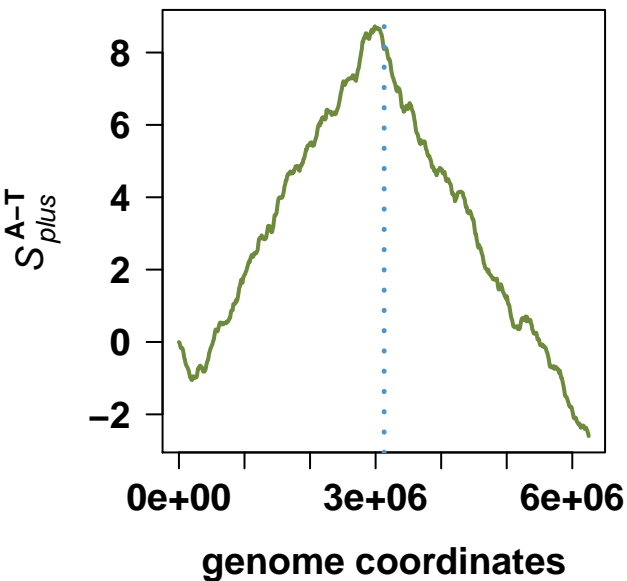
### Porphyromonas gingivalis W83



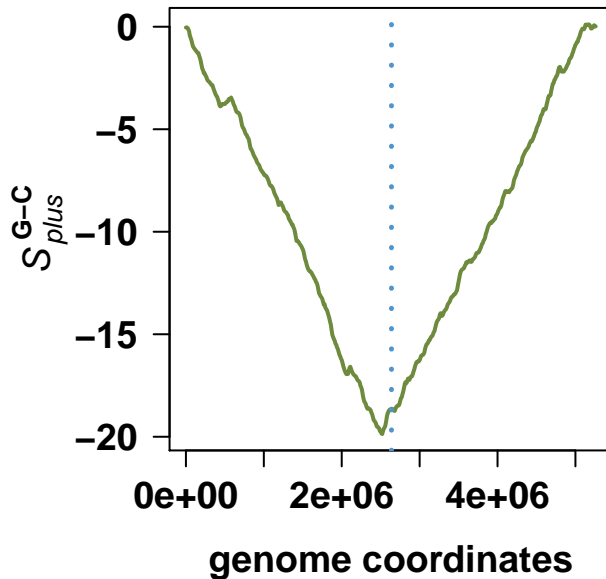
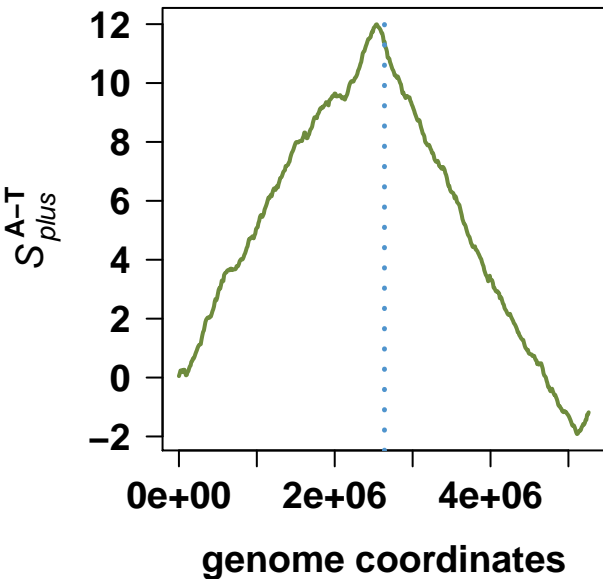
### ***Bacteroides fragilis* NCTC 9343**



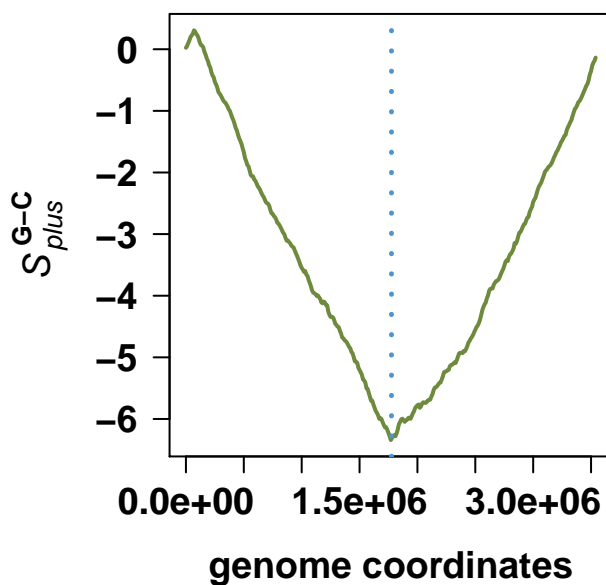
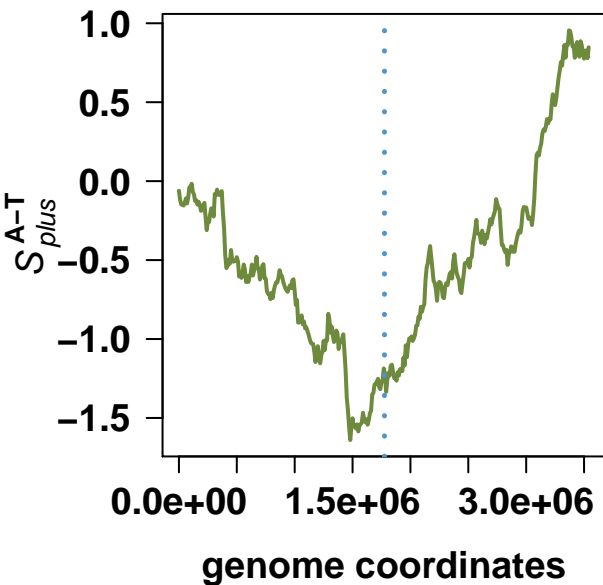
### ***Bacteroides thetaiotaomicron* VPI-5482**



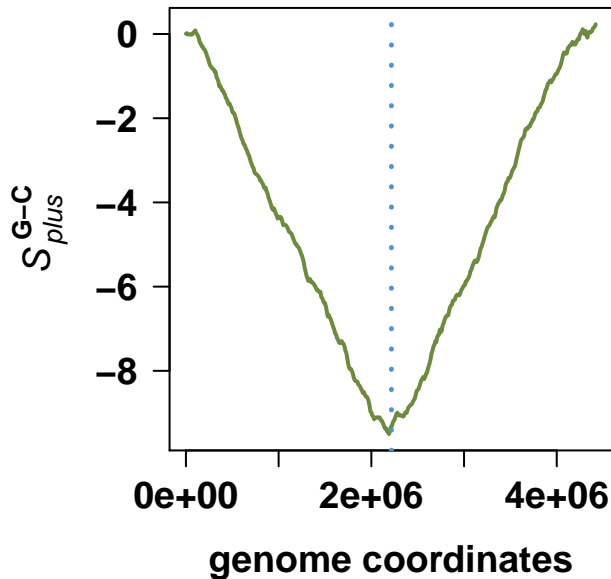
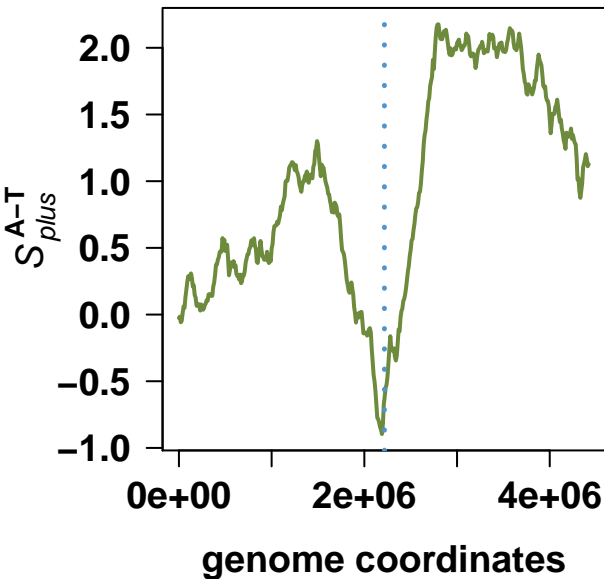
### Bacteroides fragilis YCH46



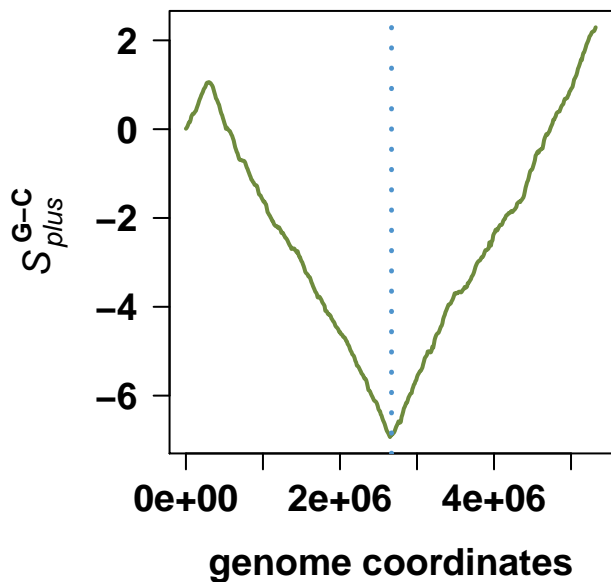
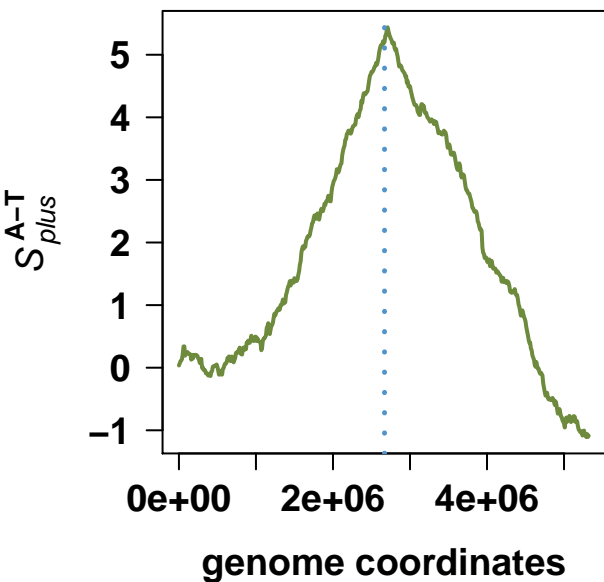
### Salinibacter ruber DSM 13855



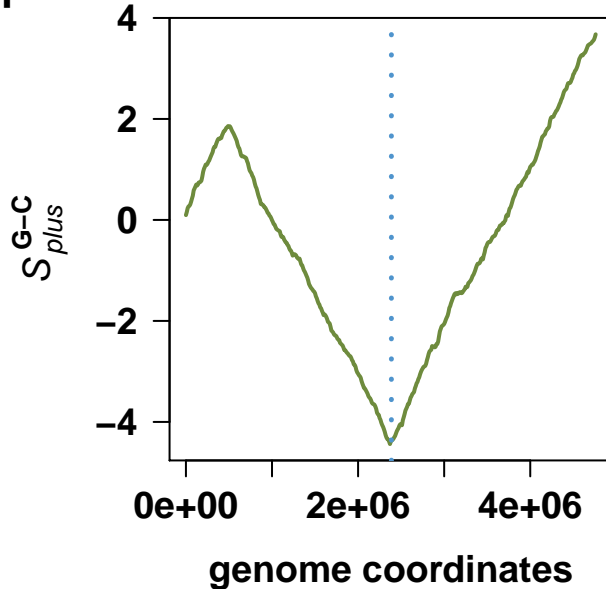
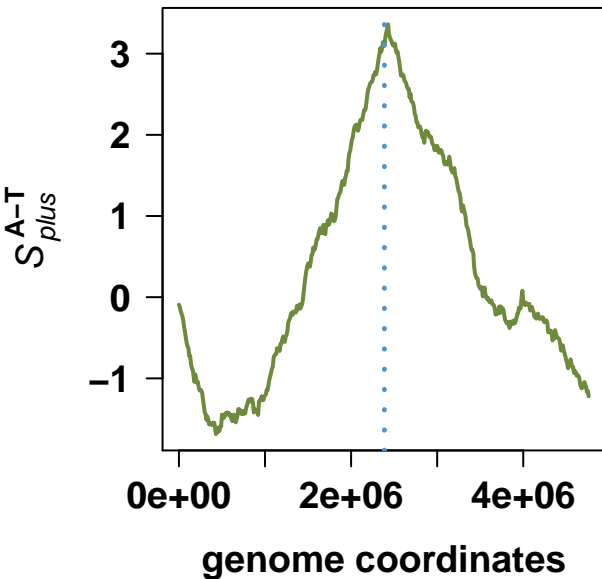
## *Cytophaga hutchinsonii* ATCC 33406



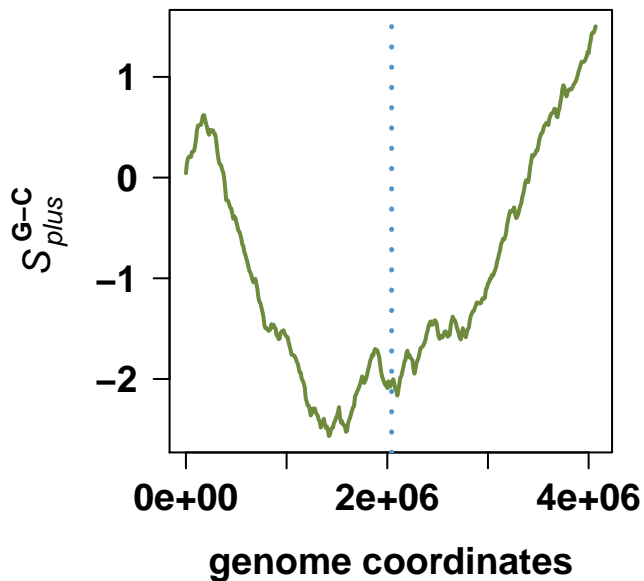
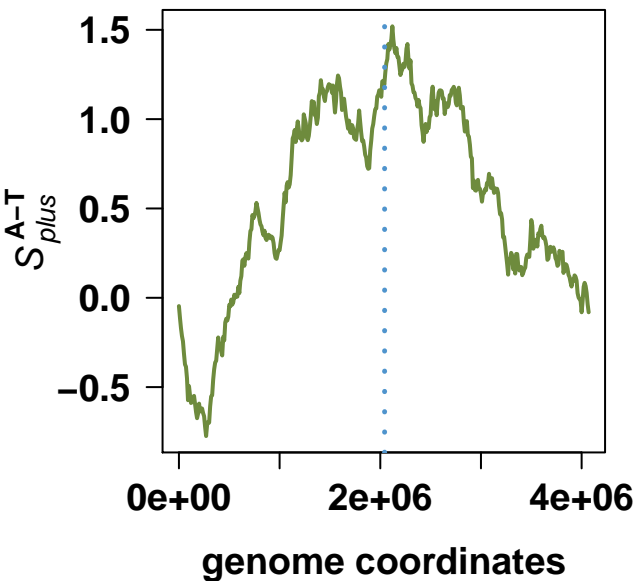
## *Bordetella bronchiseptica* RB50



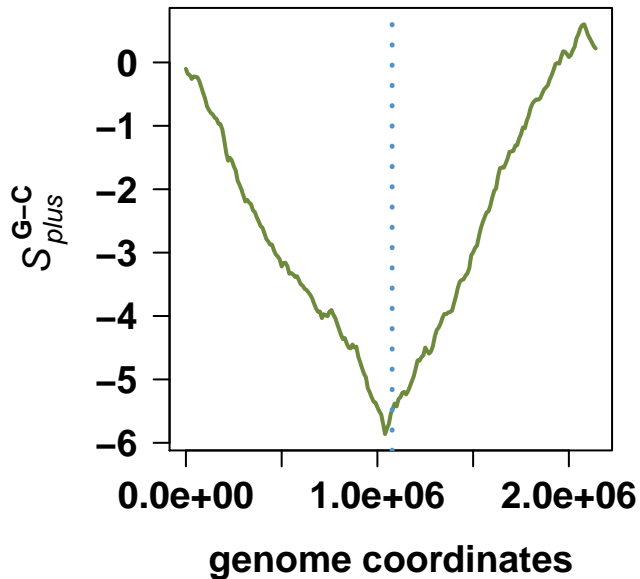
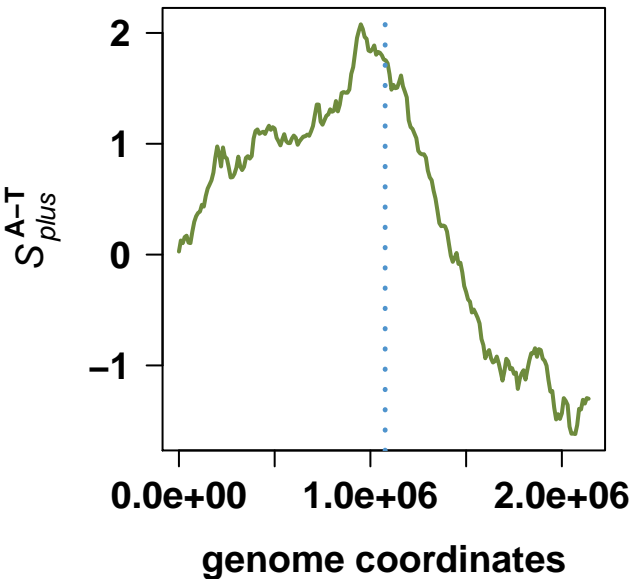
### ***Bordetella parapertussis* 12822**



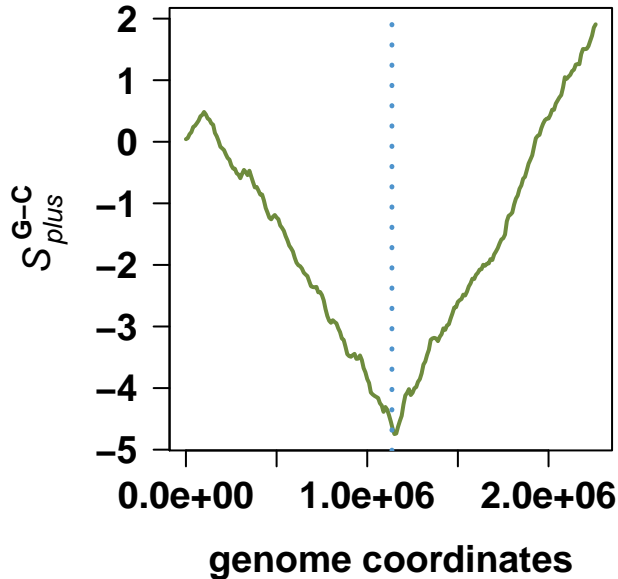
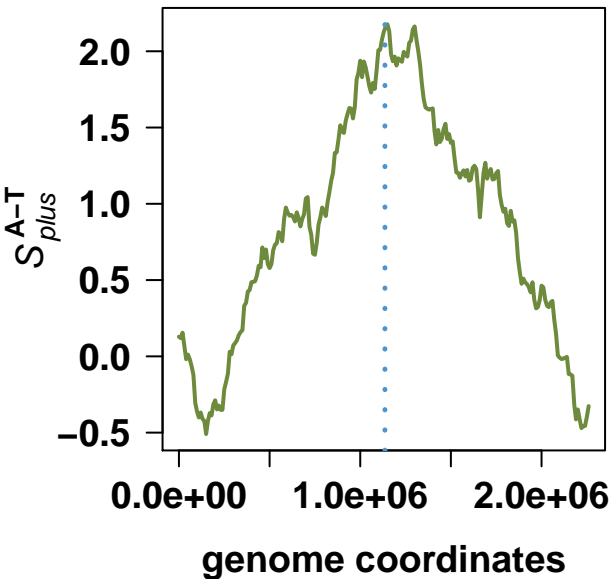
### ***Bordetella pertussis* Tohama I**



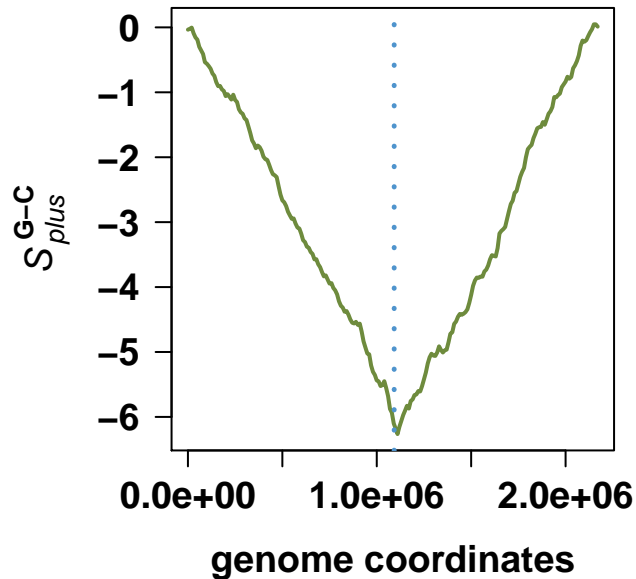
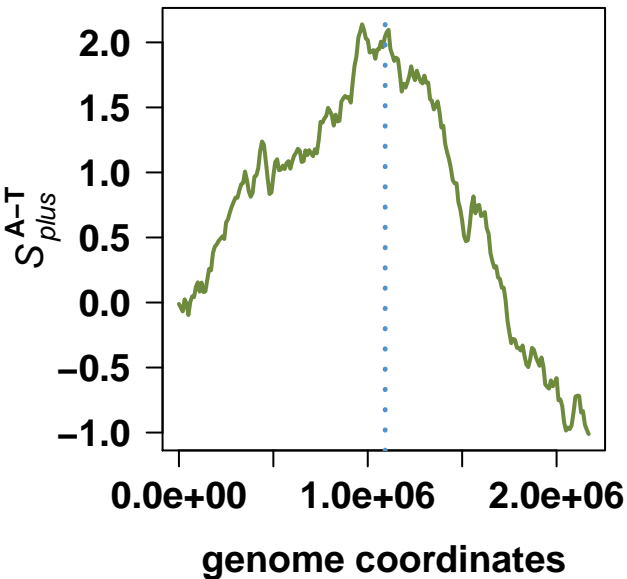
### Neisseria gonorrhoeae FA 1090



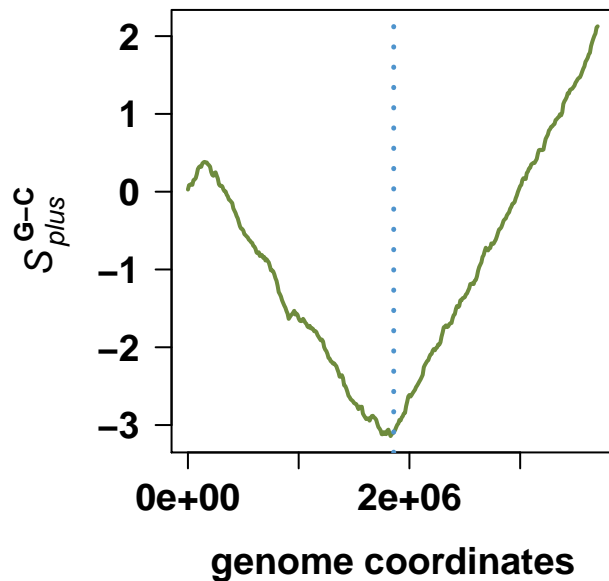
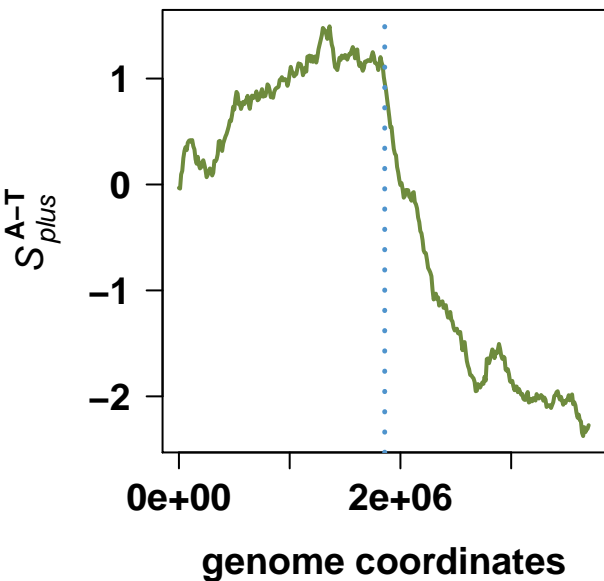
### Neisseria meningitidis MC58



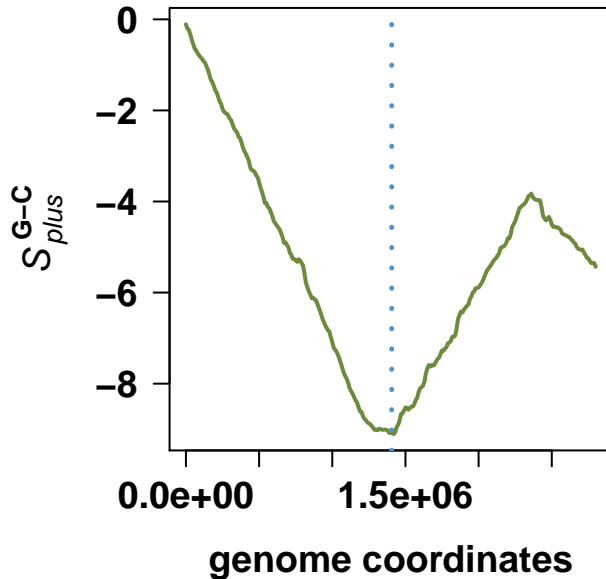
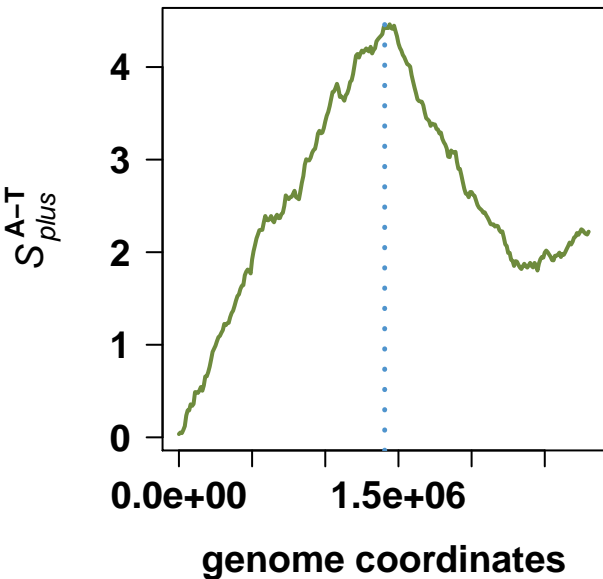
## *Neisseria meningitidis* Z2491



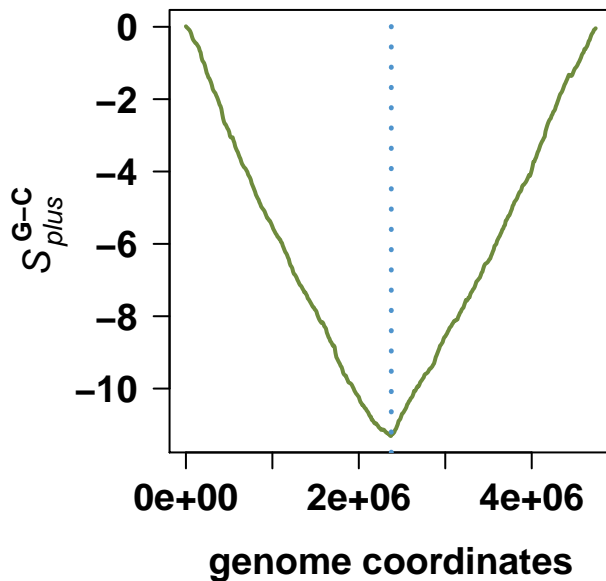
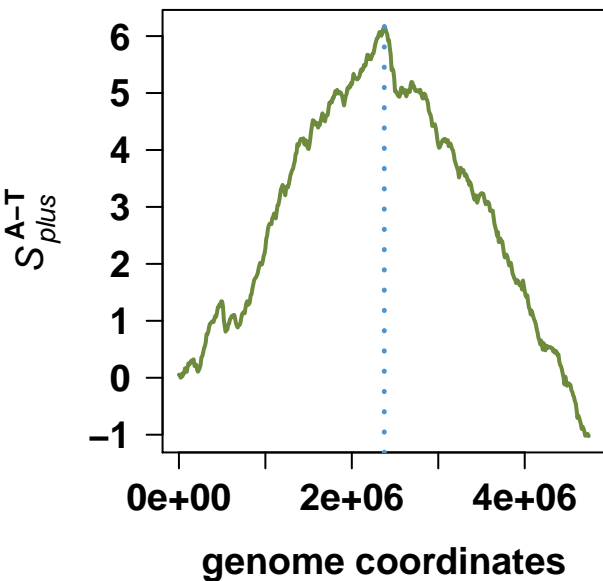
## *Ralstonia solanacearum* GMI1000



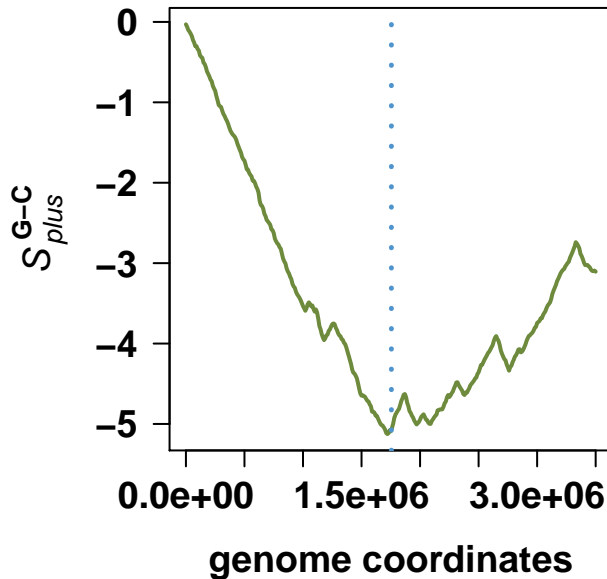
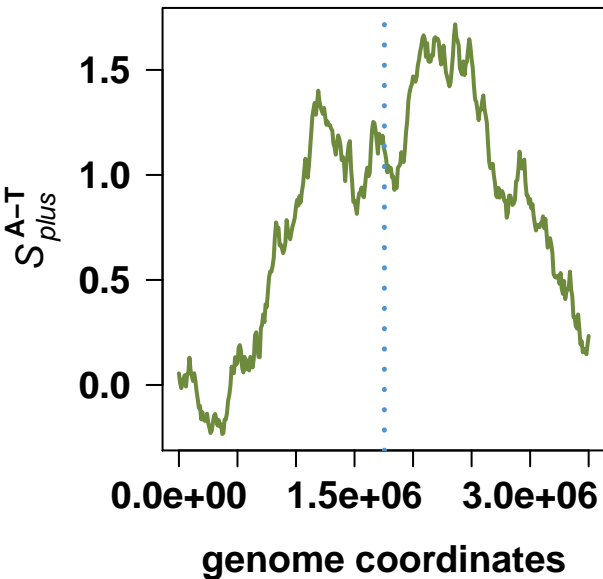
### Nitrosomonas europaea ATCC 19718



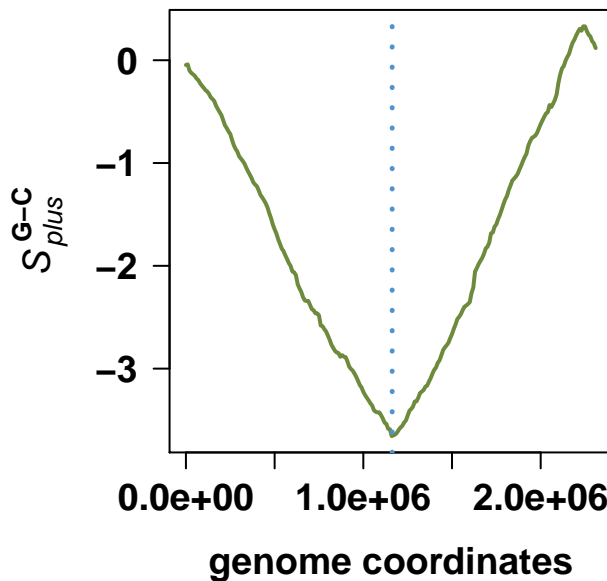
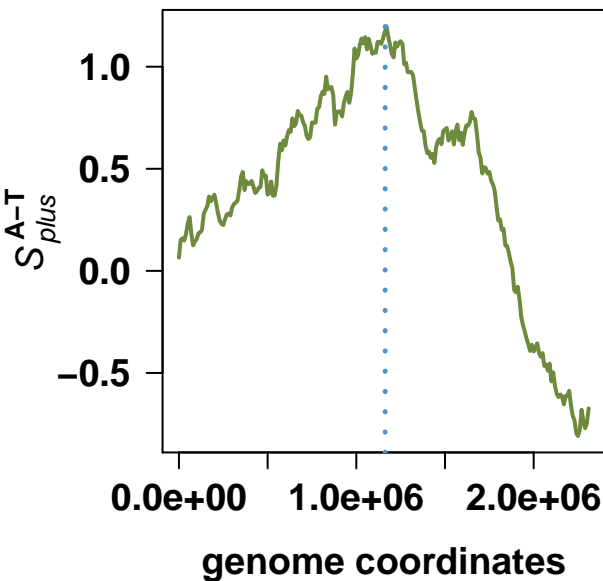
### Chromobacterium violaceum ATCC 12472



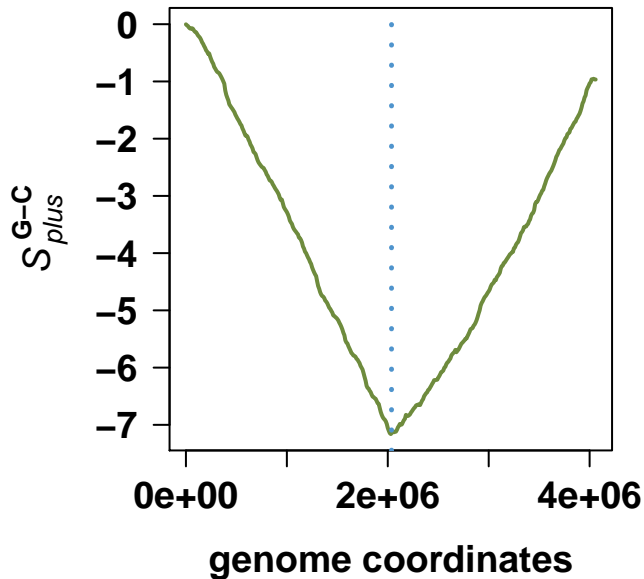
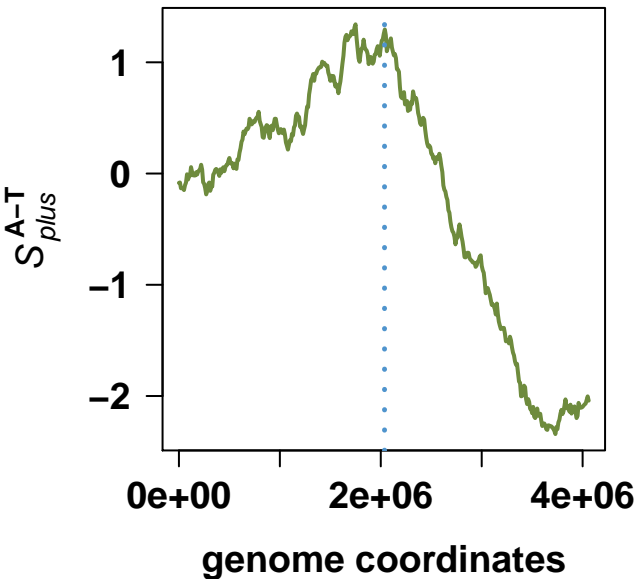
### Burkholderia mallei ATCC 23344



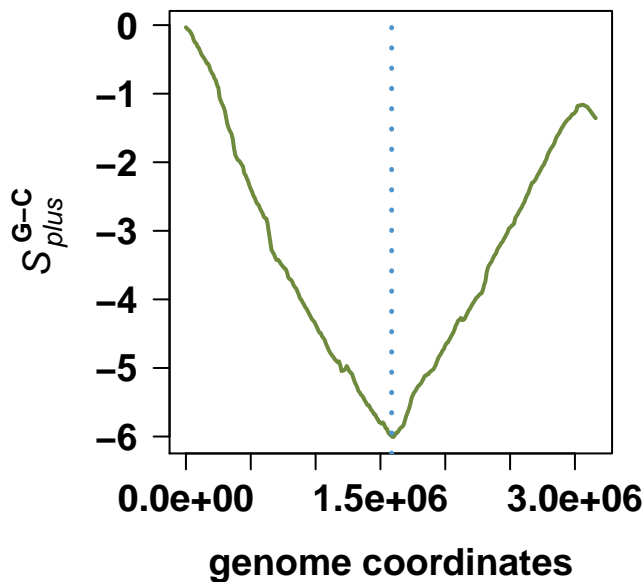
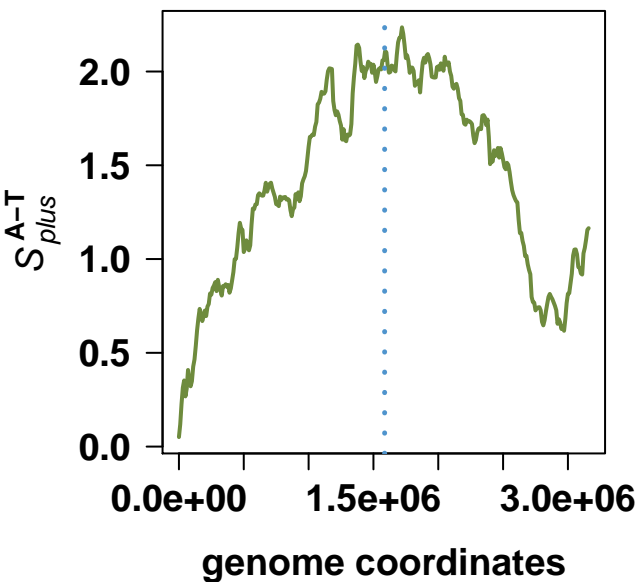
### Burkholderia mallei ATCC 23344



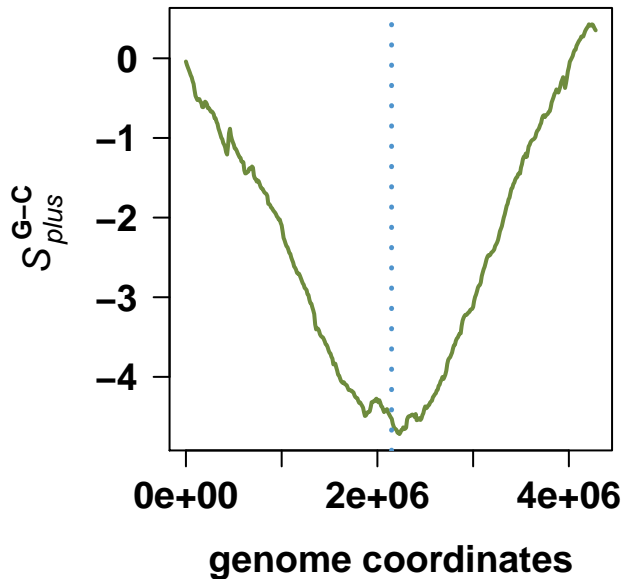
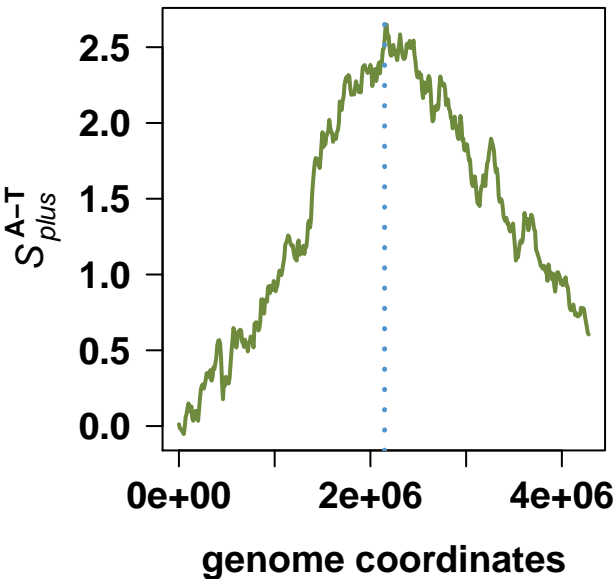
### Burkholderia pseudomallei K96243



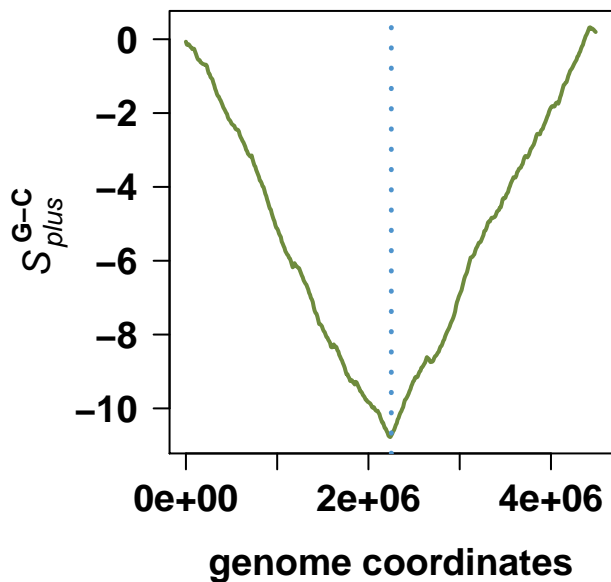
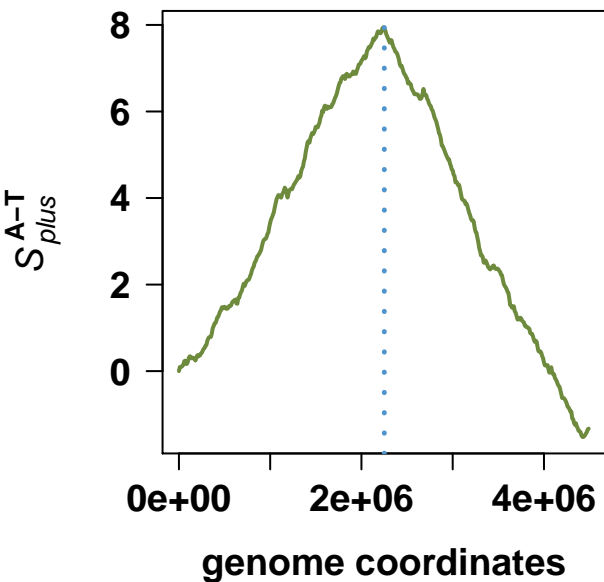
### Burkholderia pseudomallei K96243



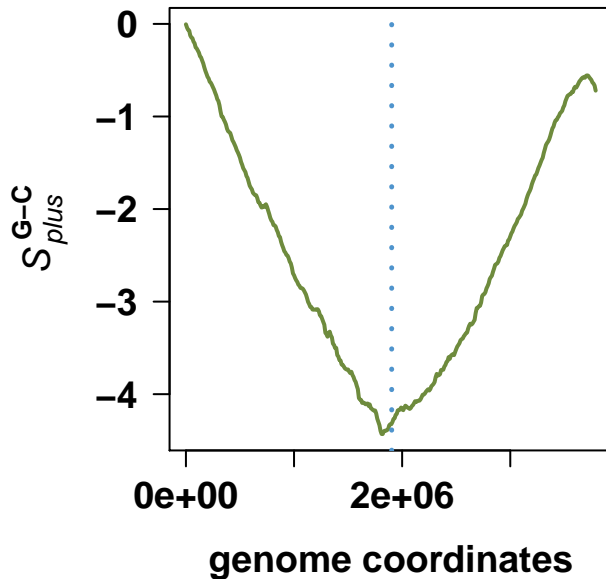
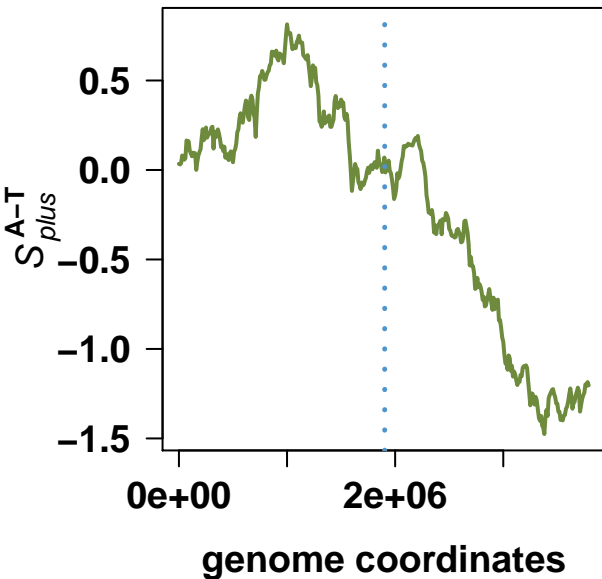
## Aromatoleum aromaticum EbN1



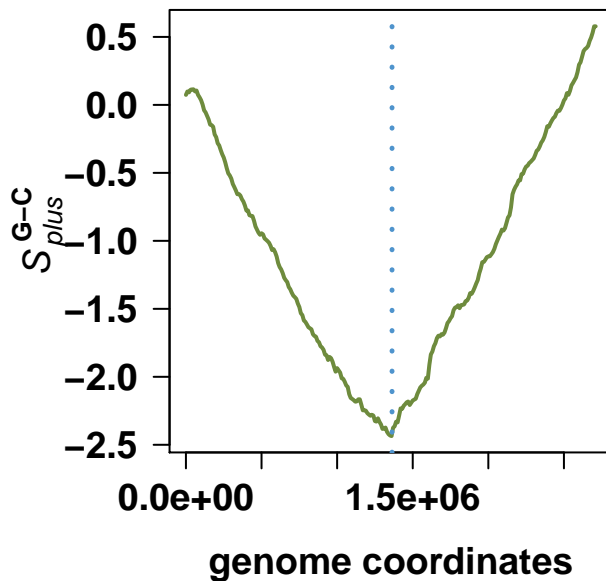
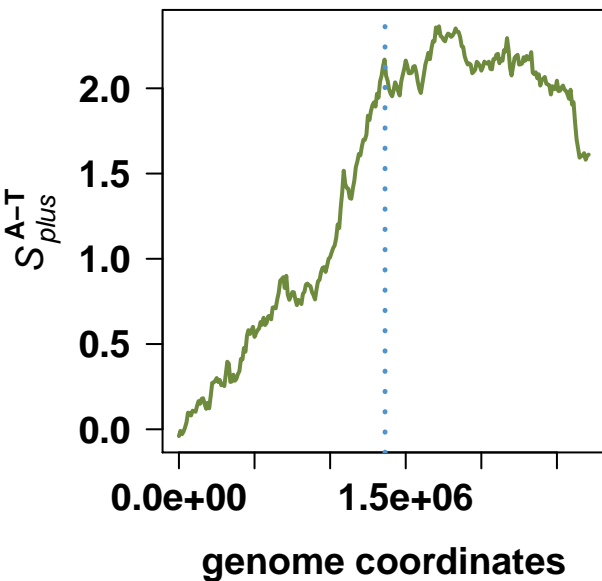
## Dechloromonas aromatica RCB



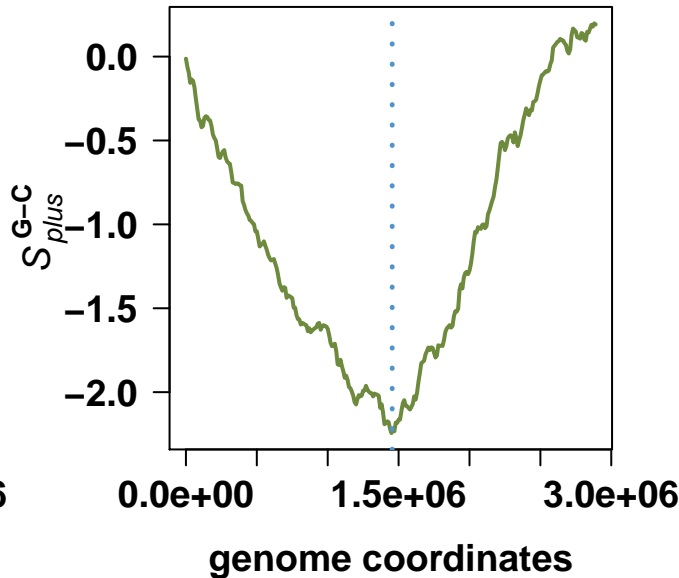
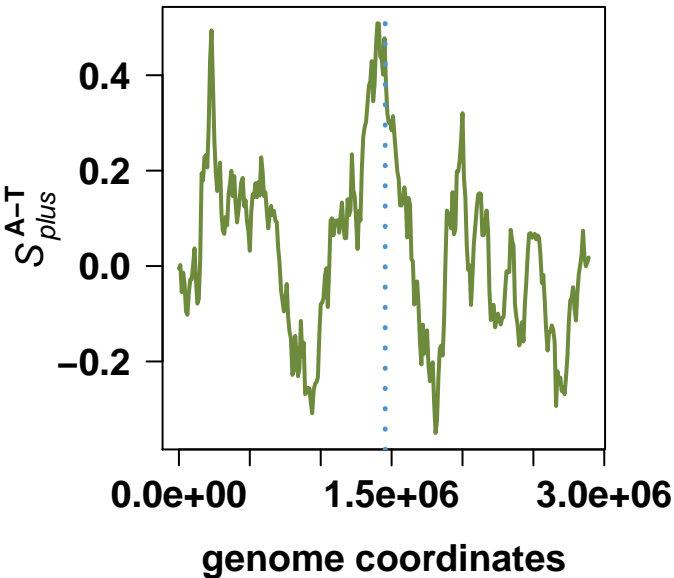
### Ralstonia eutropha JMP134



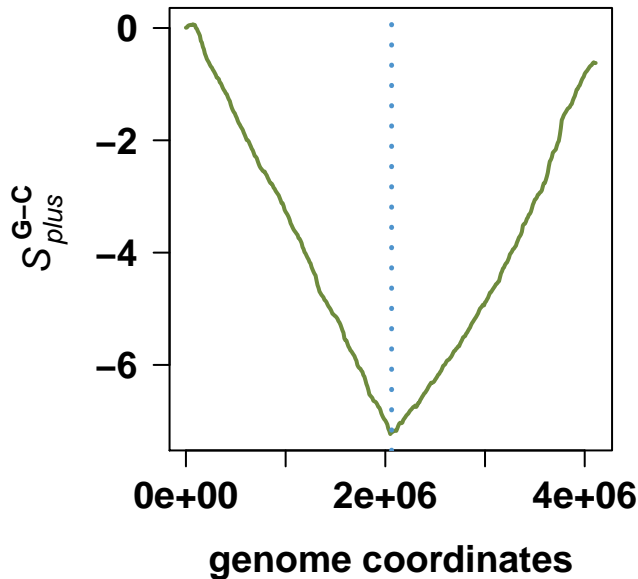
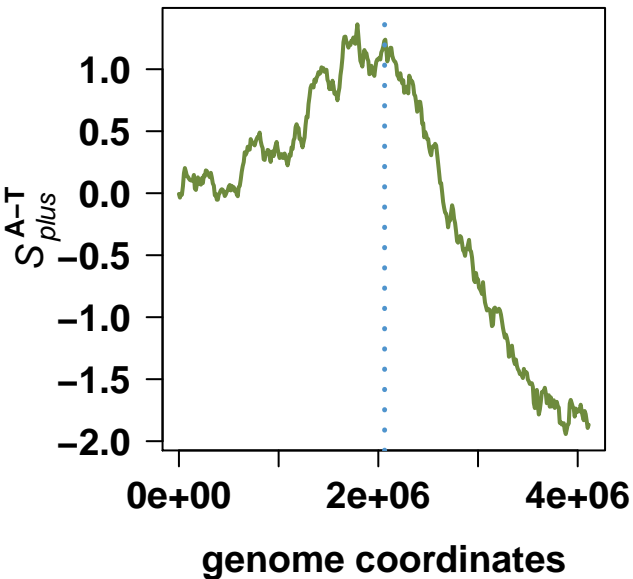
### Ralstonia eutropha JMP134



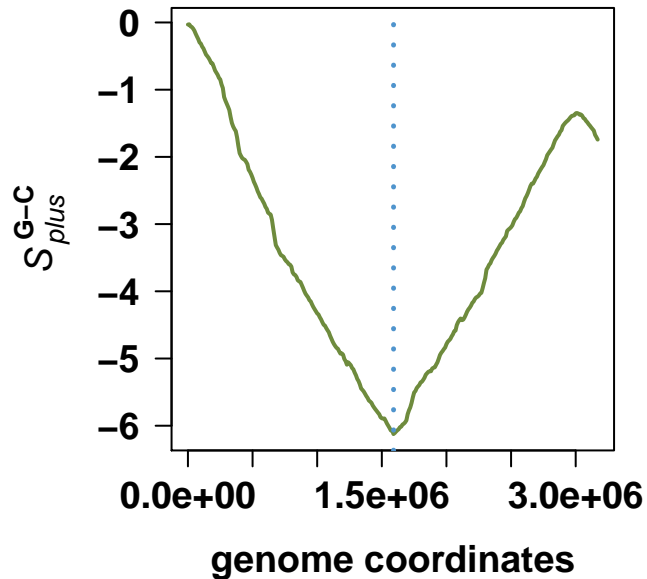
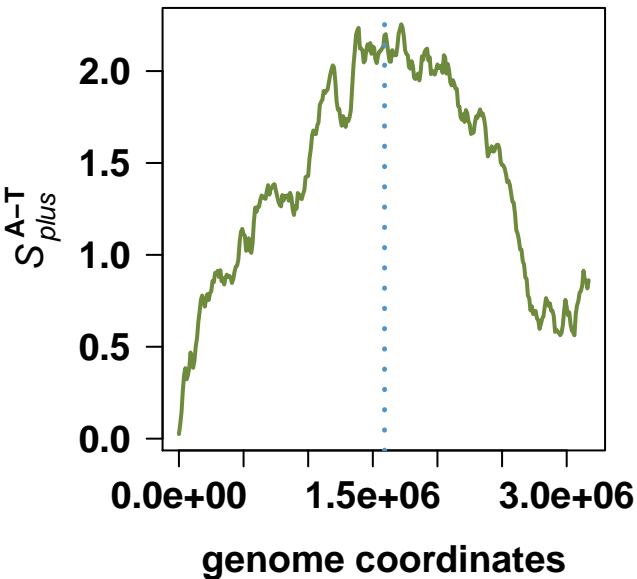
### Thiobacillus denitrificans ATCC 25259



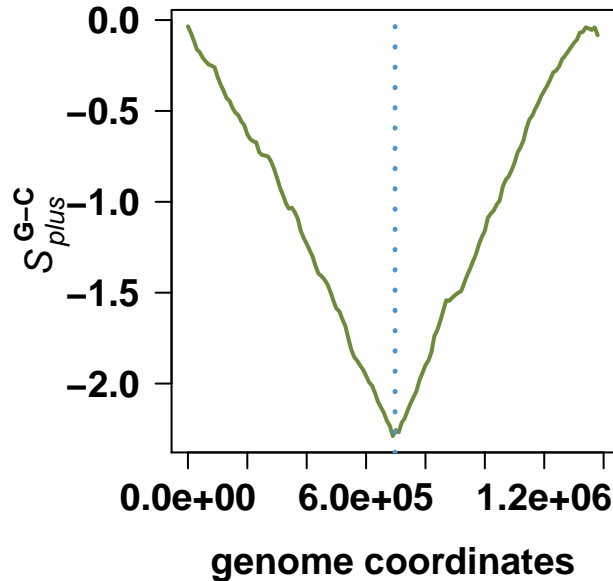
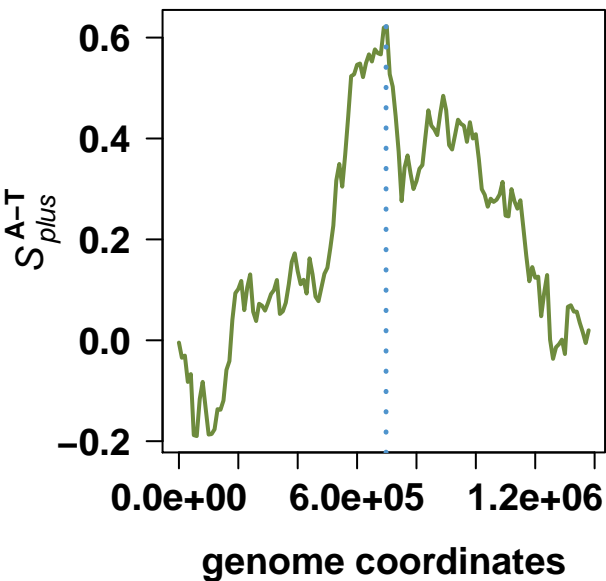
### Burkholderia pseudomallei 1710b



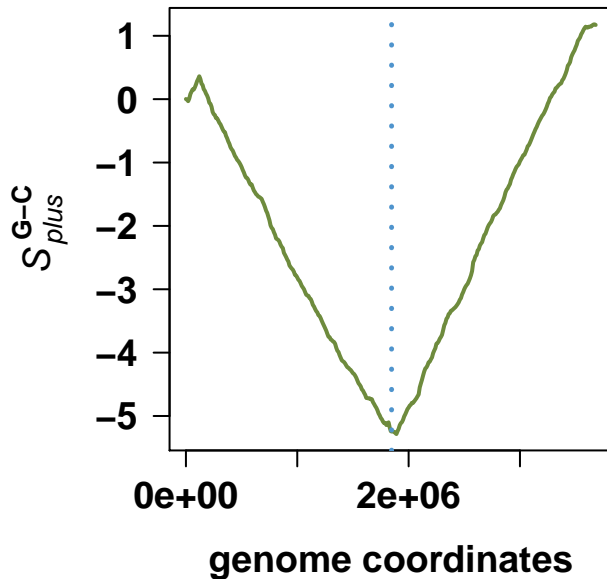
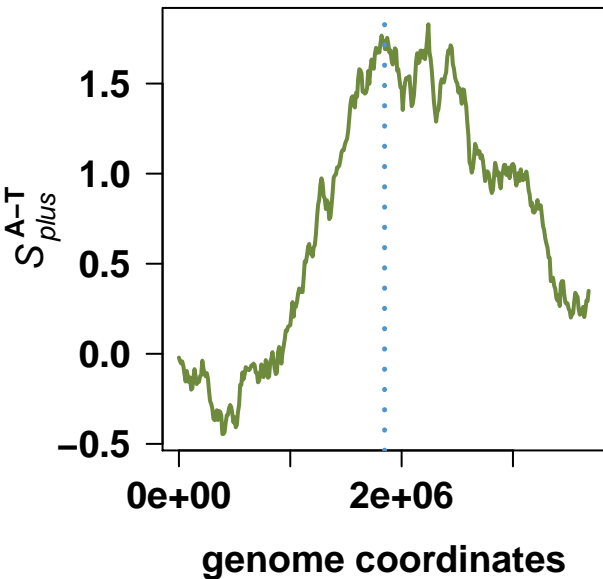
### Burkholderia pseudomallei 1710b



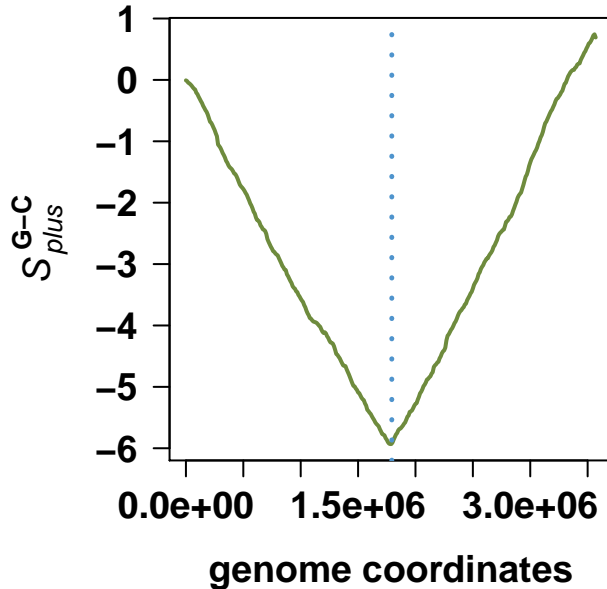
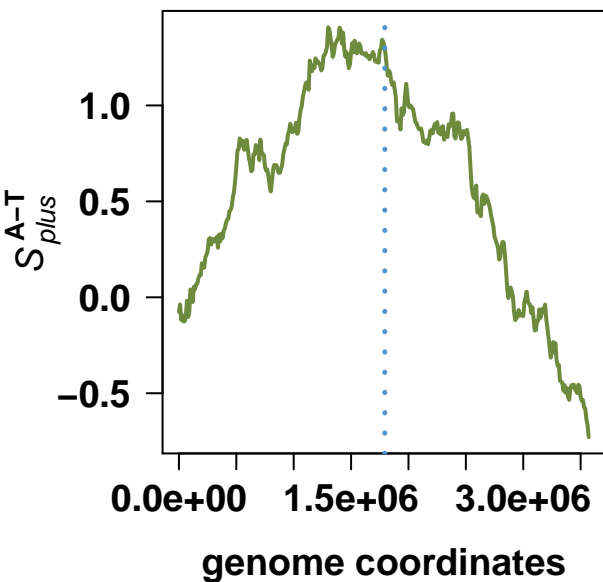
### Burkholderia lata



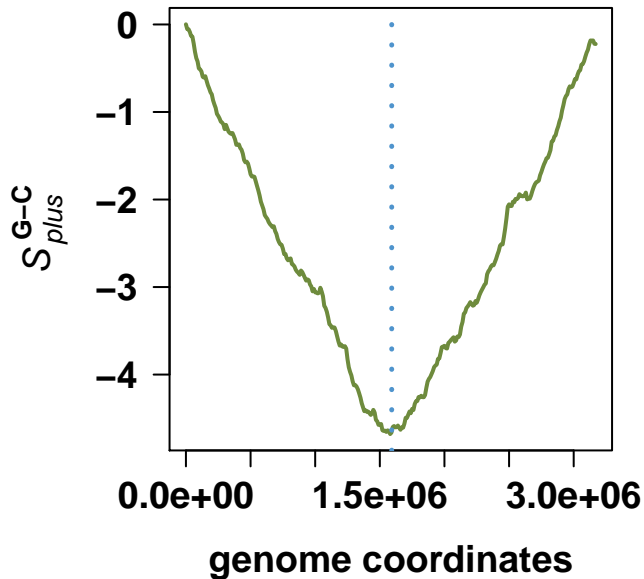
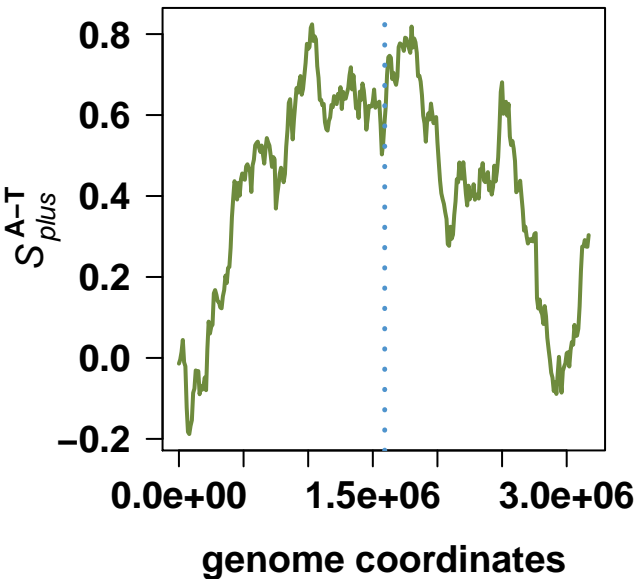
### Burkholderia lata



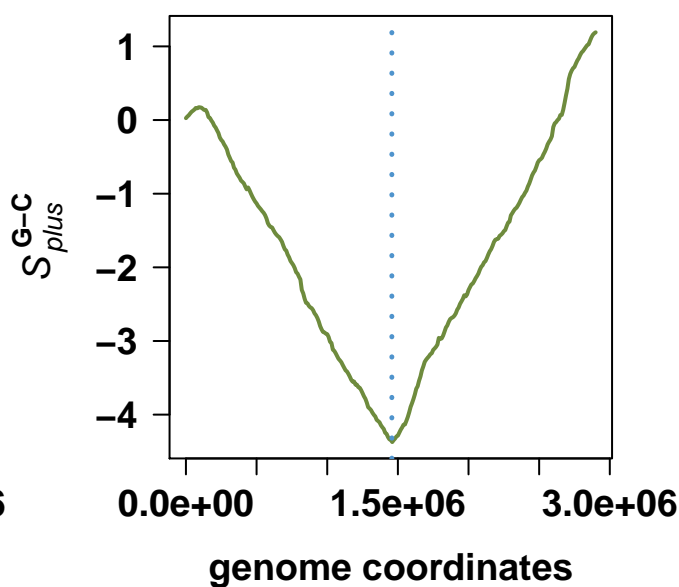
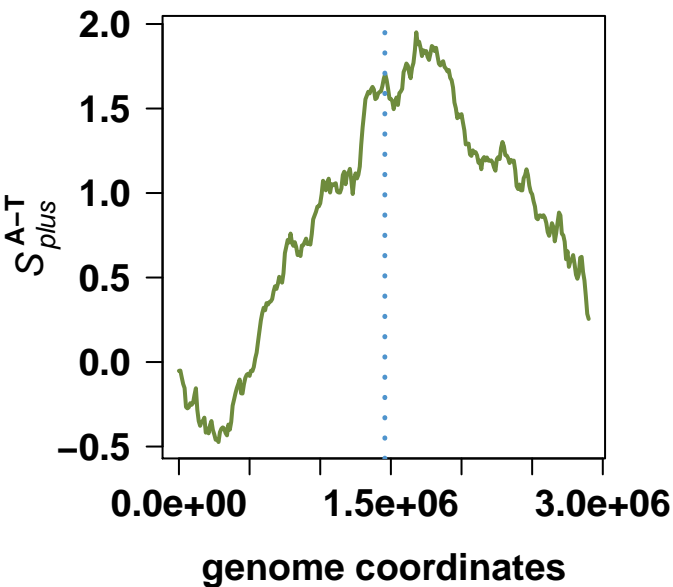
### Burkholderia lata



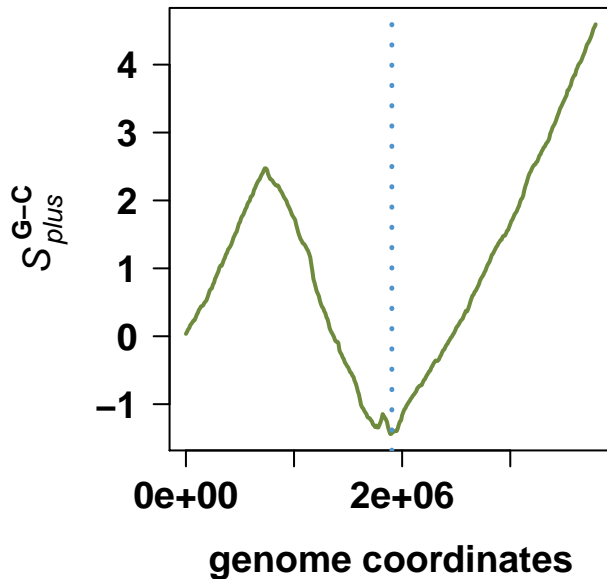
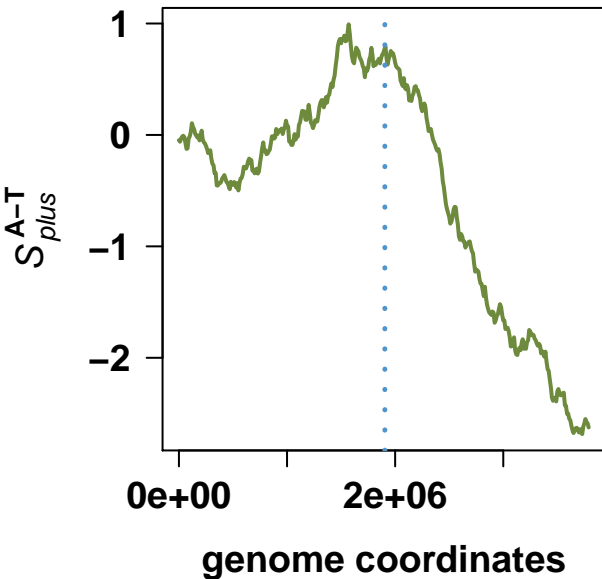
### *Nitrosospira multiformis* ATCC 25196



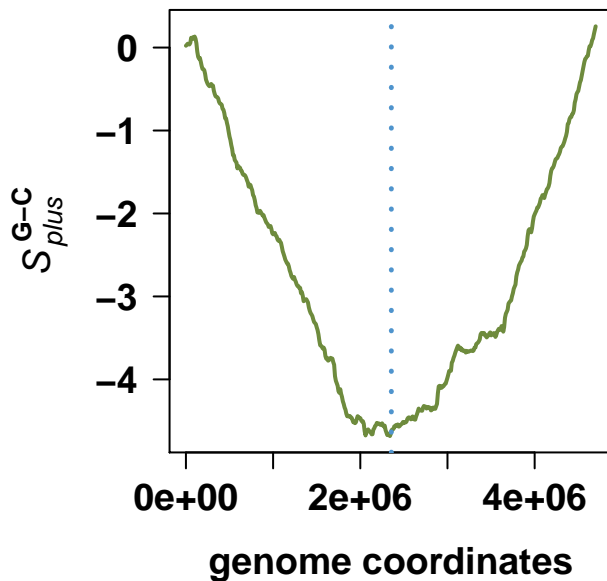
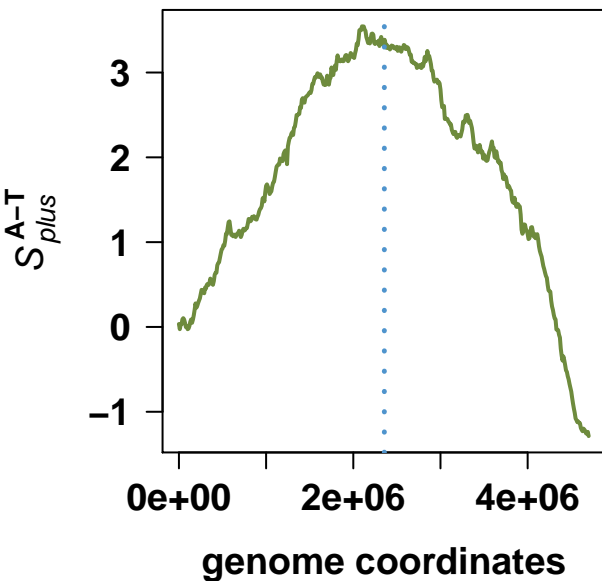
### *Burkholderia thailandensis* E264



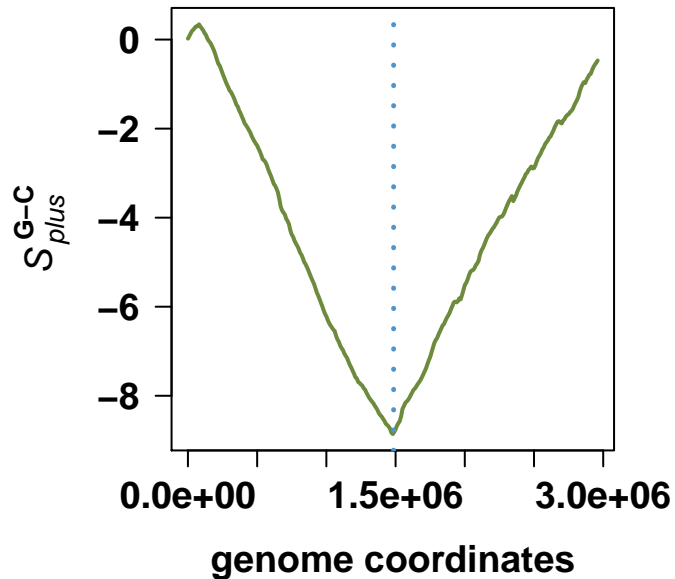
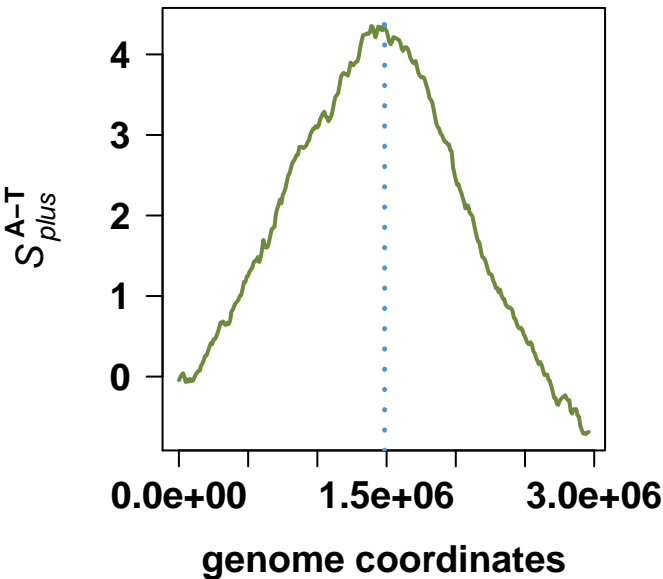
### Burkholderia thailandensis E264



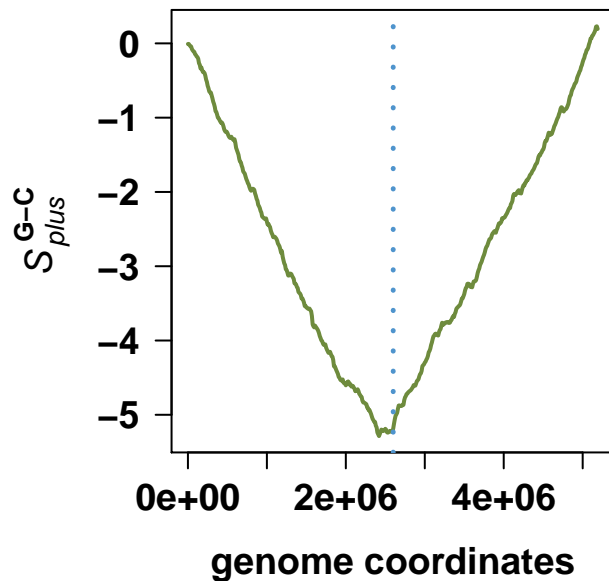
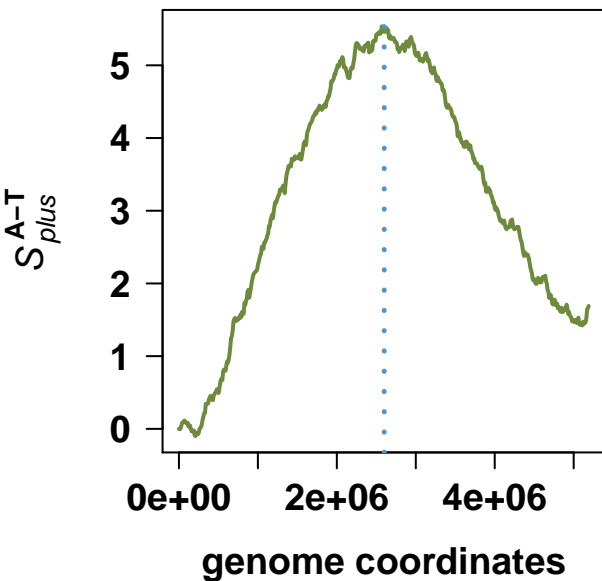
### Albidiferax ferrireducens T118



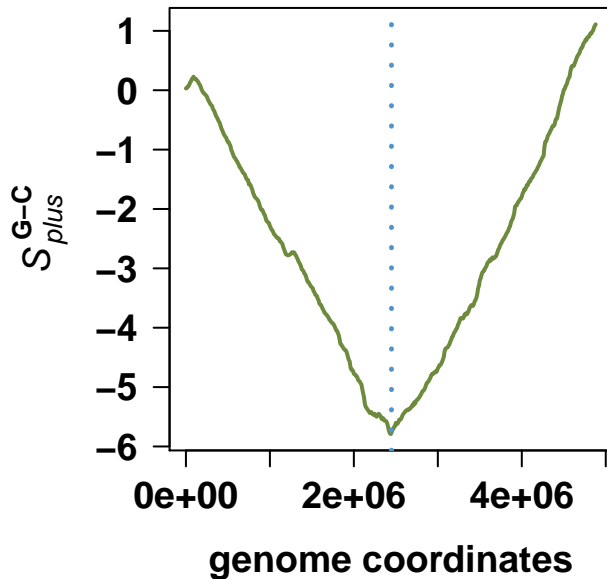
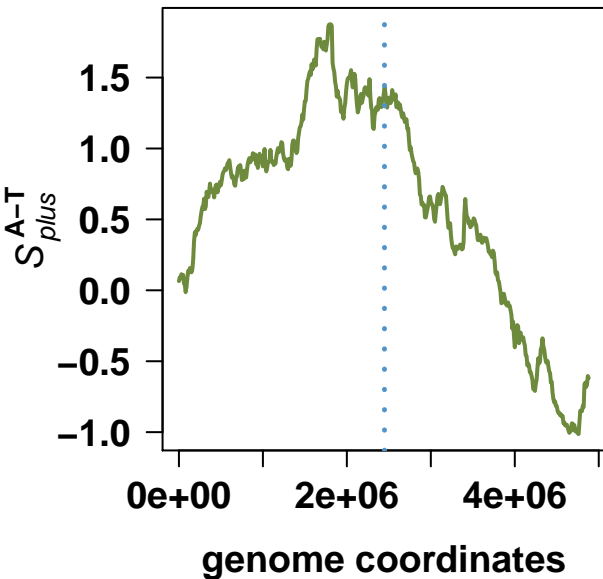
## Methylobacillus flagellatus KT



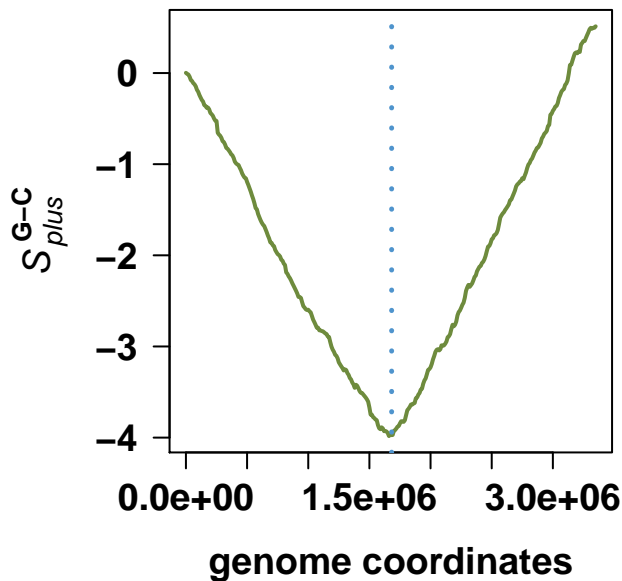
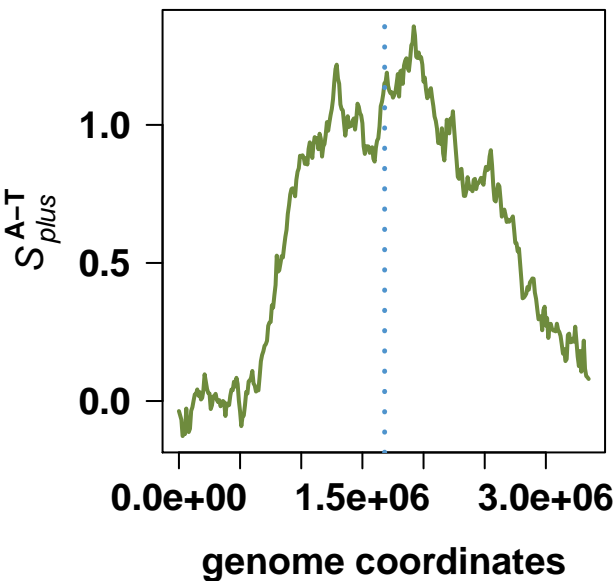
## Polaromonas sp. JS666



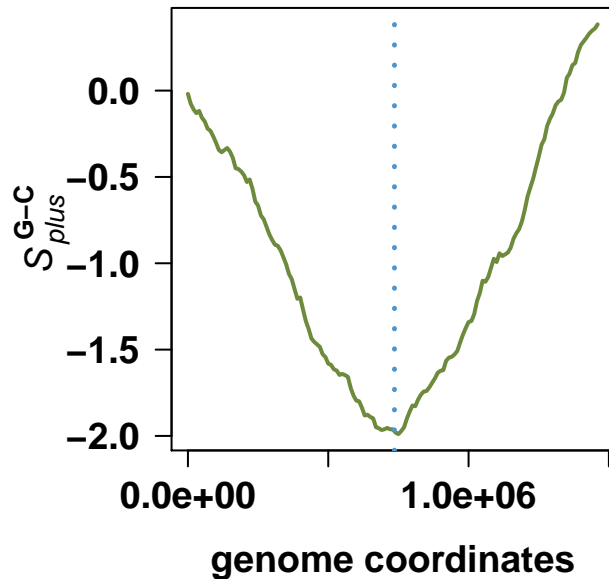
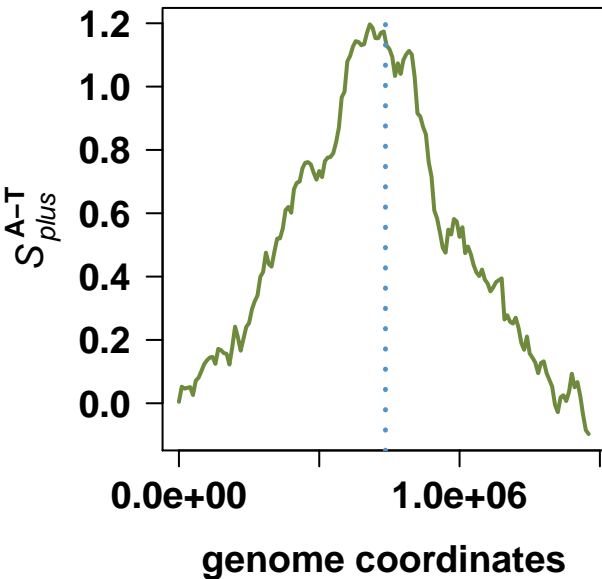
### Burkholderia xenovorans LB400



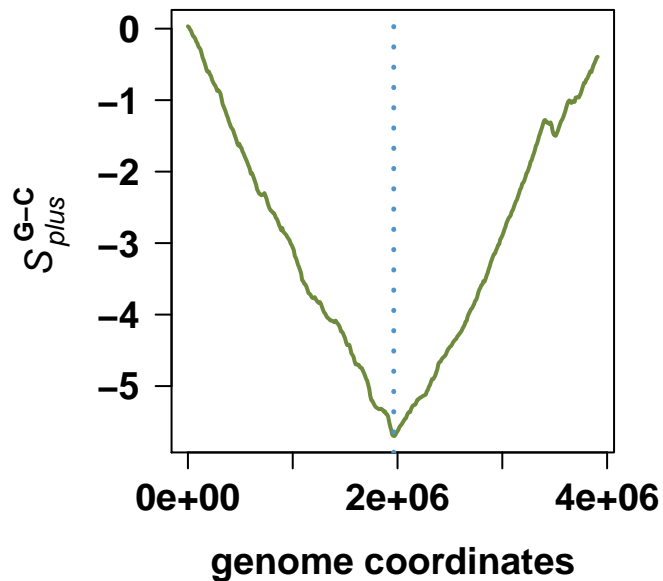
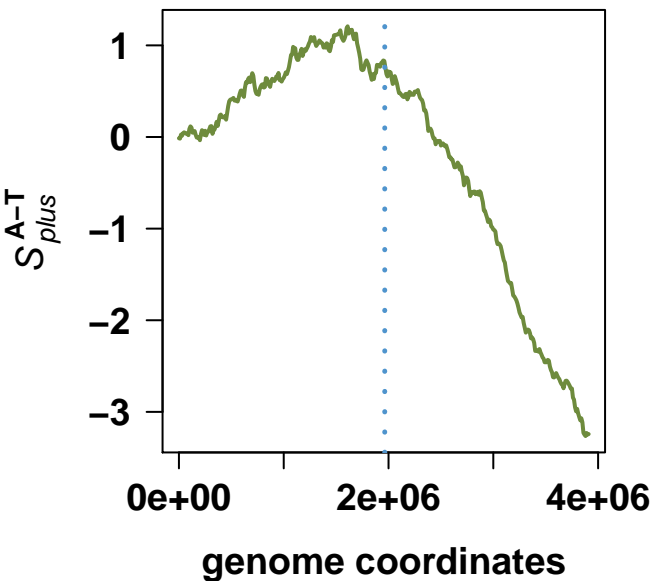
### Burkholderia xenovorans LB400



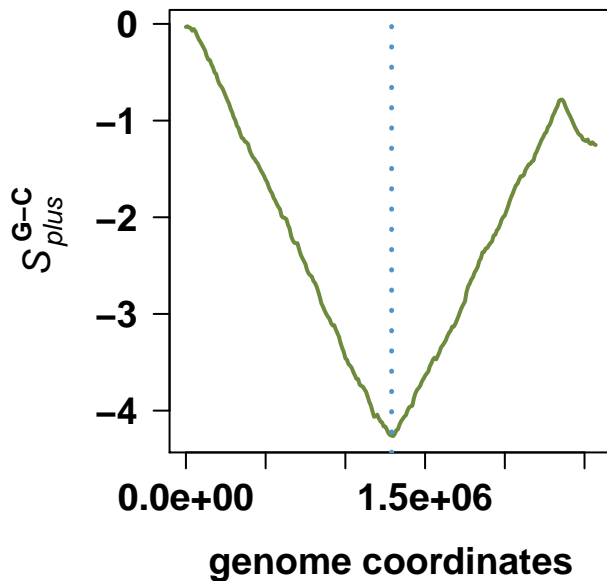
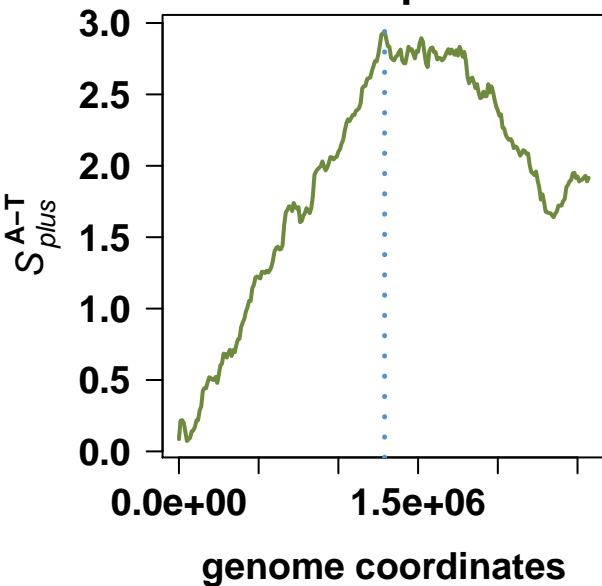
### Burkholderia xenovorans LB400



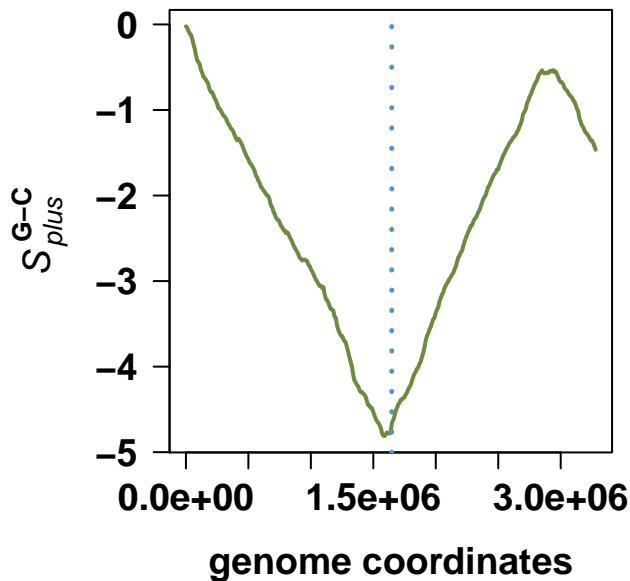
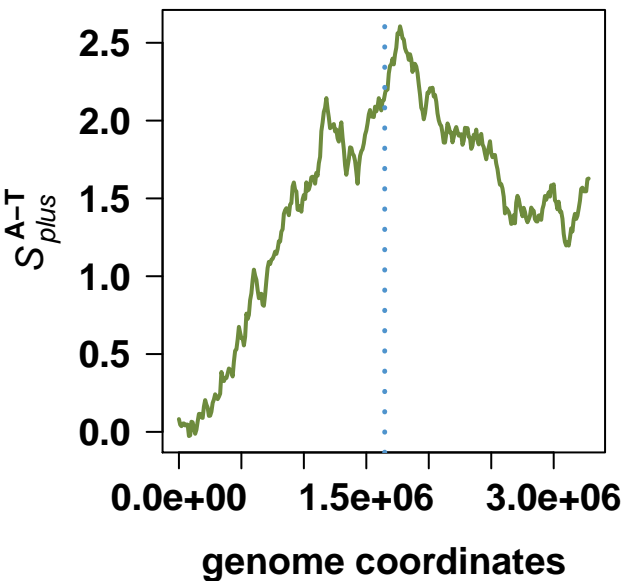
### Cupriavidus metallidurans CH34



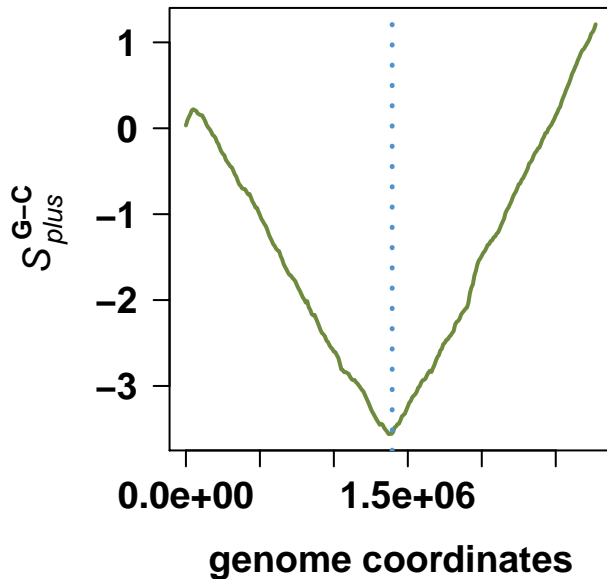
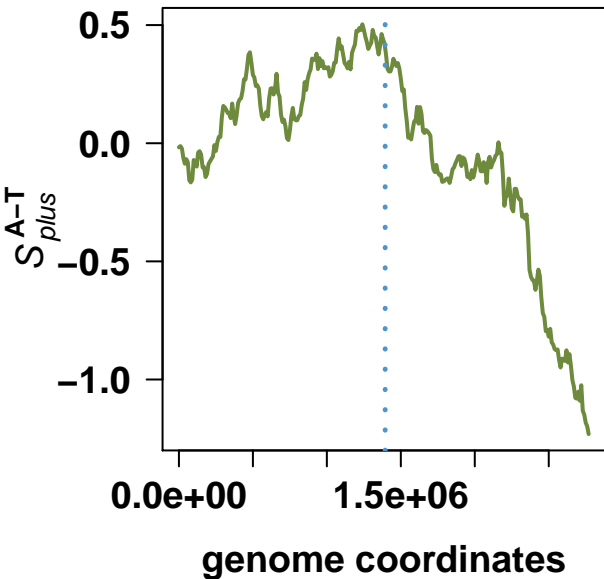
### Cupriavidus metallidurans CH34



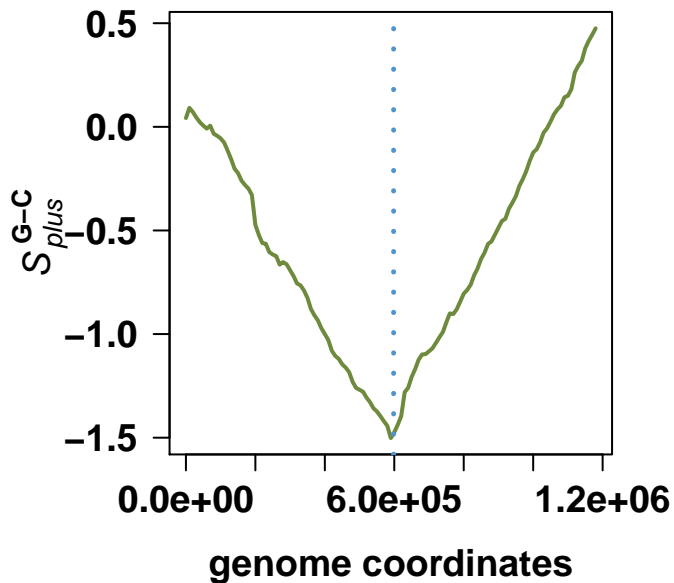
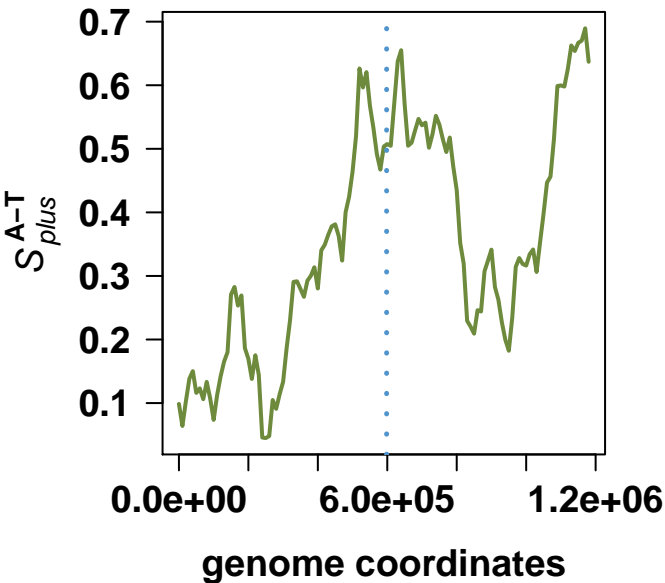
### Burkholderia cenocepacia AU 1054



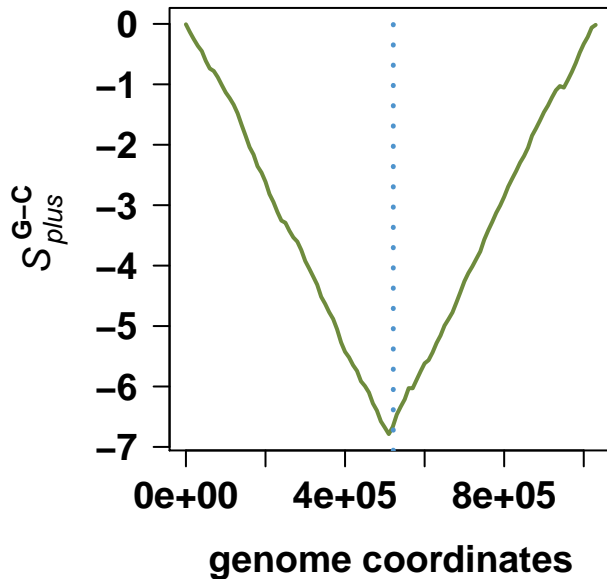
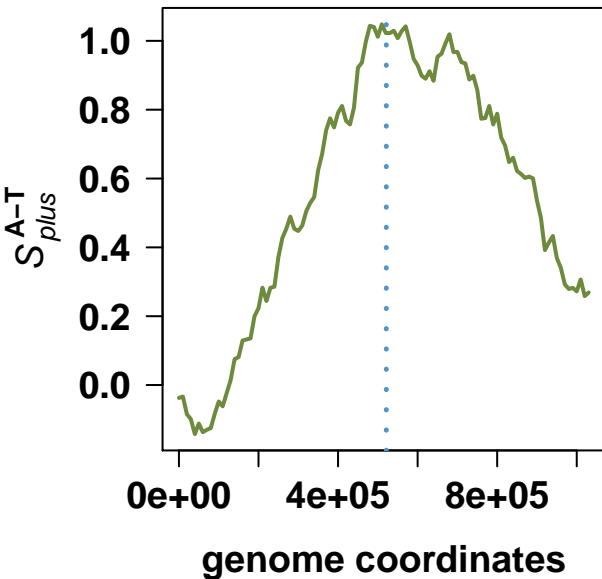
### Burkholderia cenocepacia AU 1054



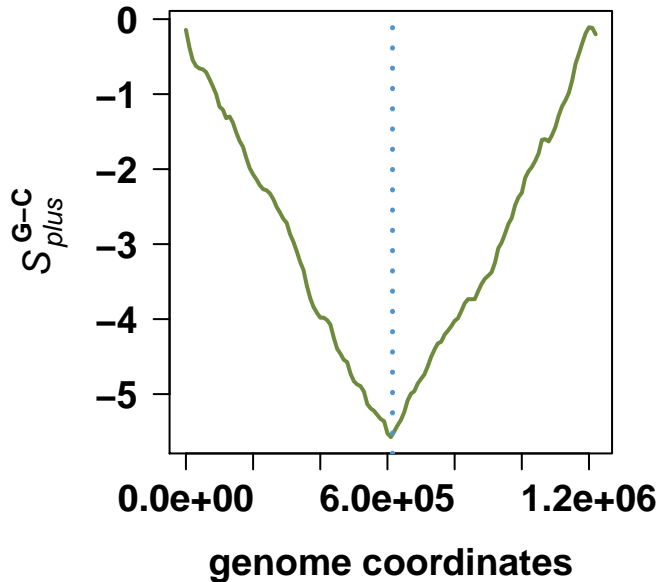
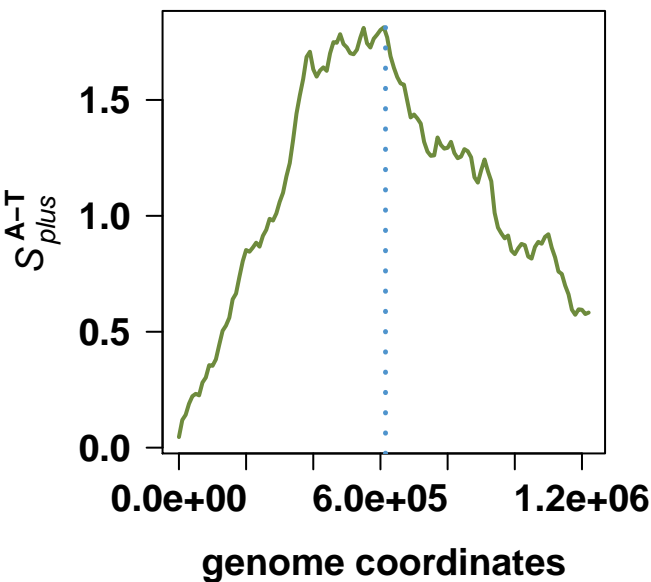
### Burkholderia cenocepacia AU 1054



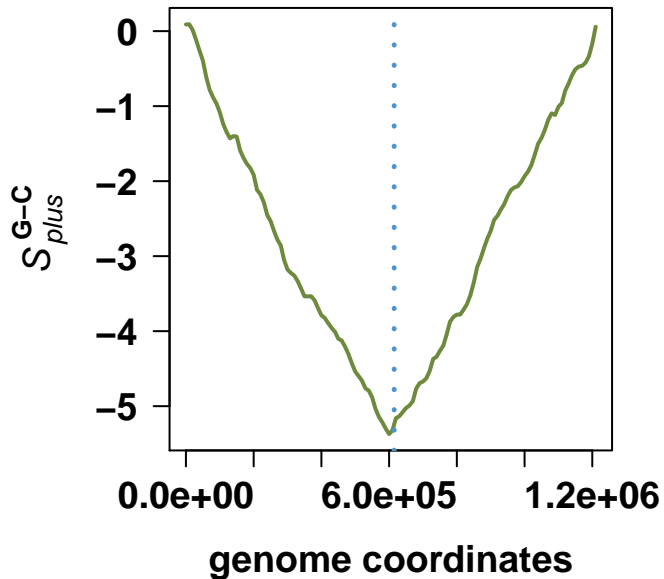
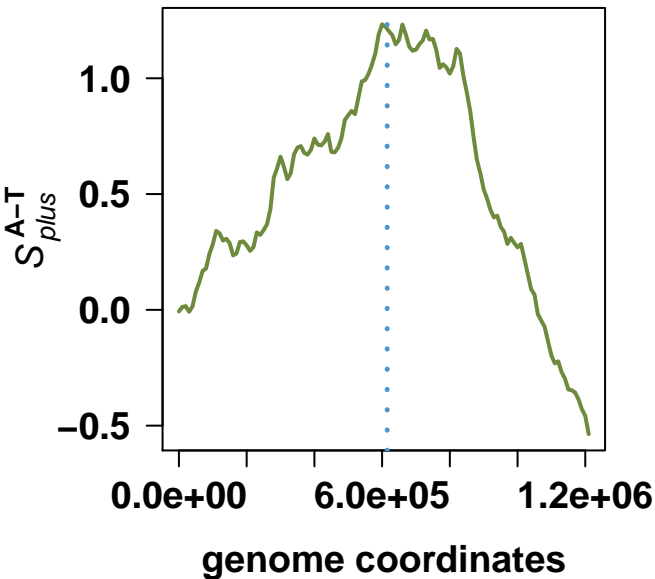
### *Chlamydia trachomatis* D/UW-3/CX



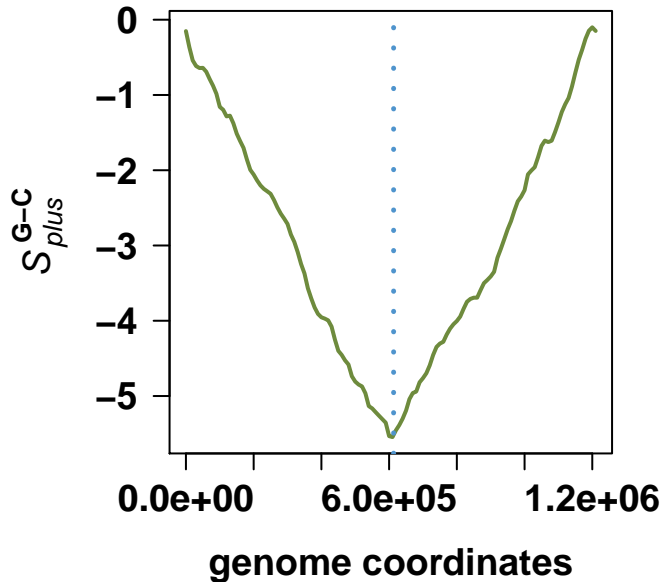
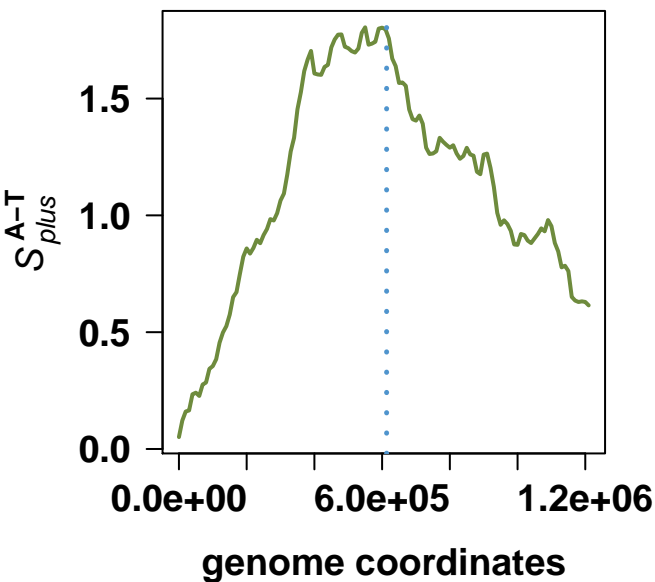
### *Chlamydomphila pneumoniae* CWL029



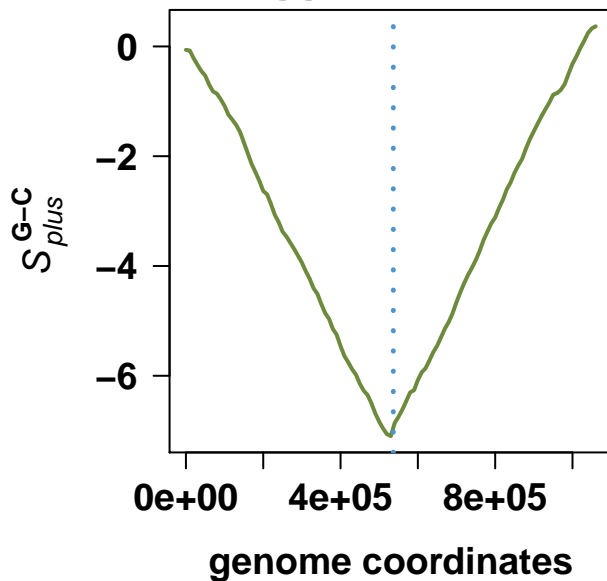
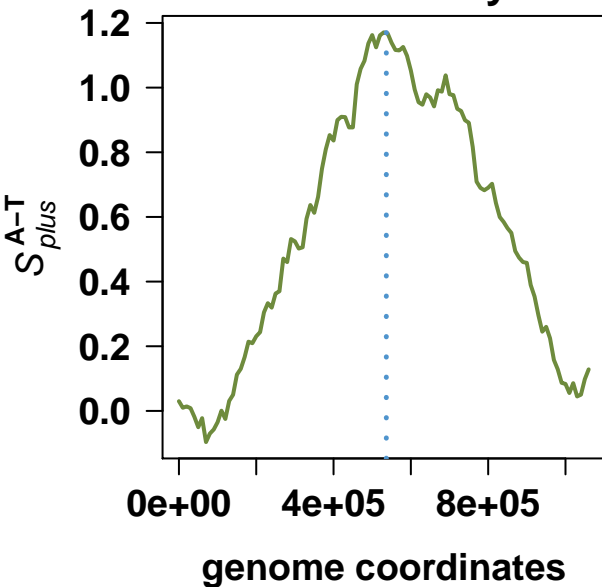
### *Chlamydophila pneumoniae* AR39



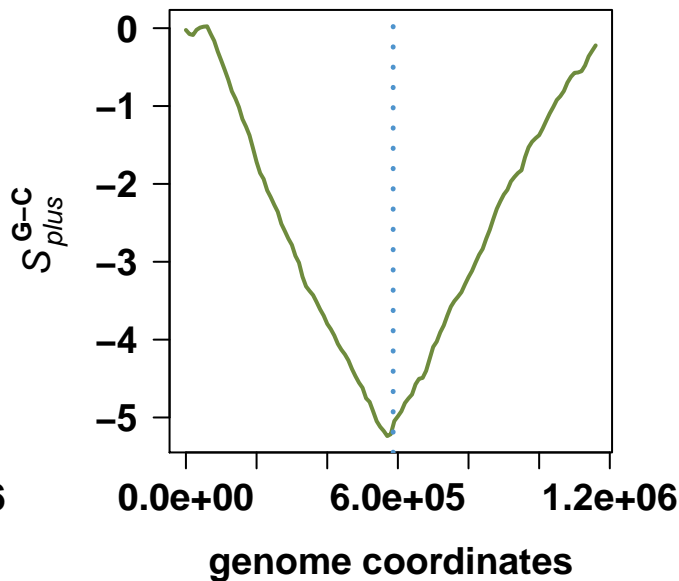
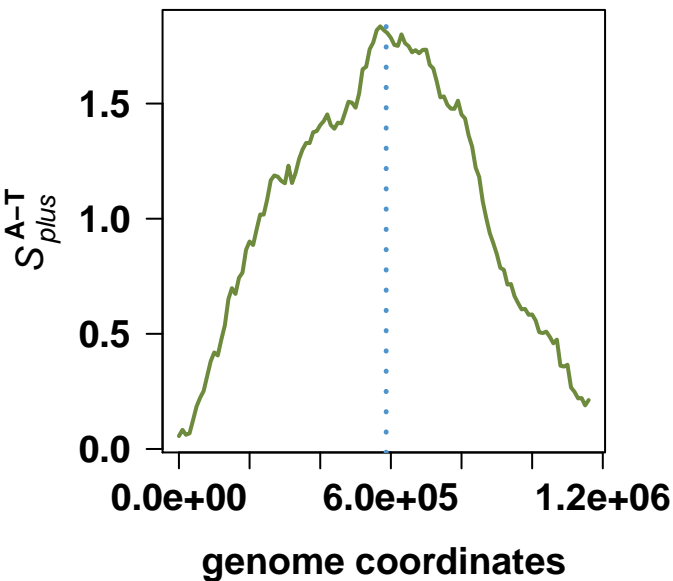
### *Chlamydophila pneumoniae* J138



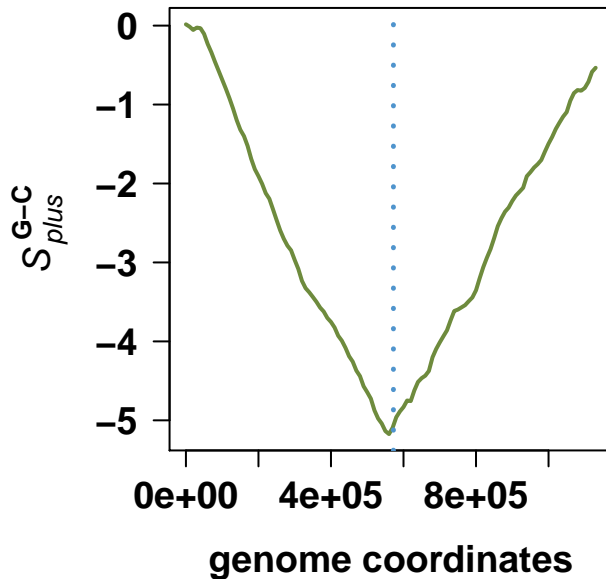
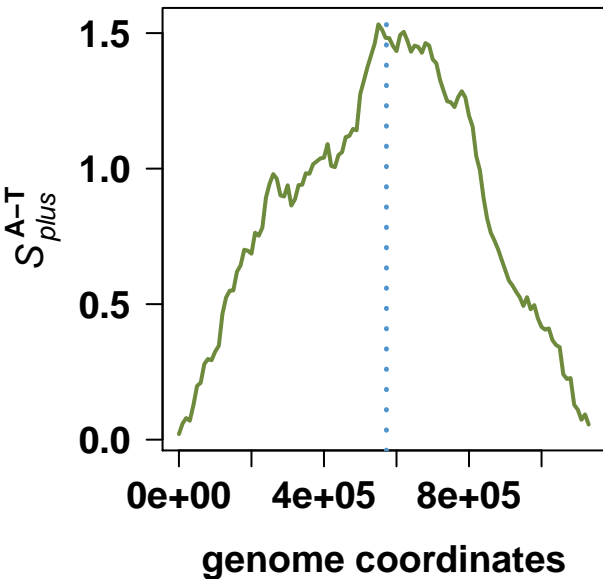
### *Chlamydia muridarum* str. Nigg



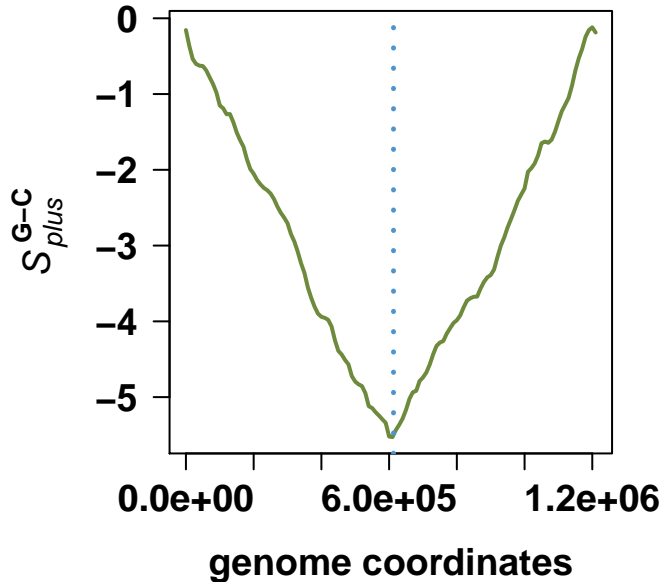
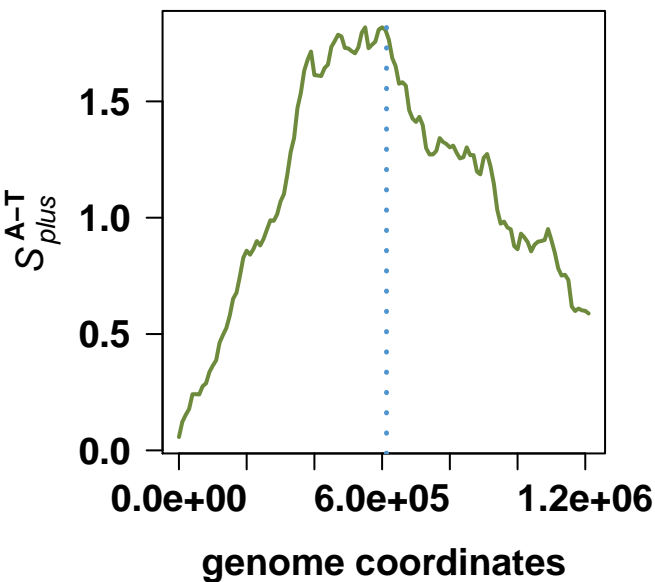
### *Chlamydomphila caviae* GPIC



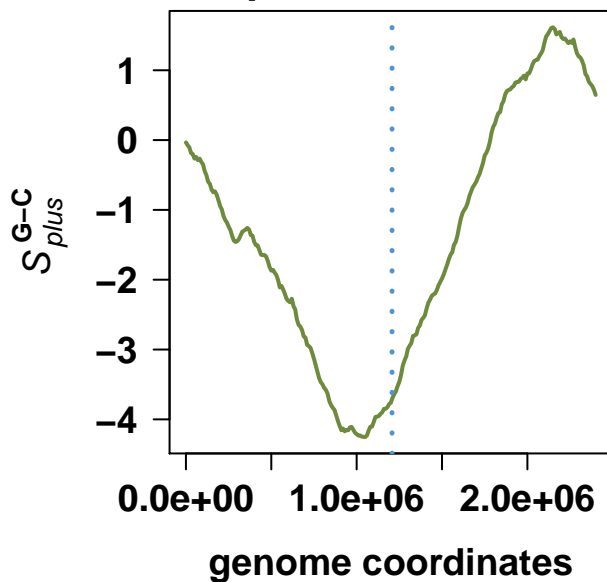
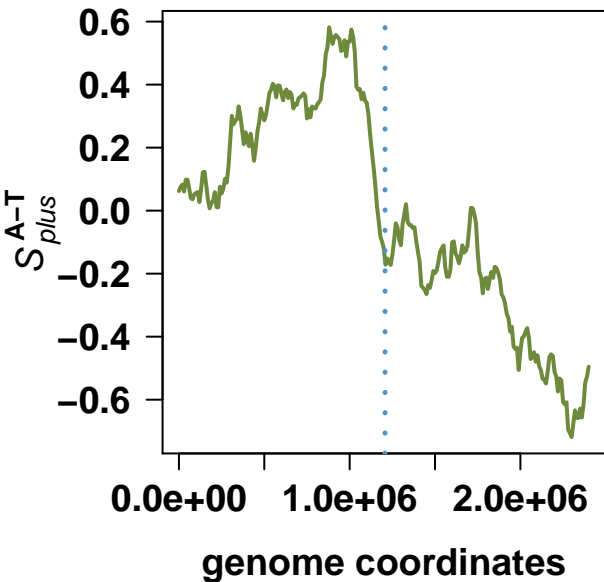
### *Chlamydophila abortus* S26/3



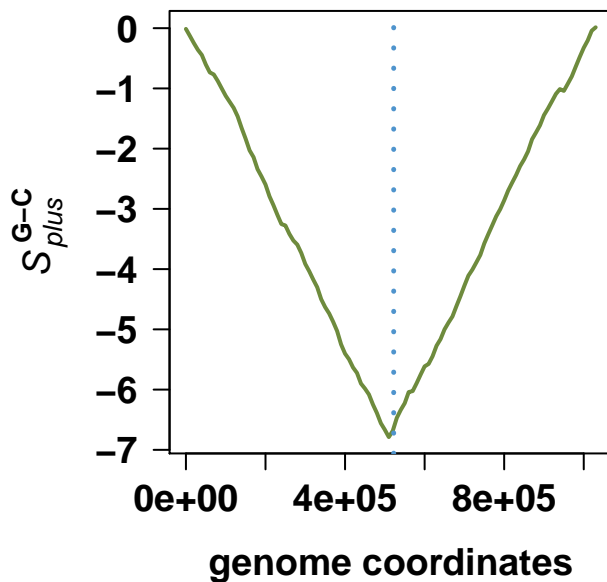
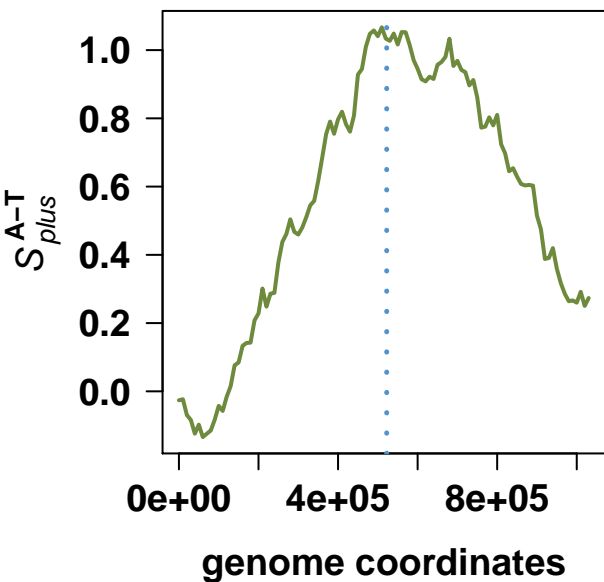
### *Chlamydophila pneumoniae* TW-183



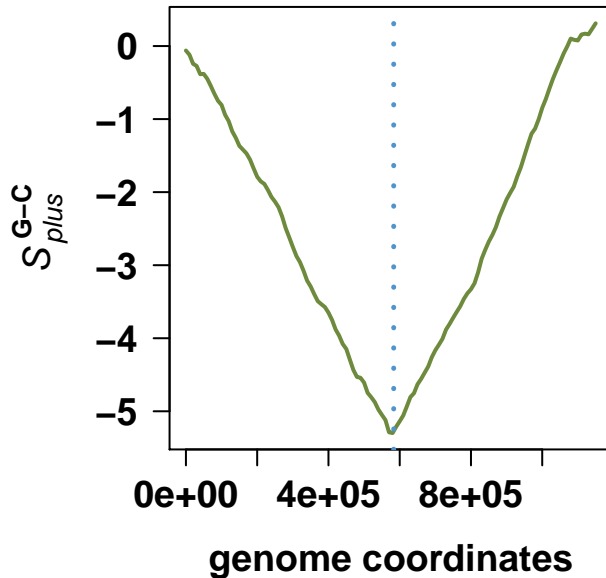
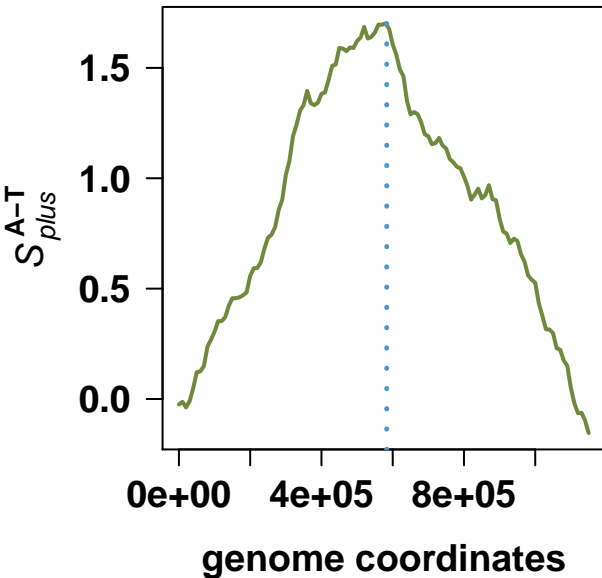
### Candidatus Protochlamydia amoebophila UWE25



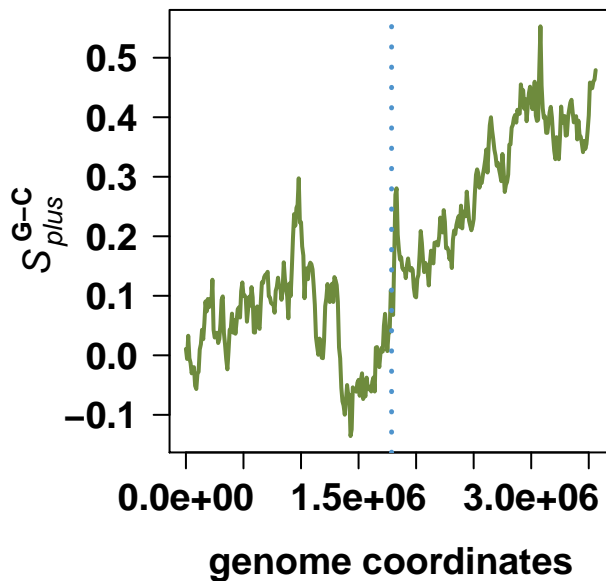
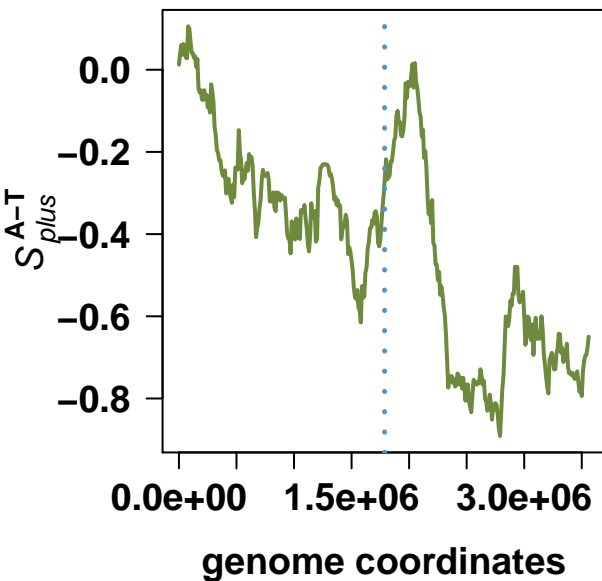
### Chlamydia trachomatis A/HAR-13



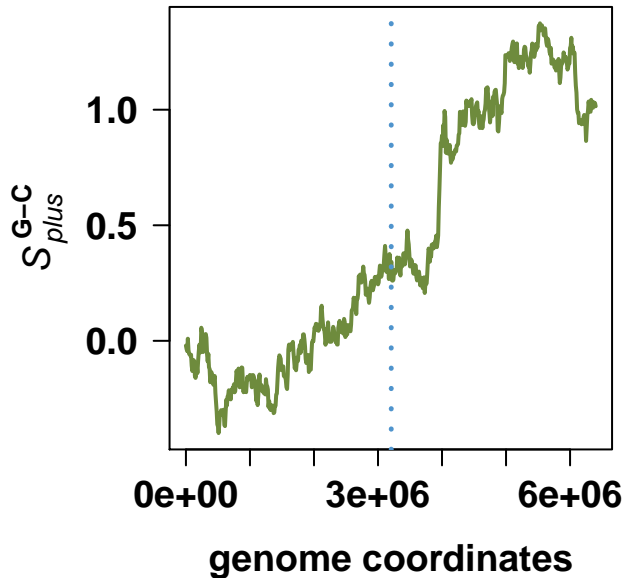
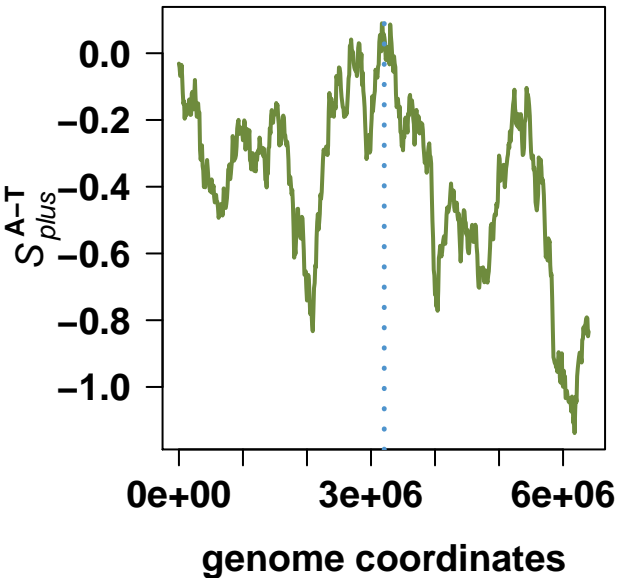
### **Chlamydomophila felis Fe/C-56**



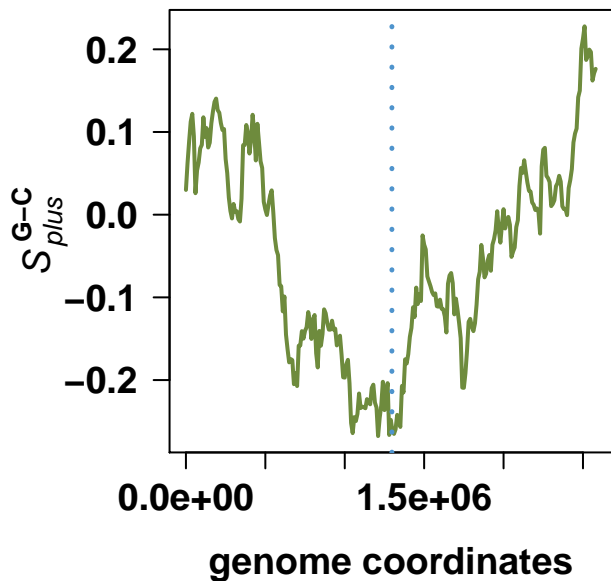
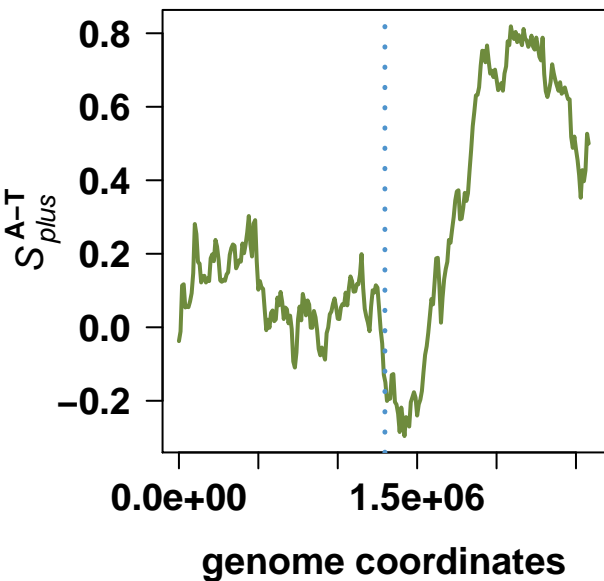
### **Synechocystis sp. PCC 6803**



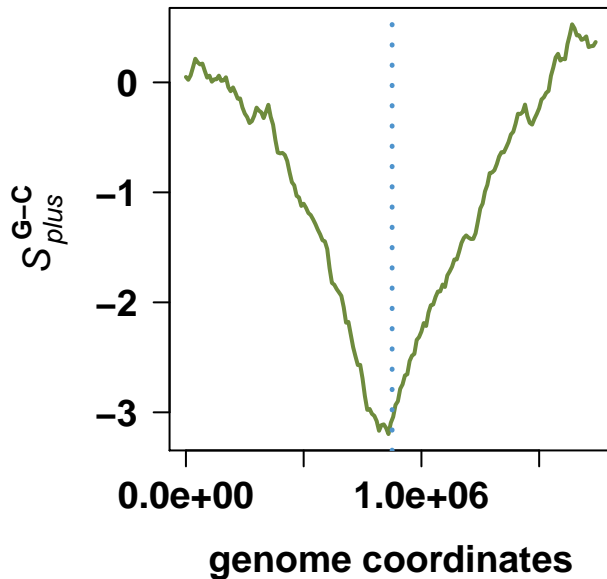
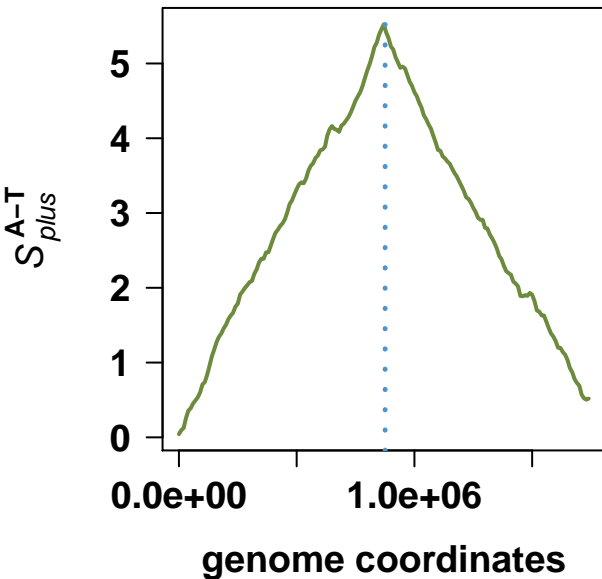
### Nostoc sp. PCC 7120



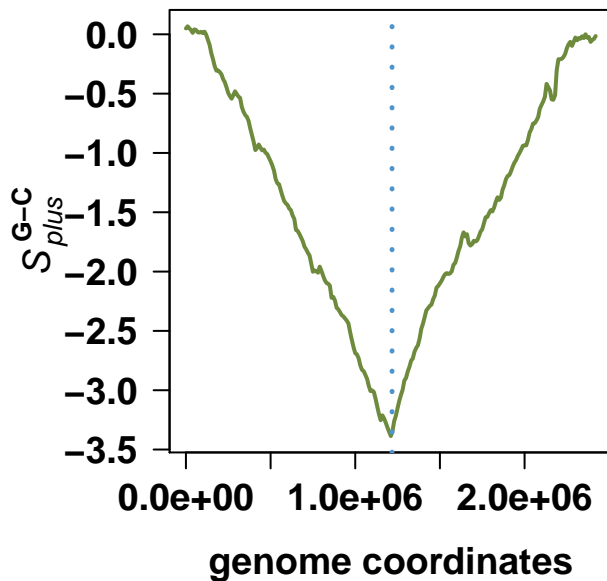
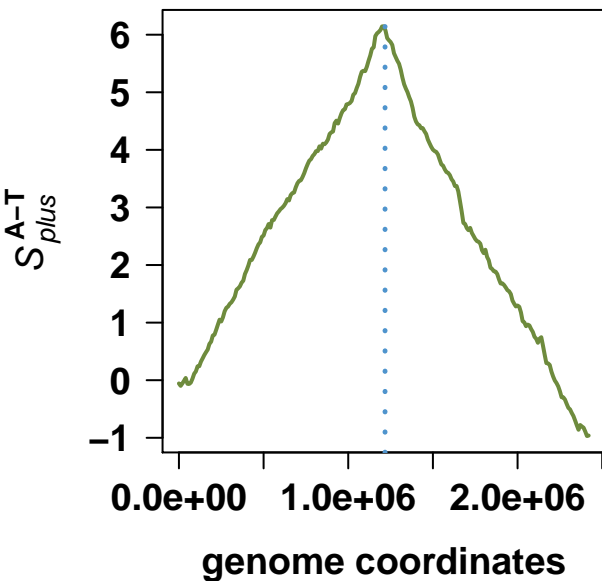
### Thermosynechococcus elongatus BP-1



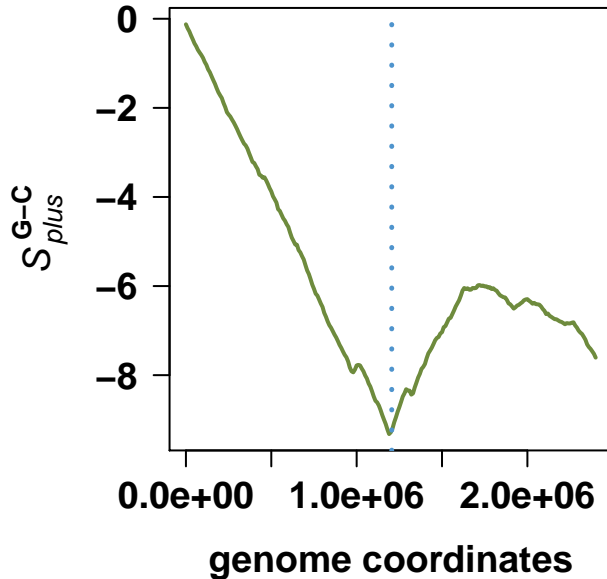
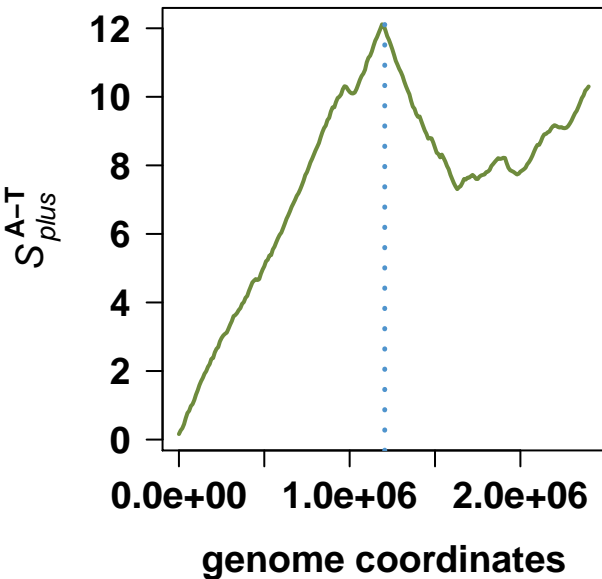
# Prochlorococcus marinus subsp. marinus str. CCMP1375



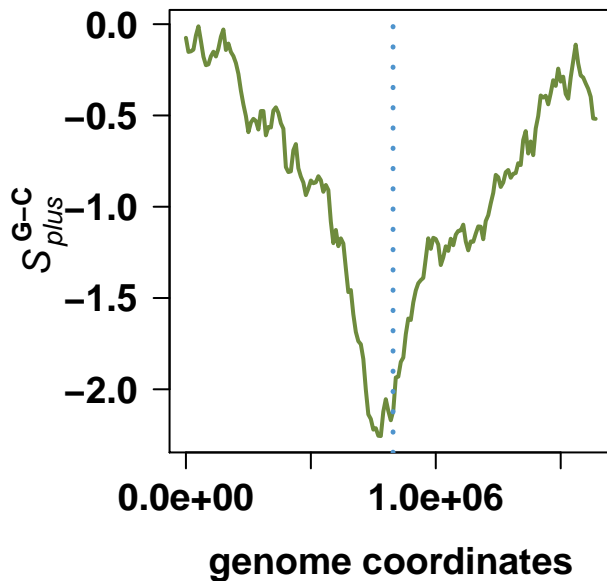
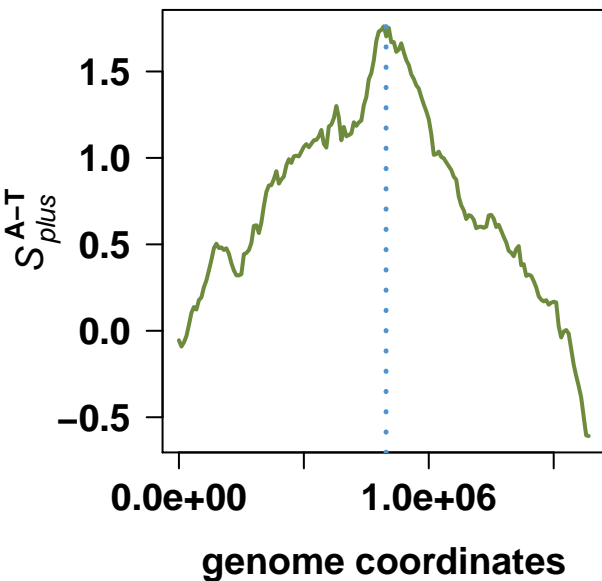
# Synechococcus sp. WH 8102



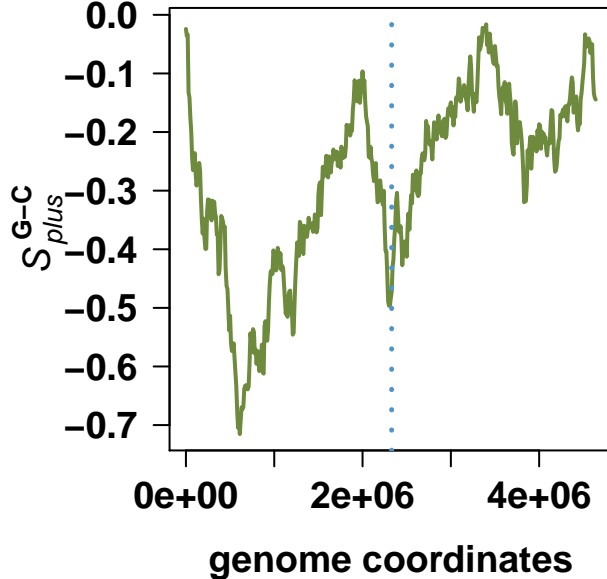
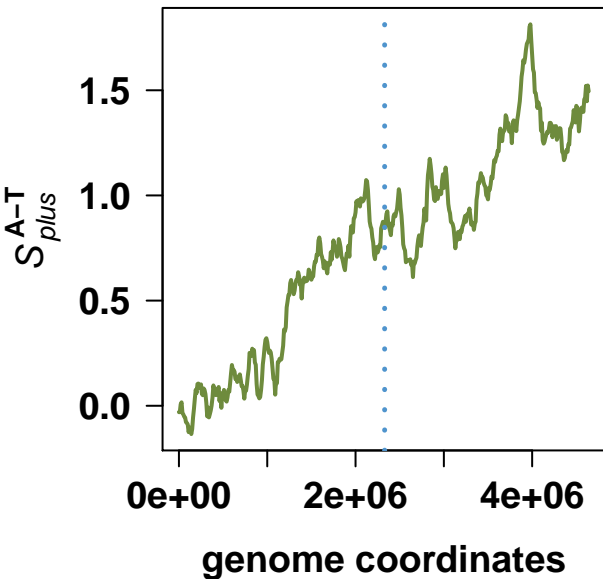
### Prochlorococcus marinus str. MIT 9313



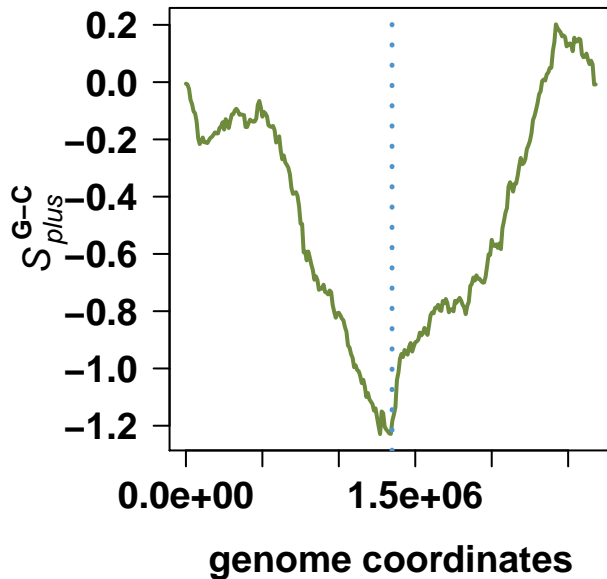
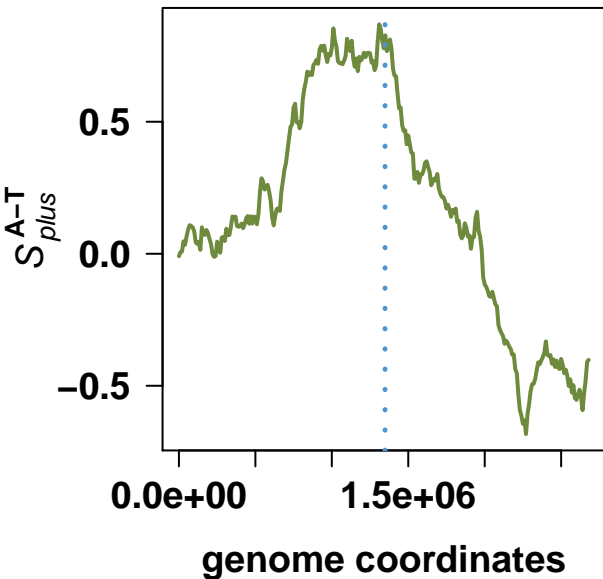
### Prochlorococcus marinus subsp. pastoris str. CCMP1986



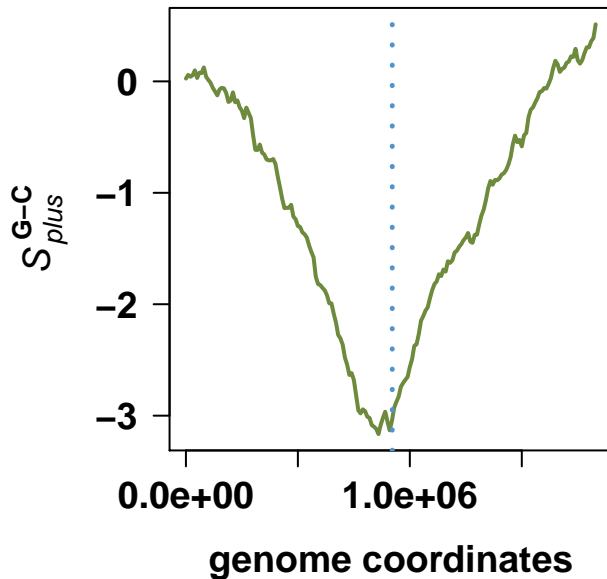
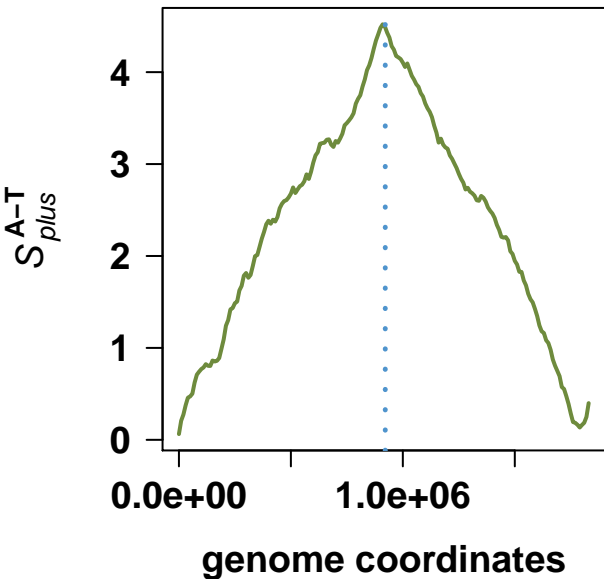
### Gloeobacter violaceus PCC 7421



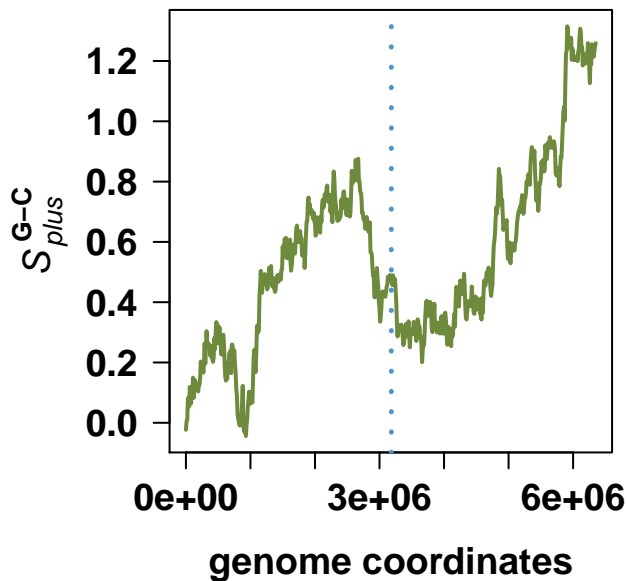
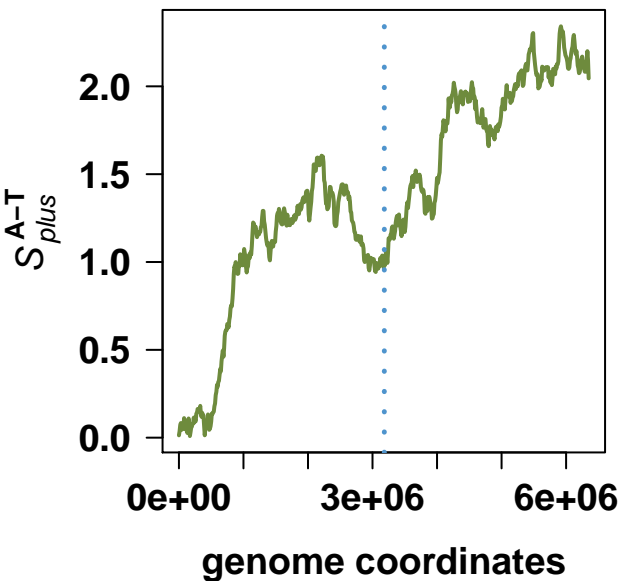
### Synechococcus elongatus PCC 6301



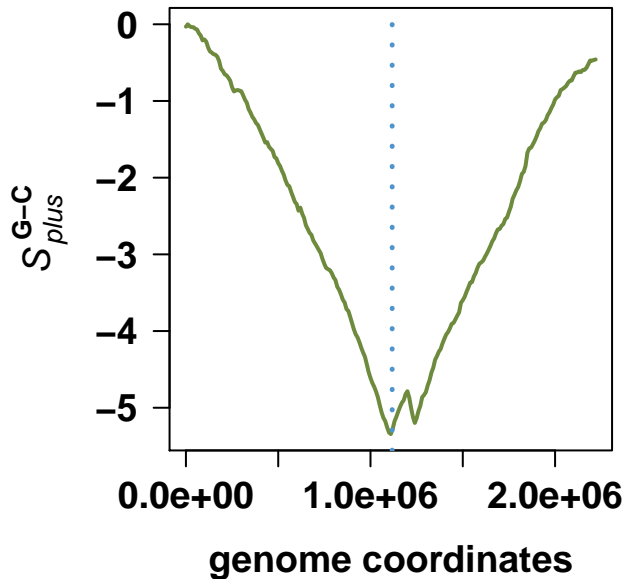
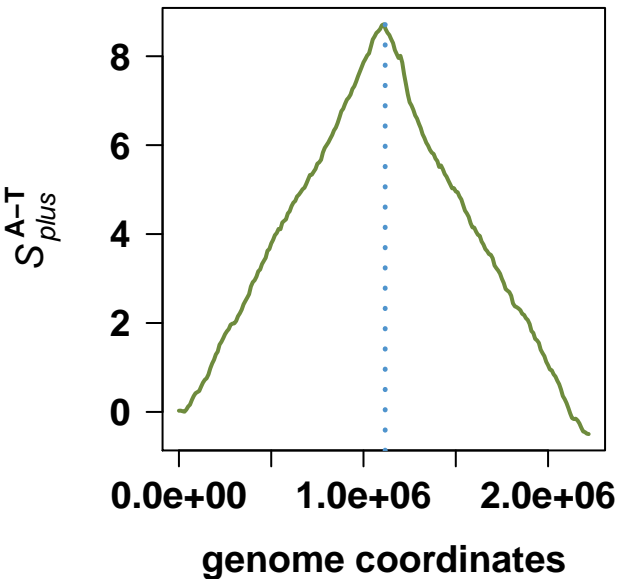
### Prochlorococcus marinus str. NATL2A



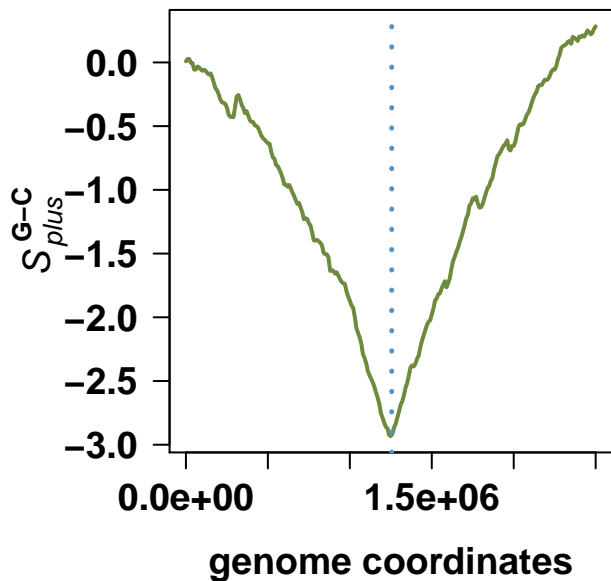
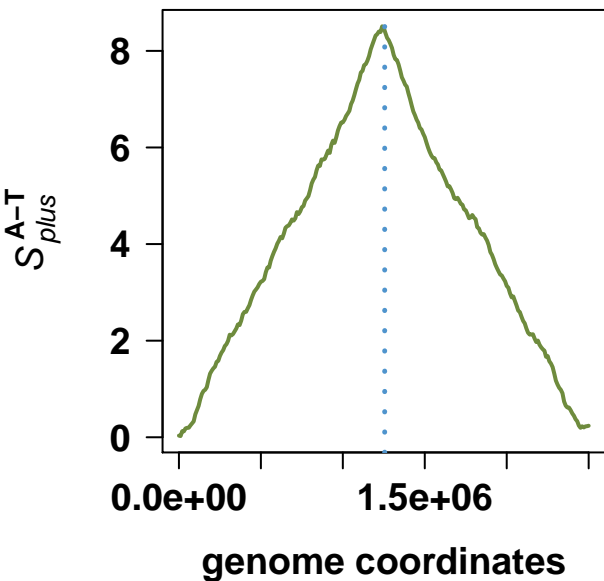
### Anabaena variabilis ATCC 29413



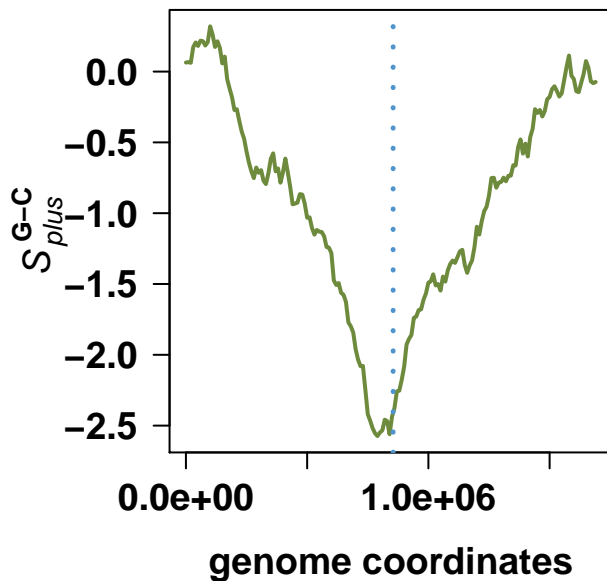
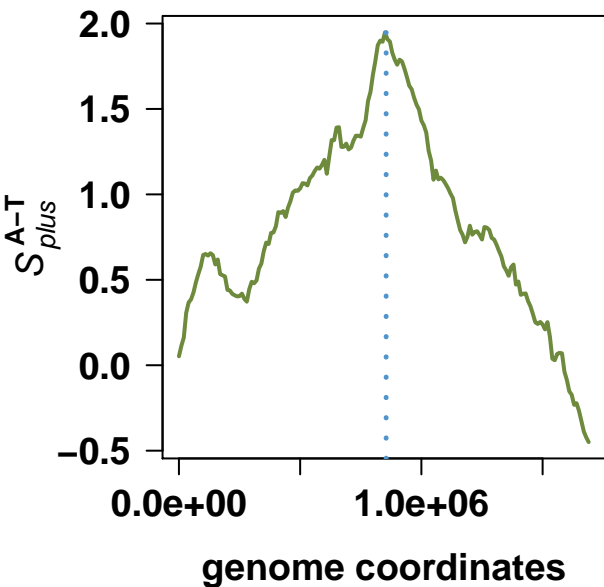
### Synechococcus sp. CC9902



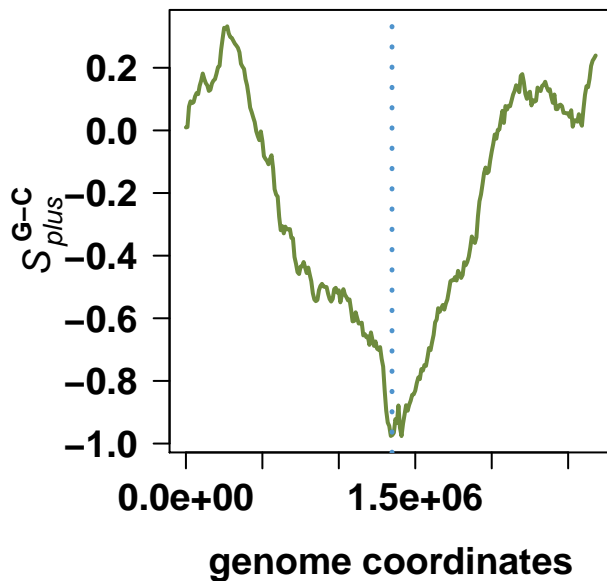
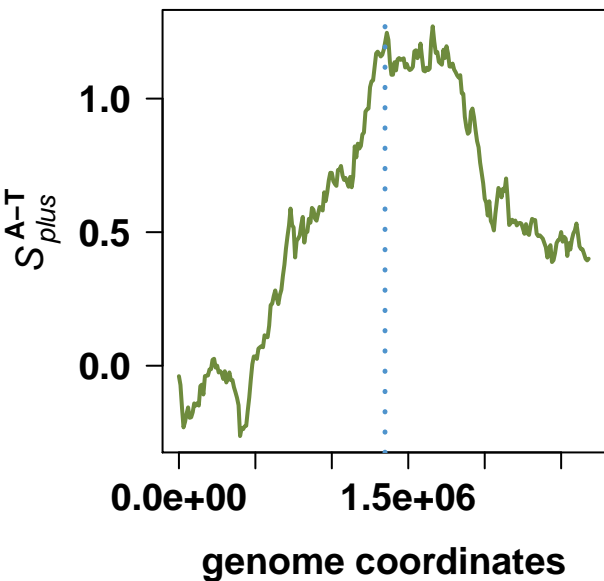
### Synechococcus sp. CC9605



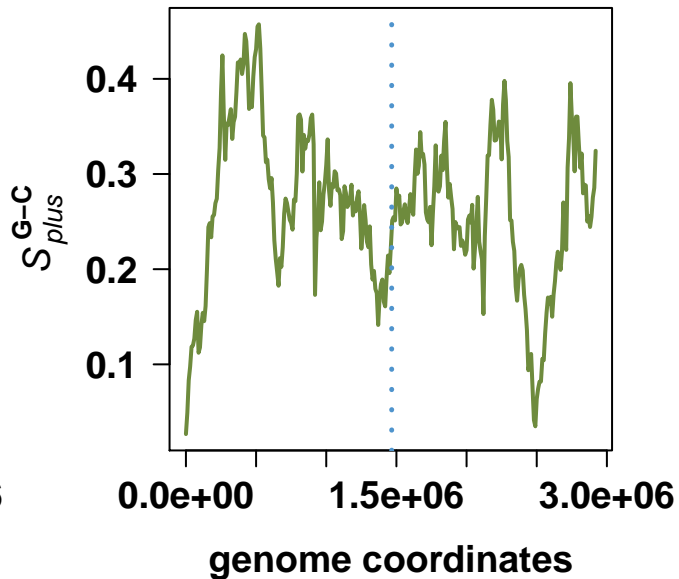
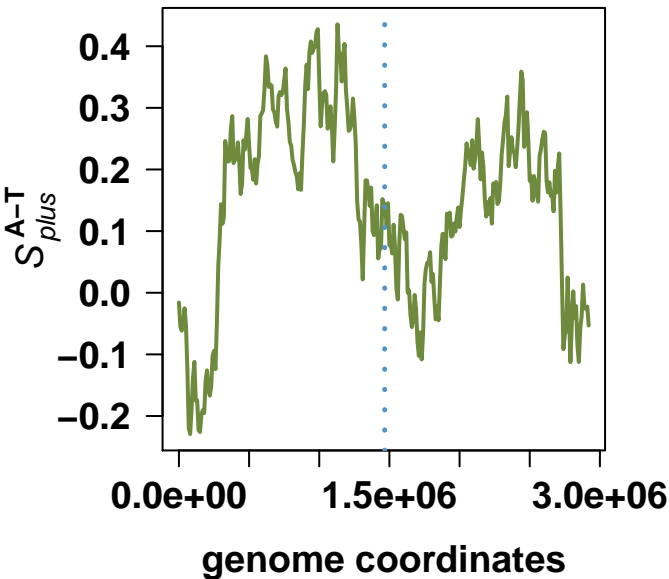
### Prochlorococcus marinus str. MIT 9312



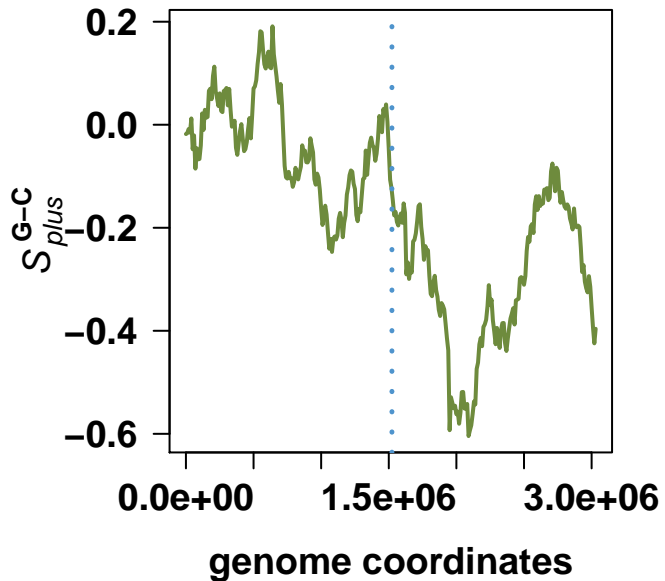
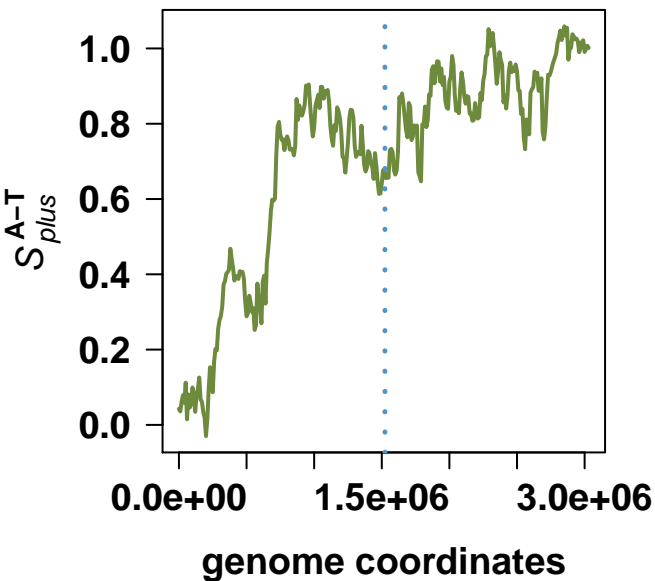
### Synechococcus elongatus PCC 7942



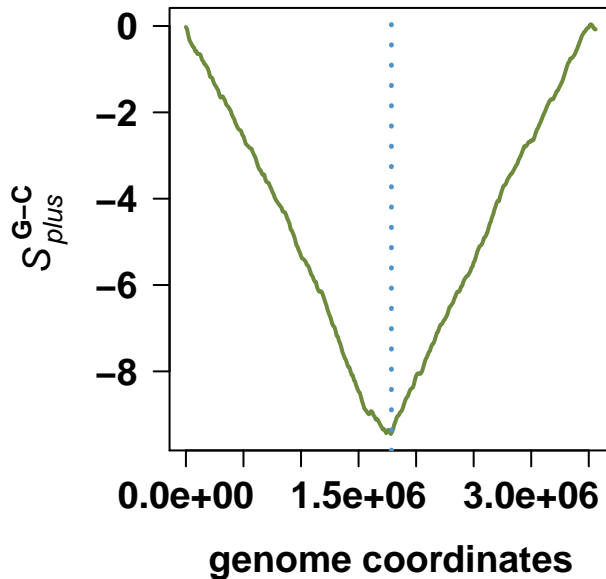
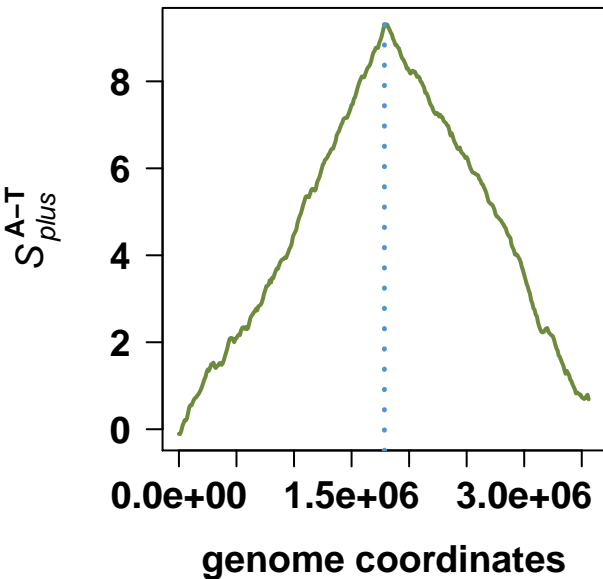
### Synechococcus sp. JA-3-3Ab



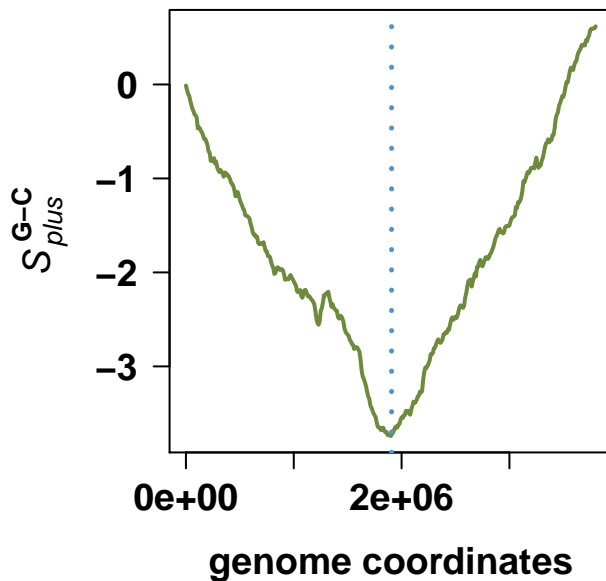
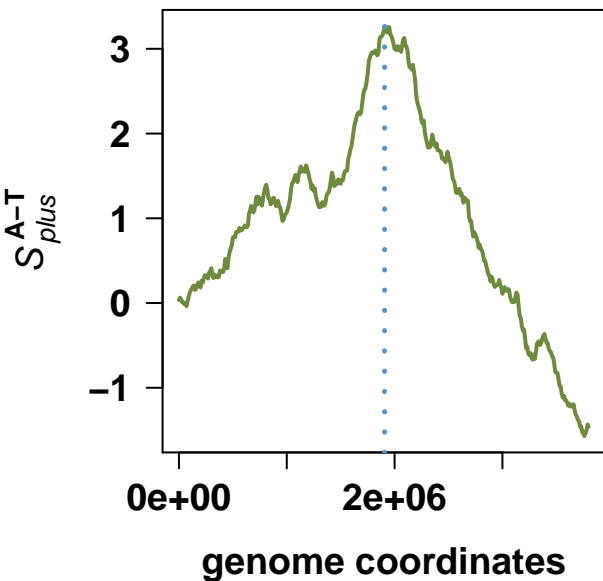
### Synechococcus sp. JA-2-3B'a(2-13)



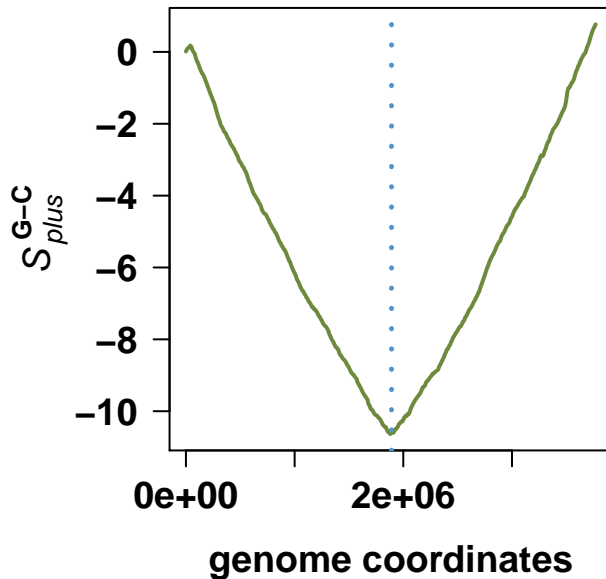
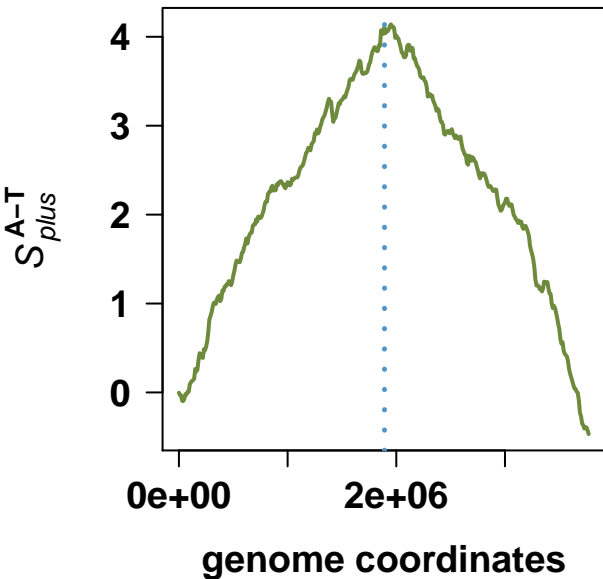
## Desulfovibrio vulgaris str. Hildenborough



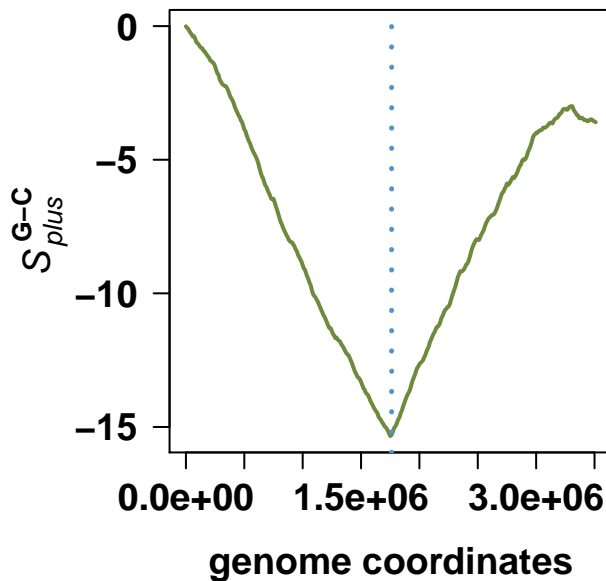
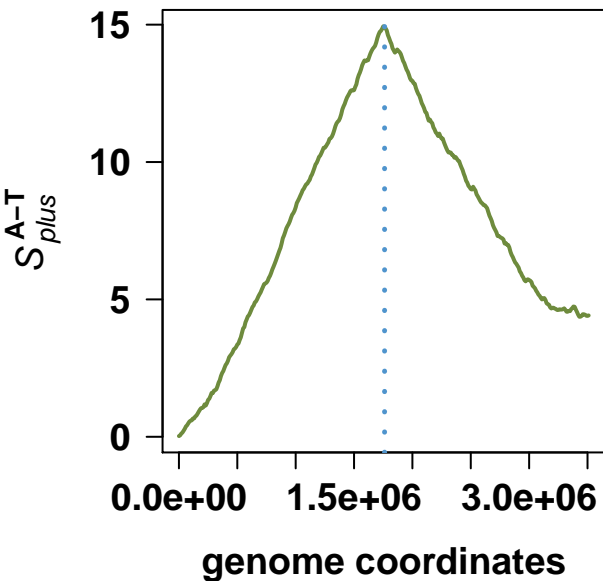
## Geobacter sulfurreducens PCA



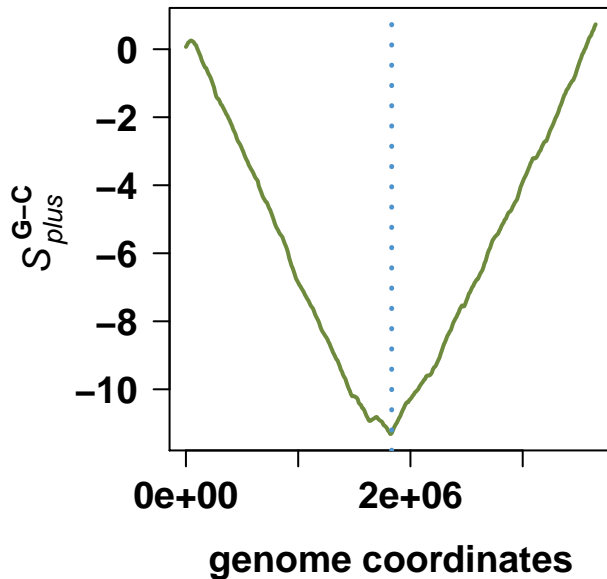
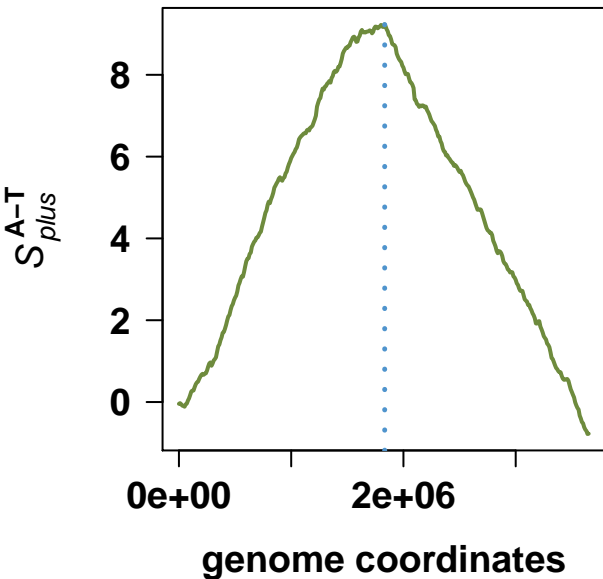
### ***Bdellovibrio bacteriovorus* HD100**



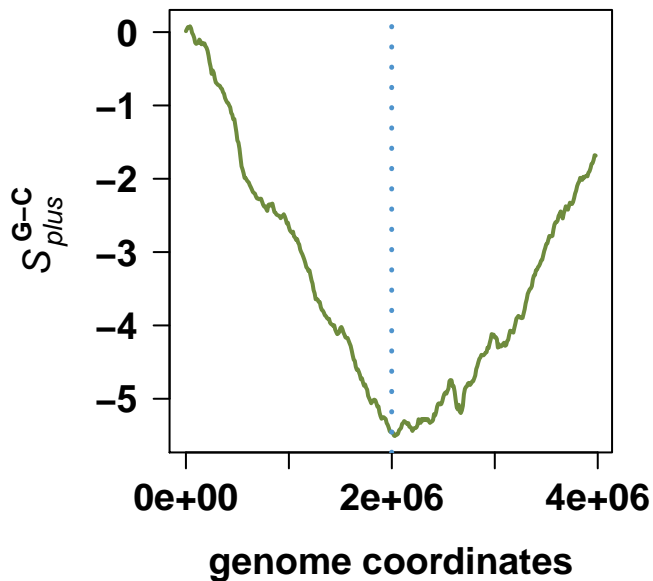
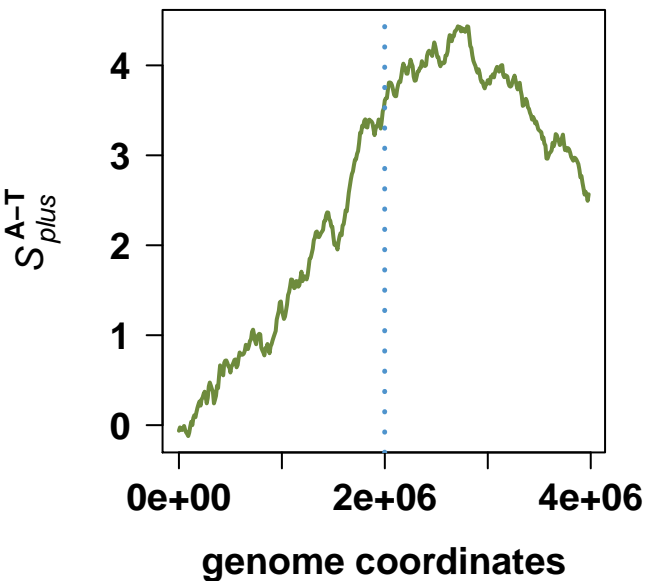
### ***Desulfotalea psychrophila* Lsv54**



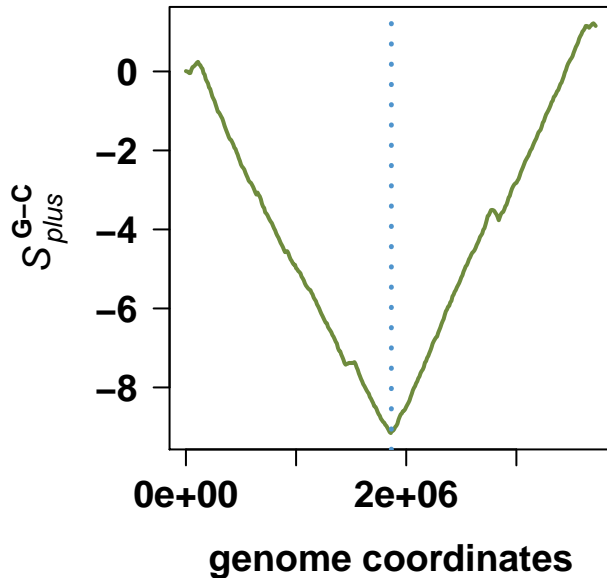
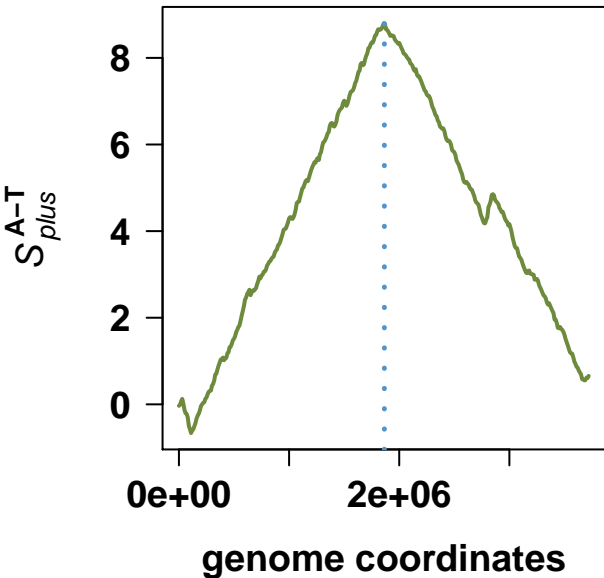
### ***Pelobacter carbinolicus* DSM 2380**



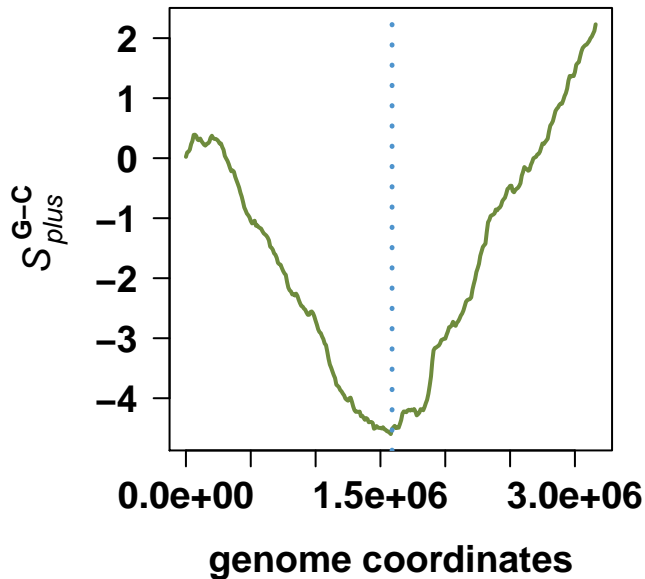
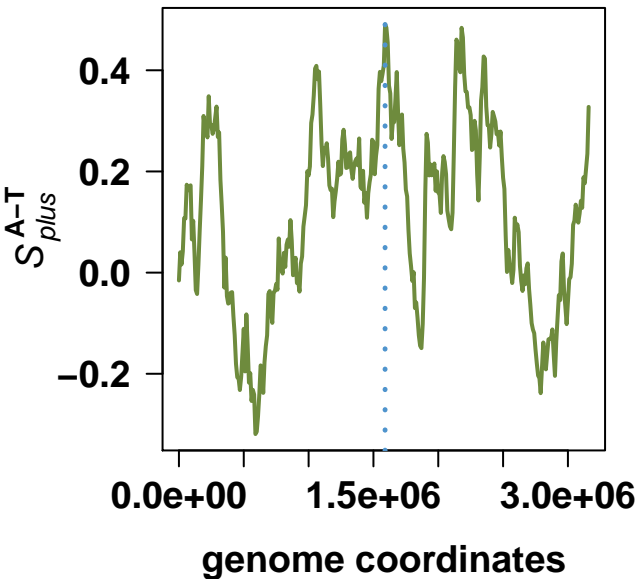
### ***Geobacter metallireducens* GS-15**



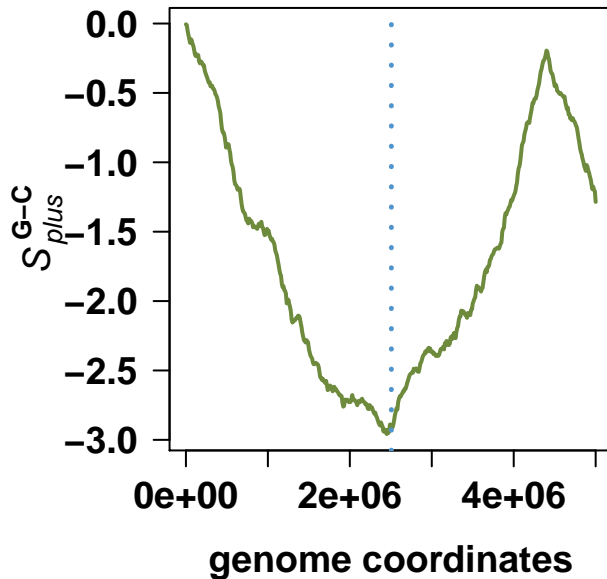
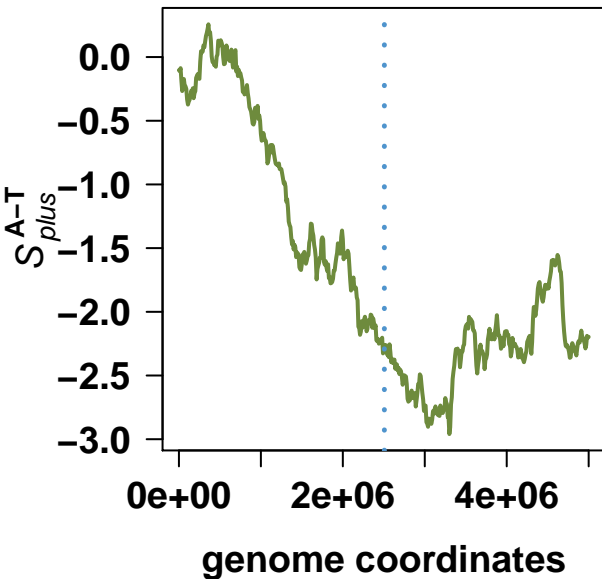
### Desulfovibrio alaskensis G20



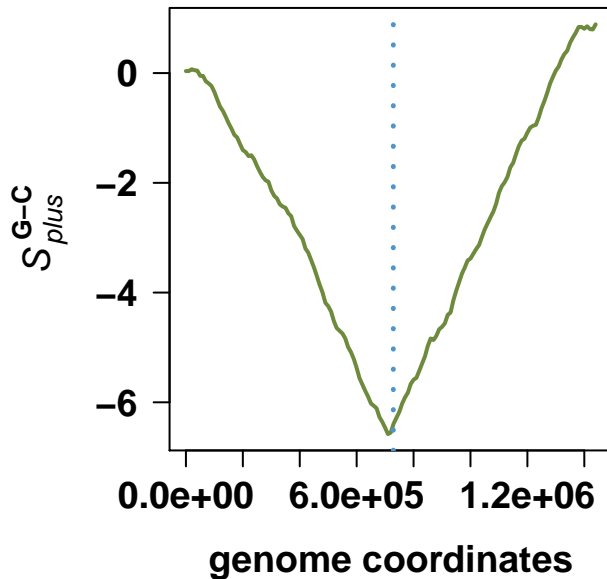
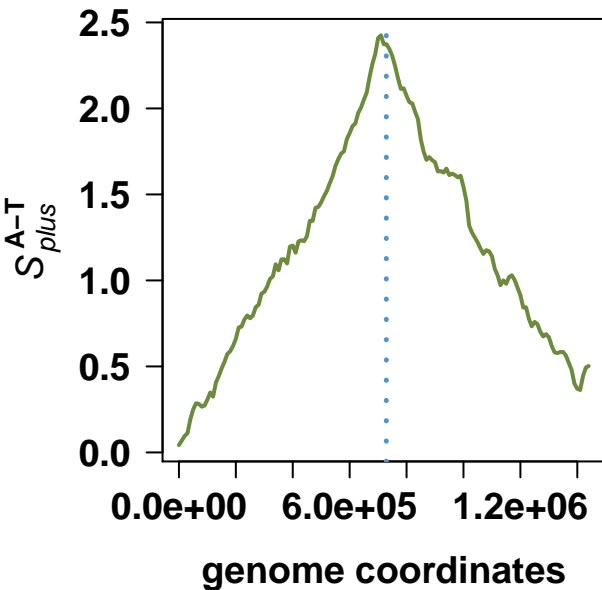
### Syntrophus aciditrophicus SB



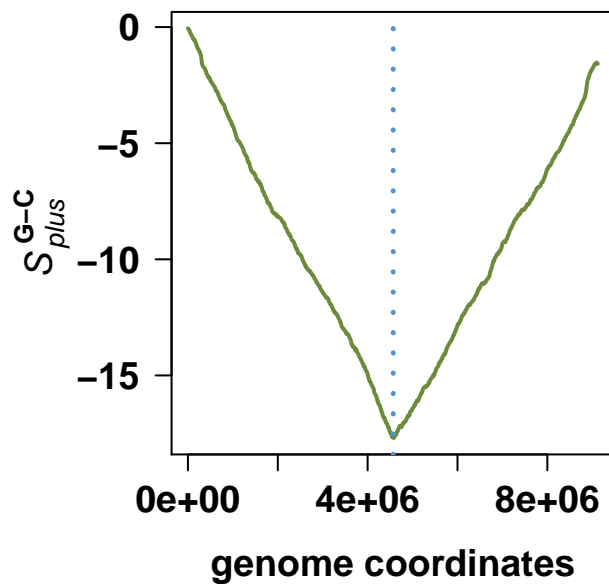
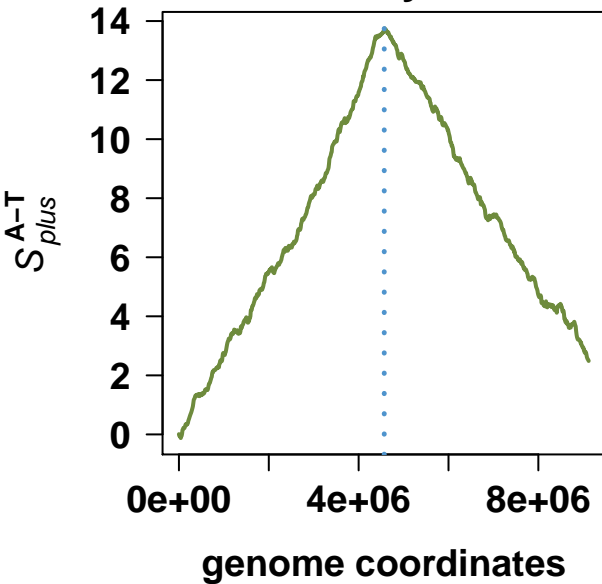
## Anaeromyxobacter dehalogenans 2CP-C



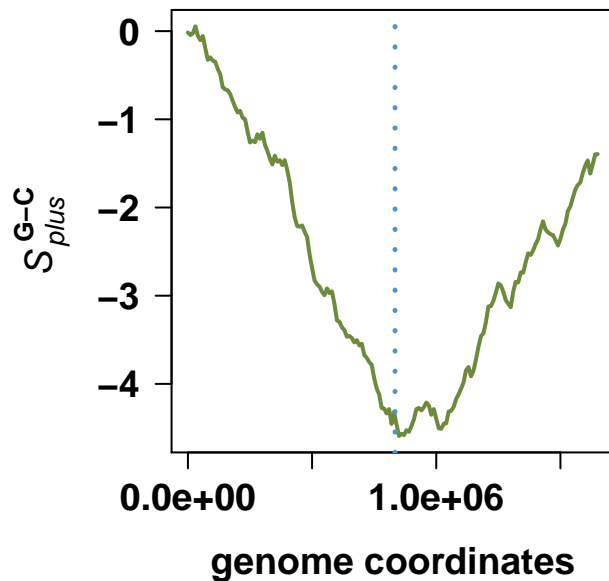
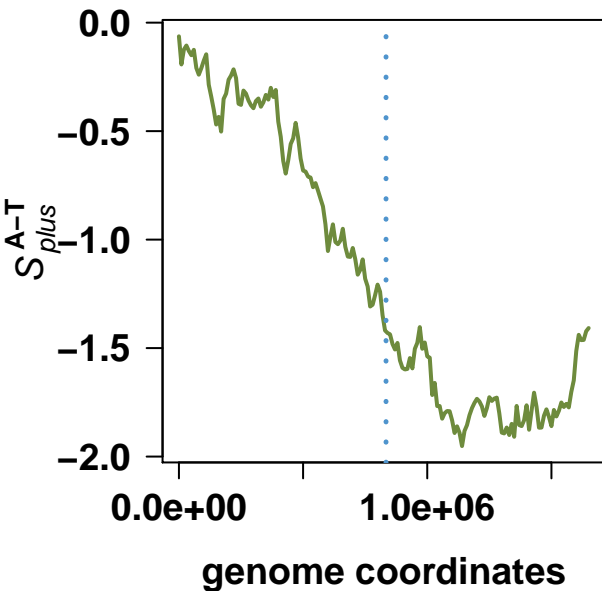
## Lawsonia intracellularis PHE/MN1-00



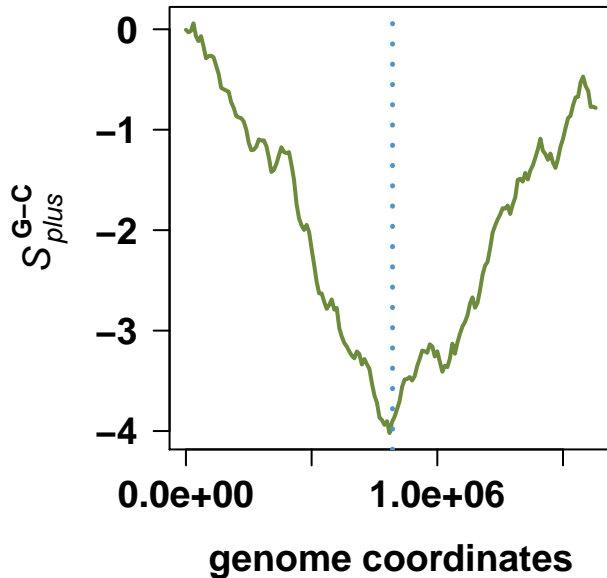
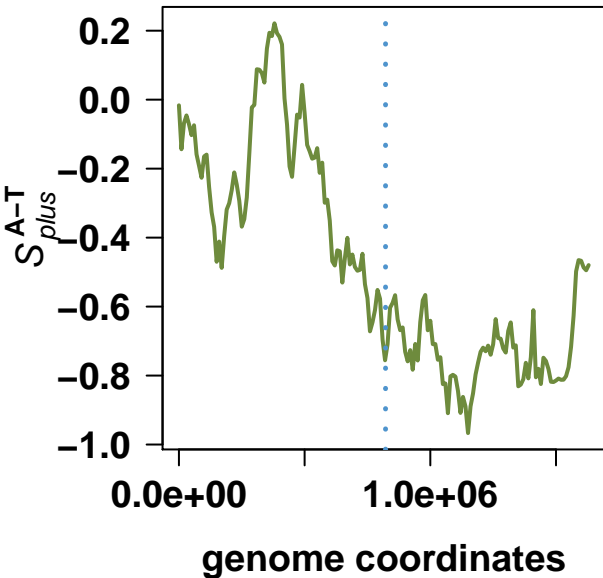
## Myxococcus xanthus DK 1622



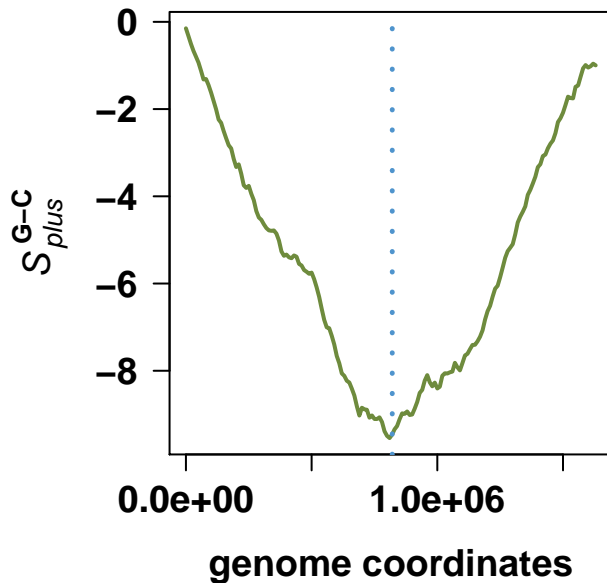
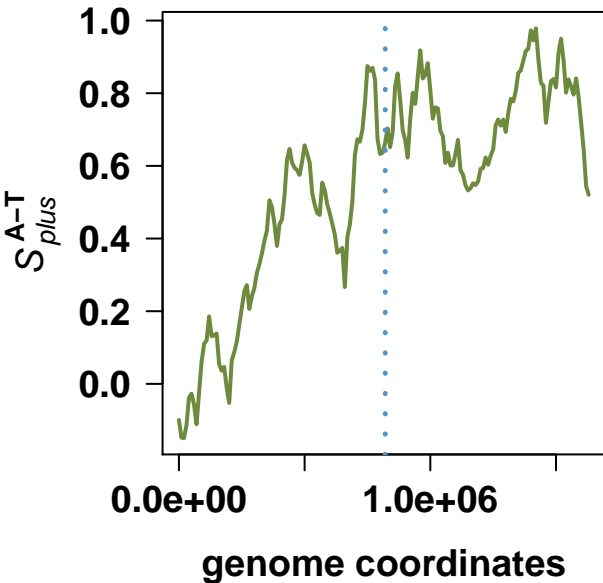
## Helicobacter pylori 26695



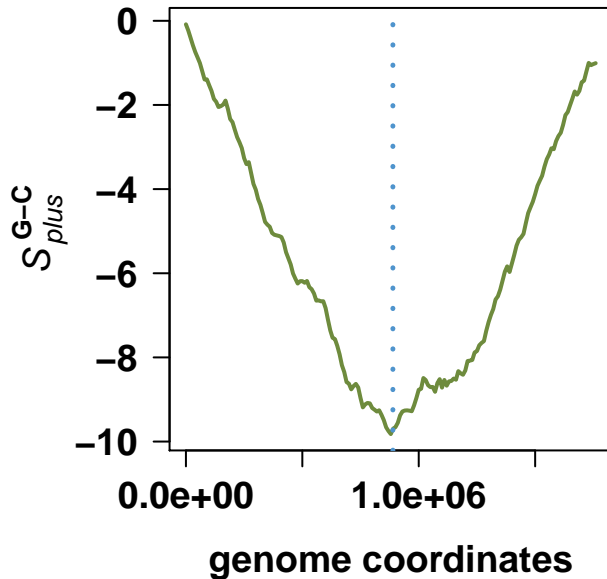
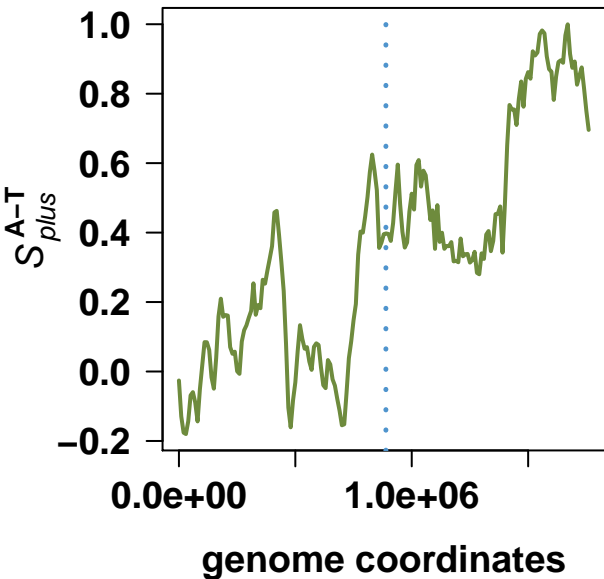
## Helicobacter pylori J99



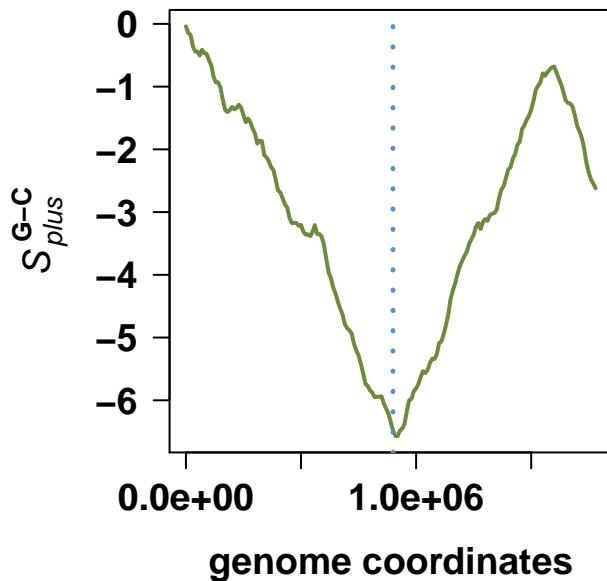
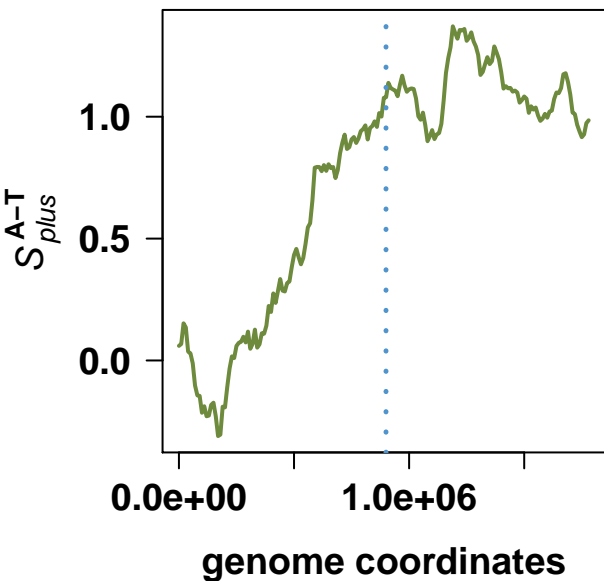
## Campylobacter jejuni subsp. jejuni NCTC 11168 = ATCC 700819



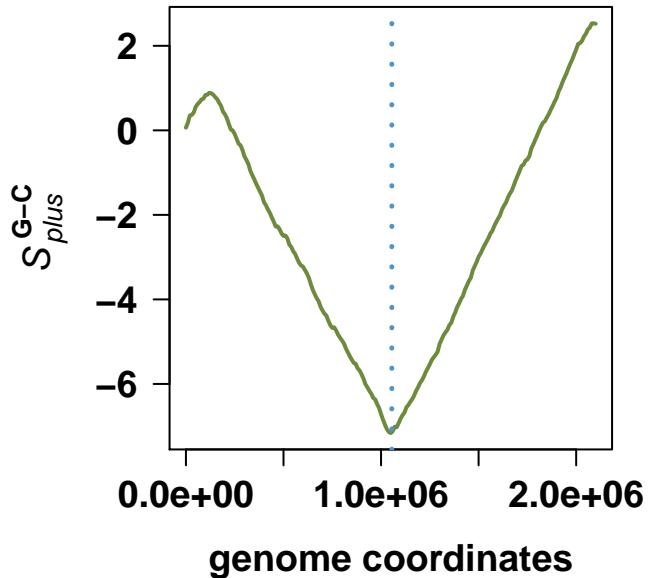
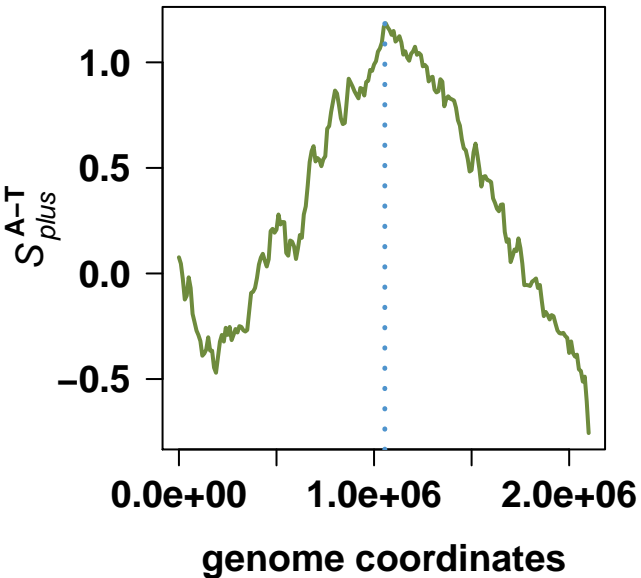
### Campylobacter jejuni RM1221



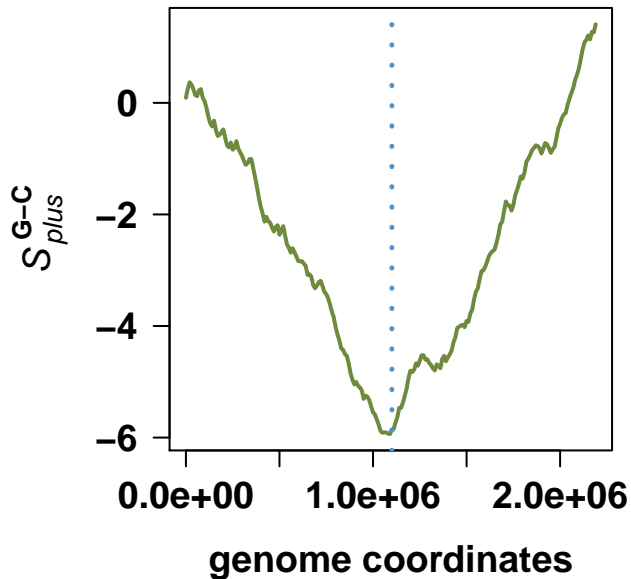
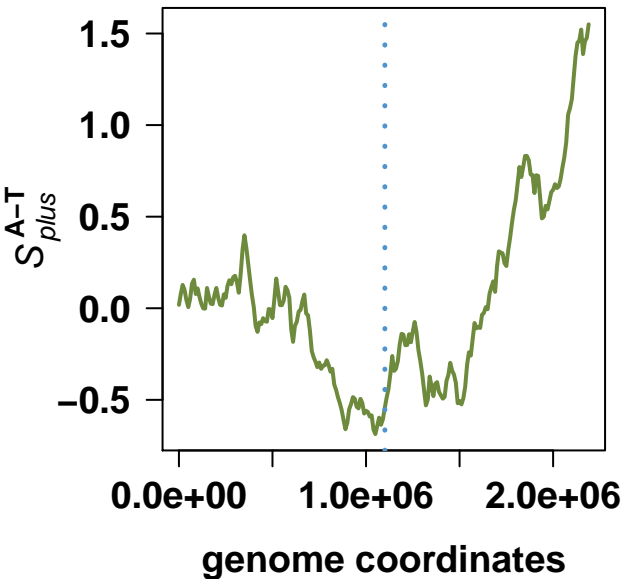
### Helicobacter hepaticus ATCC 51449



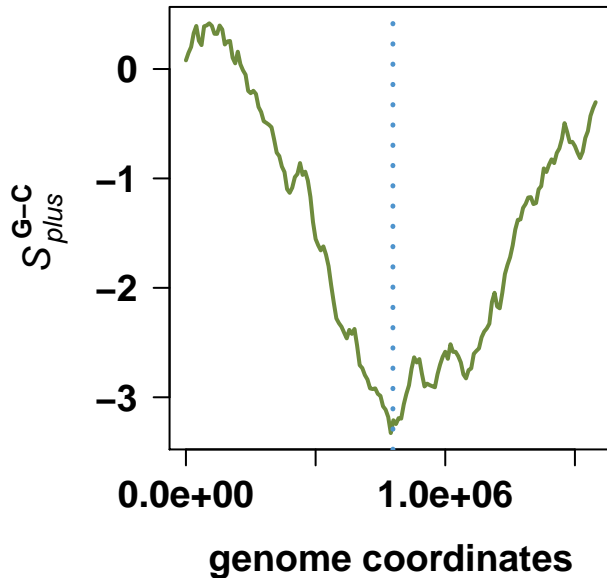
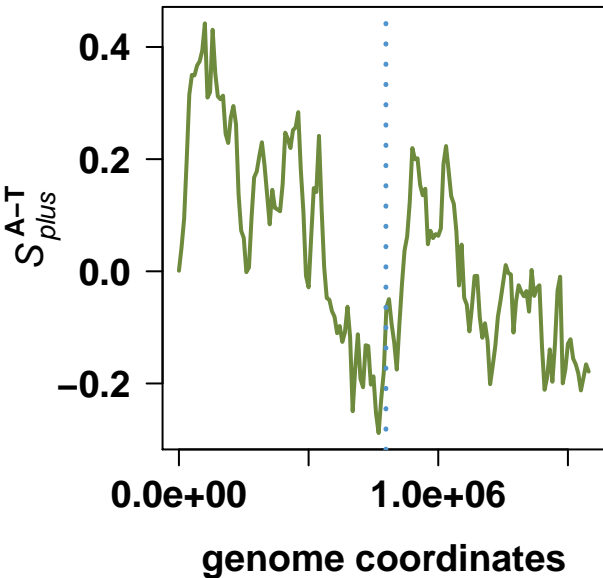
### *Wolinella succinogenes* DSM 1740



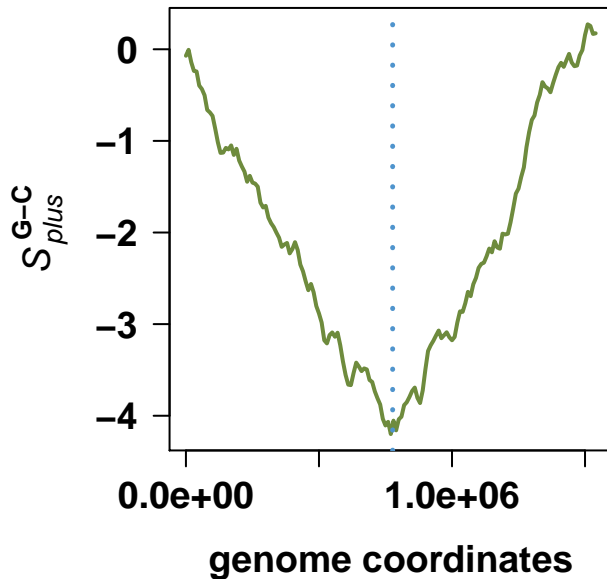
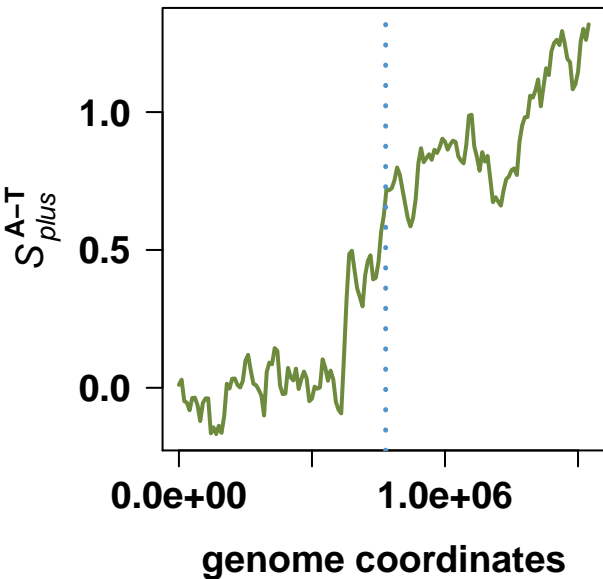
### *Sulfurimonas denitrificans* DSM 1251



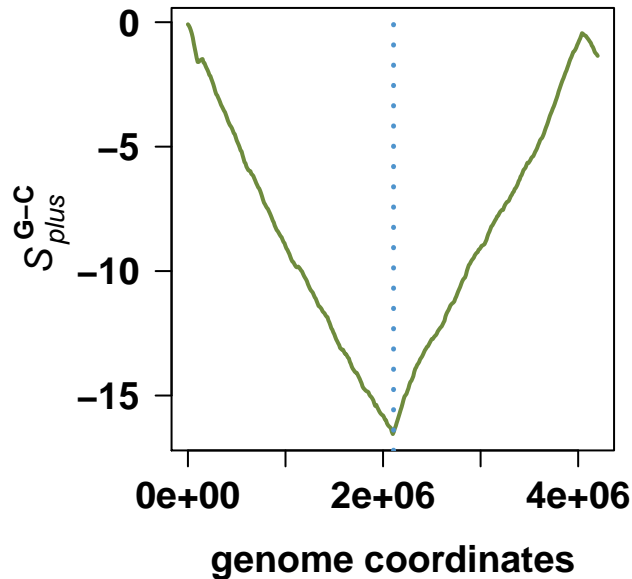
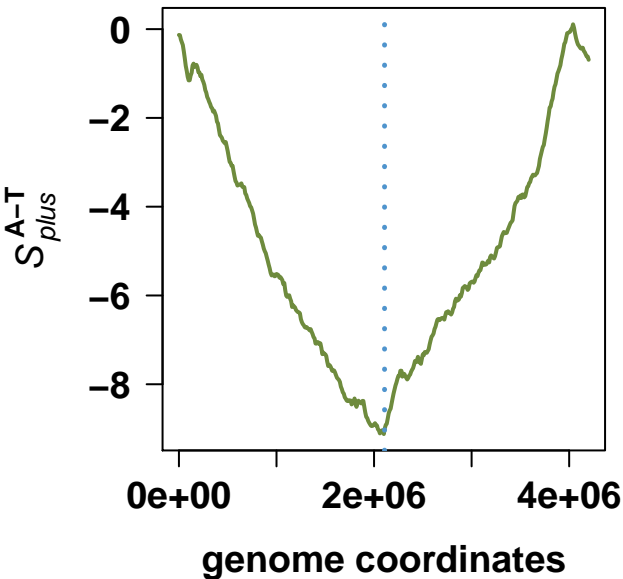
### *Helicobacter pylori* HPAG1



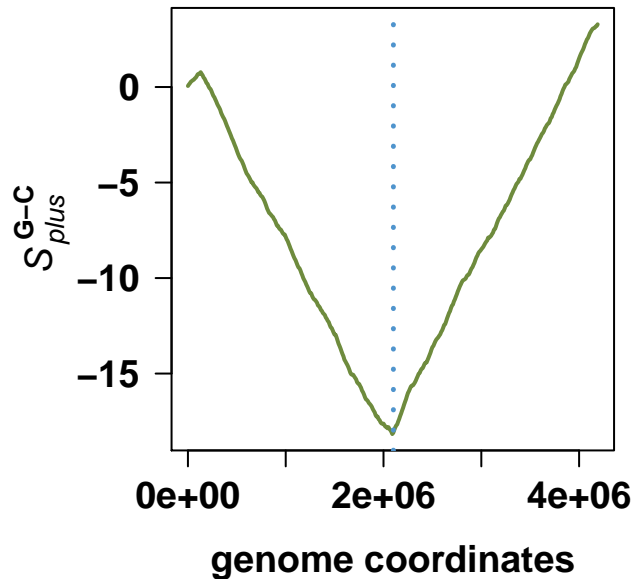
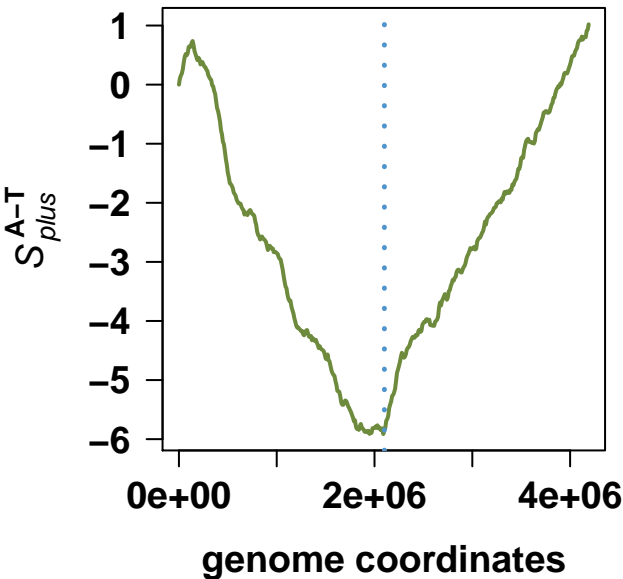
### *Helicobacter acinonychis* str. Sheeba



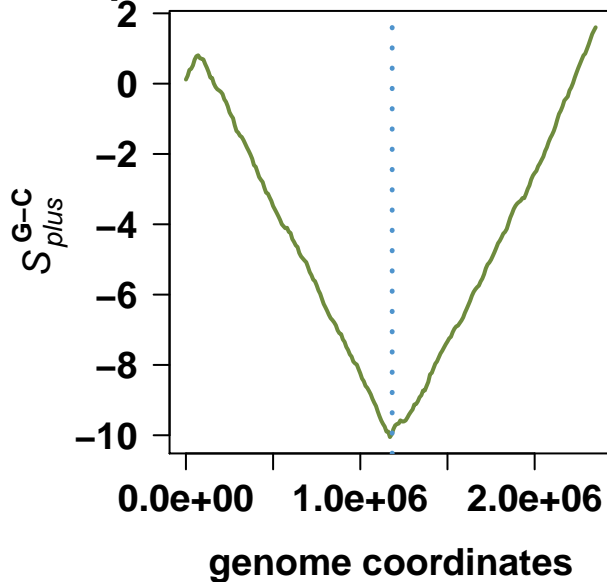
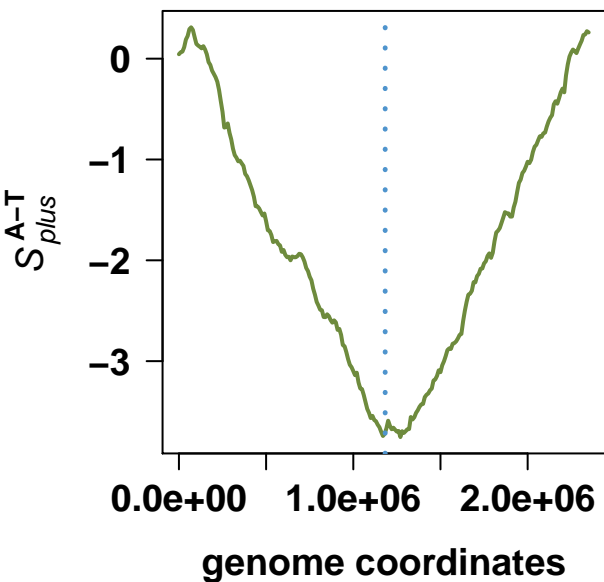
### Bacillus subtilis subsp. subtilis str. 168



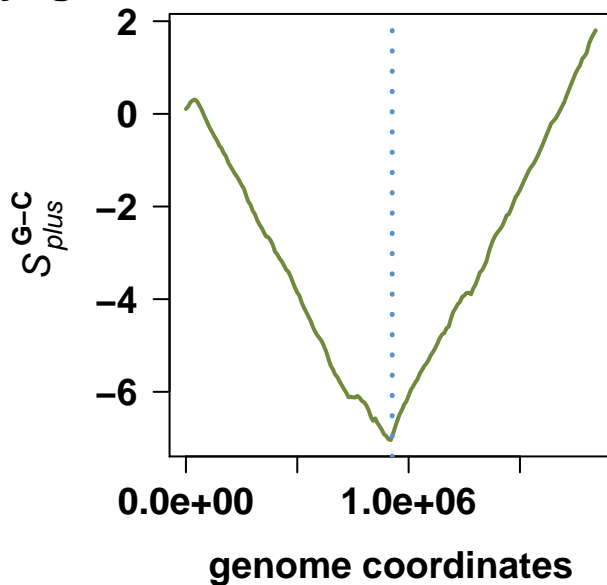
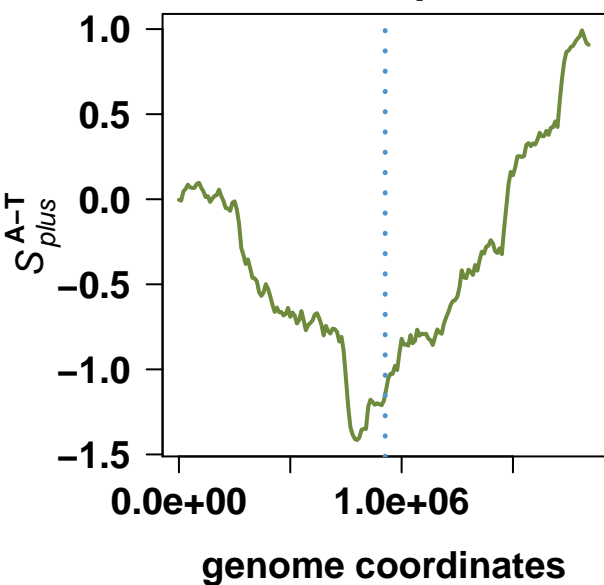
### Bacillus halodurans C-125



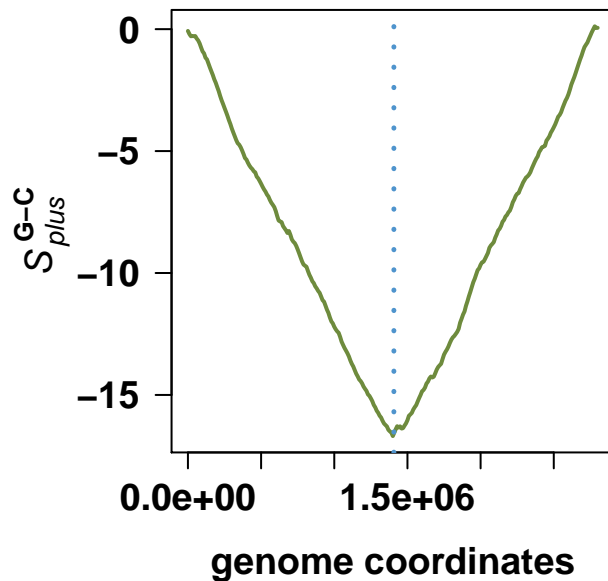
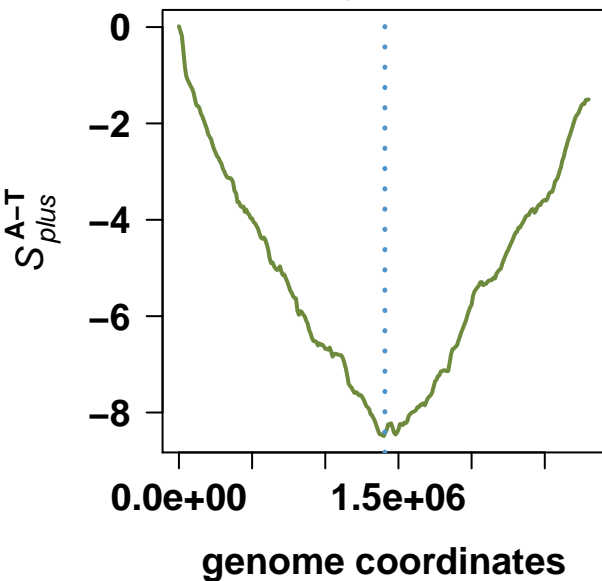
### Lactococcus lactis subsp. lactis II1403



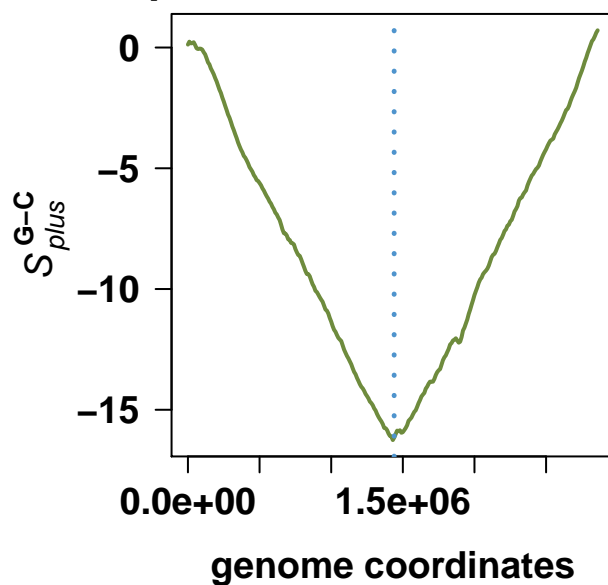
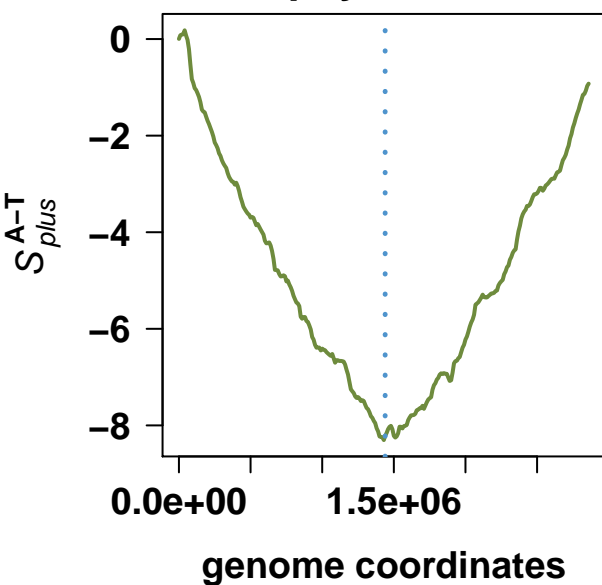
### Streptococcus pyogenes M1 GAS



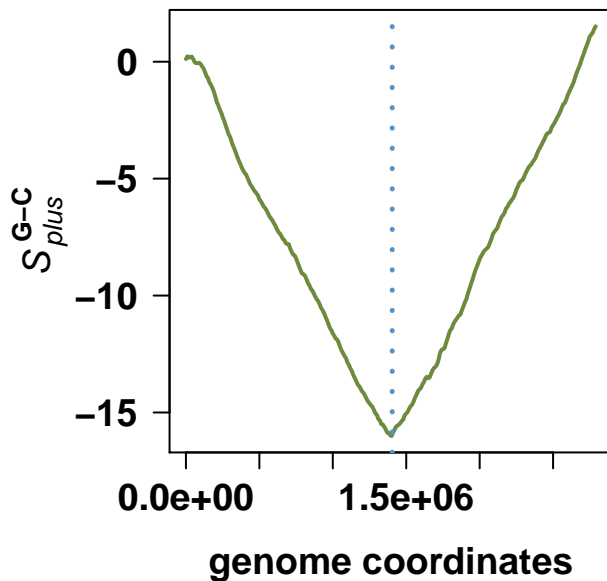
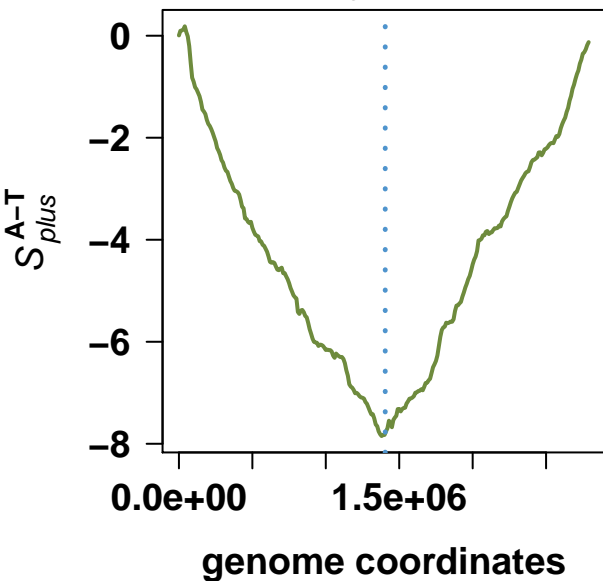
### Staphylococcus aureus subsp. aureus N315



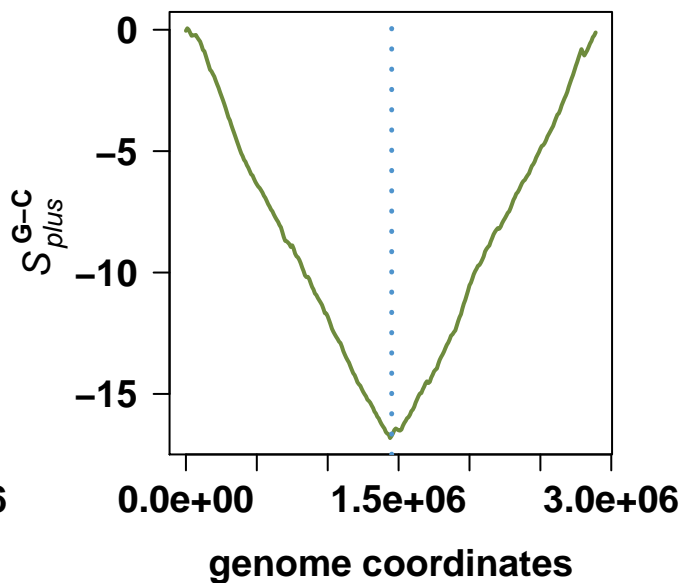
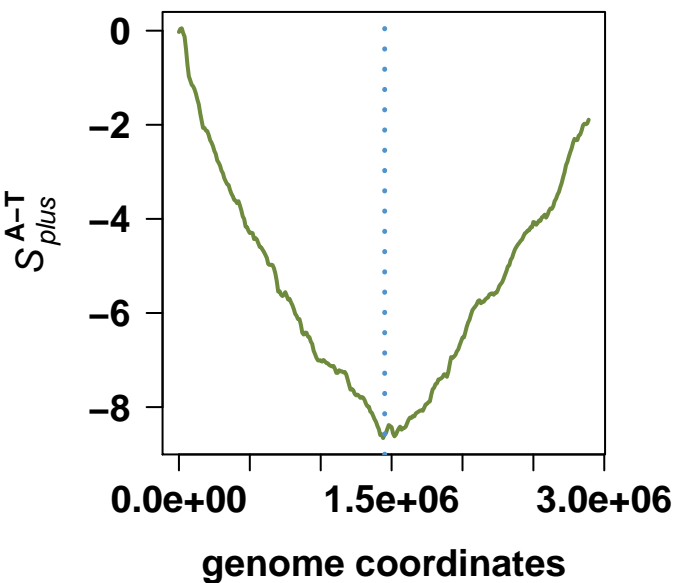
### Staphylococcus aureus subsp. aureus Mu50



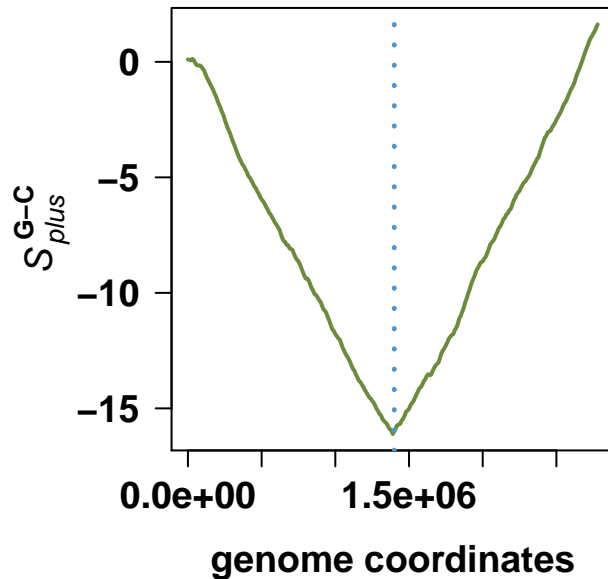
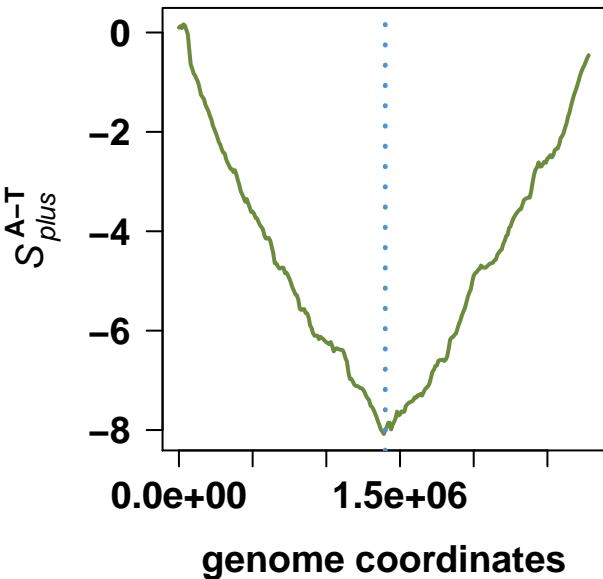
### Staphylococcus aureus subsp. aureus COL



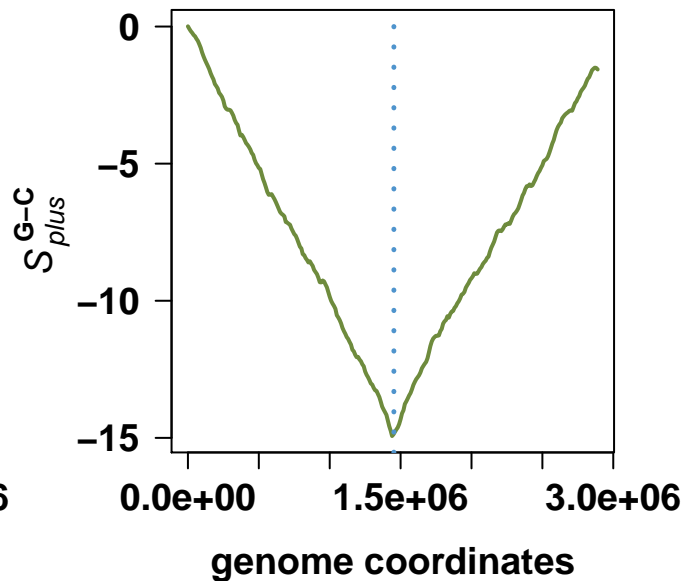
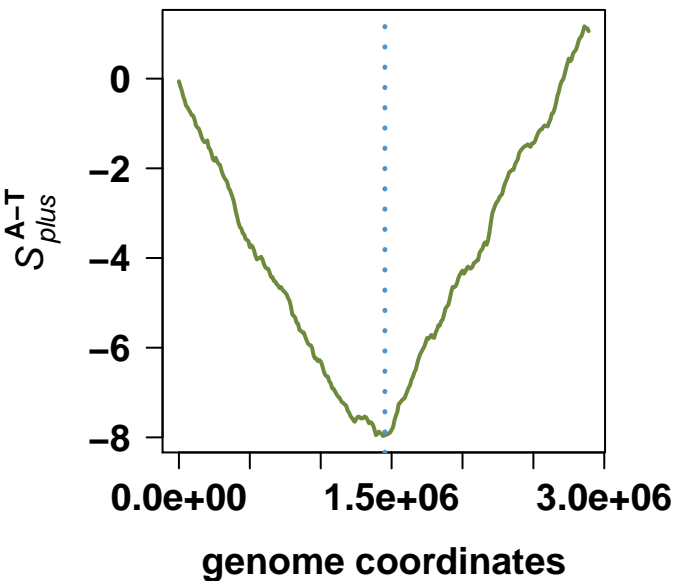
### Staphylococcus aureus subsp. aureus MRSA252



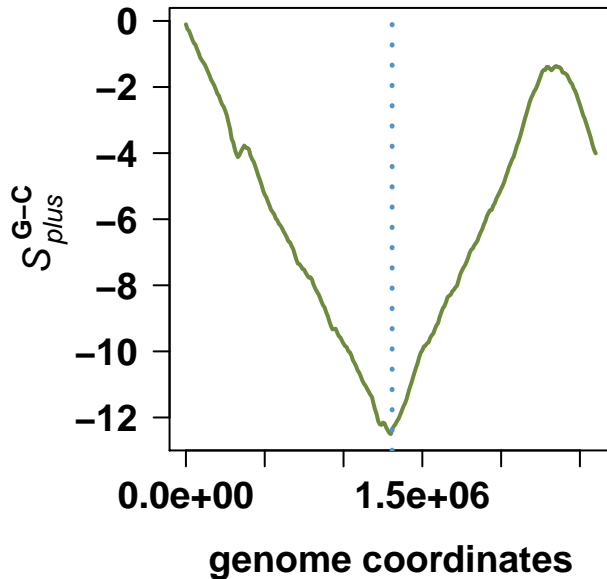
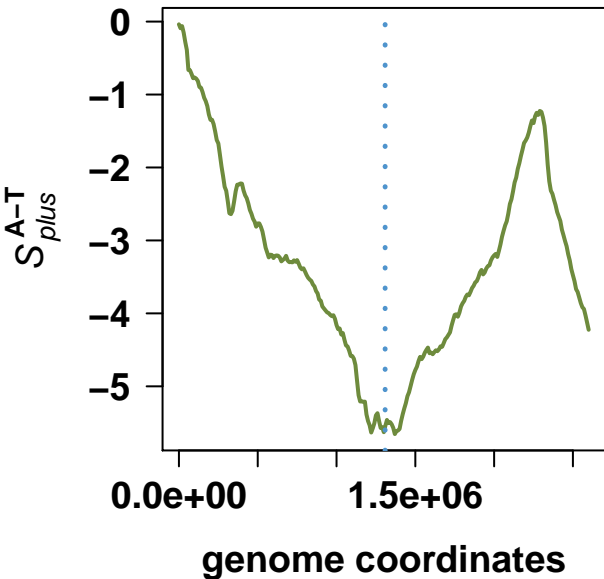
### Staphylococcus aureus subsp. aureus MSSA476



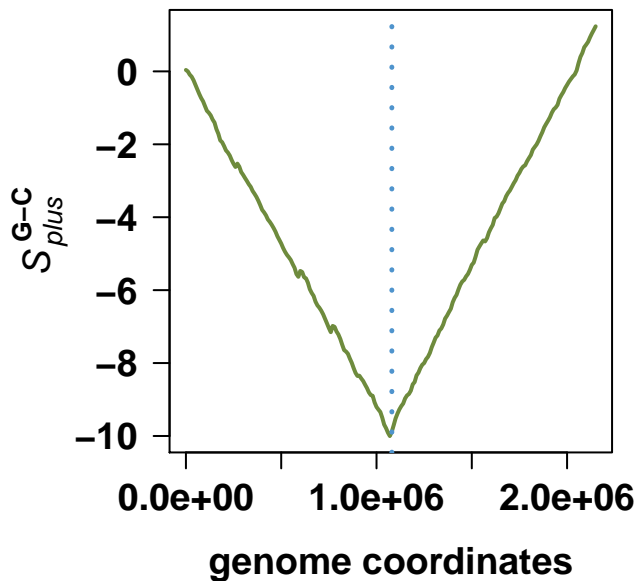
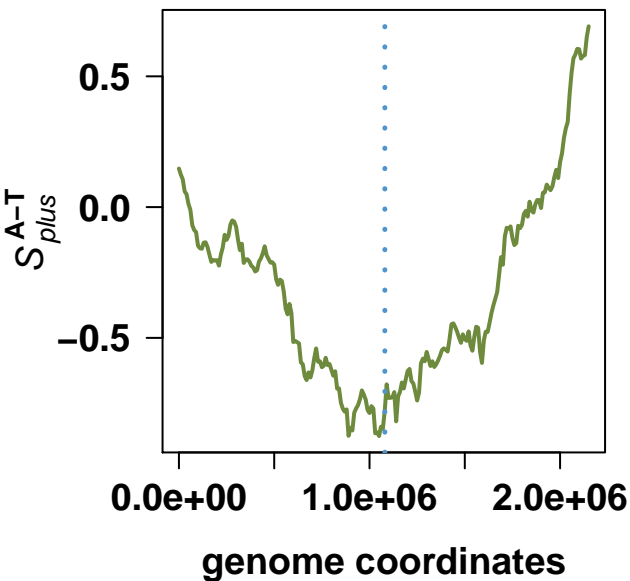
### Listeria monocytogenes serotype 4b str. F2365



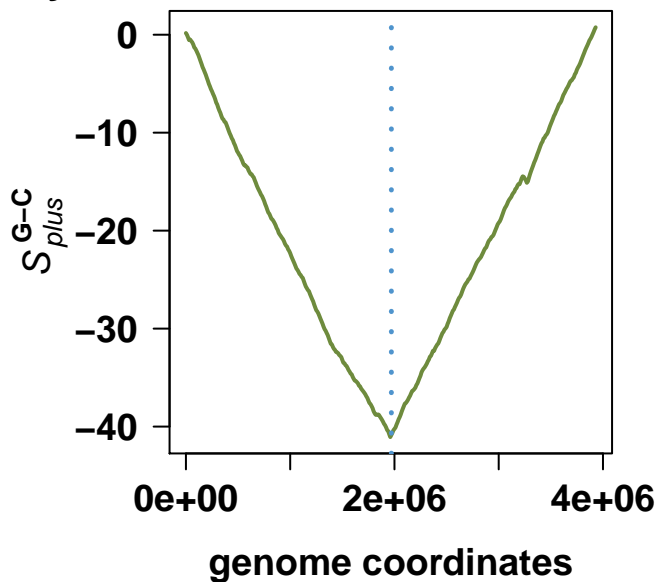
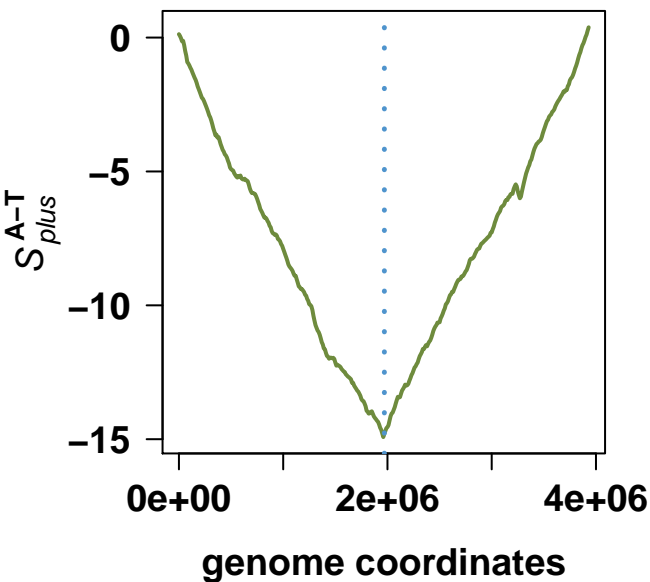
### Staphylococcus epidermidis RP62A



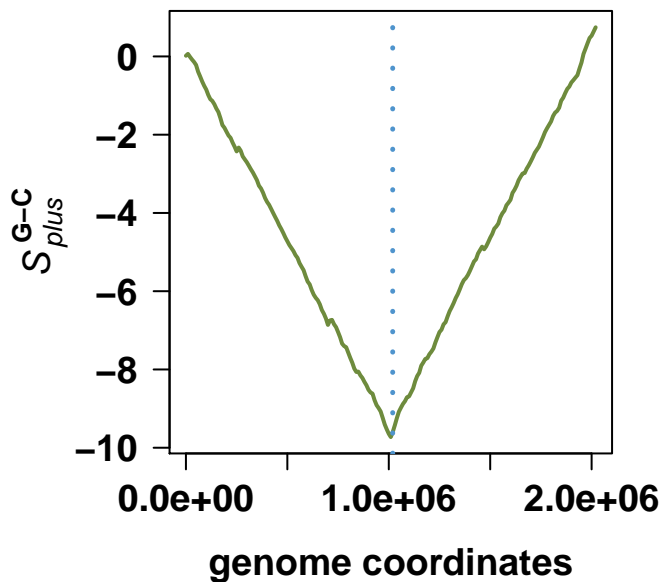
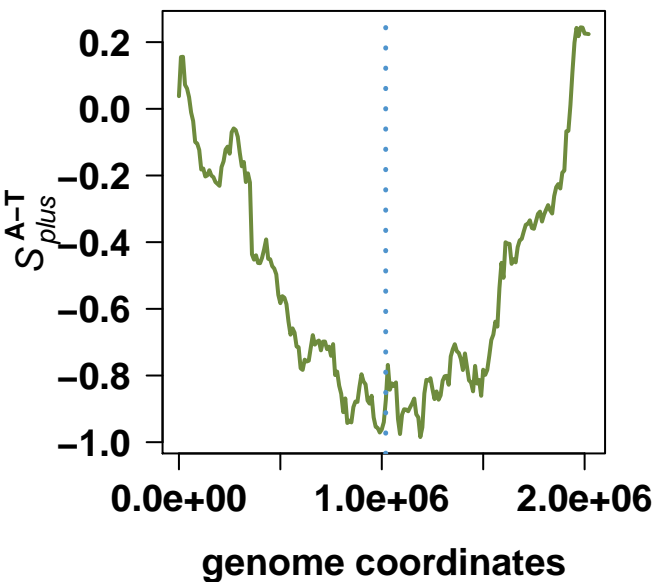
### Streptococcus pneumoniae TIGR4



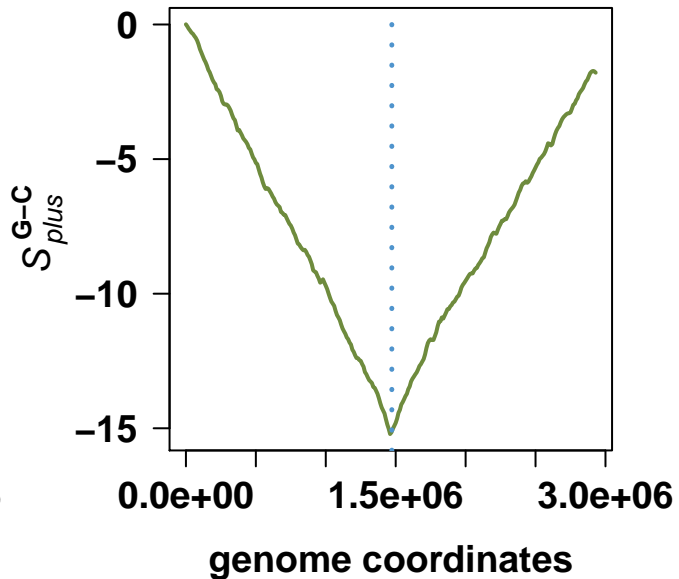
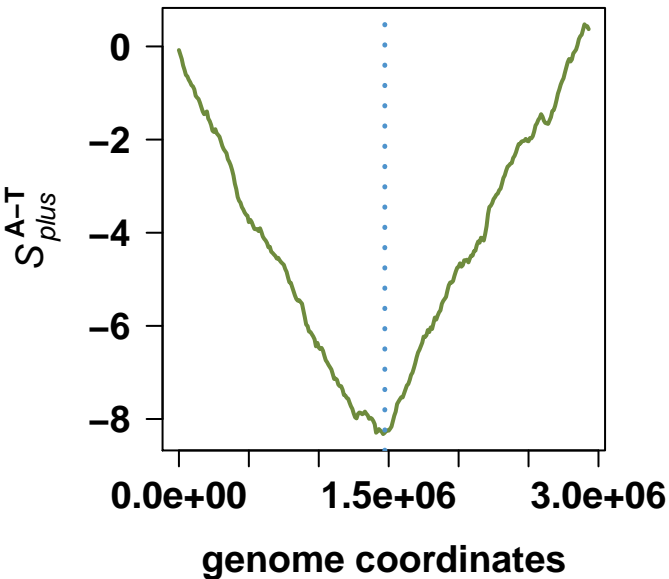
## Clostridium acetobutylicum ATCC 824



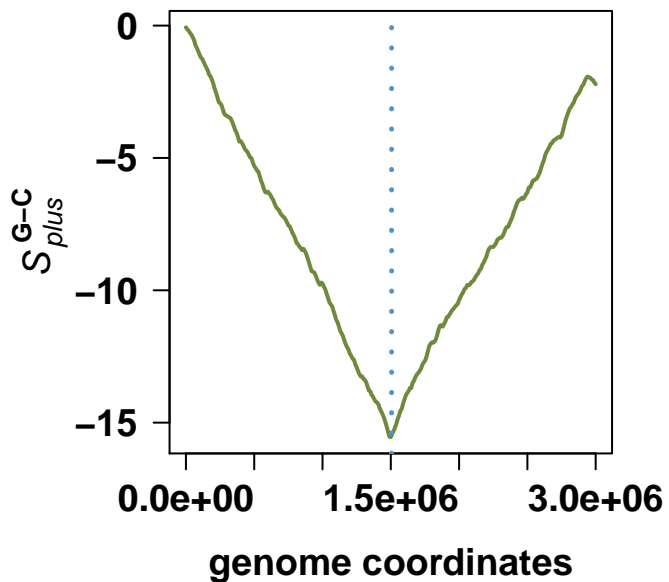
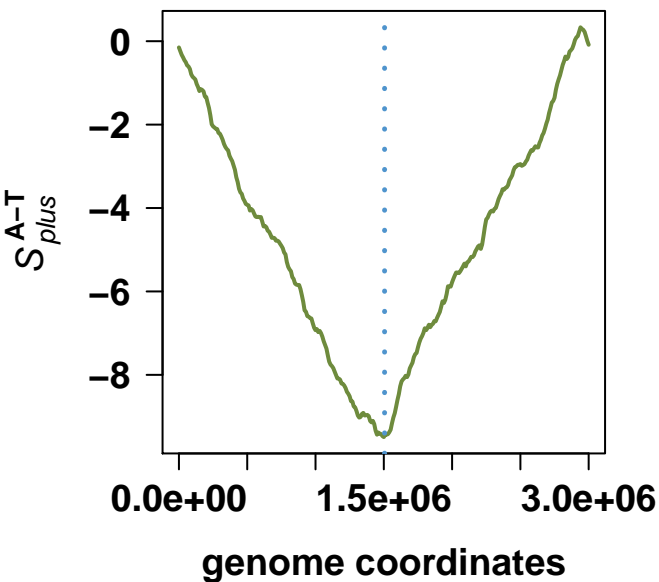
## Streptococcus pneumoniae R6



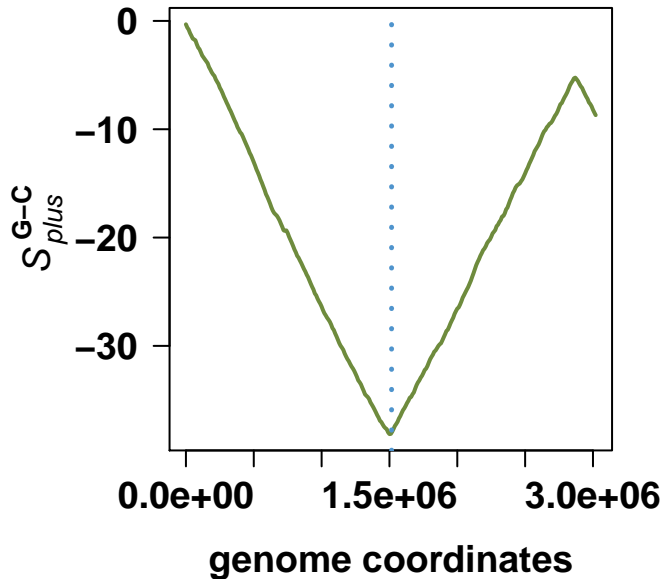
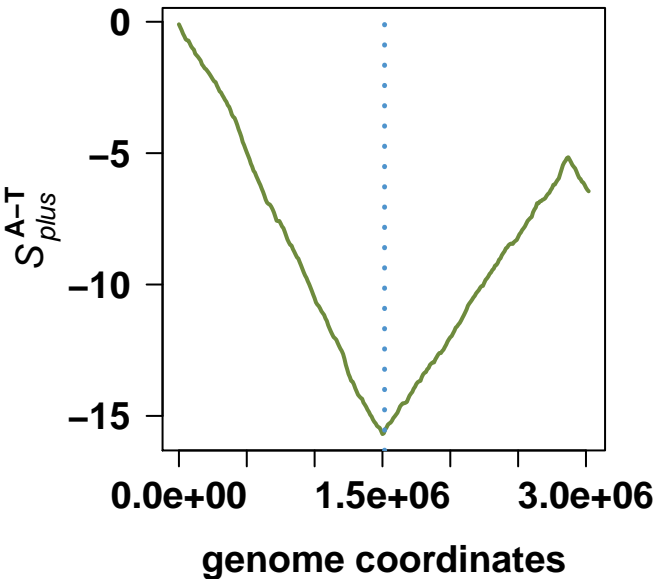
### *Listeria monocytogenes* EGD-e



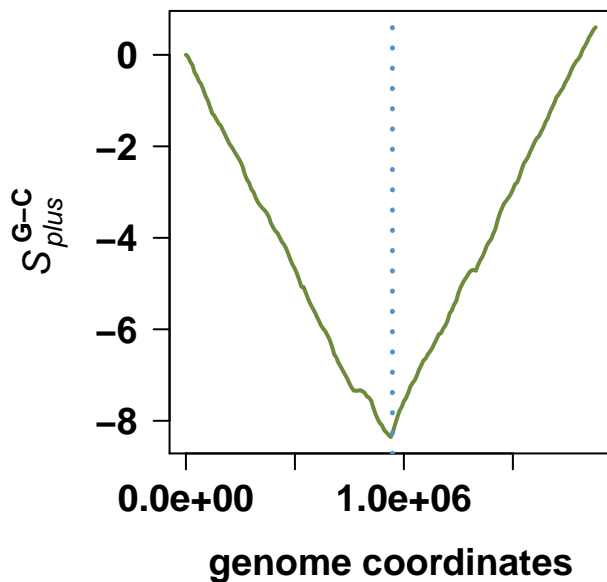
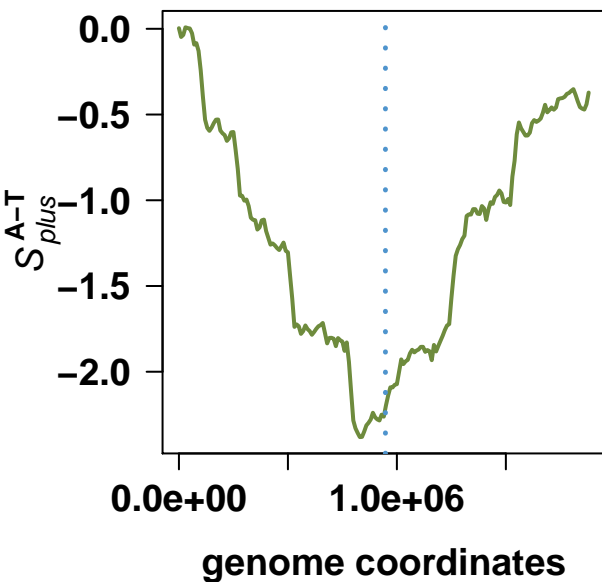
### *Listeria innocua* Clip11262



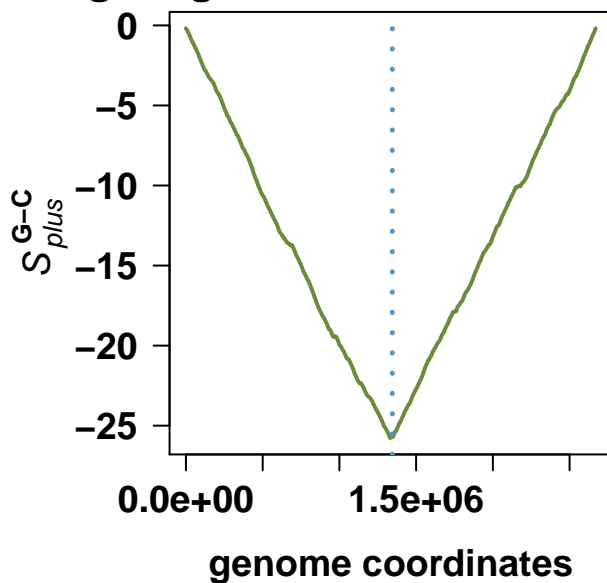
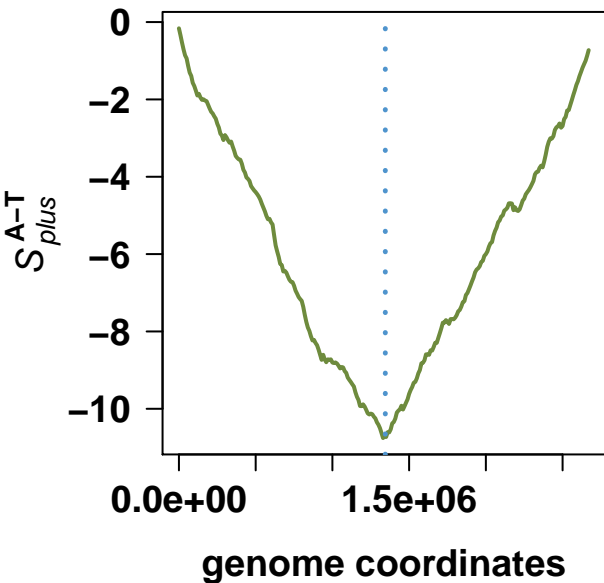
### **Clostridium perfringens str. 13**



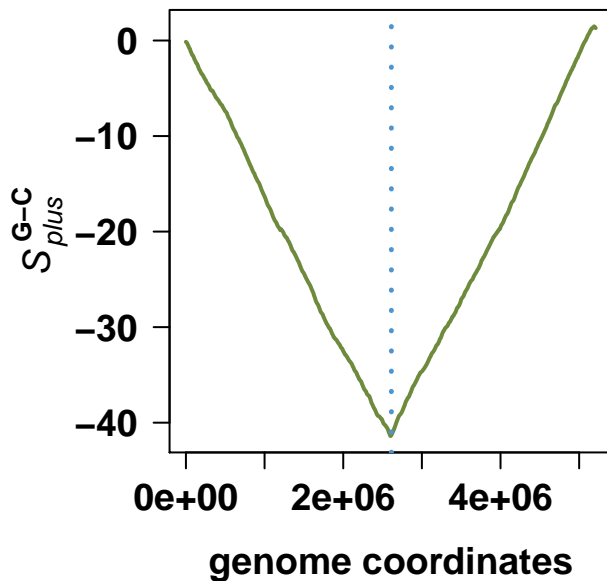
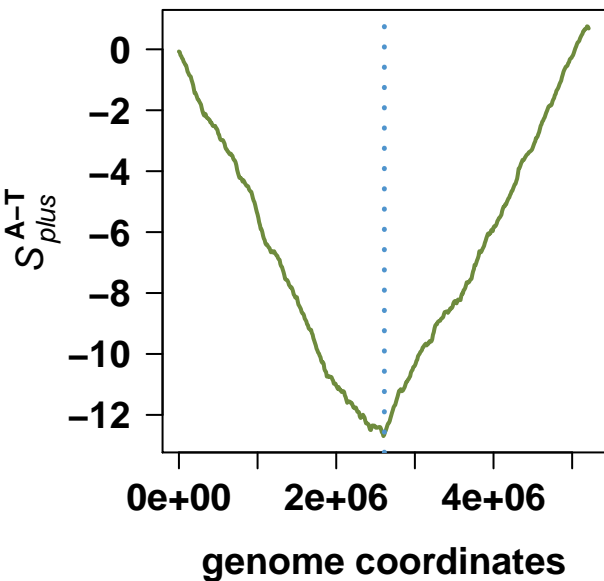
### **Streptococcus pyogenes MGAS8232**



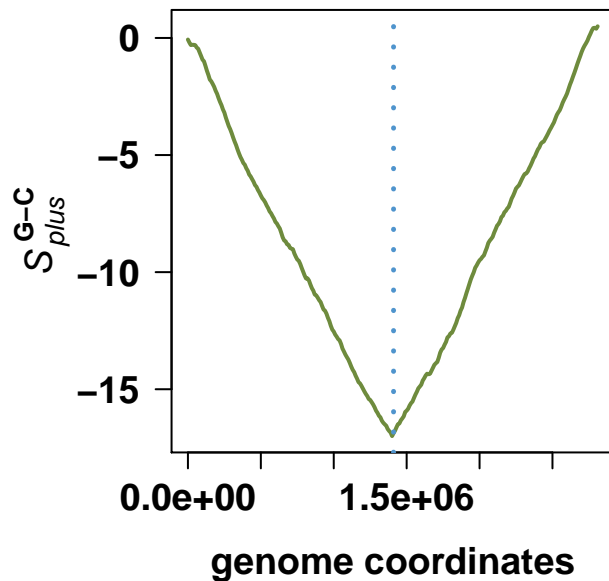
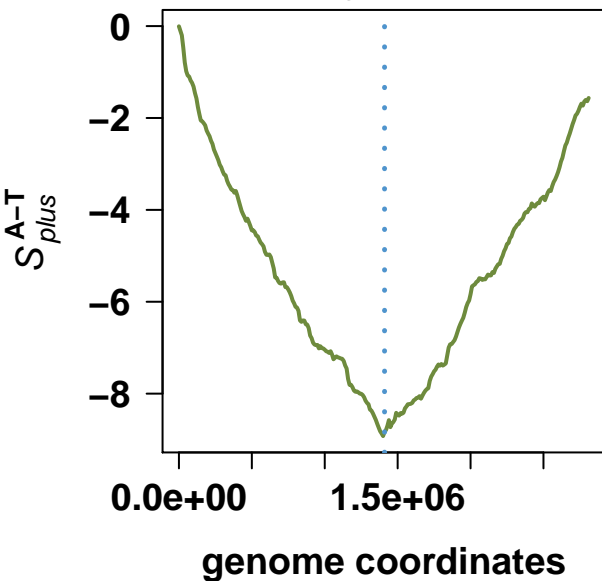
### **Thermoanaerobacter tengcongensis MB4**



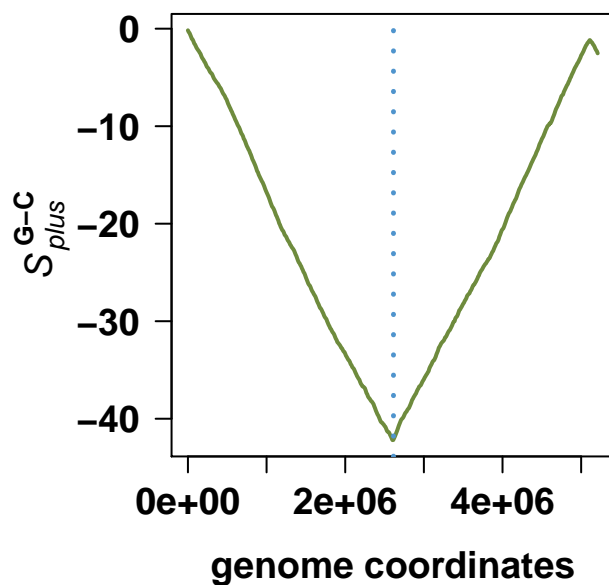
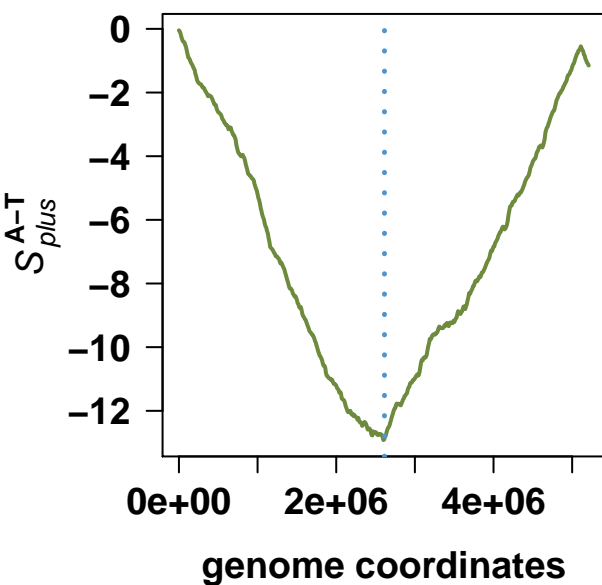
### **Bacillus cereus ATCC 10987**



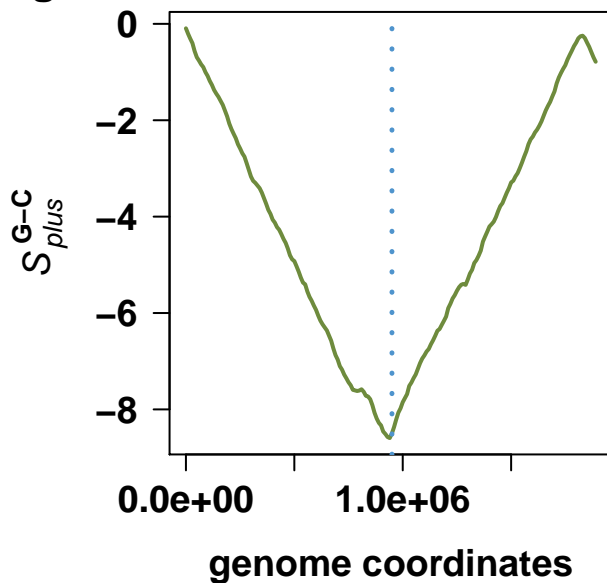
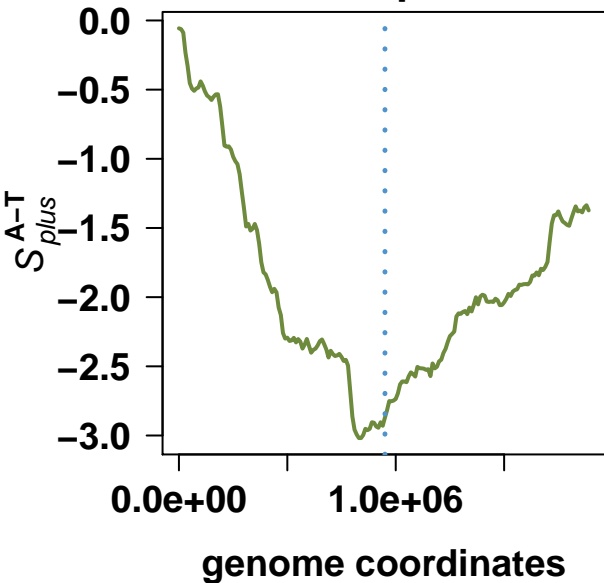
## Staphylococcus aureus subsp. aureus MW2



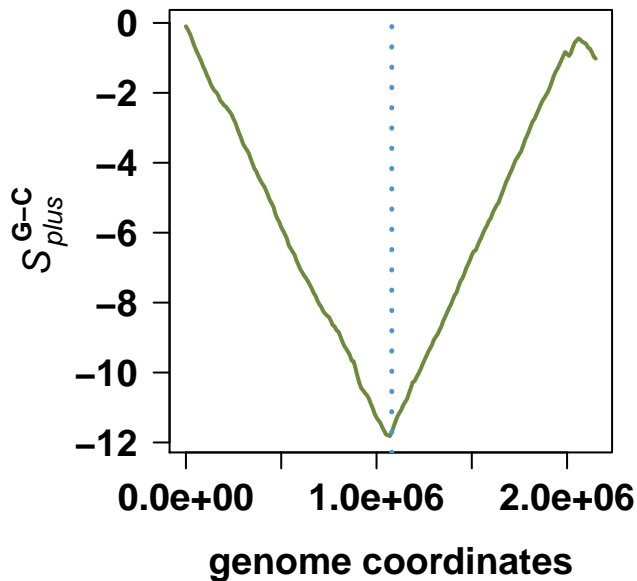
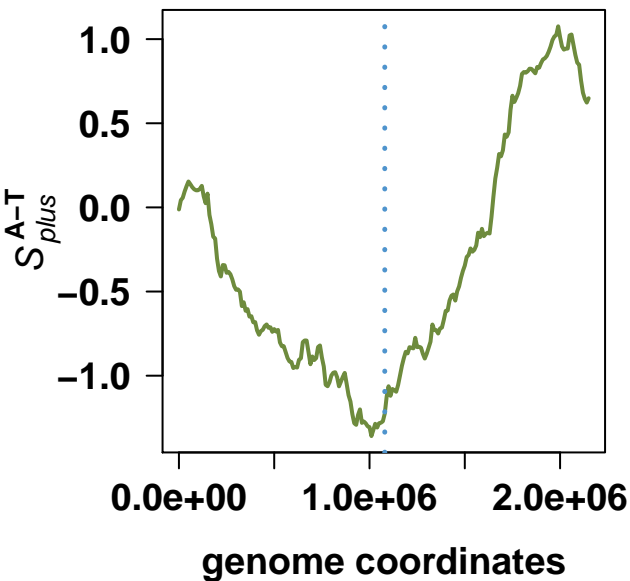
## Bacillus anthracis str. Ames



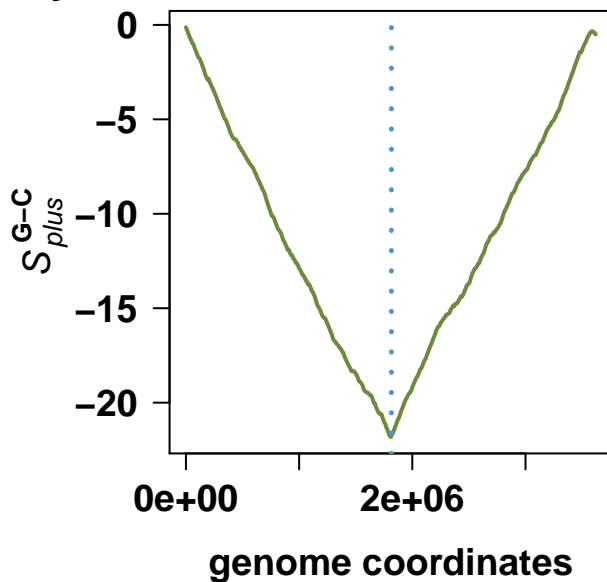
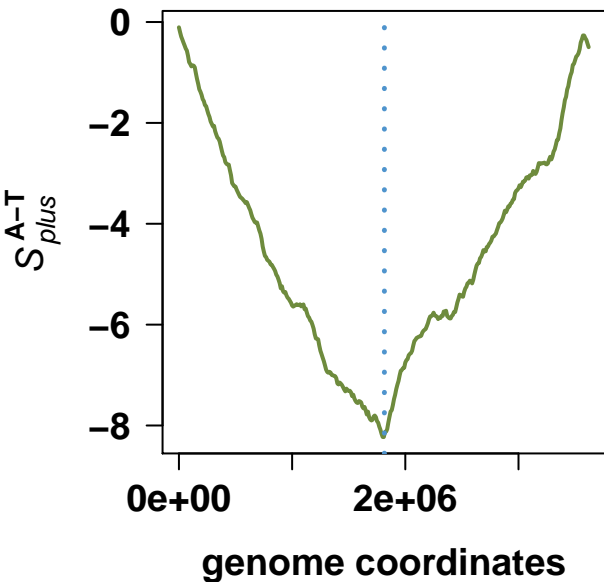
### Streptococcus pyogenes MGAS315



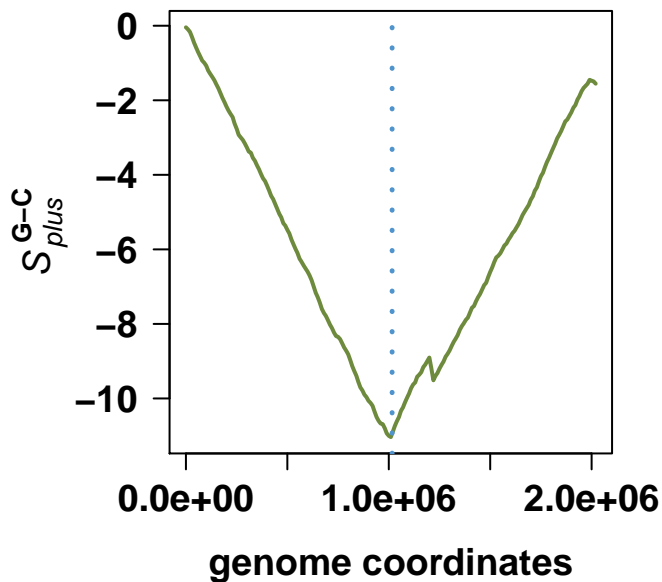
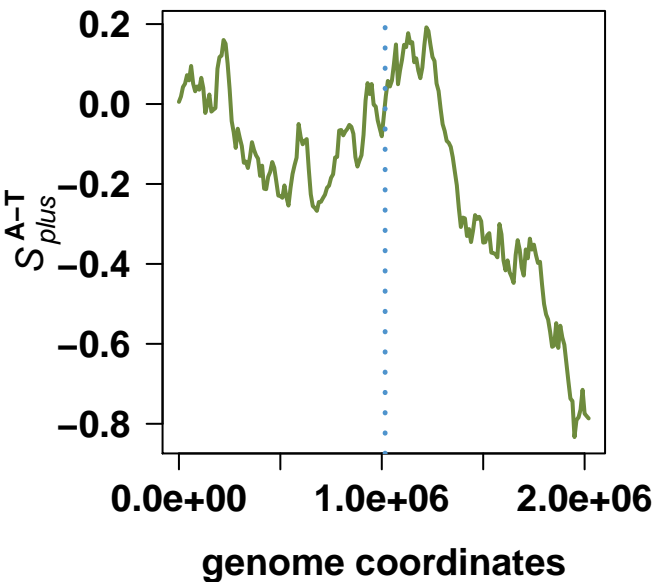
### Streptococcus agalactiae 2603V/R



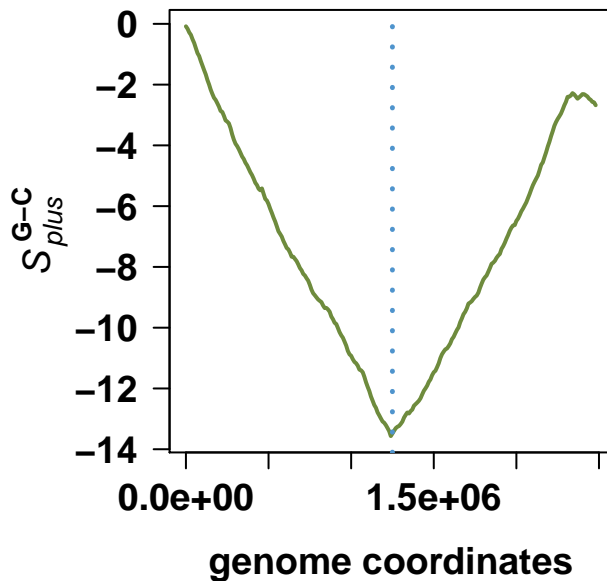
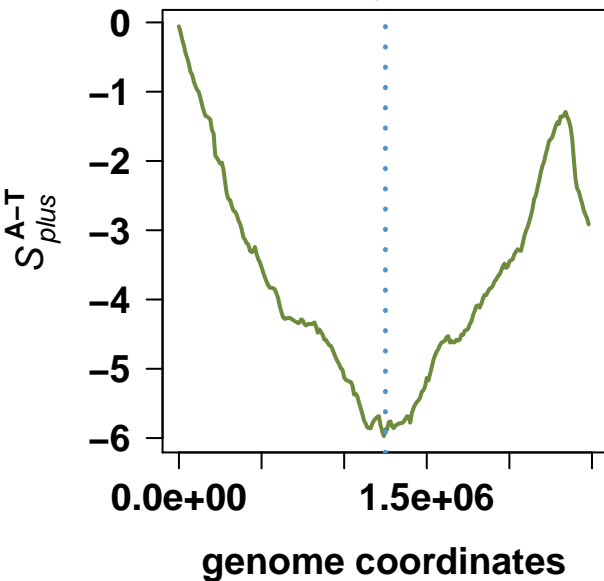
### Oceanobacillus iheyensis HTE831



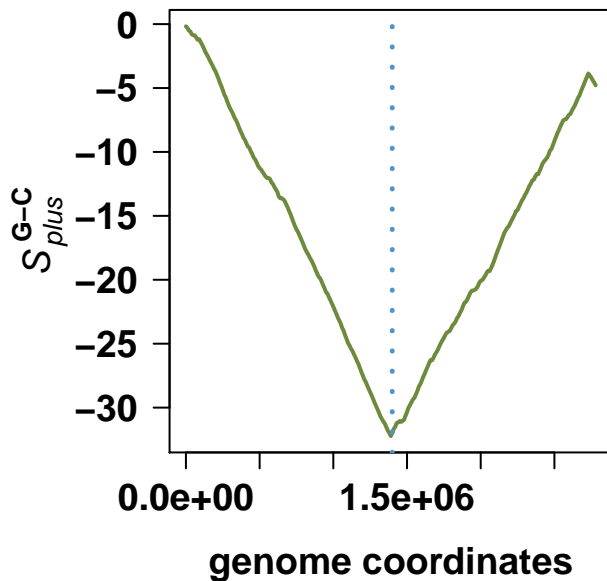
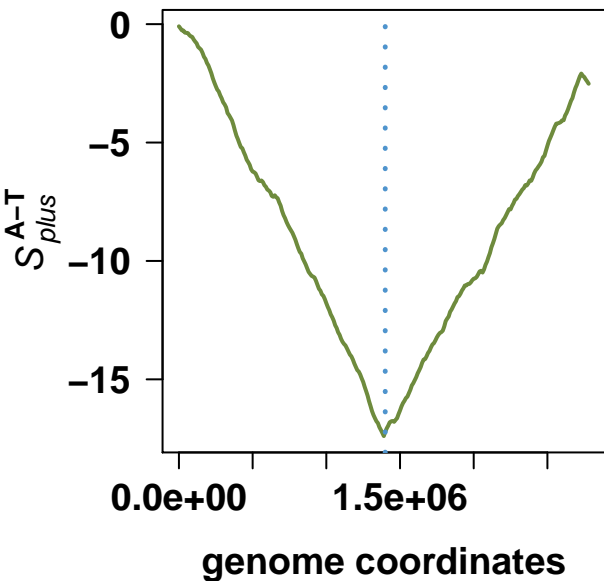
### Streptococcus mutans UA159



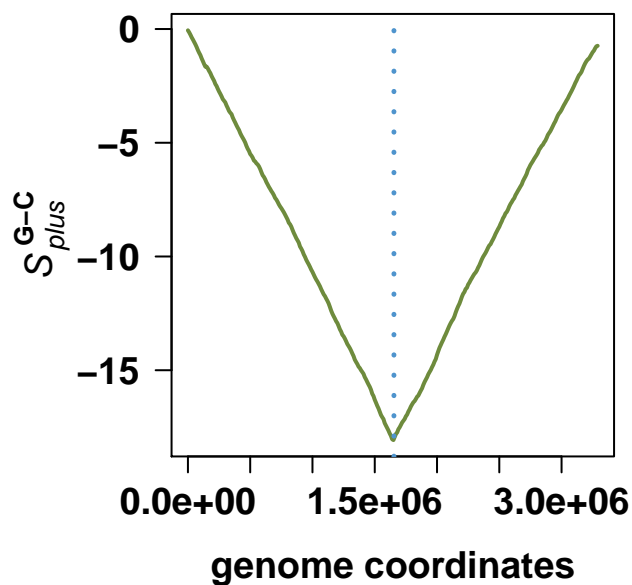
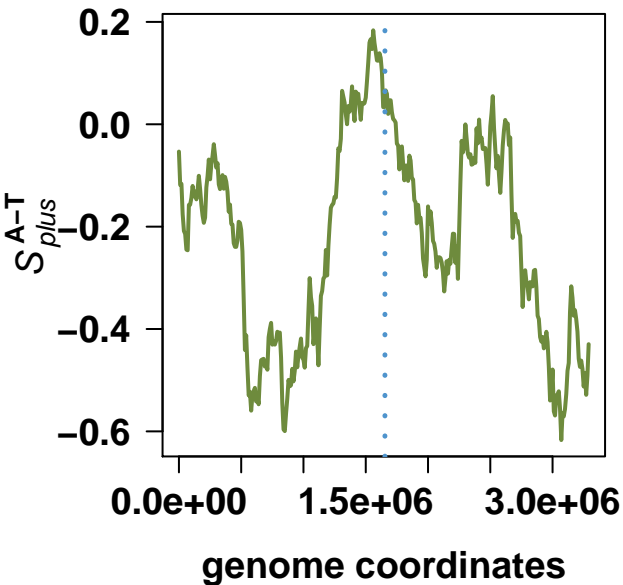
## Staphylococcus epidermidis ATCC 12228



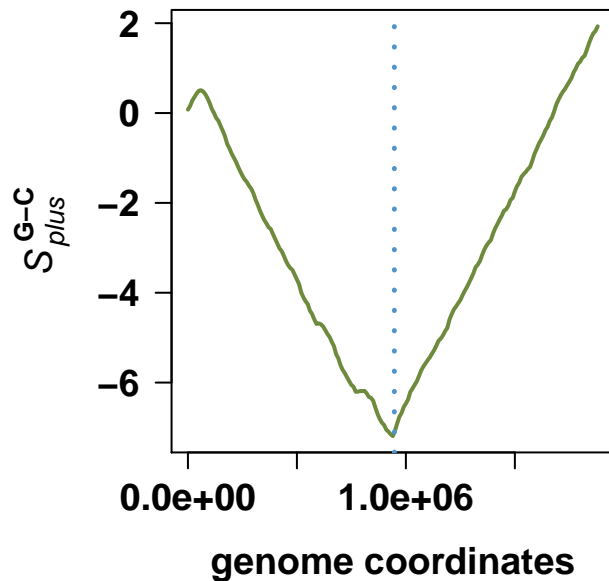
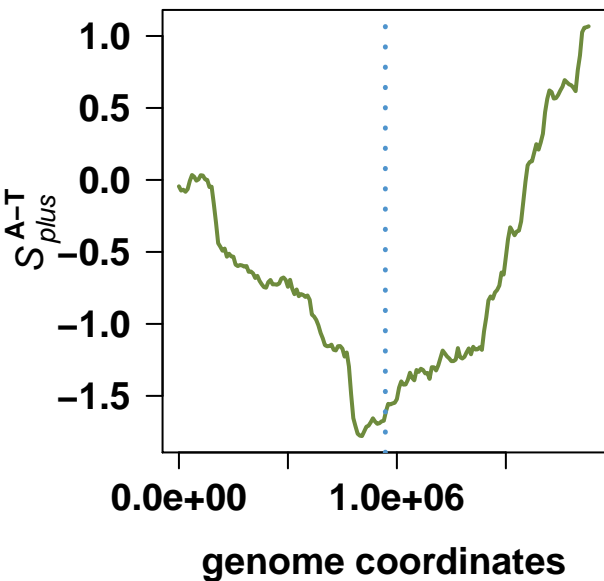
## Clostridium tetani E88



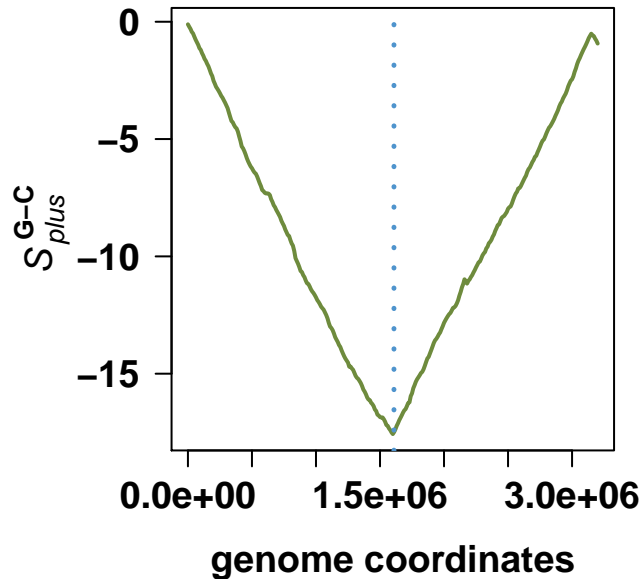
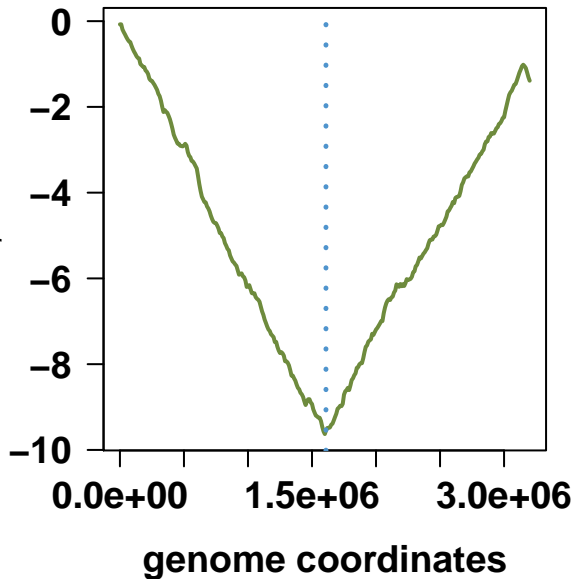
### Lactobacillus plantarum WCFS1



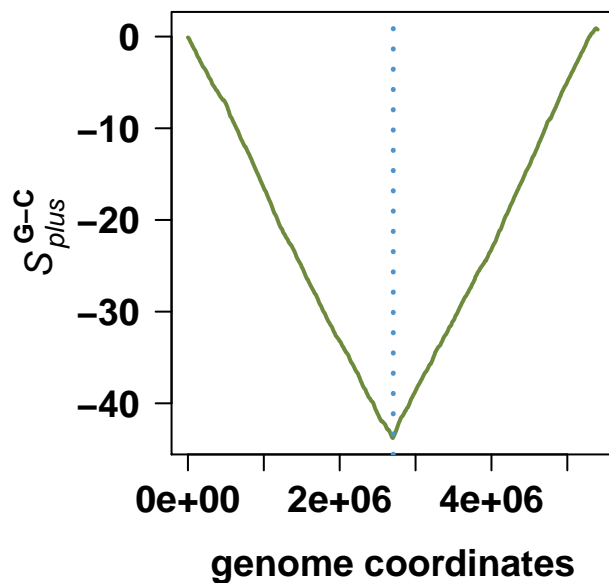
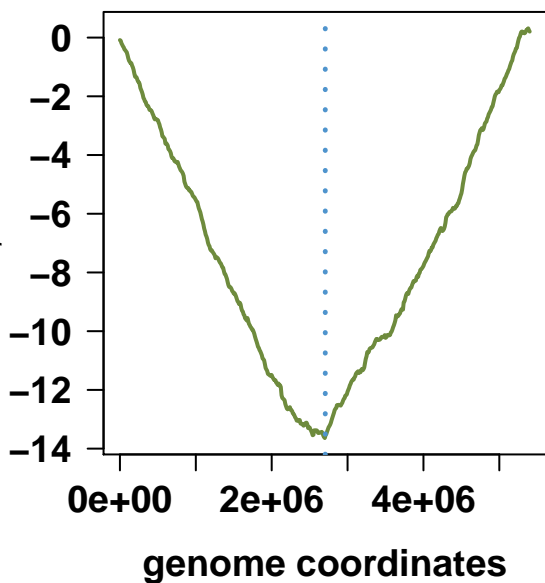
### Streptococcus pyogenes SSI-1



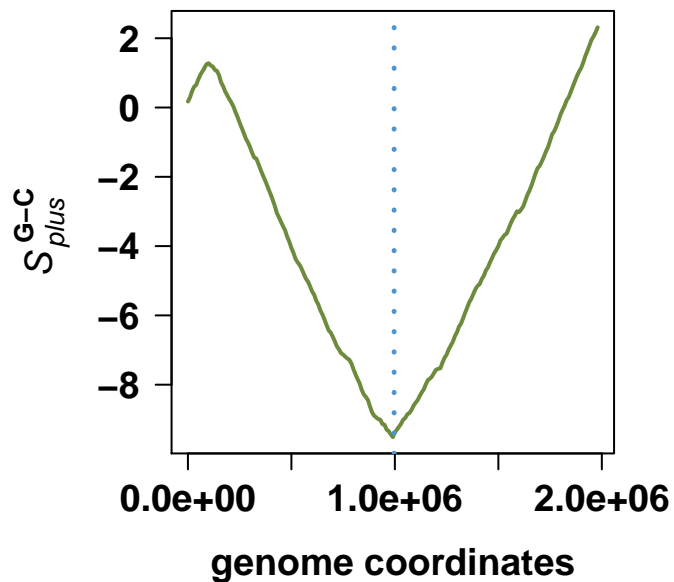
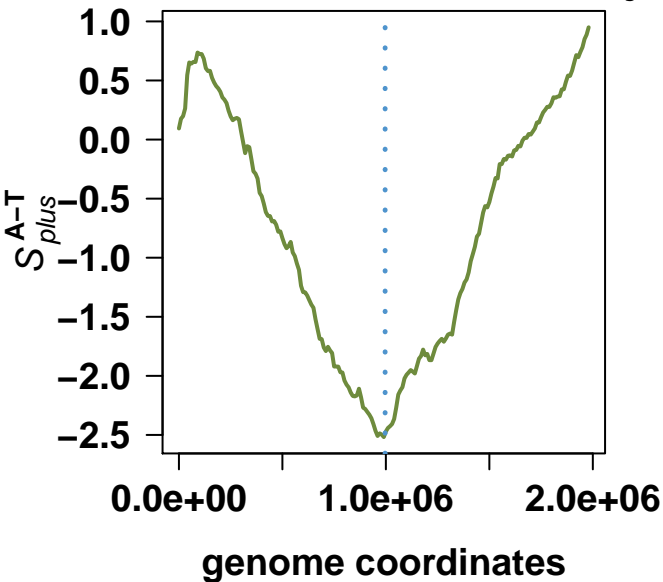
### Enterococcus faecalis V583



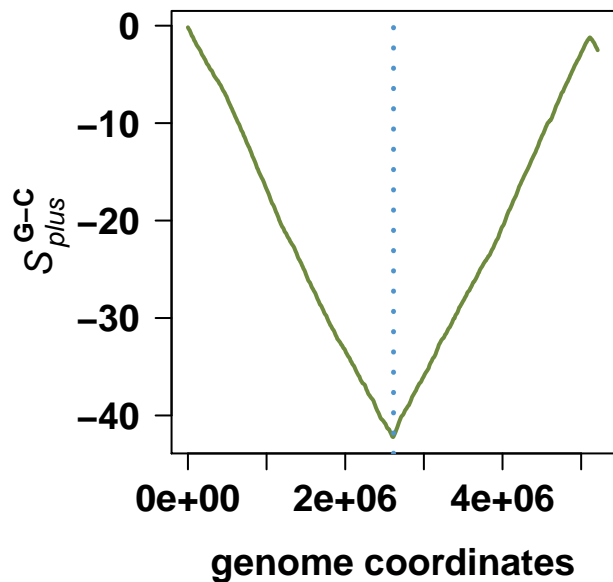
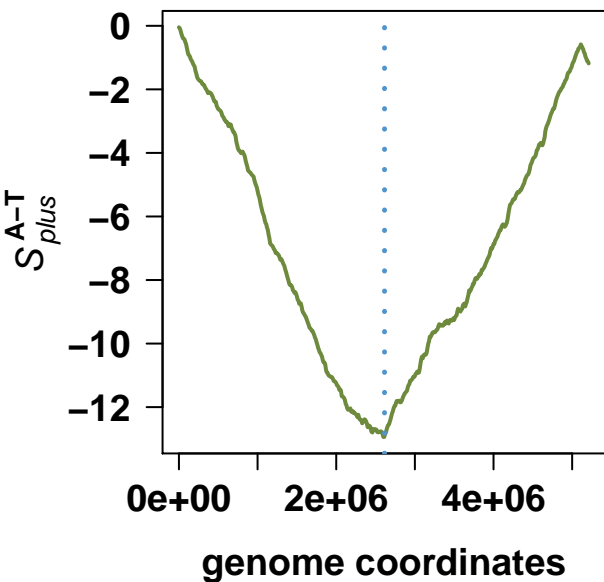
### Bacillus cereus ATCC 14579



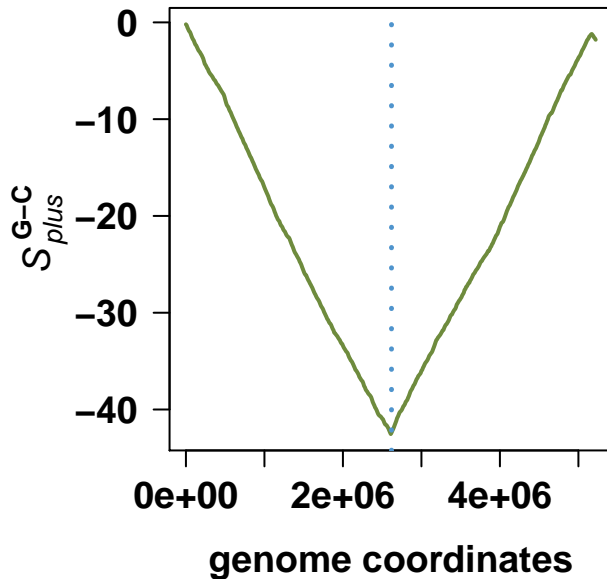
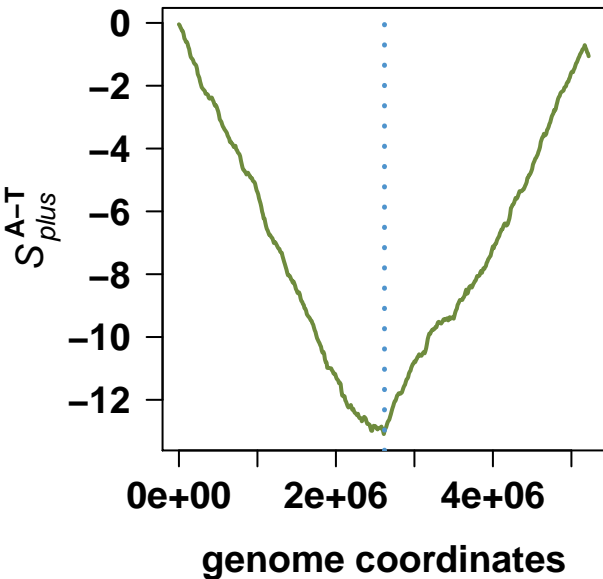
## Lactobacillus johnsonii NCC 533



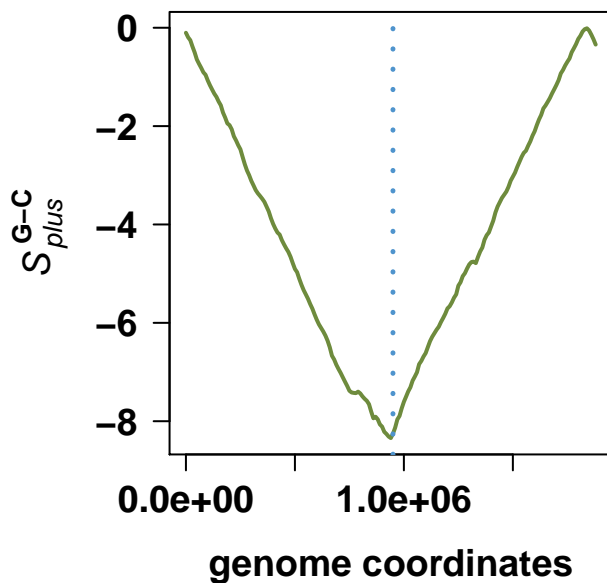
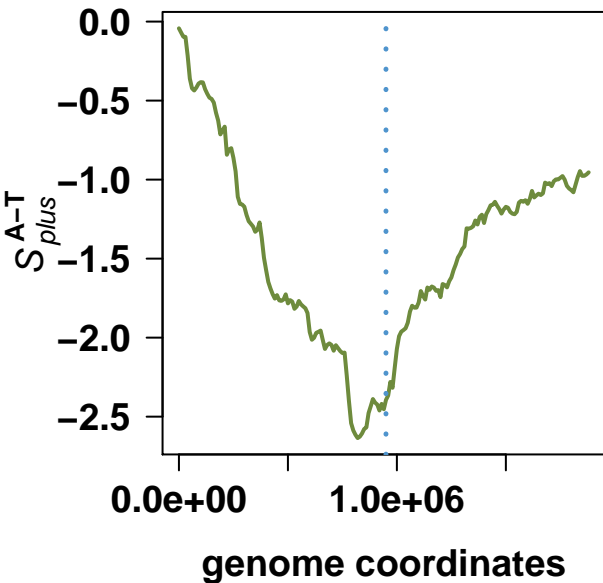
## Bacillus anthracis str. Sterne



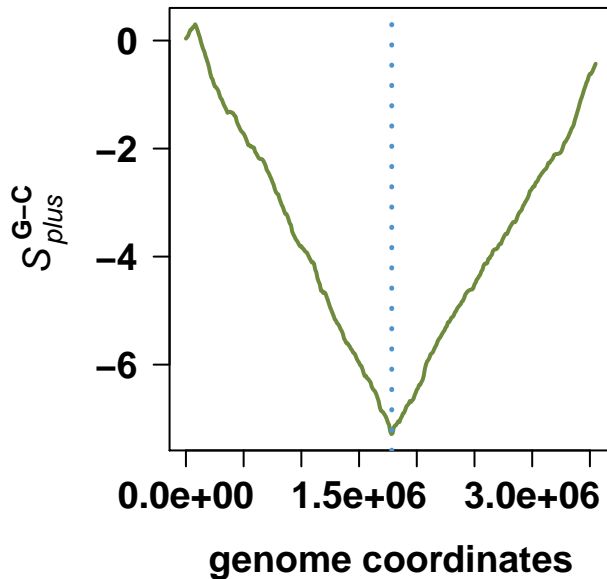
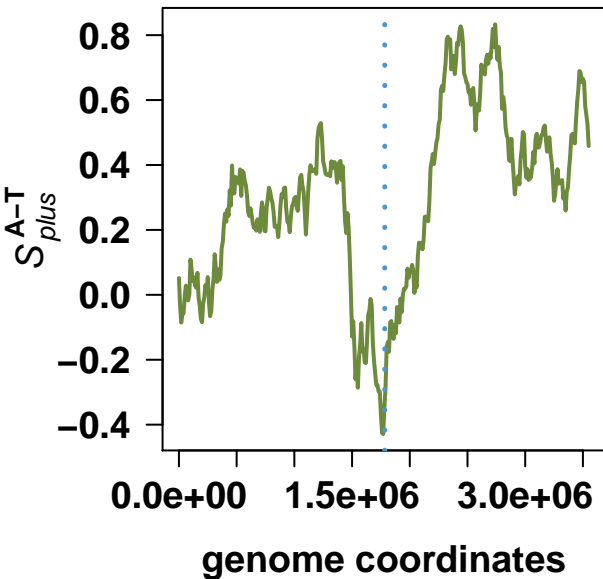
## Bacillus thuringiensis serovar konkukian str. 97-27



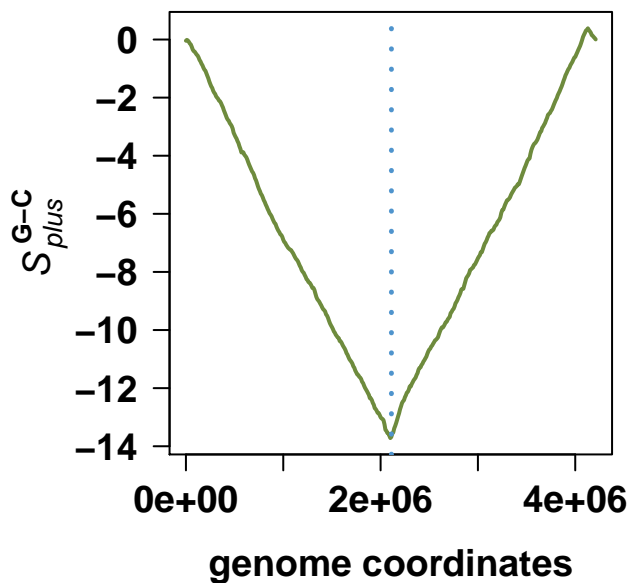
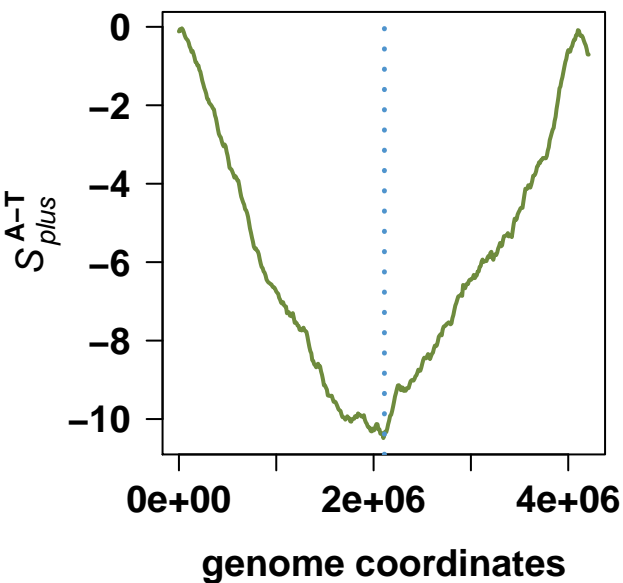
## Streptococcus pyogenes MGAS10394



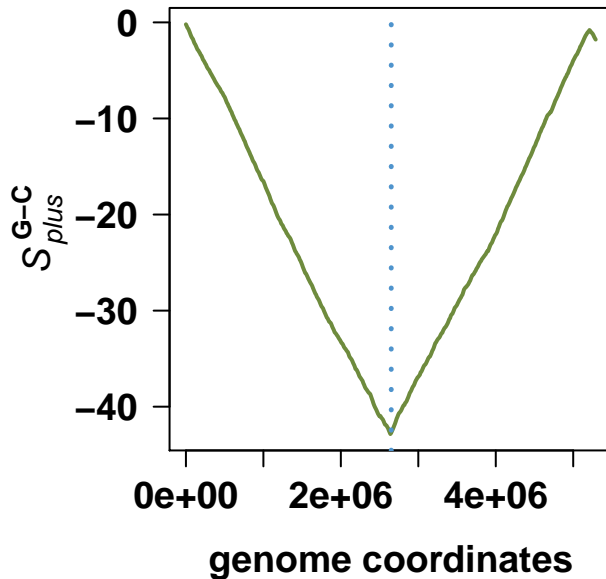
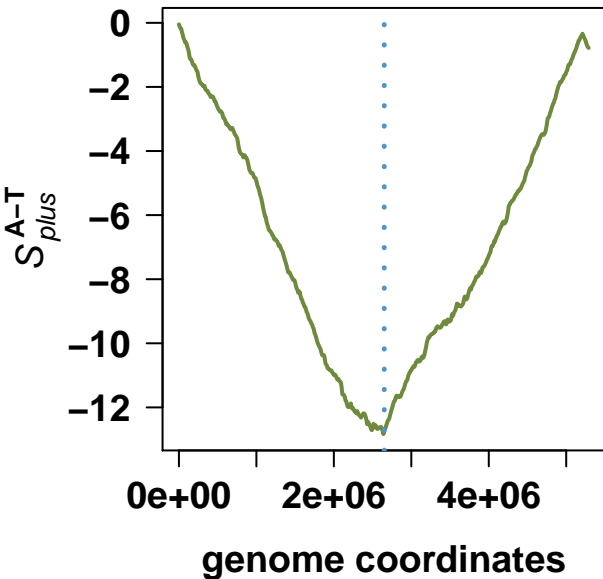
## Symbiobacterium thermophilum IAM 14863



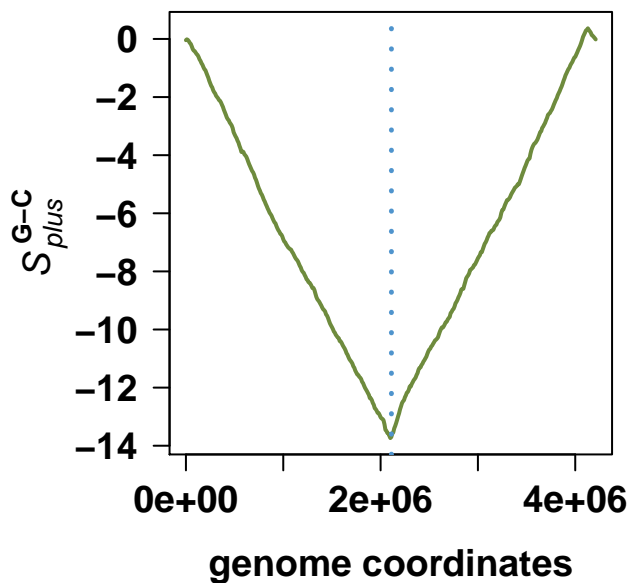
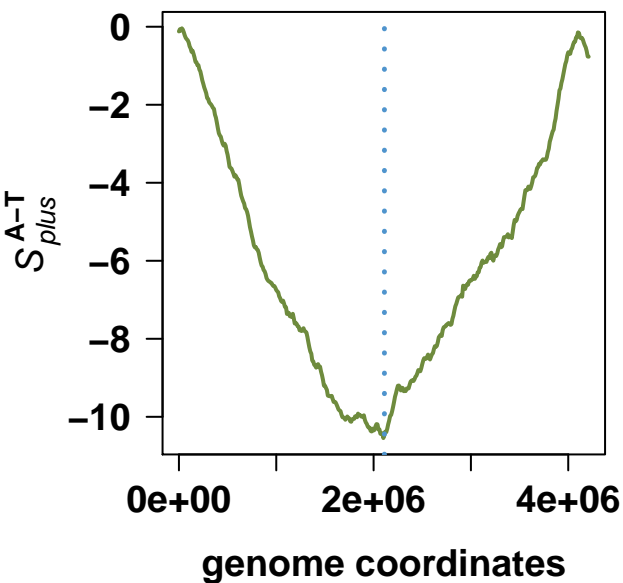
## Bacillus licheniformis DSM 13 = ATCC 14580



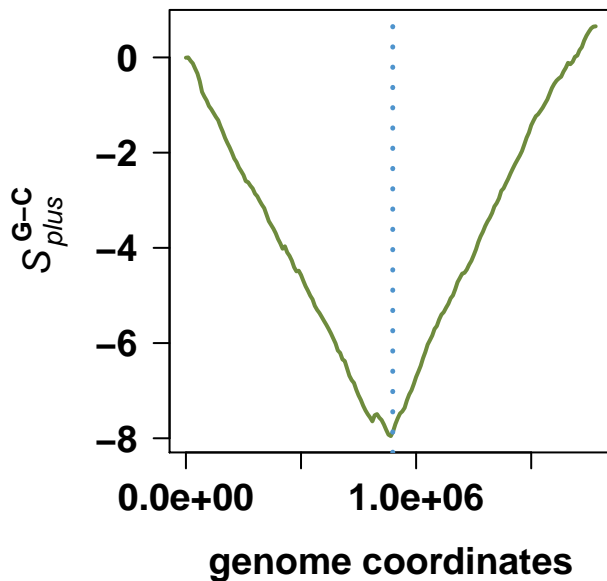
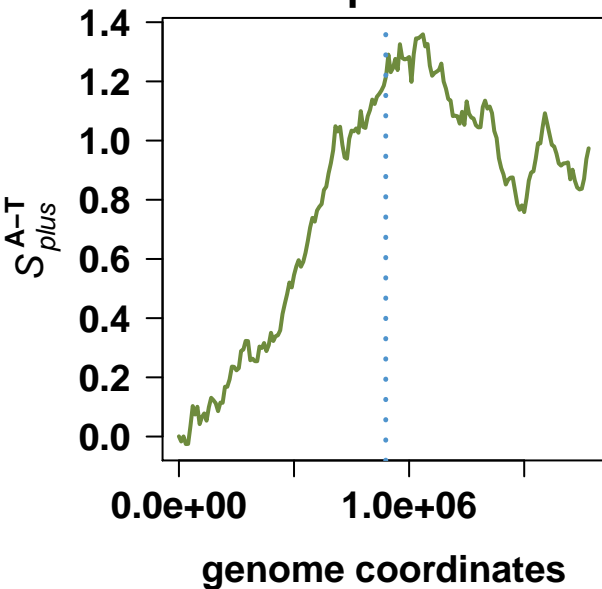
### Bacillus cereus E33L



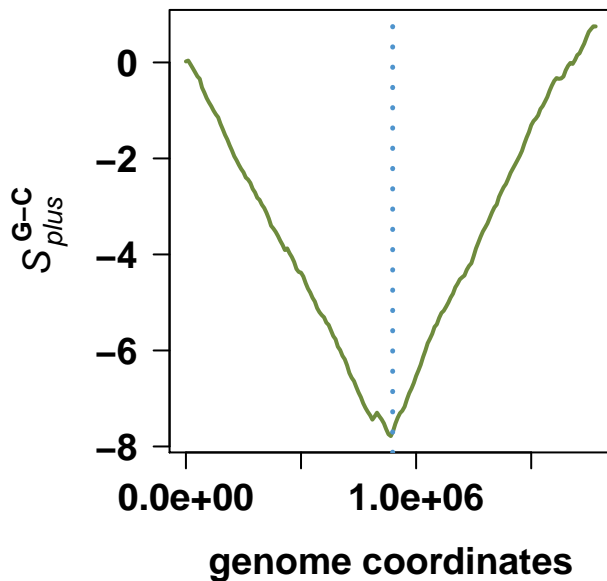
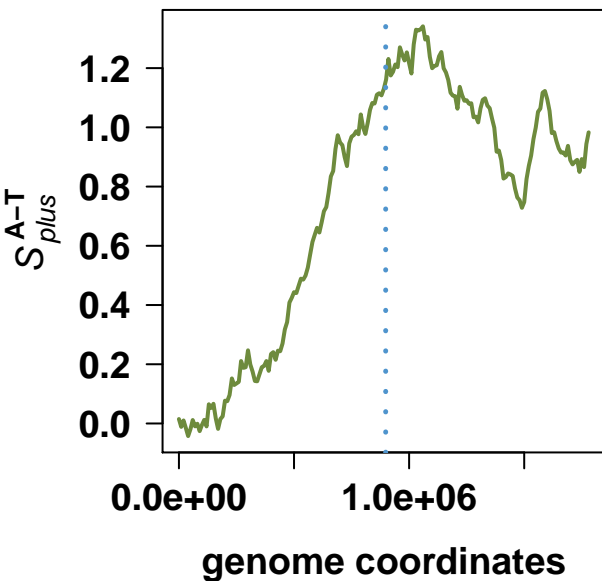
### Bacillus licheniformis DSM 13 = ATCC 14580



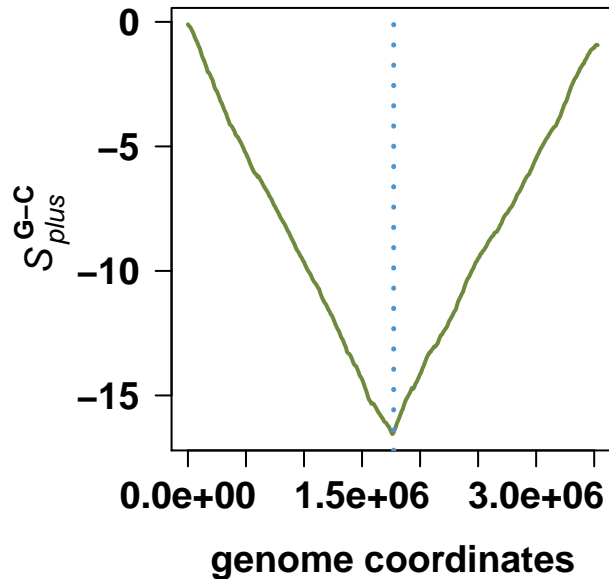
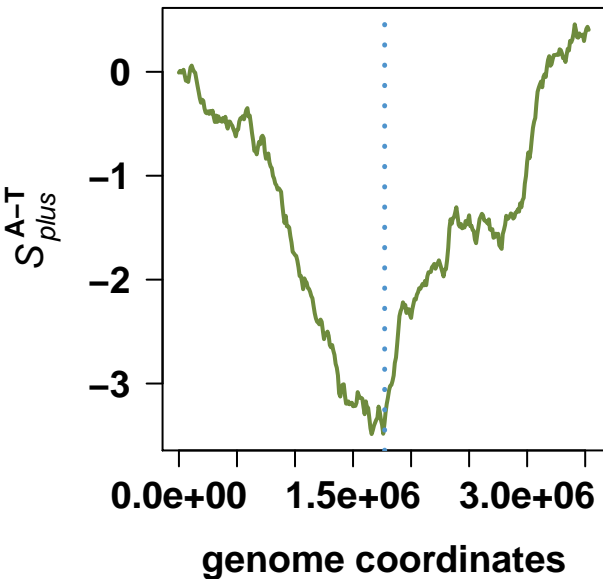
### Streptococcus thermophilus LMG 18311



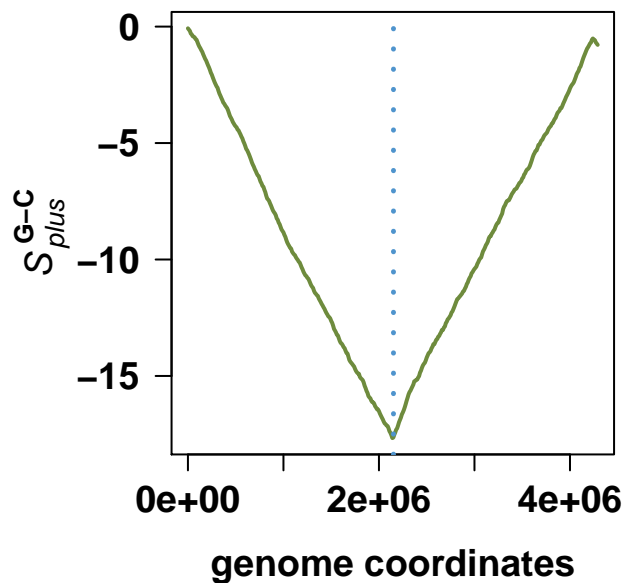
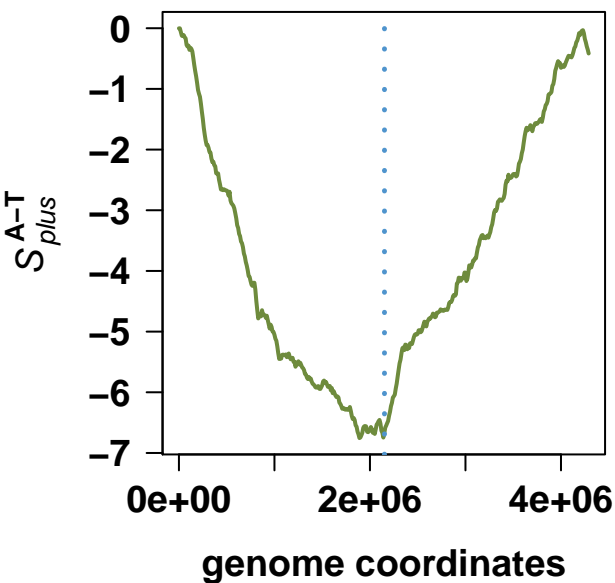
### Streptococcus thermophilus CNRZ1066



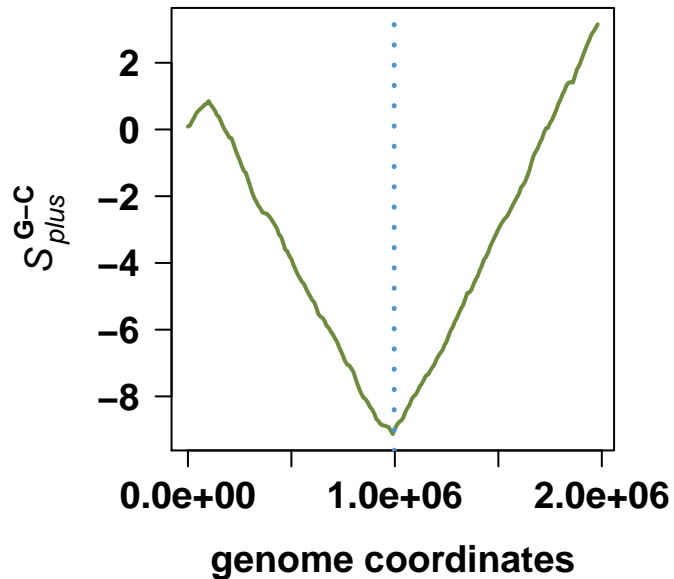
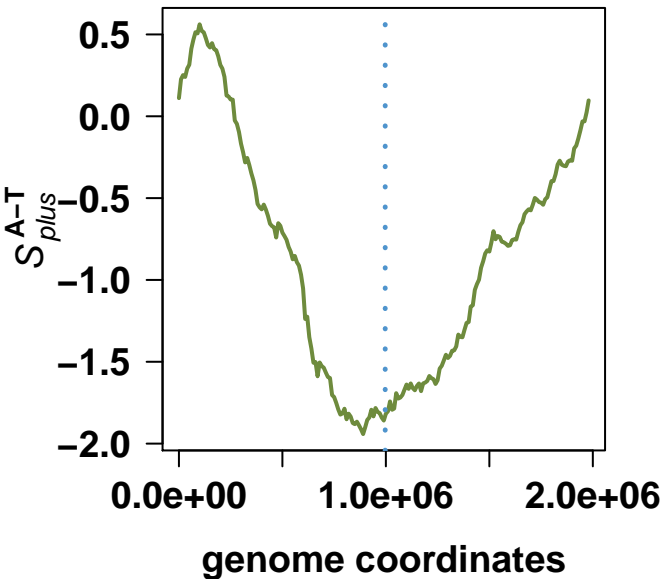
## Geobacillus kaustophilus HTA426



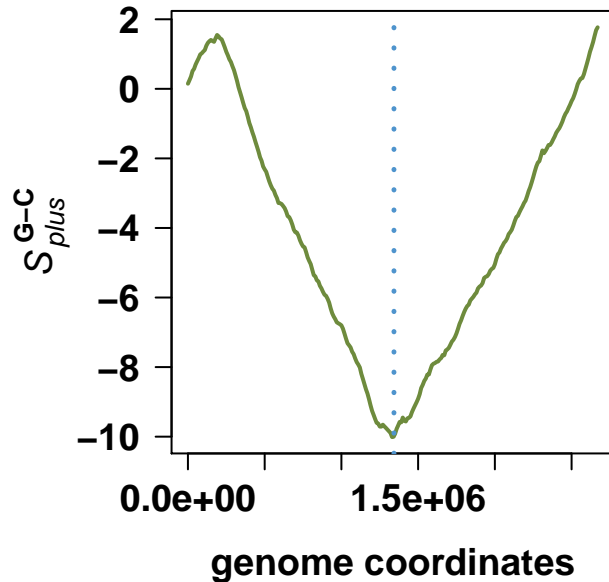
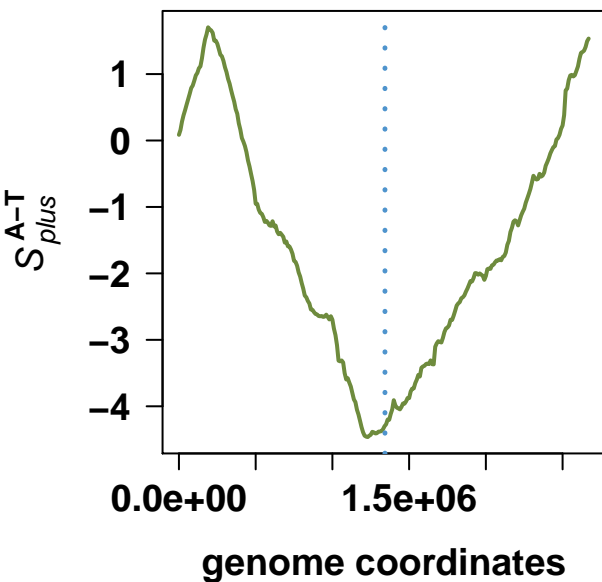
## Bacillus clausii KSM-K16



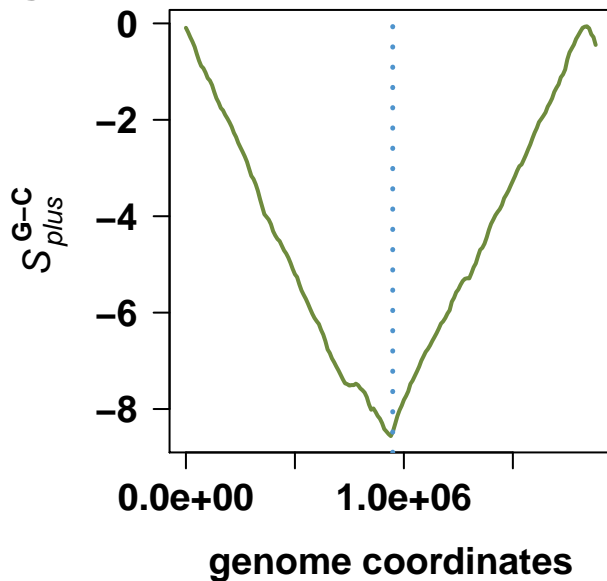
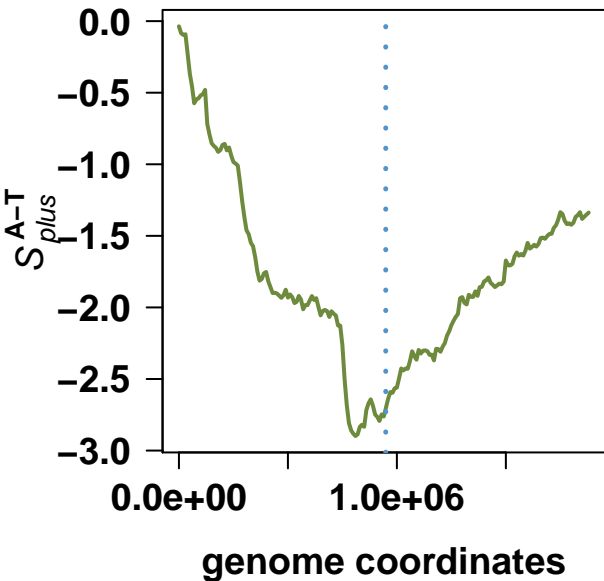
## Lactobacillus acidophilus NCFM



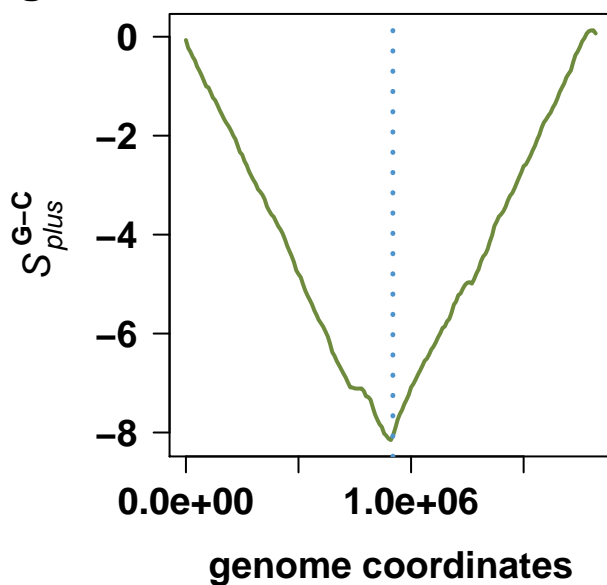
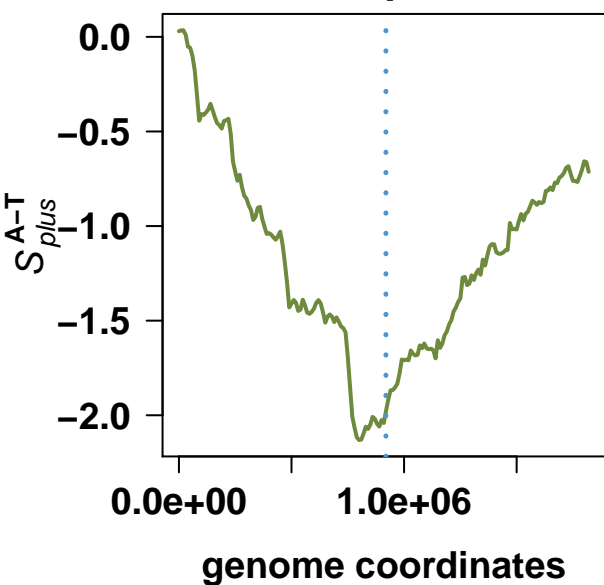
## Staphylococcus haemolyticus JCSC1435



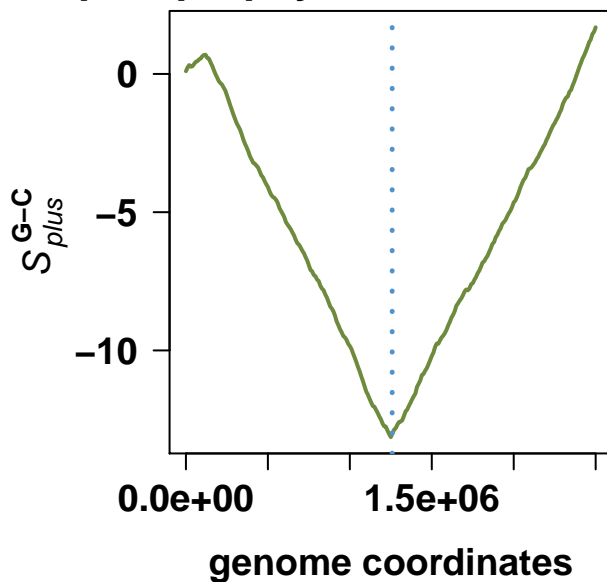
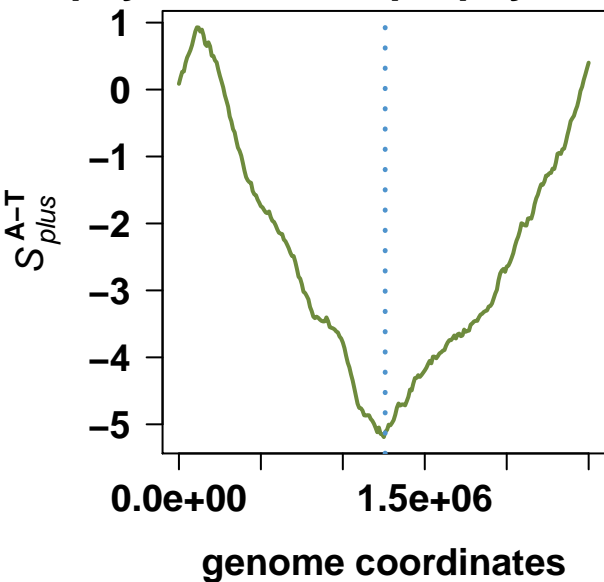
### Streptococcus pyogenes MGAS6180



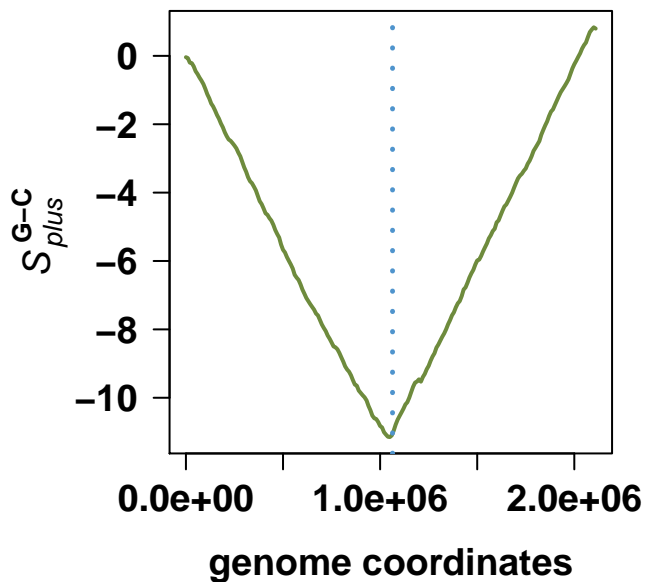
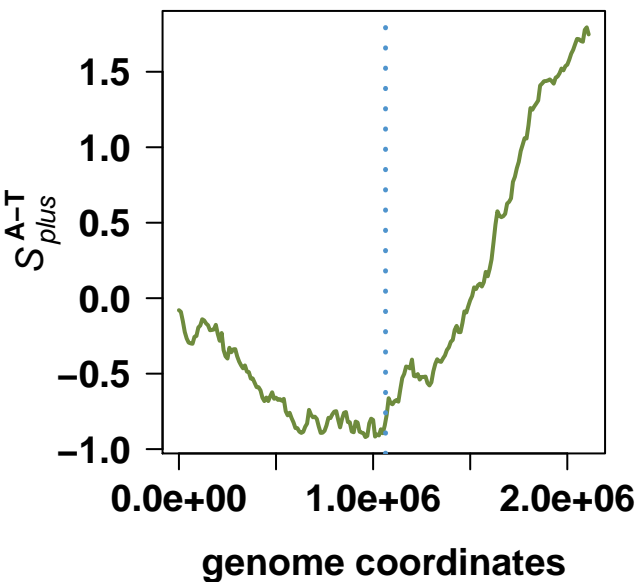
### Streptococcus pyogenes MGAS5005



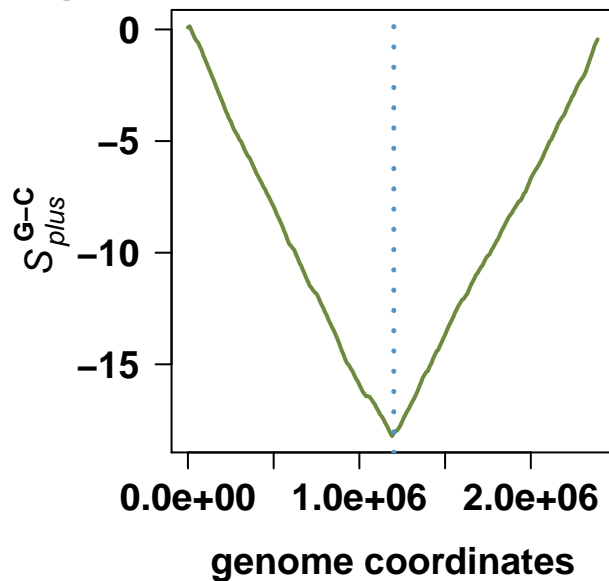
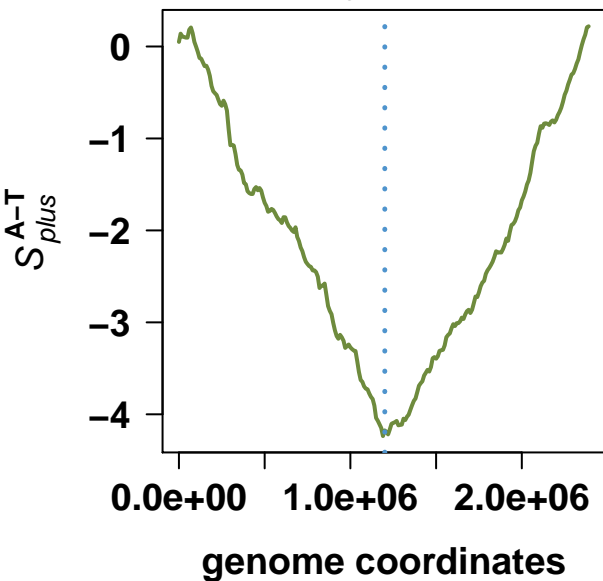
# Staphylococcus saprophyticus subsp. saprophyticus ATCC 15305



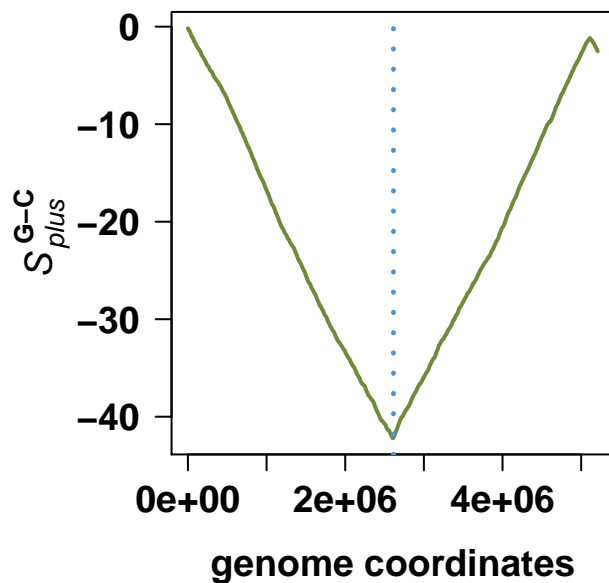
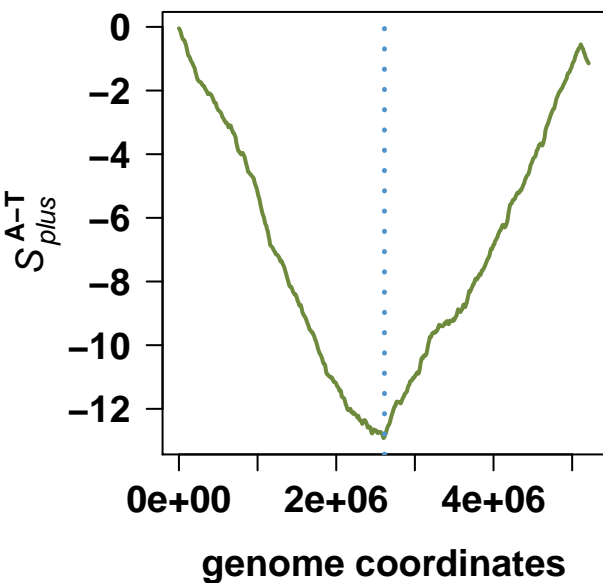
# Streptococcus agalactiae A909



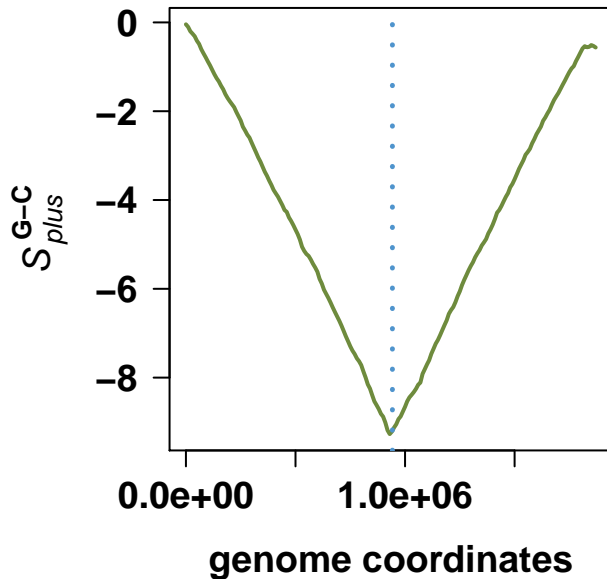
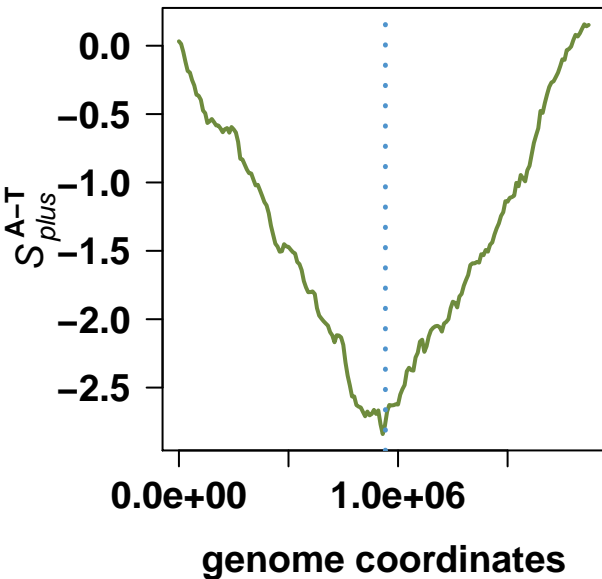
# Carboxydotherrhus hydrogenoformans Z-2901



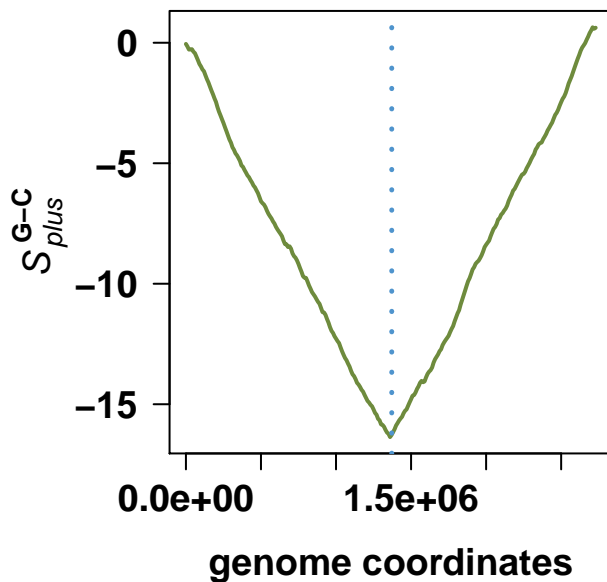
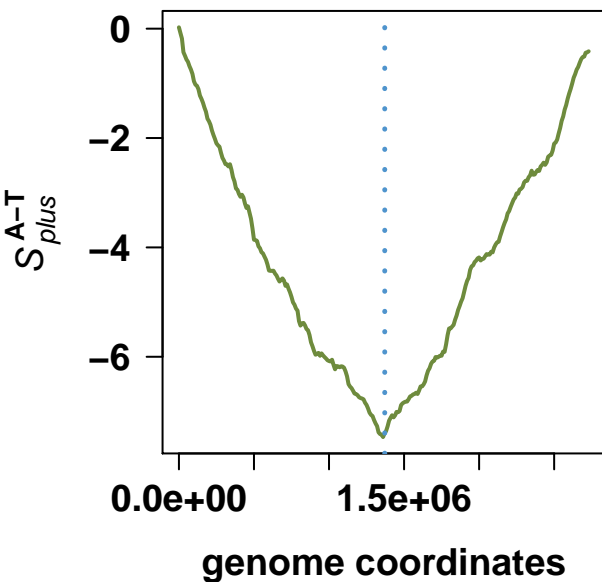
# Bacillus anthracis str. 'Ames Ancestor'



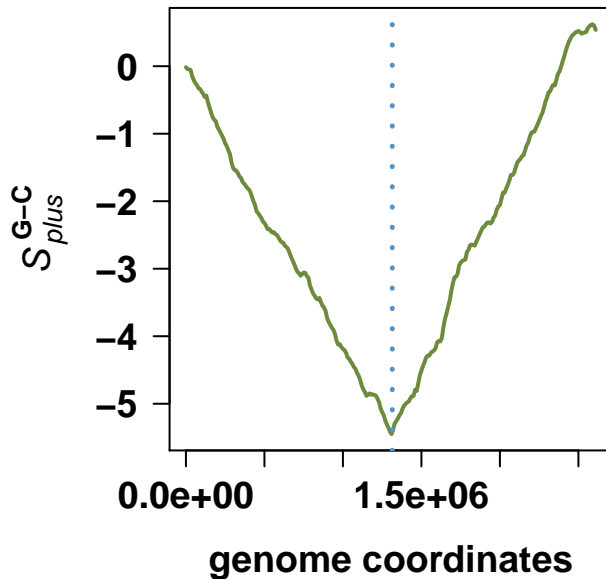
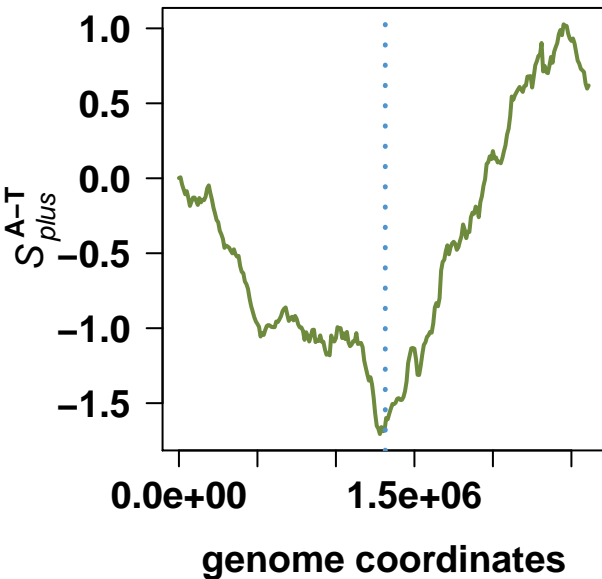
### Lactobacillus sakei subsp. sakei 23K



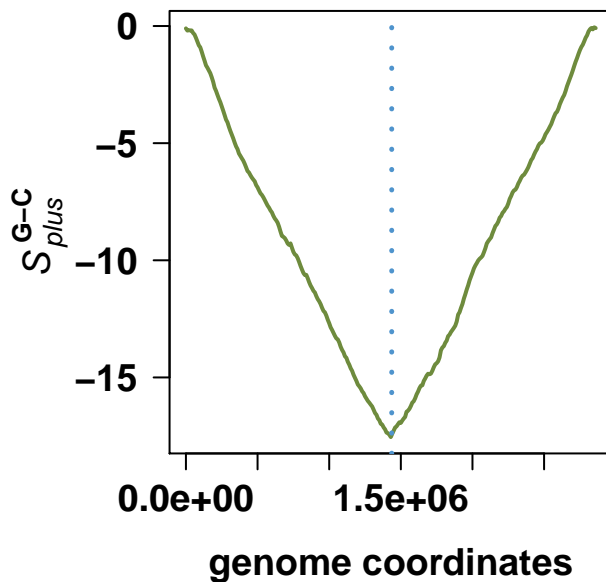
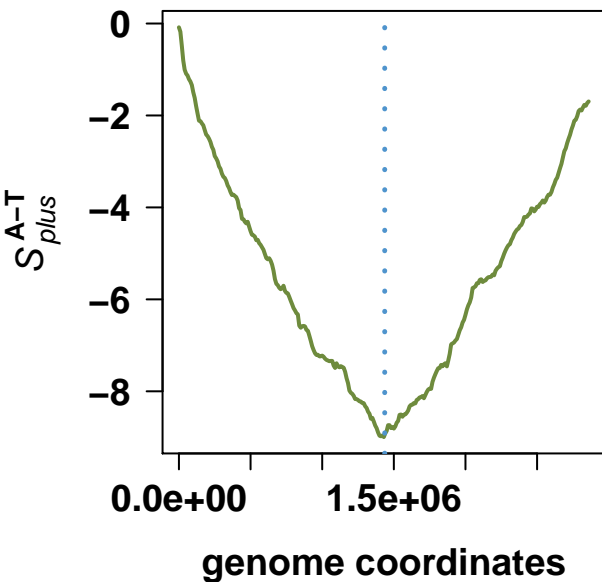
### Staphylococcus aureus RF122



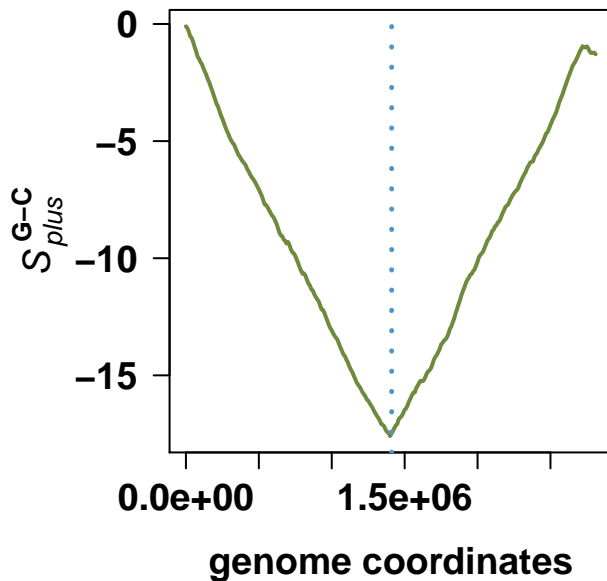
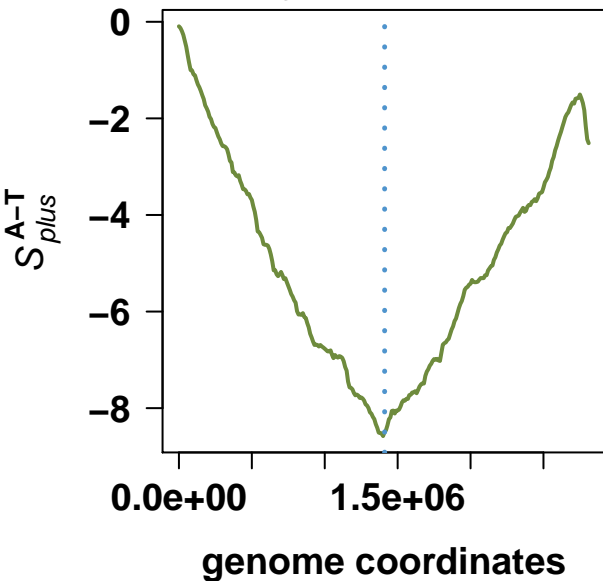
# Moorella thermoacetica ATCC 39073



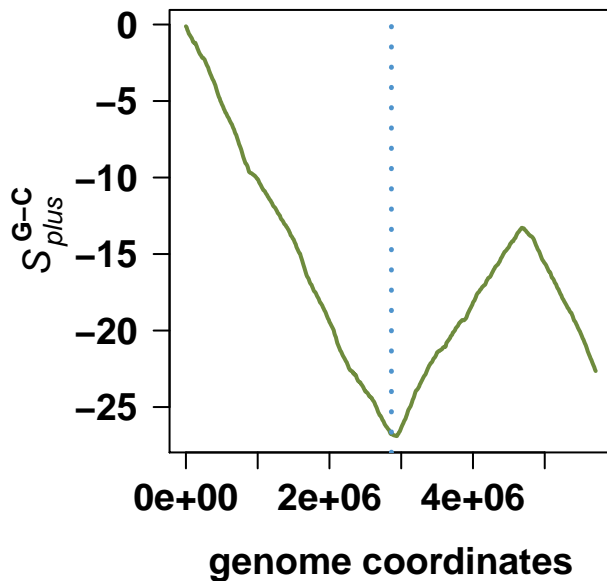
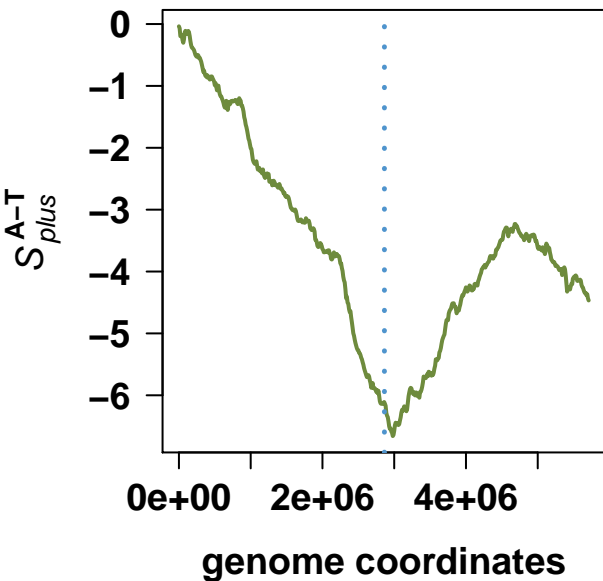
# Staphylococcus aureus subsp. aureus USA300\_FPR3757



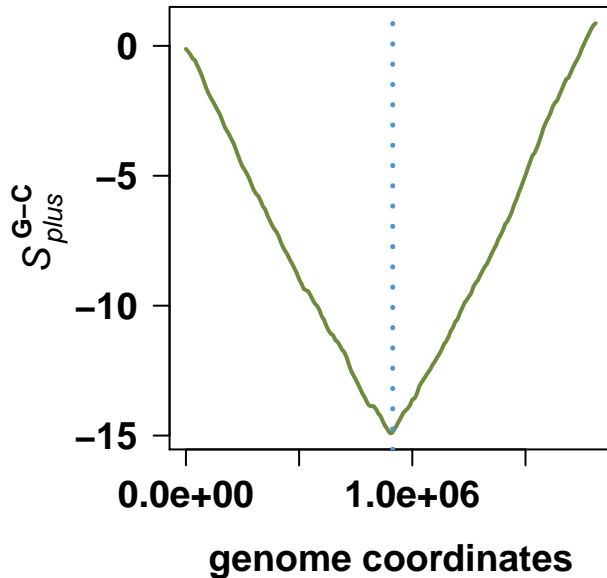
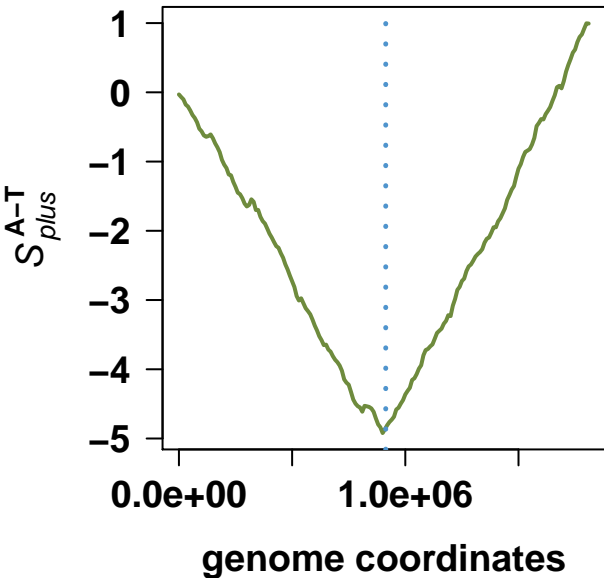
### Staphylococcus aureus subsp. aureus NCTC 8325



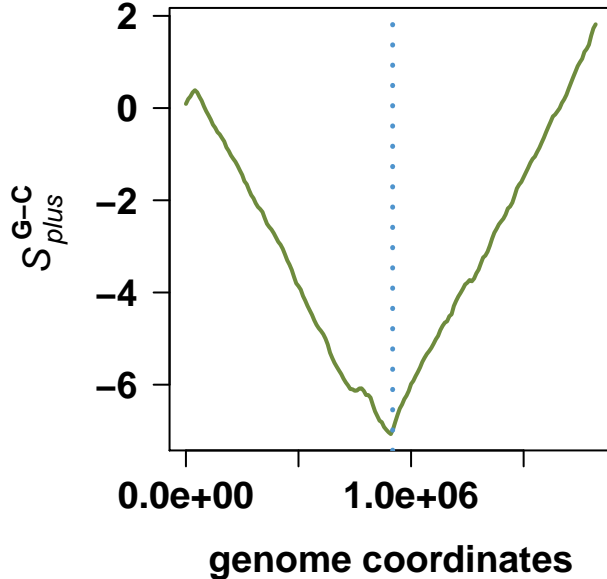
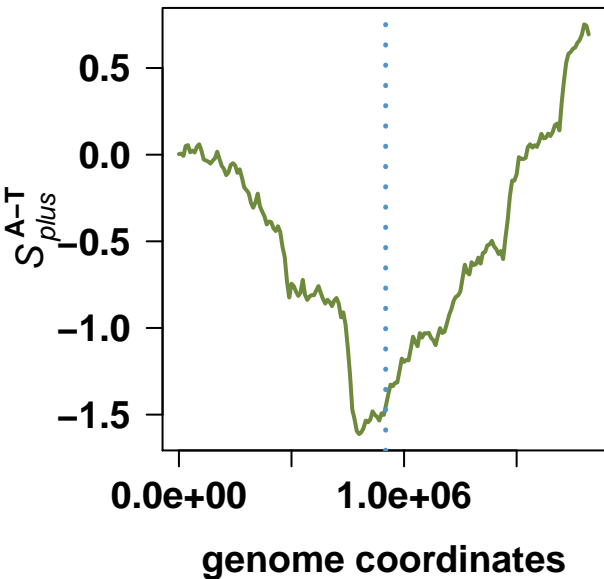
### Desulfitobacterium hafniense Y51



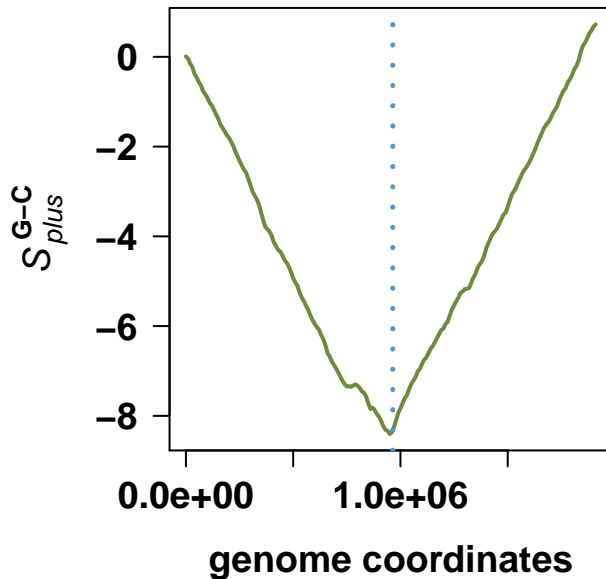
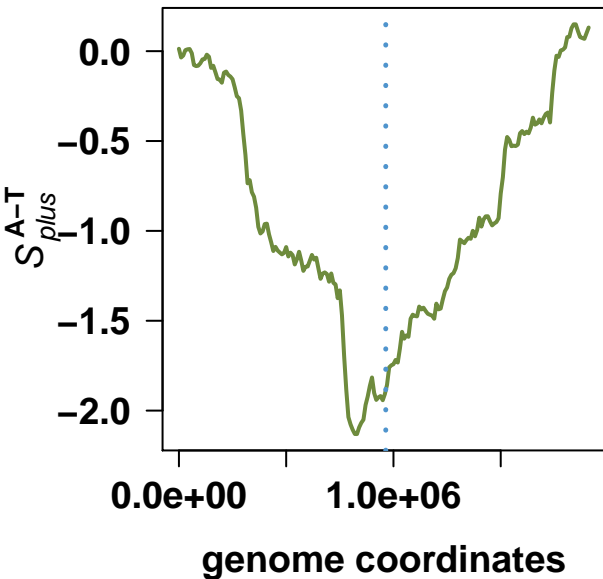
## Lactobacillus salivarius UCC118



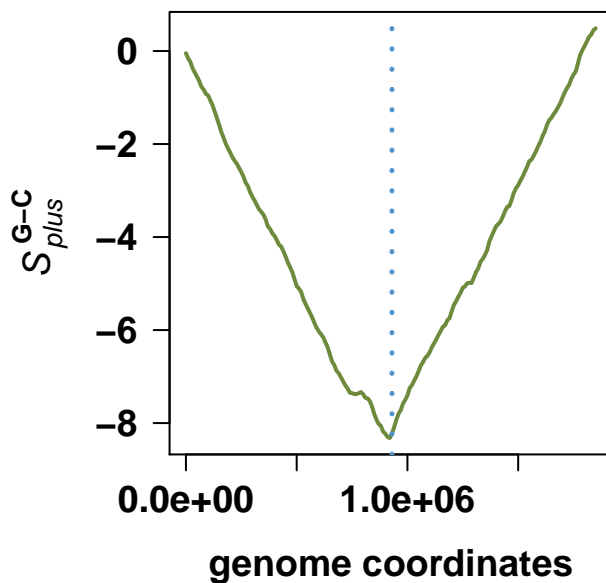
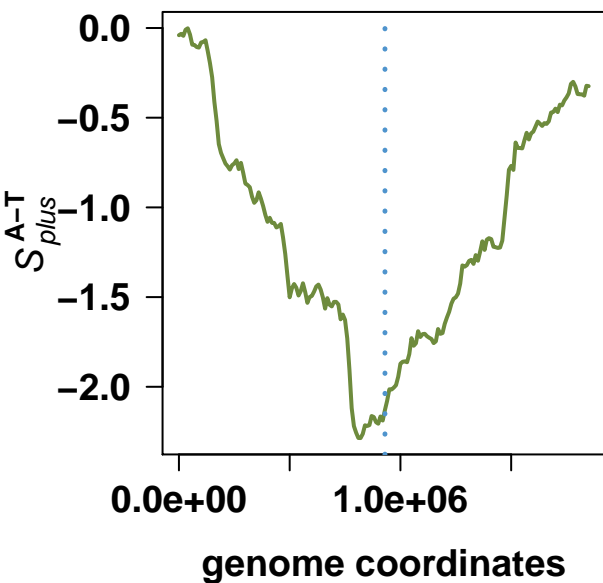
## Streptococcus pyogenes MGAS9429



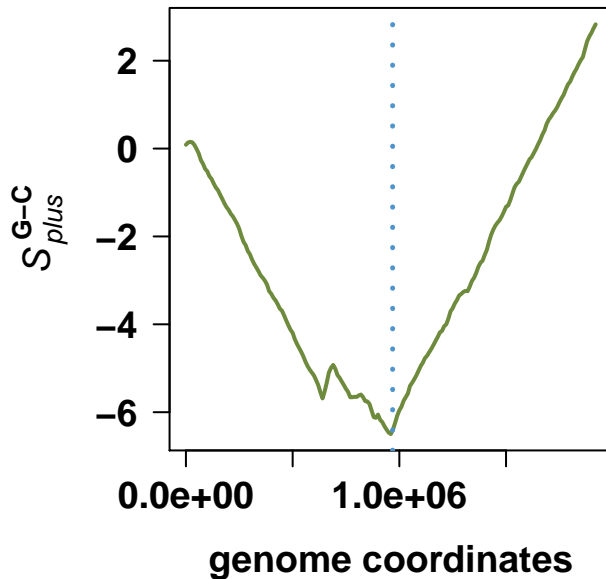
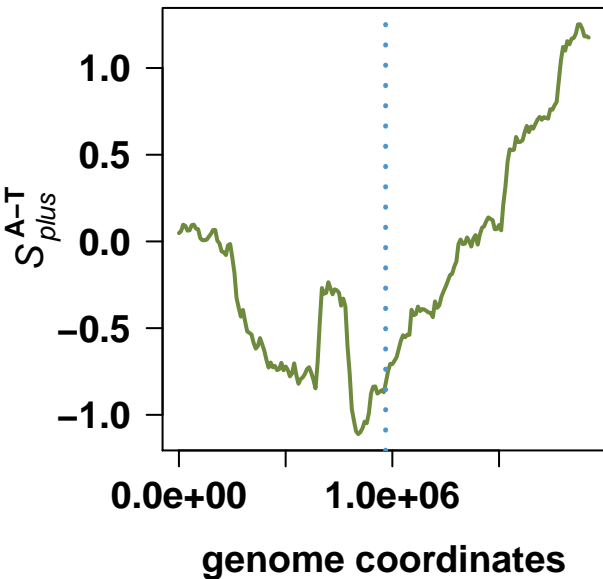
### Streptococcus pyogenes MGAS10270



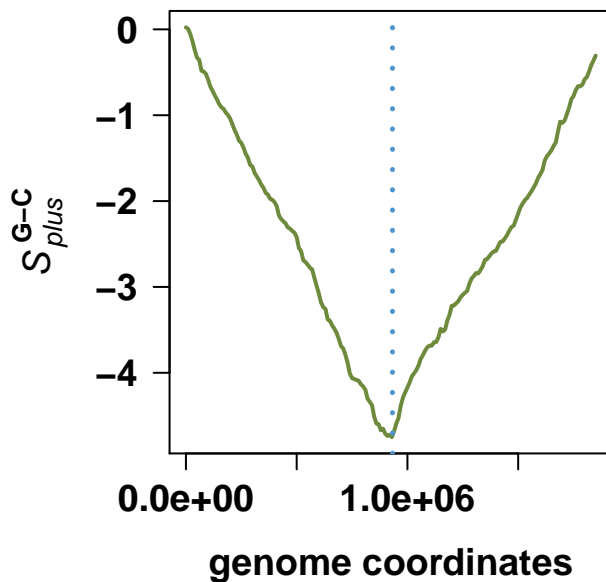
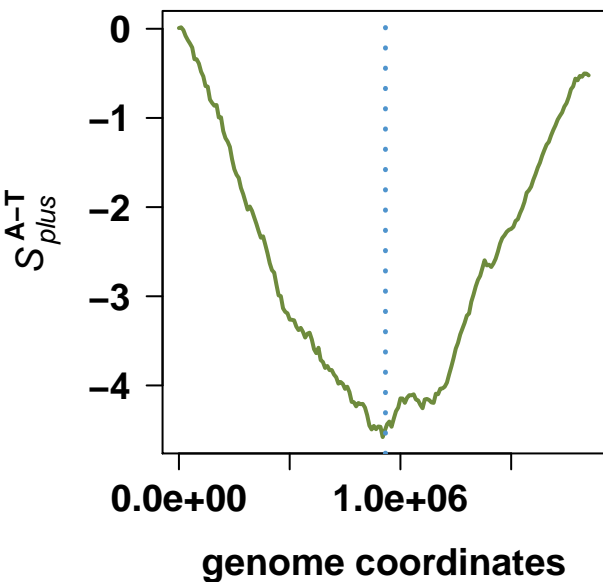
### Streptococcus pyogenes MGAS2096



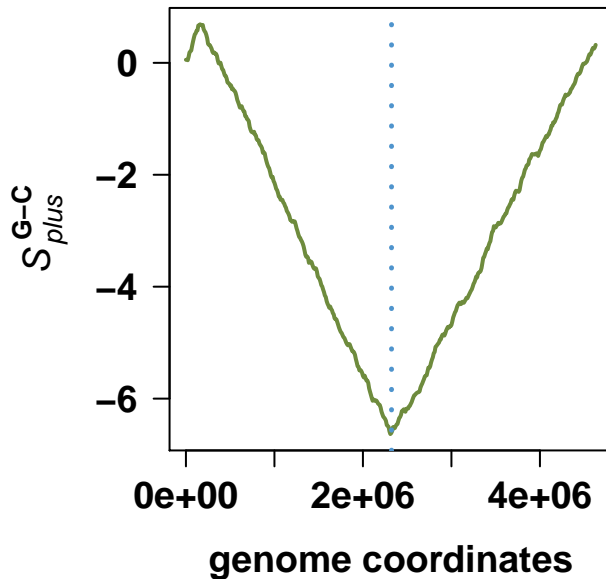
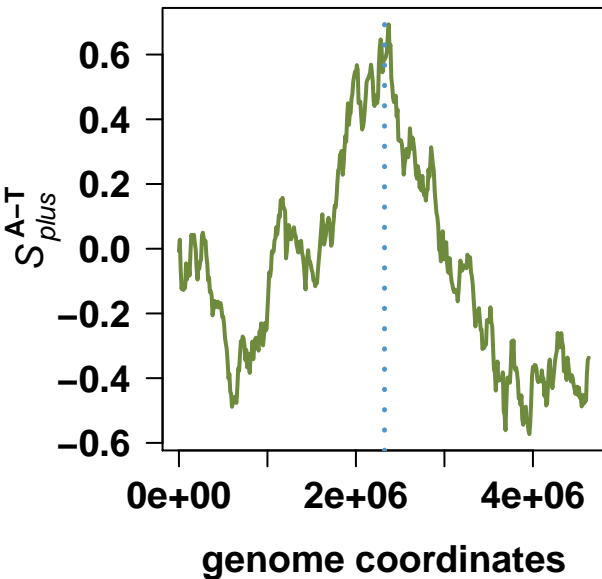
## Streptococcus pyogenes MGAS10750



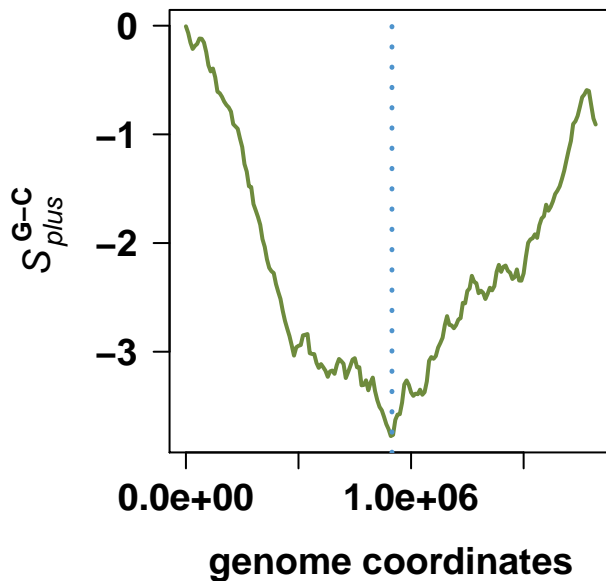
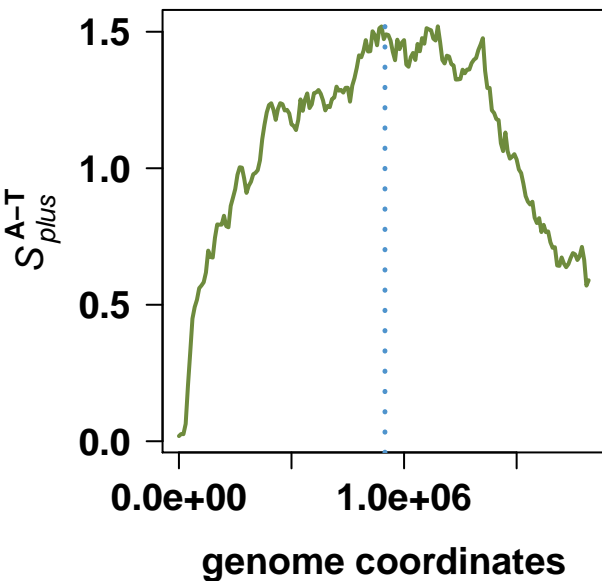
## Lactobacillus delbrueckii subsp. bulgaricus ATCC 11842



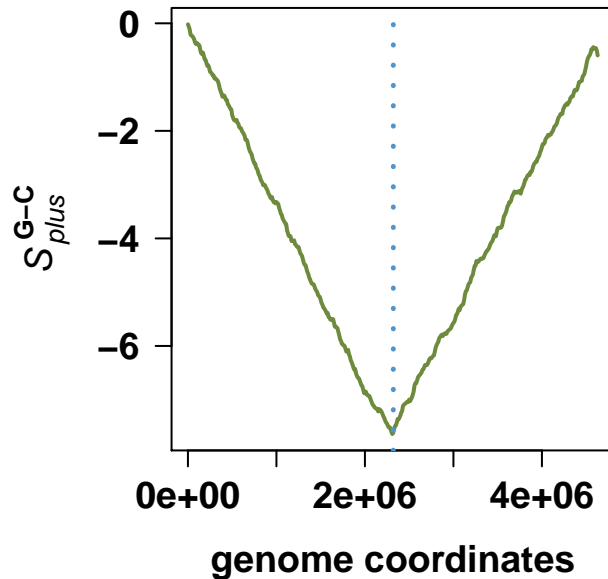
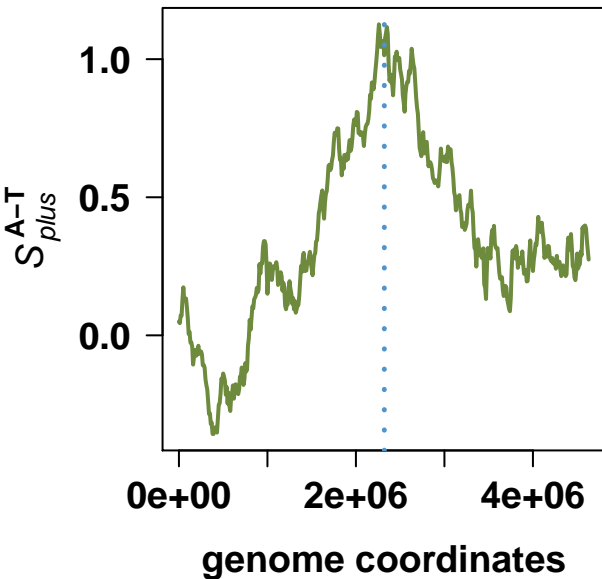
### Escherichia coli str. K-12 substr. W3110



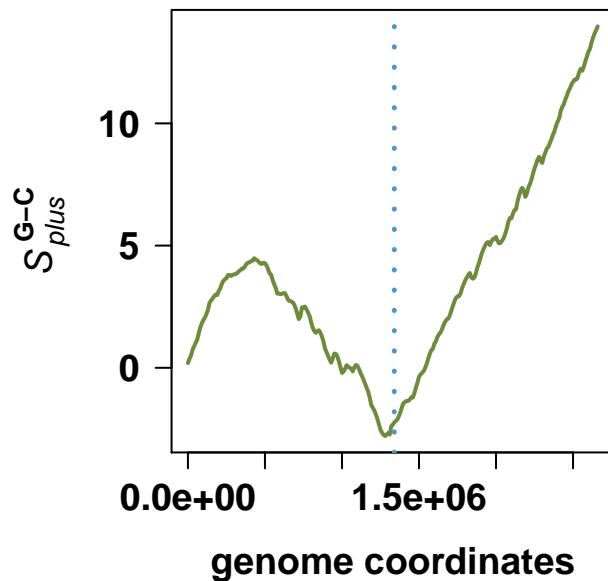
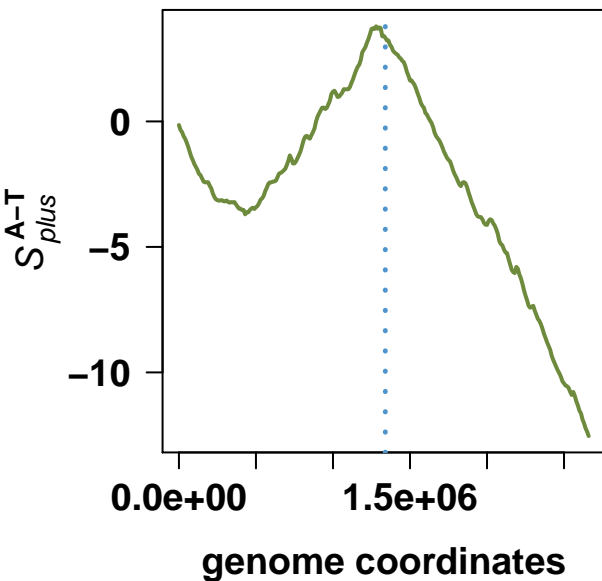
### Haemophilus influenzae Rd KW20



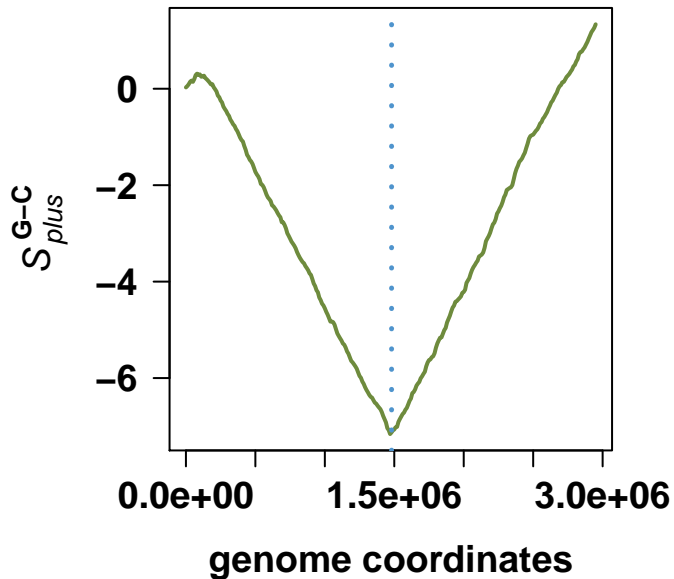
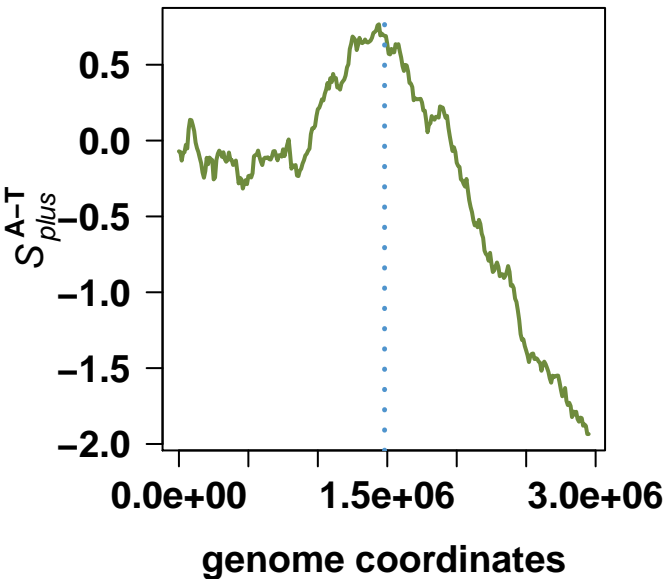
## Escherichia coli str. K-12 substr. MG1655



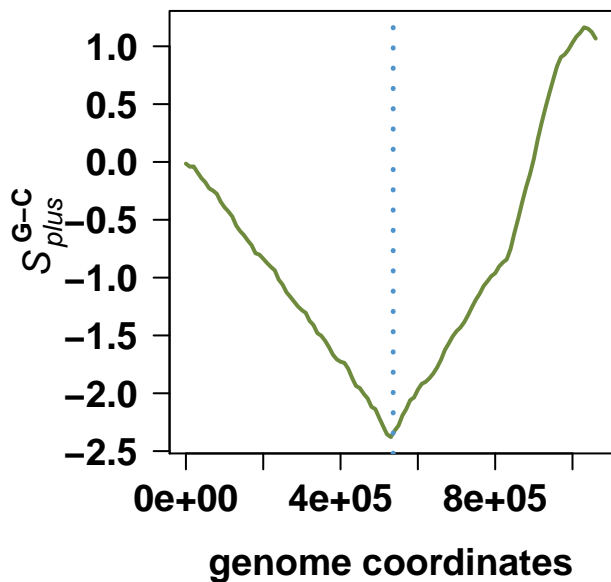
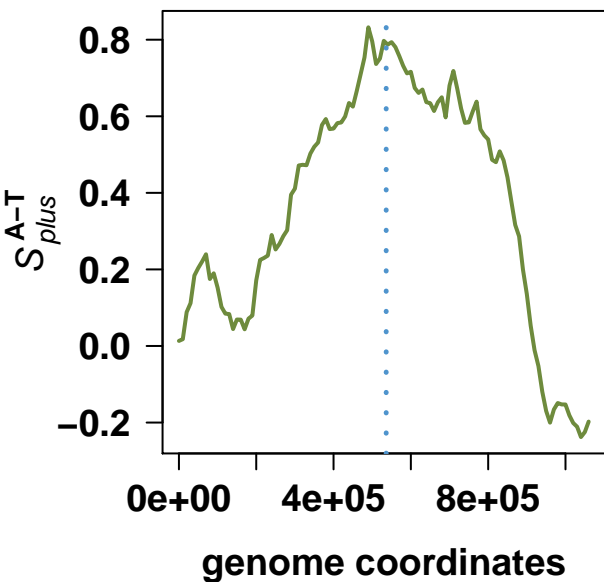
## Xylella fastidiosa 9a5c



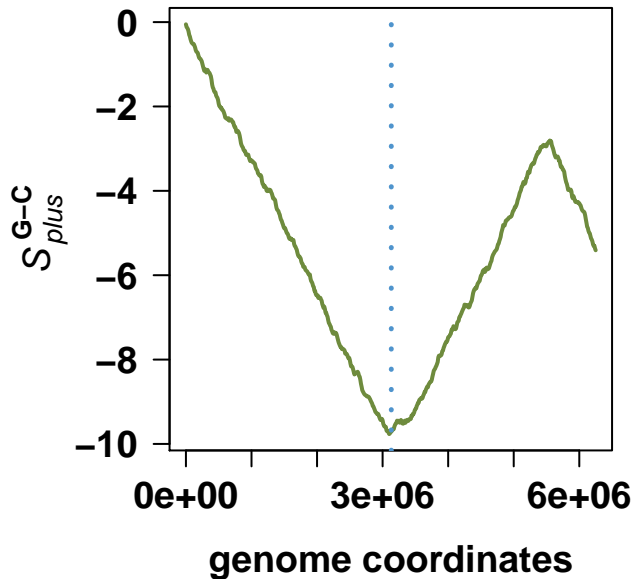
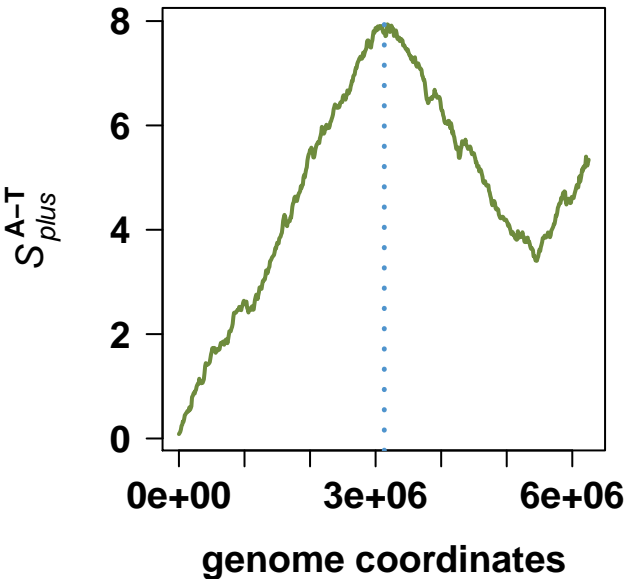
### Vibrio cholerae O1 biovar El Tor str. N16961



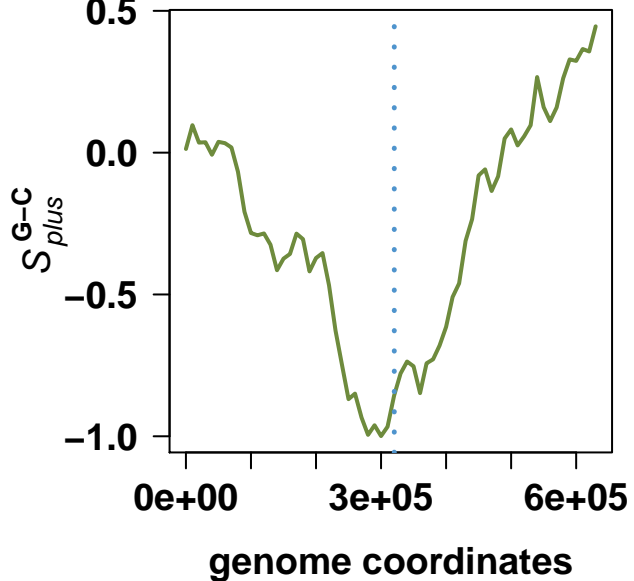
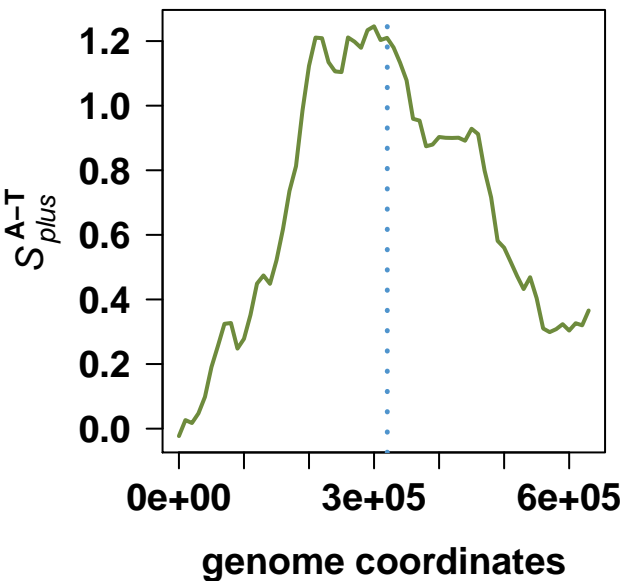
### Vibrio cholerae O1 biovar El Tor str. N16961



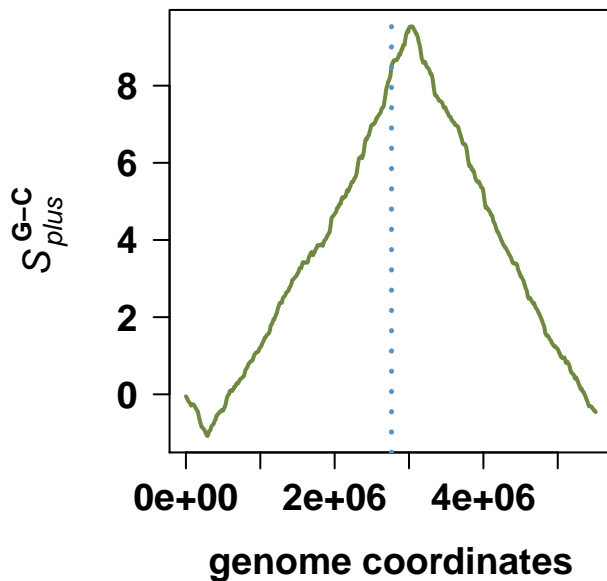
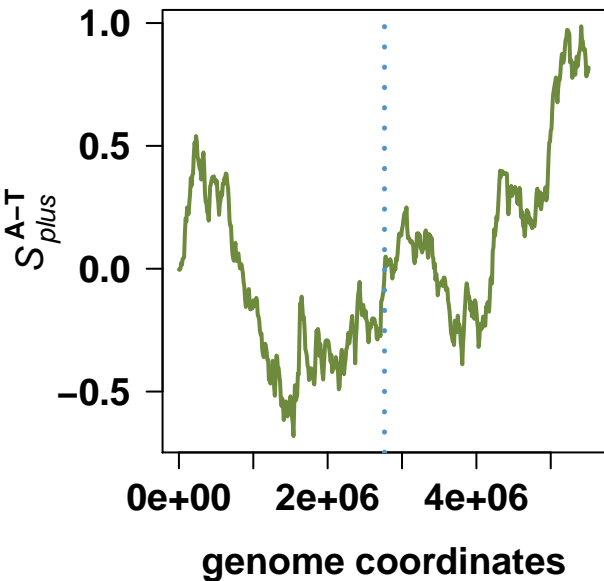
## *Pseudomonas aeruginosa* PAO1



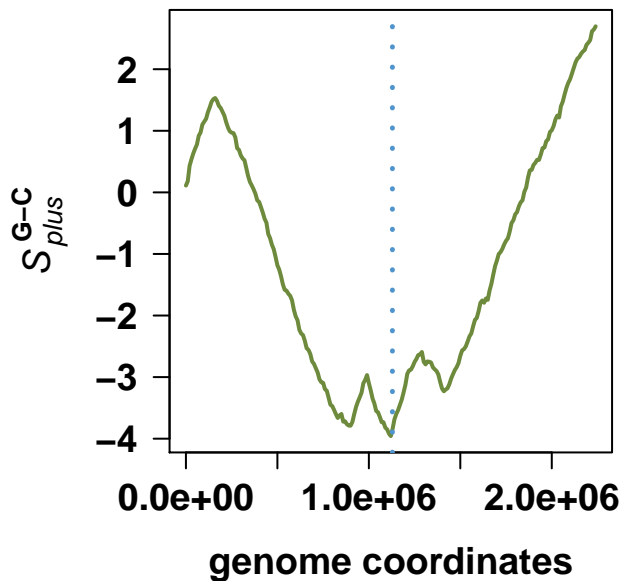
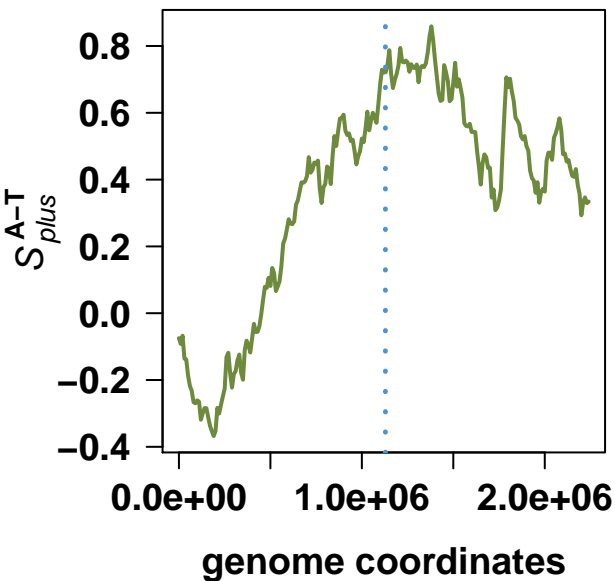
## *Buchnera aphidicola* str. APS (*Acyrtosiphon pisum*)



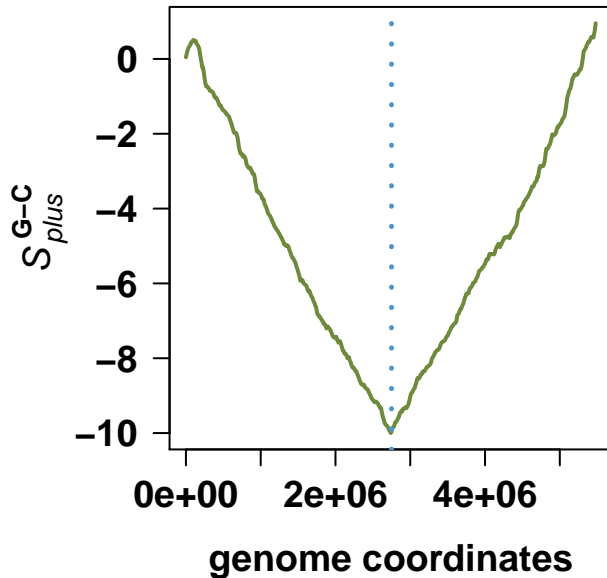
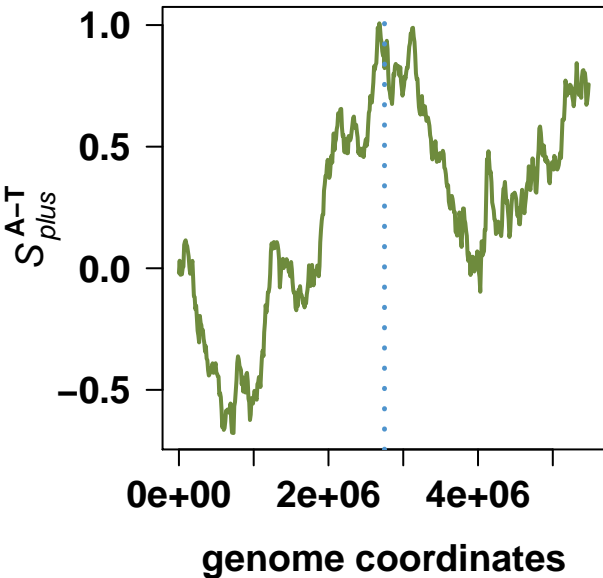
### *Escherichia coli* O157:H7 str. EDL933



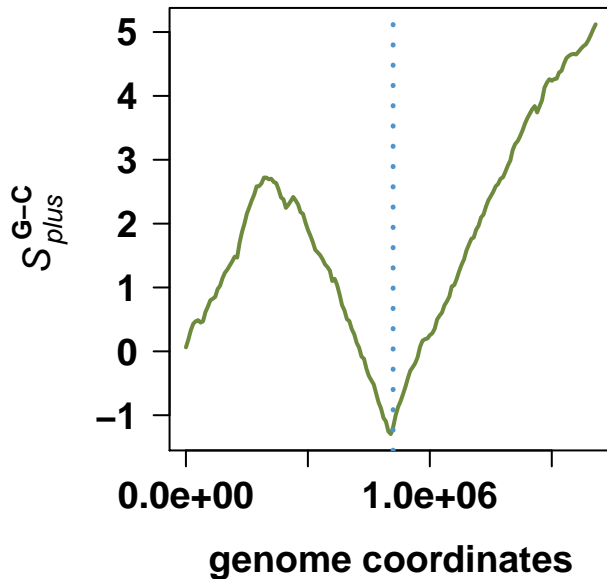
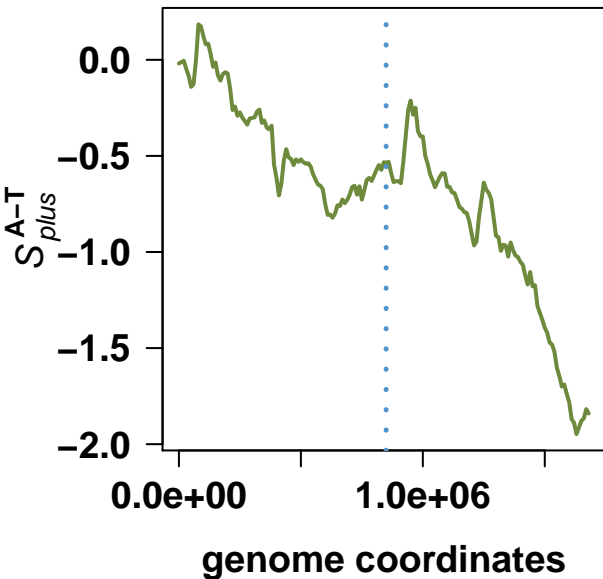
### *Pasteurella multocida* subsp. *multocida* str. Pm70



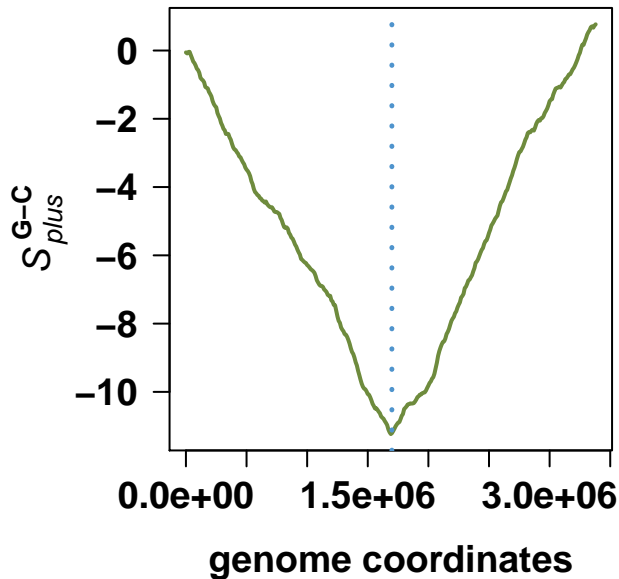
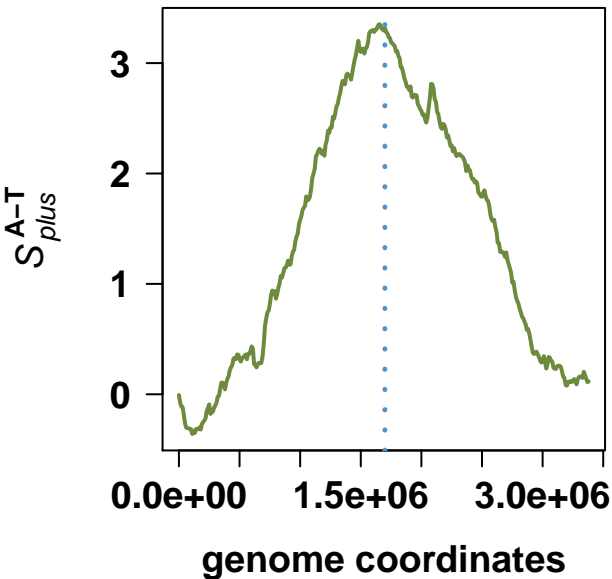
### Escherichia coli O157:H7 str. Sakai



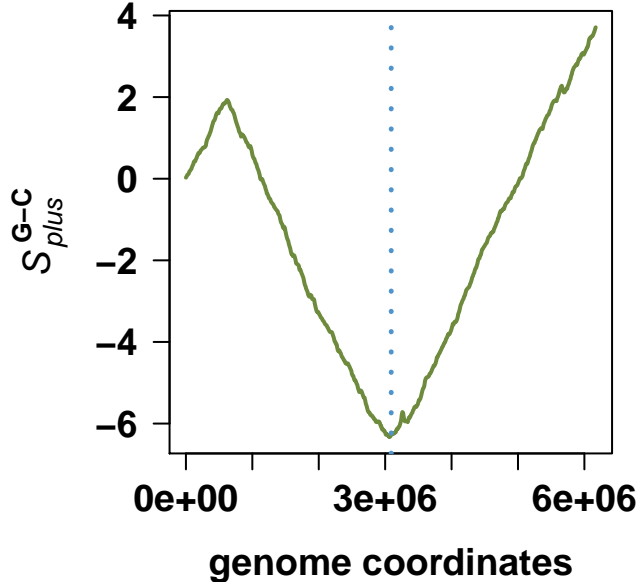
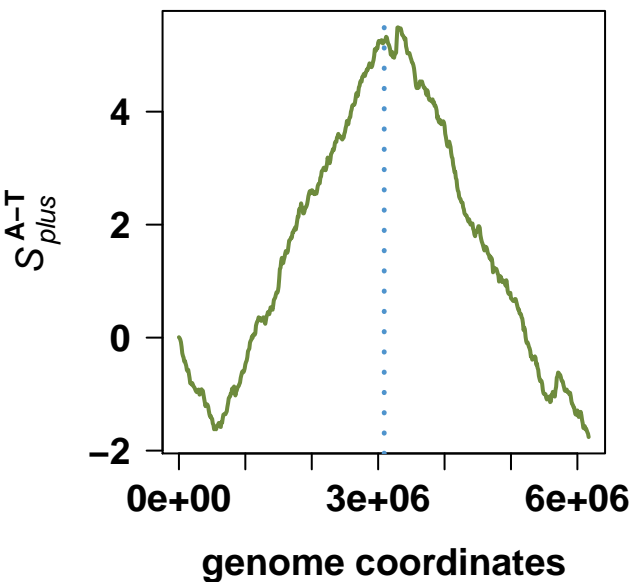
### Haemophilus ducreyi 35000HP



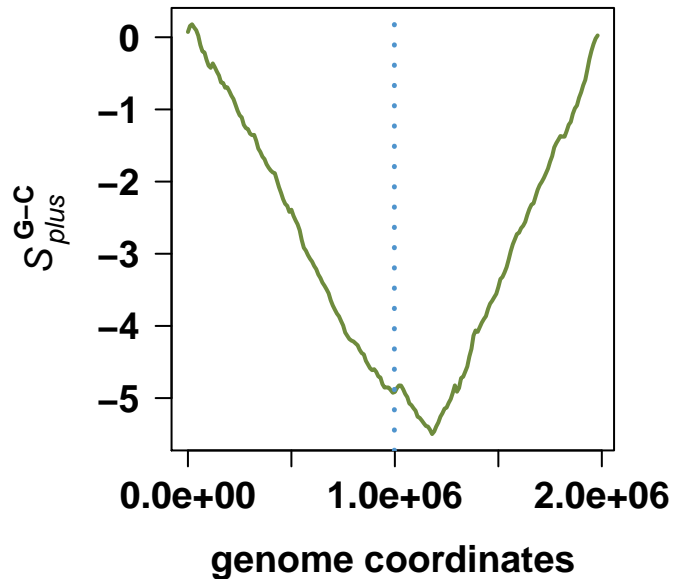
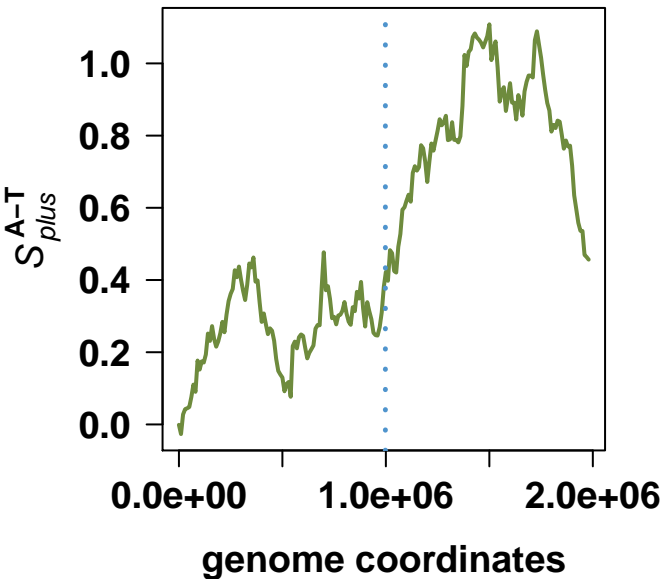
# *Legionella pneumophila* subsp. *pneumophila* str. Philadelphia 1



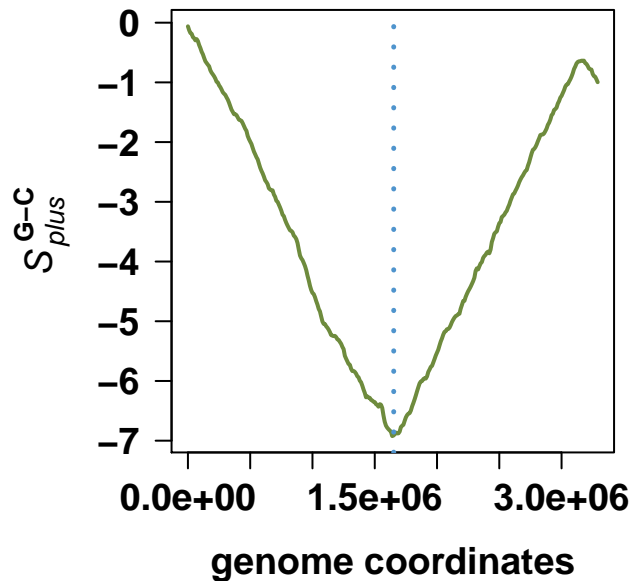
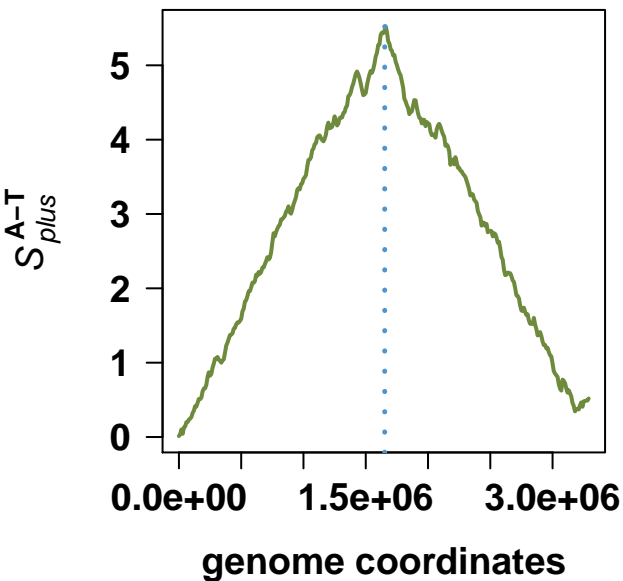
# *Pseudomonas putida* KT2440



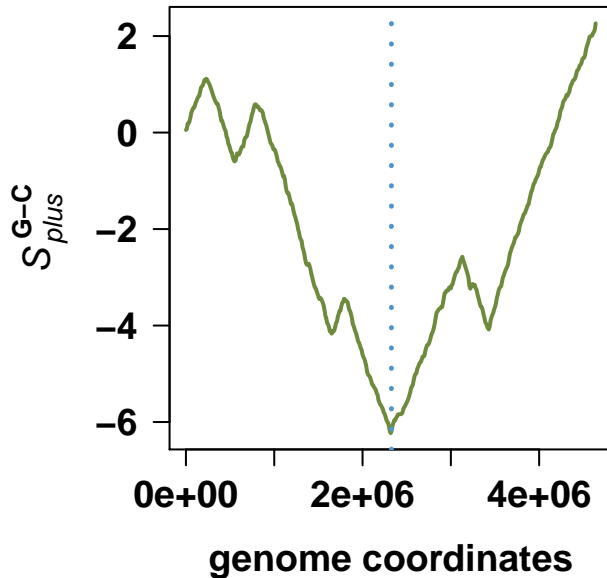
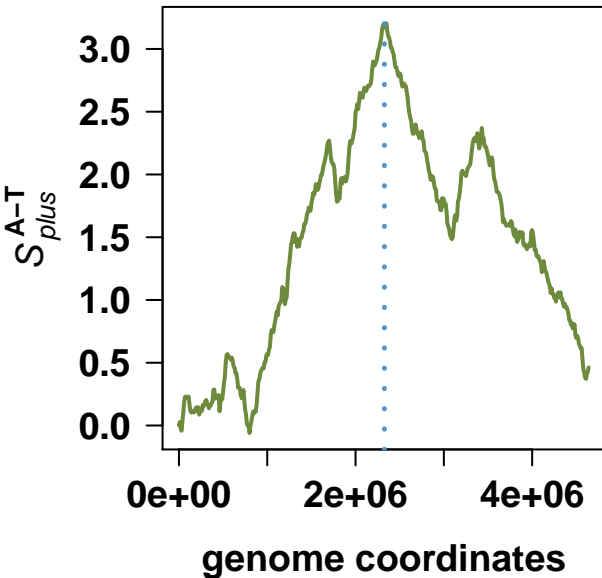
### ***Coxiella burnetii* RSA 493**



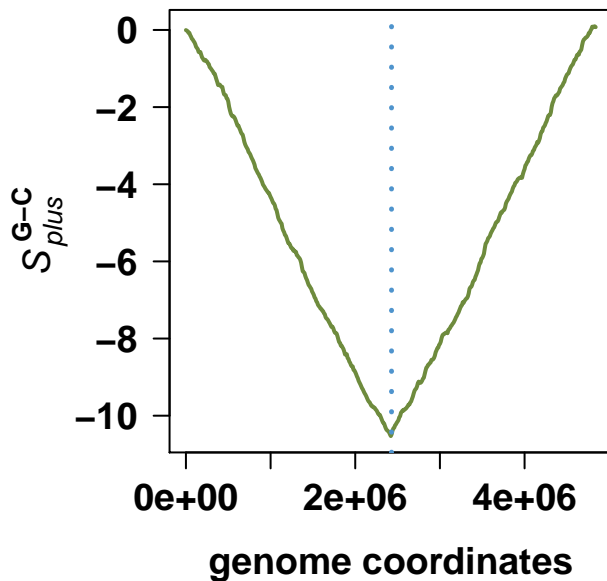
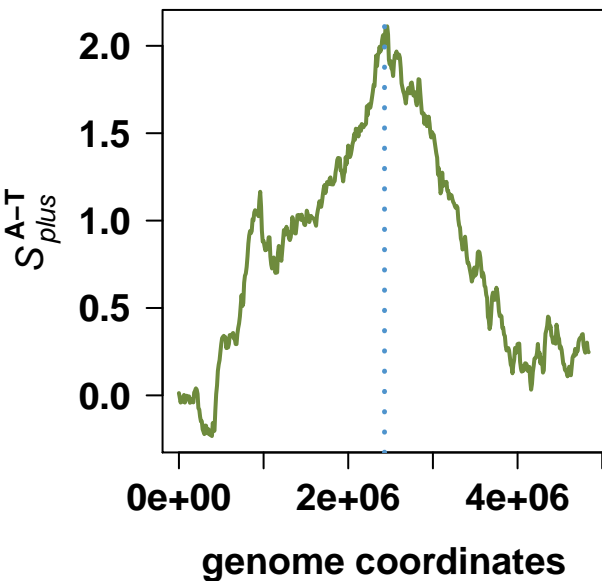
### ***Methylococcus capsulatus* str. Bath**



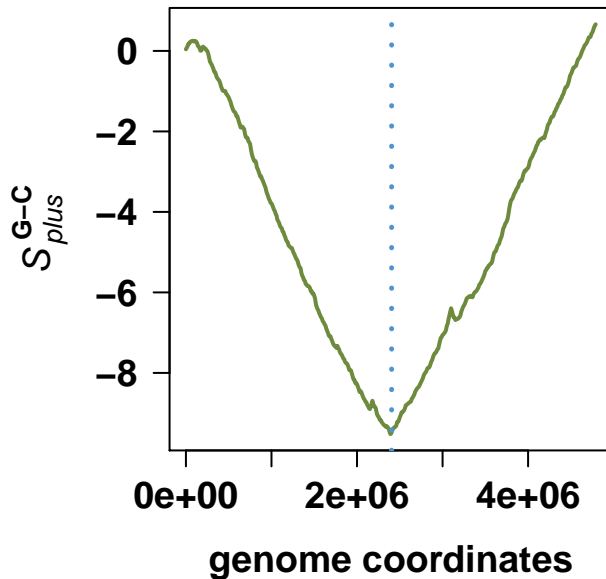
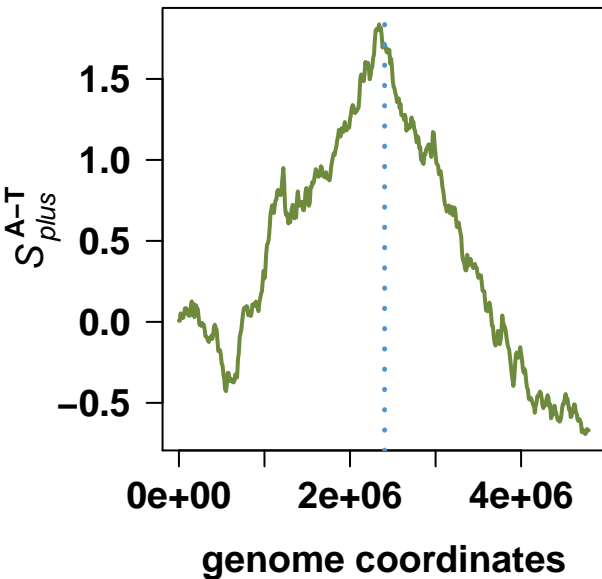
## Yersinia pestis CO92



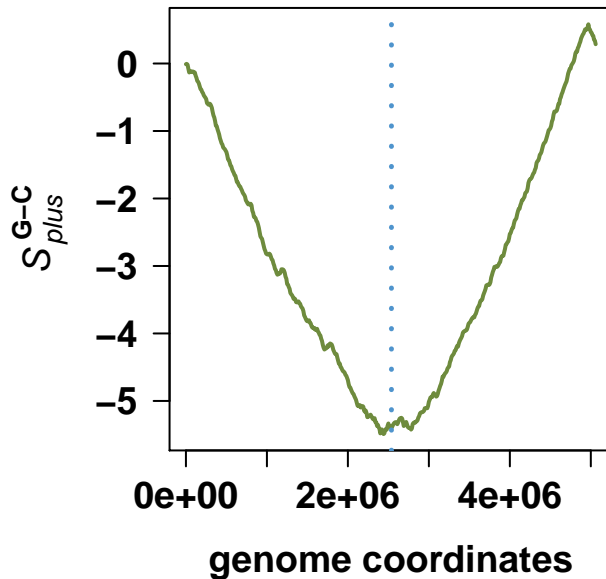
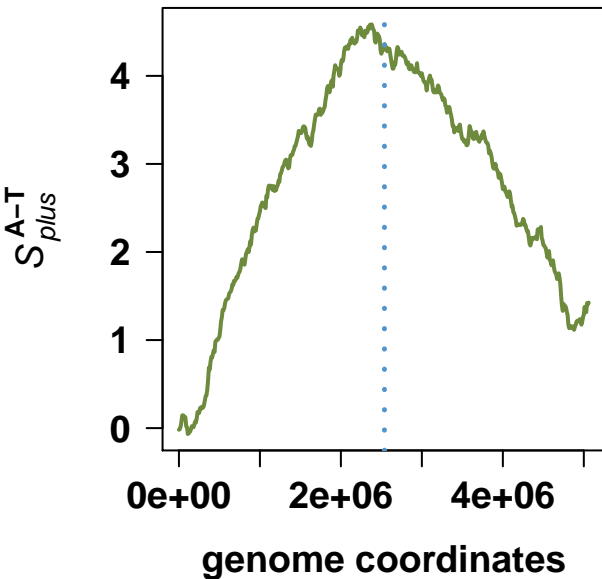
## Salmonella enterica subsp. enterica serovar Typhimurium str. LT2



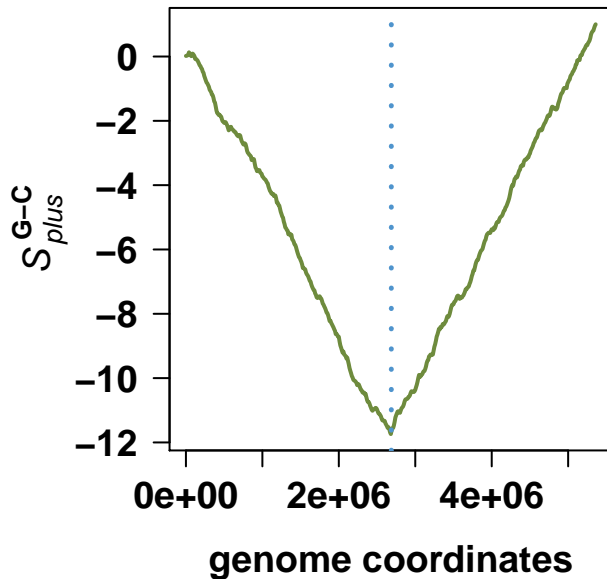
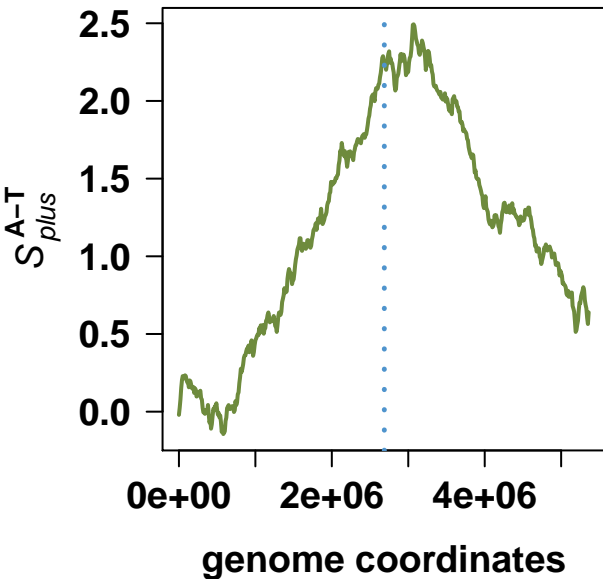
### ***Salmonella enterica* subsp. *enterica* serovar Typhi str. CT18**



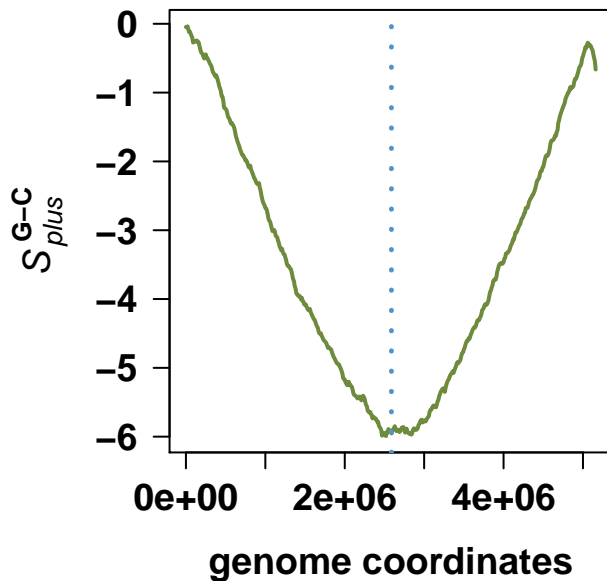
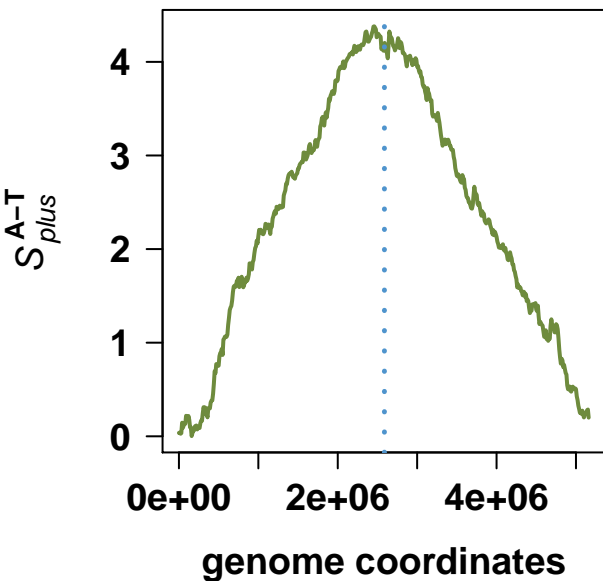
### ***Xanthomonas campestris* pv. *campestris* str. ATCC 33913**



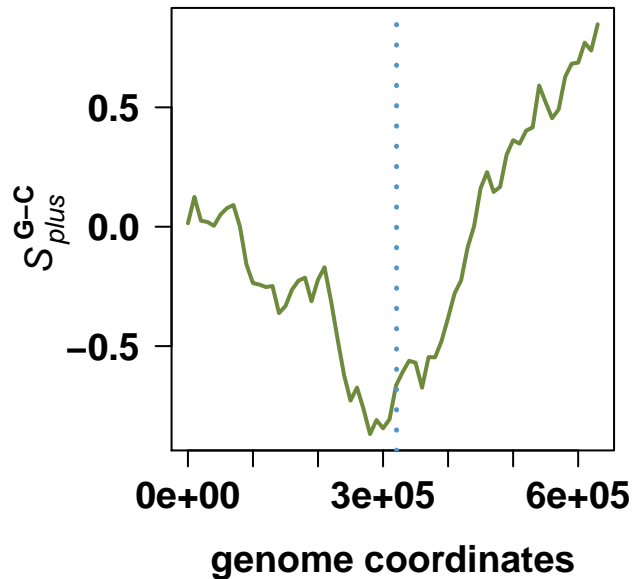
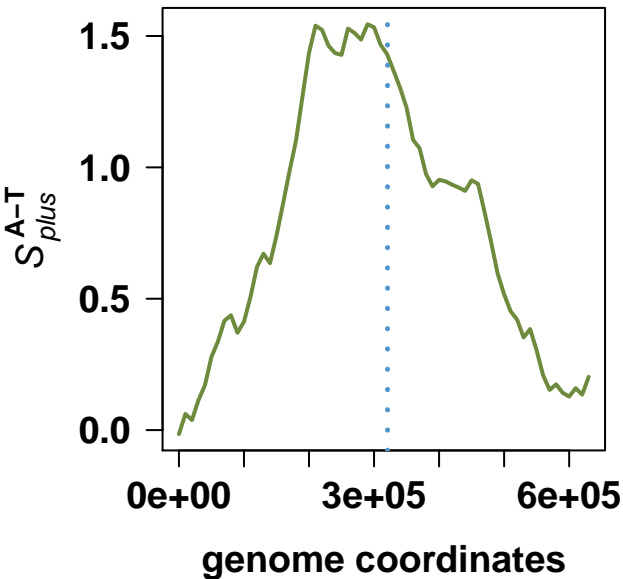
## *Colwellia psychrerythraea* 34H



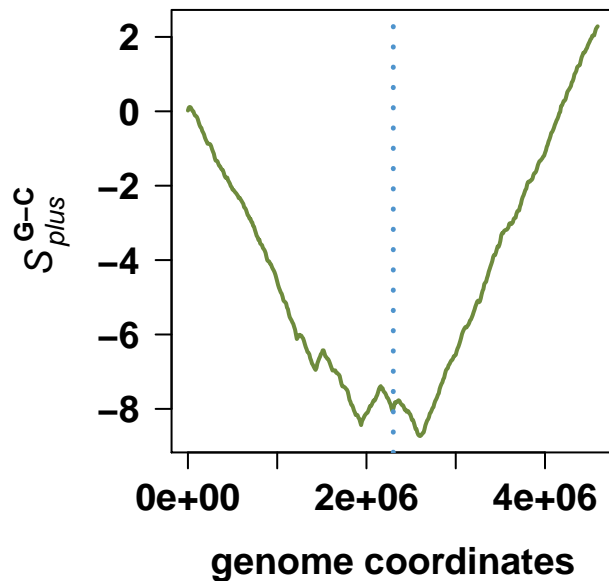
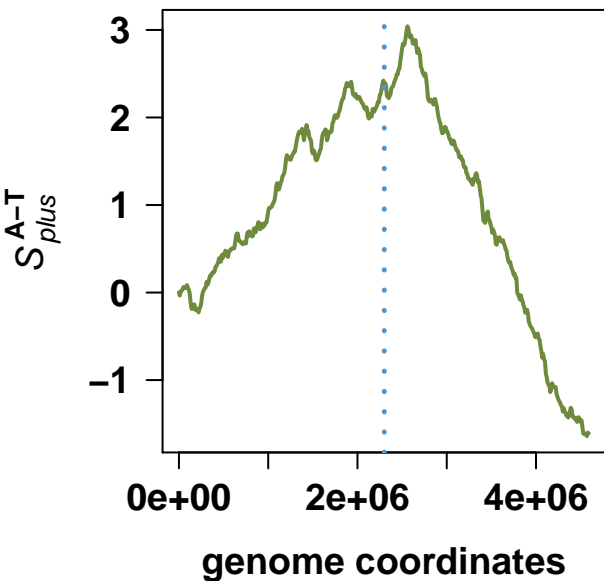
## *Xanthomonas axonopodis* pv. *citri* str. 306



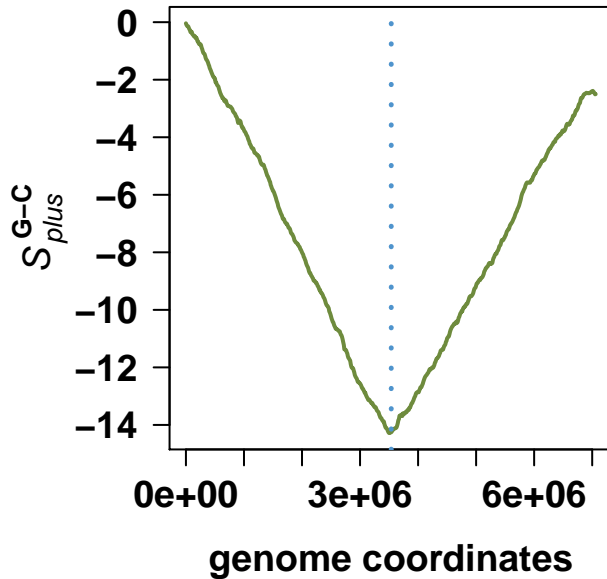
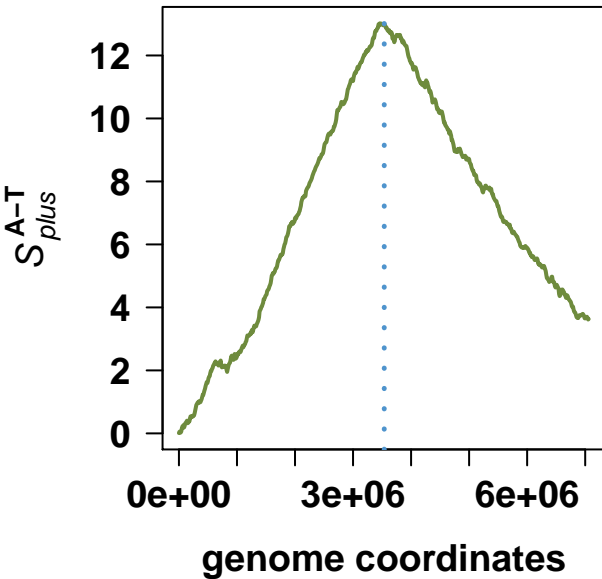
### Buchnera aphidicola str. Sg (Schizaphis graminum)



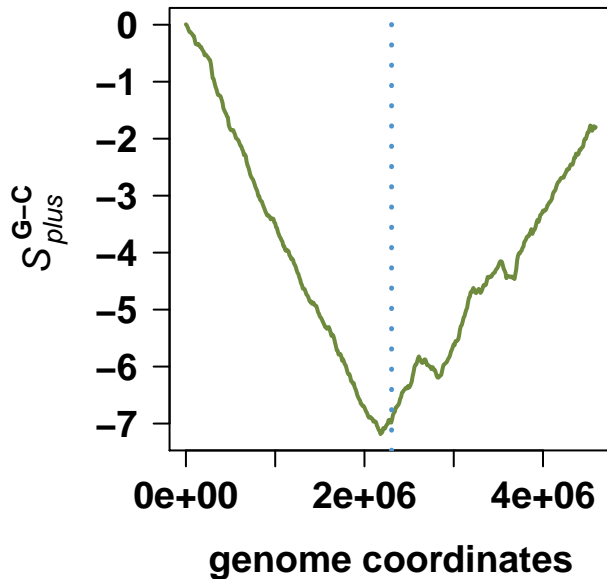
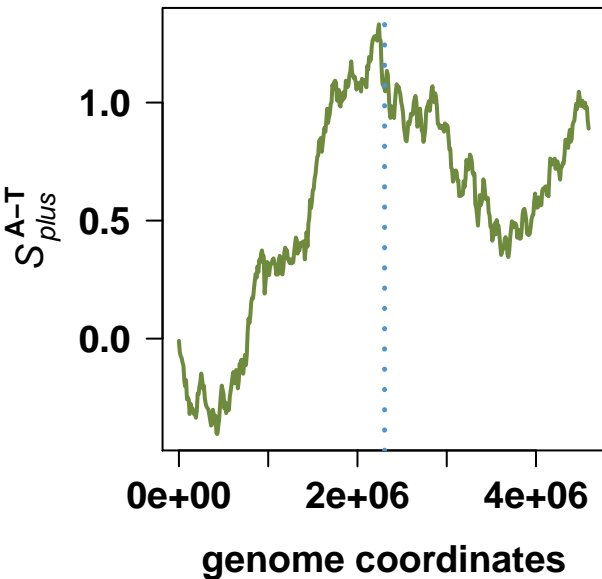
### Yersinia pestis KIM10+



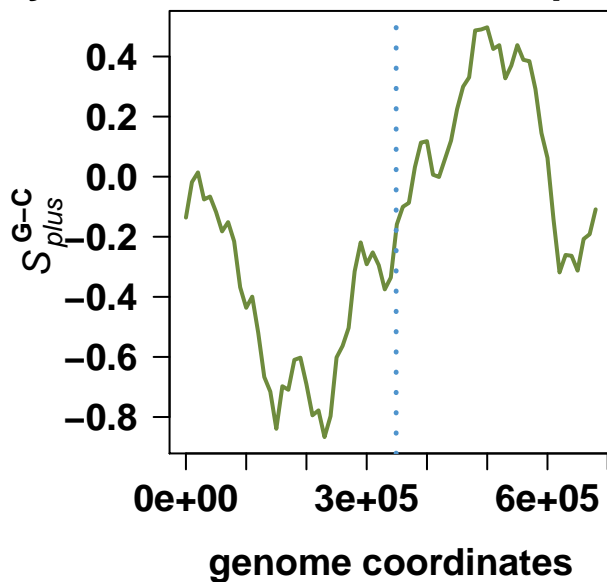
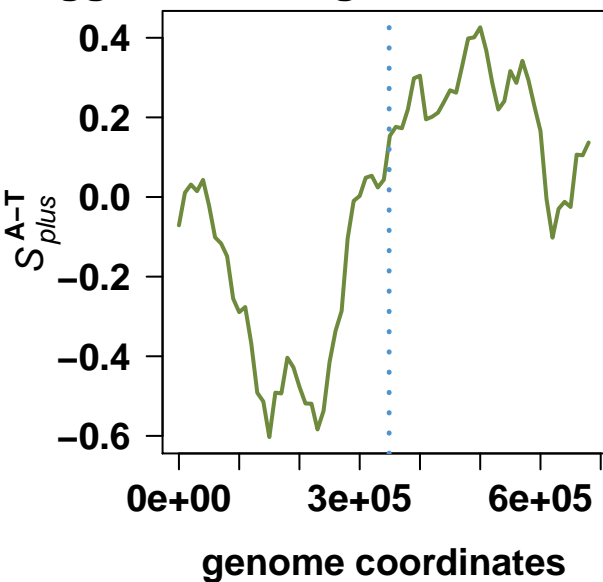
### *Pseudomonas protegens* Pf-5



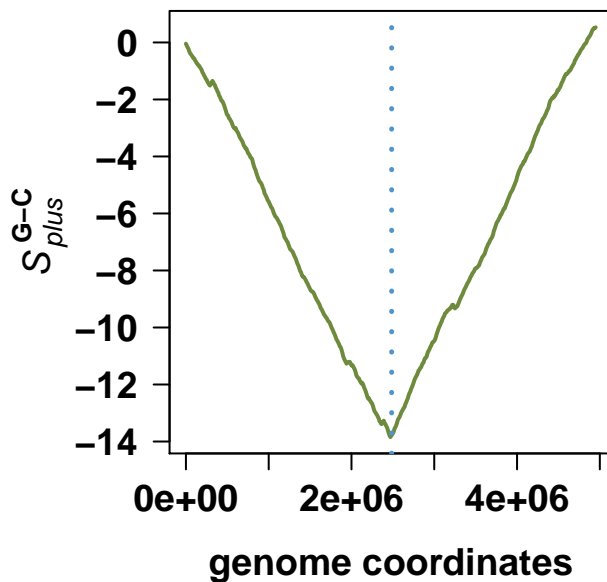
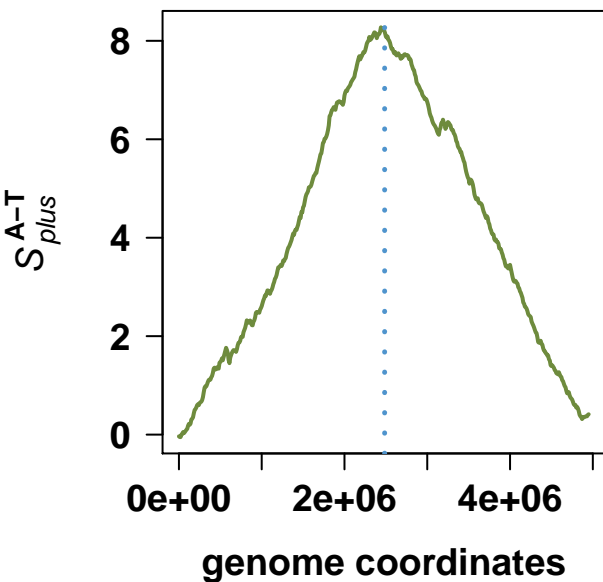
### *Shigella flexneri* 2a str. 301



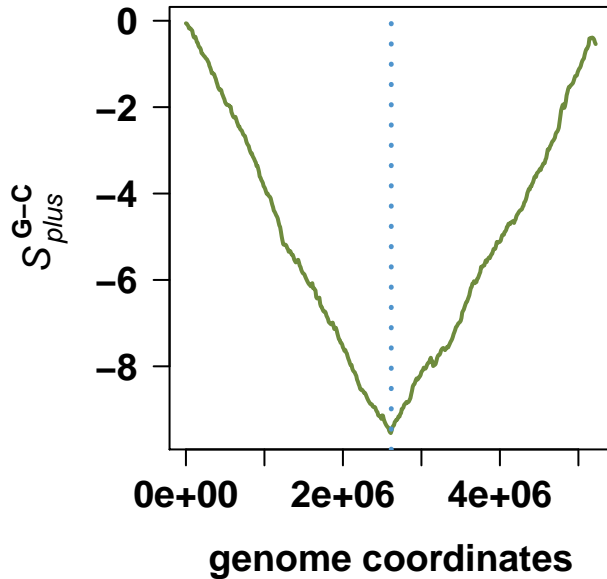
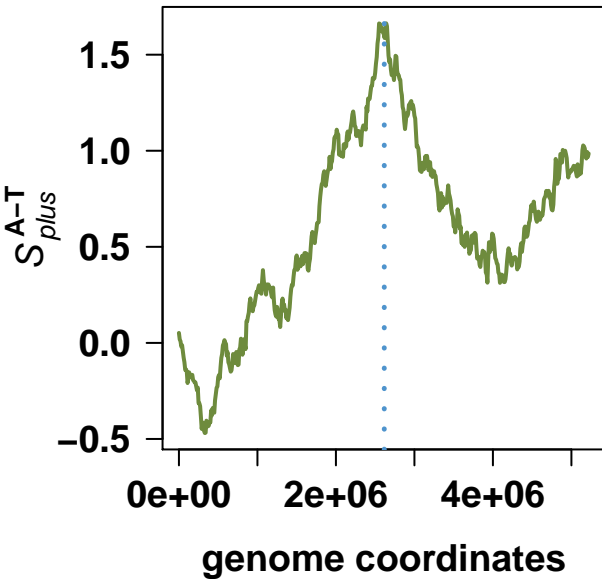
# *Wigglesworthia glossinidia* endosymbiont of *Glossina brevipalpis*



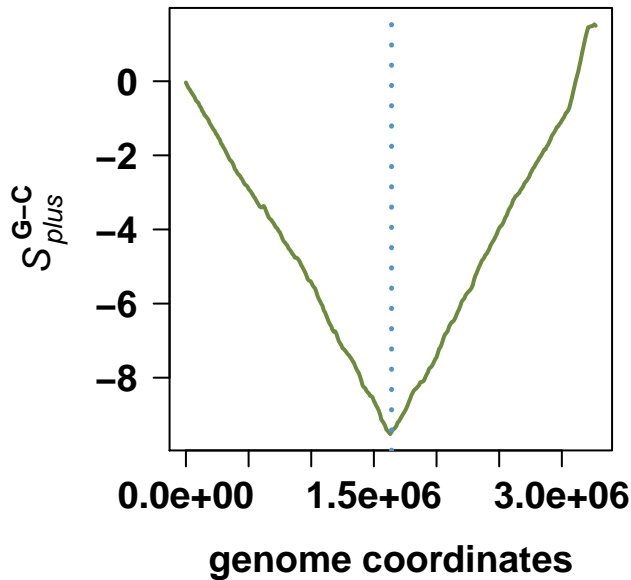
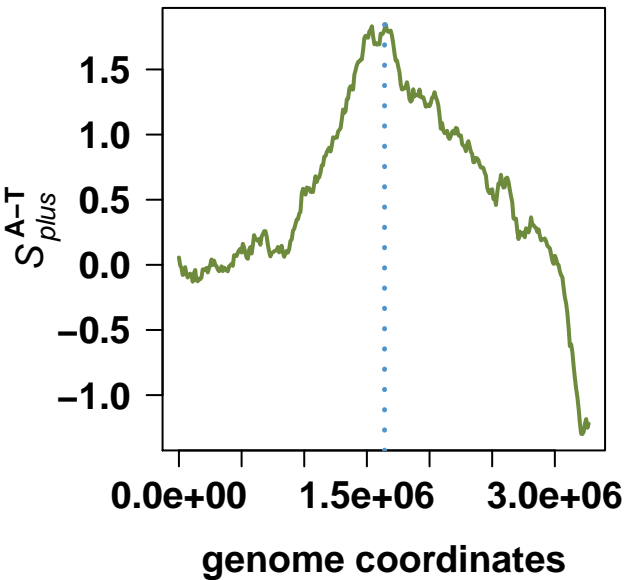
# *Shewanella oneidensis* MR-1



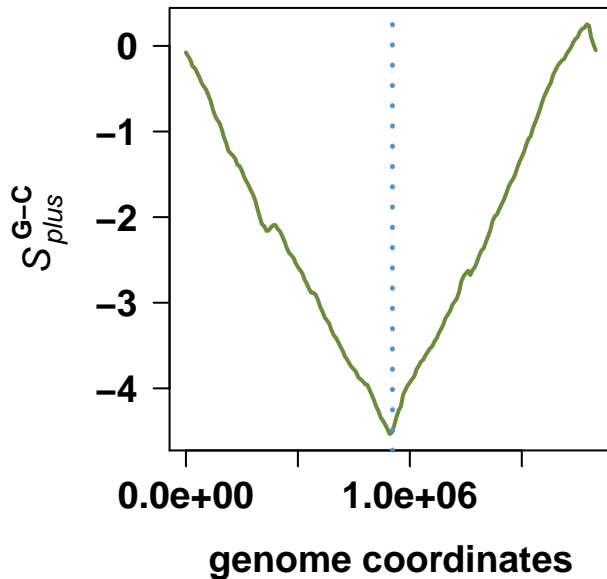
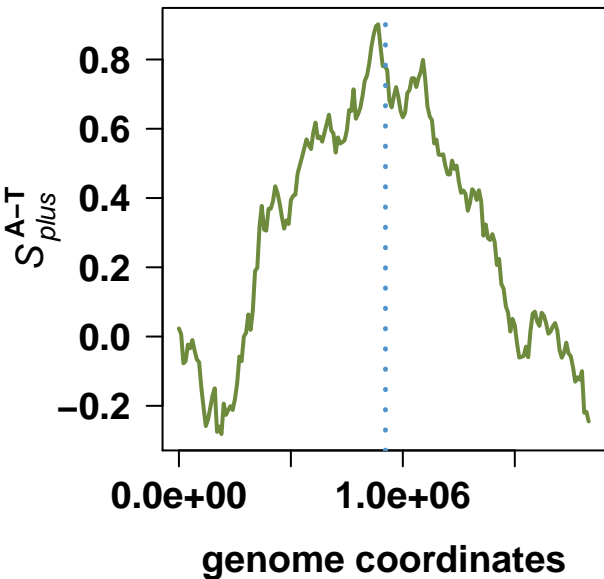
### Escherichia coli CFT073



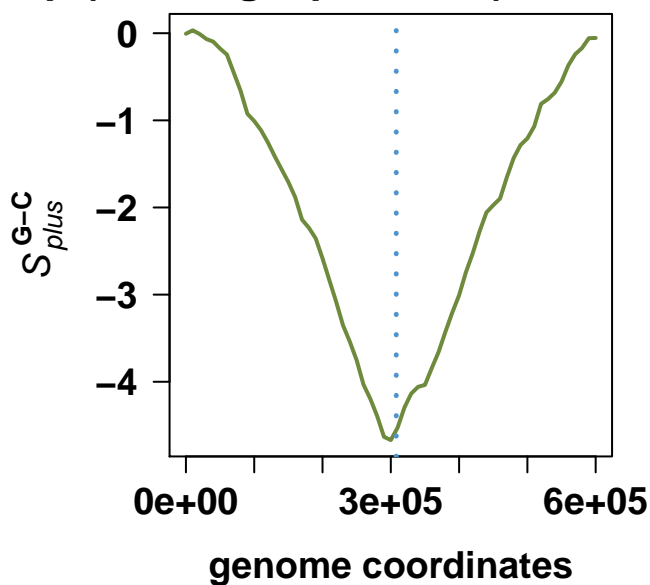
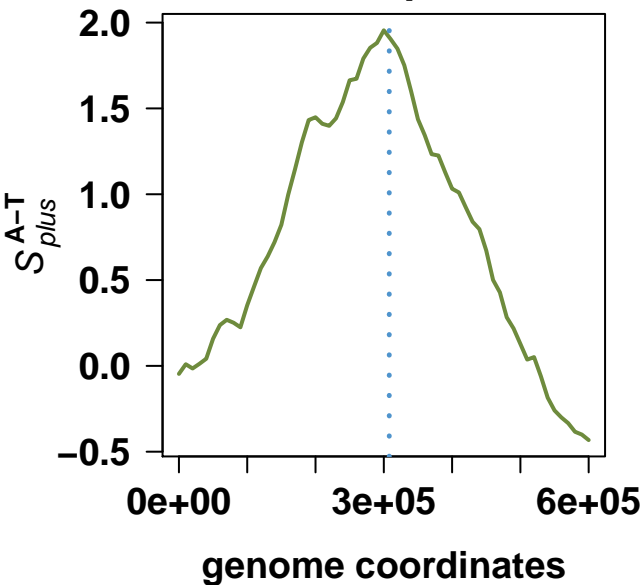
### Vibrio vulnificus CMCP6



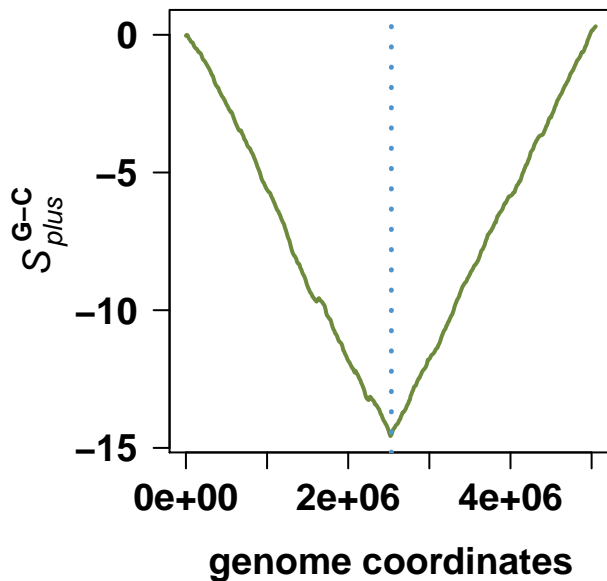
## *Vibrio vulnificus* CMCP6



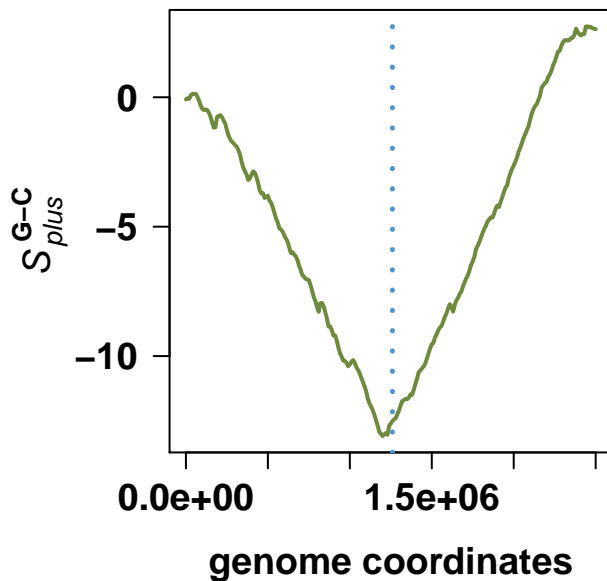
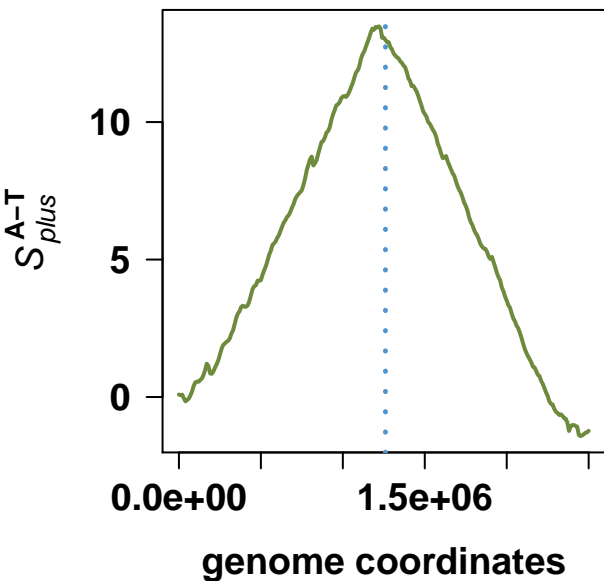
## *Buchnera aphidicola* str. Bp (*Baizongia pistaciae*)



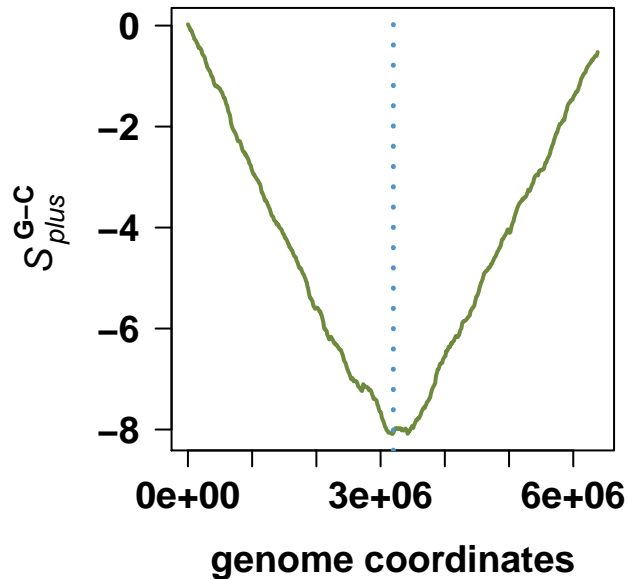
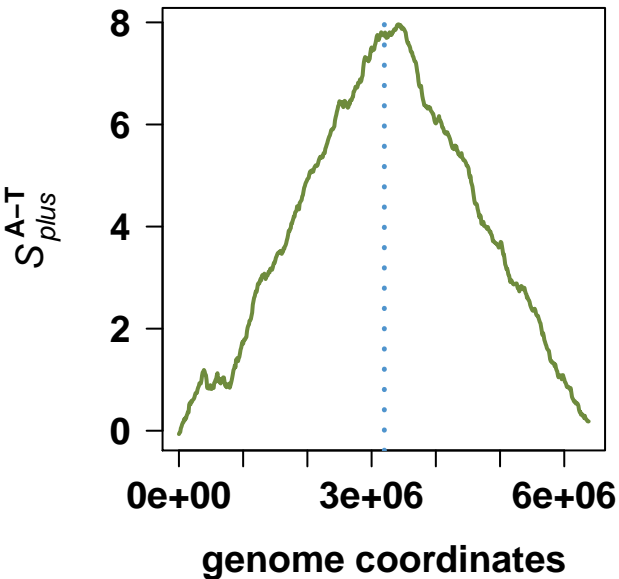
### *Pectobacterium atrosepticum* SCR11043



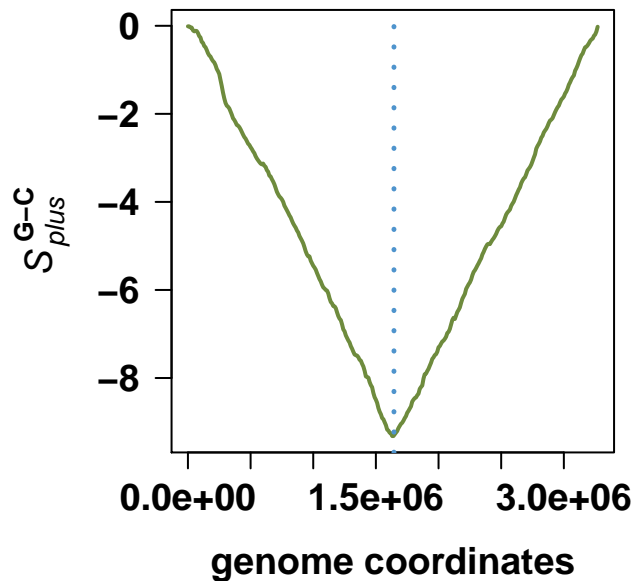
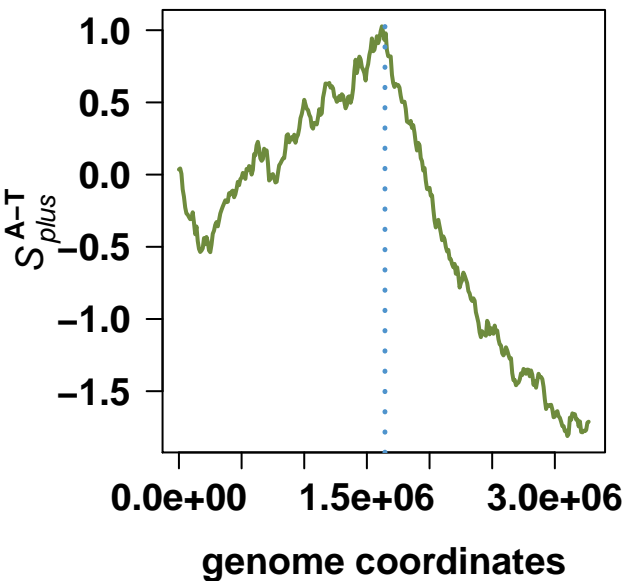
### *Xylella fastidiosa* Temecula1



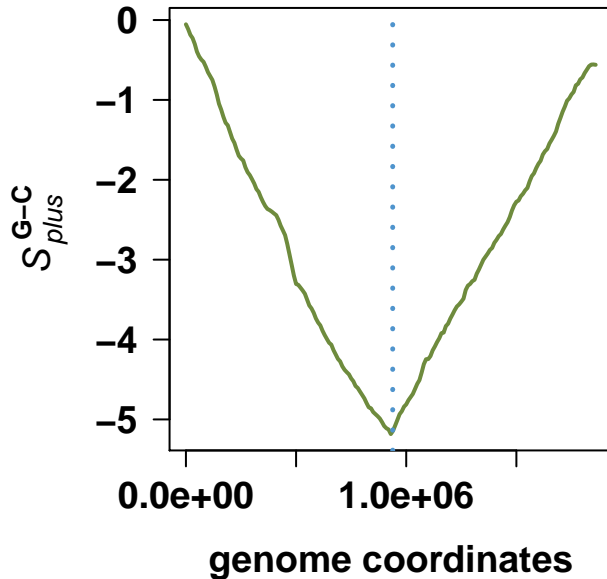
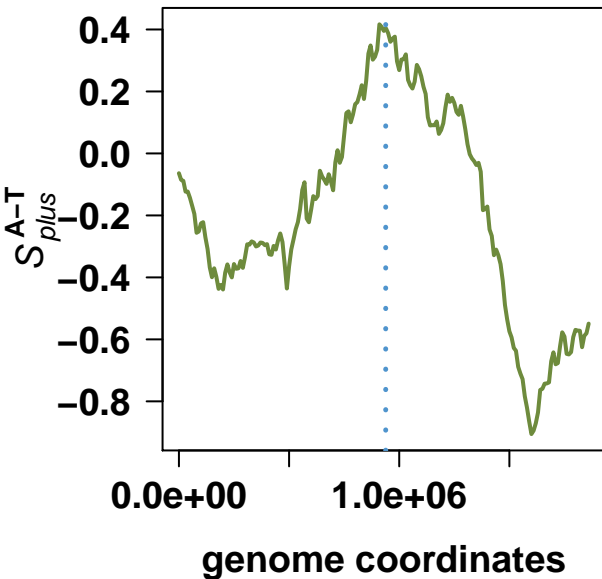
### ***Pseudomonas syringae* pv. *tomato* str. DC3000**



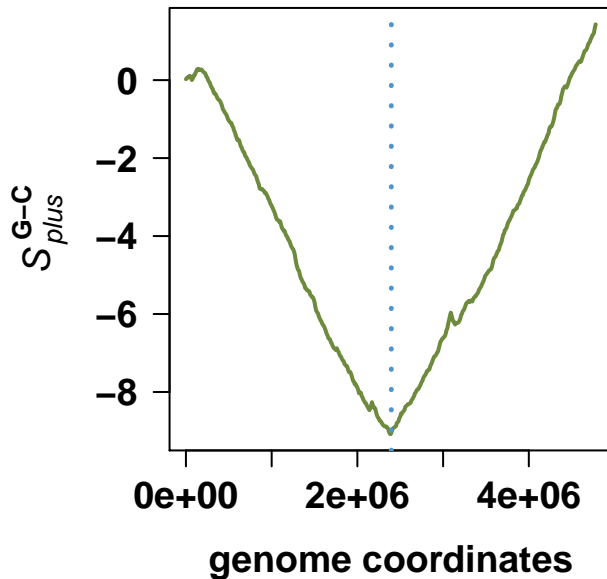
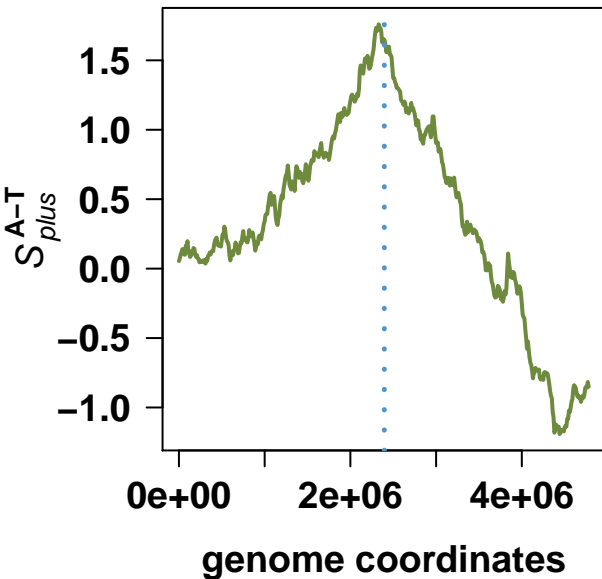
### ***Vibrio parahaemolyticus* RIMD 2210633**



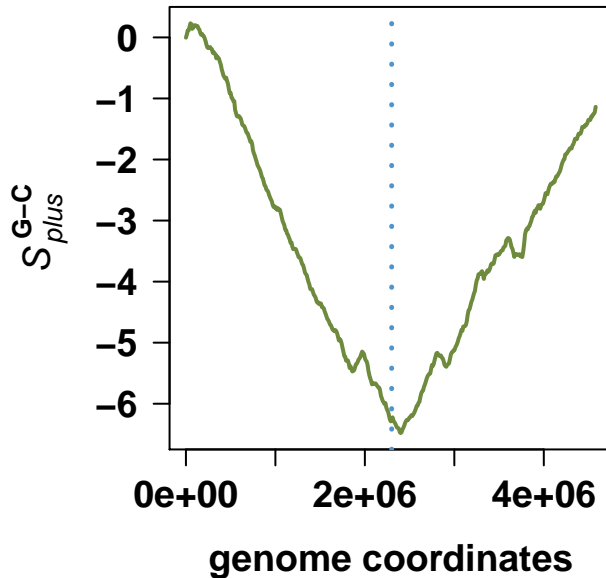
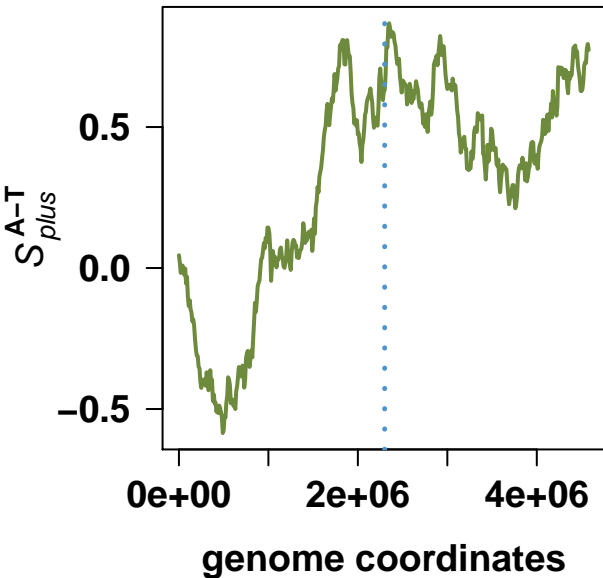
### ***Vibrio parahaemolyticus* RIMD 2210633**



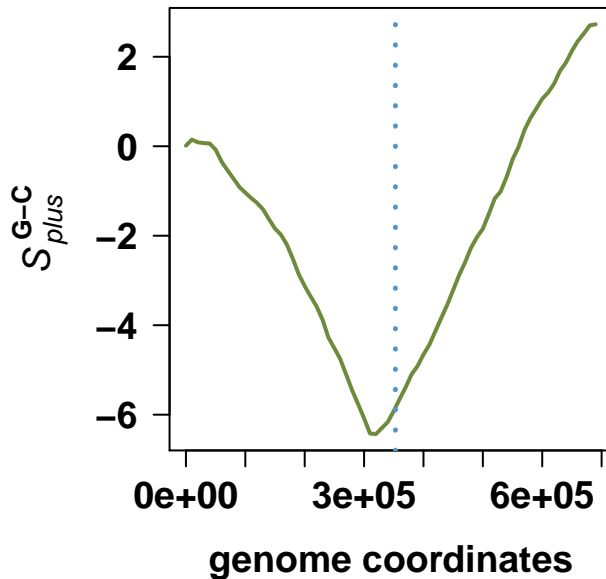
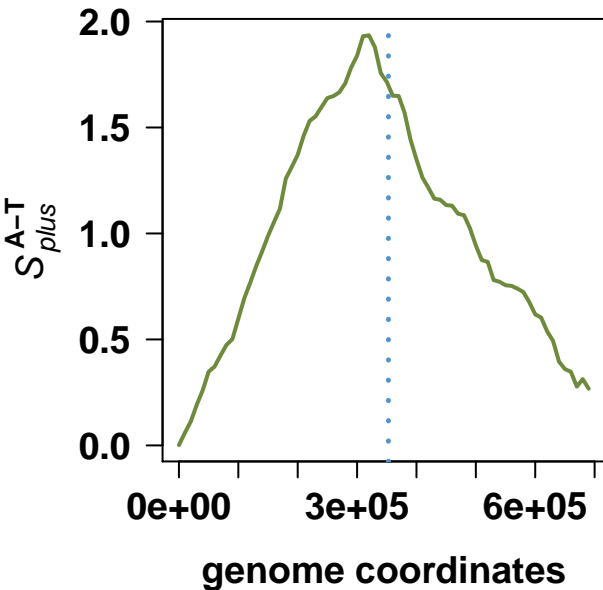
### ***Salmonella enterica* subsp. *enterica* serovar Typhi str. Ty2**



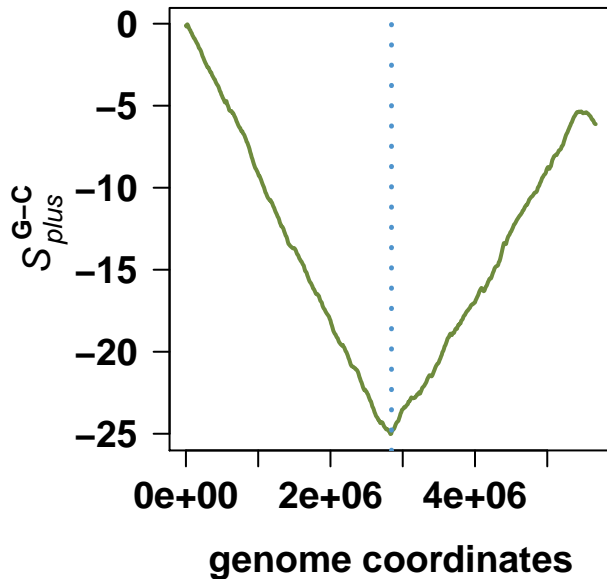
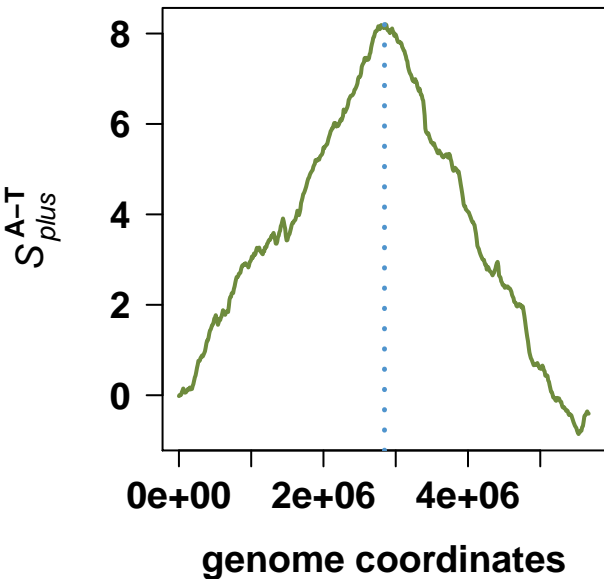
### *Shigella flexneri* 2a str. 2457T



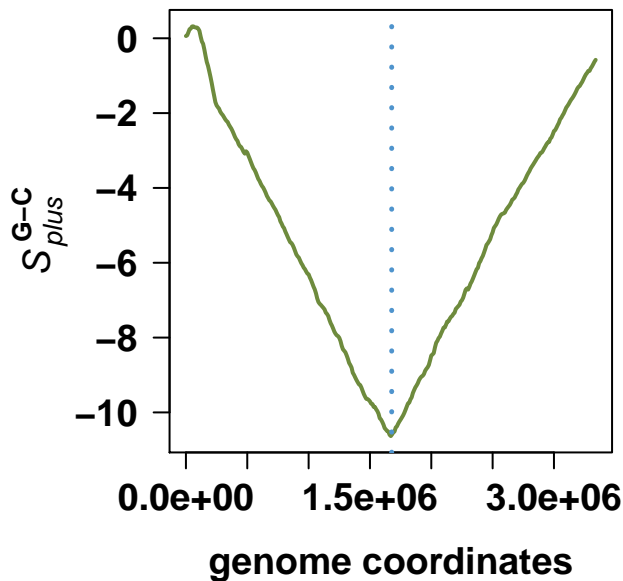
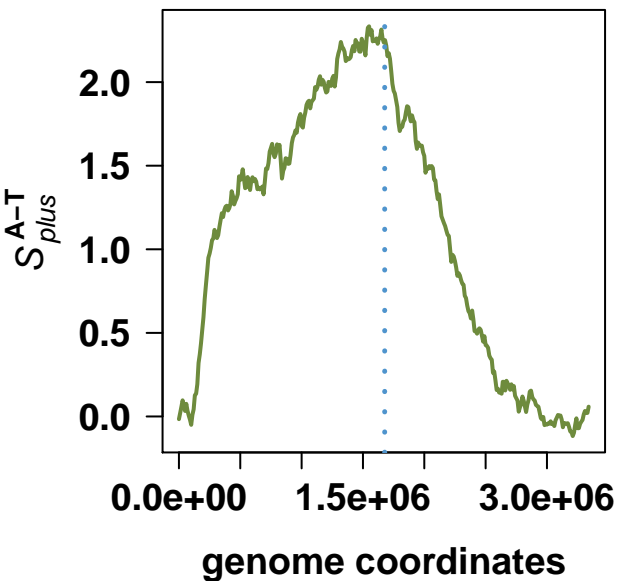
### *Candidatus Blochmannia floridanus*



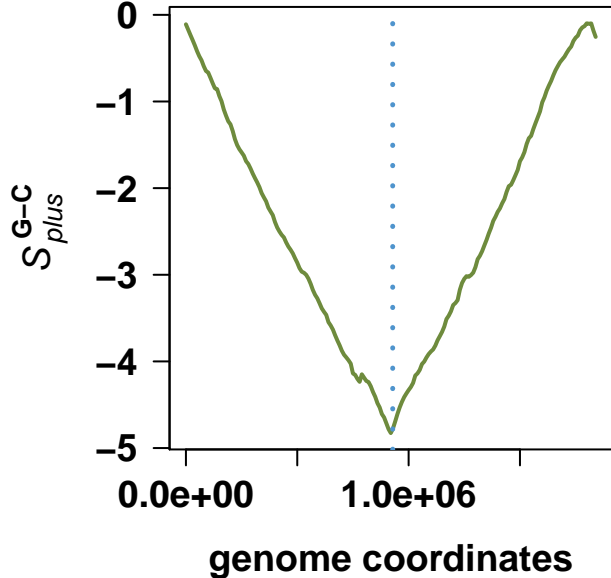
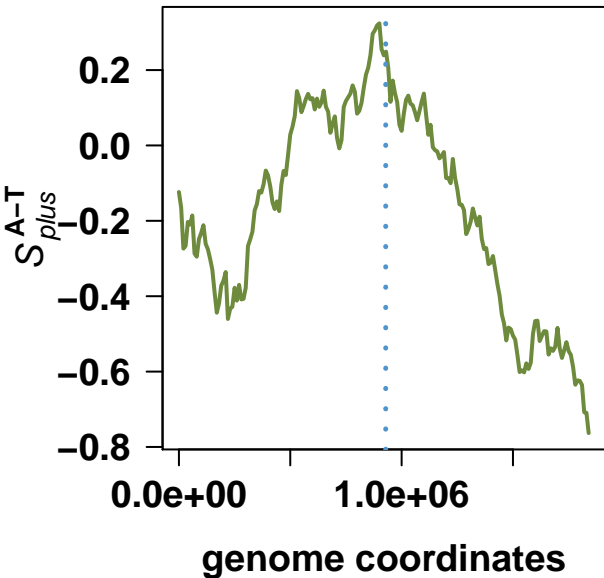
### ***Photorhabdus luminescens* subsp. *laumondii* TTO1**



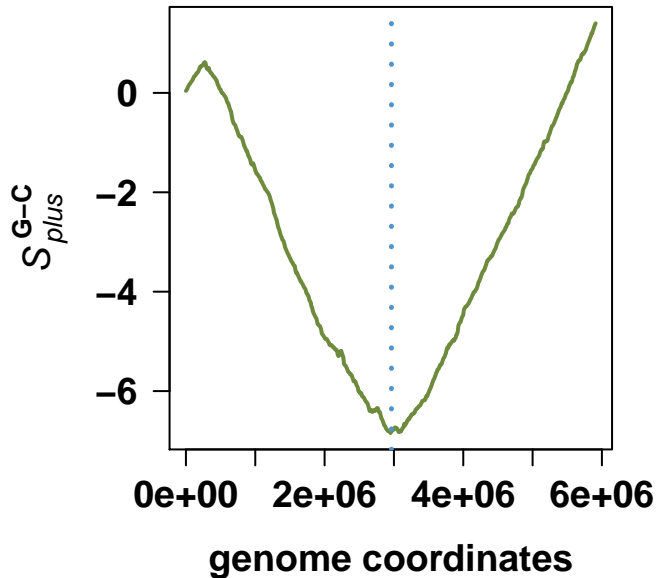
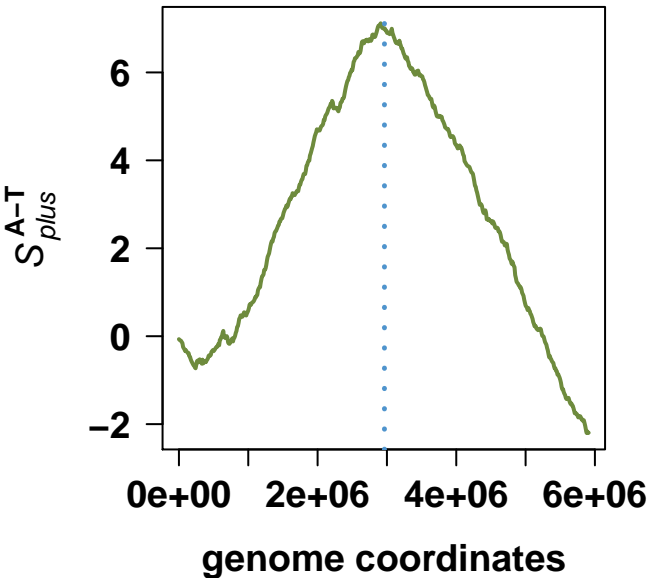
### ***Vibrio vulnificus* YJ016**



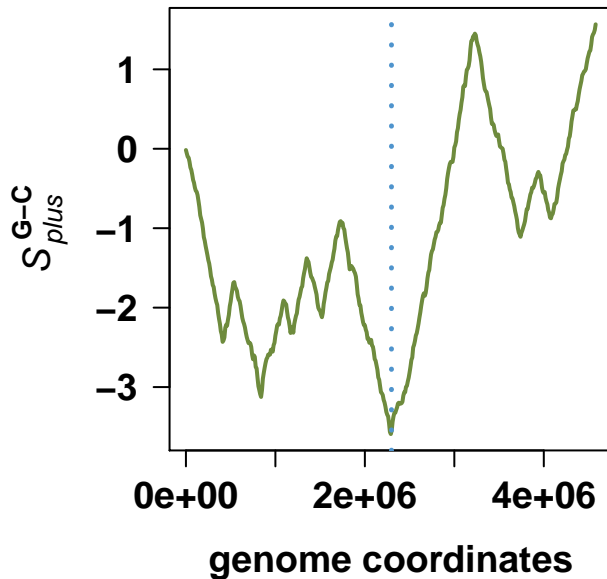
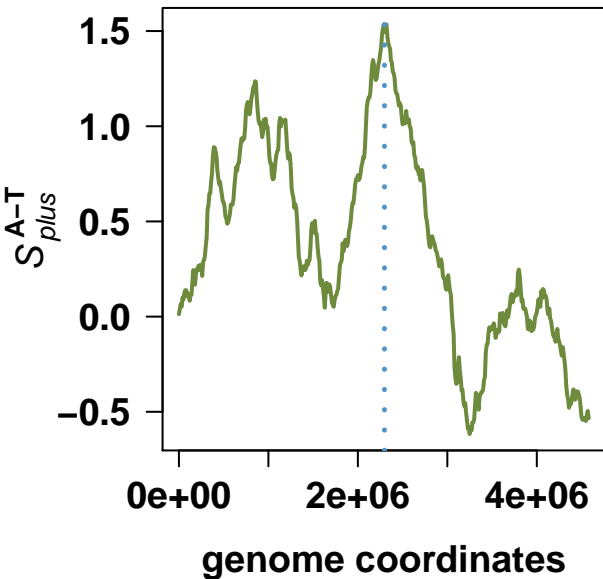
### *Vibrio vulnificus* YJ016



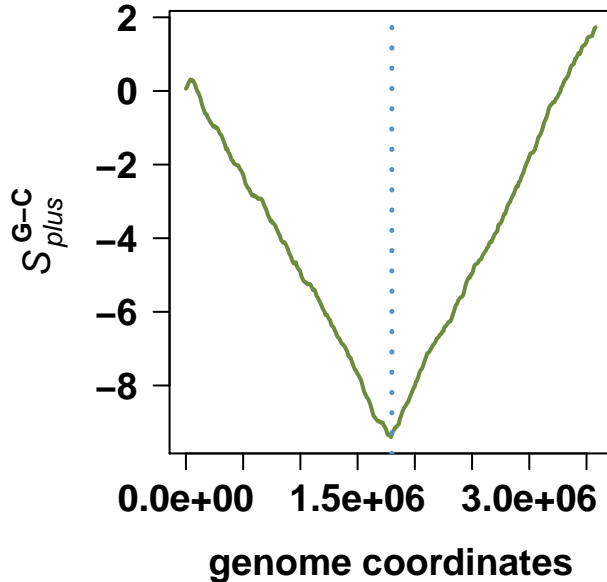
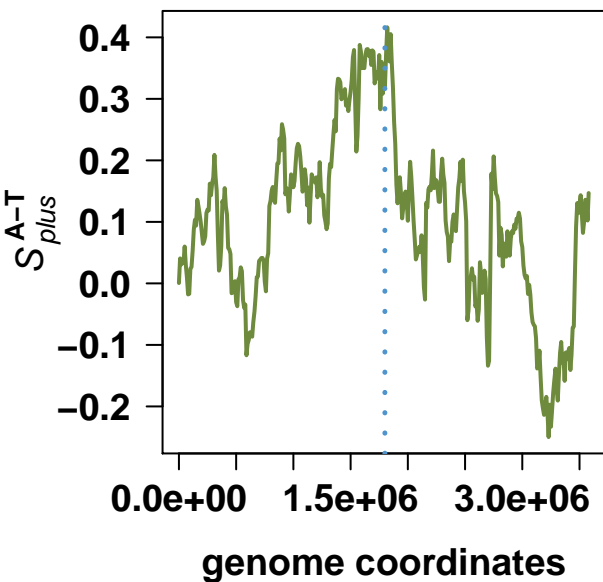
### *Pseudomonas syringae* pv. *phaseolicola* 1448A



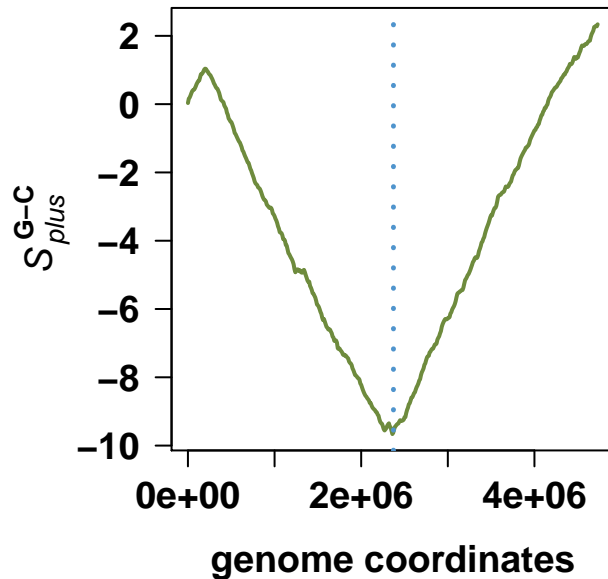
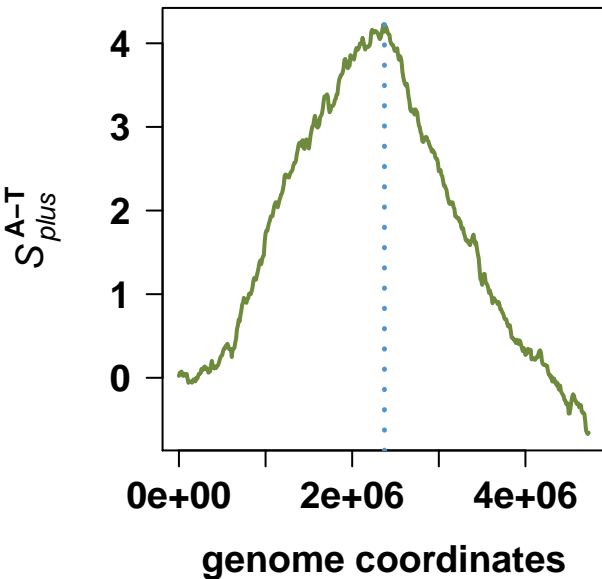
## *Yersinia pestis* biovar *Microtus* str. 91001



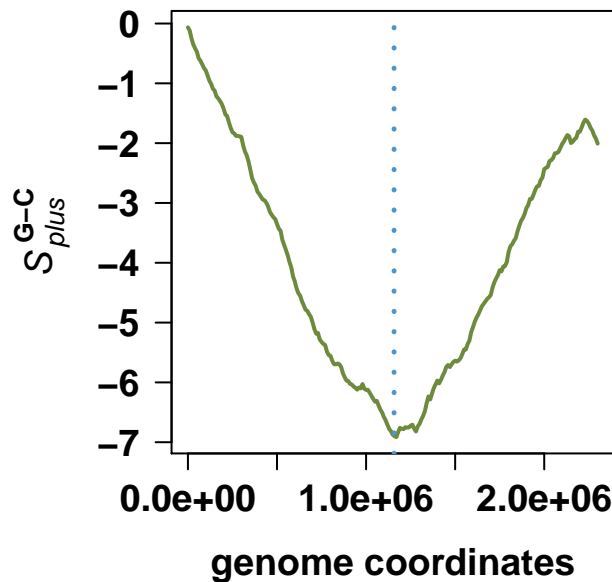
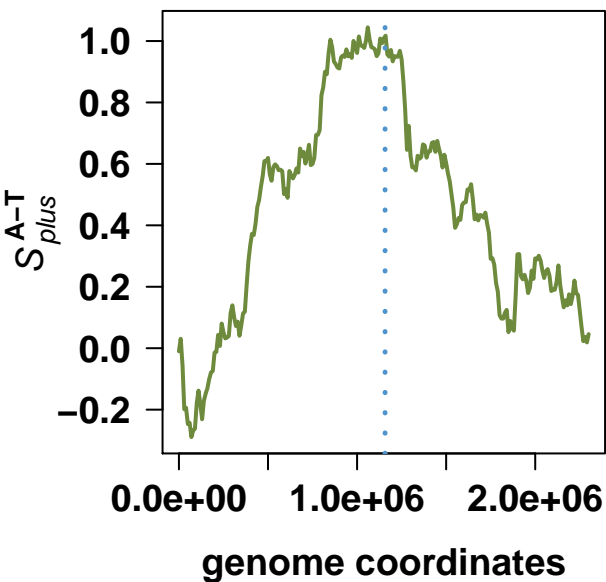
## *Acinetobacter* sp. ADP1



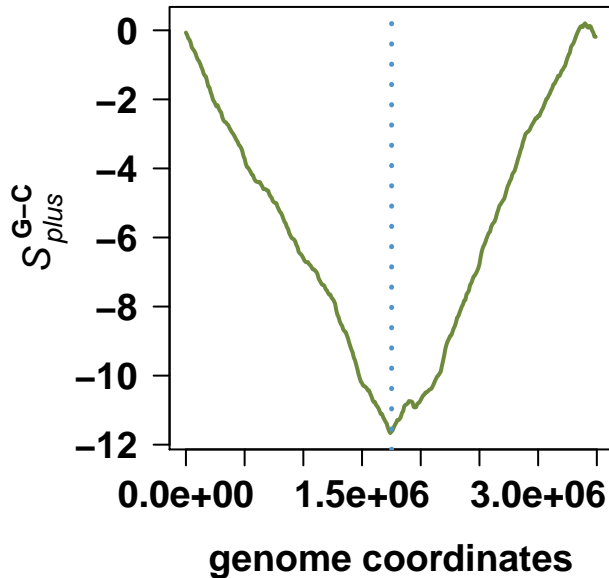
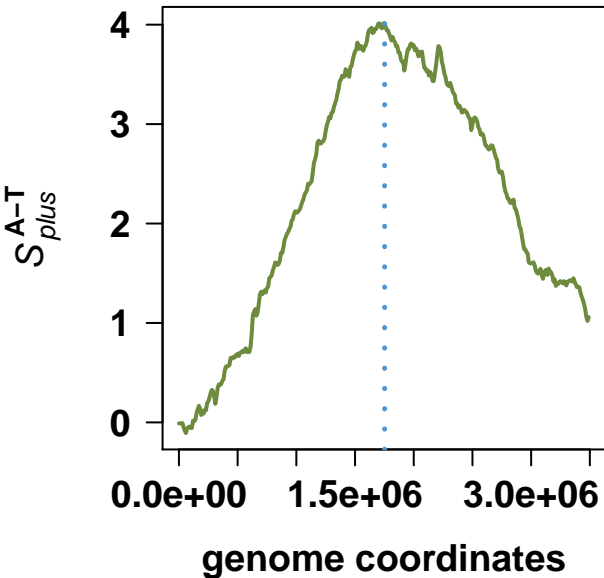
## *Yersinia pseudotuberculosis* IP 32953



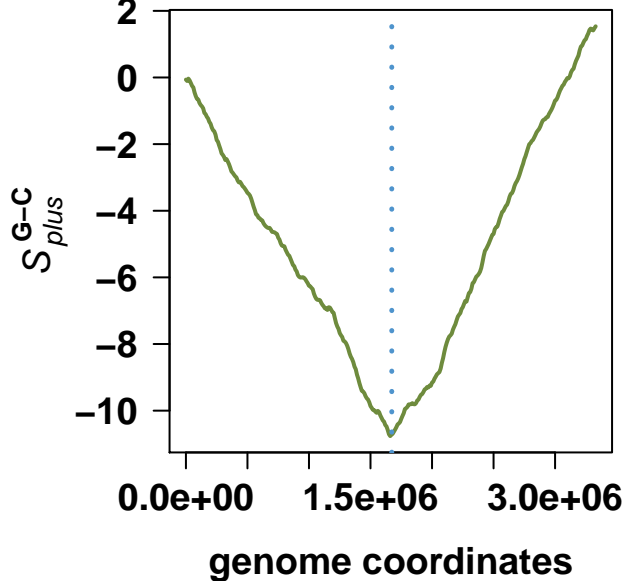
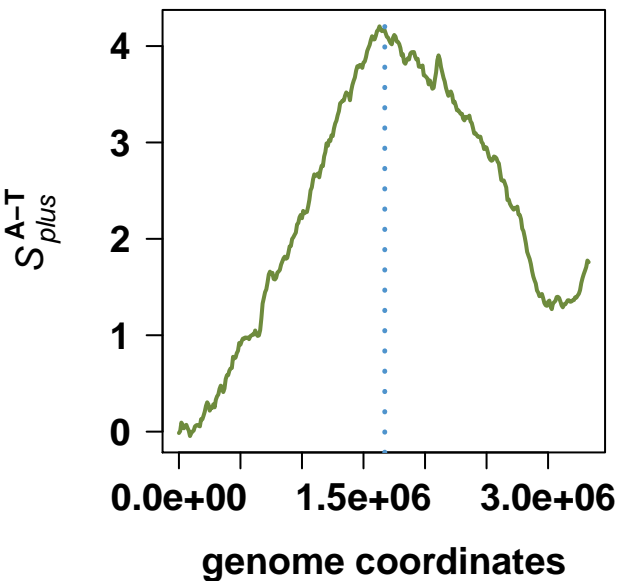
## *Mannheimia succiniciproducens* MBEL55E



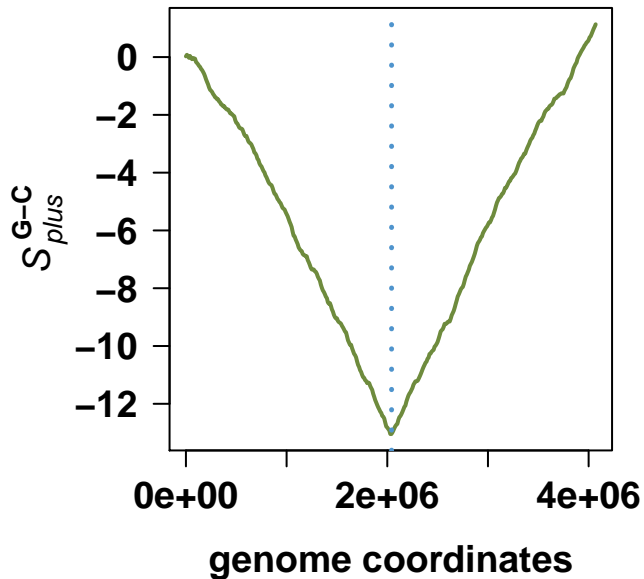
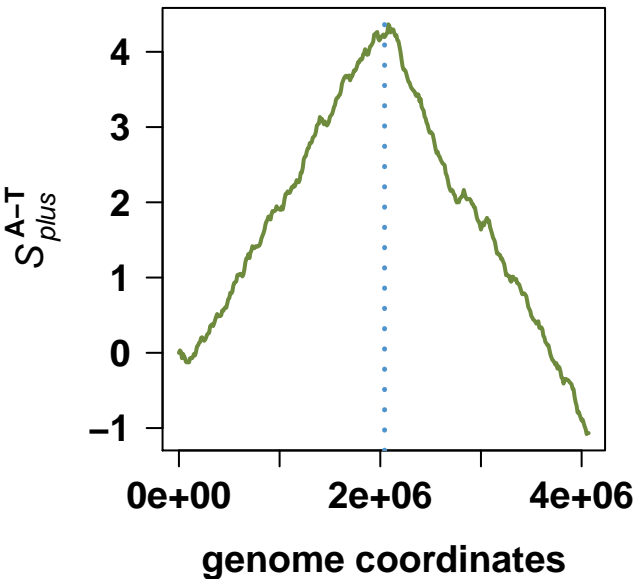
### Legionella pneumophila str. Paris



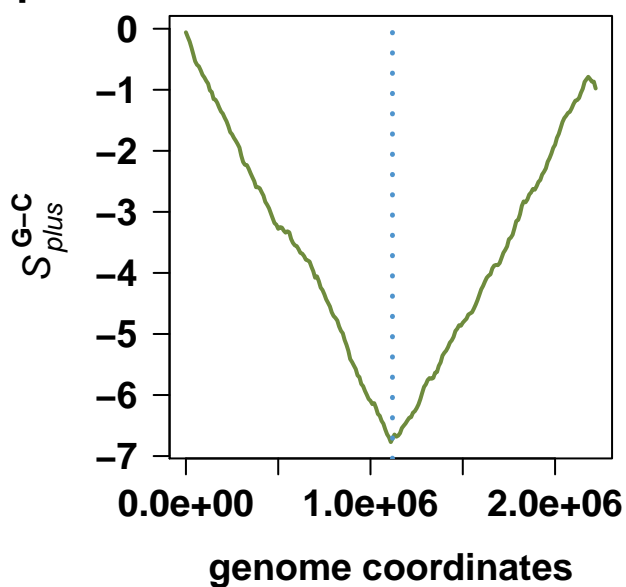
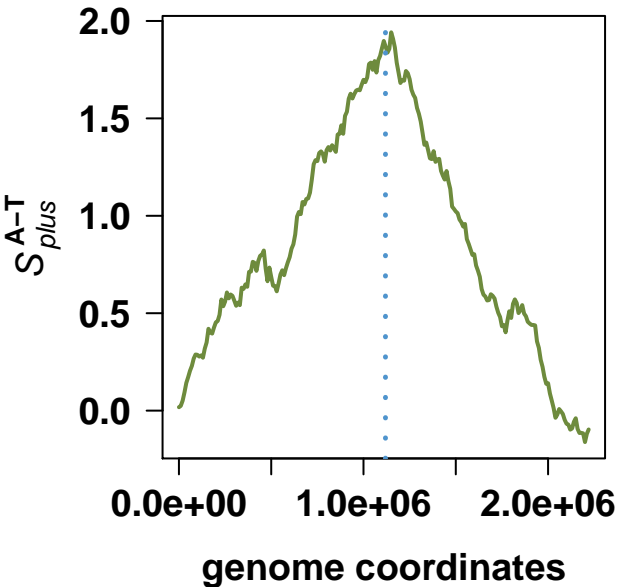
### Legionella pneumophila str. Lens



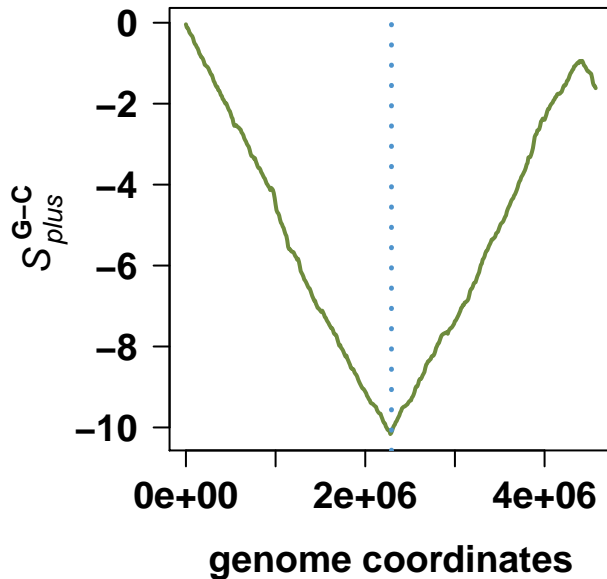
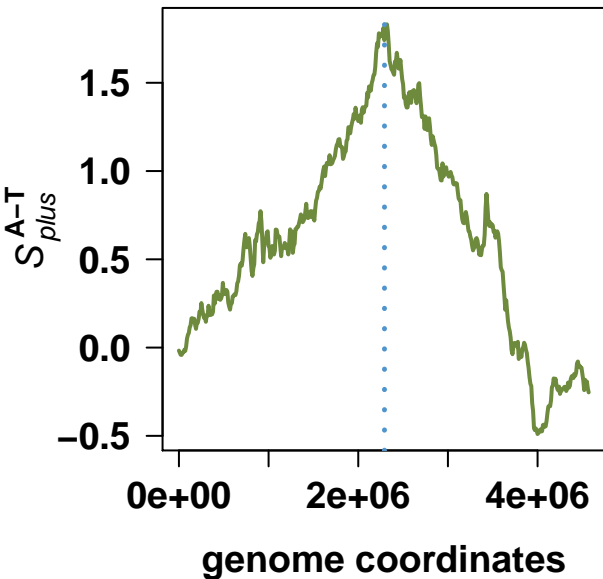
### Photobacterium profundum SS9



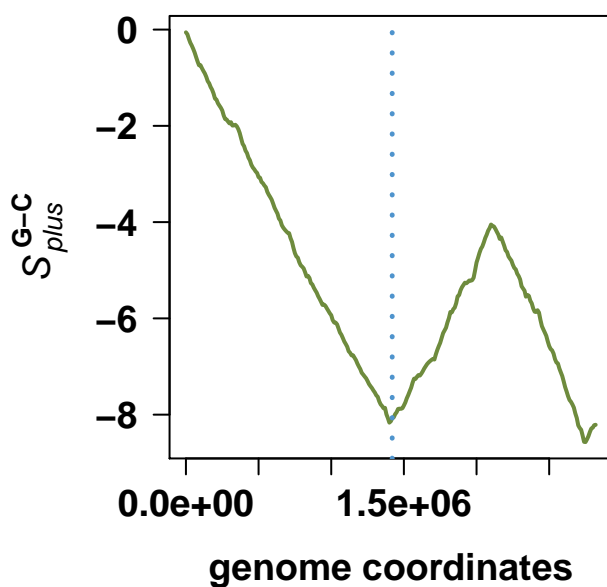
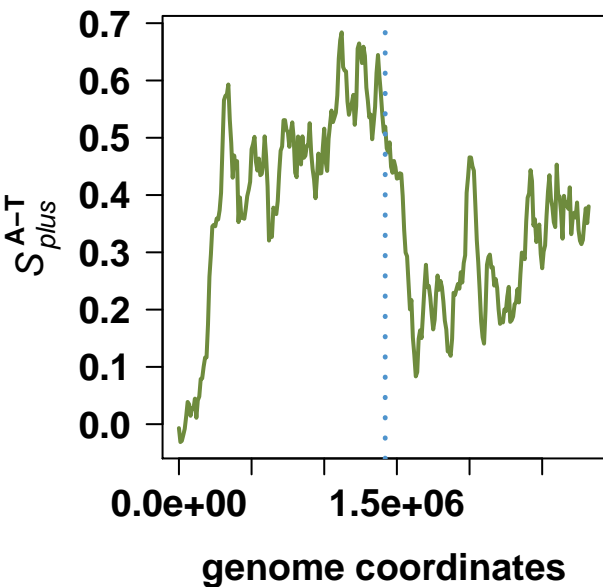
### Photobacterium profundum SS9



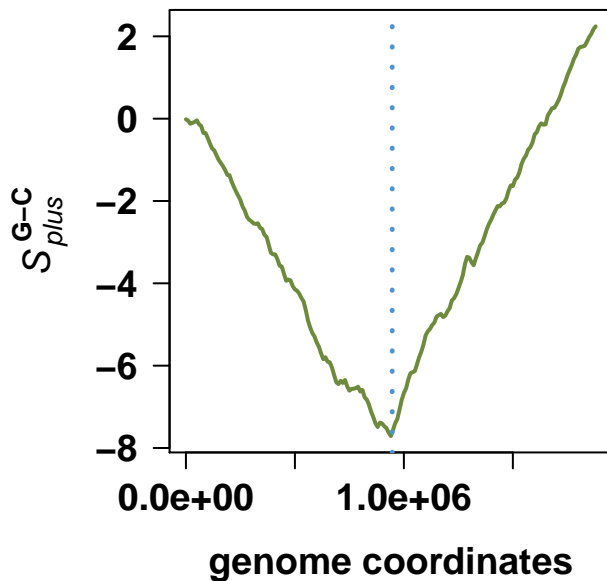
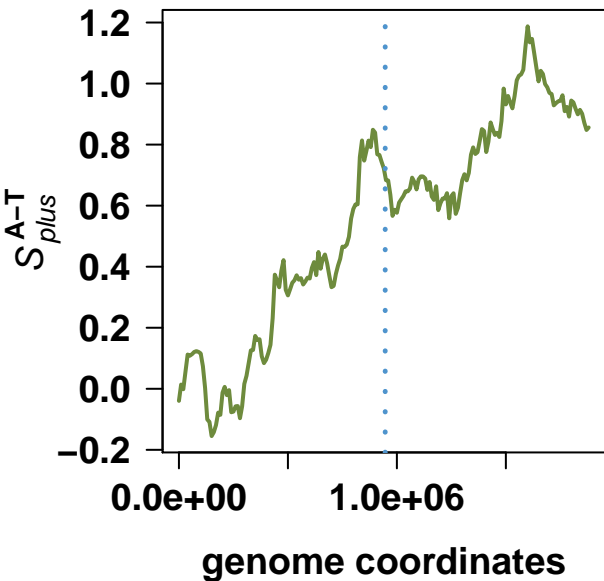
# *Imonella enterica* subsp. *enterica* serovar Paratyphi A str. ATCC 91



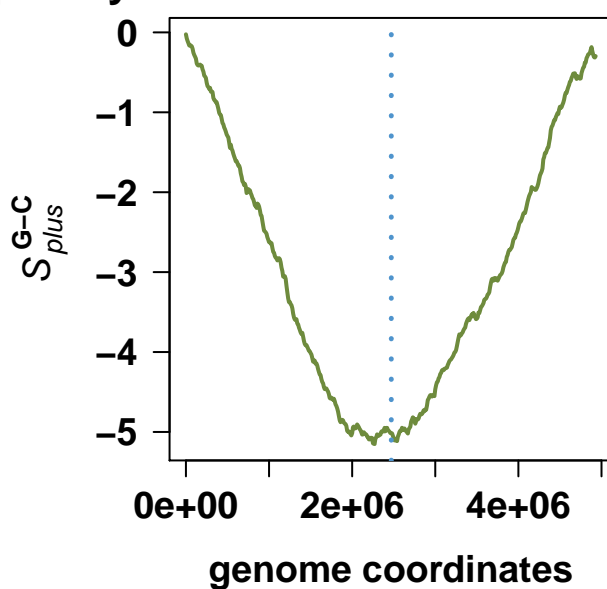
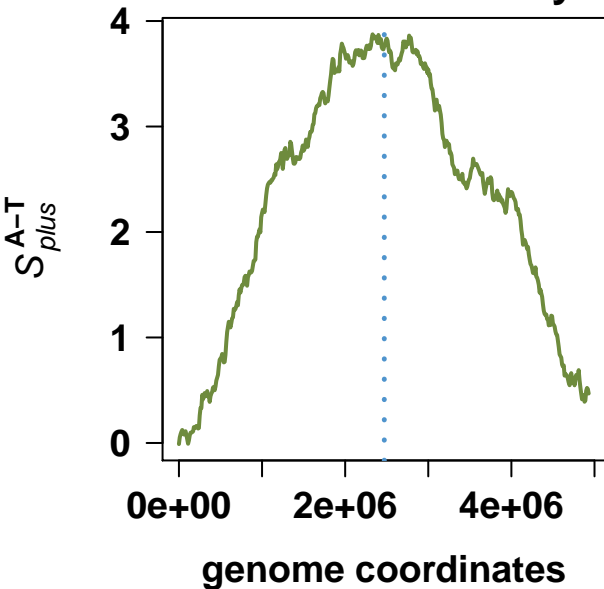
# *Idiomarina loihiensis* L2TR



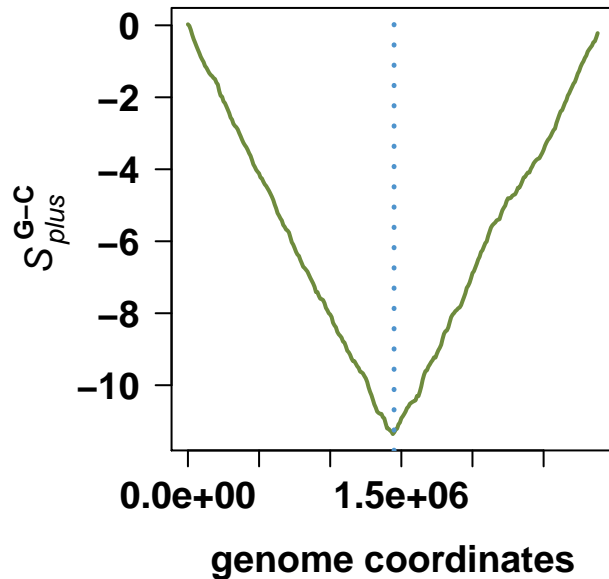
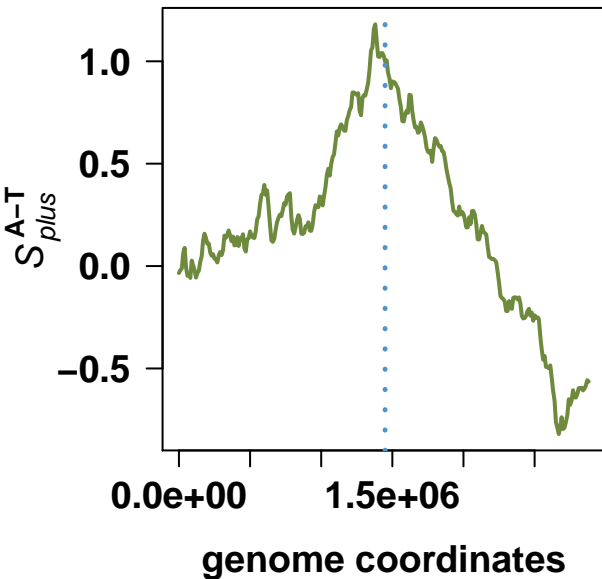
### *Francisella tularensis* subsp. *tularensis* SCHU S4



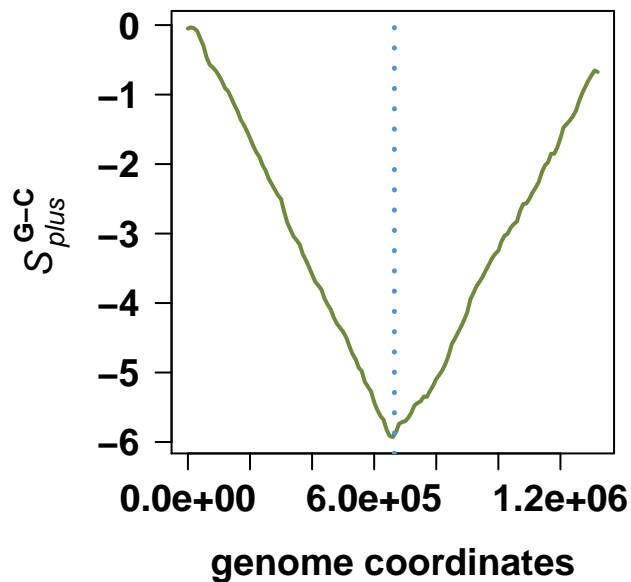
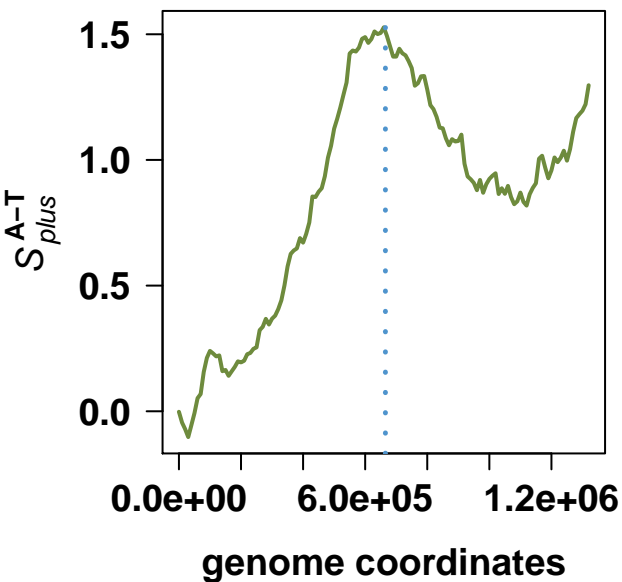
### *Xanthomonas oryzae* pv. *oryzae* KACC 10331



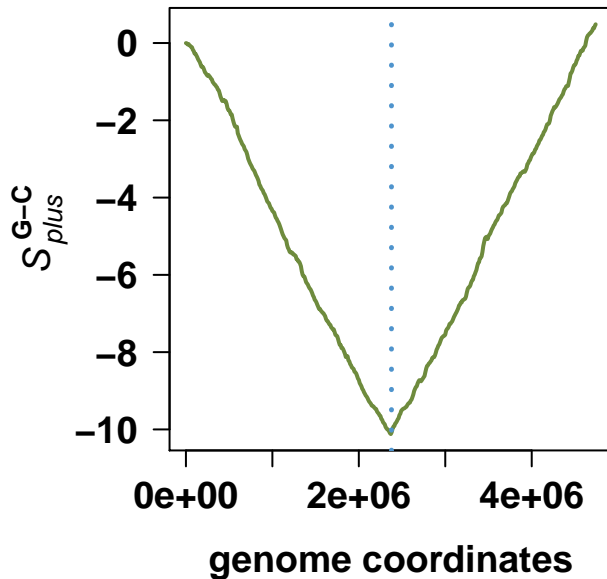
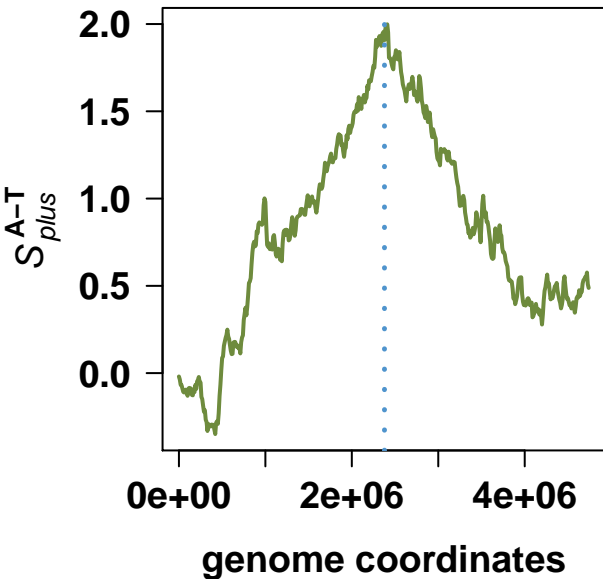
### Vibrio fischeri ES114



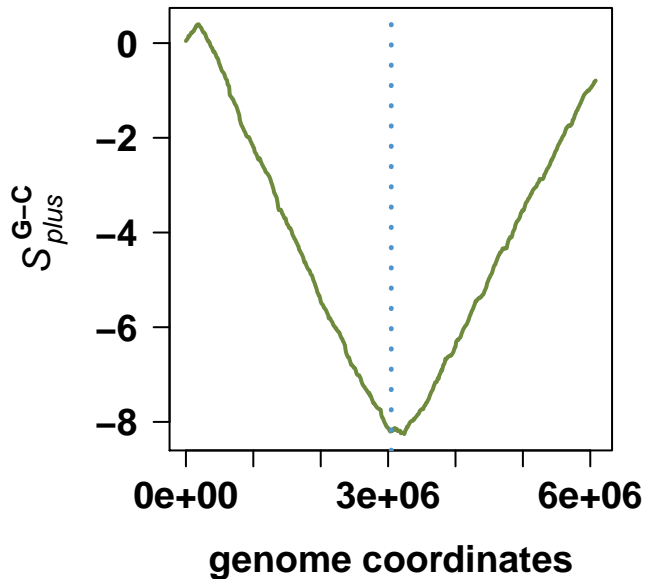
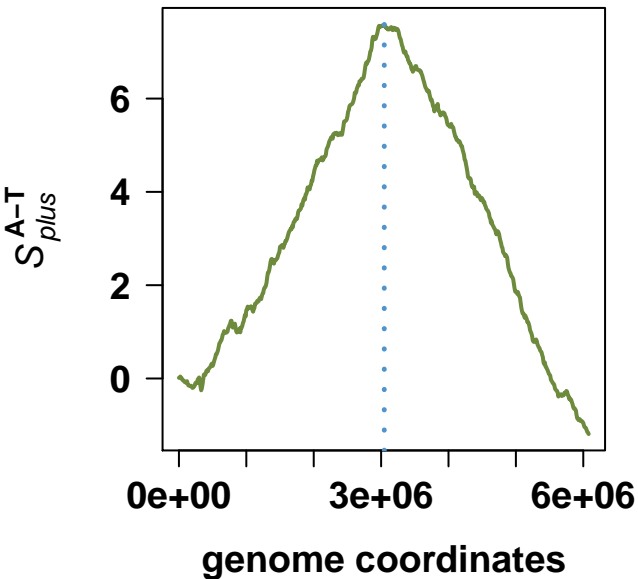
### Vibrio fischeri ES114



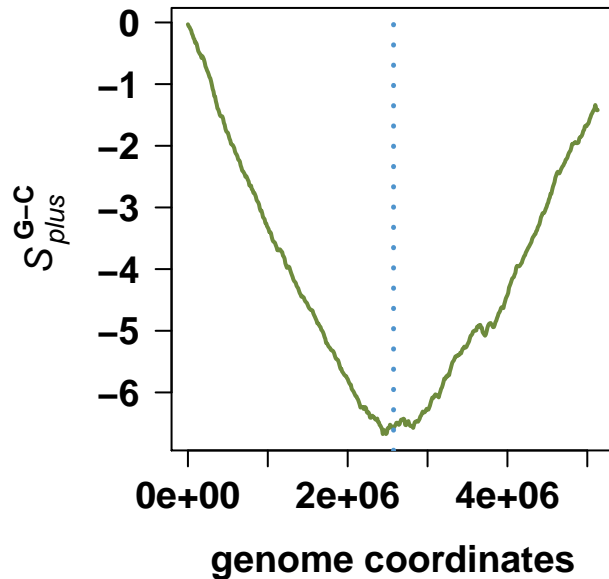
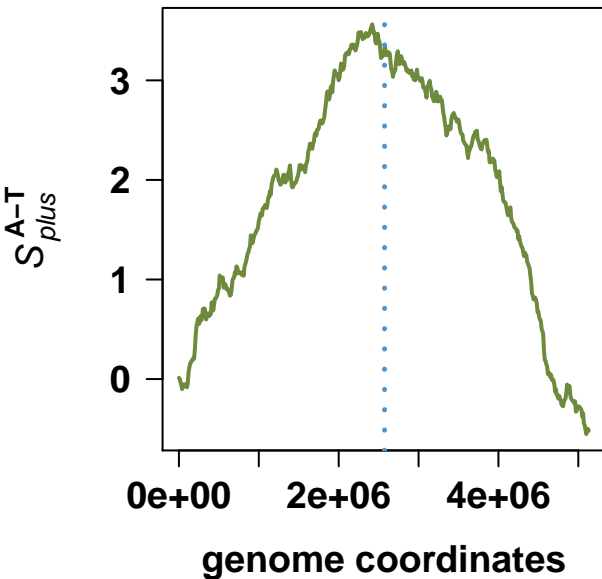
# *Salmonella enterica* subsp. *enterica* serovar Choleraesuis str. SC-B6



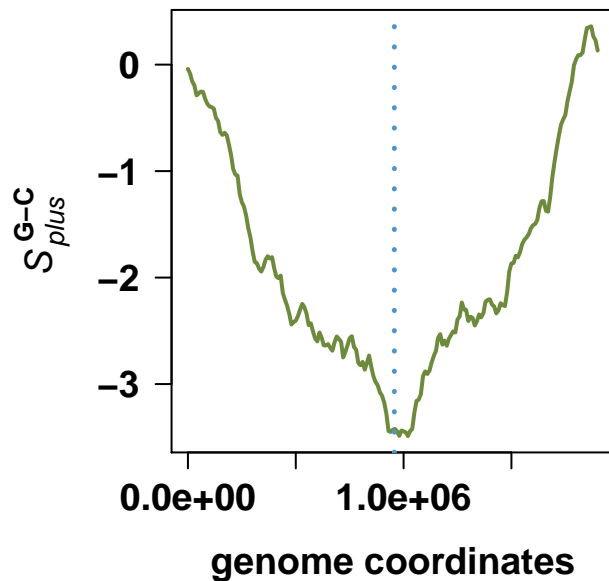
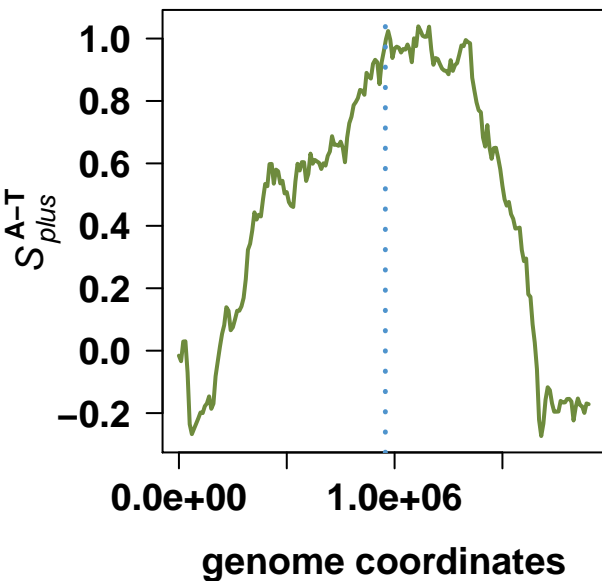
# *Pseudomonas syringae* pv. *syringae* B728a



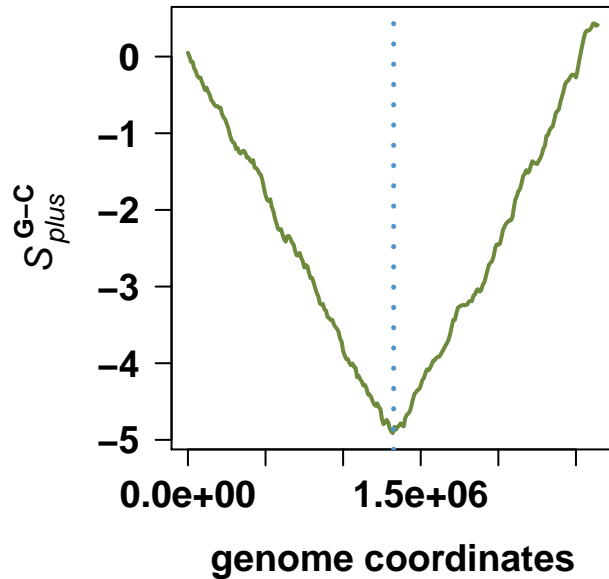
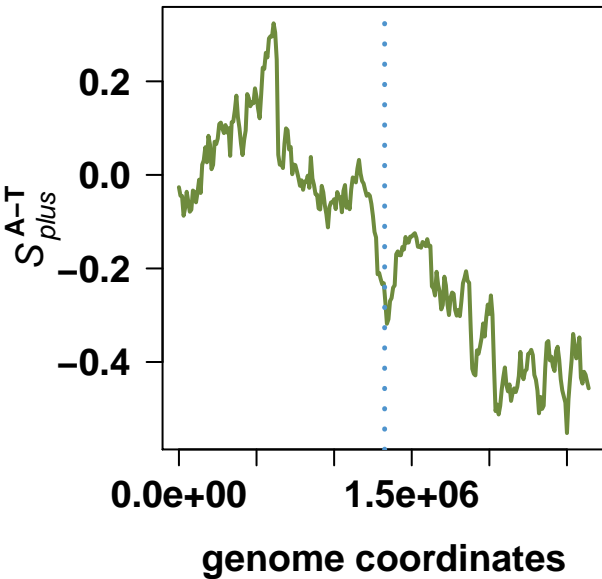
### *Xanthomonas campestris* pv. *campestris* str. 8004



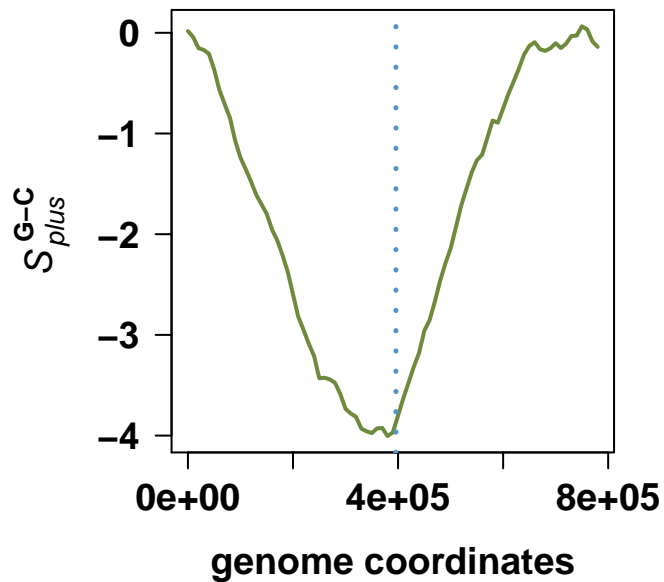
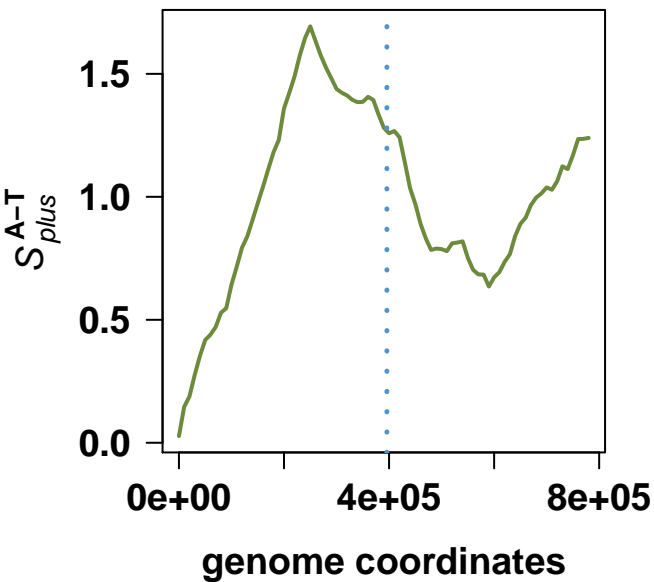
### *Haemophilus influenzae* 86-028NP



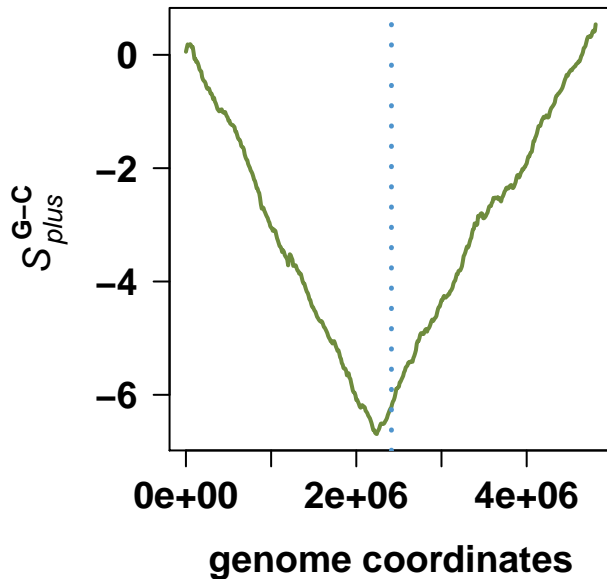
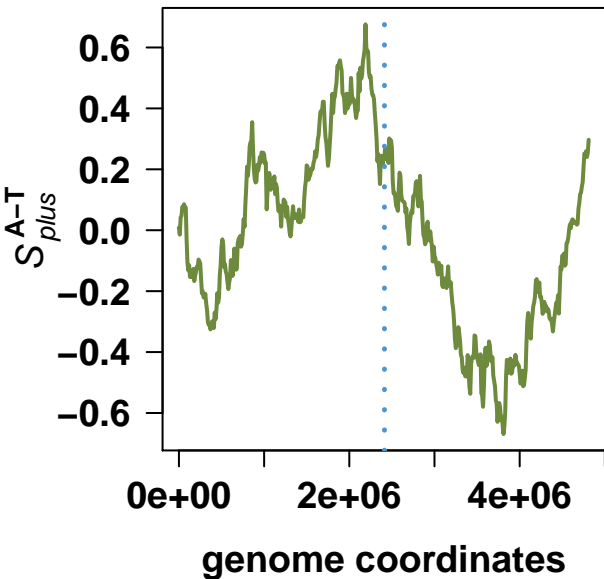
### **Psychrobacter arcticus 273-4**



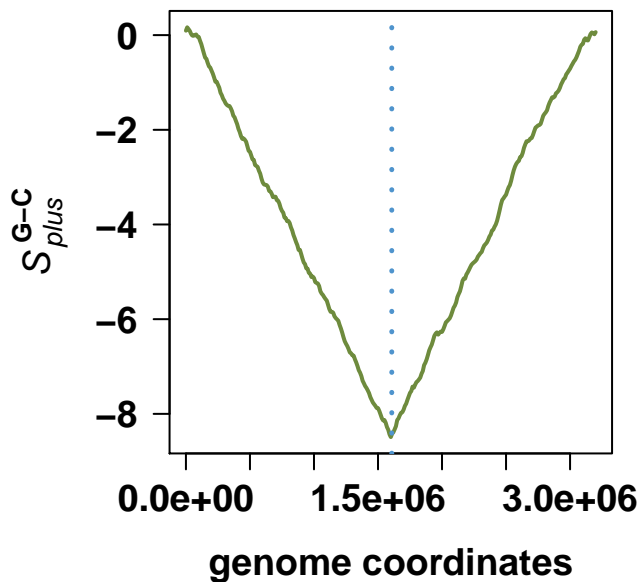
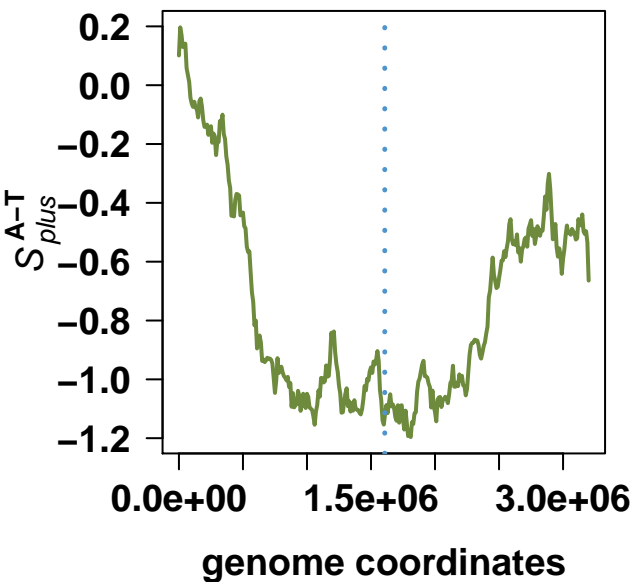
### **Candidatus Blochmannia pennsylvanicus str. BPEN**



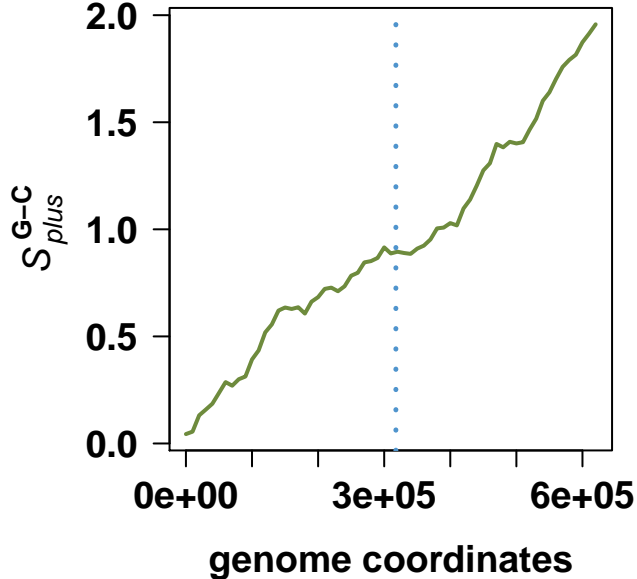
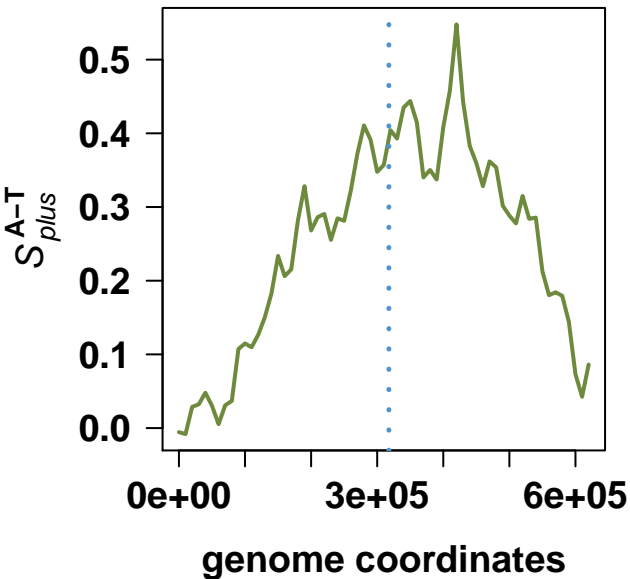
### *Shigella sonnei* Ss046



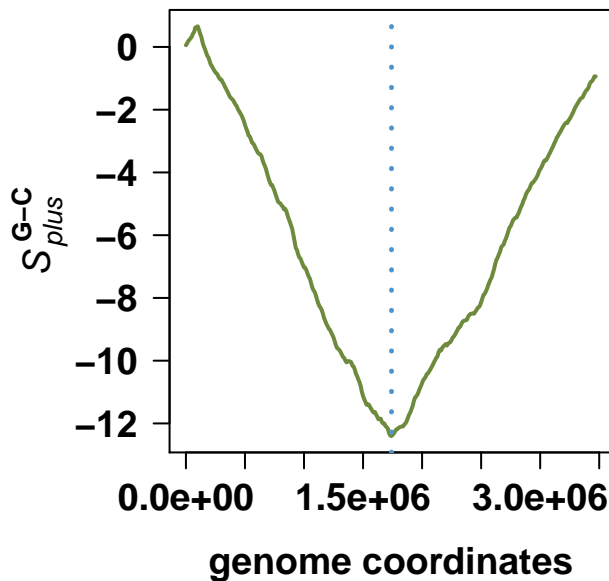
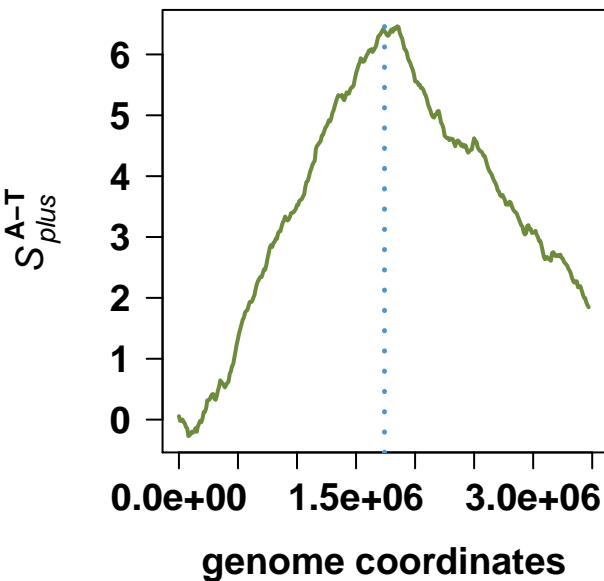
### *Pseudoalteromonas haloplanktis* TAC125



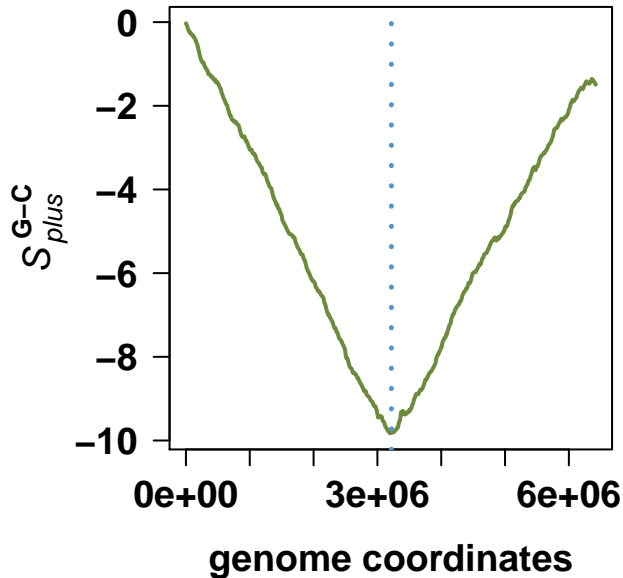
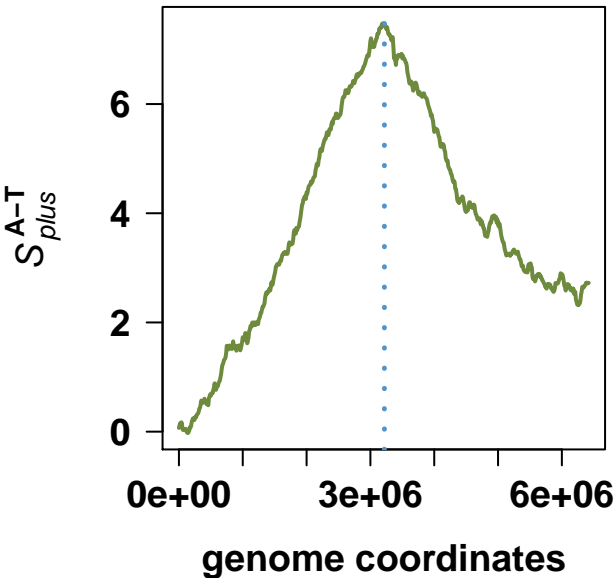
### ***Pseudoalteromonas haloplanktis* TAC125**



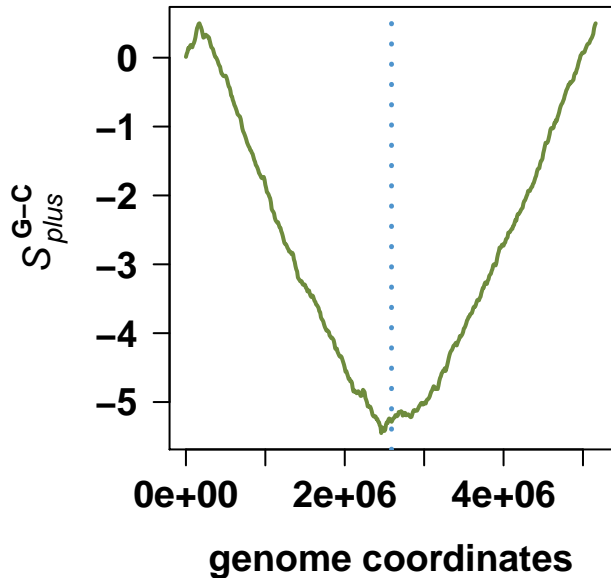
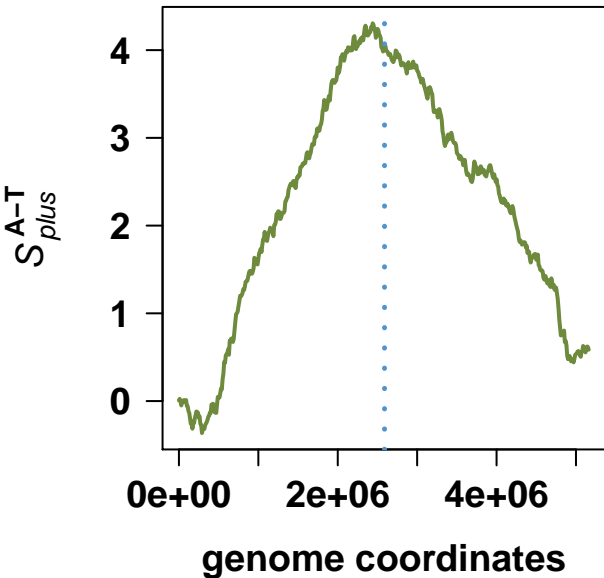
### ***Nitrosococcus oceani* ATCC 19707**



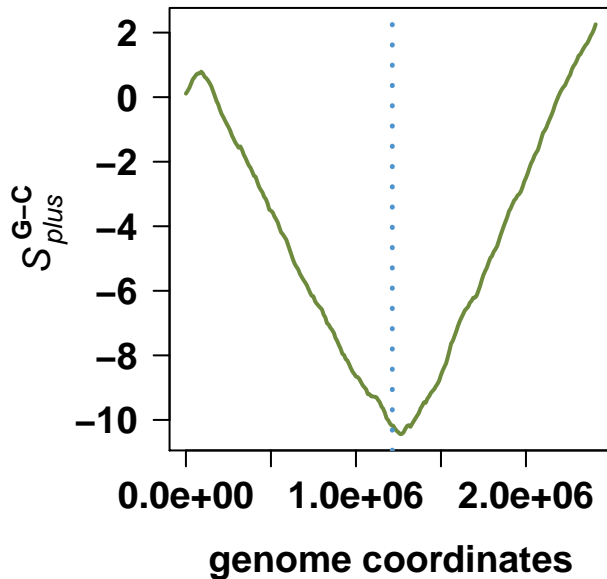
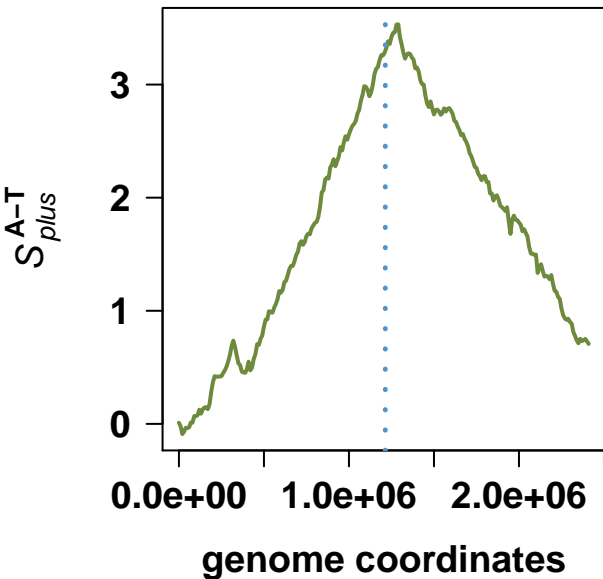
### ***Pseudomonas fluorescens* Pf0-1**



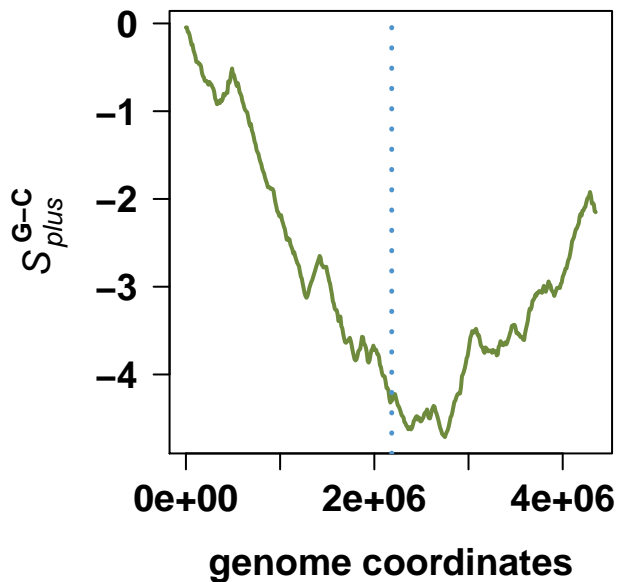
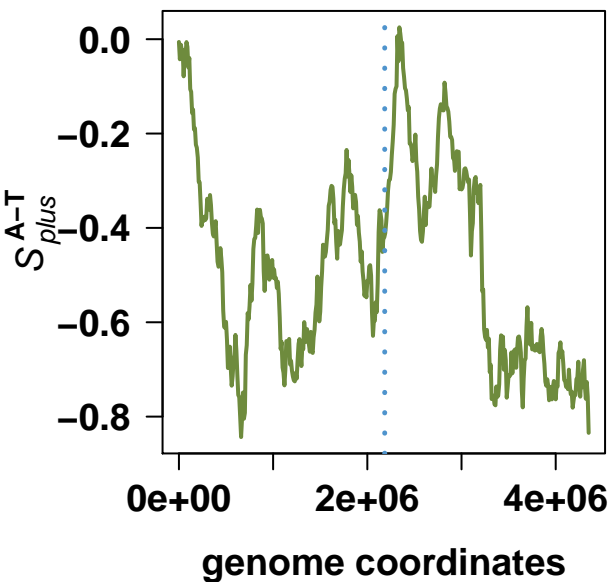
### ***Xanthomonas campestris* pv. *vesicatoria* str. 85-10**



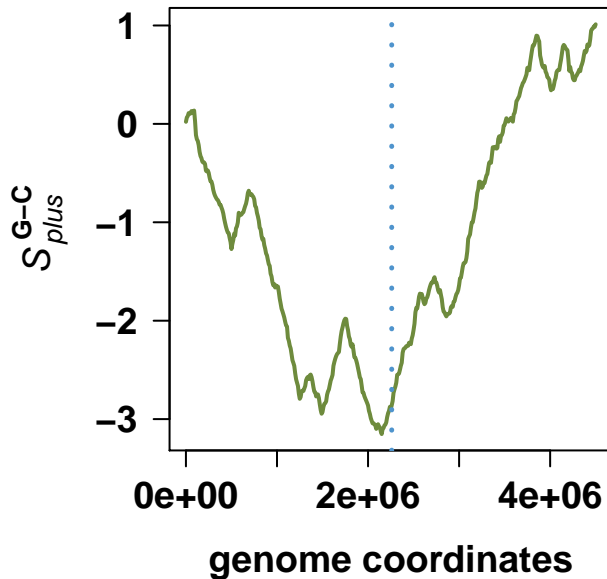
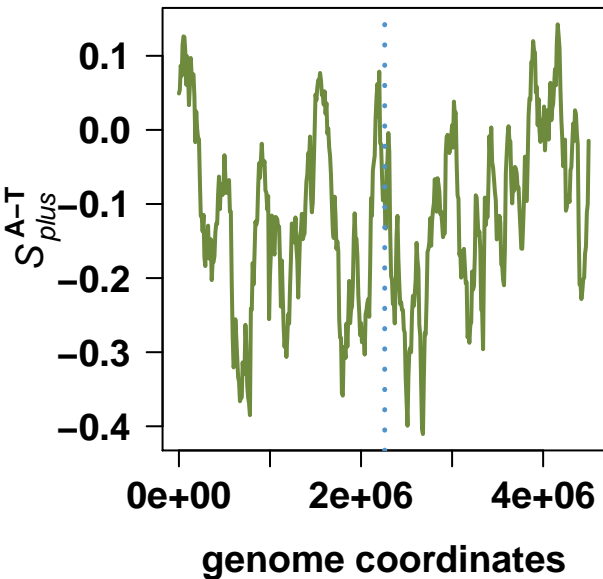
### *Thiomicrospira crunogena* XCL-2



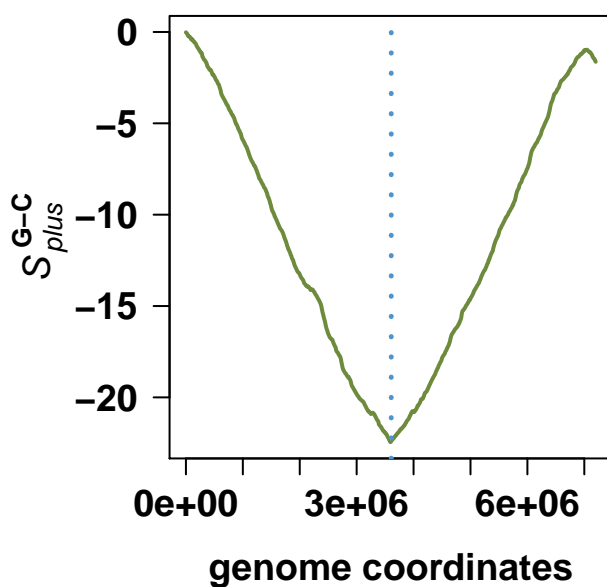
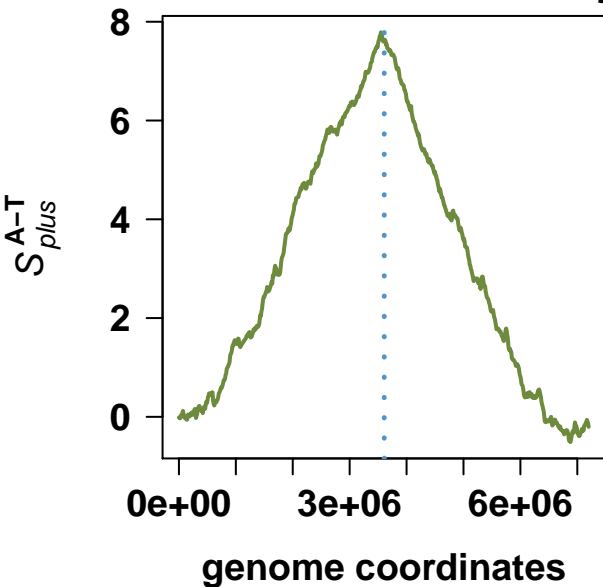
### *Shigella dysenteriae* Sd197



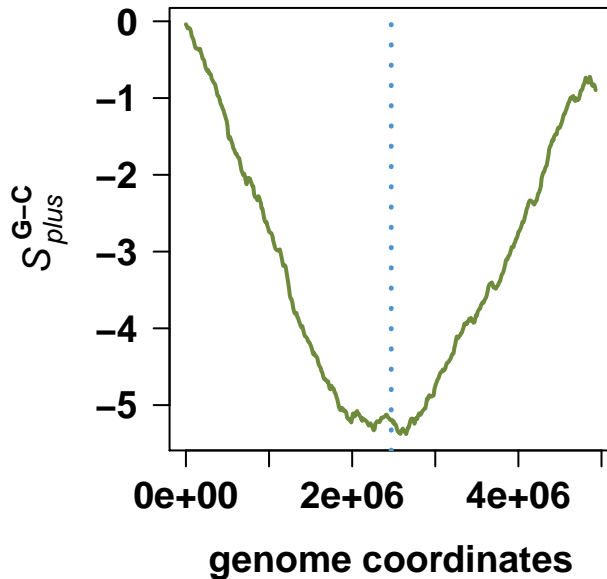
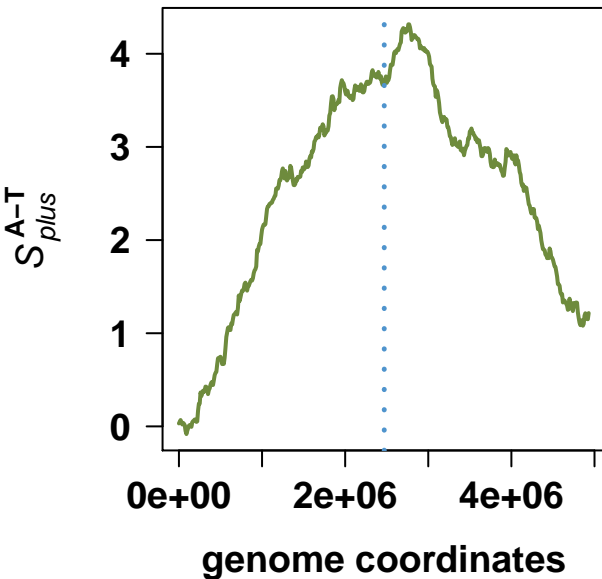
### *Shigella boydii* Sb227



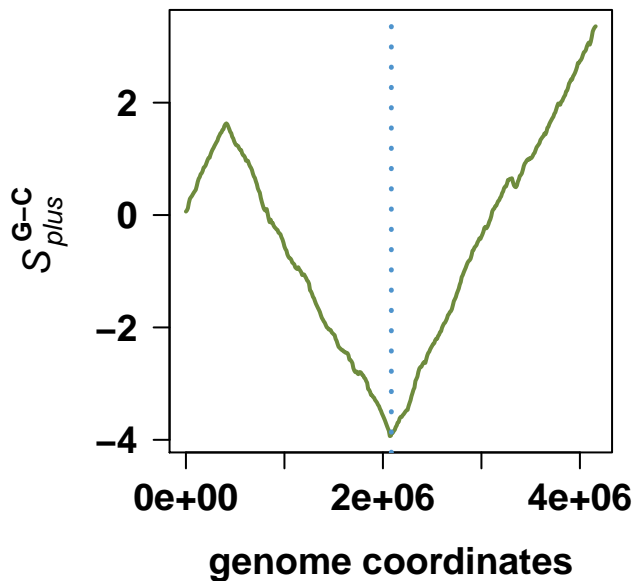
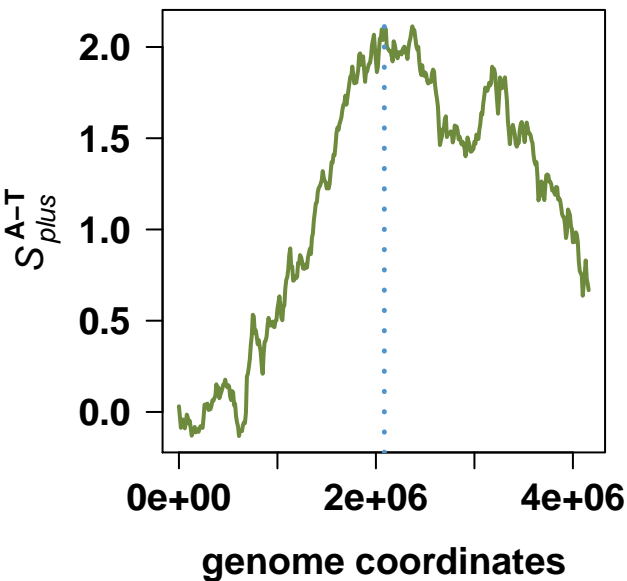
### *Hahella chejuensis* KCTC 2396



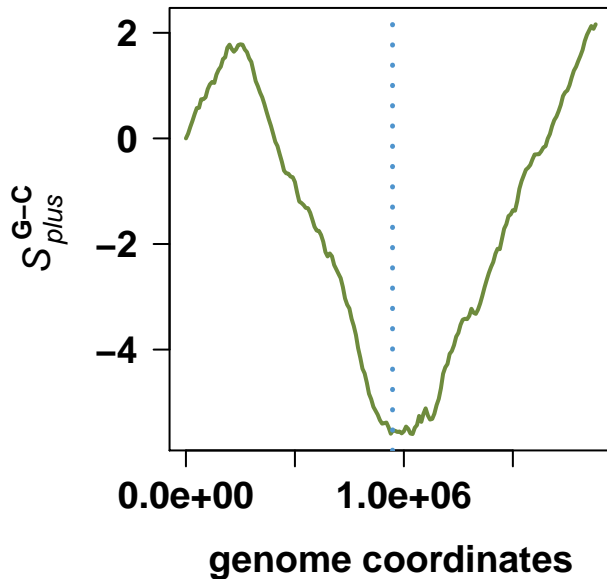
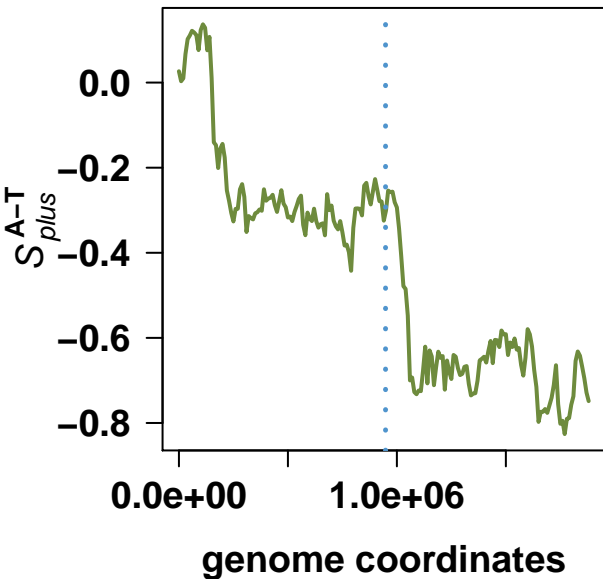
### *Xanthomonas oryzae* pv. *oryzae* MAFF 311018



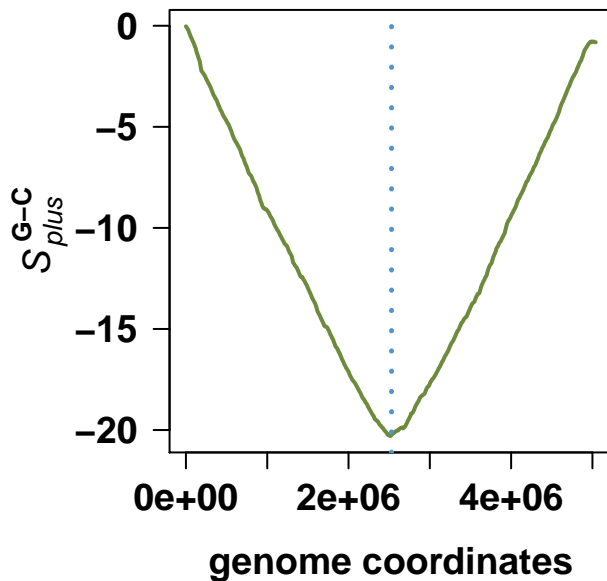
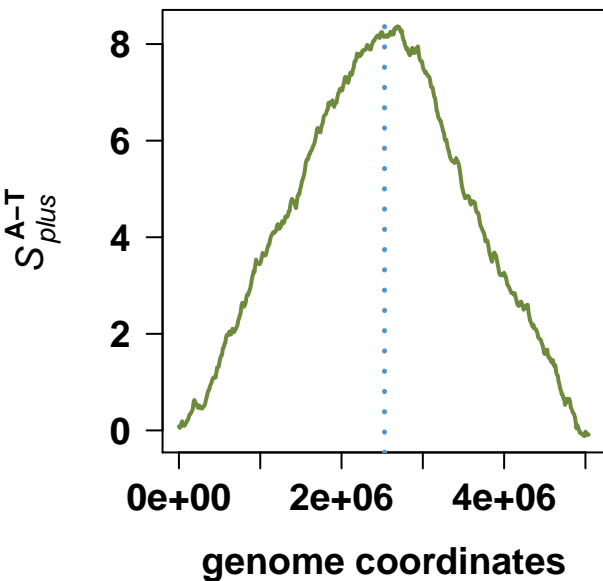
### *Sodalis glossinidius* str. 'morsitans'



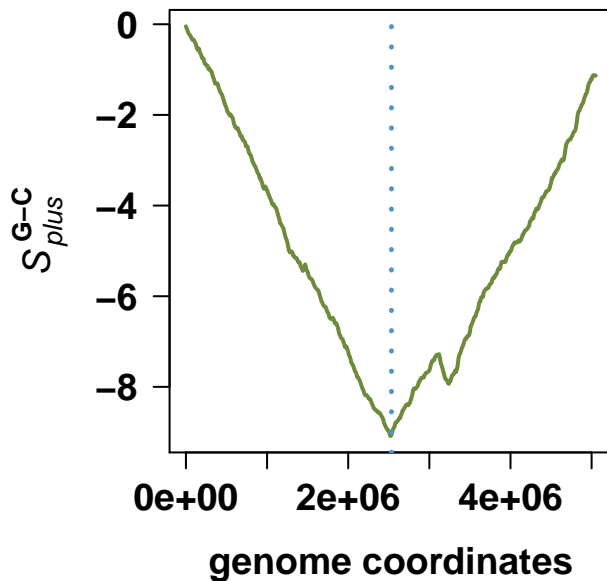
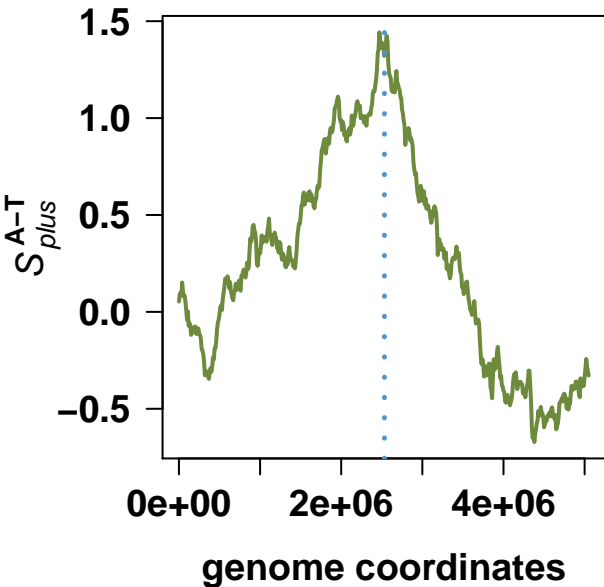
### Francisella tularensis subsp. holarctica LVS



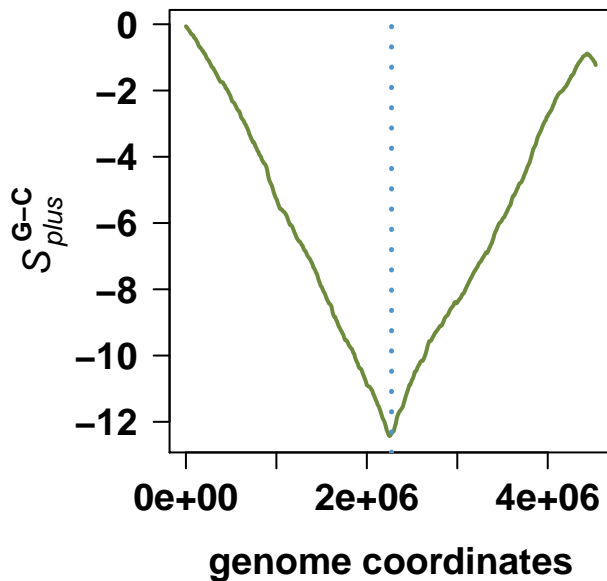
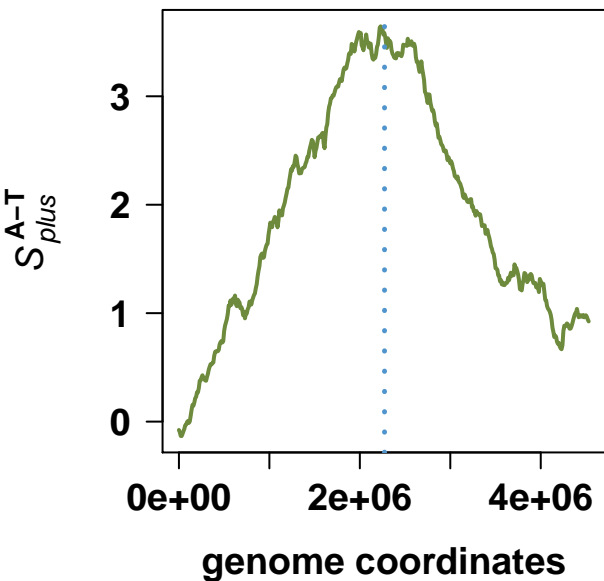
### Saccharophagus degradans 2-40



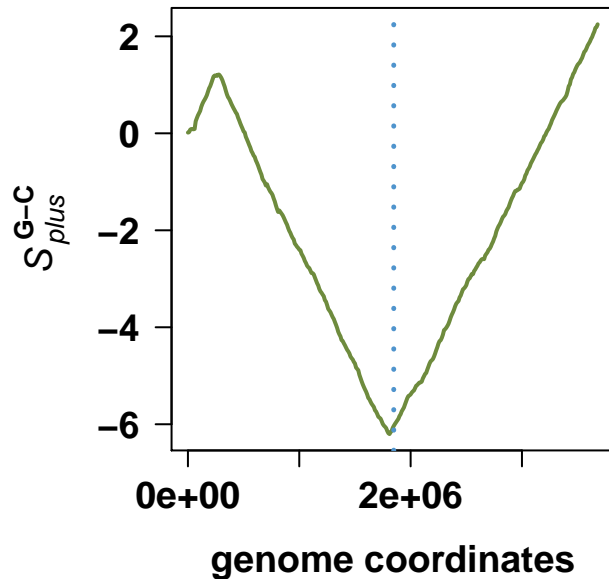
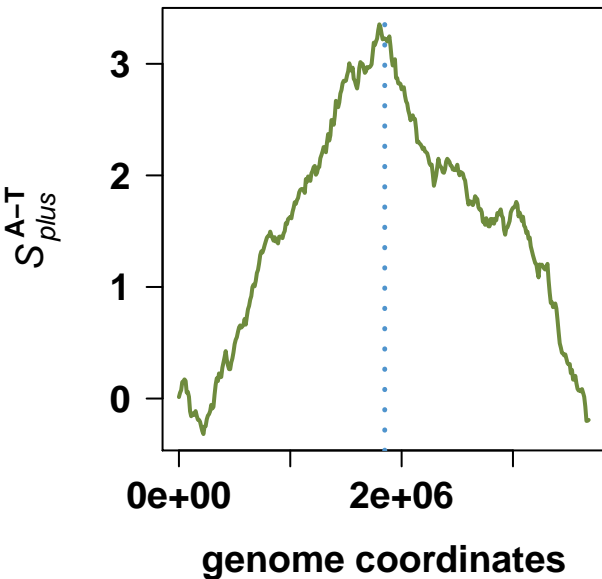
### Escherichia coli UTI89



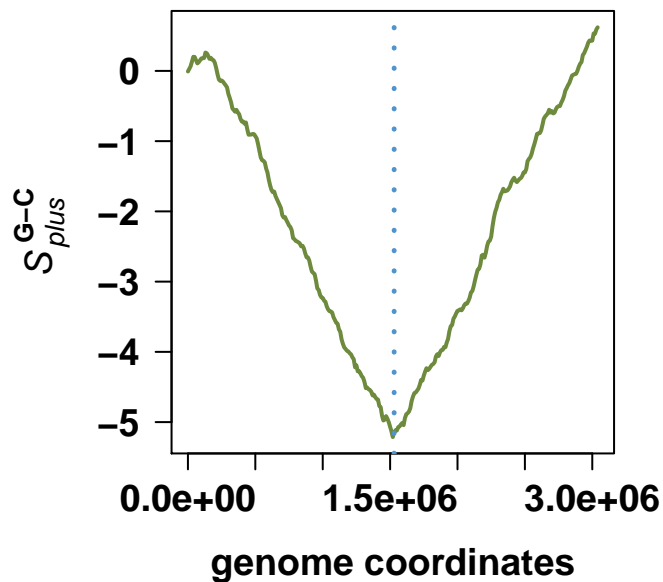
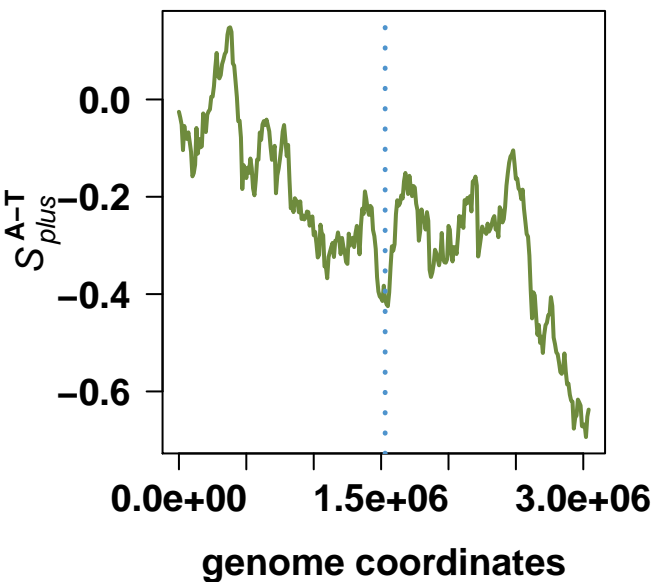
### Shewanella denitrificans OS217



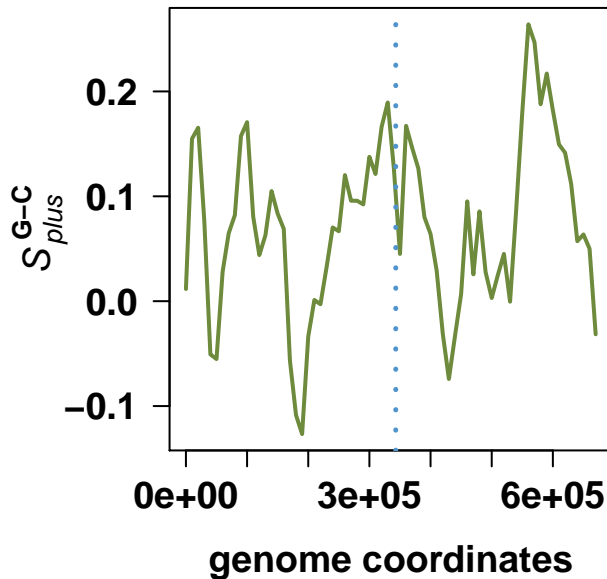
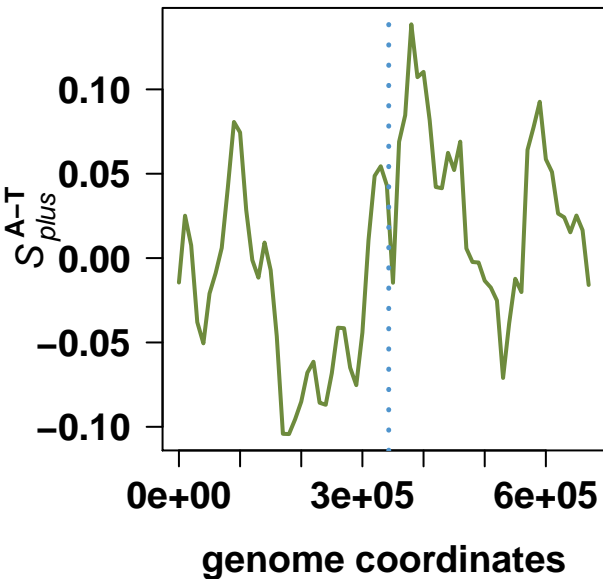
## Chromohalobacter salexigens DSM 3043



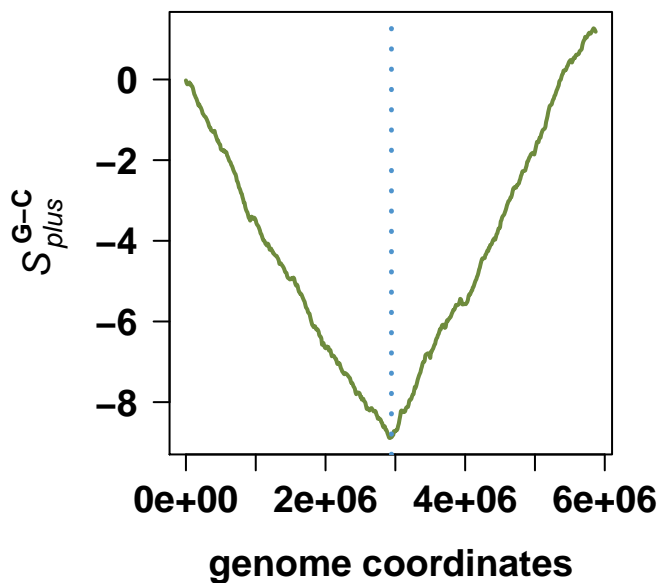
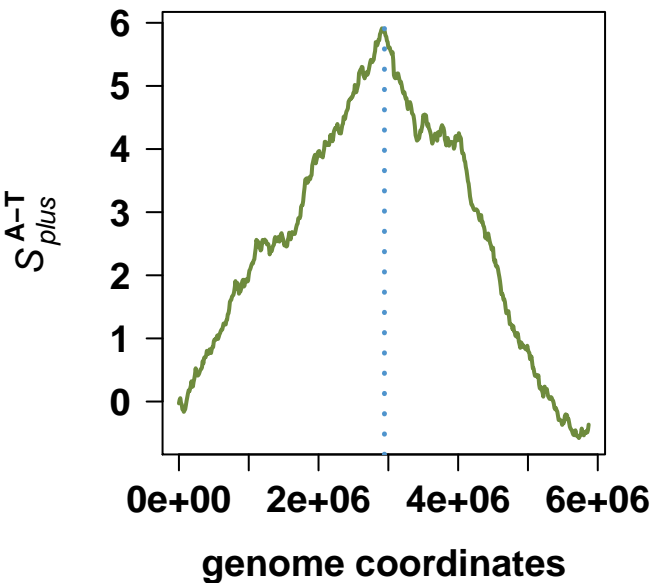
## Psychrobacter cryohalolentis K5



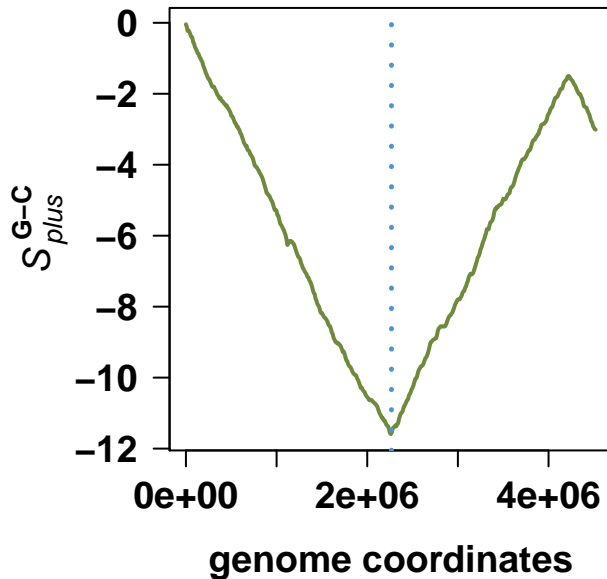
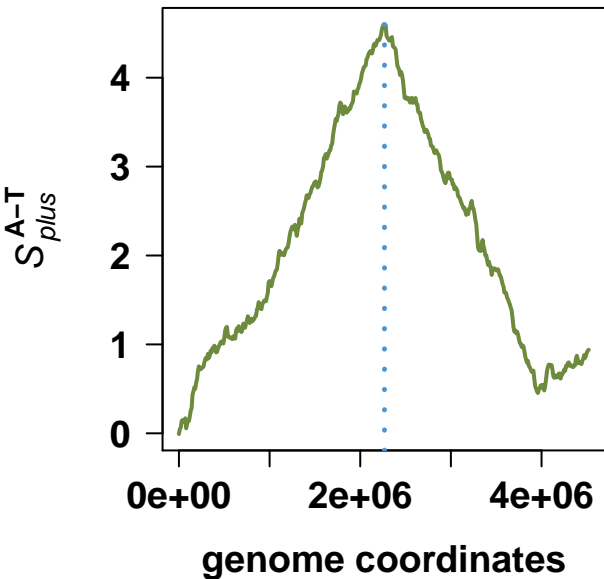
### Baumannia cicadellinicola str. Hc (Homalodisca coagulata)



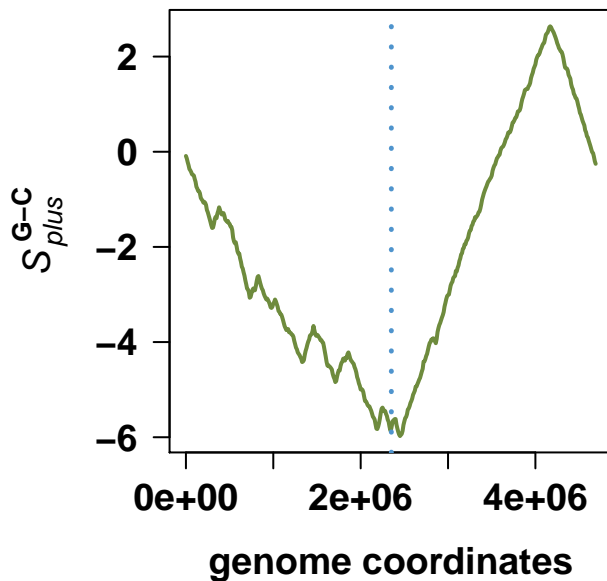
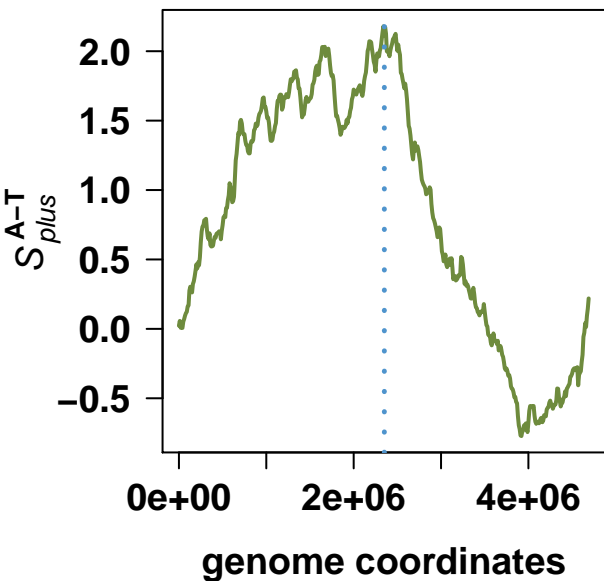
### Pseudomonas entomophila L48



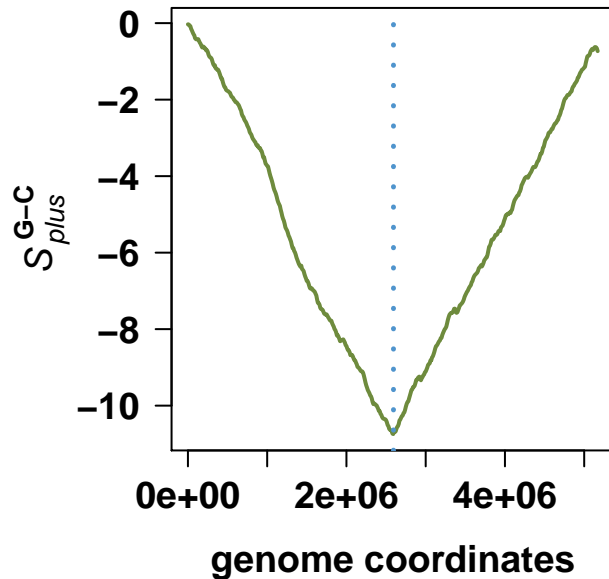
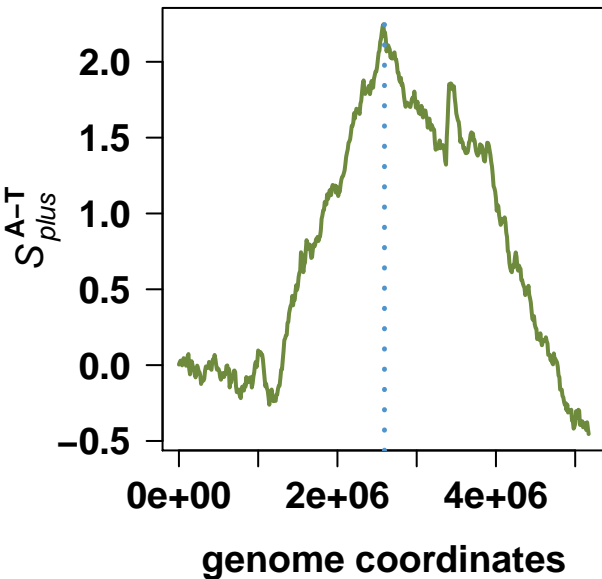
### *Yersinia pestis* Nepal516



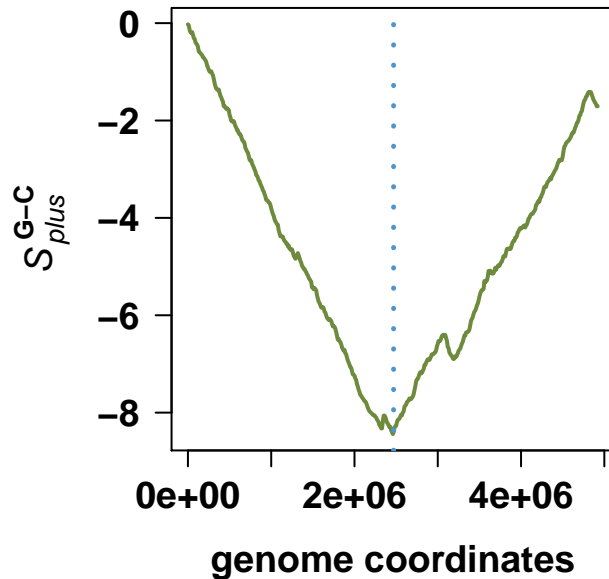
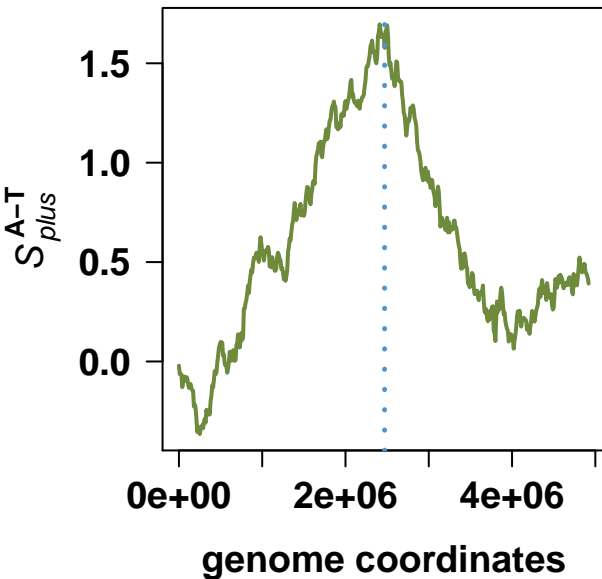
### *Yersinia pestis* Antiqua



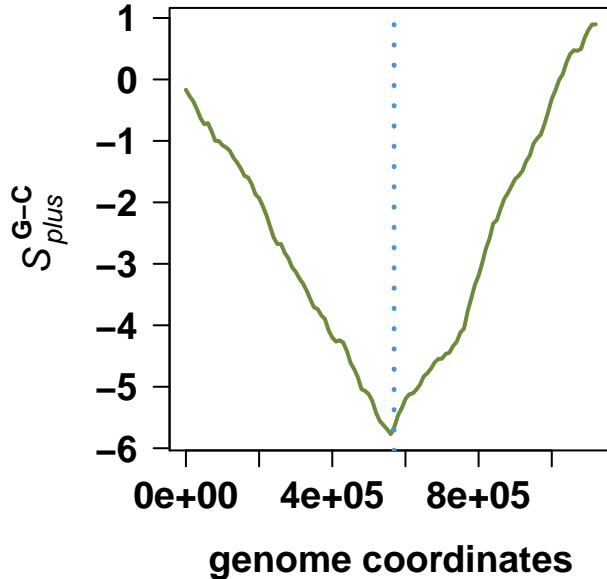
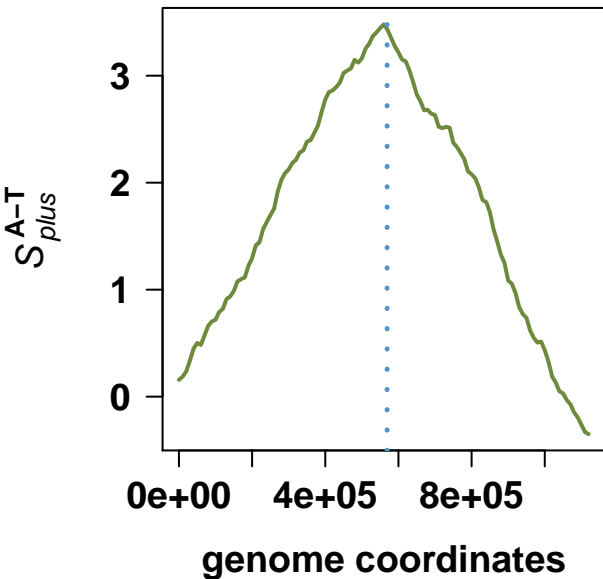
## *Pseudoalteromonas atlantica* T6c



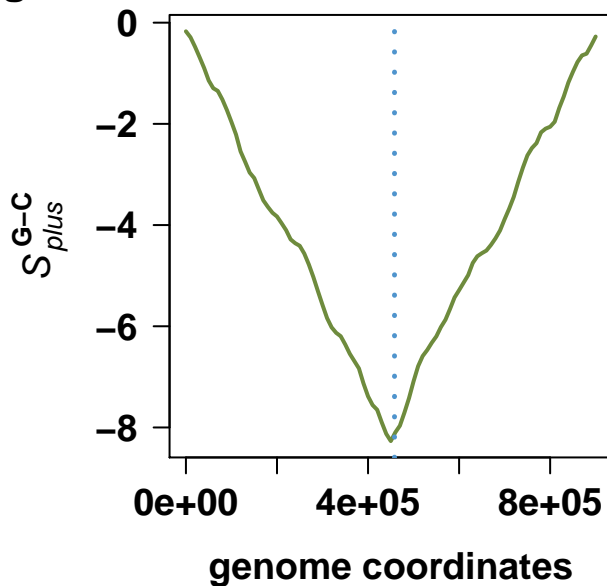
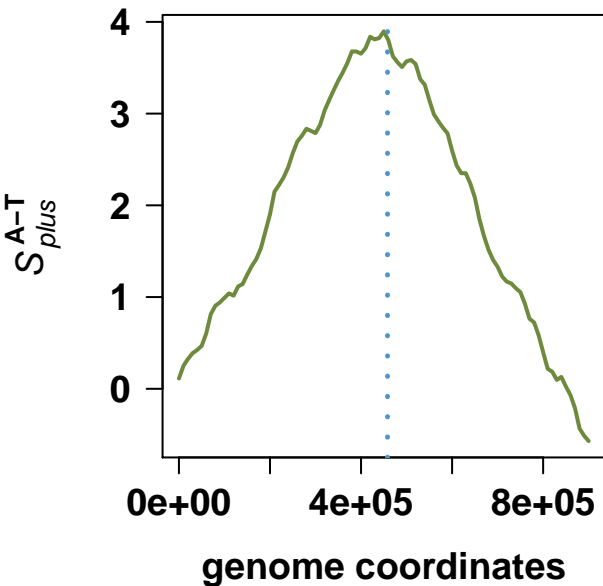
## *Escherichia coli* 536



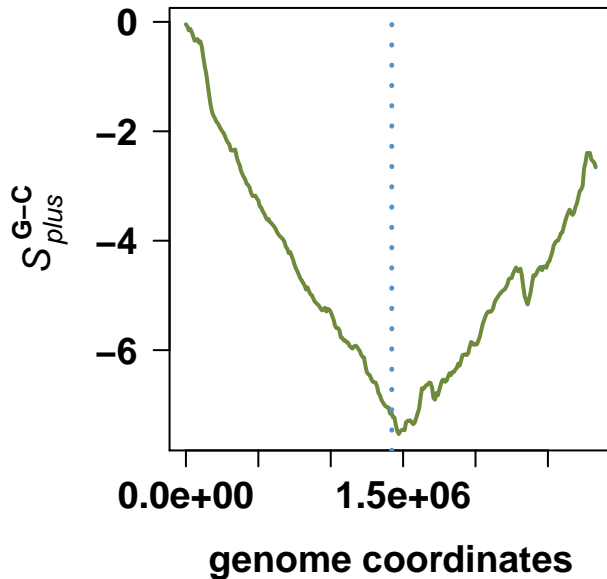
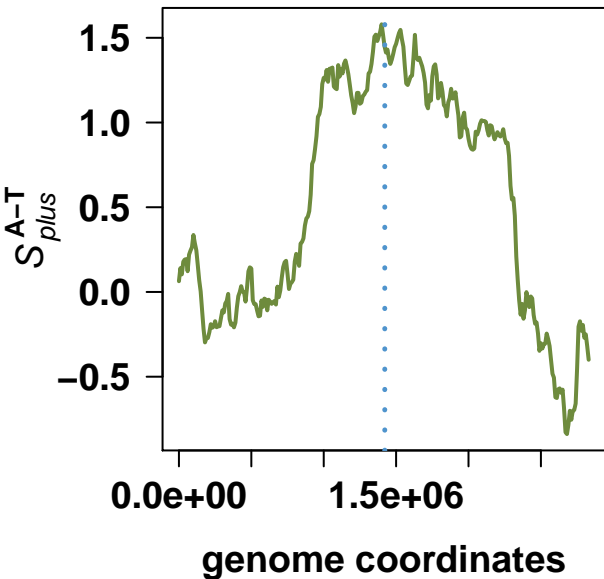
### Treponema pallidum subsp. pallidum str. Nichols



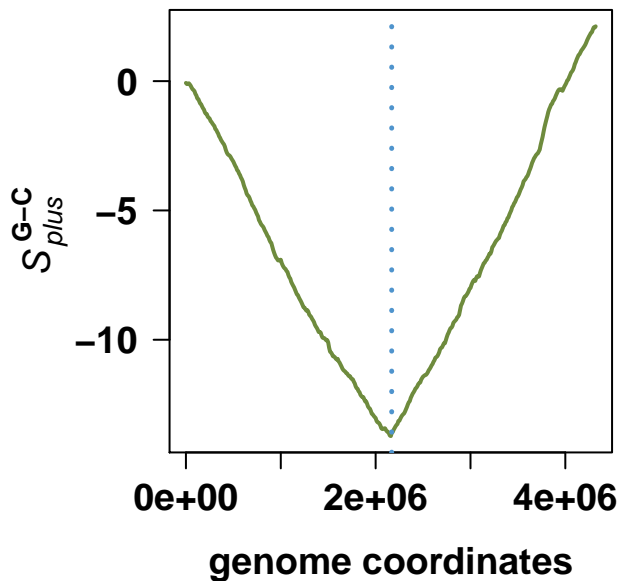
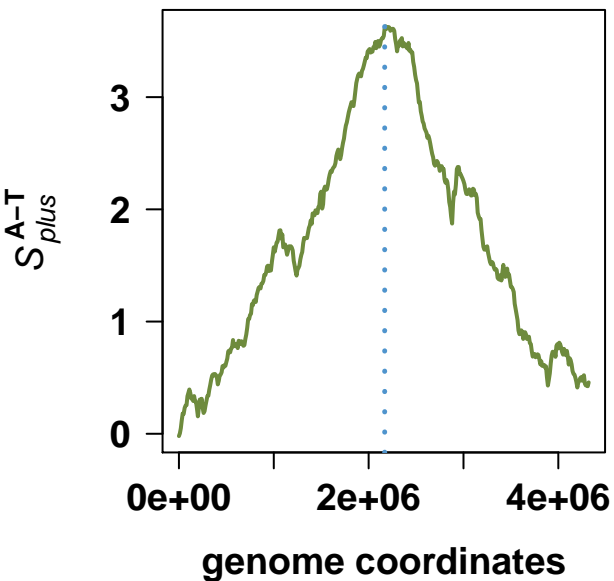
### Borrelia burgdorferi B31



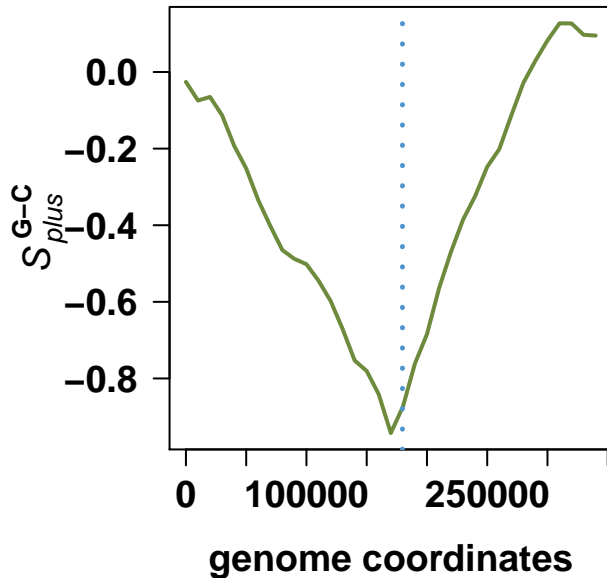
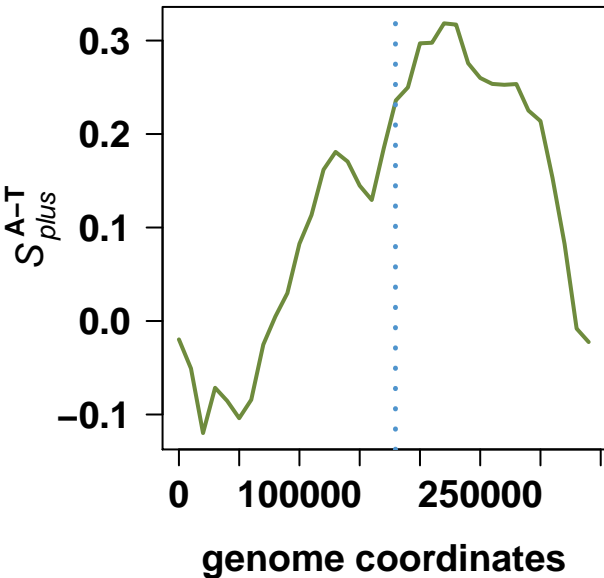
### *Treponema denticola* ATCC 35405



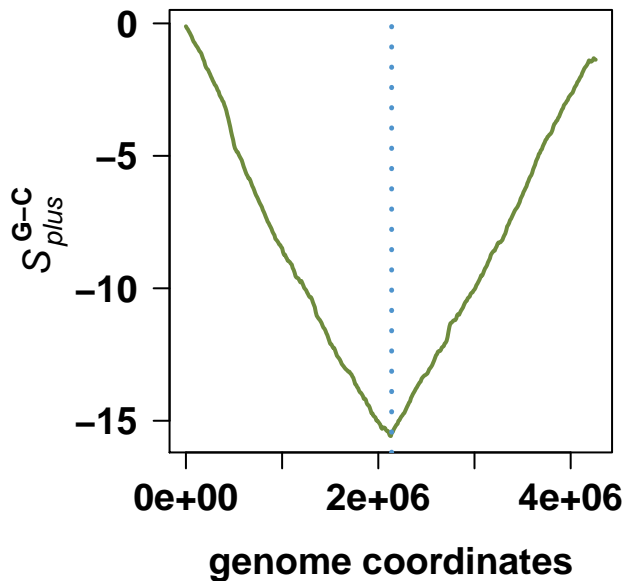
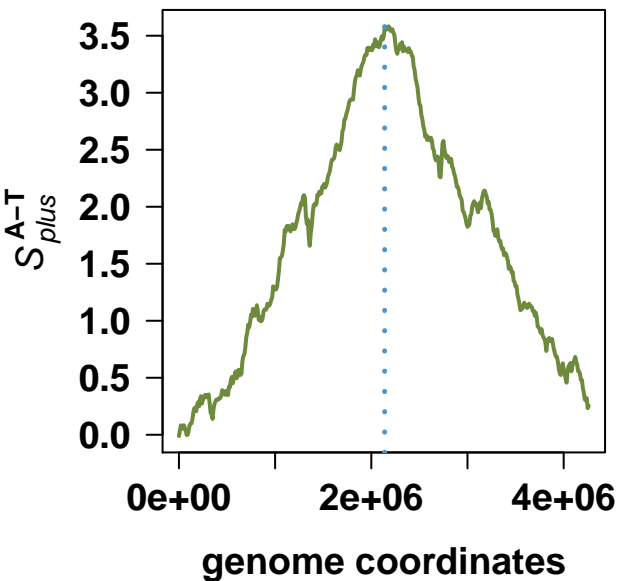
### *Leptospira interrogans* serovar Lai str. 56601



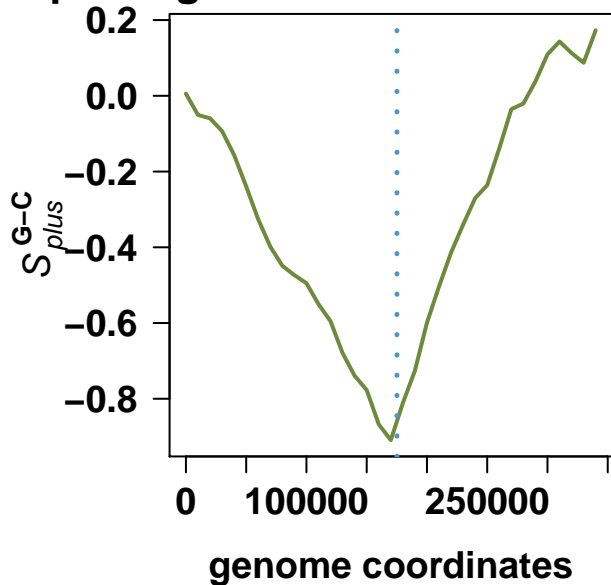
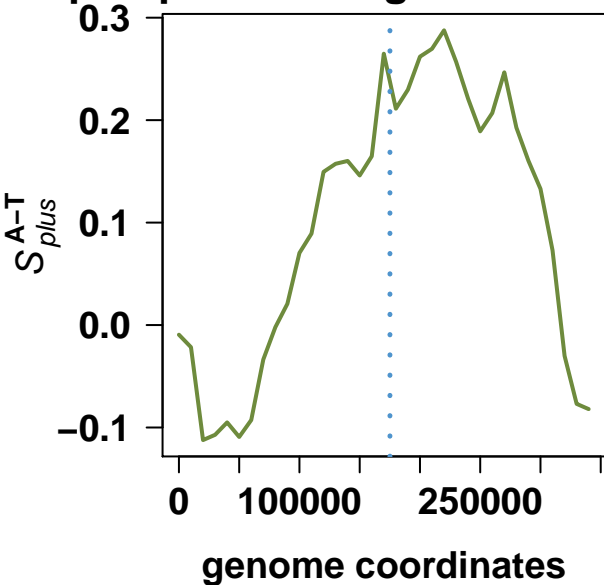
### *Leptospira interrogans* serovar Lai str. 56601



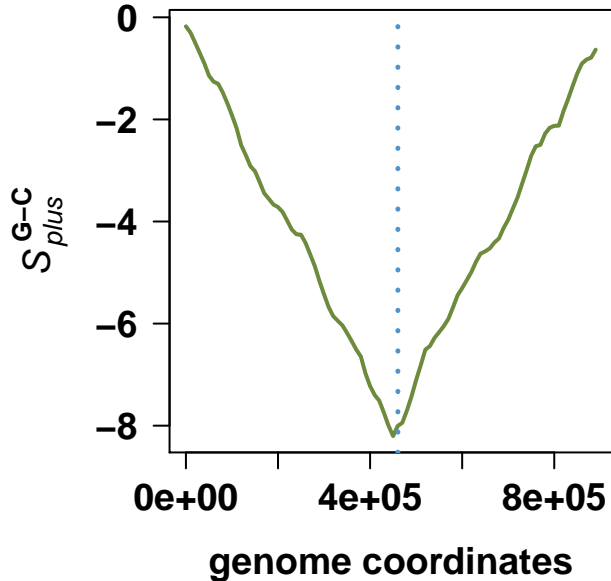
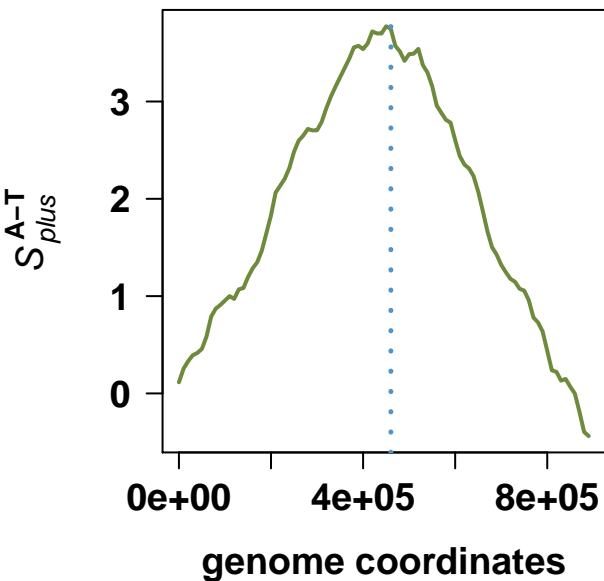
### *Leptospira interrogans* serovar Copenhageni str. Fiocruz L1-130



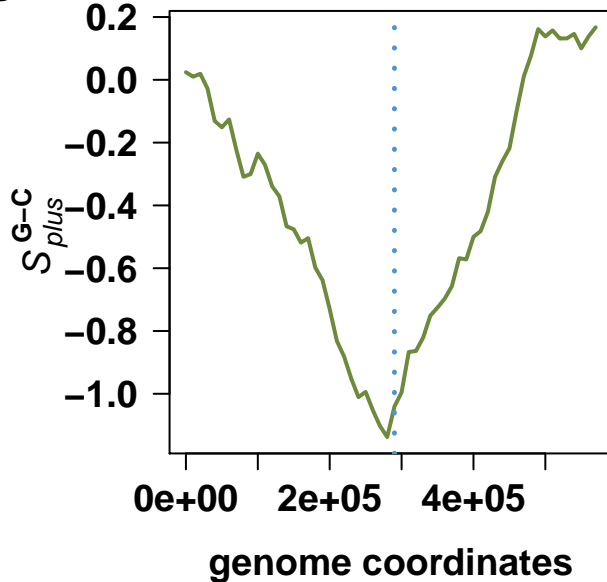
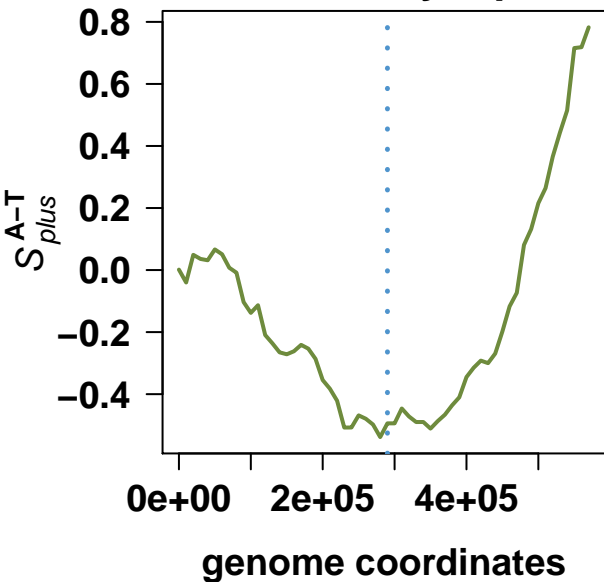
# *Leptospira interrogans* serovar Copenhageni str. Fiocruz L1-130



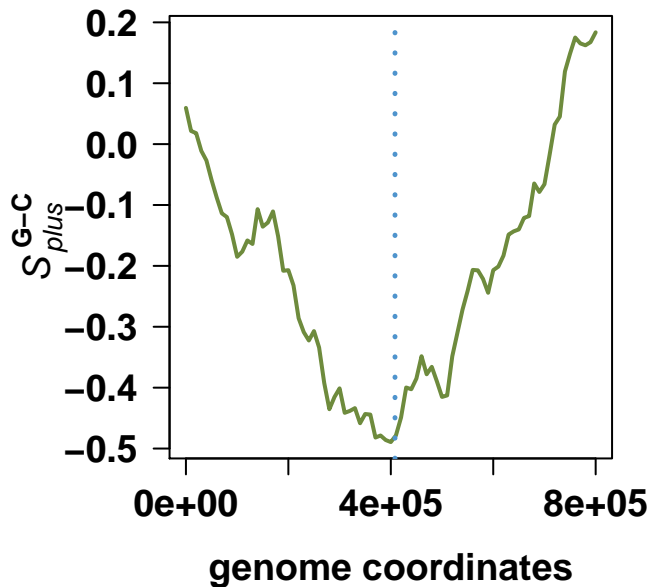
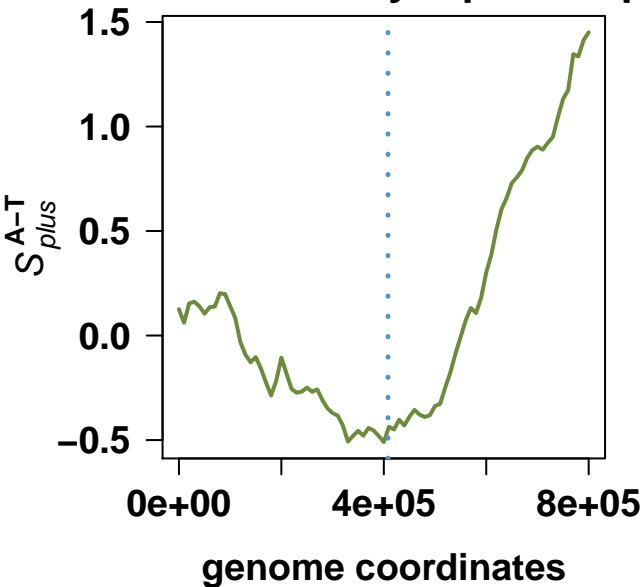
# *Borrelia garinii* PBi



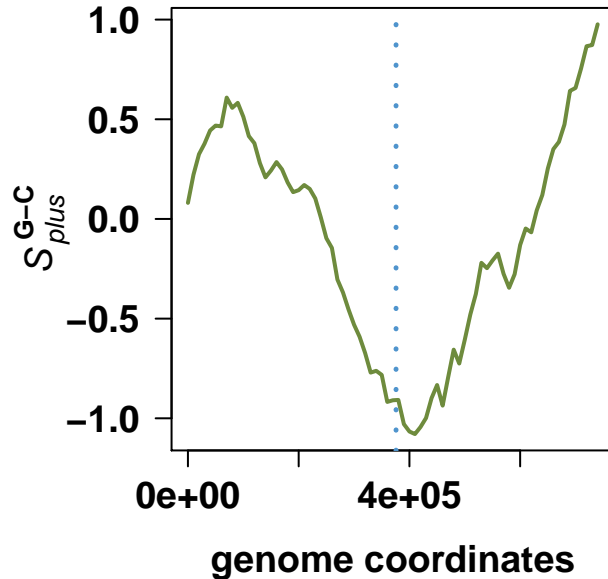
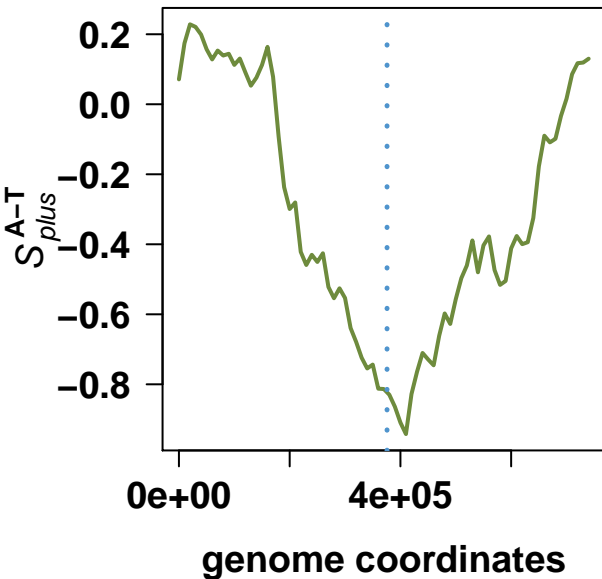
### **Mycoplasma genitalium G37**



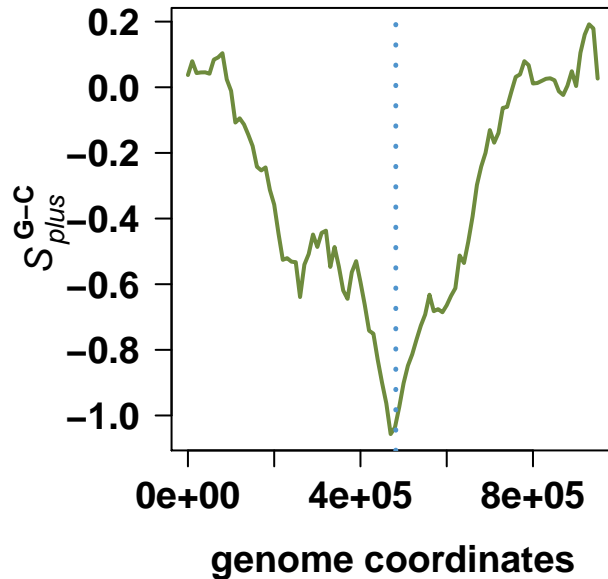
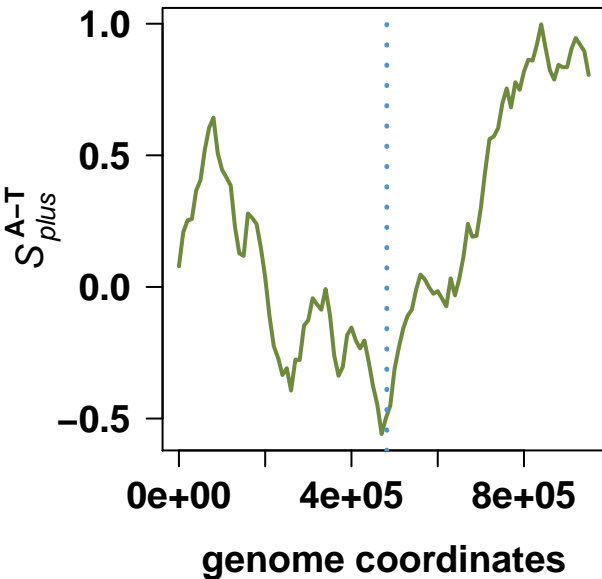
### **Mycoplasma pneumoniae M129**



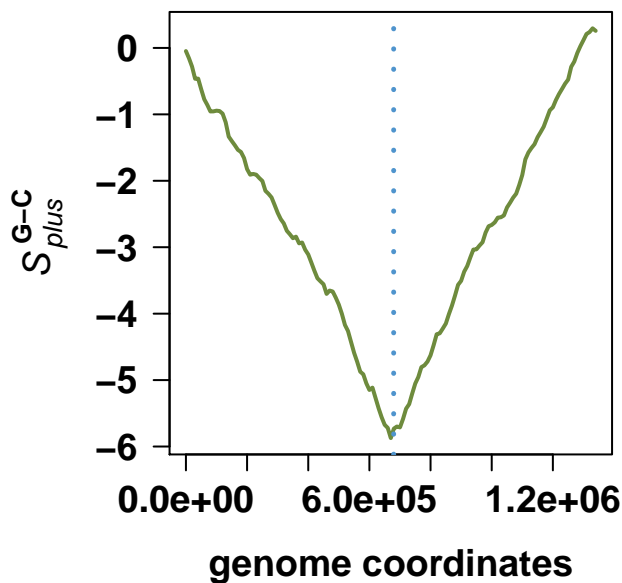
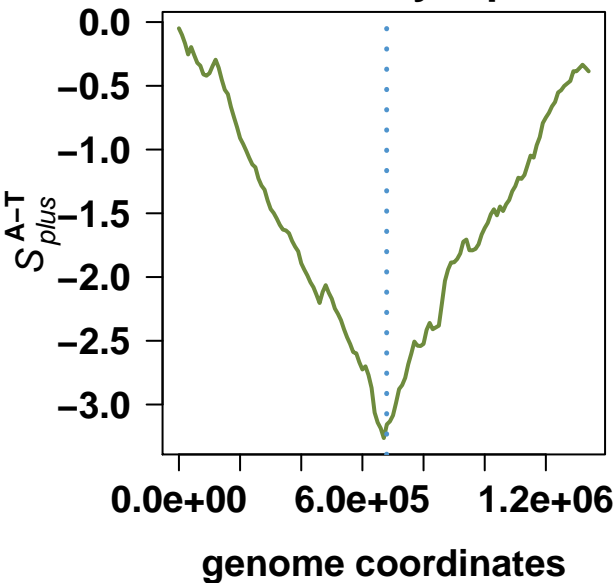
### Ureaplasma parvum serovar 3 str. ATCC 700970



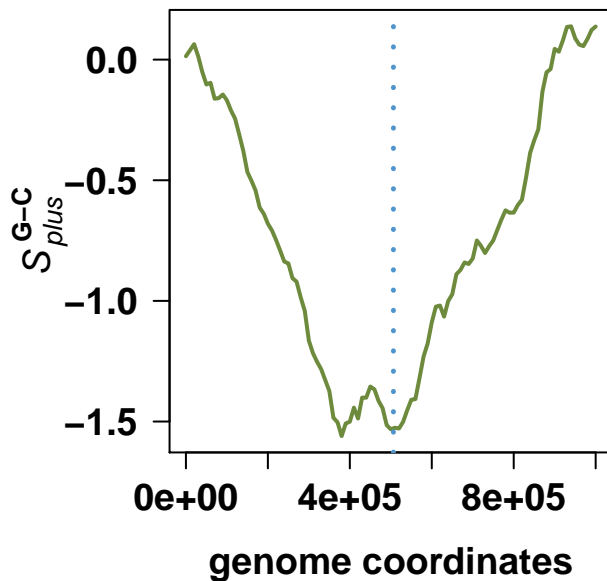
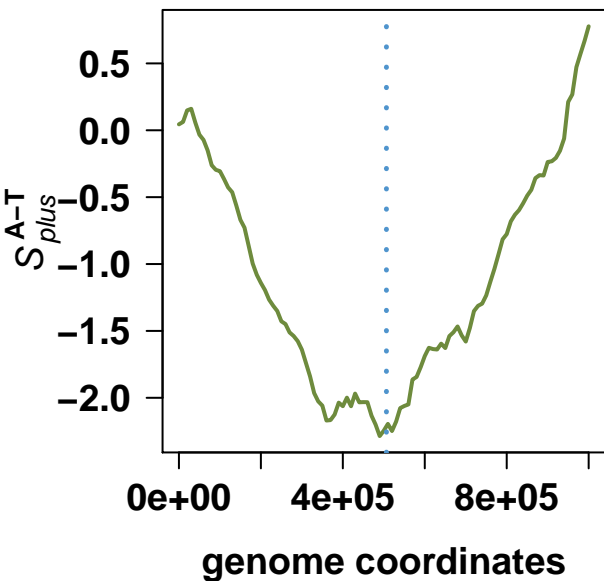
### Mycoplasma pulmonis UAB CTIP



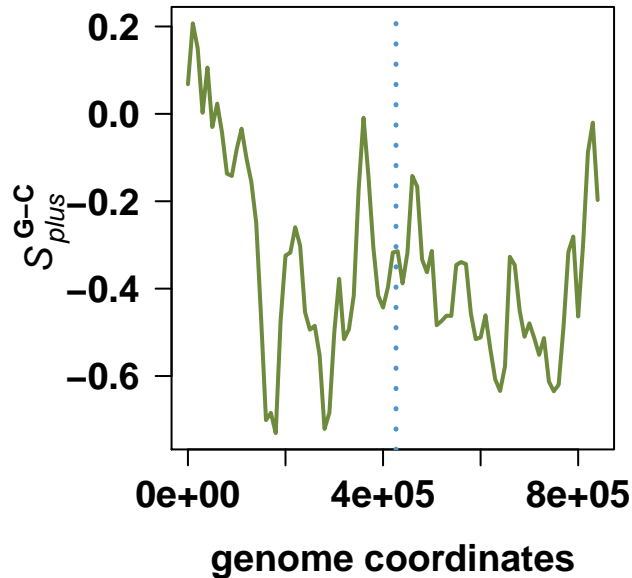
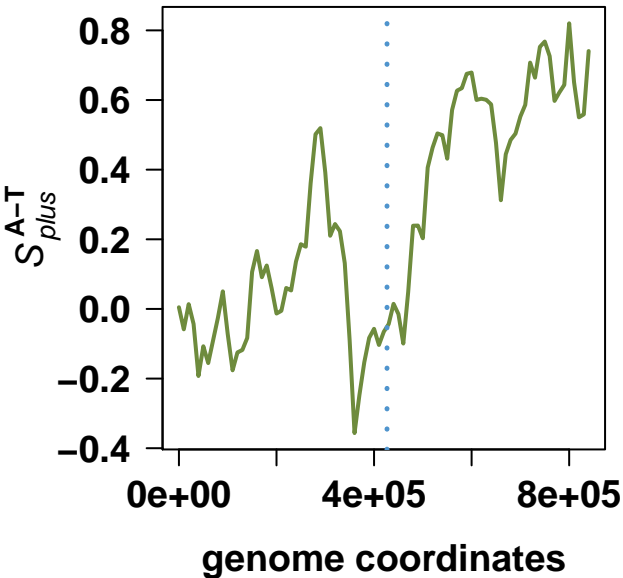
### **Mycoplasma penetrans HF-2**



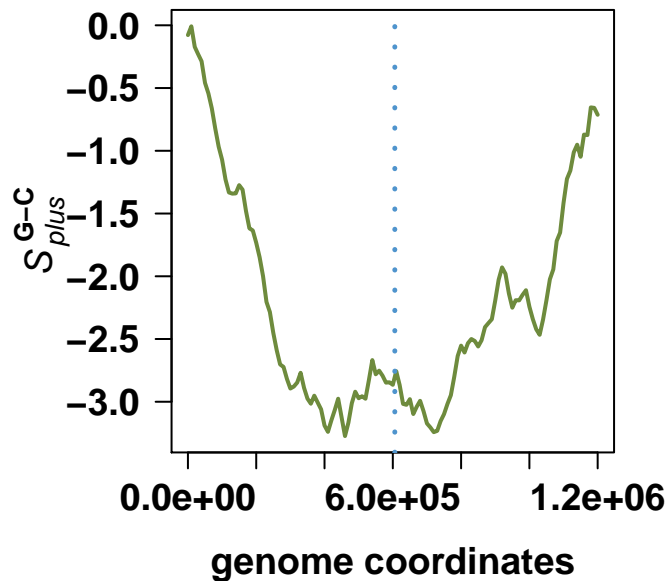
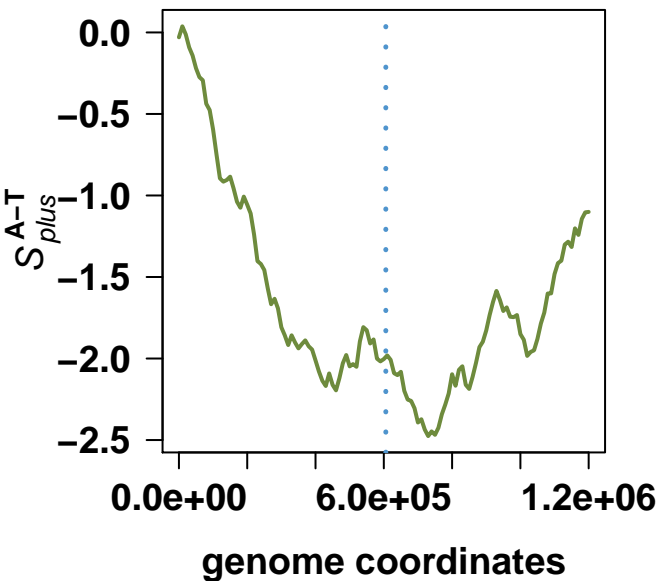
### **Mycoplasma gallisepticum str. R(low)**



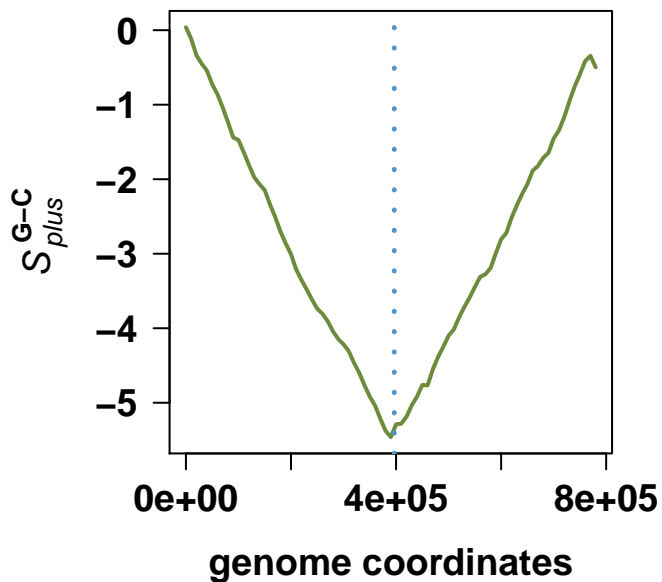
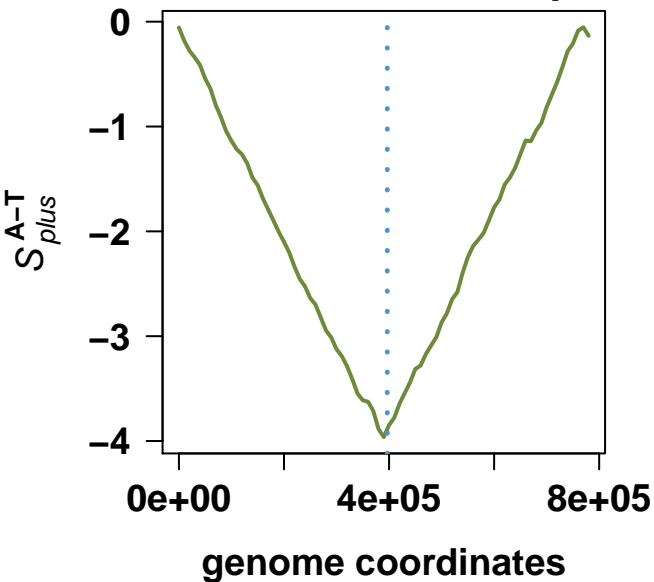
### Onion yellows phytoplasma OY-M



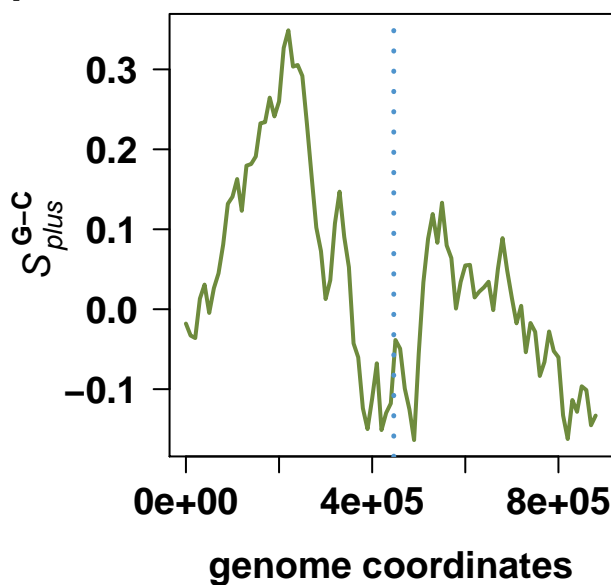
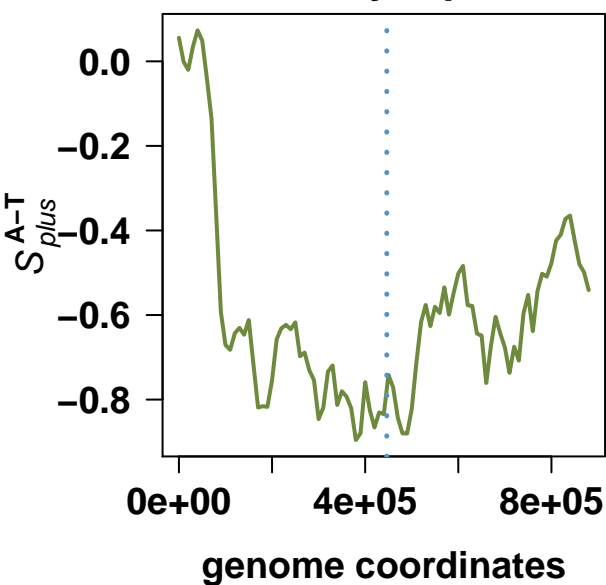
### Mycoplasma mycoides subsp. mycoides SC str. PG1



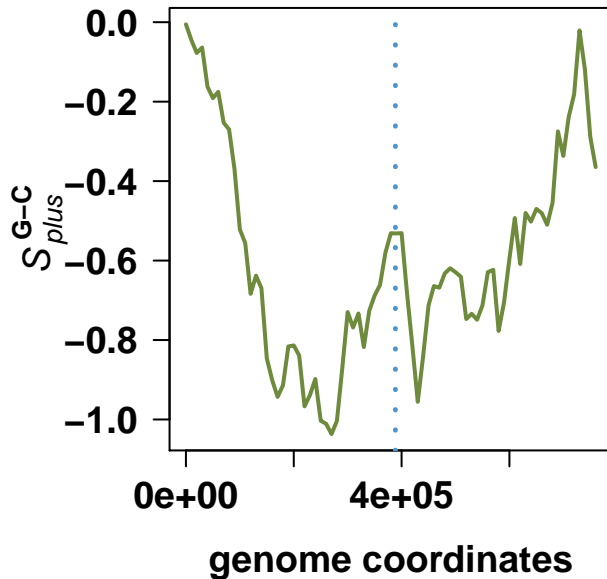
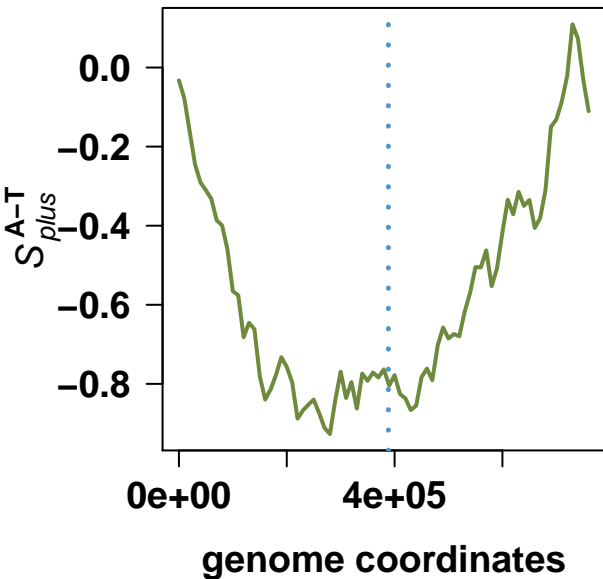
### Mesoplasma florum L1



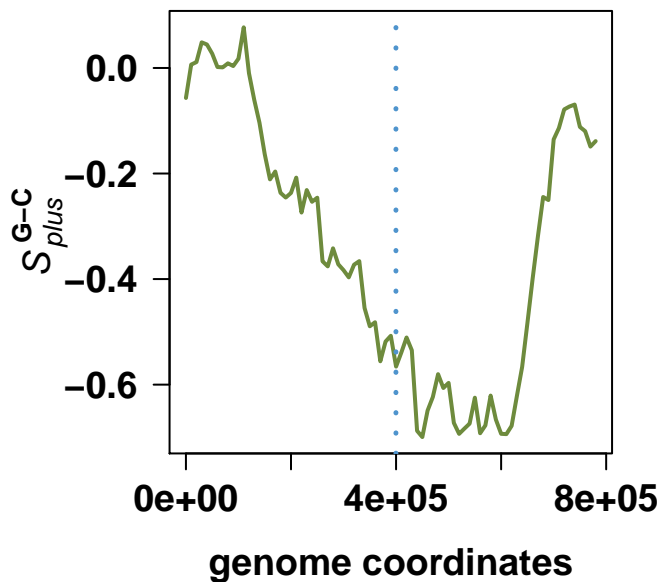
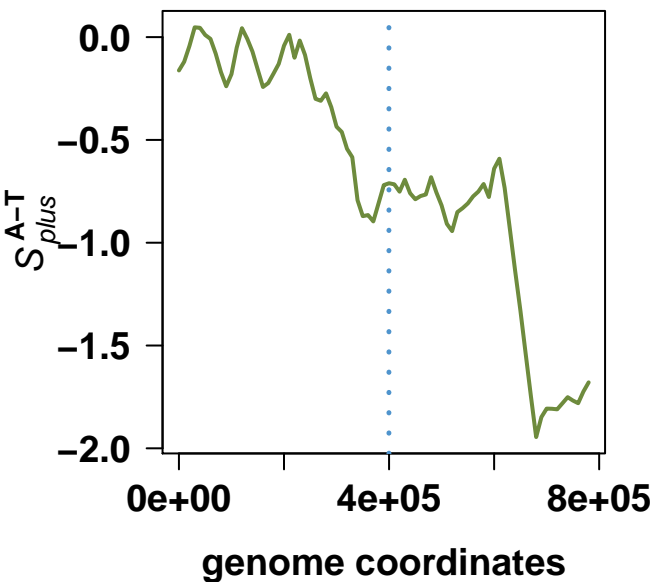
### Mycoplasma hyopneumoniae 232



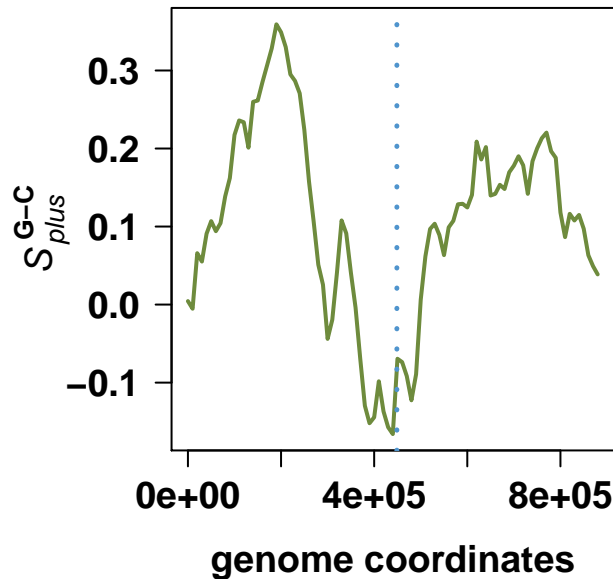
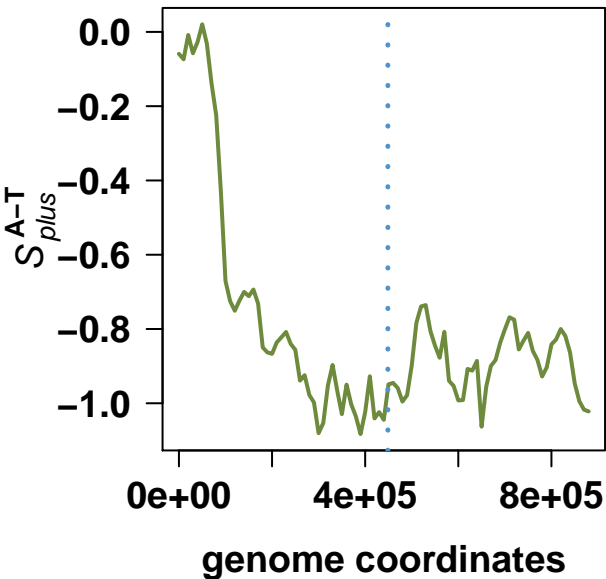
### **Mycoplasma mobile 163K**



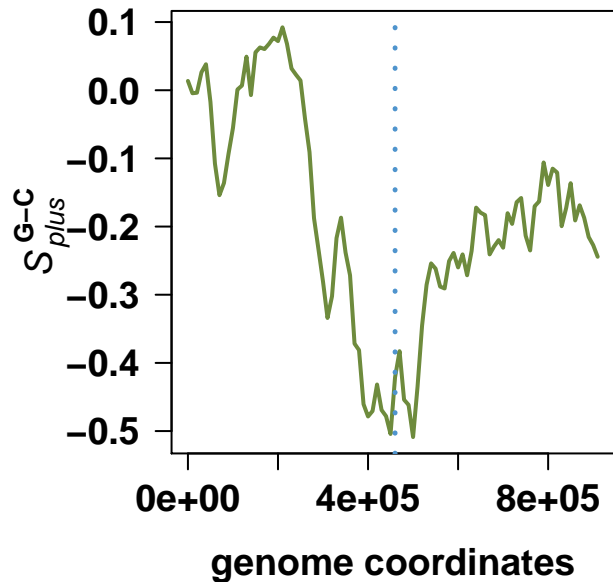
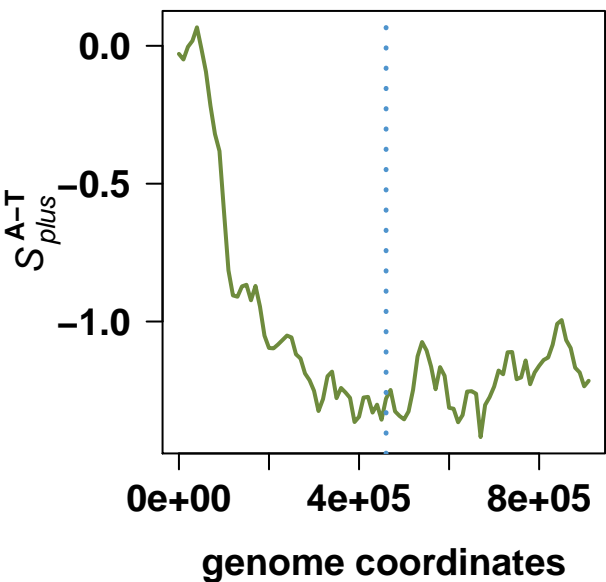
### **Mycoplasma synoviae 53**



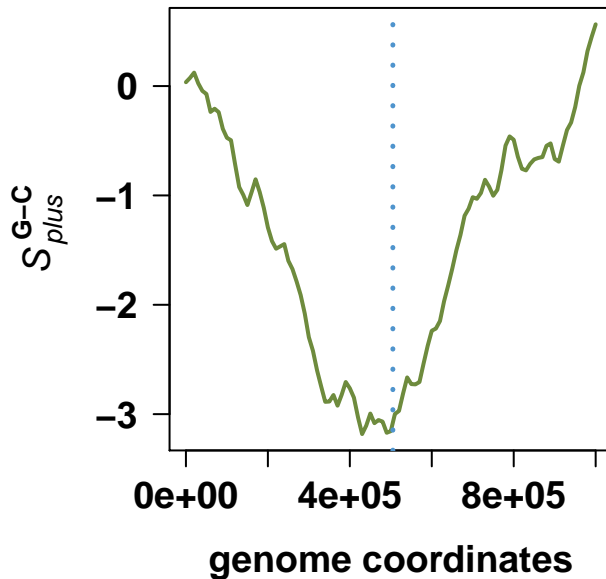
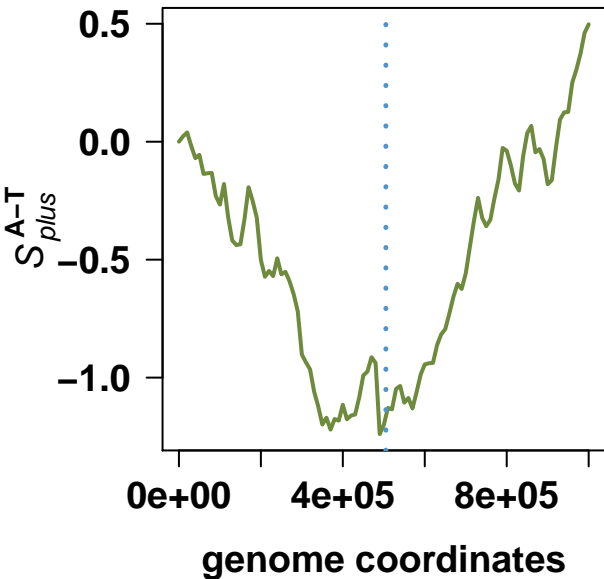
## *Mycoplasma hyopneumoniae* J



## *Mycoplasma hyopneumoniae* 7448



### **Mycoplasma capricolum subsp. capricolum ATCC 27343**



### **Aster yellows witches'-broom phytoplasma AYWB**

