



## Paragon x Watkins Landrace JIC 2013 QTL Plots

The bread wheat landrace NAM (nested association mapping) panel is a panel of bi-parental segregating F4 single-seed populations from crosses of spring wheat accession 'Paragon' with diverse wheat germplasm, particularly from the core set of the AE Watkins landrace collection. Population development and KASP genotyping was conducted within the WISP<sup>1</sup> project.

Wheat landraces and varieties were collected from markets from 32 countries across the world. 119 of these accessions have been selected as a diverse core set, which is available from Seed-Stor<sup>2</sup>. A changing set of several NAM populations is grown every year in field trials at JIC. Phenotype data is available from Designing Future Wheat (DFW) WP3 Landraces<sup>3</sup>. QTL analyses were conducted on resulting phenotype data using R/qtl software<sup>4</sup>.

**QTL plots on 2013 trials for the following populations are attached:**

population name	traits
ParW199	Ht, DTEM, TGRWT, GRSA, GRWD, GRLG
ParW246	Ht, DTEM, TGRWT, GRSA, GRWD, GRLG
ParW471	Ht, DTEM
ParW627	Ht, DTEM
ParW707	Ht, DTEM
ParW827	Ht, DTEM

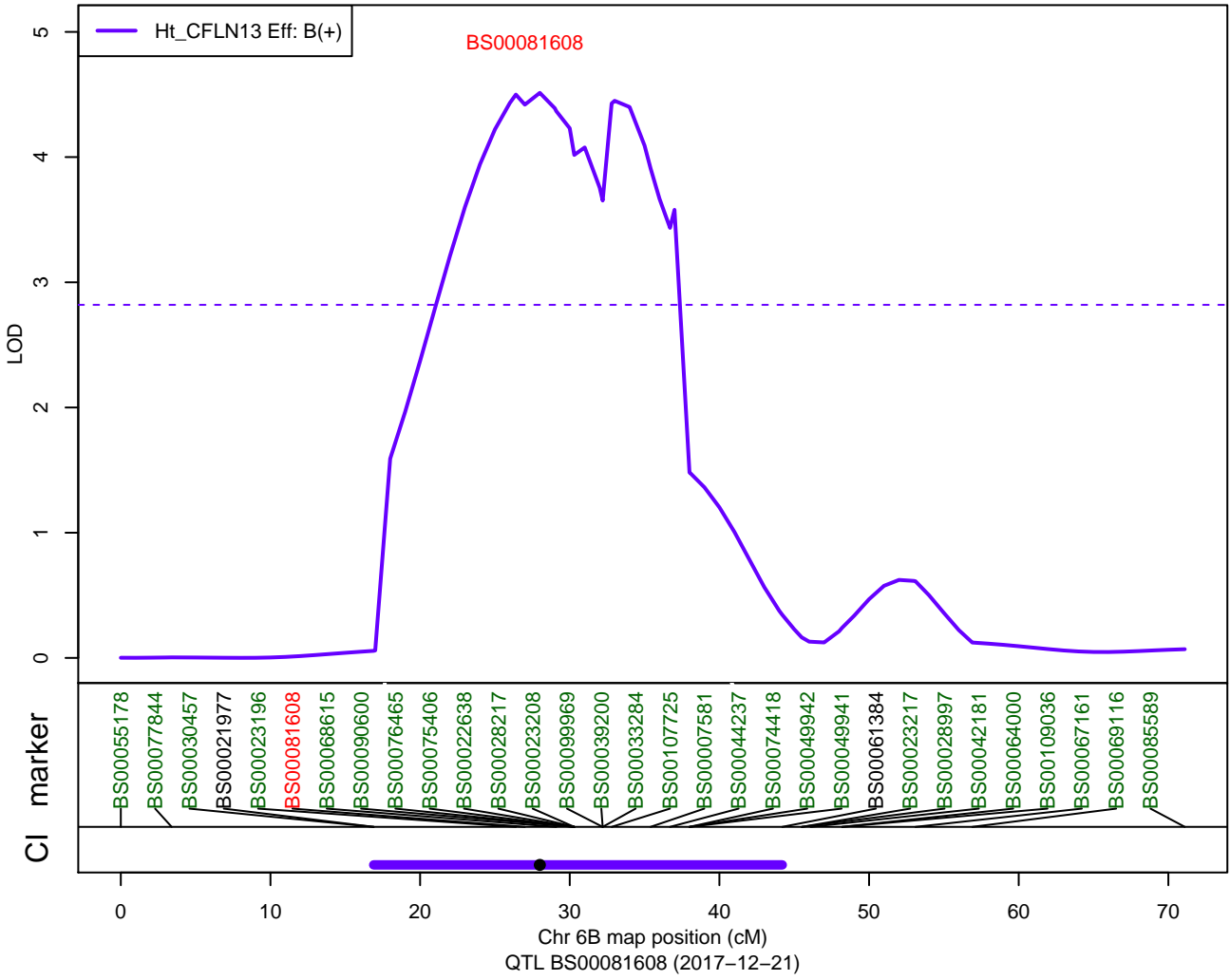
**Plot legends:** The title names trait, chromosome and population. QTL LOD scores are plotted against the chromosome. Marker names are given at the bottom of the plot. Peak markers are given over the QTL peak. Significance LOD thresholds are indicated as horizontal dotted lines. Abbreviations: DTEM: days to ear emergence after May 1st, GRLG: grain length [mm], GRSA: grain cross section area [mm<sup>2</sup>], GRWD: grain width [mm], Ht: plant height [cm], TGRWT: thousand grain weight [g].

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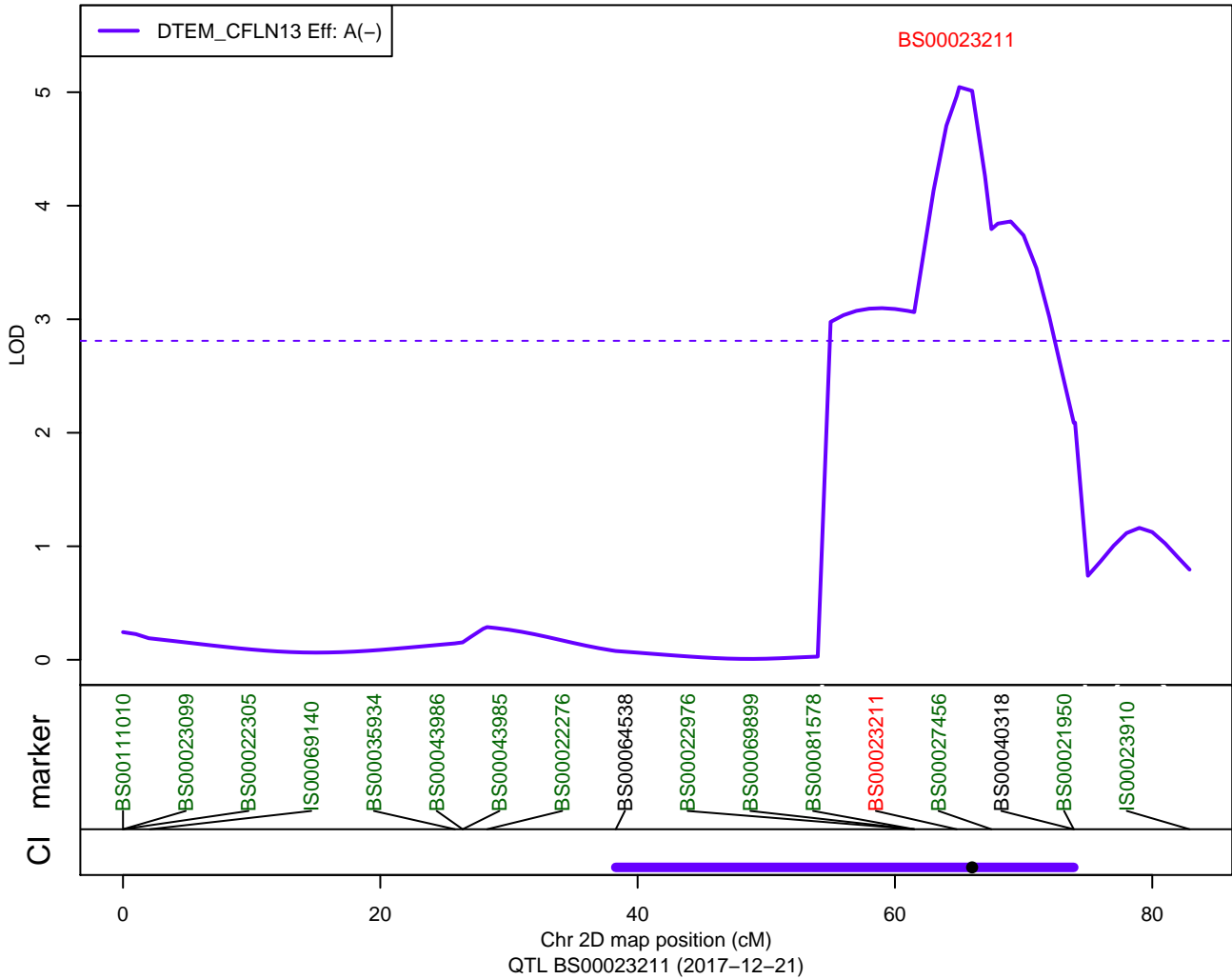
22/01/2018 Luzie Wingen (luzie.wingen@jic.ac.uk)

<sup>1</sup> [www.wheatisp.org](http://www.wheatisp.org) <sup>2</sup> <https://seedstor.ac.uk> <sup>3</sup> <http://wisplandrangepillar.jic.ac.uk/> <sup>4</sup> [www.rqtl.org](http://www.rqtl.org)

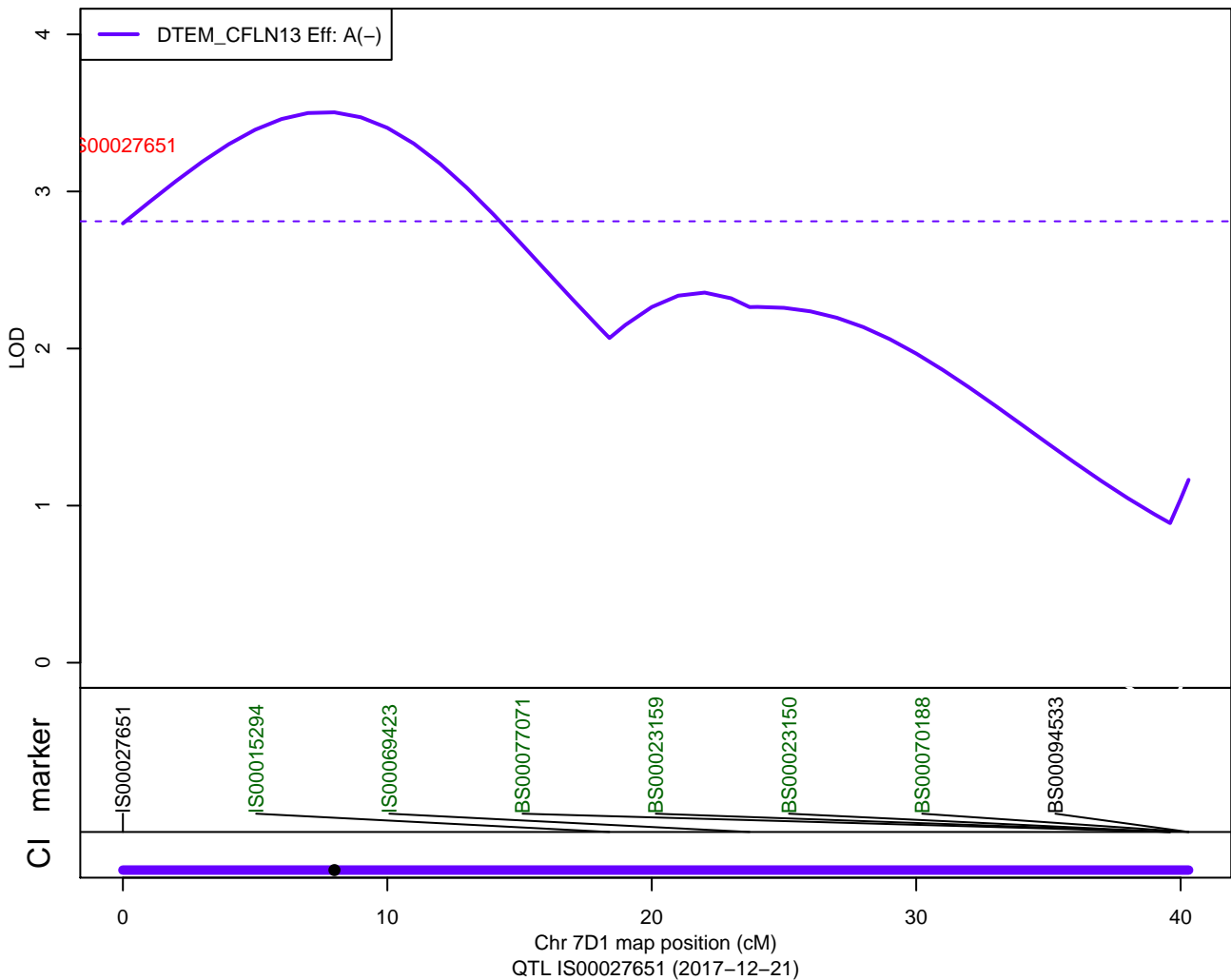
QTLs: ParW199 - Ht - 6B



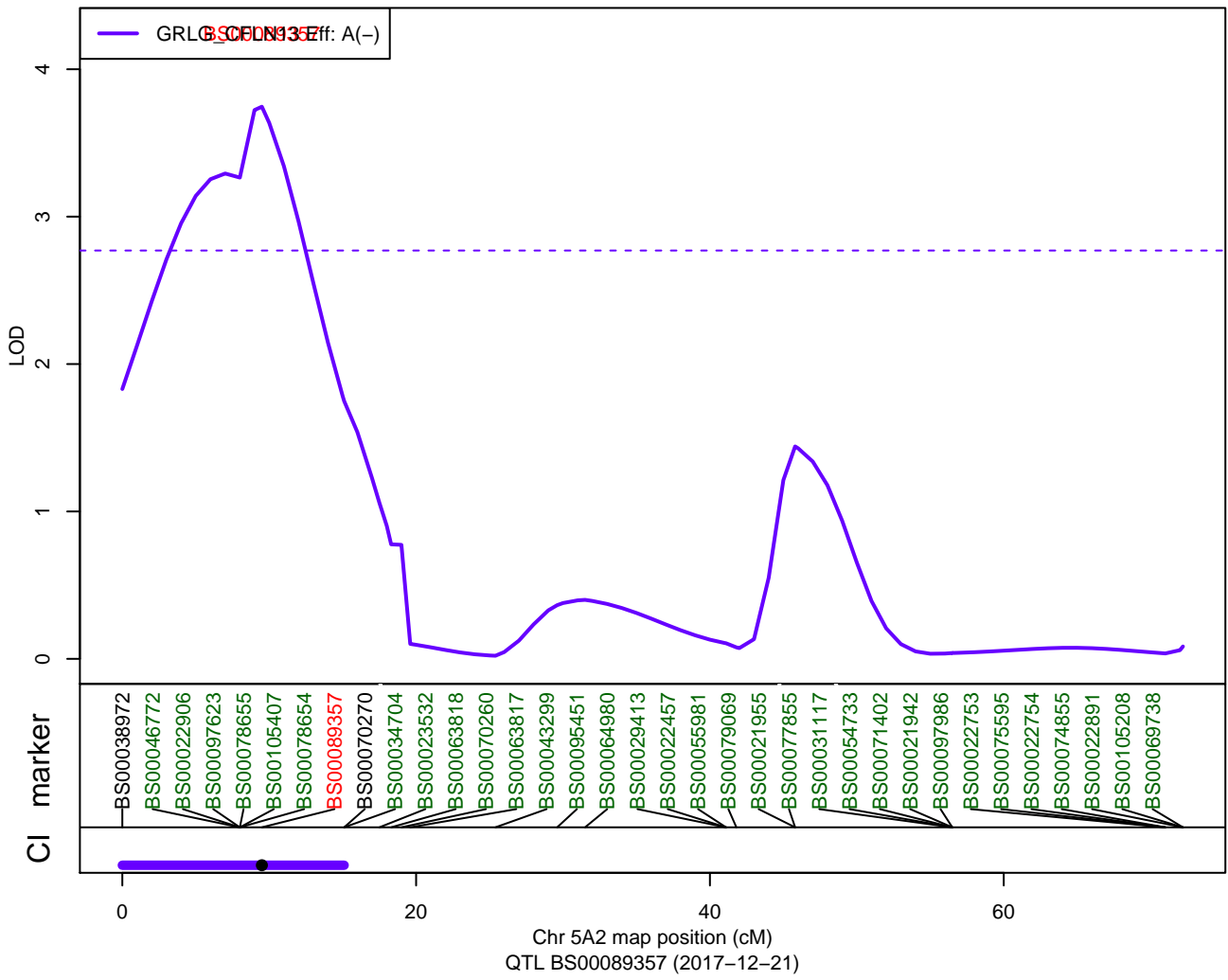
### QTLs: ParW199 – DTEM – 2D



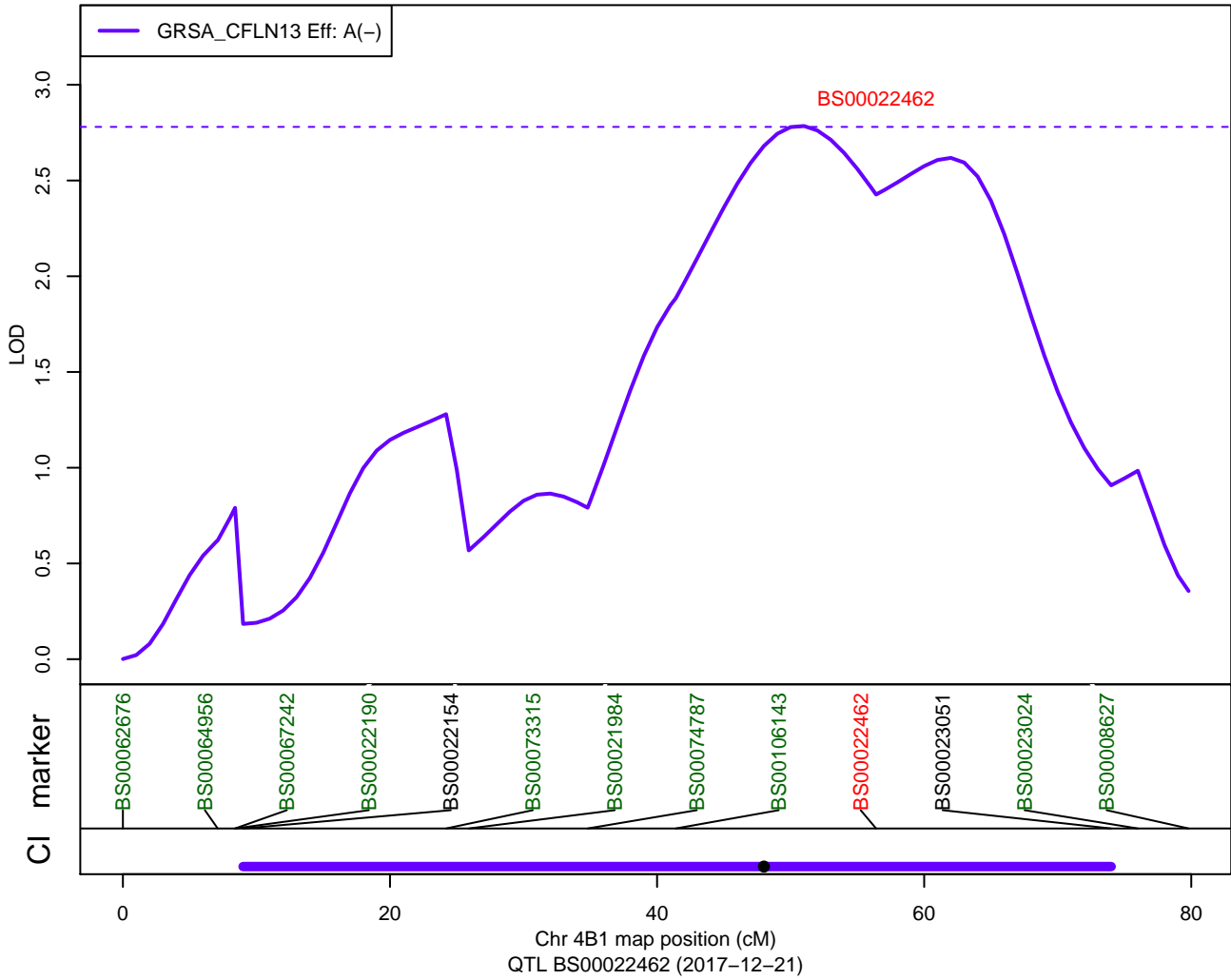
### QTLs: ParW199 – DTEM – 7D1



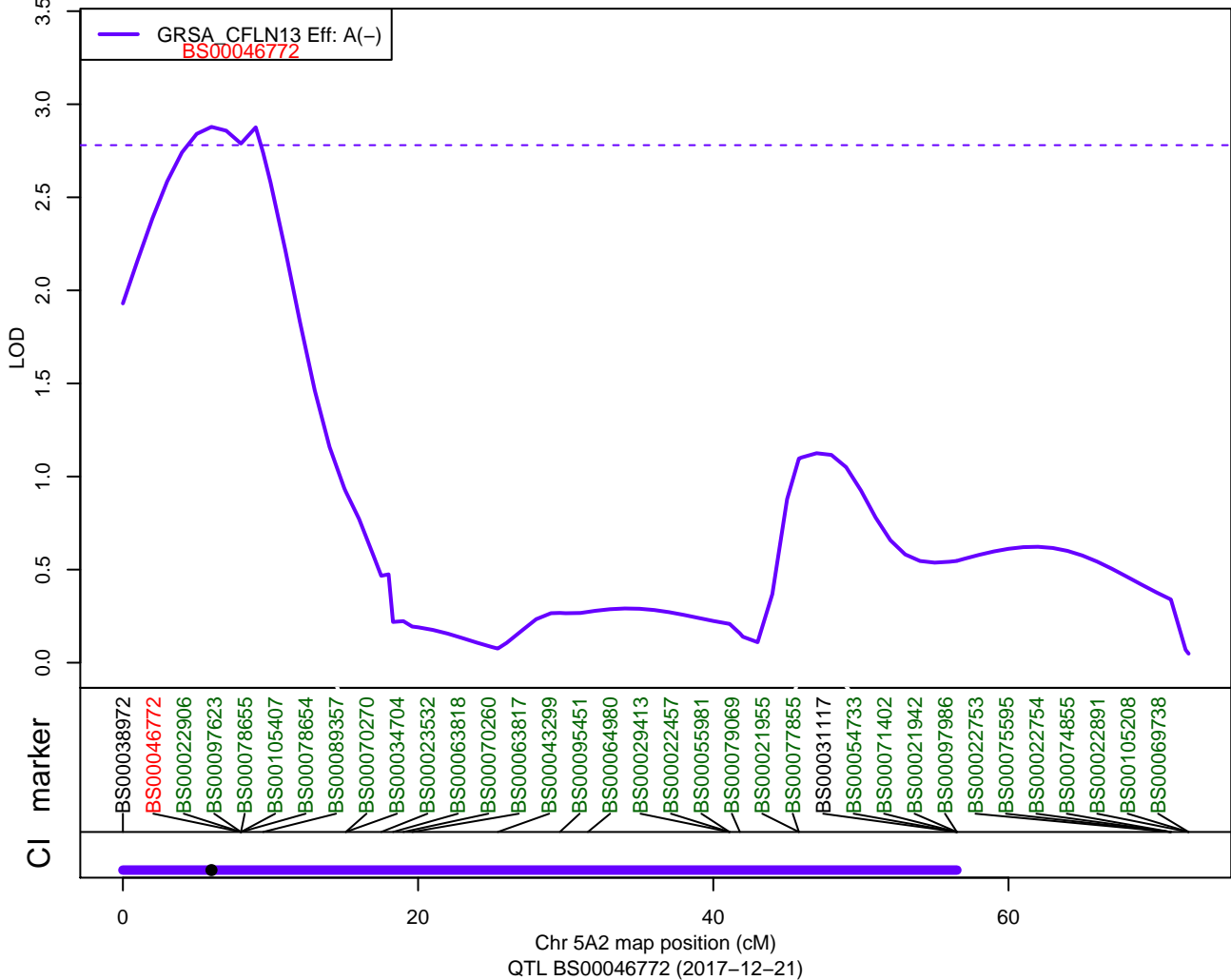
QTLs: ParW199 – GRLG – 5A2



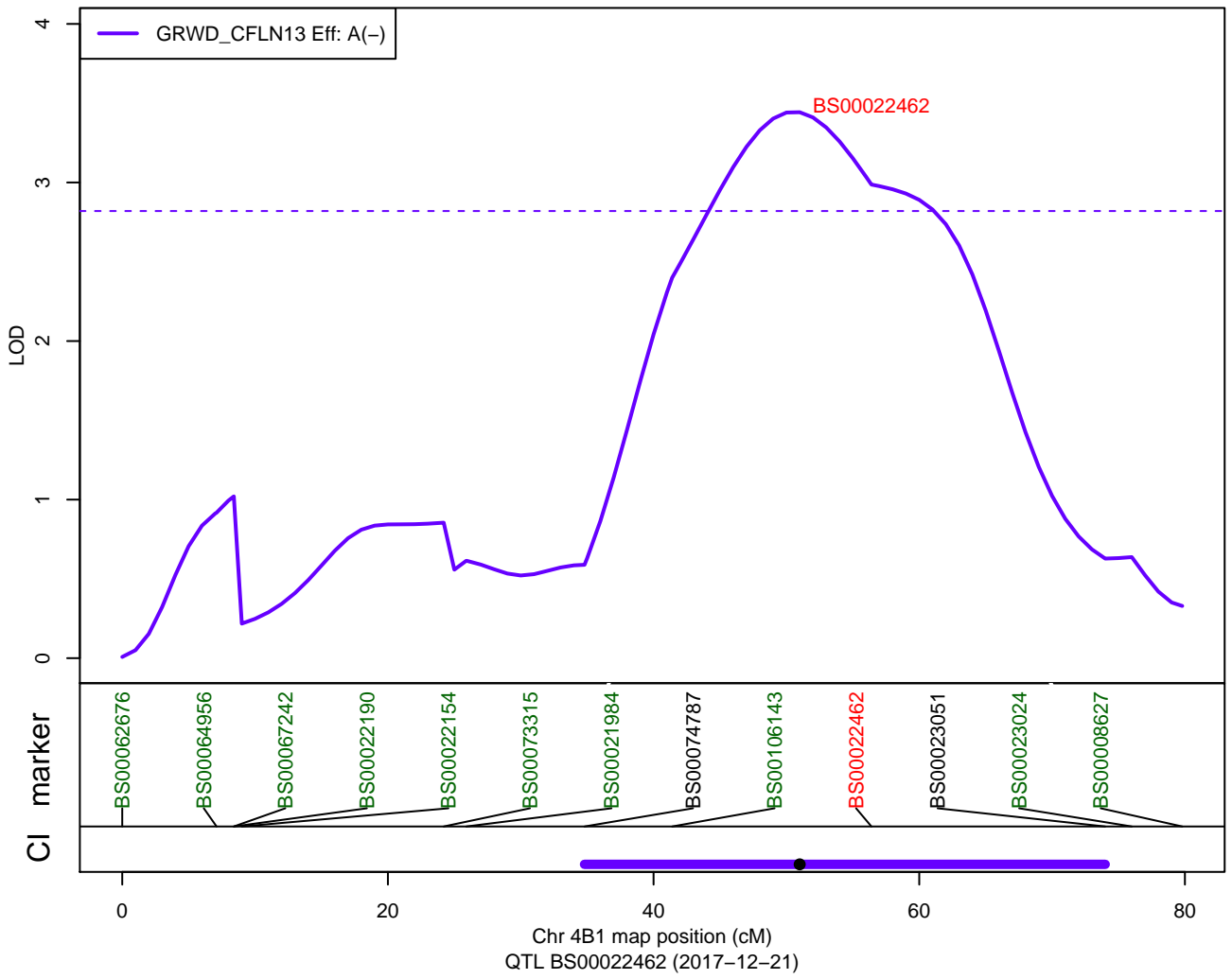
QTLs: ParW199 – GRSA – 4B1



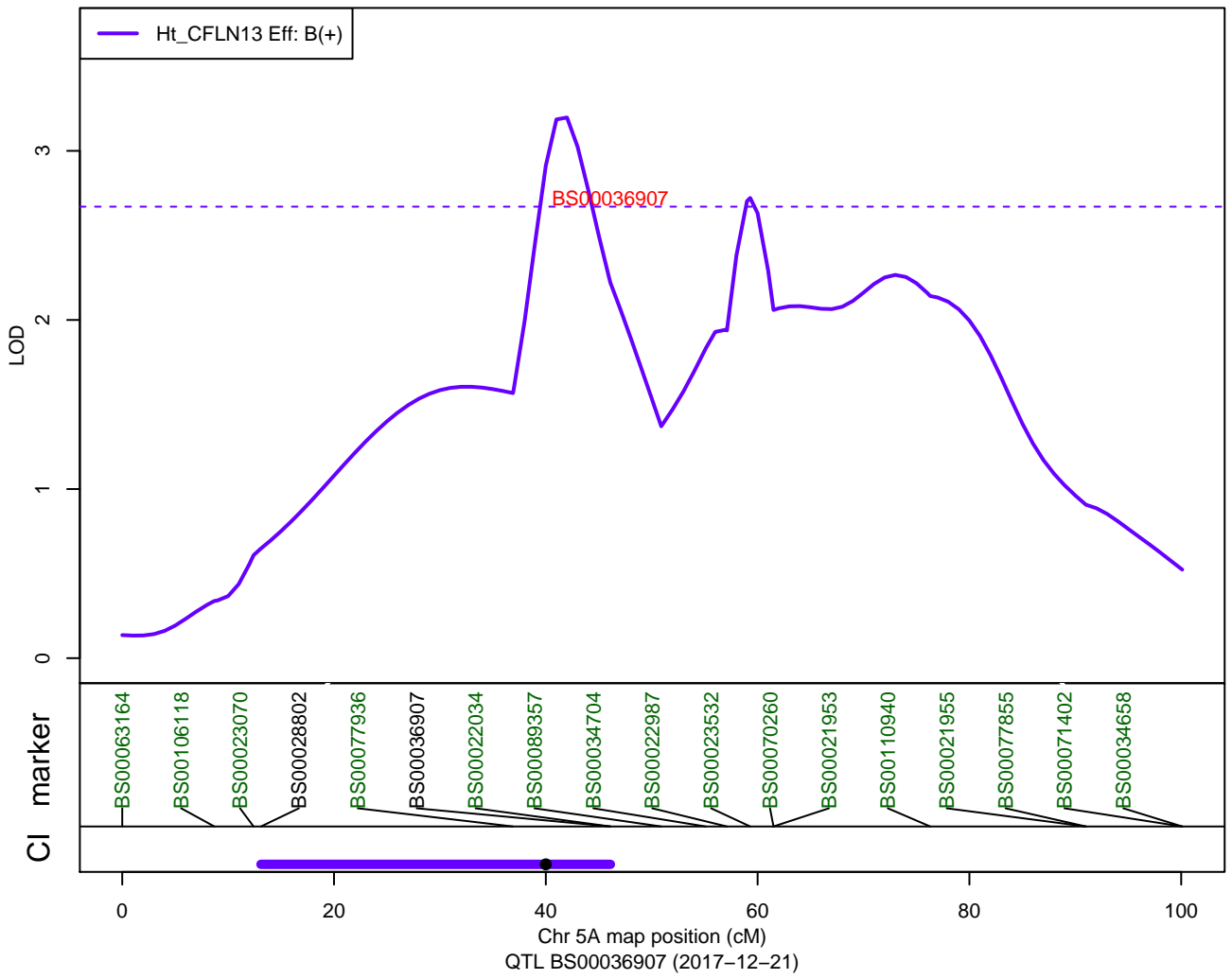
QTLs: ParW199 – GRSA – 5A2



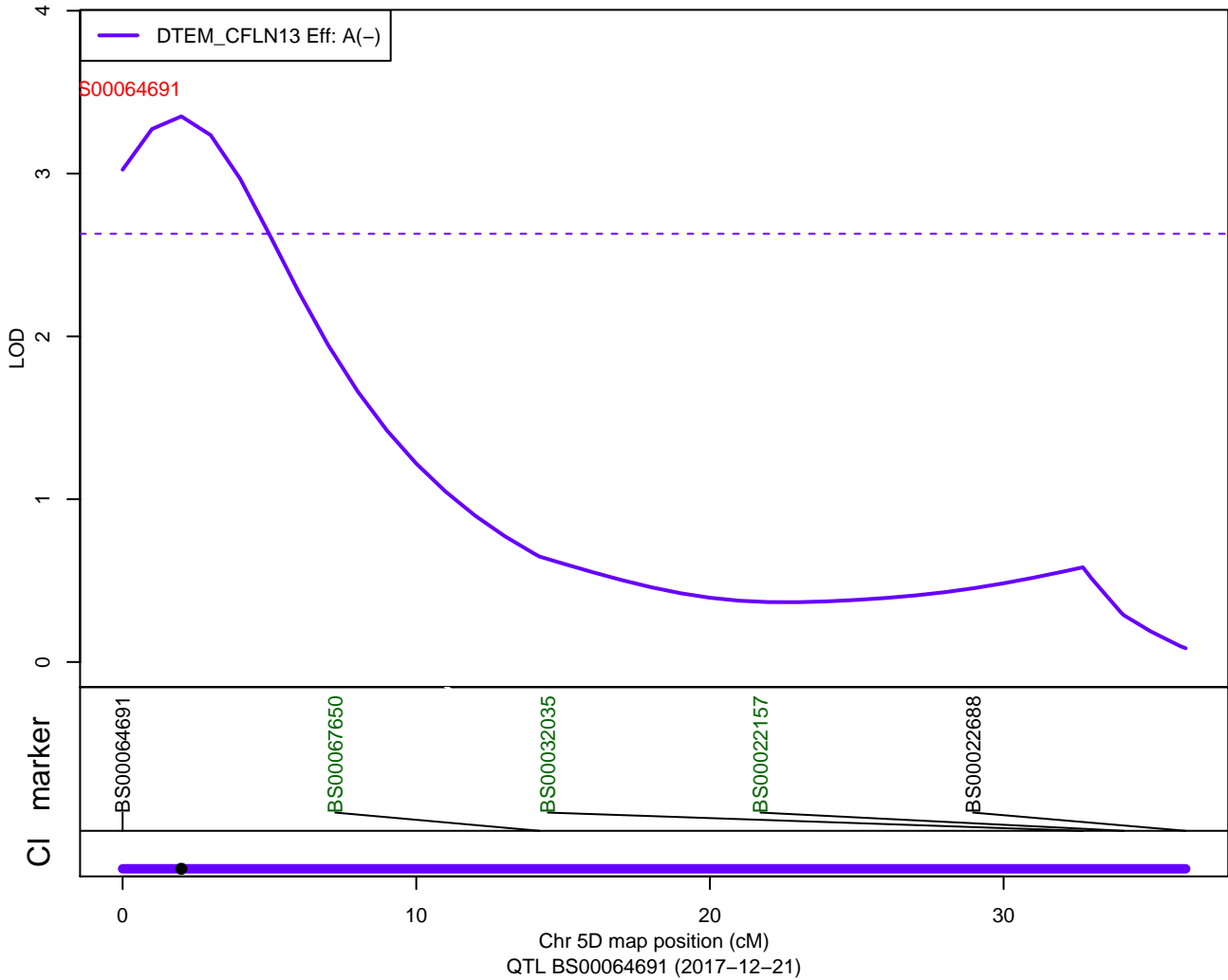
# QTLs: ParW199 – GRWD – 4B1



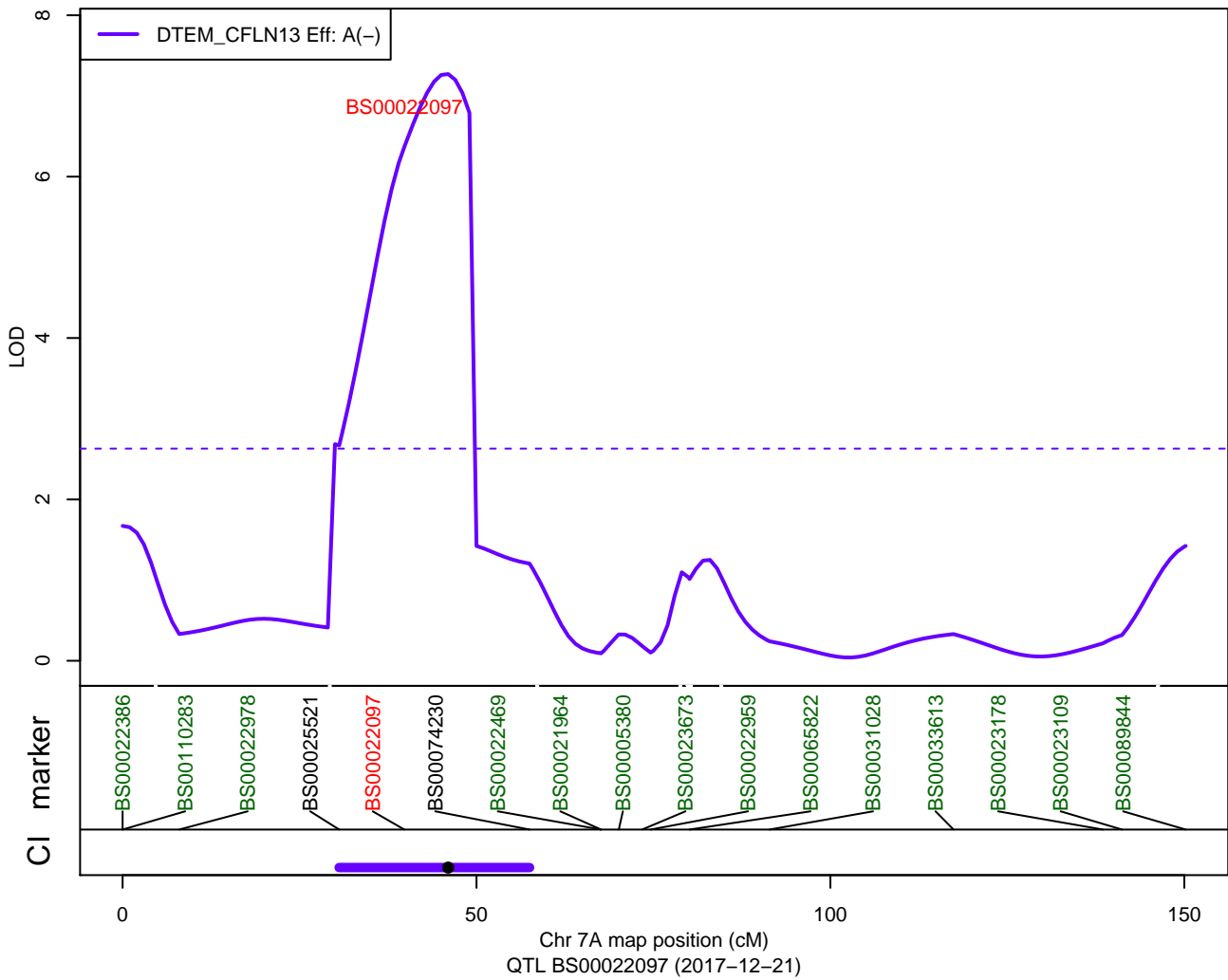
QTLs: ParW246 – Ht – 5A



### QTLs: ParW246 – DTEM – 5D

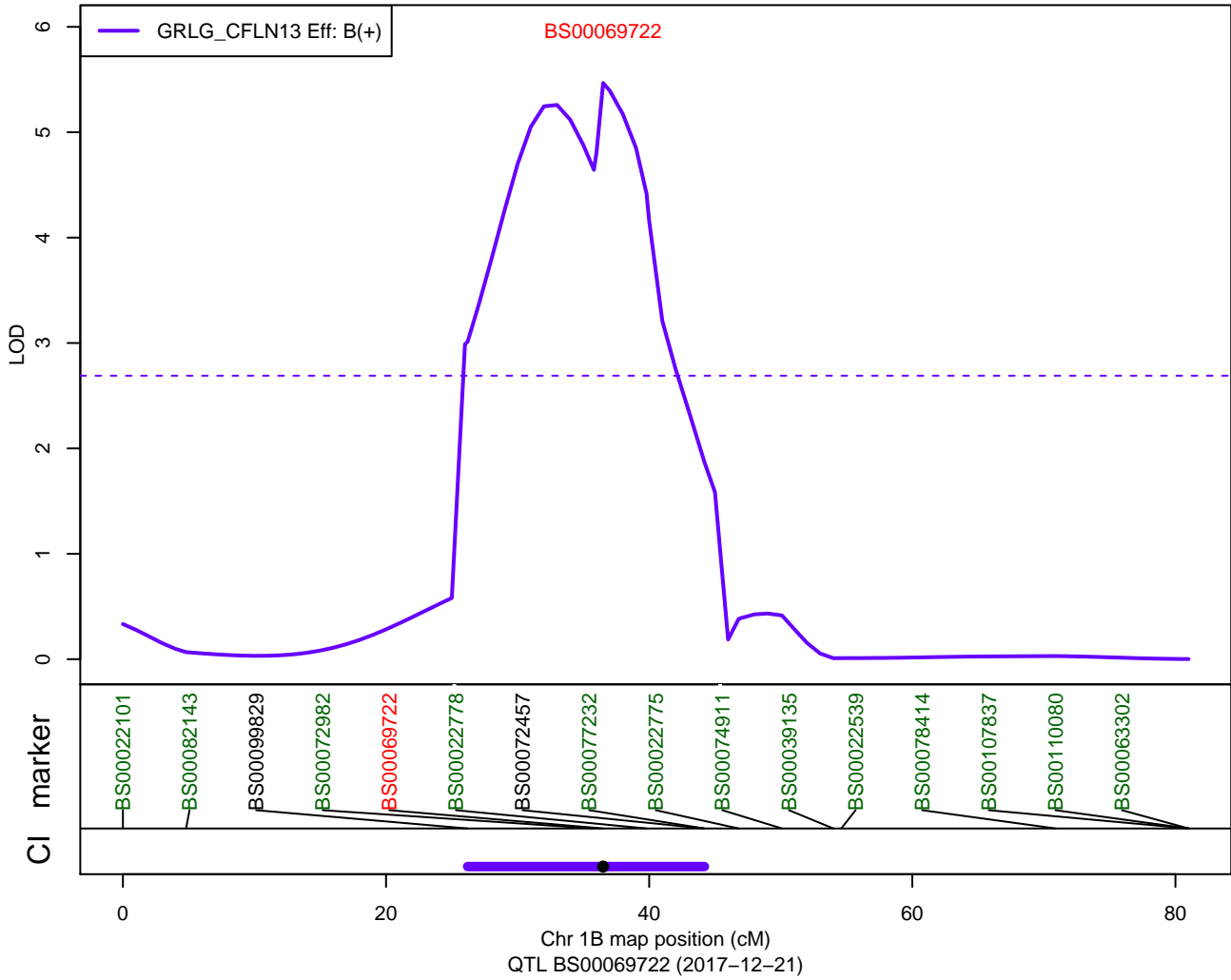


### QTLs: ParW246 – DTEM – 7A

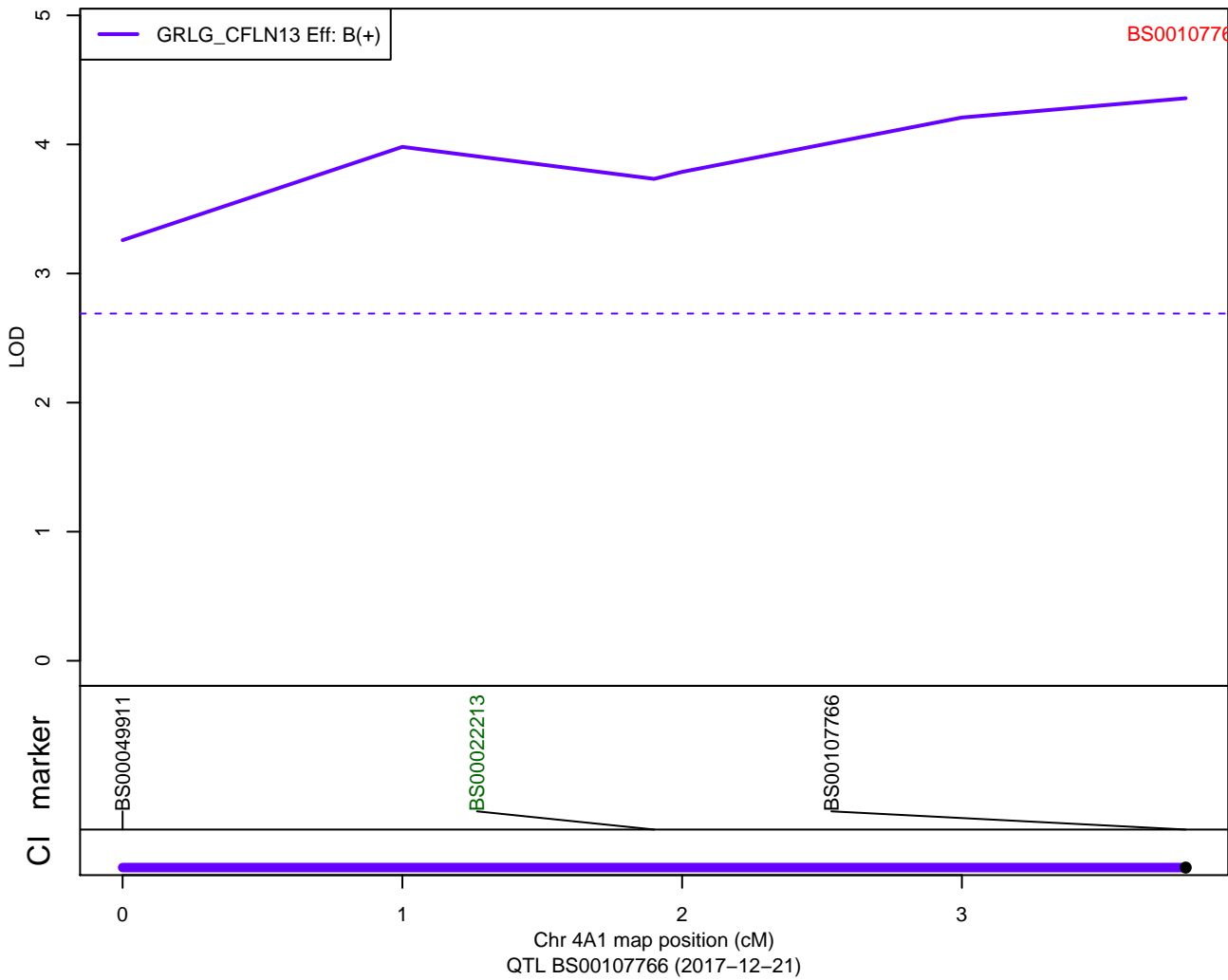




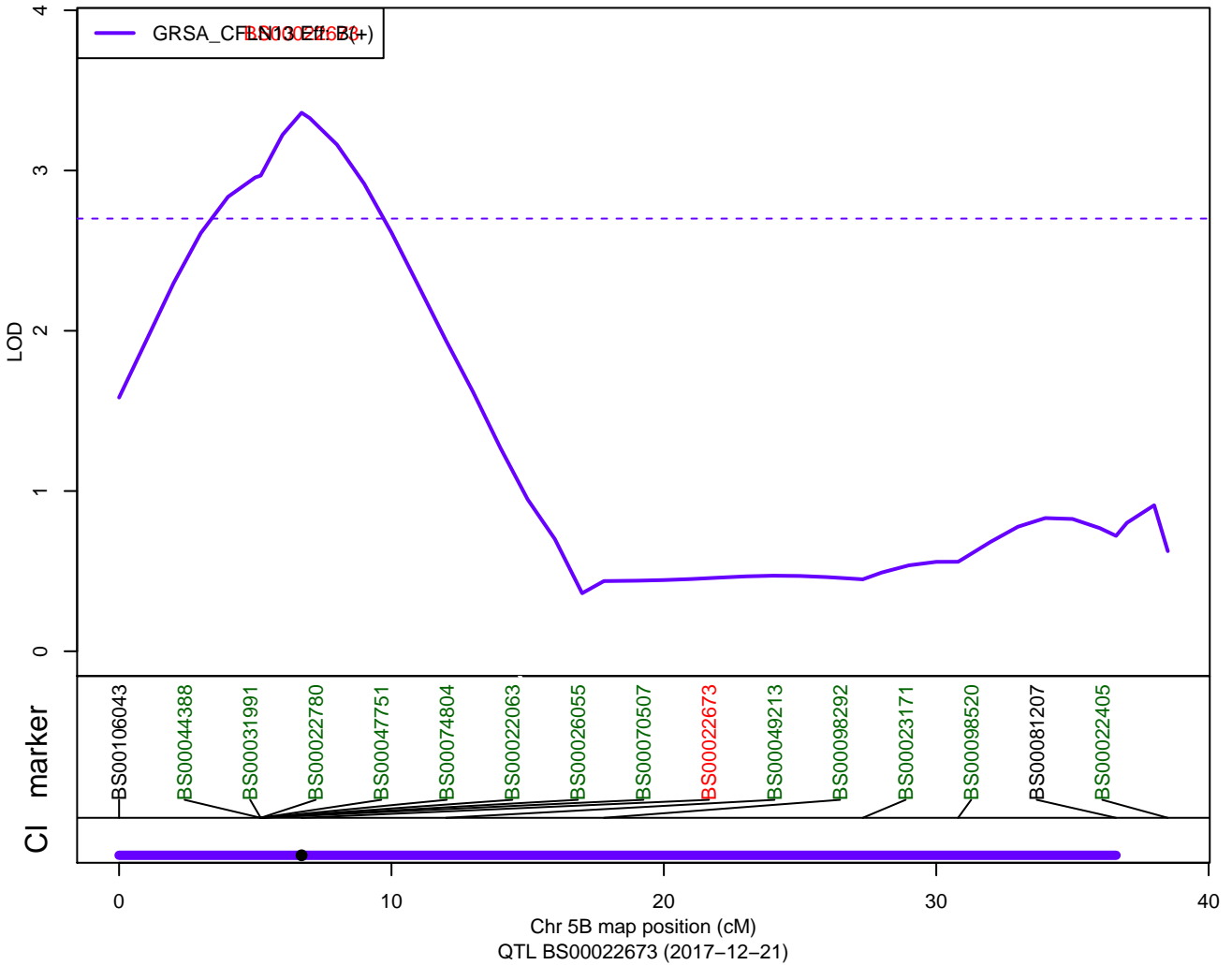
### QTLs: ParW246 – GRLG – 1B



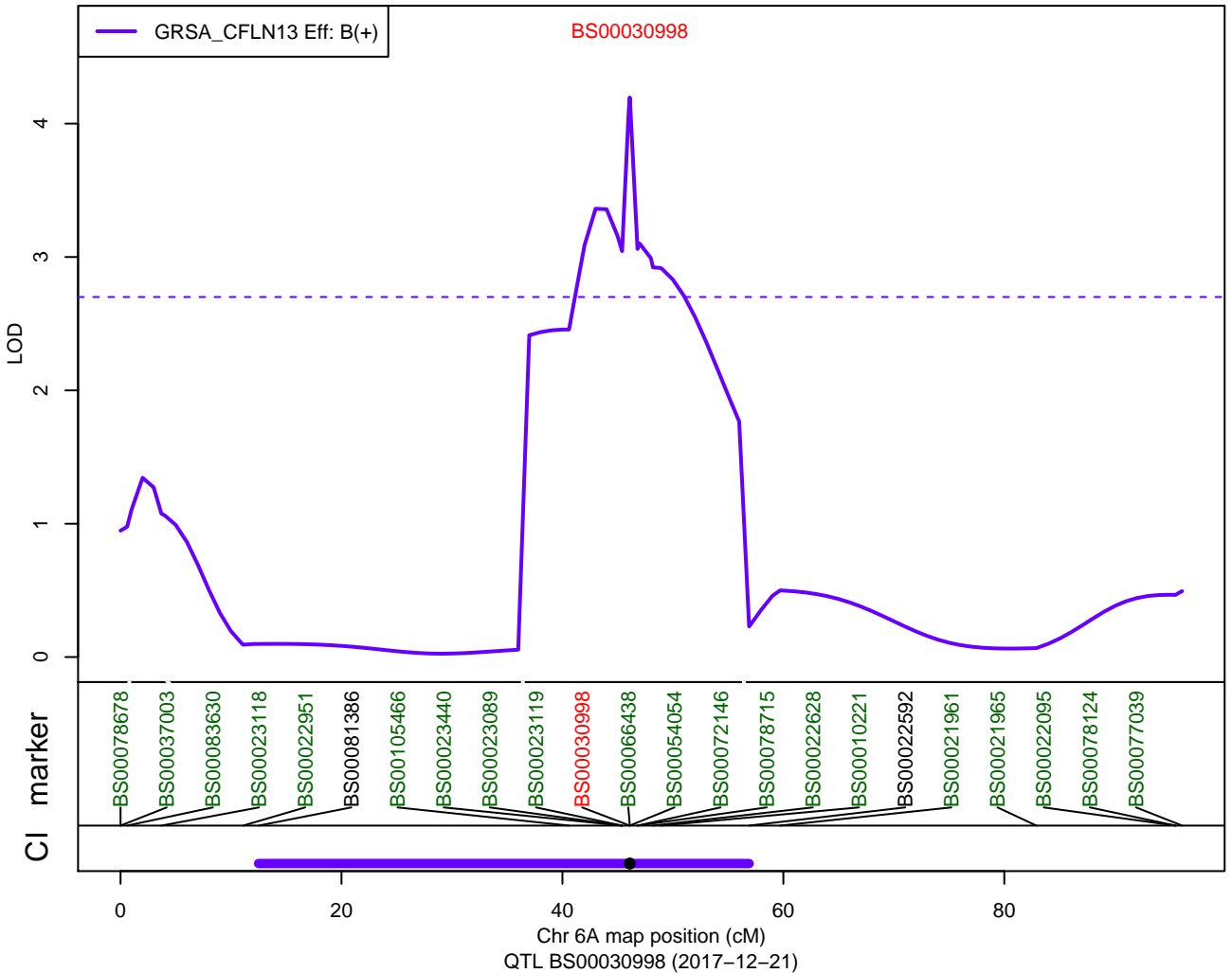
### QTLs: ParW246 – GRLG – 4A1



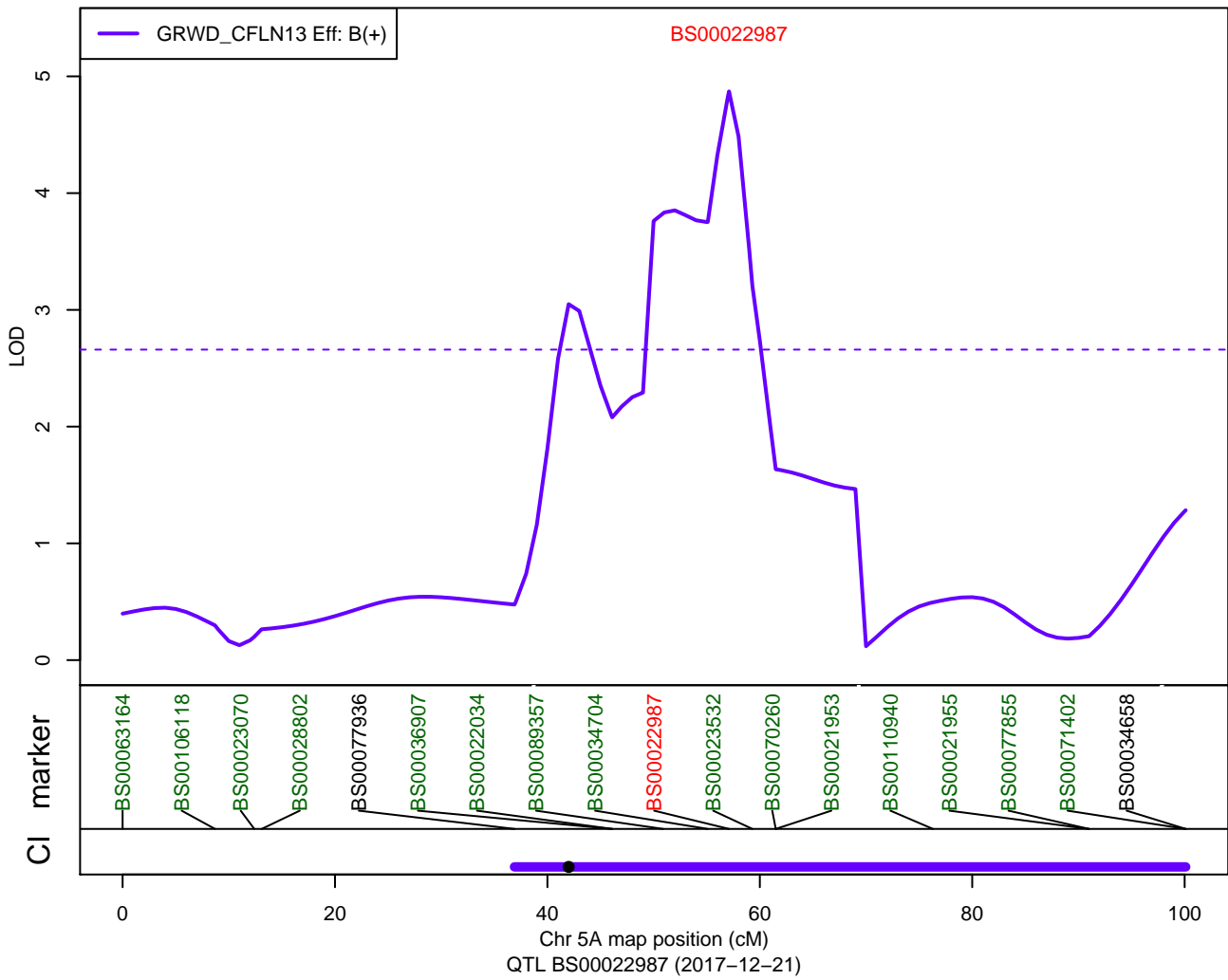
QTLs: ParW246 – GRSA – 5B



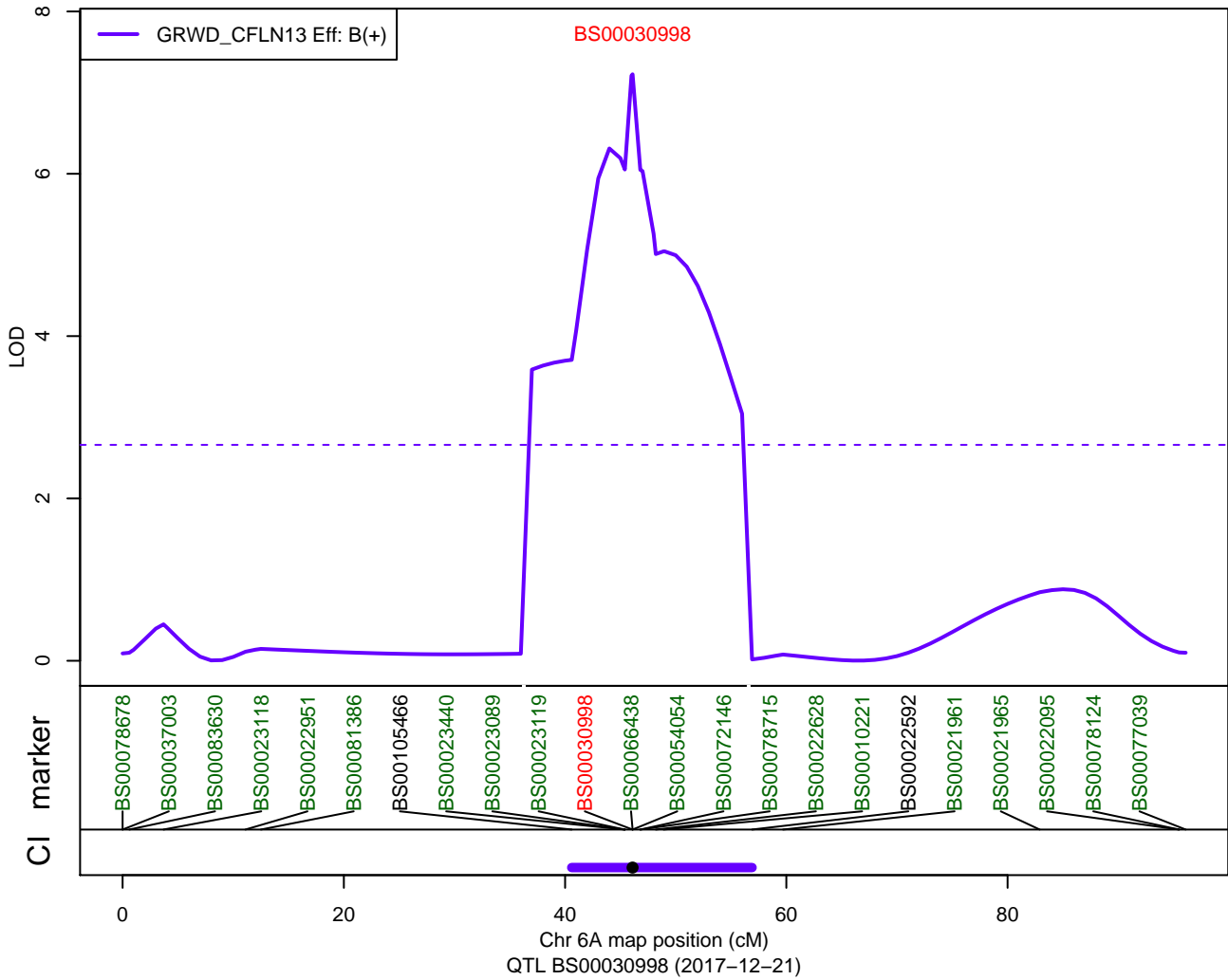
QTLs: ParW246 – GRSA – 6A



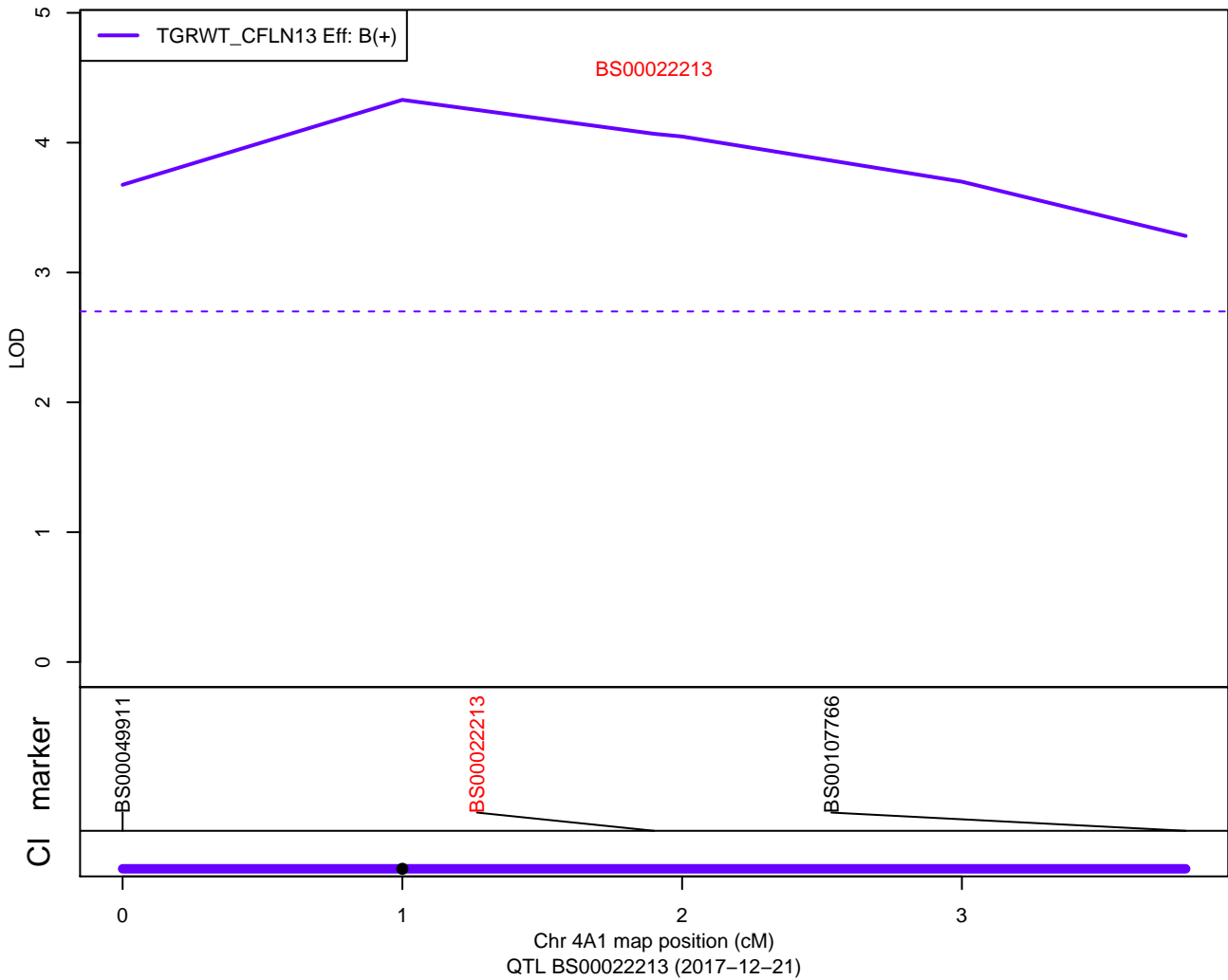
QTLs: ParW246 – GRWD – 5A



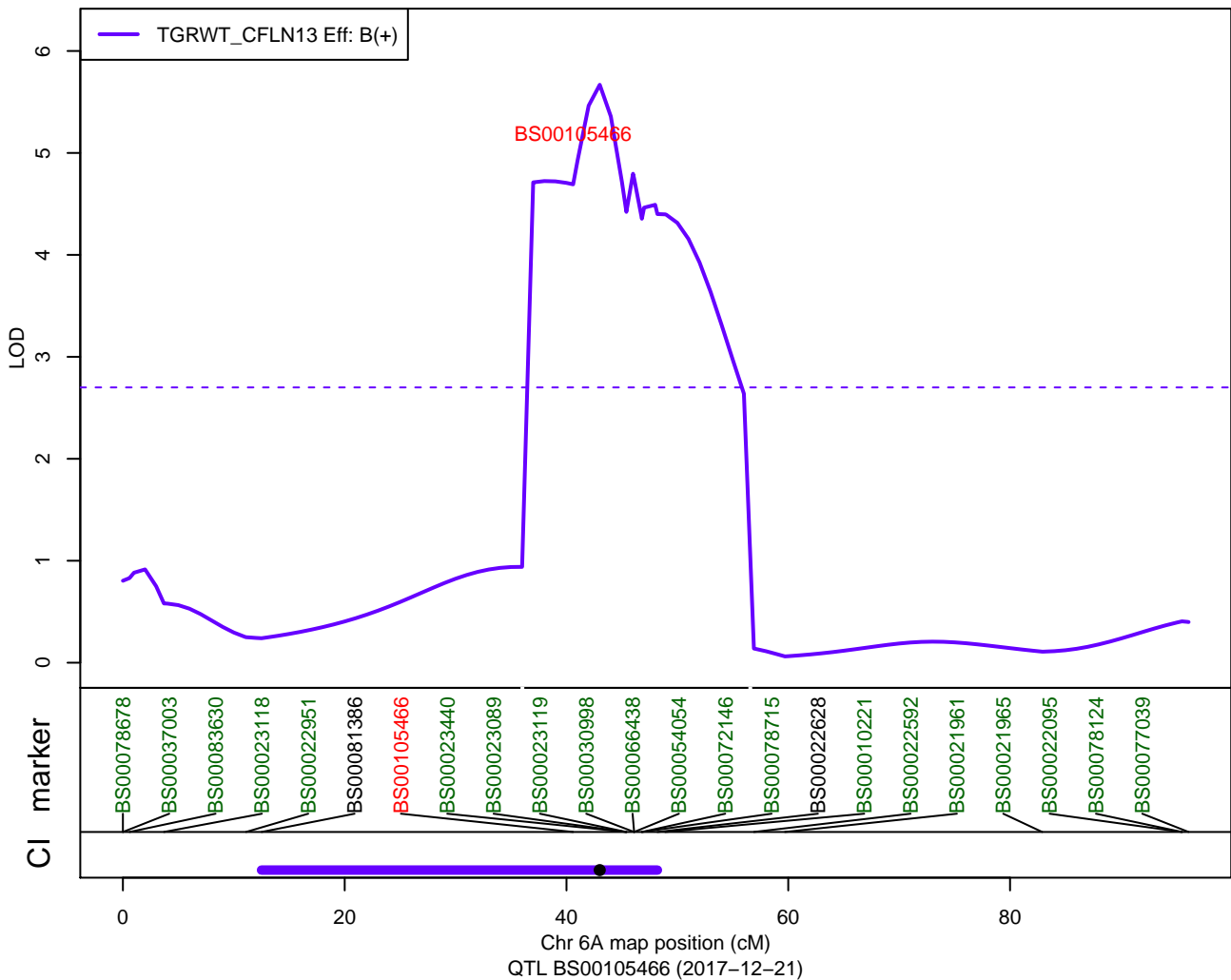
QTLs: ParW246 – GRWD – 6A



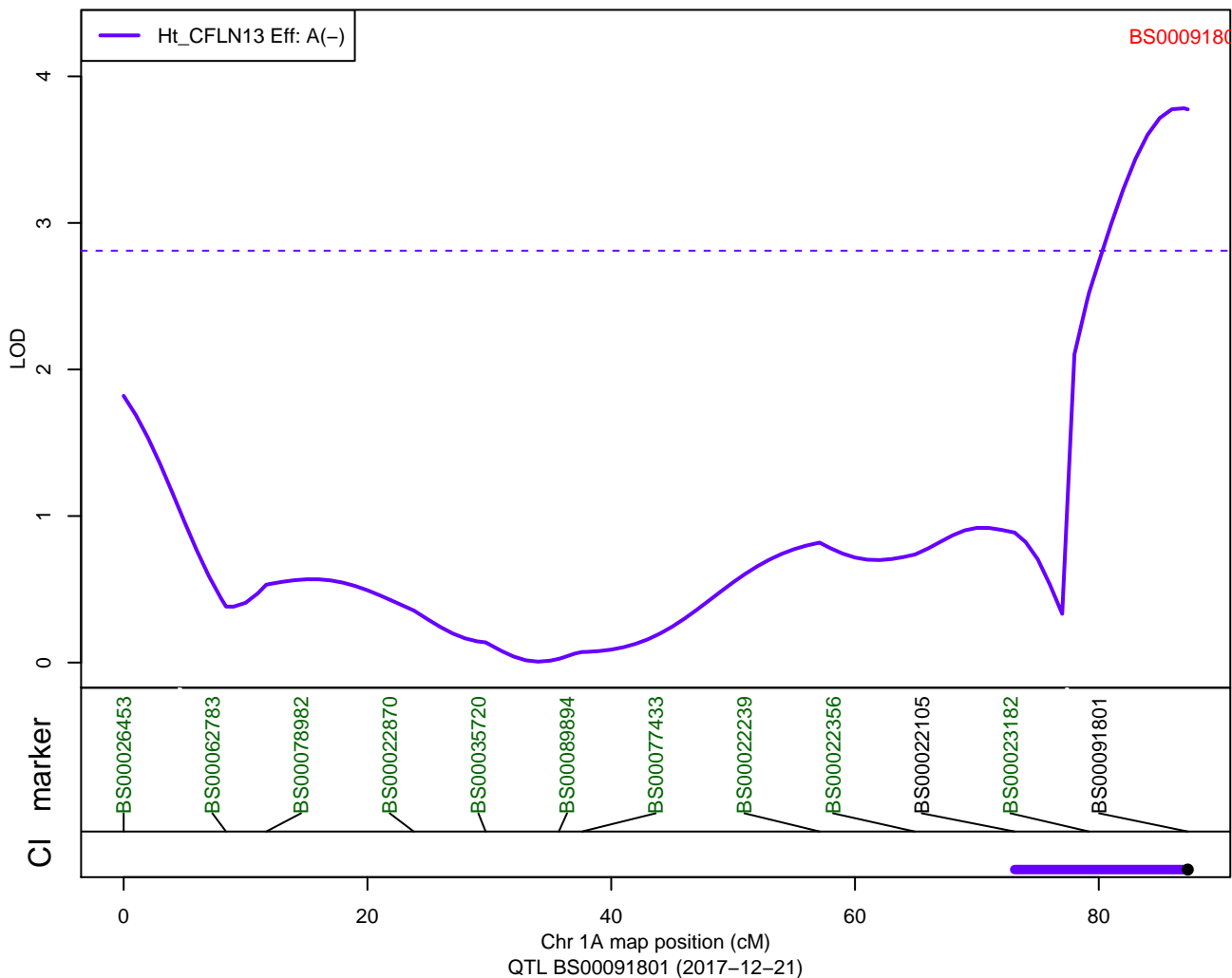
QTLs: ParW246 – TGRWT – 4A1



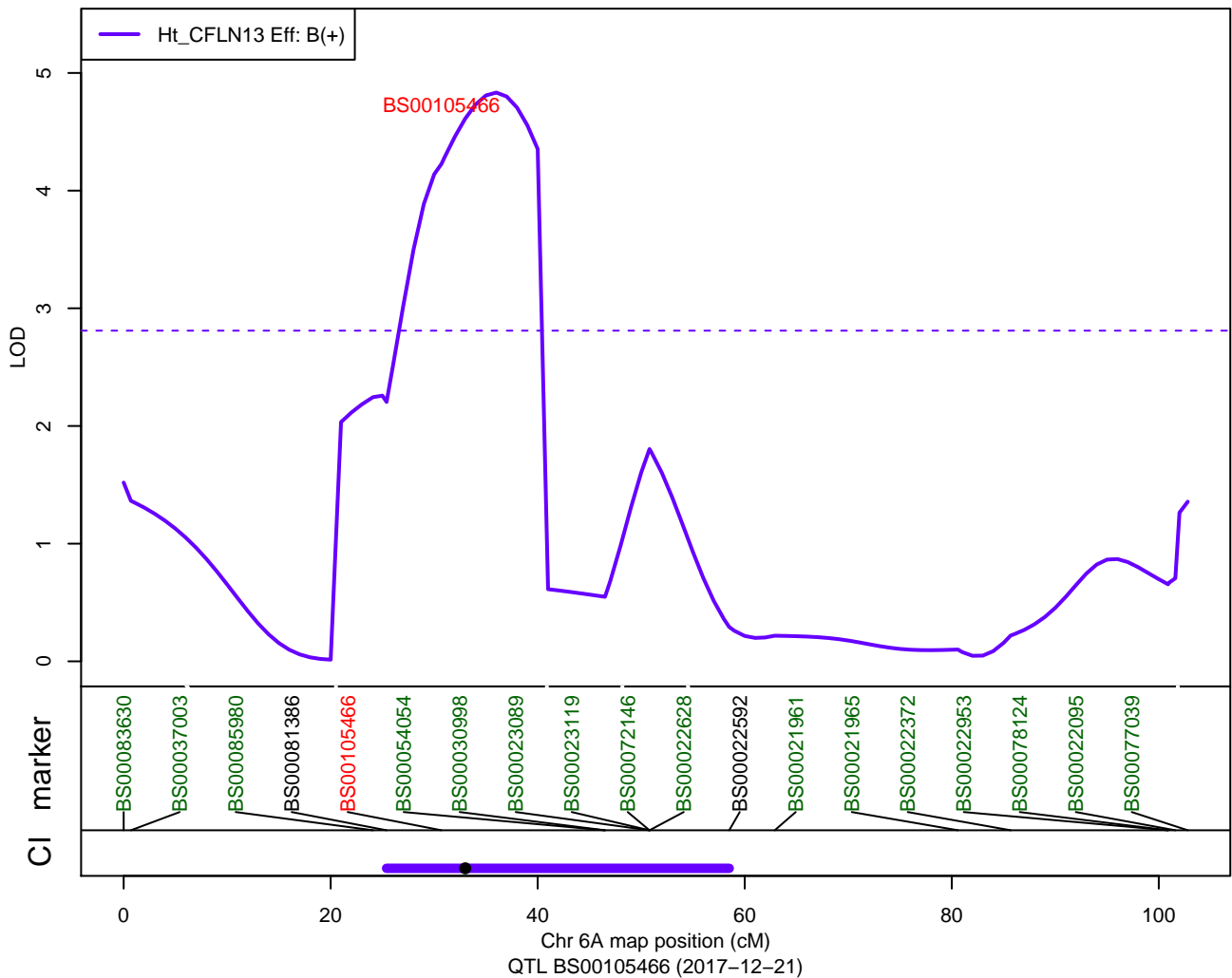
QTLs: ParW246 – TGRWT – 6A



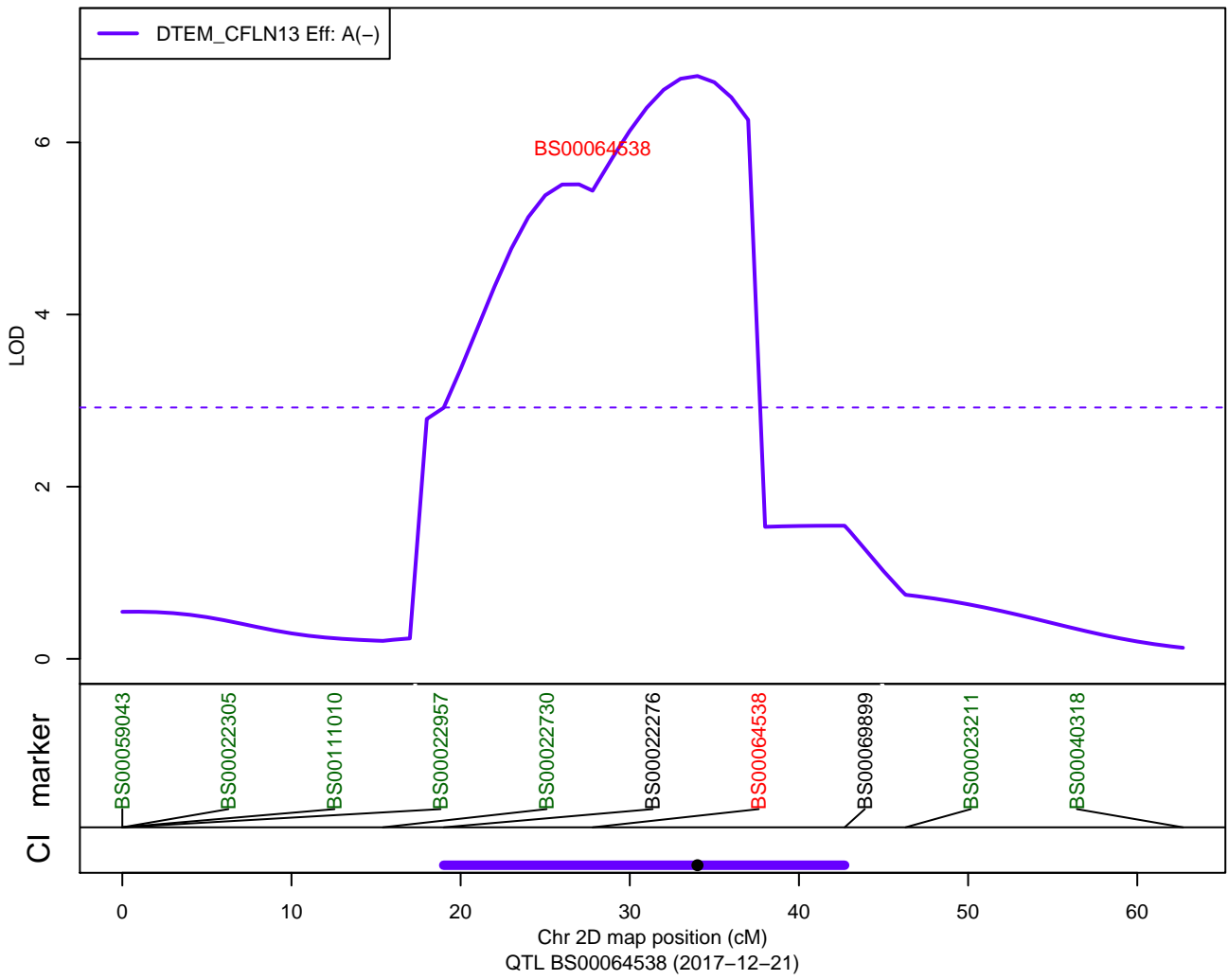
### QTLs: ParW471 - Ht - 1A



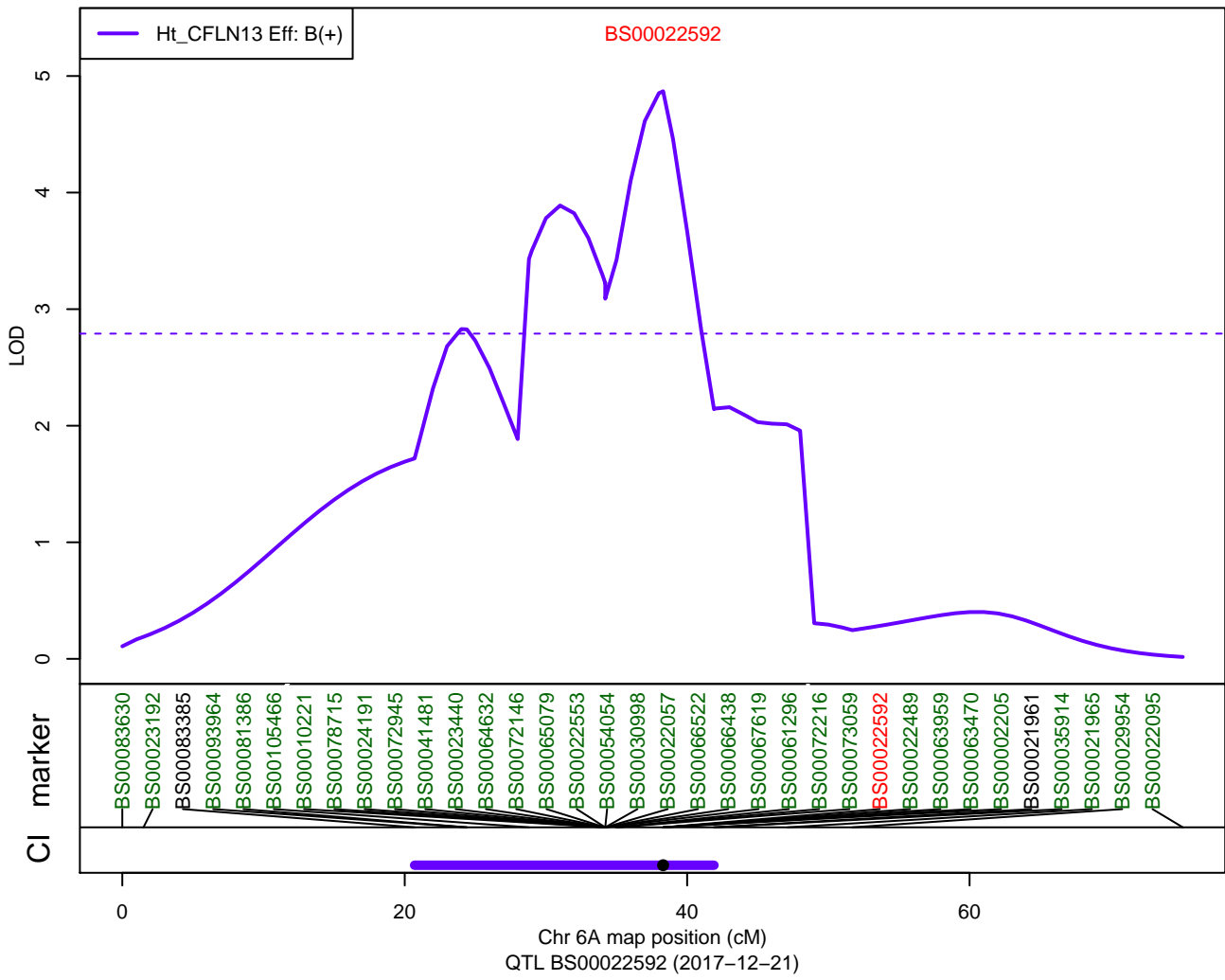
### QTLs: ParW471 - Ht - 6A



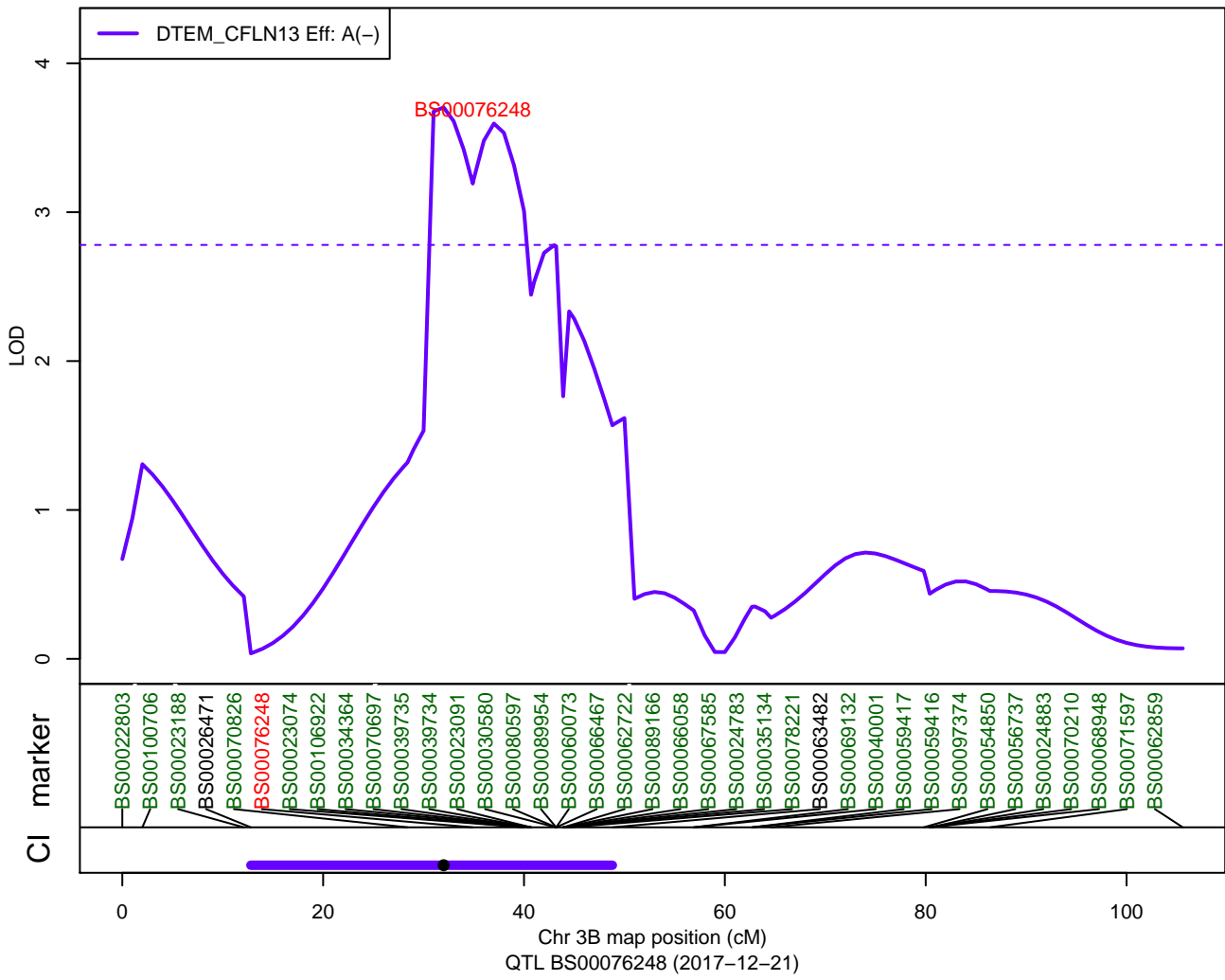
# QTLs: ParW471 - DTEM - 2D



QTLs: ParW627 – Ht – 6A

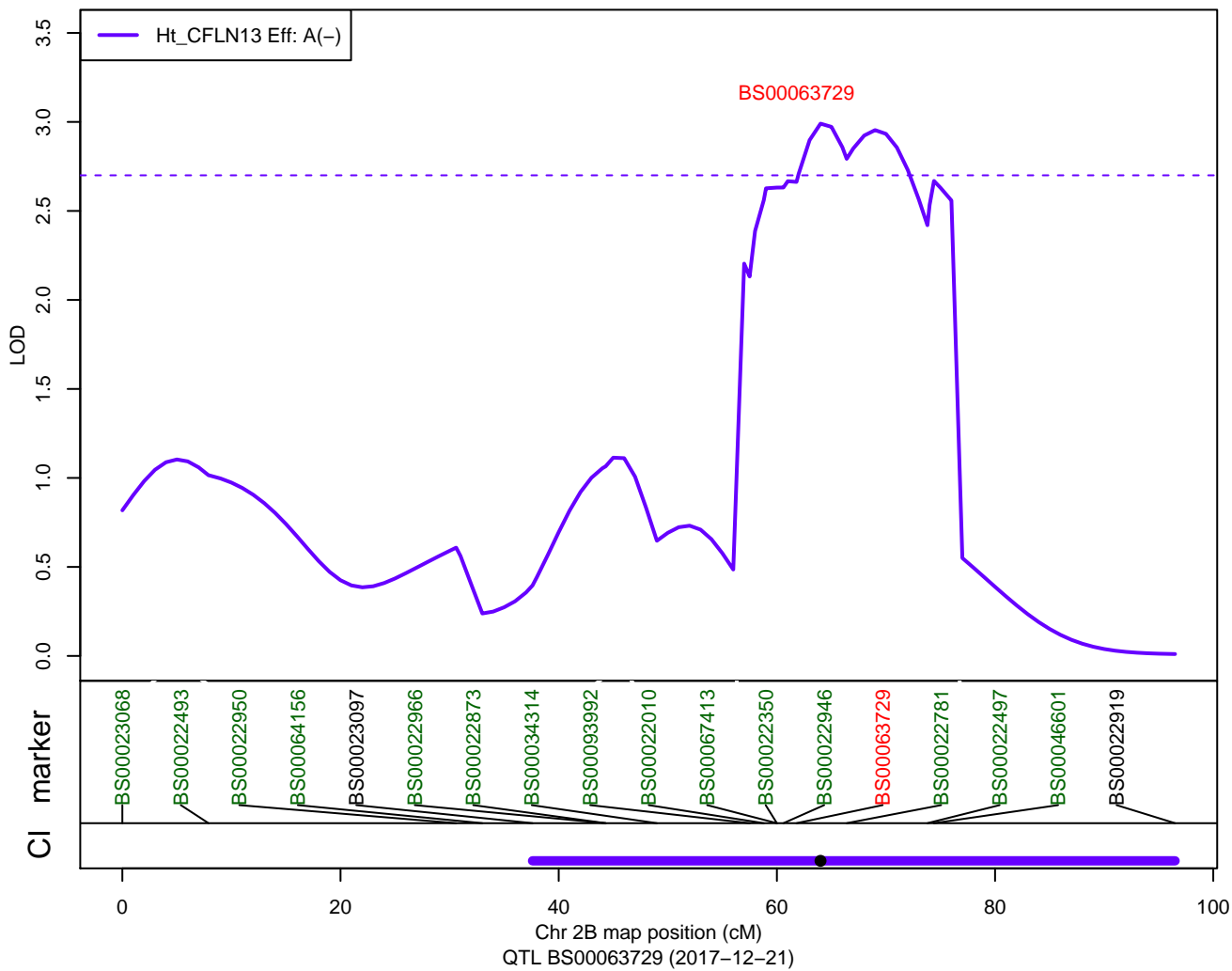


# QTLs: ParW627 - DTEM - 3B

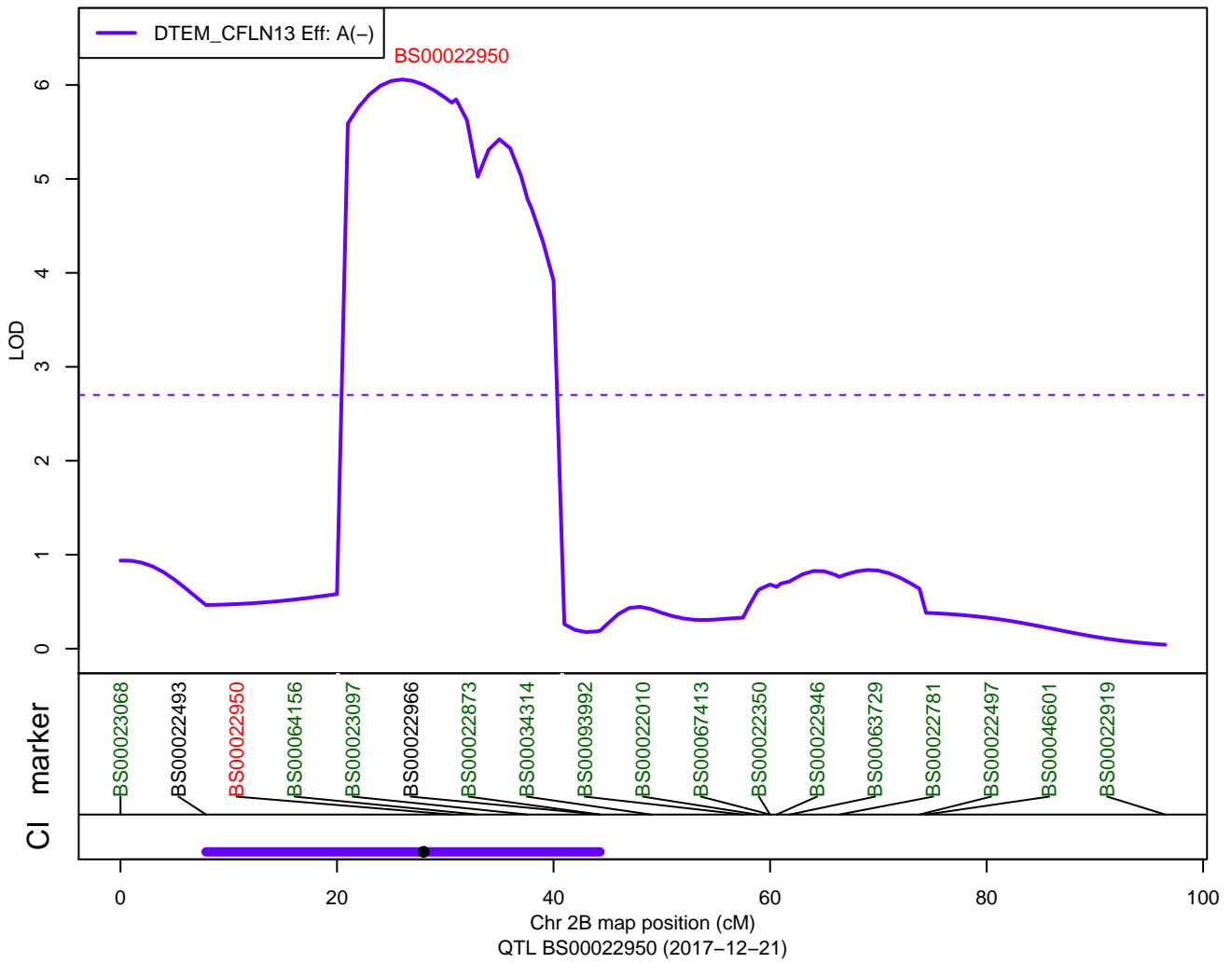




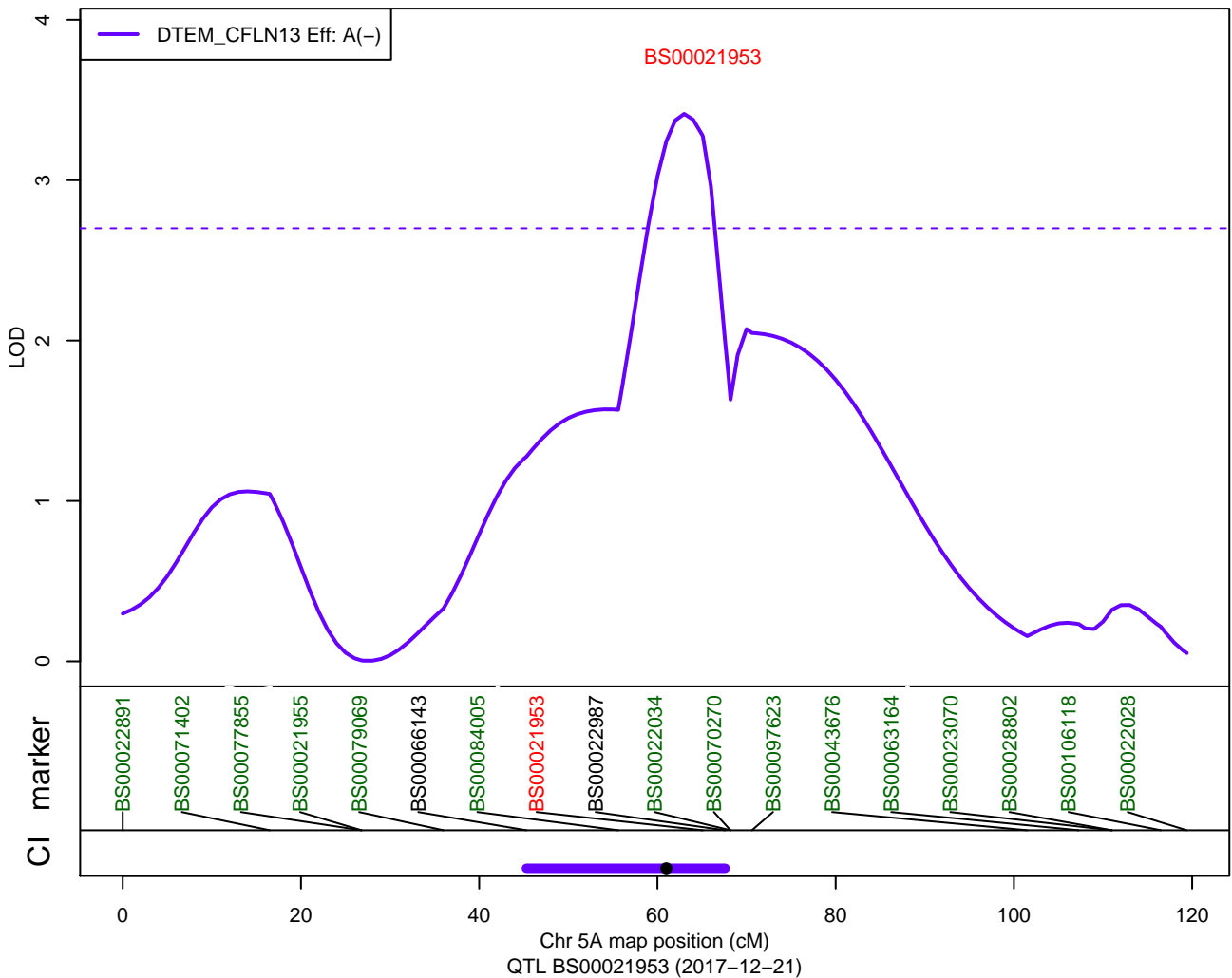
QTLs: ParW707 – Ht – 2B



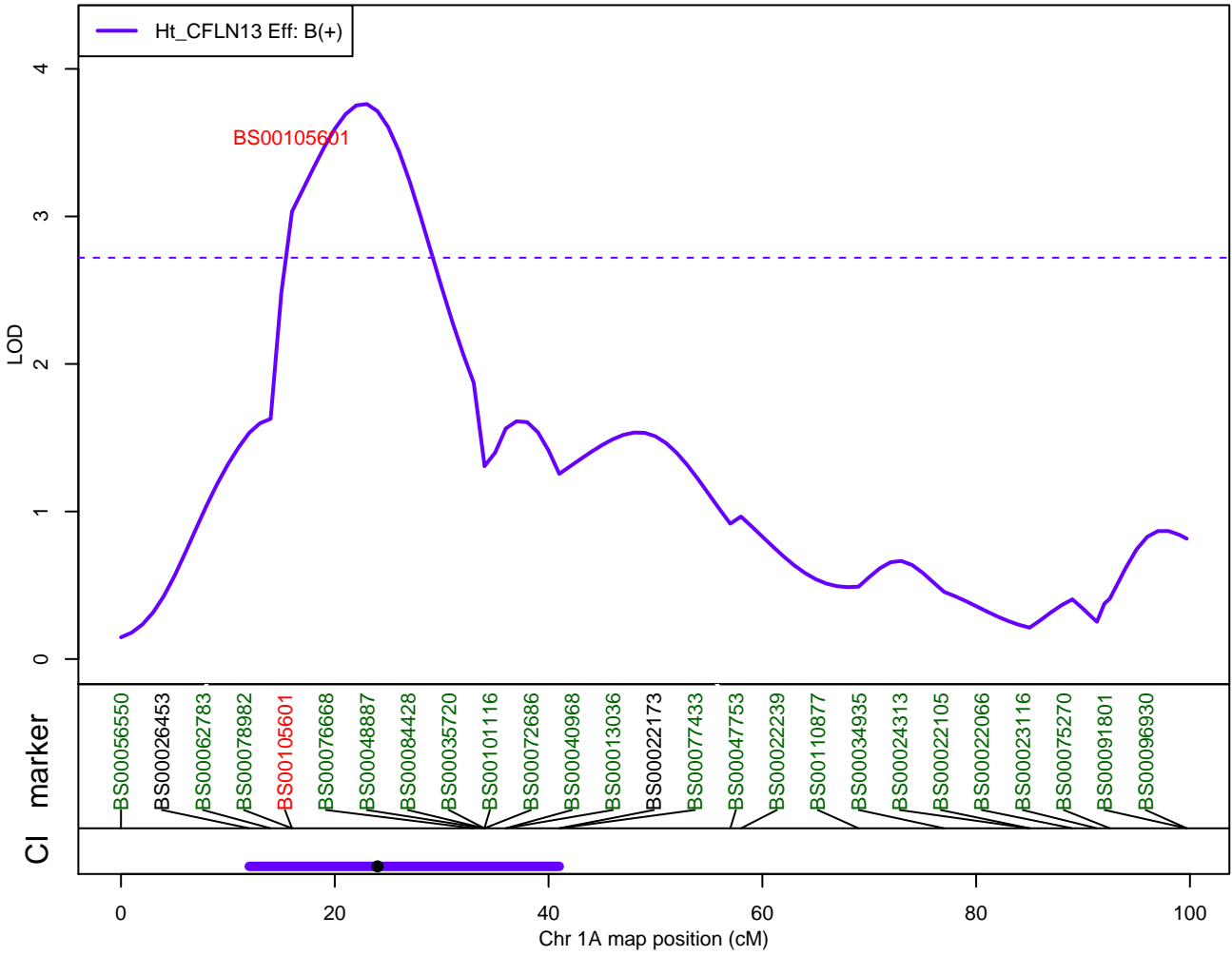
### QTLs: ParW707 – DTEM – 2B



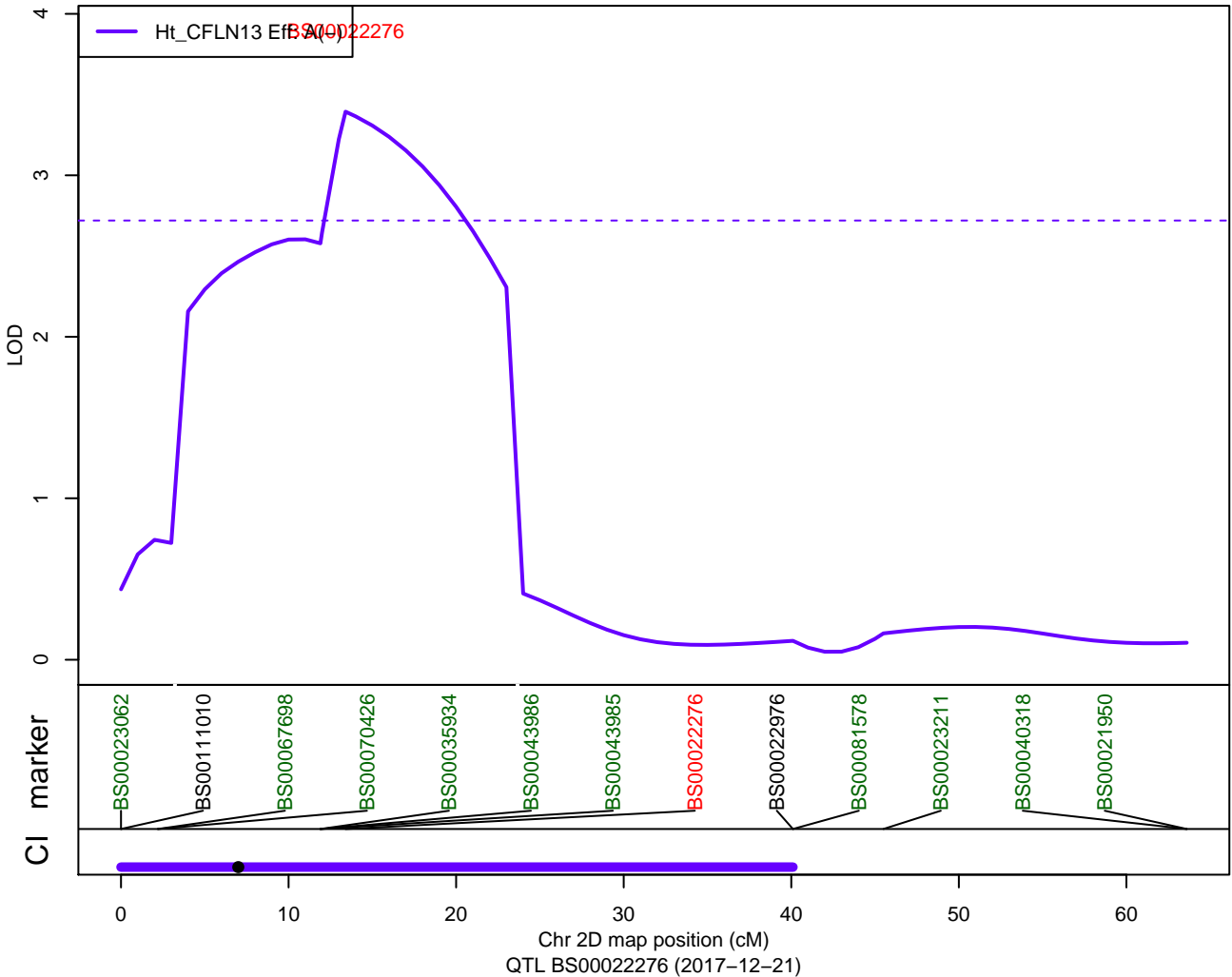
### QTLs: ParW707 – DTEM – 5A



QTLs: ParW827 – Ht – 1A



QTLs: ParW827 – Ht – 2D



# QTLs: ParW827 - DTEM - 2B

