

Session

“Databases and online tools for displaying the anchored physical maps“

-








Wheat mapping and annotation data at URGI

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GnpGenome entry page

- Select your browser

select a data source :

 <p>Wheat 3B FPC physical map</p>	 <p>Wheat 3B annotation FHB</p>	 <p>TriAnnot Pipeline Light</p>
 <p>Vitis vinifera 8X</p>	 <p>Vitis vinifera 12X</p>	
 <p>Arabidopsis TAIR v.7</p>	 <p>Arabidopsis TAIR v.7 SNPs</p>	

<http://urgi.versailles.inra.fr/data/gnpGenome/run.php>

Wheat 3B FPC physical map

- Tool versions

- v2.0

- contig centric view
 - GBrowse 1.69
 - version of the 3B FPC (published)

Paux *et al.*
Science (2008)
322:101-104

- v2.1

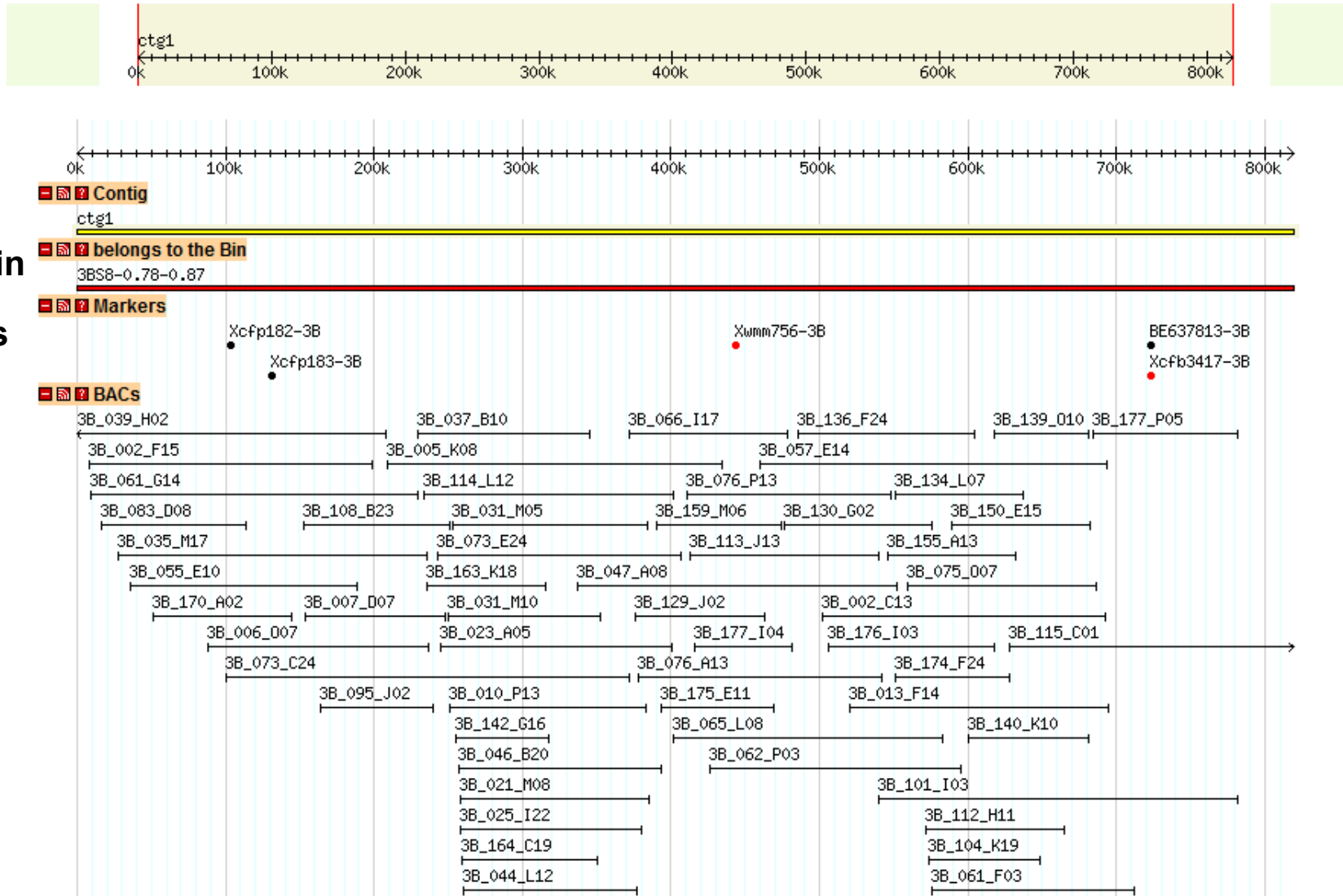
- add of deletion bin track
 - index of all features in "Landmark or Region" (wildcard allowed)

- v2.2

- speed improvement with GBrowse 1.70 and MySQL 5

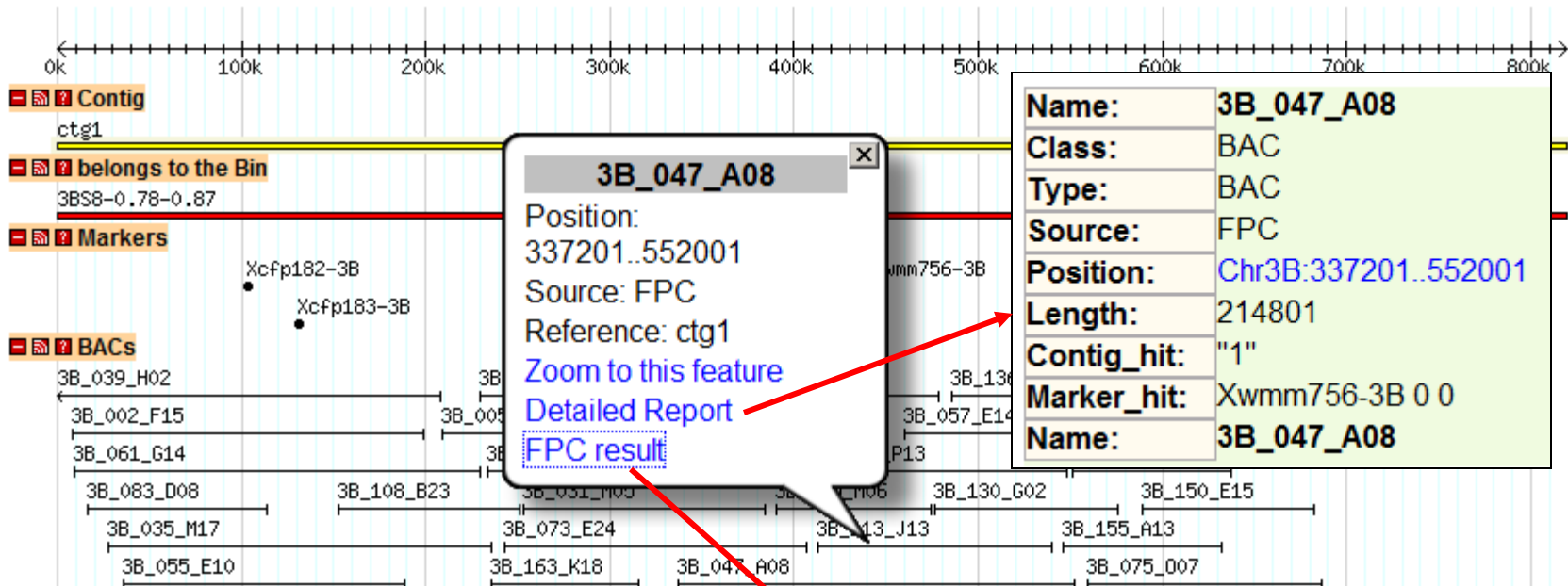
http://urgi.versailles.inra.fr/cgi-bin/gbrowse/wheat_FPC_pub/

Wheat 3B FPC physical map



Wheat 3B FPC physical map

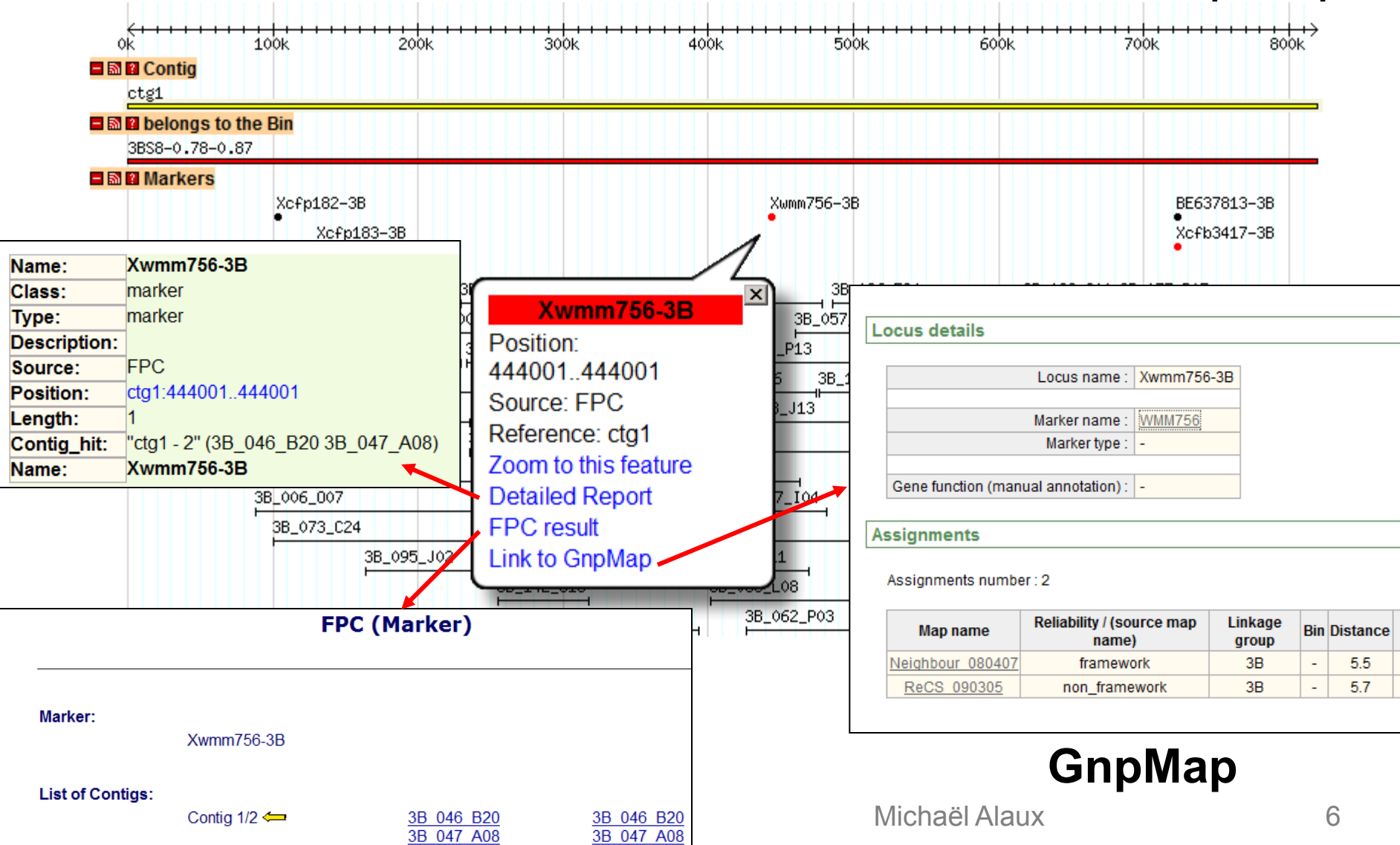
BACs informations



FPC (Clone)		
Clone:	3B_047_A08	Contig: 1
List of Markers:	Xwmm756-3B	

Wheat 3B FPC physical map

- Markers in **red** have additionnal details in GnpMap



GnpMap

Wheat 3B FPC physical map

- GnpMap the genetic mapping database

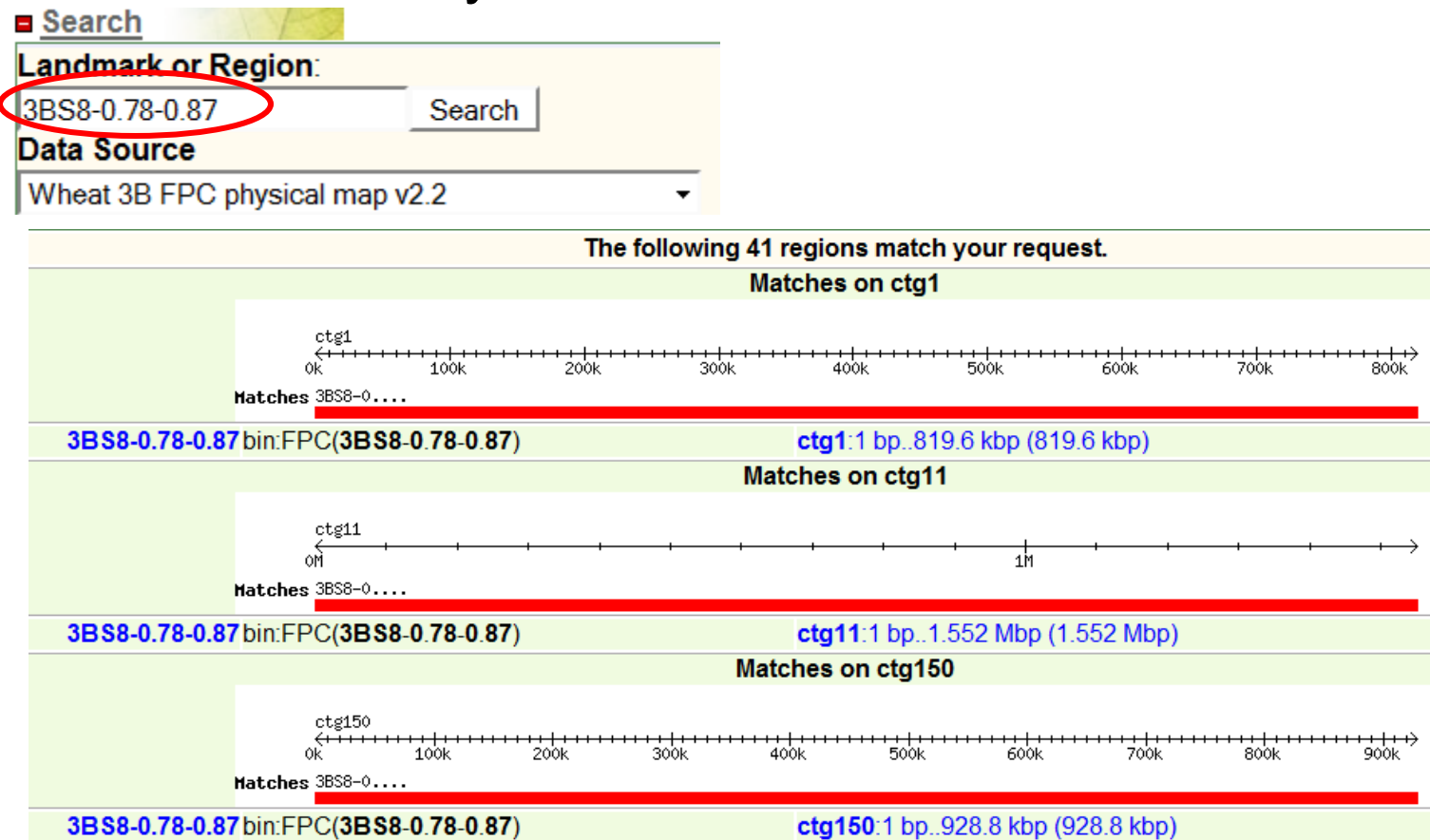
<http://urgi.versailles.inra.fr/GnpMap/mapping/welcome.do>

Map name	Population	Taxon
ARE_050606	ARE	Triticum aestivum
AXO_050428	AXO	Triticum aestivum
CtCs_040630	CtCs	Triticum aestivum
DEL_050308	Deletion	Triticum aestivum
Ditelo_050308	NT_DT	Triticum aestivum
ITMI_040618	ITMI	Triticum aestivum
Neighbour_080407	TaVirtualPop03	Triticum aestivum
NulliTetra_050308	NT_DT	Triticum aestivum
RER_040618	RER	Triticum aestivum
RER_050614	RER	Triticum aestivum
RLAc_071219	RLAc	Triticum aestivum
ReCS_090305	ReCS	Triticum aestivum
SOds_071219	SOds	Triticum aestivum
SumStoa_090225	SumStoa	Triticum aestivum
SupBW_071212	SupBW	Triticum aestivum
TXO_050621	TXO	Triticum aestivum
TaVirtualPop01_071219	TaVirtualPop01	Triticum aestivum
TaVirtualPop02_090219	TaVirtualPop02	Triticum aestivum
WuMa_071219	WuMa	Triticum aestivum

- ✓ **16 wheat genetic maps** with different versions of:
ARE, AXO, CtCs, ITMI, RER, Neighbour, RLAc, ReCS, SOds, SumStoa, SupBW, TXO, TaVirtualPop, WuMa.
- ✓ **3 wheat cytogenetic maps:**
DEL, Ditelo, NulliTetra.
- ✓ more than **10 000 wheat markers**
- ✓ more than **500 wheat QTLs**

Wheat 3B FPC physical map

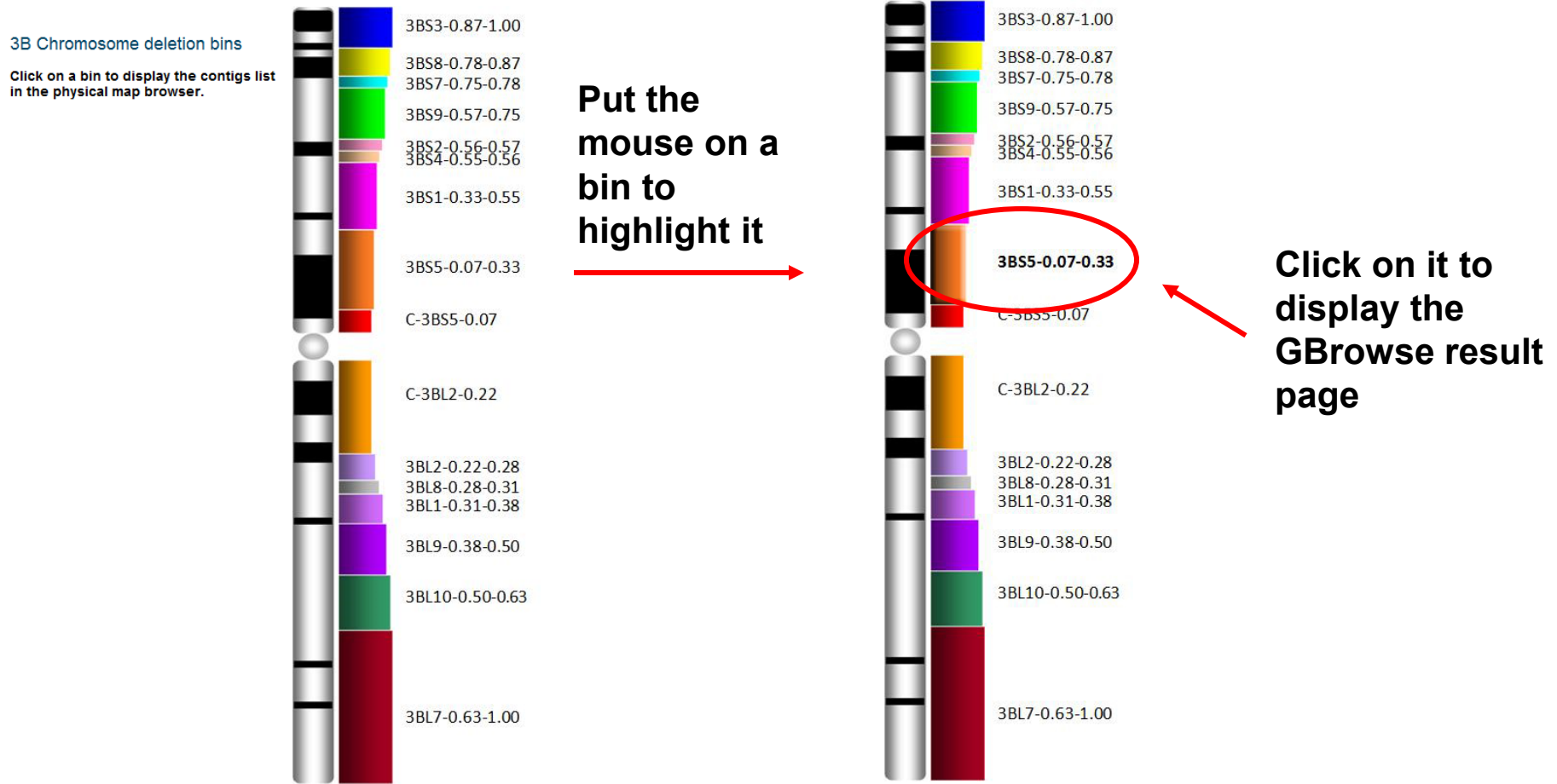
- Deletion bins
 - search by GBrowse



Links to
contigs
belonging
to the bin

Wheat 3B FPC physical map

- search by the clickable image

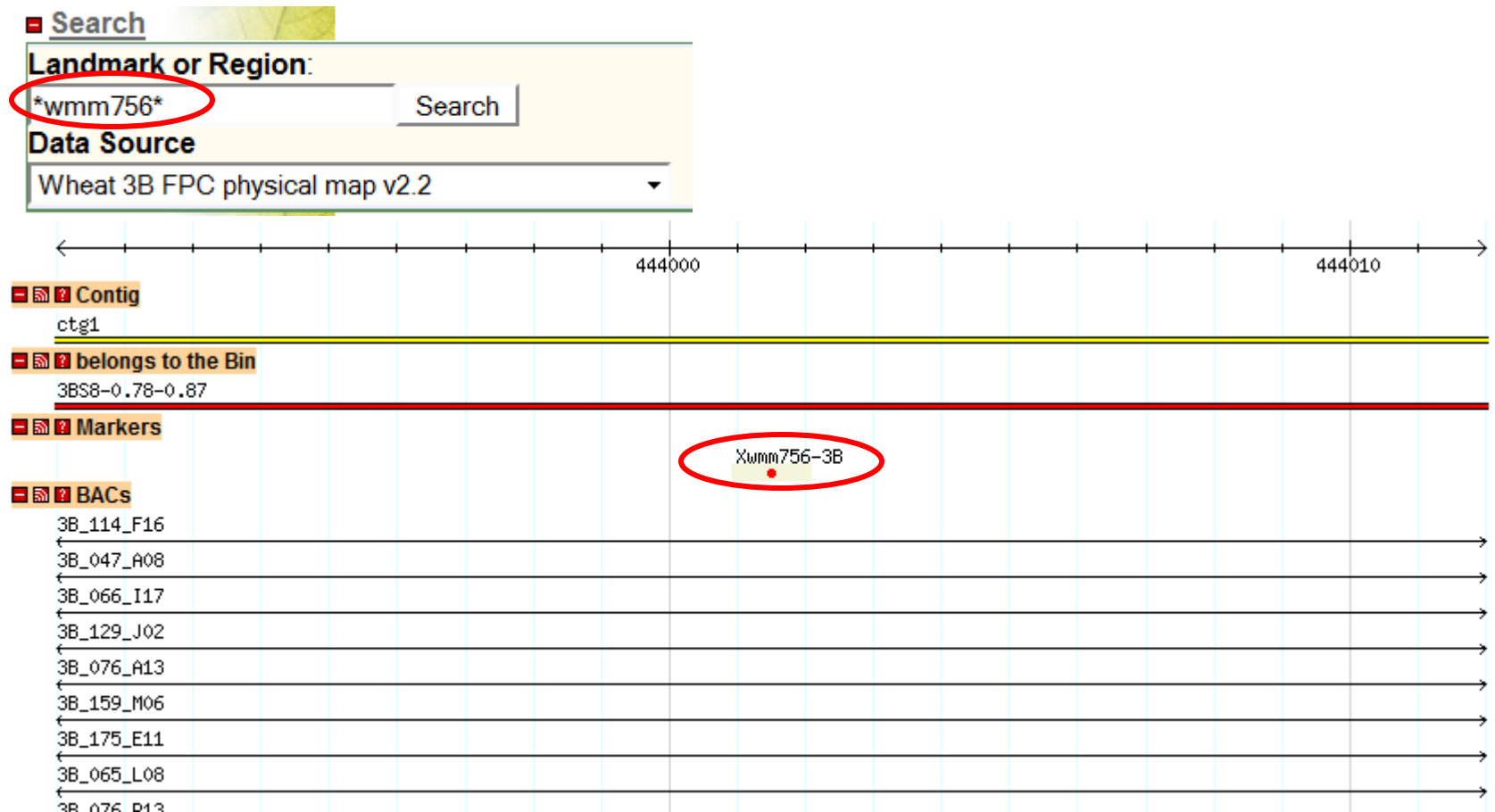


<http://urgi.versailles.inra.fr/projects/Triticum/deletionBin.php>

Wheat 3B FPC physical map

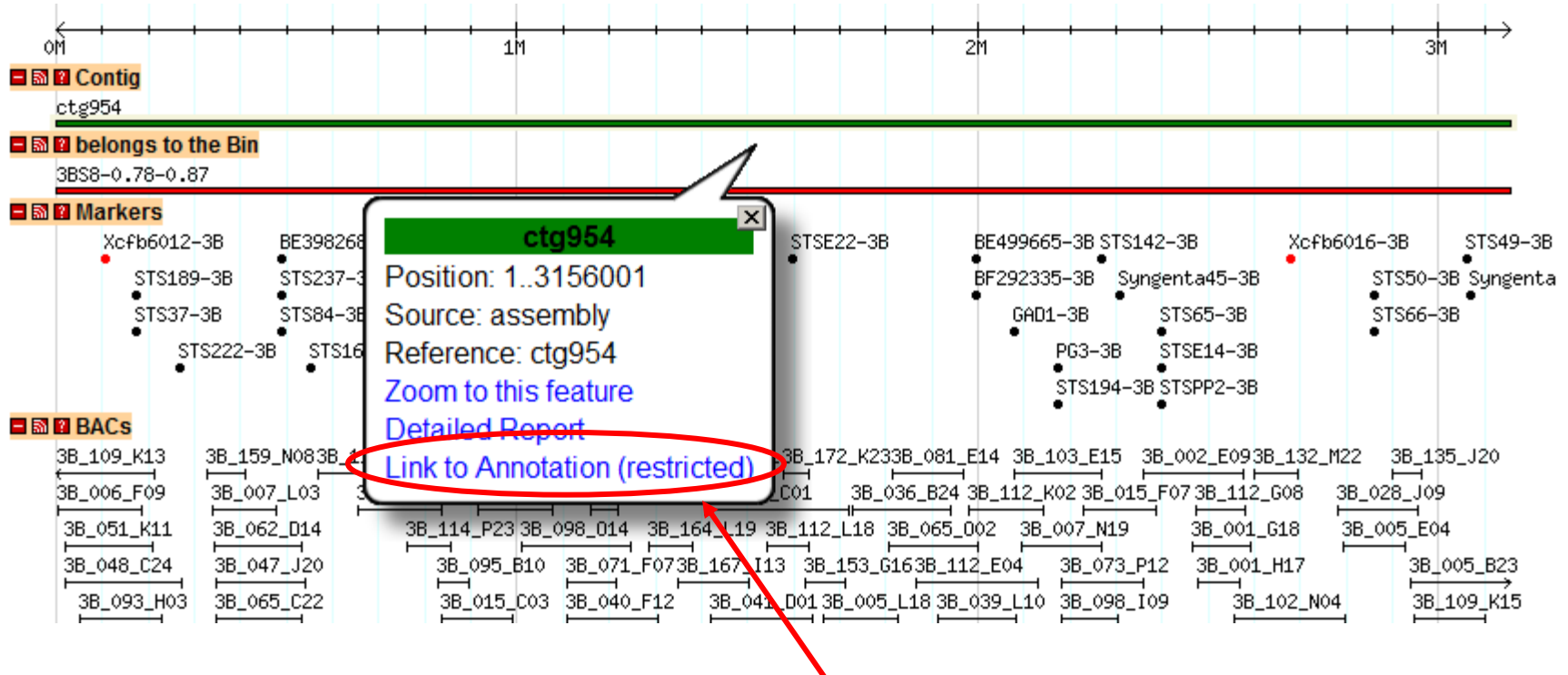
Other search example with GBrowse

- a marker with wildcards: *wmm756*



Wheat 3B FPC physical map








- Contig or BAC in **green** are annotated



Link to the wheat 3B annotation FHB (restricted access)

Wheat 3B annotation FHB

select a data source :

 <p>Wheat 3B FPC physical map</p>	 <p>Wheat 3B annotation FHB</p>	 <p>TriAnnot Pipeline Light</p>
 <p>Vitis vinifera 8X</p>	 <p>Vitis vinifera 12X</p>	
 <p>Arabidopsis TAIR v.7</p>	 <p>Arabidopsis TAIR v.7 SNPs</p>	

Wheat 3B annotation FHB

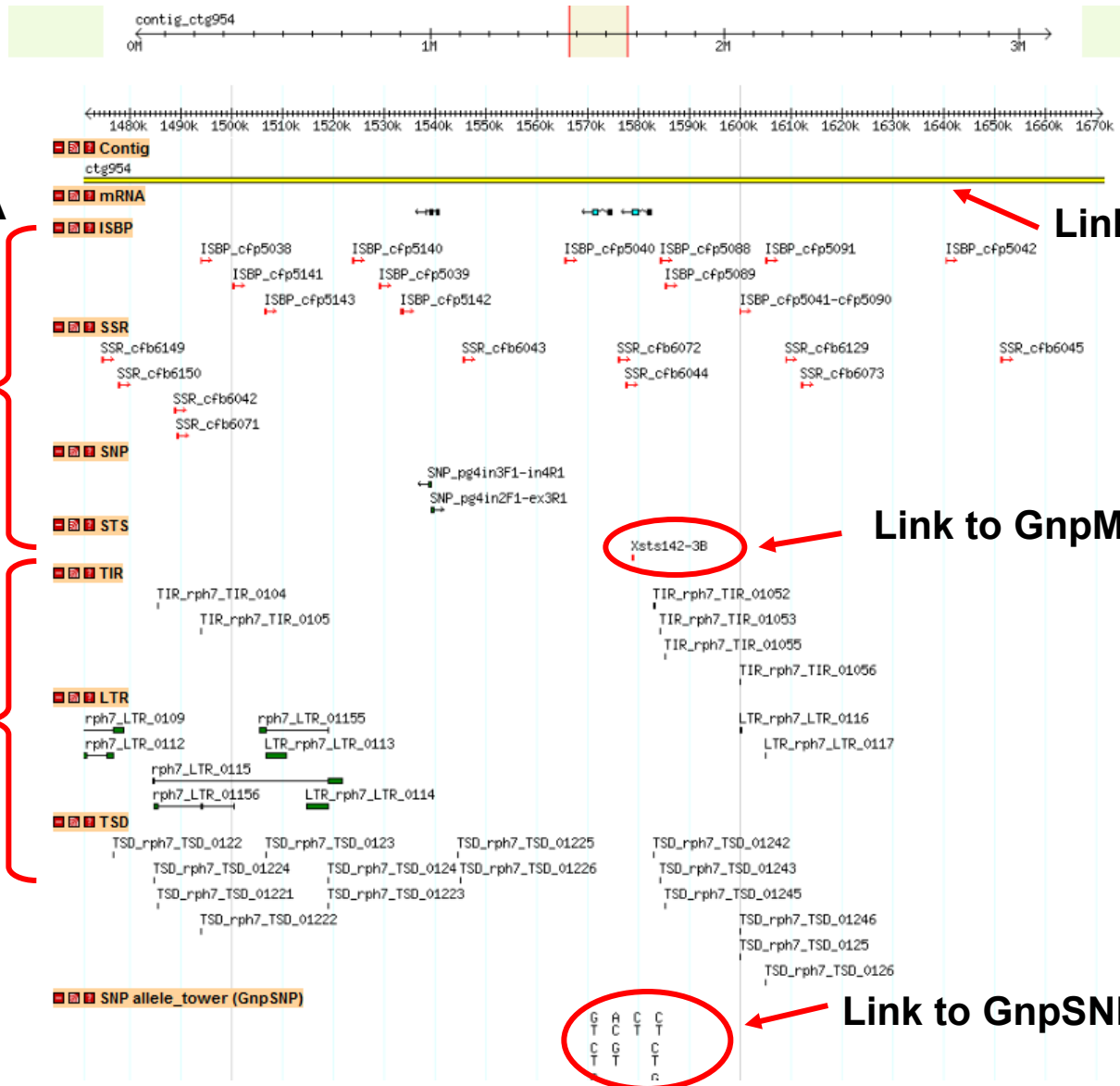
- Tool version

https://gpi.versailles.inra.fr/cgi-bin/gbrowse/wheat3B_RPH7

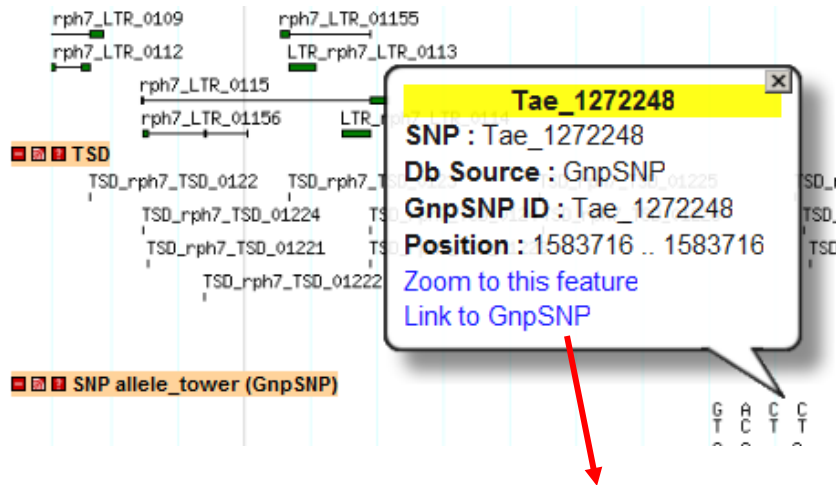
- V1.1 : GBrowse 1.70
- Restricted access (until publication by data owners)
- Thanks to Frederic Choulet for the manual curation

- **The same annotation browser system will be used to display sequenced and annotated BACs when available**

Wheat 3B annotation FHB



Wheat 3B annotation FHB




SNP details

Name :	Tae_1272248
Source :	GnpSNP



Internal references

Database	Reference name	Reference value
Wheat 3B annotation (FHB) v1.1	SNP name	Tae_1272248

SNP complements

SNP type :	SNP
Variation :	C/T
Linked with variations :	INRA_CF_ASP__82_BT002 
	View list

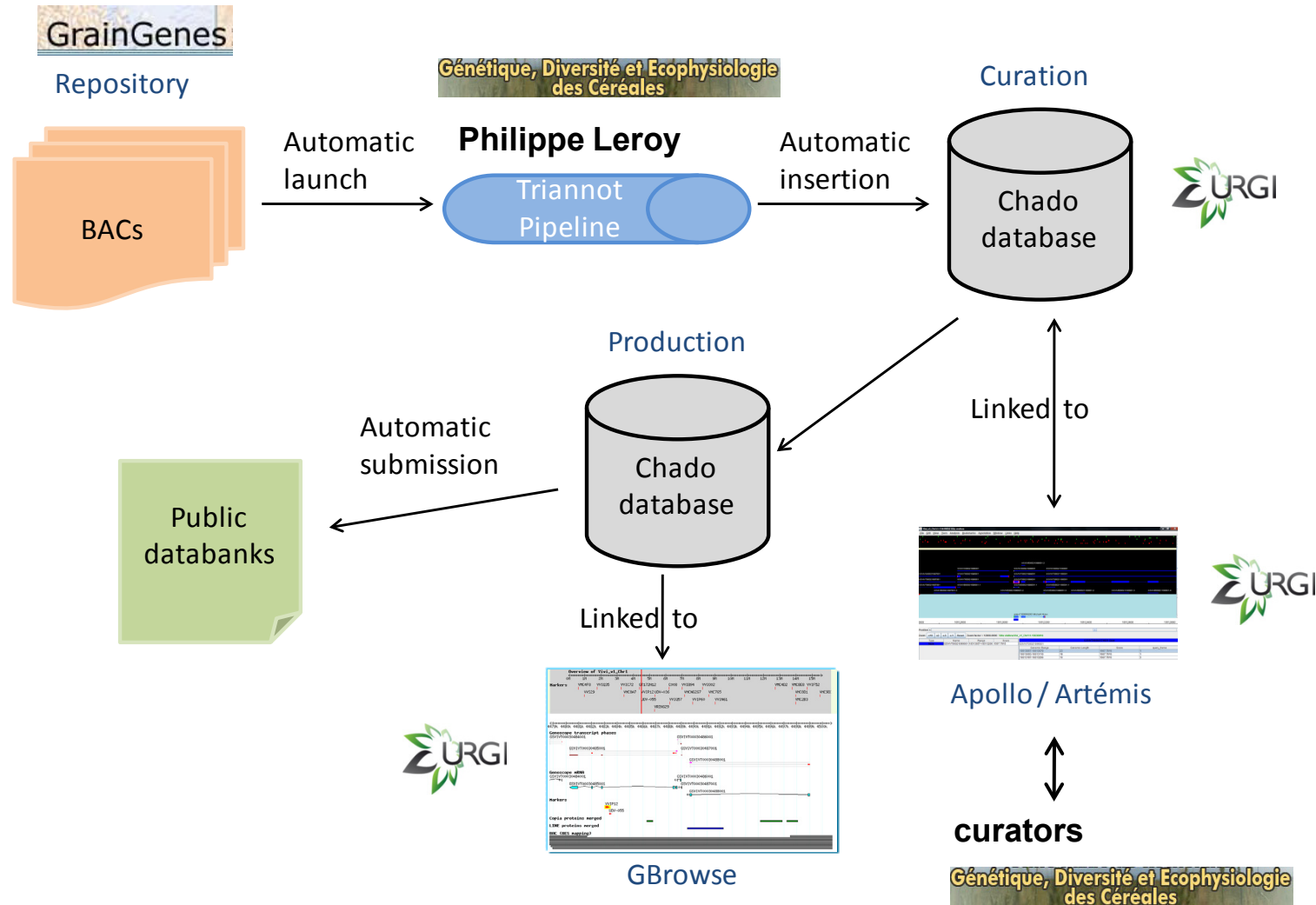
SNP sequences

5' flanker on ref.seq. :	>Tae_1272248-5' gaaggcgagcgagctggcgctcatgcacatgcagctgcgccatgtcggcttcgggtcatcgccccagcatgctngcccg t	
3' flanker on ref.seq. :	>Tae_1272248-3' gtctacaacaatacaatcaccttggcatggctaccagccgcccgtgctcattggacacaacatgtagattgtagatcatg tgagttatttgacgaaatgcacgcacatagggcggttagctaggtagagaccagactctcatggccgggacgcaggtg acgcaccacgacatgtgtgttgcaggtagagtacatgcattgtggtggcattttcgccatggacgtggttaaggactcaag ggtggcagcc	

GnpSNP

<http://urgi.versailles.inra.fr/GnpSNP>

3B BACs annotation perspectives



Take-home messages

- 3B physical map browser center on contig with links to genetic mapping, SNP and BAC annotation data

http://urgi.versailles.inra.fr/cgi-bin/gbrowse/wheat_FPC_pub/

- Easy access to deletion bins with the clickable image

<http://urgi.versailles.inra.fr/projects/Triticum/deletionBin.php>

- This physical map browser could display **other wheat chromosomes**

- We only need the FPC file
- Contact me at michael.alaux@versailles.inra.fr

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Biogemma



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GMOD community

