

# Wheat genomic data in GnpIS the URGI Information System

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## Abstract:

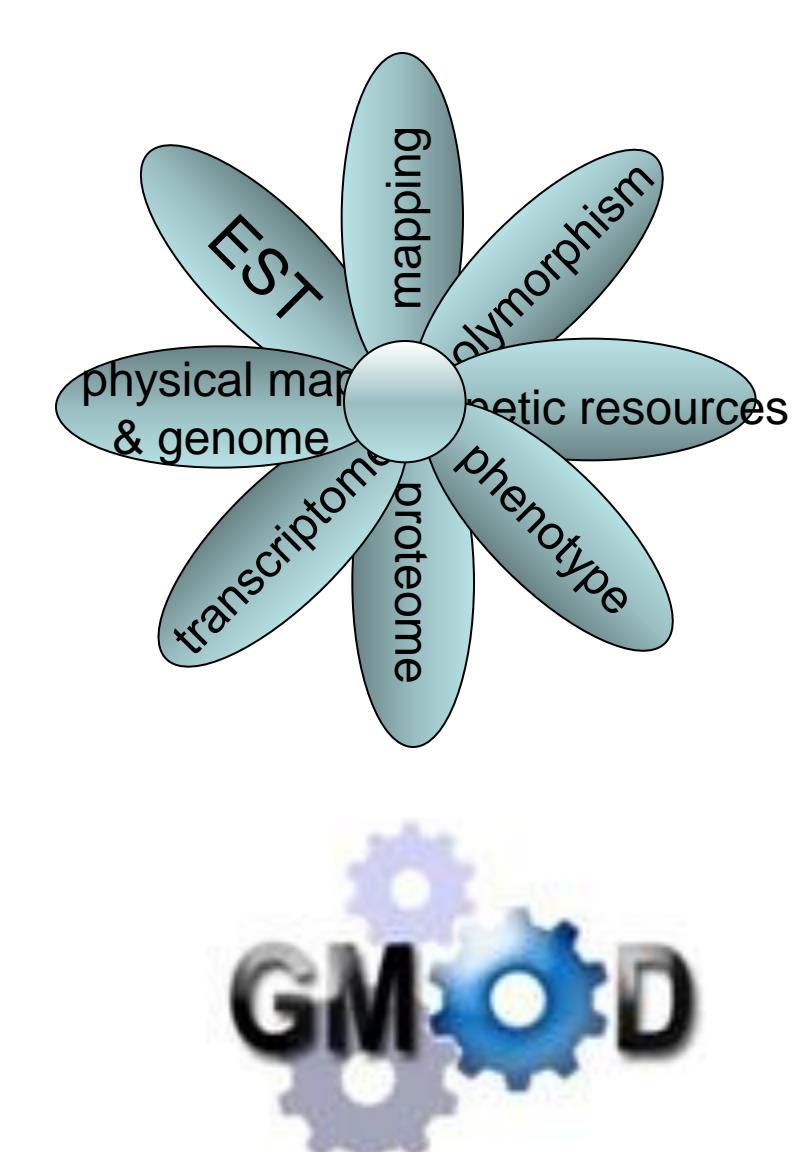
URGI is an INRA bioinformatics unit dedicated to plants and pest genomics. We develop and maintain a genomic and genetic information system called GnpIS, for plants of agronomical interest and their bioaggressors.

GnpIS is composed of multiples modules which contain wheat data:

- GnpGenome with the physical mapping of the 3B chromosome and some genomic annotation data using GMOD GBrowse viewer
- GnpMap with genetic mapping data: ITMI, ARE, RER, Neighbour, ReCs, SOds, WuMa, RLAC, SupBW, DEL, Ditelo, NulliTetra maps
- GnpSNP with polymorphism data
- GnpSeq with EST data
- SIREGal with genetic resources data

We present the links between all these kinds of wheat data inside GnpIS.

We describe more precisely the 3B physical map viewer with contigs, markers, BACs, deletion bins data and the link to the new wheat 3B BAC annotation viewer.



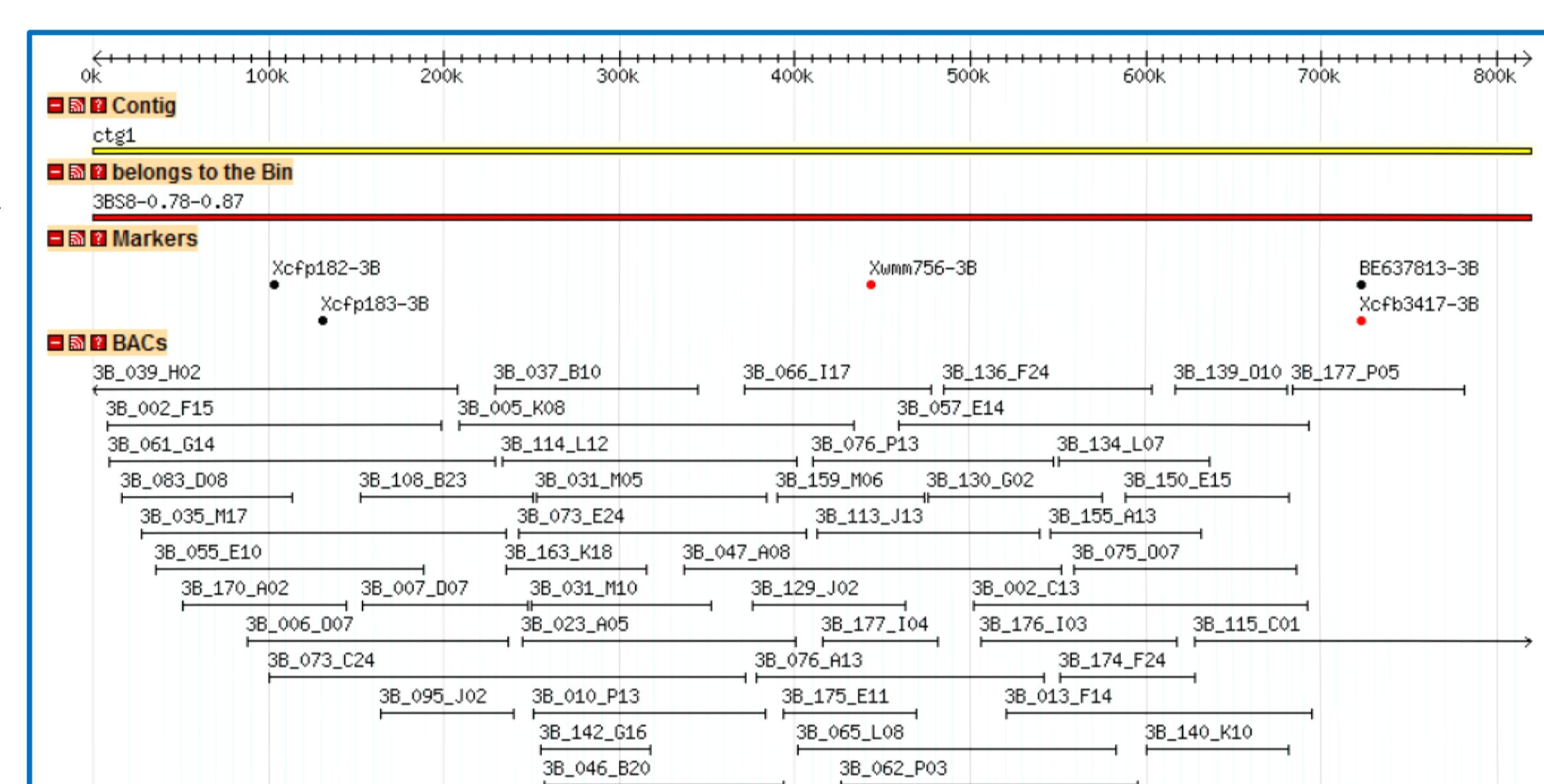
## GnpGenome

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

### Wheat 3B FPC physical map

[http://urgi.versailles.inra.fr/cgi-bin/gbrowse/wheat\\_FPC\\_pub/](http://urgi.versailles.inra.fr/cgi-bin/gbrowse/wheat_FPC_pub/)

Contig  
Deletion bin  
Markers  
BACs



### Wheat 3B deletion bins

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

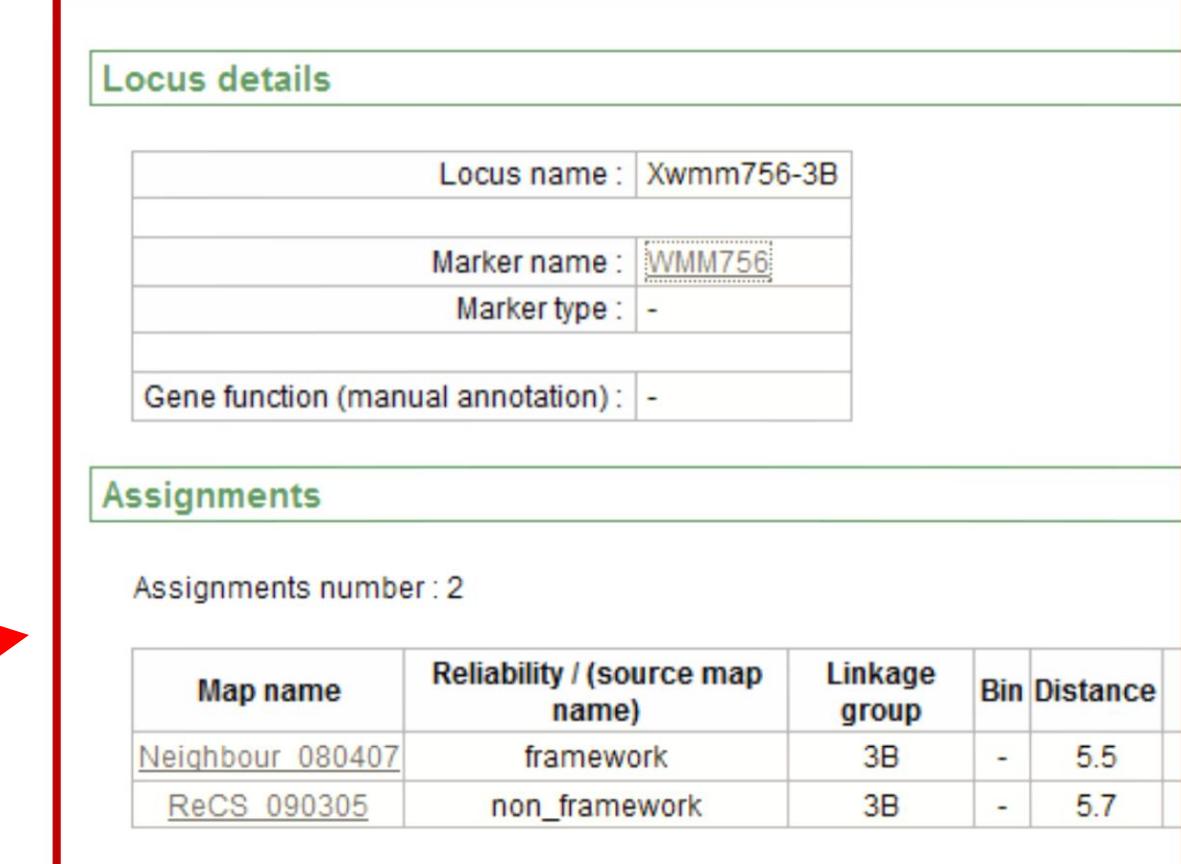
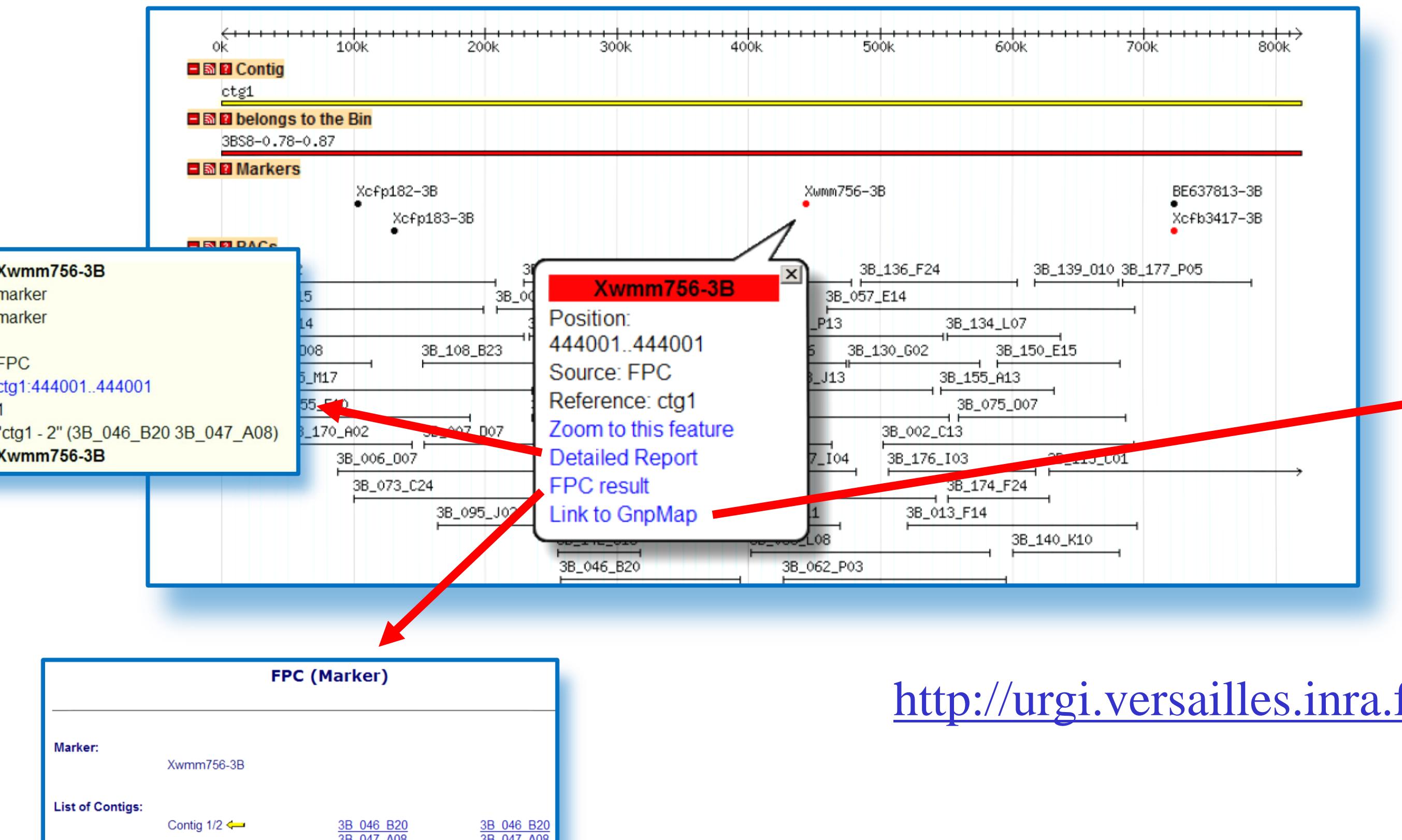
This form provides detailed information about a wheat accessions, including its name (BARBU DU FINISTERE), geographical origin (France), and various phenotypic traits like plant height and seed weight.

## SIREGal

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

This form displays SNP variations for a specific line (BARBU DU FINISTERE). It shows the variation name (INRA\_CF\_AS\_P\_75\_BT06), position (75), and flanking markers (Hga1, Hga2).

### 1) Markers in red have additionnal details in GnpMap

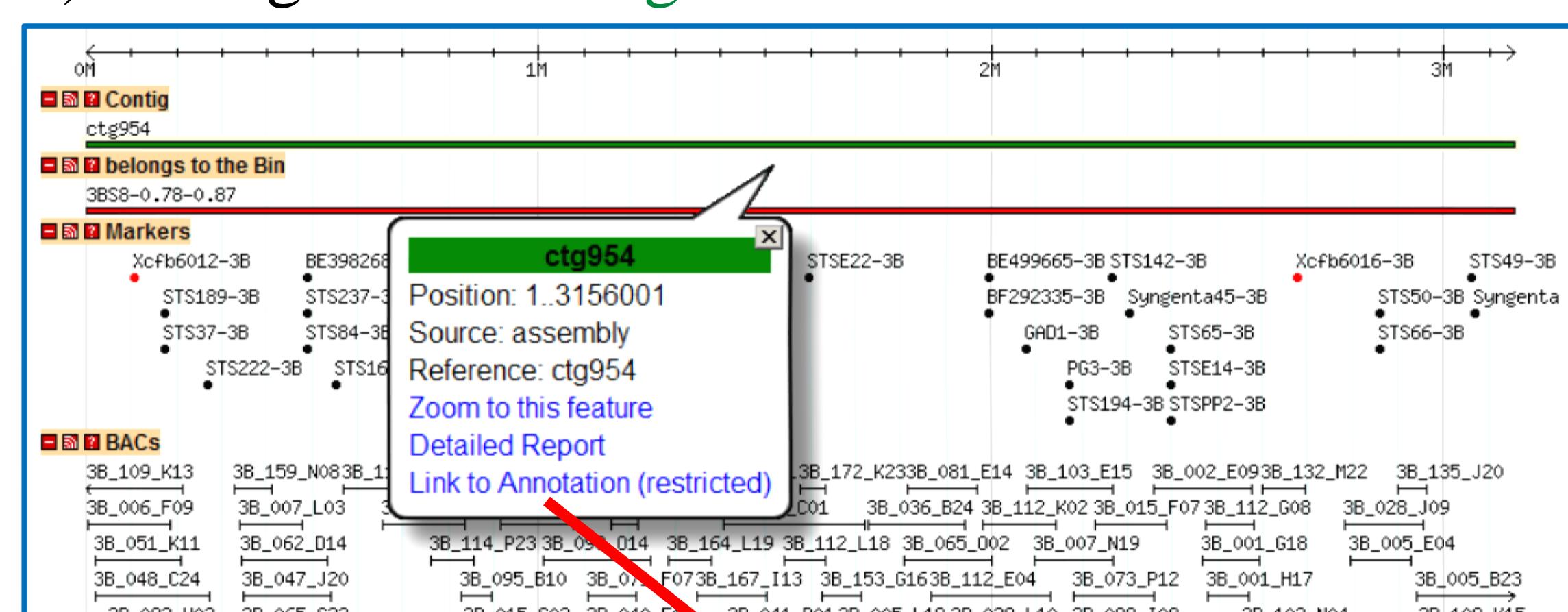


## GnpMap

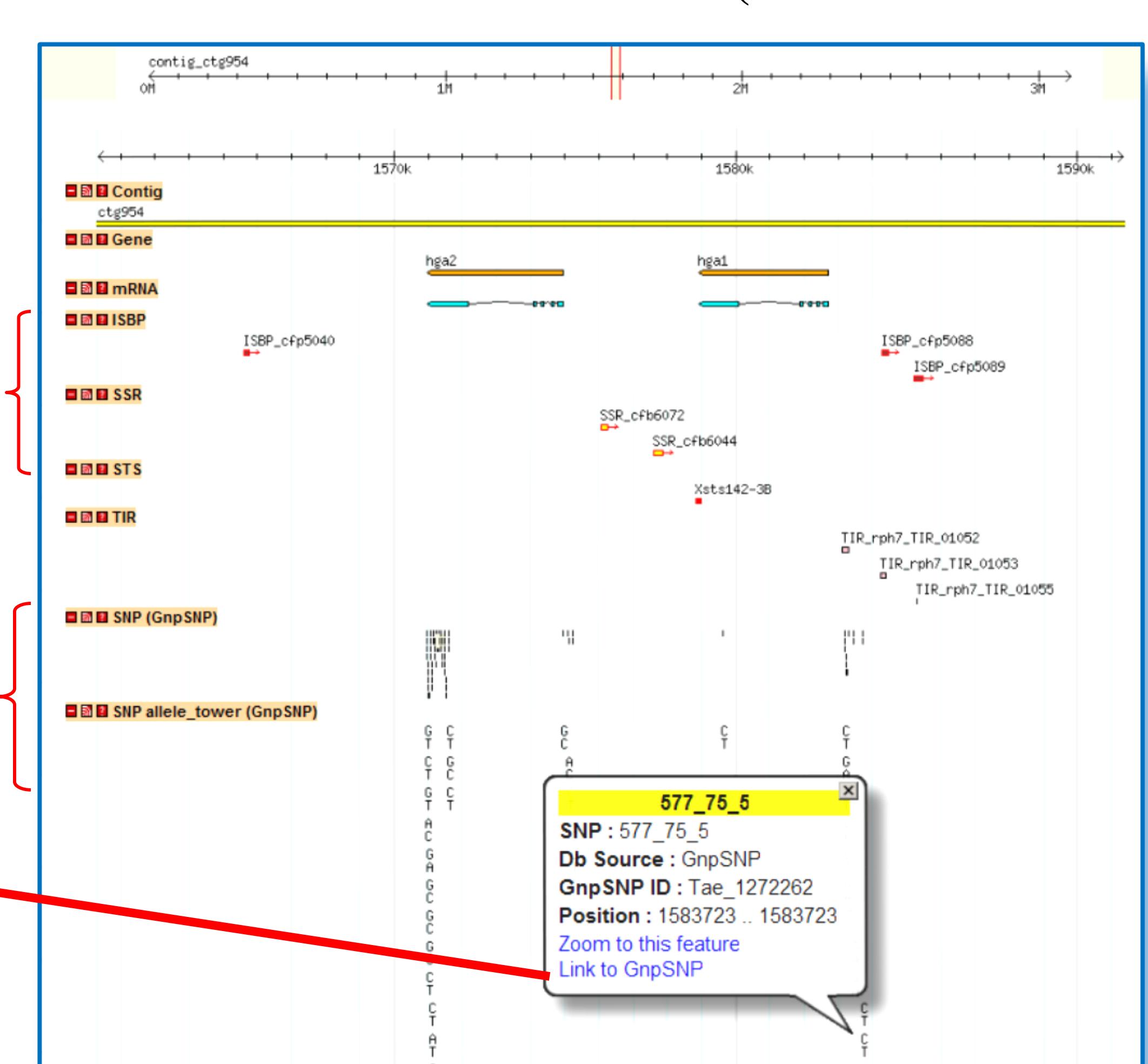
<http://urgi.versailles.inra.fr/GnpMap/mapping/welcome.do>

- ✓ 16 wheat genetic maps: ARE, AXO, CICs, 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

### 2) Contig or BAC in green are annotated



### Wheat 3B BAC annotation (restricted access)



## GnpSNP

<http://urgi.versailles.inra.fr/GnpSNP/snp/welcome.do>

### Related publication:

A physical map of the 1-gigabase bread wheat chromosome 3B  
 Paux E, Sourdille P, Salse J, Saintenac C, Choulet F, Leroy P, Korol A, Michalak M, Kianian S, Spielmeyer W, Lagudah E, Somers D, Kilian A, Alaùx M, Vautrin S, Bergès H, Eversole K, Appels R, Safar J, Simkova H, Dolezel J, Bernard M, Feuillet C.  
 Science. 2008 Oct 3;322(5898):101-4.

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