

**Allegato 6**

*Fluid flux mass balance histories  
for time period: 38626.000000 – 38991.000000 [d]*

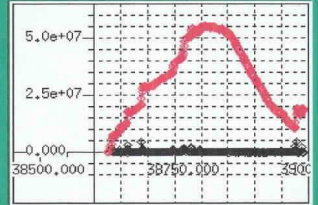
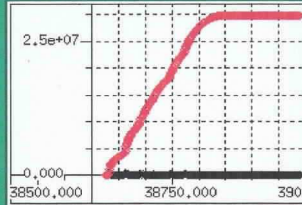
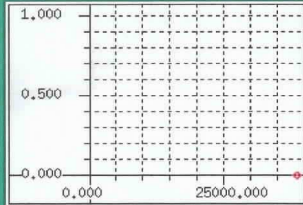
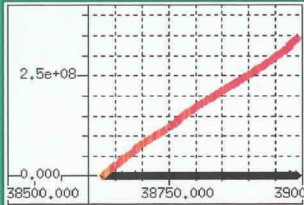
Fluxes through  
outer and inner  
boundaries

Injections and  
withdrawals  
through single  
wells

Areal fluxes  
due to infiltration,  
recharge,  
etc.

Imbalance:  
Gain(+)/Loss(-)

FLUX IN (+) : Flux Q [m3/d] / Accumulated mass M [m3]



135: 8.913e+C  
136: 8.600e+C  
137: 1.042e+C  
138: 1.553e+C  
139: 1.641e+C  
140: 1.260e+C

36: 3.399e+08  
37: 3.423e+08  
38: 3.437e+08  
39: 3.446e+08  
40: 3.456e+08

135: 0.000000  
136: 0.000000  
137: 0.000000  
138: 0.000000  
139: 0.000000  
140: 0.000000

135: 0.000000  
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137: 0.000000  
138: 0.000000  
139: 0.000000  
140: 0.000000

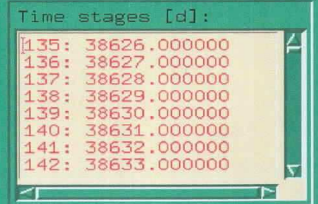
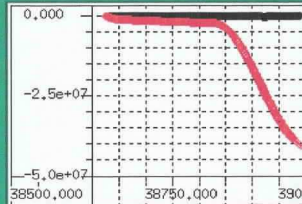
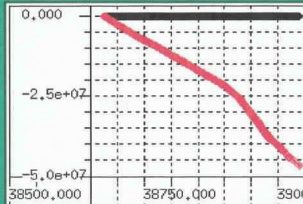
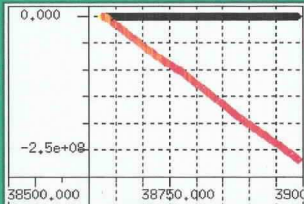
135: 16.32074  
136: 31.35731  
137: 9599.075  
138: 50092.57  
139: 92900.57  
140: 1.311e+C

36: 2.994e+07  
37: 2.994e+07  
38: 2.994e+07  
39: 2.994e+07  
40: 2.994e+07  
**RICARICA  
ZENITALE**

135: 64722.74  
136: 22226.64  
137: 2.962e+C  
138: 8.870e+C  
139: 1.104e+C  
140: 6.833e+C

36: 1.746e+07  
37: 1.832e+07  
38: 1.903e+07  
39: 1.850e+07  
40: 1.823e+07  
**VOLUME  
ACCUMULATO**

FLUX OUT (-) : Flux Q [m3/d] / Accumulated mass M [m3]



Time stages [d]:

135:	38626.000000
136:	38627.000000
137:	38628.000000
138:	38629.000000
139:	38630.000000
140:	38631.000000
141:	38632.000000
142:	38633.000000

135:-6.134e+C  
136:-6.403e+C  
137:-5.610e+C  
138:-5.256e+C  
139:-4.425e+C  
140:-5.236e+C

36:-2.660e+08  
37:-2.666e+08  
38:-2.670e+08  
39:-2.689e+08  
40:-2.699e+08

135:-1.227e+C  
136:-1.103e+C  
137:-1.101e+C  
138:-1.101e+C  
139:-1.101e+C  
140:-1.101e+C

36:-4.620e+07  
37:-4.634e+07  
38:-4.648e+07  
39:-4.662e+07  
40:-4.674e+07  
**PRELIEVI  
AREALI**

135:-90482.82  
136:-87196.15  
137:-83902.95  
138:-80605.37  
139:-77303.12  
140:-73996.78

36:-4.019e+07  
37:-4.032e+07  
38:-4.044e+07  
39:-4.056e+07  
40:-4.068e+07  
**PRELIEVI AREALI**

- Netti entrano da tutti i *Boundaries* **75.7** Mm<sup>3</sup>
- Dai pozzi singoli escono complessivamente 46.74 Mm<sup>3</sup>
- La ricarica Zenitale complessiva ammonta a 29.94 Mm<sup>3</sup>
- I prelievi areali totali ammontano a 40.68 Mm<sup>3</sup>
- Il volume accumulato complessivamente nel periodo ammonta a 18.23 Mm<sup>3</sup>

## Fluid flux mass balance histories for time period: 38626.000000 – 38991.000000 [d]

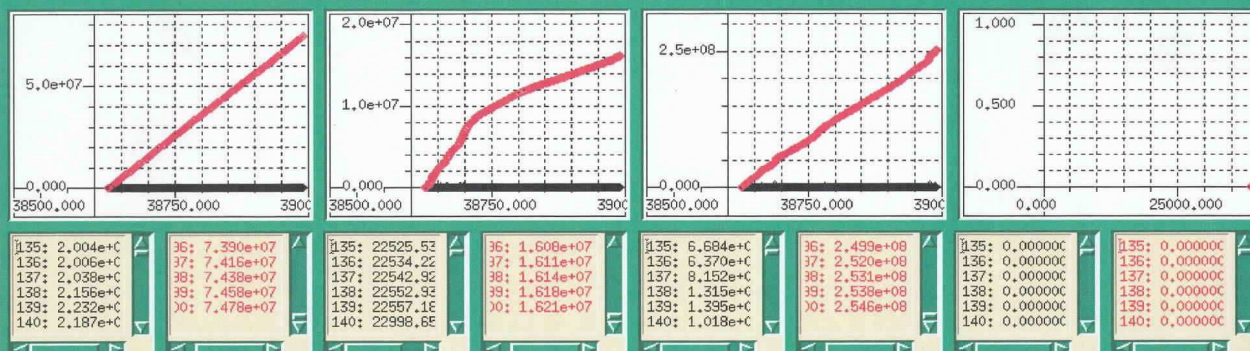
Fluxes through  
Dirichlet bound-  
aries (1st kind)

Fluxes through  
Neumann bounda-  
ries (2nd kind)

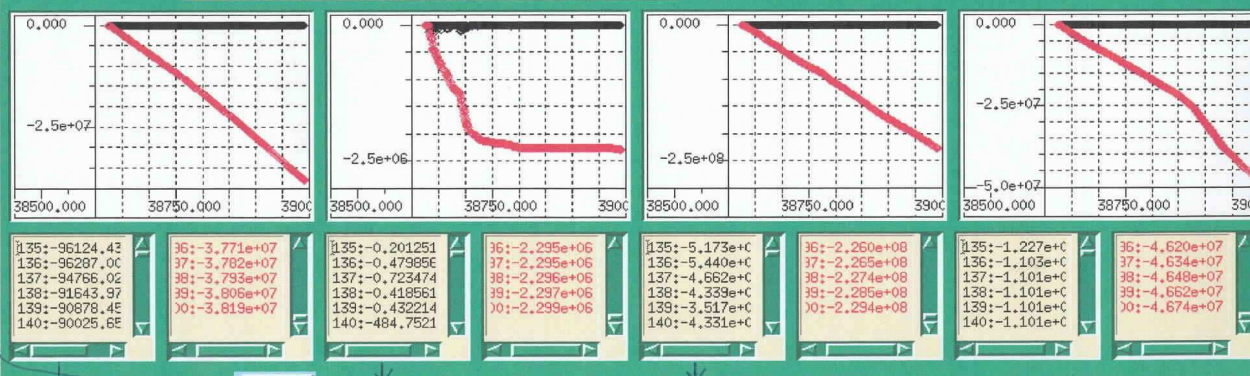
Fluxes through  
Cauchy bounda-  
ries (3rd kind)

Fluxes through  
well boundaries  
(4th kind)

FLUX IN (+) : Flux Q [m3/d] / Accumulated mass M [m3]



FLUX OUT (-) : Flux Q [m3/d] / Accumulated mass M [m3]



Netti entrano dai limiti di Dirichlet **36.59** +

Netti entrano dai limiti di Neumann 13.91 +

Netti entrano dai limiti di Cauchy **25.2** = TOTALE **75.7** Mm<sup>3</sup>

(Ricarica dal Margine meridionale negli acquiferi dei Gruppi B e C) = **36.59** – 13.13 (Flusso subalveo entrante a Fornovo) – 1.56 (Flusso sotterraneo entrante dalle conoidi Parma-Baganza nel Complesso A1) + 1.98 (Perdite verso il Gruppo Acquifero A padano) = 23.88 Mm<sup>3</sup>

(Ricarica dal Fiume Taro) = **25.2** – 11.58 (Ricarica dal Torrente Baganza e dal suo subalveo) + 13.23 (Perdite verso il fiume Po) = 26.85 Mm<sup>3</sup>

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for time period: 38626.000000 - 38991.000000 [d]*

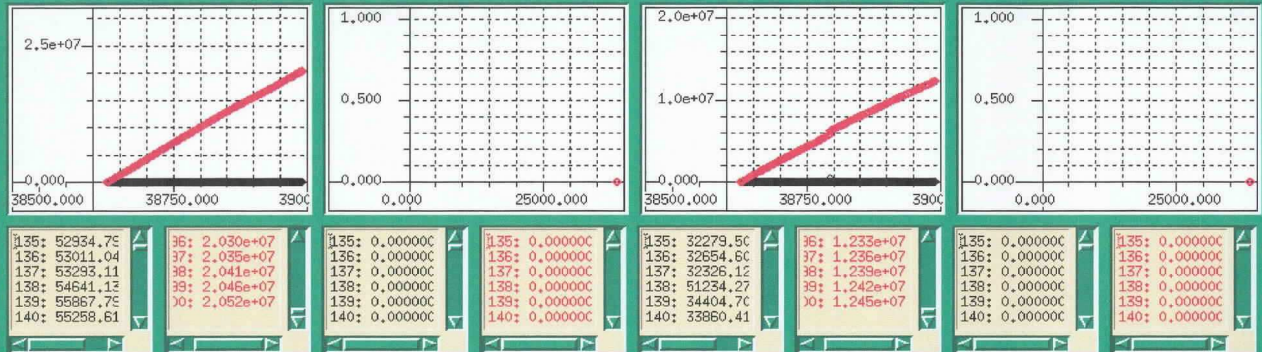
Fluxes through Dirichlet boundaries (1st kind)

Fluxes through Neumann boundaries (2nd kind)

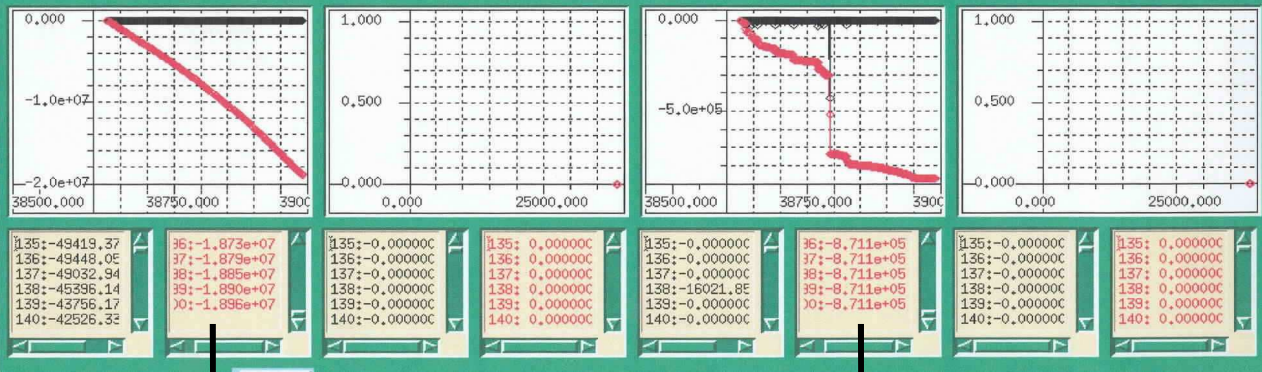
Fluxes through Cauchy boundaries (3rd kind)

Fluxes through well boundaries (4th kind)

FLUX IN (+) : Flux Q [m3/d] / Accumulated mass M [m3]



FLUX OUT (-) : Flux Q [m3/d] / Accumulated mass M [m3]



Netti entrano 1.56 Mm<sup>3</sup>  
Flusso sotterraneo entrante dalle conoidi Parma-Baganza nel Complesso A1

Netti entrano 11.58 Mm<sup>3</sup>  
Ricarica dal Torrente Baganza e dal suo subalveo

## Fluid flux mass balance histories for time period: 38626.000000 – 38991.000000 [d]

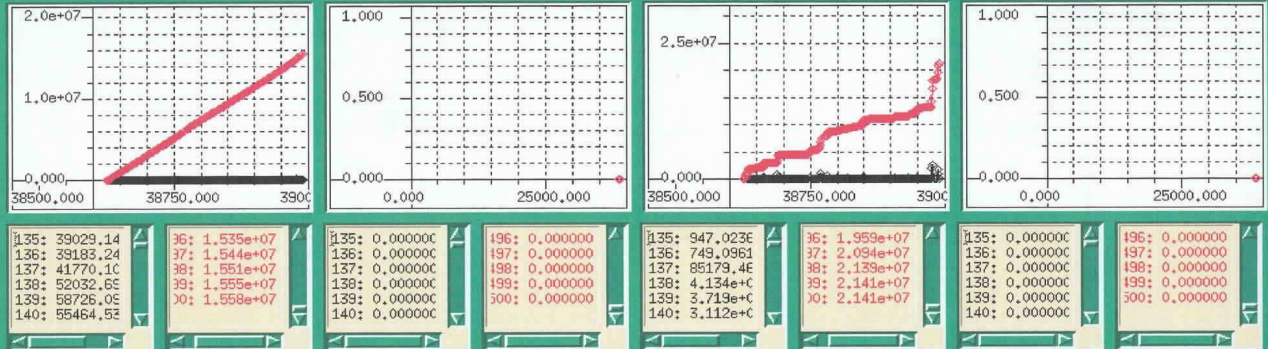
Fluxes through Dirichlet boundaries (1st kind)

Fluxes through Neumann boundaries (2nd kind)

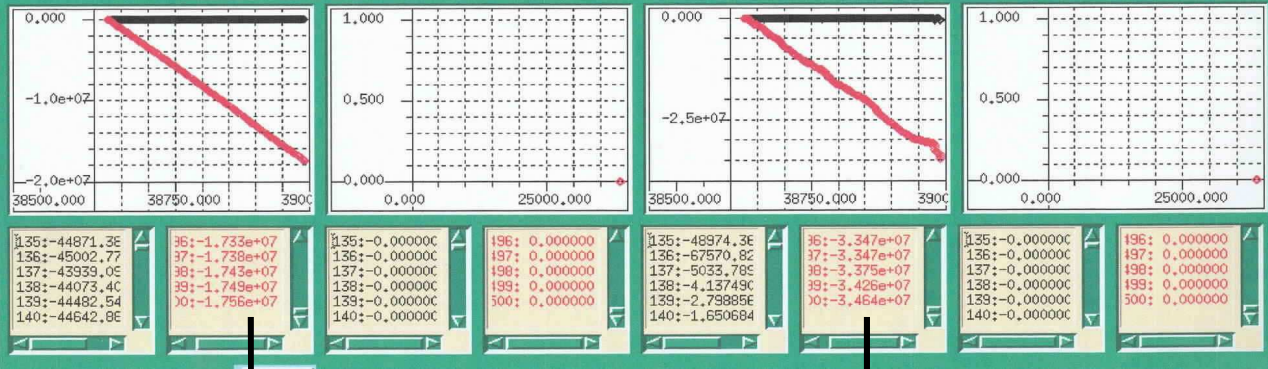
Fluxes through Cauchy boundaries (3rd kind)

Fluxes through well boundaries (4th kind)

FLUX IN (+) : Flux Q [m3/d] / Accumulated mass M [m3]



FLUX OUT (-) : Flux Q [m3/d] / Accumulated mass M [m3]



Netti escono 1.98 Mm<sup>3</sup>  
Perdite verso il Gruppo Acquifero A padano

Netti escono 13.23 Mm<sup>3</sup>  
Perdite verso il fiume Po

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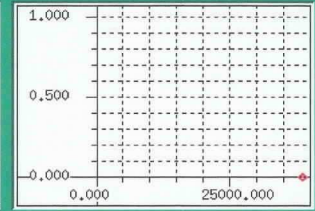
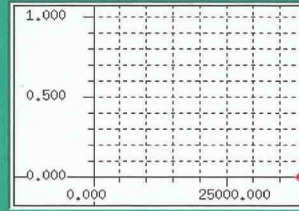
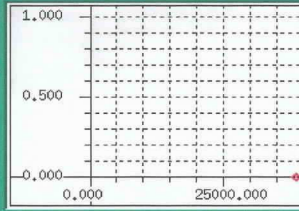
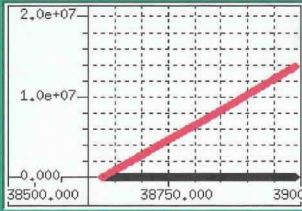
Fluxes through Dirichlet boundaries (1st kind)

Fluxes through Neumann boundaries (2nd kind)

Fluxes through Cauchy boundaries (3rd kind)

Fluxes through well boundaries (4th kind)

FLUX IN (+) : Flux Q [m3/d] / Accumulated mass M [m3]



135: 38762.04
136: 38716.30
137: 38995.24
138: 39310.46
139: 38901.90
140: 38316.50

36: 1.372e+07
37: 1.376e+07
38: 1.380e+07
39: 1.384e+07
40: 1.387e+07

135: 0.000000
136: 0.000000
137: 0.000000
138: 0.000000
139: 0.000000
140: 0.000000

135: 0.000000
136: 0.000000
137: 0.000000
138: 0.000000
139: 0.000000
140: 0.000000

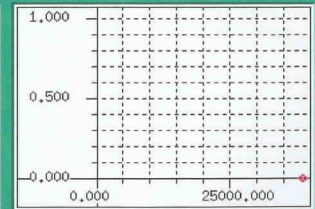
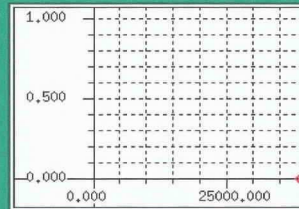
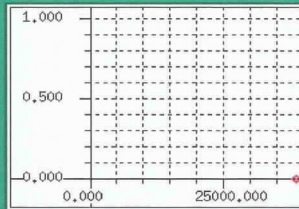
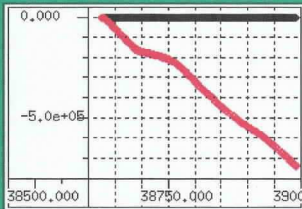
135: 0.000000
136: 0.000000
137: 0.000000
138: 0.000000
139: 0.000000
140: 0.000000

135: 0.000000
136: 0.000000
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135: 0.000000
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138: 0.000000
139: 0.000000
140: 0.000000

135: 0.000000
136: 0.000000
137: 0.000000
138: 0.000000
139: 0.000000
140: 0.000000

FLUX OUT (-) : Flux Q [m3/d] / Accumulated mass M [m3]



135: -1171.011
136: -1150.077
137: -1103.614
138: -1472.710
139: -1929.831
140: -2122.040

36: -7.319e+05
37: -7.346e+05
38: -7.373e+05
39: -7.400e+05
40: -7.428e+05

135: -0.000000
136: -0.000000
137: -0.000000
138: -0.000000
139: -0.000000
140: -0.000000

135: 0.000000
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139: 0.000000
140: 0.000000



Flusso subalveo netto entrante a Fornovo  
= 13.13 Mm<sup>3</sup>

Il Fiume Taro drena dal suo subalveo, in apice di conoide, 5.4 Mm<sup>3</sup> (tra Fornovo e Giarola)

