

Test cases Swap

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Swap 3.2 (revision 16) (Date 06 Nov 2008)

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27 PearlFocus2(Okeh-m)	80
28 PearlFocus3(Port-m)	83
29 PearlFocus4(Sevi-m)	86
30 PearlLysimeter	89
31 ShallowSoil(EuroHarpITE)	92
32 SnowFrost(Boreas)	95
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1 Introduction

This document describes test-results of simulations with the SWAP model.

In the first chapter summaries are given in 4 tables: 1. overall performance: i) was the simulation succesfull completed, ii) was the water balance sound, iii) what was the required cpu time;
2. performance indicator 1 (PI1): in general the cumulative flux at 1 meter depth;
3. performance indicator 1 (PI2);
4. performance indicator 1 (PI3);

In the next chapters the following is reported of each case :

1. a table with a short characterisation;
2. a table with the numerical input settings;
3. a table with the results from the 3 Performace Indicators;
4. a figure with 3 pictures corresponding to the 3 performance indicators;
5. a yearly water balance of each simulated year; mass balance of water (and when relevant of solutes), if the nr of years is high then the table may be truncated.

NOTE: the tests with Macropores produce a waterbalans with a deviation that is equal to the rapid drainage.

This is due to an imcomplete postprocessing and NOT due to incorrect water balance simulations

Please verify files with extension *.blc and *.bma for detailed water balances

2 Summary

The cases were simulated using:
Swap 3.2 (revision 16) (Date 06 Nov 2008)

Tabel 1: System info

systeminfo	
sysname	Windows
release	XP
version	build 2600, Service Pack 2
nodename	L0106073
machine	x86
login	kroes006
user	kroes006

Tabel 2: Summary of results

case	completed	watbalok	cpu.sec	
1	AnalyticSoilPressurehead	yes	yes	6.69
2	AnalyticSoilTemperature	yes	yes	1.02
3	AnalyticSolute	yes	yes	12.00
4	AnimoForageMaize(Cranendonk)	yes	yes	3.38
5	AnimoGrassland(Cranendonk)	yes	yes	3.96
6	AnimoGrassland(Ruurlo)	yes	yes	2.22
7	DrainageBasic(EuroHarpDKO)	yes	yes	5.58
8	DrainageBasic(Hupsel)	yes	yes	2.35
9	DrainageExtended(STONE2uc6)	yes	yes	8.35
10	DrainageExtended(Timing)	yes	yes	0.63
11	DrainageExtended(Wildenborch)	yes	yes	4.14
12	GwlMeasuredasbottomBC(Ruurlo)	yes	yes	2.26
13	GwlShallow(Zegveld)	yes	yes	12.55
14	Hysterese(Hupsel)	yes	yes	2.55
15	InfiltrationRunoff(VanDamFeddes2000)	yes	yes	0.37
16	Interception(Speuld)	yes	yes	2.98
17	Interflow(Vlietpolder)	yes	yes	3.16
18	IrrigationScheduledFixedTiming(Sevilla)	yes	yes	32.53
19	MacroPores1	yes	yes	72.15
20	MacroPores2	yes	yes	6.14
21	MeteoDetailedInOut(Hupsel)	yes	yes	0.55
22	MeteoPrecipitationDetail(Andelst)	yes	yes	4.28
23	PearlDrainageBasic	yes	yes	1.16
24	PearlFocus1(Joki-m)	yes	yes	40.25
25	PearlFocus2(Okeh-m)	yes	yes	60.52
26	PearlFocus3(Port-m)	yes	yes	51.02
27	PearlFocus4(Sevi-m)	yes	yes	62.01
28	PearlLysimeter	yes	yes	1.78
29	ShallowSoil(EuroHarpITE)	yes	yes	6.08
30	SnowFrost(Boreas)	yes	yes	1.17
31	SnowFrost(EuroHarpNOV)	yes	yes	21.02
32	SoilEvaporation(Castricum)	yes	yes	16.54
33	TimingErrorEndofDay	yes	yes	2.17
34	TranspirationDecForest(Castricum)	yes	yes	17.25
35	total	34	34	470.81

Tabel 3: Performance Indices 1

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-loam-sand	cm	-26.20	-26.23	-0.02	0.04
2	RMSE-depth0.45cm	oC	20.00	20.00	0.00	0.16
3	RMSE-Ldis0.1cm	g/cm3	2.45	2.17	-0.28	2.66
4	qCum-1m	mm	2114.43			
5	qCum-1m	mm	1354.75			
6	qCum-1m	mm	991.09			
7	qCum-1m	mm	4877.24			
8	qCum-1m	mm	590.53			
9	qCum-1m	mm	-511.51			
10	qCum-1m	mm	700.86			
11	RMSE-GrndWatlev	m bss	-0.64	-0.58	-0.05	0.13
12	qCum-1m	mm	1003.92			
13	qCum-1m	mm	816.98			
14	qCum-1m	mm	589.70			
15	qCum-1m	mm	0.13			
16	qCum-1m	mm	579.13			
17	qCum-1m	mm	88.51			
18	qCum-1m	mm	8602.94			
19	qCum-1m	mm	60.14			
20	qCum-1m	mm	-19.79			
21	qCumDiff-1m	mm	10.93	122.64	-0.03	0.21
22	qCum-1m	mm	397.67			
23	qCum-1m	mm	324.77			
24	qCum-1m	mm	17034.52			
25	qCum-1m	mm	27052.16			
26	qCum-1m	mm	38682.28			
27	qCum-1m	mm	40195.09			
28	qCum-cmpl	mm	1194.04			
29	qCum-1m	mm	1436.80			
30	qCum-1m	mm	24.41			
31	qCum-1m	mm	127.43			
32	qCum-1m	mm	18508.25			
33	qCum-1m	mm	1085.31			
34	qCum-1m	mm	12083.43			

Tabel 4: Performance Indices 2

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-sand-loam	cm	-31.48	-31.11	0.37	2.57
2	RMSE-depth245.0cm	oC	20.00	20.00	-0.00	0.02
3	RMSE-Ldis1.0cm	g/cm3	2.00	2.00	0.00	0.07
4	qCum-EvapCrop	mm	2442.00			
5	qCum-EvapCrop	mm	3940.00			
6	qCum-EvapCrop	mm	1789.00			
7	qCum-EvapCrop	mm	2645.00			
8	qCum-EvapCrop	mm	823.00			
9	qCum-EvapCrop	mm	1020.00			
10	qCum-EvapCrop	mm	270.00			
11	RMSE-SurfWatLev	m bss	-0.74	-0.83		0.16
12	qCum-EvapCrop	mm	1840.00			
13	qCumDiff-RainIO	mm	9398.30	9398.30	0.00	
14	qCum-EvapCrop	mm	813.00			
15	qCum-cmp1	mm	924.20			
16	RMSE-throughfall	mm	774.45	768.07	6.39	24.13
17	qCumDiff-RainIO	mm	3310.10	3310.10	0.00	
18	qCumDiff-IrrigIO	mm	20123.68	54587.20	-34463.52	
19	gwl-ave	cm bss	-107.85			
20	gwl-ave	cm bss	-95.15			
21	qCumDiff-Esoil	mm	40.22	387.98	0.08	1.39
22	qCumDiff-RainIO	mm	1395.35	1395.35	0.00	
23	qCum-EvapCrop	mm	225.00			
24	qCum-EvapCrop	mm	11091.00			
25	qCum-EvapCrop	mm	25349.00			
26	qCum-EvapCrop	mm	19867.00			
27	qCumDiff-IrrigIO	mm	54587.20	54587.20	0.00	
28	qCum-EvapCrop	mm	393.00			
29	qCum-EvapCrop	mm	5747.00			
30	RMSE-swe	cm	14.66	21.92	-7.26	9.03
31	qCum-EvapCrop	mm	3370.00			
32	RMSE-qDrain	mm	18633.00	19160.29	-17.58	39.70
33	qCum-Rain	mm	2353.37			
34	RMSE-qDrain	mm	11513.00	11784.00	-9.03	68.30

Tabel 5: Performance Indices 3

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-clay-sand	cm	-13.73	-13.68	0.05	0.11
2	RMSE-depth492.5cm	oC	19.99	20.00	-0.01	0.03
3	RMSE-Ldis10.0cm	g/cm3	1.95	1.95	0.00	0.02
4	RMSE-gwl	cm	-128.61	-134.48	7.88	19.13
5	RMSE-gwl	cm	-111.50	-99.77	-8.13	14.47
6	RMSE-gwl	cm	-86.10	-104.14	3.56	22.24
7	qCum-bottom	cm	0.00			
8	qCum-bottom	cm	0.00			
9	qCum-bottom	cm	1575.00			
10	qCum-bottom	cm	91.00			
11	qCumDrainOut	mm	-476.00			
12	RMSE-gwl	cm	-94.54	-104.53	0.00	0.00
13	RMSE-RainIO	mm	4387.05	4387.04	0.00	0.00
14	qCum-bottom	cm	0.00			
15	qCum-Runoff	mm	1475.80			
16	RMSE-theta50cm	-	0.16	0.11	0.03	0.04
17	RMSE-RainIO	mm	1658.46	1658.46	0.00	0.00
18	RMSE-IrrigIO	mm	9968.25	10233.89	0.00	0.00
19	qCum-bottom	mm	-88.71			
20	qCum-bottom	mm	6.78			
21	qCumDiff-Ecrop10cm	mm	21.24	201.45	0.03	0.38
22	RMSE-RainIO	mm	701.48	701.21	0.27	0.60
23	qCum-bottom	cm	-365.00			
24	qCum-bottom	cm	17095.00			
25	qCum-bottom	cm	26560.00			
26	qCum-bottom	cm	38684.00			
27	RMSE-IrrigIO	mm	27307.13	27307.13	0.00	0.00
28	qCum-bottom	cm	611.00			
29	qCum-bottom	cm	0.00			
30	RMSE-tem	oC	9.97	1.59	6.52	11.15
31	qCum-bottom	cm	0.00			
32	RMSE-ETact	mm	6527.00	6087.81	14.64	26.95
33	Count-ErrorDays	-	0.00			
34	RMSE-ETact	mm	13856.00	13464.10	13.06	55.12

3 AnalyticSoilPressurehead

Tabel 6: Description of case

		1
CaseNr		1
dirnam	AnalyticSoilPressurehead	
Purpose	Verification of SoilwaterPressureHeads	
Location		
SimulationPeriod	steadystate (1 a)	
SoilType	3 layered profiles	
CropType	BareSoil	
drainage	none	
irrigation	none	
bottomboundary	Free drainage	
reference	Vanderborght et al (2005)	

Project: SteadyStatecs

File name: SteadyStatecs.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:03:24 2008

Simulation stopped at Thu Nov 06 16:03:31 2008

Simulation elapsed time 6.69 (sec)

Succesfull completion of simulation: yes

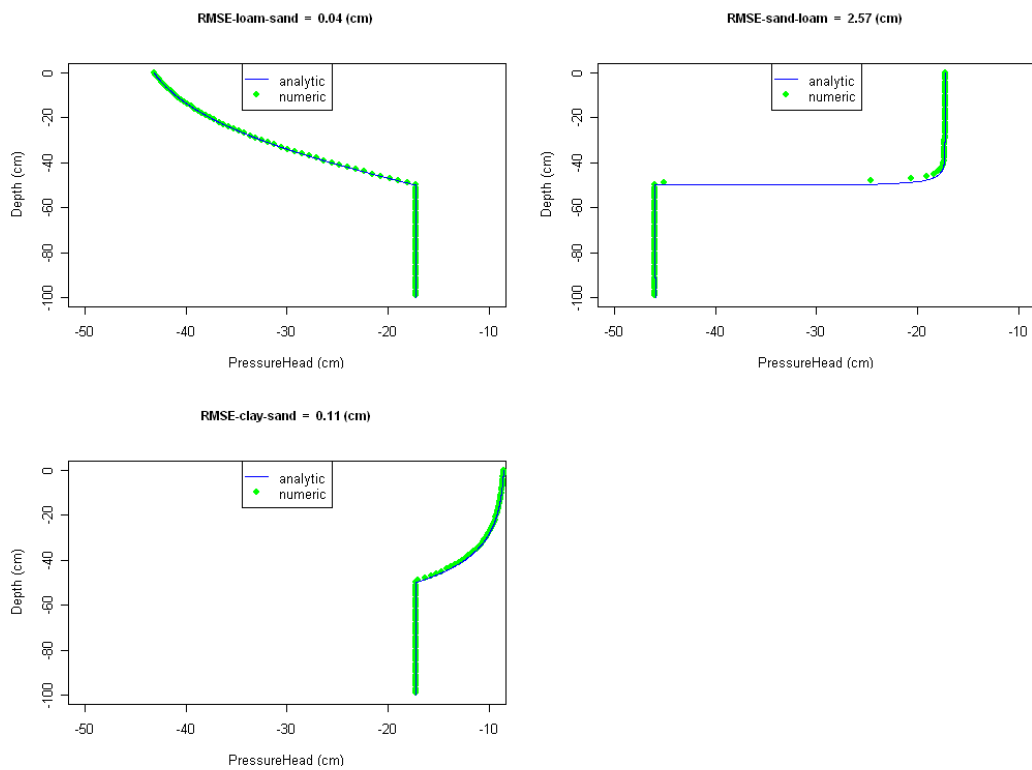
Succesfull closure of water balance: yes

Tabel 7: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Table 8: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-loam-sand	cm	-26.20	-26.23	-0.02	0.04
2	RMSE-sand-loam	cm	-31.48	-31.11	0.37	2.57
3	RMSE-clay-sand	cm	-13.73	-13.68	0.05	0.11



Figuur 1: AnalyticSoilPressurehead

Tabel 9: Waterbalans

	1
ipl	1.00
yr	1971.00
Igrai	1825.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
findr4	0.00
fdrin5	0.00
fbtin	0.00
evicpr	0.00
evicir	0.00
evso	0.00
evsubl	0.00
evpn	0.00
flev	0.00
runoff	0.00
fdrou1	0.00
fdrou2	0.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
fbtou	-1730.00
deltast	-95.00
deltapn	0.00
deltasnow	0.00
badev	0.00
evsoma	0.00
evtrma	0.00

4 AnalyticSoilTemperature

Tabel 10: Description of case

		2
CaseNr		2
dirnam	AnalyticSoilTemperature	
Purpose	Verification of SoilTemperatures	
Location		
SimulationPeriod	steadystate	
SoilType	1 layer profile	
CropType	BareSoil	
drainage	none	
irrigation	none	
bottomboundary	Free drainage	
reference		-

Project: AnalyticSoilTemp

File name: AnalyticSoilTemp.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:03:32 2008

Simulation stopped at Thu Nov 06 16:03:33 2008

Simulation elapsed time 1.02 (sec)

Succesfull completion of simulation: yes

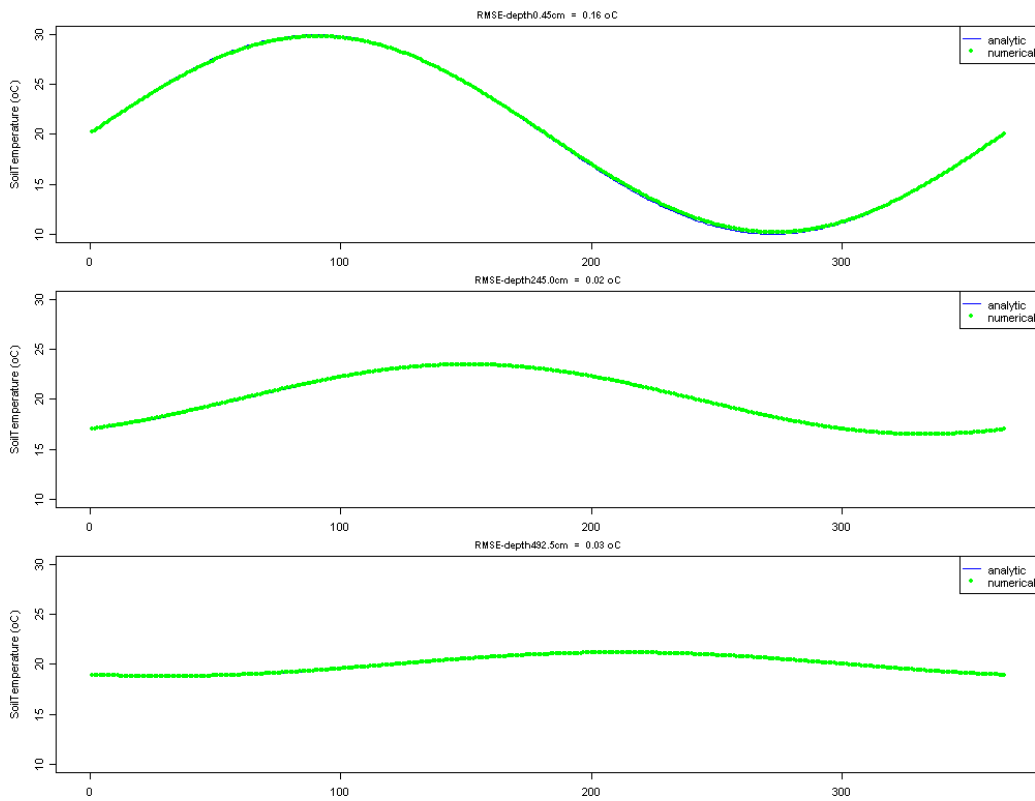
Succesfull closure of water balance: yes

Tabel 11: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 12: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-depth0.45cm	oC	20.00	20.00	0.00	0.16
2	RMSE-depth245.0cm	oC	20.00	20.00	-0.00	0.02
3	RMSE-depth492.5cm	oC	19.99	20.00	-0.01	0.03



Figuur 2: AnalyticSoilTemperature

Tabel 13: Waterbalans

	1
ipl	1.00
yr	1971.00
Igrai	0.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	0.00
evicpr	0.00
evicir	0.00
evso	0.00
evsubl	0.00
evpn	0.00
flev	0.00
runoff	0.00
fdrou1	0.00
fdrou2	0.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
flbtou	0.00
deltast	0.00
deltapn	0.00
deltasnow	0.00
badev	0.00
evsoma	0.00
evtrma	0.00

5 AnalyticSolute

Tabel 14: Description of case

		3
CaseNr		3
dirnam	AnalyticSolute	
Purpose	Solute transport processes	
Location		
SimulationPeriod	steadystate	
SoilType	1 layer profile	
CropType	BareSoil	
drainage	none	
irrigation	yes	
bottomboundary	Free drainage	
reference	Jury W.A. and K. Roth (1990)	

Project: solute3

File name: solute3.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:03:34 2008

Simulation stopped at Thu Nov 06 16:03:46 2008

Simulation elapsed time 12 (sec)

Succesfull completion of simulation: yes

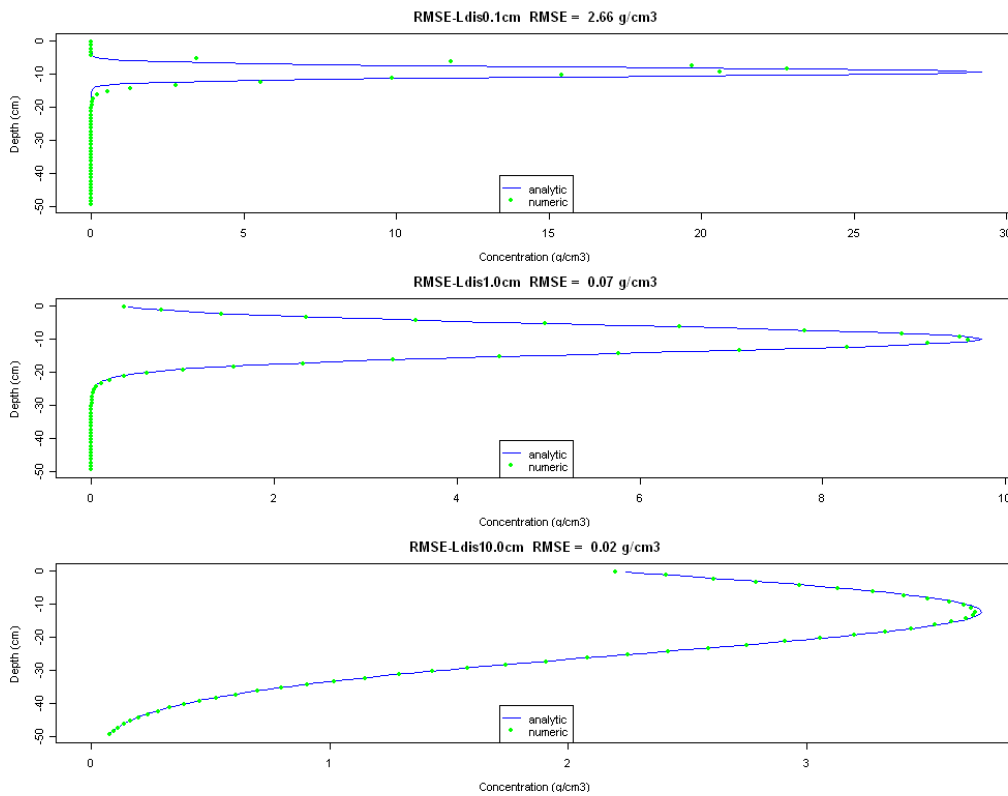
Succesfull closure of water balance: yes

Tabel 15: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 16: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-Ldis0.1cm	g/cm ³	2.45	2.17	-0.28	2.66
2	RMSE-Ldis1.0cm	g/cm ³	2.00	2.00	0.00	0.07
3	RMSE-Ldis10.0cm	g/cm ³	1.95	1.95	0.00	0.02



Figuur 3: AnalyticSolute

Tabel 17: Waterbalans

	x
ipl	1
yr	1971
Igrai	364
Igsnow	0
Igirr	1
RunOn	0
fdrin1	0
fdrin2	0
fdrin3	0
flindr4	0
fdrin5	0
flbtin	0
evicpr	0
evicir	0
evso	0
evsubl	0
evpn	0
flev	0
runoff	0
fdrou1	0
fdrou2	0
fdrou3	0
fdrou4	0
fdrou5	0
flbtou	-364
deltast	-1
deltapn	0
deltasnow	0
badev	0
evsoma	0
evtrma	0

6 AnimoForageMaize(Cranendonk)

Tabel 18: Description of case

		4
CaseNr		4
dirnam	AnimoForageMaize(Cranendonk)	
Purpose	waterbalans terms distribution	
Location	Cranendonck-NL	
SimulationPeriod	1974-1982	
SoilType	2 layers	
CropType	MaizeS	
drainage	none	
irrigation	none	
bottomboundary	hydraulic head of deep aquifer	
reference	Kroes et al ()	

Project: Cranmais

File name: Cranmais.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:03:59 2008

Simulation stopped at Thu Nov 06 16:04:02 2008

Simulation elapsed time 3.38 (sec)

Succesfull completion of simulation: yes

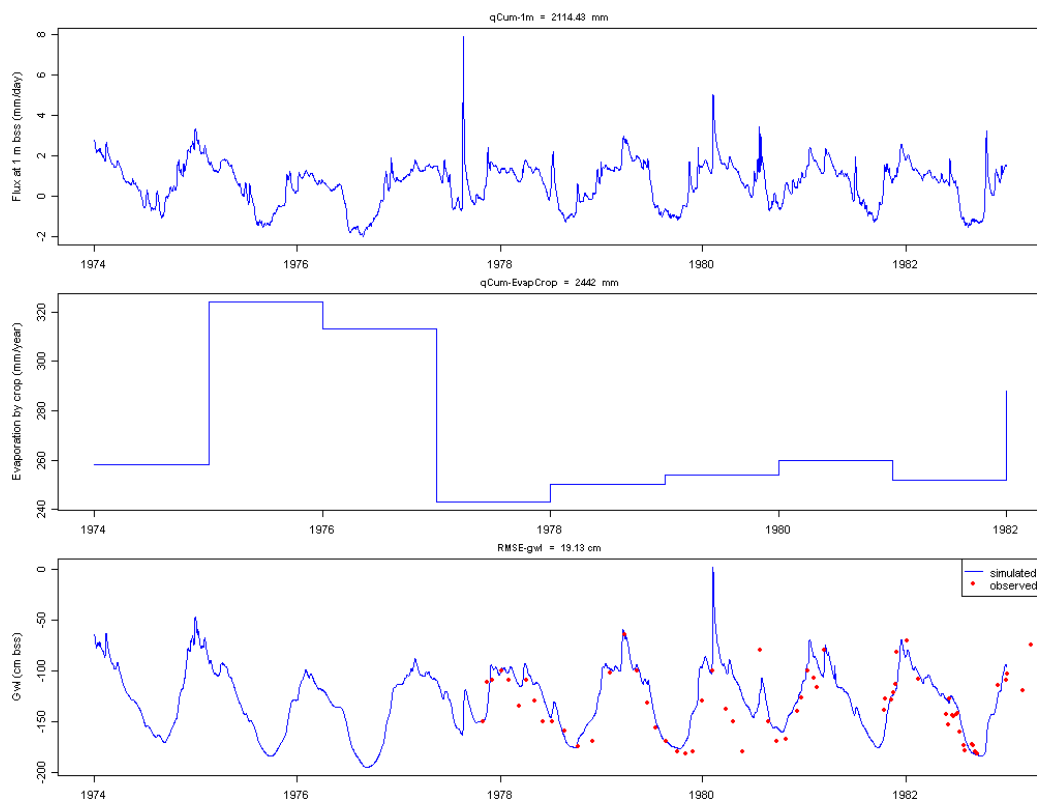
Succesfull closure of water balance: yes

Tabel 19: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 20: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	2114.43			
2	qCum-EvapCrop	mm	2442.00			
3	RMSE-gwl	cm	-128.61	-134.48	7.88	19.13



Figuur 4: AnimoForageMaize(Cranendonk)

Tabel 21: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1974.00	1975.00	1976.00	1977.00	1978.00	1979.00	1980.00	1981.00	1982.00
Igrai	822.00	590.00	492.00	809.00	615.00	727.00	792.00	811.00	645.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	30.00	112.00	170.00	6.00	67.00	83.00	13.00	43.00	82.00
evicpr	-52.00	-30.00	-31.00	-36.00	-35.00	-35.00	-44.00	-43.00	-45.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-160.00	-166.00	-139.00	-157.00	-149.00	-171.00	-150.00	-157.00	-162.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-258.00	-324.00	-313.00	-243.00	-250.00	-254.00	-260.00	-252.00	-288.00
runoff	0.00	0.00	0.00	-10.00	0.00	0.00	-24.00	0.00	0.00
fldrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-365.00	-299.00	-149.00	-338.00	-244.00	-347.00	-360.00	-360.00	-258.00
deltast	-16.00	118.00	-29.00	-31.00	-5.00	-4.00	32.00	-43.00	26.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-296.00	-286.00	-323.00	-287.00	-275.00	-269.00	-291.00	-273.00	-313.00
evtrma	-258.00	-325.00	-354.00	-243.00	-250.00	-254.00	-262.00	-252.00	-289.00

7 AnimoGrassland(Cranendonk)

Tabel 22: Description of case

		5
CaseNr		5
dirnam	AnimoGrassland(Cranendonk)	
Purpose	waterbalans terms distribution	
Location	Cranendonck-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Salm et al ()	

Project: CranGras

File name: CranGras.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:04 2008

Simulation stopped at Thu Nov 06 16:04:08 2008

Simulation elapsed time 3.96 (sec)

Succesfull completion of simulation: yes

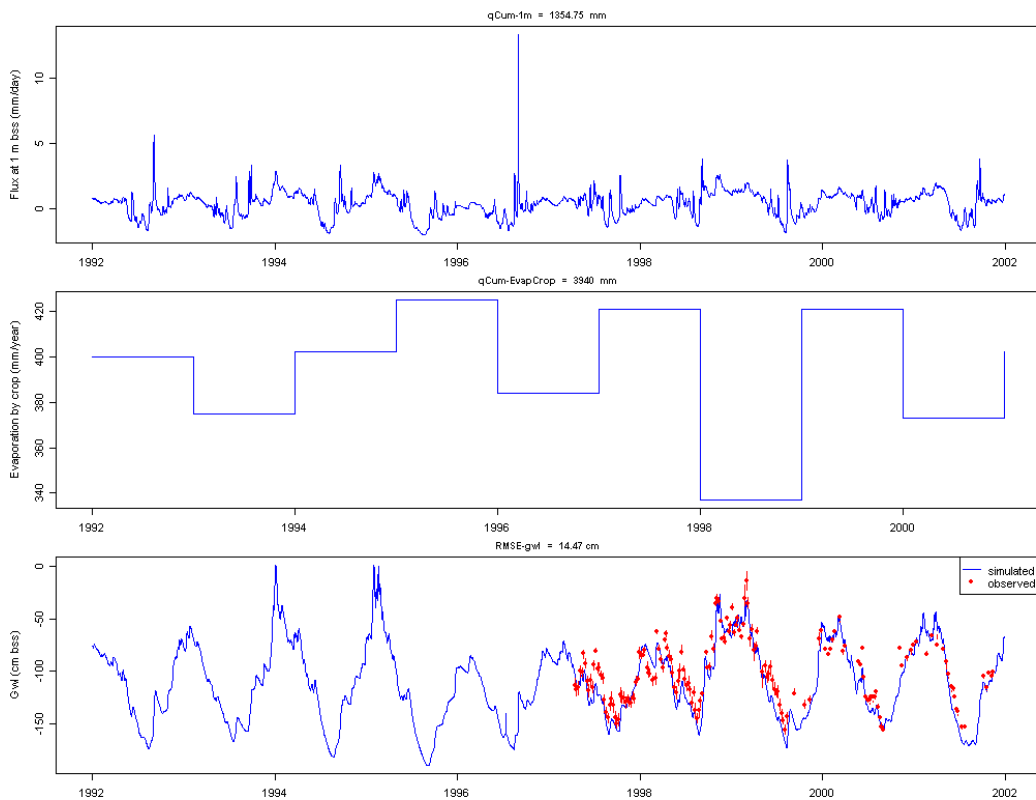
Succesfull closure of water balance: yes

Tabel 23: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 24: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	1354.75			
2	qCum-EvapCrop	mm	3940.00			
3	RMSE-gwl	cm	-111.50	-99.77	-8.13	14.47



Figuur 5: AnimoGrassland(Cranendonk)

Tabel 25: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1992.00	1993.00	1994.00	1995.00	1996.00	1997.00	1998.00	1999.00	2000.00
Igrai	679.00	743.00	743.00	664.00	587.00	692.00	892.00	811.00	774.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	336.00	318.00	283.00	348.00	385.00	335.00	219.00	290.00	254.00
evicpr	-81.00	-85.00	-87.00	-85.00	-73.00	-80.00	-106.00	-95.00	-102.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-95.00	-81.00	-94.00	-83.00	-88.00	-101.00	-87.00	-97.00	-93.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-400.00	-375.00	-402.00	-425.00	-384.00	-421.00	-337.00	-421.00	-373.00
runoff	0.00	-2.00	-13.00	-16.00	0.00	0.00	0.00	0.00	0.00
fdrou1	-441.00	-452.00	-483.00	-437.00	-405.00	-439.00	-533.00	-474.00	-502.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	0.00	0.00	-5.00	-7.00	0.00	0.00	-11.00	0.00	0.00
deltast	3.00	-60.00	50.00	41.00	-24.00	14.00	-38.00	-14.00	42.00
deltapn	0.00	-7.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-106.00	-99.00	-107.00	-113.00	-100.00	-110.00	-96.00	-112.00	-103.00
evtrma	-400.00	-375.00	-403.00	-432.00	-384.00	-421.00	-338.00	-423.00	-373.00

8 AnimoGrassland(Ruurlo)

Tabel 26: Description of case

		6
CaseNr		6
dirnam	AnimoGrassland(Ruurlo)	
Purpose	waterbalans terms distribution	
Location	Ruurlo-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Renaud et al ()	

Project: RuurloGras

File name: RuurloGras.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:09 2008

Simulation stopped at Thu Nov 06 16:04:11 2008

Simulation elapsed time 2.22 (sec)

Succesfull completion of simulation: yes

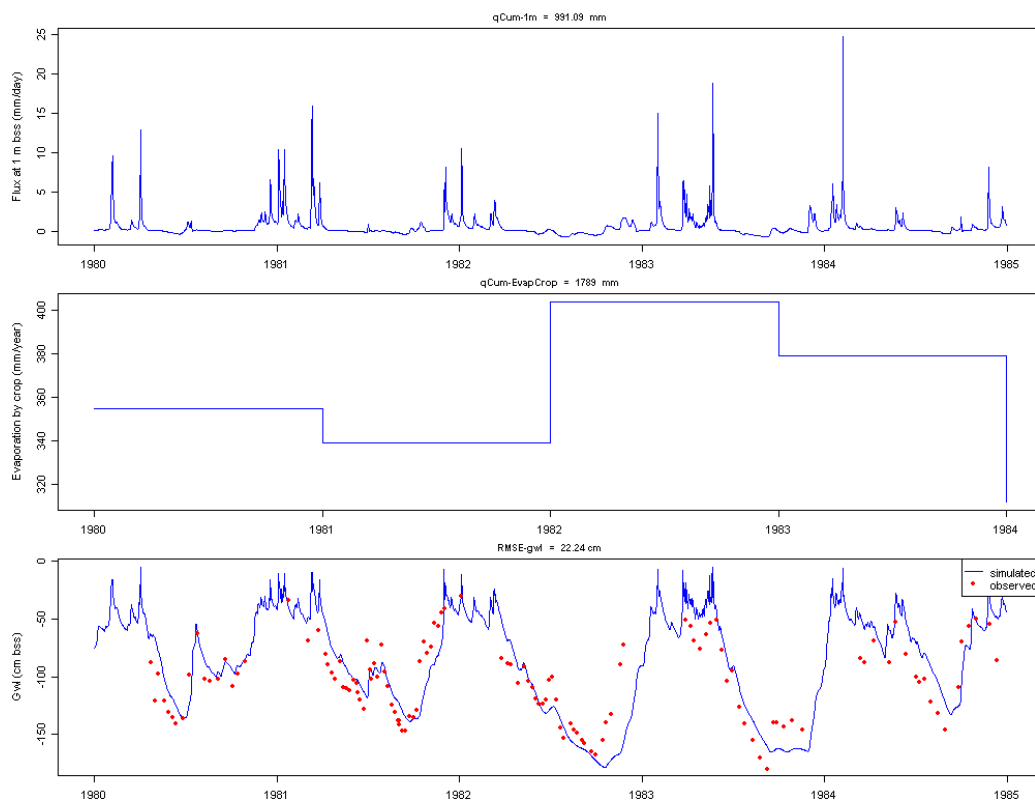
Succesfull closure of water balance: yes

Tabel 27: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 28: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	991.09			
2	qCum-EvapCrop	mm	1789.00			
3	RMSE-gwl	cm	-86.10	-104.14	3.56	22.24



Figuur 6: AnimoGrassland(Ruurlo)

Tabel 29: Waterbalans

	1	2	3	4	5
ipl	1.00	1.00	1.00	1.00	1.00
yr	1980.00	1981.00	1982.00	1983.00	1984.00
Igrai	743.00	805.00	616.00	763.00	744.00
Igsnow	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00
evicpr	-90.00	-95.00	-81.00	-64.00	-70.00
evicir	0.00	0.00	0.00	0.00	0.00
evso	-88.00	-87.00	-90.00	-92.00	-78.00
evsubl	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00
flev	-355.00	-339.00	-404.00	-379.00	-312.00
runoff	0.00	0.00	0.00	0.00	0.00
fdrou1	-20.00	-29.00	-13.00	-24.00	-26.00
fdrou2	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00
flbtou	-155.00	-253.00	-85.00	-203.00	-205.00
deltast	-35.00	-3.00	58.00	-1.00	-53.00
deltapn	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00
evsoma	-98.00	-96.00	-108.00	-104.00	-85.00
evtrma	-361.00	-347.00	-413.00	-410.00	-323.00

9 DrainageBasic(EuroHarpDKO)

Tabel 30: Description of case

		7
CaseNr		7
dirnam	DrainageBasic(EuroHarpDKO)	
Purpose	convergence of numerical solution	
Location	Denmark	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Schoumans et al ()	

Project: run.11111.2.swap

File name: run.11111.2.swap.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:13 2008

Simulation stopped at Thu Nov 06 16:04:18 2008

Simulation elapsed time 5.58 (sec)

Succesfull completion of simulation: yes

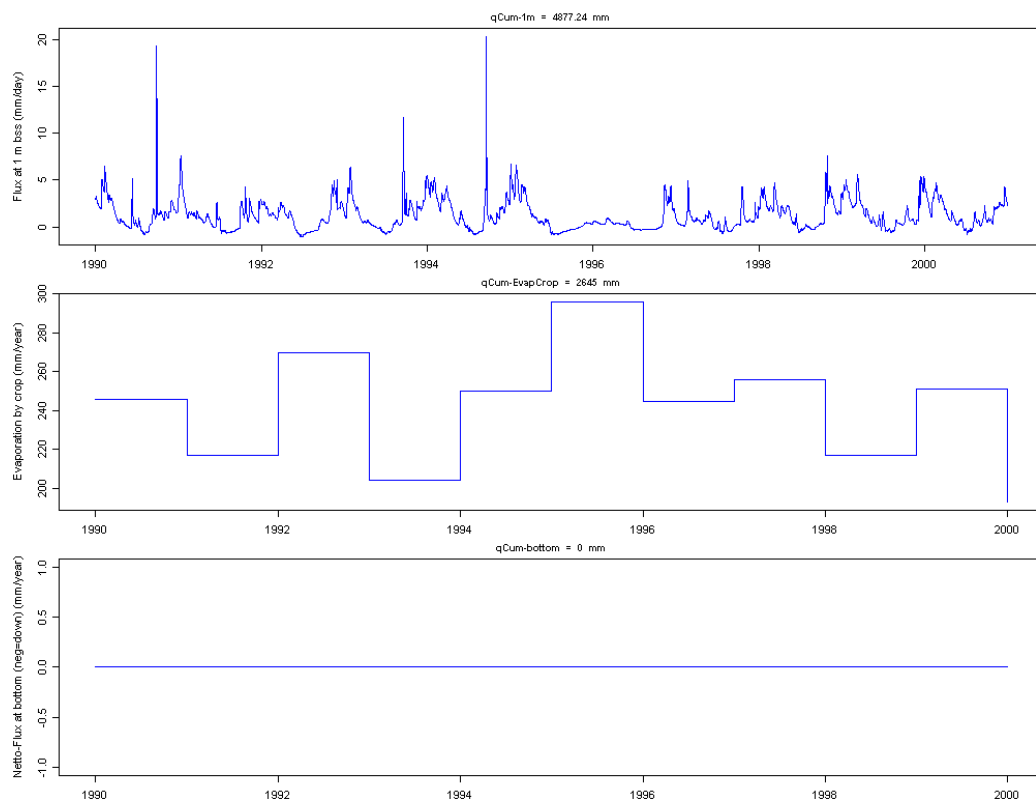
Succesfull closure of water balance: yes

Tabel 31: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 32: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	4877.24			
2	qCum-EvapCrop	mm	2645.00			
3	qCum-bottom	cm	0.00			



Figuur 7: DrainageBasic(EuroHarpDKO)

Tabel 33: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1990.00	1991.00	1992.00	1993.00	1994.00	1995.00	1996.00	1997.00	1998.00
Igrai	963.00	776.00	785.00	924.00	1070.00	743.00	577.00	722.00	1001.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	-26.00	-21.00	-26.00	-37.00	-21.00	-13.00	-20.00	-19.00	-29.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-175.00	-164.00	-165.00	-136.00	-184.00	-192.00	-134.00	-192.00	-177.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-246.00	-217.00	-270.00	-204.00	-250.00	-296.00	-245.00	-256.00	-217.00
runoff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou1	-93.00	-91.00	-88.00	-92.00	-94.00	-86.00	-73.00	-89.00	-93.00
fdrou2	-423.00	-302.00	-261.00	-383.00	-528.00	-392.00	0.00	-83.00	-465.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltast	0.00	20.00	24.00	-72.00	6.00	237.00	-106.00	-84.00	-20.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-343.00	-337.00	-342.00	-313.00	-344.00	-319.00	-310.00	-368.00	-299.00
evtrma	-246.00	-220.00	-272.00	-204.00	-251.00	-301.00	-247.00	-257.00	-217.00

10 DrainageBasic(Hupsel)

Tabel 34: Description of case

CaseNr	8
dirnam	DrainageBasic(Hupsel)
Purpose	general reference; interaction between water, solute and crop growth
Location	Hupsel-NL
SimulationPeriod	1980-1982
SoilType	2 layers, loamy-sand
CropType	maize, potatoes
drainage	basic, tile drains
irrigation	tracer application
bottomboundary	zero flux
reference	Van den Eerthweg en Meinardi (1999)

Project: hupsel

File name: hupsel.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:20 2008

Simulation stopped at Thu Nov 06 16:04:22 2008

Simulation elapsed time 2.35 (sec)

Succesfull completion of simulation: yes

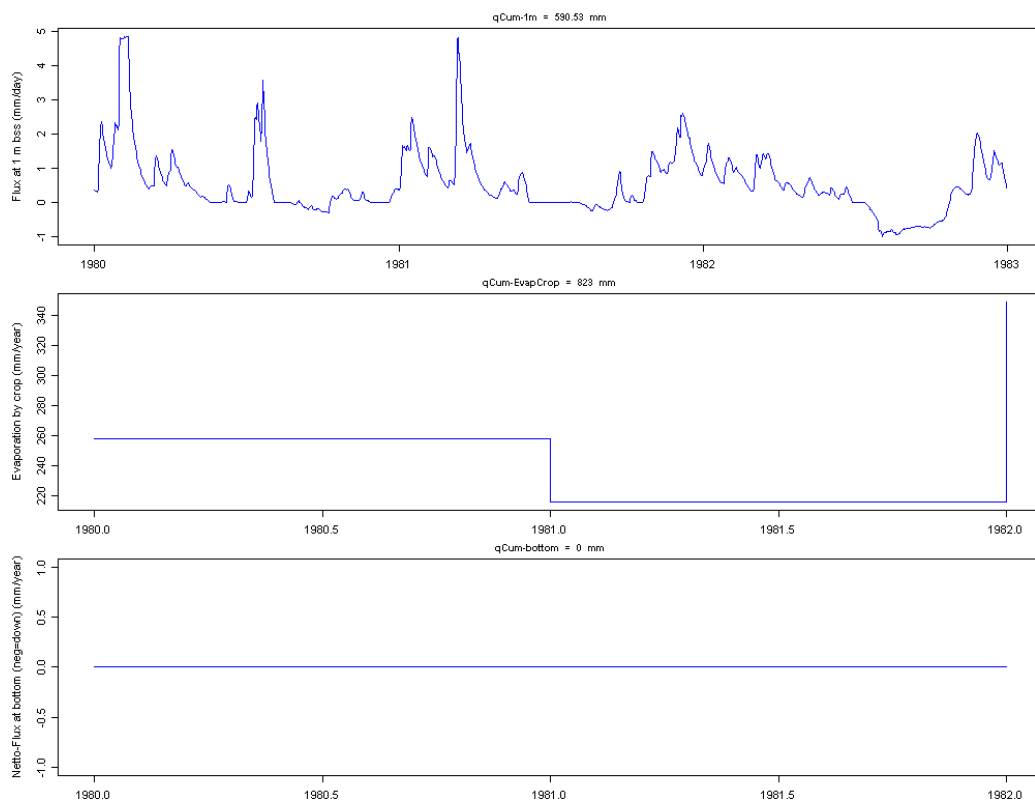
Succesfull closure of water balance: yes

Tabel 35: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 36: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	590.53			
2	qCum-EvapCrop	mm	823.00			
3	qCum-bottom	cm	0.00			



Figuur 8: DrainageBasic(Hupsel)

Tabel 37: Waterbalans

	1	2	3
ipl	1.00	1.00	1.00
yr	1980.00	1981.00	1982.00
Igrai	647.00	775.00	566.00
Igsnow	13.00	24.00	1.00
Igirr	1.00	0.00	0.00
RunOn	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00
flindr4	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00
fbtin	0.00	0.00	0.00
evicpr	-44.00	-14.00	-40.00
evicir	0.00	0.00	0.00
evso	-136.00	-173.00	-158.00
evsubl	-6.00	0.00	0.00
evpn	0.00	0.00	0.00
flev	-258.00	-216.00	-349.00
runoff	-78.00	-9.00	0.00
fdrou1	-357.00	-372.00	-153.00
fdrou2	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00
fbtou	0.00	0.00	0.00
deltast	-2.00	-16.00	133.00
deltapn	0.00	0.00	0.00
deltasnow	220.00	0.00	0.00
badev	0.00	0.00	0.00
evsoma	-340.00	-317.00	-342.00
evtrma	-296.00	-216.00	-353.00

11 DrainageExtended(STONE2uc6)

Tabel 38: Description of case

		9
CaseNr		9
dirnam	DrainageExtended(STONE2uc6)	
Purpose	convergence of numerical solution	
Location		NL
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference		Kroes et al ()

Project: Stoneuc6

File name: Stoneuc6.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:24 2008

Simulation stopped at Thu Nov 06 16:04:32 2008

Simulation elapsed time 8.35 (sec)

Succesfull completion of simulation: yes

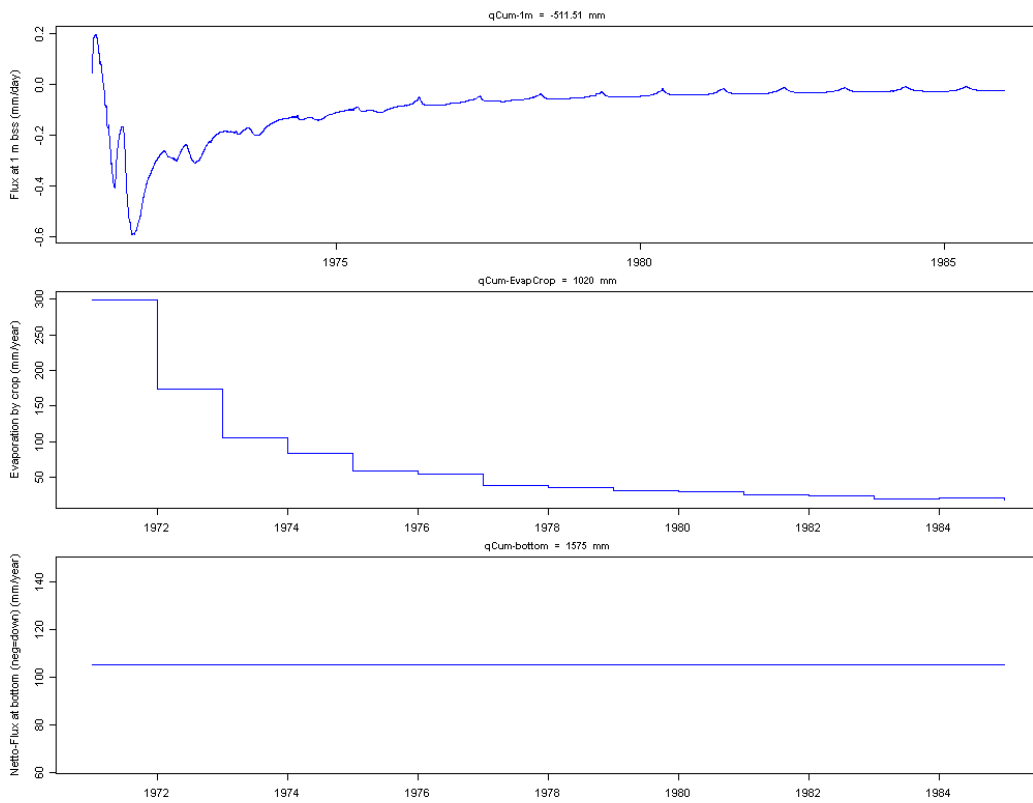
Succesfull closure of water balance: yes

Tabel 39: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 40: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	-511.51			
2	qCum-EvapCrop	mm	1020.00			
3	qCum-bottom	cm	1575.00			



Figuur 9: DrainageExtended(STONE2uc6)

Tabel 41: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1971.00	1972.00	1973.00	1974.00	1975.00	1976.00	1977.00	1978.00	1979.00
Igrai	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igsnow	599.00	740.00	793.00	824.00	695.00	588.00	789.00	712.00	874.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsubl	-207.00	-222.00	-232.00	-234.00	-231.00	-267.00	-223.00	-216.00	-207.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-299.00	-174.00	-106.00	-84.00	-59.00	-55.00	-39.00	-35.00	-31.00
runoff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou1	-2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-105.00	-105.00	-105.00	-105.00	-105.00	-105.00	-105.00	-105.00	-105.00
deltast	405.00	279.00	211.00	189.00	164.00	161.00	145.00	140.00	136.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	-392.00	-518.00	-561.00	-590.00	-464.00	-321.00	-566.00	-496.00	-667.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evtrma	-364.00	-340.00	-340.00	-349.00	-373.00	-394.00	-312.00	-313.00	-304.00

12 DrainageExtended(Timing)

Tabel 42: Description of case

		10
CaseNr		10
dirnam	DrainageExtended(Timing)	
Purpose	convergence of numerical solution	
Location		
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference		Kroes et al ()

Project: swap

File name: swap.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:34 2008

Simulation stopped at Thu Nov 06 16:04:35 2008

Simulation elapsed time 0.63 (sec)

Succesfull completion of simulation: yes

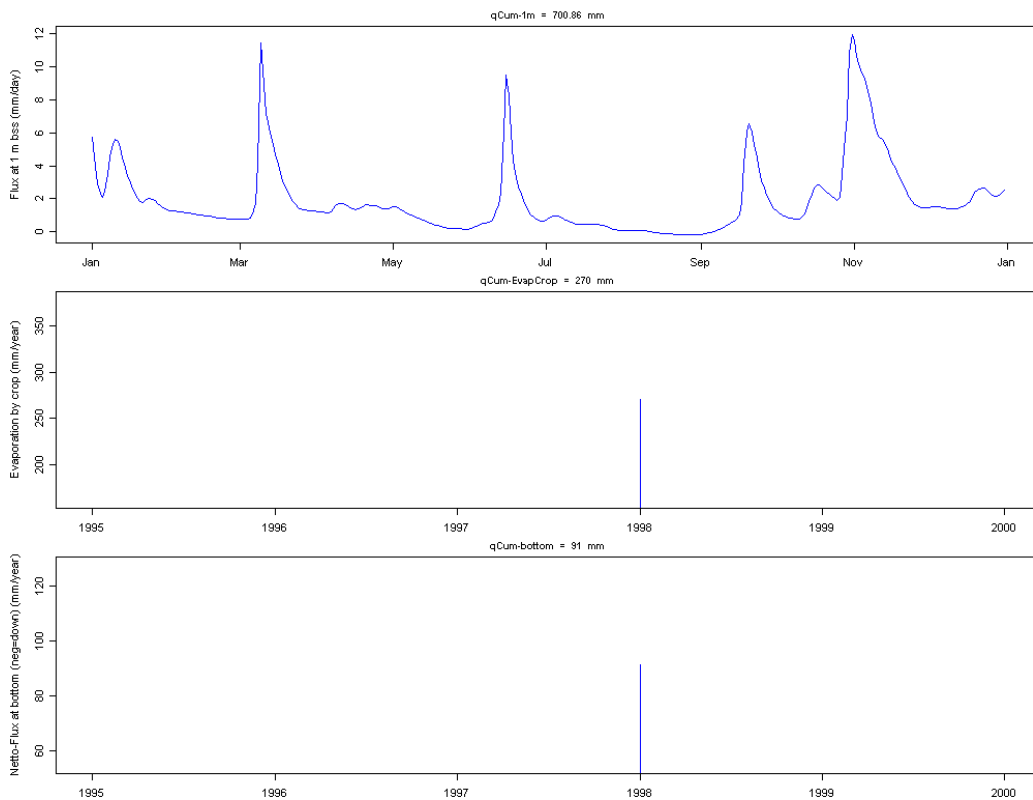
Succesfull closure of water balance: yes

Tabel 43: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 44: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	700.86			
2	qCum-EvapCrop	mm	270.00			
3	qCum-bottom	cm	91.00			



Figuur 10: DrainageExtended(Timing)

Tabel 45: Waterbalans

	1
ipl	1.00
yr	1998.00
Igrai	1185.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	0.00
evicpr	-50.00
evicir	0.00
evso	-163.00
evsubl	0.00
evpn	0.00
flev	-270.00
runoff	0.00
fdrou1	-156.00
fdrou2	-257.00
fdrou3	-201.00
fdrou4	0.00
fdrou5	0.00
flbtou	-91.00
deltast	4.00
deltapn	0.00
deltasnow	0.00
badev	0.00
evsoma	-241.00
evtrma	-270.00

13 DrainageExtended(Wildenborch)

Tabel 46: Description of case

		11
CaseNr		11
dirnam	DrainageExtended(Wildenborch)	
Purpose	very wet grassland	
Location	Wildenborch-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Kroes et al ()	

Project: Wildenborch

File name: Wildenborch.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:36 2008

Simulation stopped at Thu Nov 06 16:04:40 2008

Simulation elapsed time 4.14 (sec)

Succesfull completion of simulation: yes

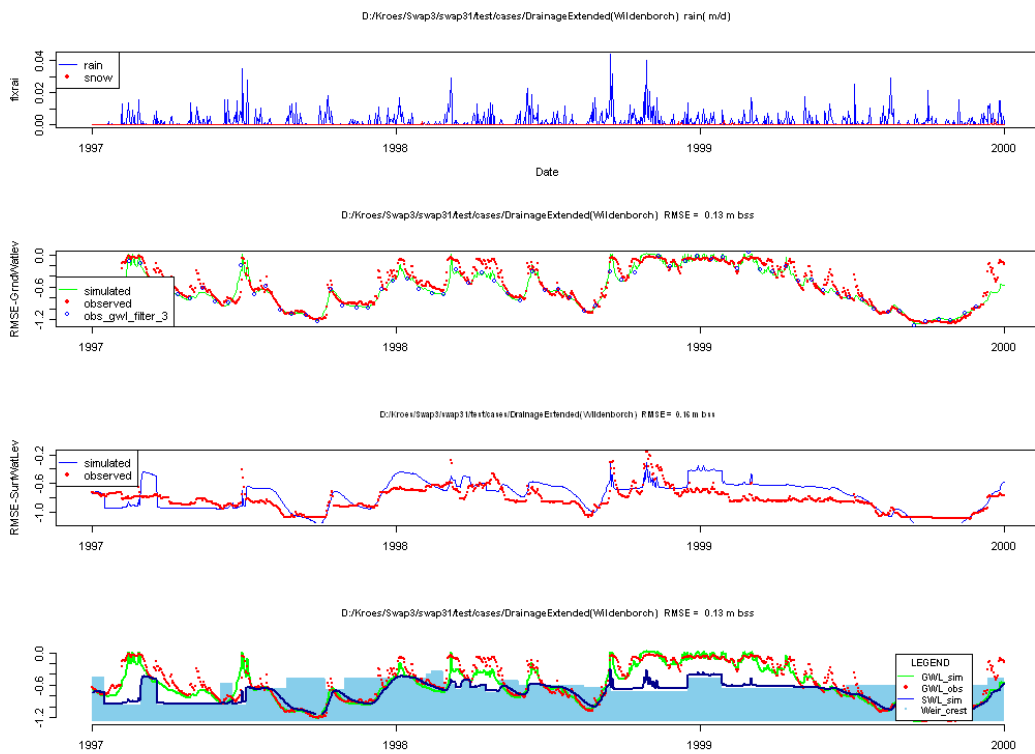
Succesfull closure of water balance: yes

Tabel 47: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	200	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 48: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	RMSE-GrndWatlev	m bss	-0.64	-0.58	-0.05	0.13
2	RMSE-SurfWatLev	m bss	-0.74	-0.83		0.16
3	qCumDrainOut	mm	-476.00			



Figuur 11: DrainageExtended(Wildenborch)

Tabel 49: Waterbalans

	1	2	3
ipl	1.00	1.00	1.00
yr	1997.00	1998.00	1999.00
Igrai	674.00	1044.00	779.00
Igsnow	1.00	9.00	13.00
Igirr	0.00	0.00	0.00
RunOn	0.00	0.00	0.00
fdrin1	4.00	5.00	5.00
fdrin2	0.00	1.00	2.00
fdrin3	0.00	0.00	0.00
flindr4	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00
fbtin	319.00	225.00	172.00
evicpr	-79.00	-105.00	-95.00
evicir	0.00	0.00	0.00
evso	-92.00	-84.00	-98.00
evsubl	0.00	-1.00	-1.00
evpn	0.00	0.00	0.00
flev	-402.00	-318.00	-407.00
runoff	-18.00	-213.00	-31.00
fdrou1	-74.00	-116.00	-83.00
fdrou2	-25.00	-102.00	-76.00
fdrou3	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00
fbtou	-276.00	-325.00	-214.00
deltast	-32.00	-20.00	34.00
deltapn	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00
badev	0.00	0.00	0.00
evsoma	-108.00	-93.00	-111.00
evtrma	-409.00	-329.00	-418.00

14 GwlMeasuredasbottomBC(Ruurlo)

Tabel 50: Description of case

		12
CaseNr		12
dirnam	GwlMeasuredasbottomBC(Ruurlo)	
Purpose	verification of swbotb=1 (Gwl as special bottomBC)	
Location	Ruurlo-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Renaud et al ()	

Project: RuurloGras

File name: RuurloGras.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:42 2008

Simulation stopped at Thu Nov 06 16:04:44 2008

Simulation elapsed time 2.26 (sec)

Succesfull completion of simulation: yes

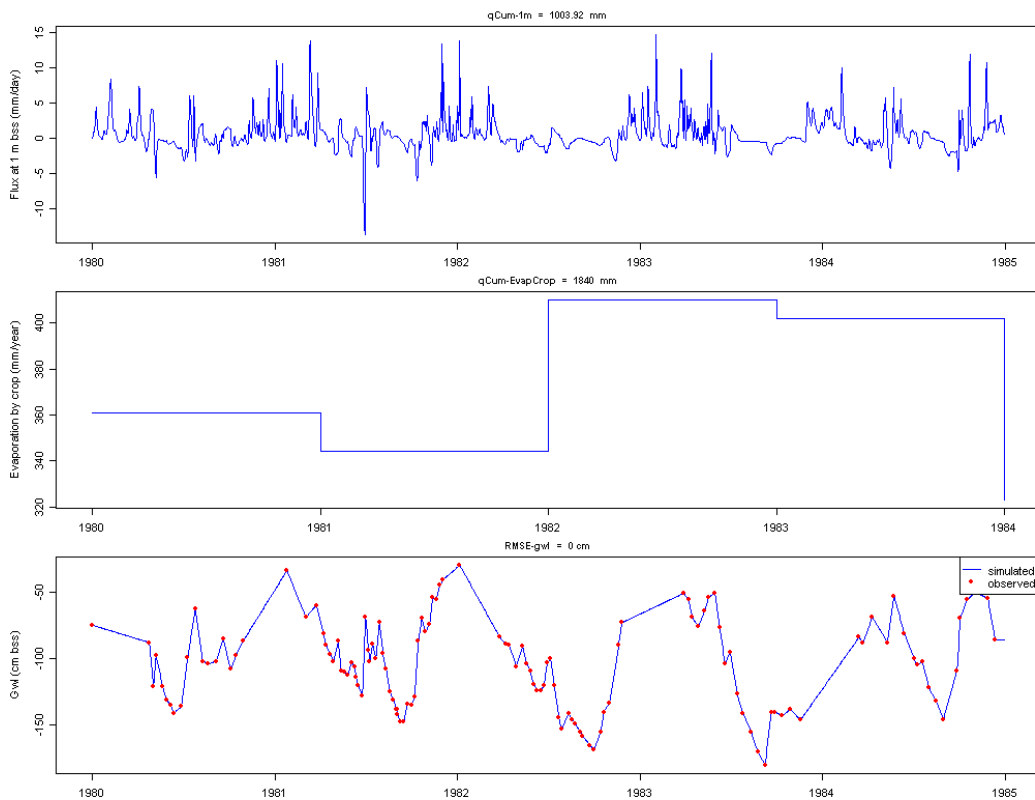
Succesfull closure of water balance: yes

Tabel 51: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 52: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	1003.92			
2	qCum-EvapCrop	mm	1840.00			
3	RMSE-gwl	cm	-94.54	-104.53	0.00	0.00



Figuur 12: GwlMeasuredasbottomBC(Ruurlo)

Tabel 53: Waterbalans

	1	2	3	4	5
ipl	1	1	1	1	1
yr	1980	1981	1982	1983	1984
Igrai	743	805	616	763	744
Igsnow	0	0	0	0	0
Igirr	0	0	0	0	0
RunOn	0	0	0	0	0
fldrin1	0	0	0	0	0
fldrin2	0	0	0	0	0
fldrin3	0	0	0	0	0
flindr4	0	0	0	0	0
fldrin5	0	0	0	0	0
flbtin	160	239	192	148	188
evicpr	-90	-95	-81	-64	-70
evicir	0	0	0	0	0
evso	-88	-87	-91	-90	-78
evsubl	0	0	0	0	0
evpn	0	0	0	0	0
flev	-361	-344	-410	-402	-323
runoff	0	0	0	0	0
fldrou1	0	-16	-8	-1	-1
fldrou2	0	0	0	0	0
fldrou3	0	0	0	0	0
fldrou4	0	0	0	0	0
fldrou5	0	0	0	0	0
flbtou	-334	-487	-252	-414	-422
deltast	-29	-15	34	60	-38
deltapn	0	0	0	0	0
deltasnow	0	0	0	0	0
badev	0	0	0	0	0
evsoma	-98	-96	-108	-104	-85
evtrma	-361	-347	-413	-410	-323

15 GwlShallow(Zegveld)

Tabel 54: Description of case

		13
CaseNr		13
dirnam	GwlShallow(Zegveld)	
Purpose	shallow gwl with drainage	
Location	Zegveld-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Hendriks et al ()	

Project: zeg13

File name: zeg13.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:04:46 2008

Simulation stopped at Thu Nov 06 16:04:58 2008

Simulation elapsed time 12.55 (sec)

Succesfull completion of simulation: yes

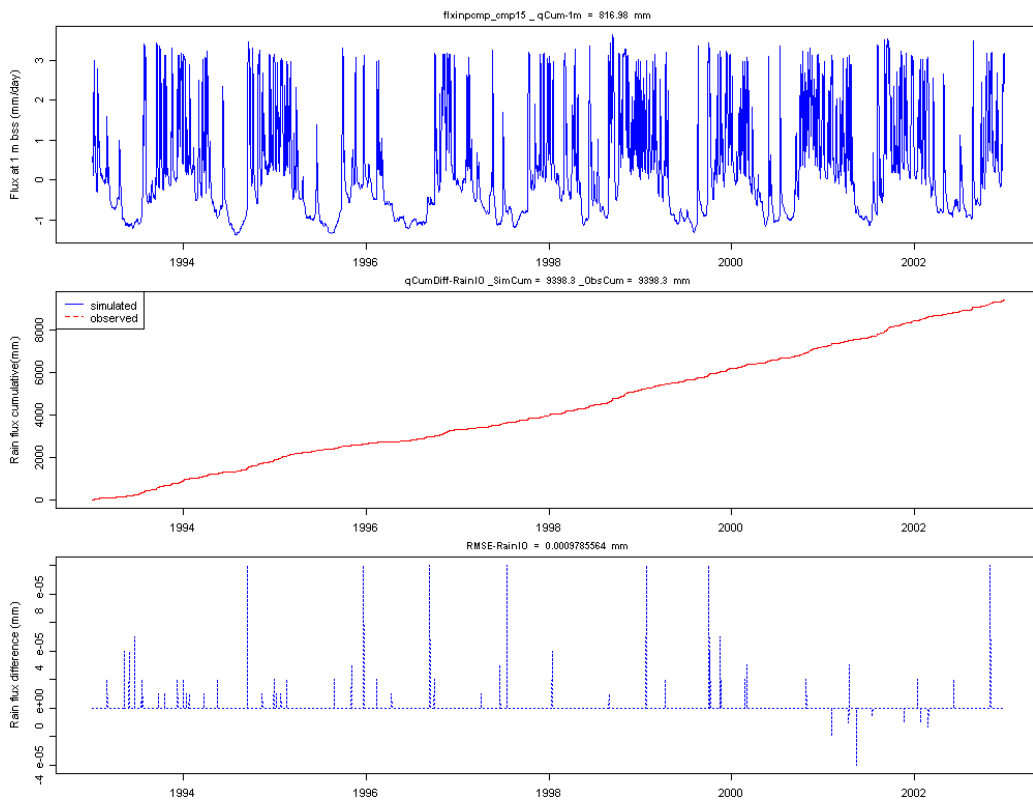
Succesfull closure of water balance: yes

Tabel 55: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	900	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	5	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 56: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	816.98			
2	qCumDiff-RainIO	mm	9398.30	9398.30	0.00	
3	RMSE-RainIO	mm	4387.05	4387.04	0.00	0.00



Figuur 13: GwlShallow(Zegveld)

Tabel 57: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1993.00	1994.00	1995.00	1996.00	1997.00	1998.00	1999.00	2000.00	2001.00
Igrai	922.00	959.00	767.00	646.00	674.00	1193.00	1020.00	1014.00	1215.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	254.00	254.00	308.00	331.00	299.00	185.00	262.00	231.00	170.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	-87.00	-97.00	-86.00	-70.00	-80.00	-112.00	-106.00	-107.00	-121.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-114.00	-106.00	-107.00	-91.00	-113.00	-116.00	-114.00	-119.00	-120.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-408.00	-387.00	-441.00	-419.00	-446.00	-338.00	-443.00	-399.00	-339.00
runoff	-135.00	-143.00	-58.00	-55.00	-44.00	-193.00	-142.00	-96.00	-180.00
fdrou1	-86.00	-106.00	-79.00	-65.00	-47.00	-144.00	-104.00	-117.00	-145.00
fdrou2	-208.00	-253.00	-185.00	-154.00	-113.00	-345.00	-244.00	-276.00	-346.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-129.00	-128.00	-124.00	-123.00	-127.00	-133.00	-127.00	-130.00	-134.00
deltast	-2.00	0.00	5.00	0.00	-3.00	3.00	-2.00	-1.00	0.00
deltapn	-7.00	6.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-133.00	-140.00	-146.00	-129.00	-133.00	-129.00	-142.00	-136.00	-136.00
evtrma	-462.00	-481.00	-522.00	-469.00	-486.00	-403.00	-502.00	-458.00	-412.00

16 Hysterese(Hupsel)

Tabel 58: Description of case

		14
CaseNr		14
dirnam	Hysterese(Hupsel)	
Purpose	hysteresis	
Location	Hupsel-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Van den Eerthweg en Meinardi (1999)	

Project: HupselHyst

File name: HupselHyst.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:05:00 2008

Simulation stopped at Thu Nov 06 16:05:03 2008

Simulation elapsed time 2.55 (sec)

Succesfull completion of simulation: yes

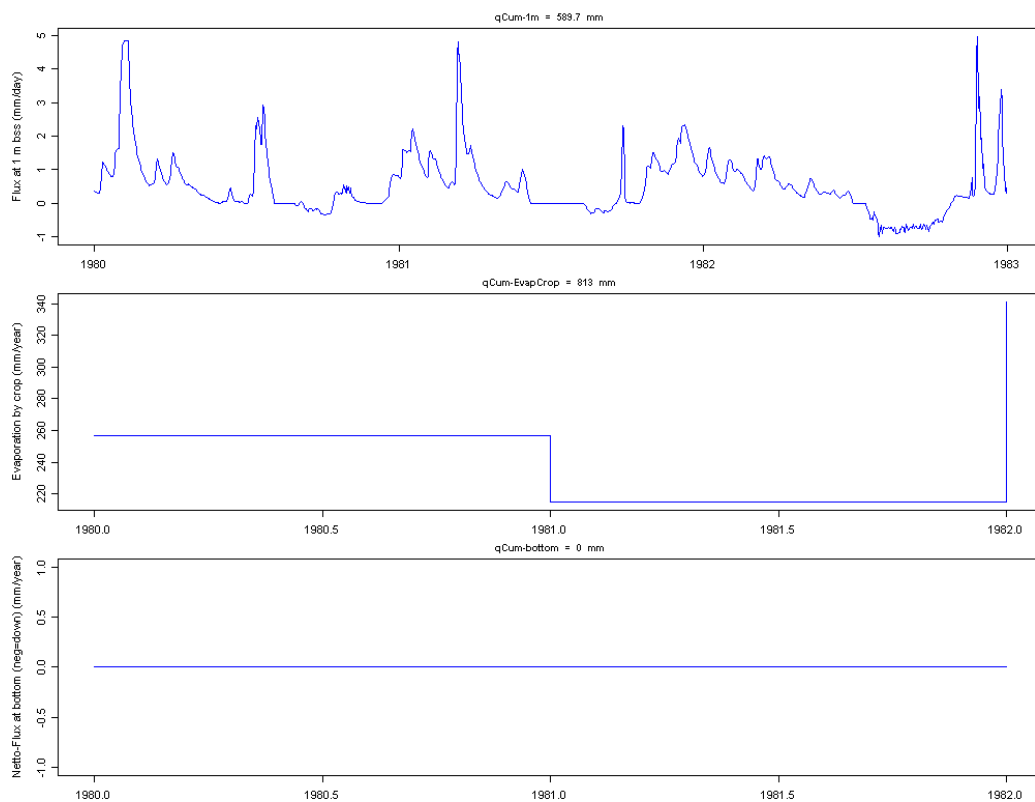
Succesfull closure of water balance: yes

Tabel 59: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 60: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	589.70			
2	qCum-EvapCrop	mm	813.00			
3	qCum-bottom	cm	0.00			



Figuur 14: Hysteresis(Hupsel)

Tabel 61: Waterbalans

	1	2	3
ipl	1.00	1.00	1.00
yr	1980.00	1981.00	1982.00
Igrai	647.00	775.00	566.00
Igsnow	13.00	24.00	1.00
Igirr	1.00	0.00	0.00
RunOn	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00
flindr4	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00
fbtin	0.00	0.00	0.00
evicpr	-44.00	-14.00	-40.00
evicir	0.00	0.00	0.00
evso	-136.00	-173.00	-158.00
evsubl	-6.00	0.00	0.00
evpn	0.00	0.00	0.00
flev	-257.00	-215.00	-341.00
runoff	-69.00	-6.00	0.00
fdrou1	-331.00	-371.00	-157.00
fdrou2	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00
fbtou	0.00	0.00	0.00
deltast	-38.00	-20.00	129.00
deltapn	0.00	0.00	0.00
deltasnow	220.00	0.00	0.00
badev	0.00	0.00	0.00
evsoma	-340.00	-317.00	-342.00
evtrma	-296.00	-215.00	-353.00

17 InfiltrationRunoff(VanDamFeddes2000)

Tabel 62: Description of case

		15
CaseNr		15
dirnam	InfiltrationRunoff(VanDamFeddes2000)	
Purpose	accuracy of infiltration and surface runoff	
Location		
SimulationPeriod		transient
SoilType		homogeneous sand
CropType		BareSoil
drainage		no
irrigation		no
bottomboundary		zero flux
reference	VanDam and Feddes 2000)	

Project: InfiltrRunoff

File name: InfiltrRunoff.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:05:04 2008

Simulation stopped at Thu Nov 06 16:05:04 2008

Simulation elapsed time 0.37 (sec)

Succesfull completion of simulation: yes

Succesfull closure of water balance: yes

Tabel 63: Iteration parameters

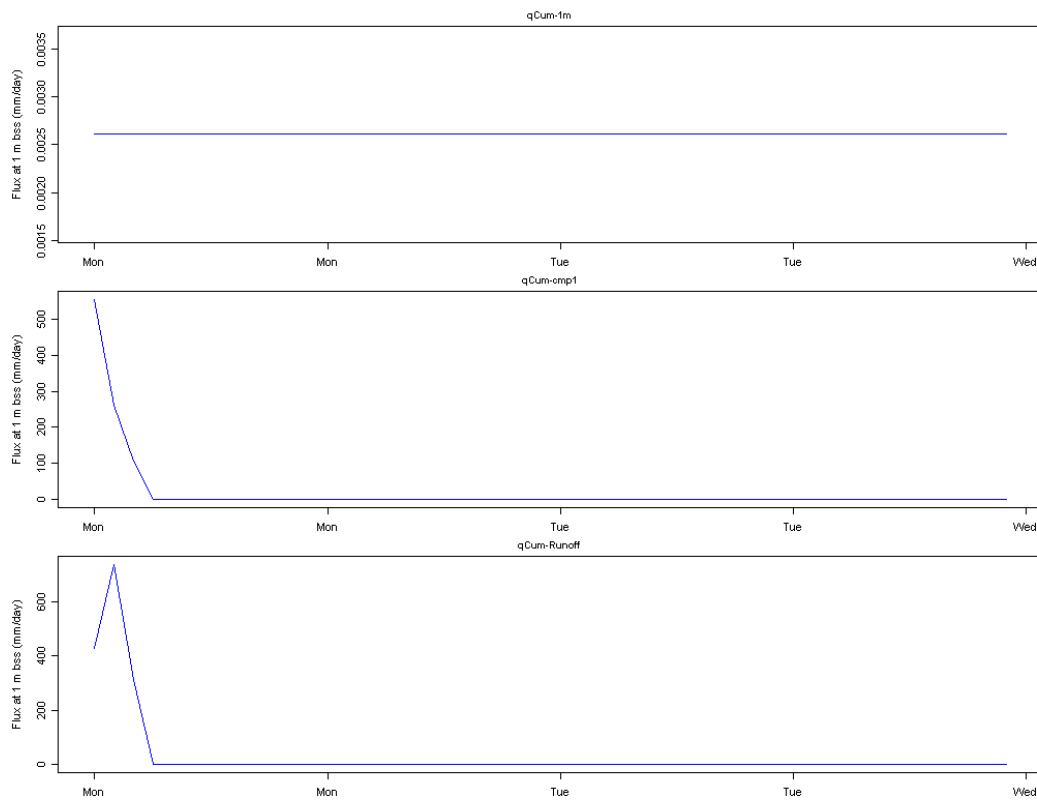
	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 64: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	0.13			
2	qCum-cmp1	mm	924.20			
3	qCum-Runoff	mm	1475.80			

Tabel 65: Waterbalans

values none



Figuur 15: InfiltrationRunoff(VanDamFeddes2000)

18 Interception(Speuld)

Tabel 66: Description of case

		16
CaseNr		16
dirnam	Interception(Speuld)	
Purpose	Evaporation by interception, forest	
Location	Speuld-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Titkak et al ()	

Project: speuld

File name: speuld.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:05:05 2008

Simulation stopped at Thu Nov 06 16:05:08 2008

Simulation elapsed time 2.98 (sec)

Succesfull completion of simulation: yes

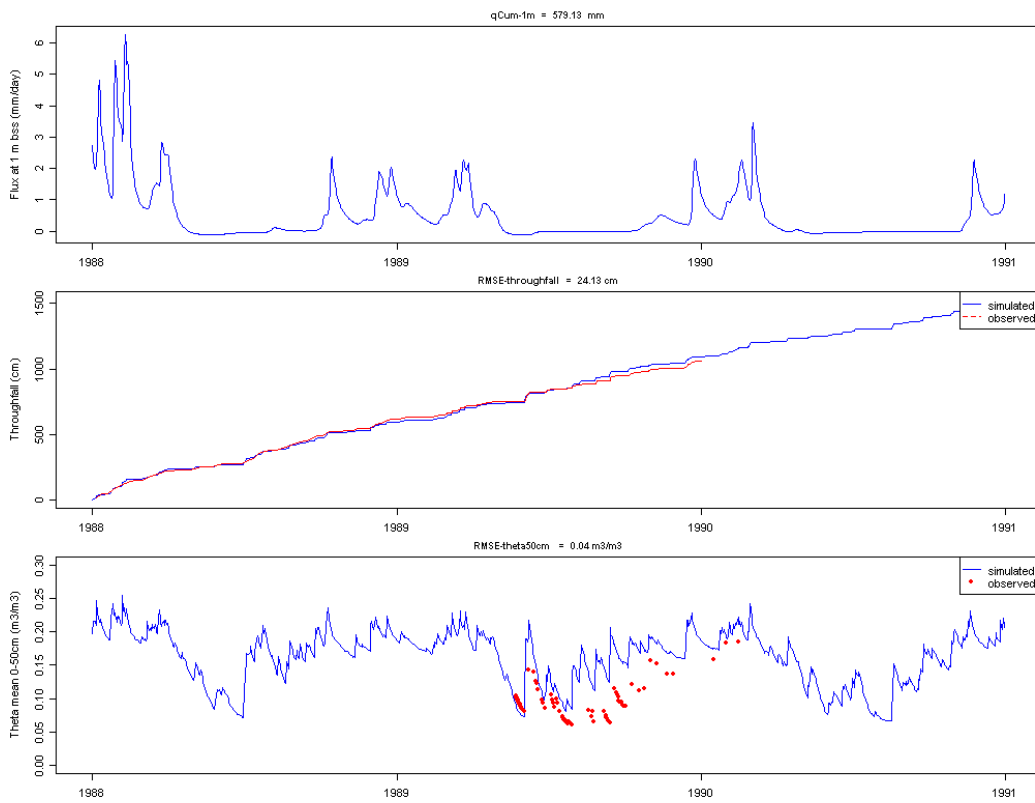
Succesfull closure of water balance: yes

Tabel 67: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 68: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	579.13			
2	RMSE-throughfall	mm	774.45	768.07	6.39	24.13
3	RMSE-theta50cm	-	0.16	0.11	0.03	0.04



Figuur 16: Interception(Speuld)

Tabel 69: Waterbalans

	1	2	3
ipl	1.00	1.00	1.00
yr	1988.00	1989.00	1990.00
Igrai	933.00	806.00	715.00
Igsnow	0.00	0.00	0.00
Igirr	0.00	0.00	0.00
RunOn	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00
findr4	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00
fbtin	0.00	0.00	0.00
evicpr	-336.00	-307.00	-283.00
evicir	0.00	0.00	0.00
evso	-35.00	-43.00	-43.00
evsubl	0.00	0.00	0.00
evpn	0.00	0.00	0.00
flev	-322.00	-389.00	-309.00
runoff	0.00	0.00	0.00
fdrou1	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00
fbtou	-429.00	-116.00	-72.00
deltast	189.00	49.00	-8.00
deltapn	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00
badev	0.00	0.00	0.00
evsoma	-36.00	-47.00	-46.00
evtrma	-359.00	-461.00	-451.00

19 Interflow(Vlietpolder)

Tabel 70: Description of case

		17
CaseNr		17
dirnam	Interflow(Vlietpolder)	
Purpose	shallow gwl with interflow and drainage	
Location	Vlietpolder-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Hendriks et al ()	

Project: Vlietp

File name: Vlietp.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:05:10 2008

Simulation stopped at Thu Nov 06 16:05:13 2008

Simulation elapsed time 3.16 (sec)

Succesfull completion of simulation: yes

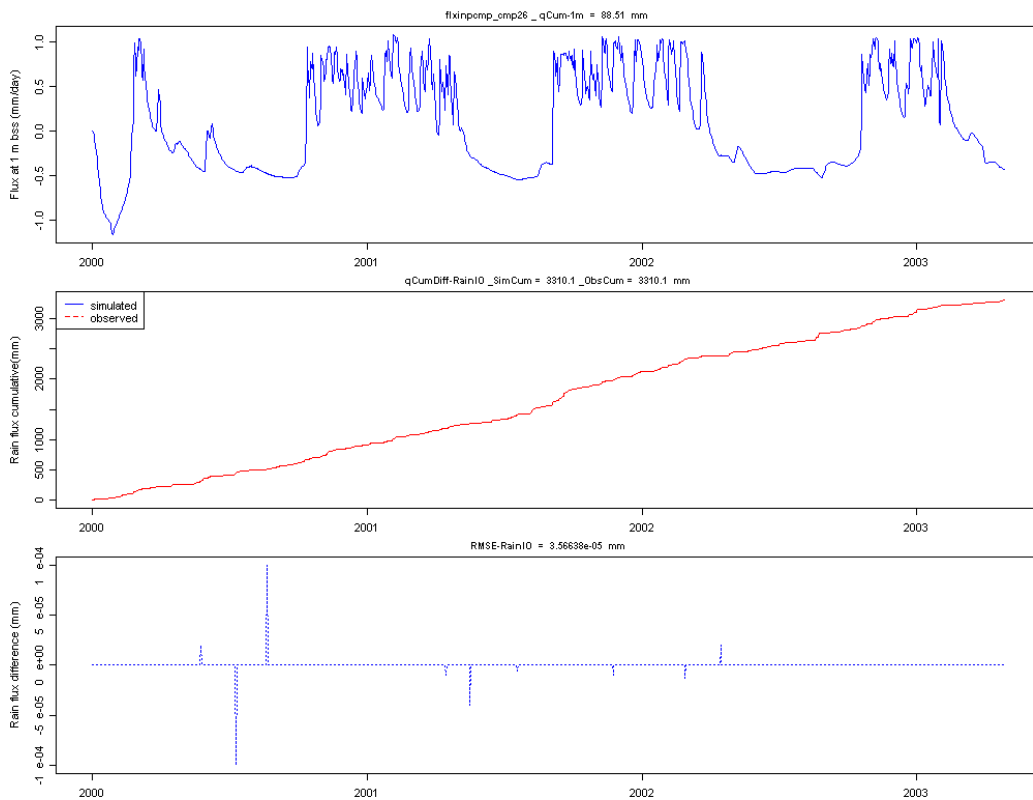
Succesfull closure of water balance: yes

Tabel 71: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 72: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	88.51			
2	qCumDiff-RainIO	mm	3310.10	3310.10	0.00	
3	RMSE-RainIO	mm	1658.46	1658.46	0.00	0.00



Figuur 17: Interflow(Vlietpolder)

Tabel 73: Waterbalans

	1	2	3
ipl	1.00	1.00	1.00
yr	2000.00	2001.00	2002.00
Igrai	908.00	1215.00	989.00
Igsnow	0.00	0.00	0.00
Igirr	0.00	0.00	0.00
RunOn	0.00	0.00	0.00
fdrin1	158.00	68.00	101.00
fdrin2	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00
findr4	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00
fbtin	0.00	0.00	0.00
evicpr	-105.00	-121.00	-98.00
evicir	0.00	0.00	0.00
evso	-112.00	-118.00	-117.00
evsubl	0.00	0.00	0.00
evpn	0.00	0.00	0.00
flev	-416.00	-369.00	-415.00
runoff	-110.00	-222.00	-149.00
fdrou1	-109.00	-262.00	-178.00
fdrou2	-61.00	-167.00	-111.00
fdrou3	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00
fbtou	-20.00	-23.00	-22.00
deltast	-132.00	-1.00	-1.00
deltapn	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00
badev	0.00	0.00	0.00
evsoma	-130.00	-135.00	-133.00
evtrma	-436.00	-413.00	-439.00

20 IrrigationScheduledFixedTiming(Sevilla)

Tabel 74: Description of case

		18
CaseNr		18
dirnam	IrrigationScheduledFixedTiming(Sevilla)	
Purpose	scheduled irrigation	
Location	Sevilla-Spain	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Focus (2000)	

Project: Sevi

File name: Sevi.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:05:14 2008

Simulation stopped at Thu Nov 06 16:05:47 2008

Simulation elapsed time 32.53 (sec)

Succesfull completion of simulation: yes

Succesfull closure of water balance: yes

Tabel 75: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Table 76: Statistics of Performance Indices

	PName	PUnit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	8602.94			
2	qCumDiff-IrrigIO	mm	20123.68	54587.20	-34463.52	
3	RMSE-IrrigIO	mm	9968.25	10233.89	0.00	0.00

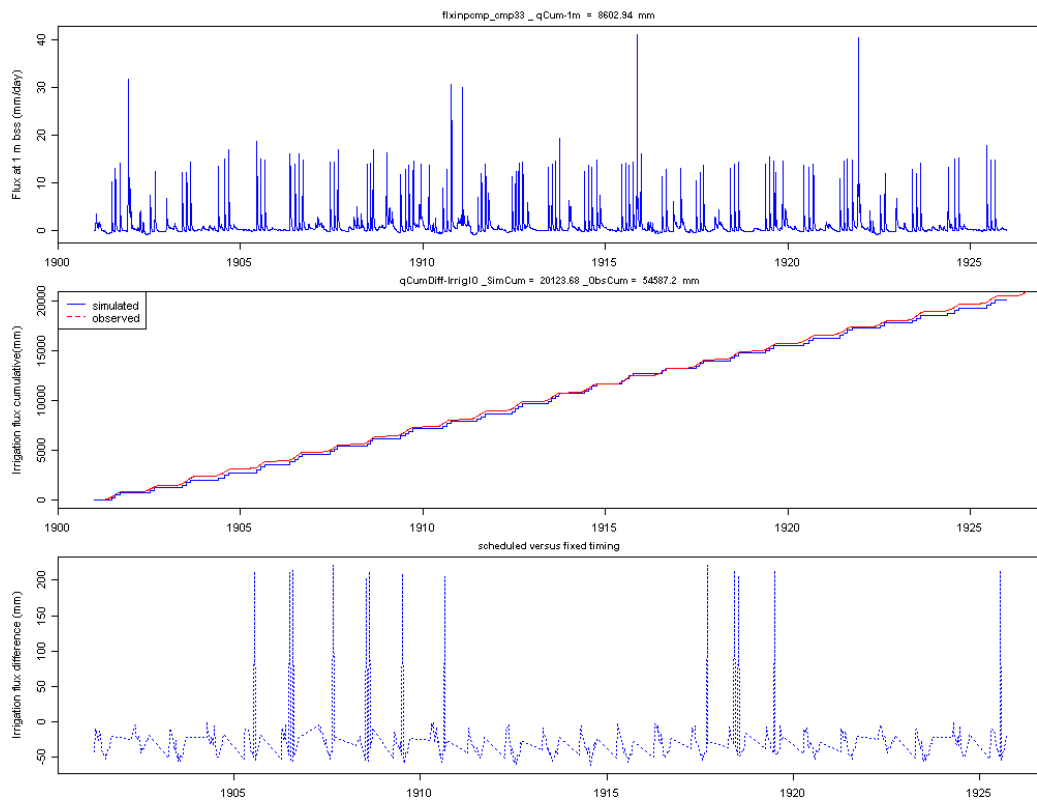


Figure 18: IrrigationScheduledFixedTiming(Sevilla)

Tabel 77: Waterbalans

	1	2	3	4	5	6	7	8
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1901.00	1902.00	1903.00	1904.00	1905.00	1906.00	1907.00	1908.00
Igrai	808.00	434.00	370.00	378.00	316.00	277.00	472.00	849.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	750.00	473.00	758.00	782.00	792.00	1055.00	781.00	784.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-312.00	-244.00	-256.00	-212.00	-220.00	-214.00	-272.00	-291.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-1046.00	-880.00	-1000.00	-970.00	-965.00	-1075.00	-983.00	-1122.00
runoff	-7.00	-3.00	-14.00	-7.00	-19.00	-24.00	-7.00	-12.00
fldrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-10.00	-50.00	-1.00	0.00	0.00	0.00	0.00	0.00
deltast	-183.00	269.00	143.00	29.00	97.00	-20.00	7.00	-209.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-580.00	-486.00	-543.00	-531.00	-534.00	-523.00	-503.00	-508.00
evtrma	-1058.00	-901.00	-1012.00	-982.00	-979.00	-1090.00	-995.00	-1137.00

21 MacroPores1

Tabel 78: Description of case

		19
CaseNr		19
dirnam	MacroPores1	
Purpose	macropore flow	
Location	Andelst-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Hendriks et al ()	

Project: Andelst

File name: Andelst.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:05:49 2008

Simulation stopped at Thu Nov 06 16:07:02 2008

Simulation elapsed time 72.15 (sec)

Succesfull completion of simulation: yes

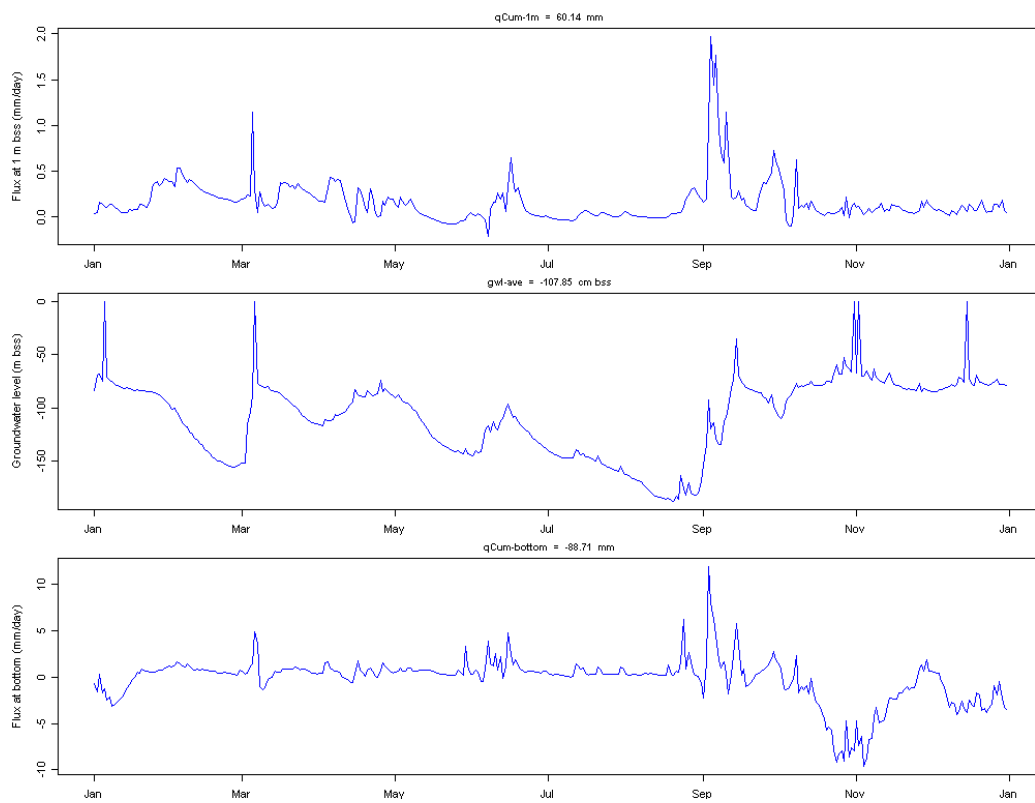
Succesfull closure of water balance: yes

Tabel 79: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	999	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 80: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	60.14			
2	gwl-ave	cm bss	-107.85			
3	qCum-bottom	mm	-88.71			



Figuur 19: MacroPores1

Tabel 81: Waterbalans

	1
ipl	1.00
yr	1998.00
Igrai	1111.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	324.00
evicpr	-31.00
evicir	0.00
evso	-263.00
evsubl	0.00
evpn	0.00
flev	-120.00
runoff	0.00
fdrou1	-28.00
fdrou2	0.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
flbtou	-235.00
deltast	-8.00
deltapn	0.00
deltasnow	0.00
badev	750.00
evsoma	-356.00
evtrma	-161.00

22 MacroPores2

Tabel 82: Description of case

		20
CaseNr		20
dirnam	MacroPores2	
Purpose	macropore flow	
Location	Vlierd-NL	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Hendriks et al ()	

Project: Vlierd

File name: Vlierd.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:07:03 2008

Simulation stopped at Thu Nov 06 16:07:09 2008

Simulation elapsed time 6.14 (sec)

Succesfull completion of simulation: yes

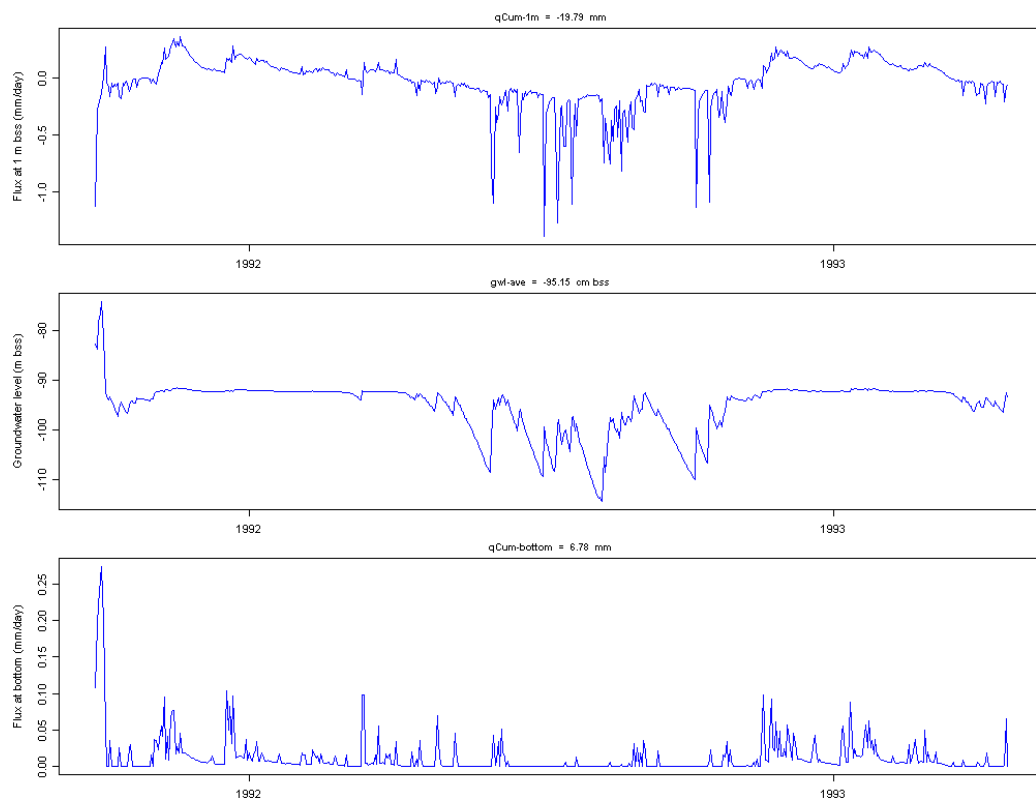
Succesfull closure of water balance: yes

Tabel 83: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 84: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	-19.79			
2	gwl-ave	cm bss	-95.15			
3	qCum-bottom	mm	6.78			



Figuur 20: MacroPores2

Tabel 85: Waterbalans

	1
ipl	1.00
yr	1991.00
Igrai	710.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	0.00
evicpr	-75.00
evicir	0.00
evso	0.00
evsubl	0.00
evpn	0.00
flev	-343.00
runoff	0.00
fdrou1	-58.00
fdrou2	0.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
flbtou	0.00
deltast	-63.00
deltapn	0.00
deltasnow	220.00
badev	391.00
evsoma	0.00
evtrma	-486.00

23 MeteoDetailedInOut(Hupsel)

Tabel 86: Description of case

		21
CaseNr		21
dirnam	MeteoDetailedInOut(Hupsel)	
Purpose	daily fluctuation of ET	
Location	Hupsel-NL	
SimulationPeriod	May-80	
SoilType	loamy sand	
CropType	grass	
drainage	tile drains	
irrigation	no	
bottomboundary	zero flux	
reference	Allen et al, 1998, FAO56	

Project: MeteoDetail

File name: MeteoDetail.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:07:10 2008

Simulation stopped at Thu Nov 06 16:07:11 2008

Simulation elapsed time 0.55 (sec)

Succesfull completion of simulation: yes

Succesfull closure of water balance: yes

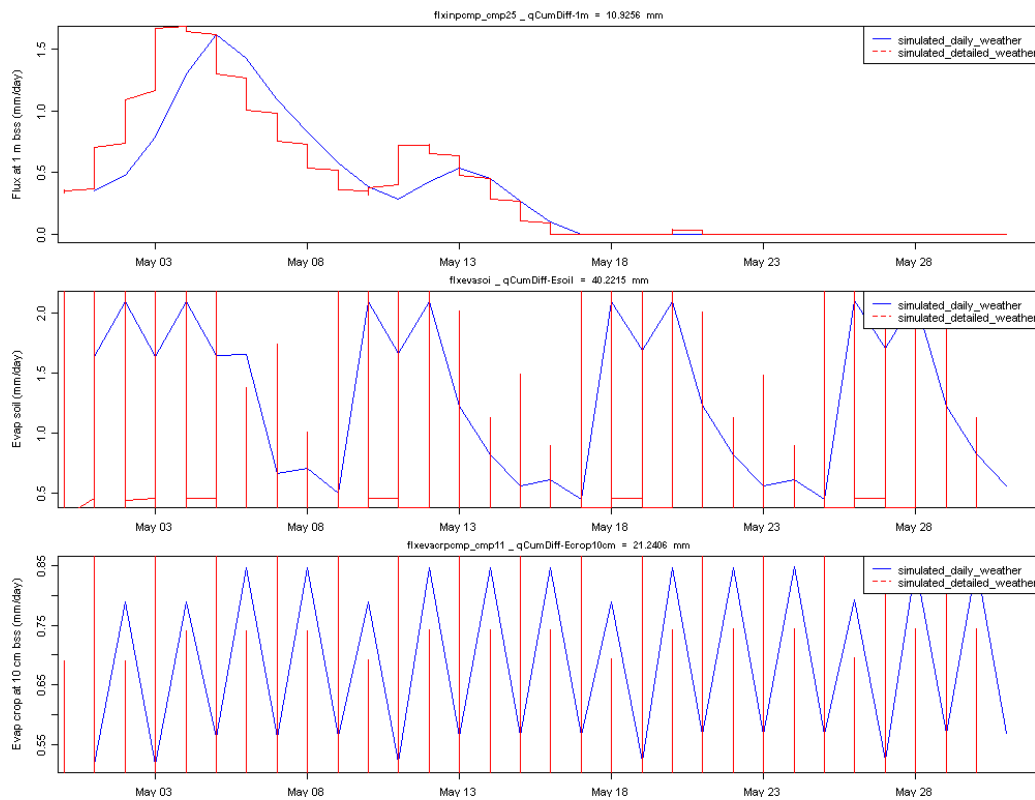
Tabel 87: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.5	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	50	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Table 88: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCumDiff-1m	mm	10.93	122.64	-0.03	0.21
2	qCumDiff-Esoil	mm	40.22	387.98	0.08	1.39
3	qCumDiff-Ecrop10cm	mm	21.24	201.45	0.03	0.38

Table 89: Waterbalans
values none



Figuur 21: MeteoDetailedInOut(Hupsel)

24 MeteoPrecipitationDetail(Andelst)

Tabel 90: Description of case

		22
CaseNr		22
dirnam	MeteoPrecipitationDetail(Andelst)	
Purpose		rain events
Location		Andelst-NL
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference		Hendriks et al ()

Project: Andelst

File name: Andelst.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:07:12 2008

Simulation stopped at Thu Nov 06 16:07:16 2008

Simulation elapsed time 4.28 (sec)

Succesfull completion of simulation: yes

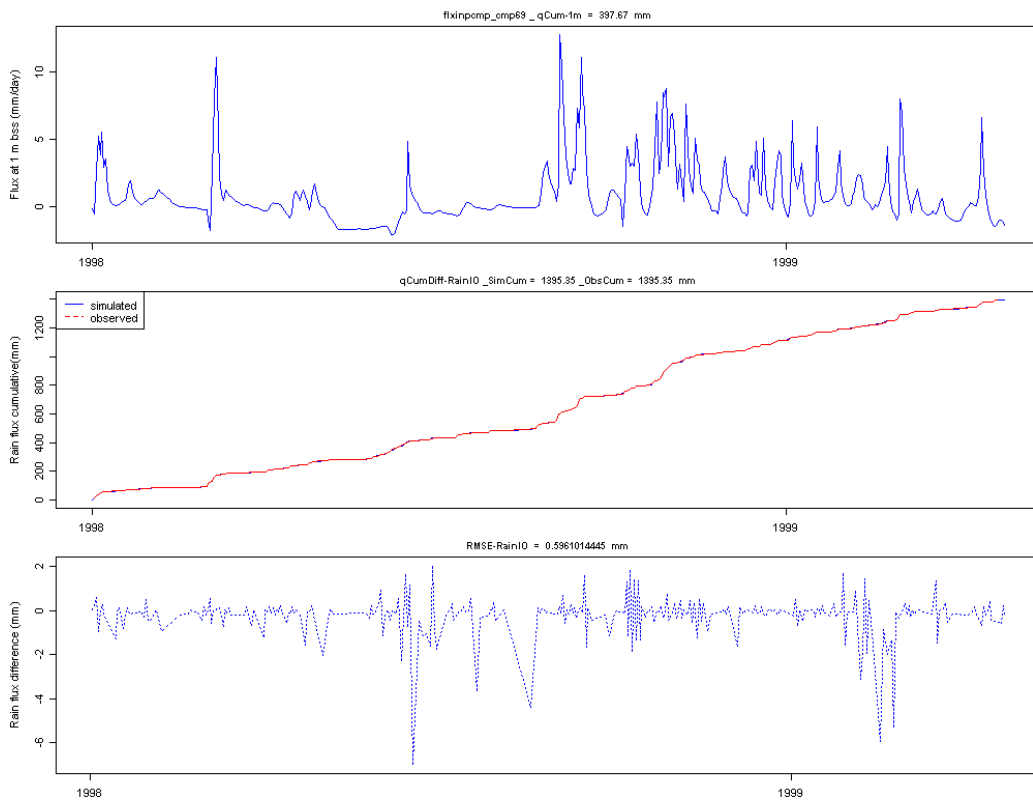
Succesfull closure of water balance: yes

Tabel 91: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	999	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 92: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	397.67			
2	qCumDiff-RainIO	mm	1395.35	1395.35	0.00	
3	RMSE-RainIO	mm	701.48	701.21	0.27	0.60



Figuur 22: MeteoPrecipitationDetail(Andelst)

Tabel 93: Waterbalans

	1
ipl	1.00
yr	1998.00
Igrai	1111.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	560.00
evicpr	-38.00
evicir	0.00
evso	-349.00
evsubl	0.00
evpn	0.00
flev	-196.00
runoff	-21.00
fdrou1	-984.00
fdrou2	0.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
flbtou	-86.00
deltast	2.00
deltapn	0.00
deltasnow	0.00
badev	0.00
evsoma	-448.00
evtrma	-202.00

25 PearlDrainageBasic

Tabel 94: Description of case

		23
CaseNr		23
dirnam	PearlDrainageBasic	
Purpose	drainage	
Location	Wassenaar	
SimulationPeriod	1993-1994	
SoilType	Sand	
CropType	Flower bulbs	
drainage	basic	
irrigation	no	
bottomboundary	Sine function	
reference	Van den Berg (2006)	

Project: PearlBasicDrain

File name: PearlBasicDrain.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:07:17 2008

Simulation stopped at Thu Nov 06 16:07:19 2008

Simulation elapsed time 1.16 (sec)

Succesfull completion of simulation: yes

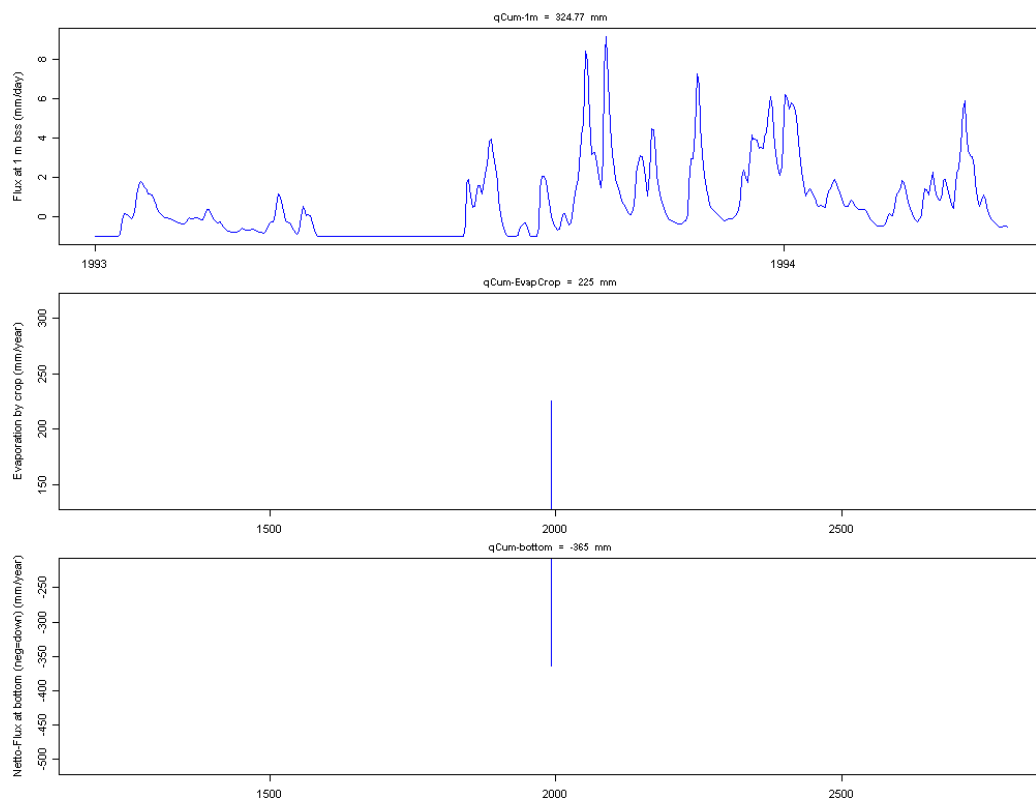
Succesfull closure of water balance: yes

Tabel 95: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 96: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	324.77			
2	qCum-EvapCrop	mm	225.00			
3	qCum-bottom	cm	-365.00			



Figuur 23: PearlDrainageBasic

Tabel 97: Waterbalans

	1
ipl	1.00
yr	1993.00
Igrai	898.00
Igsnow	0.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	365.00
evicpr	-13.00
evicir	0.00
evso	-297.00
evsubl	0.00
evpn	0.00
flev	-225.00
runoff	0.00
fdrou1	-9.00
fdrou2	-638.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
flbtou	0.00
deltast	-82.00
deltapn	0.00
deltasnow	0.00
badev	0.00
evsoma	-440.00
evtrma	-225.00

26 PearlFocus1(Joki-m)

Tabel 98: Description of case

		24
CaseNr		24
dirnam	PearlFocus1(Joki-m)	
Purpose	frost conditions (at times below -20 deg C); winter crop	
Location	Jokioinen-Finland	
SimulationPeriod	1901-1966	
SoilType	Loamy sand	
CropType	Winter Cereals	
drainage	no	
irrigation	no	
bottomboundary	q/h	
reference	Focus (2000)	

Project: Joki-m

File name: Joki-m.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:07:20 2008

Simulation stopped at Thu Nov 06 16:08:00 2008

Simulation elapsed time 40.25 (sec)

Succesfull completion of simulation: yes

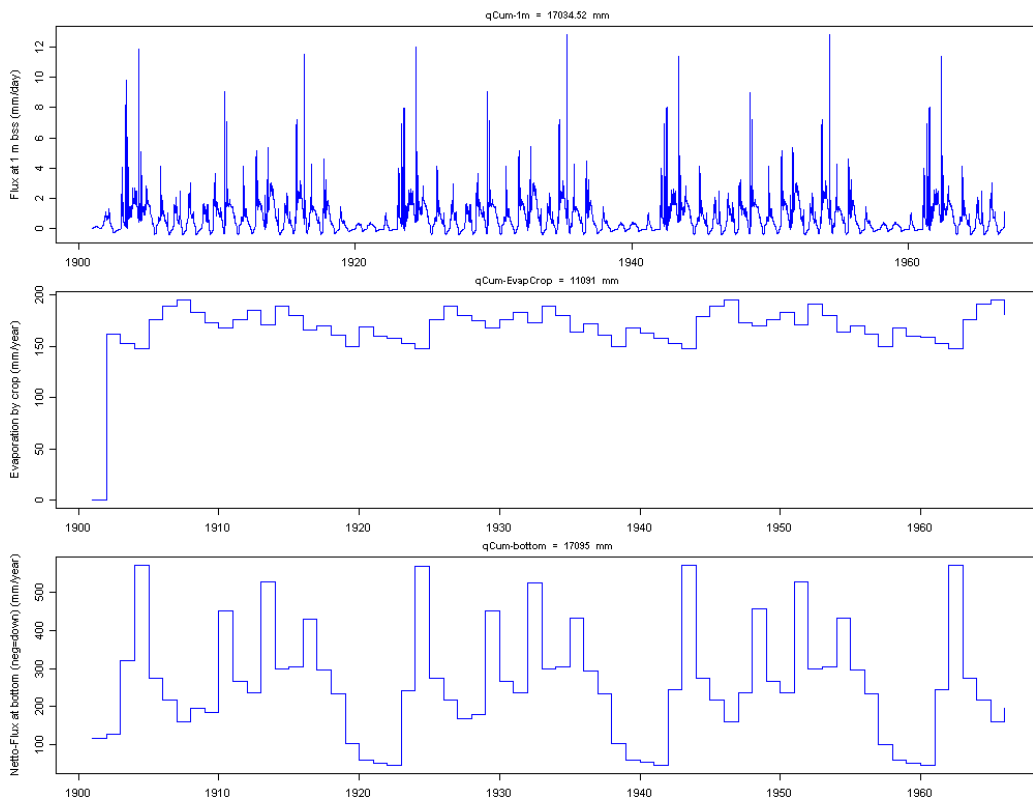
Succesfull closure of water balance: yes

Tabel 99: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 100: Statistics of Performance Indices

	PName	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	17034.52			
2	qCum-EvapCrop	mm	11091.00			
3	qCum-bottom	cm	17095.00			



Figuur 24: PearlFocus1(Joki-m)

Tabel 101: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1901.00	1902.00	1903.00	1904.00	1905.00	1906.00	1907.00	1908.00	1909.00
Igrai	375.00	393.00	964.00	964.00	630.00	558.00	659.00	512.00	730.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-255.00	-209.00	-243.00	-242.00	-236.00	-219.00	-271.00	-191.00	-243.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	0.00	-162.00	-153.00	-148.00	-176.00	-189.00	-195.00	-183.00	-173.00
runoff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-115.00	-127.00	-320.00	-572.00	-275.00	-218.00	-161.00	-195.00	-184.00
deltast	-5.00	105.00	-248.00	-1.00	57.00	69.00	-33.00	57.00	-129.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-604.00	-360.00	-314.00	-313.00	-328.00	-333.00	-366.00	-329.00	-305.00
evtrma	0.00	-179.00	-153.00	-155.00	-176.00	-189.00	-195.00	-185.00	-173.00

27 PearlFocus2(Okeh-m)

Tabel 102: Description of case

	25
CaseNr	25
dirnam	PearlFocus2(Okeh-m)
Purpose	wet climate: annual rainfall 1040 mm, loamy soil
Location	Okehampton-UK
SimulationPeriod	1901-1966
SoilType	Loam
CropType	Grass
drainage	no
irrigation	no
bottomboundary	freedrainage
reference	Focus (2000)

Project: Okeh-m

File name: Okeh-m.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:08:05 2008

Simulation stopped at Thu Nov 06 16:09:05 2008

Simulation elapsed time 60.52 (sec)

Succesfull completion of simulation: yes

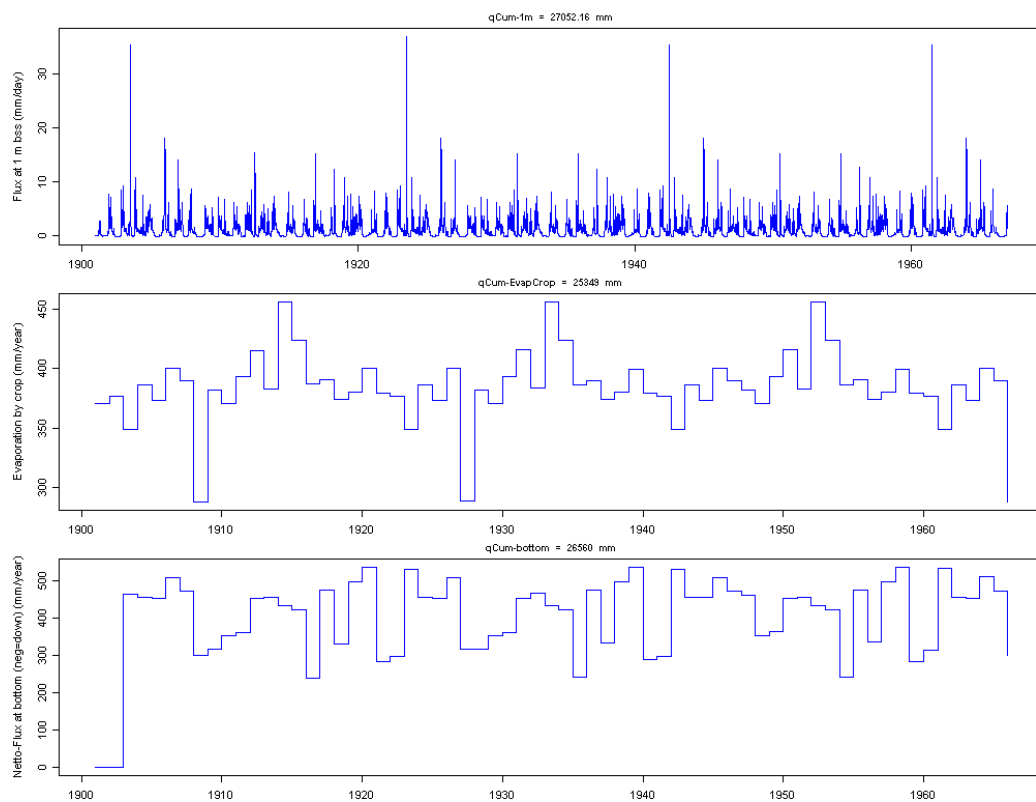
Succesfull closure of water balance: yes

Tabel 103: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 104: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	27052.16			
2	qCum-EvapCrop	mm	25349.00			
3	qCum-bottom	cm	26560.00			



Figuur 25: PearlFocus2(Okeh-m)

Tabel 105: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1901.00	1902.00	1903.00	1904.00	1905.00	1906.00	1907.00	1908.00	1909.00
Igrai	938.00	1016.00	1113.00	1132.00	972.00	1158.00	1083.00	673.00	1056.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-225.00	-221.00	-201.00	-231.00	-231.00	-252.00	-242.00	-231.00	-254.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-371.00	-377.00	-349.00	-386.00	-373.00	-400.00	-390.00	-288.00	-382.00
runoff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3.00
fdrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	0.00	0.00	-462.00	-454.00	-453.00	-507.00	-471.00	-300.00	-315.00
deltast	-341.00	-418.00	-101.00	-61.00	85.00	1.00	20.00	145.00	-102.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-298.00	-299.00	-243.00	-276.00	-285.00	-301.00	-298.00	-335.00	-287.00
evtrma	-421.00	-422.00	-366.00	-394.00	-419.00	-444.00	-428.00	-511.00	-394.00

28 PearlFocus3(Port-m)

Tabel 106: Description of case

		26
CaseNr		26
dirnam	PearlFocus3(Port-m)	
Purpose	very wet climate: annual rainfall 1150 mm; 2 crops per year	
Location	Porto-Portugal	
SimulationPeriod	1901-1966	
SoilType	Loam	
CropType	Cabbage; 2 crops per year	
drainage		no
irrigation		no
bottomboundary		q/h
reference		Focus (2000)

Project: Port-m

File name: Port-m.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:09:10 2008

Simulation stopped at Thu Nov 06 16:10:01 2008

Simulation elapsed time 51.02 (sec)

Succesfull completion of simulation: yes

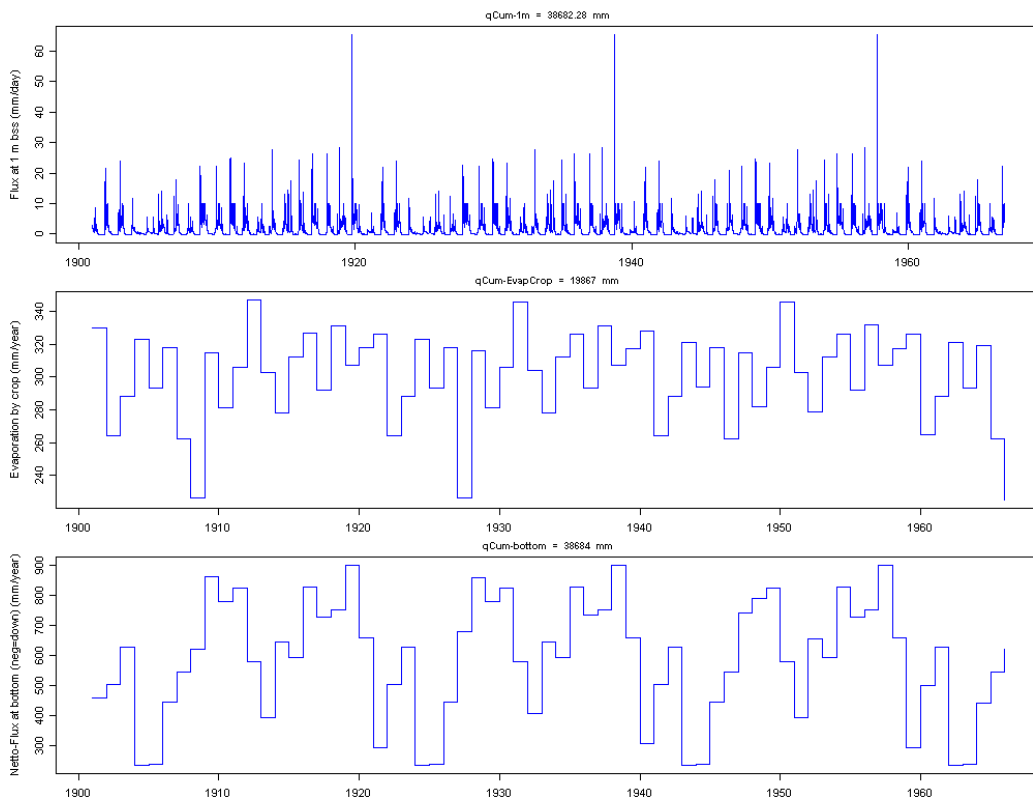
Succesfull closure of water balance: yes

Tabel 107: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 108: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	38682.28			
2	qCum-EvapCrop	mm	19867.00			
3	qCum-bottom	cm	38684.00			



Figuur 26: PearlFocus3(Port-m)

Tabel 109: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1901.00	1902.00	1903.00	1904.00	1905.00	1906.00	1907.00	1908.00	1909.00
Igrai	1123.00	952.00	1073.00	661.00	864.00	923.00	924.00	1176.00	1563.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-269.00	-180.00	-232.00	-187.00	-193.00	-193.00	-175.00	-146.00	-225.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-330.00	-264.00	-288.00	-323.00	-293.00	-318.00	-262.00	-226.00	-315.00
runoff	-19.00	-16.00	-24.00	-1.00	0.00	0.00	-3.00	-27.00	-183.00
fdrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-460.00	-503.00	-630.00	-235.00	-239.00	-444.00	-545.00	-621.00	-862.00
deltast	-45.00	12.00	100.00	85.00	-139.00	32.00	62.00	-157.00	23.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-591.00	-484.00	-464.00	-437.00	-460.00	-397.00	-385.00	-395.00	-385.00
evtrma	-470.00	-404.00	-423.00	-355.00	-344.00	-348.00	-353.00	-345.00	-337.00

29 PearlFocus4(Sevi-m)

Tabel 110: Description of case

		27
CaseNr		27
dirnam	PearlFocus4(Sevi-m)	
Purpose	irrigation; warm climate	
Location	Sevilla-Spain	
SimulationPeriod	1901-1966	
SoilType	Silt loam	
CropType	Apples	
drainage	no	
irrigation	fixed	
bottomboundary	time dep gwl; gwl constant	
reference	Focus (2000)	

Project: Sevi-m

File name: Sevi-m.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:10:05 2008

Simulation stopped at Thu Nov 06 16:11:08 2008

Simulation elapsed time 62.01 (sec)

Succesfull completion of simulation: yes

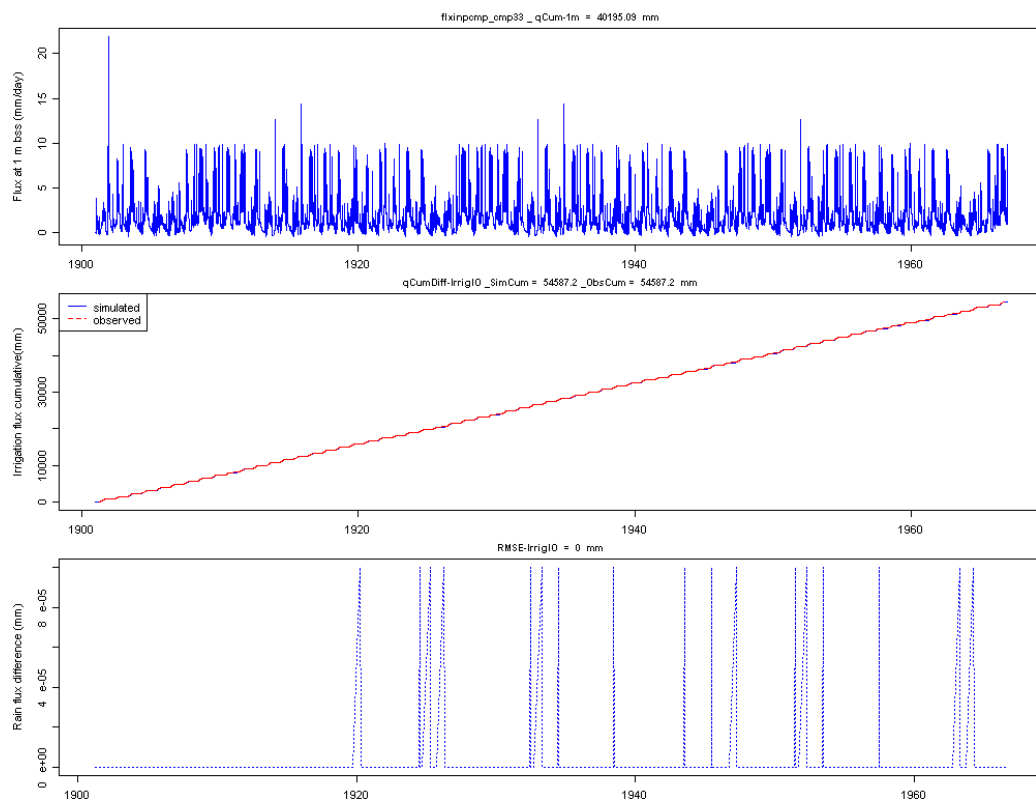
Succesfull closure of water balance: yes

Tabel 111: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 112: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	40195.09			
2	qCumDiff-IrrigIO	mm	54587.20	54587.20	0.00	
3	RMSE-IrrigIO	mm	27307.13	27307.13	0.00	0.00



Figuur 27: PearlFocus4(Sevi-m)

Tabel 113: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1901.00	1902.00	1903.00	1904.00	1905.00	1906.00	1907.00	1908.00	1909.00
Igrai	808.00	434.00	370.00	378.00	316.00	277.00	472.00	849.00	594.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	817.00	611.00	929.00	759.00	791.00	930.00	735.00	816.00	939.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-322.00	-237.00	-295.00	-240.00	-241.00	-262.00	-270.00	-276.00	-298.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-862.00	-243.00	-318.00	-337.00	-648.00	-926.00	-300.00	-205.00	-363.00
runoff	-16.00	-26.00	-43.00	-28.00	0.00	0.00	-27.00	-150.00	-89.00
fdrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-154.00	-574.00	-660.00	-569.00	-221.00	-76.00	-509.00	-970.00	-832.00
deltast	-272.00	34.00	18.00	37.00	3.00	57.00	-101.00	-51.00	35.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-14.00	14.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-448.00	-353.00	-410.00	-405.00	-402.00	-406.00	-355.00	-365.00	-384.00
evtrma	-867.00	-680.00	-918.00	-855.00	-866.00	-957.00	-800.00	-909.00	-945.00

30 PearlLysimeter

Tabel 114: Description of case

		28
CaseNr		28
dirnam	PearlLysimeter	
Purpose	the seepage face option	
Location	Landhorst	
SimulationPeriod	1980-1982	
SoilType	Sand	
CropType	Maize	
drainage	no	
irrigation	no	
bottomboundary	lysimeter	
reference	Van den Berg (2006)	

Project: Lysimeter

File name: Lysimeter.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:11:13 2008

Simulation stopped at Thu Nov 06 16:11:14 2008

Simulation elapsed time 1.78 (sec)

Succesfull completion of simulation: yes

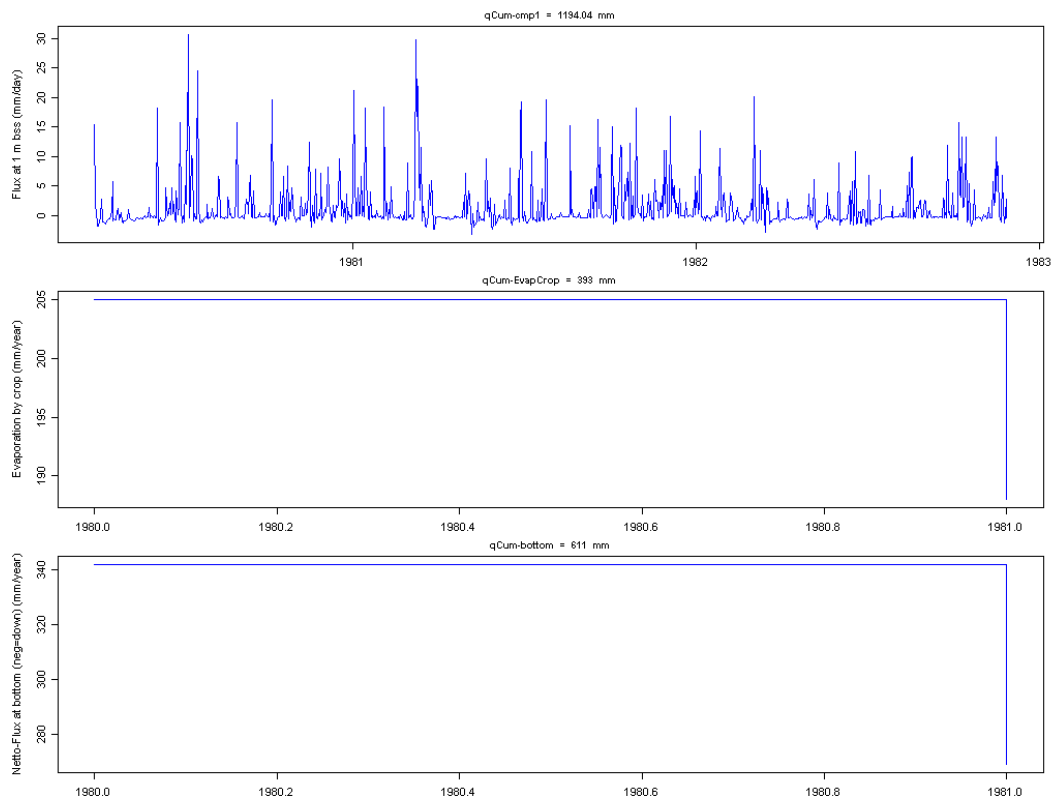
Succesfull closure of water balance: yes

Tabel 115: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 116: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-cmp1	mm	1194.04			
2	qCum-EvapCrop	mm	393.00			
3	qCum-bottom	cm	611.00			



Figuur 28: PearlLysimeter

Tabel 117: Waterbalans

	1	2
ipl	1.00	1.00
yr	1980.00	1981.00
Igrai	774.00	682.00
Igsnow	0.00	0.00
Igirr	0.00	0.00
RunOn	0.00	0.00
fldrin1	0.00	0.00
fldrin2	0.00	0.00
fldrin3	0.00	0.00
flindr4	0.00	0.00
fldrin5	0.00	0.00
fbtin	0.00	0.00
evicpr	0.00	0.00
evicir	0.00	0.00
evso	-226.00	-227.00
evsubl	0.00	0.00
evpn	0.00	0.00
flev	-205.00	-188.00
runoff	0.00	0.00
fdrou1	0.00	0.00
fdrou2	0.00	0.00
fdrou3	0.00	0.00
fdrou4	0.00	0.00
fdrou5	0.00	0.00
fbtou	-342.00	-269.00
deltast	0.00	2.00
deltapn	0.00	0.00
deltasnow	0.00	0.00
badev	0.00	0.00
evsoma	-377.00	-343.00
evtrma	-205.00	-188.00

31 ShallowSoil(EuroHarpITE)

Tabel 118: Description of case

		29
CaseNr		29
dirnam	ShallowSoil(EuroHarpITE)	
Purpose	numerical performance	
Location	Italy	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Schoumans et al ()	

Project: run.5212.2.swap

File name: run.5212.2.swap.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:11:16 2008

Simulation stopped at Thu Nov 06 16:11:22 2008

Simulation elapsed time 6.08 (sec)

Succesfull completion of simulation: yes

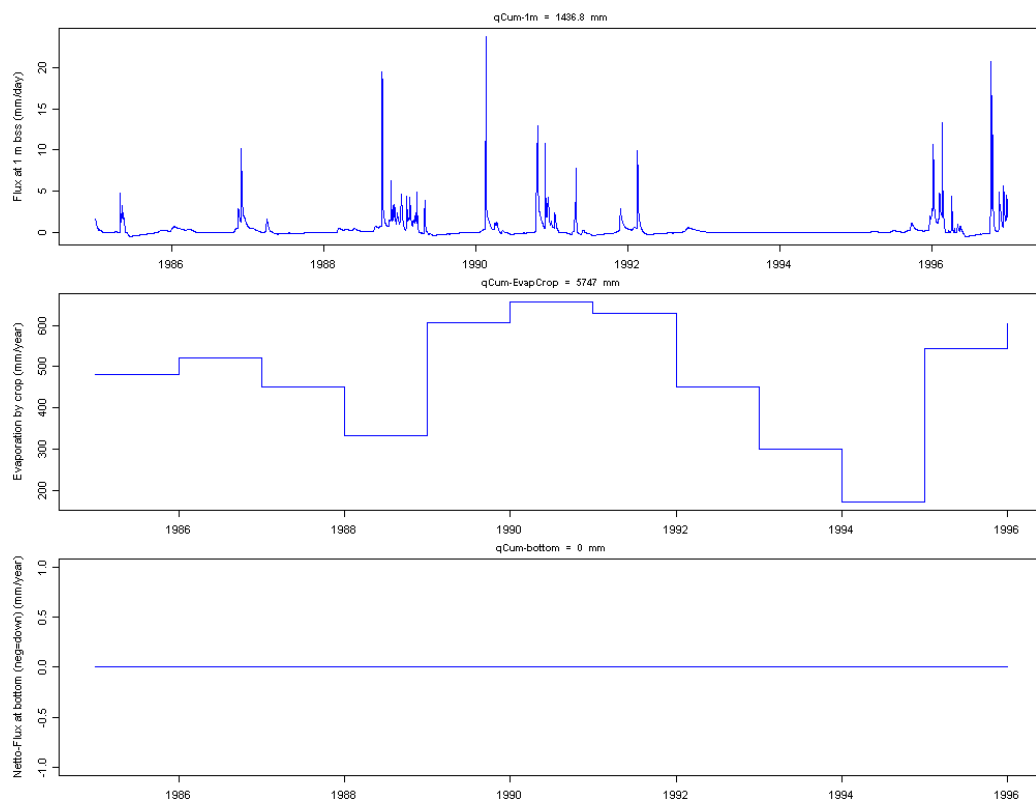
Succesfull closure of water balance: yes

Tabel 119: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	200	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 120: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	1436.80			
2	qCum-EvapCrop	mm	5747.00			
3	qCum-bottom	cm	0.00			



Figuur 29: ShallowSoil(EuroHarpITE)

Tabel 121: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1985.00	1986.00	1987.00	1988.00	1989.00	1990.00	1991.00	1992.00	1993.00
Igrai	625.00	754.00	432.00	951.00	747.00	1242.00	753.00	624.00	302.00
Igsnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	-25.00	-65.00	-31.00	-40.00	-42.00	-103.00	-69.00	-40.00	-15.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-198.00	-110.00	-144.00	-203.00	-166.00	-104.00	-106.00	-181.00	-130.00
evsubl	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-480.00	-522.00	-450.00	-333.00	-606.00	-657.00	-629.00	-452.00	-300.00
runoff	-2.00	0.00	0.00	-2.00	0.00	-11.00	-8.00	-10.00	0.00
fdrou1	-72.00	0.00	0.00	-83.00	-213.00	-90.00	-68.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltast	153.00	-57.00	193.00	-290.00	281.00	-276.00	128.00	59.00	143.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-494.00	-223.00	-478.00	-618.00	-309.00	-225.00	-208.00	-466.00	-614.00
evtrma	-495.00	-692.00	-481.00	-339.00	-665.00	-701.00	-687.00	-453.00	-355.00

32 SnowFrost(Boreas)

Tabel 122: Description of case

		30
CaseNr		30
dirnam		SnowFrost(Boreas)
Purpose	snow storage, snow melt, soil temperatures, interception of rain and snow	
Location		Canada
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference		-

Project: Boreas

File name: Boreas.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:11:24 2008

Simulation stopped at Thu Nov 06 16:11:25 2008

Simulation elapsed time 1.17 (sec)

Succesfull completion of simulation: yes

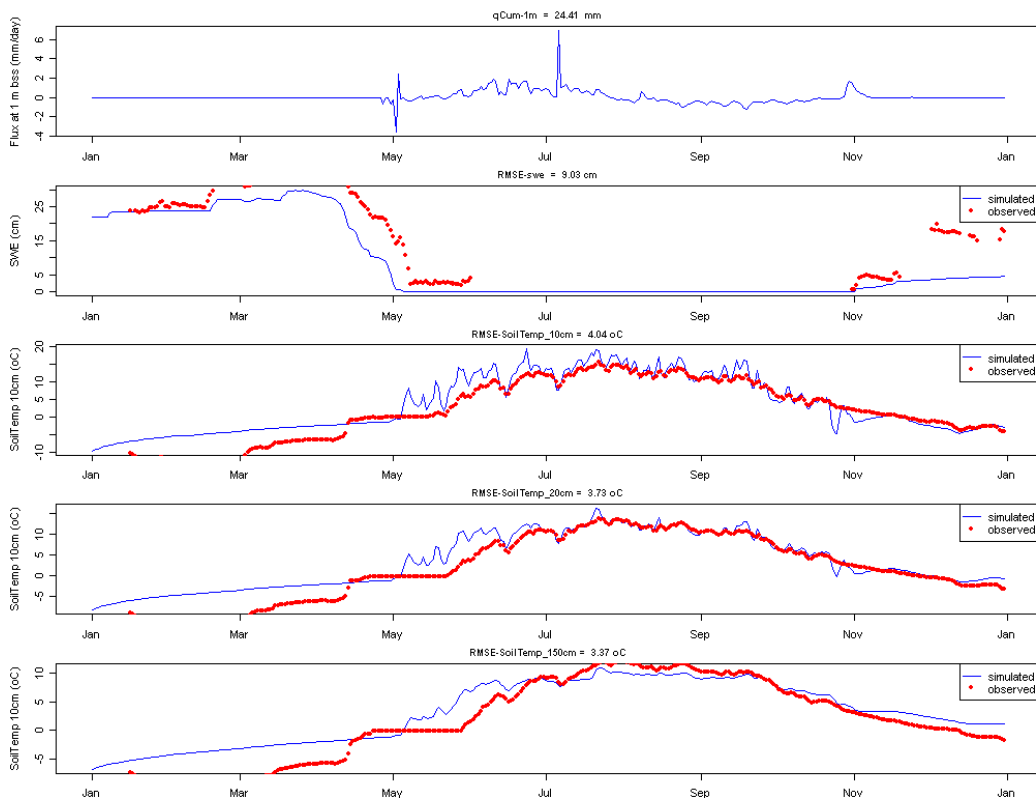
Succesfull closure of water balance: yes

Tabel 123: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	500	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 124: Statistics of Performance Indices

	PIname	Plunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	24.41			
2	RMSE-swe	cm	14.66	21.92	-7.26	9.03
3	RMSE-tem	oC	9.97	1.59	6.52	11.15



Figuur 30: SnowFrost(Boreas)

Tabel 125: Waterbalans

	1
ipl	1.00
yr	1994.00
Igrai	277.00
Igsnow	167.00
Igirr	0.00
RunOn	0.00
fdrin1	0.00
fdrin2	0.00
fdrin3	0.00
flindr4	0.00
fdrin5	0.00
flbtin	19.00
evicpr	-62.00
evicir	0.00
evso	-43.00
evsubl	-160.00
evpn	0.00
flev	-492.00
runoff	-135.00
fdrou1	0.00
fdrou2	0.00
fdrou3	0.00
fdrou4	0.00
fdrou5	0.00
flbtou	-78.00
deltast	332.00
deltapn	0.00
deltasnow	175.00
badev	0.00
evsoma	-102.00
evtrma	-573.00

33 SnowFrost(EuroHarpNOV)

Tabel 126: Description of case

		31
CaseNr		31
dirnam	SnowFrost(EuroHarpNOV)	
Purpose	snow melt, surface runoff, related to thawing, drainage	
Location	Norway	
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Schoumans et al ()	

Project: run.319.2.swap

File name: run.319.2.swap.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:11:26 2008

Simulation stopped at Thu Nov 06 16:11:47 2008

Simulation elapsed time 21.02 (sec)

Succesfull completion of simulation: yes

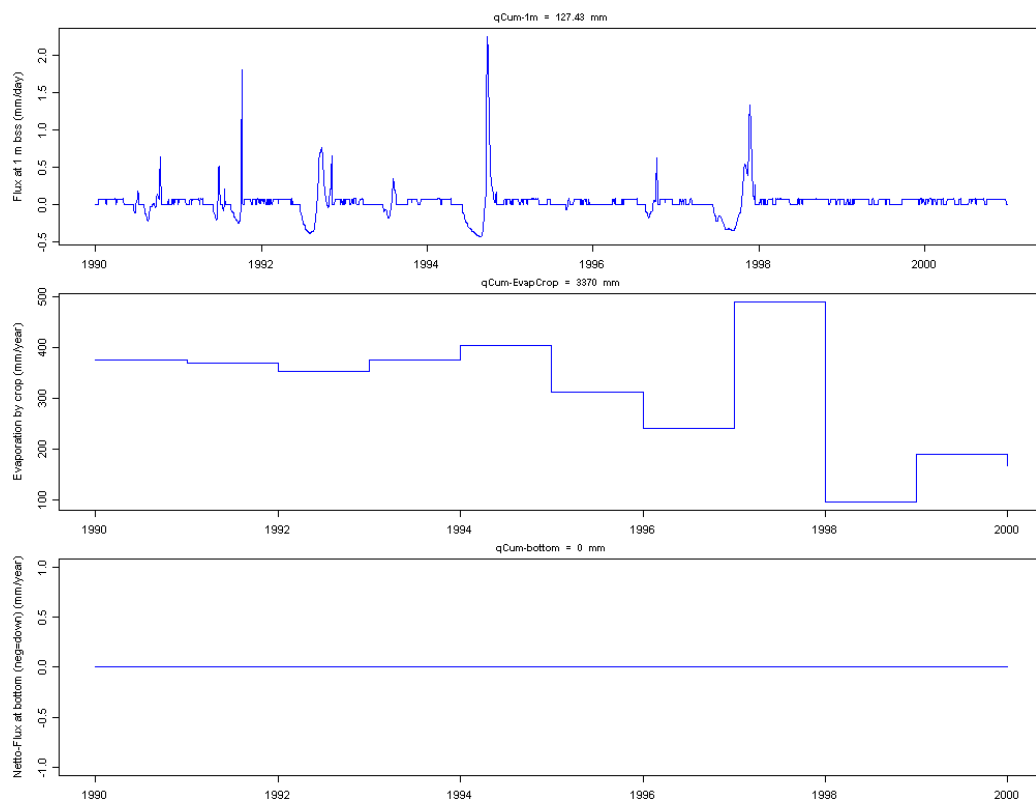
Succesfull closure of water balance: yes

Tabel 127: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	500	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 128: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	127.43			
2	qCum-EvapCrop	mm	3370.00			
3	qCum-bottom	cm	0.00			



Figuur 31: SnowFrost(EuroHarpNOV)

Tabel 129: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1990.00	1991.00	1992.00	1993.00	1994.00	1995.00	1996.00	1997.00	1998.00
Igrai	851.00	719.00	711.00	701.00	658.00	700.00	648.00	585.00	766.00
Igsnow	30.00	46.00	45.00	100.00	130.00	111.00	75.00	66.00	73.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-94.00	-65.00	-83.00	-76.00	-51.00	-91.00	-88.00	-69.00	-112.00
evsubl	-1.00	-4.00	-2.00	-6.00	-13.00	-4.00	-10.00	-2.00	-8.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-375.00	-370.00	-352.00	-376.00	-403.00	-312.00	-241.00	-490.00	-95.00
runoff	-418.00	-307.00	-299.00	-262.00	-366.00	-382.00	-358.00	-99.00	-583.00
fdrou1	-18.00	-19.00	-19.00	-17.00	-16.00	-22.00	-17.00	-4.00	-37.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltast	-1.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	-25.00
deltapn	0.00	1.00	0.00	-2.00	-1.00	3.00	0.00	3.00	-3.00
deltasnow	27.00	0.00	0.00	-63.00	63.00	-2.00	-8.00	-14.00	25.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-130.00	-114.00	-123.00	-116.00	-109.00	-127.00	-112.00	-122.00	-122.00
evtrma	-475.00	-433.00	-454.00	-429.00	-476.00	-440.00	-417.00	-520.00	-376.00

34 SoilEvaporation(Castricum)

Tabel 130: Description of case

		32
CaseNr		32
dirnam	SoilEvaporation(Castricum)	
Purpose	test of bare soil evaporation and drainage	
Location	Castricum-NL	
SimulationPeriod	1941-1970	
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Garcia ()	

Project: BareSoil

File name: BareSoil.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:11:49 2008

Simulation stopped at Thu Nov 06 16:12:05 2008

Simulation elapsed time 16.54 (sec)

Succesfull completion of simulation: yes

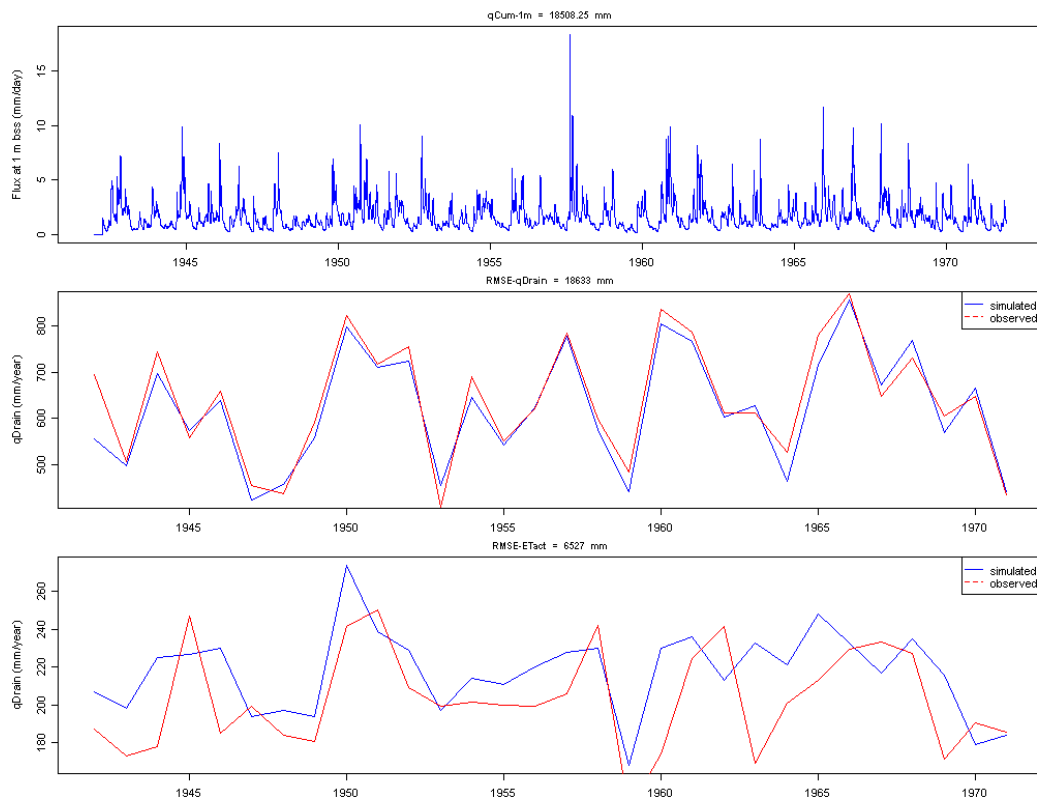
Succesfull closure of water balance: yes

Tabel 131: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	200	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 132: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	18508.25			
2	RMSE-qDrain	mm	18633.00	19160.29	-17.58	39.70
3	RMSE-ETact	mm	6527.00	6087.81	14.64	26.95



Figur 32: SoilEvaporation(Castricum)

Tabel 133: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1942.00	1943.00	1944.00	1945.00	1946.00	1947.00	1948.00	1949.00	1950.00
Igrai	841.00	672.00	916.00	783.00	827.00	567.00	618.00	771.00	1055.00
Igsnow	41.00	7.00	4.00	22.00	16.00	87.00	2.00	2.00	10.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-207.00	-198.00	-225.00	-226.00	-229.00	-175.00	-197.00	-194.00	-273.00
evsubl	0.00	0.00	0.00	-1.00	-1.00	-19.00	0.00	0.00	-1.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
runoff	-18.00	0.00	0.00	0.00	0.00	-20.00	0.00	0.00	0.00
fdrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-538.00	-496.00	-696.00	-574.00	-639.00	-403.00	-457.00	-557.00	-797.00
deltast	-119.00	16.00	0.00	-3.00	26.00	-34.00	30.00	-22.00	6.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	-4.00	4.00	0.00	-1.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-644.00	-663.00	-637.00	-613.00	-642.00	-718.00	-663.00	-659.00	-639.00
evtrma	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

35 TimingErrorEndofDay

Tabel 134: Description of case

		33
CaseNr		33
dirnam	TimingErrorEndofDay	
Purpose	convergence of numerical solution	
Location		
SimulationPeriod		
SoilType		
CropType		
drainage		
irrigation		
bottomboundary		
reference	Walvoort et al ()	

Project: 1.swap

File name: 1.swap.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:12:08 2008

Simulation stopped at Thu Nov 06 16:12:10 2008

Simulation elapsed time 2.17 (sec)

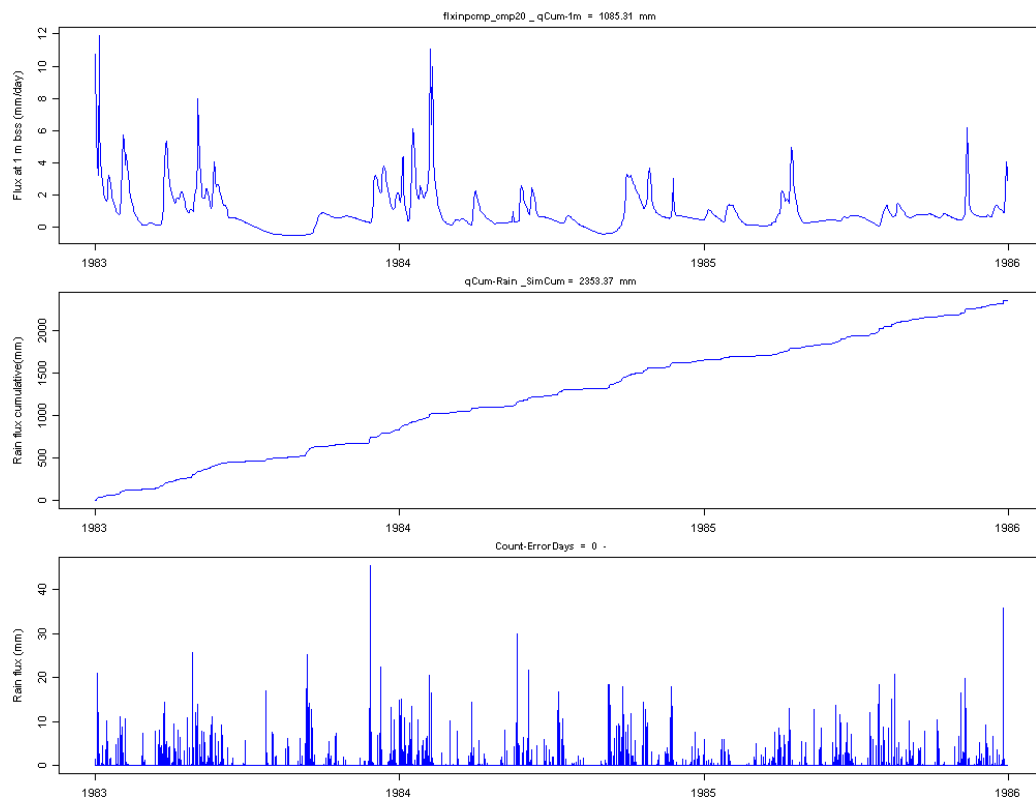
Succesfull completion of simulation: yes

Succesfull closure of water balance: yes

Tabel 135: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	100	(cm)
4	CRITDEVMASBALABS	0.099	(d)
5	CRITDEVMASBALDT	NA	(d)
6	CRITDEVPONDDT	1e-04	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 136: Waterbalans
values none



Figuur 33: TimingErrorEndofDay

36 TranspirationDecForest(Castricum)

Tabel 137: Description of case

CaseNr	
dirnam	TranspirationDecFores
Purpose	test of evaporation of deciduous forest and drainage, seasonal completely unsaturat
Location	C
SimulationPeriod	
SoilType	
CropType	
drainage	
irrigation	
bottomboundary	
reference	

Project: Oak

File name: Oak.swp

Model version: Swap 3.2 (revision 16) (Date 06 Nov 2008)

Simulation started at Thu Nov 06 16:12:11 2008

Simulation stopped at Thu Nov 06 16:12:29 2008

Simulation elapsed time 17.25 (sec)

Succesfull completion of simulation: yes

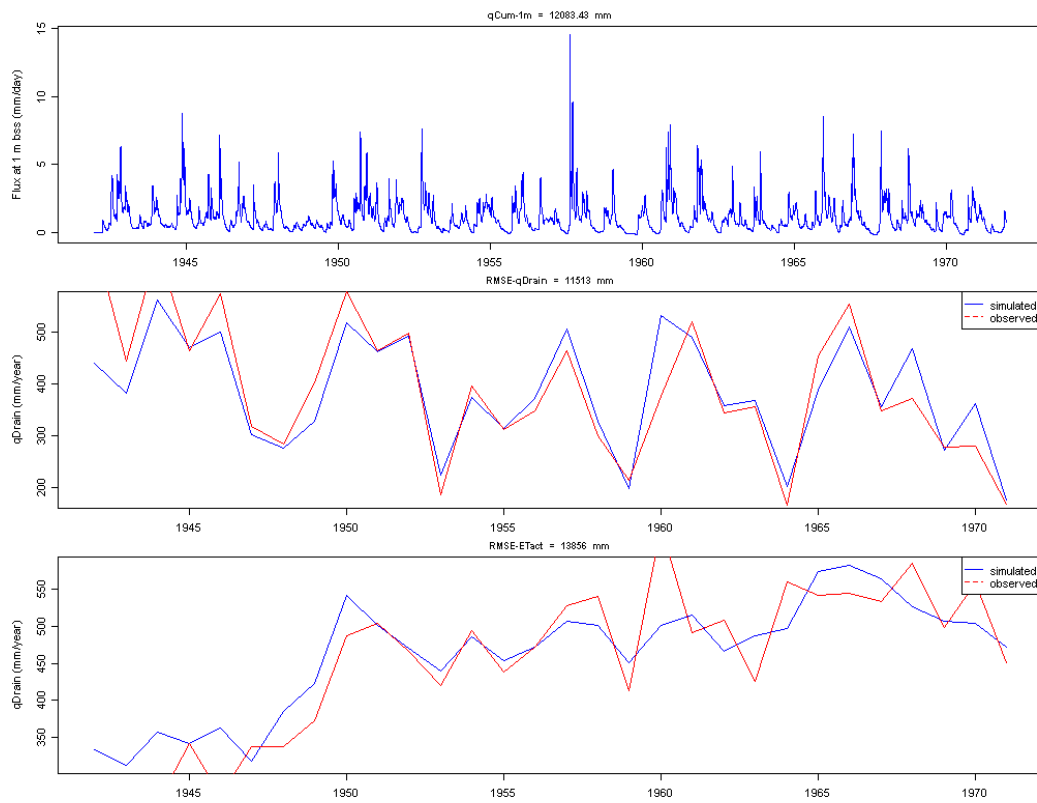
Succesfull closure of water balance: yes

Tabel 138: Iteration parameters

	variables	values	units
1	DTMIN	NA	(d)
2	DTMAX	0.2	(d)
3	GWLCONV	200	(cm)
4	CRITDEVMSBALABS	0.099	(d)
5	CRITDEVMSBALDT	NA	(d)
6	CRITDEVPONDDT	NA	(cm)
7	MAXIT	30	(-)
8	MAXBACKTR	3	(-)
9	SWkmean	1	(-)
10	SWkImpl	0	(-)

Tabel 139: Statistics of Performance Indices

	PIname	PIunit	SIM	OBS	ME	RMSE
1	qCum-1m	mm	12083.43			
2	RMSE-qDrain	mm	11513.00	11784.00	-9.03	68.30
3	RMSE-ETact	mm	13856.00	13464.10	13.06	55.12



Figuur 34: TranspirationDecForest(Castricum)

Tabel 140: Waterbalans

	1	2	3	4	5	6	7	8	
ipl	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
yr	1942.00	1943.00	1944.00	1945.00	1946.00	1947.00	1948.00	1949.00	1950.00
Igrai	841.00	672.00	916.00	783.00	827.00	567.00	618.00	771.00	1055.00
Igsnow	41.00	7.00	4.00	22.00	16.00	87.00	2.00	2.00	10.00
Igirr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RunOn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flindr4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fldrin5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evicpr	-140.00	-146.00	-166.00	-155.00	-152.00	-117.00	-168.00	-192.00	-252.00
evicir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evso	-161.00	-145.00	-171.00	-167.00	-171.00	-132.00	-146.00	-141.00	-171.00
evsubl	-13.00	0.00	0.00	-1.00	-1.00	-20.00	0.00	0.00	-1.00
evpn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flev	-19.00	-21.00	-20.00	-18.00	-38.00	-48.00	-71.00	-90.00	-118.00
runoff	-8.00	0.00	0.00	0.00	0.00	-15.00	0.00	0.00	0.00
fdrou1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fdrou5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
flbtou	-432.00	-381.00	-561.00	-470.00	-500.00	-286.00	-276.00	-328.00	-517.00
deltast	-108.00	14.00	-3.00	8.00	20.00	-32.00	36.00	-23.00	-6.00
deltapn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
deltasnow	0.00	0.00	0.00	0.00	0.00	-4.00	4.00	0.00	-1.00
badev	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
evsoma	-548.00	-558.00	-525.00	-495.00	-510.00	-598.00	-492.00	-465.00	-379.00
evtrma	-20.00	-21.00	-20.00	-18.00	-38.00	-49.00	-71.00	-90.00	-124.00