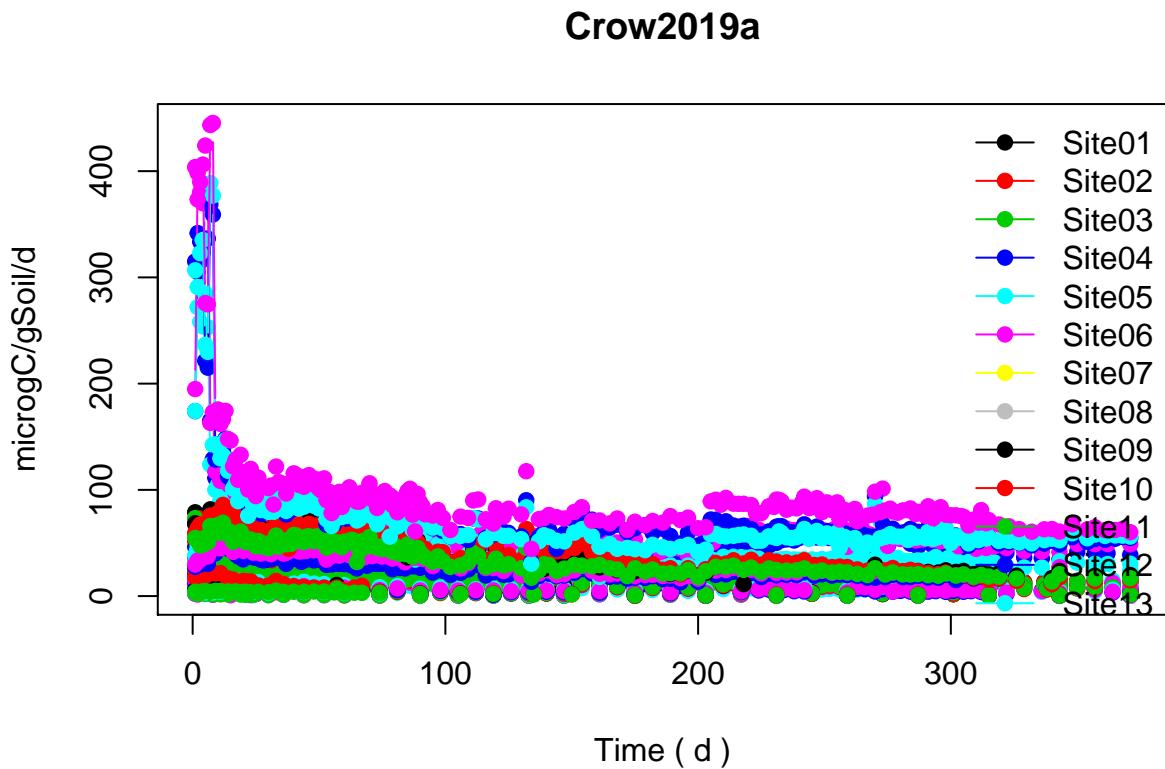


# Fitting models to time series data Crow2019a

Mina Azizi-Rad

## Dataset Crow2019a

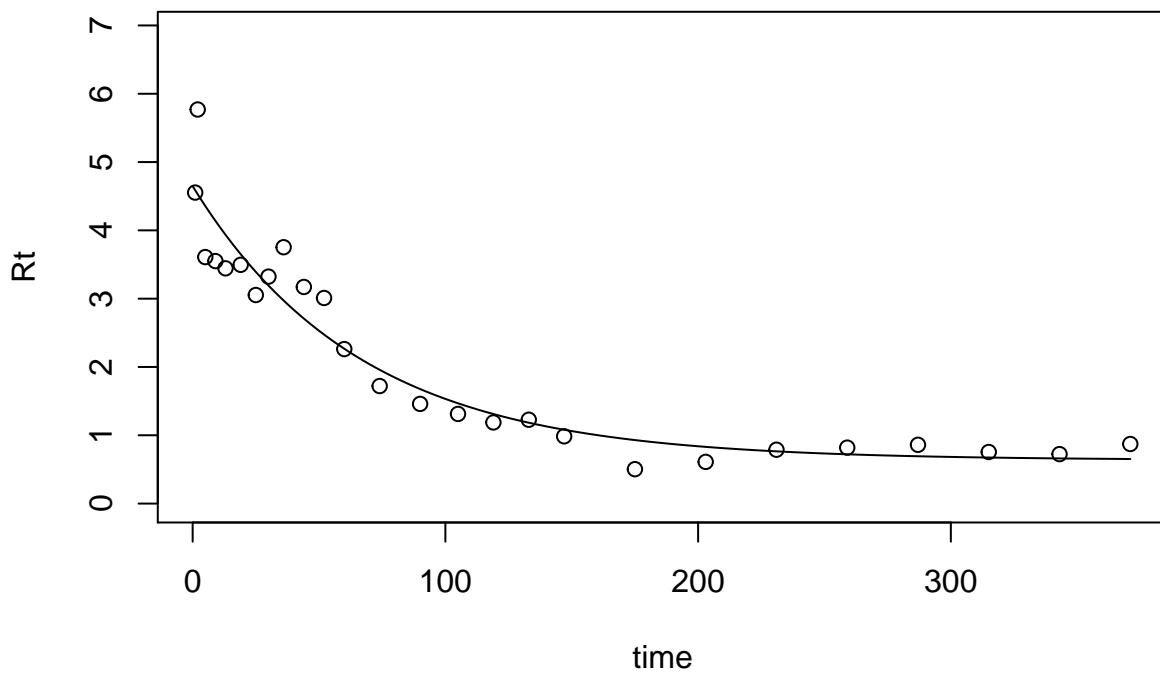
A dataset with 37 variables of 6 different sites each two levels of vegetation (Native grassland and cultivated). and three levels of temperature (15, 25, 35)



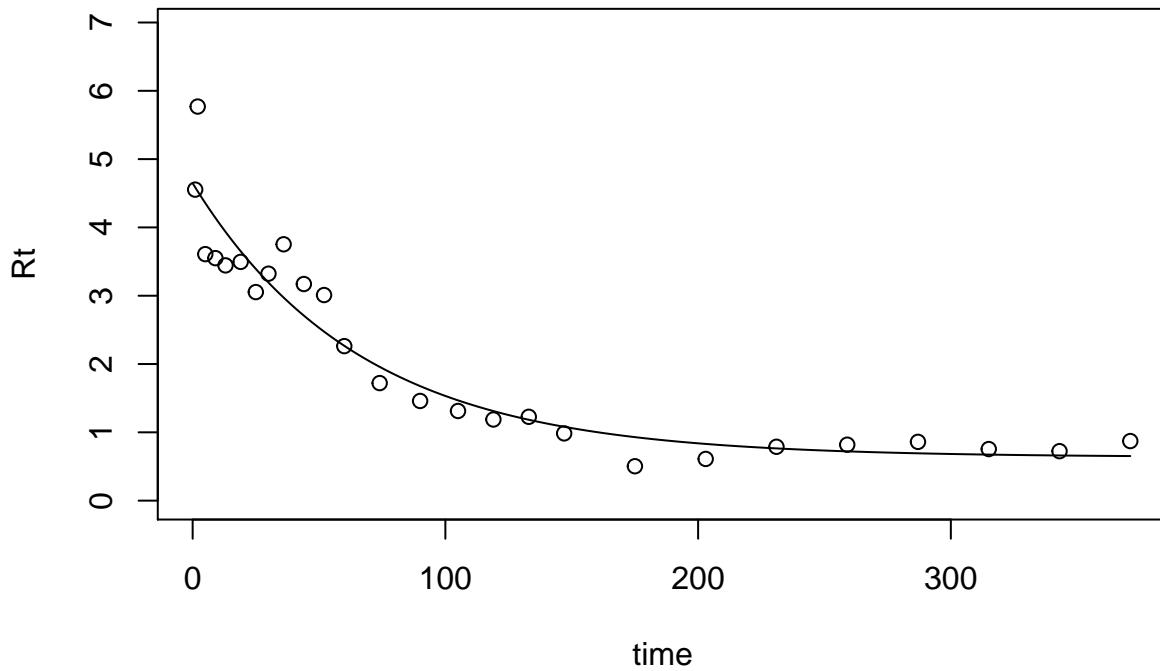
### Variable Site01:

CO2 production rate

```
## [1] "k1= 0.0150492366476274"  
## [2] "k2= 3.91188163257795e-05"  
## [3] "proportion of C0 in pool 1= 0.015822057617315"
```

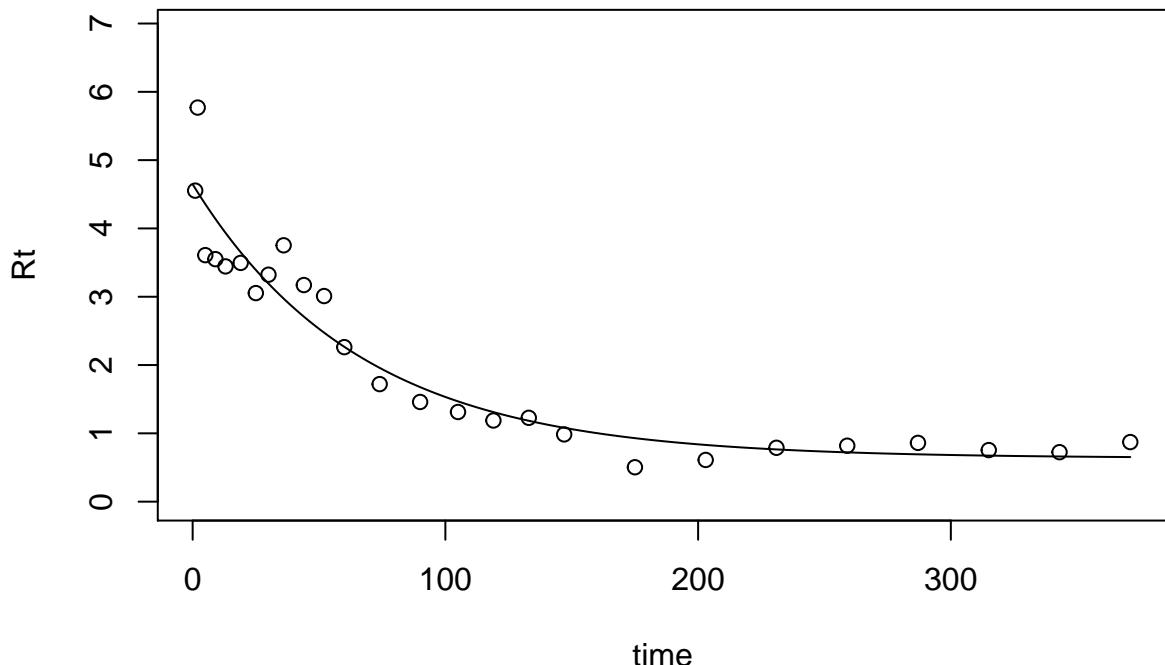


```
## [1] "AIC = 9.53606523312129"
## [1] "k1= 0.0150489461088625"
## [2] "k2= 3.91180512668053e-05"
## [3] "a21= 0.0740288487303253"
## [4] "a12= 5.21902653100037e-05"
## [5] "Proportion of C0 in pool 1= 0.0170906911771803"
```

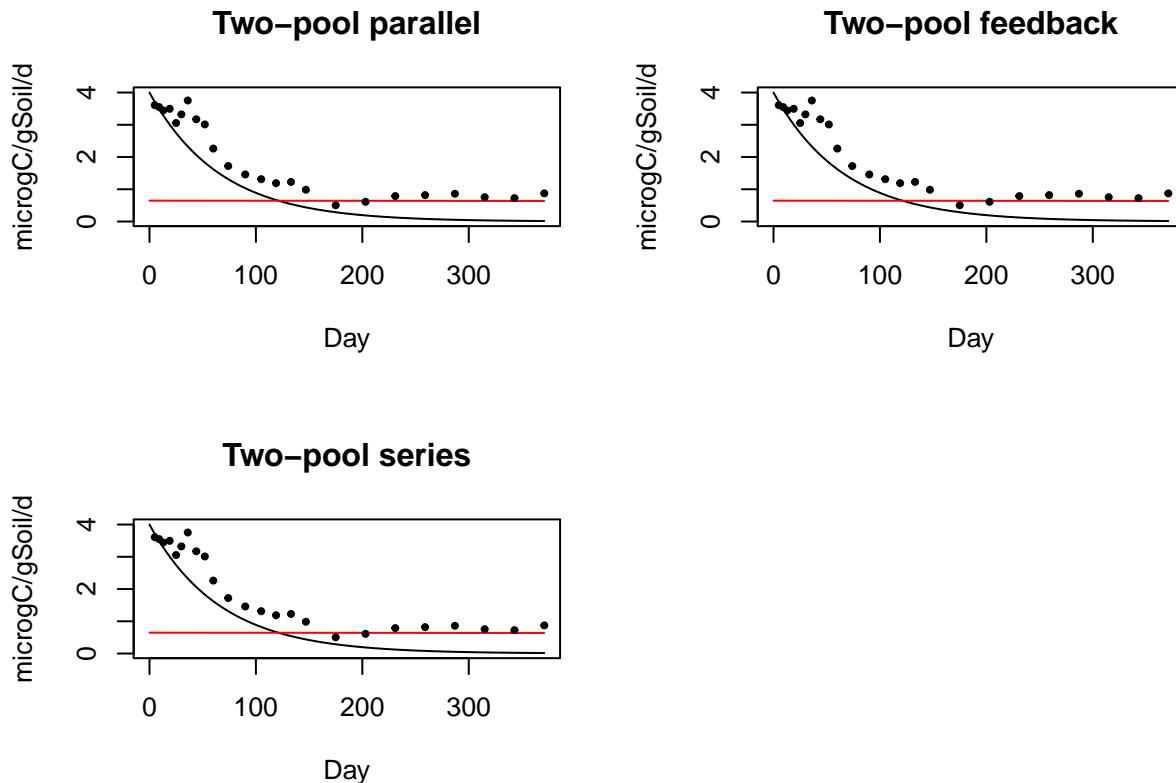


```
## [1] "AIC = 13.5360652144238"
## [1] "k1= 0.0150492175936028"
## [2] "k2= 3.91187561374027e-05"
## [3] "a21= 0.000203770234879164"
```

```
## [4] "Proportion of C0 in pool 1= 0.0158252785216162"
```



```
## [1] "AIC = 11.5360652329193"
```



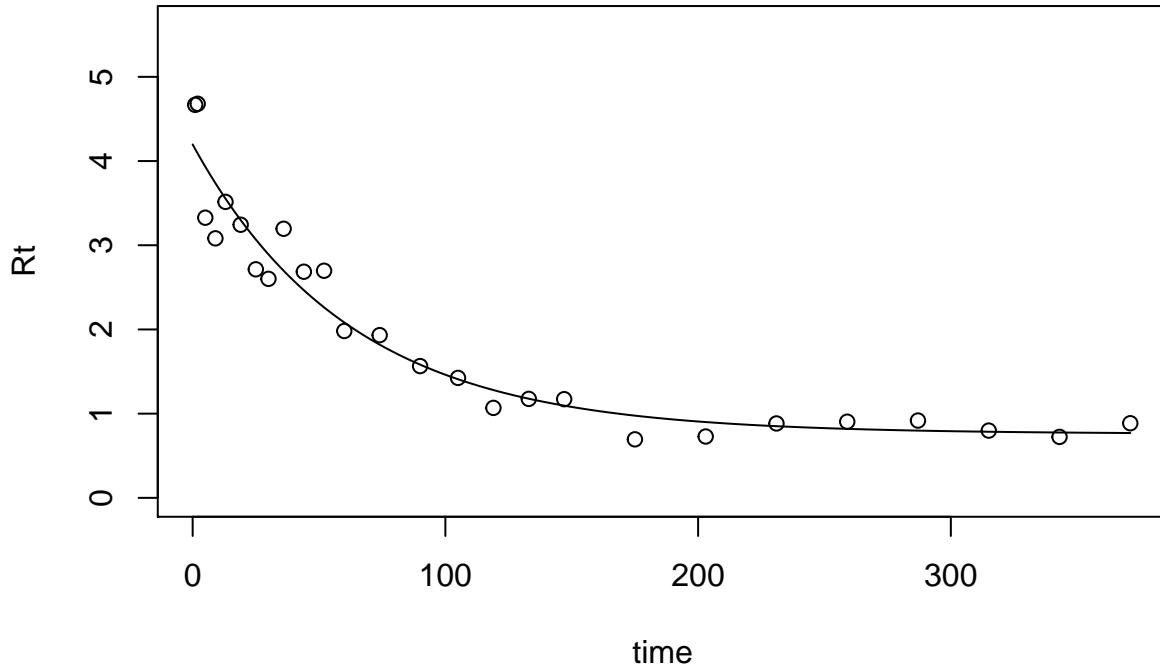
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	9.536065	0.0150492	3.91e-05	0.0158221	NA	NA
Two-pool feedback	13.536065	0.0150489	3.91e-05	0.0170907	0.0740288	5.22e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	11.536065	0.0150492	3.91e-05	0.0158253	0.0002038	NA

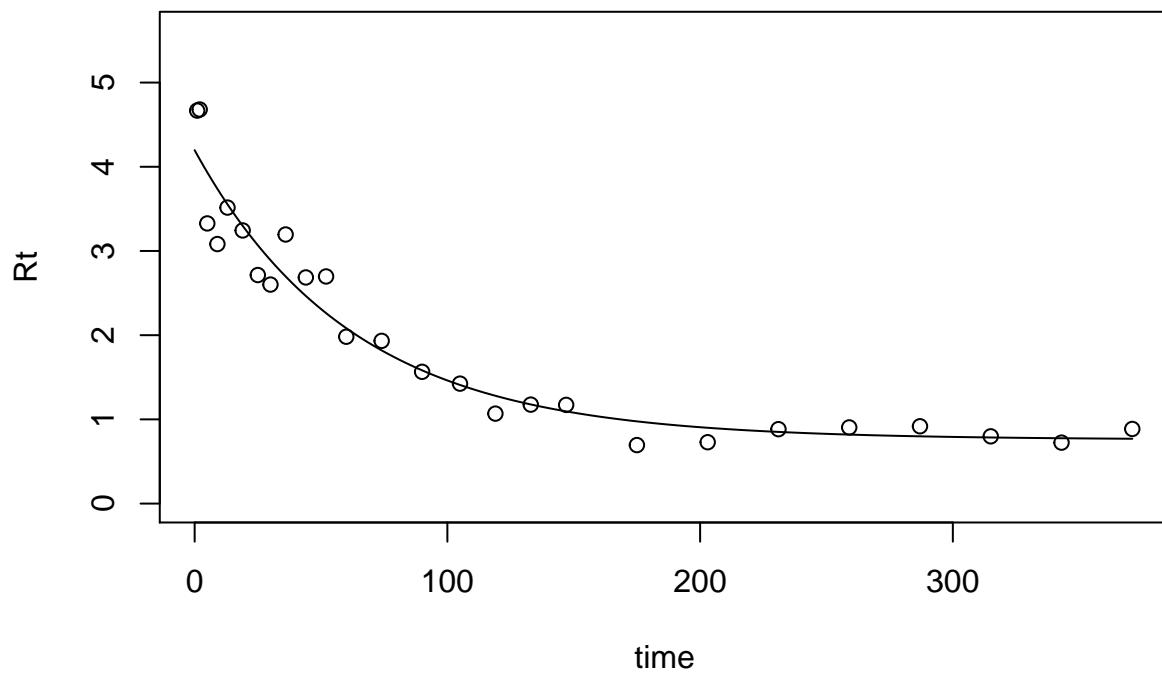
## Variable Site02:

CO2 production rate

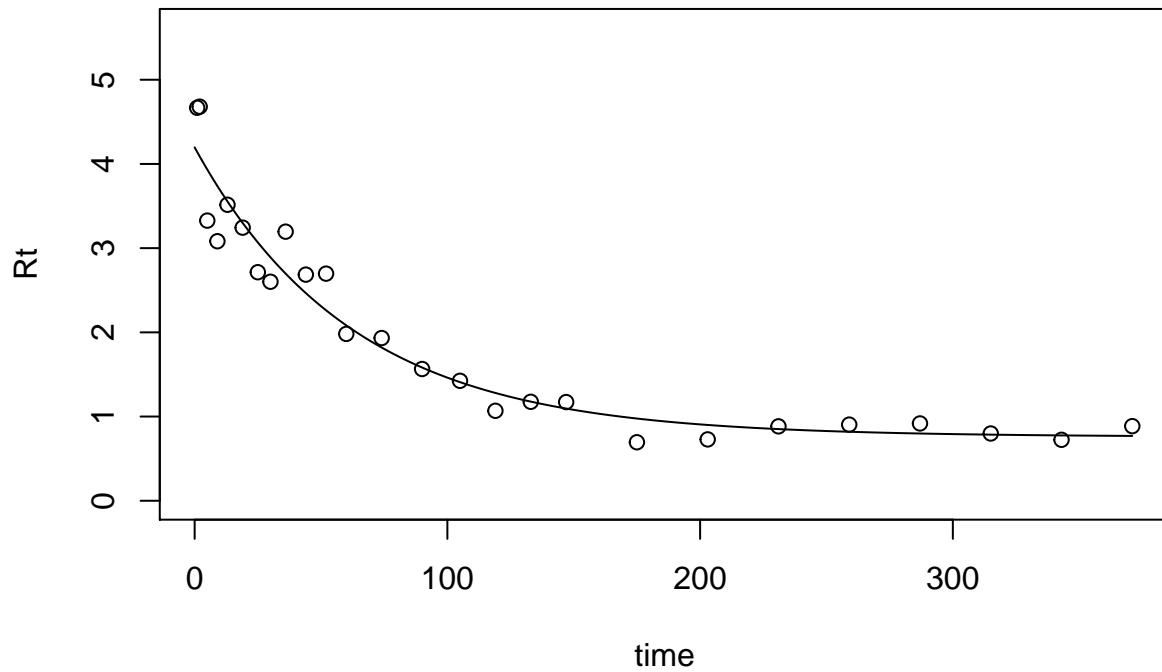
```
## [1] "k1= 0.0159987246551327"
## [2] "k2= 4.97207191000826e-05"
## [3] "proportion of C0 in pool 1= 0.0135372893378183"
```



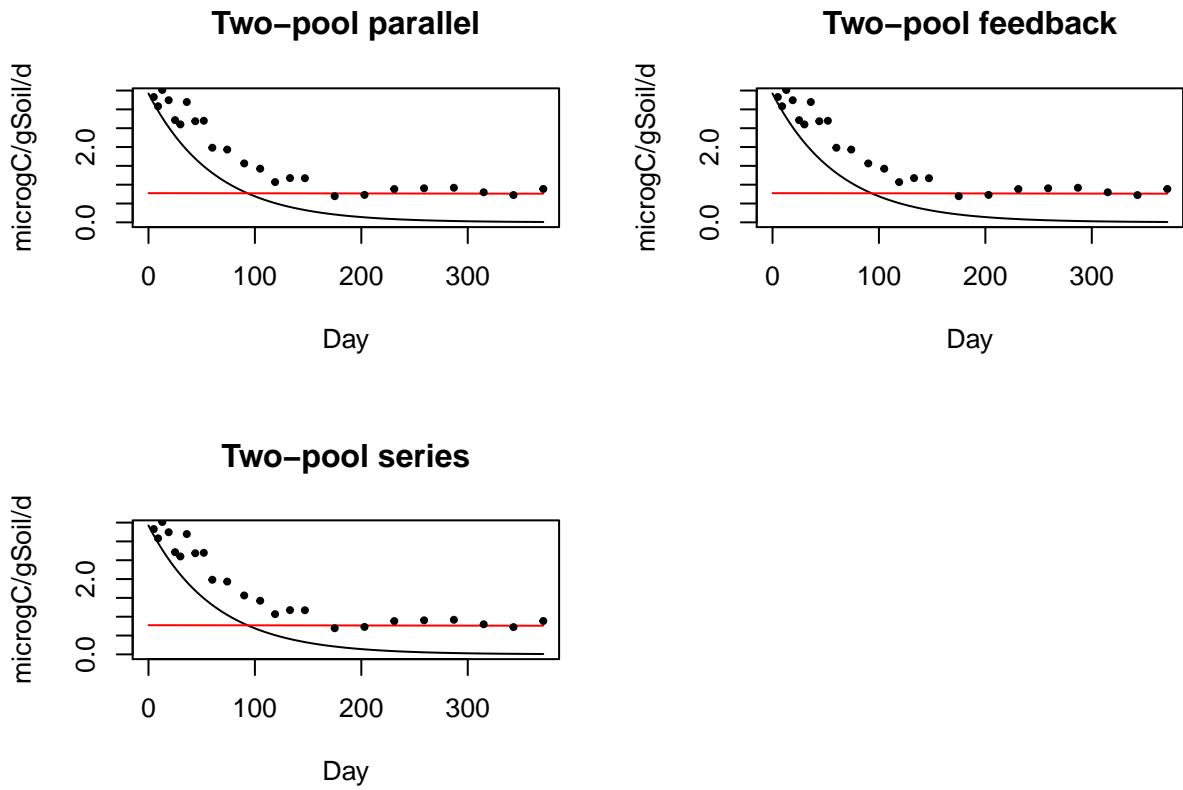
```
## [1] "AIC = 10.8120813486886"
## [1] "k1= 0.0159987264451739"
## [2] "k2= 4.97207354961845e-05"
## [3] "a21= 0.0331132025113032"
## [4] "a12= 6.53878248207951e-06"
## [5] "Proportion of C0 in pool 1= 0.0140023948672477"
```



```
## [1] "AIC = 14.8120813485154"
## [1] "k1= 0.015998726051245"
## [2] "k2= 4.97207232103423e-05"
## [3] "a21= 0.0451343133006349"
## [4] "Proportion of C0 in pool 1= 0.0141792499391762"
```



```
## [1] "AIC = 12.8120813486829"
```

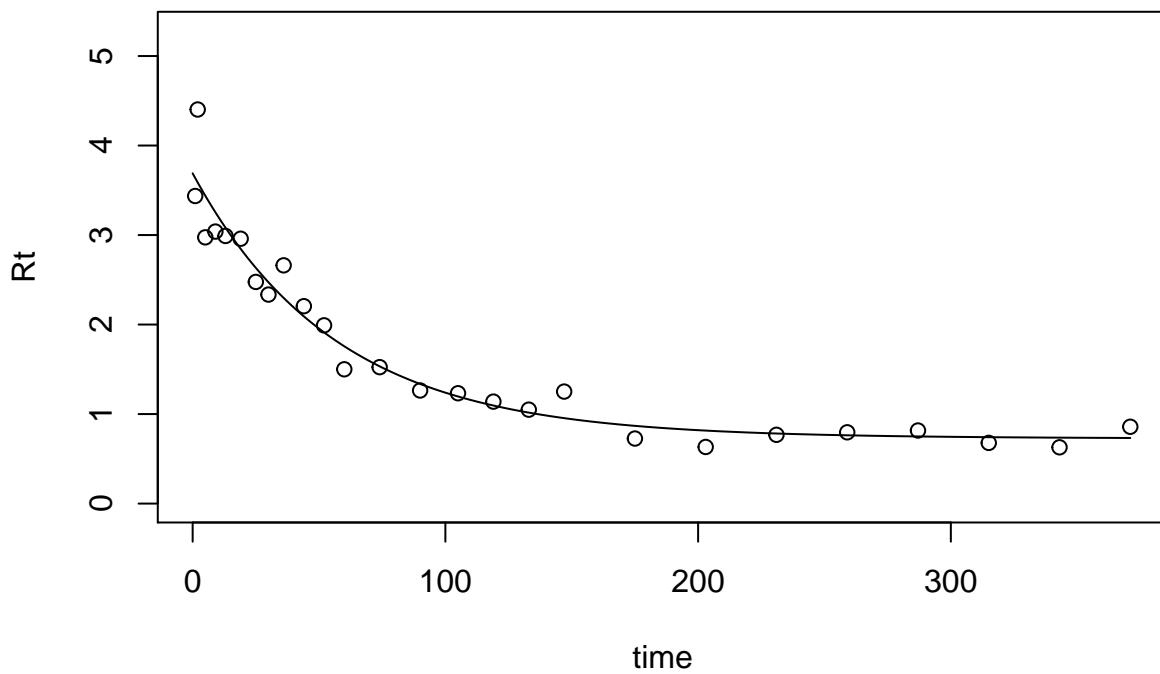


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	10.81208	0.0159987	4.97e-05	0.0135373	NA	NA
Two-pool feedback	14.81208	0.0159987	4.97e-05	0.0140024	0.0331132	6.5e-06
Two-pool series	12.81208	0.0159987	4.97e-05	0.0141792	0.0451343	NA

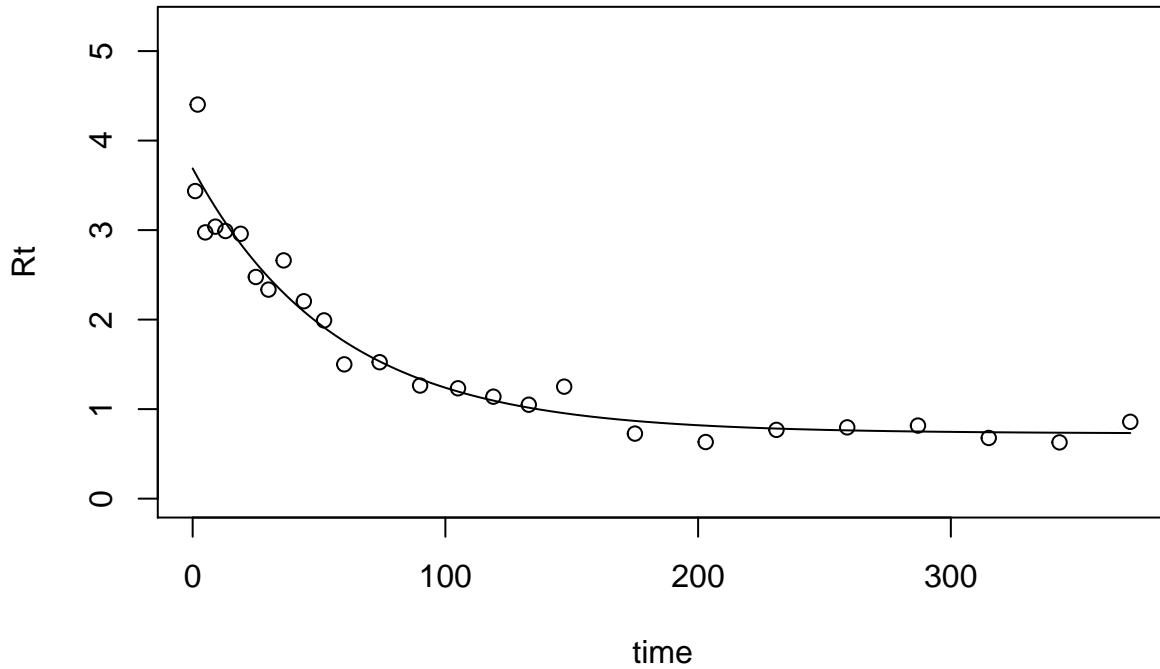
### Variable Site03:

CO2 production rate

```
## [1] "k1= 0.0177296212586343"
## [2] "k2= 4.97047047973896e-05"
## [3] "proportion of C0 in pool 1= 0.0110082371578302"
```

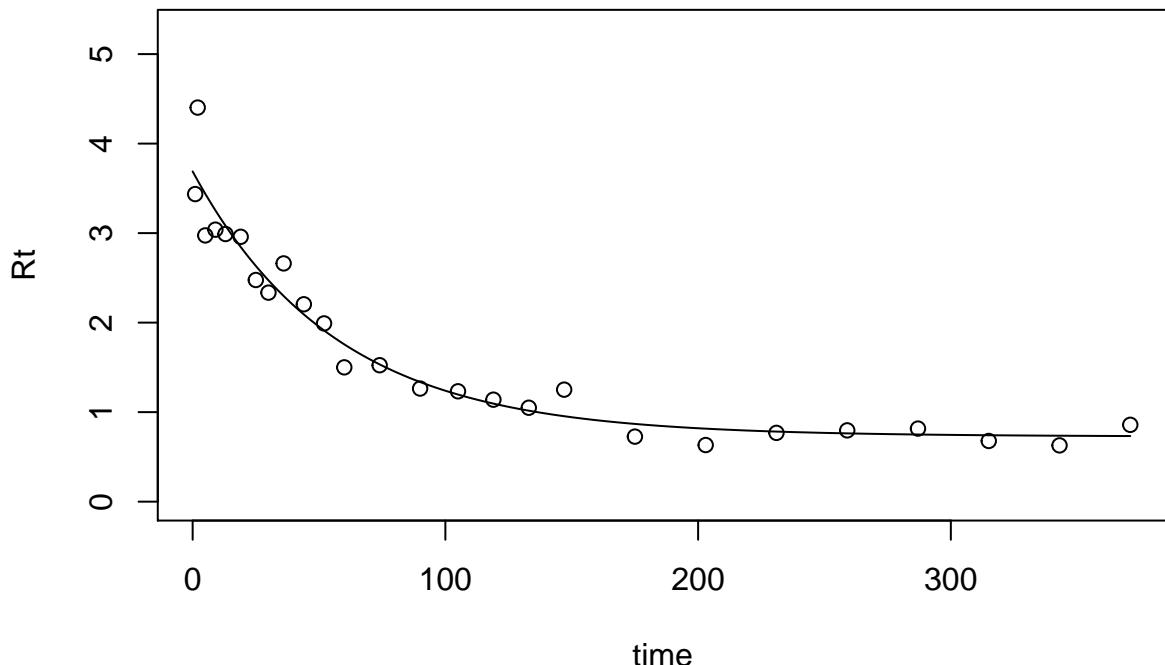


```
## [1] "AIC = 11.7865651761402"
## [1] "k1= 0.0177296289124539"
## [2] "k2= 4.9704769691771e-05"
## [3] "a21= 0.196930088867737"
## [4] "a12= 5.06377544851055e-06"
## [5] "Proportion of C0 in pool 1= 0.0137171476007902"
```

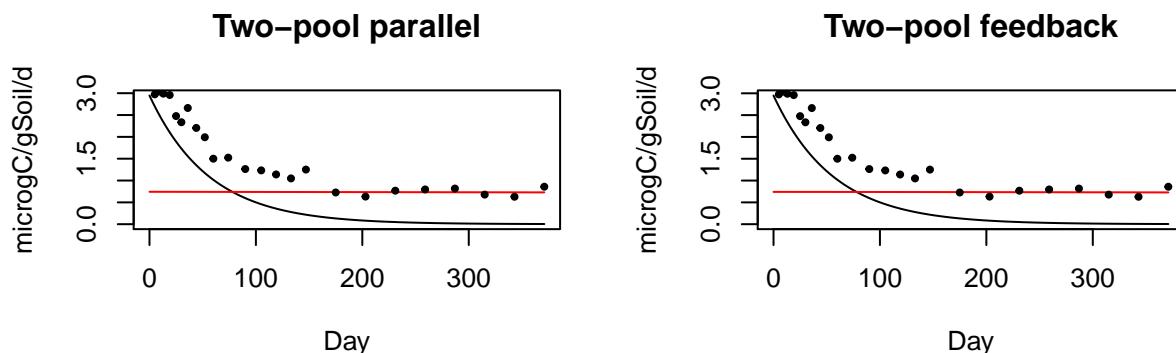


```
## [1] "AIC = 15.7865651760813"
## [1] "k1= 0.0177296224158936"
## [2] "k2= 4.97047071344683e-05"
## [3] "a21= 0.033525642477049"
```

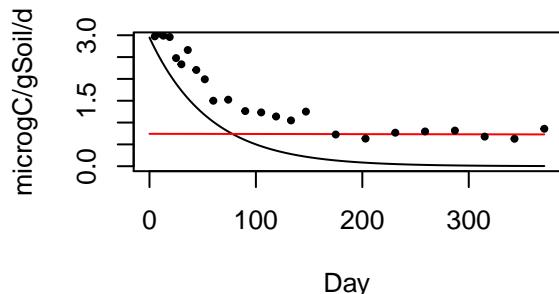
```
## [4] "Proportion of C0 in pool 1= 0.0113911962818932"
```



```
## [1] "AIC = 13.7865651760651"
```



**Two-pool series**



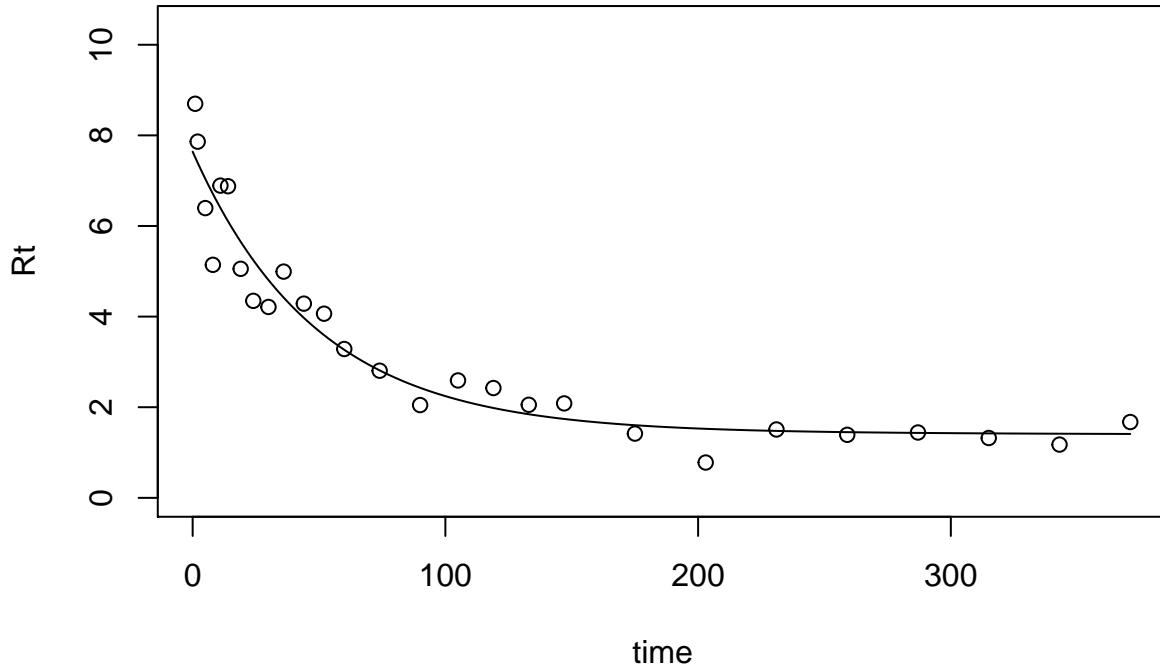
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	11.78657	0.0177296	4.97e-05	0.0110082	NA	NA
Two-pool feedback	15.78657	0.0177296	4.97e-05	0.0137171	0.1969301	5.1e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	13.78657	0.0177296	4.97e-05		0.0113912	0.0335256

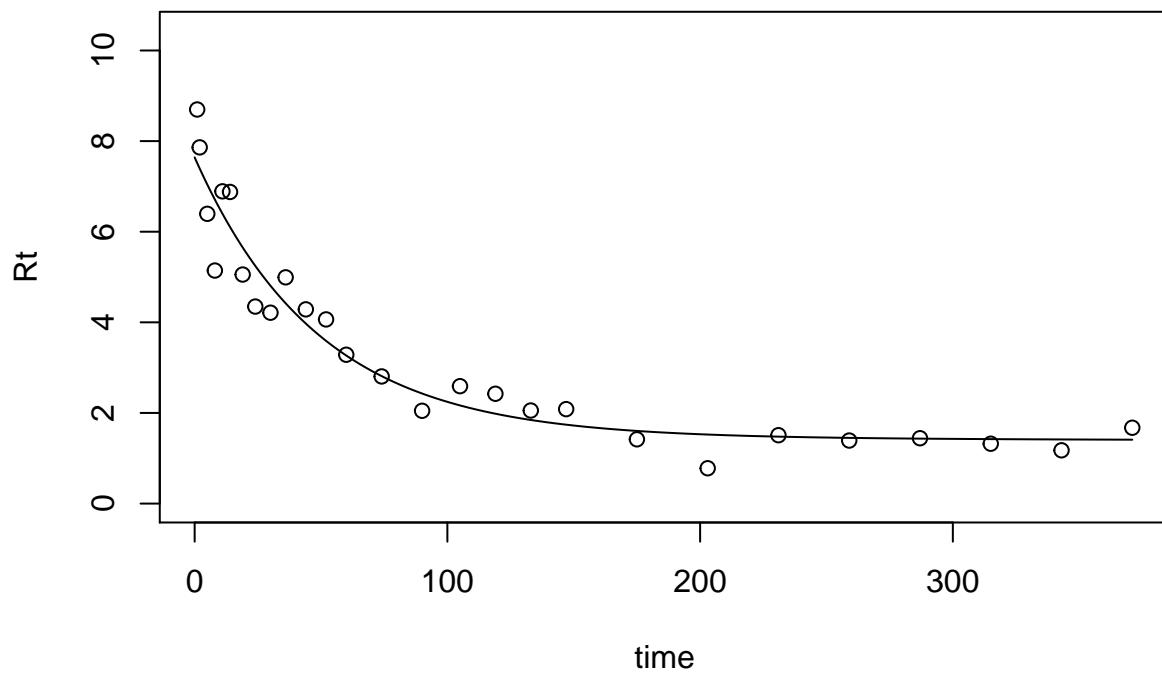
## Variable Site04:

CO2 production rate

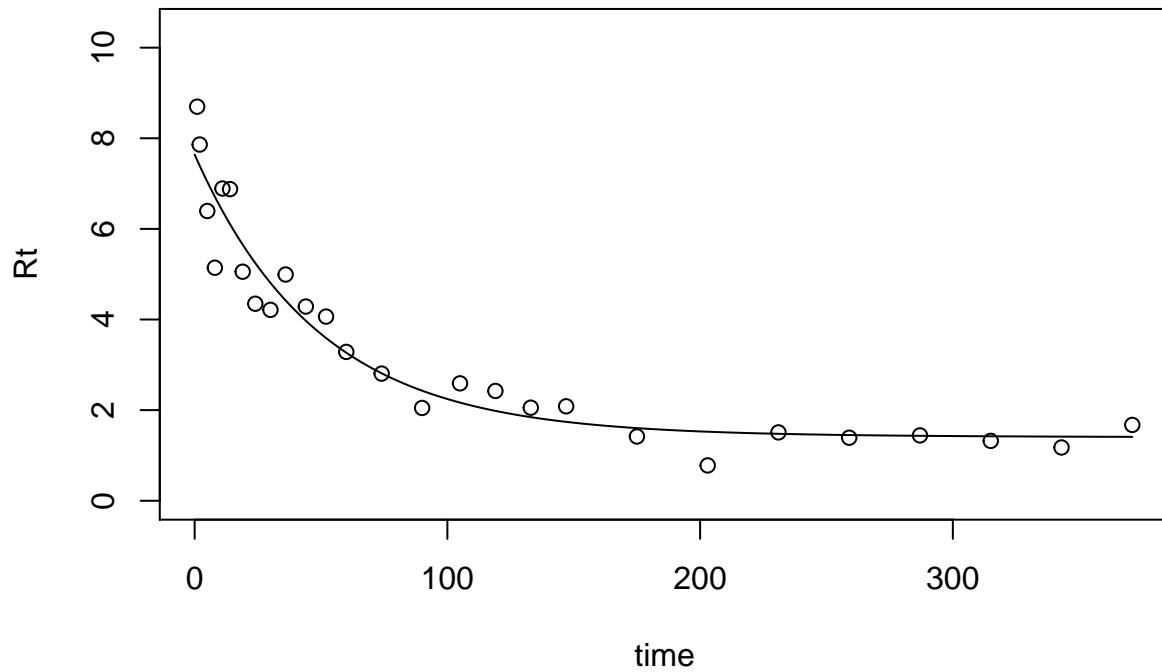
```
## [1] "k1= 0.0203348117431867"
## [2] "k2= 7.11707622200827e-05"
## [3] "proportion of C0 in pool 1= 0.0147923623267685"
```



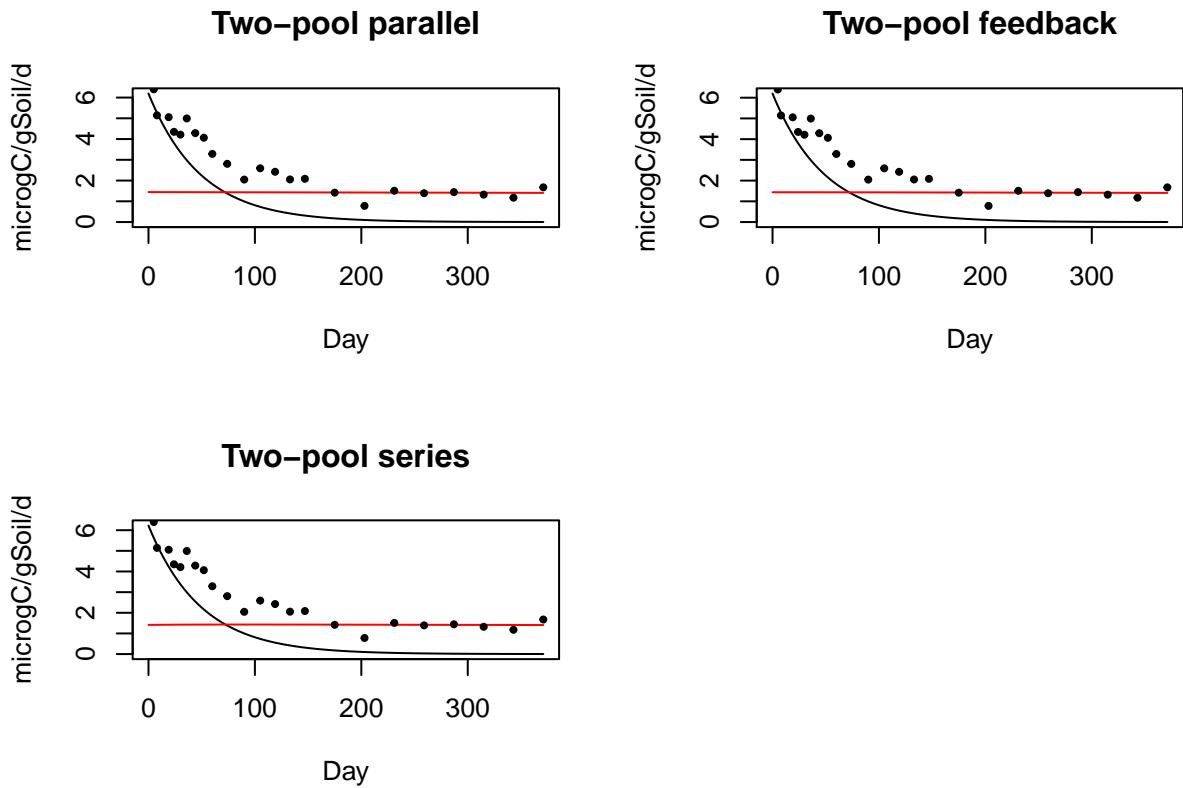
```
## [1] "AIC = 8.21822192799316"
## [1] "k1= 0.0203349580571043"
## [2] "k2= 7.11722508638159e-05"
## [3] "a21= 0.240783424325138"
## [4] "a12= 6.6457712728285e-05"
## [5] "Proportion of C0 in pool 1= 0.0195055356817204"
```



```
## [1] "AIC = 12.2182219281863"
## [1] "k1= 0.0203347317451951"
## [2] "k2= 7.11705752332794e-05"
## [3] "a21= 0.585377139768567"
## [4] "Proportion of C0 in pool 1= 0.0358547141026417"
```



```
## [1] "AIC = 10.2182219271134"
```

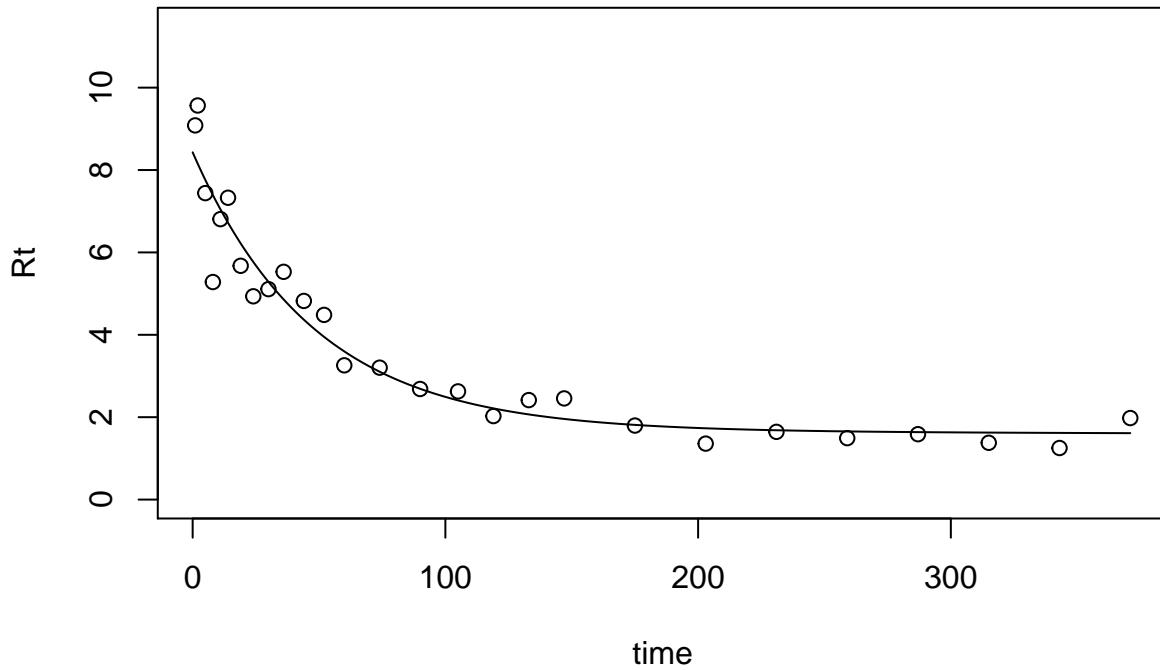


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.218222	0.0203348	7.12e-05	0.0147924	NA	NA
Two-pool feedback	12.218222	0.0203350	7.12e-05	0.0195055	0.2407834	6.65e-05
Two-pool series	10.218222	0.0203347	7.12e-05	0.0358547	0.5853771	NA

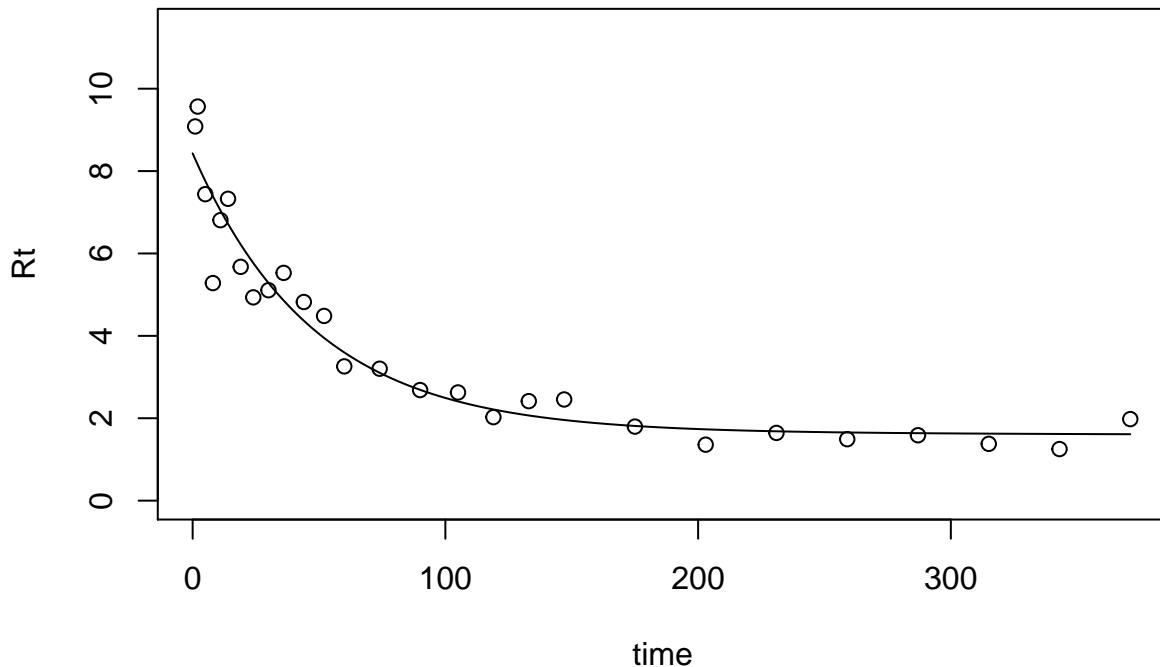
## Variable Site05:

CO2 production rate

```
## [1] "k1= 0.0207727237389409"
## [2] "k2= 7.90114286736543e-05"
## [3] "proportion of C0 in pool 1= 0.0153082820722723"
```

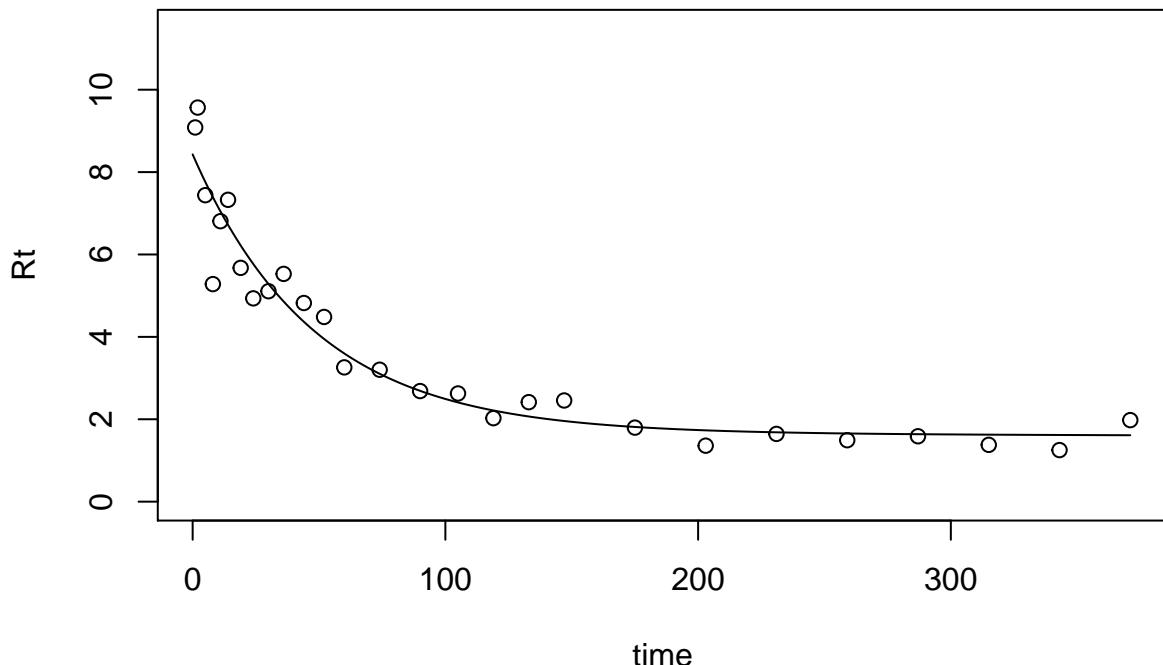


```
## [1] "AIC = 7.8612206014507"
## [1] "k1= 0.0207729238635494"
## [2] "k2= 7.90120874897092e-05"
## [3] "a21= 0.12490807994127"
## [4] "a12= 1.80469564998731e-05"
## [5] "Proportion of C0 in pool 1= 0.0175027563043716"
```

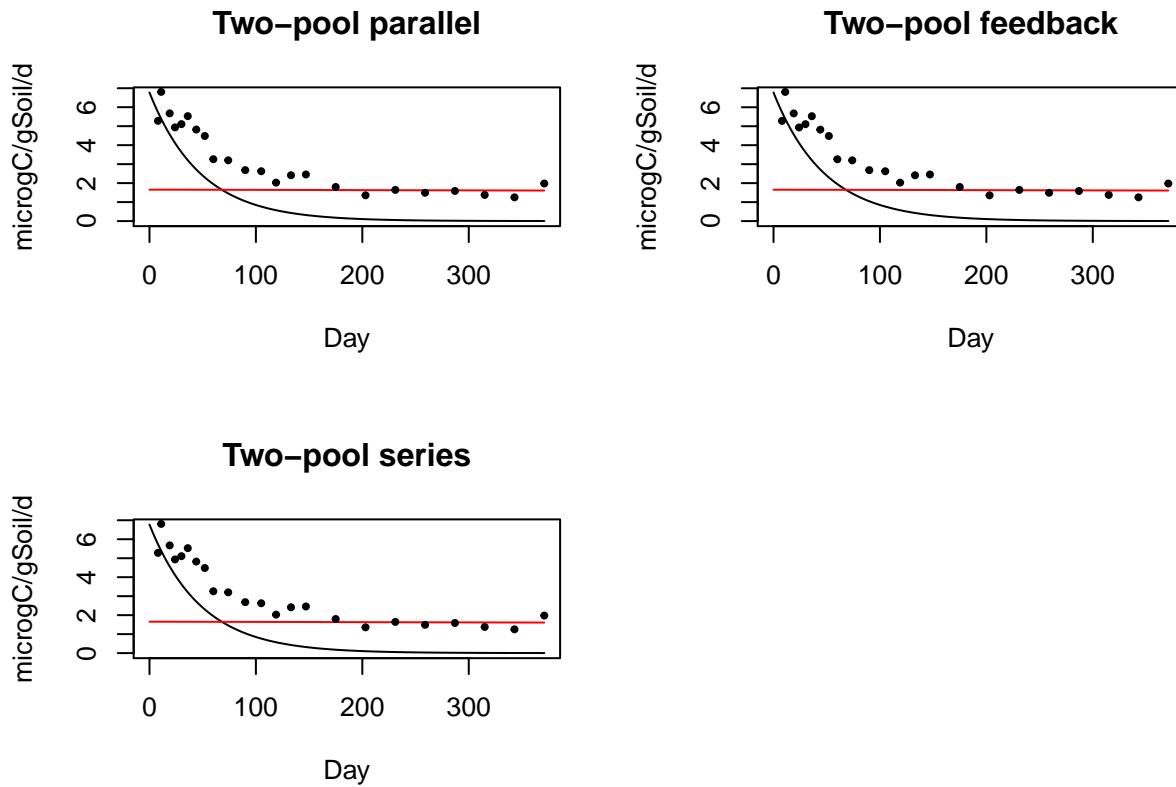


```
## [1] "AIC = 11.8612206015548"
## [1] "k1= 0.0207723429833235"
## [2] "k2= 7.90105161549334e-05"
## [3] "a21= 0.0383094071306057"
```

```
## [4] "Proportion of C0 in pool 1= 0.015920719663921"
```



```
## [1] "AIC = 9.86122059817101"
```



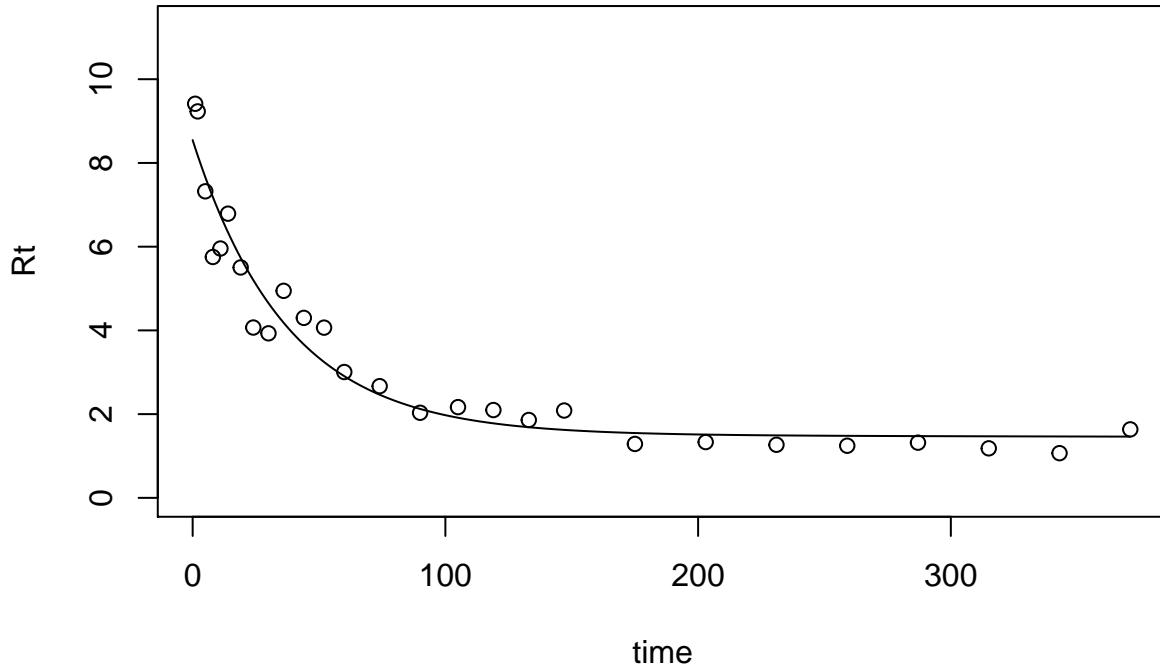
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	7.861221	0.0207727	7.9e-05	0.0153083	NA	NA
Two-pool feedback	11.861221	0.0207729	7.9e-05	0.0175028	0.1249081	1.8e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	9.861221	0.0207723	7.9e-05		0.0159207	0.0383094

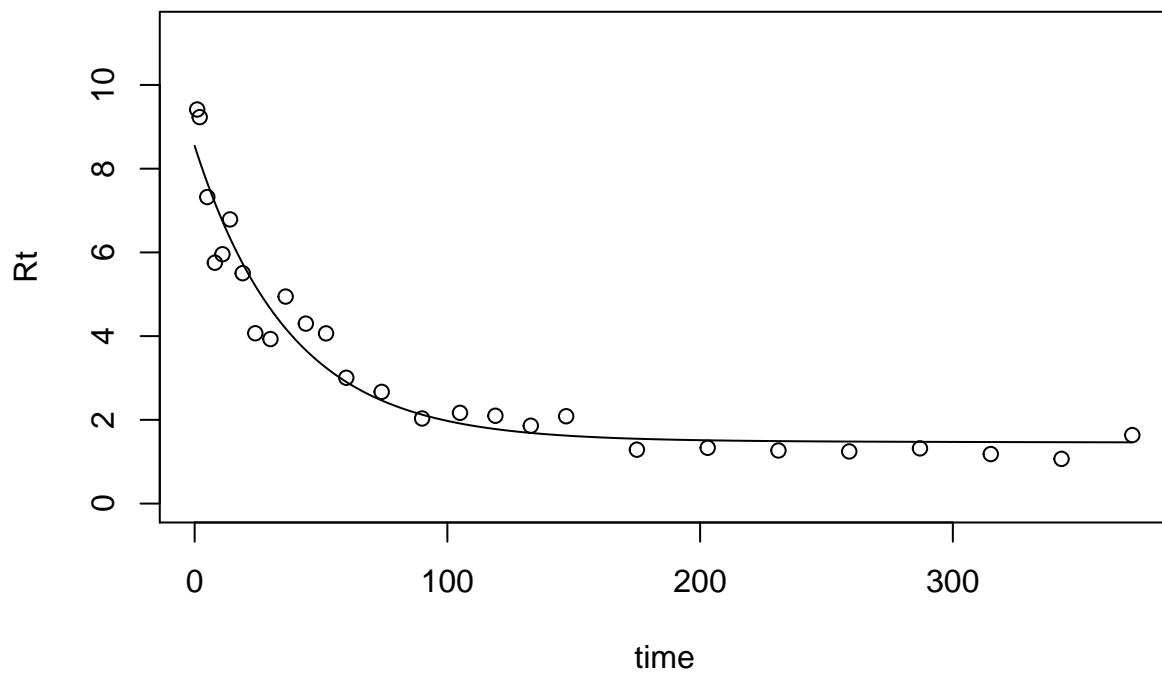
## Variable Site06:

CO2 production rate

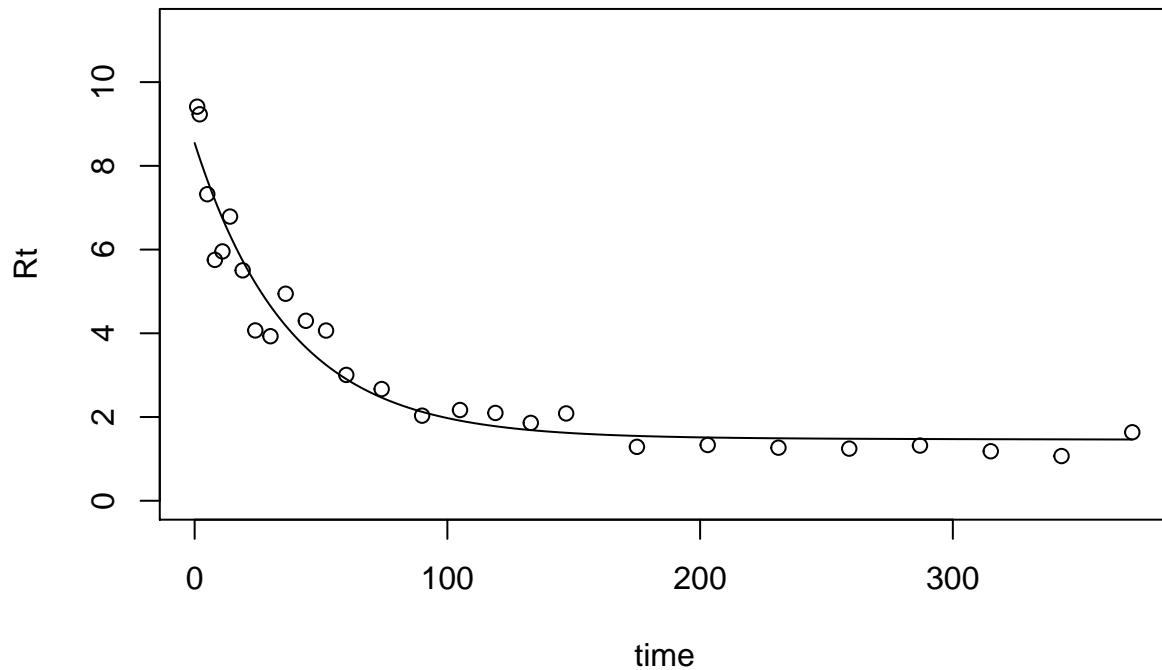
```
## [1] "k1= 0.026797839604408"
## [2] "k2= 7.28116285178511e-05"
## [3] "proportion of C0 in pool 1= 0.0125749343116197"
```



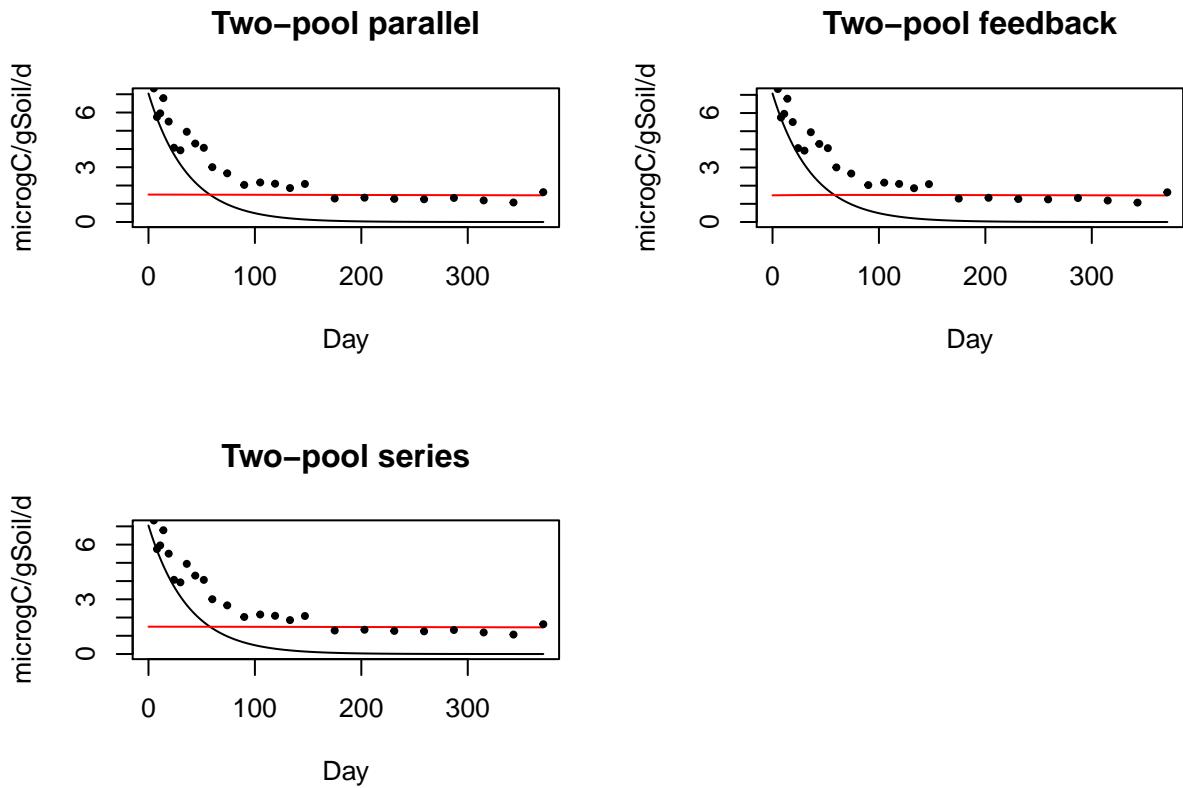
```
## [1] "AIC = 8.04795480951001"
## [1] "k1= 0.0267980654291413"
## [2] "k2= 7.28127819025441e-05"
## [3] "a21= 0.636444351240429"
## [4] "a12= 1.59837534952634e-05"
## [5] "Proportion of C0 in pool 1= 0.0347542914633518"
```



```
## [1] "AIC = 12.0479548025721"
## [1] "k1= 0.0267978669324993"
## [2] "k2= 7.28117236613636e-05"
## [3] "a21= 0.17598591466284"
## [4] "Proportion of C0 in pool 1= 0.0152694308680725"
```



```
## [1] "AIC = 10.0479548074474"
```

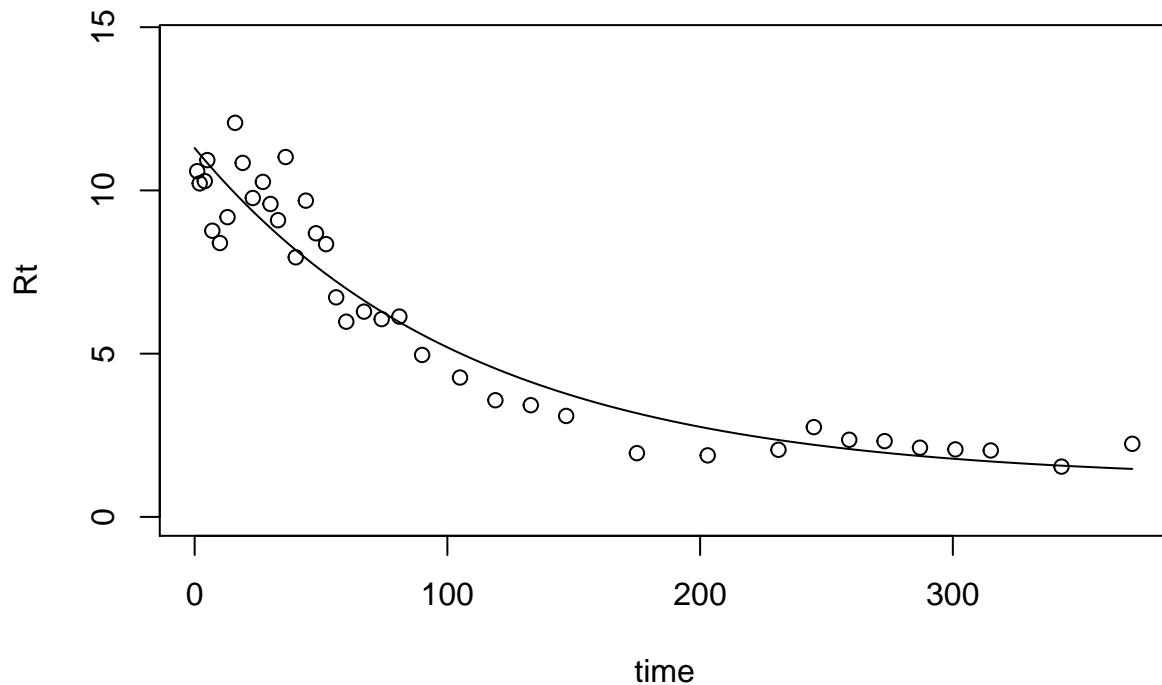


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.047955	0.0267978	7.28e-05	0.0125749	NA	NA
Two-pool feedback	12.047955	0.0267981	7.28e-05	0.0347543	0.6364444	1.6e-05
Two-pool series	10.047955	0.0267979	7.28e-05	0.0152694	0.1759859	NA

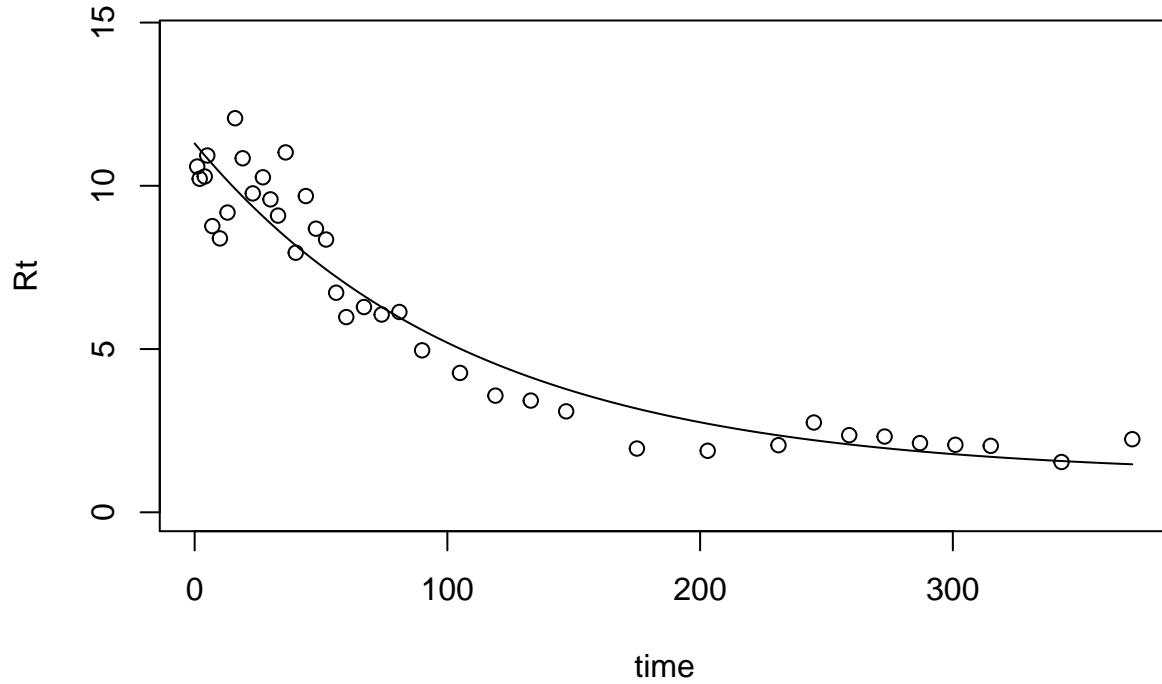
## Variable Site07:

CO2 production rate

```
## [1] "k1= 0.00920024064145791"
## [2] "k2= 6.08439001062591e-05"
## [3] "proportion of C0 in pool 1= 0.0545365215298995"
```

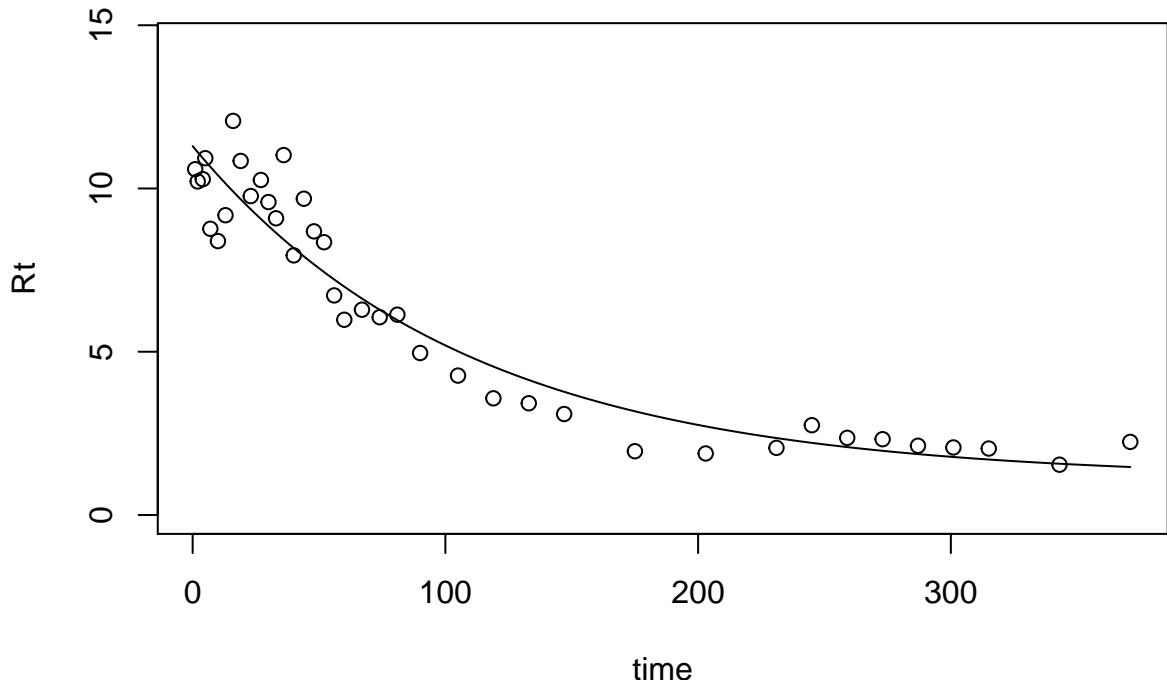


```
## [1] "AIC = 6.03815842120897"
## [1] "k1= 0.00920045310819008"
## [2] "k2= 6.08475662986202e-05"
## [3] "a21= 0.00790396467266613"
## [4] "a12= 1.32224309051798e-05"
## [5] "Proportion of C0 in pool 1= 0.05497243921378"
```

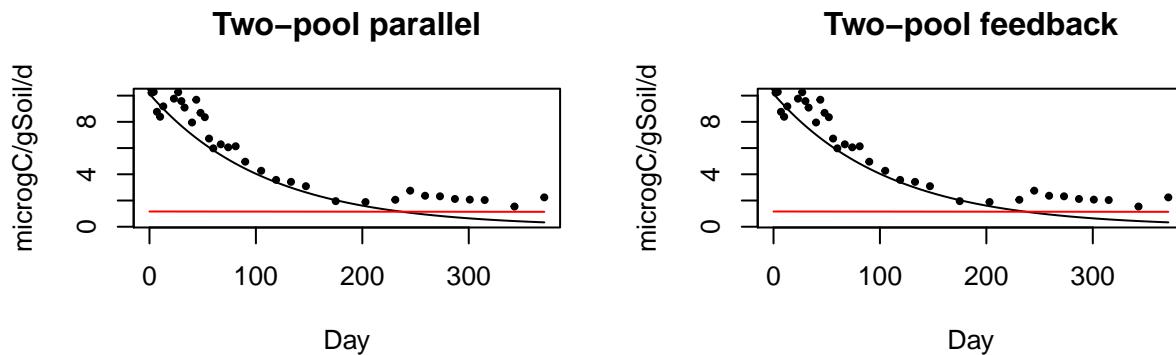


```
## [1] "AIC = 10.0381584220651"
## [1] "k1= 0.0092001572202144"
## [2] "k2= 6.08424674601663e-05"
## [3] "a21= 0.00788632623495389"
```

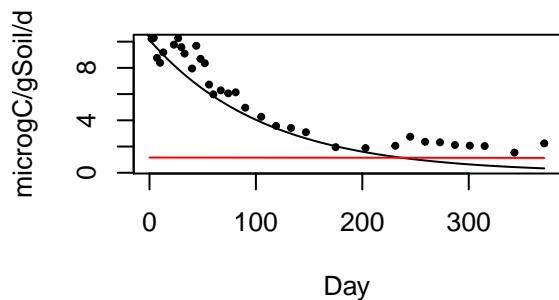
```
## [4] "Proportion of C0 in pool 1= 0.0549733844985183"
```



```
## [1] "AIC = 8.03815841962851"
```



### Two-pool series



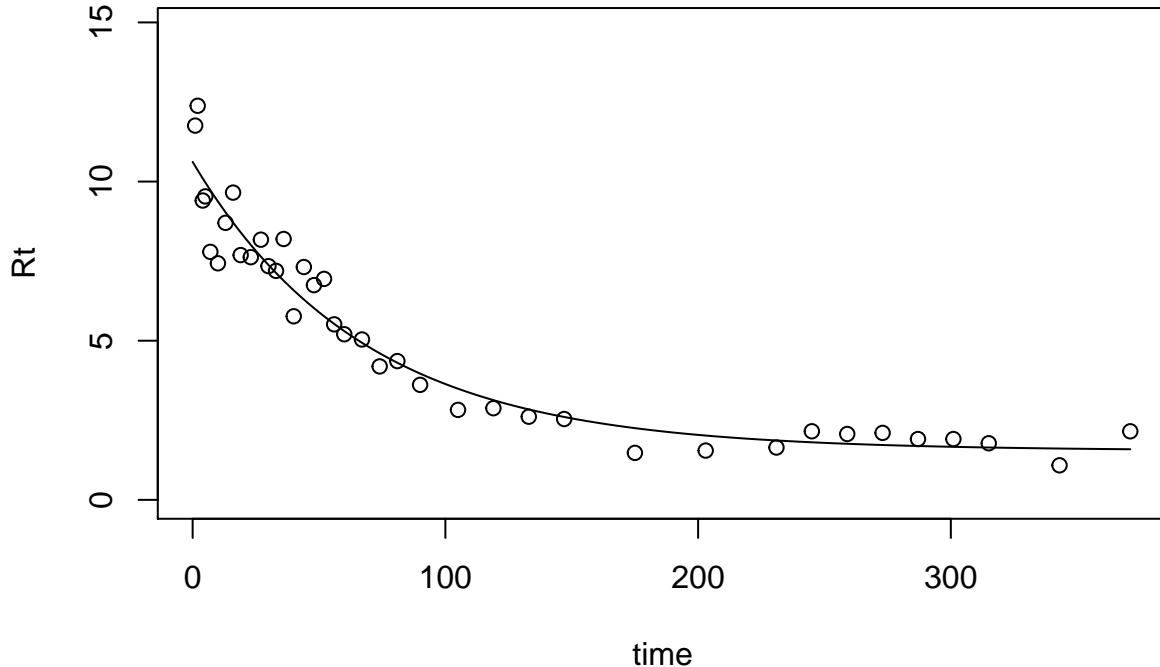
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.038158	0.0092002	6.08e-05	0.0545365	NA	NA
Two-pool feedback	10.038158	0.0092005	6.08e-05	0.0549724	0.0079040	1.32e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.038158	0.0092002	6.08e-05	0.0549734	0.0078863	NA

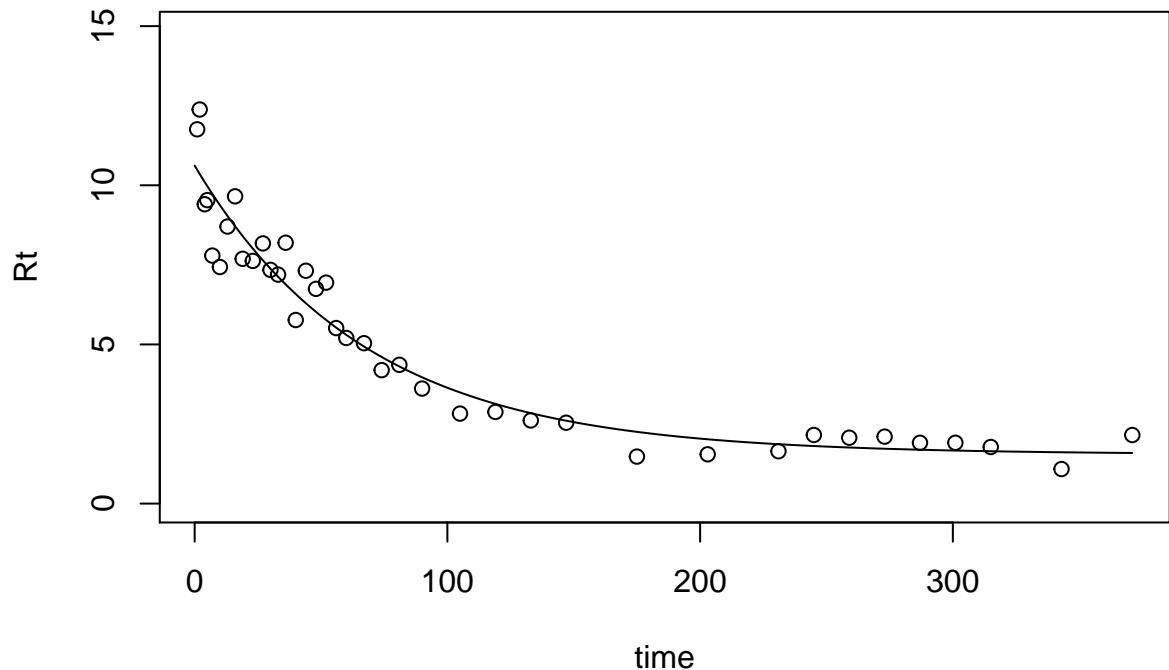
## Variable Site08:

CO2 production rate

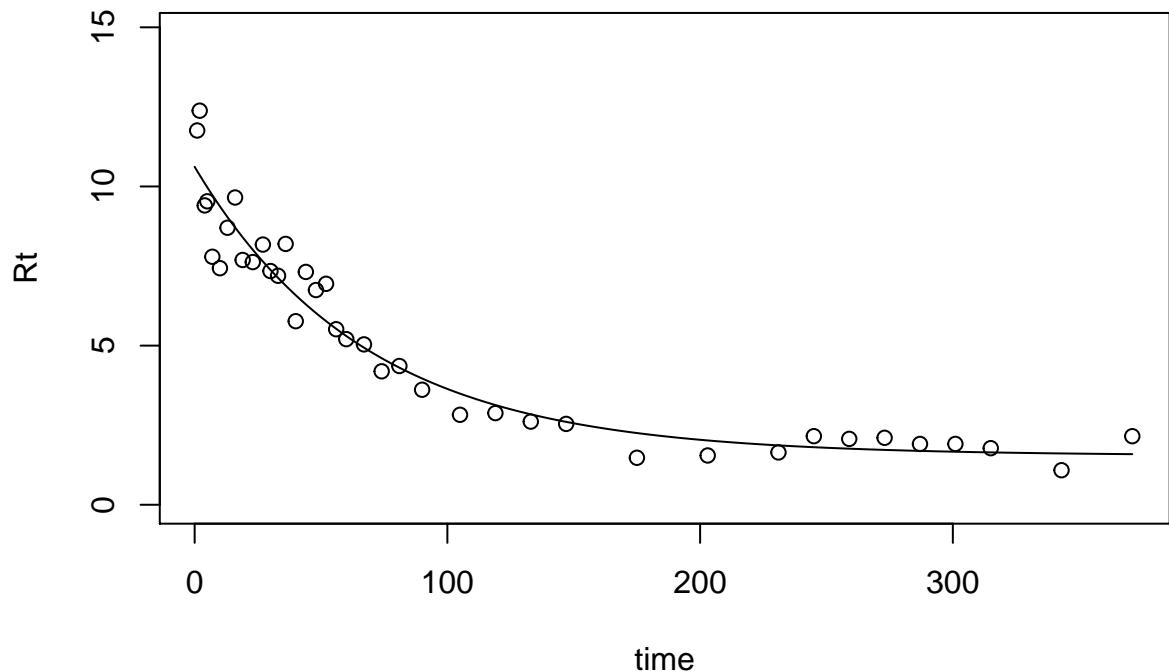
```
## [1] "k1= 0.0148049181038127"
## [2] "k2= 8.1246749300503e-05"
## [3] "proportion of C0 in pool 1= 0.0300040565613327"
```



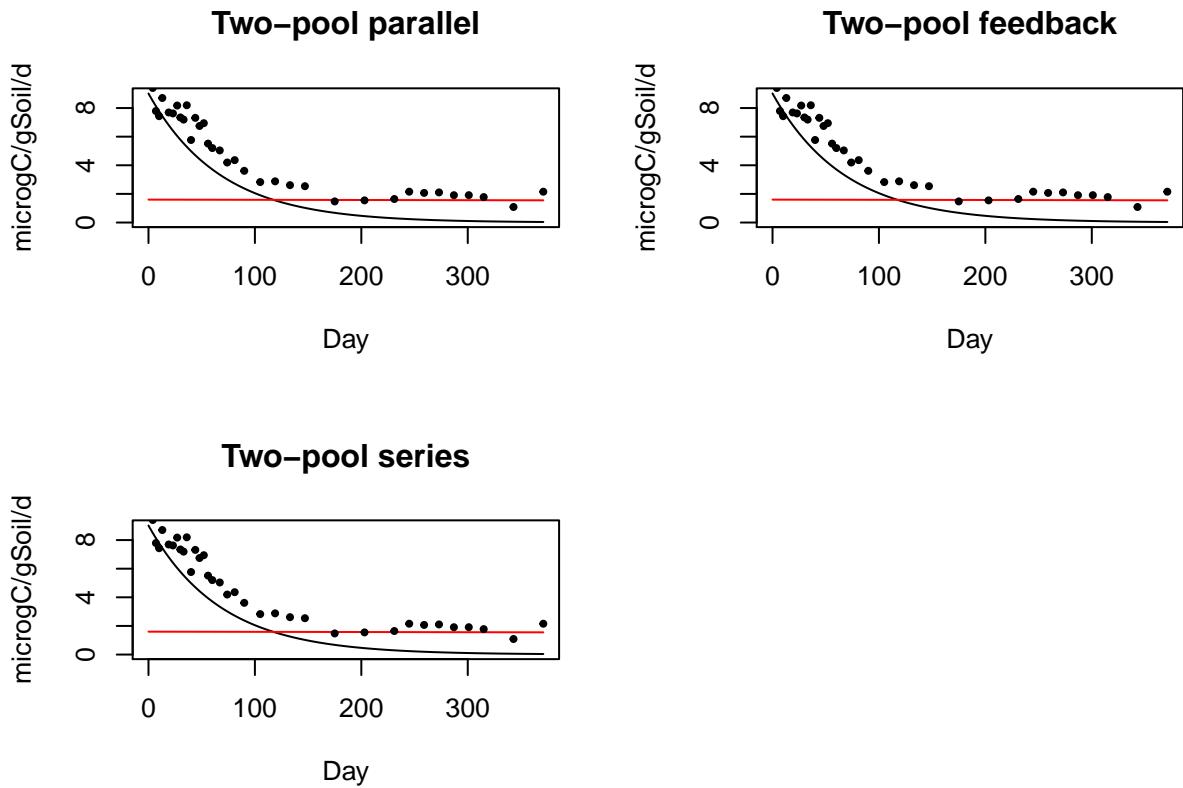
```
## [1] "AIC = 6.9685995685959"
## [1] "k1= 0.0148049062757236"
## [2] "k2= 8.12466752185984e-05"
## [3] "a21= 0.00249893587998451"
## [4] "a12= 4.52574456311083e-06"
## [5] "Proportion of C0 in pool 1= 0.0300796854077762"
```



```
## [1] "AIC = 10.9685995685988"
## [1] "k1= 0.014805063661079"
## [2] "k2= 8.12476742502326e-05"
## [3] "a21= 0.0124450739454003"
## [4] "Proportion of C0 in pool 1= 0.03038387776353"
```



```
## [1] "AIC = 8.96859956729696"
```



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.9686	0.0148049	8.12e-05	0.0300041	NA	NA
Two-pool feedback	10.9686	0.0148049	8.12e-05	0.0300797	0.0024989	4.5e-06
Two-pool series	8.9686	0.0148051	8.12e-05	0.0303839	0.0124451	NA

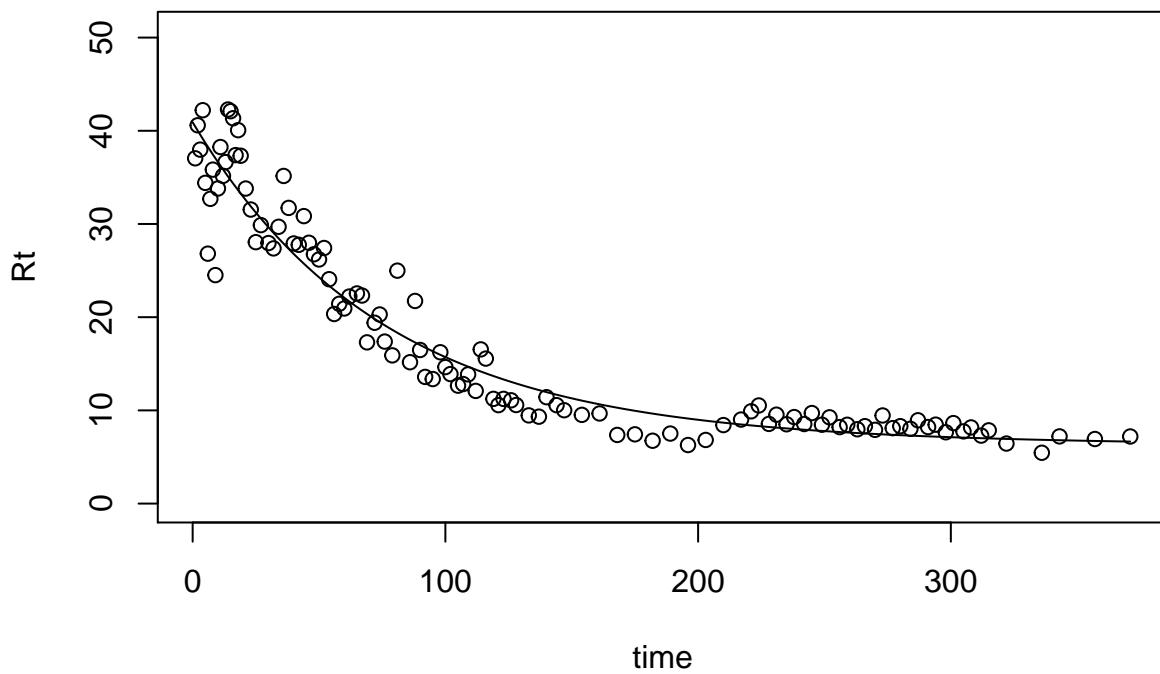
## Variable Site09:

CO2 production rate

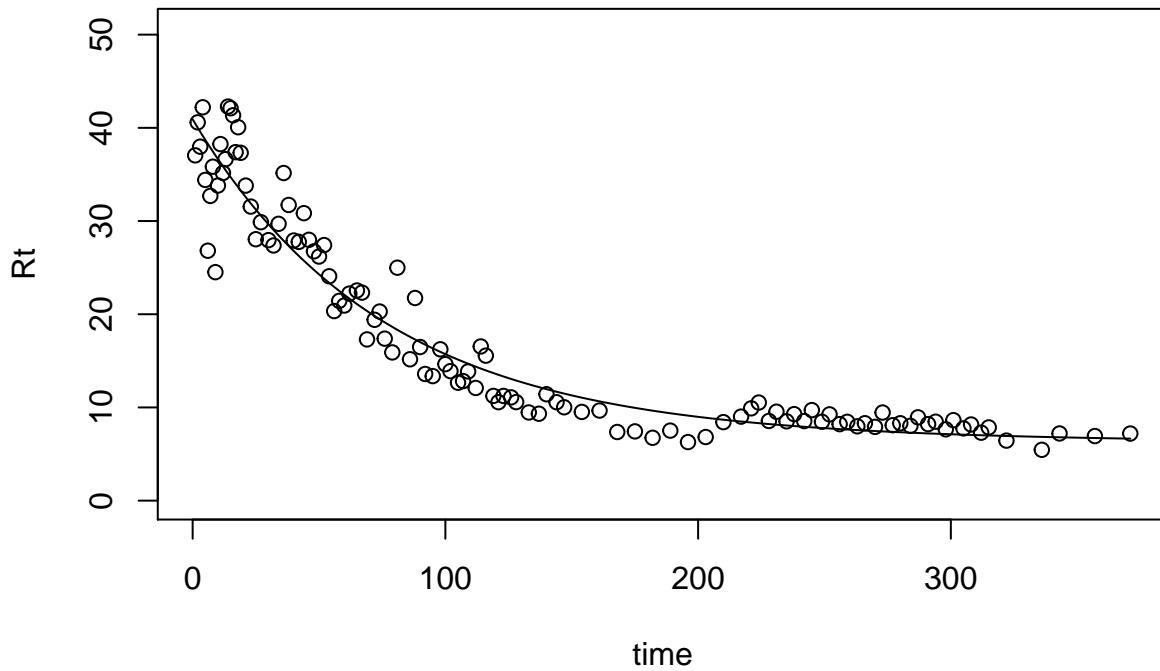
## Variable Site10:

CO2 production rate

```
## [1] "k1= 0.0133523356574467"
## [2] "k2= 0.000200461145834926"
## [3] "proportion of C0 in pool 1= 0.0688388293262408"
```

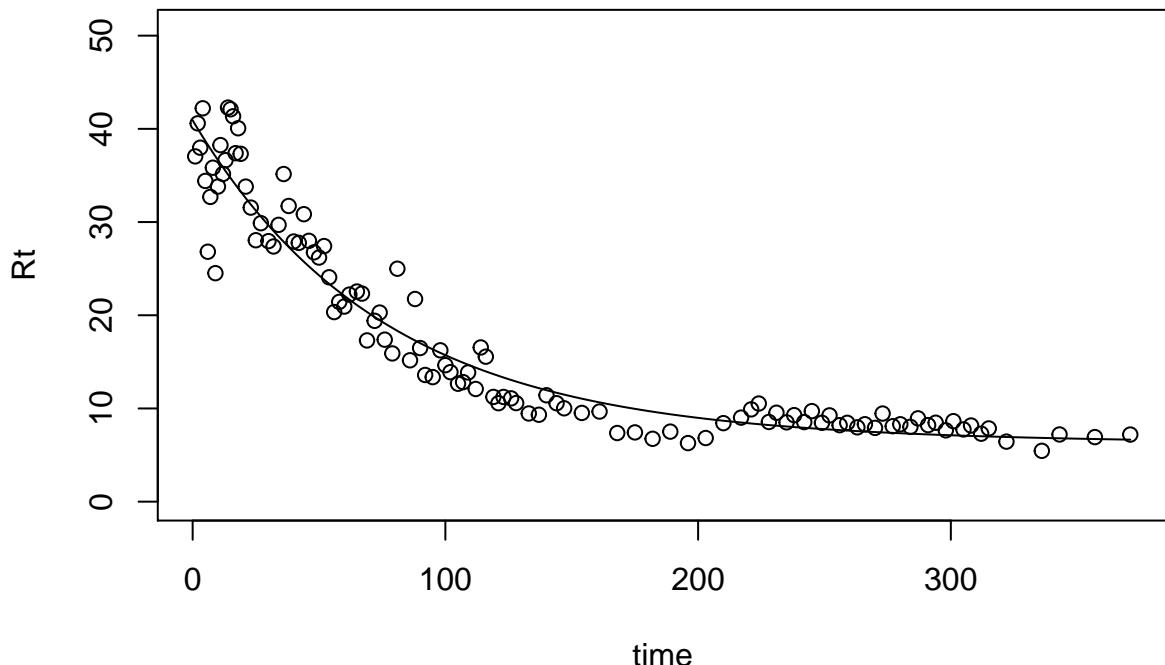


```
## [1] "AIC = 1.61139560805245"
## [1] "k1= 0.0133522031783789"
## [2] "k2= 0.000200459034740395"
## [3] "a21= 0.00991949951118393"
## [4] "a12= 6.71272961344505e-06"
## [5] "Proportion of C0 in pool 1= 0.0695397684034003"
```

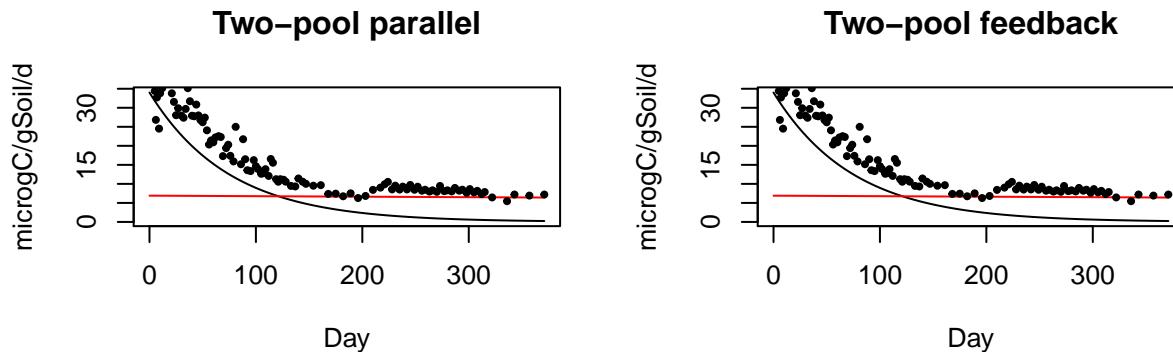


```
## [1] "AIC = 5.61139560699989"
## [1] "k1= 0.0133524392336177"
## [2] "k2= 0.000200462806340194"
## [3] "a21= 0.00823062227362958"
```

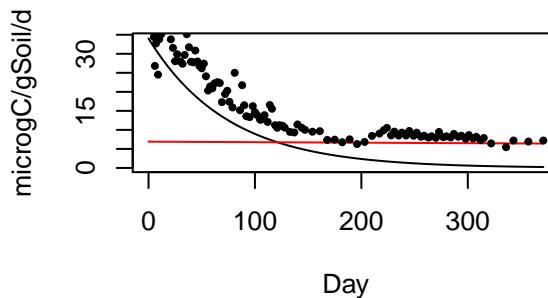
```
## [4] "Proportion of C0 in pool 1= 0.0694182931694707"
```



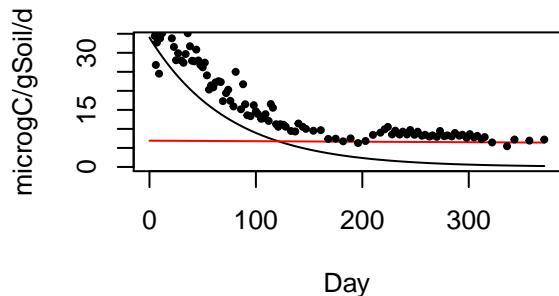
```
## [1] "AIC = 3.6113956080992"
```



### Two-pool feedback



### Two-pool series



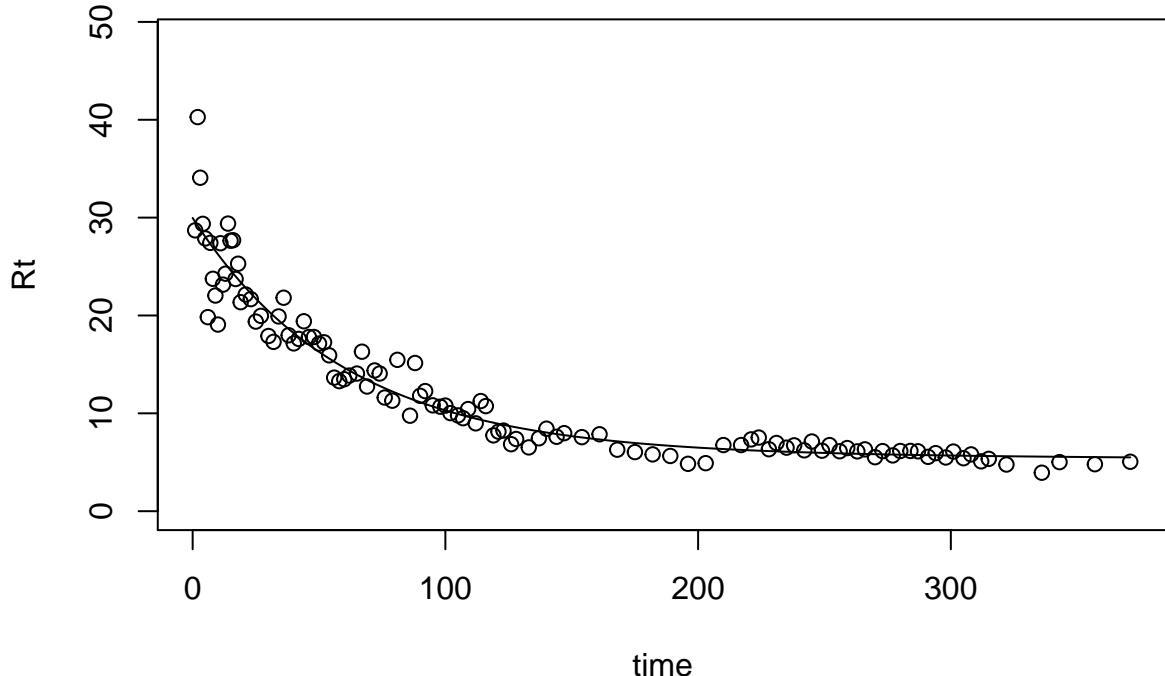
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	1.611396	0.0133523	0.0002005	0.0688388	NA	NA
Two-pool feedback	5.611396	0.0133522	0.0002005	0.0695398	0.0099195	6.7e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	3.611396	0.0133524	0.0002005		0.0694183	0.0082306

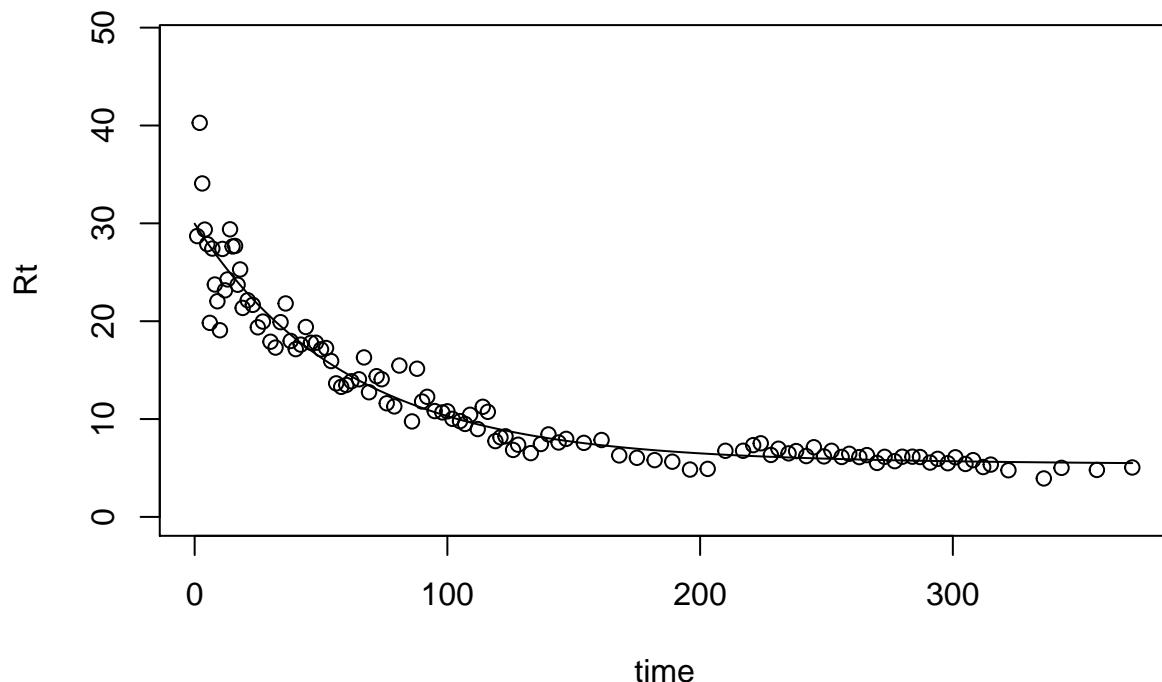
## Variable Site11:

CO2 production rate

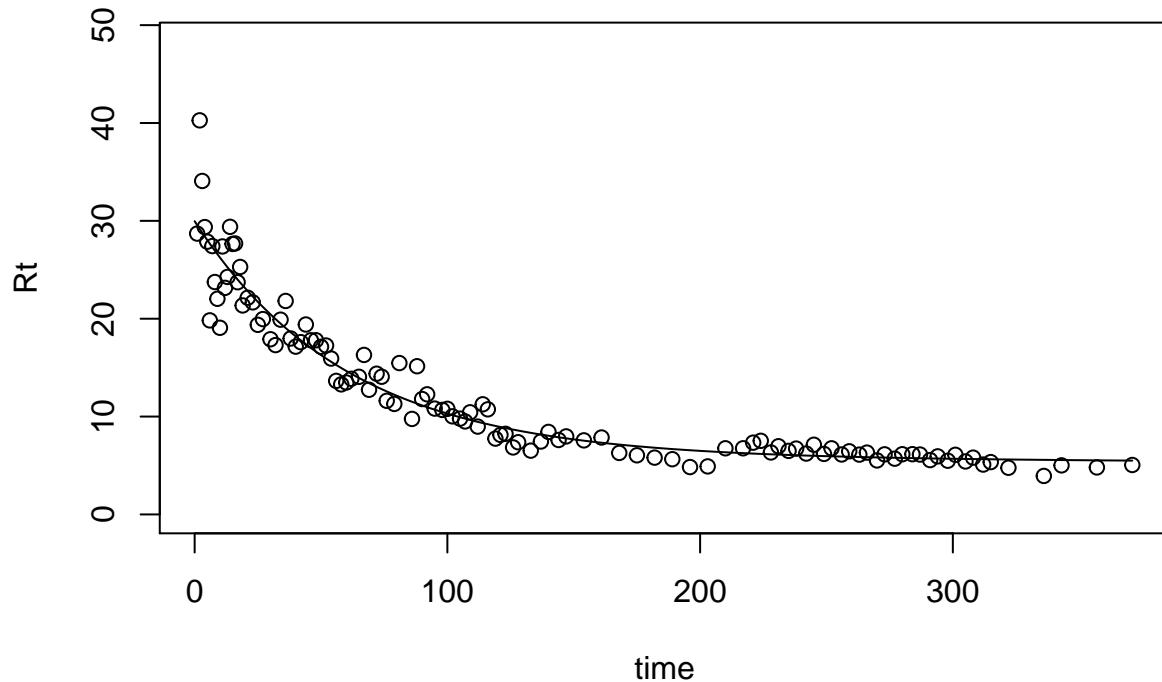
```
## [1] "k1= 0.0166569464624123"
## [2] "k2= 0.00019418899927466"
## [3] "proportion of C0 in pool 1= 0.0458053272309299"
```



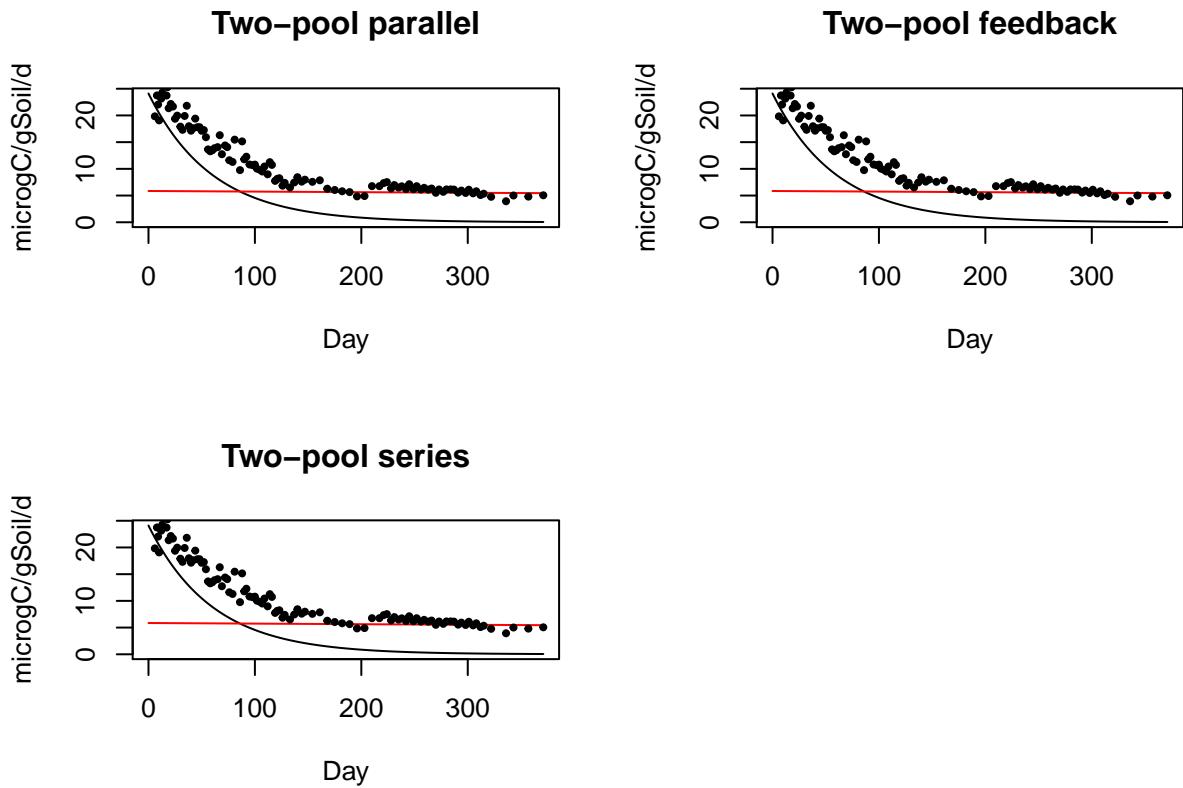
```
## [1] "AIC = 3.1200257660843"
## [1] "k1= 0.0166569547779255"
## [2] "k2= 0.000194189092781285"
## [3] "a21= 0.00725140951314401"
## [4] "a12= 1.62944122273911e-05"
## [5] "Proportion of C0 in pool 1= 0.0461440244910085"
```



```
## [1] "AIC = 7.12002576607724"  
## [1] "k1= 0.0166569048010734"  
## [2] "k2= 0.000194188649910172"  
## [3] "a21= 0.00289667058285176"  
## [4] "Proportion of C0 in pool 1= 0.0459400196899761"
```



```
## [1] "AIC = 5.12002576597362"
```



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	3.120026	0.0166569	0.0001942	0.0458053	NA	NA
Two-pool feedback	7.120026	0.0166570	0.0001942	0.0461440	0.0072514	1.63e-05
Two-pool series	5.120026	0.0166569	0.0001942	0.0459400	0.0028967	NA

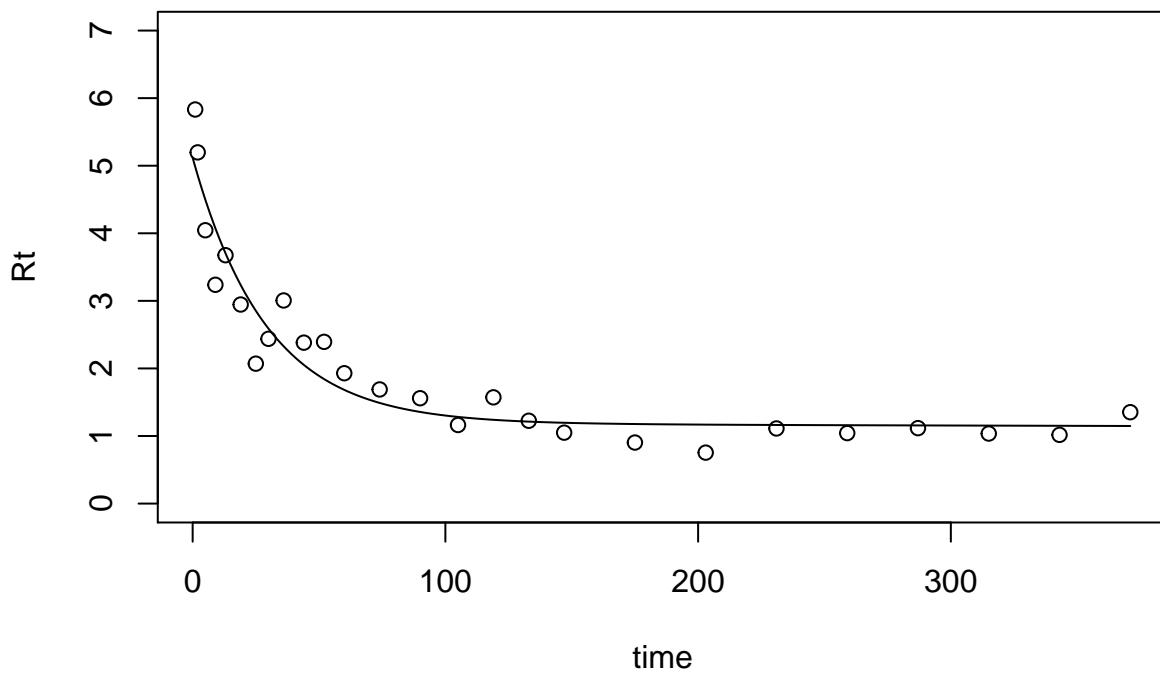
## Variable Site12:

CO2 production rate

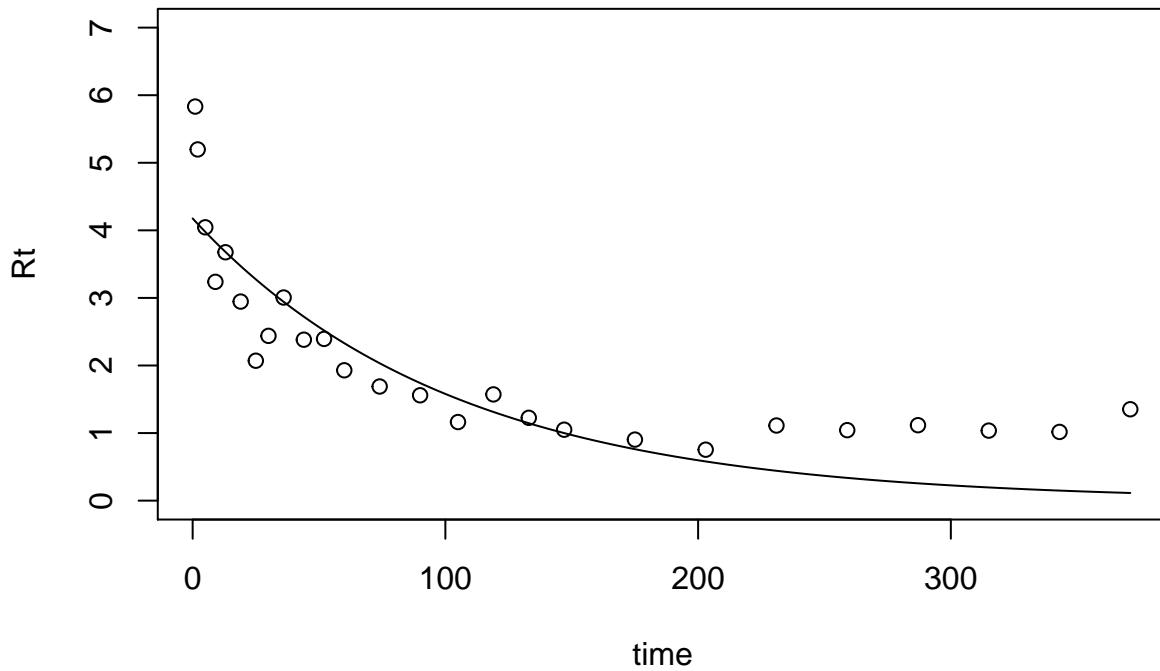
## Variable Site13:

CO2 production rate

```
## [1] "k1= 0.0342452480387773"
## [2] "k2= 8.41079969523627e-05"
## [3] "proportion of C0 in pool 1= 0.00809040206166006"
```

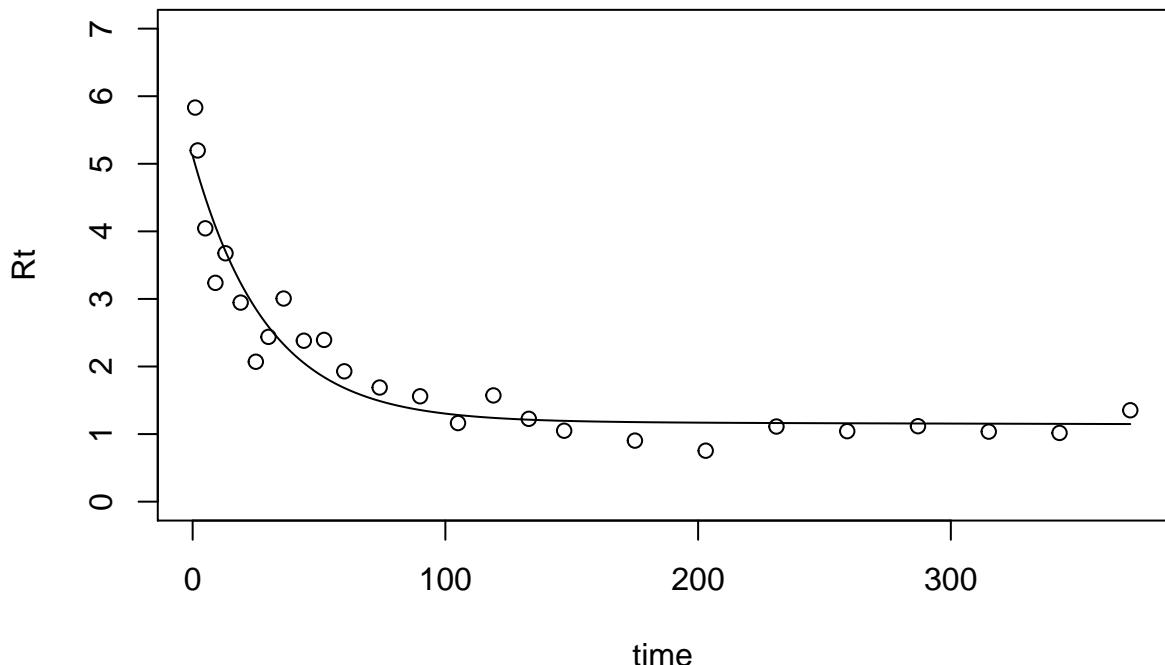


```
## [1] "AIC = 9.76624001472825"
## [1] "k1= 5.37679586267652e-20"
## [2] "k2= 0.00972501666487171"
## [3] "a21= 0.999709020000031"
## [4] "a12= 4.22581416748002e-07"
## [5] "Proportion of C0 in pool 1= 0.969760802209421"
```

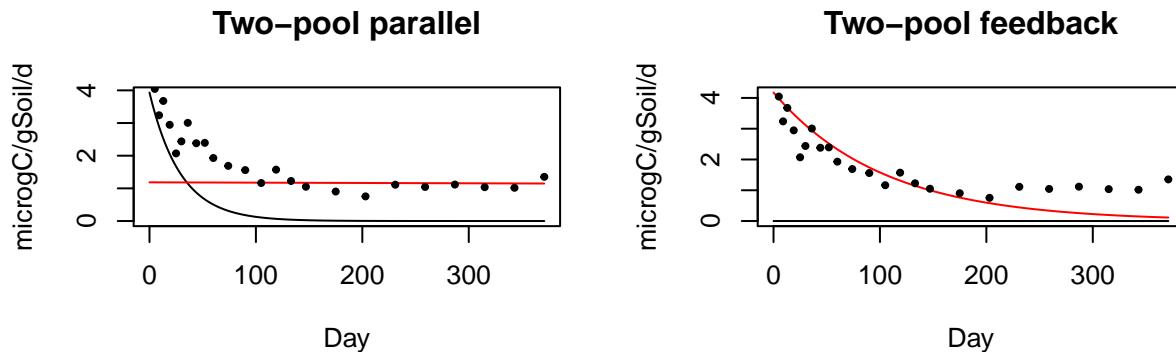


```
## [1] "AIC = 11.5449912239174"
## [1] "k1= 0.03424650096034"
## [2] "k2= 8.41090764044814e-05"
## [3] "a21= 6.27844862431948e-05"
```

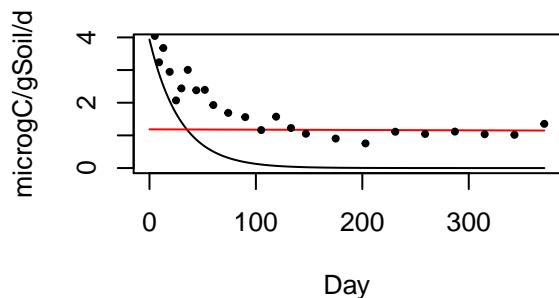
```
## [4] "Proportion of C0 in pool 1= 0.00809062021226586"
```



```
## [1] "AIC = 11.7662400176435"
```



**Two-pool series**



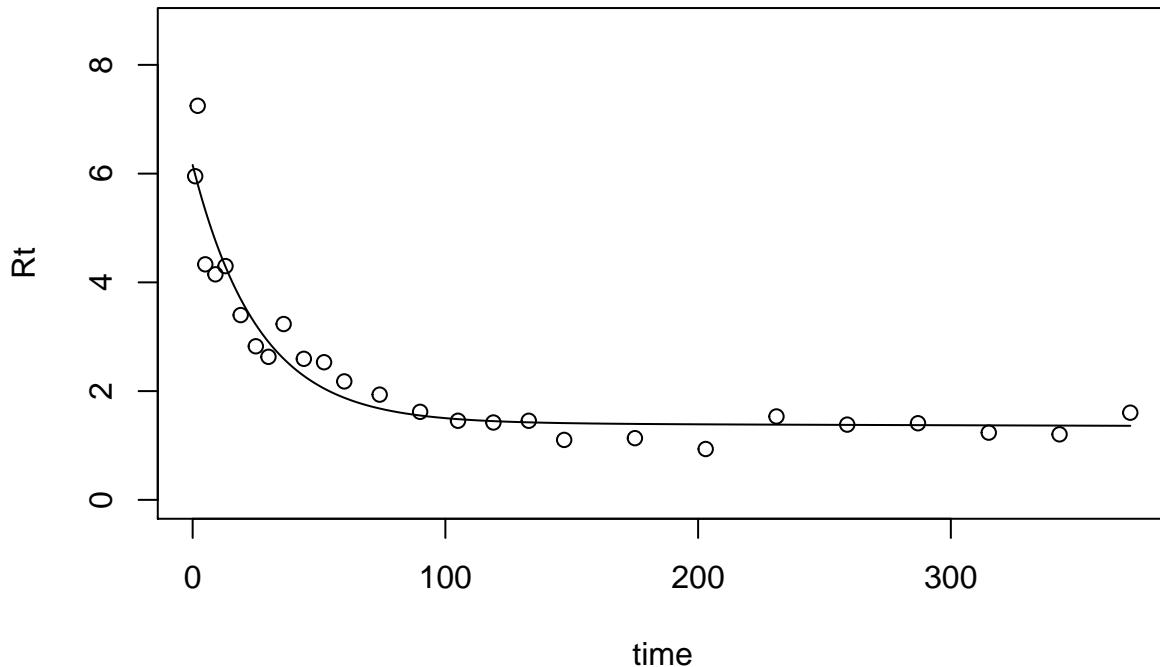
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	9.76624	0.0342452	0.0000841	0.0080904	NA	NA
Two-pool feedback	11.54499	0.0000000	0.0097250	0.9697608	0.9997090	4e-07

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	11.76624	0.0342465	0.0000841	0.0080906	0.0000628	NA

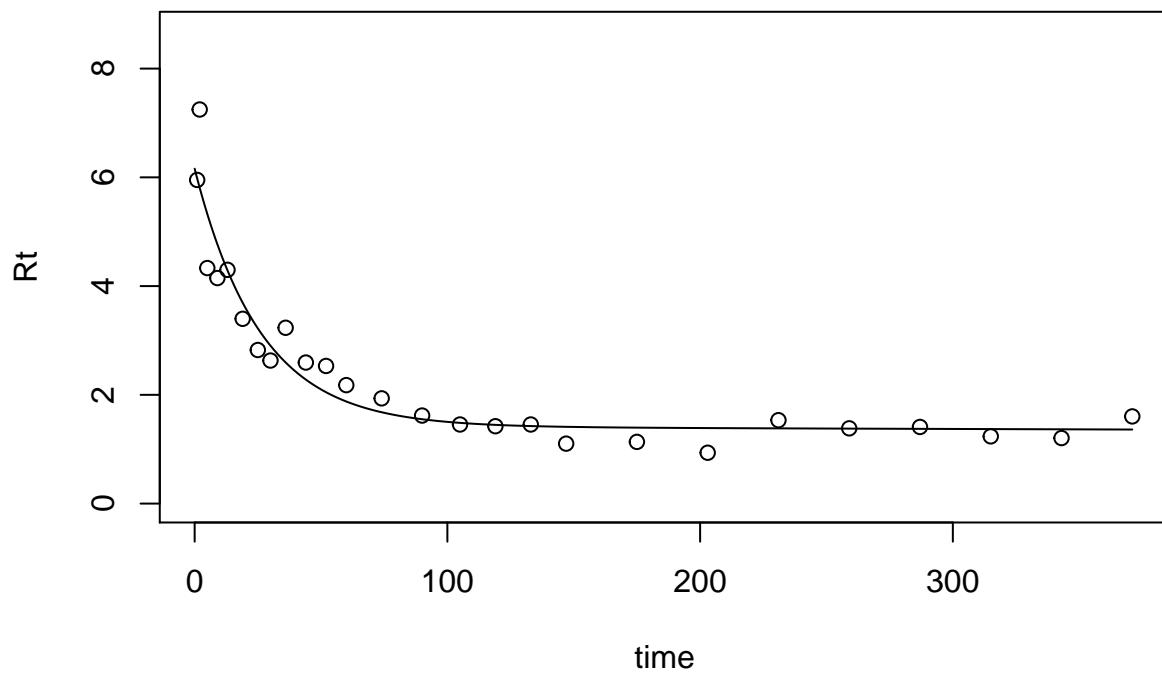
## Variable Site14:

CO2 production rate

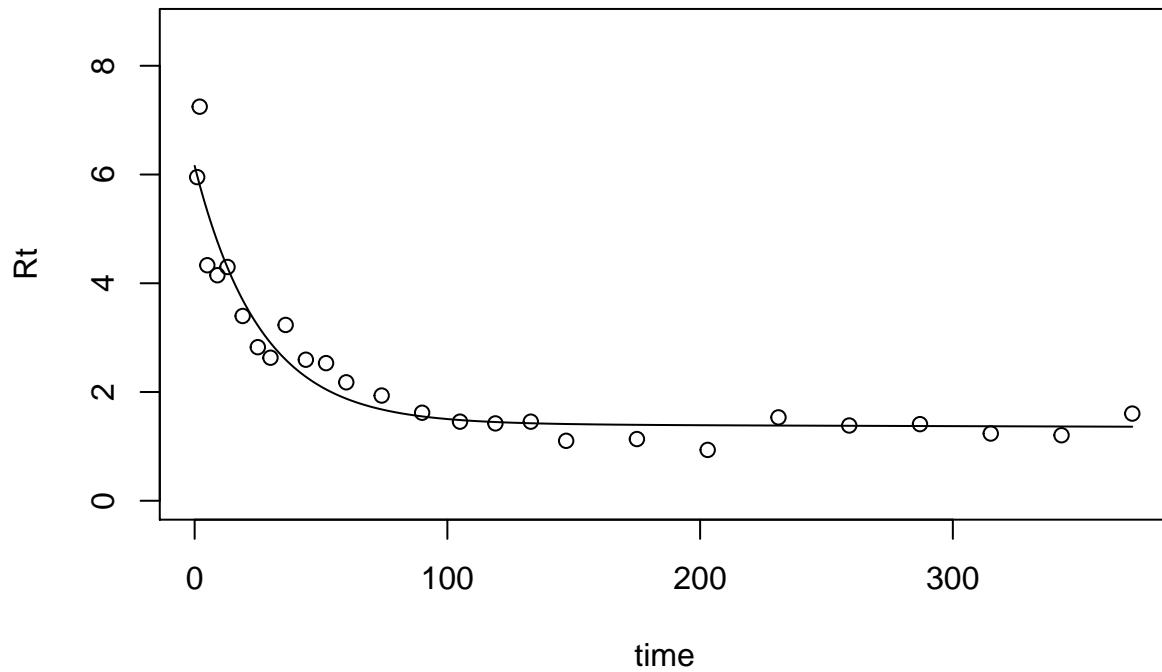
```
## [1] "k1= 0.0385578094982407"
## [2] "k2= 0.000108404036051263"
## [3] "proportion of C0 in pool 1= 0.00931571582240387"
```



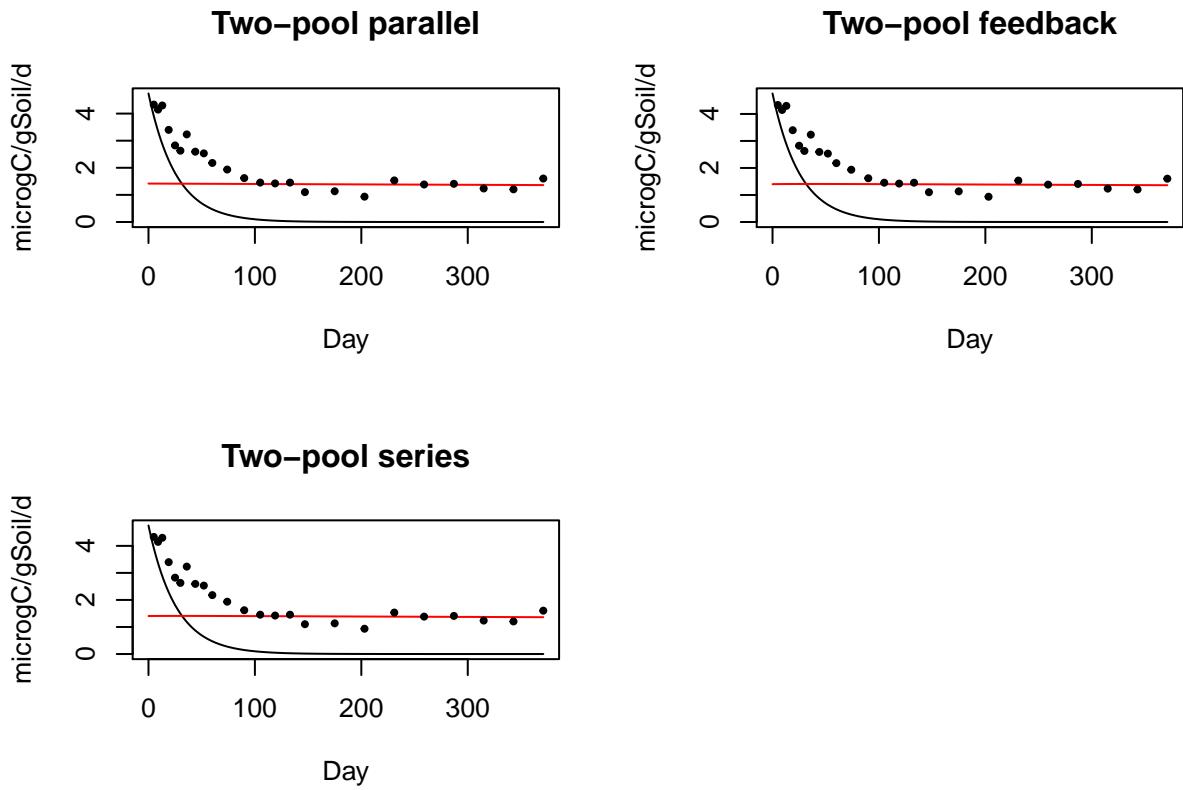
```
## [1] "AIC = 9.23047388056813"
## [1] "k1= 0.0385581338525114"
## [2] "k2= 0.000108405377550395"
## [3] "a21= 0.552900070332997"
## [4] "a12= 1.73582195085453e-05"
## [5] "Proportion of C0 in pool 1= 0.0209086724326332"
```



```
## [1] "AIC = 13.2304738851221"
## [1] "k1= 0.0385572431576873"
## [2] "k2= 0.00010840347978661"
## [3] "a21= 0.46820771831914"
## [4] "Proportion of C0 in pool 1= 0.017561353538473"
```



```
## [1] "AIC = 11.2304738828355"
```

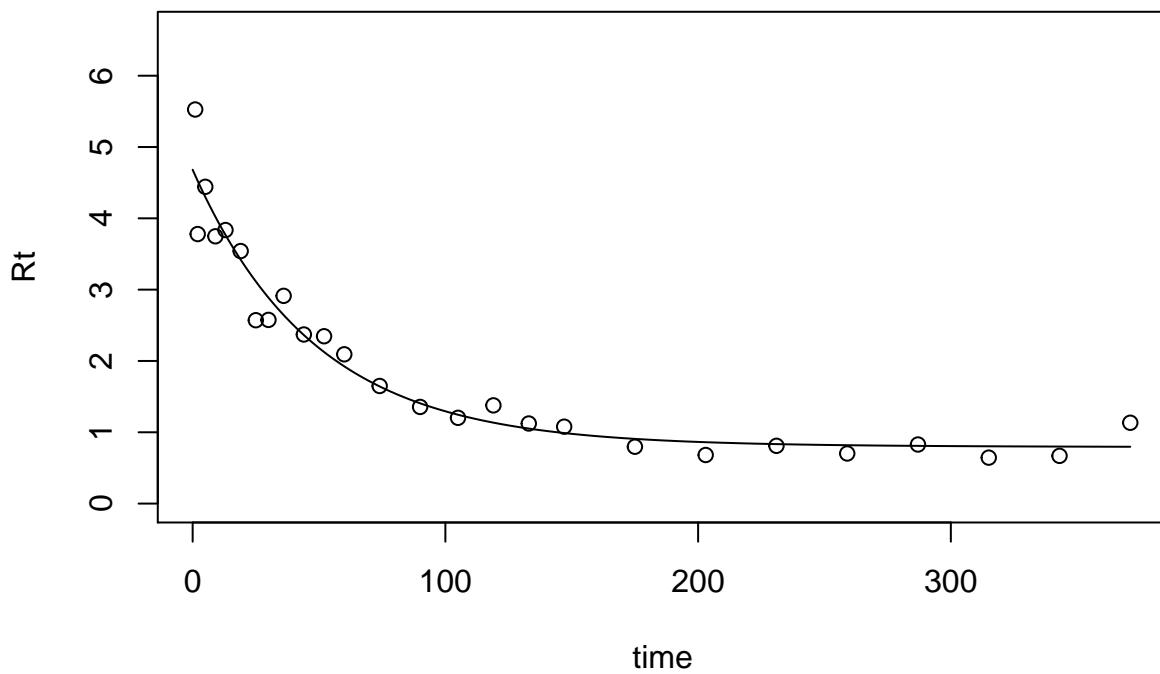


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	9.230474	0.0385578	0.0001084	0.0093157	NA	NA
Two-pool feedback	13.230474	0.0385581	0.0001084	0.0209087	0.5529001	1.74e-05
Two-pool series	11.230474	0.0385572	0.0001084	0.0175614	0.4682077	NA

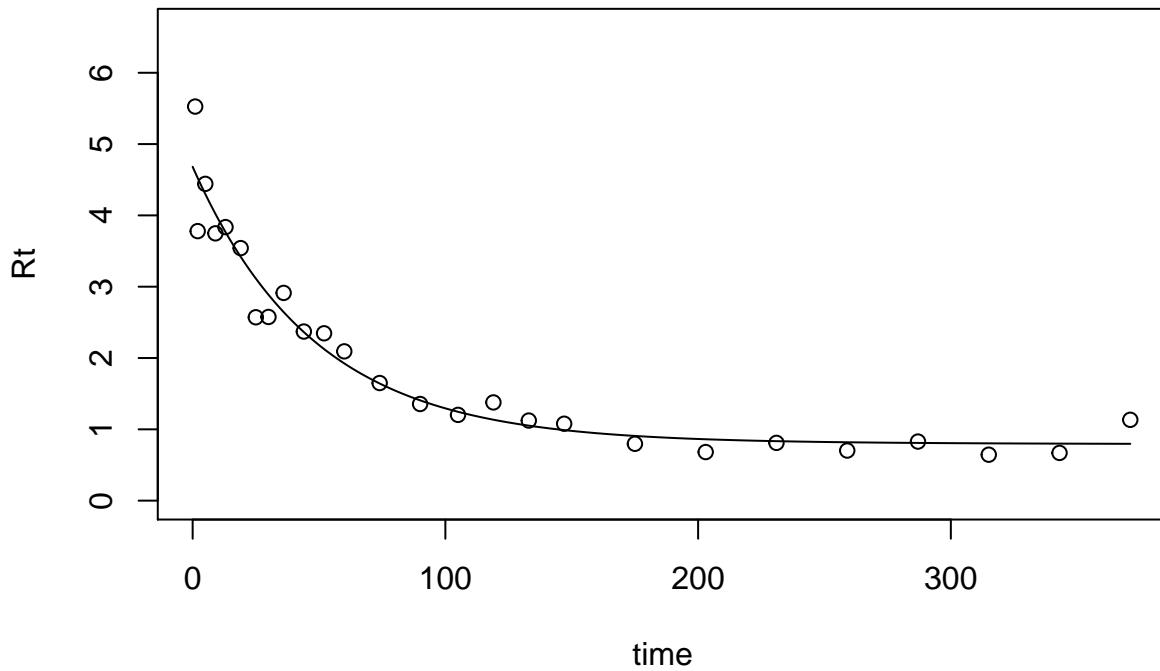
### Variable Site15:

CO2 production rate

```
## [1] "k1= 0.020753974708309"
## [2] "k2= 6.30099730669015e-05"
## [3] "proportion of CO in pool 1= 0.0142270194207435"
```

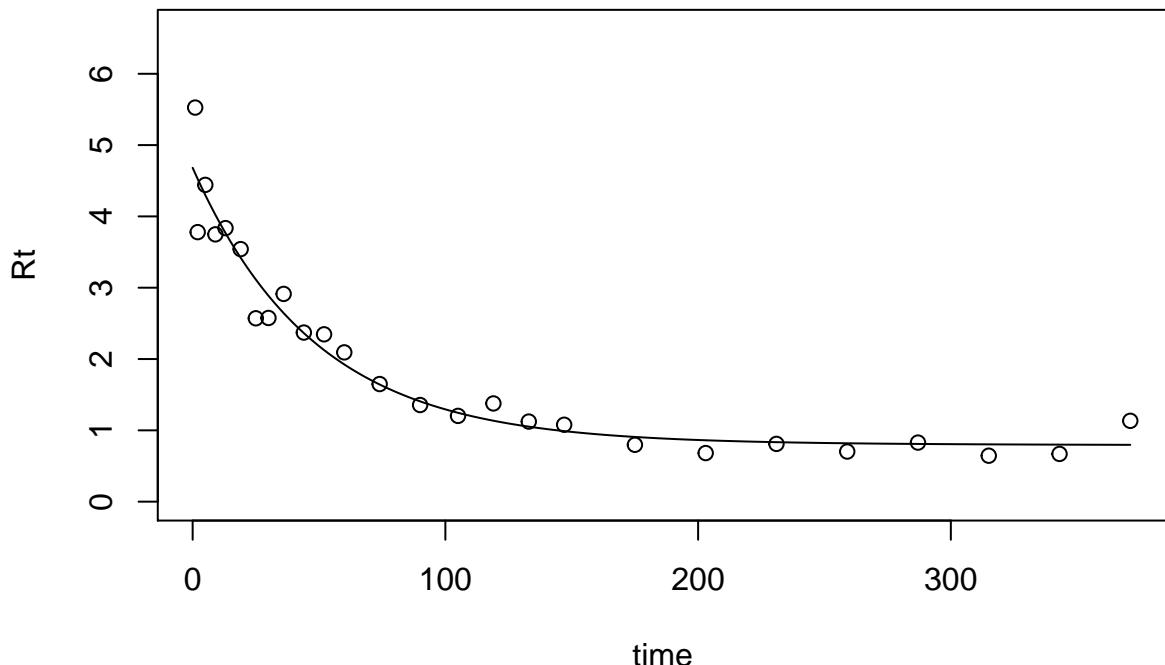


```
## [1] "AIC = 10.8023837717763"
## [1] "k1= 0.0207486061014555"
## [2] "k2= 6.8391150308906e-05"
## [3] "a21= 0.078446484619433"
## [4] "a12= 0.999993230609442"
## [5] "Proportion of C0 in pool 1= 0.0186904525042159"
```

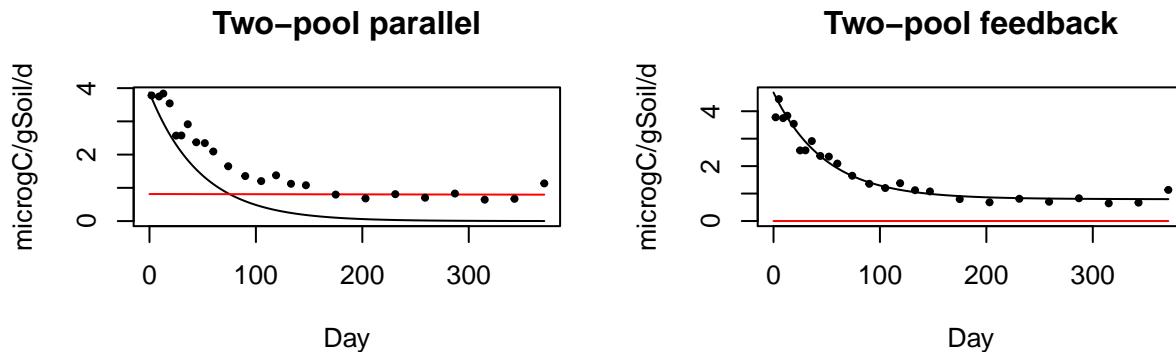


```
## [1] "AIC = 14.8023837705325"
## [1] "k1= 0.0207539553917189"
## [2] "k2= 6.30099298107117e-05"
## [3] "a21= 0.0318014040665985"
```

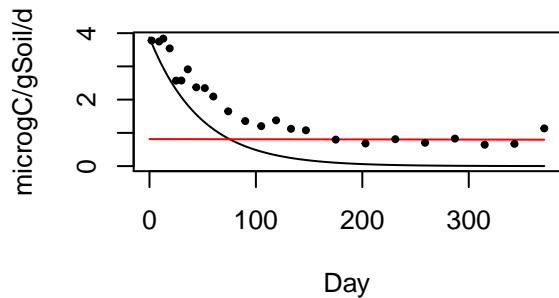
```
## [4] "Proportion of C0 in pool 1= 0.0146957453637727"
```



```
## [1] "AIC = 12.8023837706854"
```



**Two-pool series**



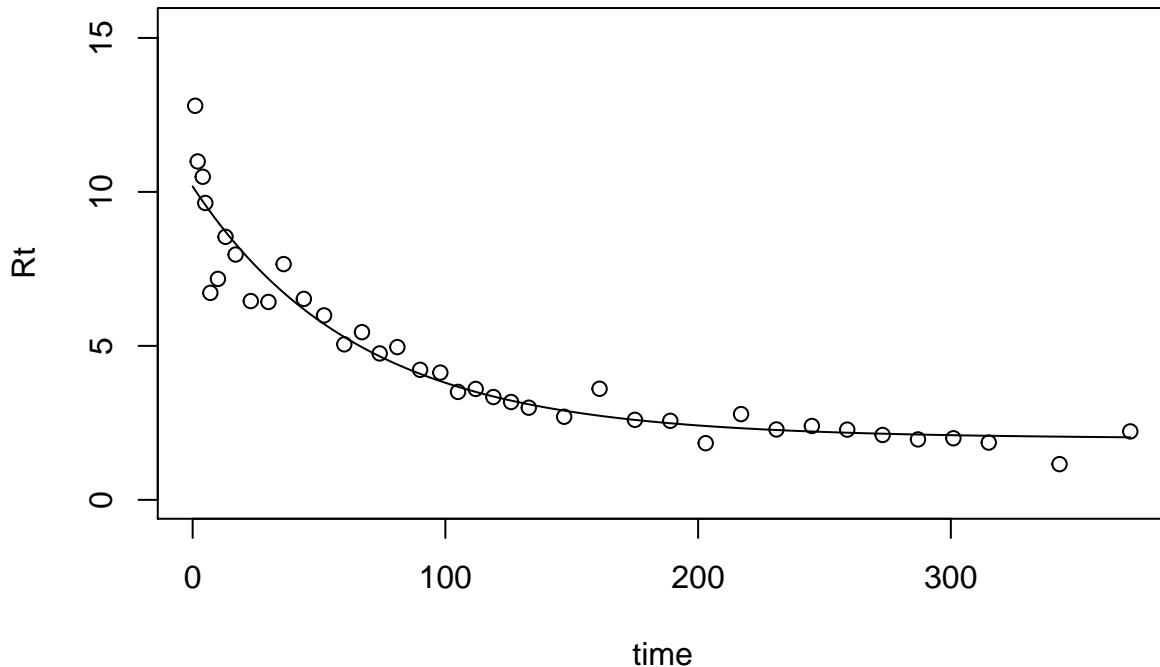
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	10.80238	0.0207540	6.30e-05	0.0142270	NA	NA
Two-pool feedback	14.80238	0.0207486	6.84e-05	0.0186905	0.0784465	0.9999932

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	12.80238	0.0207540	6.30e-05		0.0146957	0.0318014

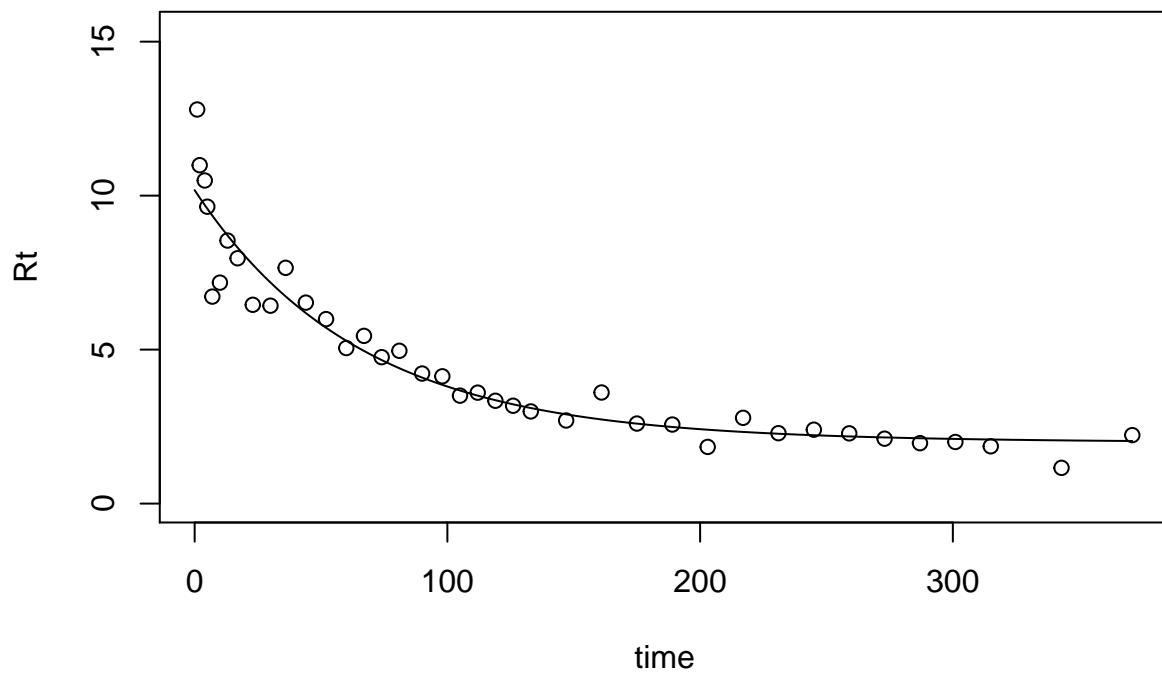
## Variable Site16:

CO2 production rate

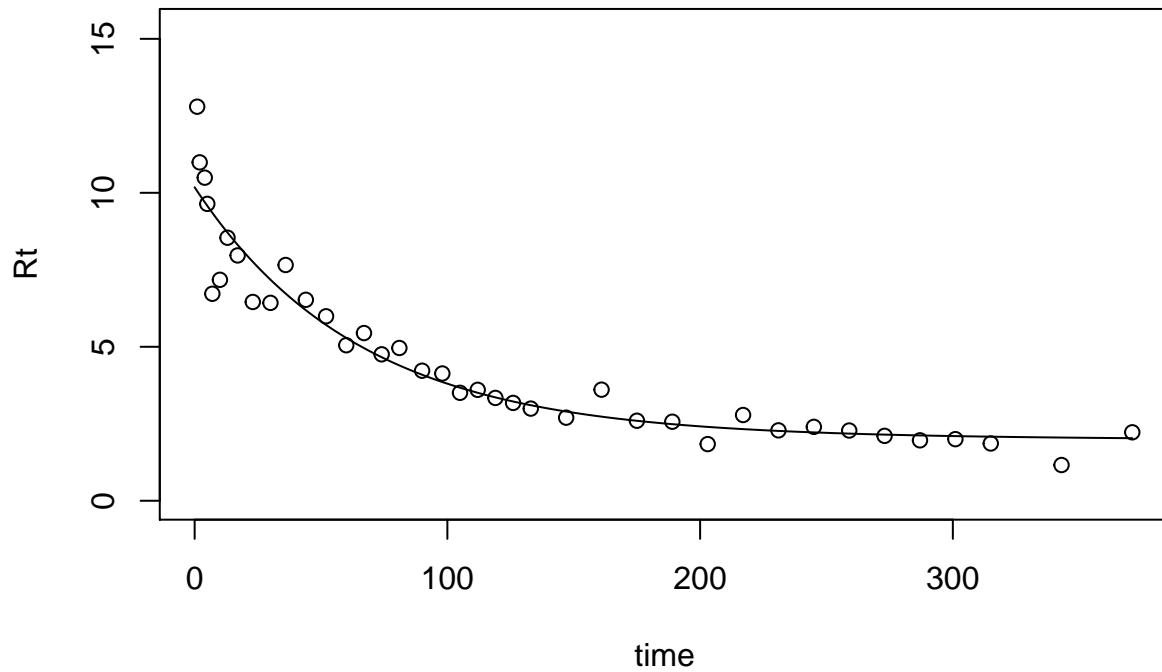
```
## [1] "k1= 0.0154030063019568"
## [2] "k2= 0.000115118956184563"
## [3] "proportion of C0 in pool 1= 0.0280746663551604"
```



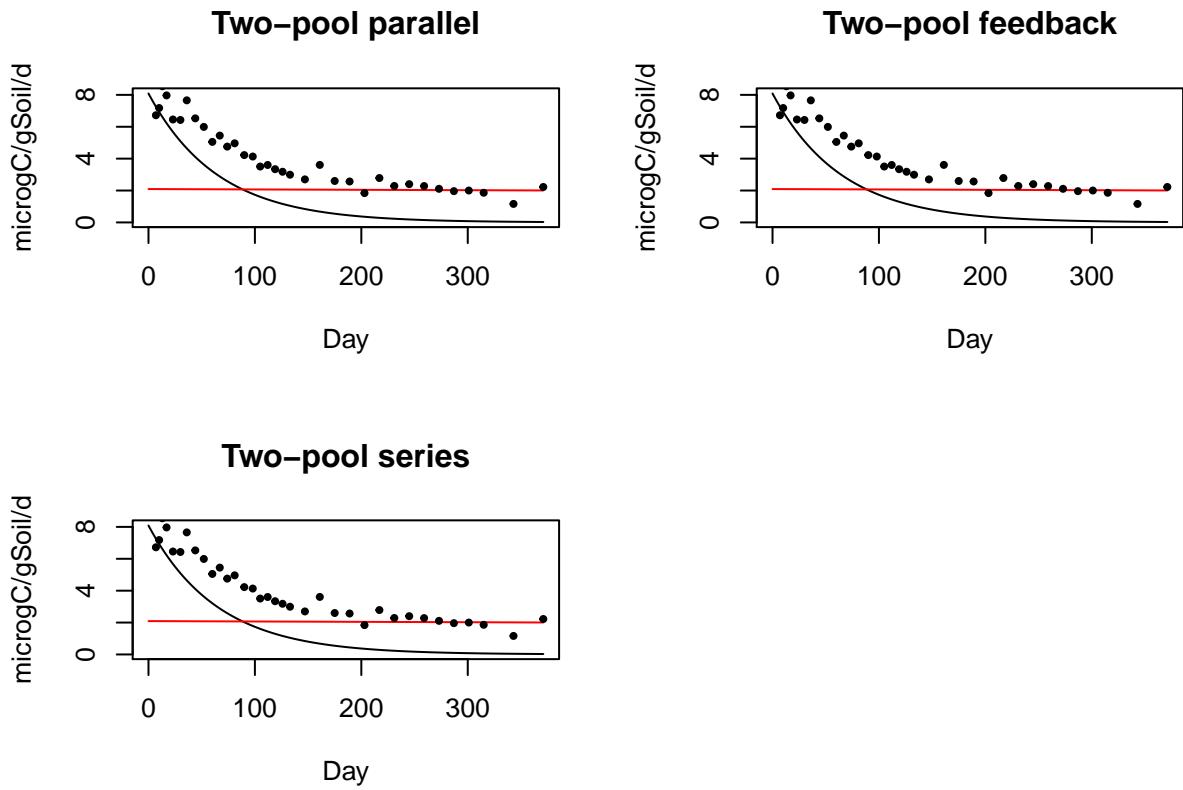
```
## [1] "AIC = 6.80050461715213"
## [1] "k1= 0.0154032263388181"
## [2] "k2= 0.000115120232599066"
## [3] "a21= 0.0127907714562838"
## [4] "a12= 6.28323544826781e-06"
## [5] "Proportion of C0 in pool 1= 0.0284408036690922"
```



```
## [1] "AIC = 10.8005046176685"
## [1] "k1= 0.015402683151695"
## [2] "k2= 0.000115117094468906"
## [3] "a21= 0.0179950869445162"
## [4] "Proportion of C0 in pool 1= 0.0285935270002354"
```



```
## [1] "AIC = 8.8005046132161"
```

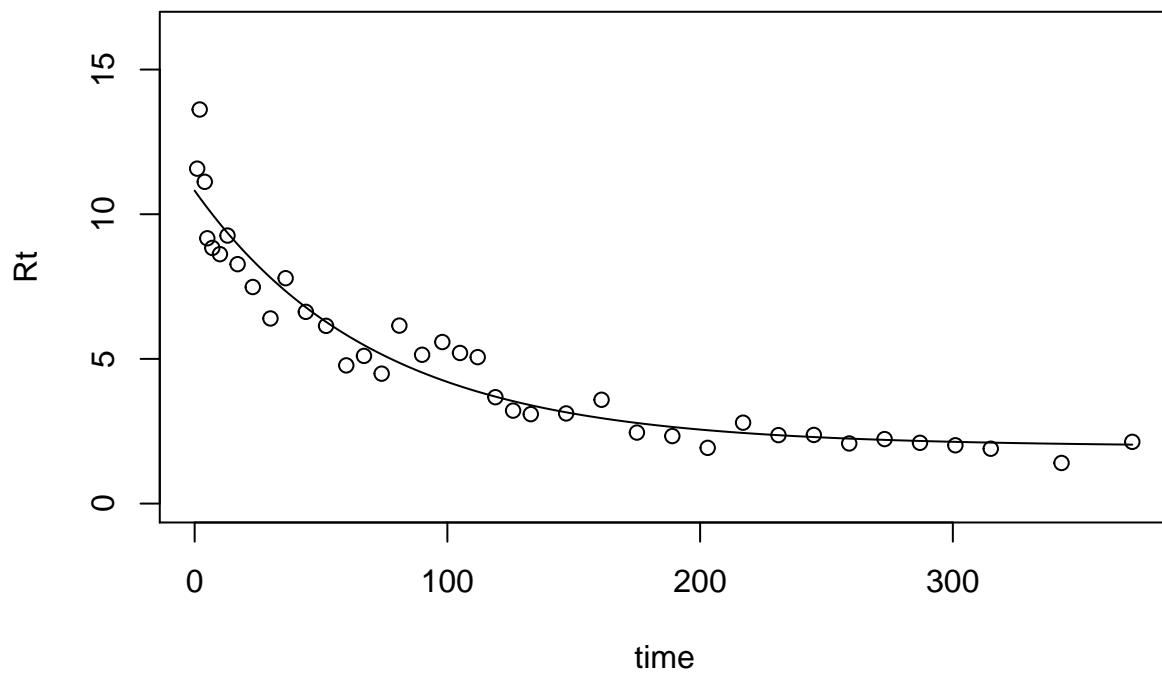


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.800505	0.0154030	0.0001151	0.0280747	NA	NA
Two-pool feedback	10.800505	0.0154032	0.0001151	0.0284408	0.0127908	6.3e-06
Two-pool series	8.800505	0.0154027	0.0001151	0.0285935	0.0179951	NA

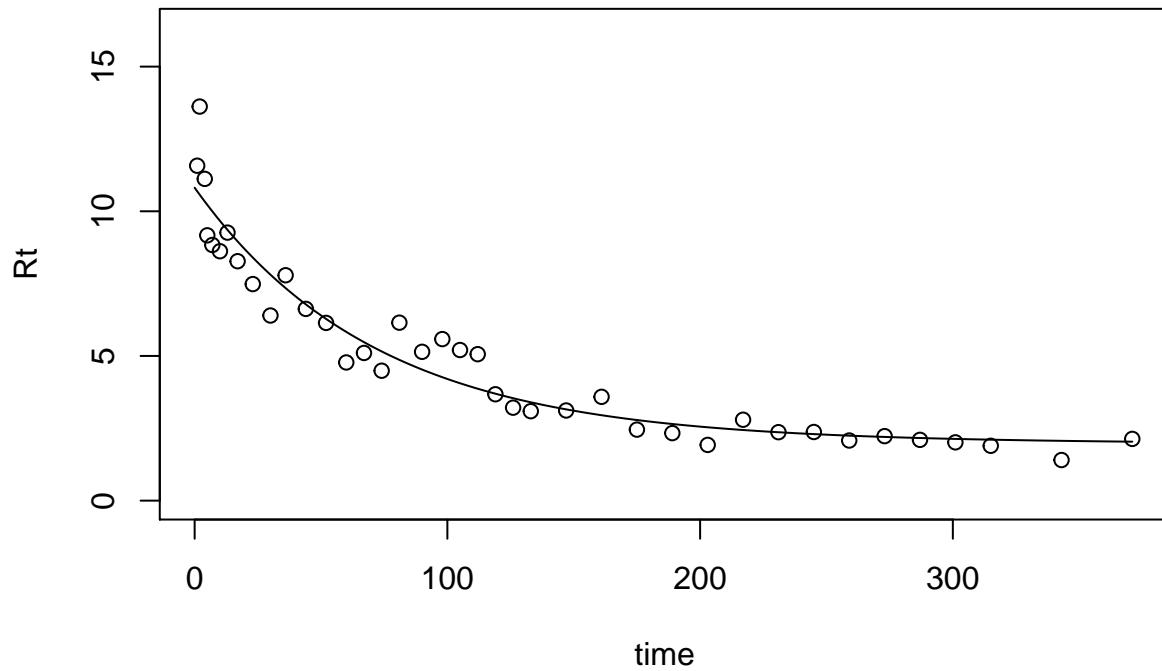
## Variable Site17:

CO2 production rate

```
## [1] "k1= 0.0140041587192428"
## [2] "k2= 0.000109725771225137"
## [3] "proportion of C0 in pool 1= 0.0320175033031613"
```

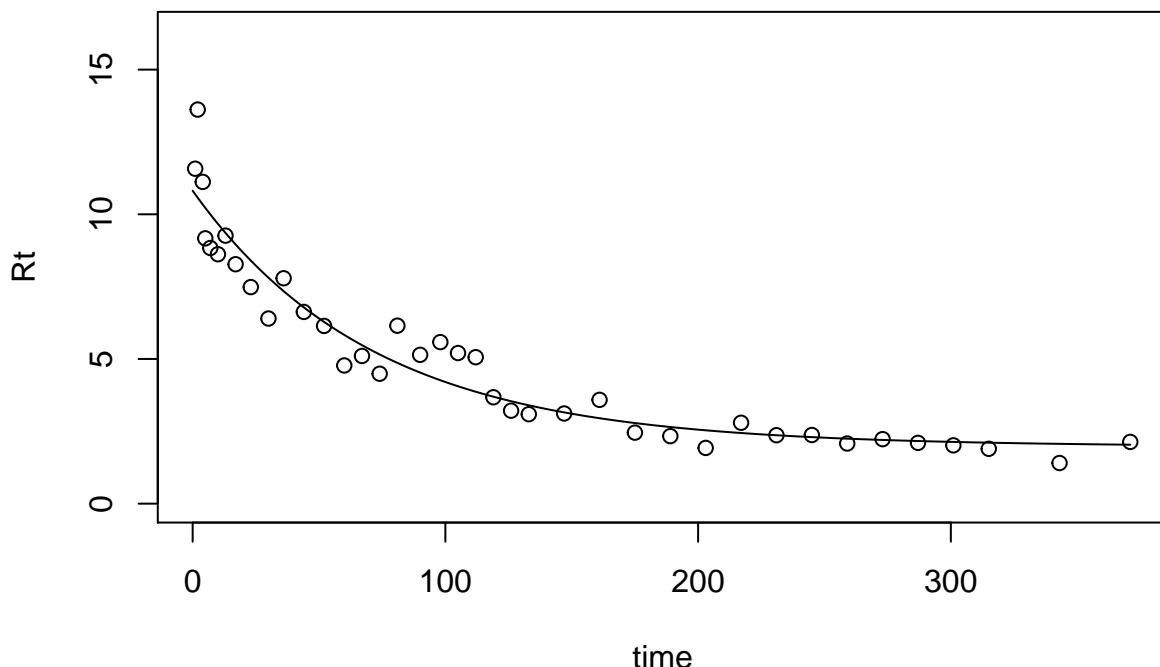


```
## [1] "AIC = 6.67366651822523"
## [1] "k1= 0.0140042557633894"
## [2] "k2= 0.000109726540893387"
## [3] "a21= 0.0342009540836895"
## [4] "a12= 1.77478086055283e-05"
## [5] "Proportion of C0 in pool 1= 0.0331604591011397"
```

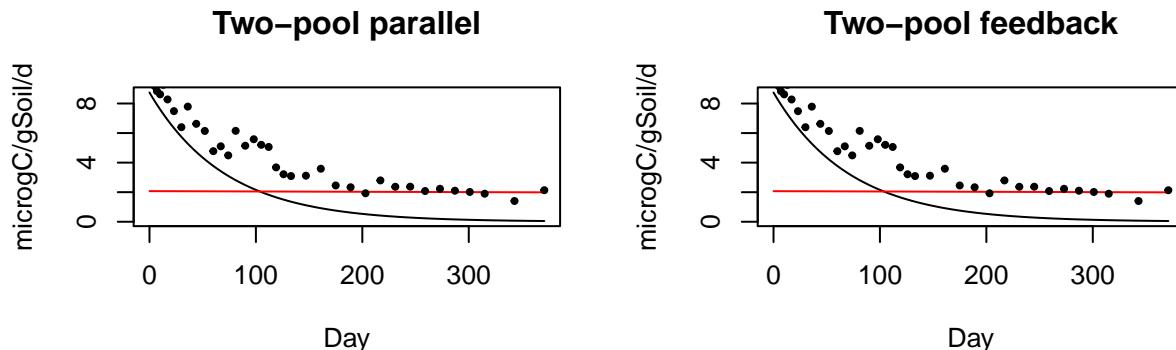


```
## [1] "AIC = 10.6736665183195"
## [1] "k1= 0.0140042015424244"
## [2] "k2= 0.000109726079770309"
## [3] "a21= 0.00411371061113219"
```

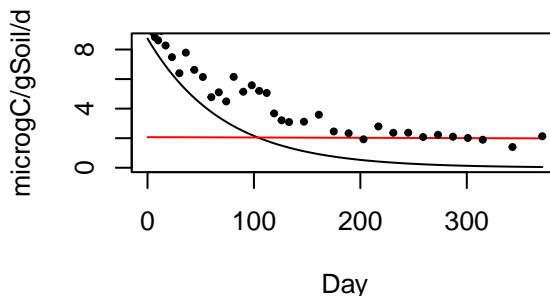
```
## [4] "Proportion of C0 in pool 1= 0.0321505421371633"
```



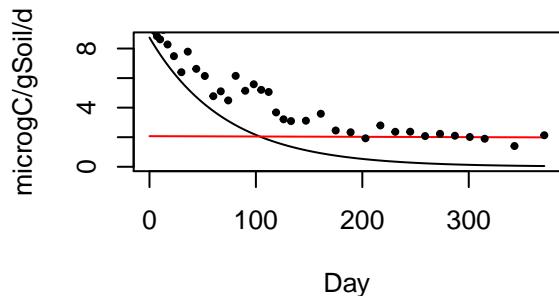
```
## [1] "AIC = 8.67366651703251"
```



### Two-pool feedback



### Two-pool series



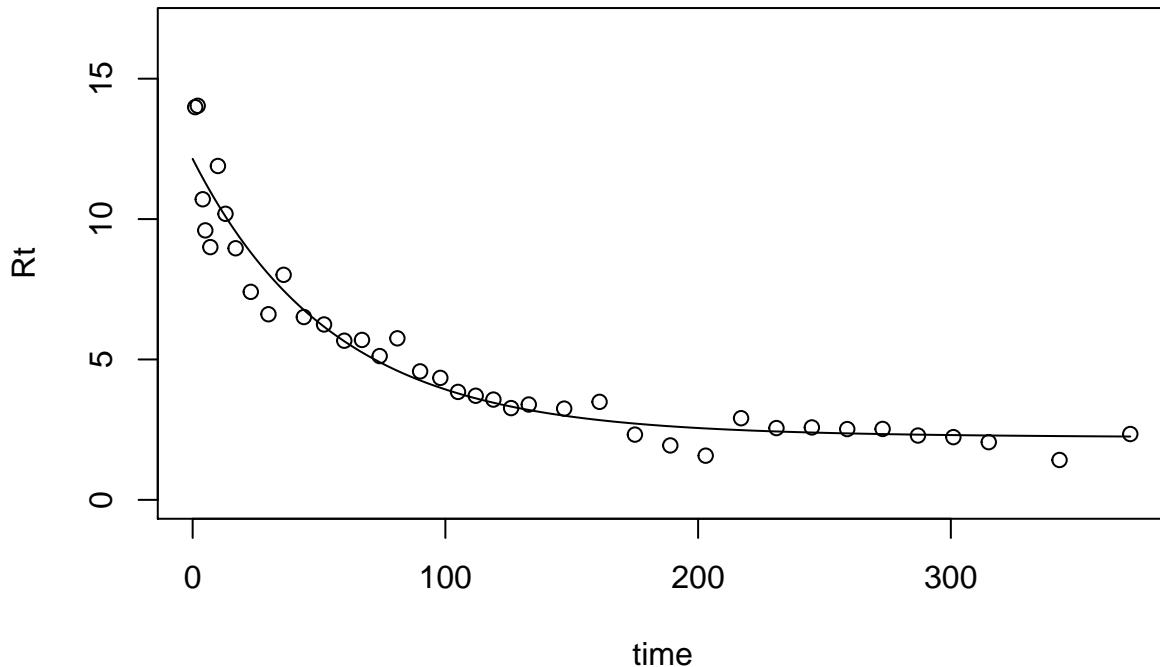
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.673667	0.0140042	0.0001097	0.0320175	NA	NA
Two-pool feedback	10.673666	0.0140043	0.0001097	0.0331605	0.0342010	1.77e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.673666	0.0140042	0.0001097		0.0321505	0.0041137

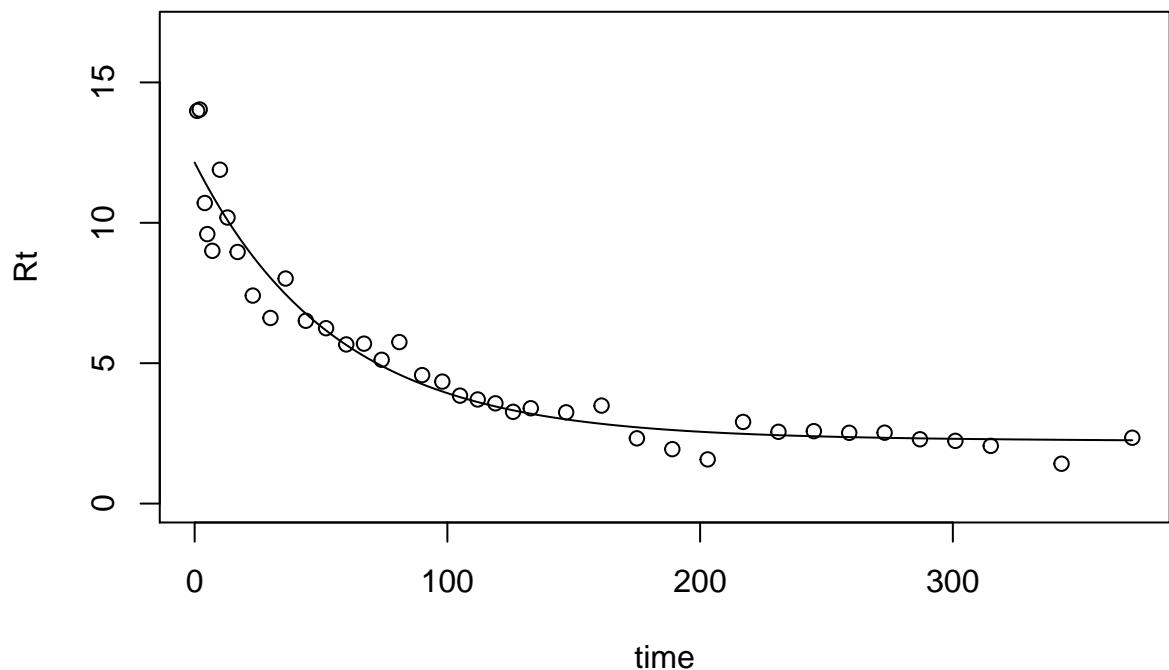
## Variable Site18:

CO2 production rate

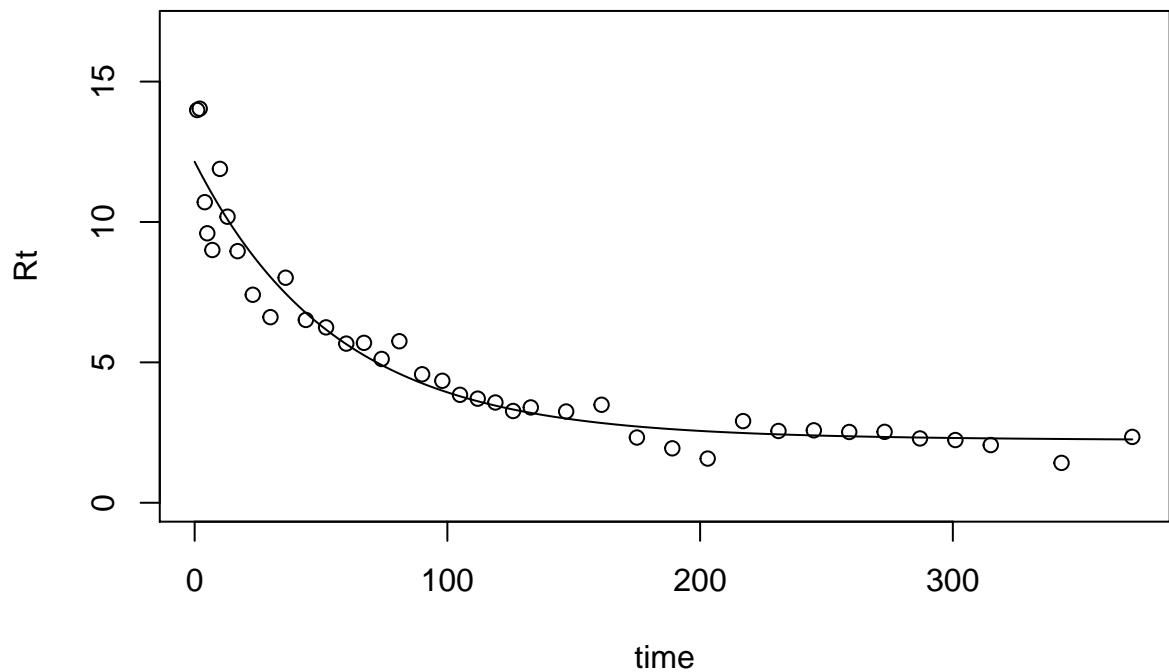
```
## [1] "k1= 0.018061796957814"
## [2] "k2= 0.000131892874637747"
## [3] "proportion of C0 in pool 1= 0.0294580541425038"
```



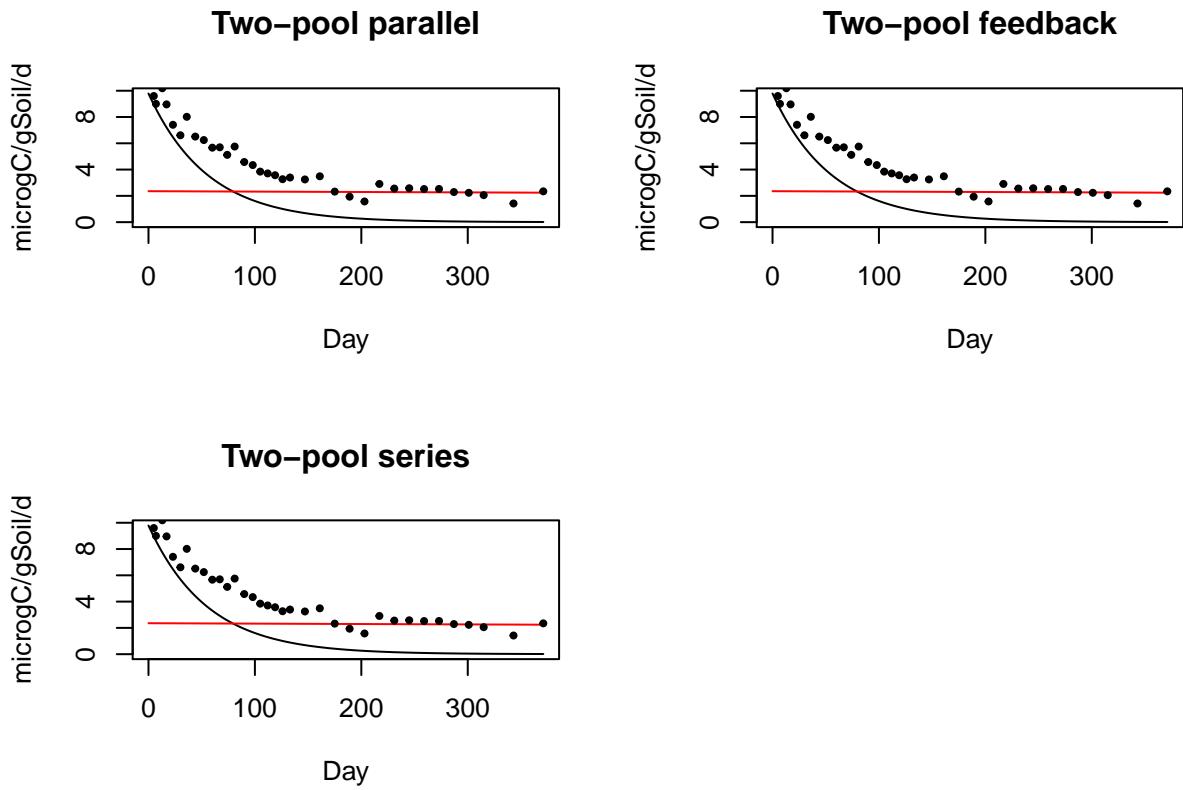
```
## [1] "AIC = 6.65714606502734"
## [1] "k1= 0.018062258619558"
## [2] "k2= 0.000131895284098512"
## [3] "a21= 0.00189597561910015"
## [4] "a12= 4.01253977927452e-06"
## [5] "Proportion of C0 in pool 1= 0.0295136174864074"
```



```
## [1] "AIC = 10.6571460643545"
## [1] "k1= 0.0180621534151682"
## [2] "k2= 0.000131894734561635"
## [3] "a21= 0.000857506357907767"
## [4] "Proportion of C0 in pool 1= 0.0294828786700116"
```



```
## [1] "AIC = 8.65714606499267"
```



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.657146	0.0180618	0.0001319	0.0294581	NA	NA
Two-pool feedback	10.657146	0.0180623	0.0001319	0.0295136	0.0018960	4e-06
Two-pool series	8.657146	0.0180622	0.0001319	0.0294829	0.0008575	NA

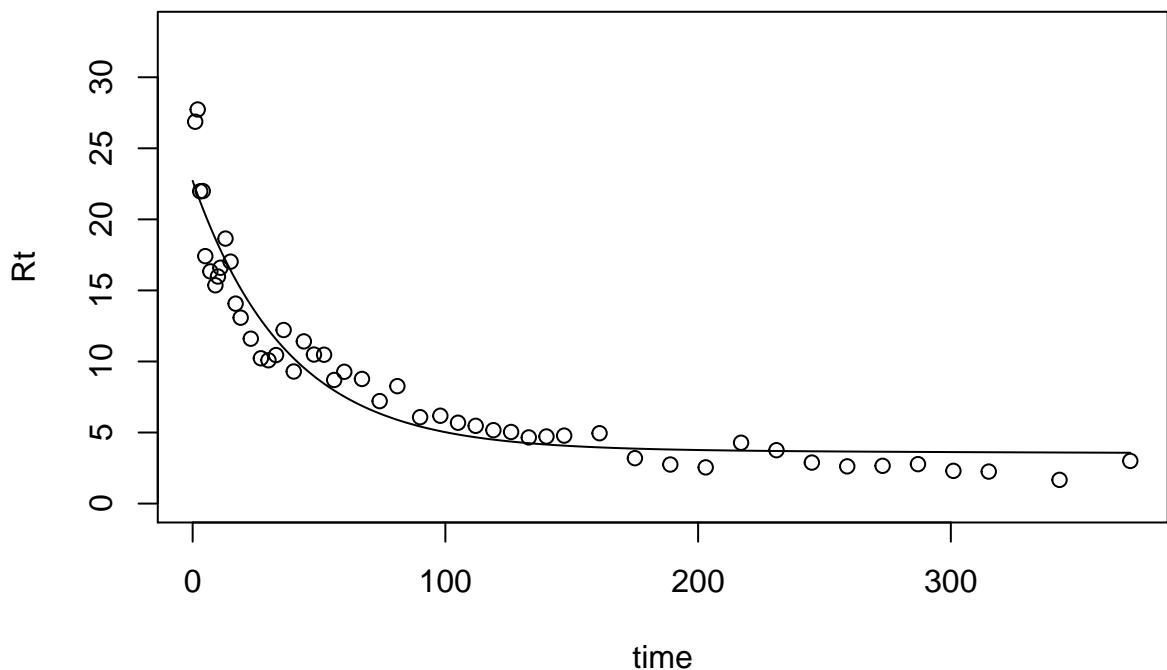
## Variable Site19:

CO2 production rate

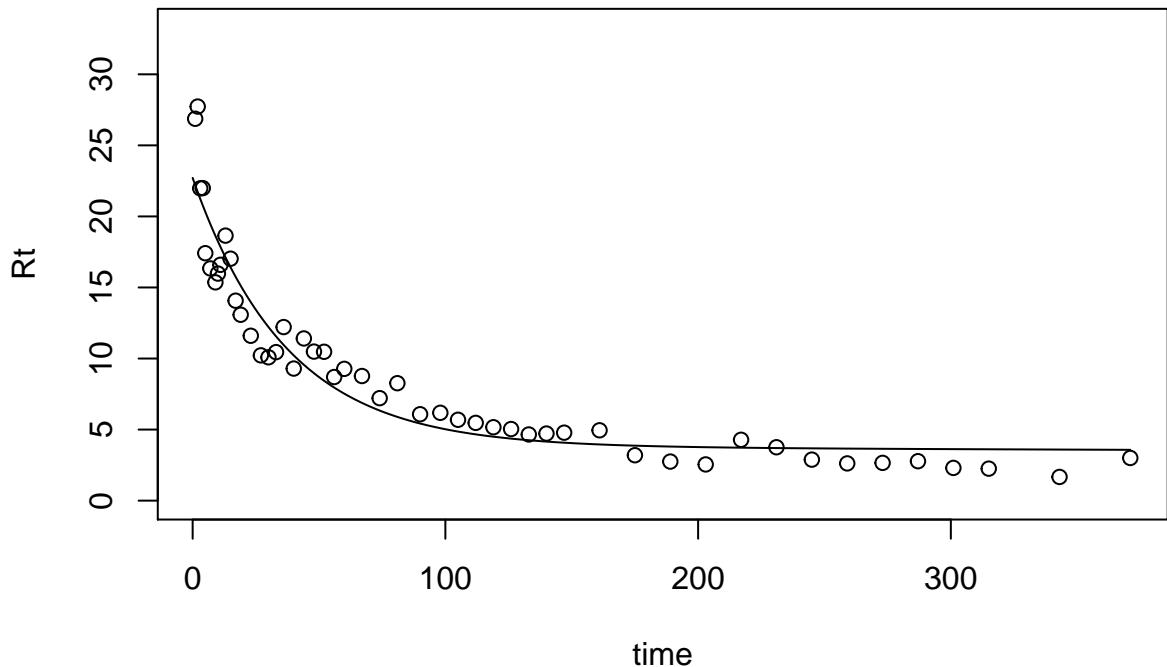
## Variable Site20:

CO2 production rate

```
## [1] "k1= 0.0269307072967726"
## [2] "k2= 0.000173270778516012"
## [3] "proportion of C0 in pool 1= 0.0309124592387499"
```

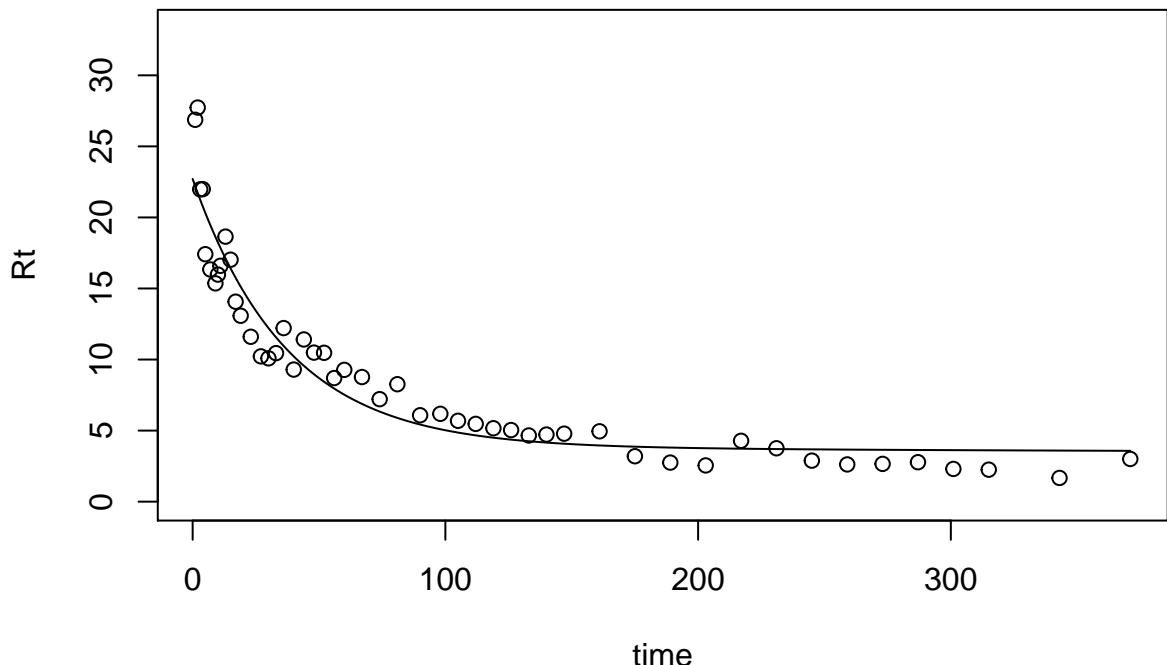


```
## [1] "AIC = 3.55073888585162"
## [1] "k1= 0.026931248584007"
## [2] "k2= 0.000173273519345782"
## [3] "a21= 0.00681847296701538"
## [4] "a12= 2.09259032157849e-05"
## [5] "Proportion of C0 in pool 1= 0.0311255770824847"
```

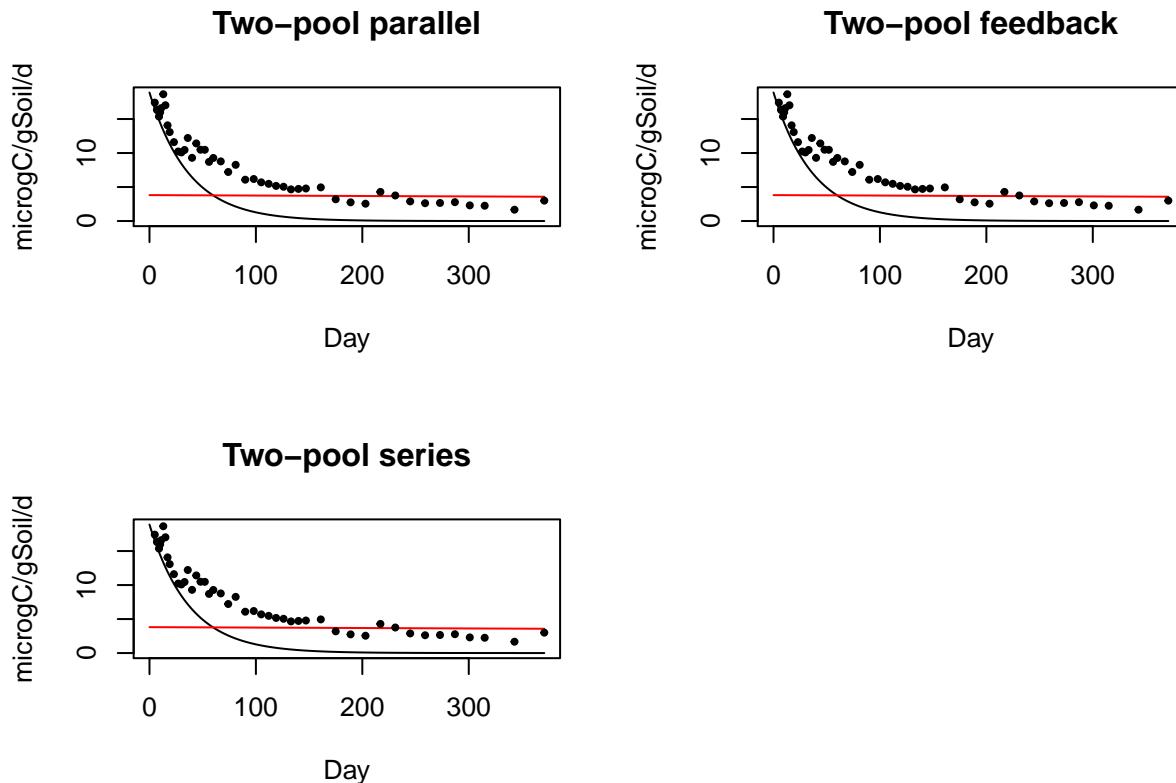


```
## [1] "AIC = 7.55073888943365"
## [1] "k1= 0.0269317786154463"
## [2] "k2= 0.000173276560609067"
## [3] "a21= 0.0114796211138467"
```

```
## [4] "Proportion of C0 in pool 1= 0.0312724723718774"
```



```
## [1] "AIC = 5.55073889082026"
```



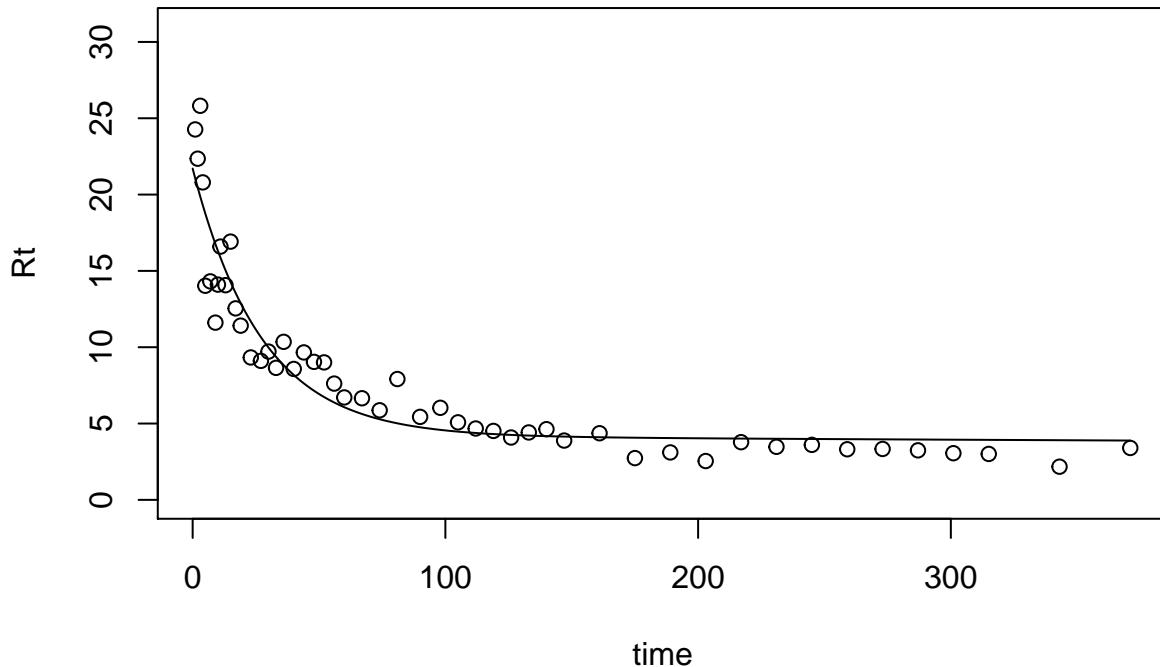
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	3.550739	0.0269307	0.0001733	0.0309125	NA	NA
Two-pool feedback	7.550739	0.0269312	0.0001733	0.0311256	0.0068185	2.09e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	5.550739	0.0269318	0.0001733		0.0312725	0.0114796

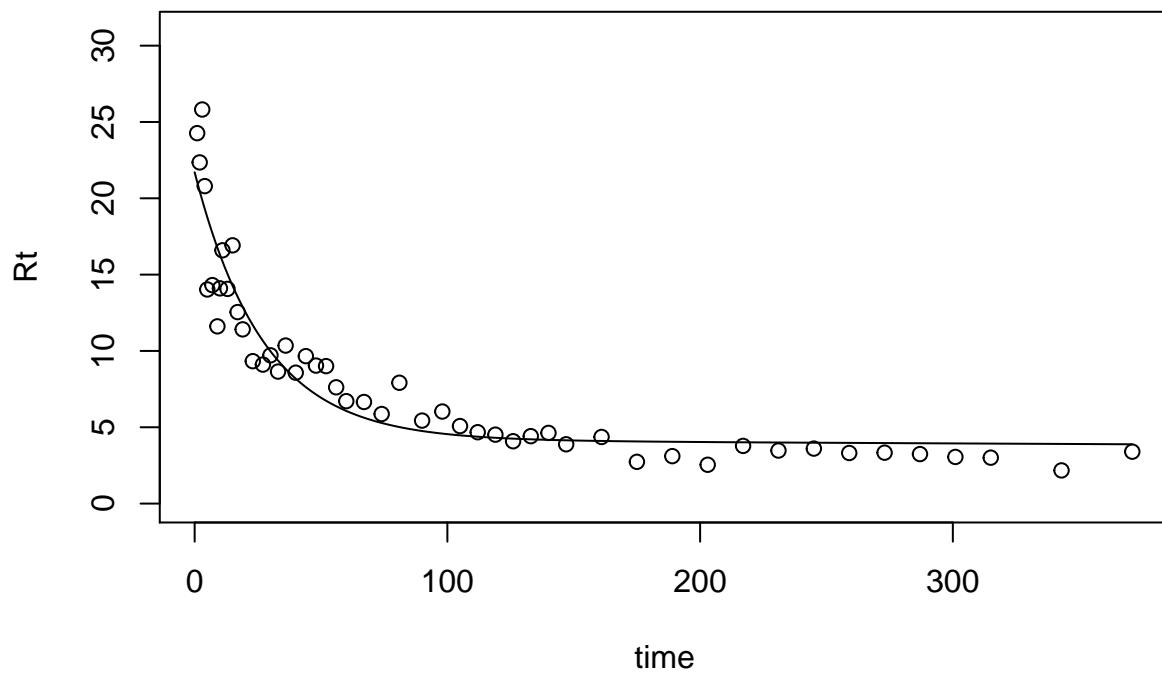
## Variable Site21:

CO2 production rate

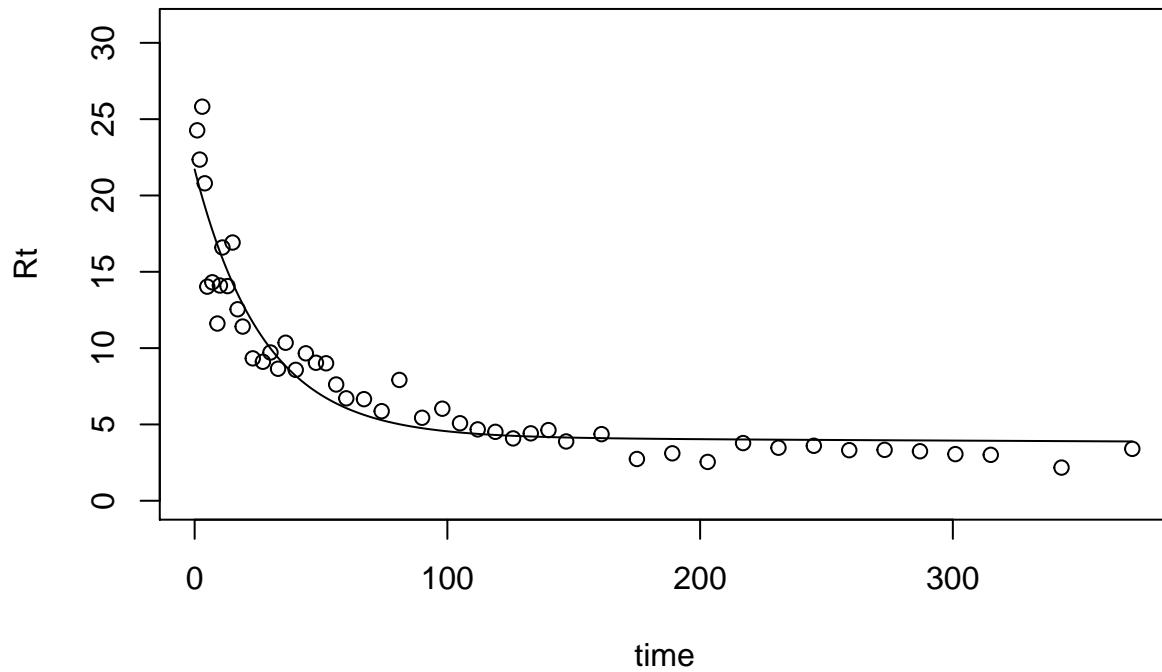
```
## [1] "k1= 0.0367476743826393"
## [2] "k2= 0.00020312265691374"
## [3] "proportion of C0 in pool 1= 0.0225903348545992"
```



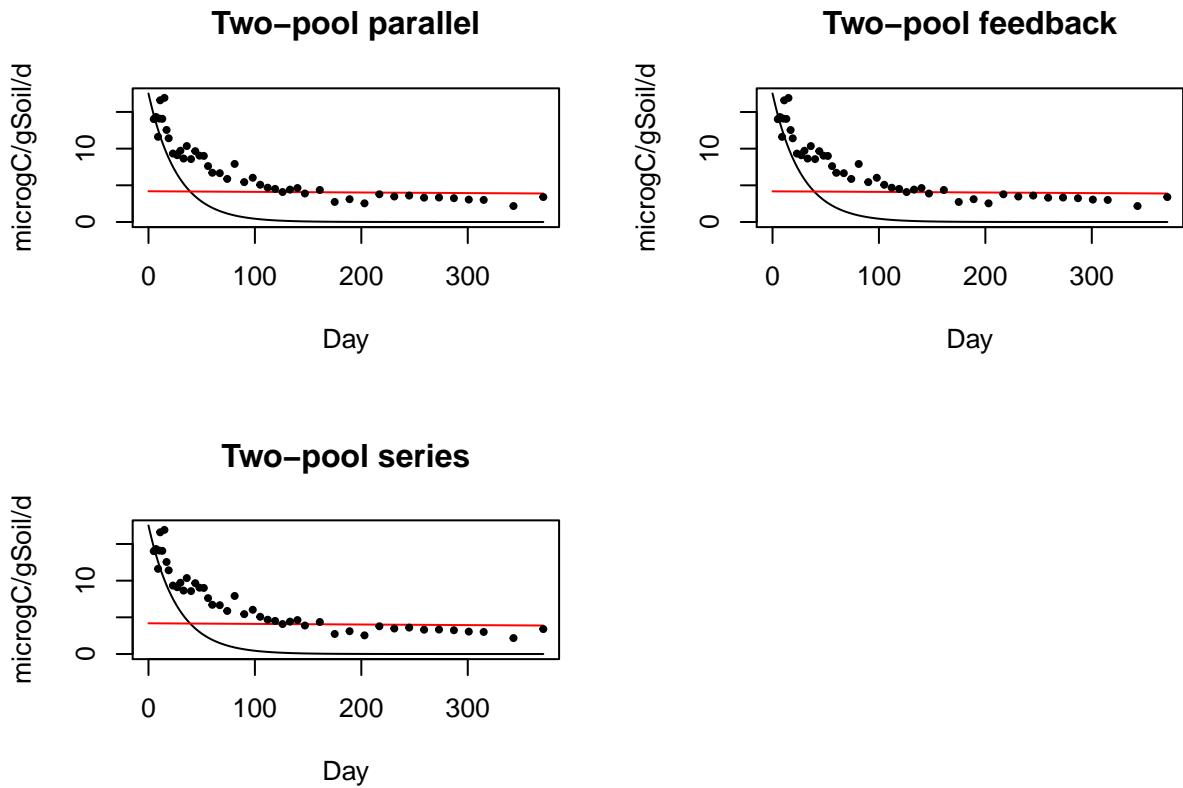
```
## [1] "AIC = 3.44617631432037"
## [1] "k1= 0.0367489184536859"
## [2] "k2= 0.000203126092729954"
## [3] "a21= 0.101370336748583"
## [4] "a12= 1.36861499129282e-05"
## [5] "Proportion of C0 in pool 1= 0.0251537906652759"
```



```
## [1] "AIC = 7.44617631735816"
## [1] "k1= 0.0367487686295873"
## [2] "k2= 0.000203125418781075"
## [3] "a21= 0.017262073156145"
## [4] "Proportion of C0 in pool 1= 0.0229887161473748"
```



```
## [1] "AIC = 5.44617631665434"
```

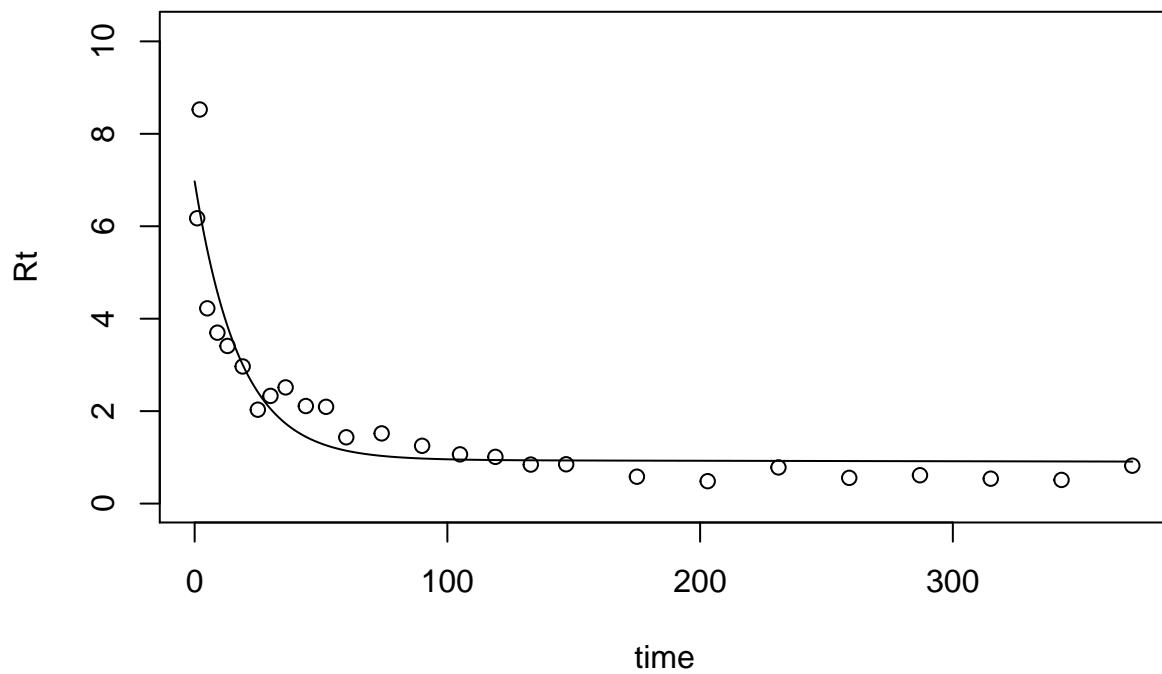


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	3.446176	0.0367477	0.0002031	0.0225903	NA	NA
Two-pool feedback	7.446176	0.0367489	0.0002031	0.0251538	0.1013703	1.37e-05
Two-pool series	5.446176	0.0367488	0.0002031	0.0229887	0.0172621	NA

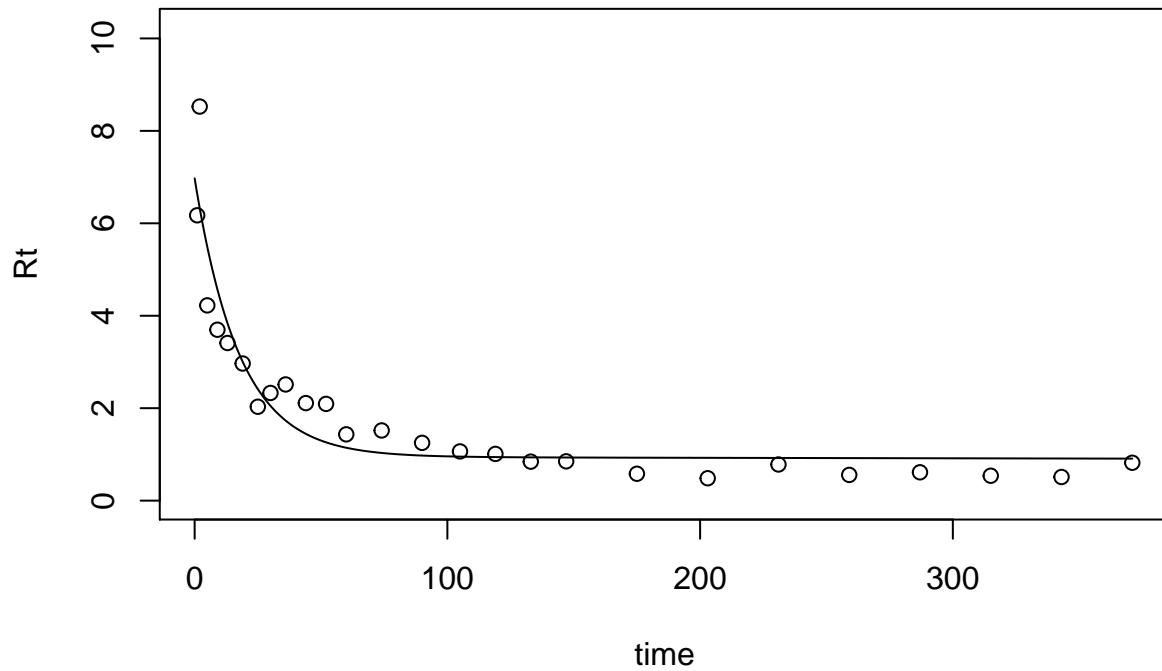
## Variable Site22:

CO2 production rate

```
## [1] "k1= 0.0564603334206298"
## [2] "k2= 0.000111512831717987"
## [3] "proportion of CO in pool 1= 0.0124076076871162"
```

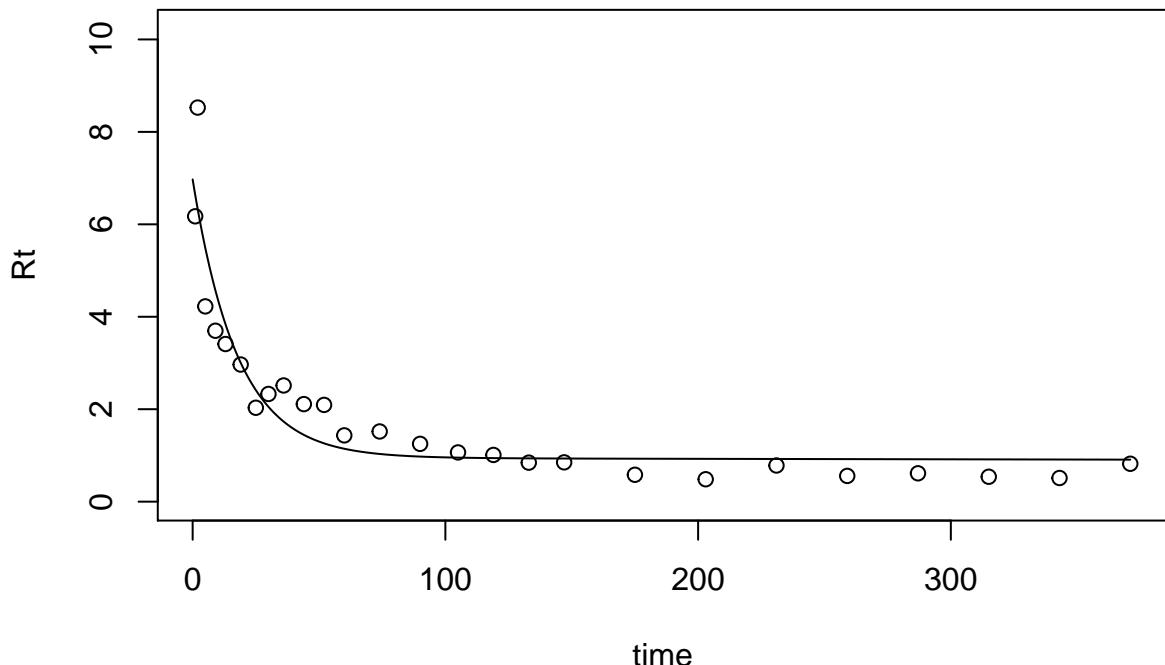


```
## [1] "AIC = 7.74579076581222"
## [1] "k1= 0.0564642535564481"
## [2] "k2= 0.000111517421517747"
## [3] "a21= 0.262271276425431"
## [4] "a12= 2.54956223790237e-05"
## [5] "Proportion of C0 in pool 1= 0.0168296151660206"
```

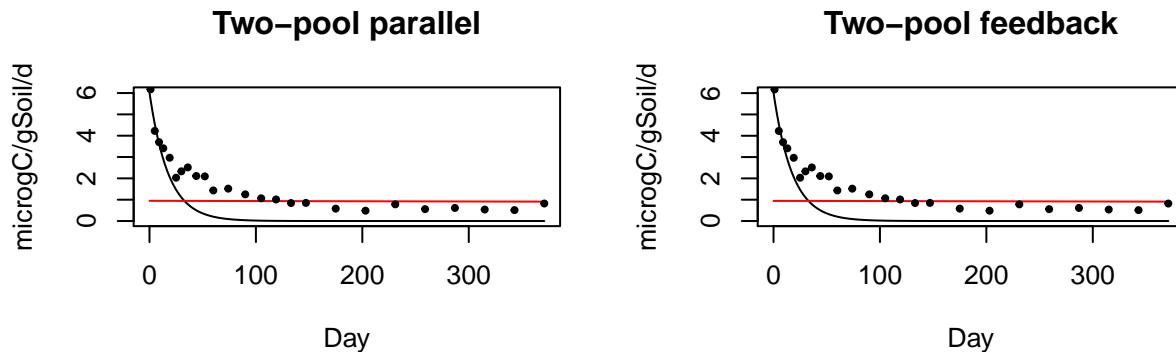


```
## [1] "AIC = 11.7457907743808"
## [1] "k1= 0.0564587365306285"
## [2] "k2= 0.000111511282009578"
## [3] "a21= 0.00241641905747281"
```

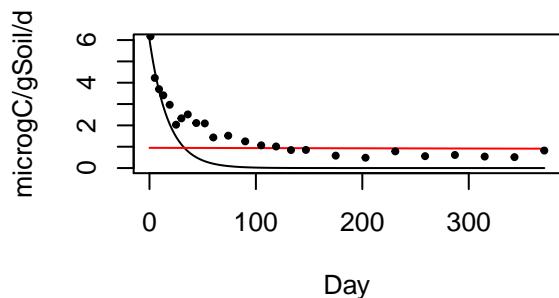
```
## [4] "Proportion of C0 in pool 1= 0.0124378976191859"
```



```
## [1] "AIC = 9.74579075861818"
```



**Two-pool series**



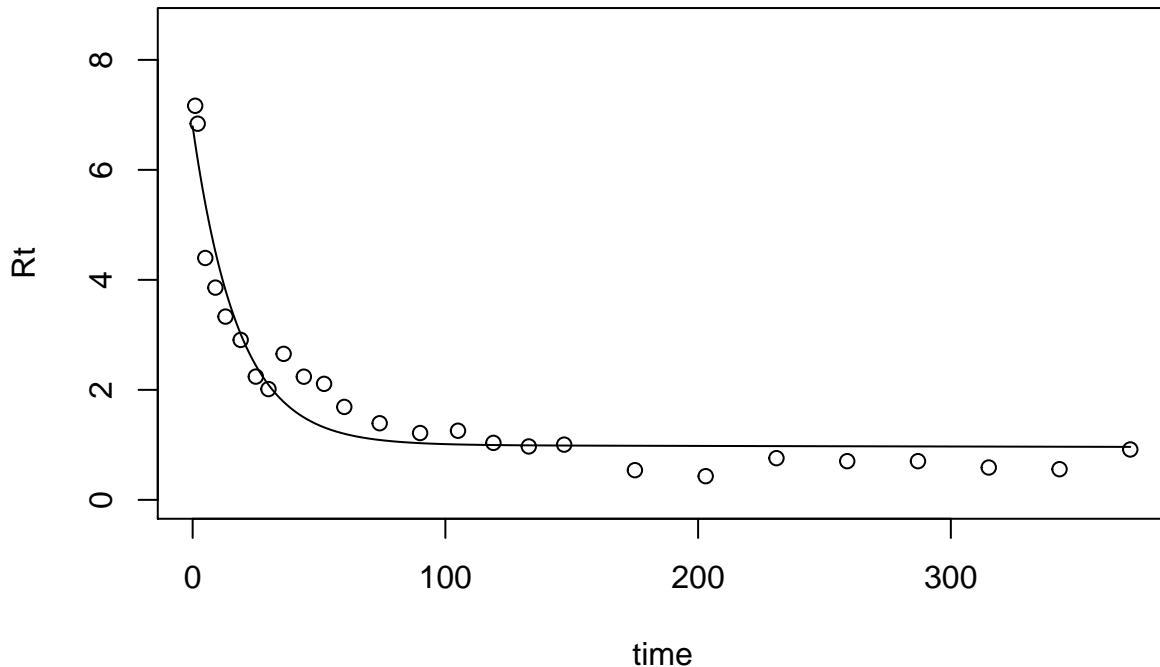
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	7.745791	0.0564603	0.0001115	0.0124076	NA	NA
Two-pool feedback	11.745791	0.0564643	0.0001115	0.0168296	0.2622713	2.55e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	9.745791	0.0564587	0.0001115		0.0124379	0.0024164

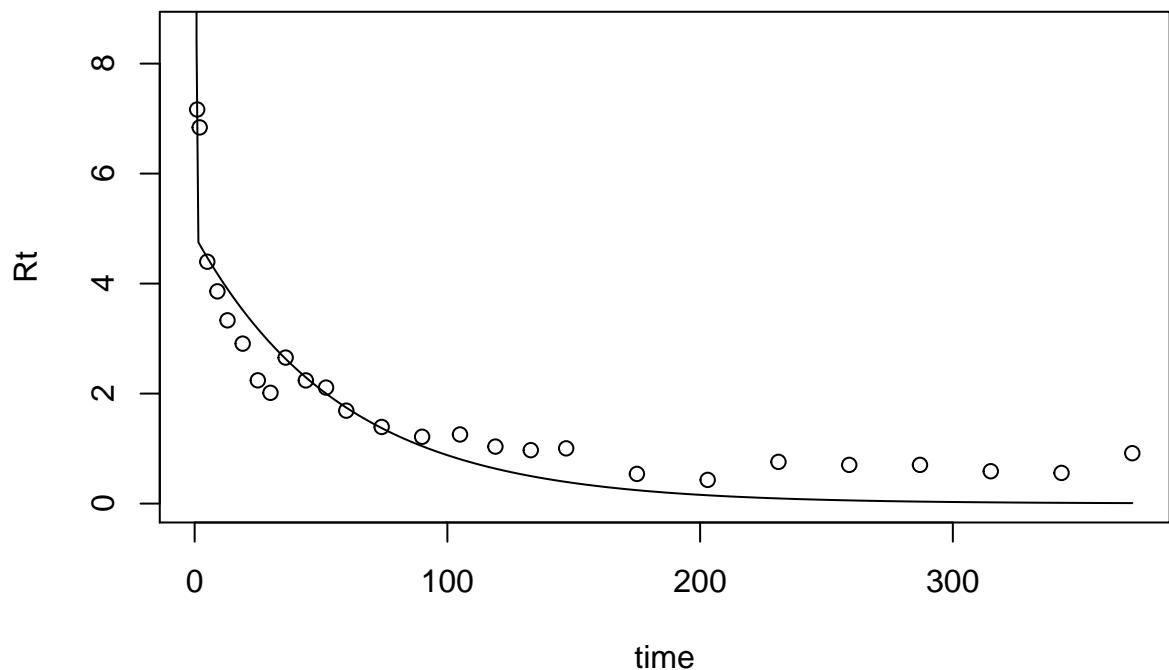
## Variable Site23:

CO2 production rate

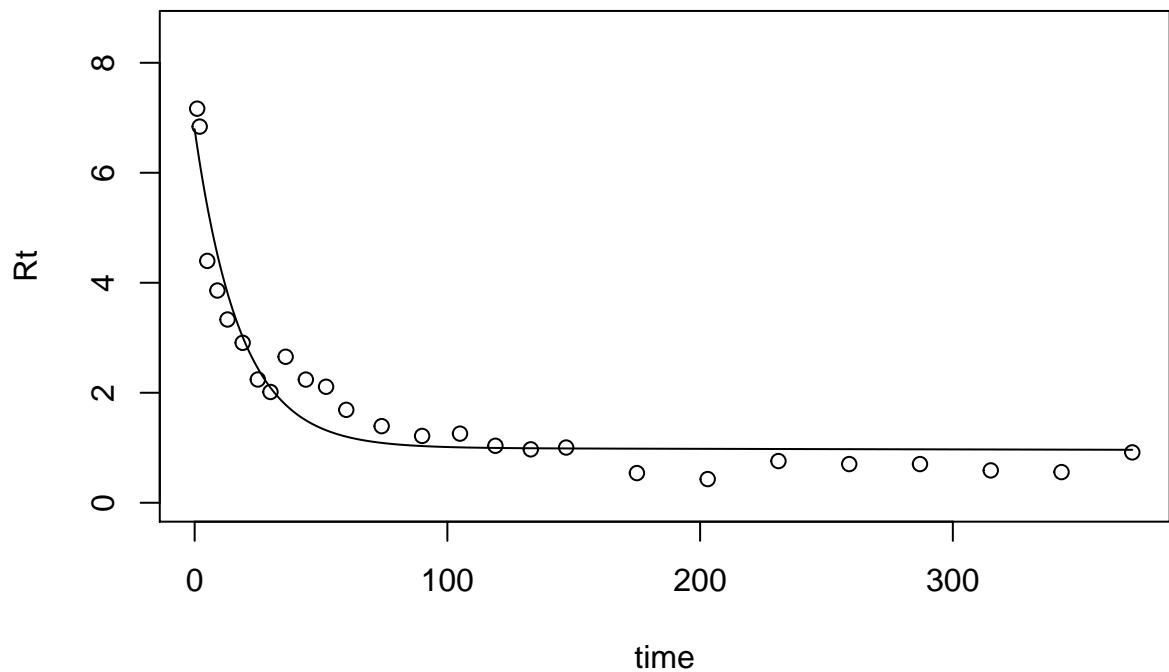
```
## [1] "k1= 0.0555384824801928"
## [2] "k2= 0.000105448929830073"
## [3] "proportion of C0 in pool 1= 0.0108619043597534"
```



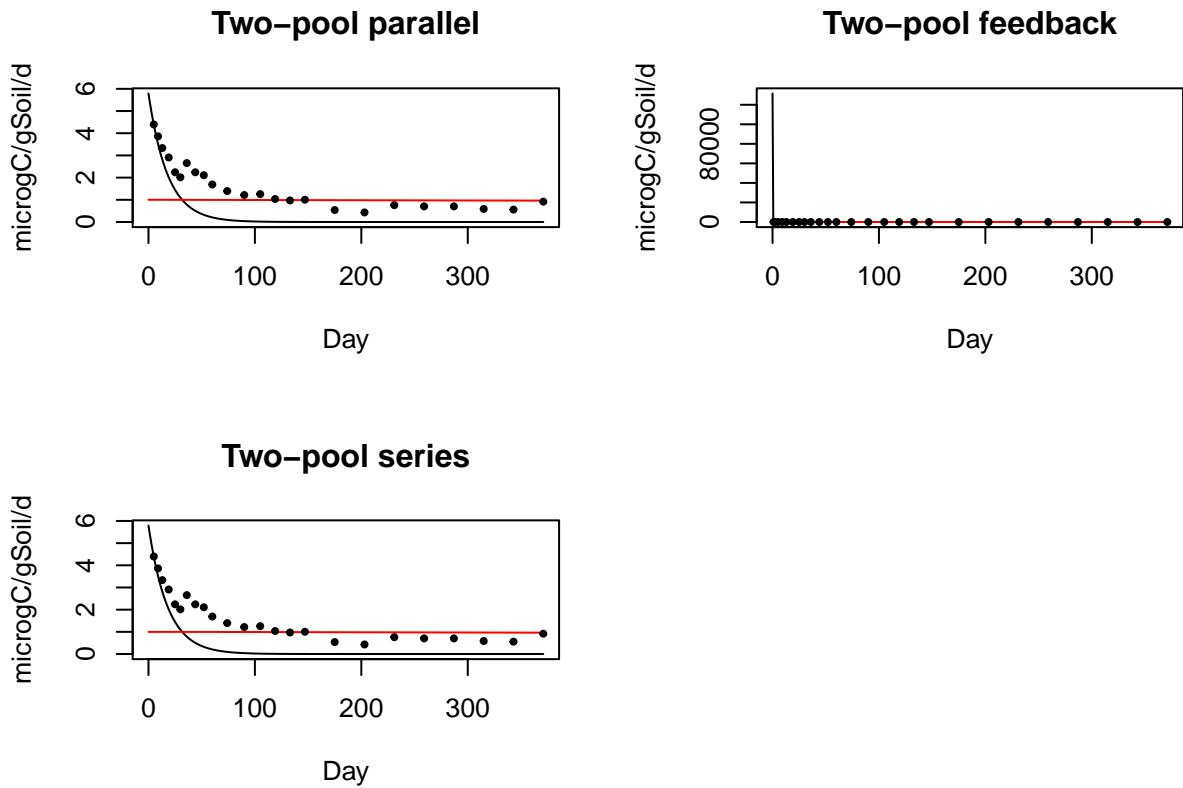
```
## [1] "AIC = 8.94289259752473"
## [1] "k1= 14.1209634432727"
## [2] "k2= 0.0176309596682989"
## [3] "a21= 0.028957009732072"
## [4] "a12= 0.999998119915936"
## [5] "Proportion of C0 in pool 1= 0.999356589063978"
```



```
## [1] "AIC = 11.7300691105531"
## [1] "k1= 0.0555381024544244"
## [2] "k2= 0.000105448593164201"
## [3] "a21= 0.226538857866203"
## [4] "Proportion of C0 in pool 1= 0.0140511369094622"
```



```
## [1] "AIC = 10.9428925958006"
```

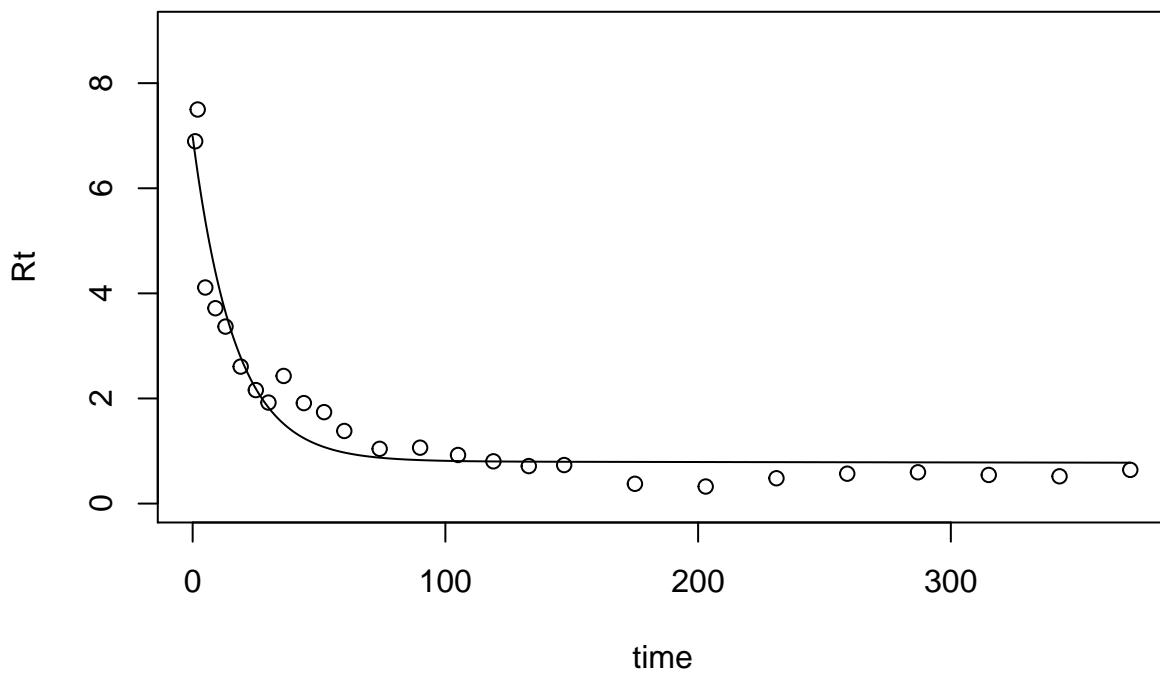


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.942893	0.0555385	0.0001054	0.0108619	NA	NA
Two-pool feedback	11.730069	14.1209634	0.0176310	0.9993566	0.0289570	0.9999981
Two-pool series	10.942893	0.0555381	0.0001054	0.0140511	0.2265389	NA

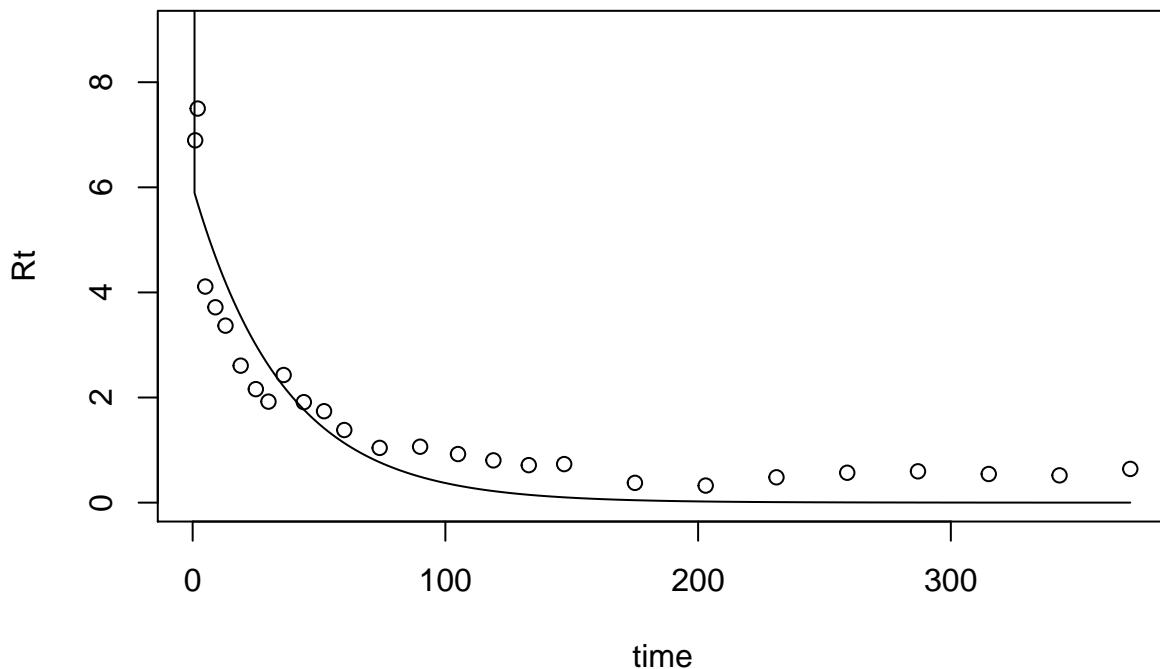
### Variable Site24:

CO2 production rate

```
## [1] "k1= 0.0599038876399336"
## [2] "k2= 9.37126909678408e-05"
## [3] "proportion of C0 in pool 1= 0.0118576195889253"
```

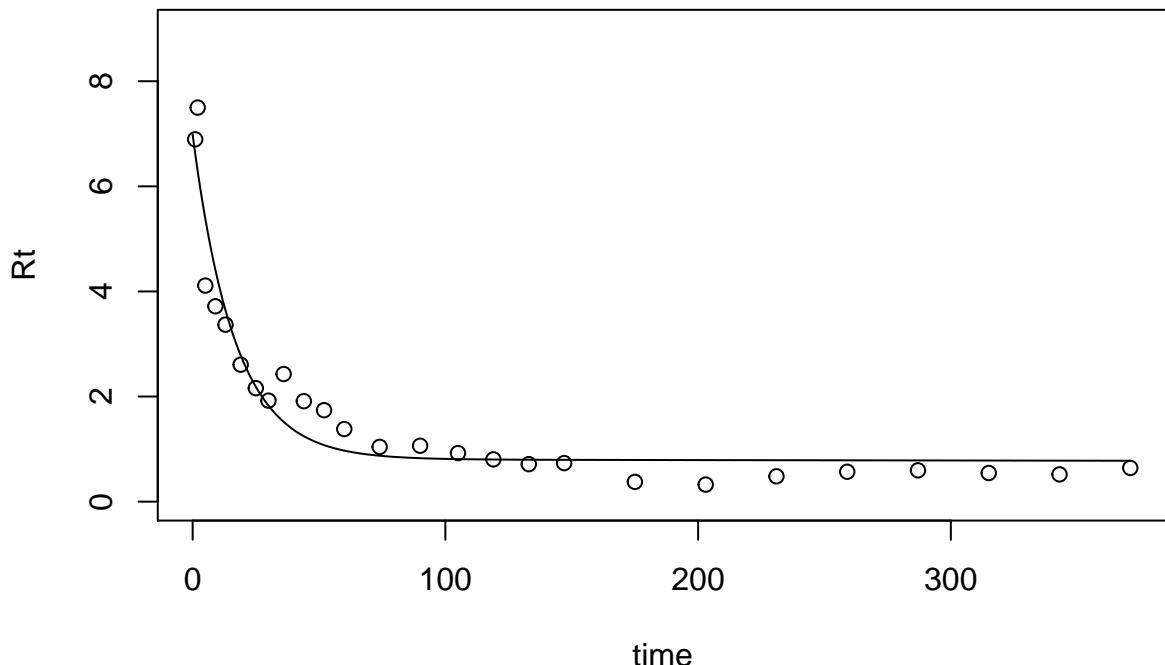


```
## [1] "AIC = 8.78547249536453"
## [1] "k1= 818.793100740234"
## [2] "k2= 0.027809006707401"
## [3] "a21= 0.0246330442233542"
## [4] "a12= 1.22862557389025e-06"
## [5] "Proportion of C0 in pool 1= 0.999759448176471"
```

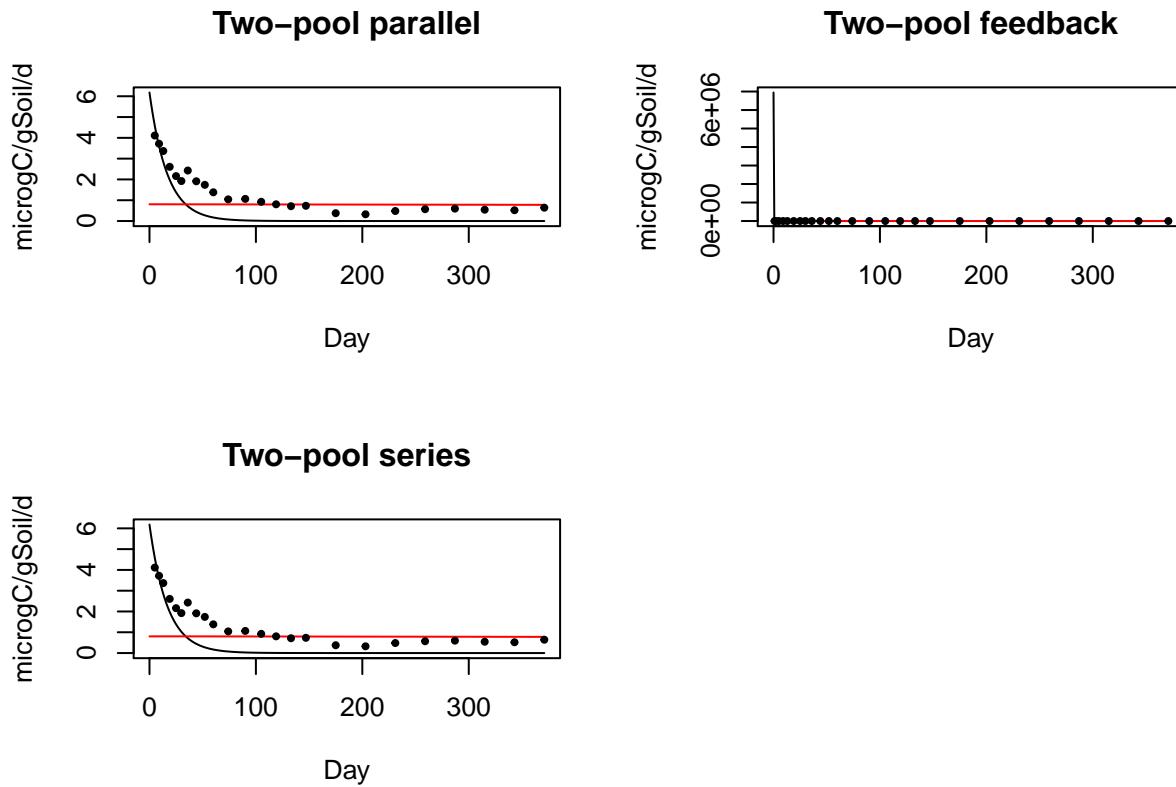


```
## [1] "AIC = 11.3217706844967"
## [1] "k1= 0.0599053965823033"
## [2] "k2= 9.3714041708307e-05"
## [3] "a21= 0.276977925410504"
```

```
## [4] "Proportion of C0 in pool 1= 0.0164094384077683"
```



```
## [1] "AIC = 10.7854724959619"
```



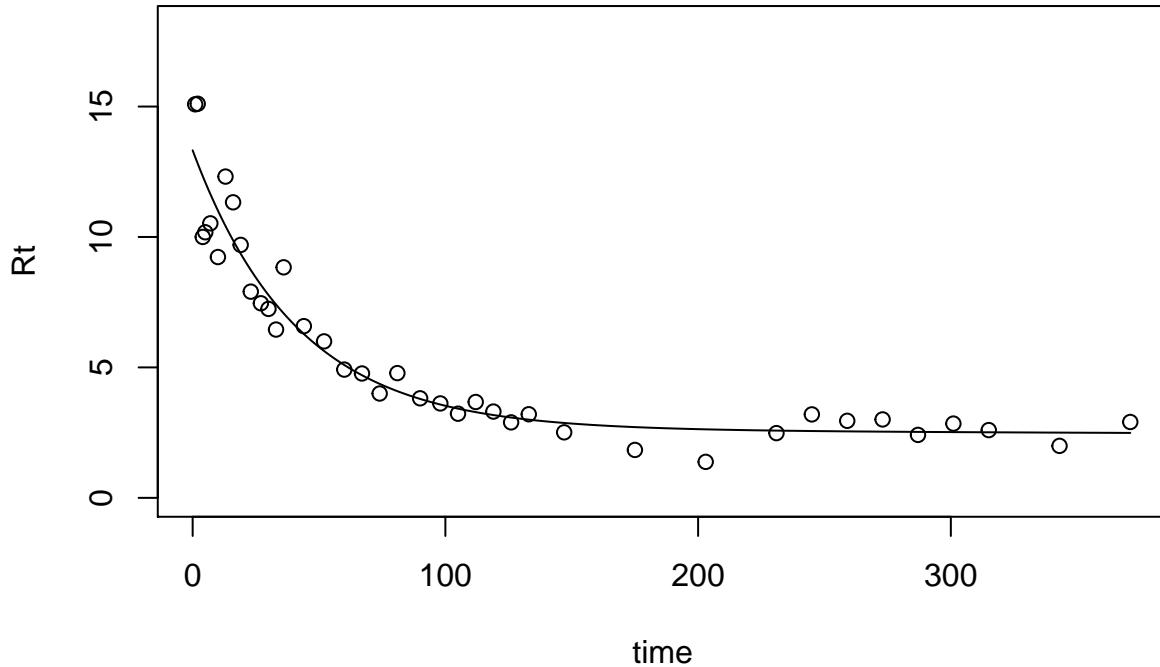
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.785472	0.0599039	0.0000937	0.0118576	NA	NA
Two-pool feedback	11.321771	818.7931007	0.0278090	0.9997594	0.0246330	1.2e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	10.785472	0.0599054	0.0000937	0.0164094	0.2769779	NA

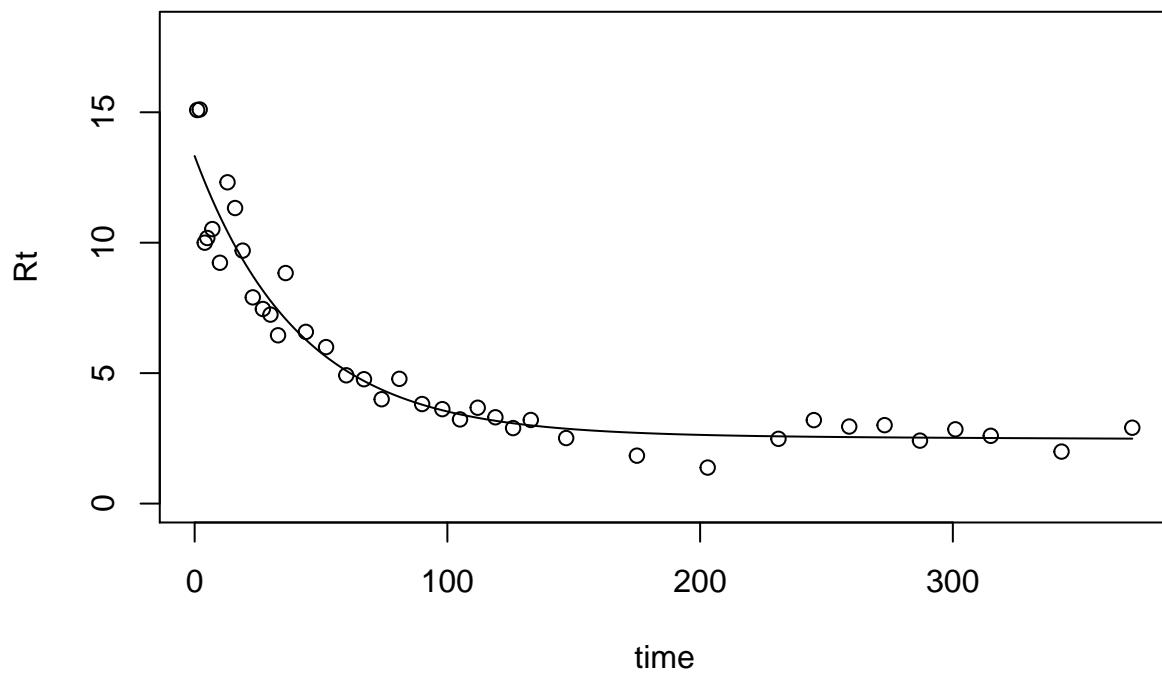
## Variable Site25:

CO2 production rate

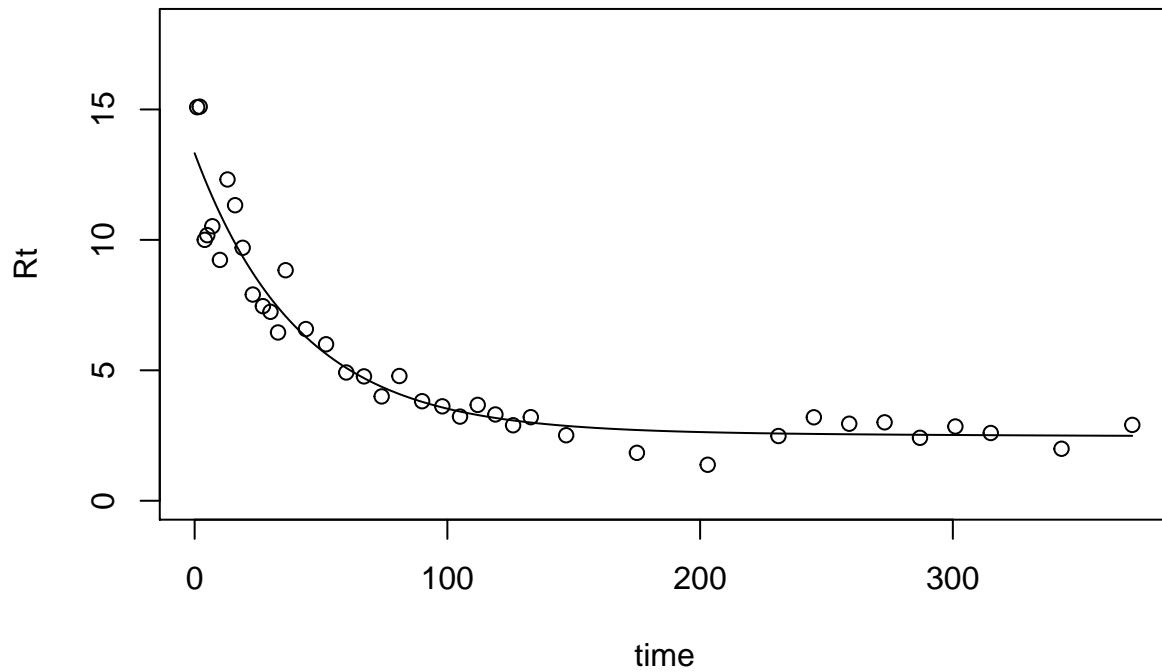
```
## [1] "k1= 0.0242926467807851"
## [2] "k2= 0.000144546190308214"
## [3] "proportion of C0 in pool 1= 0.023674175781559"
```



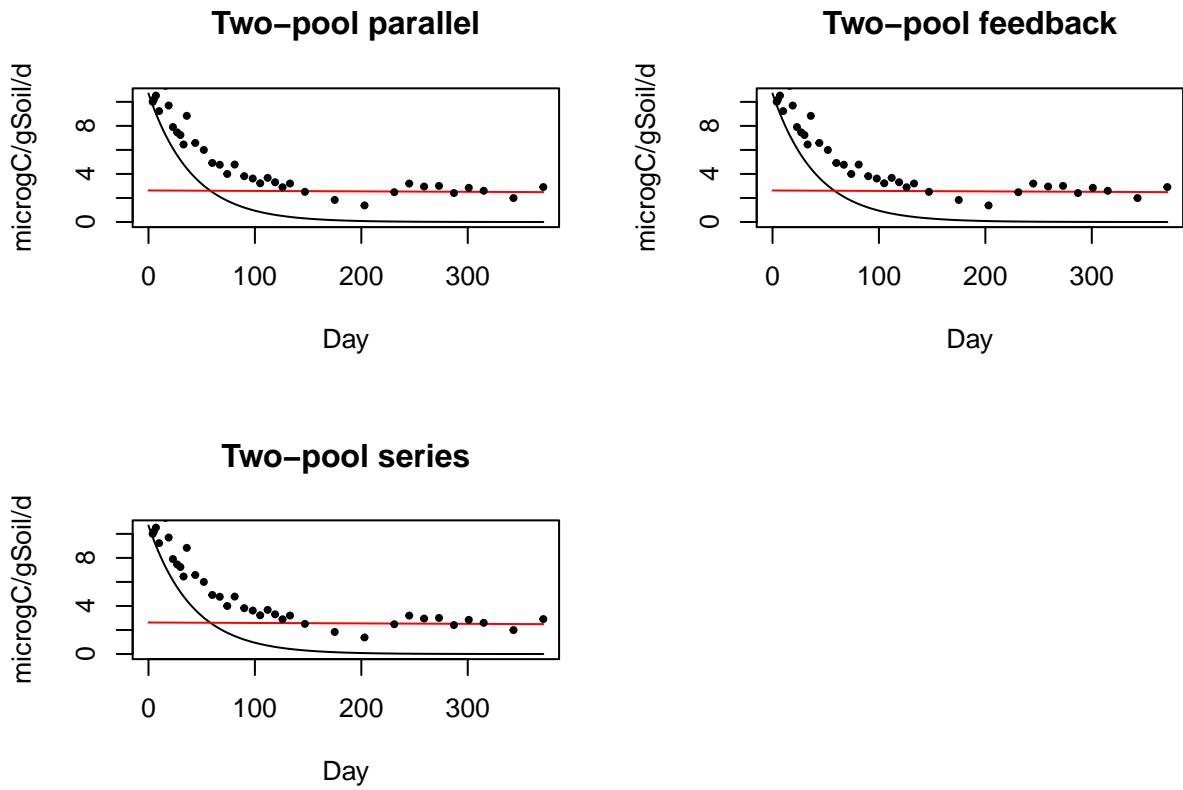
```
## [1] "AIC = 5.99115587180991"
## [1] "k1= 0.0242936739510469"
## [2] "k2= 0.000144550654162057"
## [3] "a21= 0.0218540785815947"
## [4] "a12= 2.49612791404785e-05"
## [5] "Proportion of C0 in pool 1= 0.0242054821554298"
```



```
## [1] "AIC =  9.991155874049"
## [1] "k1=  0.0242936227017786"
## [2] "k2=  0.000144550181867189"
## [3] "a21=  0.0107186421515926"
## [4] "Proportion of C0 in pool 1=  0.0239312606246744"
```



```
## [1] "AIC =  7.99115587427887"
```

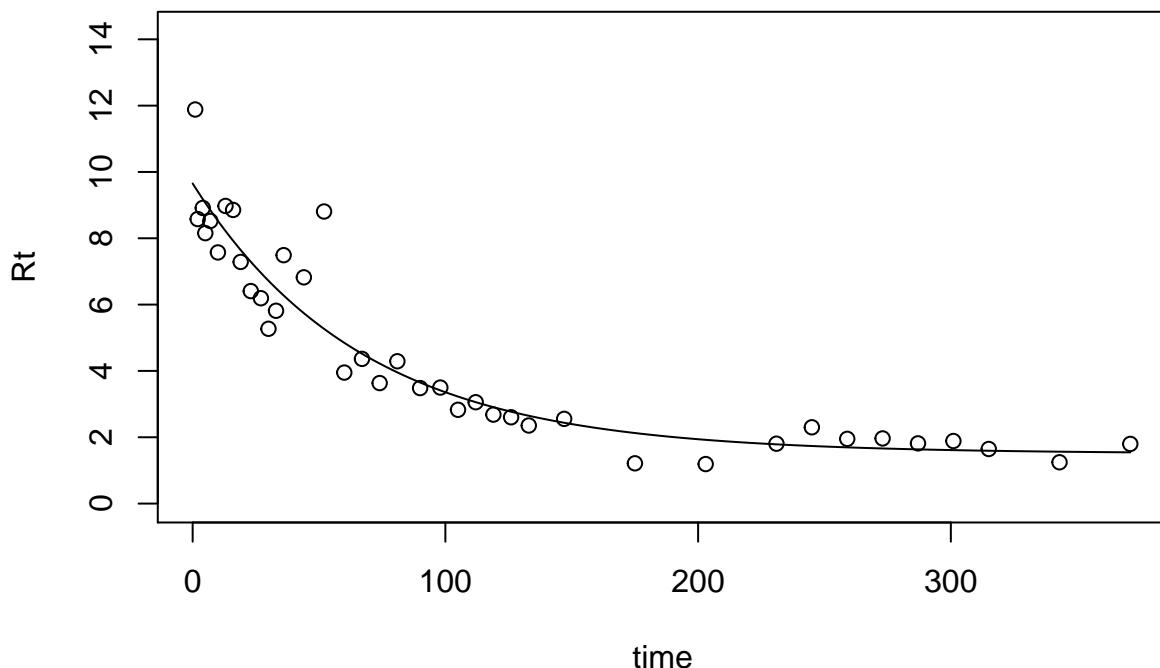


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	5.991156	0.0242926	0.0001445	0.0236742	NA	NA
Two-pool feedback	9.991156	0.0242937	0.0001446	0.0242055	0.0218541	2.5e-05
Two-pool series	7.991156	0.0242936	0.0001446	0.0239313	0.0107186	NA

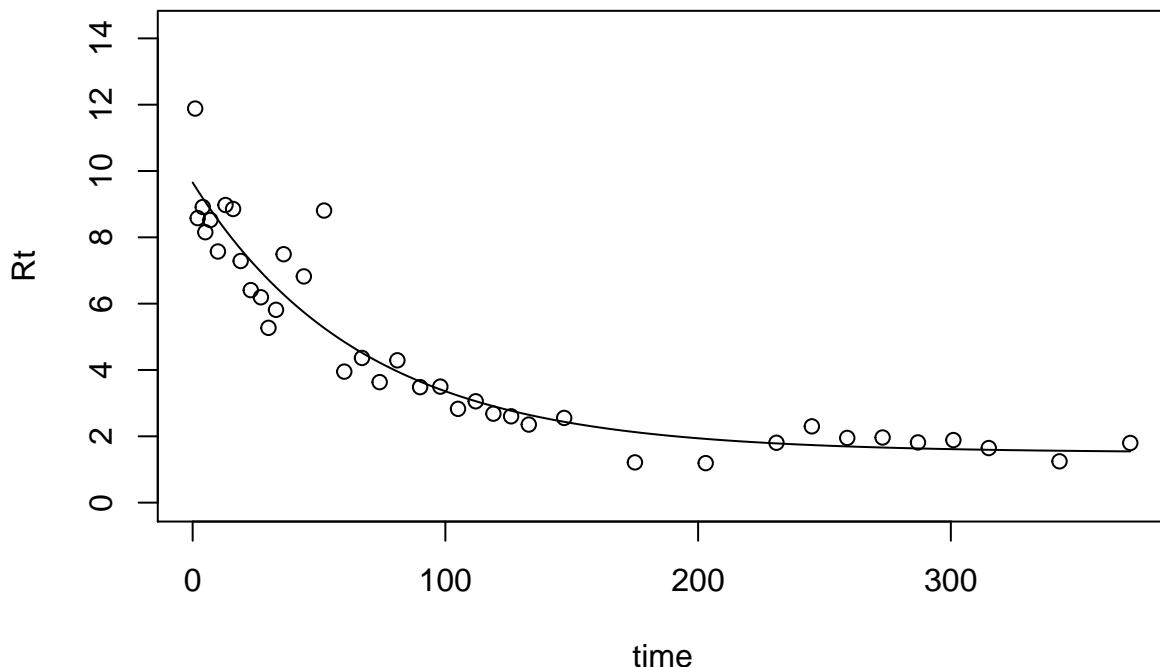
## Variable Site26:

CO2 production rate

```
## [1] "k1= 0.0149824886514182"
## [2] "k2= 8.60529551463372e-05"
## [3] "proportion of C0 in pool 1= 0.0288788564603088"
```

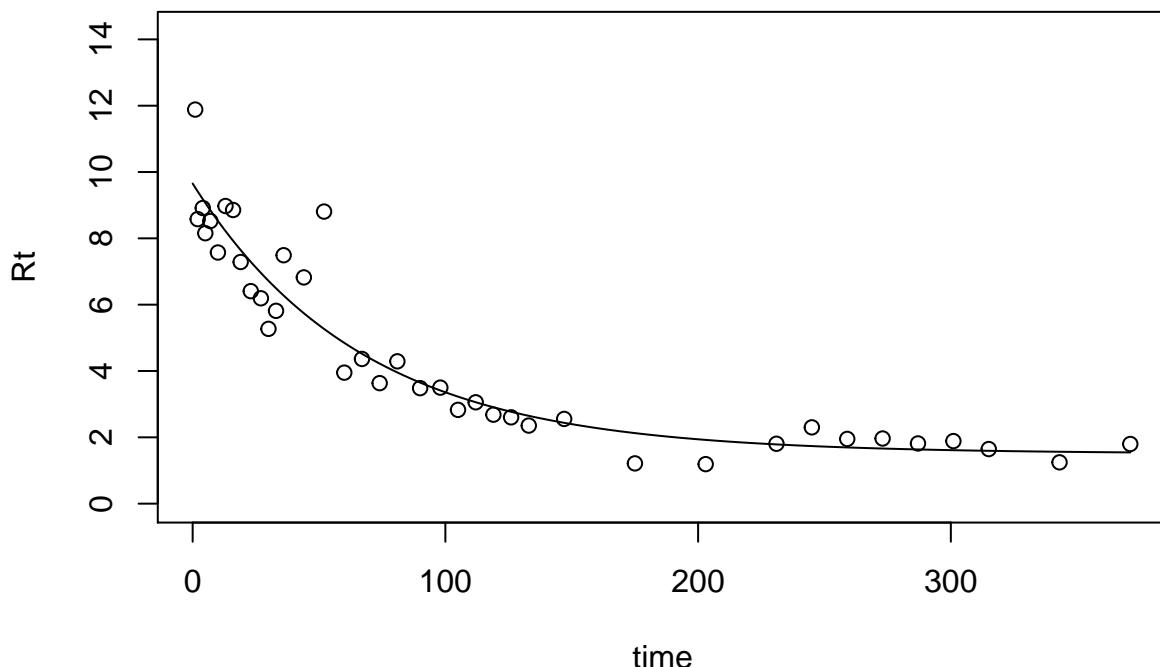


```
## [1] "AIC = 6.35921546651096"
## [1] "k1= 0.0149824586047246"
## [2] "k2= 8.60528677867463e-05"
## [3] "a21= 0.0315954258705579"
## [4] "a12= 3.41069658858495e-05"
## [5] "Proportion of C0 in pool 1= 0.029826723826354"
```

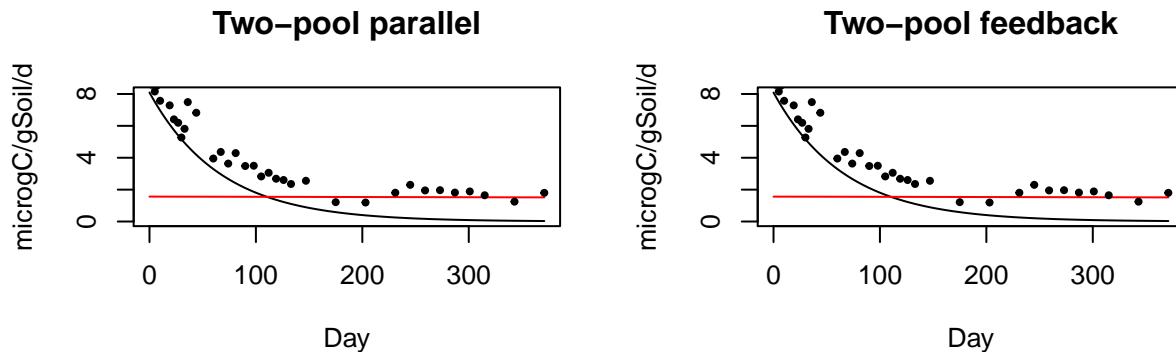


```
## [1] "AIC = 10.3592154643695"
## [1] "k1= 0.0149824708145515"
## [2] "k2= 8.60528445377228e-05"
## [3] "a21= 0.0258218083167392"
```

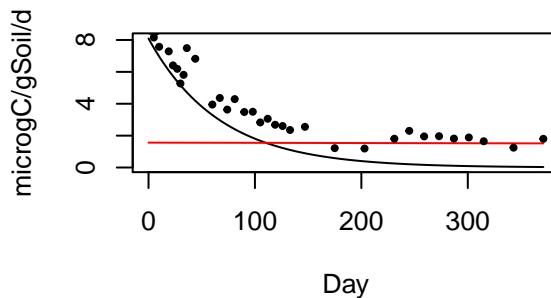
```
## [4] "Proportion of C0 in pool 1= 0.029648858000612"
```



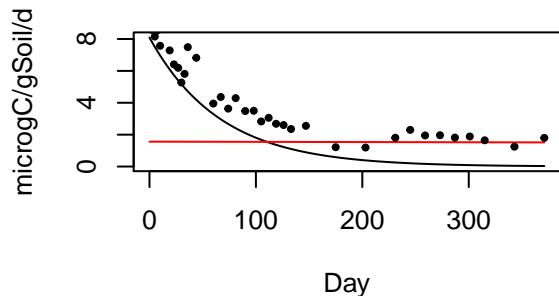
```
## [1] "AIC = 8.35921546641925"
```



### Two-pool feedback



### Two-pool series



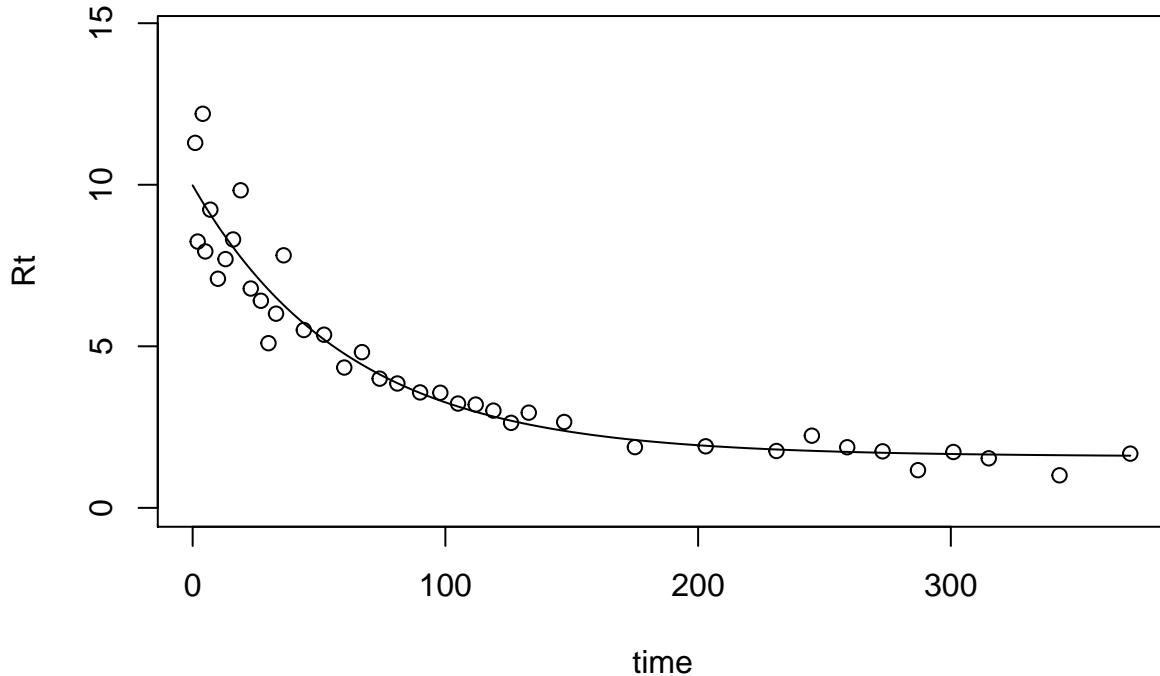
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.359216	0.0149825	8.61e-05	0.0288789	NA	NA
Two-pool feedback	10.359215	0.0149825	8.61e-05	0.0298267	0.0315954	3.41e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.359215	0.0149825	8.61e-05	0.0296489	0.0258218	NA

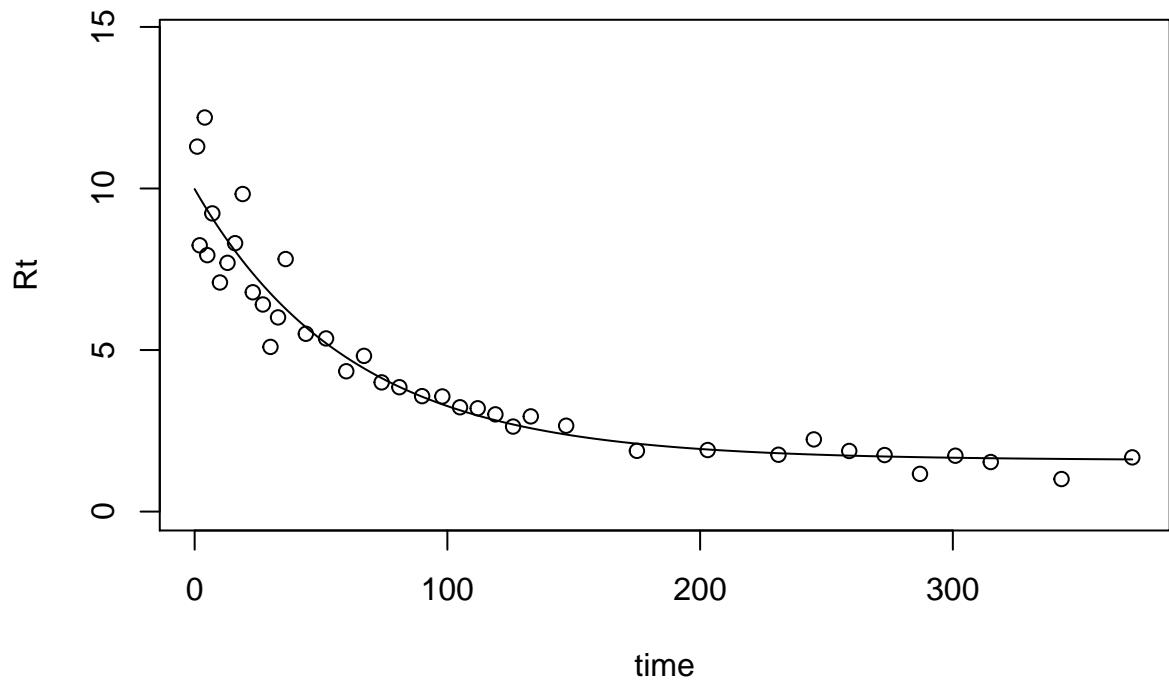
## Variable Site27:

CO2 production rate

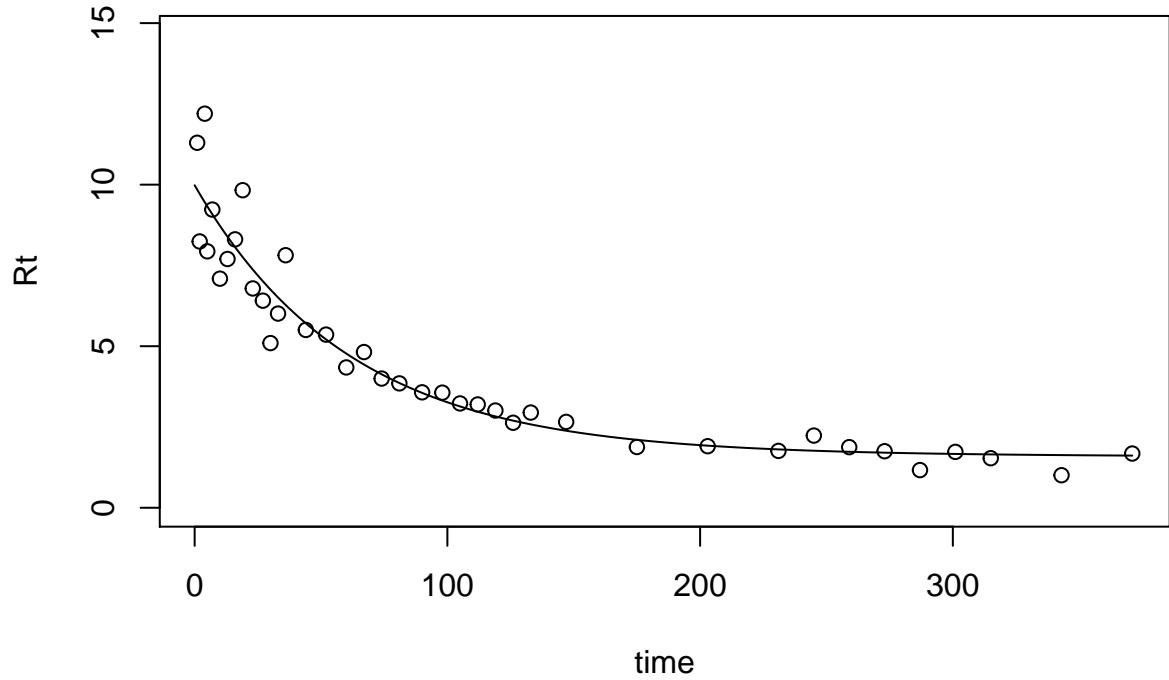
```
## [1] "k1= 0.0162972832571775"
## [2] "k2= 8.22520329818669e-05"
## [3] "proportion of C0 in pool 1= 0.0249568682536521"
```



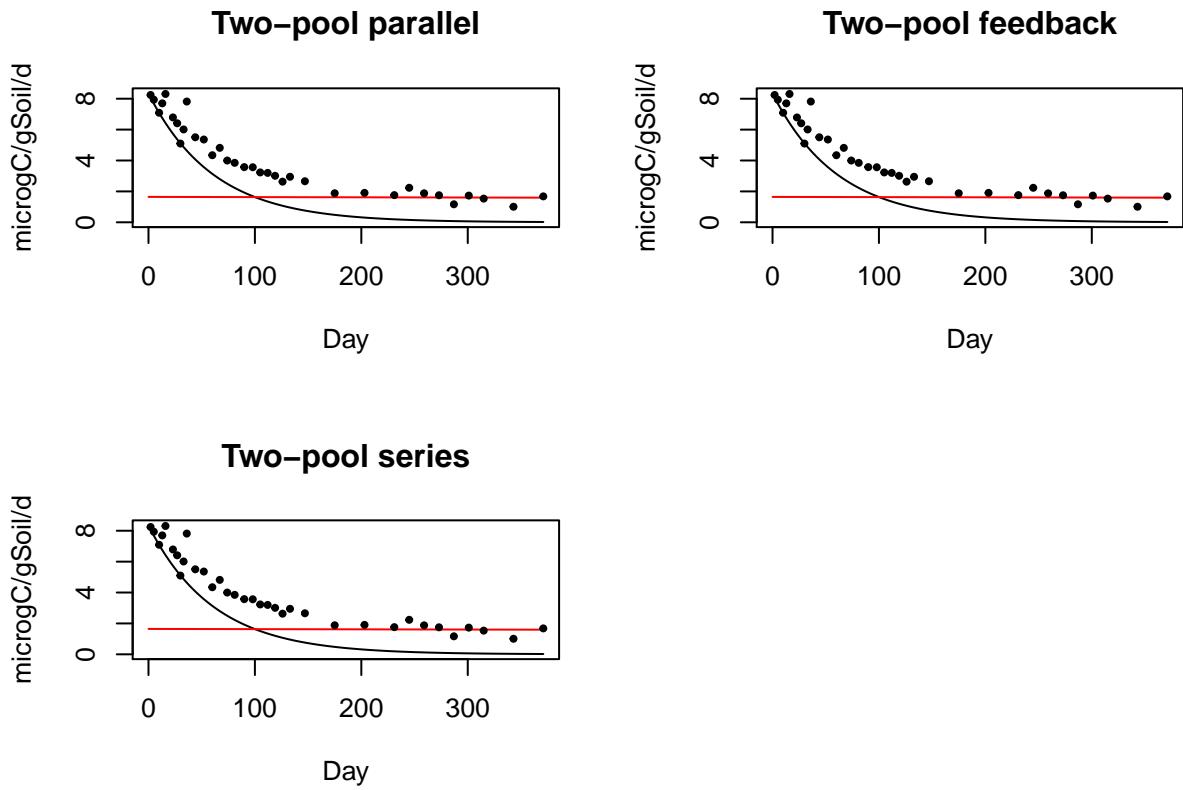
```
## [1] "AIC = 6.58836191589095"
## [1] "k1= 0.01629731929508"
## [2] "k2= 8.225230588223e-05"
## [3] "a21= 0.0288587999737768"
## [4] "a12= 3.89811981015287e-05"
## [5] "Proportion of C0 in pool 1= 0.0257023049763335"
```



```
## [1] "AIC = 10.5883619130414"
## [1] "k1= 0.0162975021489366"
## [2] "k2= 8.22531324800033e-05"
## [3] "a21= 0.0124170474749703"
## [4] "Proportion of C0 in pool 1= 0.0252718756138282"
```



```
## [1] "AIC = 8.58836191540104"
```

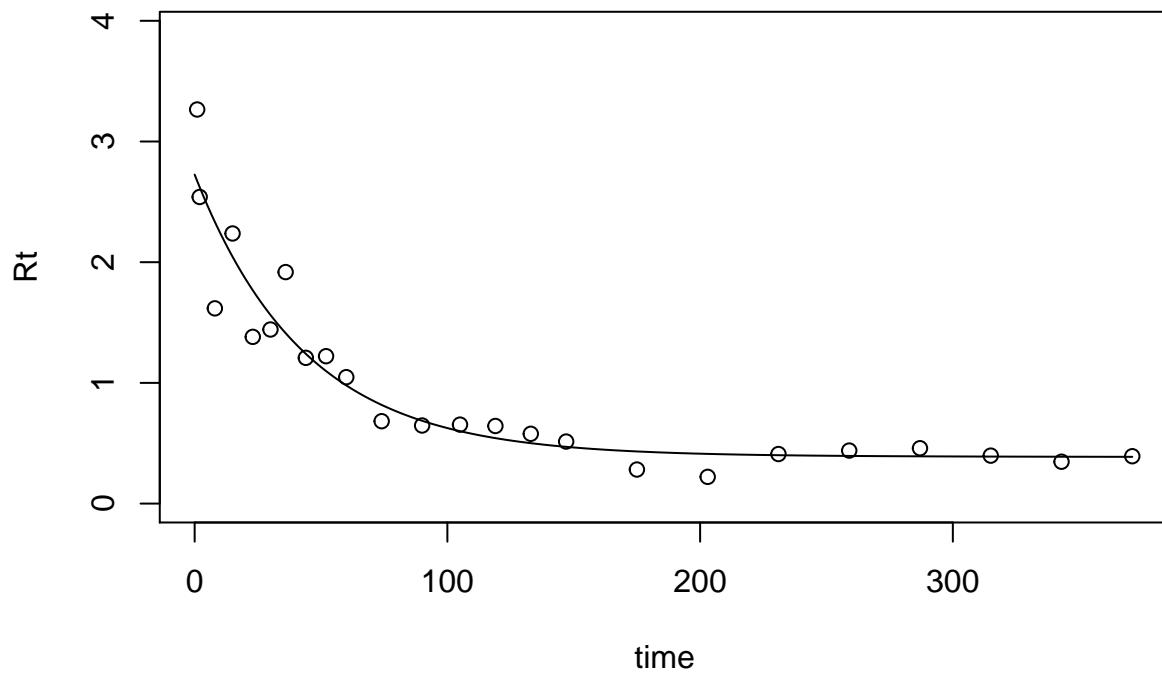


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.588362	0.0162973	8.23e-05	0.0249569	NA	NA
Two-pool feedback	10.588362	0.0162973	8.23e-05	0.0257023	0.0288588	3.9e-05
Two-pool series	8.588362	0.0162975	8.23e-05	0.0252719	0.0124170	NA

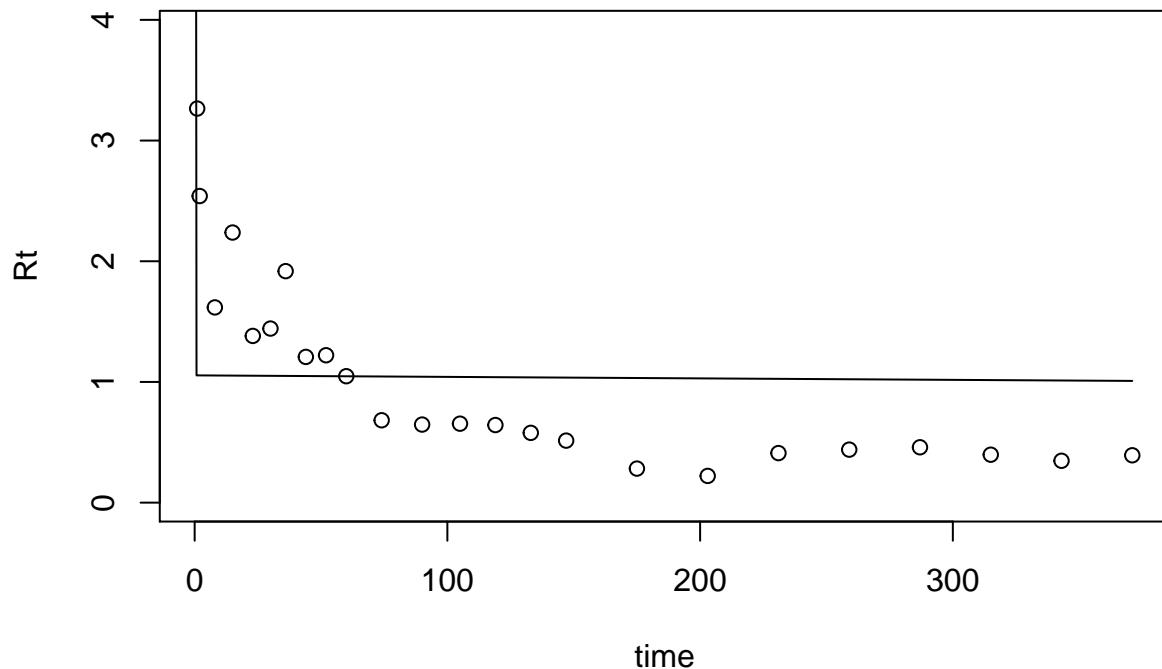
## Variable Site28:

CO2 production rate

```
## [1] "k1= 0.0229986907021708"
## [2] "k2= 4.52187038016449e-05"
## [3] "proportion of C0 in pool 1= 0.0115253806136047"
```

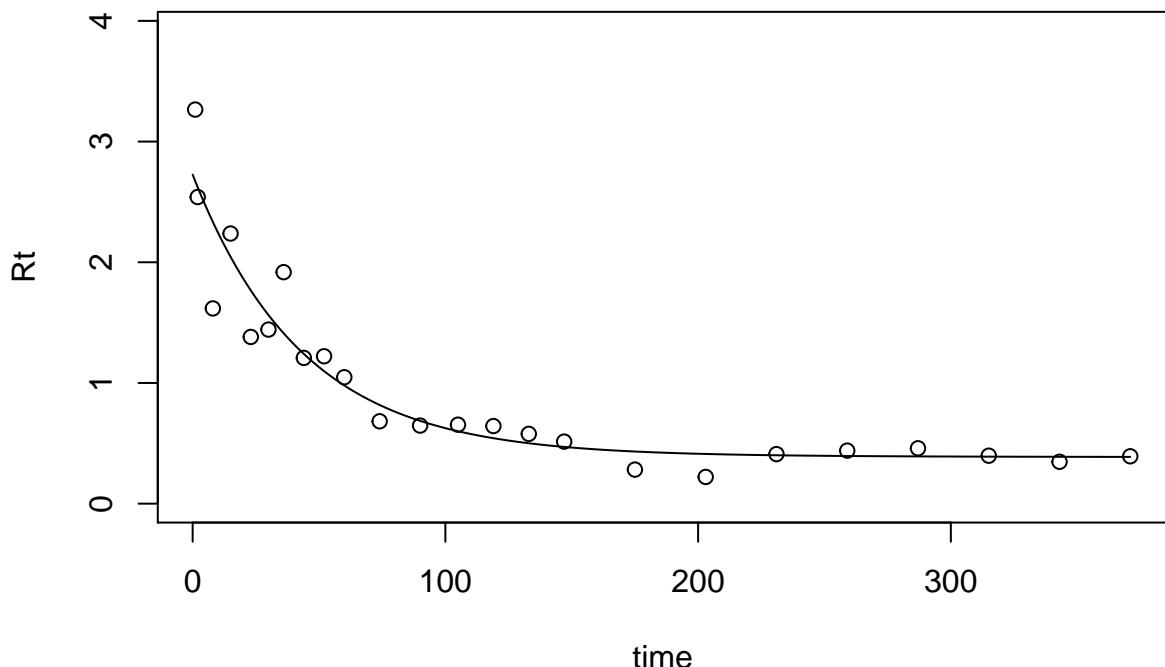


```
## [1] "AIC = 11.6047736426247"
## [1] "k1= 59.9234410597467"
## [2] "k2= 0.0166843795163432"
## [3] "a21= 0.992855317138496"
## [4] "a12= 0.999960650434301"
## [5] "Proportion of C0 in pool 1= 0.00442394741056346"
```

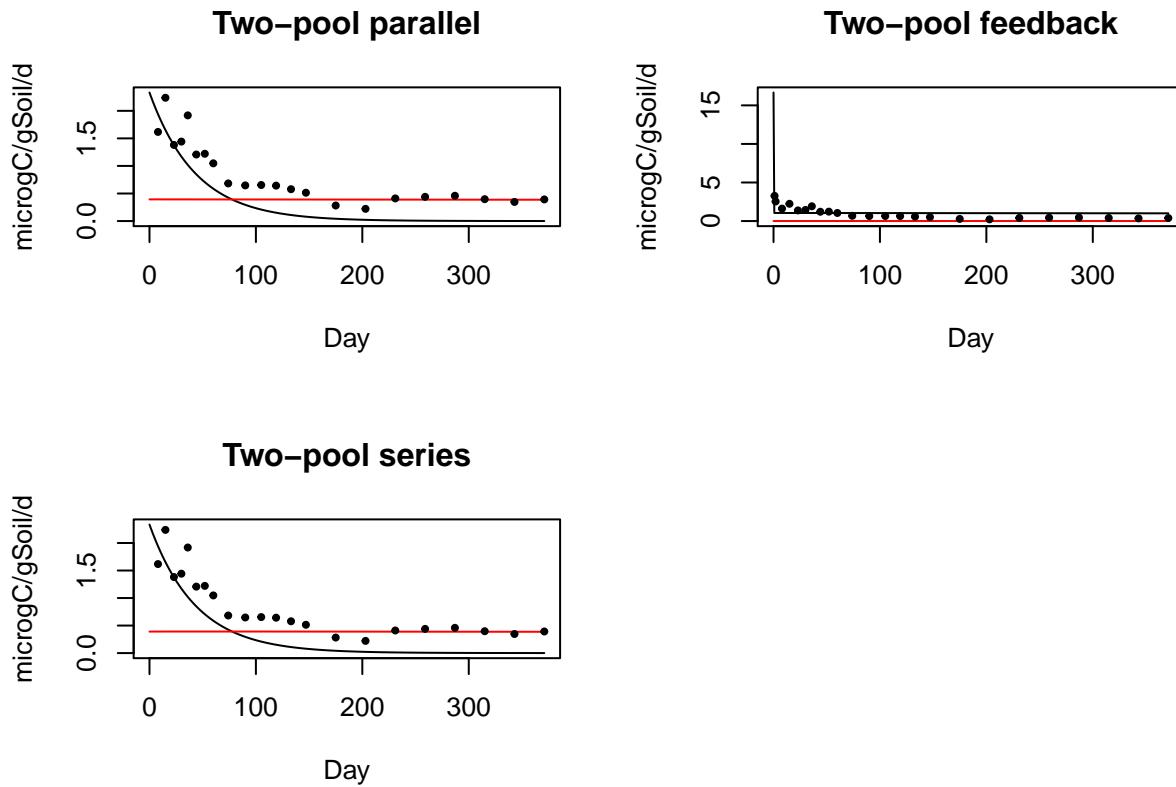


```
## [1] "AIC = 11.018631089673"
## [1] "k1= 0.0229984365087037"
## [2] "k2= 4.52180922711352e-05"
## [3] "a21= 0.373330492307641"
```

```
## [4] "Proportion of C0 in pool 1= 0.0184130358793691"
```



```
## [1] "AIC = 13.604773620702"
```



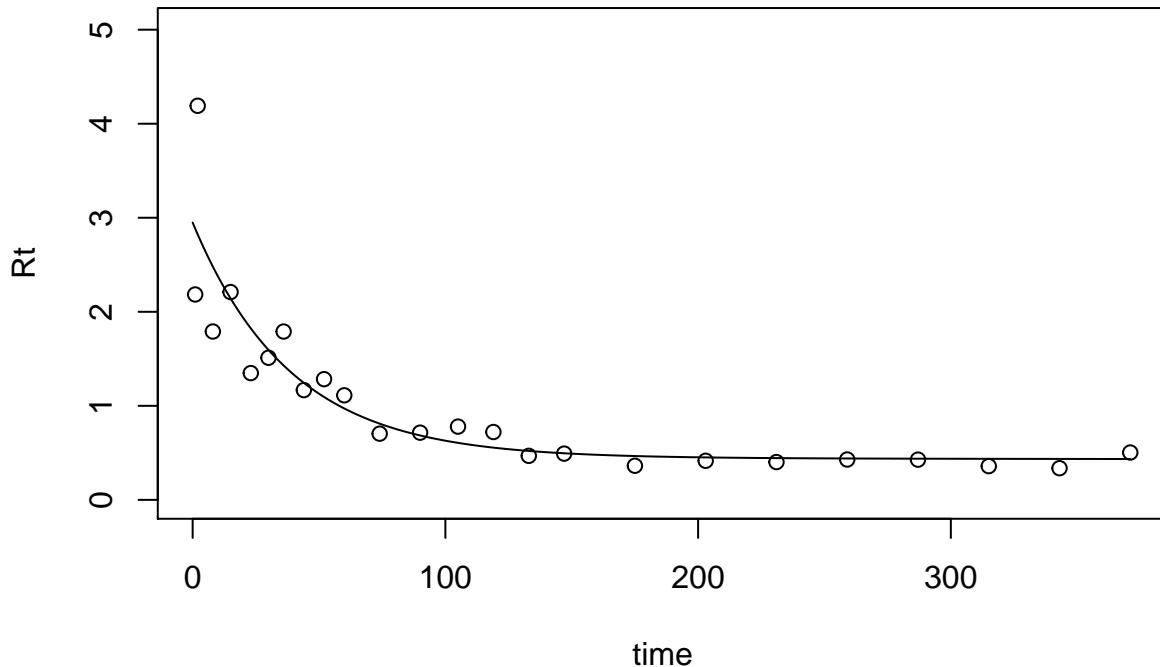
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	11.60477	0.0229987	0.0000452	0.0115254	NA	NA
Two-pool feedback	11.01863	59.9234411	0.0166844	0.0044239	0.9928553	0.9999607

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12	
Two-pool series	13.60477	0.0229984	0.0000452		0.0184130	0.3733305	NA

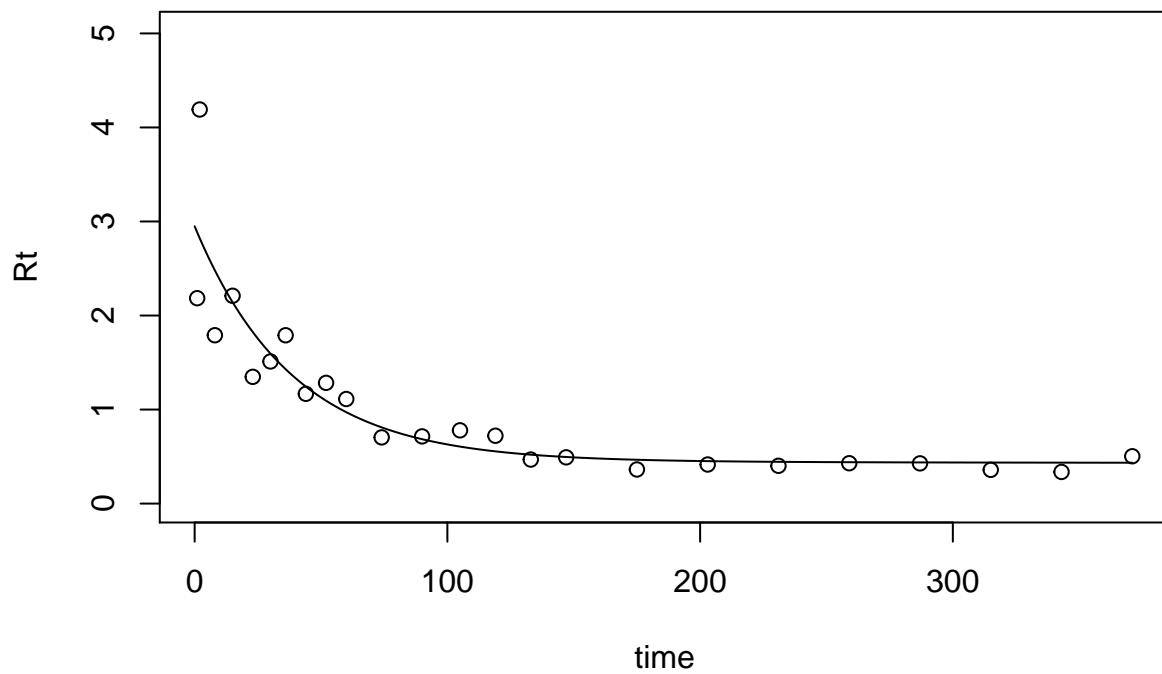
## Variable Site29:

CO2 production rate

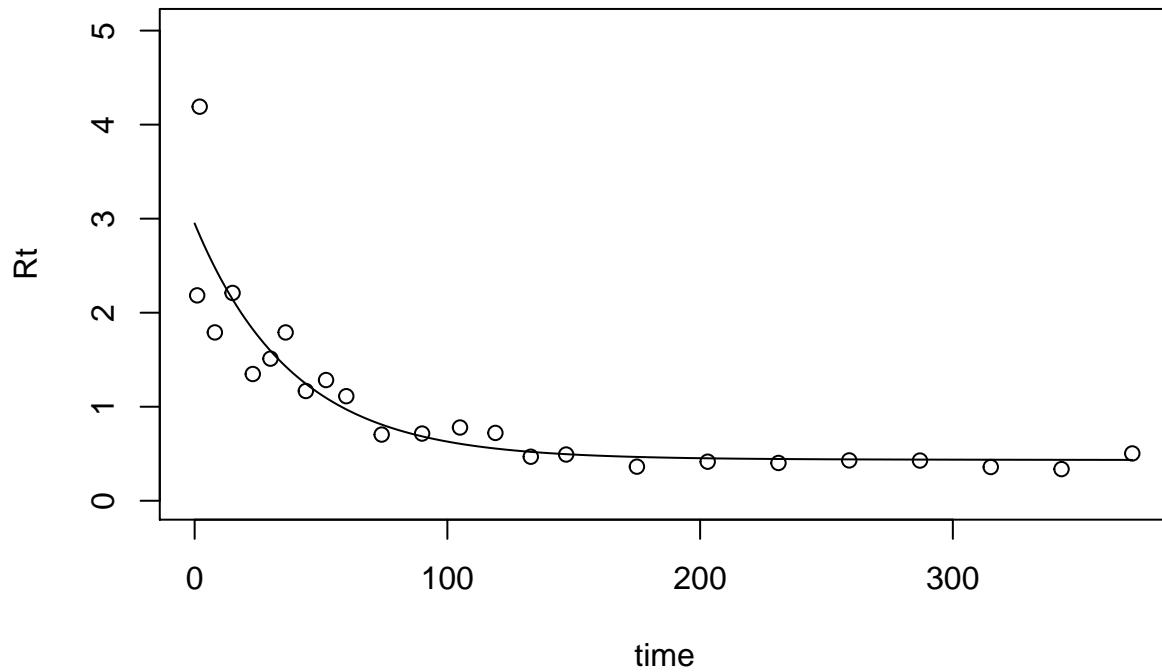
```
## [1] "k1= 0.0258888773067719"
## [2] "k2= 5.46899769018754e-05"
## [3] "proportion of C0 in pool 1= 0.0118039723912726"
```



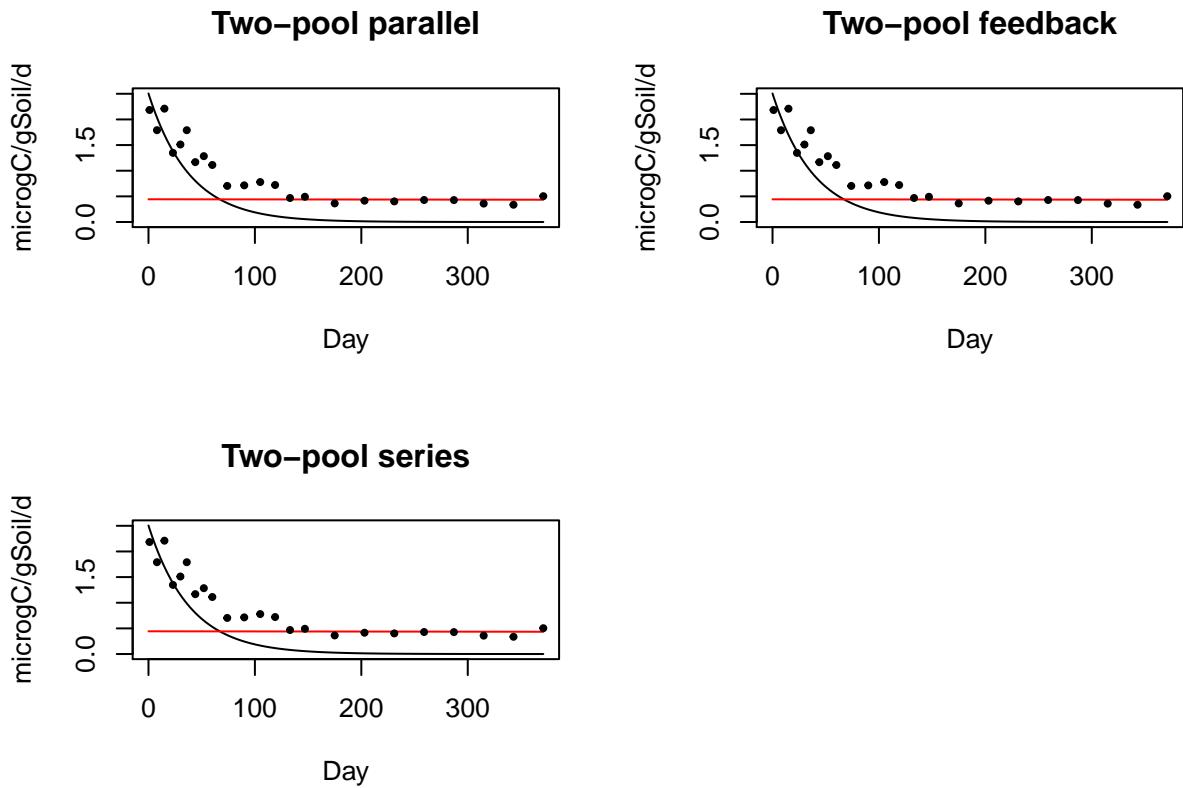
```
## [1] "AIC = 9.92236907388202"
## [1] "k1= 0.025888509008494"
## [2] "k2= 5.46897870496845e-05"
## [3] "a21= 0.172867421928001"
## [4] "a12= 5.12304462786939e-05"
## [5] "Proportion of C0 in pool 1= 0.0142773786638409"
```



```
## [1] "AIC = 13.9223690731332"
## [1] "k1= 0.0258882844486944"
## [2] "k2= 5.46888508086647e-05"
## [3] "a21= 0.012523752672148"
## [4] "Proportion of C0 in pool 1= 0.0119542309184221"
```



```
## [1] "AIC = 11.9223690735809"
```

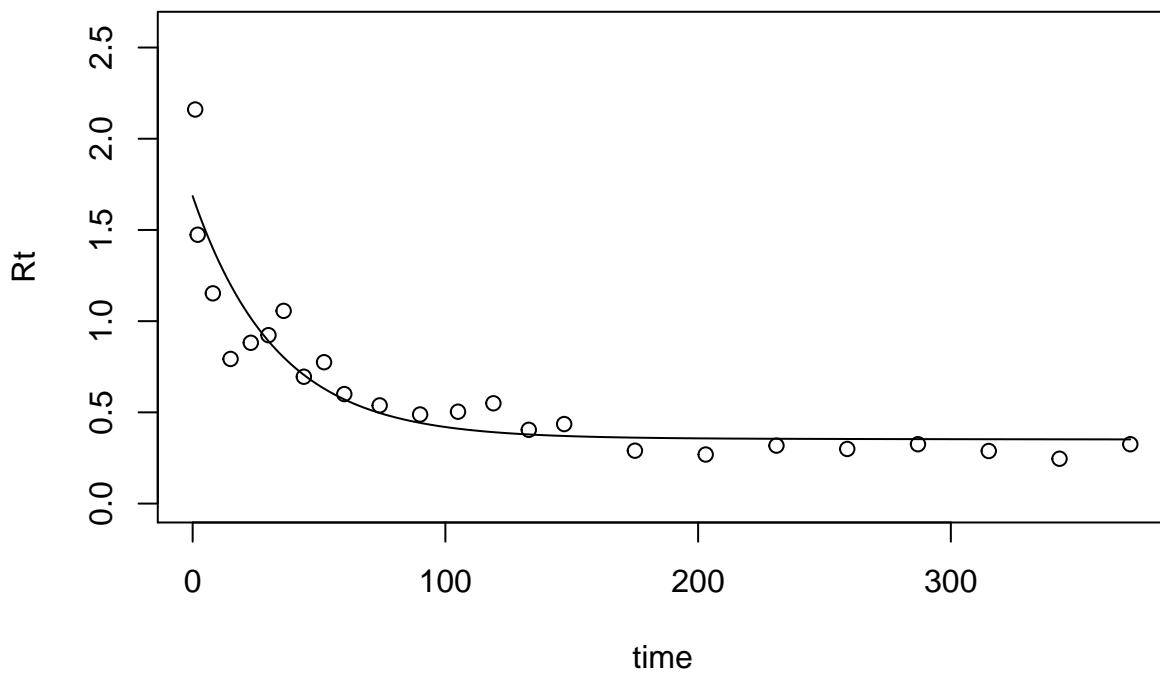


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	9.922369	0.0258889	5.47e-05	0.0118040	NA	NA
Two-pool feedback	13.922369	0.0258885	5.47e-05	0.0142774	0.1728674	5.12e-05
Two-pool series	11.922369	0.0258883	5.47e-05	0.0119542	0.0125238	NA

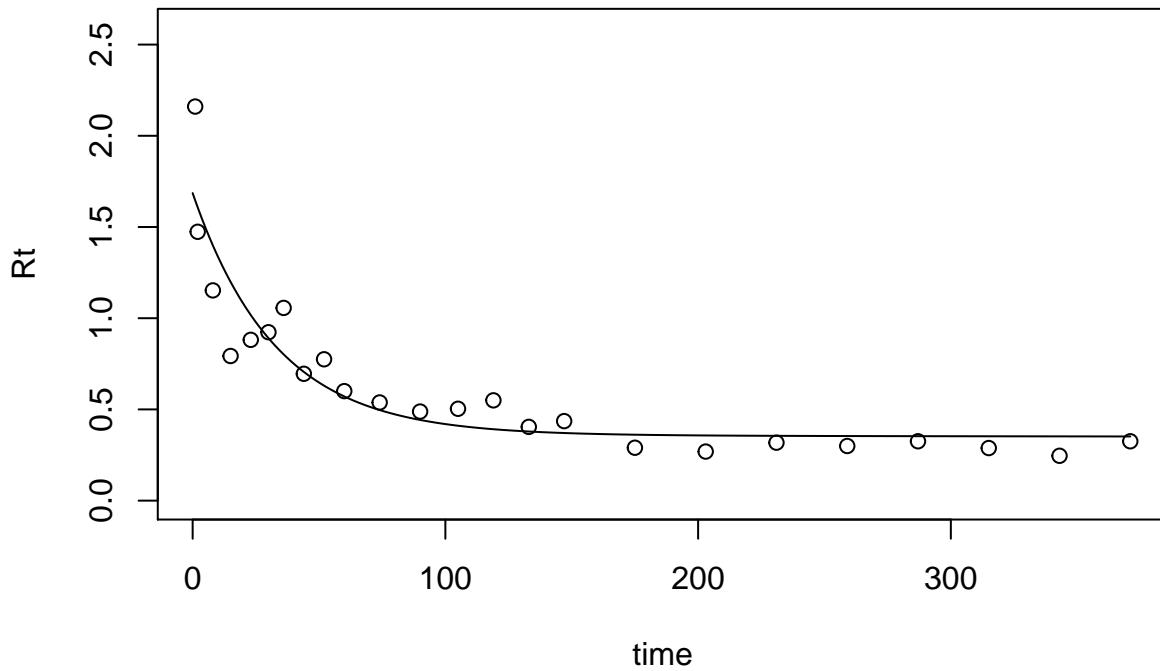
### Variable Site30:

CO2 production rate

```
## [1] "k1= 0.0303997836994646"
## [2] "k2= 4.61312835906368e-05"
## [3] "proportion of C0 in pool 1= 0.00560118153681022"
```

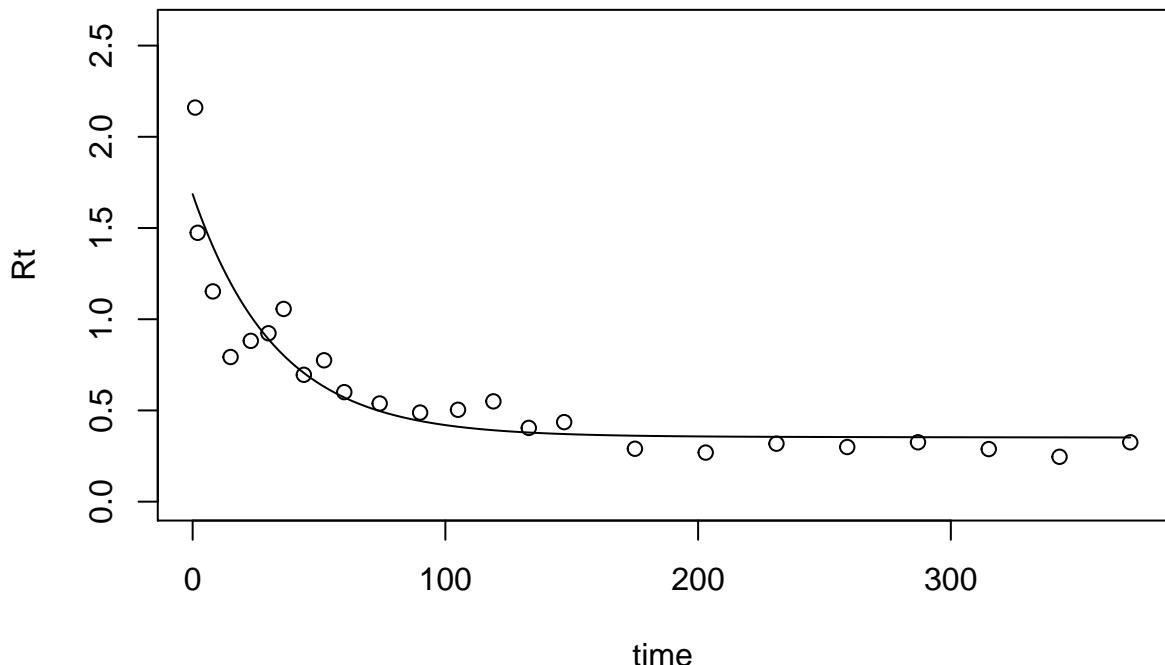


```
## [1] "AIC = 13.0946192977183"
## [1] "k1= 0.0304025786826478"
## [2] "k2= 4.61332976152052e-05"
## [3] "a21= 0.387782281892866"
## [4] "a12= 1.26834220313121e-05"
## [5] "Proportion of C0 in pool 1= 0.0091571047358977"
```



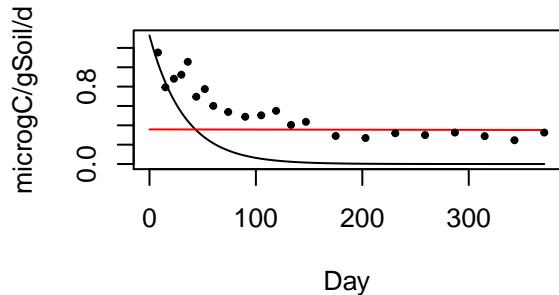
```
## [1] "AIC = 17.0946192861558"
## [1] "k1= 0.0304011817473032"
## [2] "k2= 4.61321699067121e-05"
## [3] "a21= 0.234219813529181"
```

```
## [4] "Proportion of C0 in pool 1= 0.00731723407831264"
```

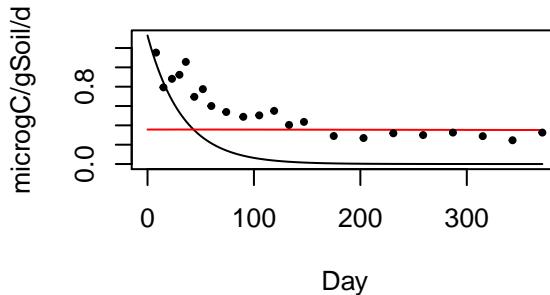


```
## [1] "AIC = 15.0946192754348"
```

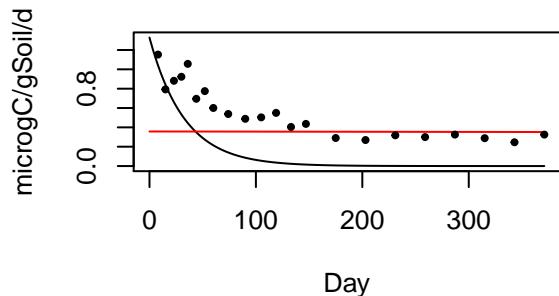
### Two-pool parallel



### Two-pool feedback



### Two-pool series



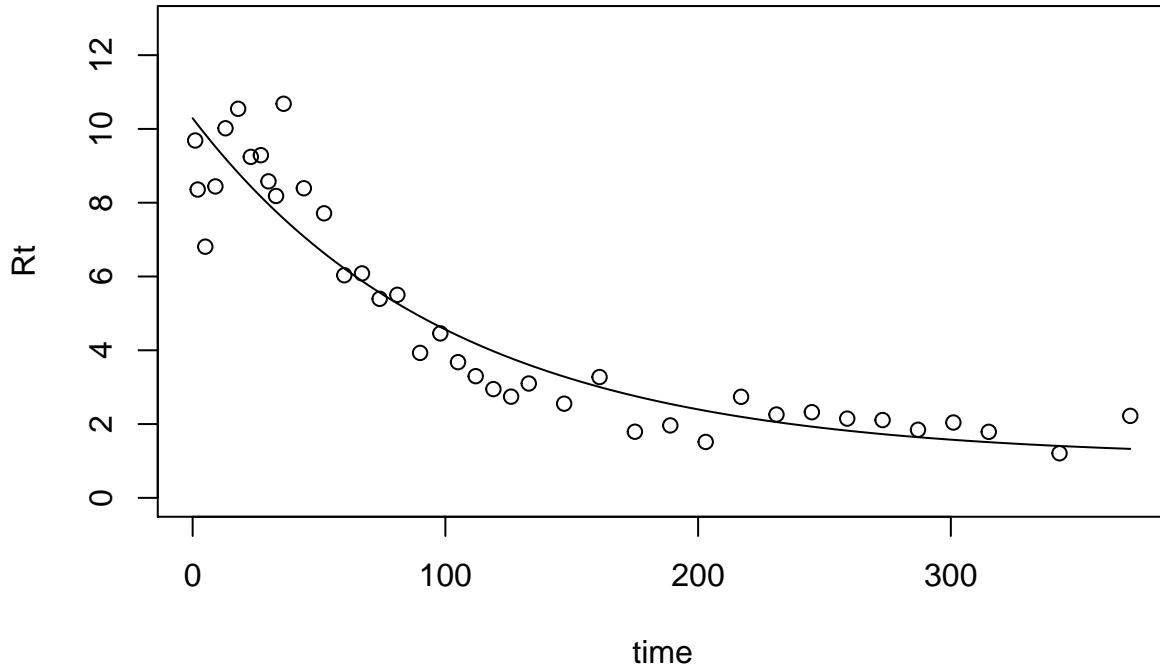
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	13.09462	0.0303998	4.61e-05	0.0056012	NA	NA
Two-pool feedback	17.09462	0.0304026	4.61e-05	0.0091571	0.3877823	1.27e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	15.09462	0.0304012	4.61e-05	0.0073172	0.2342198	NA

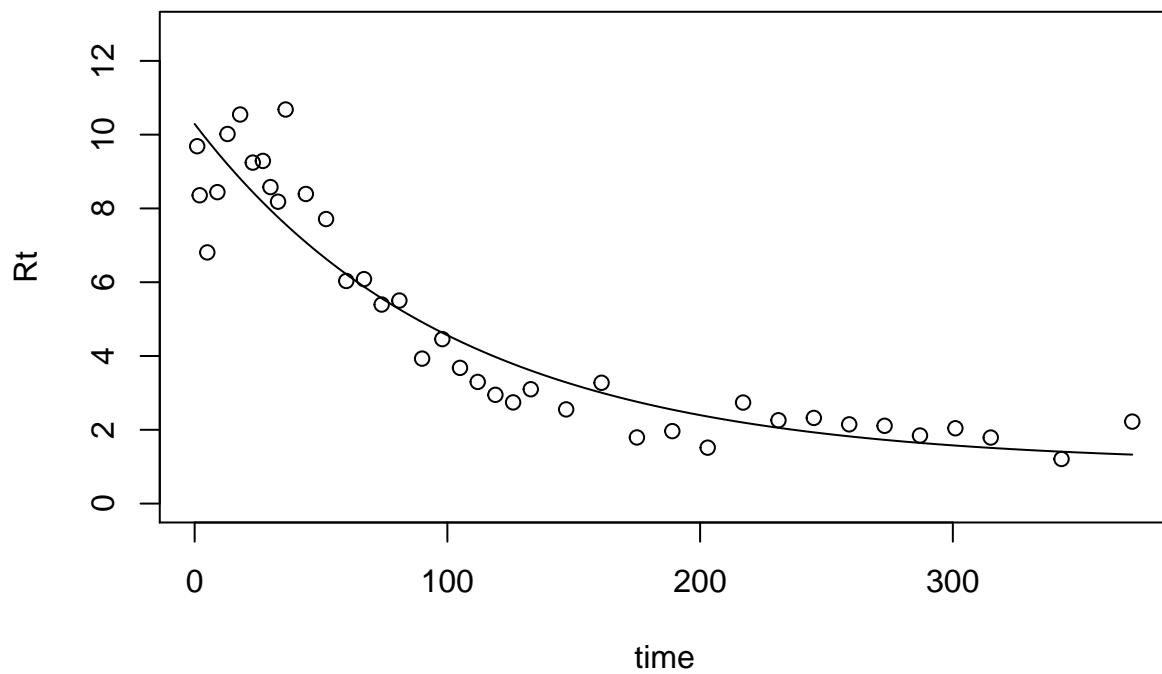
## Variable Site31:

CO2 production rate

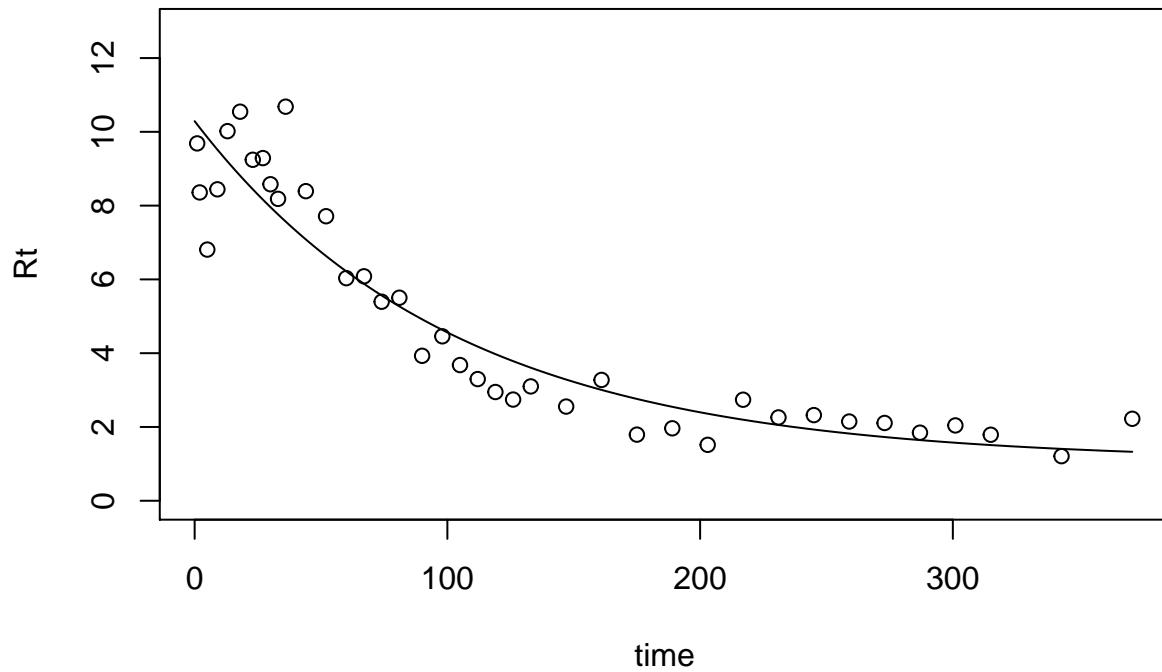
```
## [1] "k1= 0.00973961529589929"
## [2] "k2= 3.74140618749131e-05"
## [3] "proportion of C0 in pool 1= 0.0312621652481834"
```



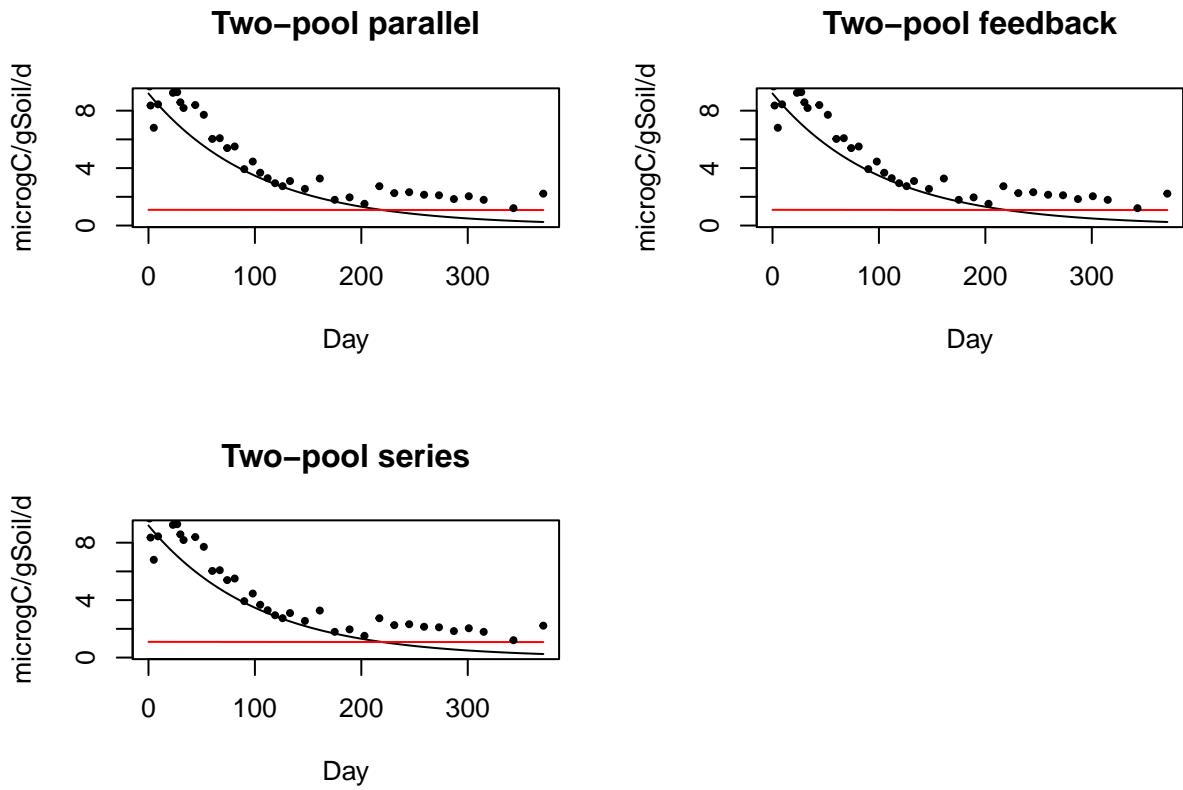
```
## [1] "AIC = 5.85807532657257"
## [1] "k1= 0.00973934575934265"
## [2] "k2= 3.7411563049253e-05"
## [3] "a21= 0.0106098153738284"
## [4] "a12= 9.15341441430906e-05"
## [5] "Proportion of C0 in pool 1= 0.0315999106773656"
```



```
## [1] "AIC = 9.85807532545106"
## [1] "k1= 0.0097388390508465"
## [2] "k2= 3.7406774283464e-05"
## [3] "a21= 0.0104017496085949"
## [4] "Proportion of C0 in pool 1= 0.031594754729393"
```



```
## [1] "AIC = 7.8580753162532"
```

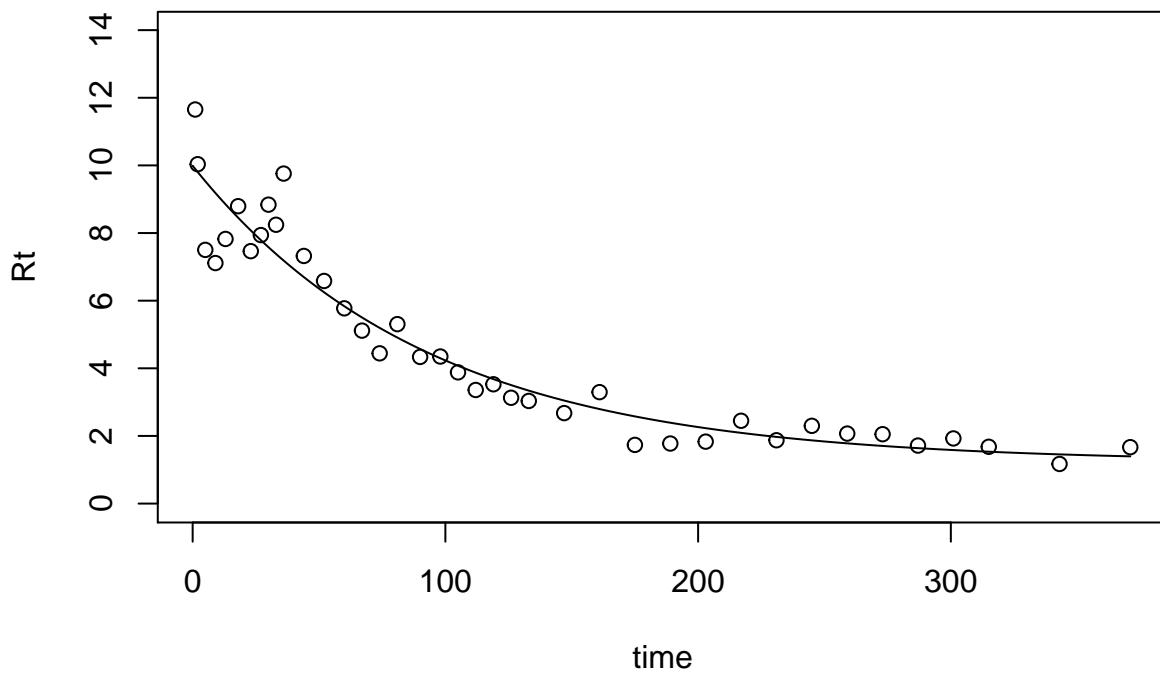


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	5.858075	0.0097396	3.74e-05	0.0312622	NA	NA
Two-pool feedback	9.858075	0.0097393	3.74e-05	0.0315999	0.0106098	9.15e-05
Two-pool series	7.858075	0.0097388	3.74e-05	0.0315948	0.0104017	NA

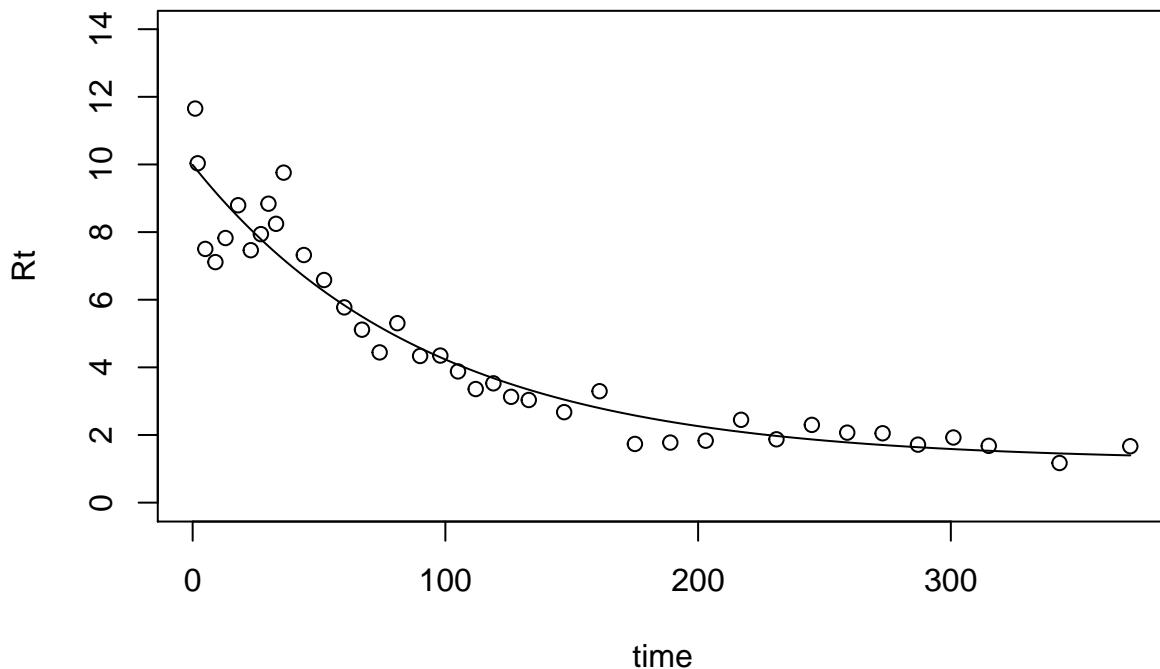
## Variable Site32:

CO2 production rate

```
## [1] "k1= 0.0107424772691706"
## [2] "k2= 4.26665552878324e-05"
## [3] "proportion of C0 in pool 1= 0.0269285190063374"
```

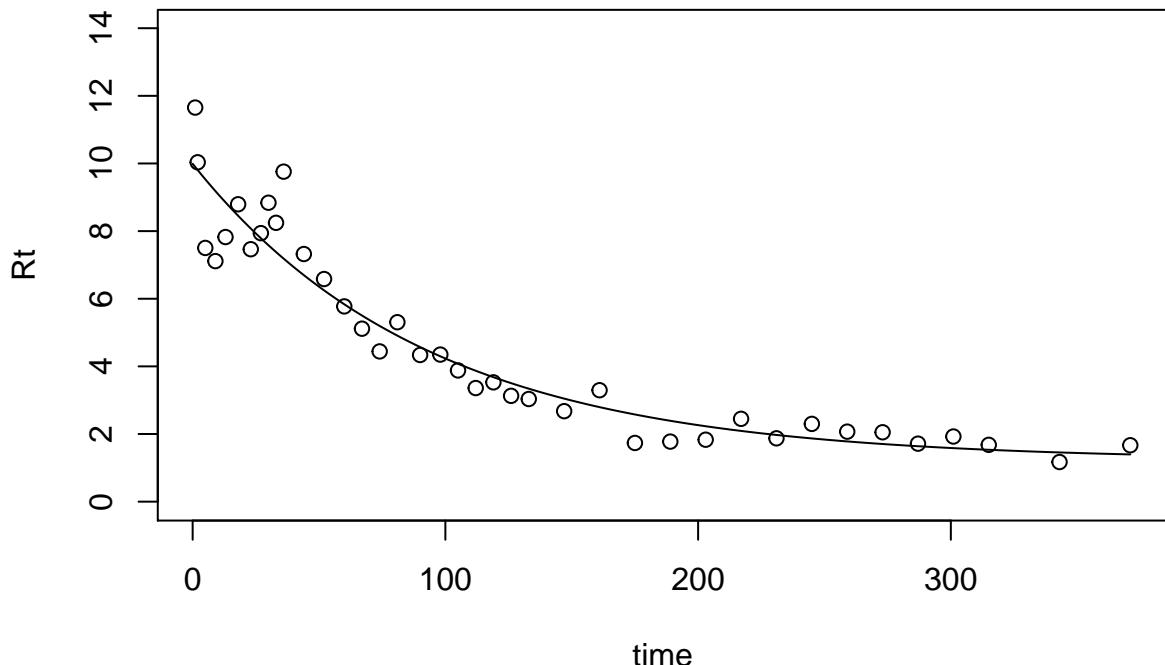


```
## [1] "AIC = 6.77089901962427"
## [1] "k1= 0.0107280317112587"
## [2] "k2= 5.7149364578858e-05"
## [3] "a21= 0.252411339012162"
## [4] "a12= 0.999987700396951"
## [5] "Proportion of C0 in pool 1= 0.0412455774401419"
```

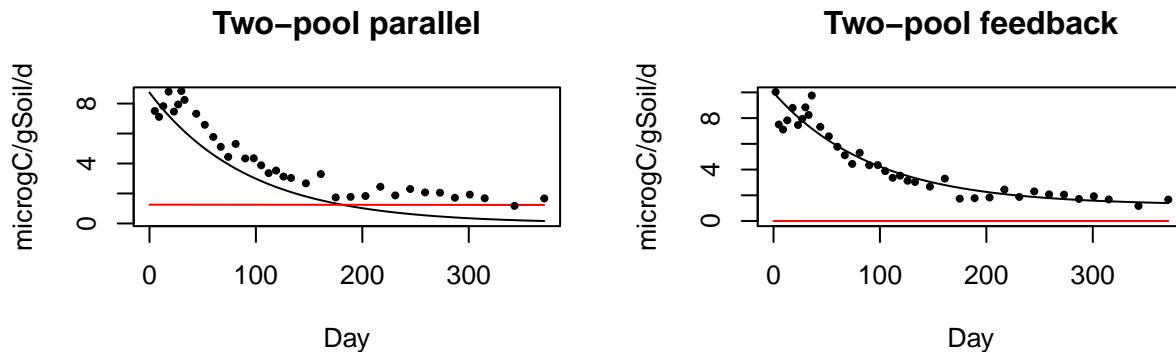


```
## [1] "AIC = 10.770899019579"
## [1] "k1= 0.0107427207350601"
## [2] "k2= 4.26683570046923e-05"
## [3] "a21= 0.00464171773739452"
```

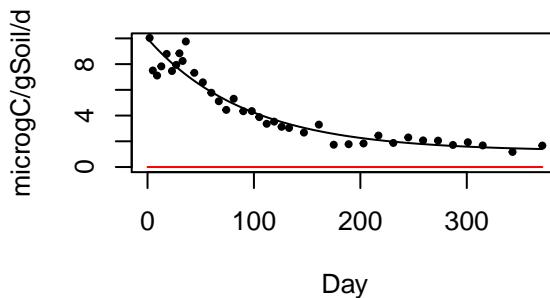
```
## [4] "Proportion of C0 in pool 1= 0.0270538836947349"
```



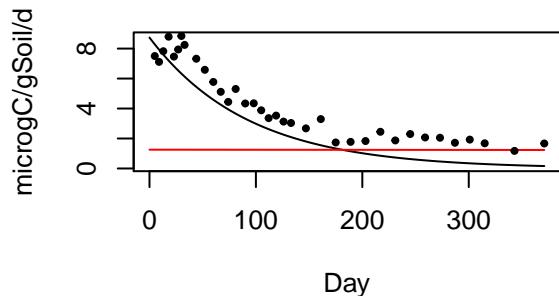
```
## [1] "AIC = 8.77089901815097"
```



### Two-pool feedback



### Two-pool series



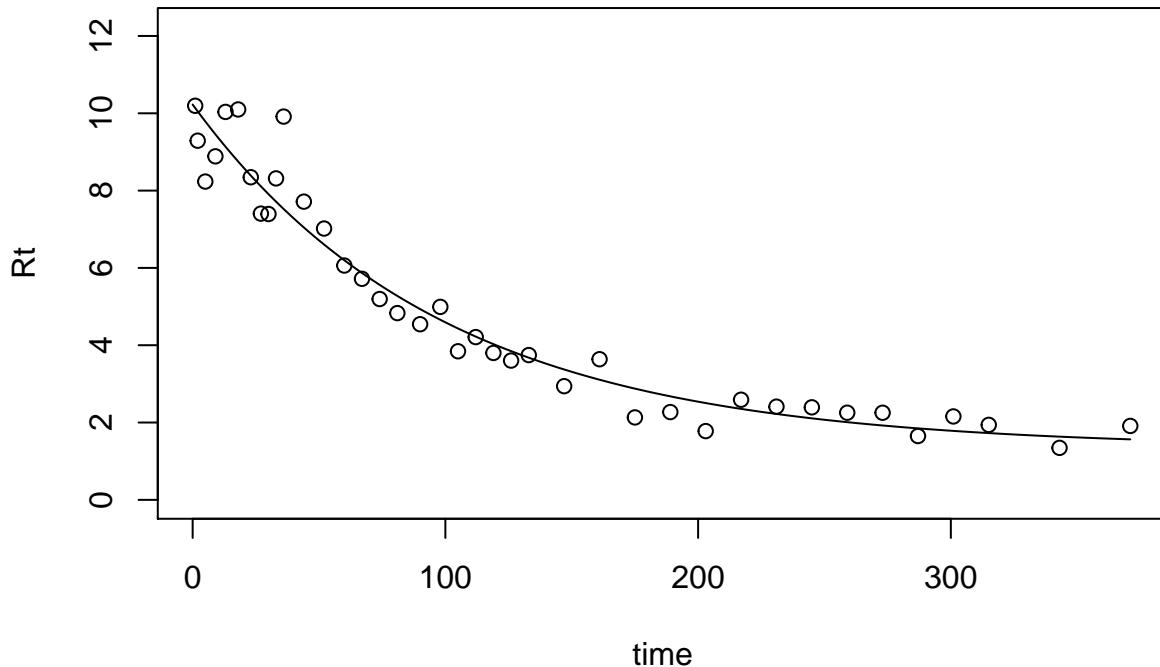
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.770899	0.0107425	4.27e-05	0.0269285	NA	NA
Two-pool feedback	10.770899	0.0107280	5.71e-05	0.0412456	0.2524113	0.9999877

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.770899	0.0107427	4.27e-05		0.0270539	0.0046417

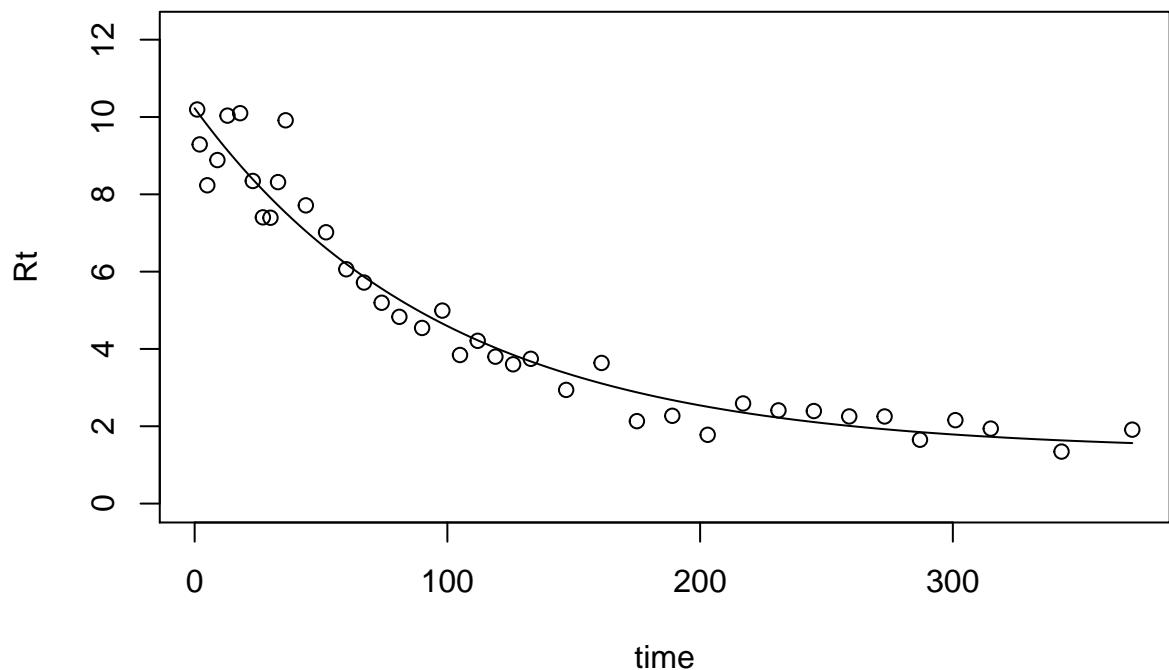
### Variable Site33:

CO2 production rate

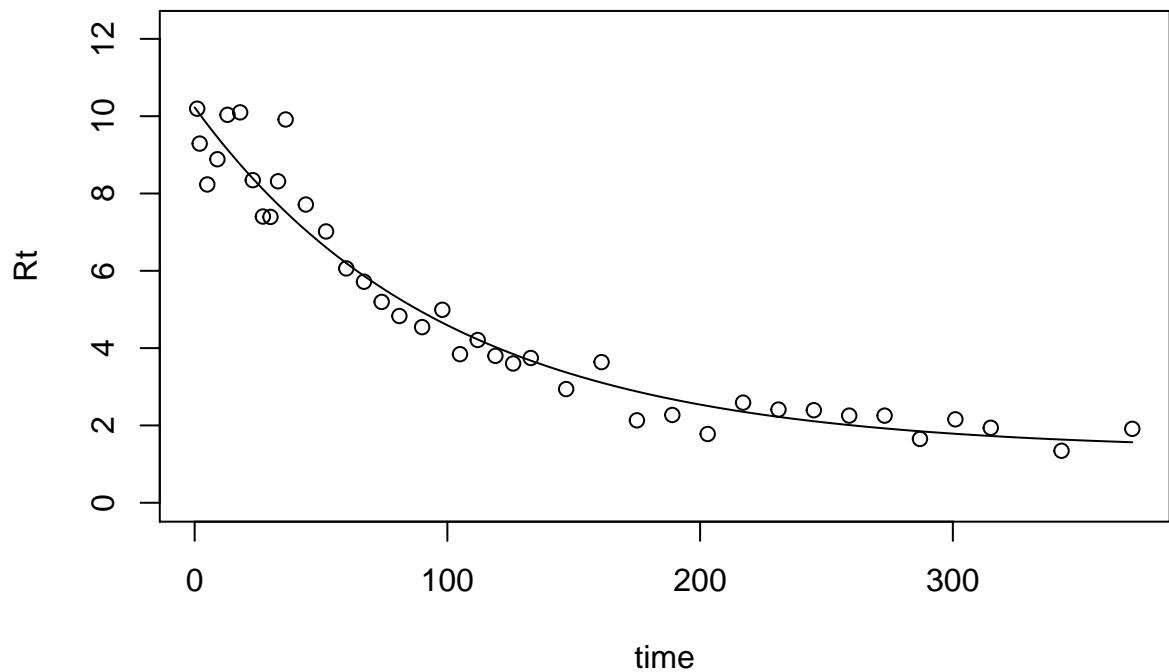
```
## [1] "k1= 0.0101207652401172"
## [2] "k2= 5.84927114443833e-05"
## [3] "proportion of C0 in pool 1= 0.0355011732875775"
```



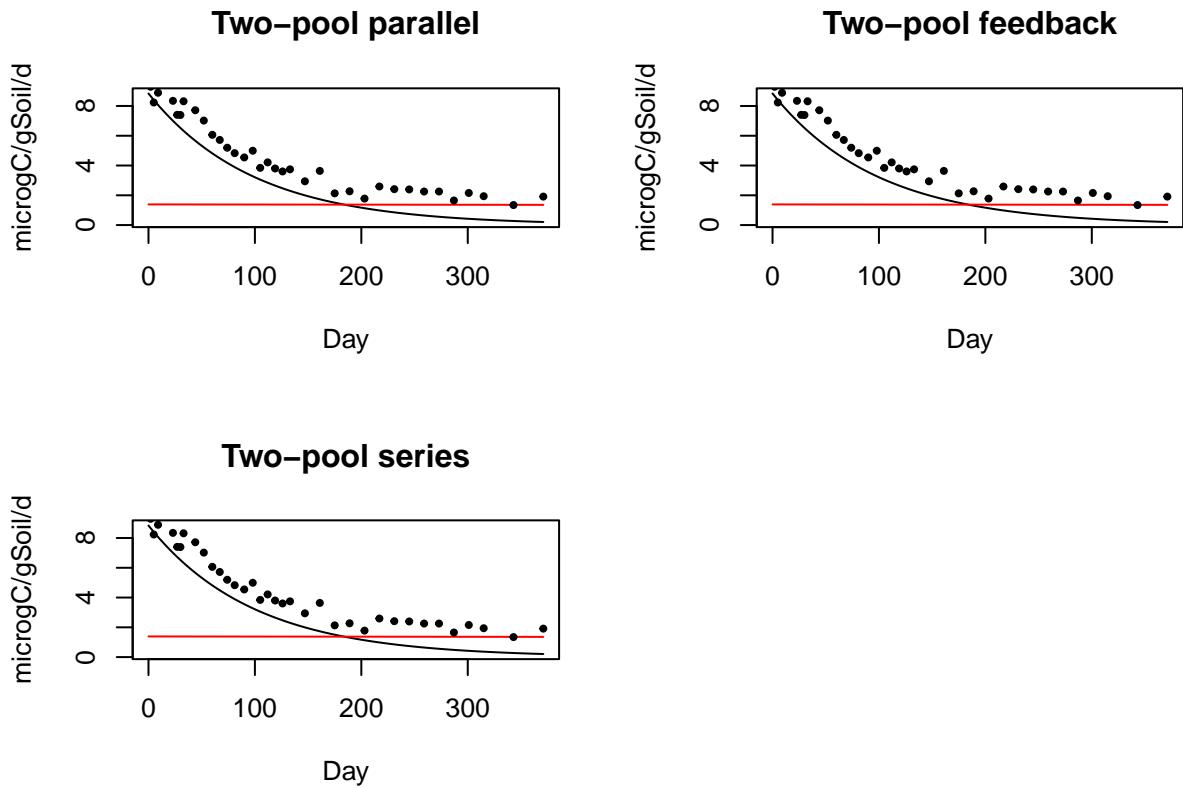
```
## [1] "AIC = 7.66187082524219"
## [1] "k1= 0.0101207677227985"
## [2] "k2= 5.84927567770586e-05"
## [3] "a21= 0.0130059546556141"
## [4] "a12= 2.48762342267006e-05"
## [5] "Proportion of C0 in pool 1= 0.0359717315324055"
```



```
## [1] "AIC = 11.6618708238327"
## [1] "k1= 0.0101207201065461"
## [2] "k2= 5.84922405175735e-05"
## [3] "a21= 0.00462976842578994"
## [4] "Proportion of C0 in pool 1= 0.0356674350090733"
```



```
## [1] "AIC = 9.6618708253111"
```

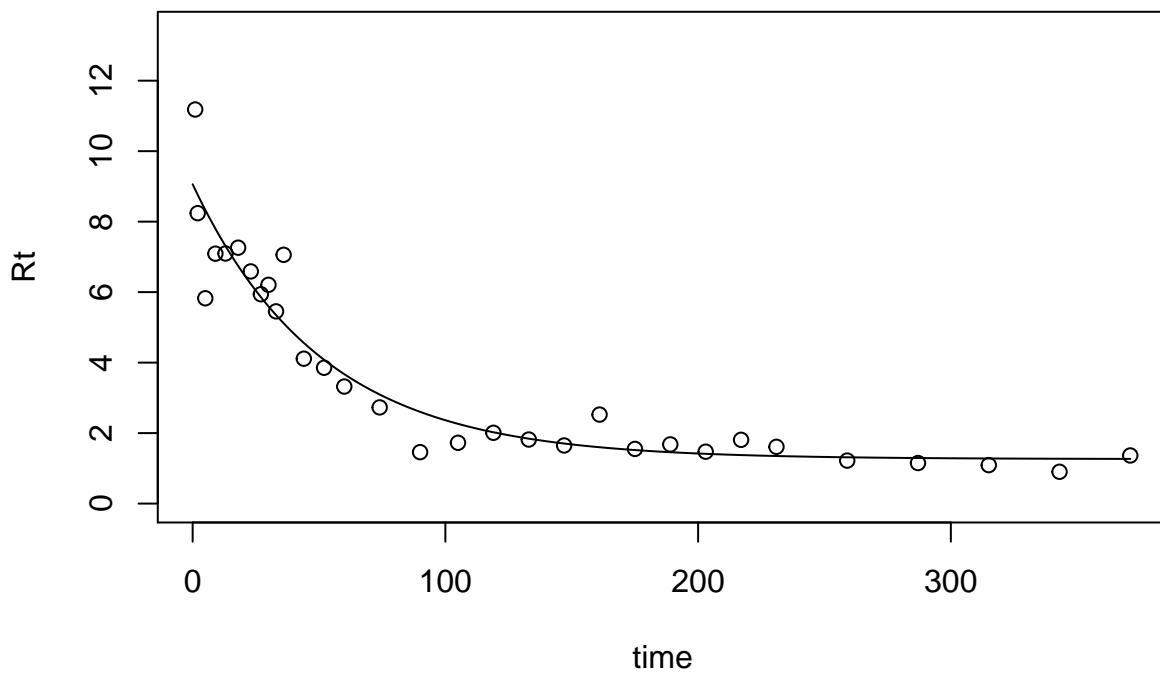


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	7.661871	0.0101208	5.85e-05	0.0355012	NA	NA
Two-pool feedback	11.661871	0.0101208	5.85e-05	0.0359717	0.0130060	2.49e-05
Two-pool series	9.661871	0.0101207	5.85e-05	0.0356674	0.0046298	NA

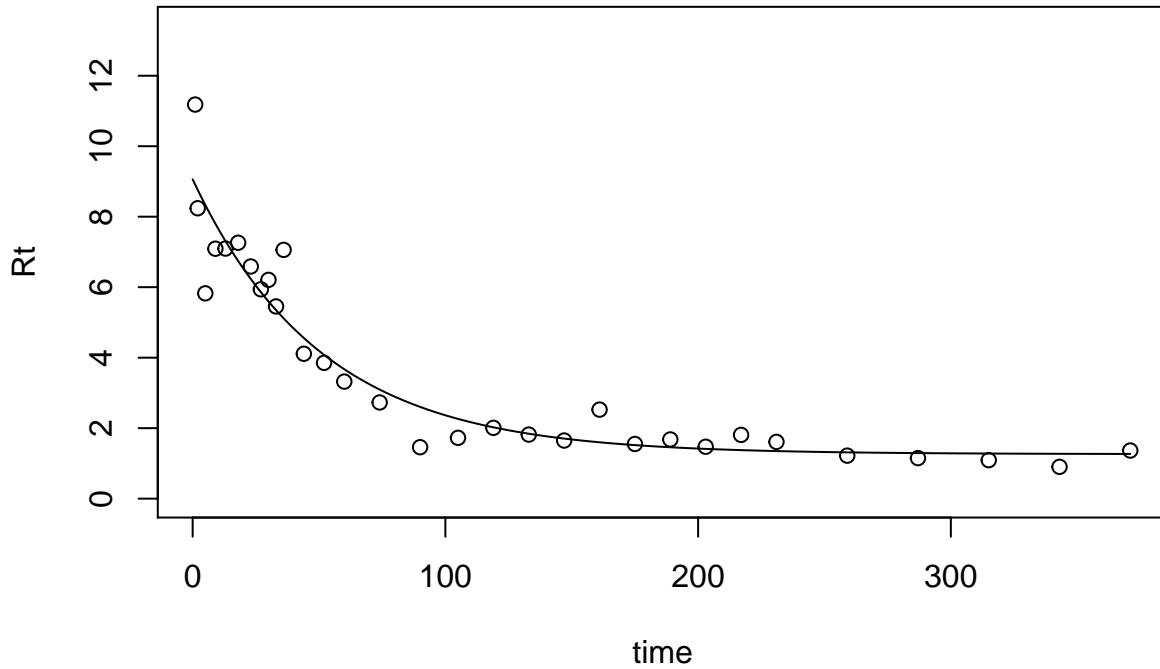
### Variable Site34:

CO2 production rate

```
## [1] "k1= 0.0196072215215642"
## [2] "k2= 1.89412115663702e-05"
## [3] "proportion of C0 in pool 1= 0.00588633162765251"
```

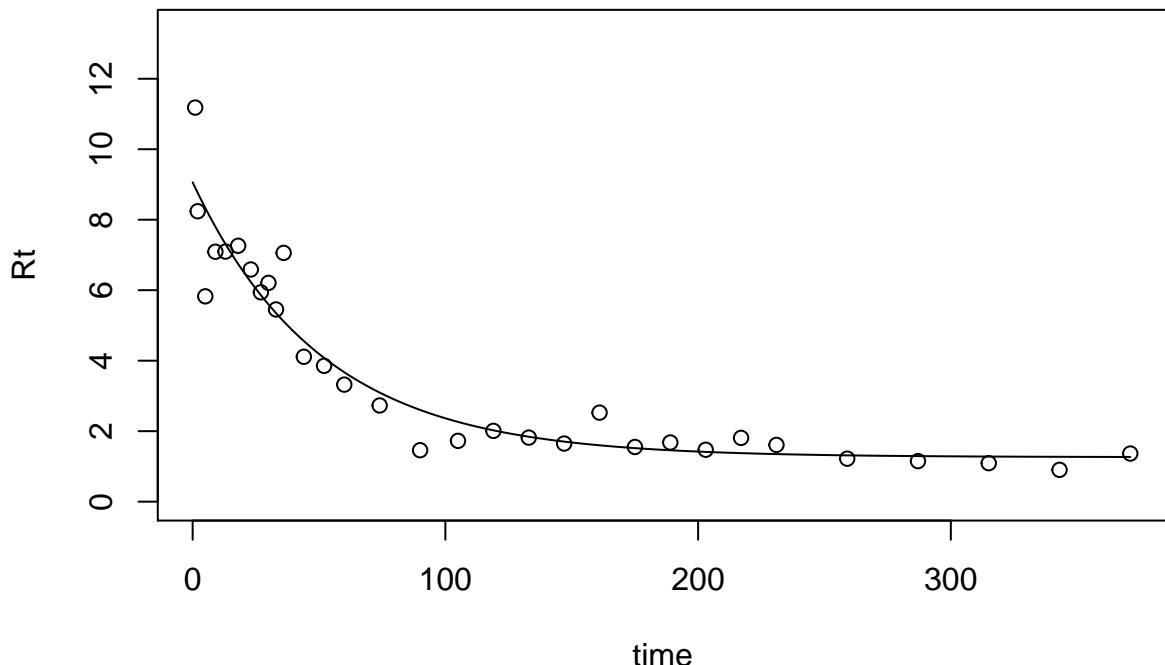


```
## [1] "AIC = 6.84478401864477"
## [1] "k1= 0.0196071851917656"
## [2] "k2= 1.89413525073537e-05"
## [3] "a21= 0.300543518370304"
## [4] "a12= 3.02119494556274e-05"
## [5] "Proportion of C0 in pool 1= 0.00841910905166821"
```

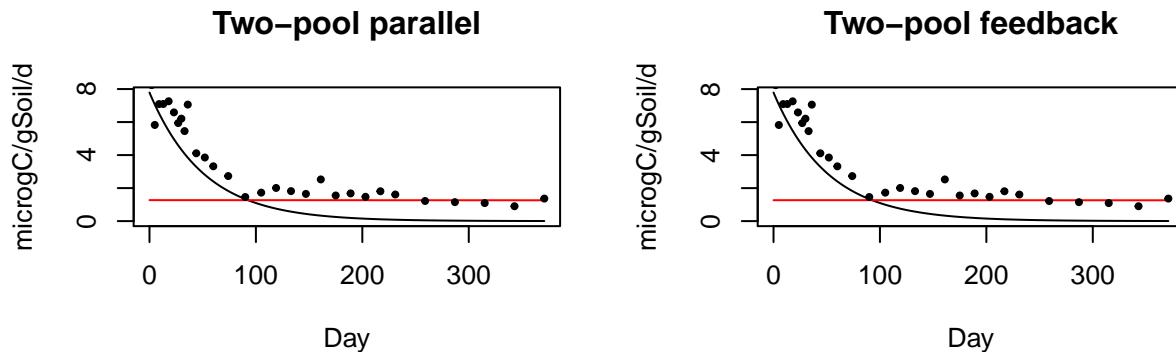


```
## [1] "AIC = 10.8447840185671"
## [1] "k1= 0.0196072097494388"
## [2] "k2= 1.89412014582085e-05"
## [3] "a21= 0.132404067755203"
```

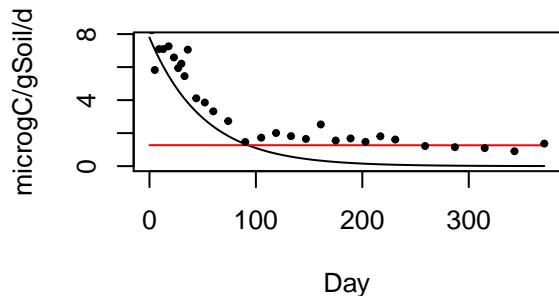
```
## [4] "Proportion of C0 in pool 1= 0.00678564432327028"
```



```
## [1] "AIC = 8.84478401860259"
```



**Two-pool series**



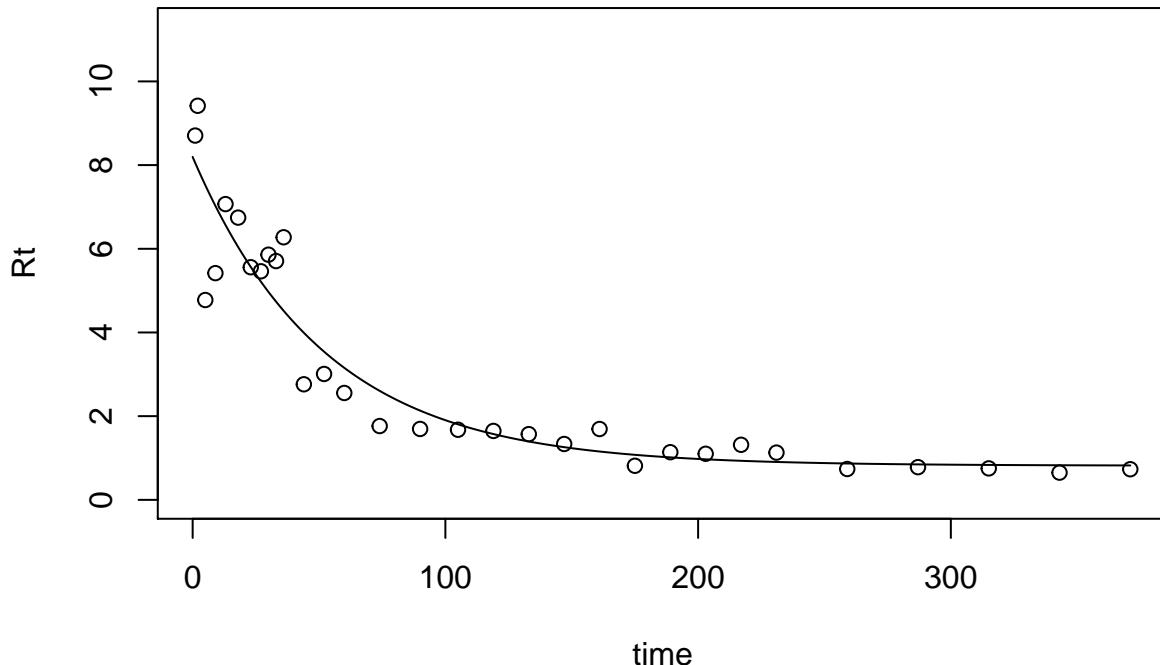
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.844784	0.0196072	1.89e-05	0.0058863	NA	NA
Two-pool feedback	10.844784	0.0196072	1.89e-05	0.0084191	0.3005435	3.02e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.844784	0.0196072	1.89e-05	0.0067856	0.1324041	NA

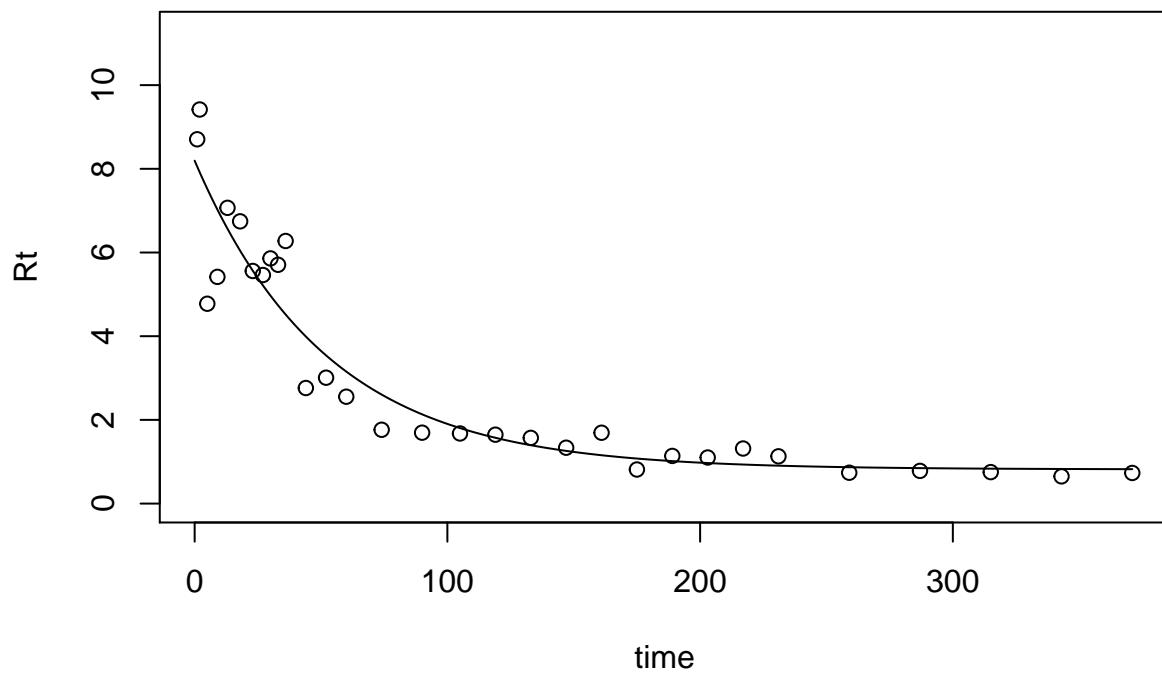
## Variable Site35:

CO2 production rate

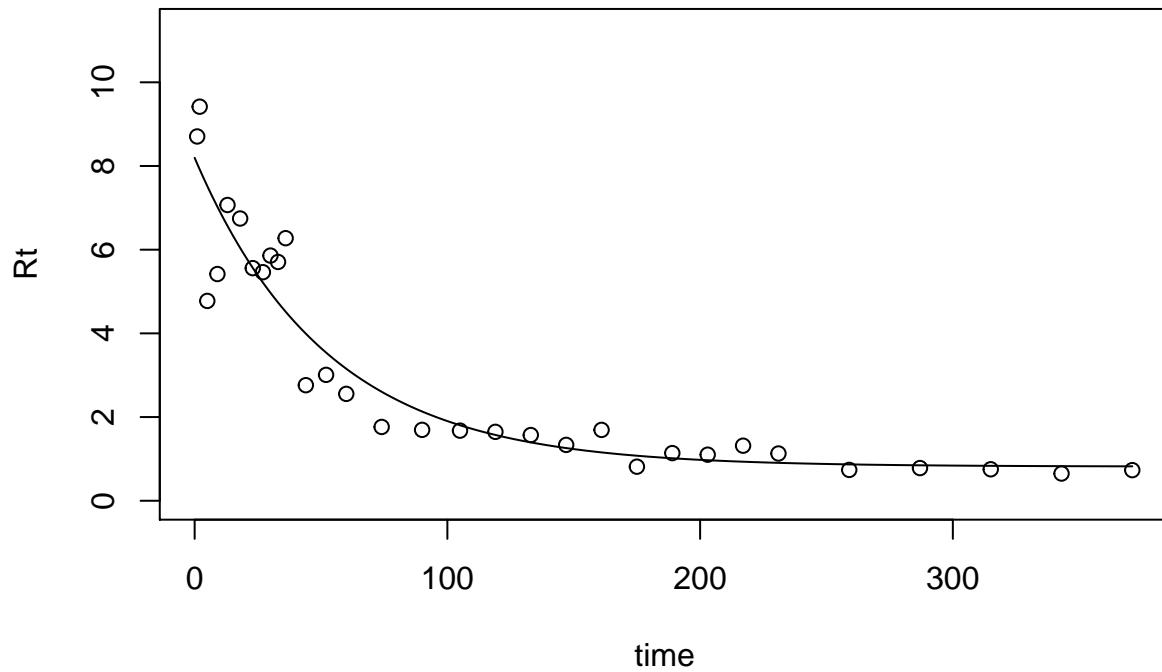
```
## [1] "k1= 0.0191699143625036"
## [2] "k2= 1.36918406031233e-05"
## [3] "proportion of C0 in pool 1= 0.00637946668238421"
```



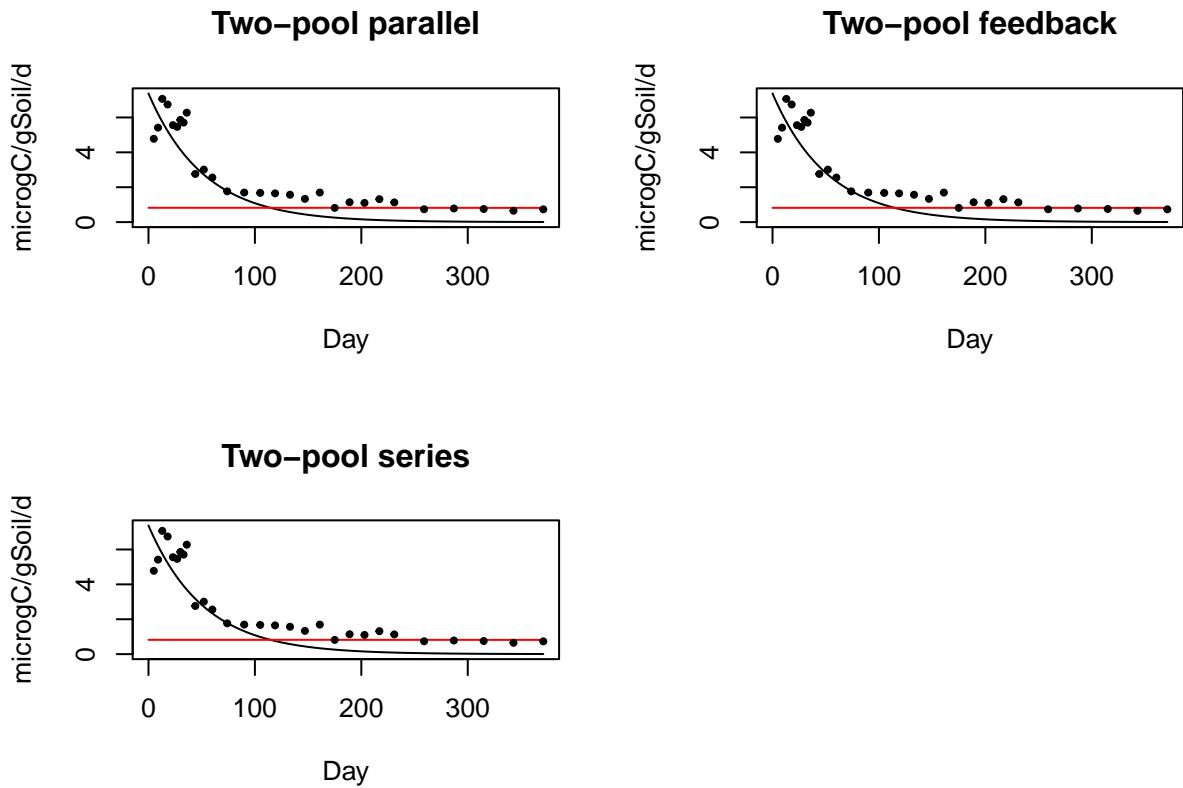
```
## [1] "AIC = 6.66880350383988"
## [1] "k1= 0.0191699055333086"
## [2] "k2= 1.36920603271592e-05"
## [3] "a21= 0.305387344353507"
## [4] "a12= 5.45176482764642e-05"
## [5] "Proportion of C0 in pool 1= 0.00918709829560388"
```



```
## [1] "AIC = 10.6688035032648"
## [1] "k1= 0.0191698668785708"
## [2] "k2= 1.3691794955736e-05"
## [3] "a21= 0.0881342485369224"
## [4] "Proportion of C0 in pool 1= 0.00699655390541565"
```



```
## [1] "AIC = 8.66880350381876"
```

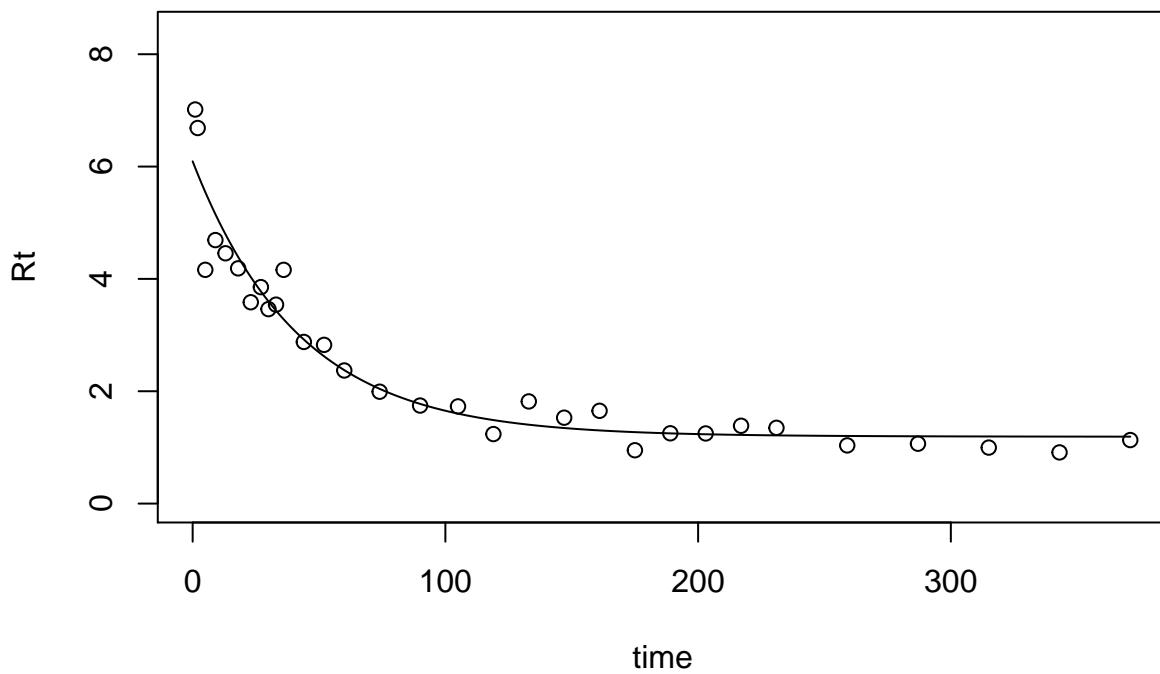


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.668804	0.0191699	1.37e-05	0.0063795	NA	NA
Two-pool feedback	10.668803	0.0191699	1.37e-05	0.0091871	0.3053873	5.45e-05
Two-pool series	8.668803	0.0191699	1.37e-05	0.0069966	0.0881342	NA

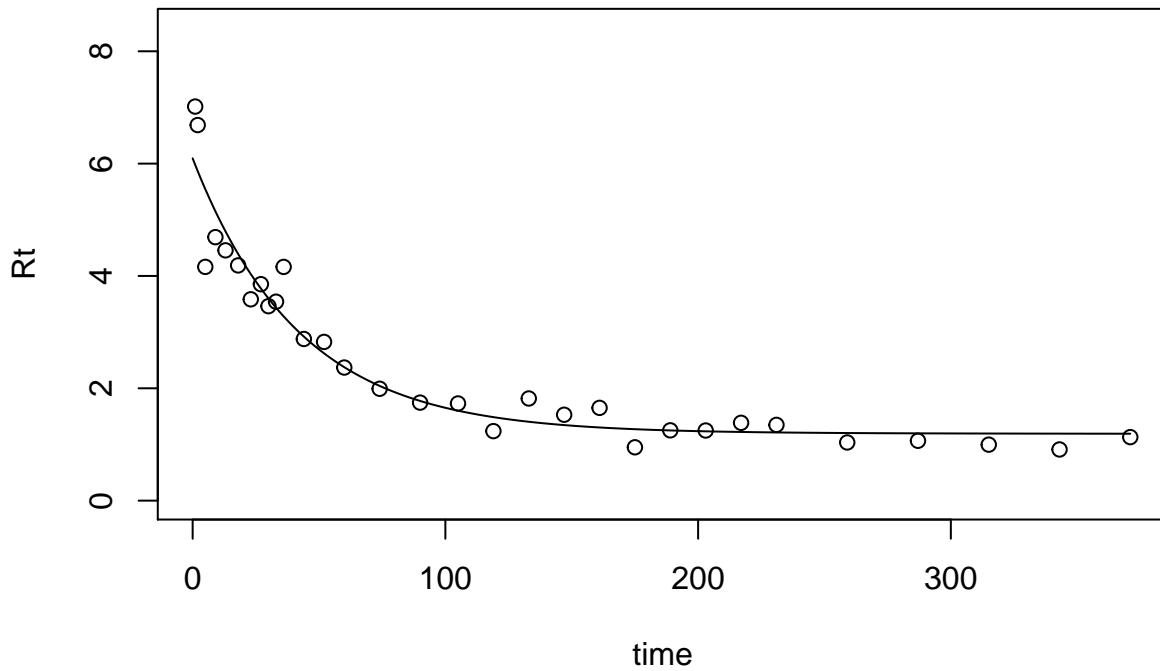
### Variable Site36:

CO2 production rate

```
## [1] "k1= 0.0237354900091703"
## [2] "k2= 1.85027711855756e-05"
## [3] "proportion of C0 in pool 1= 0.00317262560676257"
```

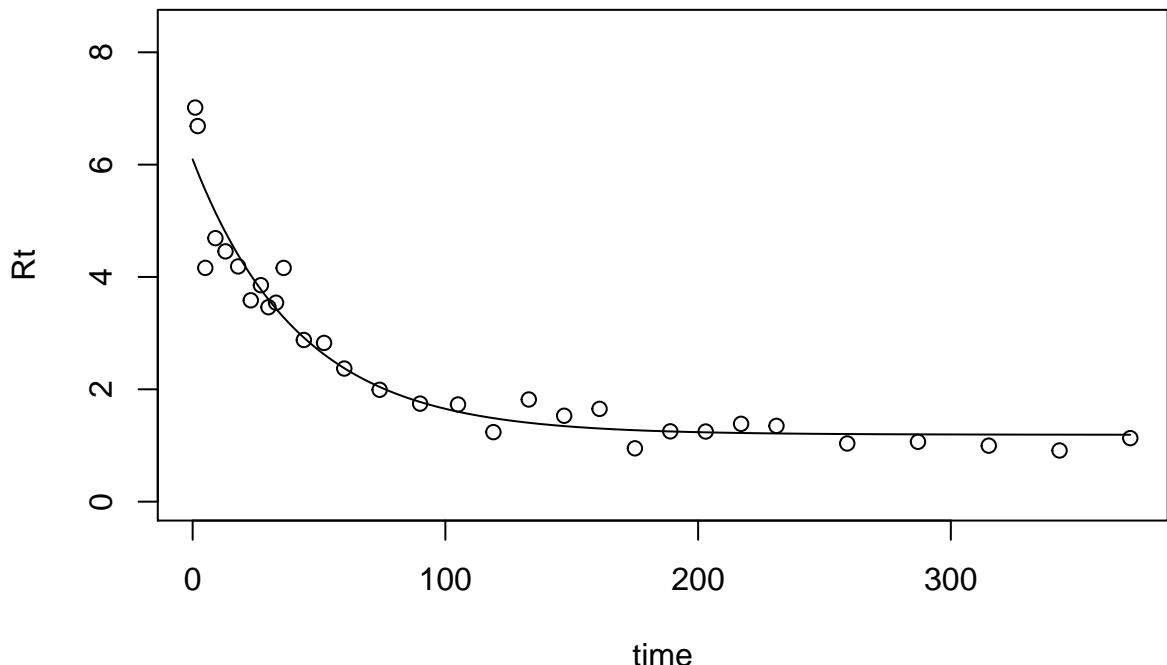


```
## [1] "AIC =  9.34735411611092"
## [1] "k1=  0.023718068448969"
## [2] "k2=  3.66328615512741e-05"
## [3] "a21=  0.49454762249087"
## [4] "a12=  0.999938289224567"
## [5] "Proportion of C0 in pool 1=  0.0078197543697448"
```

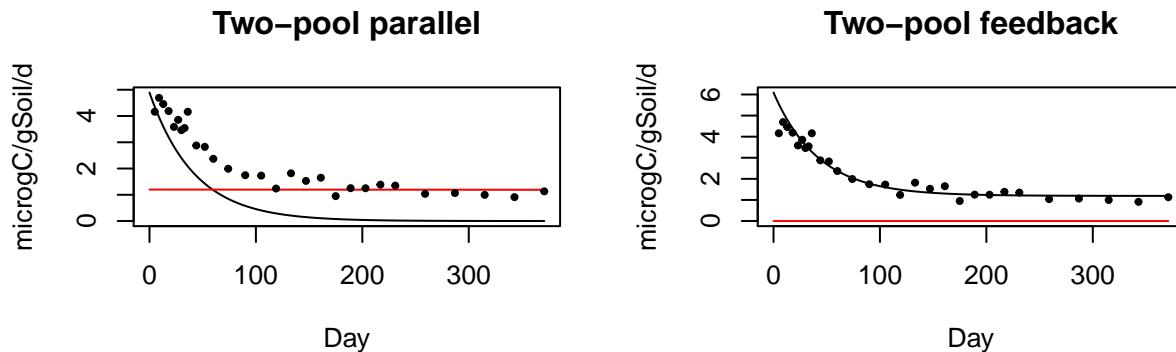


```
## [1] "AIC =  13.3473554917212"
## [1] "k1=  0.0237360104438163"
## [2] "k2=  1.8503089273599e-05"
## [3] "a21=  0.656849062100326"
```

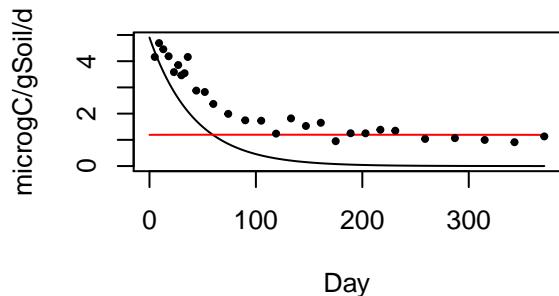
```
## [4] "Proportion of C0 in pool 1= 0.00925919095959132"
```



```
## [1] "AIC = 11.3473541032735"
```



### Two-pool series



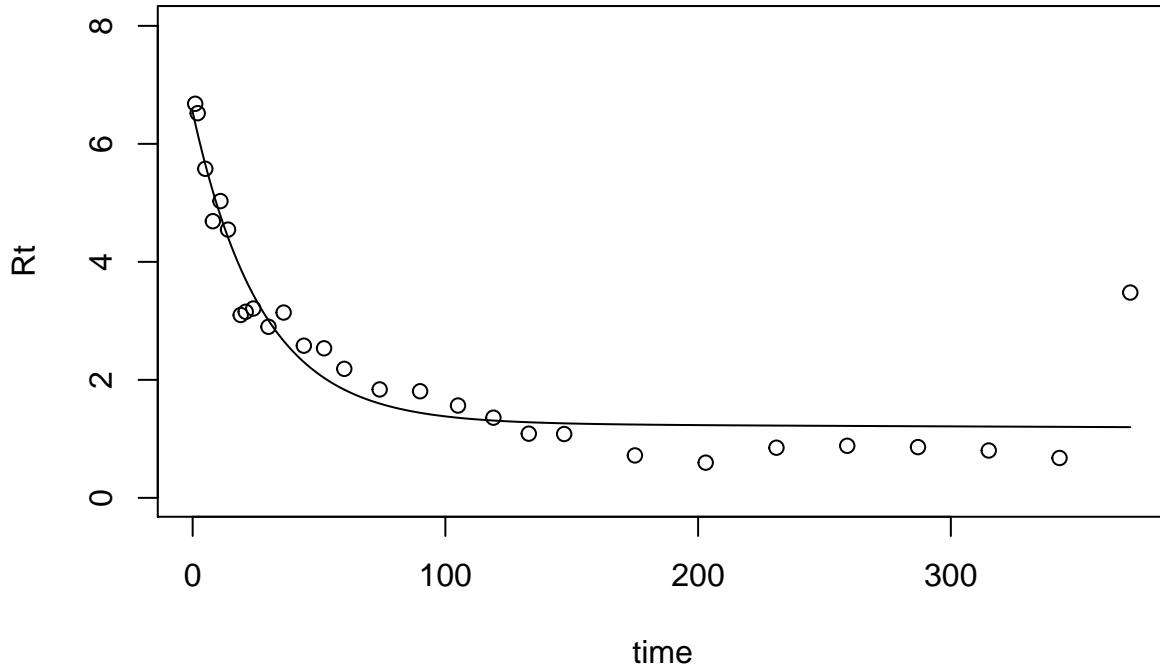
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	9.347354	0.0237355	1.85e-05	0.0031726	NA	NA
Two-pool feedback	13.347356	0.0237181	3.66e-05	0.0078198	0.4945476	0.9999383

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	11.347354	0.0237360	1.85e-05		0.0092592	0.6568491

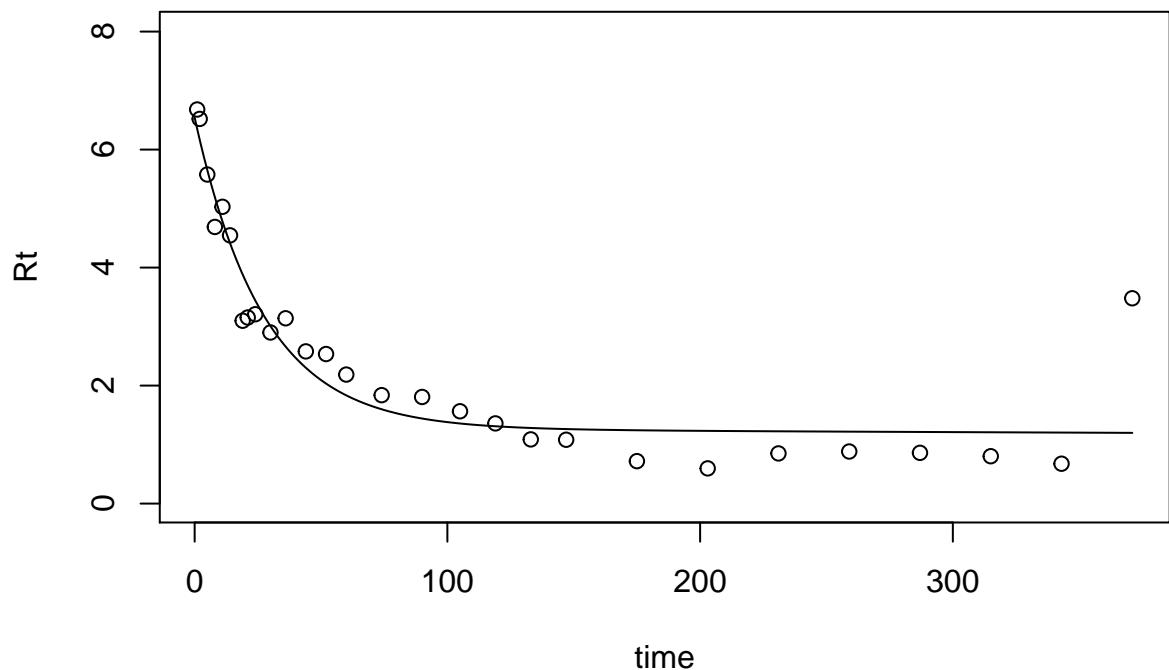
## Variable Site37:

CO2 production rate

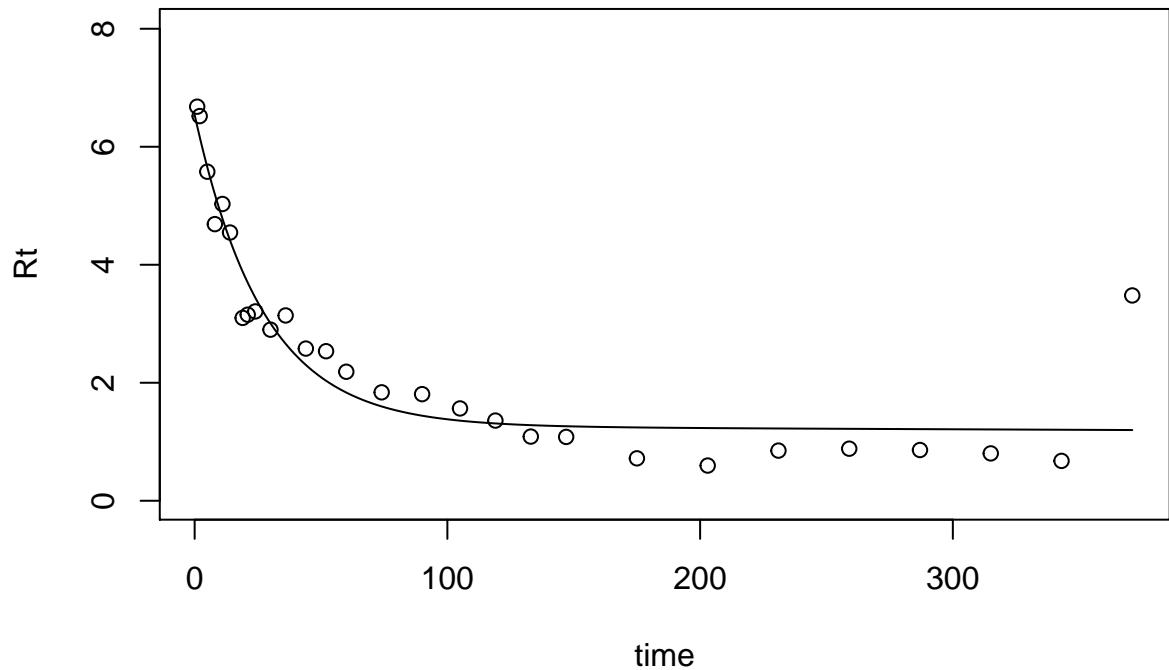
```
## [1] "k1= 0.0368420638493111"
## [2] "k2= 0.000149822065646229"
## [3] "proportion of C0 in pool 1= 0.0166496557738594"
```



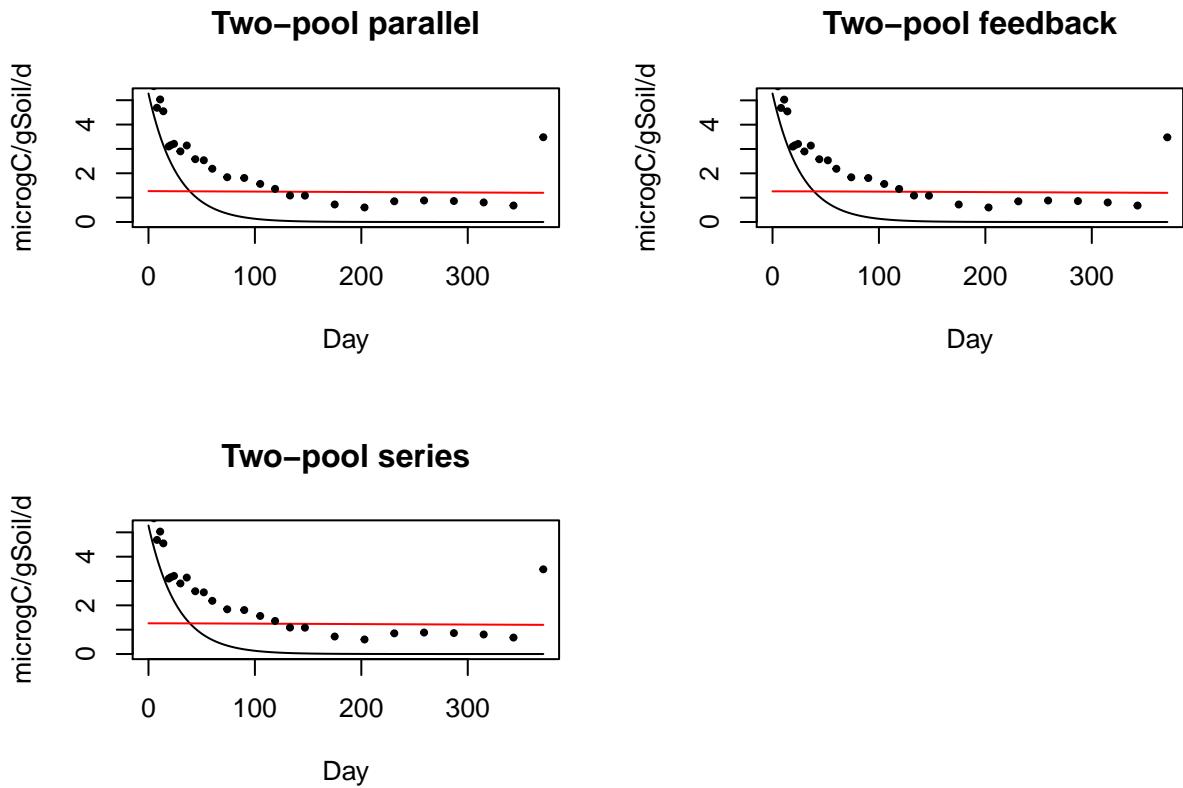
```
## [1] "AIC = 8.21700457808002"
## [1] "k1= 0.036842368625919"
## [2] "k2= 0.000149823666502926"
## [3] "a21= 0.252837020598843"
## [4] "a12= 2.75961230468136e-05"
## [5] "Proportion of C0 in pool 1= 0.0223146025319593"
```



```
## [1] "AIC = 12.2170045782727"
## [1] "k1= 0.0368416324121571"
## [2] "k2= 0.000149821275945077"
## [3] "a21= 0.200361476652261"
## [4] "Proportion of C0 in pool 1= 0.0208429437115134"
```



```
## [1] "AIC = 10.2170045769521"
```

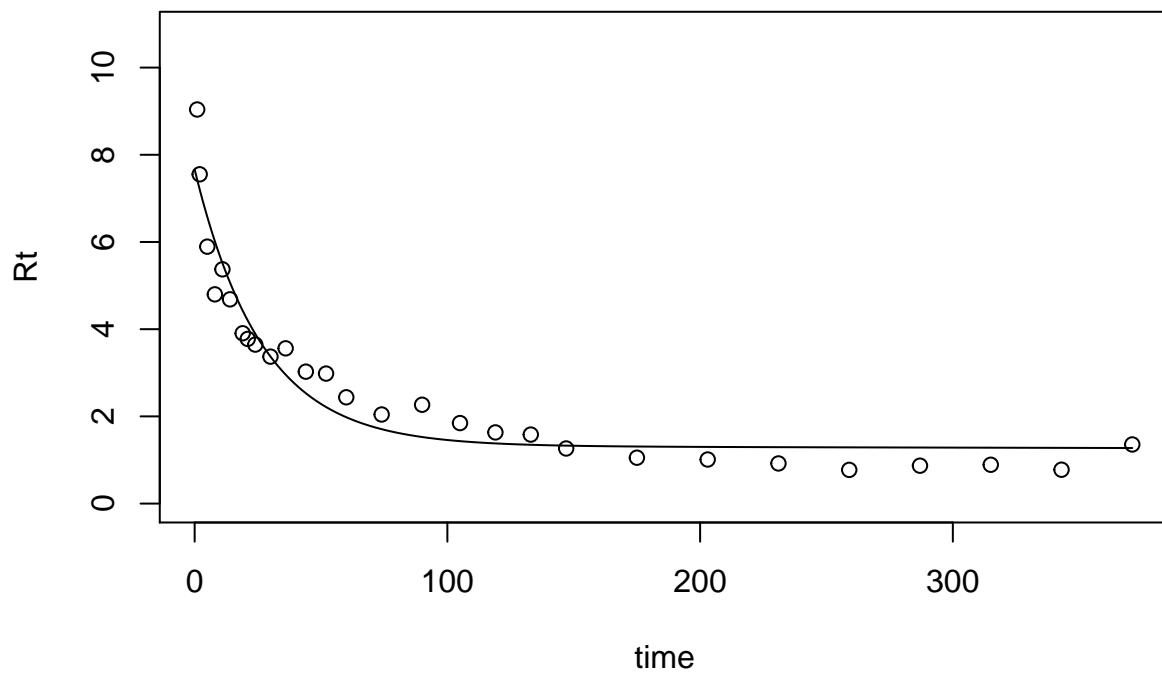


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.217005	0.0368421	0.0001498	0.0166497	NA	NA
Two-pool feedback	12.217005	0.0368424	0.0001498	0.0223146	0.2528370	2.76e-05
Two-pool series	10.217005	0.0368416	0.0001498	0.0208429	0.2003615	NA

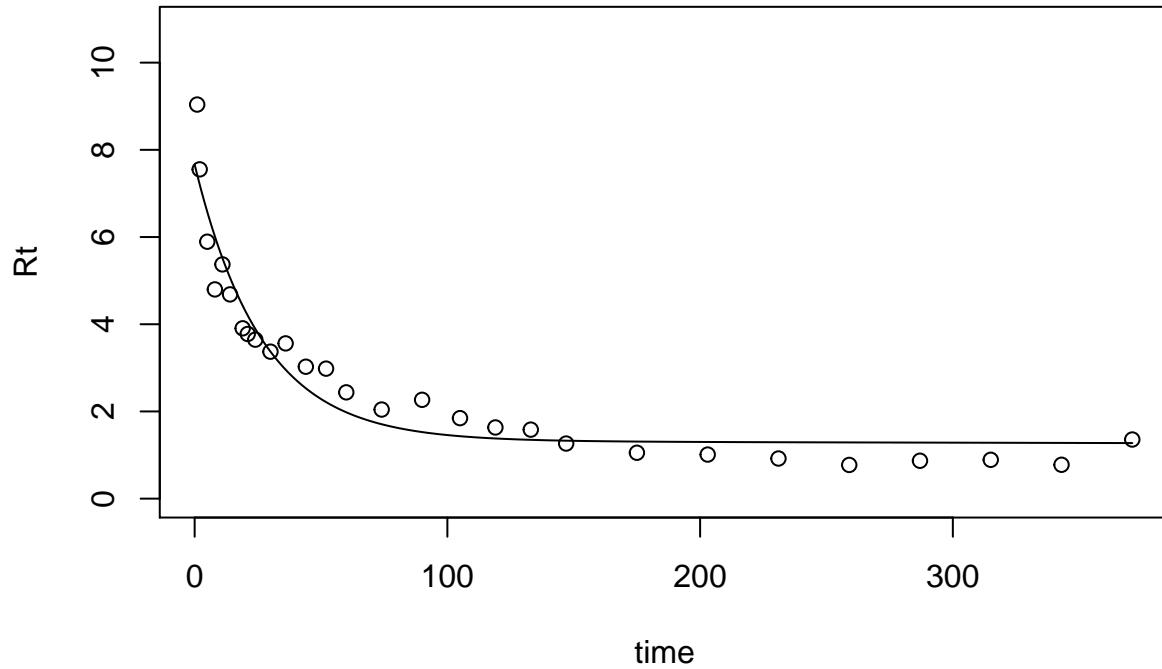
### Variable Site38:

CO2 production rate

```
## [1] "k1= 0.0375833427838168"
## [2] "k2= 0.000102348434365127"
## [3] "proportion of C0 in pool 1= 0.0128770240618121"
```

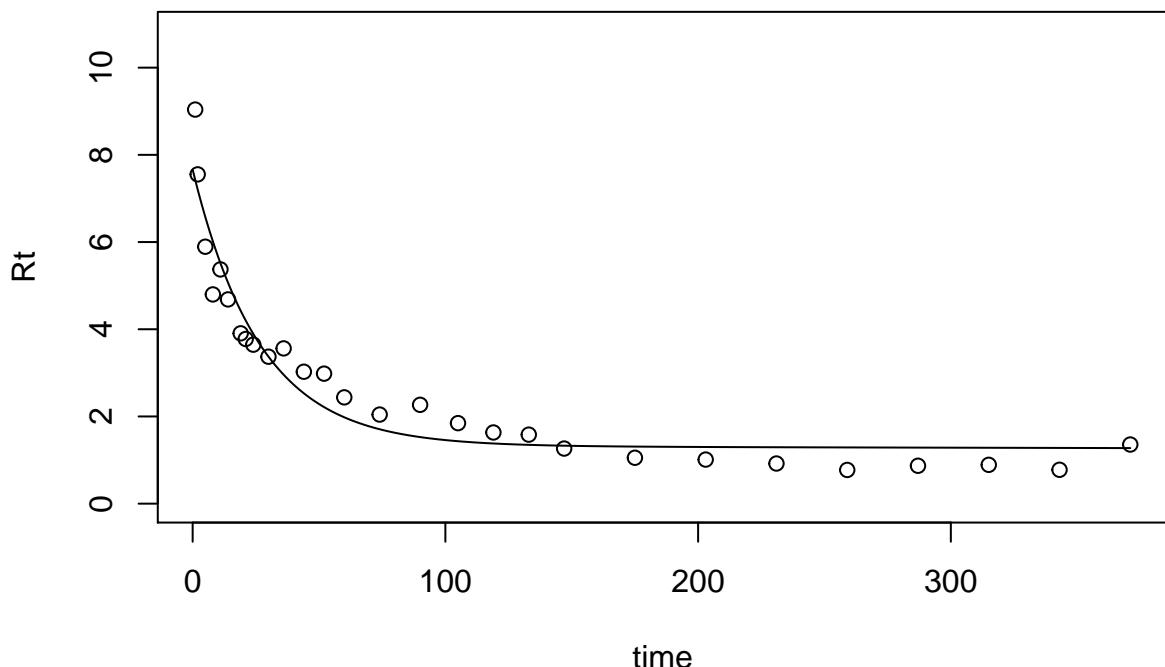


```
## [1] "AIC = 8.30644756506078"
## [1] "k1= 0.0375851721092729"
## [2] "k2= 0.000102351316757375"
## [3] "a21= 0.289997938900945"
## [4] "a12= 1.03474542180182e-05"
## [5] "Proportion of C0 in pool 1= 0.0181561441401899"
```

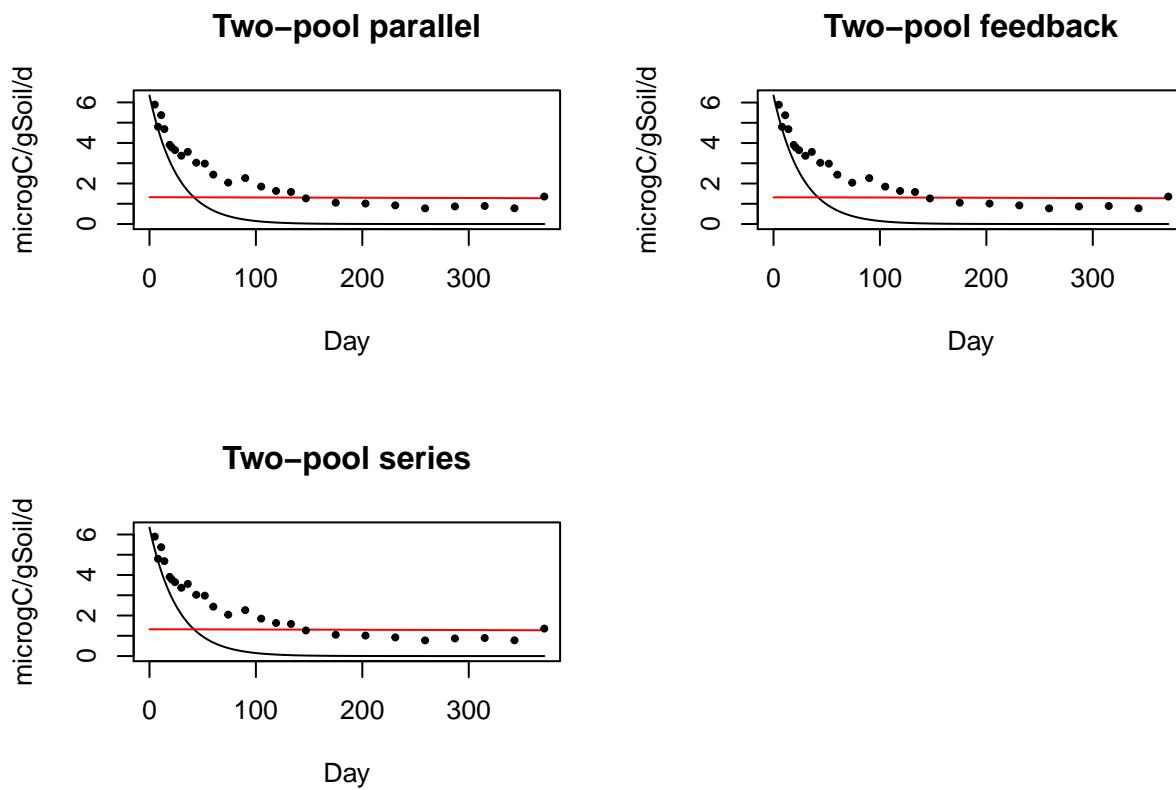


```
## [1] "AIC = 12.3064475698963"
## [1] "k1= 0.0375841537602384"
## [2] "k2= 0.000102349597243089"
## [3] "a21= 0.15728723220901"
```

```
## [4] "Proportion of C0 in pool 1= 0.0152878286221937"
```



```
## [1] "AIC = 10.3064475653832"
```



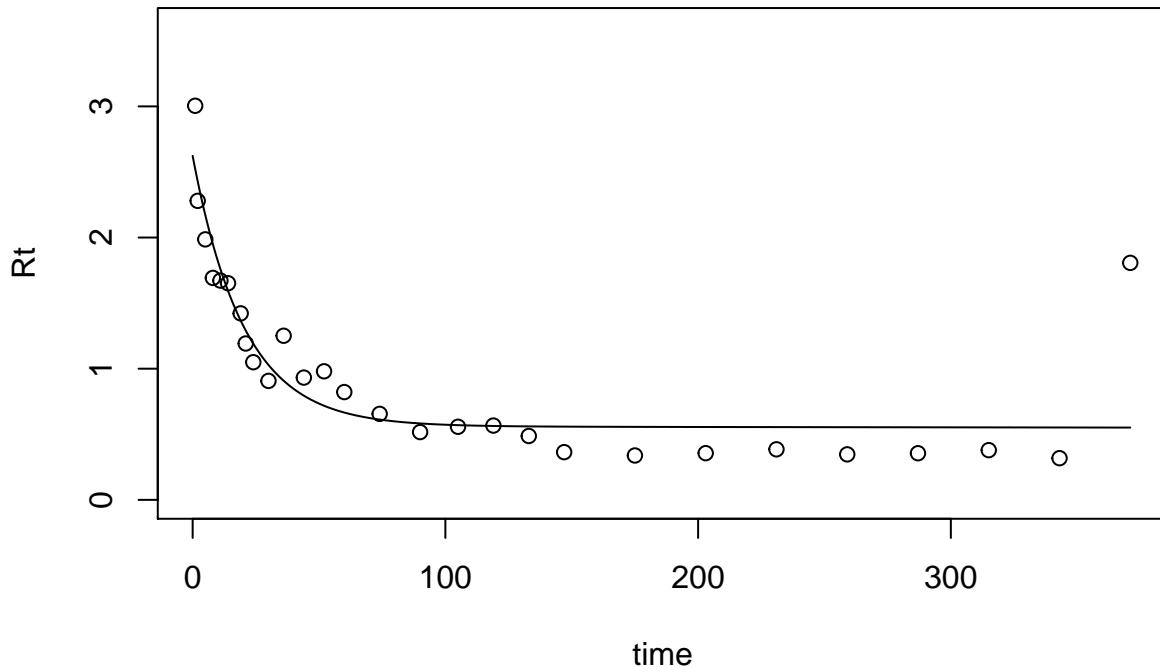
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.306448	0.0375833	0.0001023	0.0128770	NA	NA
Two-pool feedback	12.306448	0.0375852	0.0001024	0.0181561	0.2899979	1.03e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	10.306448	0.0375842	0.0001023		0.0152878	0.1572872

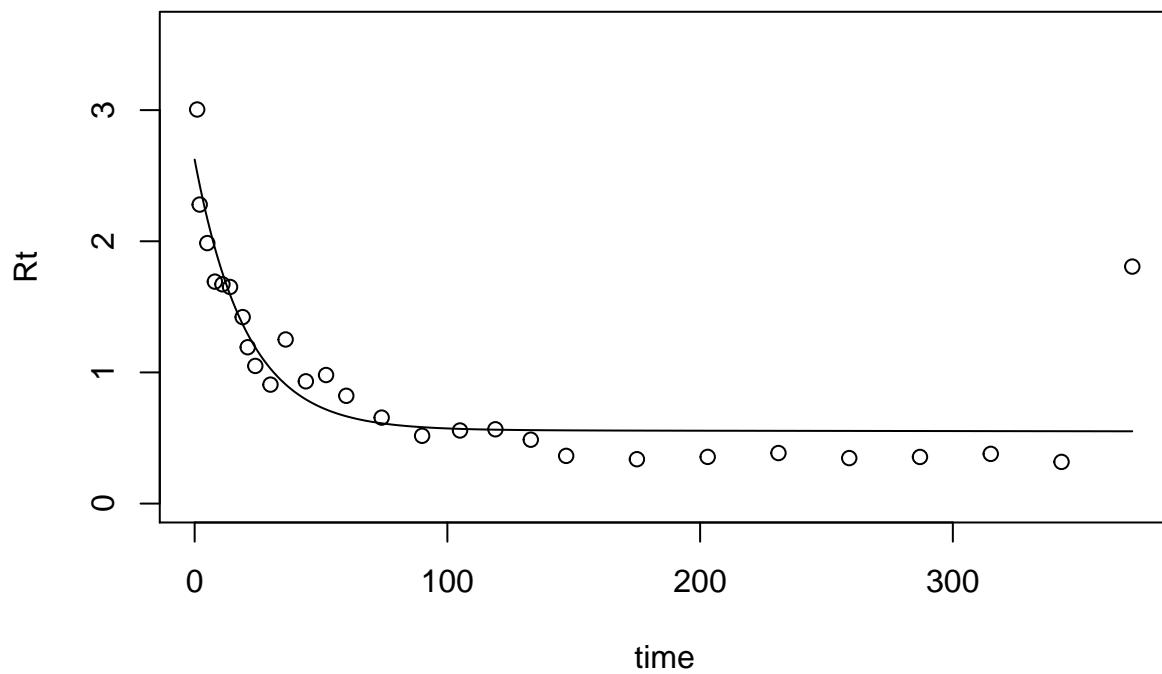
## Variable Site39:

CO2 production rate

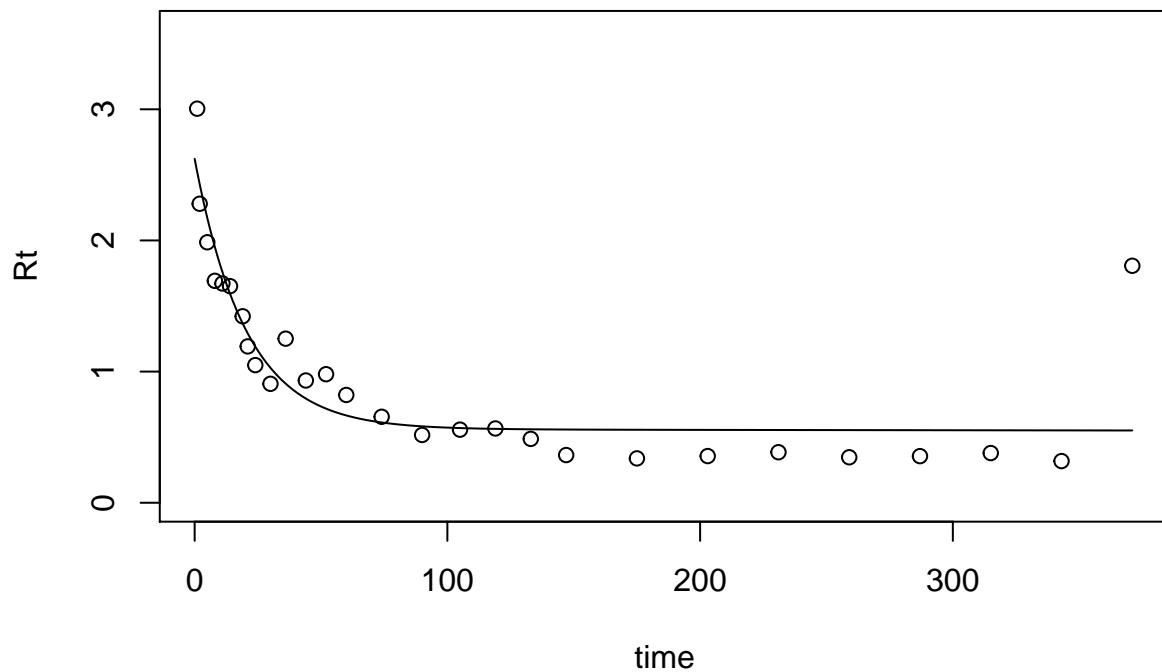
```
## [1] "k1= 0.049372764027026"
## [2] "k2= 4.64924826807207e-05"
## [3] "proportion of C0 in pool 1= 0.00345153819849653"
```



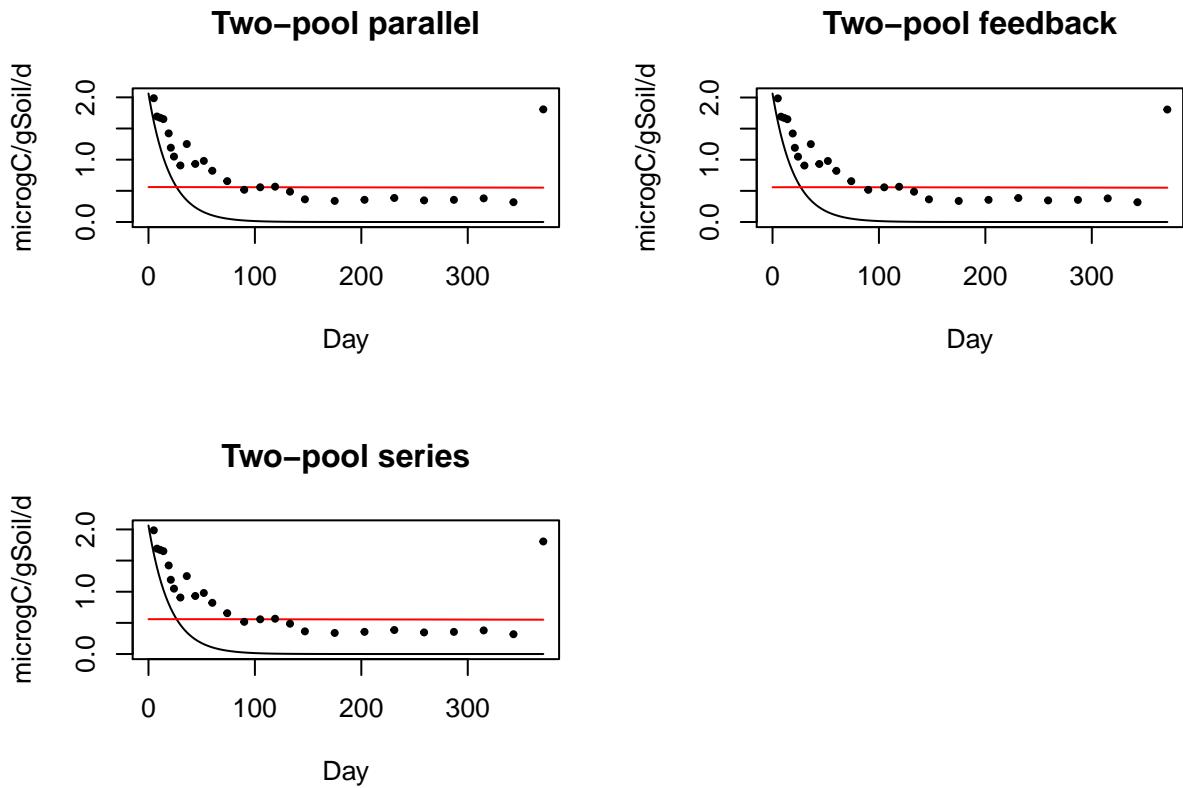
```
## [1] "AIC = 10.7901592297102"
## [1] "k1= 0.0493732909321692"
## [2] "k2= 4.64994578867839e-05"
## [3] "a21= 0.571805094001926"
## [4] "a12= 0.000258535720695008"
## [5] "Proportion of C0 in pool 1= 0.00807101679415023"
```



```
## [1] "AIC = 14.790159212191"
## [1] "k1= 0.0493732349168239"
## [2] "k2= 4.64925710656916e-05"
## [3] "a21= 0.361980185114022"
## [4] "Proportion of C0 in pool 1= 0.00541262072933707"
```



```
## [1] "AIC = 12.790159218578"
```

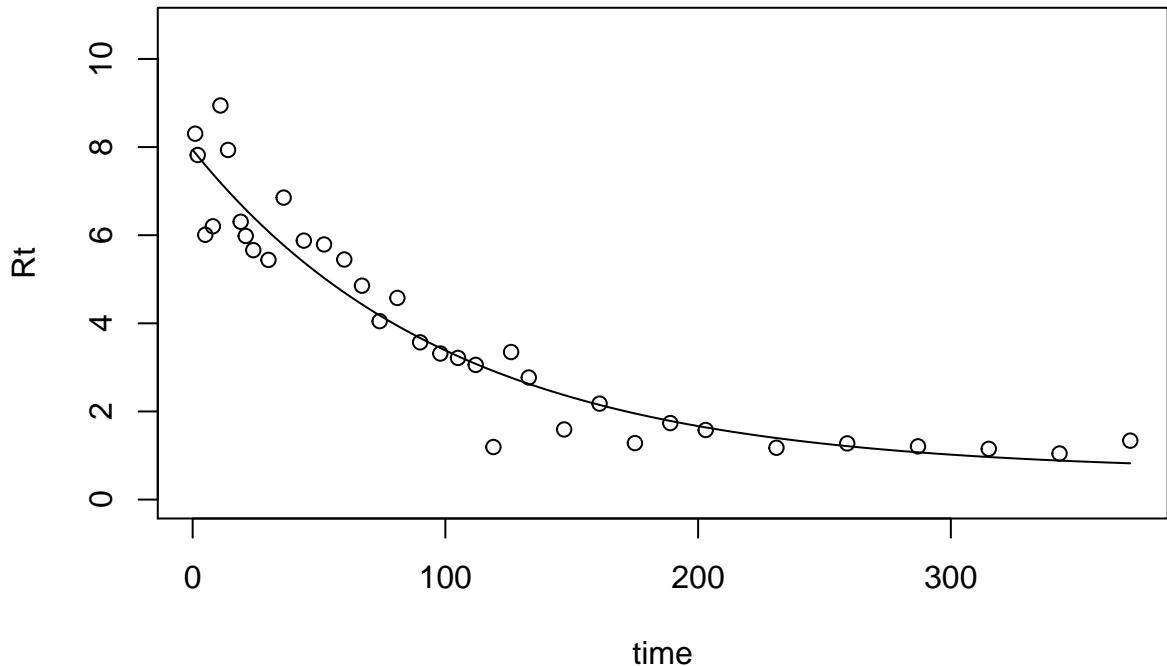


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	10.79016	0.0493728	4.65e-05	0.0034515	NA	NA
Two-pool feedback	14.79016	0.0493733	4.65e-05	0.0080710	0.5718051	0.0002585
Two-pool series	12.79016	0.0493732	4.65e-05	0.0054126	0.3619802	NA

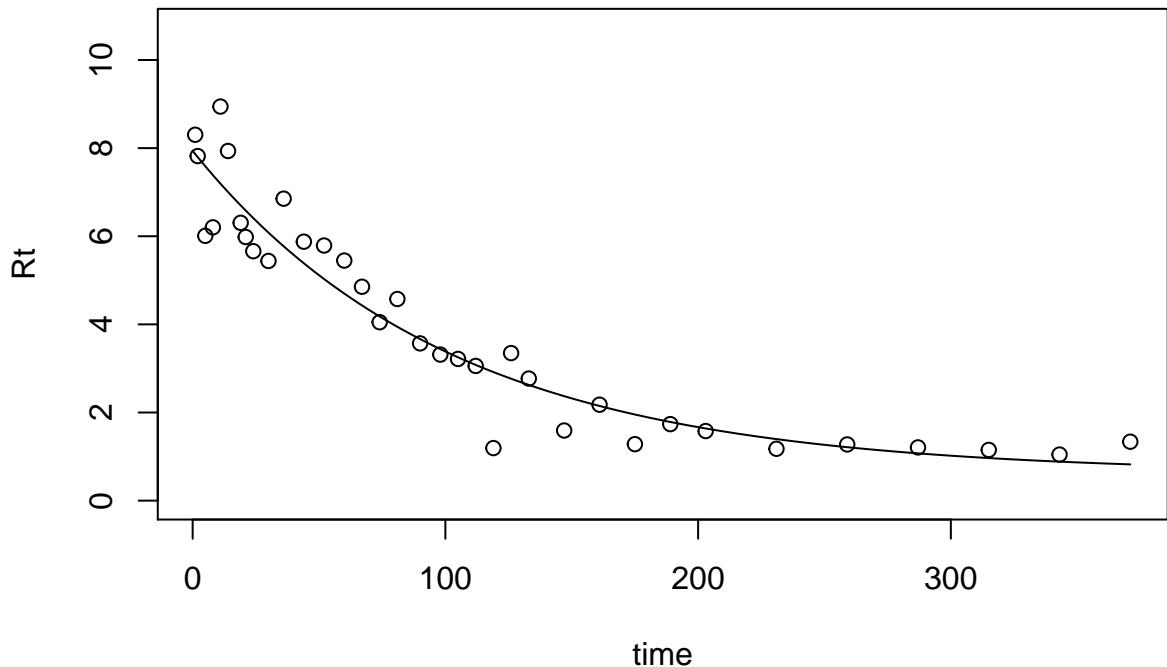
## Variable Site40:

CO2 production rate

```
## [1] "k1= 0.00976181995455681"
## [2] "k2= 3.37149242733811e-05"
## [3] "proportion of CO in pool 1= 0.0381622082569006"
```

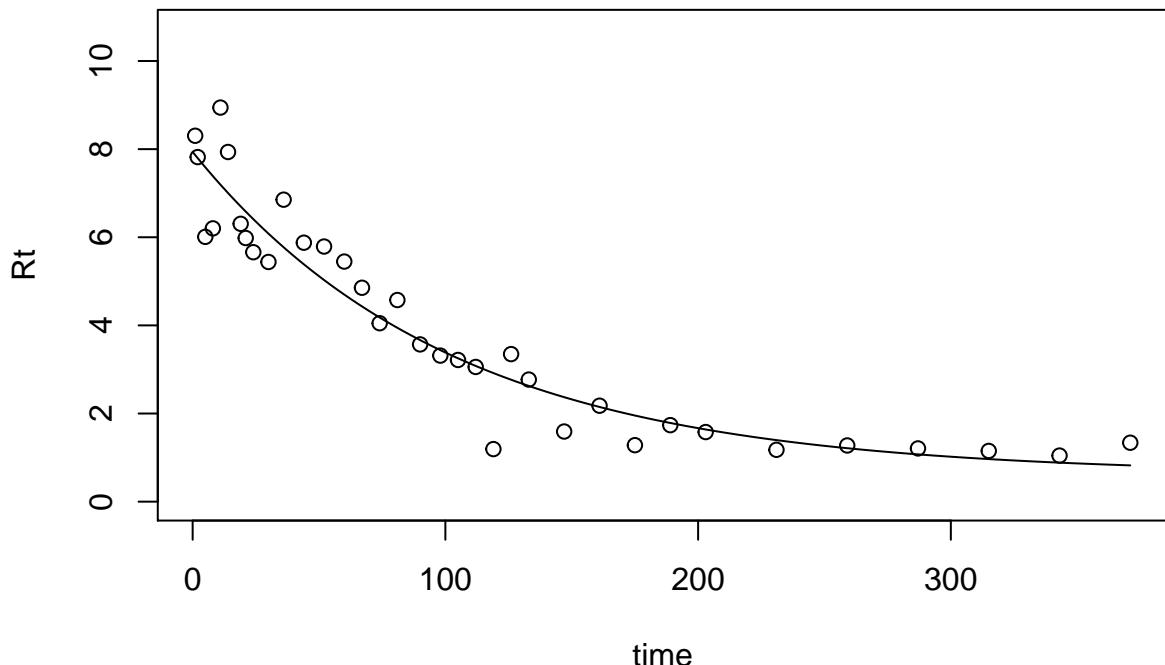


```
## [1] "AIC = 7.38755076496917"
## [1] "k1= 0.00976175819038732"
## [2] "k2= 3.37141402613797e-05"
## [3] "a21= 0.00553488958802439"
## [4] "a12= 2.27439072325586e-06"
## [5] "Proportion of C0 in pool 1= 0.0383755381818165"
```

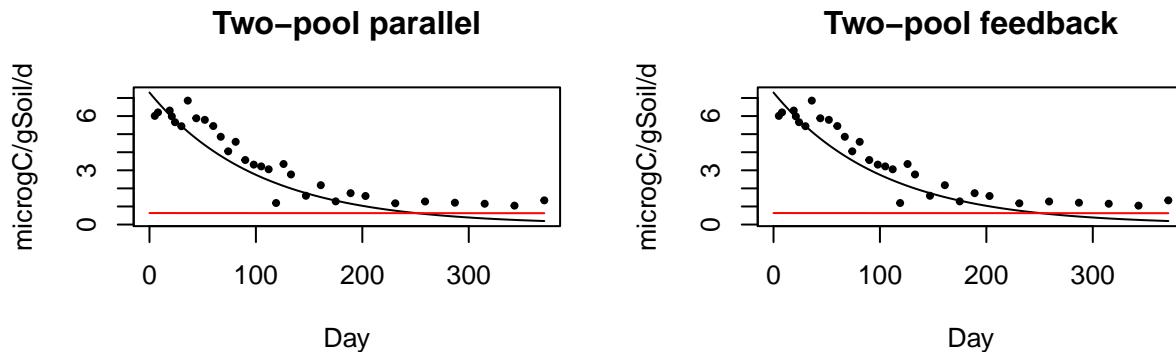


```
## [1] "AIC = 11.3875507646115"
## [1] "k1= 0.00976176134085394"
## [2] "k2= 3.37141796666738e-05"
## [3] "a21= 0.00156085134112049"
```

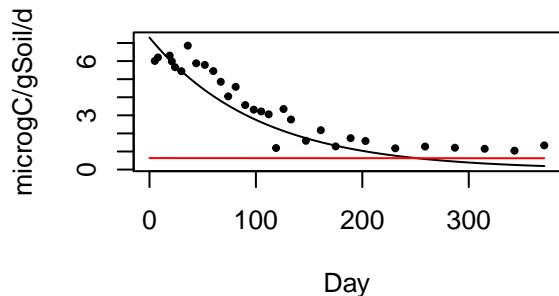
```
## [4] "Proportion of C0 in pool 1= 0.0382221621002272"
```



```
## [1] "AIC = 9.38755076357269"
```



**Two-pool series**



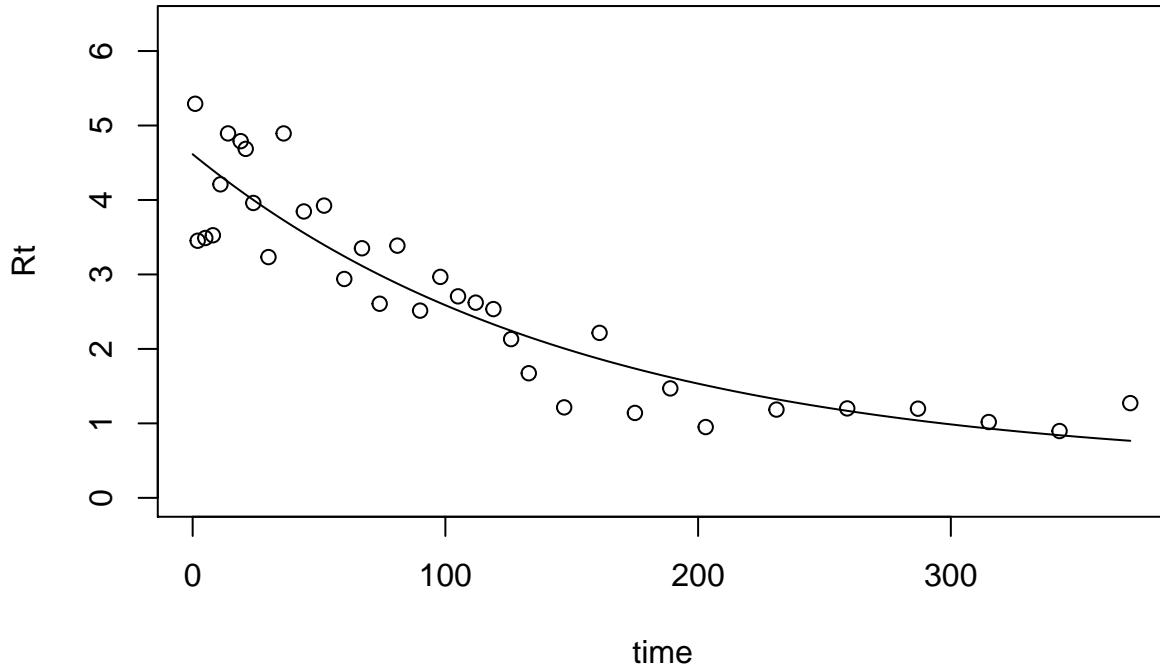
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	7.387551	0.0097618	3.37e-05	0.0381622	NA	NA
Two-pool feedback	11.387551	0.0097618	3.37e-05	0.0383755	0.0055349	2.3e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	9.387551	0.0097618	3.37e-05		0.0382222	0.0015609

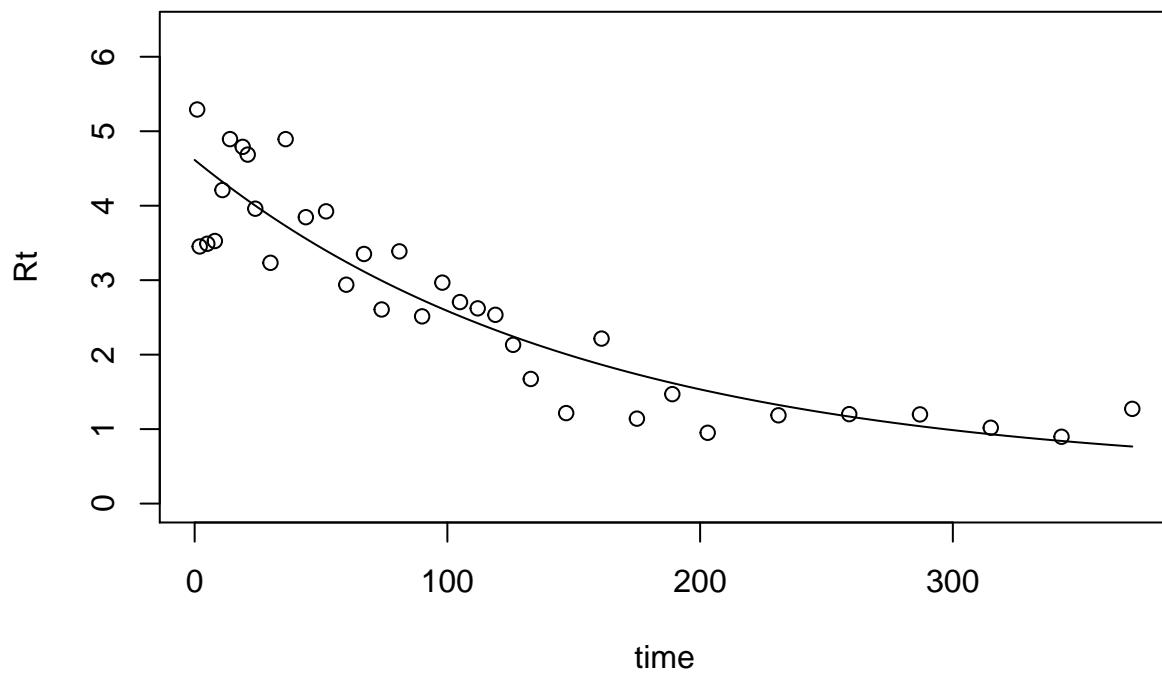
## Variable Site41:

CO2 production rate

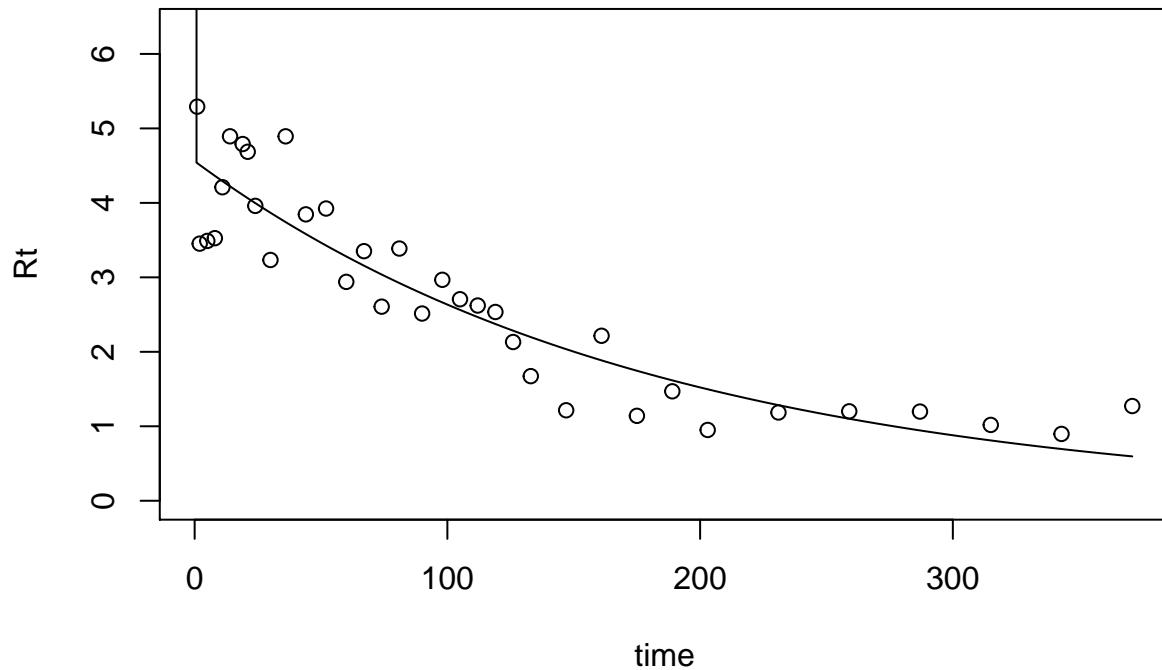
```
## [1] "k1= 0.00655286028384018"
## [2] "k2= 2.03687284399967e-05"
## [3] "proportion of C0 in pool 1= 0.0318512570648856"
```



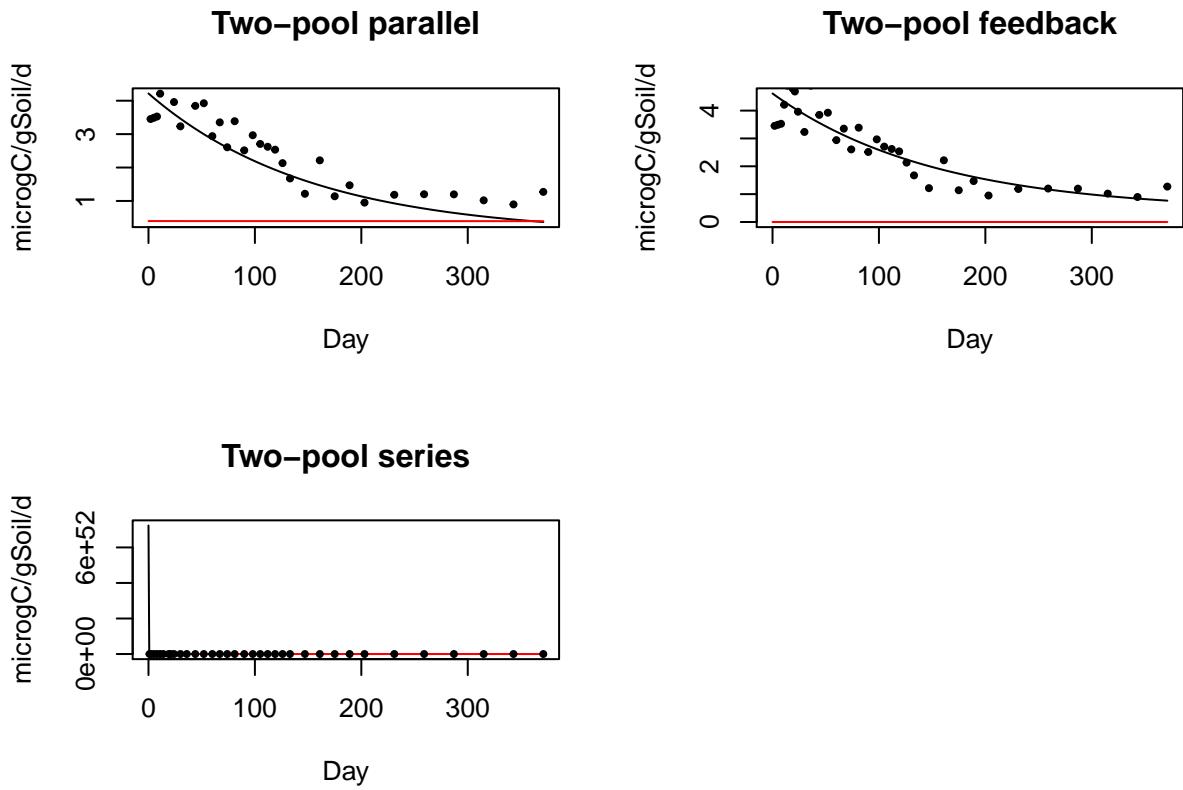
```
## [1] "AIC = 8.56876798562567"
## [1] "k1= 0.00655204730361691"
## [2] "k2= 2.13434762888932e-05"
## [3] "a21= 0.0454272077913072"
## [4] "a12= 0.999991482354522"
## [5] "Proportion of C0 in pool 1= 0.0365240786561939"
```



```
## [1] "AIC = 12.5687679848852"
## [1] "k1= 3.7350726465203e+48"
## [2] "k2= 0.00548569701412691"
## [3] "a21= 0.0411040543712268"
## [4] "Proportion of C0 in pool 1= 0.999958821801291"
```



```
## [1] "AIC = 10.5400915864056"
```

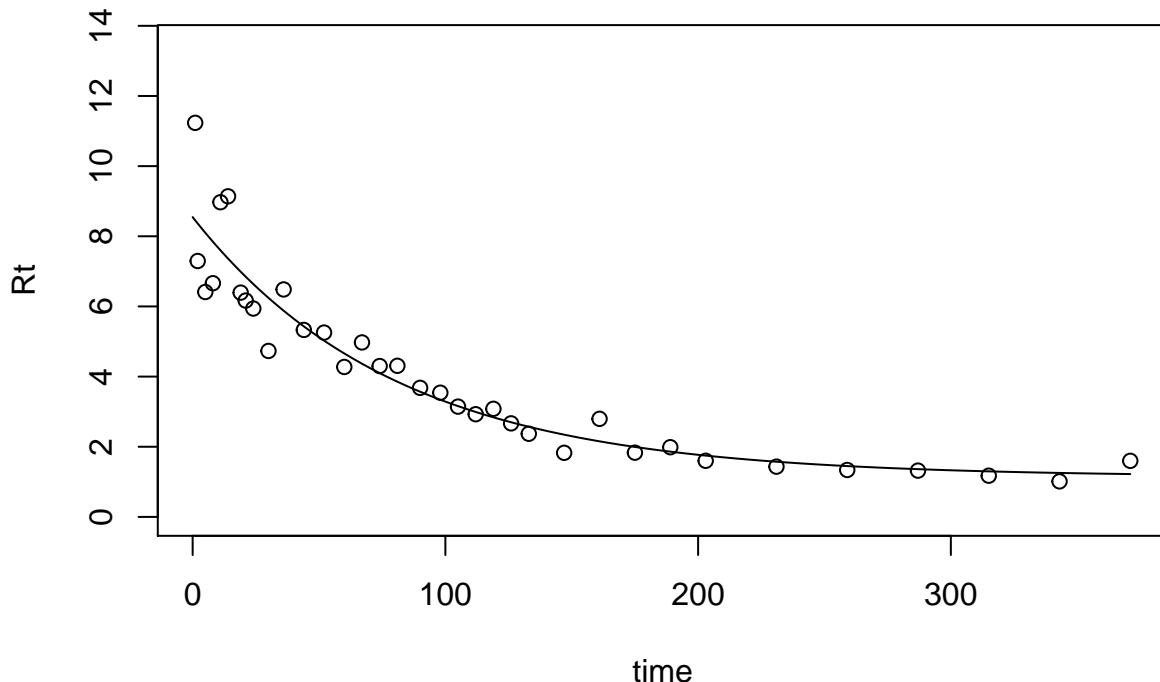


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	8.568768	6.552900e-03	0.0000204	0.0318513	NA	NA
Two-pool feedback	12.568768	6.552000e-03	0.0000213	0.0365241	0.0454272	0.9999915
Two-pool series	10.540092	3.735073e+48	0.0054857	0.9999588	0.0411041	NA

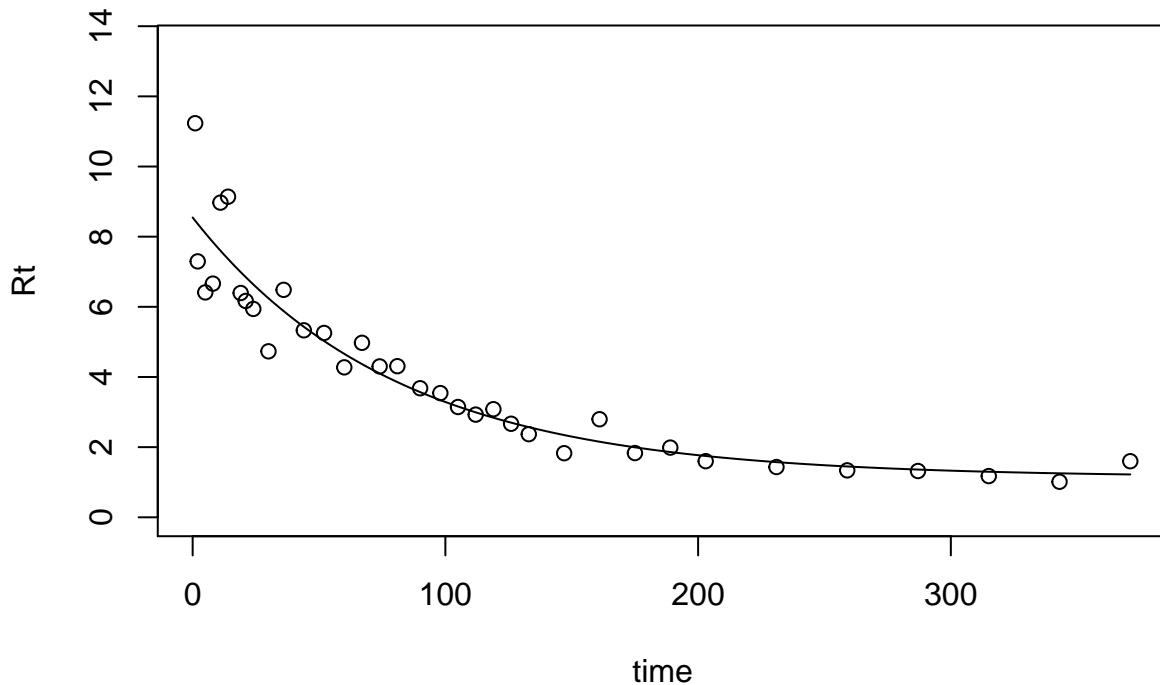
## Variable Site42:

CO2 production rate

```
## [1] "k1= 0.0124707172792095"
## [2] "k2= 6.50033361548062e-05"
## [3] "proportion of C0 in pool 1= 0.0316016467489096"
```

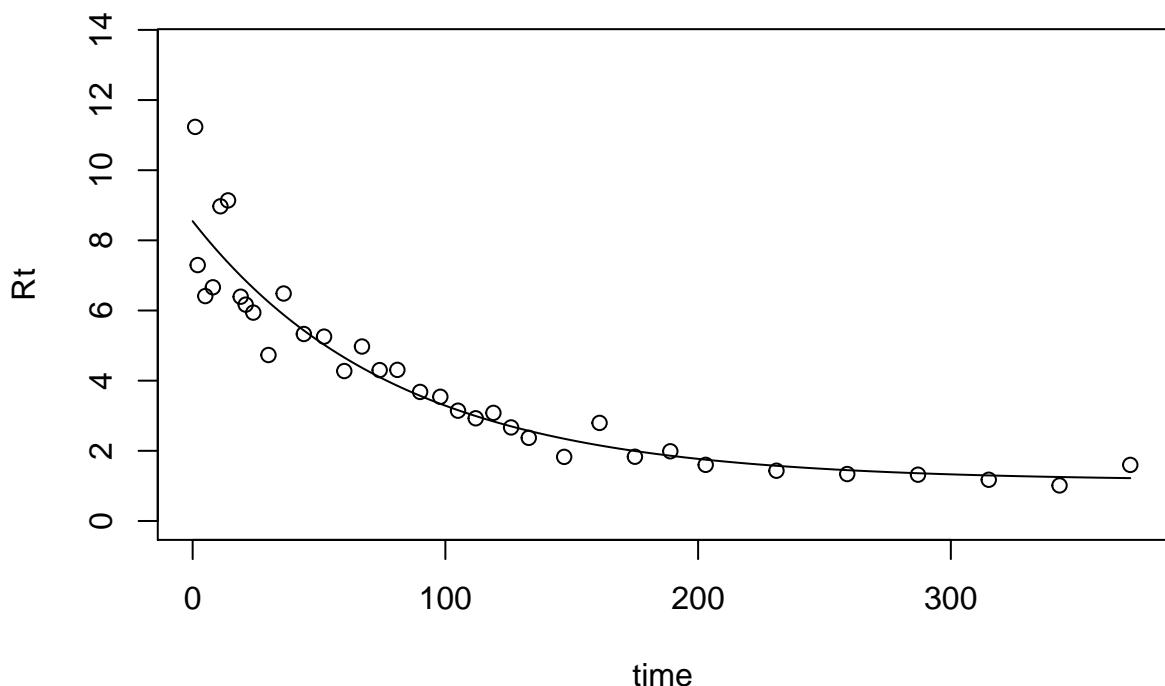


```
## [1] "AIC = 6.74753139875787"
## [1] "k1= 0.0124707561784301"
## [2] "k2= 6.50036715069628e-05"
## [3] "a21= 0.00518077563187008"
## [4] "a12= 2.17570249649857e-06"
## [5] "Proportion of C0 in pool 1= 0.0317669585067553"
```



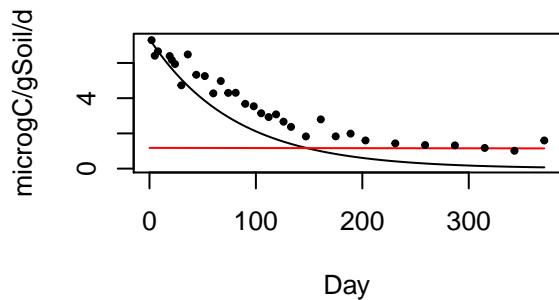
```
## [1] "AIC = 10.7475313987284"
## [1] "k1= 0.0124707758805643"
## [2] "k2= 6.50038403910522e-05"
## [3] "a21= 0.00191748446253026"
```

```
## [4] "Proportion of C0 in pool 1= 0.0316624708303131"
```

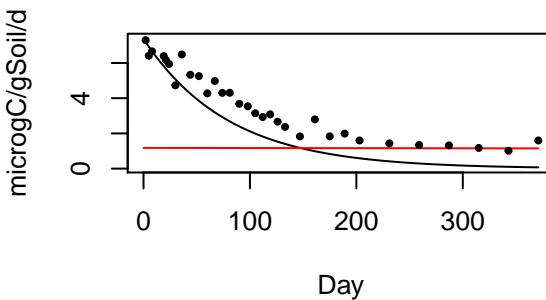


```
## [1] "AIC = 8.74753139867997"
```

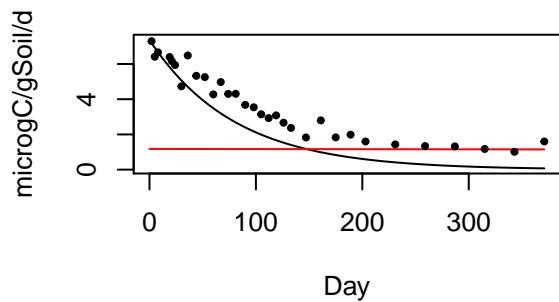
### Two-pool parallel



### Two-pool feedback



### Two-pool series



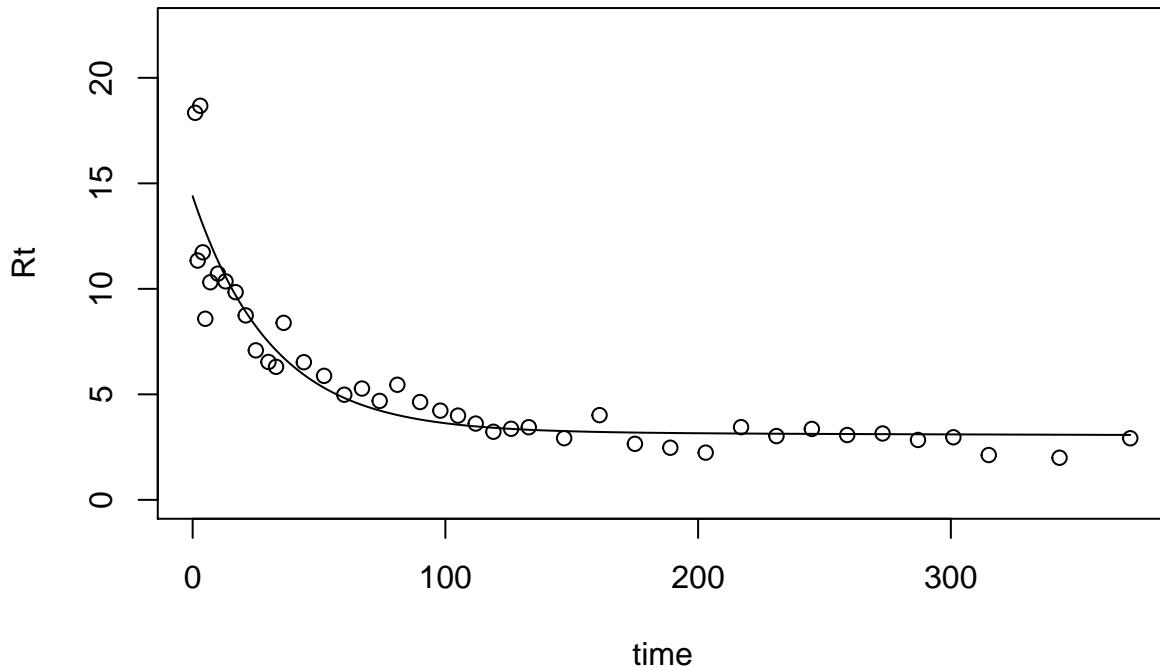
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.747531	0.0124707	6.5e-05	0.0316016	NA	NA
Two-pool feedback	10.747531	0.0124708	6.5e-05	0.0317670	0.0051808	2.2e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.747531	0.0124708	6.5e-05		0.0316625	0.0019175

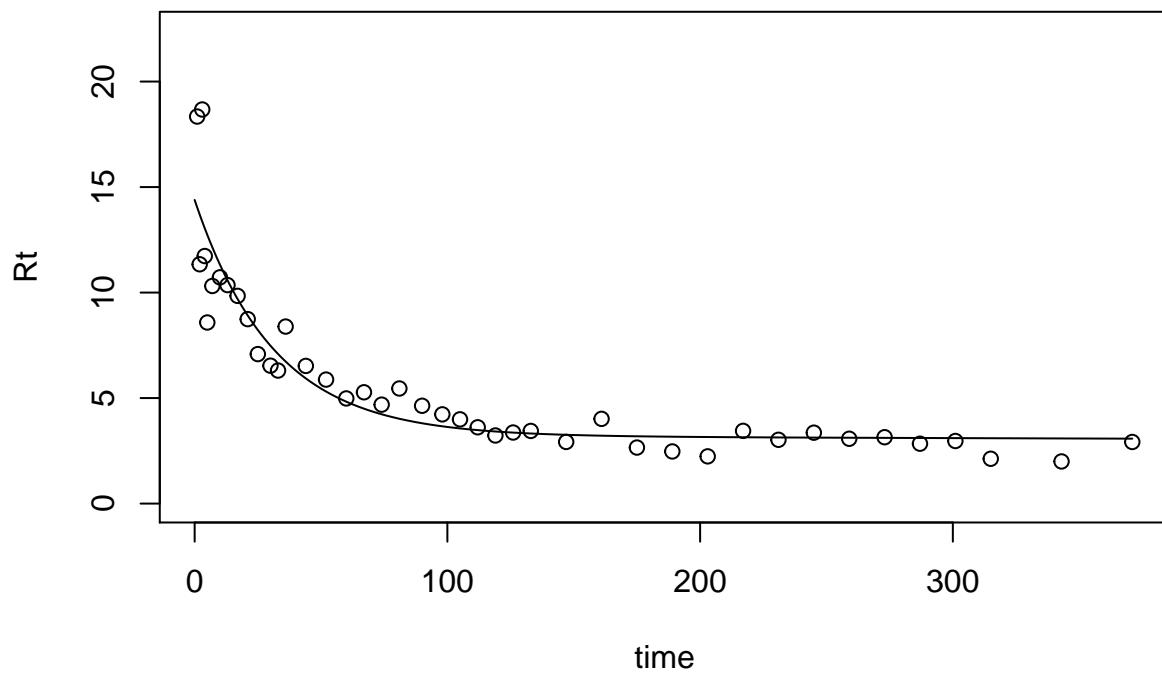
## Variable Site43:

CO2 production rate

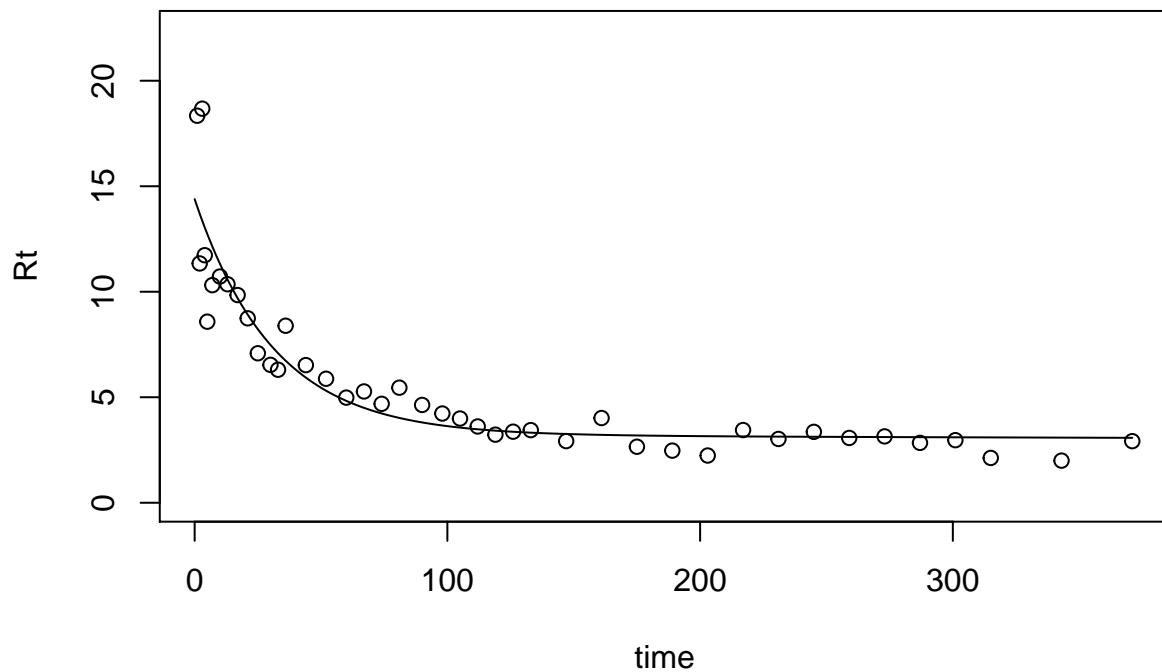
```
## [1] "k1= 0.0319942615193887"
## [2] "k2= 0.000116599102273068"
## [3] "proportion of C0 in pool 1= 0.0125229640838148"
```



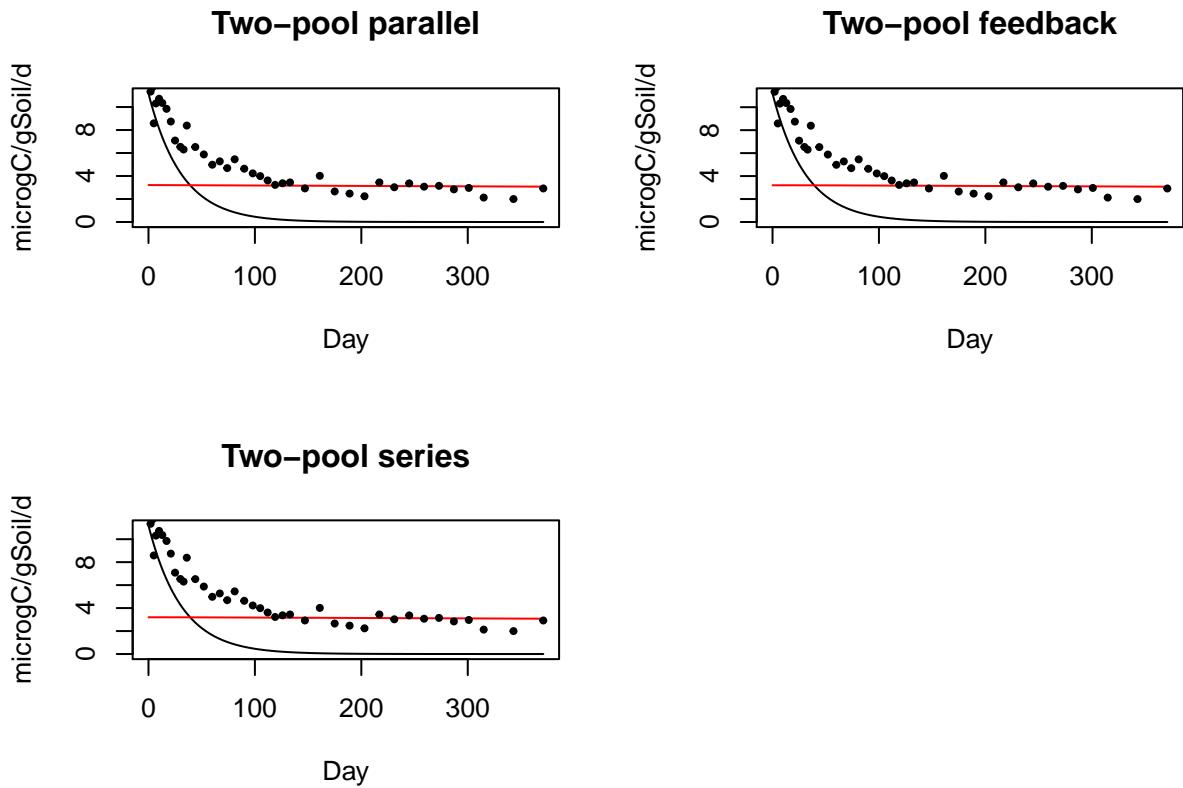
```
## [1] "AIC = 4.47036589621732"
## [1] "k1= 0.0319947102356783"
## [2] "k2= 0.000116601591511652"
## [3] "a21= 0.256961755390455"
## [4] "a12= 6.16478964444722e-05"
## [5] "Proportion of C0 in pool 1= 0.0168750833103351"
```



```
## [1] "AIC = 8.47036589567527"
## [1] "k1= 0.0319939118640764"
## [2] "k2= 0.000116598641697147"
## [3] "a21= 0.236896330814064"
## [4] "Proportion of C0 in pool 1= 0.0164290468093968"
```



```
## [1] "AIC = 6.47036588716515"
```

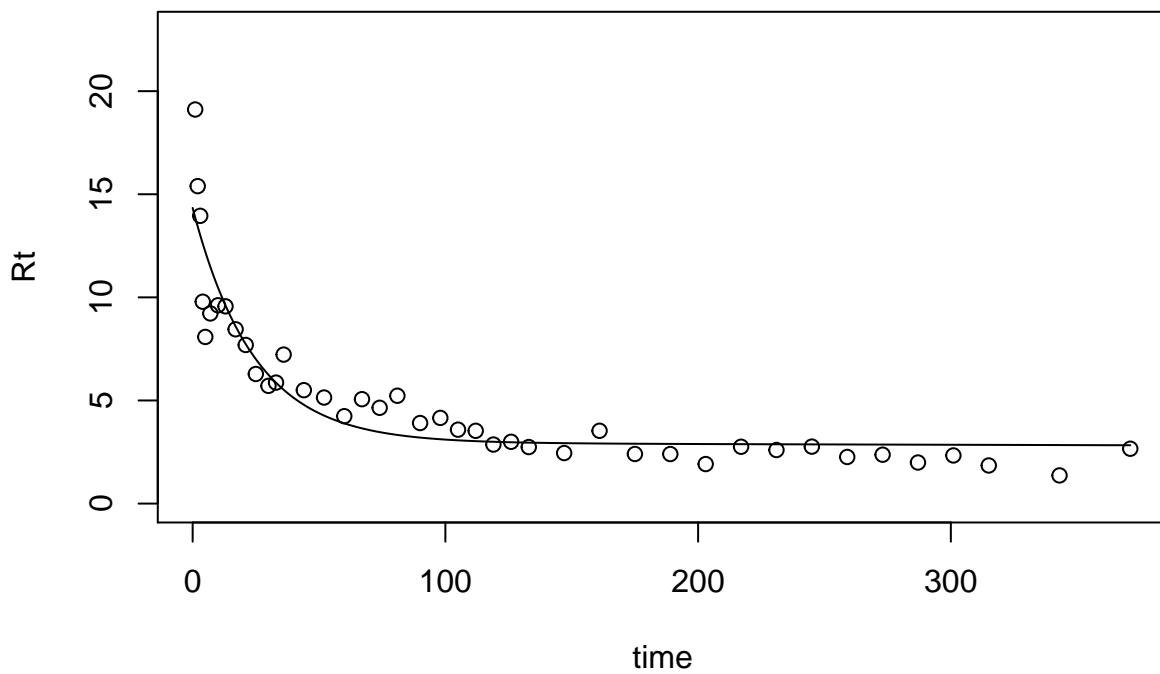


model	AIC	k1	k2	Proportion.of.CO.in.pool.1	a21	a12
Two-pool parallel	4.470366	0.0319943	0.0001166	0.0125230	NA	NA
Two-pool feedback	8.470366	0.0319947	0.0001166	0.0168751	0.2569618	6.16e-05
Two-pool series	6.470366	0.0319939	0.0001166	0.0164290	0.2368963	NA

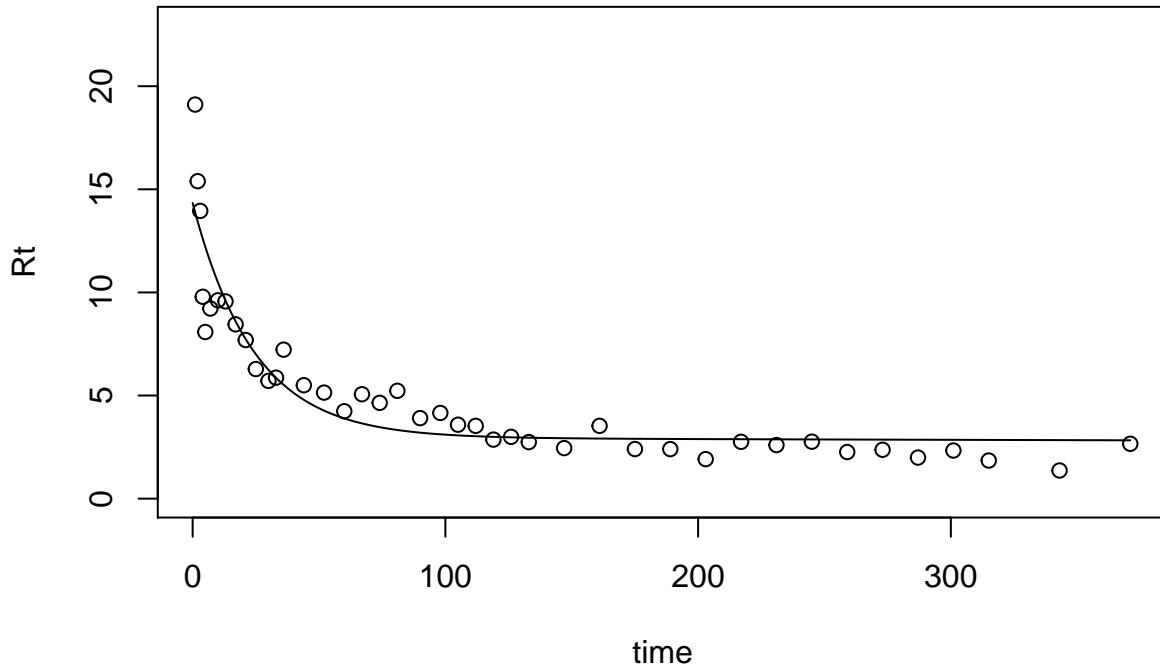
### Variable Site44:

CO2 production rate

```
## [1] "k1= 0.0412550710957312"
## [2] "k2= 0.000116622250847352"
## [3] "proportion of CO in pool 1= 0.0107791410988077"
```

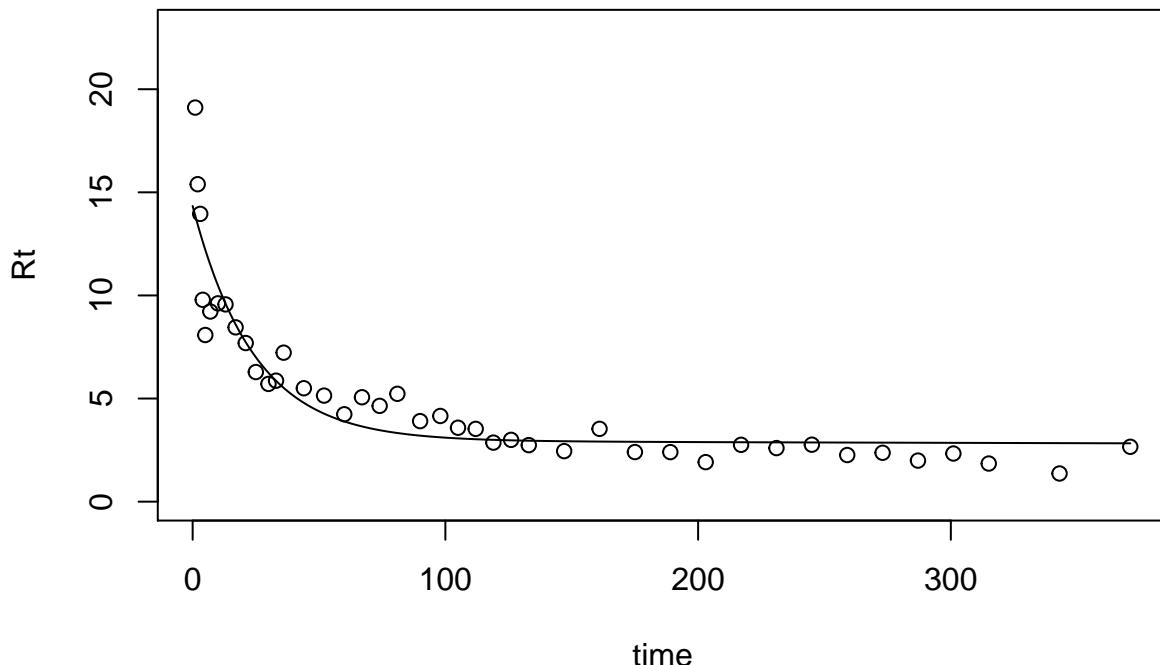


```
## [1] "AIC = 4.60808062411781"
## [1] "k1= 0.041258675978208"
## [2] "k2= 0.00011662566907404"
## [3] "a21= 0.528378252797104"
## [4] "a12= 2.18763614823203e-06"
## [5] "Proportion of C0 in pool 1= 0.0229266798703684"
```

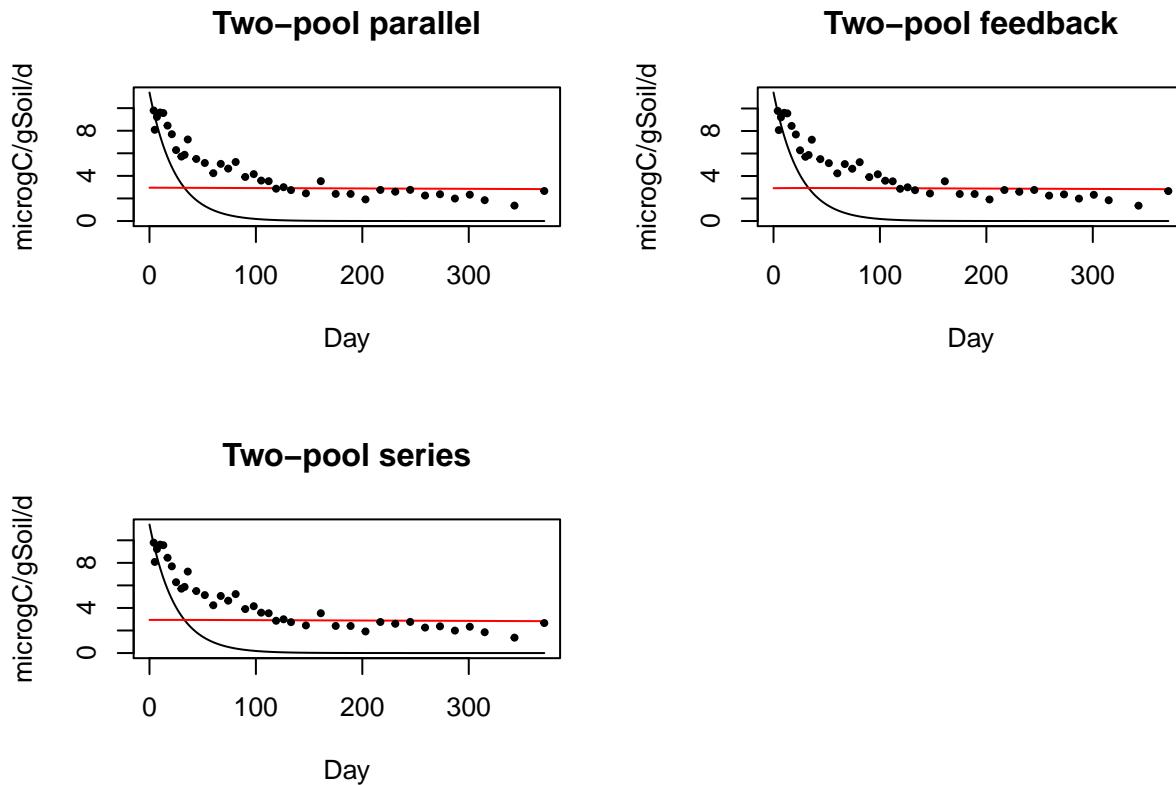


```
## [1] "AIC = 8.60808063366379"
## [1] "k1= 0.041256198544016"
## [2] "k2= 0.000116623254780668"
## [3] "a21= 0.302188044059622"
```

```
## [4] "Proportion of C0 in pool 1= 0.015465506090532"
```



```
## [1] "AIC = 6.60808062568568"
```



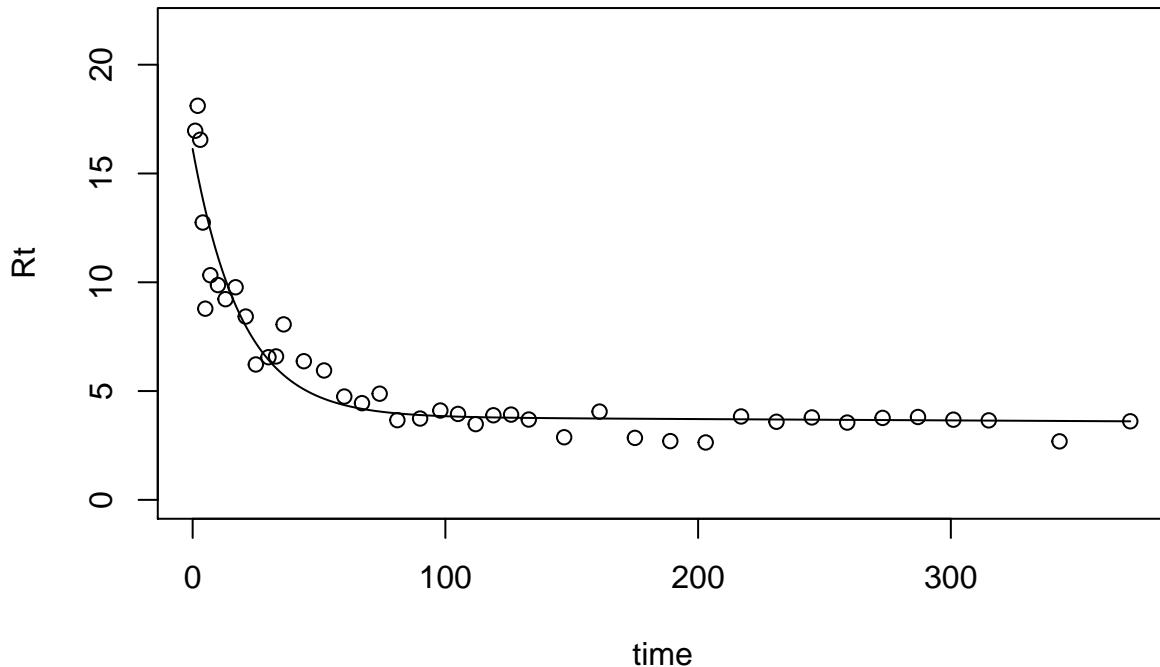
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	4.608081	0.0412551	0.0001166	0.0107791	NA	NA
Two-pool feedback	8.608081	0.0412587	0.0001166	0.0229267	0.5283783	2.2e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	6.608081	0.0412562	0.0001166		0.0154655	0.3021880

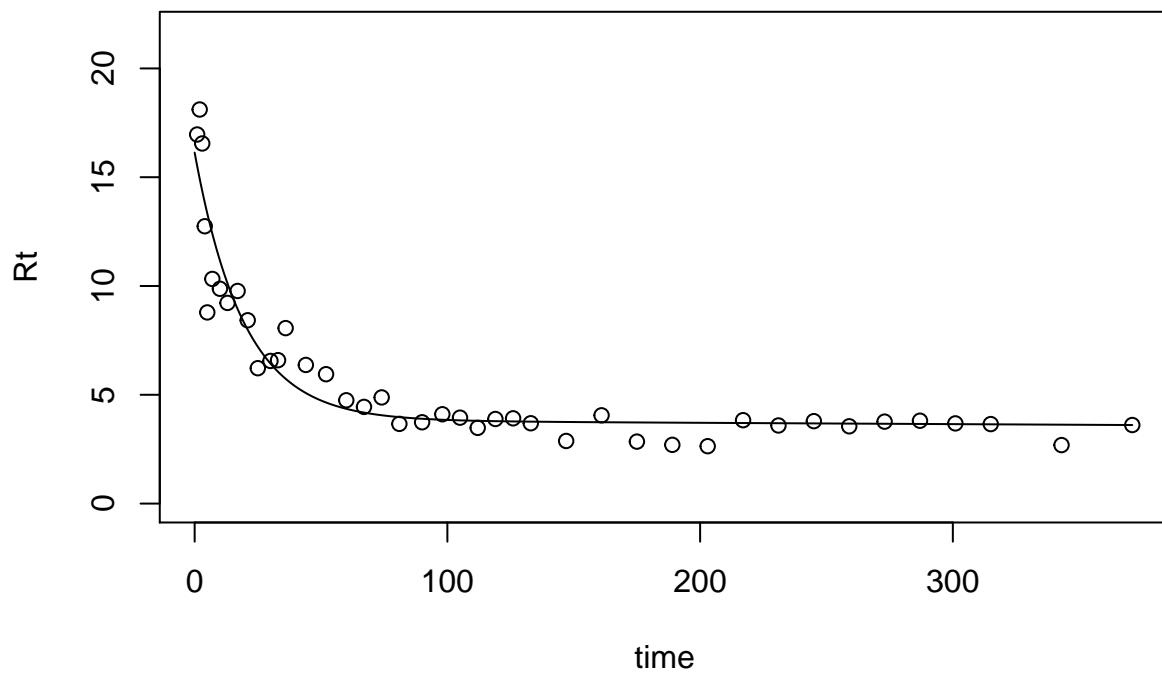
## Variable Site45:

CO2 production rate

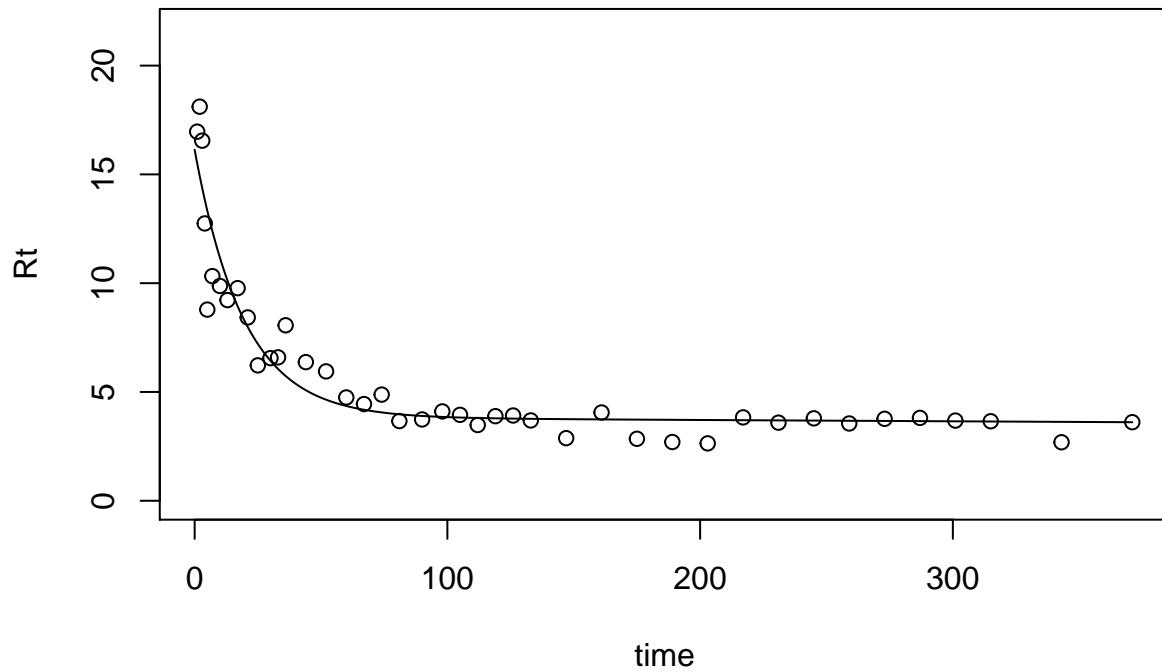
```
## [1] "k1= 0.051552210862195"
## [2] "k2= 0.000163467103849253"
## [3] "proportion of C0 in pool 1= 0.0100635367153713"
```



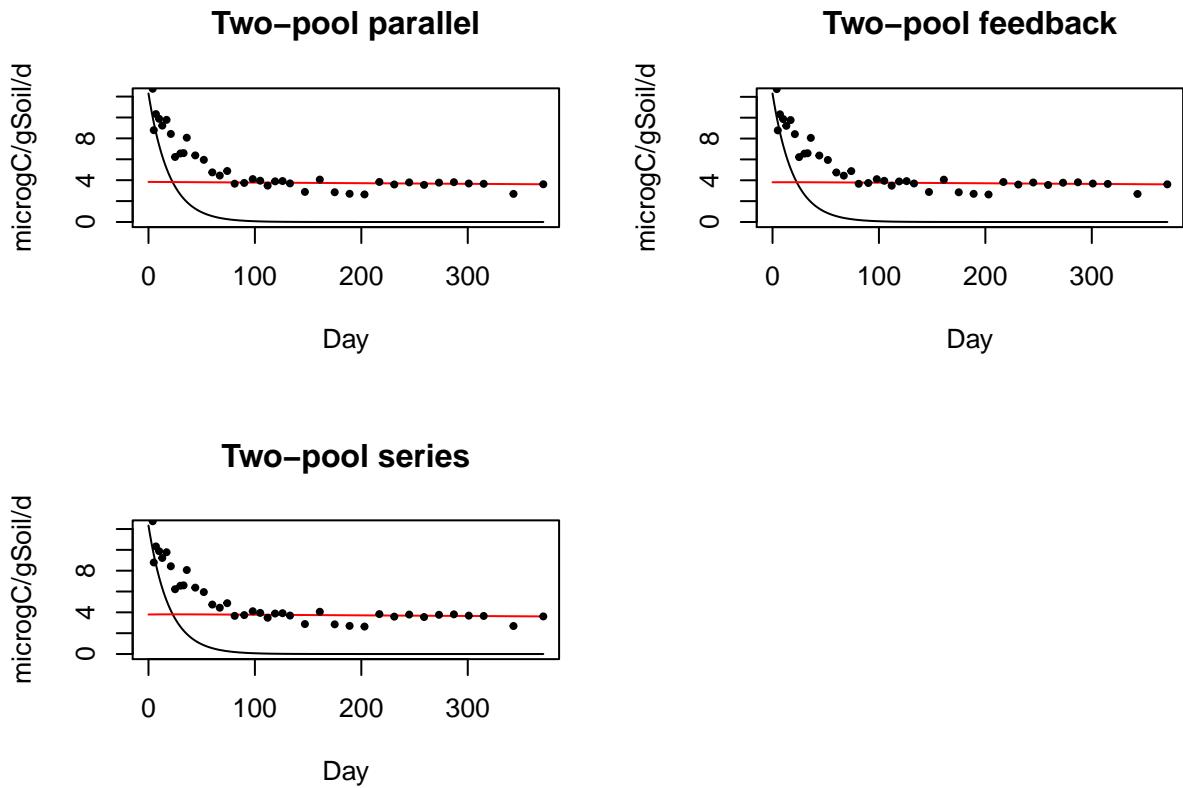
```
## [1] "AIC = 5.19871552209523"
## [1] "k1= 0.0515529844686395"
## [2] "k2= 0.000163474664717355"
## [3] "a21= 0.402748329262653"
## [4] "a12= 0.000106802800857841"
## [5] "Proportion of C0 in pool 1= 0.0168860823716381"
```



```
## [1] "AIC = 9.19871552360073"
## [1] "k1= 0.0515537777699057"
## [2] "k2= 0.000163468243825532"
## [3] "a21= 0.514639854237983"
## [4] "Proportion of C0 in pool 1= 0.0208039225194691"
```



```
## [1] "AIC = 7.19871552392136"
```

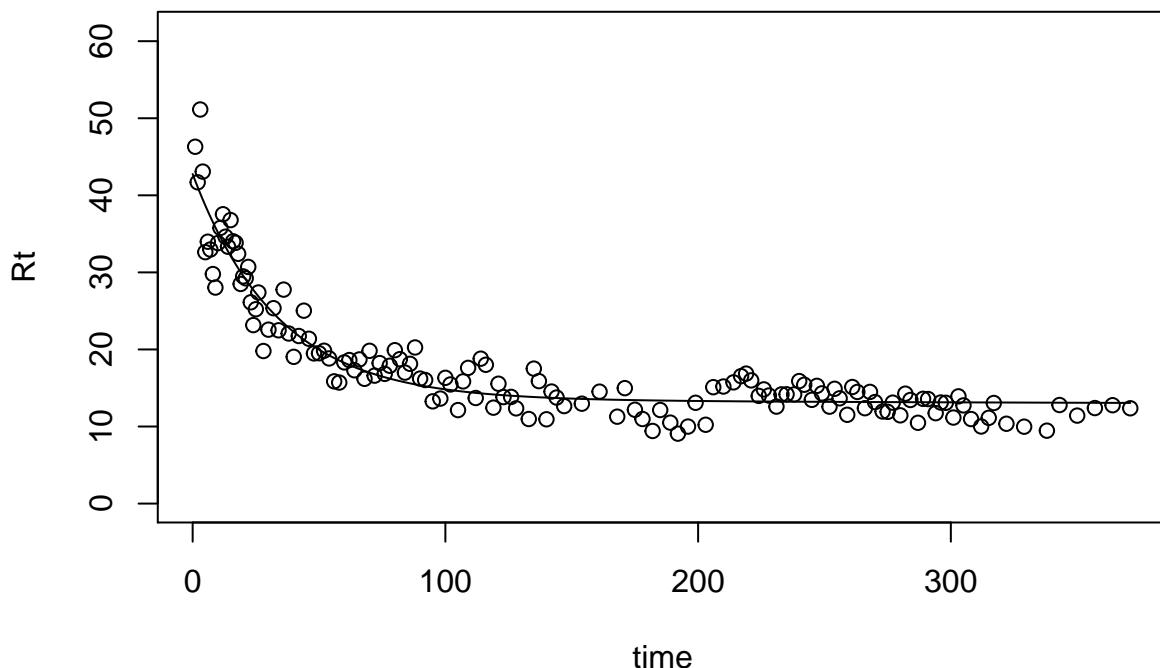


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	5.198715	0.0515522	0.0001635	0.0100635	NA	NA
Two-pool feedback	9.198716	0.0515530	0.0001635	0.0168861	0.4027483	0.0001068
Two-pool series	7.198715	0.0515538	0.0001635	0.0208039	0.5146399	NA

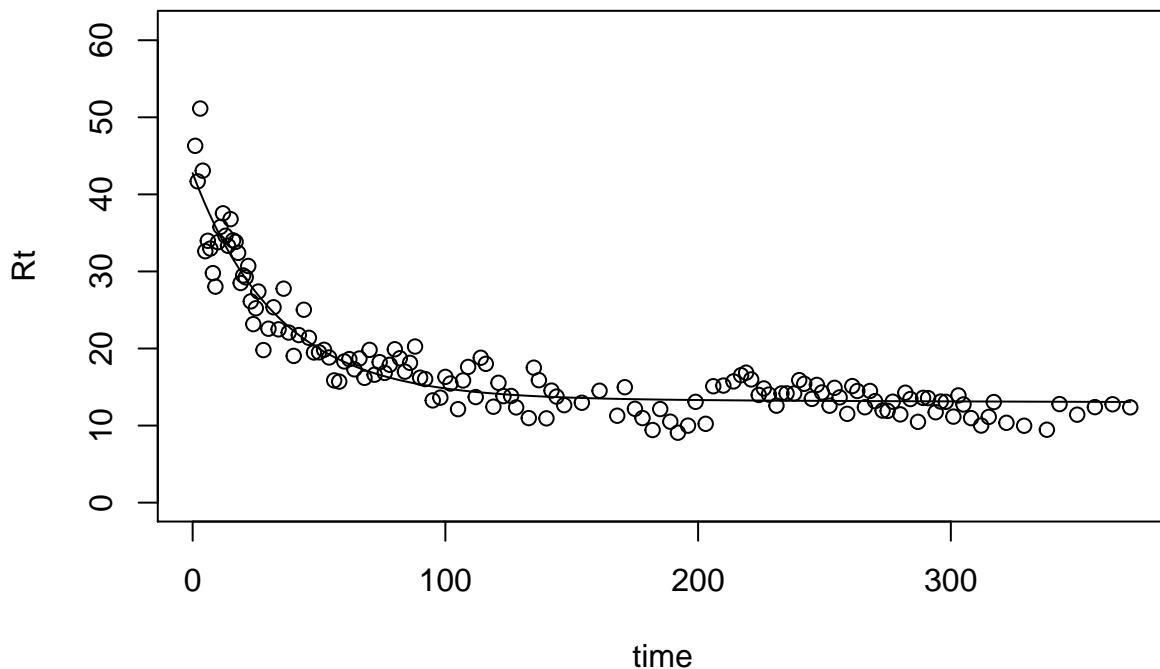
### Variable Site46:

CO2 production rate

```
## [1] "k1= 0.0298861499635095"
## [2] "k2= 7.93457671106644e-05"
## [3] "proportion of C0 in pool 1= 0.00575251012871547"
```

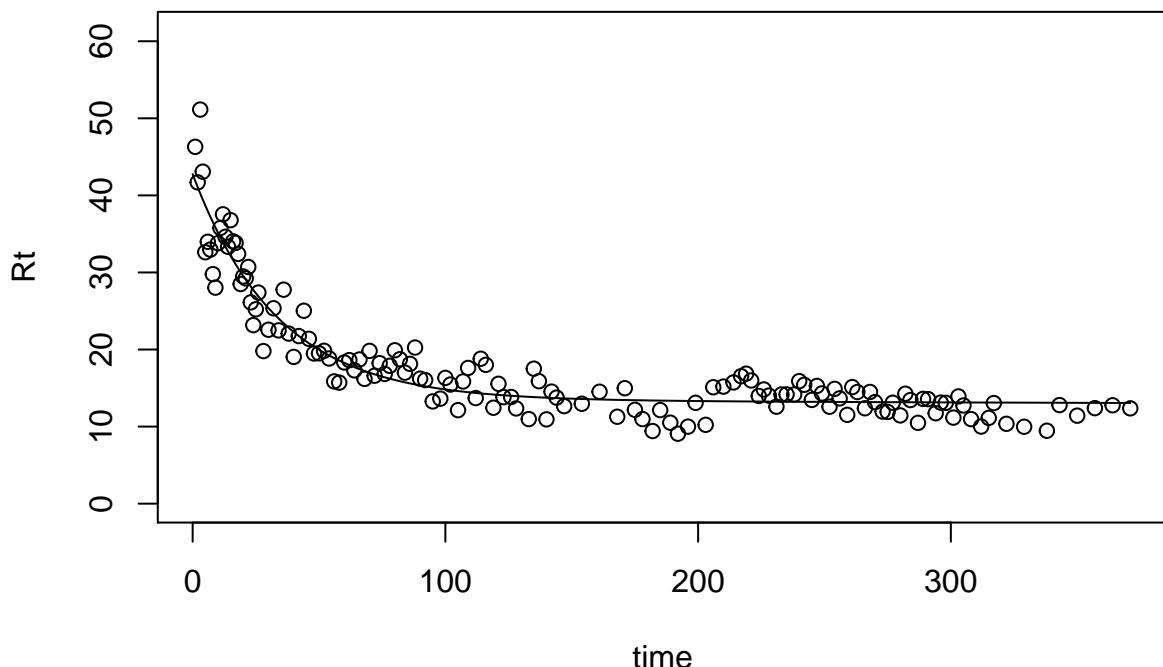


```
## [1] "AIC = 2.28342636180652"
## [1] "k1= 0.029886104217663"
## [2] "k2= 7.93852972000884e-05"
## [3] "a21= 0.445039678862784"
## [4] "a12= 0.00111976136472569"
## [5] "Proportion of C0 in pool 1= 0.0103907548300121"
```

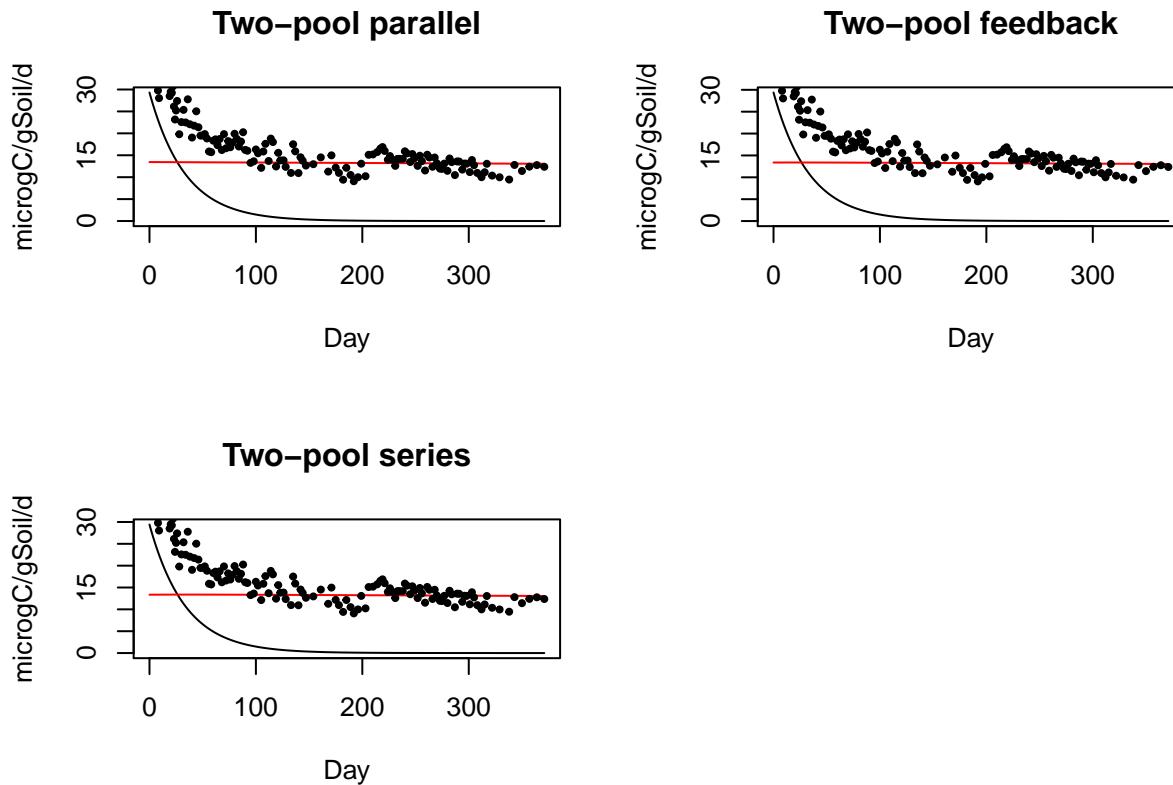


```
## [1] "AIC = 6.28342636149788"
## [1] "k1= 0.0298862266619511"
## [2] "k2= 7.93458071507764e-05"
## [3] "a21= 0.558871947255575"
```

```
## [4] "Proportion of C0 in pool 1= 0.0130845622440052"
```



```
## [1] "AIC = 4.28342636164357"
```



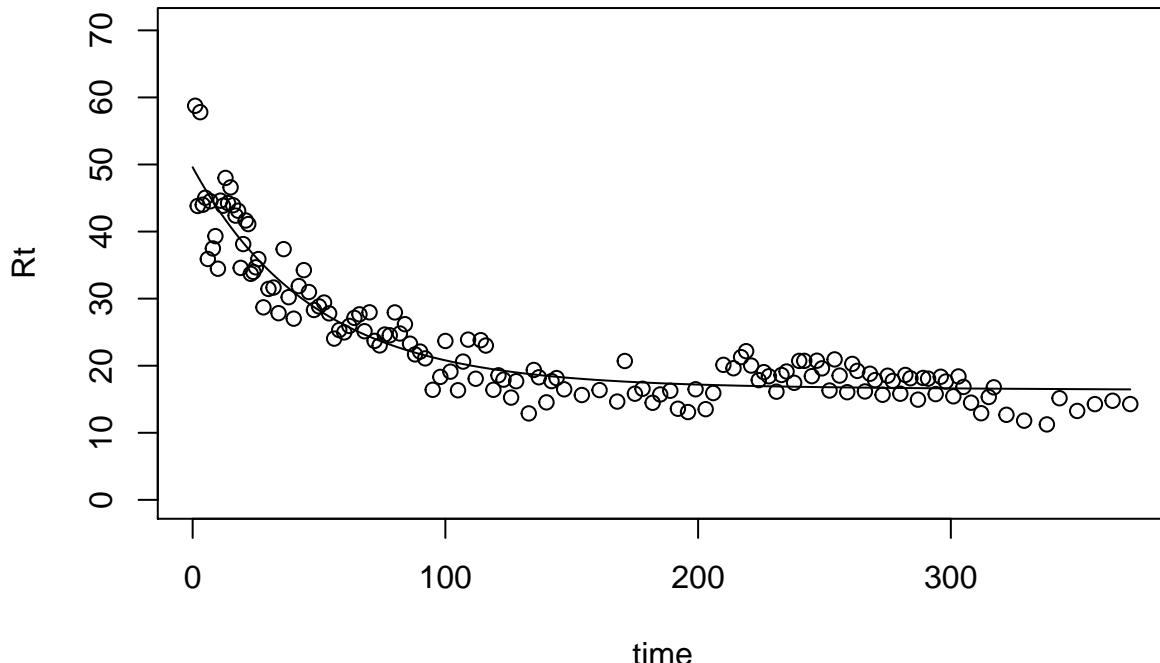
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	2.283426	0.0298861	7.93e-05	0.0057525	NA	NA
Two-pool feedback	6.283426	0.0298861	7.94e-05	0.0103908	0.4450397	0.0011198

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	4.283426	0.0298862	7.93e-05		0.0130846	0.5588719

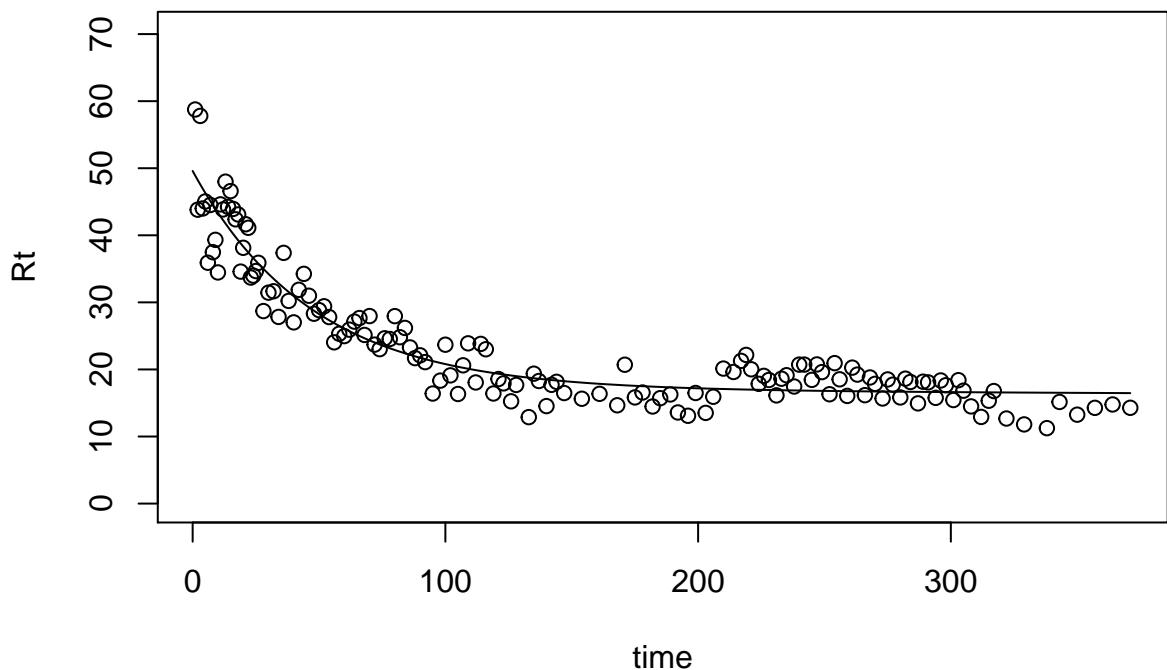
## Variable Site47:

CO2 production rate

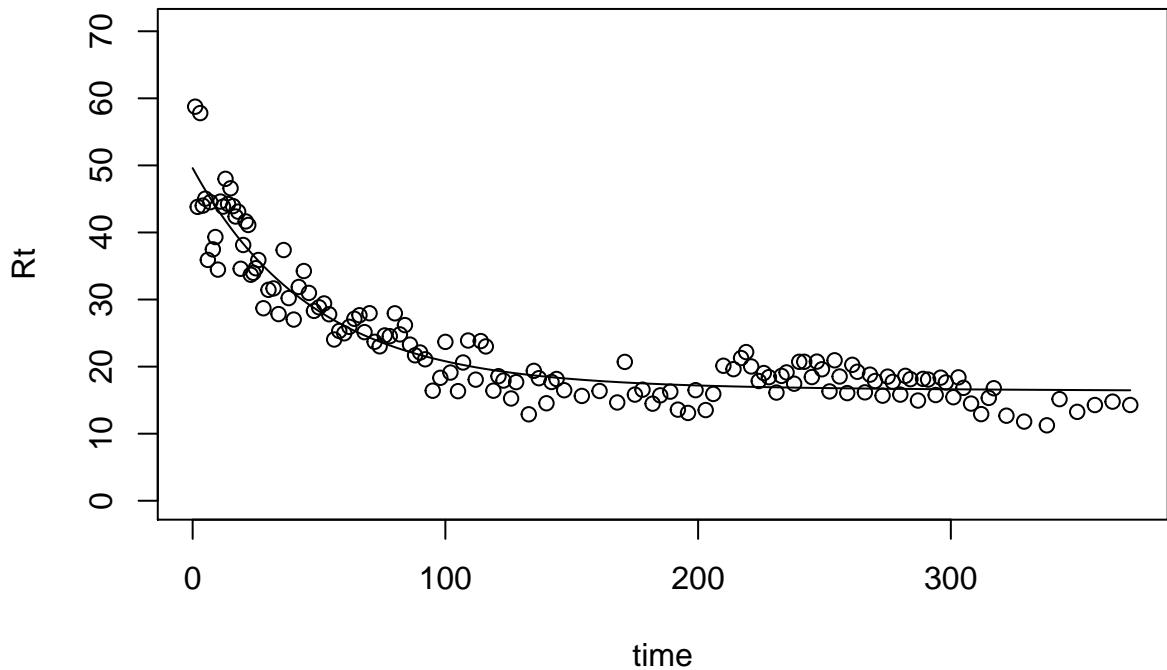
```
## [1] "k1= 0.0211406234161167"
## [2] "k2= 9.01484957144409e-05"
## [3] "proportion of C0 in pool 1= 0.00809798998246436"
```



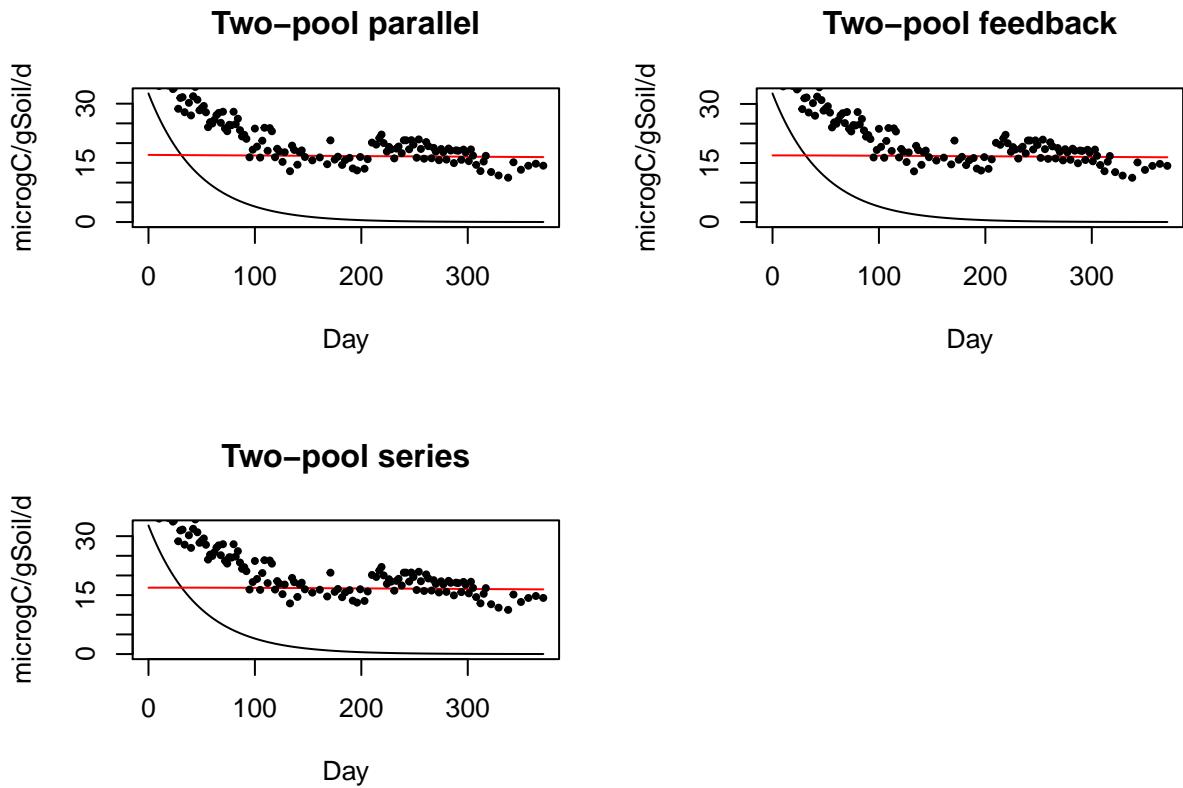
```
## [1] "AIC = 1.36541783591387"
## [1] "k1= 0.0211405700578496"
## [2] "k2= 9.01519181760106e-05"
## [3] "a21= 0.380910174659208"
## [4] "a12= 0.000102245166354653"
## [5] "Proportion of C0 in pool 1= 0.0131154908567644"
```



```
## [1] "AIC = 5.3654178358724"  
## [1] "k1= 0.0211406240704917"  
## [2] "k2= 9.01484968409334e-05"  
## [3] "a21= 0.481683363106701"  
## [4] "Proportion of C0 in pool 1= 0.0156860505745943"
```



```
## [1] "AIC = 3.36541783589939"
```

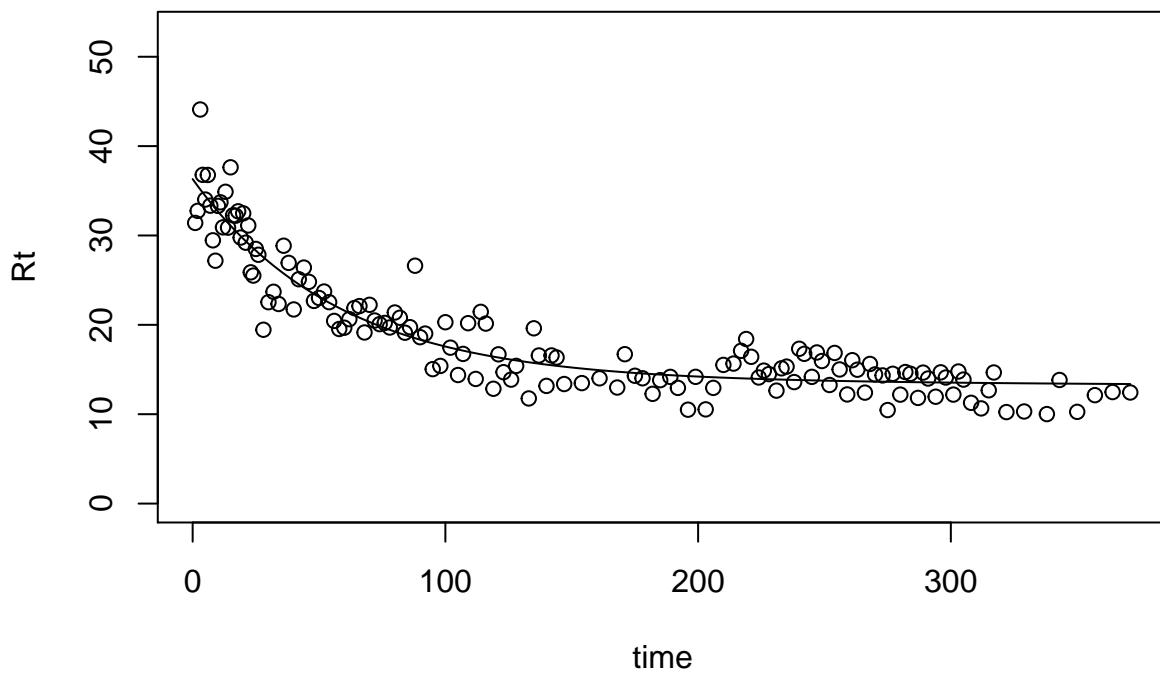


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	1.365418	0.0211406	9.01e-05	0.0080980	NA	NA
Two-pool feedback	5.365418	0.0211406	9.02e-05	0.0131155	0.3809102	0.0001022
Two-pool series	3.365418	0.0211406	9.01e-05	0.0156861	0.4816834	NA

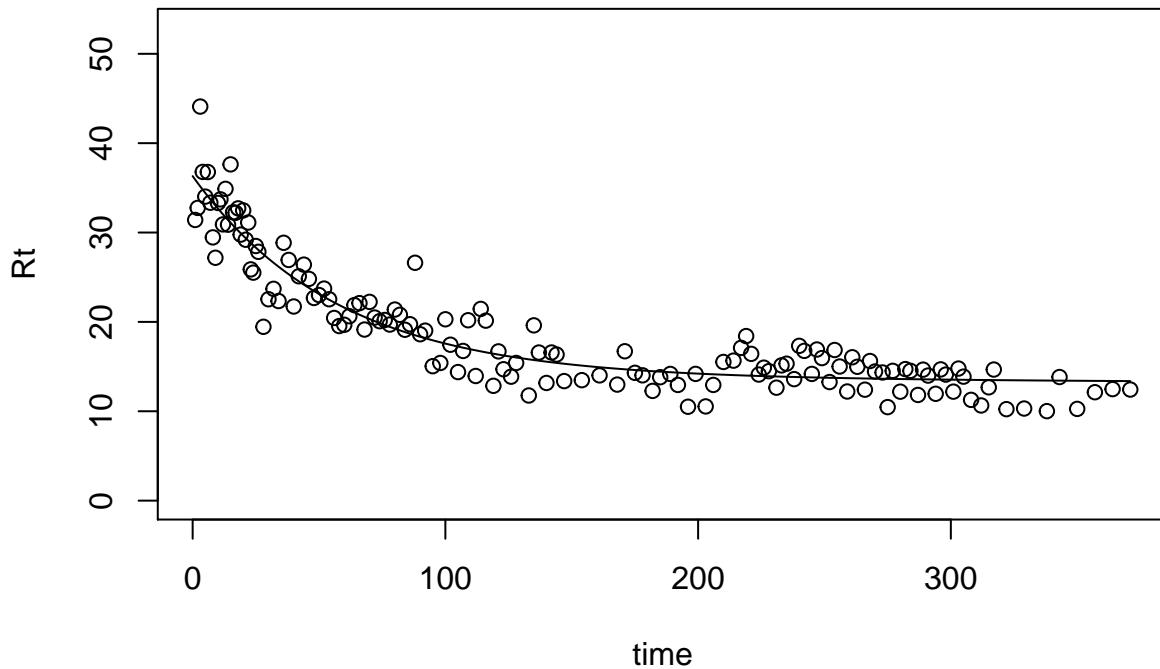
### Variable Site48:

CO2 production rate

```
## [1] "k1= 0.0174464678019873"
## [2] "k2= 7.94133700697551e-05"
## [3] "proportion of C0 in pool 1= 0.00742382803214231"
```

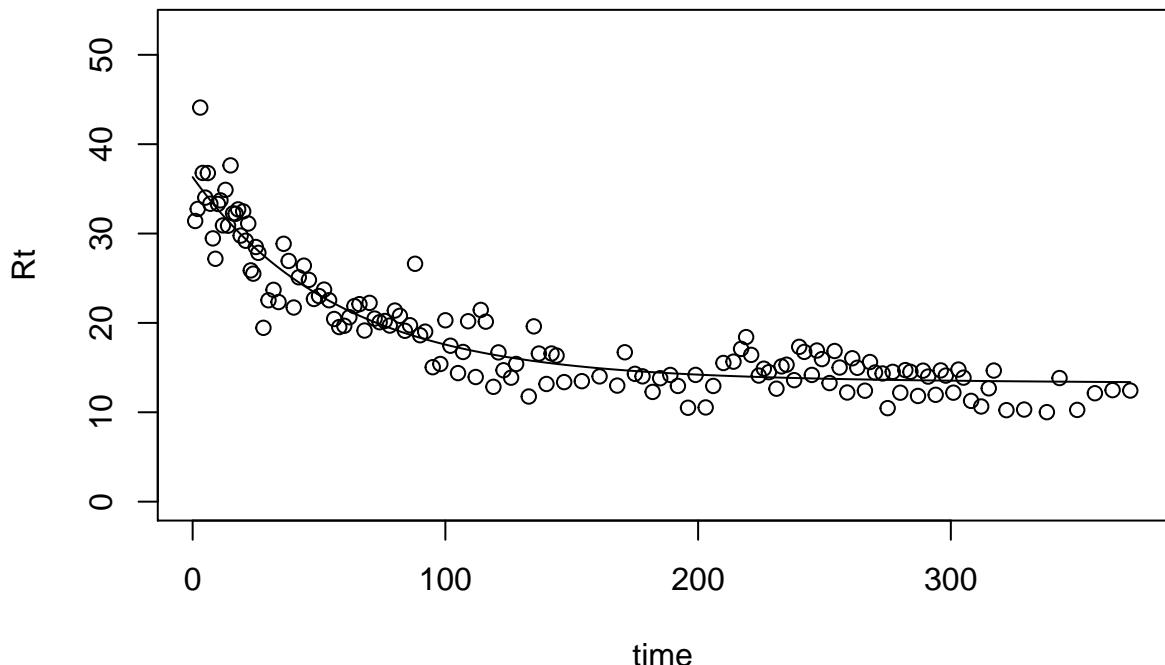


```
## [1] "AIC = 2.39913500632347"
## [1] "k1= 0.0174466396793777"
## [2] "k2= 7.94170324964457e-05"
## [3] "a21= 0.239791037737894"
## [4] "a12= 0.000182519629701061"
## [5] "Proportion of C0 in pool 1= 0.00978035357910589"
```

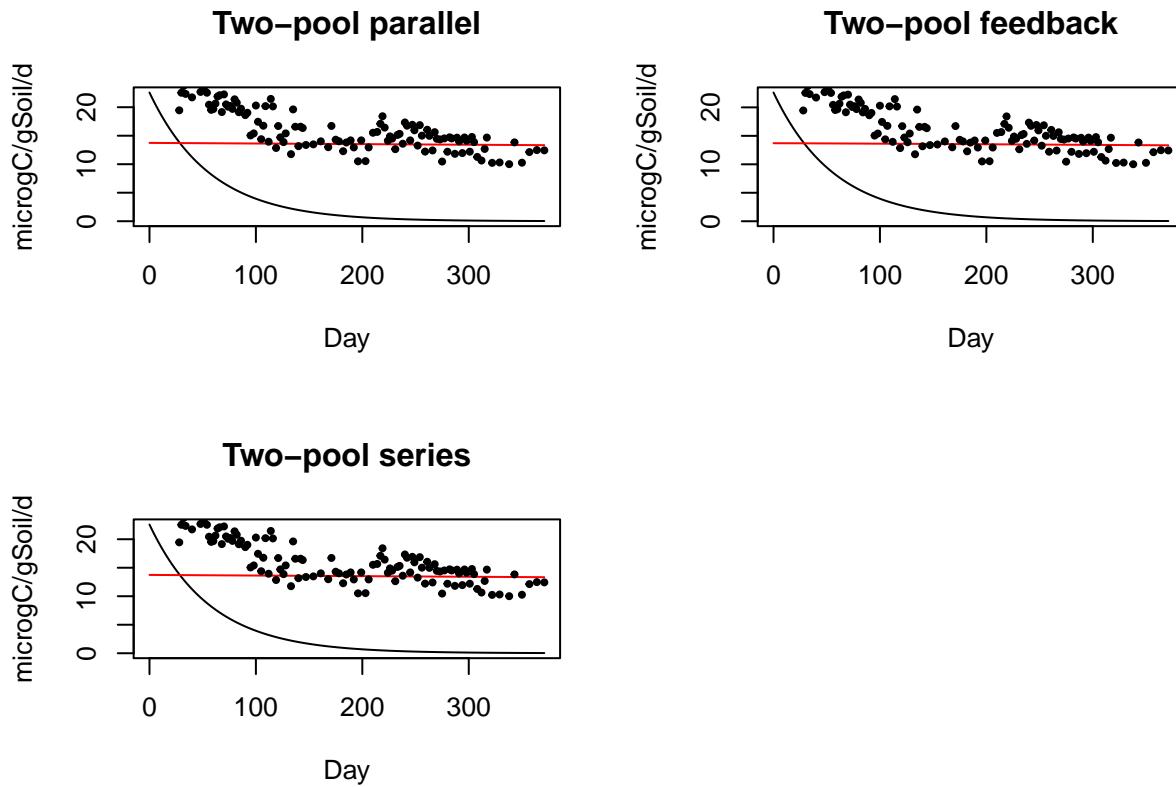


```
## [1] "AIC = 6.39913500628631"
## [1] "k1= 0.0174465624821478"
## [2] "k2= 7.94134689505419e-05"
## [3] "a21= 0.00243528948372101"
```

```
## [4] "Proportion of C0 in pool 1= 0.00744197114963313"
```



```
## [1] "AIC = 4.39913500599283"
```



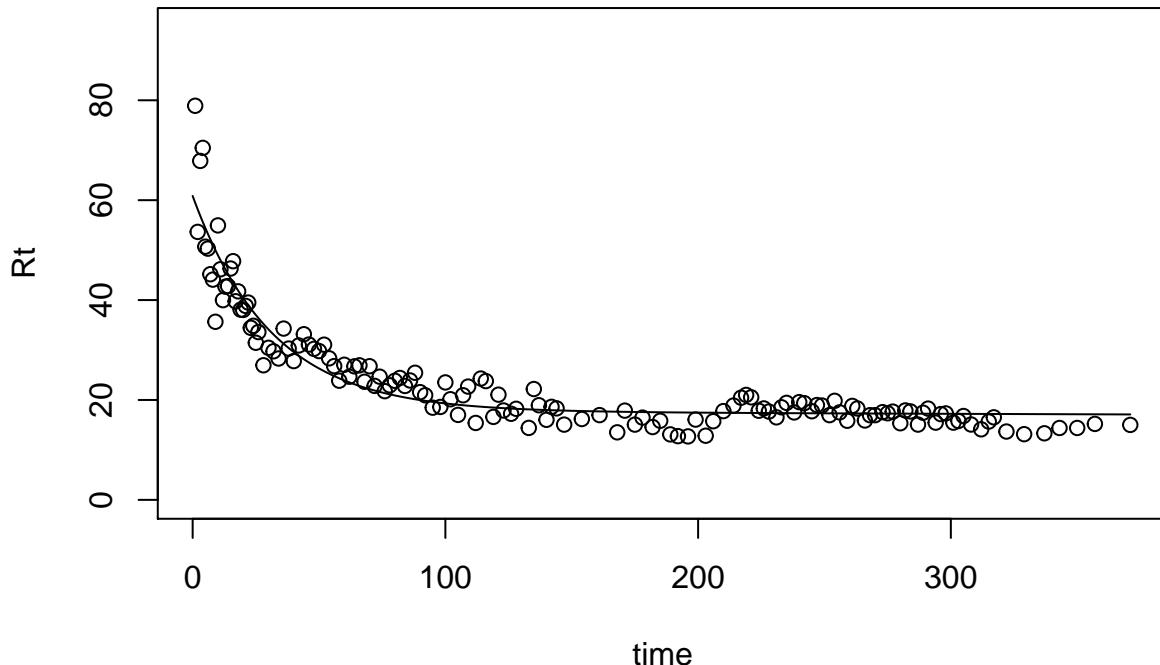
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	2.399135	0.0174465	7.94e-05	0.0074238	NA	NA
Two-pool feedback	6.399135	0.0174466	7.94e-05	0.0097804	0.2397910	0.0001825

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	4.399135	0.0174466	7.94e-05		0.0074420	0.0024353

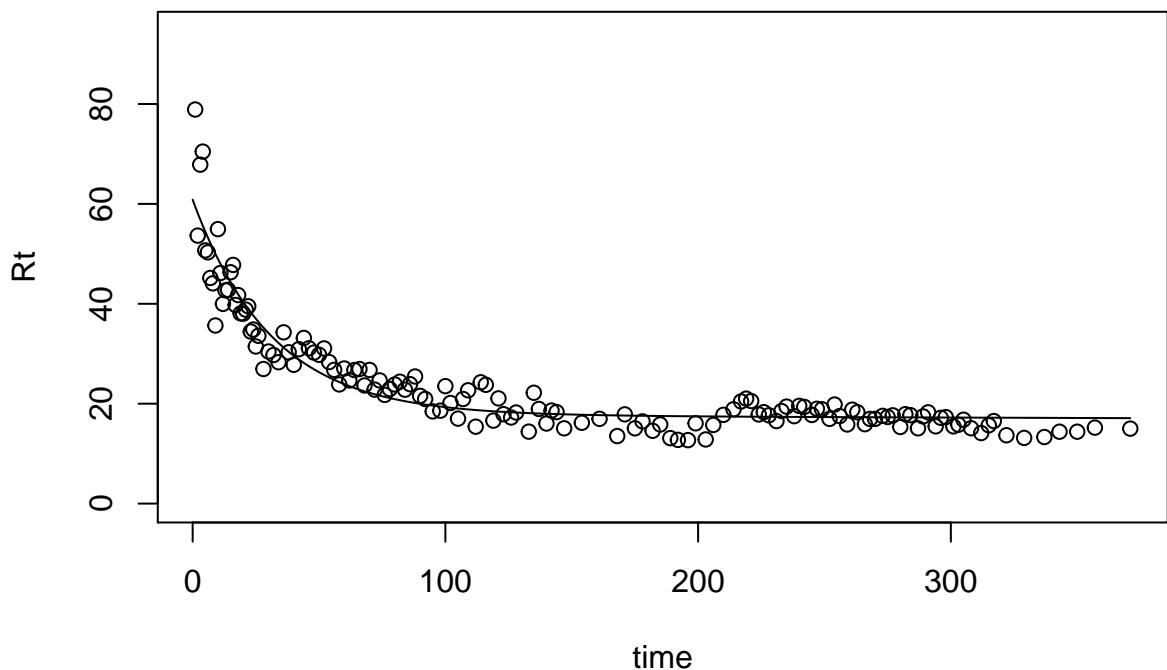
## Variable Site49:

CO2 production rate

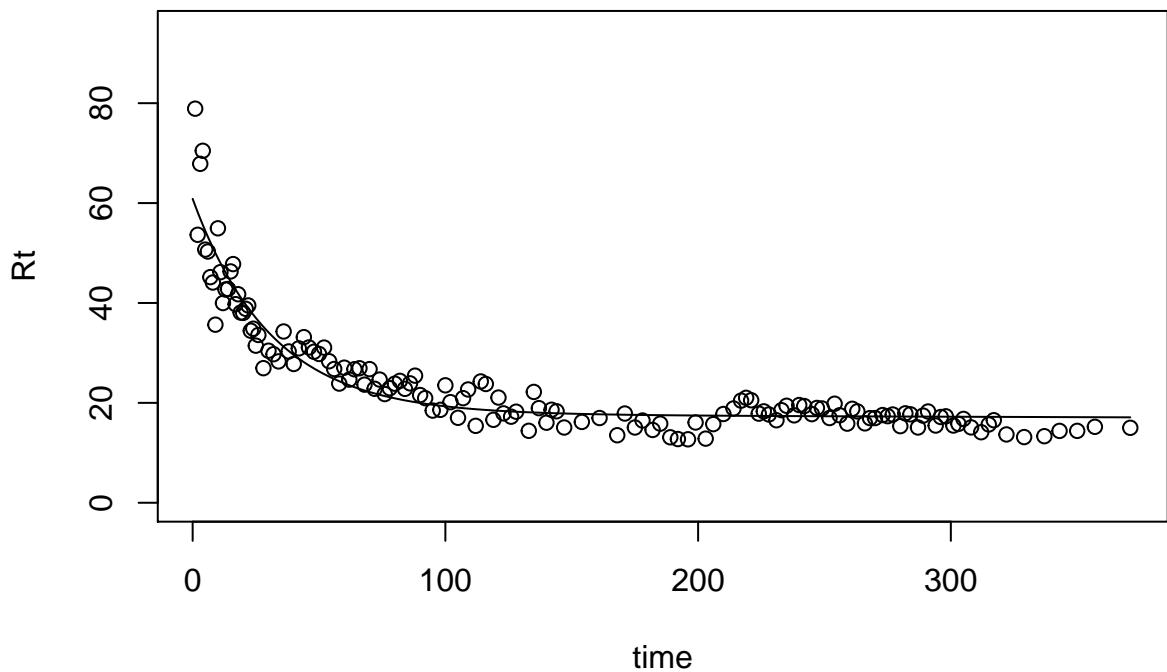
```
## [1] "k1= 0.0321239104015434"
## [2] "k2= 9.97770738082023e-05"
## [3] "proportion of C0 in pool 1= 0.007487787472231"
```



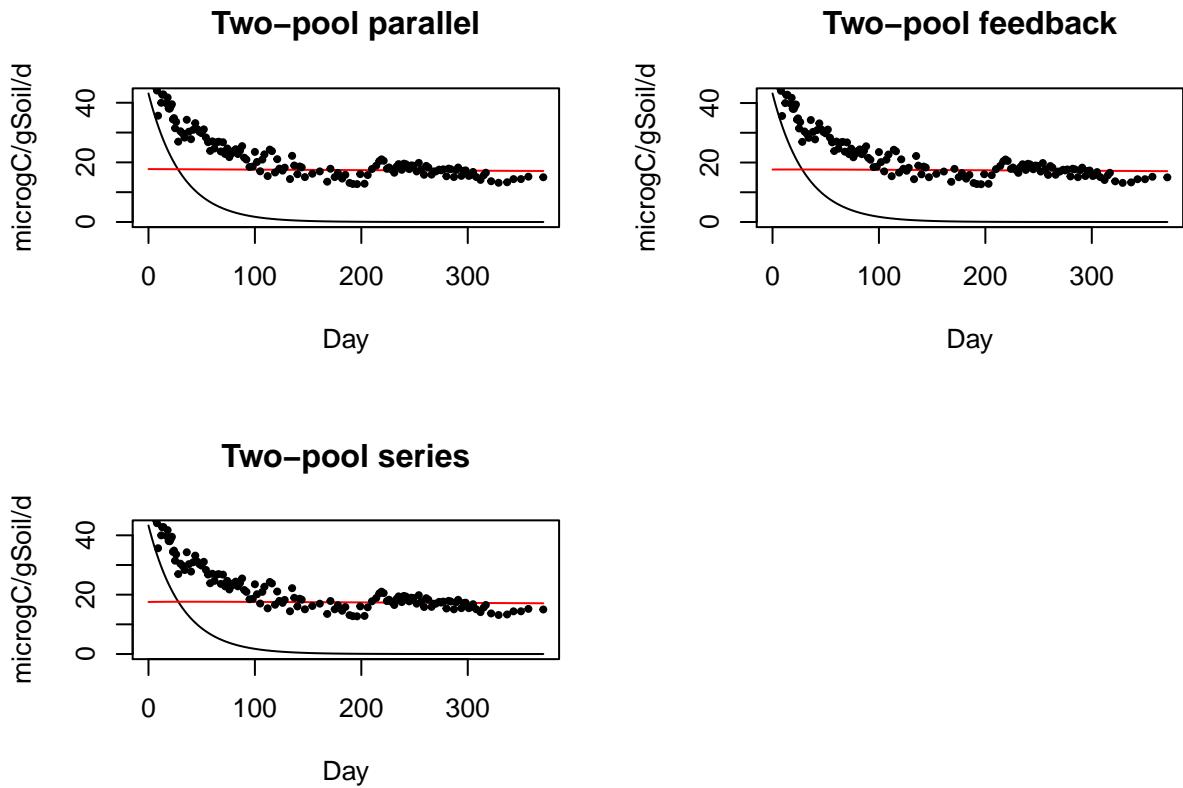
```
## [1] "AIC = 0.654861625530085"
## [1] "k1= 0.0321247406821459"
## [2] "k2= 9.97918008243596e-05"
## [3] "a21= 0.429009500906974"
## [4] "a12= 0.00033000617870188"
## [5] "Proportion of C0 in pool 1= 0.0131452040488909"
```



```
## [1] "AIC = 4.65486162705527"
## [1] "k1= 0.0321248936038077"
## [2] "k2= 9.97777031080652e-05"
## [3] "a21= 0.598680169385739"
## [4] "Proportion of C0 in pool 1= 0.0187446020603783"
```



```
## [1] "AIC = 2.65486162691507"
```

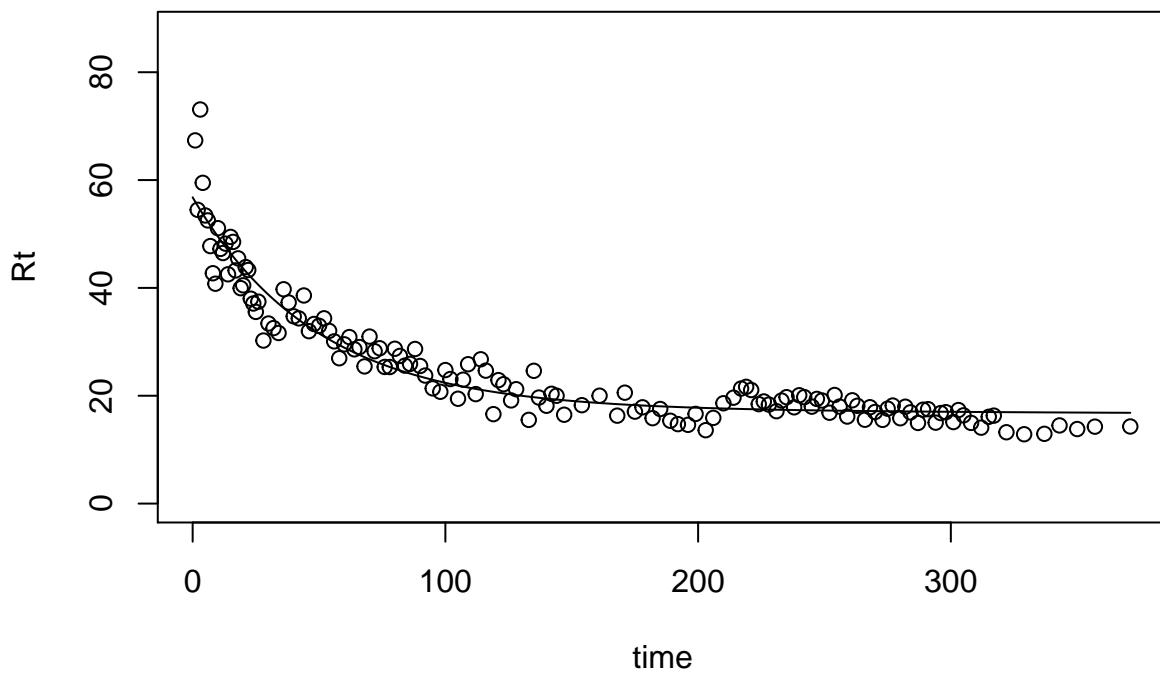


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	0.6548616	0.0321239	9.98e-05	0.0074878	NA	NA
Two-pool feedback	4.6548616	0.0321247	9.98e-05	0.0131452	0.4290095	0.00033
Two-pool series	2.6548616	0.0321249	9.98e-05	0.0187446	0.5986802	NA

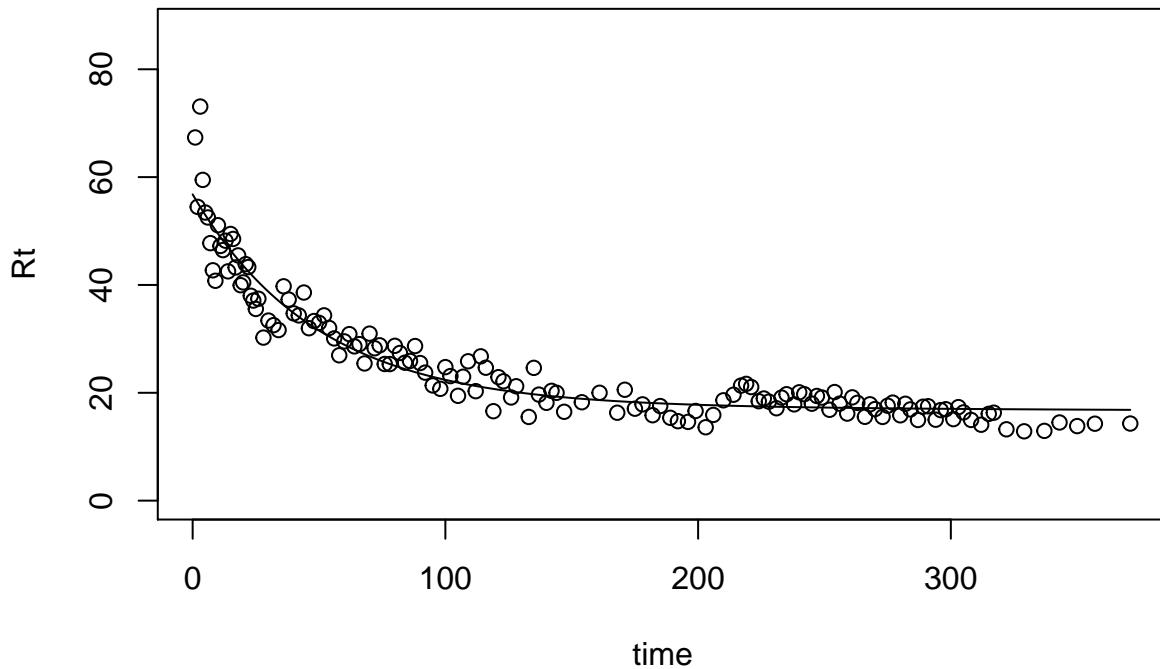
## Variable Site50:

CO2 production rate

```
## [1] "k1= 0.0204029522645191"
## [2] "k2= 0.000101468834703593"
## [3] "proportion of CO in pool 1= 0.0110816268026063"
```

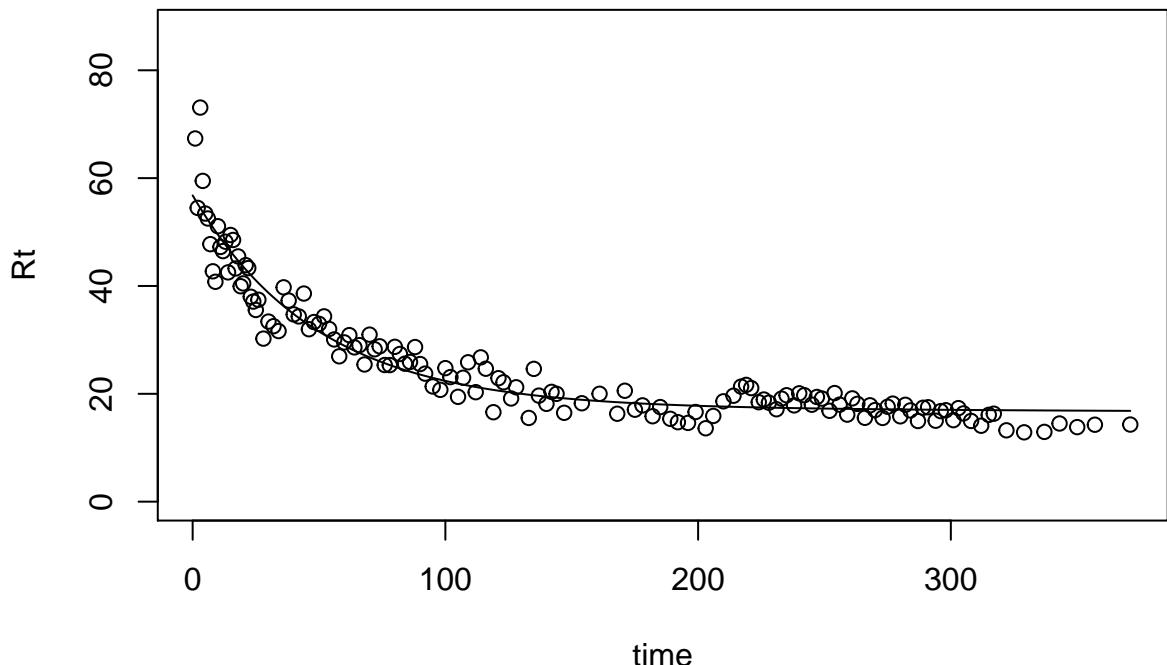


```
## [1] "AIC = 1.21110967567892"
## [1] "k1= 0.0204032195910812"
## [2] "k2= 0.000101471017739039"
## [3] "a21= 0.277547375182807"
## [4] "a12= 6.5575834639231e-05"
## [5] "Proportion of C0 in pool 1= 0.0153685333883657"
```

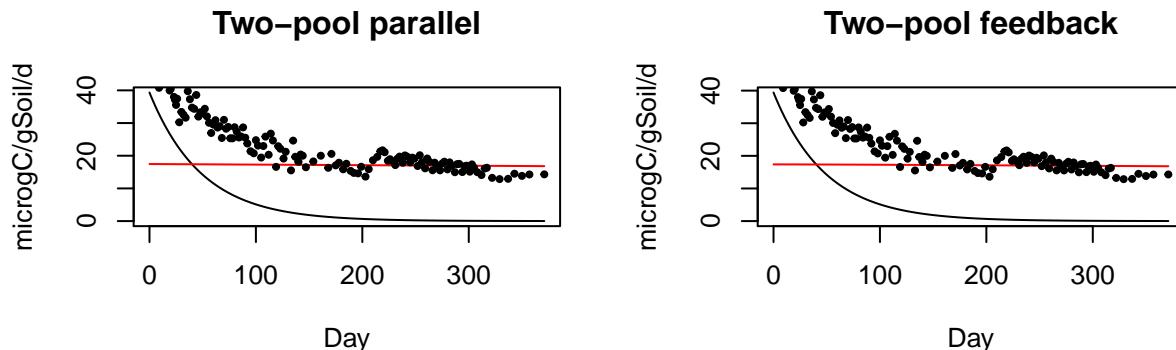


```
## [1] "AIC = 5.21110967604622"
## [1] "k1= 0.0204029810882048"
## [2] "k2= 0.00010146887315658"
## [3] "a21= 0.00431382029166516"
```

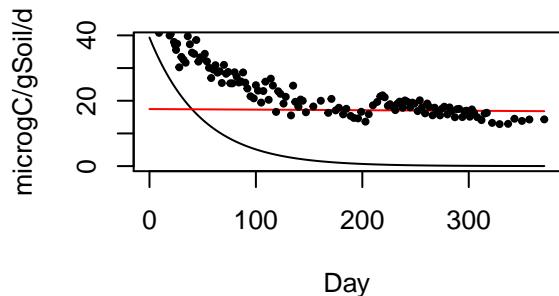
```
## [4] "Proportion of C0 in pool 1= 0.0111298444372923"
```



```
## [1] "AIC = 3.21110967564725"
```



### Two-pool series



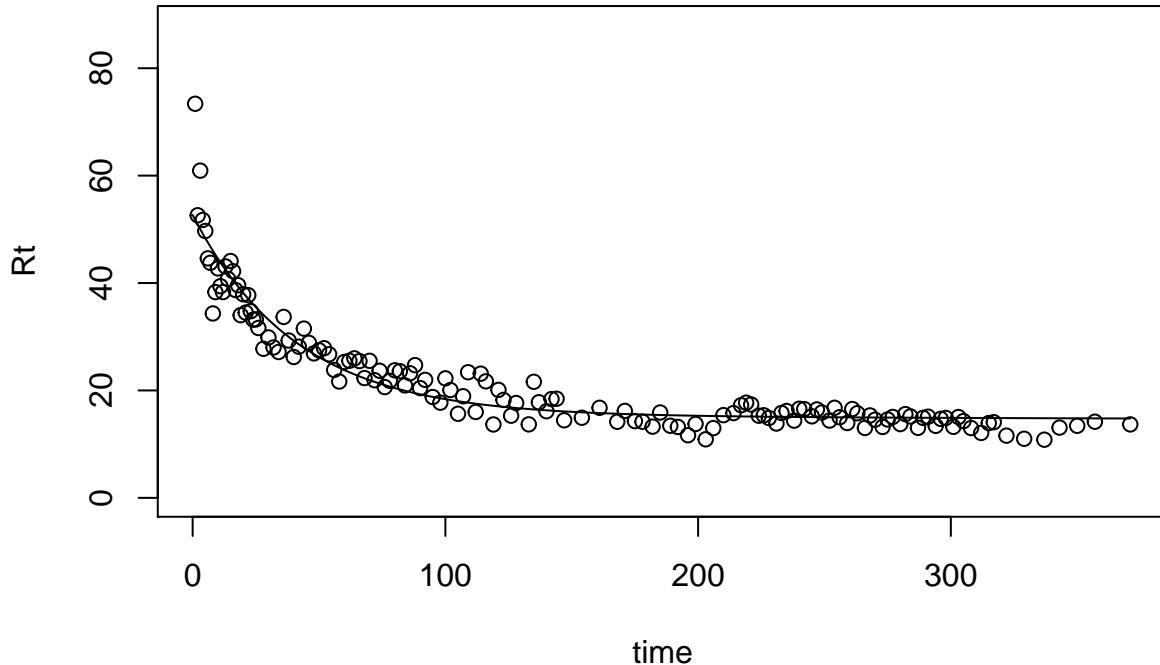
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	1.21111	0.0204030	0.0001015	0.0110816	NA	NA
Two-pool feedback	5.21111	0.0204032	0.0001015	0.0153685	0.2775474	6.56e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	3.21111	0.0204030	0.0001015		0.0111298	0.0043138

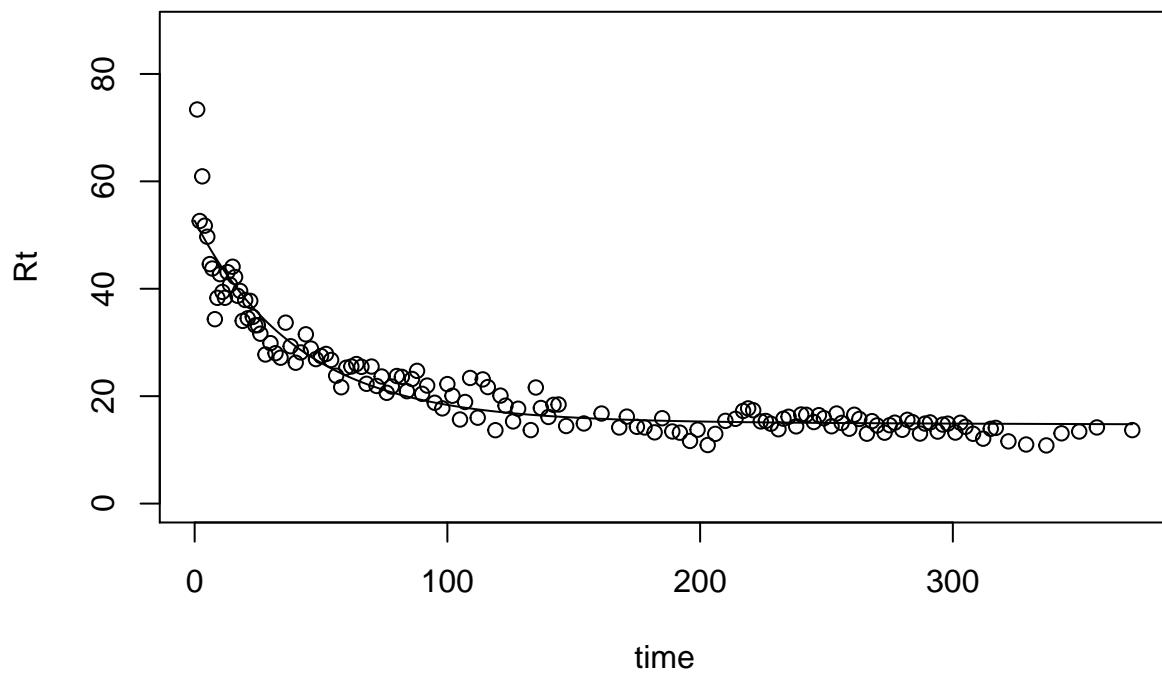
## Variable Site51:

CO2 production rate

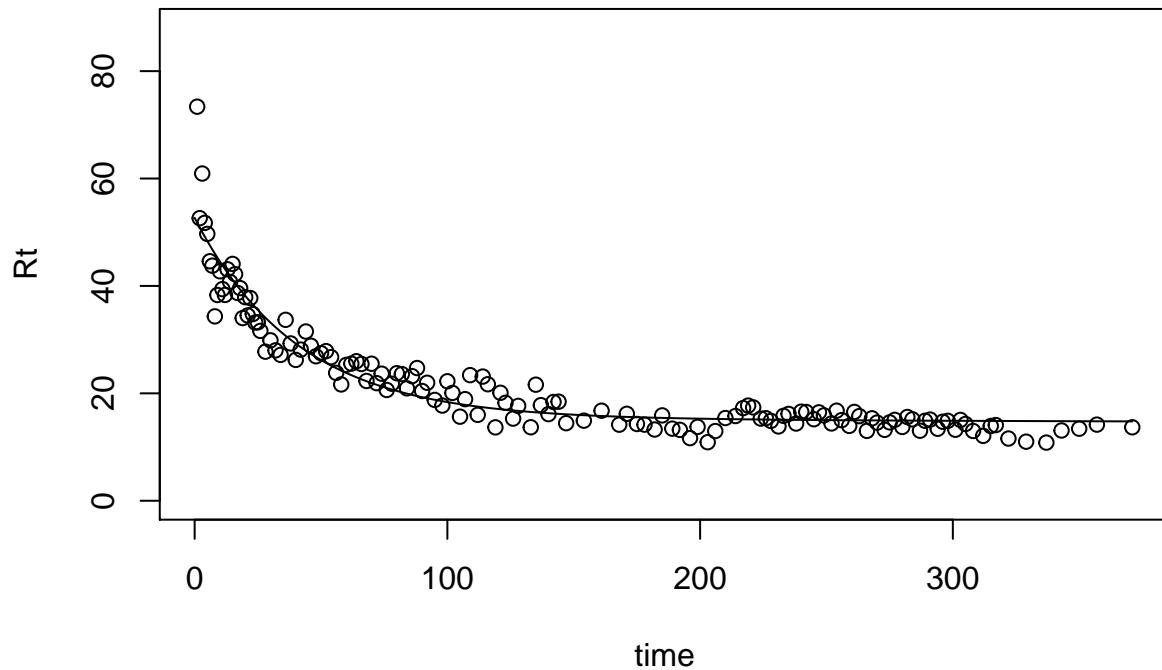
```
## [1] "k1= 0.0244819550790018"
## [2] "k2= 9.07374971068819e-05"
## [3] "proportion of C0 in pool 1= 0.00899132634595751"
```



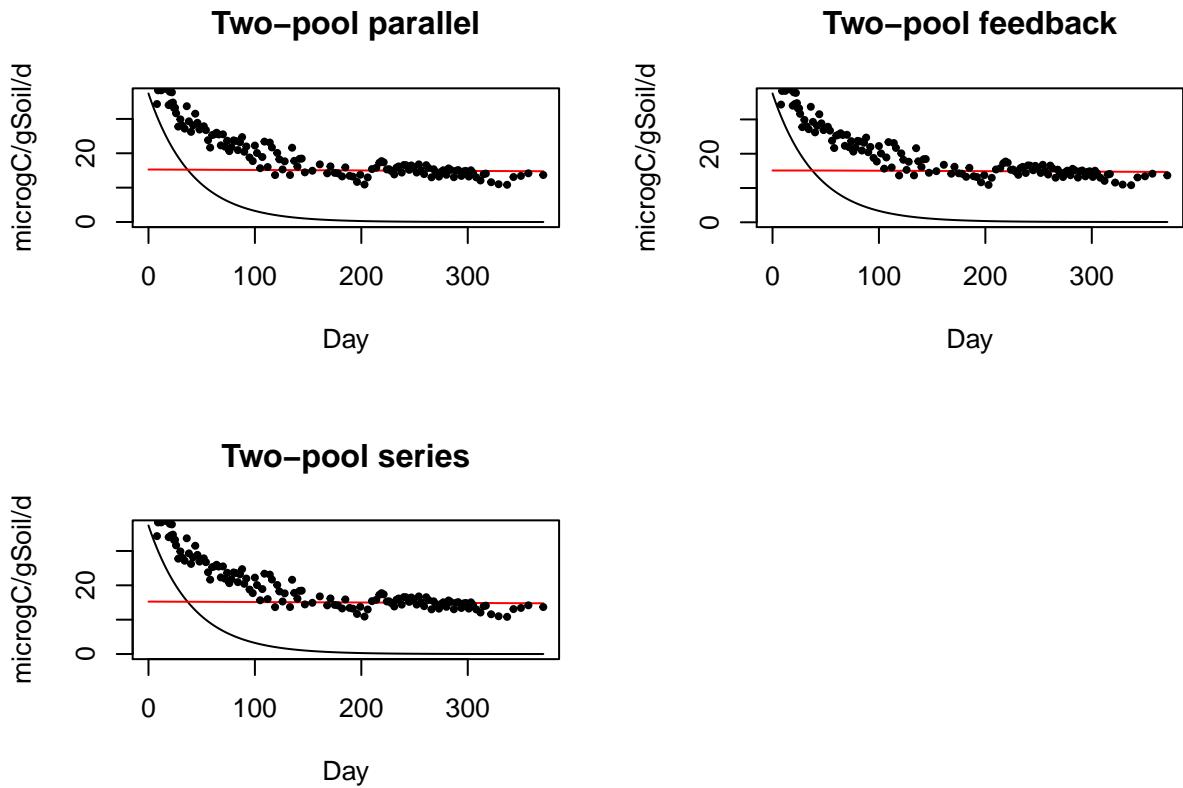
```
## [1] "AIC = 1.30326300477917"
## [1] "k1= 0.0244814153599868"
## [2] "k2= 9.10551144861713e-05"
## [3] "a21= 0.376848482871667"
## [4] "a12= 0.00920189488676831"
## [5] "Proportion of C0 in pool 1= 0.0144953613949337"
```



```
## [1] "AIC = 5.30326300555114"
## [1] "k1= 0.0244825890682464"
## [2] "k2= 9.07380850058955e-05"
## [3] "a21= 0.107854568813838"
## [4] "Proportion of C0 in pool 1= 0.0100826476378287"
```



```
## [1] "AIC = 3.30326300634082"
```

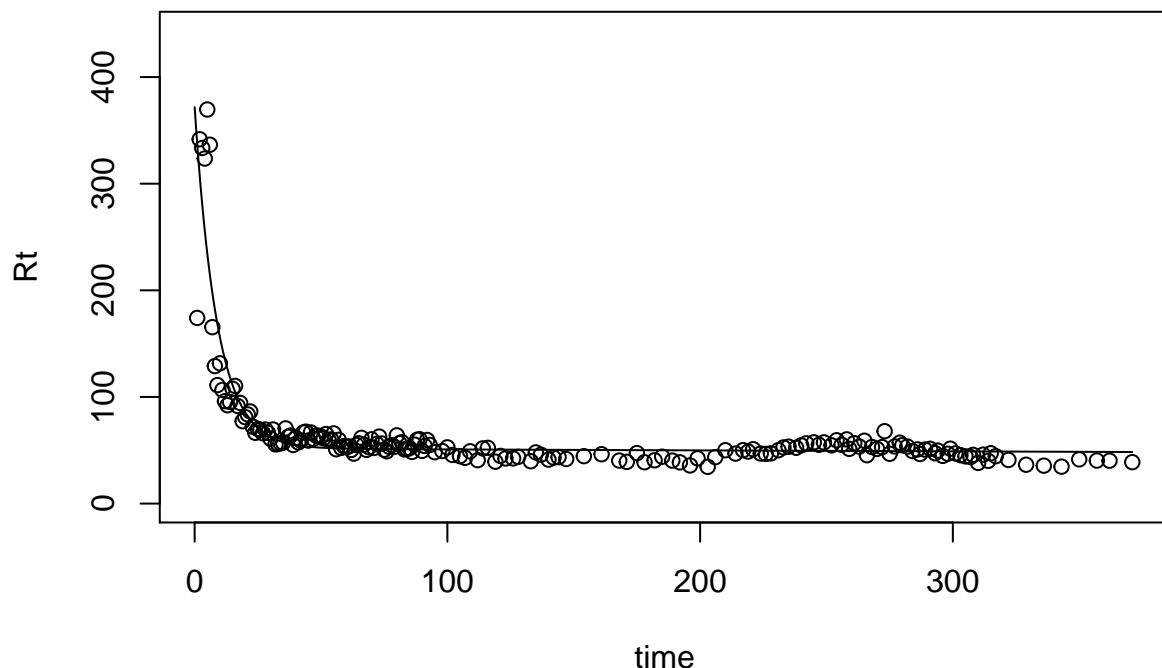


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	1.303263	0.0244820	9.07e-05	0.0089913	NA	NA
Two-pool feedback	5.303263	0.0244814	9.11e-05	0.0144954	0.3768485	0.0092019
Two-pool series	3.303263	0.0244826	9.07e-05	0.0100826	0.1078546	NA

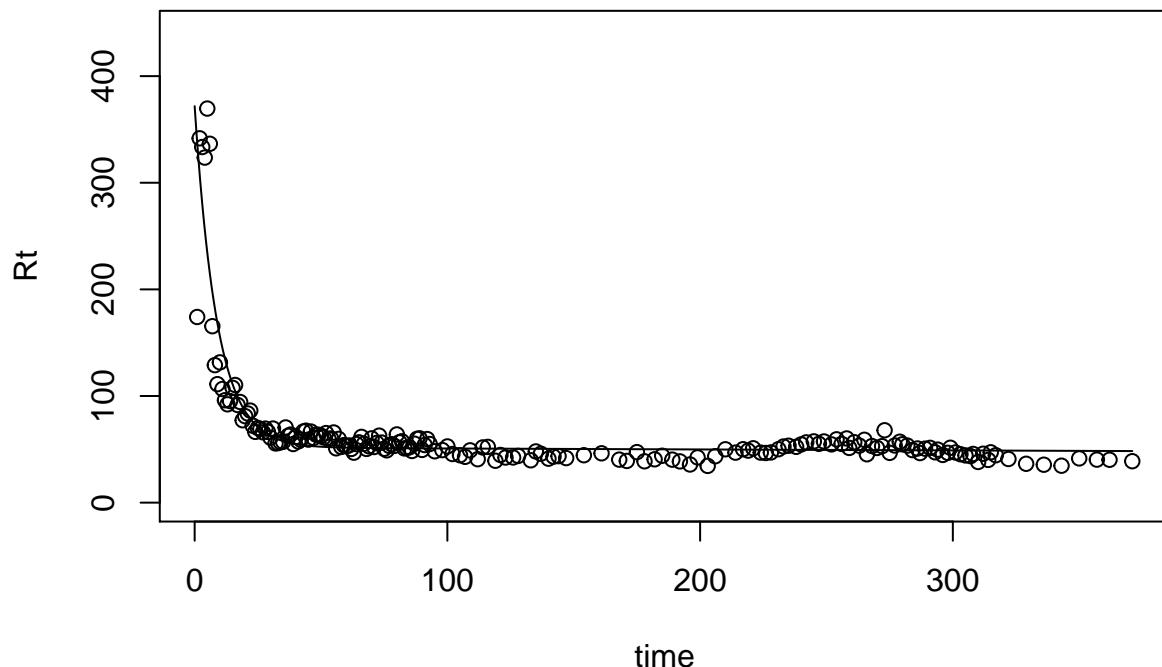
## Variable Site52:

CO2 production rate

```
## [1] "k1= 0.112132544132362"
## [2] "k2= 0.000181128834823848"
## [3] "proportion of CO in pool 1= 0.00989779324105711"
```

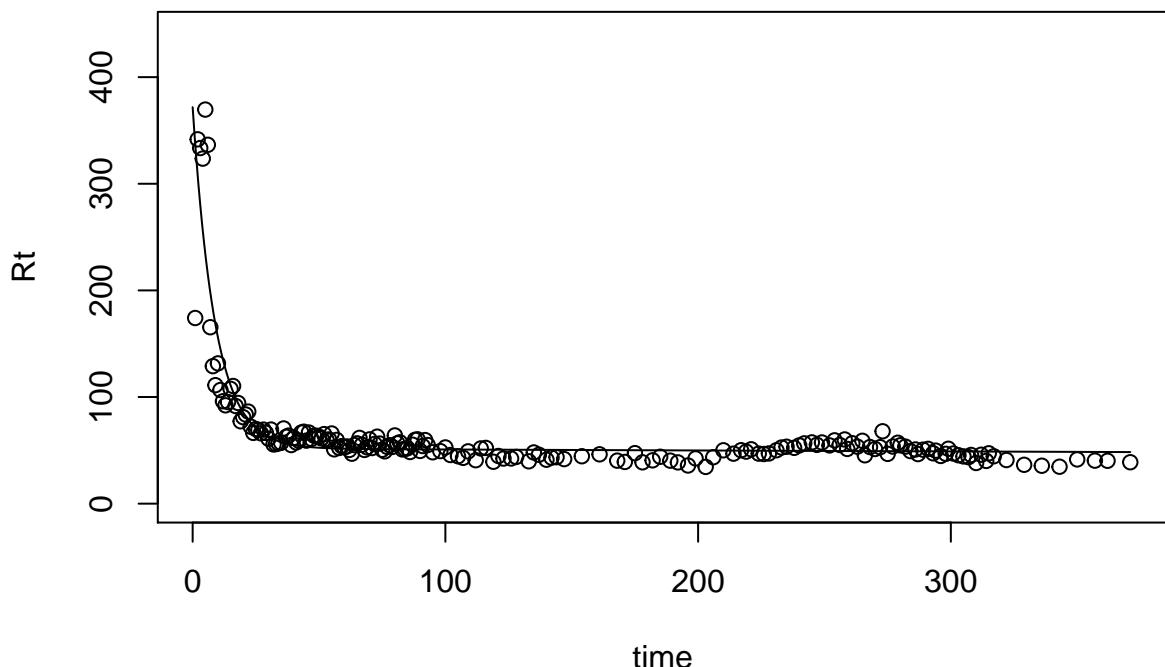


```
## [1] "AIC = -6.28109293357519"
## [1] "k1= 0.112133658084878"
## [2] "k2= 0.000181131057354164"
## [3] "a21= 0.439607881127036"
## [4] "a12= 2.43155274514684e-05"
## [5] "Proportion of C0 in pool 1= 0.017684657769415"
```



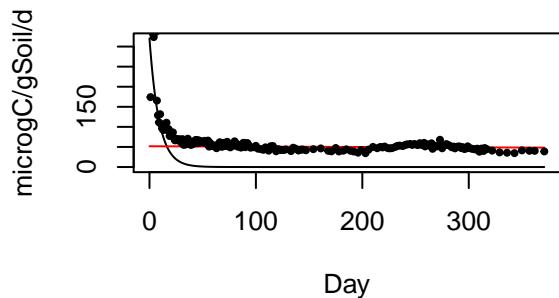
```
## [1] "AIC = -2.28109293375736"
## [1] "k1= 0.112134369119008"
## [2] "k2= 0.00018112931278268"
## [3] "a21= 0.226298739105186"
```

```
## [4] "Proportion of C0 in pool 1= 0.0127985835001618"
```

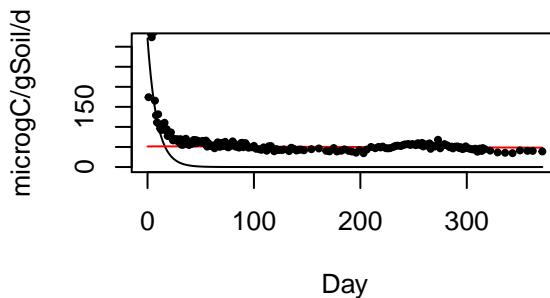


```
## [1] "AIC = -4.28109293496563"
```

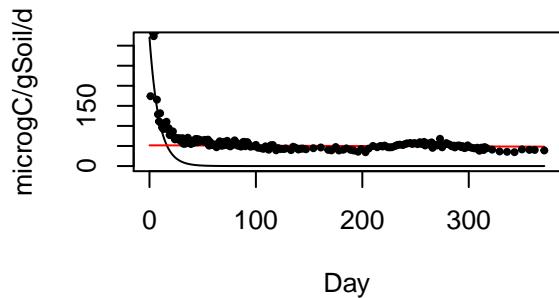
### Two-pool parallel



### Two-pool feedback



### Two-pool series



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-6.281093	0.1121325	0.0001811	0.0098978	NA	NA
Two-pool feedback	-2.281093	0.1121337	0.0001811	0.0176847	0.4396079	2.43e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	-4.281093	0.1121344	0.0001811		0.0127986	0.2262987

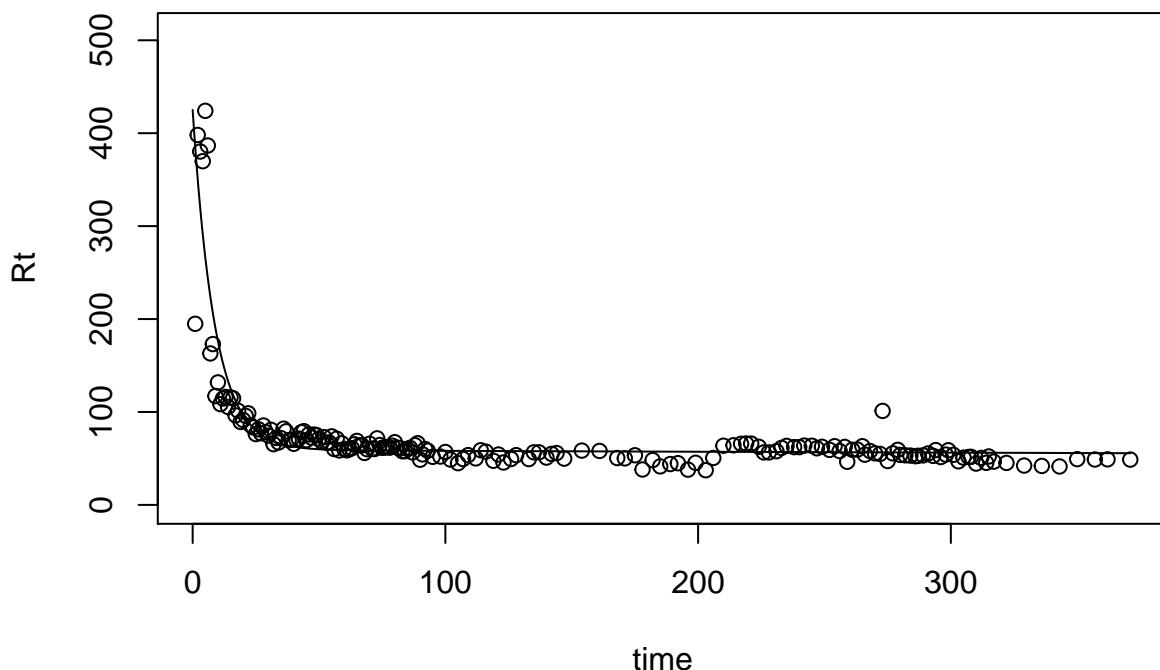
## Variable Site53:

CO2 production rate

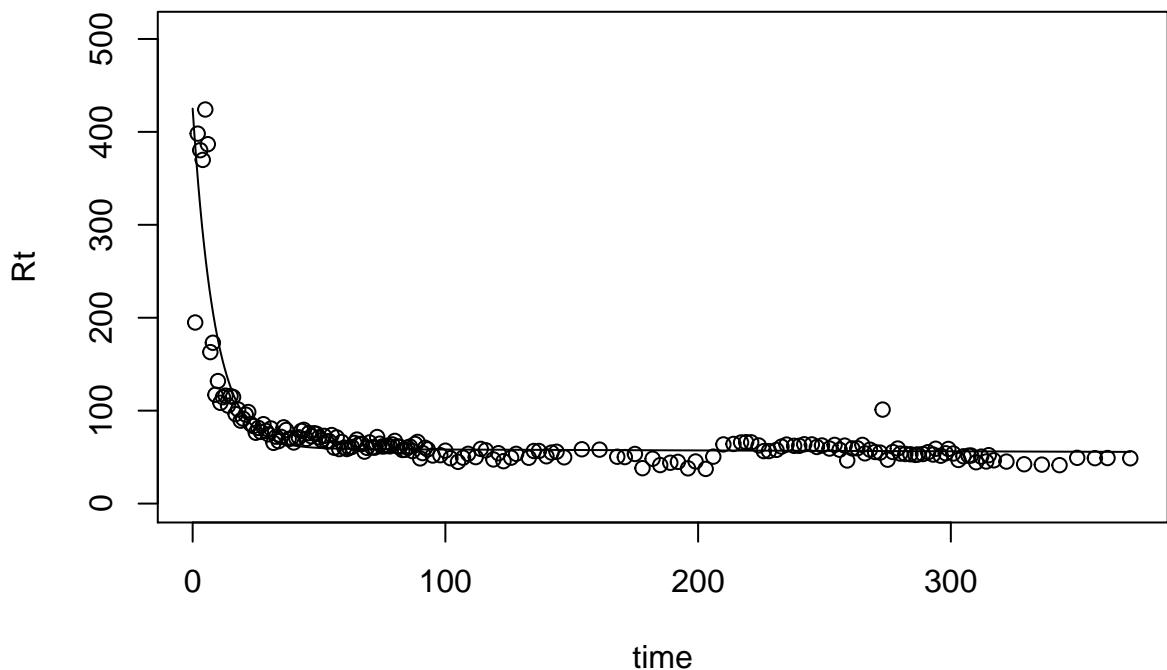
## Variable Site54:

CO2 production rate

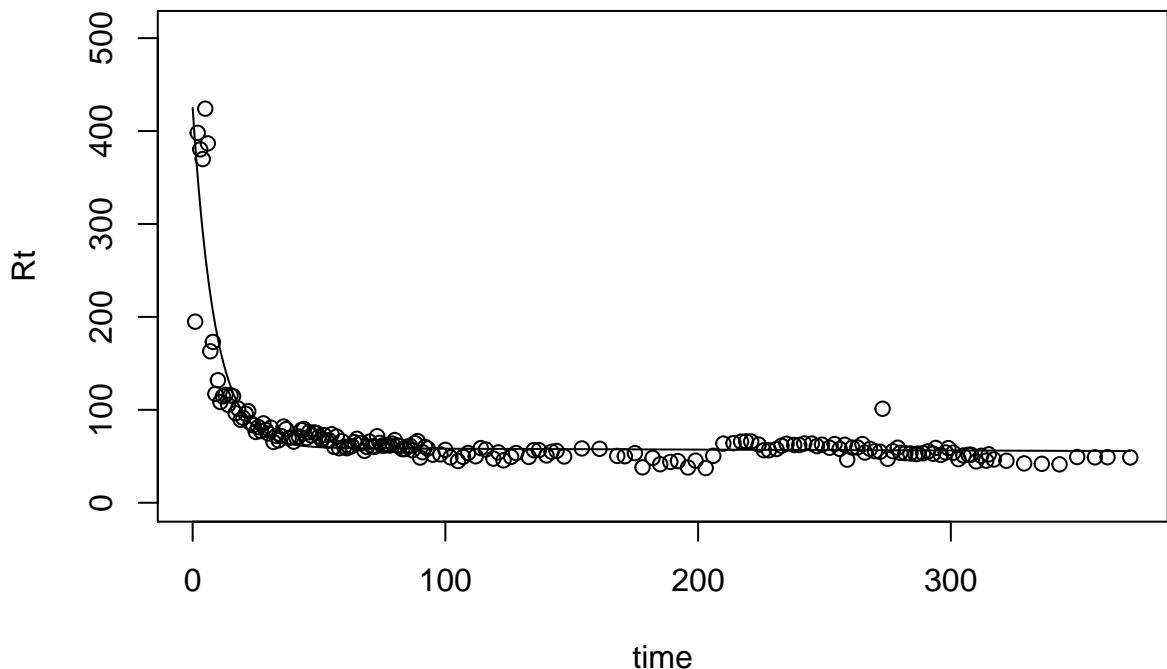
```
## [1] "k1= 0.113813877751784"
## [2] "k2= 0.000165056095814153"
## [3] "proportion of C0 in pool 1= 0.00889663603134211"
```



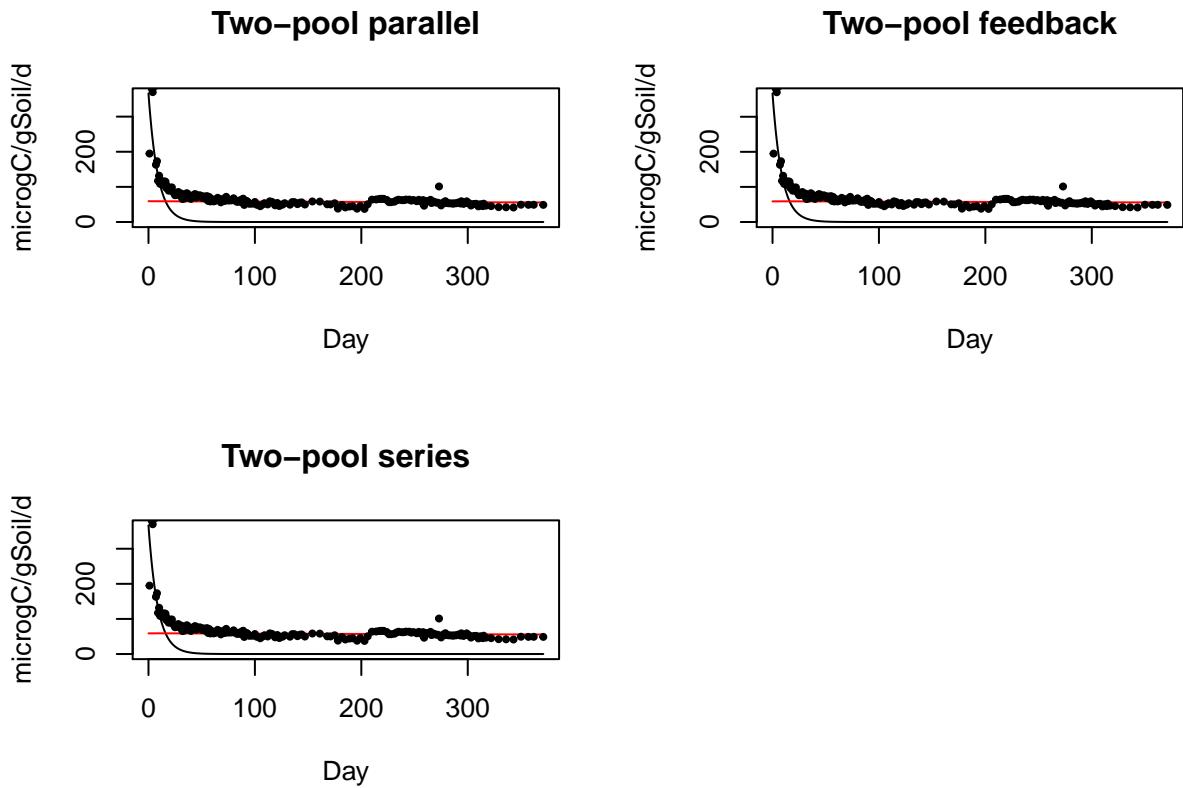
```
## [1] "AIC = -6.95654930089792"
## [1] "k1= 0.113814563533802"
## [2] "k2= 0.00016505704421368"
## [3] "a21= 0.421960434402965"
## [4] "a12= 1.17166355169673e-05"
## [5] "Proportion of C0 in pool 1= 0.0154073467729578"
```



```
## [1] "AIC = -2.95654930112547"
## [1] "k1= 0.113814457090928"
## [2] "k2= 0.000165056227286656"
## [3] "a21= 0.342201340532911"
## [4] "Proportion of C0 in pool 1= 0.0135350029382482"
```



```
## [1] "AIC = -4.95654930118355"
```

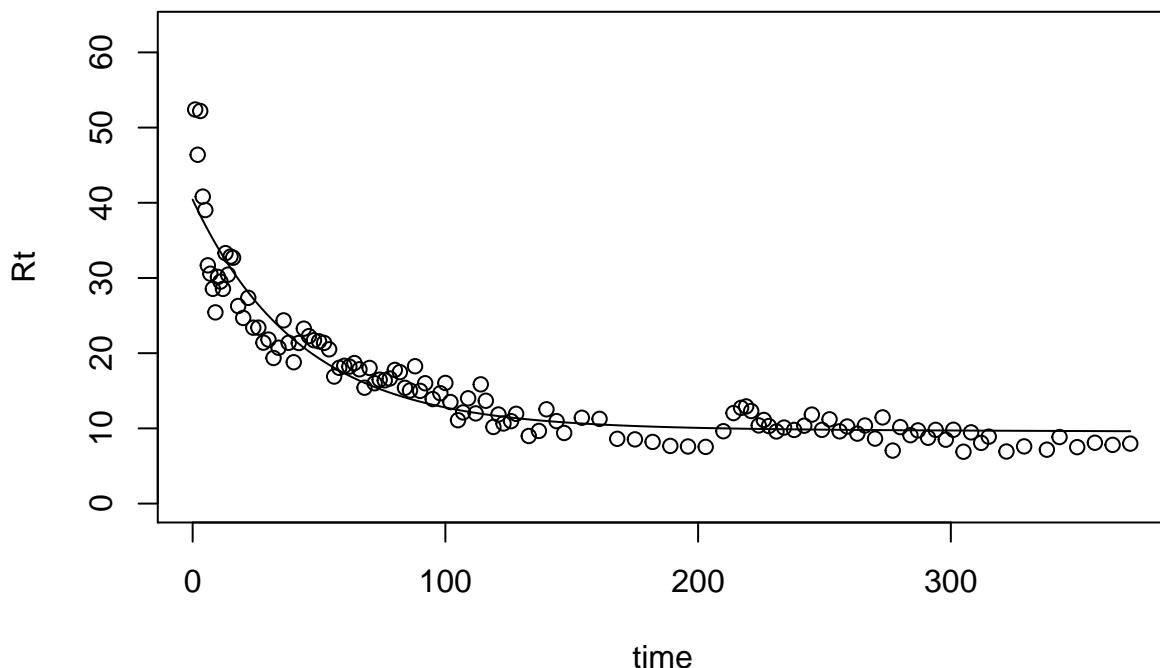


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-6.956549	0.1138139	0.0001651	0.0088966	NA	NA
Two-pool feedback	-2.956549	0.1138146	0.0001651	0.0154073	0.4219604	1.17e-05
Two-pool series	-4.956549	0.1138145	0.0001651	0.0135350	0.3422013	NA

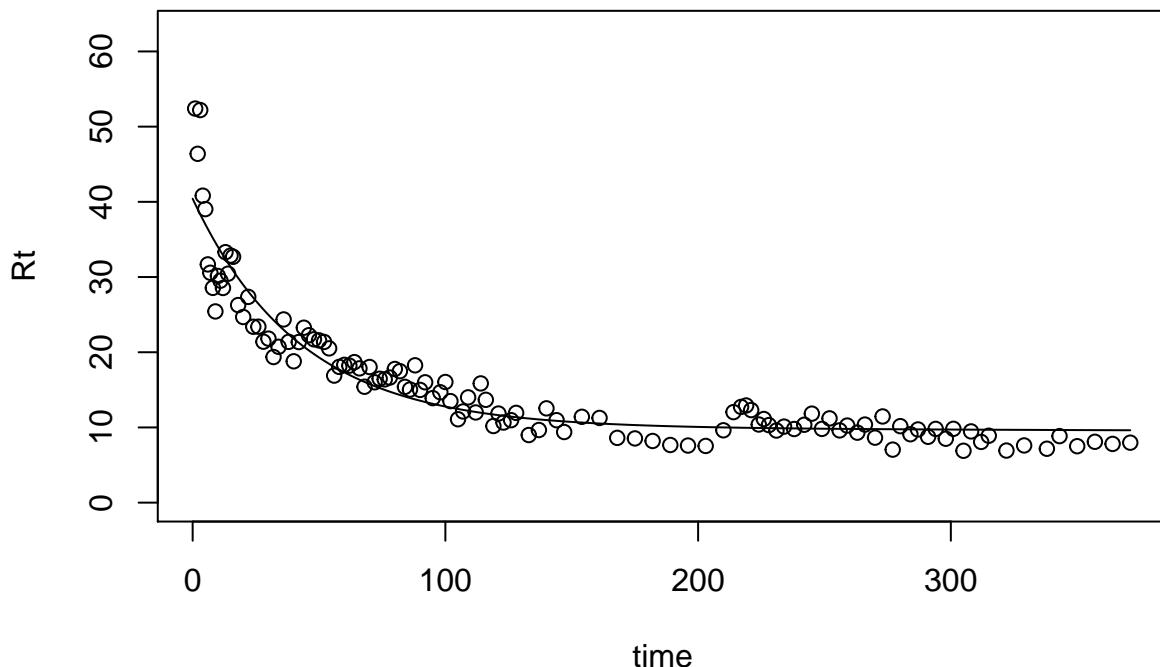
### Variable Site55:

CO2 production rate

```
## [1] "k1= 0.0235882644247993"
## [2] "k2= 0.000107394416843395"
## [3] "proportion of C0 in pool 1= 0.0136416131217101"
```

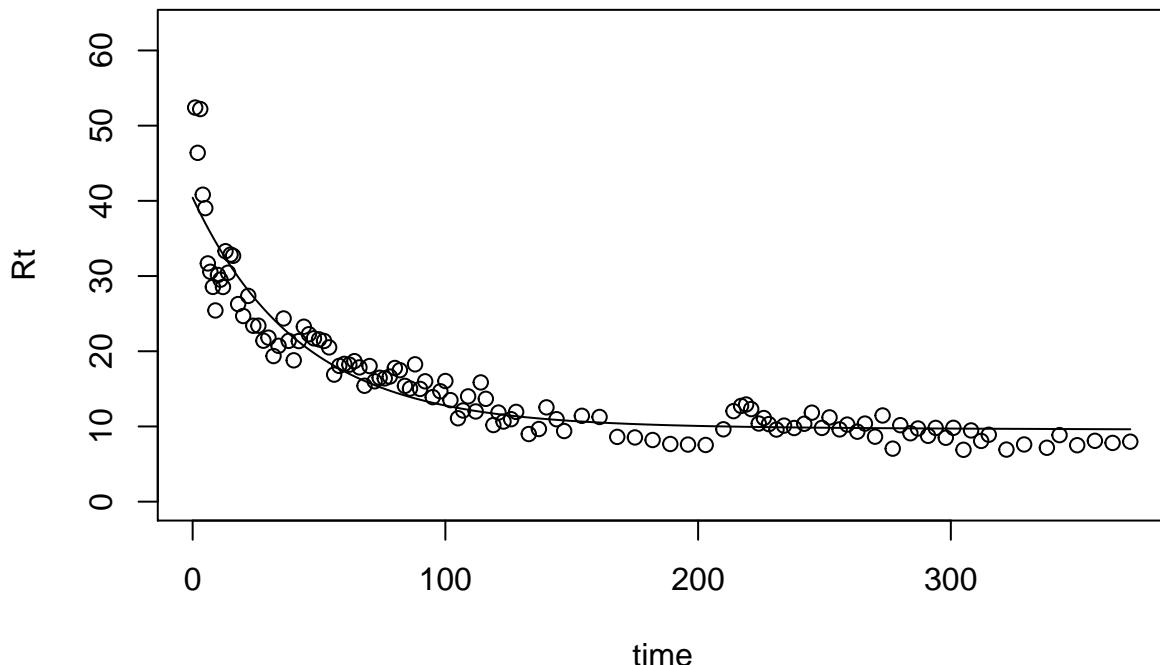


```
## [1] "AIC = 1.67525541995539"
## [1] "k1= 0.0235890906712915"
## [2] "k2= 0.000107396216070539"
## [3] "a21= 0.450258590491011"
## [4] "a12= 8.56715424135679e-06"
## [5] "Proportion of C0 in pool 1= 0.0249072362144051"
```

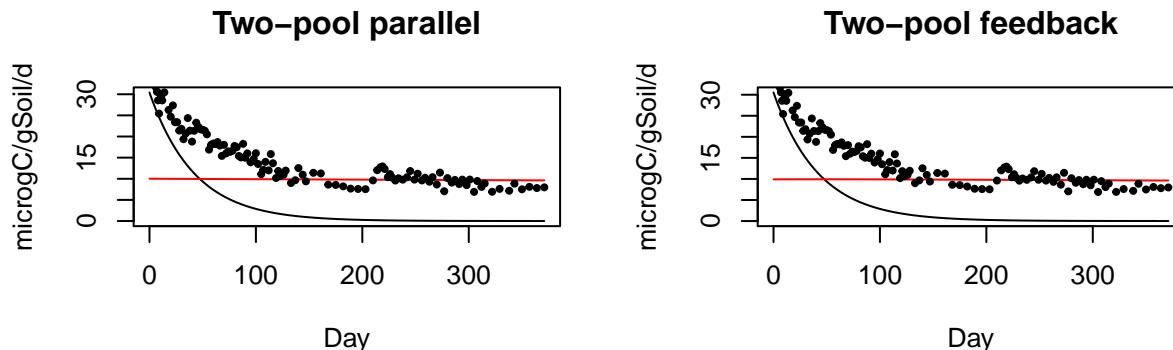


```
## [1] "AIC = 5.67525542177148"
## [1] "k1= 0.0235891259298354"
## [2] "k2= 0.000107395811076731"
## [3] "a21= 0.438795759408189"
```

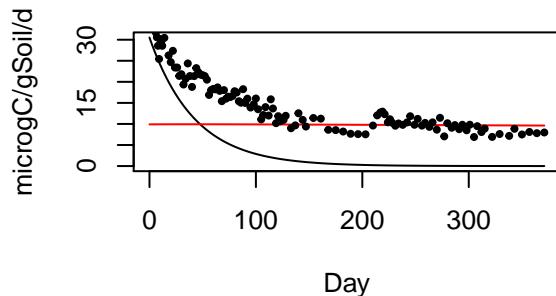
```
## [4] "Proportion of C0 in pool 1= 0.024394269595327"
```



```
## [1] "AIC = 3.67525542177824"
```



### Two-pool series



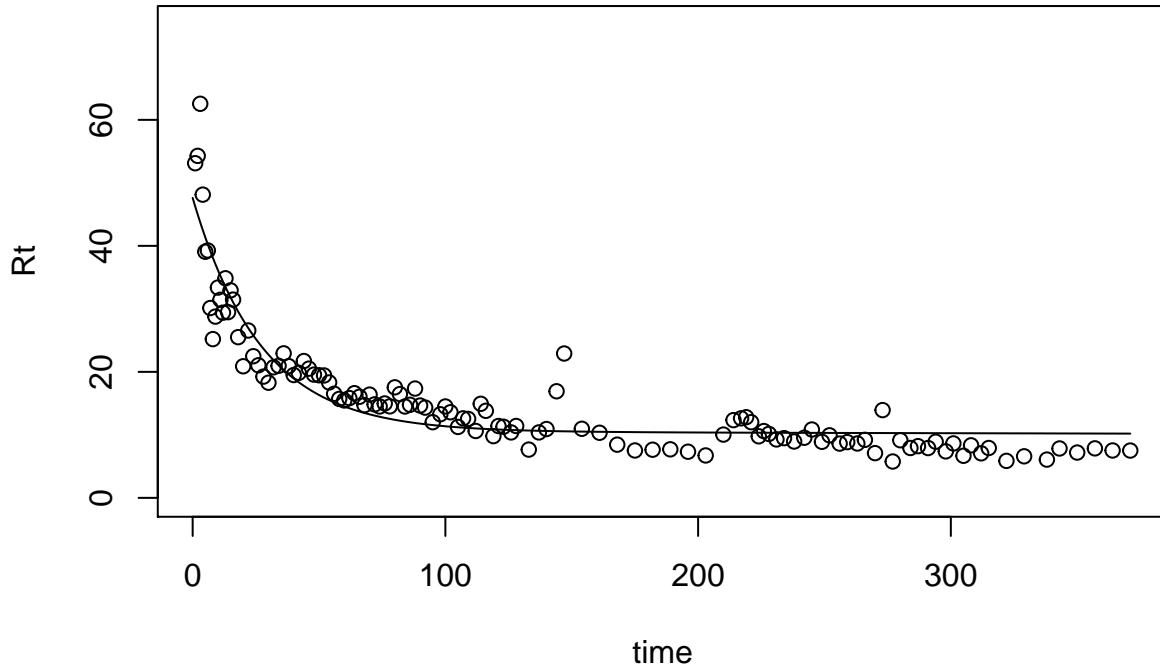
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	1.675255	0.0235883	0.0001074	0.0136416	NA	NA
Two-pool feedback	5.675255	0.0235891	0.0001074	0.0249072	0.4502586	8.6e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	3.675255	0.0235891	0.0001074		0.0243943	0.4387958

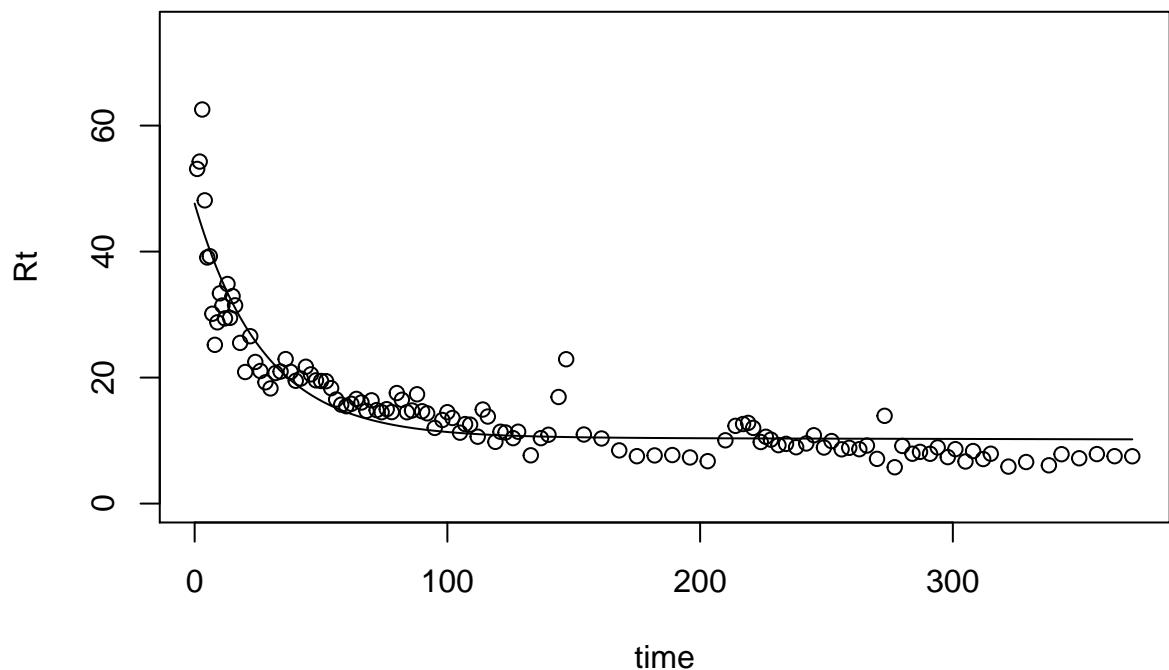
## Variable Site56:

CO2 production rate

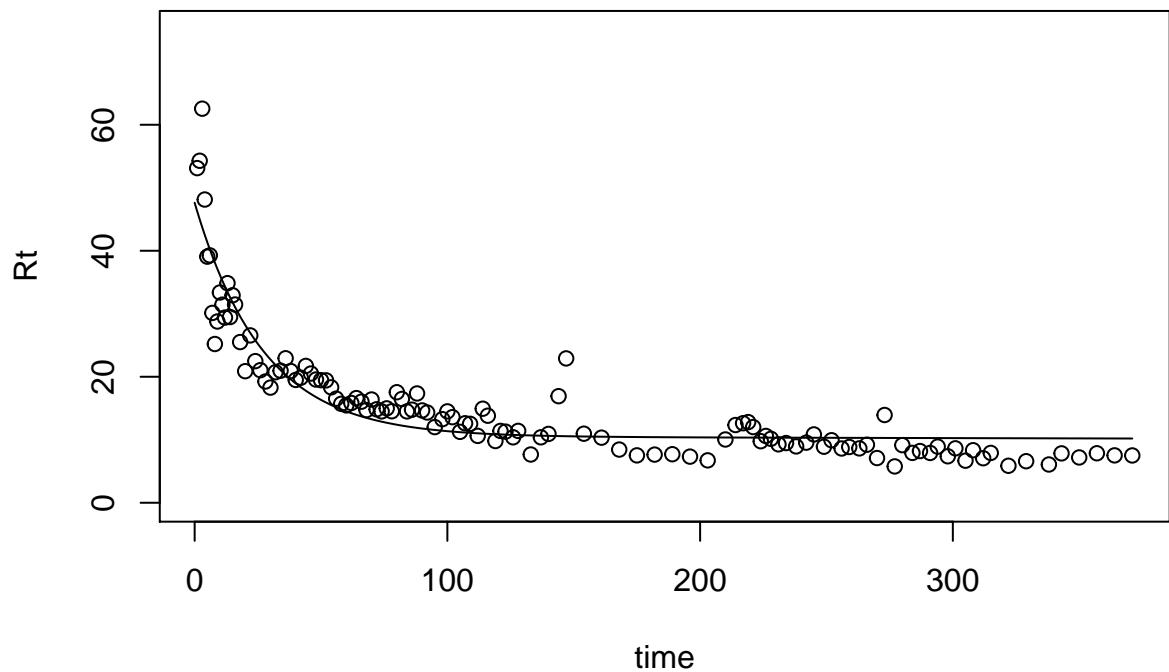
```
## [1] "k1= 0.0369742337148002"
## [2] "k2= 8.79376554541232e-05"
## [3] "proportion of C0 in pool 1= 0.00830226895765596"
```



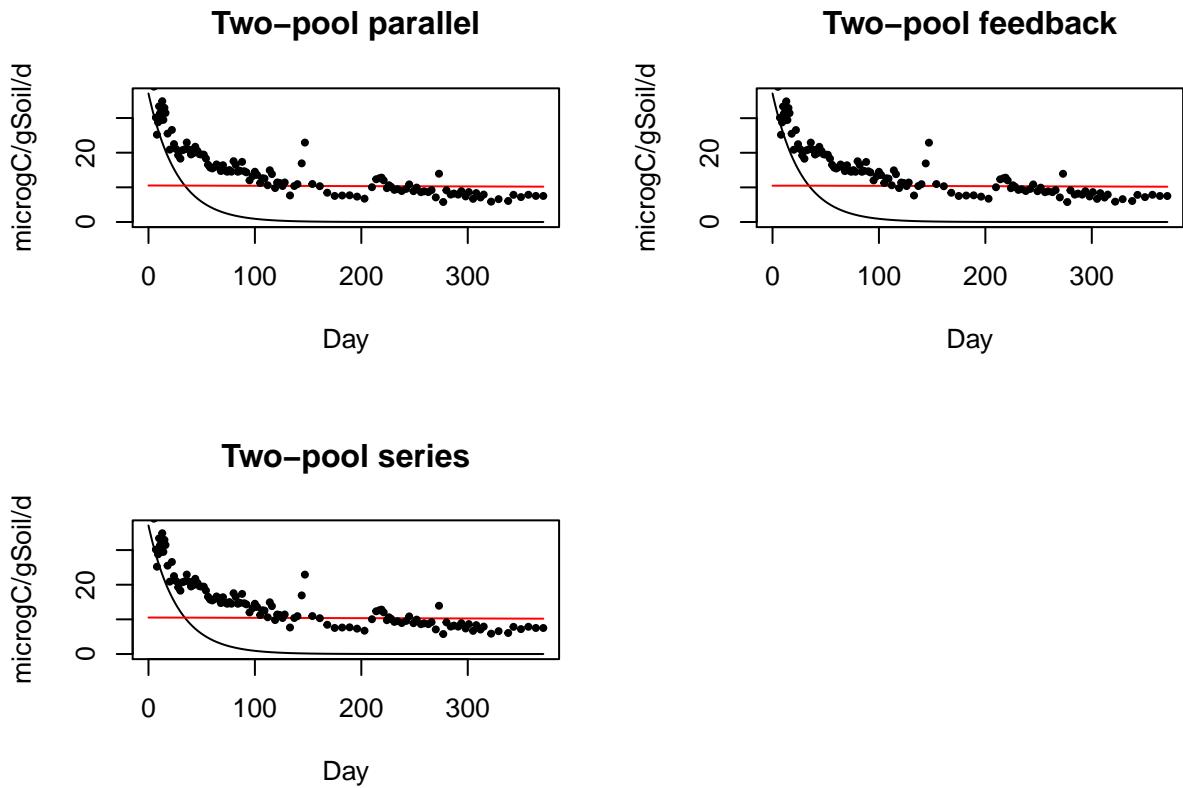
```
## [1] "AIC = 0.647562639915278"
## [1] "k1= 0.0369759690963204"
## [2] "k2= 8.79397606070862e-05"
## [3] "a21= 0.359545783905543"
## [4] "a12= 3.11115425366548e-05"
## [5] "Proportion of C0 in pool 1= 0.0129800796049041"
```



```
## [1] "AIC = 4.64756264492684"
## [1] "k1= 0.0369739335230412"
## [2] "k2= 8.79374609647801e-05"
## [3] "a21= 0.0528733714797828"
## [4] "Proportion of C0 in pool 1= 0.00876694726150218"
```



```
## [1] "AIC = 2.64756263858507"
```

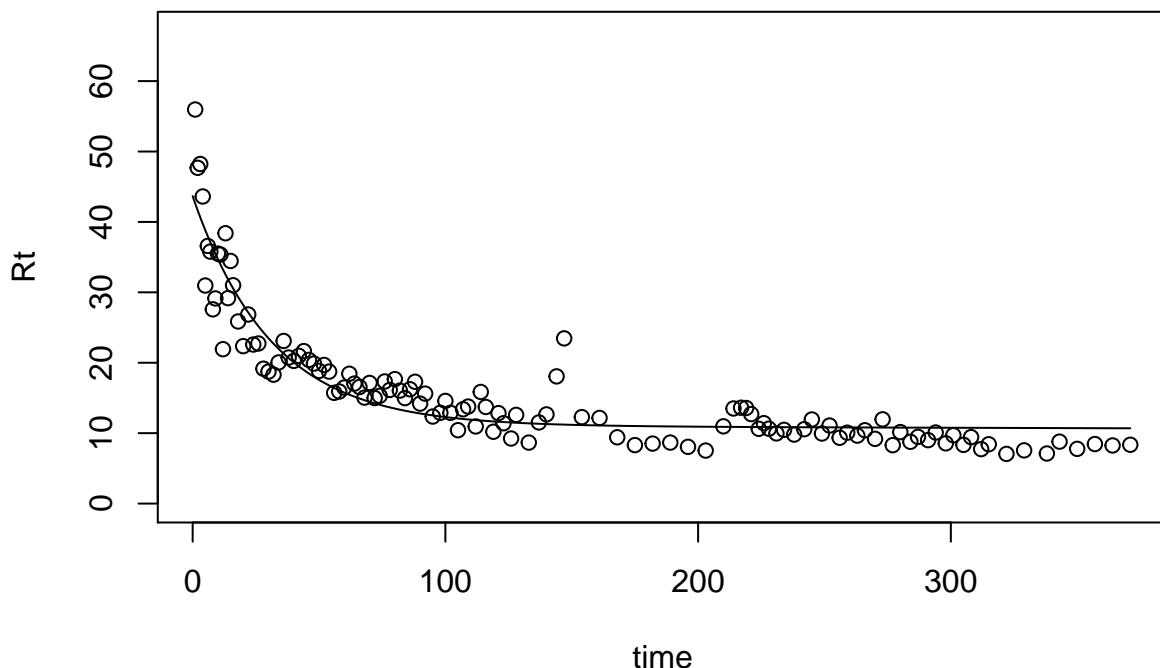


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	0.6475626	0.0369742	8.79e-05	0.0083023	NA	NA
Two-pool feedback	4.6475626	0.0369760	8.79e-05	0.0129801	0.3595458	3.11e-05
Two-pool series	2.6475626	0.0369739	8.79e-05	0.0087669	0.0528734	NA

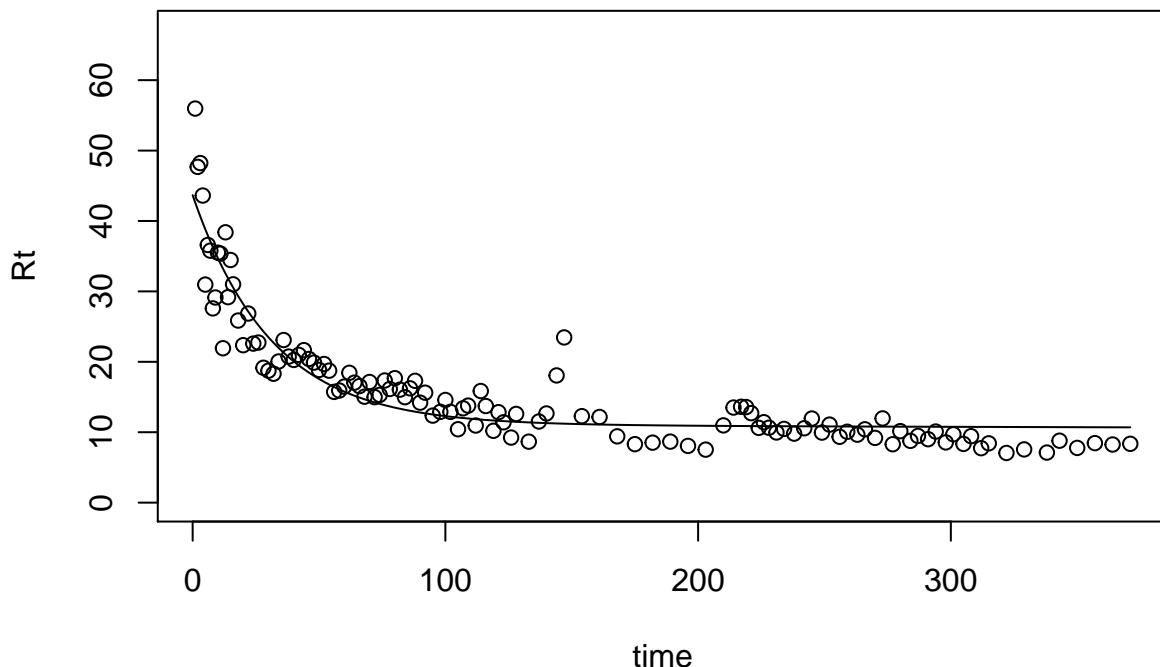
### Variable Site57:

CO2 production rate

```
## [1] "k1= 0.0320958621419554"
## [2] "k2= 9.51723440803048e-05"
## [3] "proportion of C0 in pool 1= 0.00864735930108335"
```

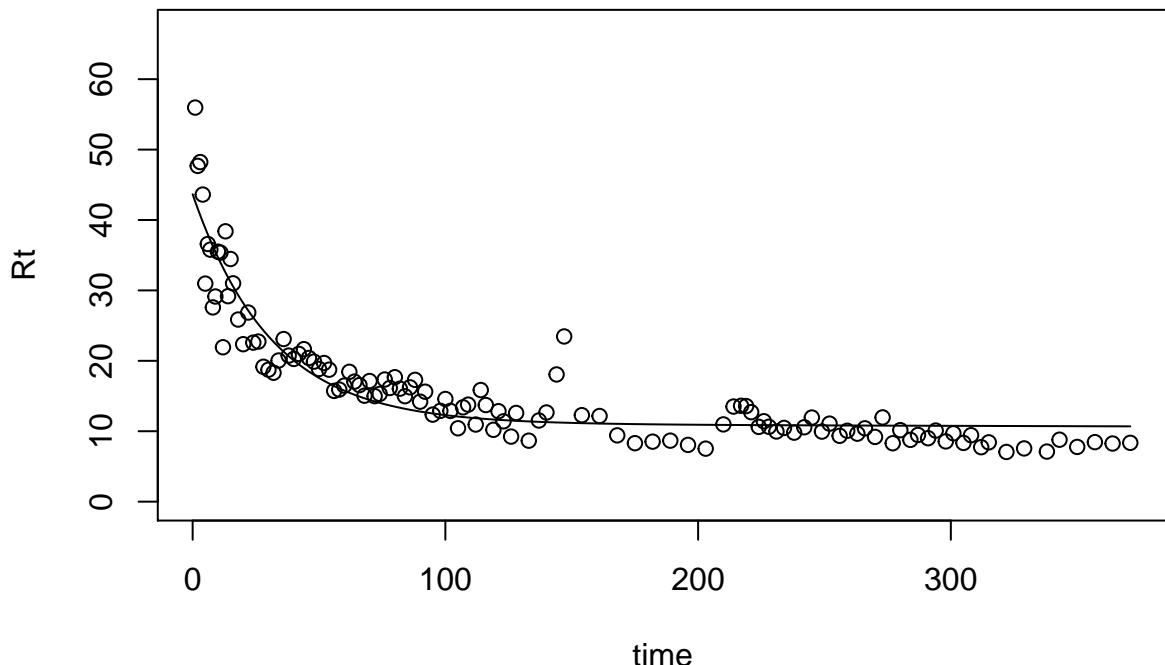


```
## [1] "AIC = 1.17380627098187"
## [1] "k1= 0.0320972905153704"
## [2] "k2= 9.51734640861342e-05"
## [3] "a21= 0.0545427765272962"
## [4] "a12= 1.92778065893906e-06"
## [5] "Proportion of C0 in pool 1= 0.00914746527596377"
```

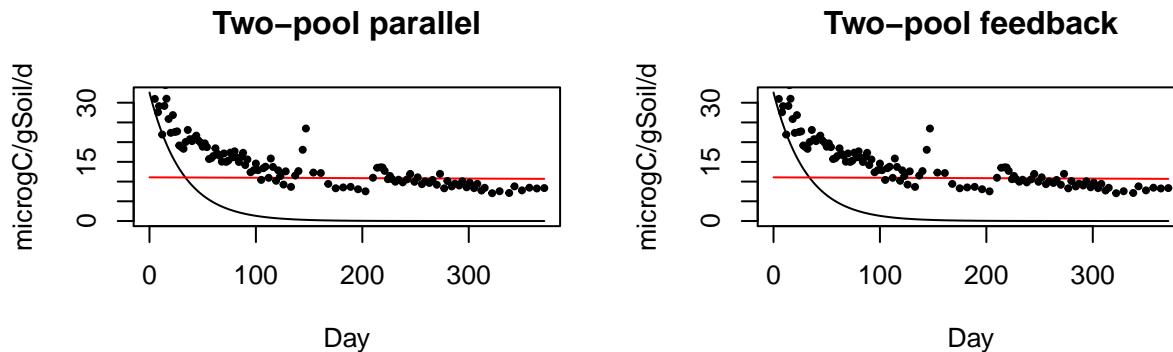


```
## [1] "AIC = 5.17380627528514"
## [1] "k1= 0.0320958012631765"
## [2] "k2= 9.51722618126887e-05"
## [3] "a21= 0.00228987983208939"
```

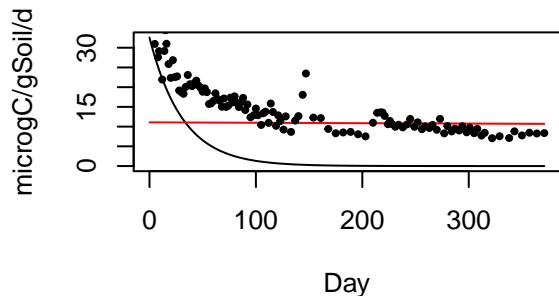
```
## [4] "Proportion of C0 in pool 1= 0.00866723450955353"
```



```
## [1] "AIC = 3.17380627017258"
```



### Two-pool series



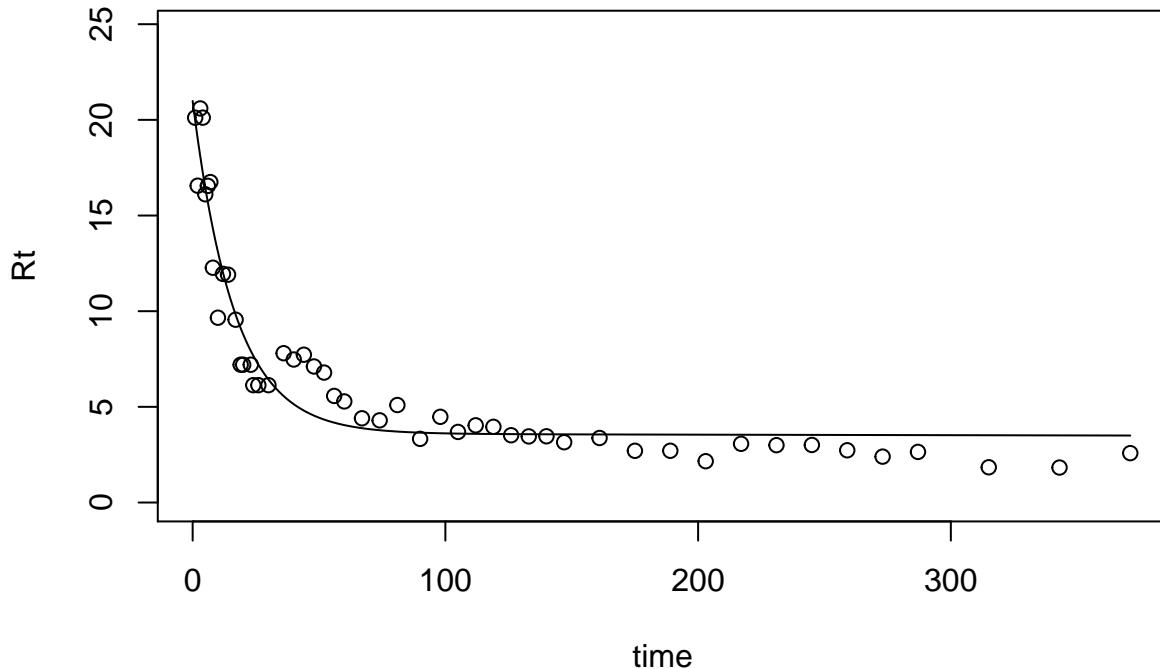
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	1.173806	0.0320959	9.52e-05	0.0086474	NA	NA
Two-pool feedback	5.173806	0.0320973	9.52e-05	0.0091475	0.0545428	1.9e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	3.173806	0.0320958	9.52e-05	0.0086672	0.0022899	NA

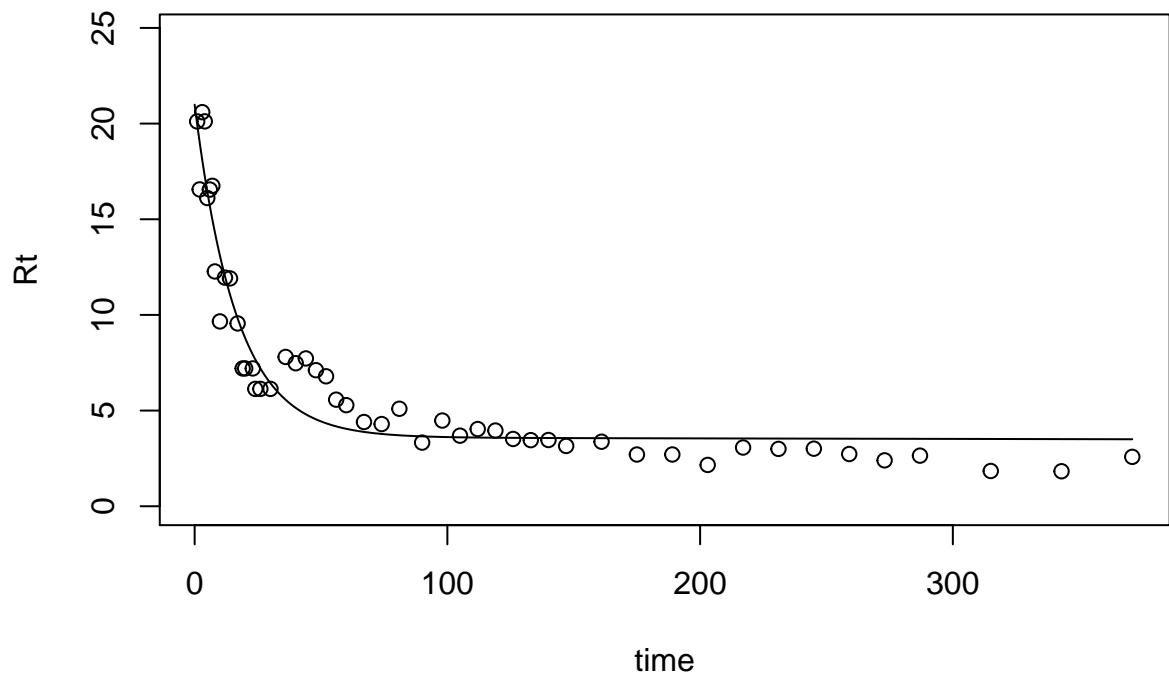
## Variable Site58:

CO2 production rate

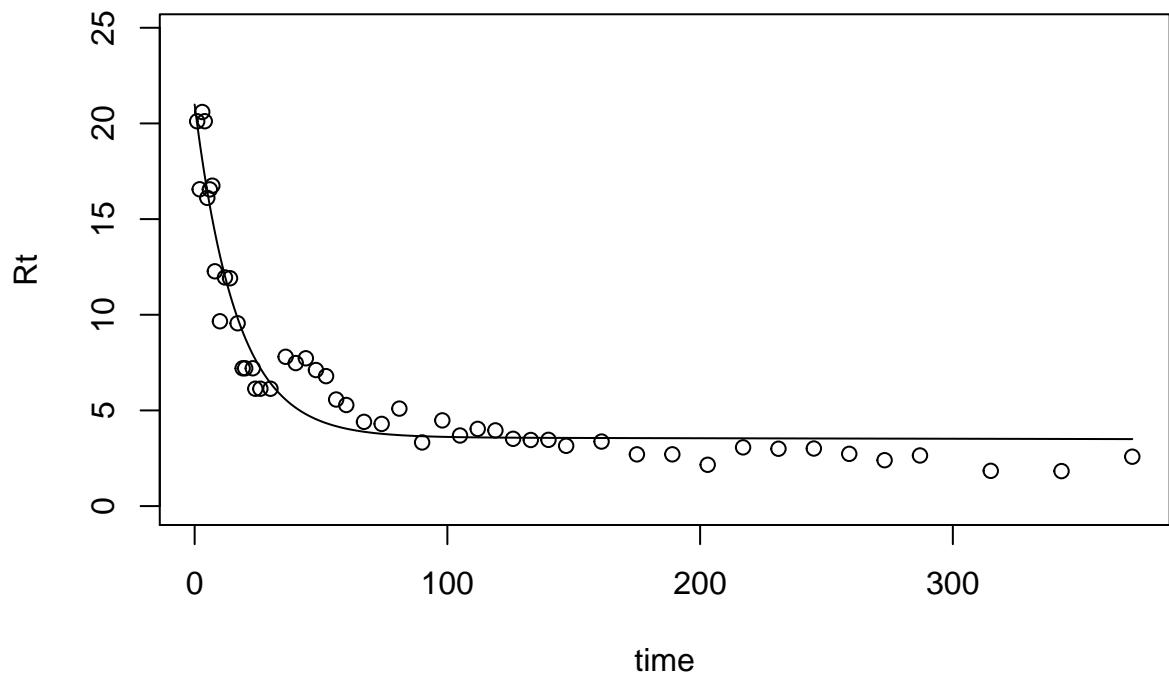
```
## [1] "k1= 0.0604332373634958"
## [2] "k2= 7.52975503240346e-05"
## [3] "proportion of C0 in pool 1= 0.00598154164386366"
```



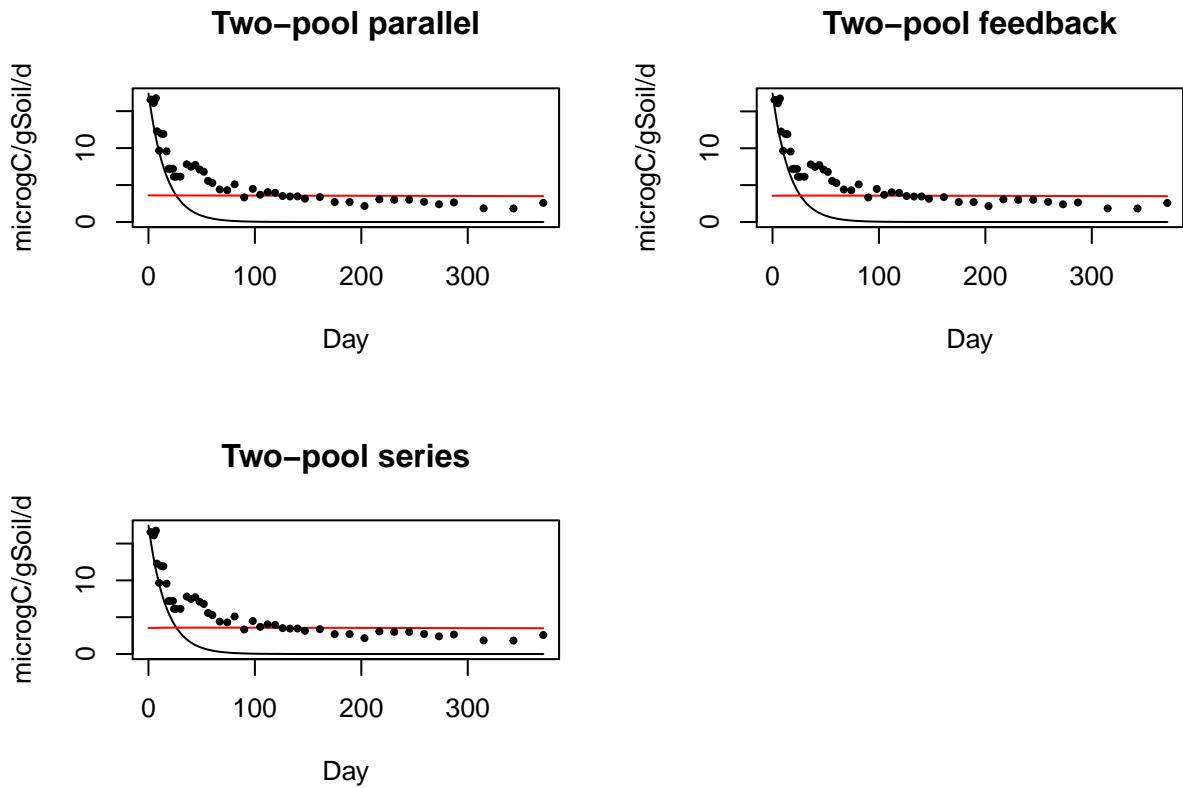
```
## [1] "AIC = 4.54001925292631"
## [1] "k1= 0.0604341633104924"
## [2] "k2= 7.52995614126891e-05"
## [3] "a21= 0.656453628489412"
## [4] "a12= 3.20282983685694e-05"
## [5] "Proportion of C0 in pool 1= 0.0174526193444763"
```



```
## [1] "AIC = 8.54001925381765"
## [1] "k1= 0.0604342415435217"
## [2] "k2= 7.52980194544757e-05"
## [3] "a21= 0.747655411786062"
## [4] "Proportion of C0 in pool 1= 0.0237915312098206"
```



```
## [1] "AIC = 6.54001925381184"
```

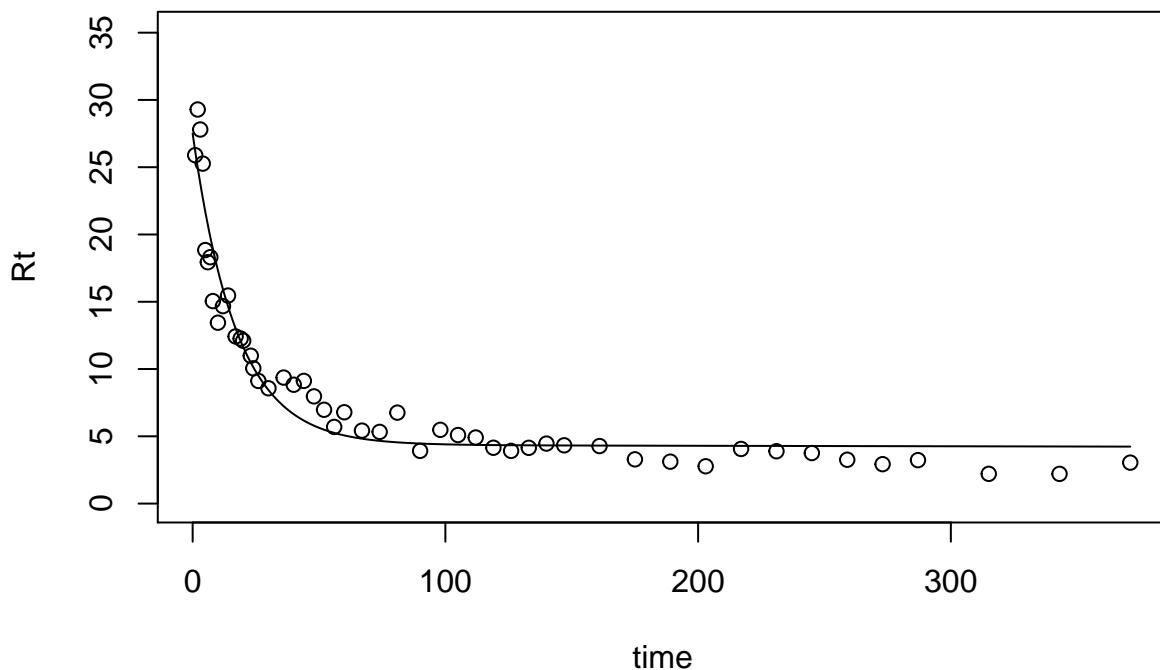


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	4.540019	0.0604332	7.53e-05	0.0059815	NA	NA
Two-pool feedback	8.540019	0.0604342	7.53e-05	0.0174526	0.6564536	3.2e-05
Two-pool series	6.540019	0.0604342	7.53e-05	0.0237915	0.7476554	NA

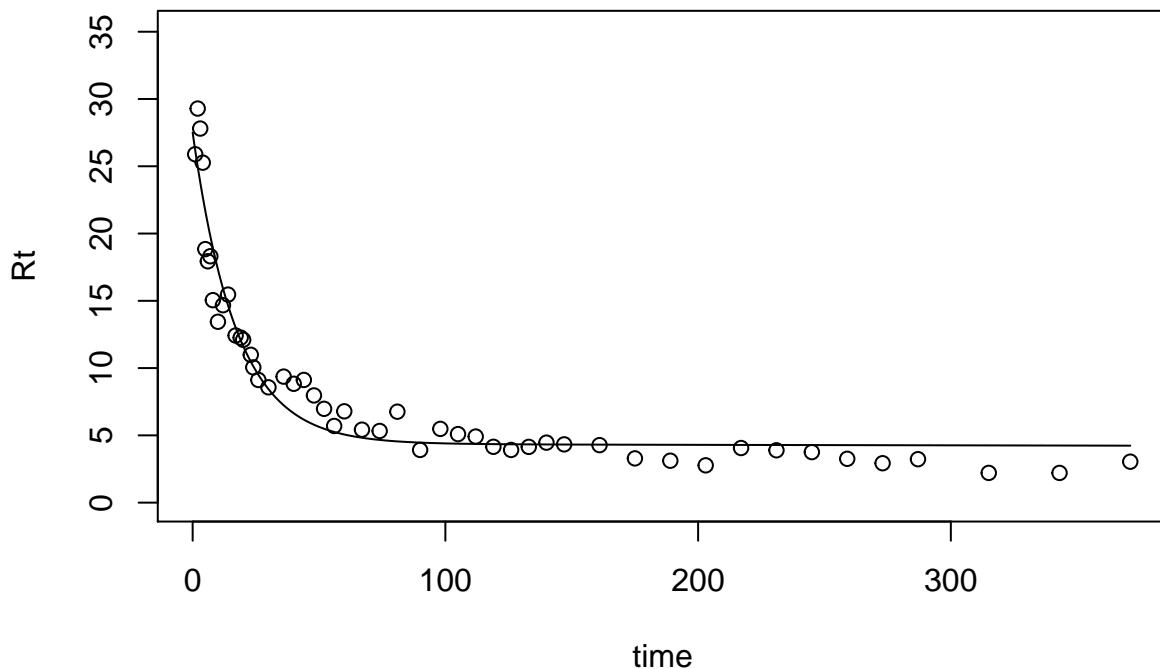
### Variable Site59:

CO2 production rate

```
## [1] "k1= 0.0578249749671867"
## [2] "k2= 8.34980149889974e-05"
## [3] "proportion of C0 in pool 1= 0.00759138724256381"
```

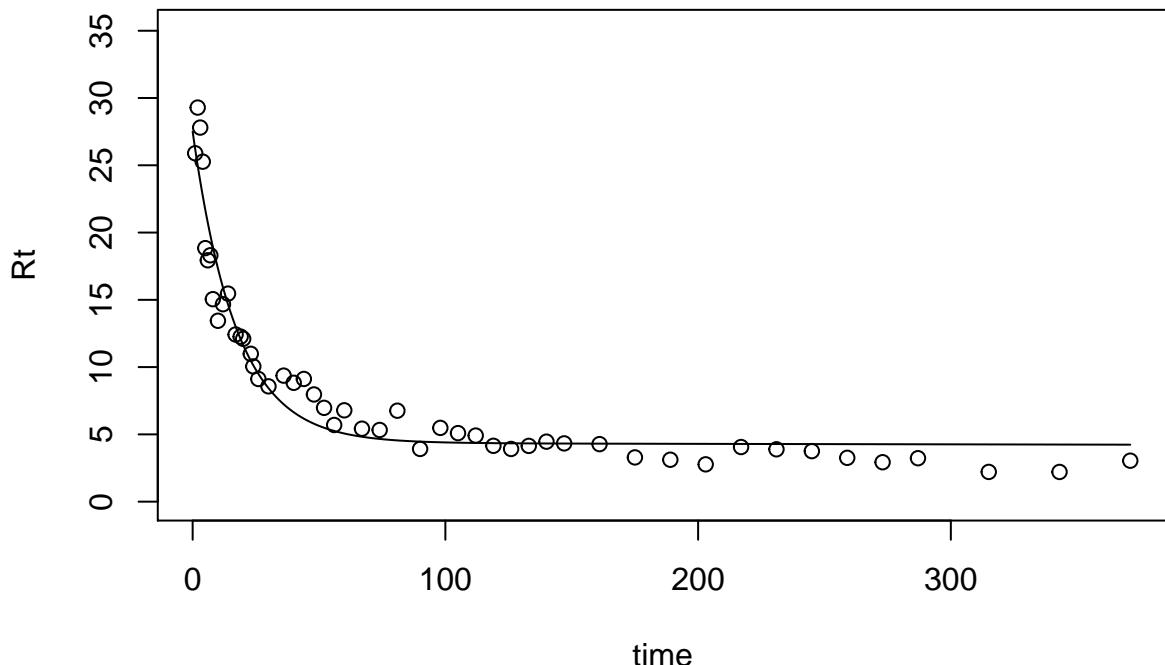


```
## [1] "AIC = 3.8318728766988"
## [1] "k1= 0.0578261877690873"
## [2] "k2= 8.35005817836587e-05"
## [3] "a21= 0.618981684251195"
## [4] "a12= 3.54508134762788e-05"
## [5] "Proportion of C0 in pool 1= 0.0199706006908226"
```

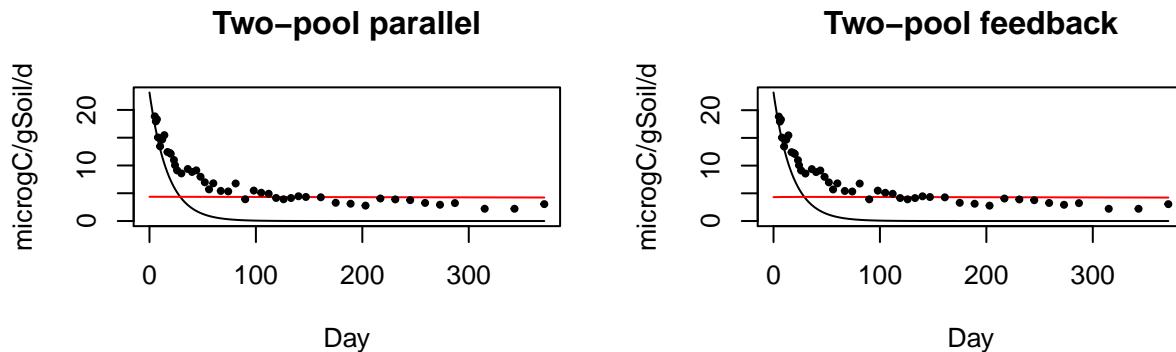


```
## [1] "AIC = 7.83187287899887"
## [1] "k1= 0.0578252661830243"
## [2] "k2= 8.34981805147082e-05"
## [3] "a21= 0.000609886607051247"
```

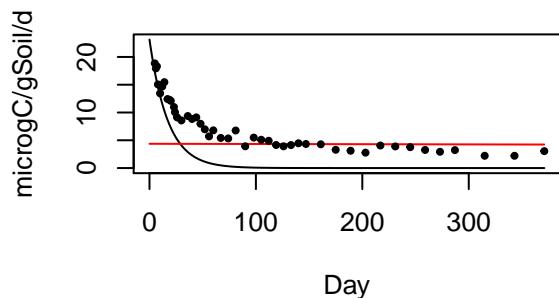
```
## [4] "Proportion of C0 in pool 1= 0.00759595836242805"
```



```
## [1] "AIC = 5.83187287596385"
```



**Two-pool series**



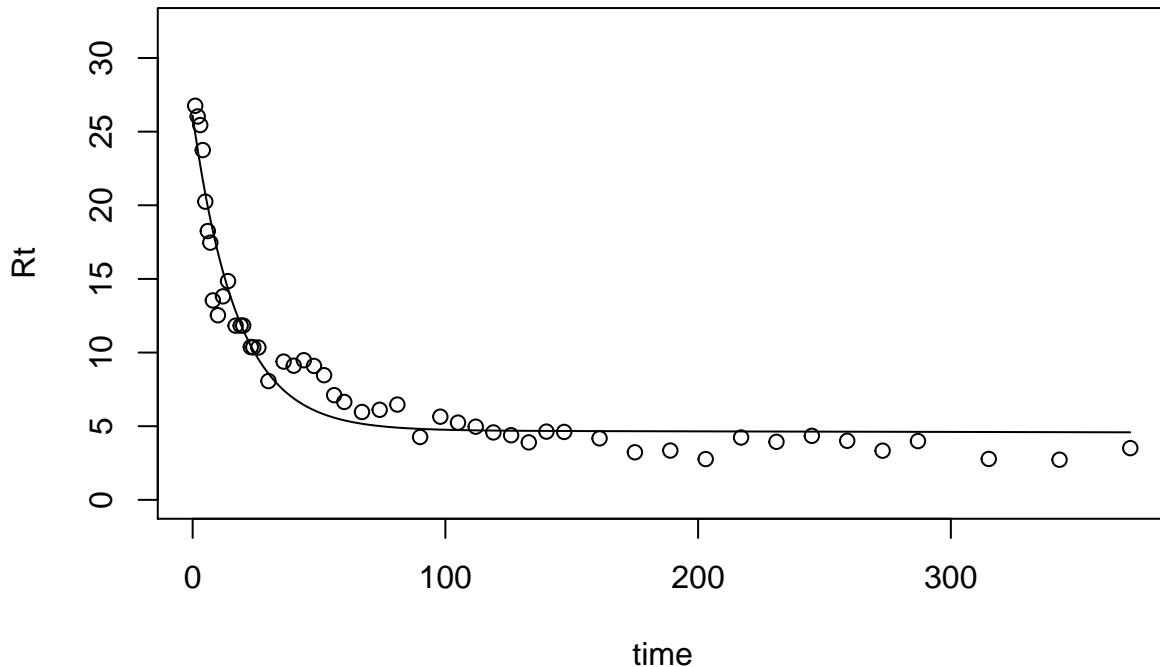
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	3.831873	0.0578250	8.35e-05	0.0075914	NA	NA
Two-pool feedback	7.831873	0.0578262	8.35e-05	0.0199706	0.6189817	3.55e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	5.831873	0.0578253	8.35e-05	0.0075960	0.0006099	NA

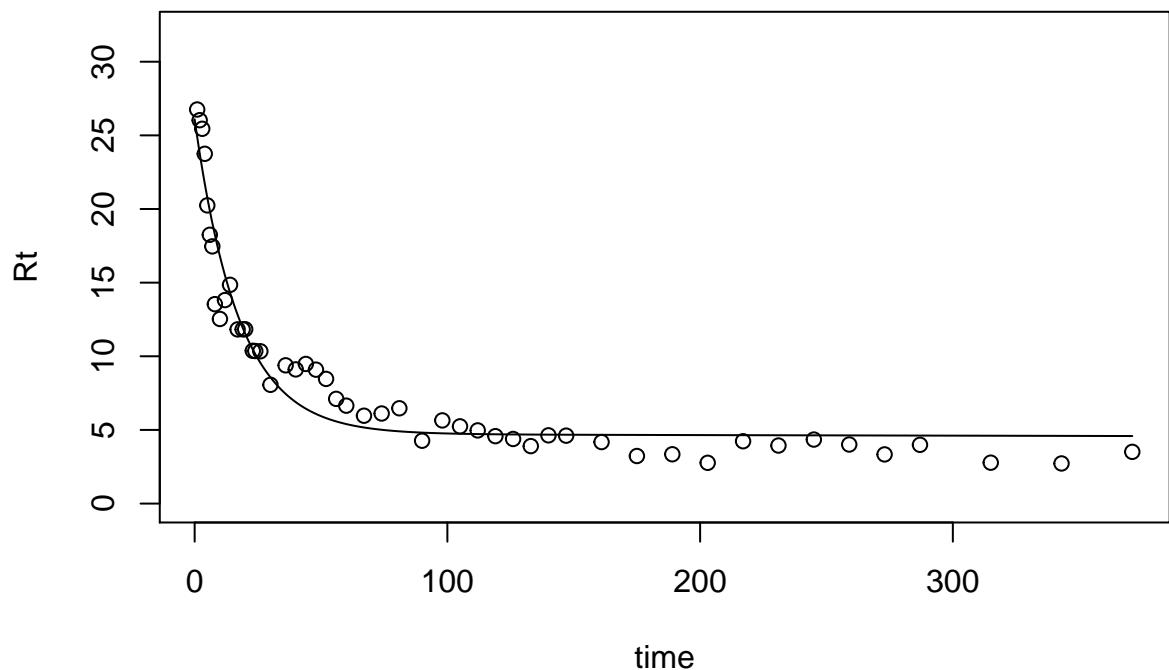
## Variable Site60:

CO2 production rate

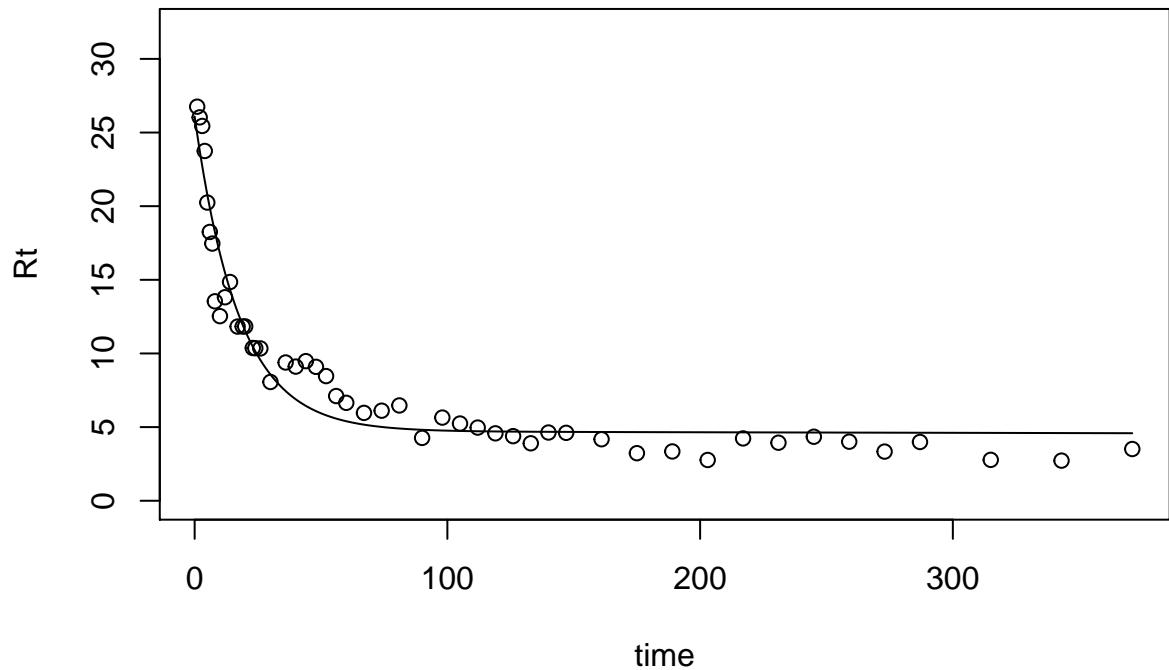
```
## [1] "k1= 0.0570869968746053"
## [2] "k2= 8.13079256546111e-05"
## [3] "proportion of C0 in pool 1= 0.006397147299052"
```



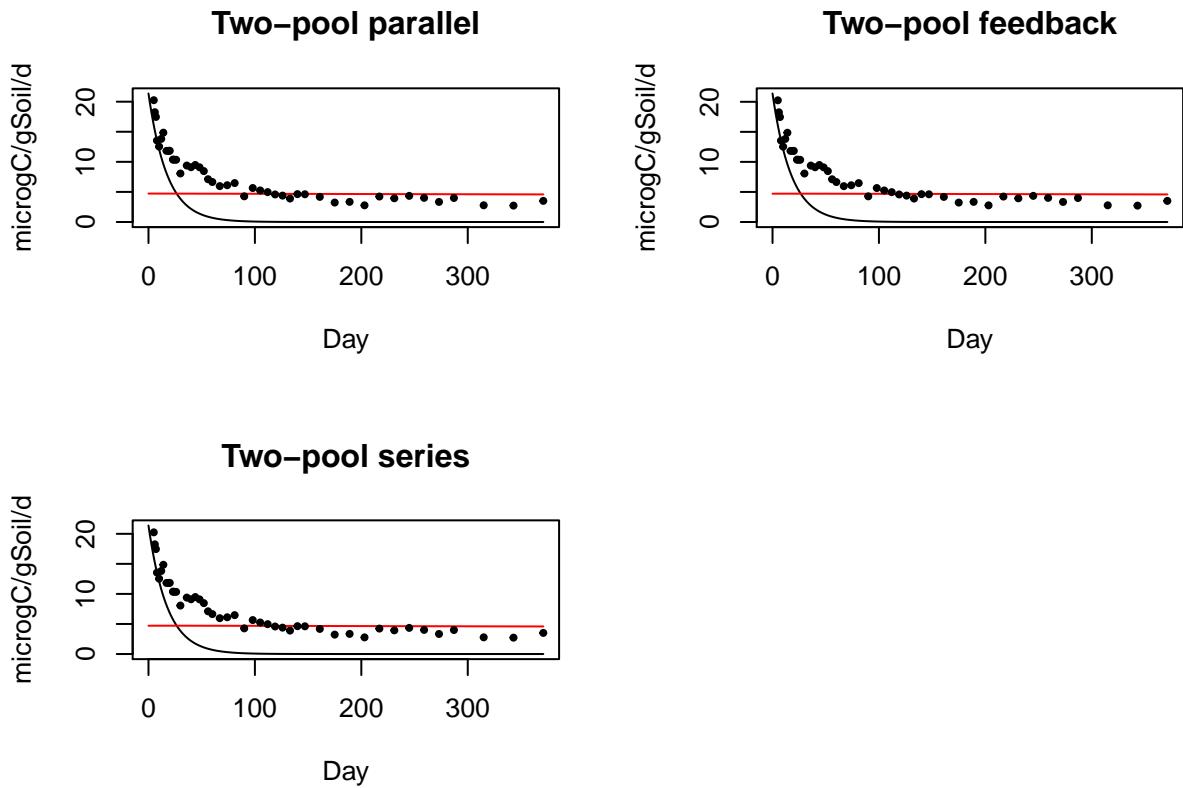
```
## [1] "AIC = 4.02882680838945"
## [1] "k1= 0.0570872913667486"
## [2] "k2= 8.13081799576184e-05"
## [3] "a21= 0.387408946391346"
## [4] "a12= 3.17226511248325e-06"
## [5] "Proportion of C0 in pool 1= 0.0104521536217092"
```



```
## [1] "AIC = 8.02882680965637"
## [1] "k1= 0.0570880733046087"
## [2] "k2= 8.13084873140526e-05"
## [3] "a21= 0.381251761709731"
## [4] "Proportion of C0 in pool 1= 0.0103477947294067"
```



```
## [1] "AIC = 6.02882681208891"
```

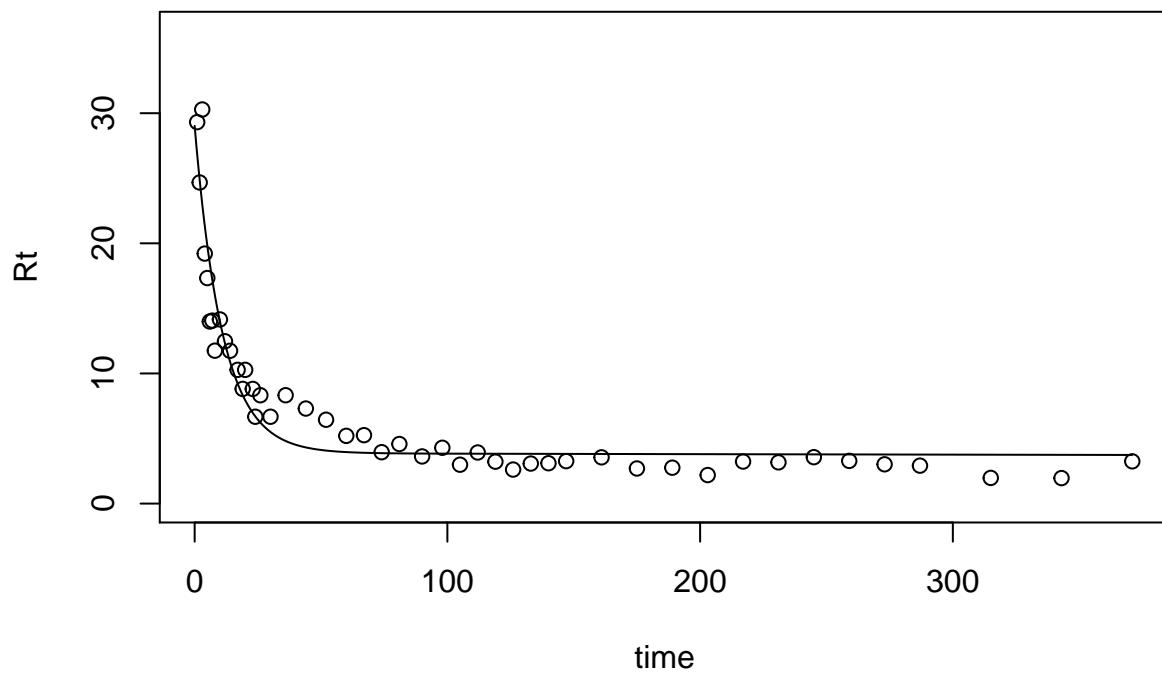


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	4.028827	0.0570870	8.13e-05	0.0063971	NA	NA
Two-pool feedback	8.028827	0.0570873	8.13e-05	0.0104522	0.3874089	3.2e-06
Two-pool series	6.028827	0.0570881	8.13e-05	0.0103478	0.3812518	NA

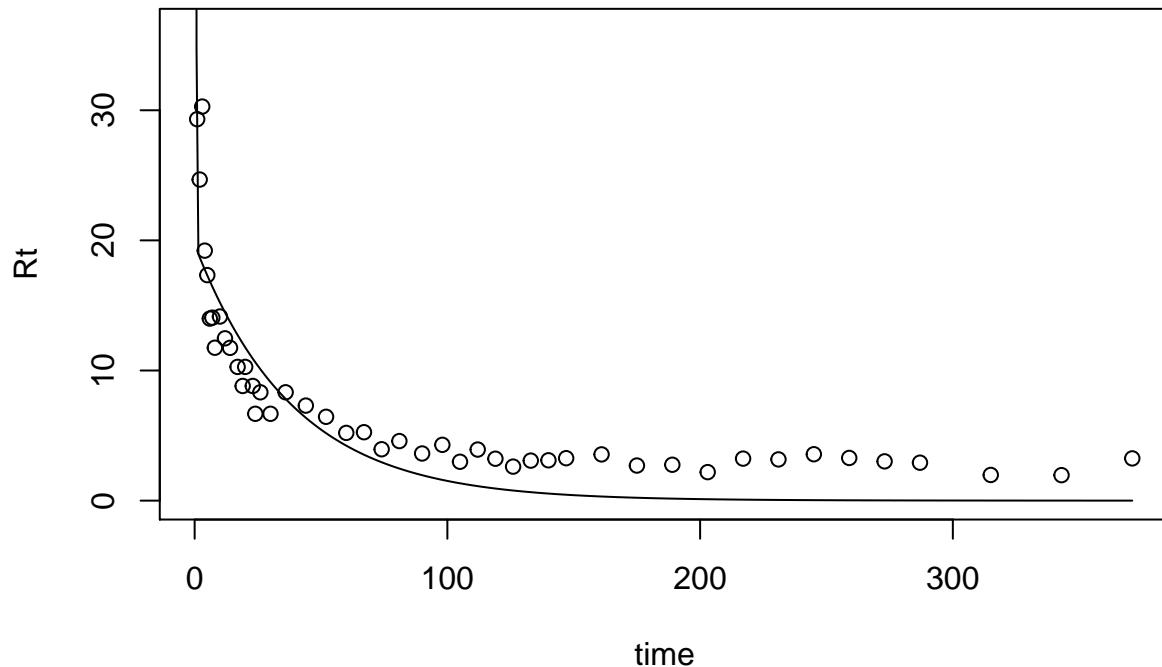
## Variable Site61:

CO2 production rate

```
## [1] "k1= 0.0909522469955234"
## [2] "k2= 9.6493249360729e-05"
## [3] "proportion of C0 in pool 1= 0.00684519771884329"
```

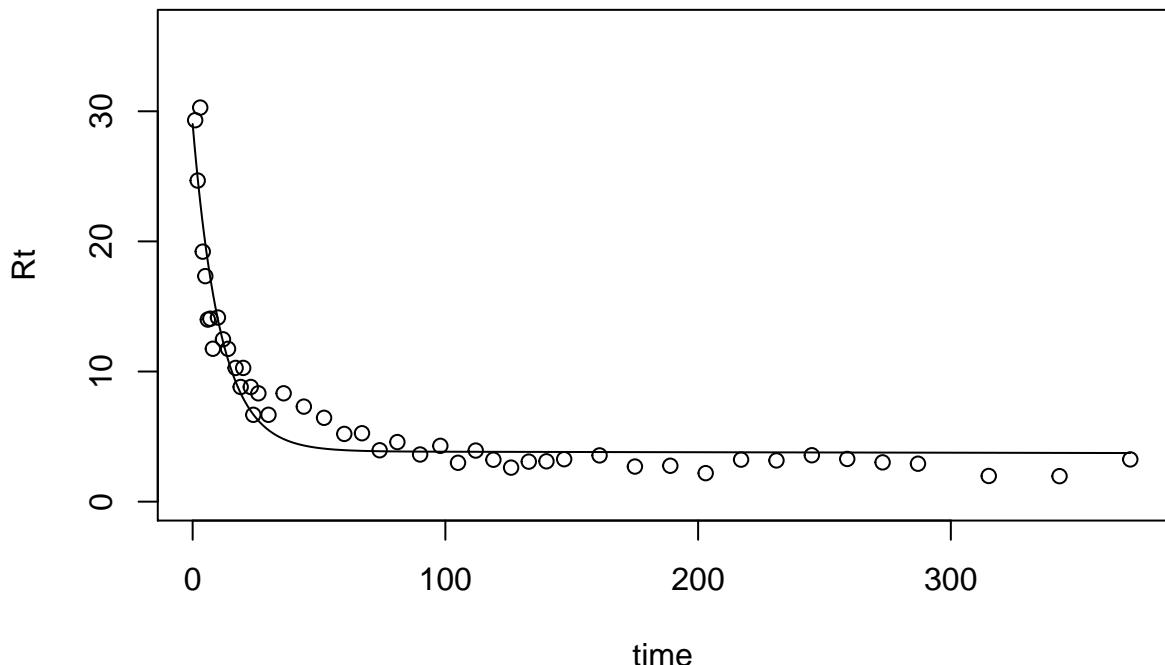


```
## [1] "AIC = 3.27851612155335"
## [1] "k1= 14.1115867540242"
## [2] "k2= 0.0261365705788296"
## [3] "a21= 0.0186404121366899"
## [4] "a12= 0.999996713641577"
## [5] "Proportion of C0 in pool 1= 0.999711414699087"
```



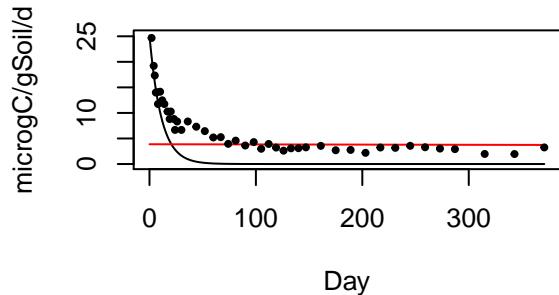
```
## [1] "AIC = 5.52303511677796"
## [1] "k1= 0.090950029310018"
## [2] "k2= 9.64923141590805e-05"
## [3] "a21= 0.229764174766514"
```

```
## [4] "Proportion of C0 in pool 1= 0.00888996369936729"
```

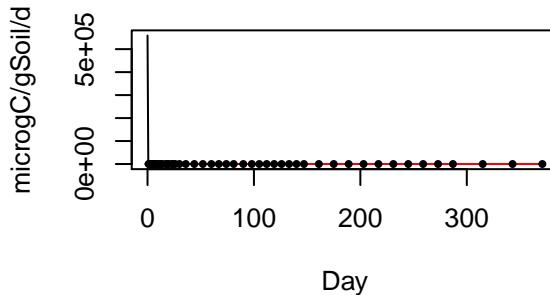


```
## [1] "AIC = 5.27851611114127"
```

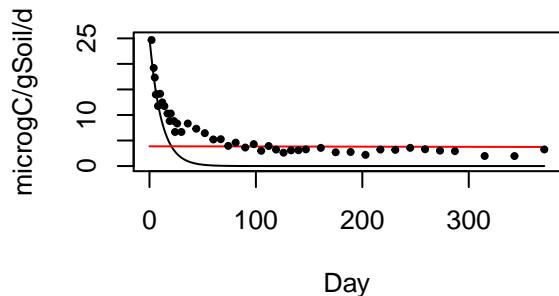
### Two-pool parallel



### Two-pool feedback



### Two-pool series



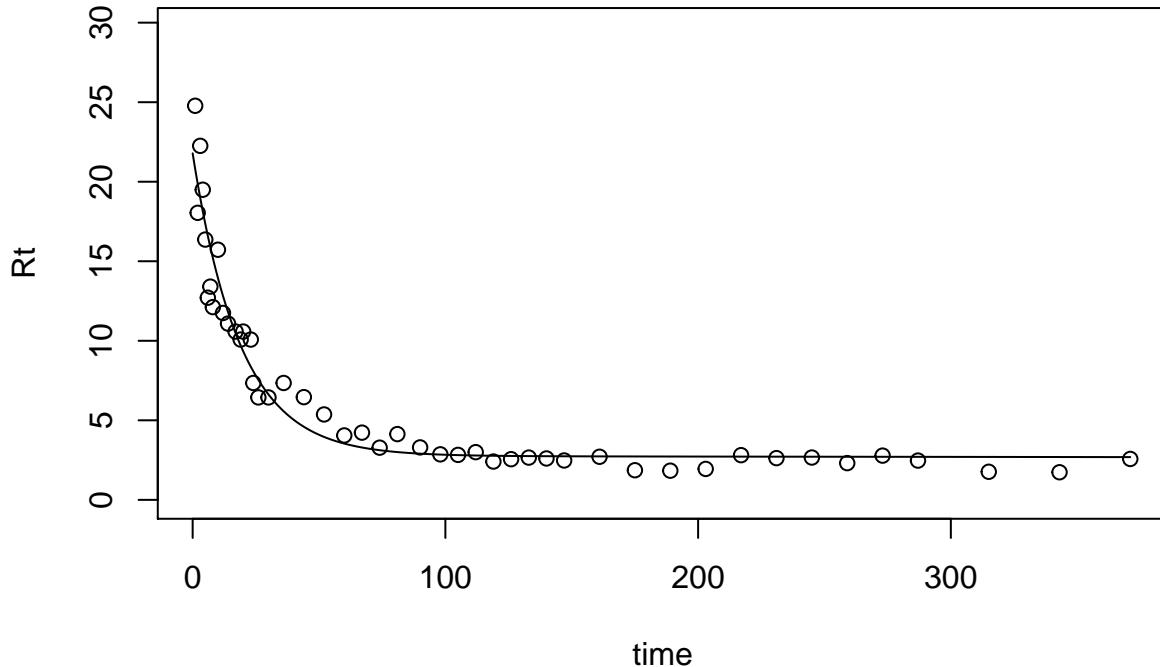
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	3.278516	0.0909522	0.0000965	0.0068452	NA	NA
Two-pool feedback	5.523035	14.1115868	0.0261366	0.9997114	0.0186404	0.9999967

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	5.278516	0.0909500	0.00000965	0.0088900	0.2297642	NA

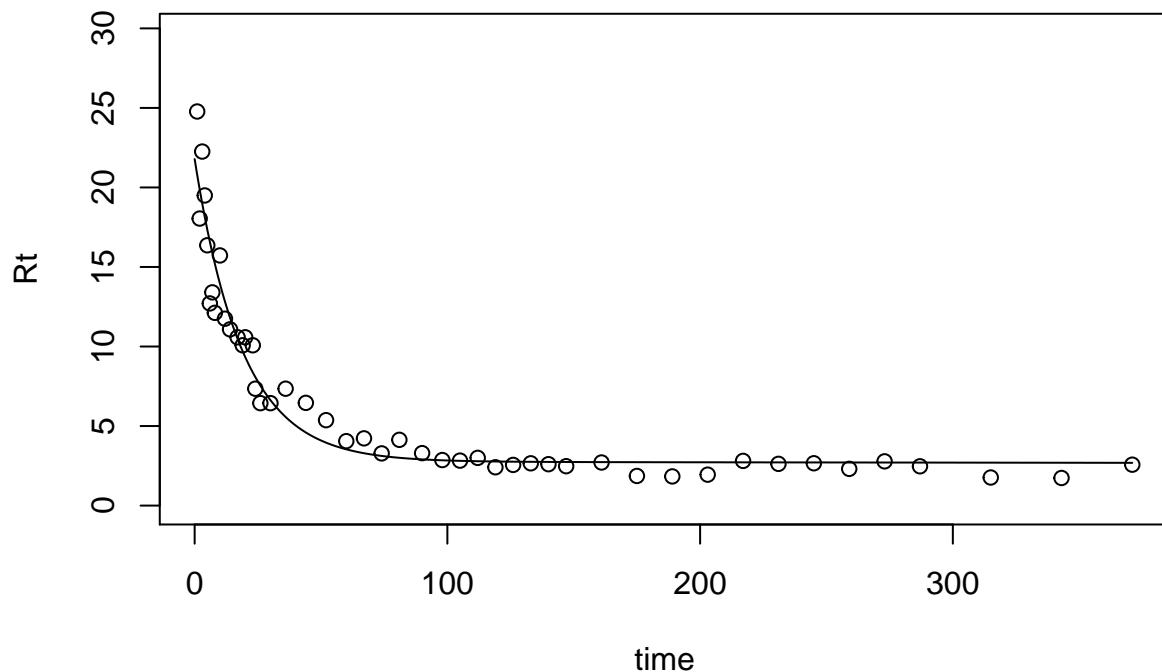
## Variable Site62:

CO2 production rate

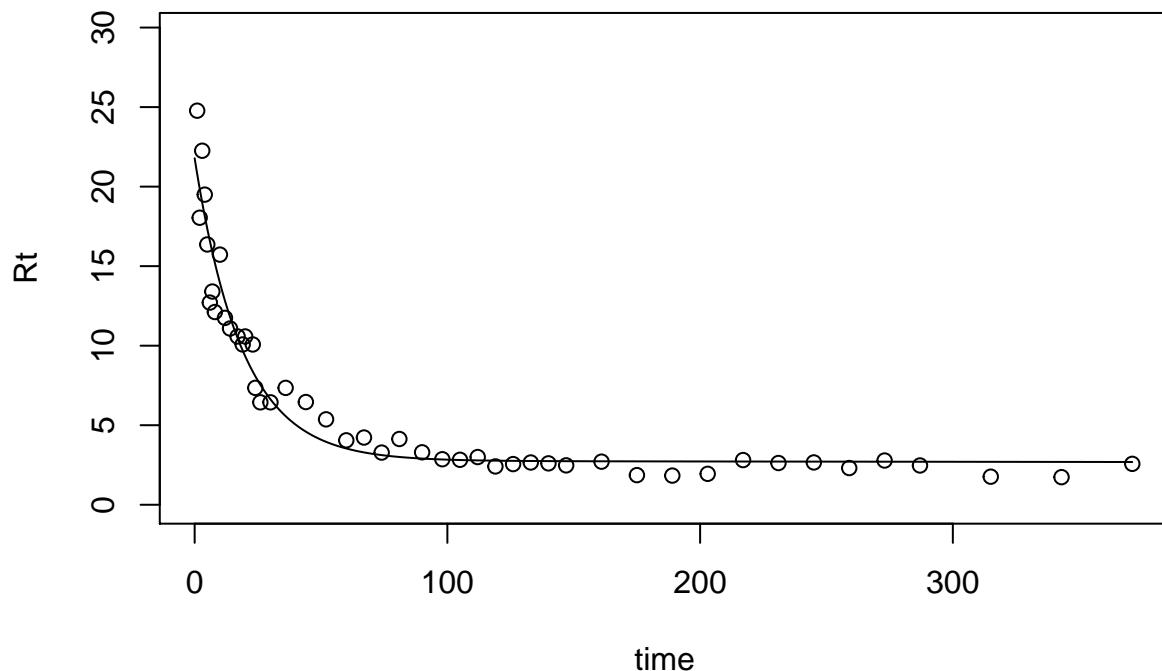
```
## [1] "k1= 0.0530583742858257"
## [2] "k2= 7.29634265518252e-05"
## [3] "proportion of C0 in pool 1= 0.009386368534061"
```



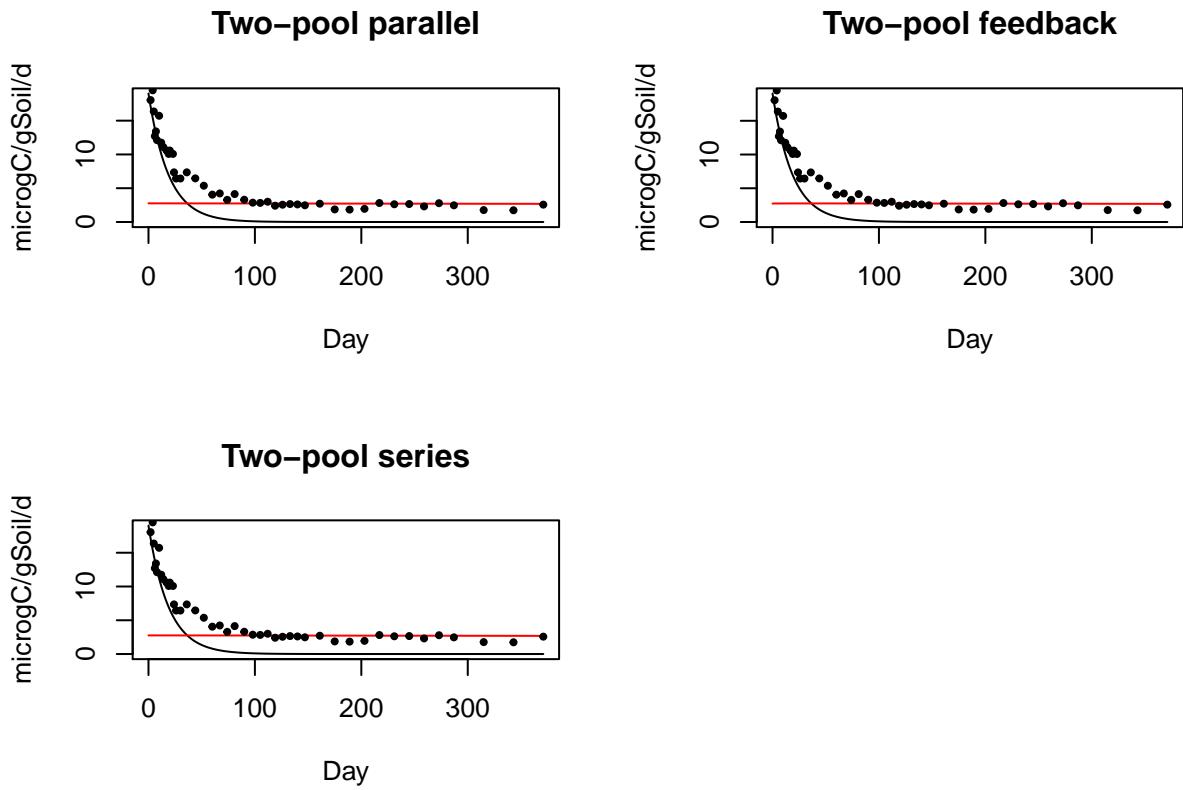
```
## [1] "AIC = 4.69279924347675"
## [1] "k1= 0.0530590009464366"
## [2] "k2= 7.29640677485067e-05"
## [3] "a21= 0.459243342237777"
## [4] "a12= 4.72258670319858e-06"
## [5] "Proportion of C0 in pool 1= 0.0173780111444604"
```



```
## [1] "AIC = 8.69279924187247"
## [1] "k1= 0.0530583736484342"
## [2] "k2= 7.29634099924981e-05"
## [3] "a21= 0.195341472168334"
## [4] "Proportion of C0 in pool 1= 0.0116688873362389"
```



```
## [1] "AIC = 6.69279924174427"
```

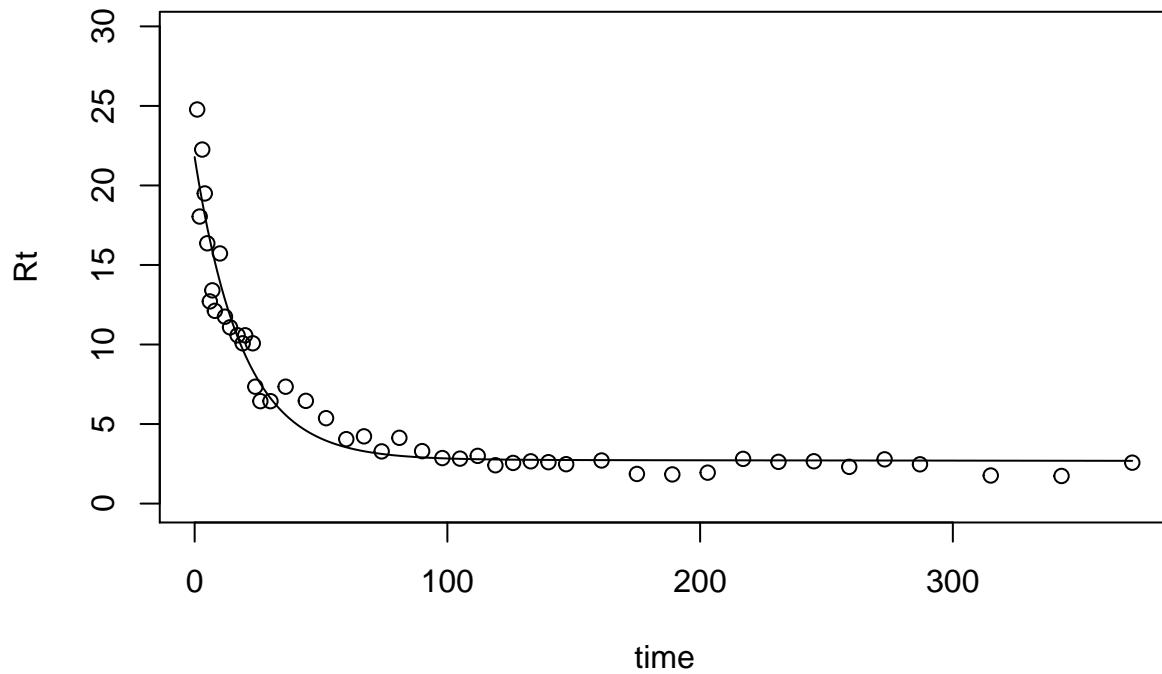


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	4.692799	0.0530584	7.3e-05	0.0093864	NA	NA
Two-pool feedback	8.692799	0.0530590	7.3e-05	0.0173780	0.4592433	4.7e-06
Two-pool series	6.692799	0.0530584	7.3e-05	0.0116689	0.1953415	NA

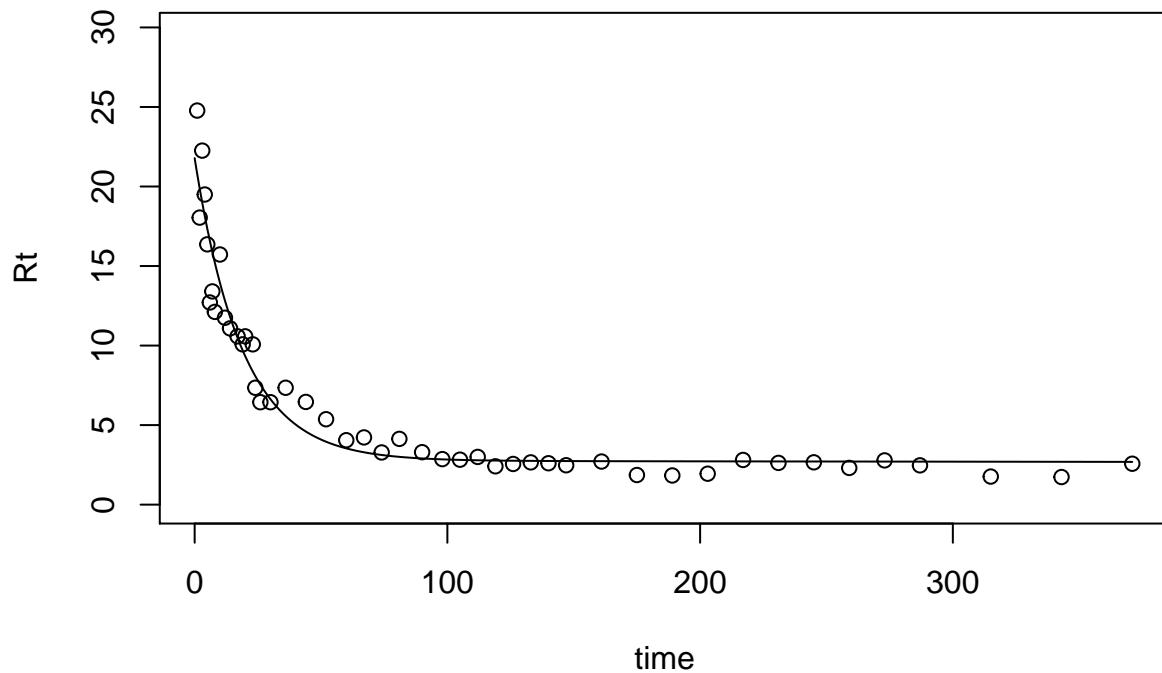
## Variable Site62:

CO2 production rate

```
## [1] "k1= 0.0530583742858257"
## [2] "k2= 7.29634265518252e-05"
## [3] "proportion of C0 in pool 1= 0.009386368534061"
```

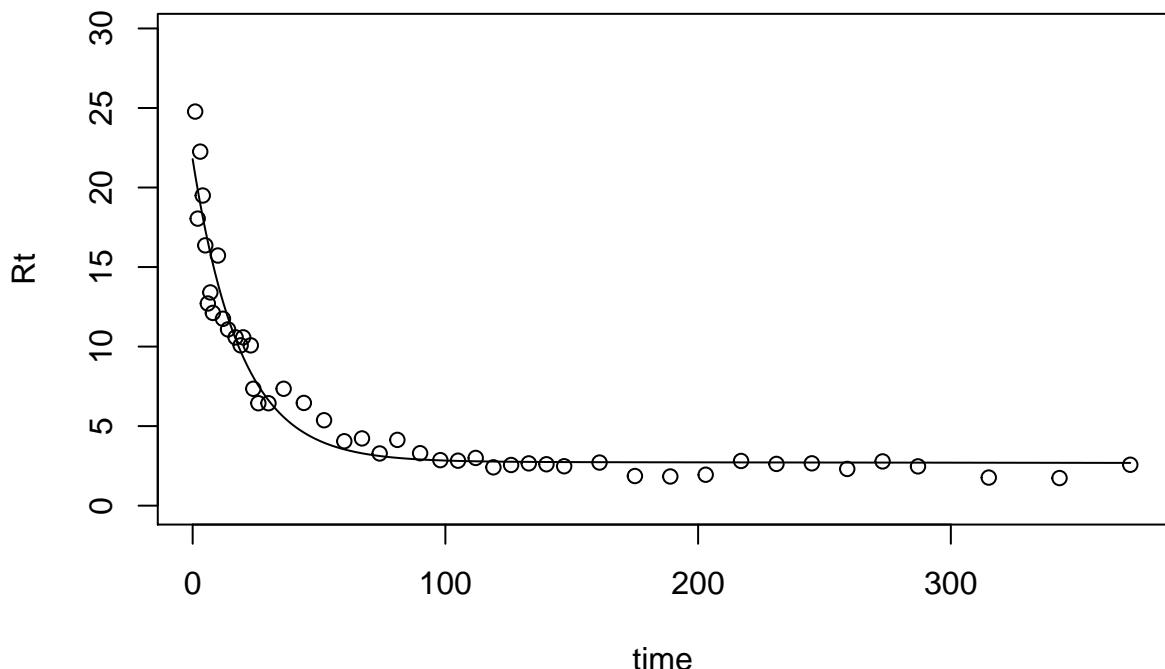


```
## [1] "AIC = 4.69279924347675"
## [1] "k1= 0.0530590009464366"
## [2] "k2= 7.29640677485067e-05"
## [3] "a21= 0.459243342237777"
## [4] "a12= 4.72258670319858e-06"
## [5] "Proportion of C0 in pool 1= 0.0173780111444604"
```

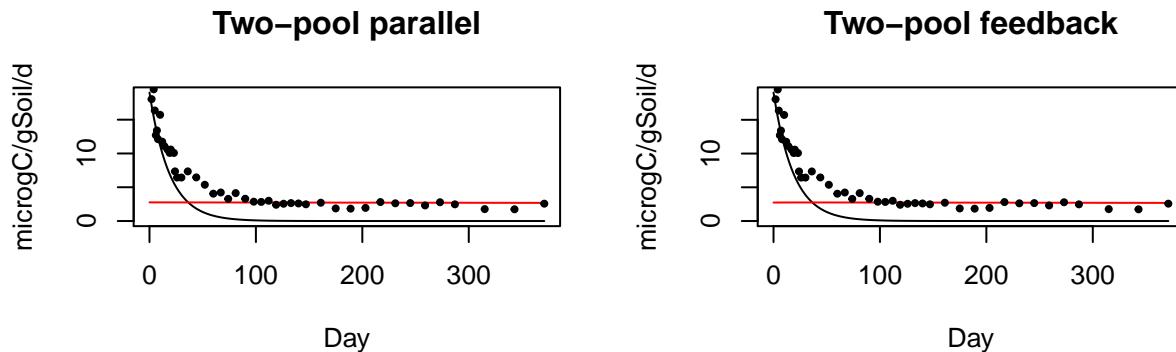


```
## [1] "AIC = 8.69279924187247"
## [1] "k1= 0.0530583736484342"
## [2] "k2= 7.29634099924981e-05"
## [3] "a21= 0.195341472168334"
```

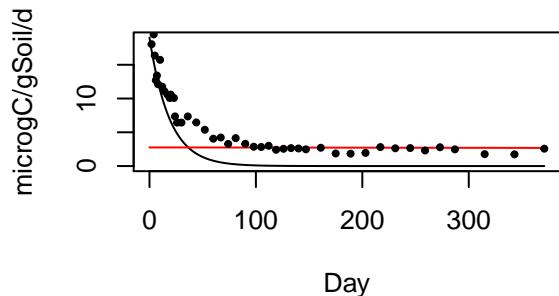
```
## [4] "Proportion of C0 in pool 1= 0.0116688873362389"
```



```
## [1] "AIC = 6.69279924174427"
```



### Two-pool series



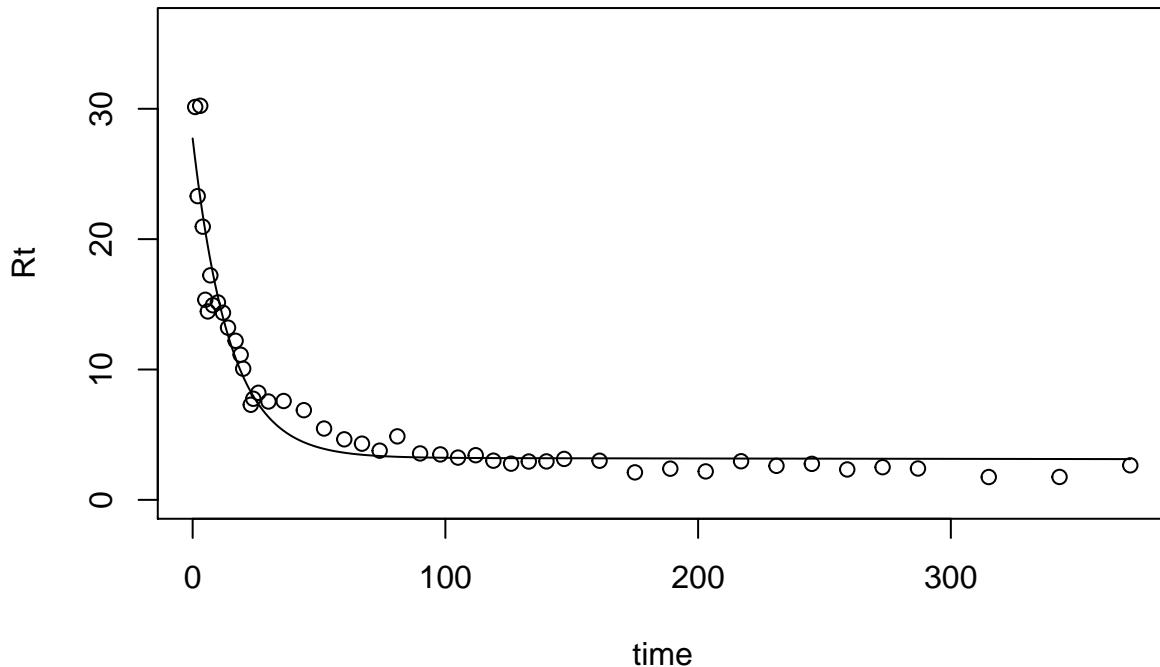
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	4.692799	0.0530584	7.3e-05	0.0093864	NA	NA
Two-pool feedback	8.692799	0.0530590	7.3e-05	0.0173780	0.4592433	4.7e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	6.692799	0.0530584	7.3e-05	0.0116689	0.1953415	NA

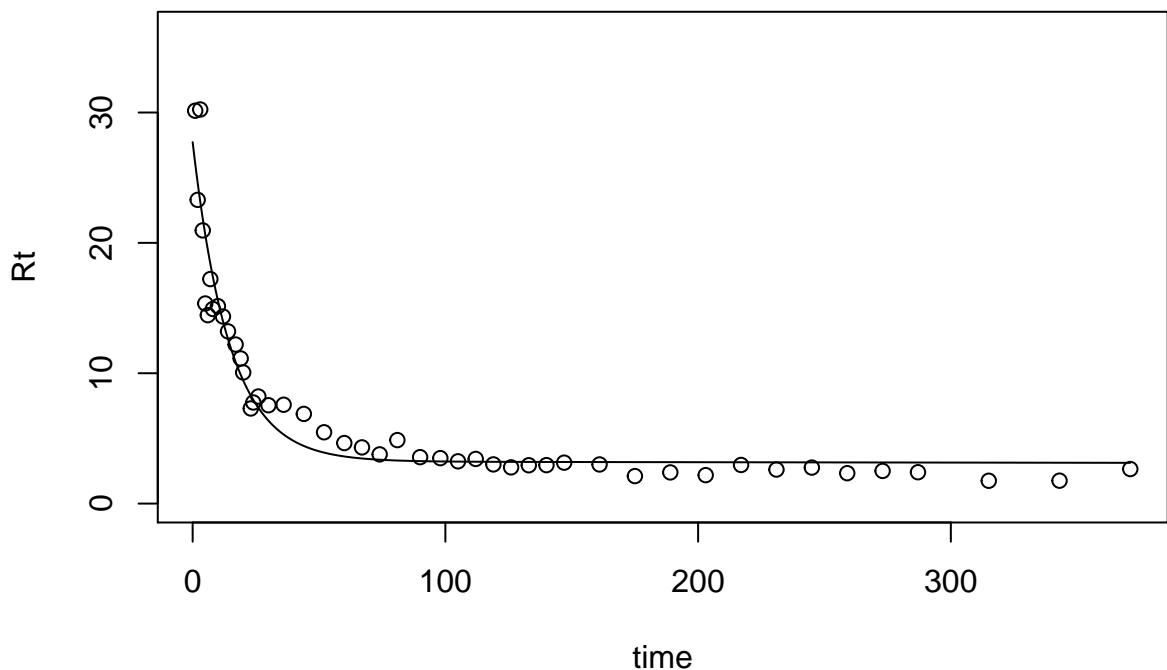
## Variable Site63:

CO2 production rate

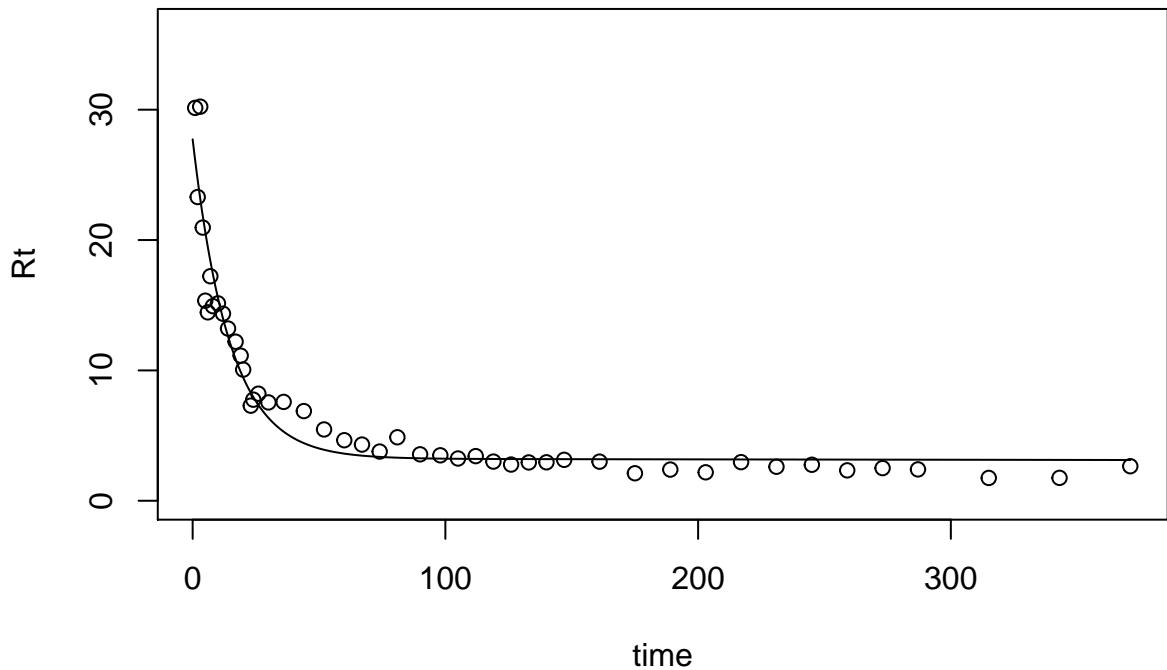
```
## [1] "k1= 0.0685256204277715"
## [2] "k2= 8.9149022680705e-05"
## [3] "proportion of C0 in pool 1= 0.00976678878038623"
```



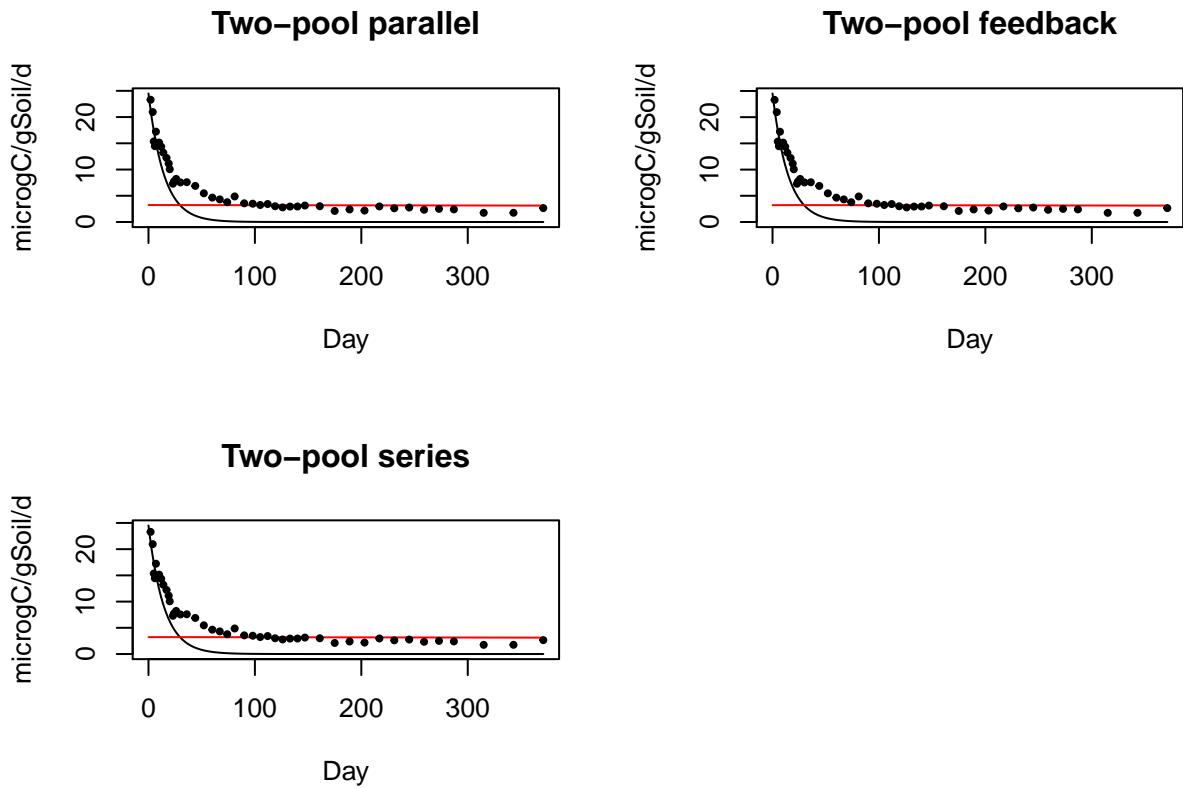
```
## [1] "AIC = 3.49912943464775"
## [1] "k1= 0.0685252199686277"
## [2] "k2= 8.91496337363323e-05"
## [3] "a21= 0.437369621949496"
## [4] "a12= 2.30459743747469e-05"
## [5] "Proportion of C0 in pool 1= 0.0173767951063625"
```



```
## [1] "AIC = 7.49912943949971"
## [1] "k1= 0.068525782071632"
## [2] "k2= 8.91491092624803e-05"
## [3] "a21= 0.348972153913317"
## [4] "Proportion of C0 in pool 1= 0.0150125103172274"
```



```
## [1] "AIC = 5.49912943884039"
```

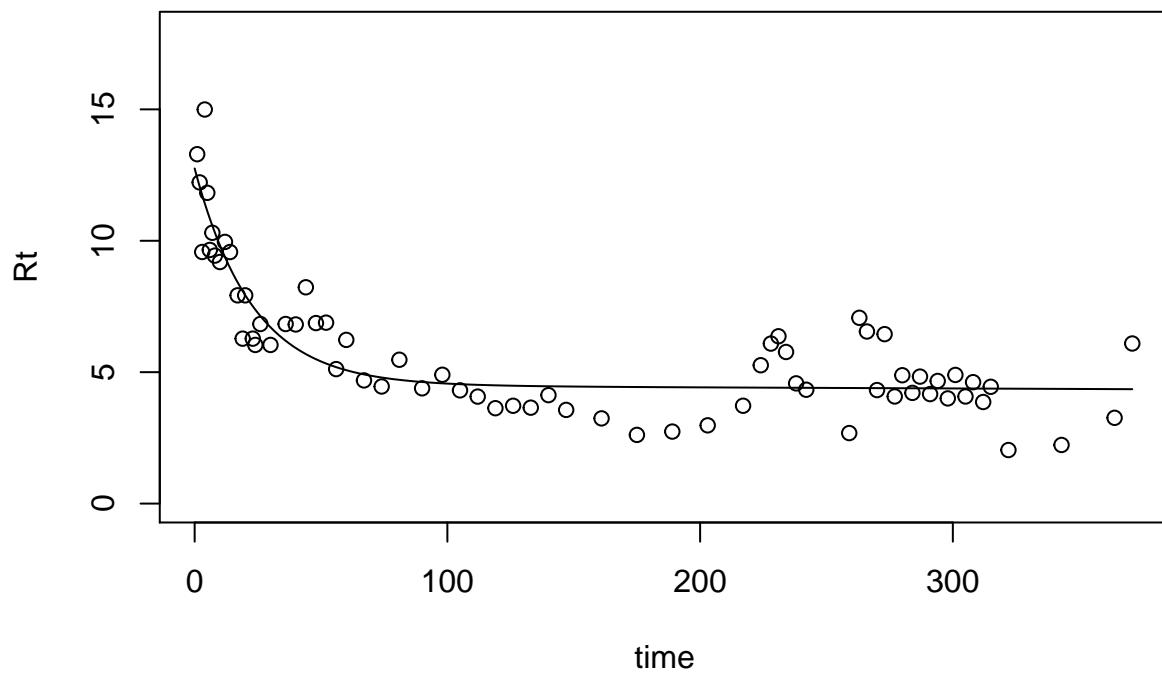


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	3.499129	0.0685256	8.91e-05	0.0097668	NA	NA
Two-pool feedback	7.499129	0.0685252	8.91e-05	0.0173768	0.4373696	2.3e-05
Two-pool series	5.499129	0.0685258	8.91e-05	0.0150125	0.3489722	NA

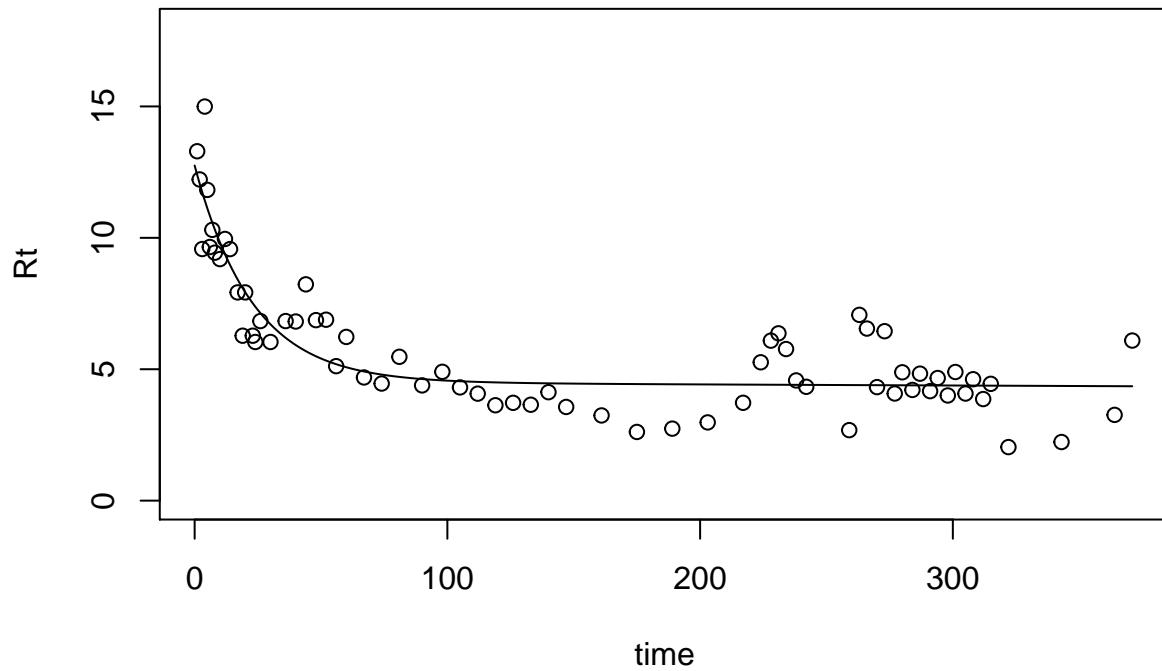
## Variable Site64:

CO2 production rate

```
## [1] "k1= 0.0437468030045223"
## [2] "k2= 9.1310694395831e-05"
## [3] "proportion of C0 in pool 1= 0.00380923210660744"
```

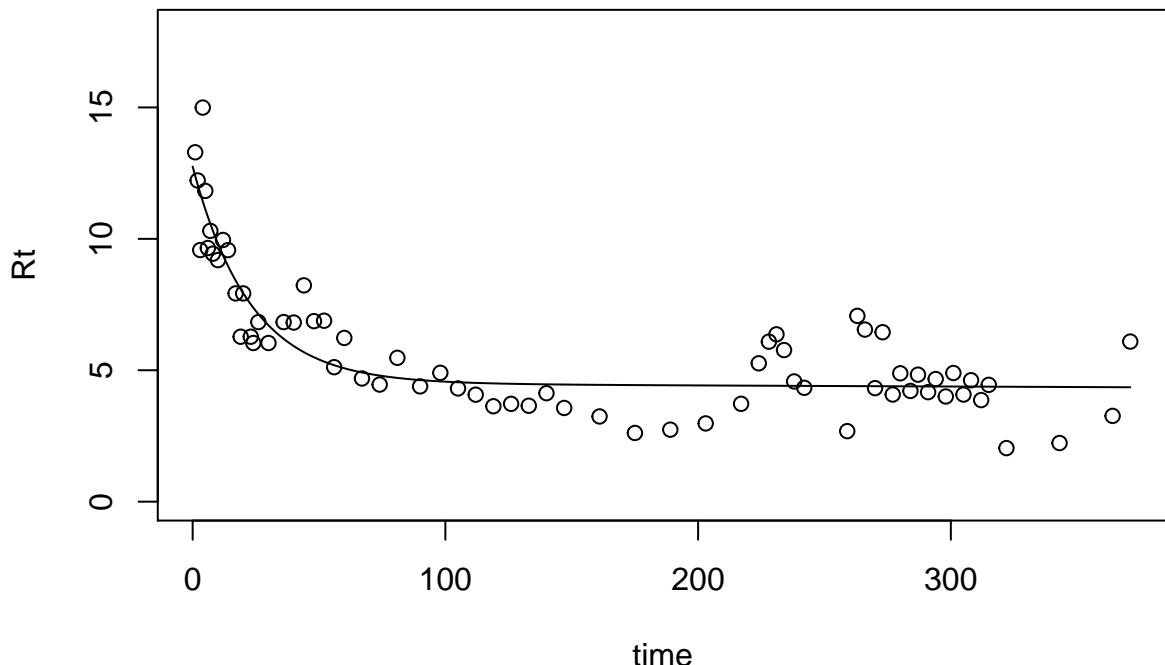


```
## [1] "AIC = 5.23709134537931"
## [1] "k1= 0.04374709097348"
## [2] "k2= 9.13171541526843e-05"
## [3] "a21= 0.568645909199163"
## [4] "a12= 0.000134867191127486"
## [5] "Proportion of C0 in pool 1= 0.00885552423122904"
```

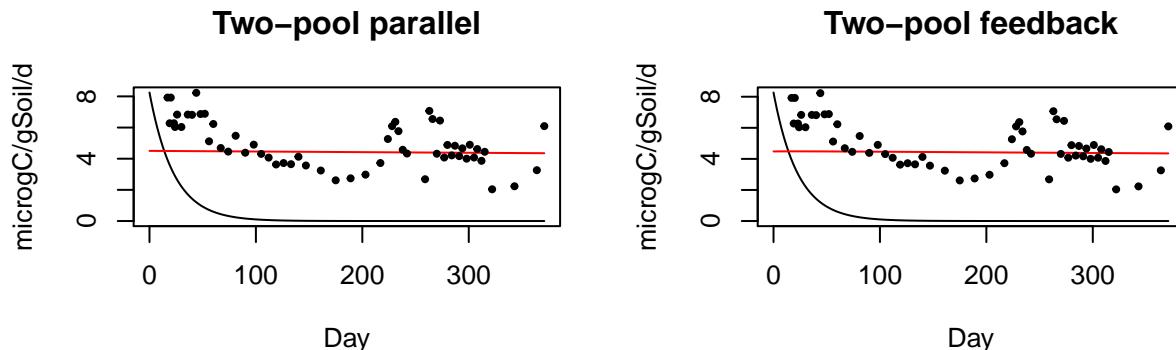


```
## [1] "AIC = 9.23709134441552"
## [1] "k1= 0.0437466312900541"
## [2] "k2= 9.1310655384891e-05"
## [3] "a21= 0.757710881124388"
```

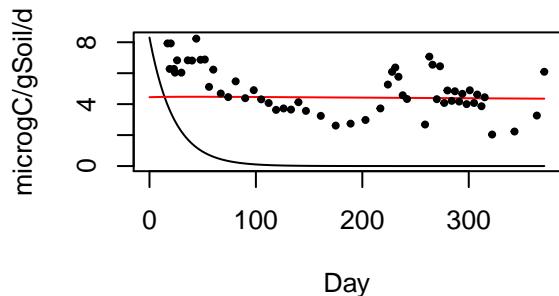
```
## [4] "Proportion of C0 in pool 1= 0.0158254269156345"
```



```
## [1] "AIC = 7.23709134541596"
```



### Two-pool series



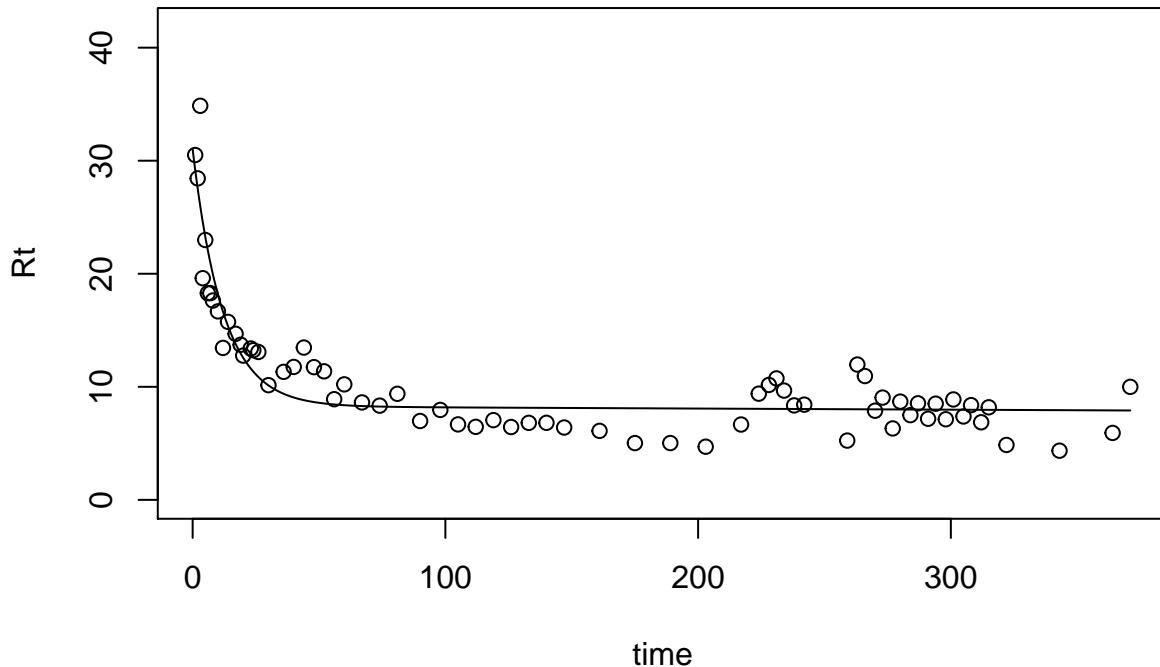
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	5.237091	0.0437468	9.13e-05	0.0038092	NA	NA
Two-pool feedback	9.237091	0.0437471	9.13e-05	0.0088555	0.5686459	0.0001349

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	7.237091	0.0437466	9.13e-05		0.0158254	0.7577109

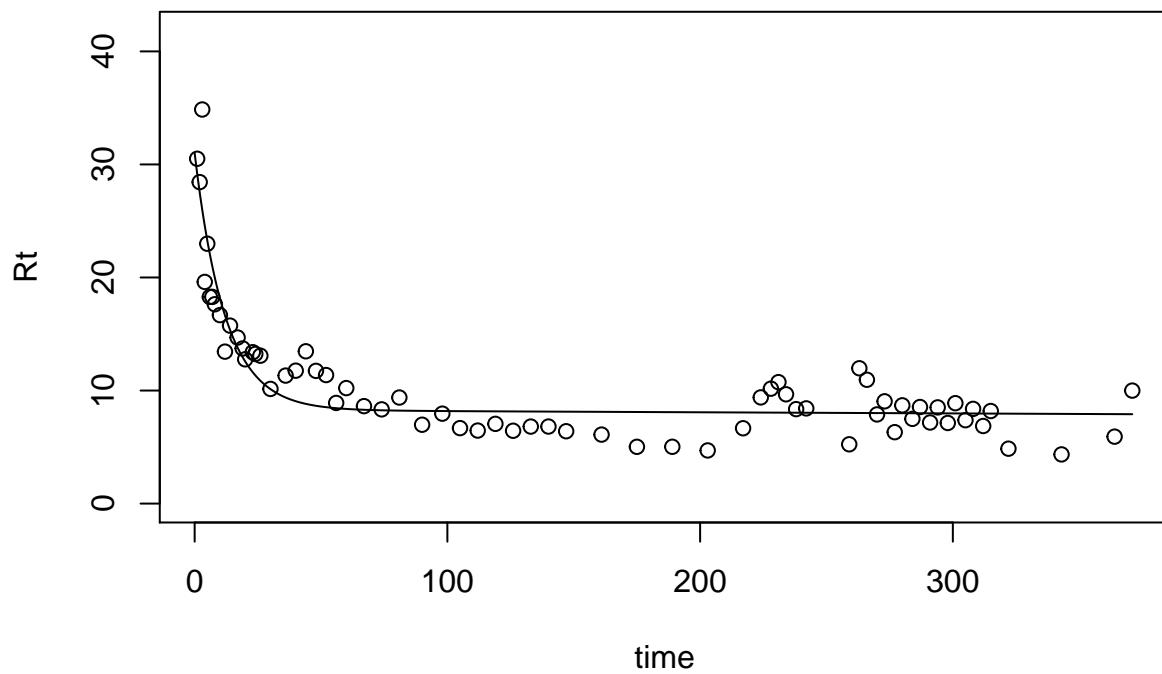
## Variable Site65:

CO2 production rate

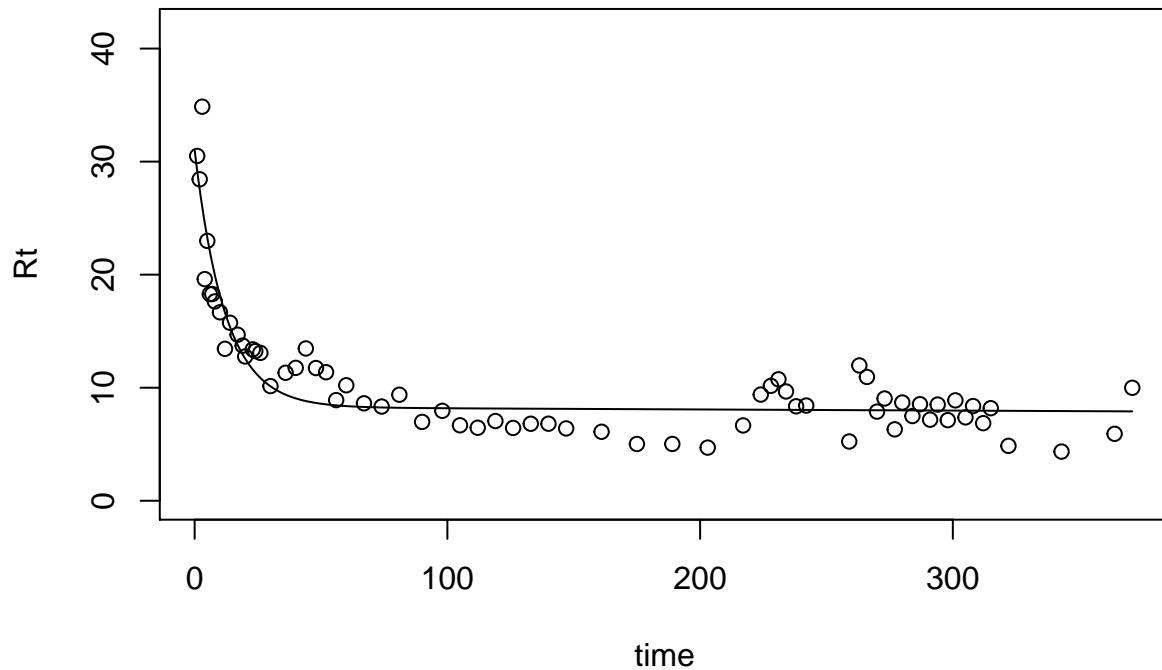
```
## [1] "k1= 0.0831324262571504"
## [2] "k2= 0.000124260254133219"
## [3] "proportion of C0 in pool 1= 0.00408706062075265"
```



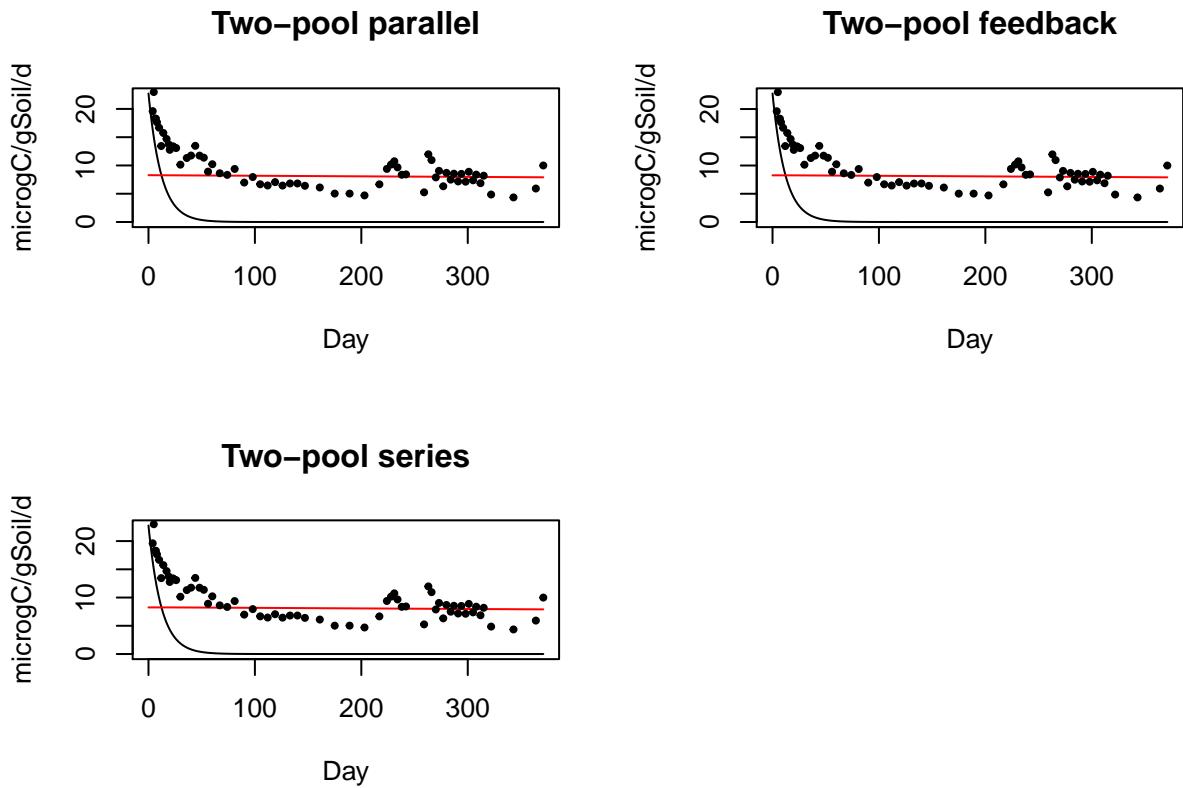
```
## [1] "AIC = 2.71651340568277"
## [1] "k1= 0.0831352585719432"
## [2] "k2= 0.000124261200479381"
## [3] "a21= 0.381310024579324"
## [4] "a12= 9.61231579771349e-06"
## [5] "Proportion of C0 in pool 1= 0.00661191845823439"
```



```
## [1] "AIC = 6.71651340949495"
## [1] "k1= 0.0831361663906503"
## [2] "k2= 0.000124260900567299"
## [3] "a21= 0.451307888708503"
## [4] "Proportion of C0 in pool 1= 0.00745766904402018"
```



```
## [1] "AIC = 4.71651341056267"
```

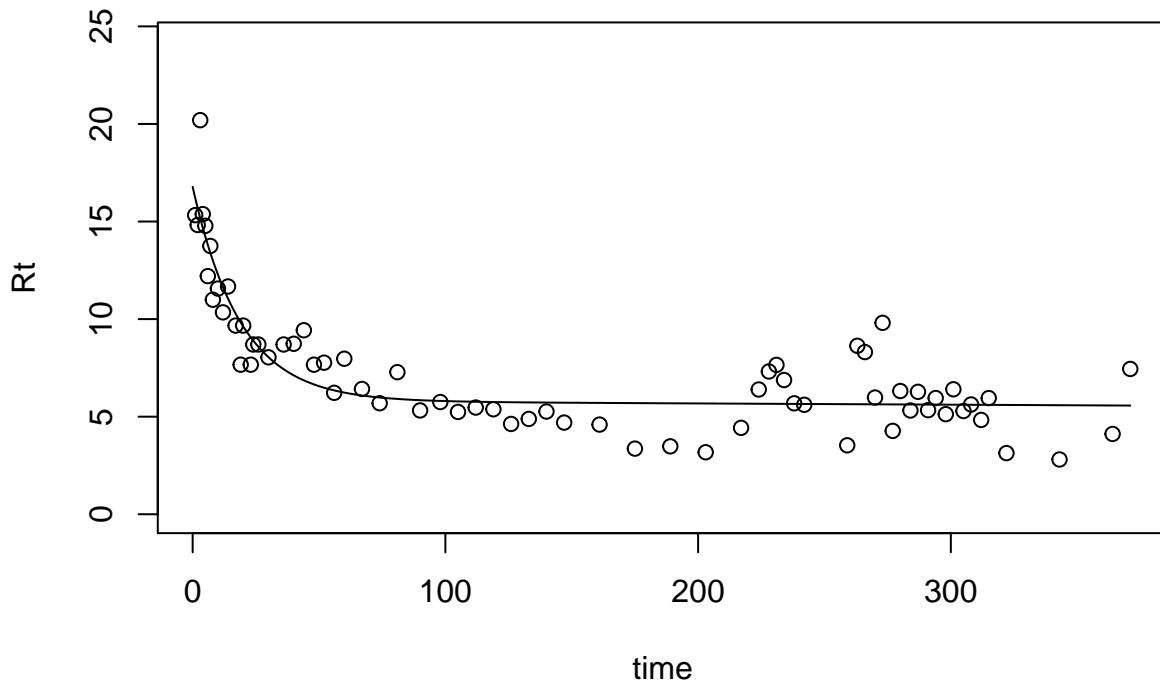


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	2.716513	0.0831324	0.0001243	0.0040871	NA	NA
Two-pool feedback	6.716513	0.0831353	0.0001243	0.0066119	0.3813100	9.6e-06
Two-pool series	4.716513	0.0831362	0.0001243	0.0074577	0.4513079	NA

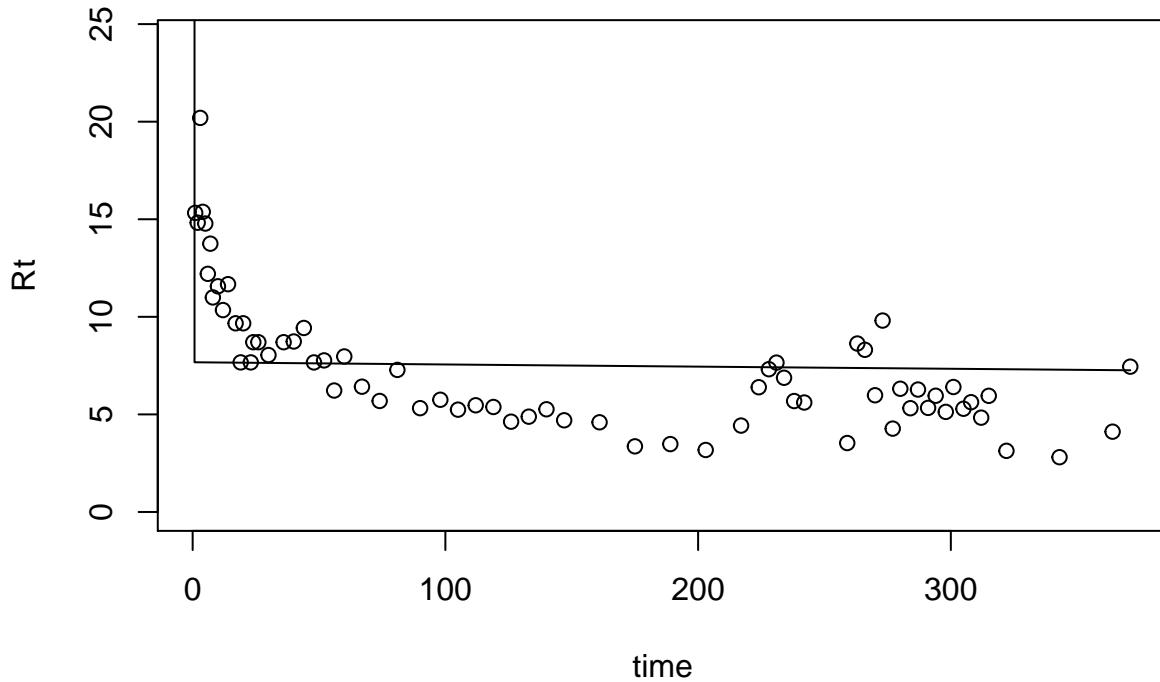
## Variable Site66:

CO2 production rate

```
## [1] "k1= 0.0526320195247329"
## [2] "k2= 0.000112554427985552"
## [3] "proportion of C0 in pool 1= 0.00402377539559651"
```

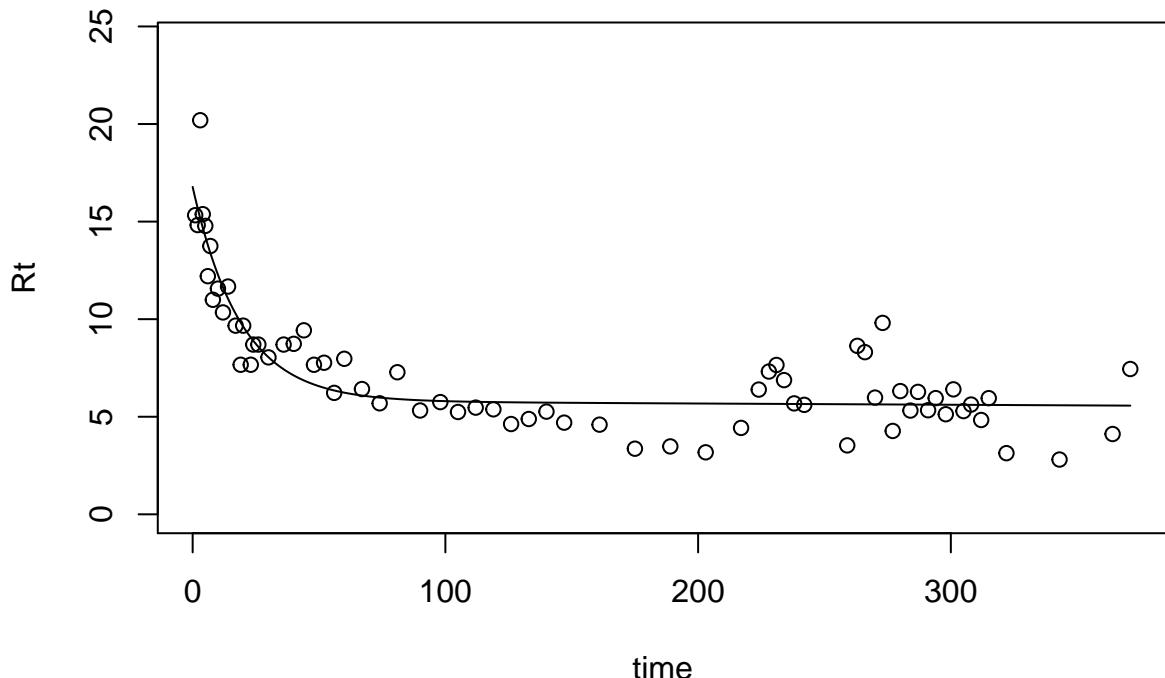


```
## [1] "AIC = 4.35767242075541"
## [1] "k1= 1117605.33132527"
## [2] "k2= 0.000148091890030701"
## [3] "a21= 0.999718159892231"
## [4] "a12= 3.0505038445261e-07"
## [5] "Proportion of C0 in pool 1= 0.000284928981119259"
```

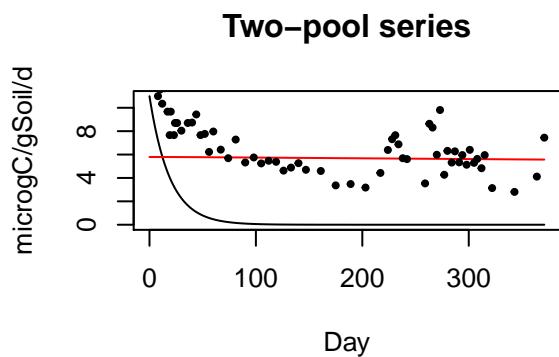
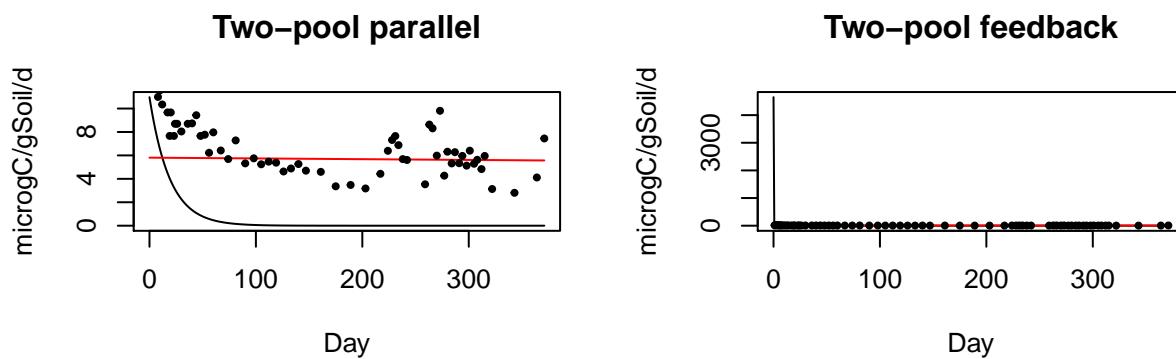


```
## [1] "AIC = 5.22797261182058"
## [1] "k1= 0.0526324746930895"
## [2] "k2= 0.000112554529043645"
## [3] "a21= 0.440301268505921"
```

```
## [4] "Proportion of C0 in pool 1= 0.00720119689088911"
```



```
## [1] "AIC = 6.35767242010432"
```



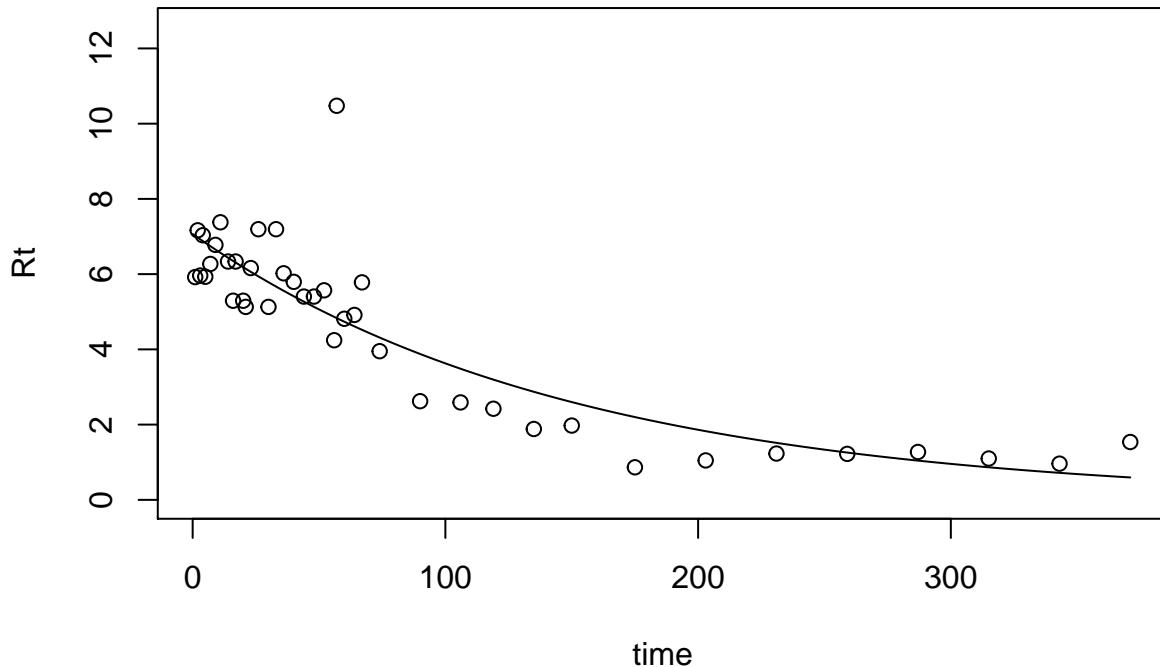
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	4.357672	5.263200e-02	0.0001126	0.0040238	NA	NA
Two-pool feedback	5.227973	1.117605e+06	0.0001481	0.0002849	0.9997182	3e-07

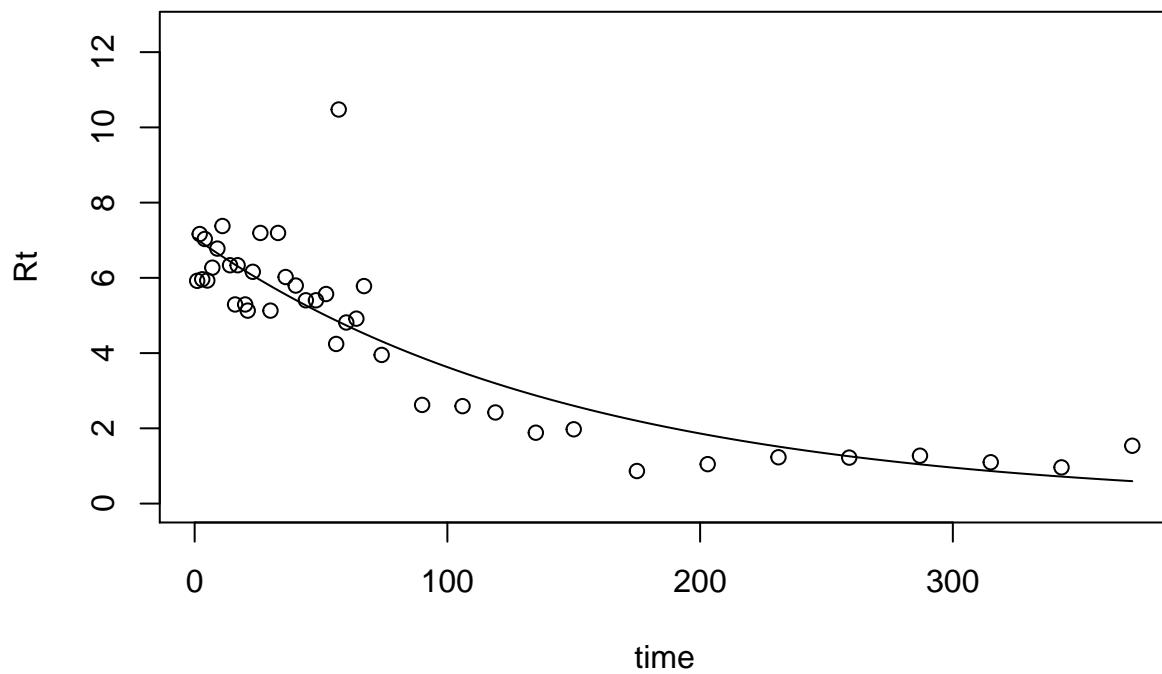
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	6.357672	5.263250e-02	0.0001126	0.0072012	0.4403013	NA

## Variable Site67:

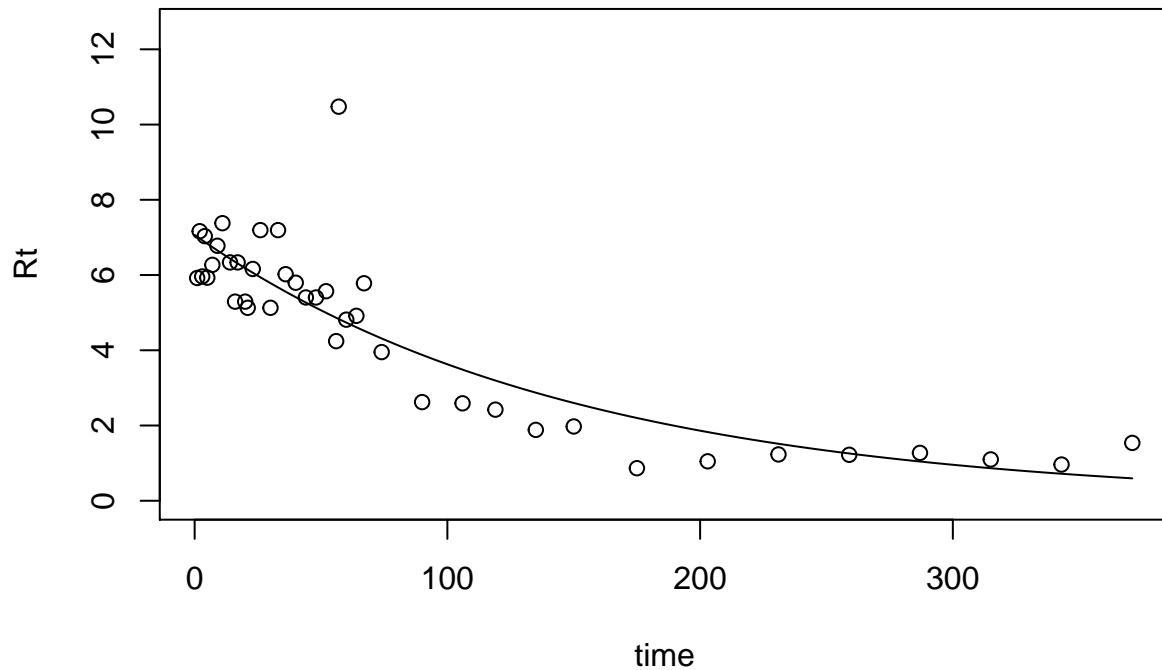
CO2 production rate

```
## [1] "k1= 0.00666650194815083"
## [2] "k2= 3.65326762214709e-19"
## [3] "proportion of C0 in pool 1= 0.0157014323100678"
```

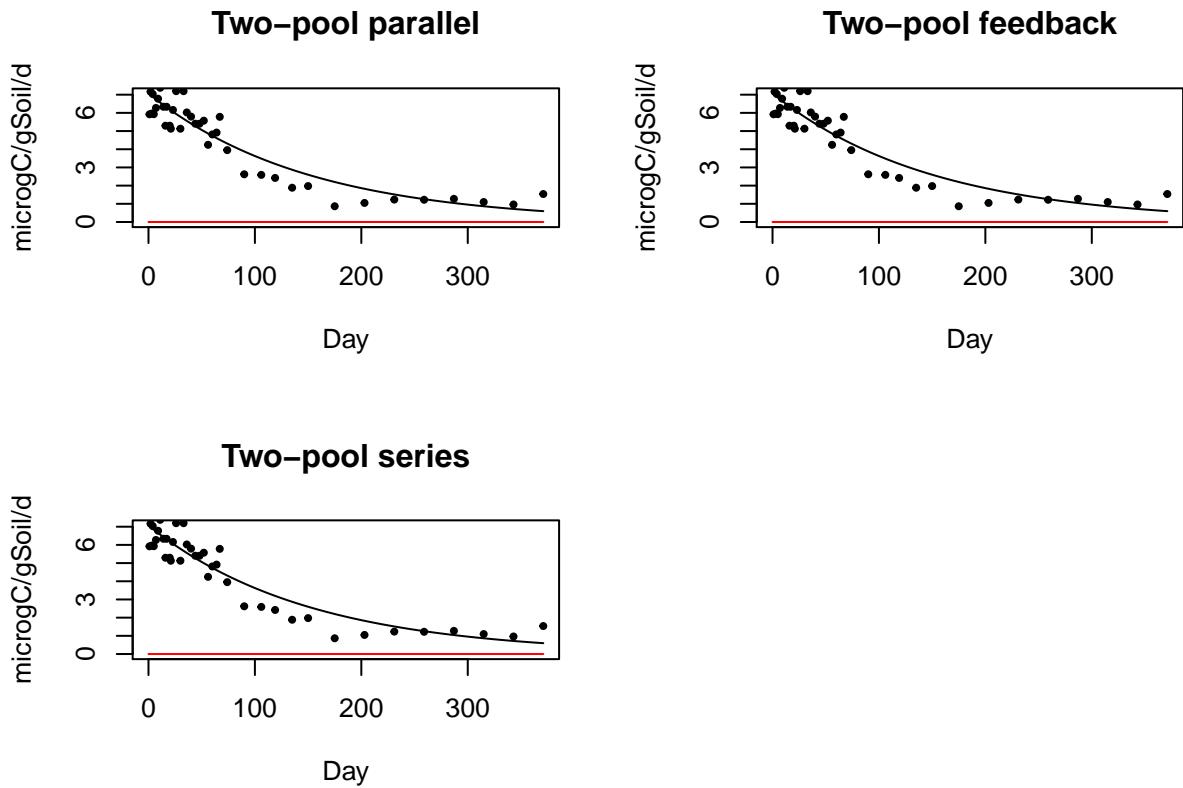




```
## [1] "AIC = 9.4529816673791"
## [1] "k1= 0.00666651600742618"
## [2] "k2= 1.32843738650578e-10"
## [3] "a21= 0.98243215897851"
## [4] "Proportion of C0 in pool 1= 0.893756912582178"
```



```
## [1] "AIC = 7.45298167598494"
```



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	5.452982	0.0066665	0	0.0157014	NA	NA
Two-pool feedback	9.452982	0.0066665	0	0.0161271	0.0264018	0.0001336
Two-pool series	7.452982	0.0066665	0	0.8937569	0.9824322	NA

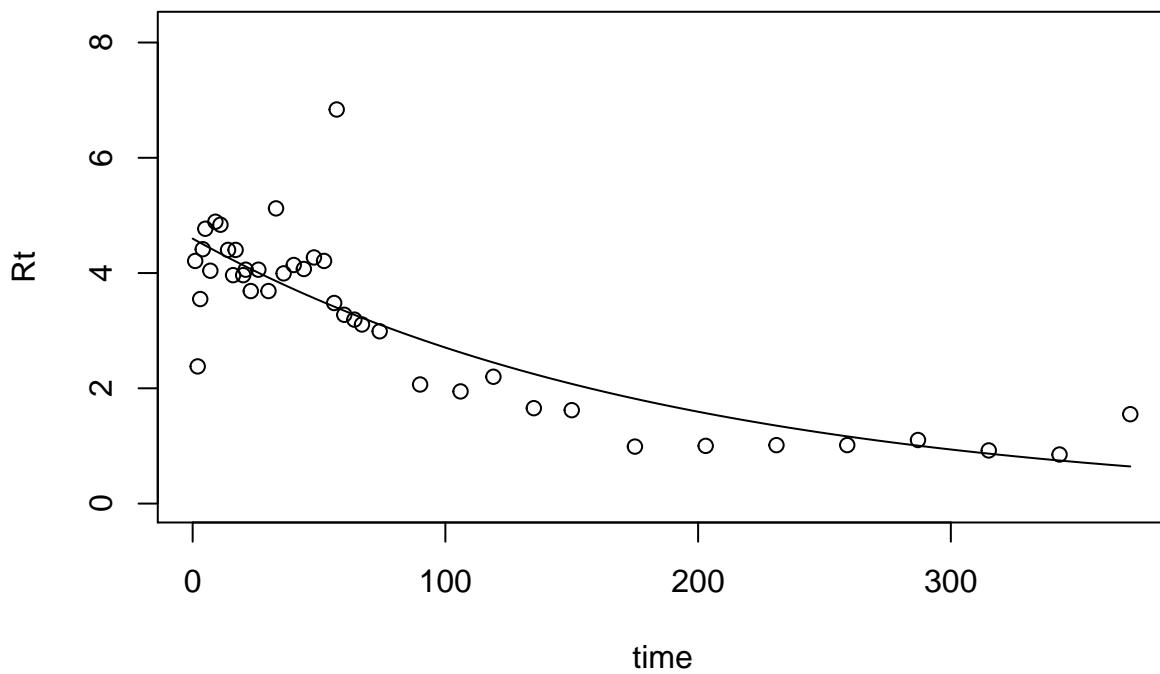
### Variable Site68:

CO2 production rate

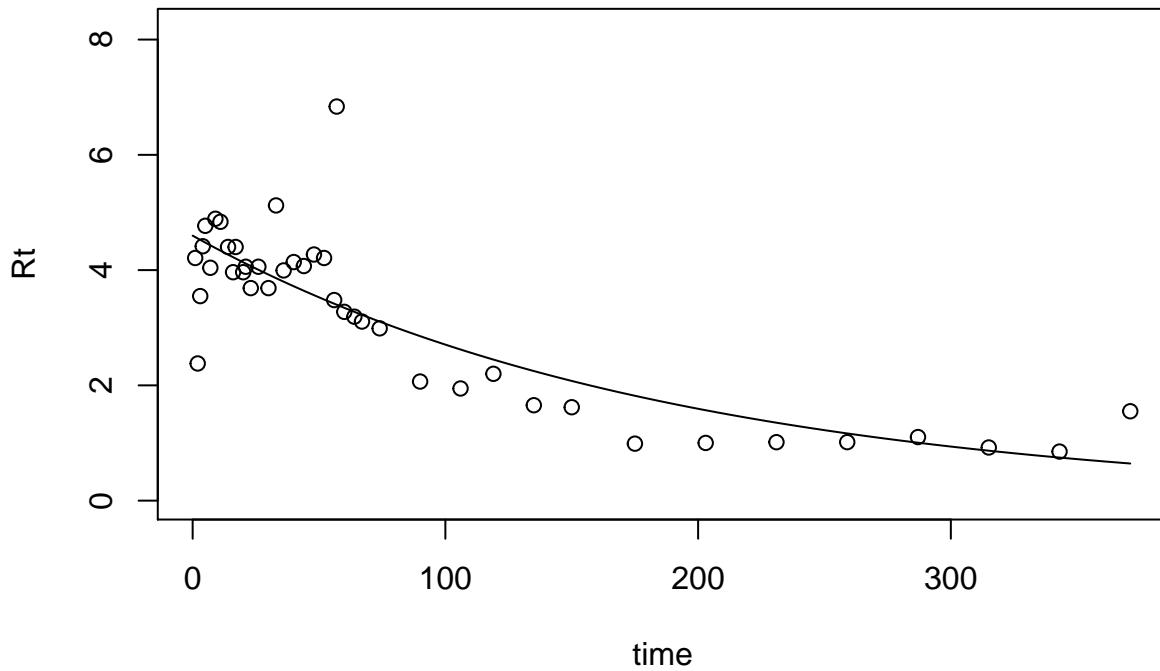
### Variable Site69:

CO2 production rate

```
## [1] "k1= 0.00529770538984298"
## [2] "k2= 1.68601506818775e-18"
## [3] "proportion of C0 in pool 1= 0.0133517037273589"
```

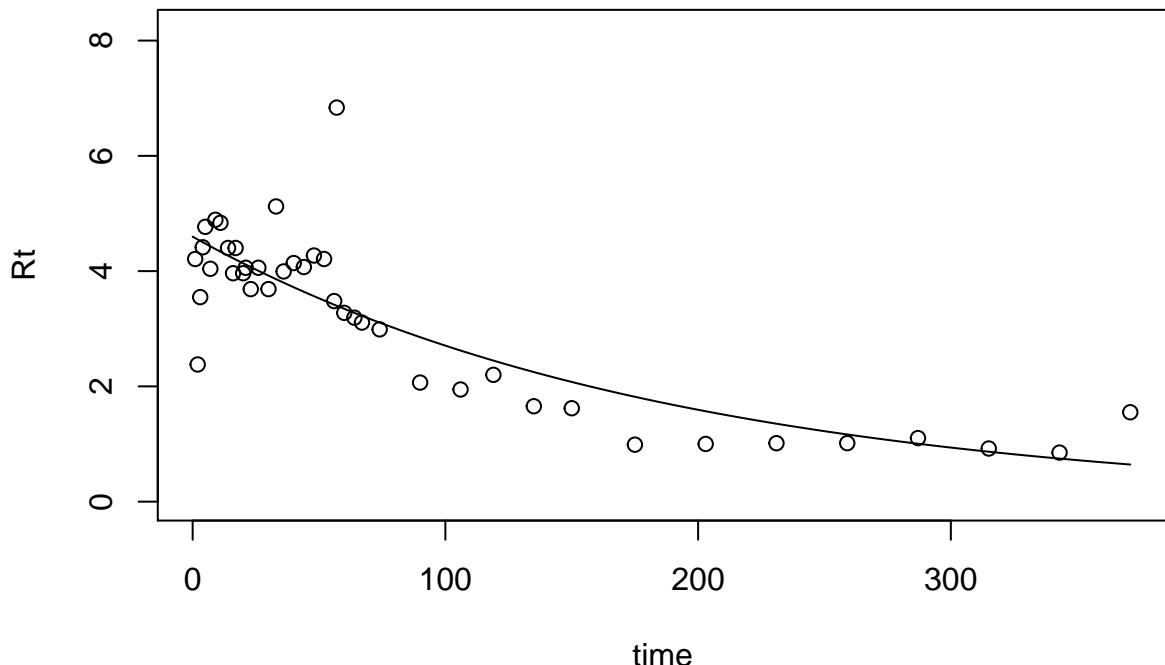


```
## [1] "AIC = 6.95208263850479"
## [1] "k1= 0.0052977116701871"
## [2] "k2= 3.14650021679164e-12"
## [3] "a21= 0.00758241257204545"
## [4] "a12= 6.28745551462528e-05"
## [5] "Proportion of C0 in pool 1= 0.0134536378577574"
```

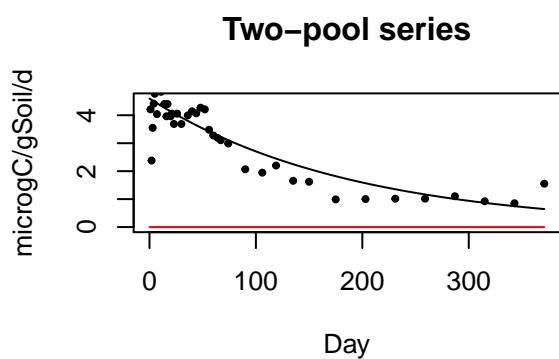
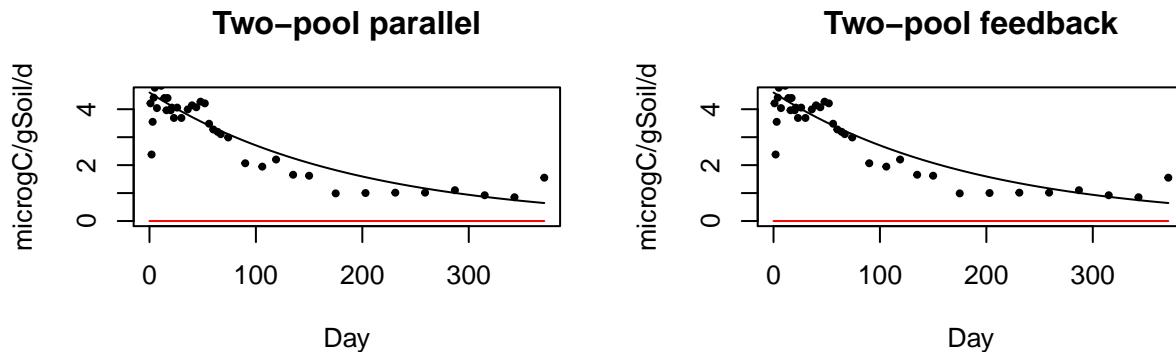


```
## [1] "AIC = 10.9520826360921"
## [1] "k1= 0.00529774511649425"
## [2] "k2= 2.57256121531693e-10"
## [3] "a21= 0.0359363253775836"
```

```
## [4] "Proportion of C0 in pool 1= 0.013849249019649"
```



```
## [1] "AIC = 8.95208251104242"
```



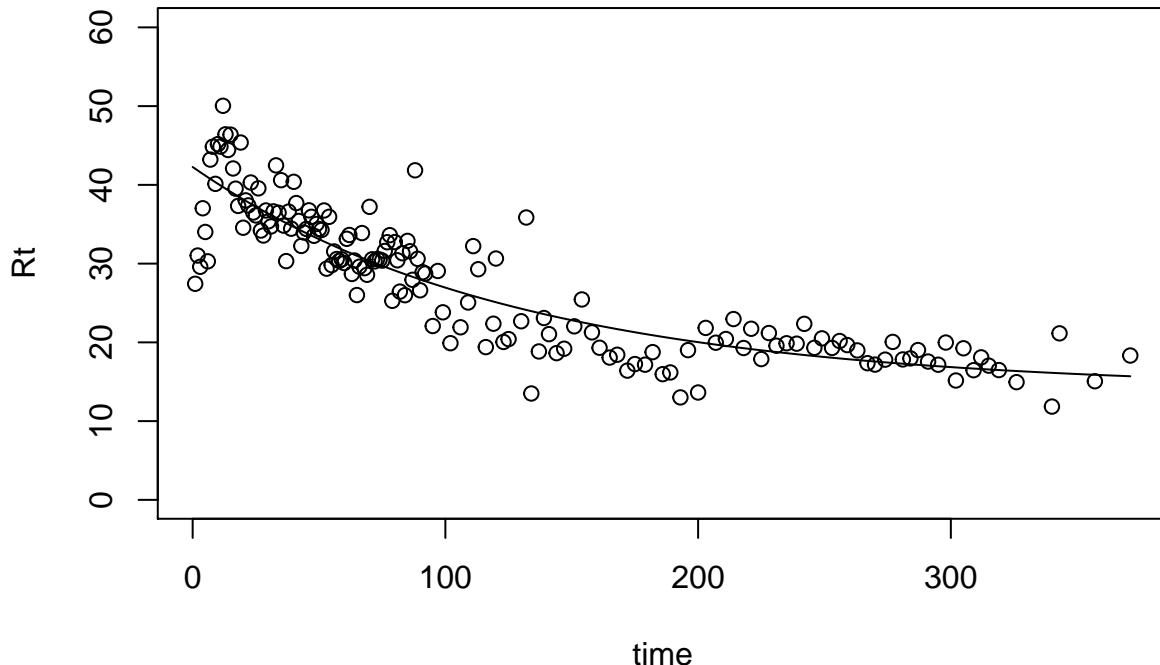
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	6.952083	0.0052977	0	0.0133517	NA	NA
Two-pool feedback	10.952083	0.0052977	0	0.0134536	0.0075824	6.29e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	8.952082	0.0052977	0	0.0138492	0.0359363	NA

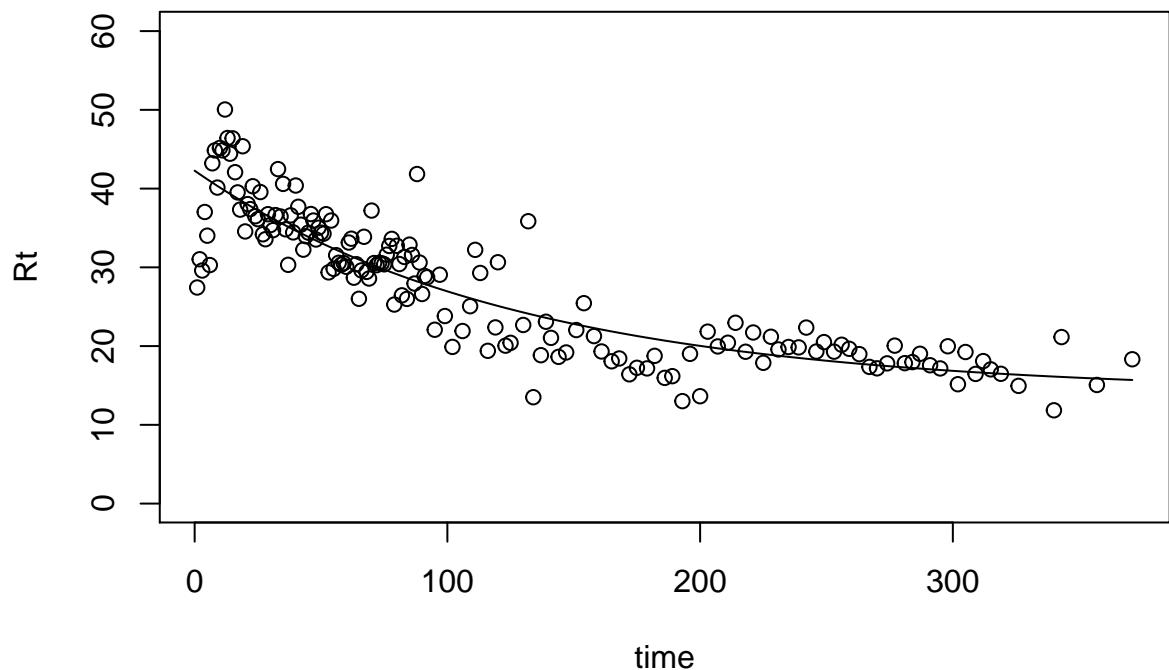
## Variable Site70:

CO2 production rate

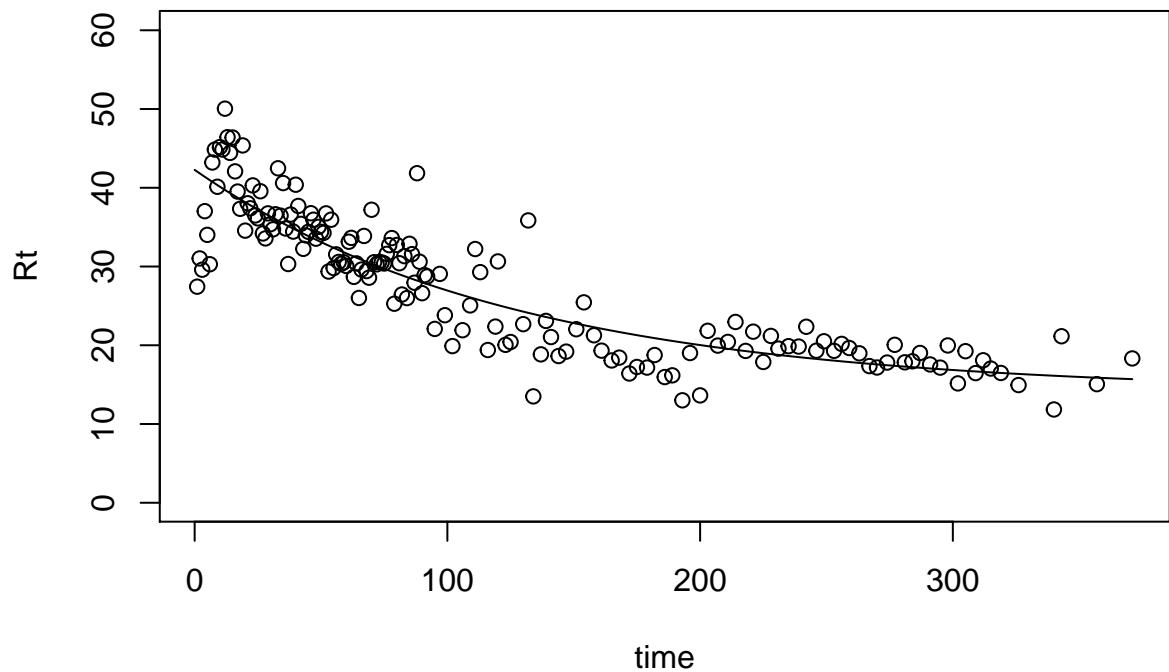
```
## [1] "k1= 0.00804416722335576"
## [2] "k2= 8.84781885633224e-05"
## [3] "proportion of C0 in pool 1= 0.0200423566770878"
```



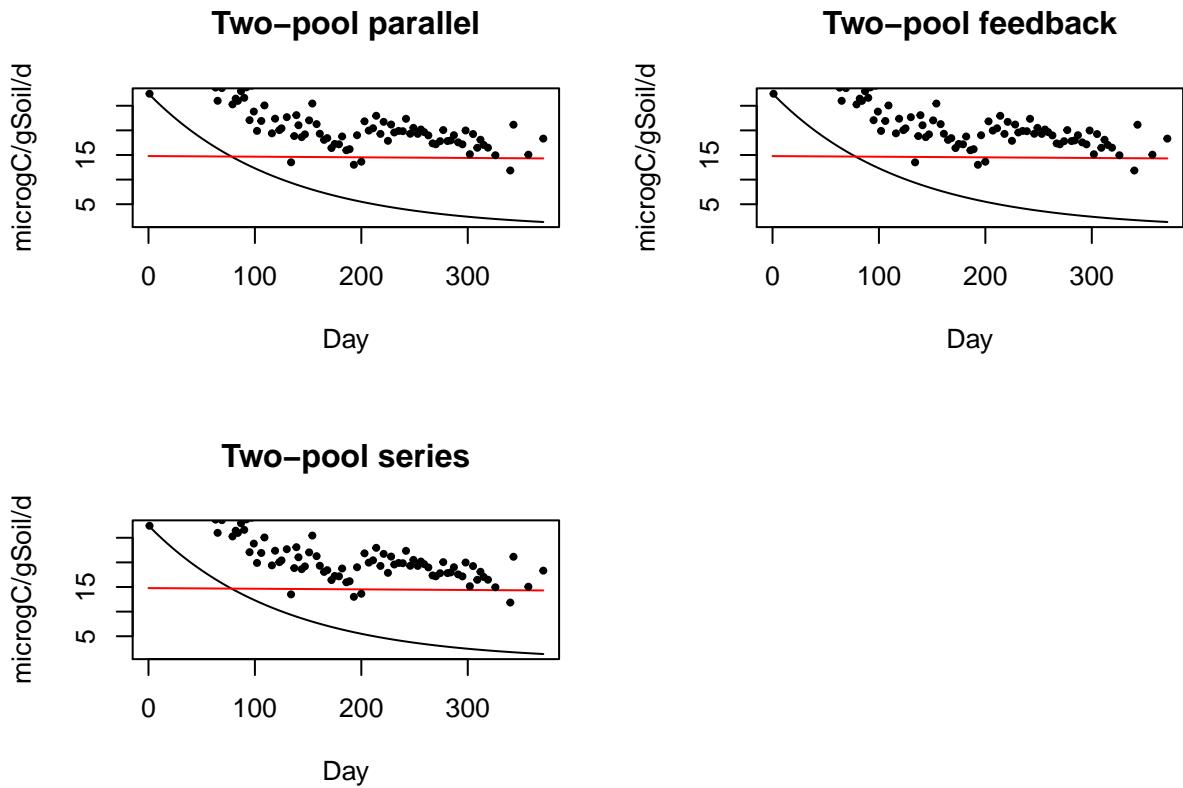
```
## [1] "AIC = 0.432393657072427"
## [1] "k1= 0.00804427365274878"
## [2] "k2= 8.84790243496103e-05"
## [3] "a21= 0.0191516933553496"
## [4] "a12= 4.25986521866983e-05"
## [5] "Proportion of C0 in pool 1= 0.0204382627715881"
```



```
## [1] "AIC = 4.43239365707466"
## [1] "k1= 0.00804434207070625"
## [2] "k2= 8.84794441342589e-05"
## [3] "a21= 0.0150546901069041"
## [4] "Proportion of C0 in pool 1= 0.0203515964934526"
```



```
## [1] "AIC = 2.43239365688803"
```



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	0.4323937	0.0080442	8.85e-05	0.0200424	NA	NA
Two-pool feedback	4.4323937	0.0080443	8.85e-05	0.0204383	0.0191517	4.26e-05
Two-pool series	2.4323937	0.0080443	8.85e-05	0.0203516	0.0150547	NA

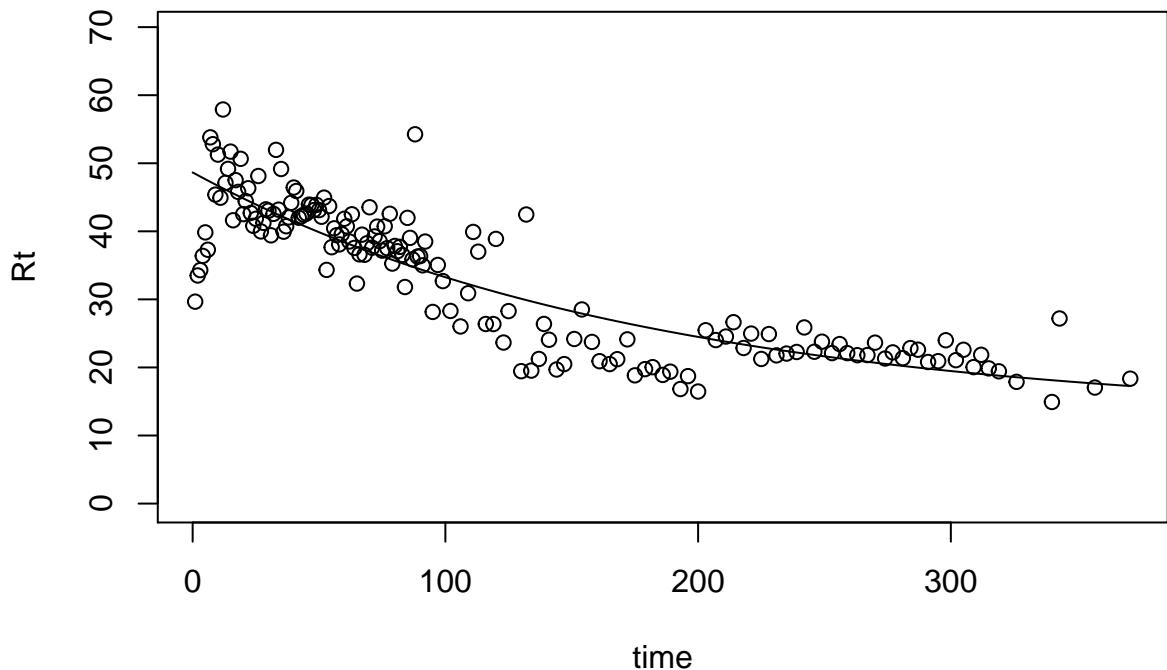
### Variable Site71:

CO2 production rate

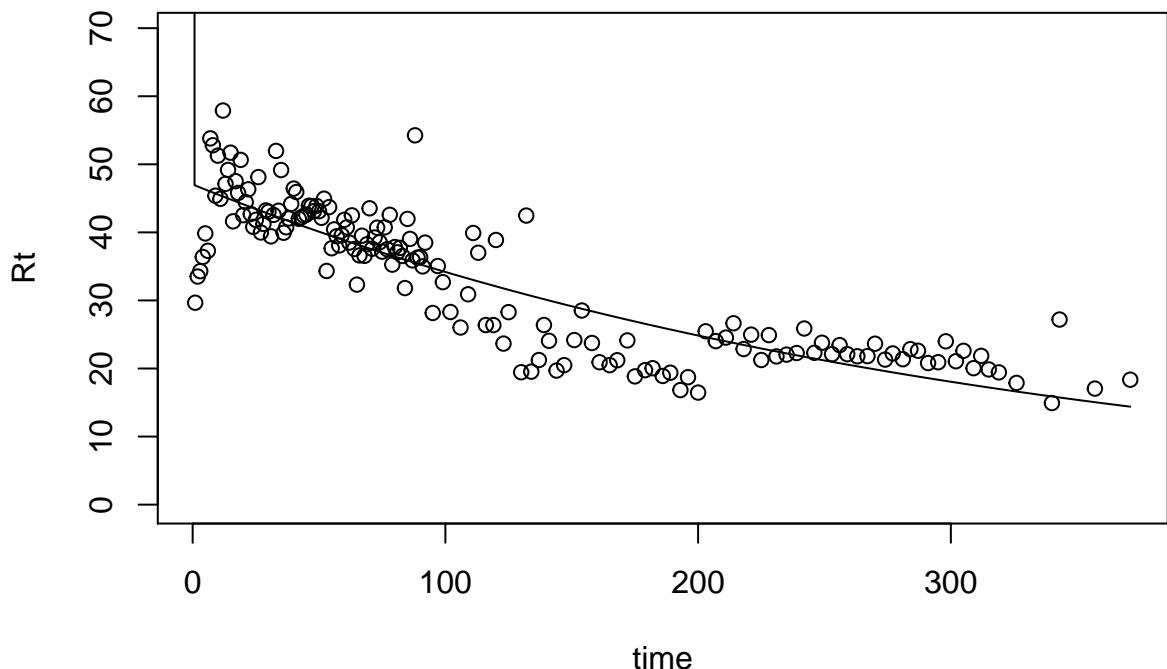
### Variable Site72:

CO2 production rate

```
## [1] "k1= 0.00568106641441122"
## [2] "k2= 7.9537722266347e-05"
## [3] "proportion of C0 in pool 1= 0.0356298893361925"
```

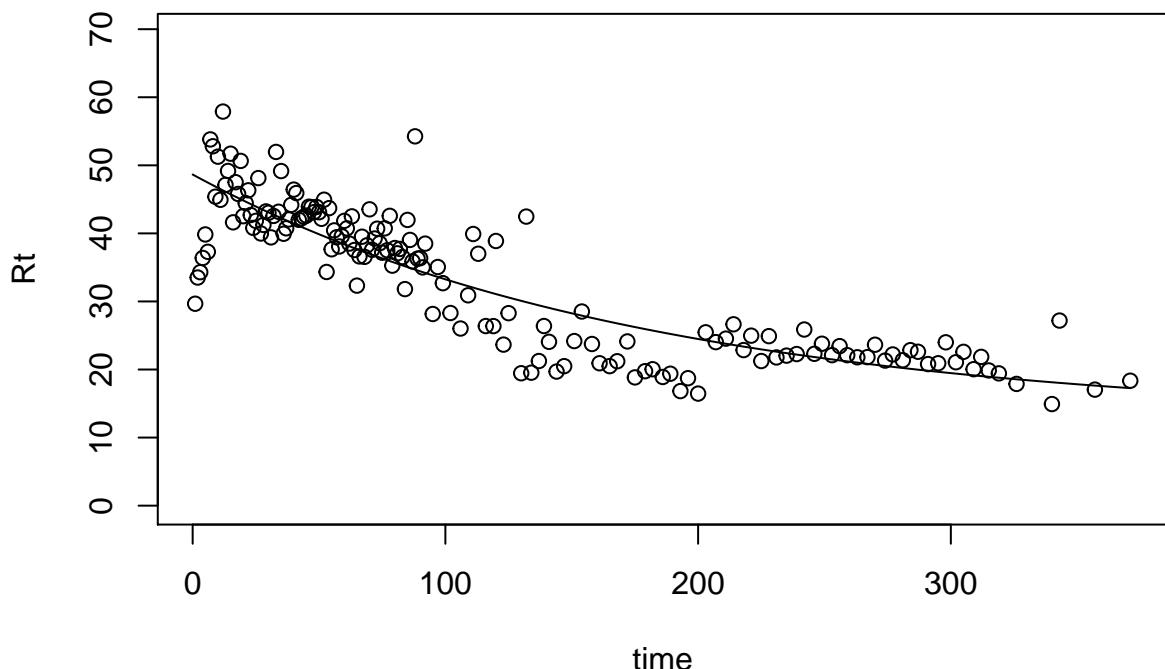


```
## [1] "AIC = -0.471927730009836"
## [1] "k1= 5694.26697929835"
## [2] "k2= 0.00319194649841303"
## [3] "a21= 0.000867783340367356"
## [4] "a12= 1.47523118620985e-06"
## [5] "Proportion of C0 in pool 1= 0.916245006444948"
```

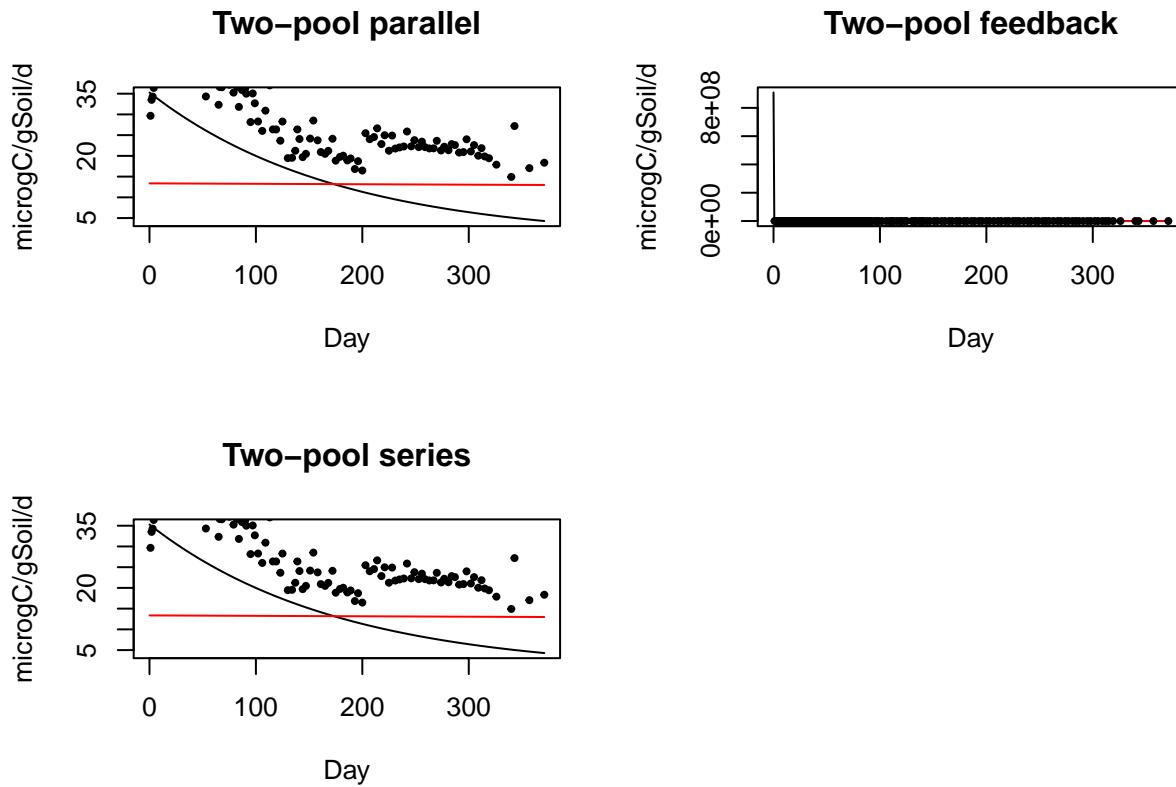


```
## [1] "AIC = 3.44724332349194"
## [1] "k1= 0.00568120435686495"
## [2] "k2= 7.95400453792003e-05"
## [3] "a21= 0.00791258887529861"
```

```
## [4] "Proportion of C0 in pool 1= 0.0359168360579887"
```



```
## [1] "AIC = 1.52807226921735"
```



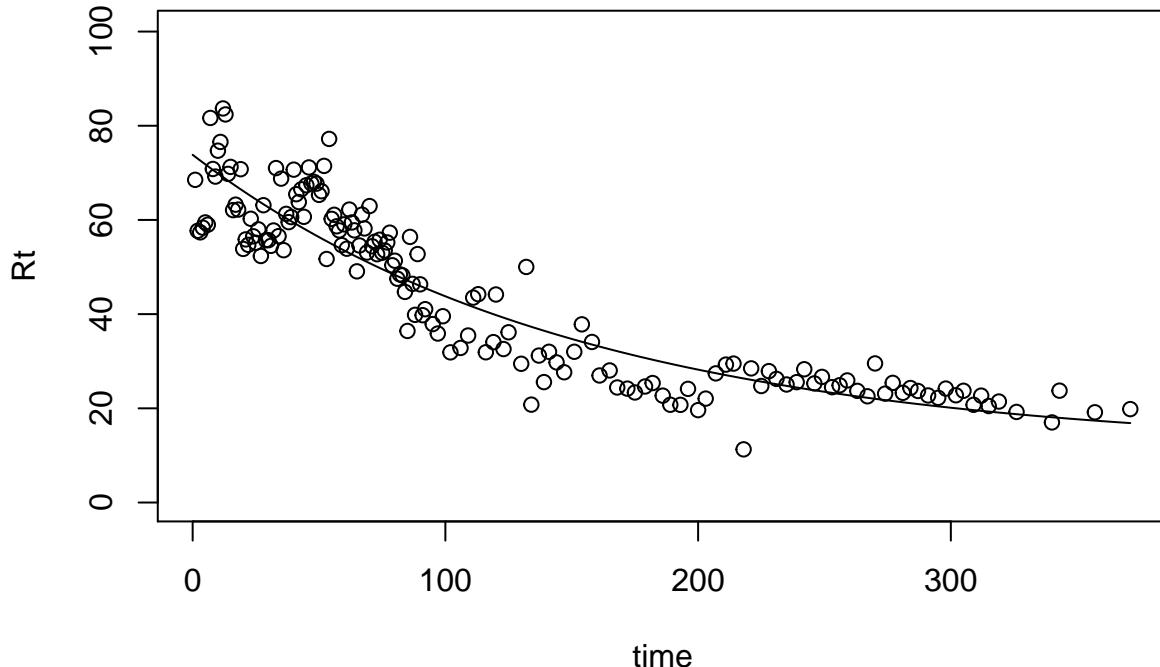
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-0.4719277	0.0056811	0.0000795	0.0356299	NA	NA
Two-pool feedback	3.4472433	5694.2669793	0.0031919	0.9162450	0.0008678	1.5e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	1.5280723	0.0056812	0.0000795	0.0359168	0.0079126	NA

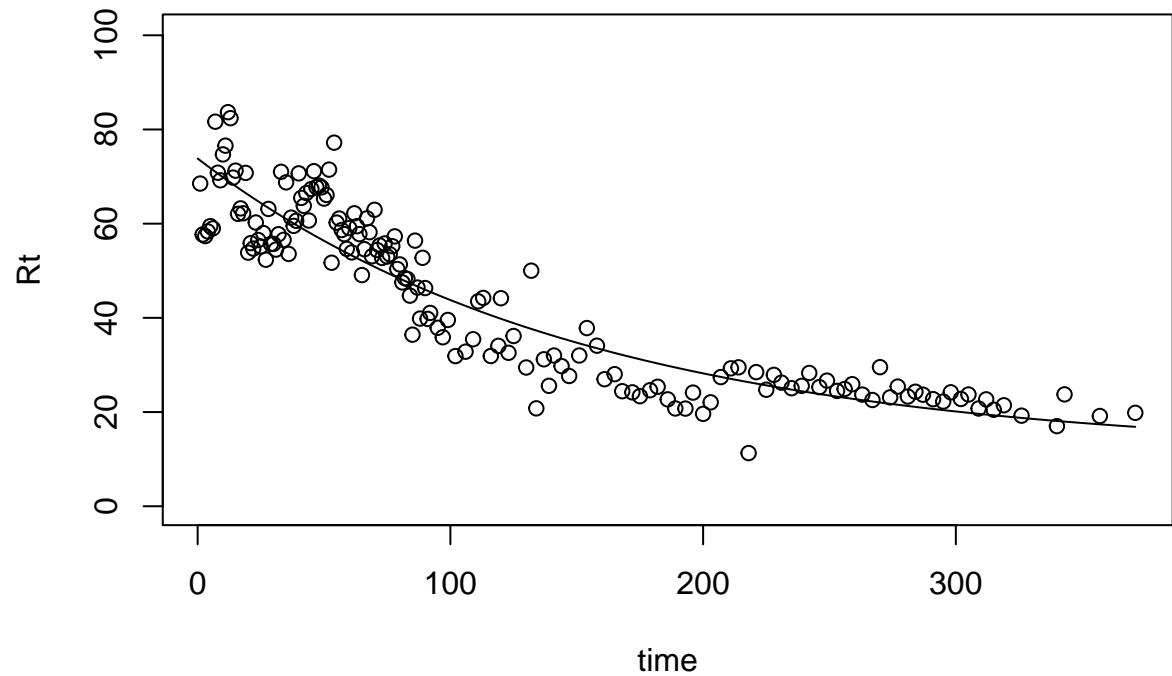
## Variable Site73:

CO2 production rate

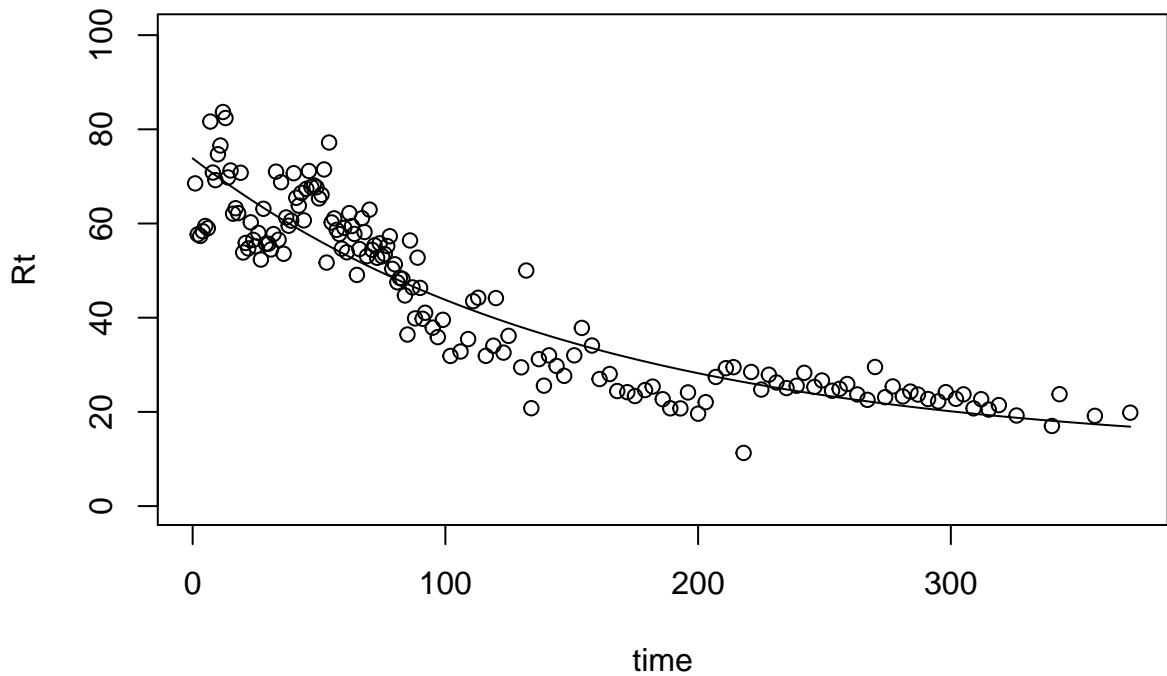
```
## [1] "k1= 0.00659812133104911"
## [2] "k2= 6.9492159674646e-05"
## [3] "proportion of C0 in pool 1= 0.0524630397885043"
```



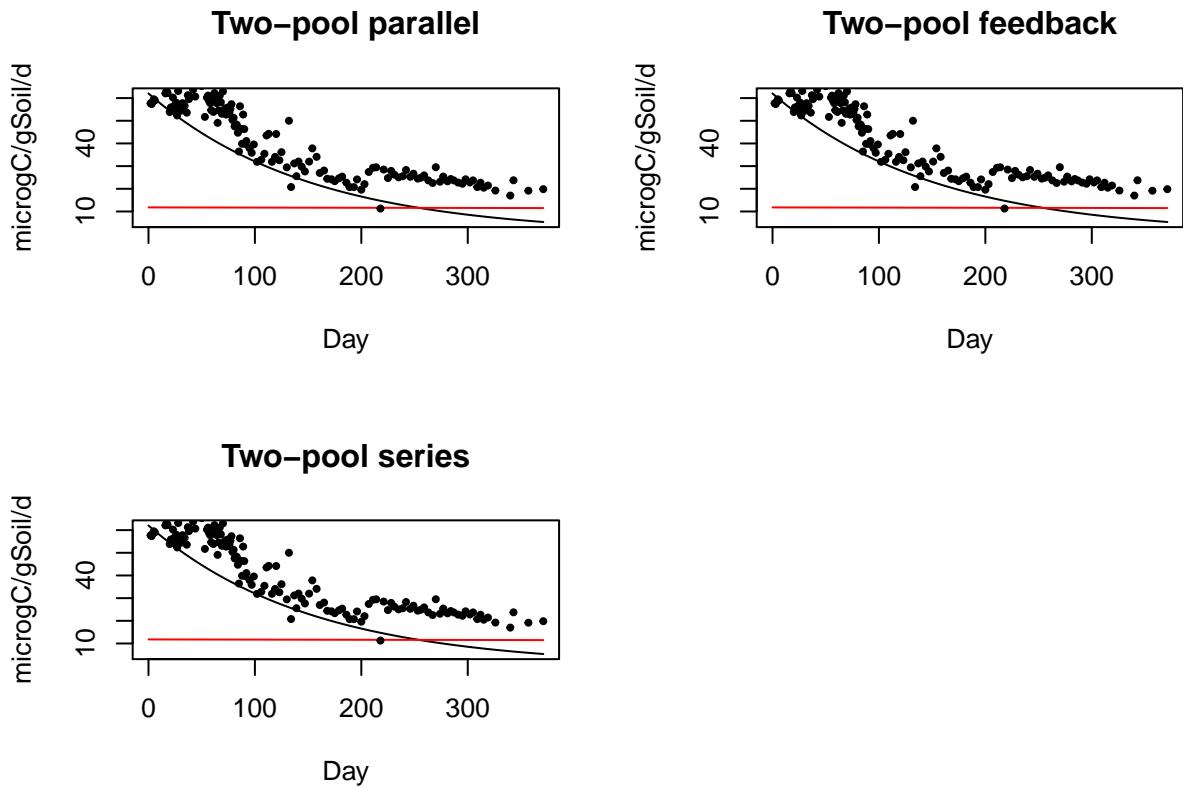
```
## [1] "AIC = -1.81346924581126"
## [1] "k1= 0.00659835171810946"
## [2] "k2= 6.94974034268352e-05"
## [3] "a21= 0.00921311329880914"
## [4] "a12= 4.80553230206571e-05"
## [5] "Proportion of C0 in pool 1= 0.0529541301162312"
```



```
## [1] "AIC = 2.18653075416332"
## [1] "k1= 0.00659848188504513"
## [2] "k2= 6.95003225667261e-05"
## [3] "a21= 0.000724957643727597"
## [4] "Proportion of C0 in pool 1= 0.0524973312273407"
```



```
## [1] "AIC = 0.186530749069753"
```

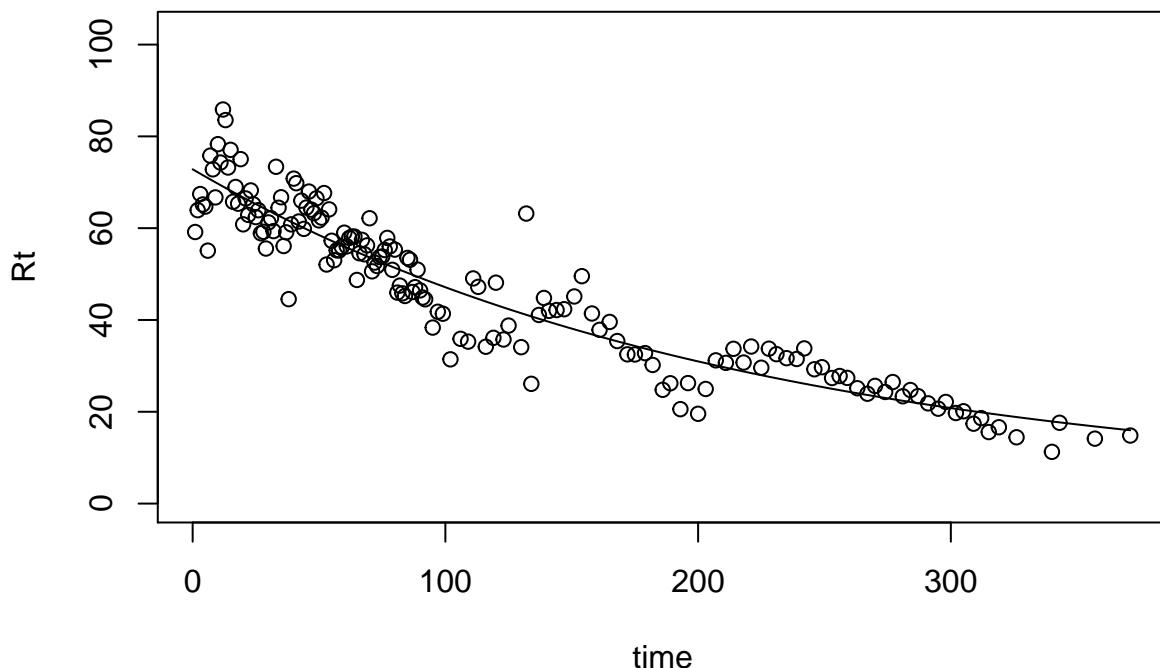


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-1.8134692	0.0065981	6.95e-05	0.0524630	NA	NA
Two-pool feedback	2.1865308	0.0065984	6.95e-05	0.0529541	0.0092131	4.81e-05
Two-pool series	0.1865307	0.0065985	6.95e-05	0.0524973	0.0007250	NA

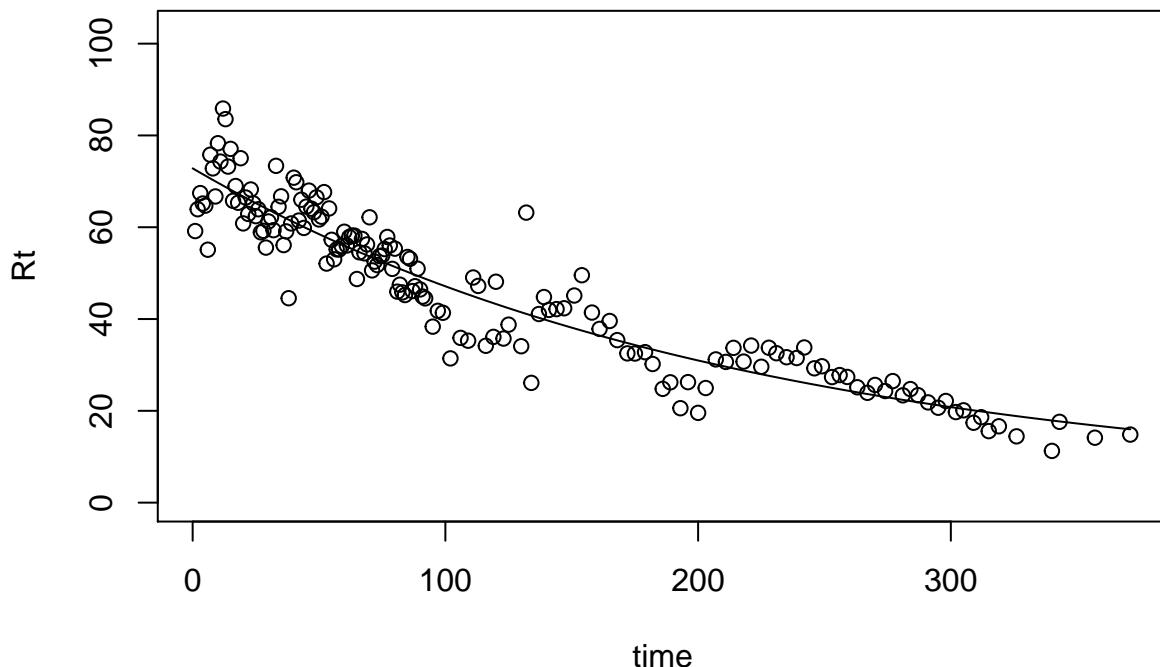
### Variable Site74:

CO2 production rate

```
## [1] "k1= 0.00464003932397663"
## [2] "k2= 2.28229651488392e-05"
## [3] "proportion of C0 in pool 1= 0.0857096491908595"
```

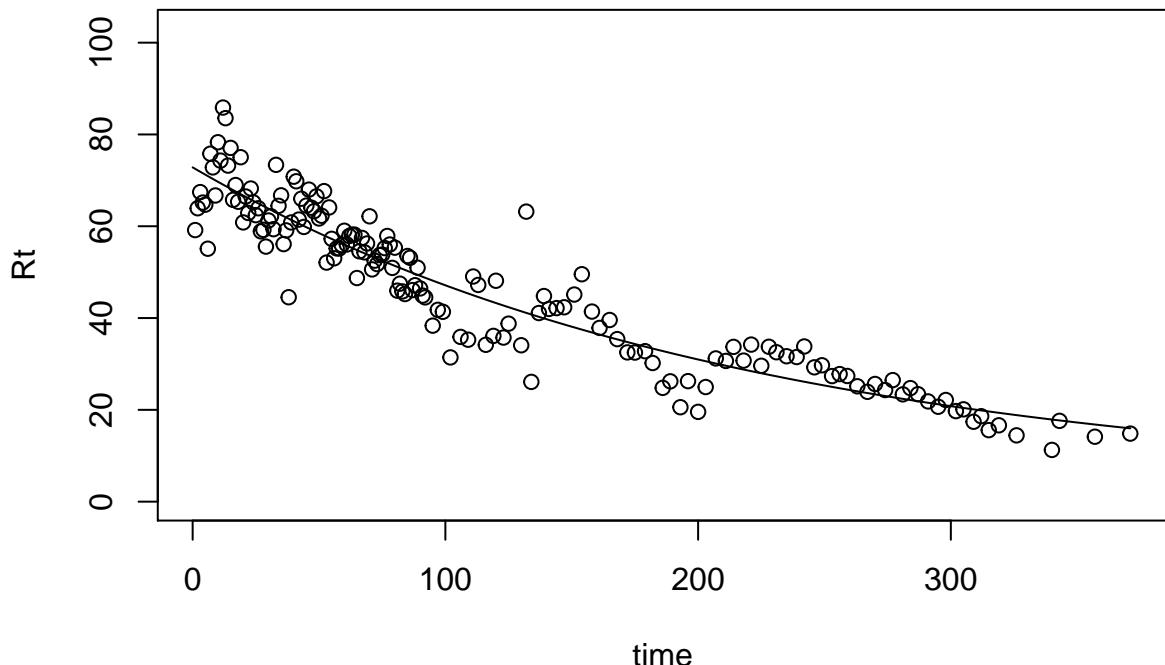


```
## [1] "AIC = -1.13636680607606"
## [1] "k1= 0.00464003842742238"
## [2] "k2= 2.28229248714953e-05"
## [3] "a21= 0.00762371668815576"
## [4] "a12= 3.6062444762619e-05"
## [5] "Proportion of C0 in pool 1= 0.0863715573819341"
```

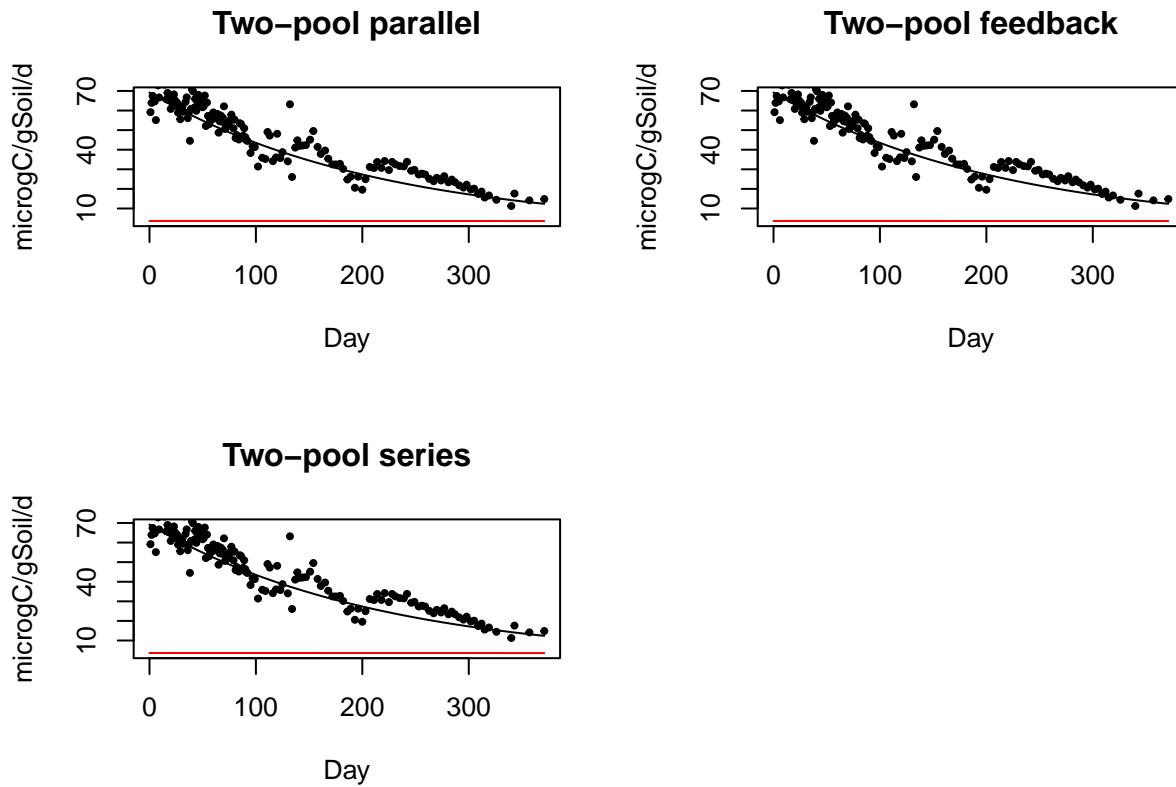


```
## [1] "AIC = 2.86363319392349"
## [1] "k1= 0.00464003949295017"
## [2] "k2= 2.28229736473869e-05"
## [3] "a21= 0.00185602348679031"
```

```
## [4] "Proportion of C0 in pool 1= 0.0858697669219571"
```



```
## [1] "AIC = 0.863633193895632"
```



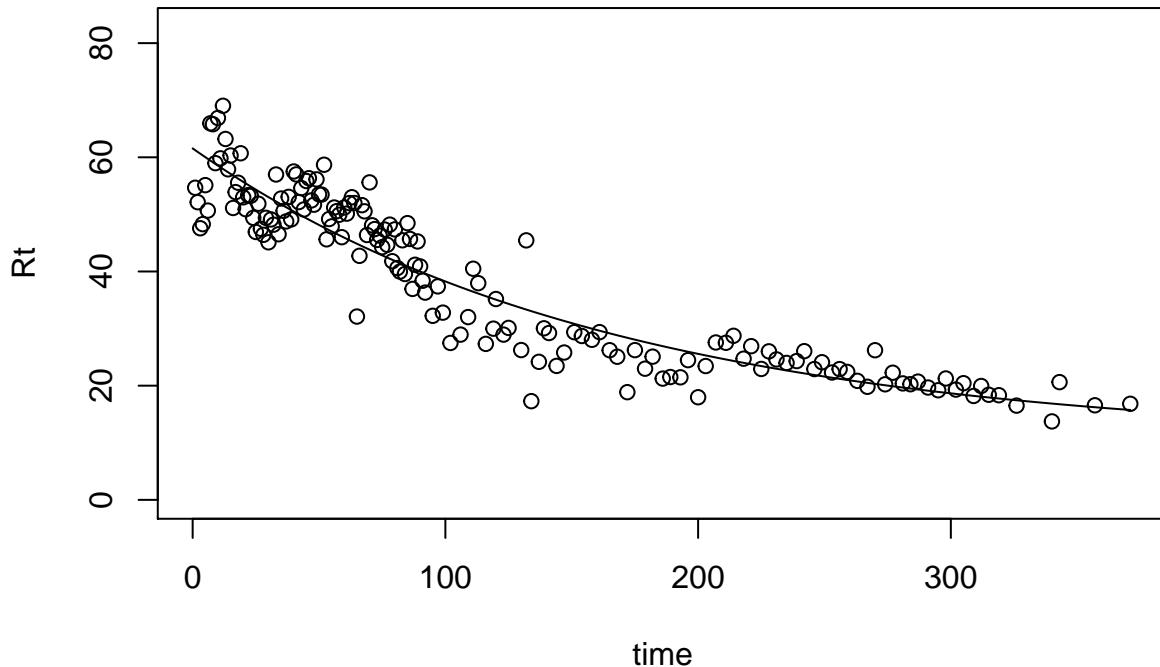
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-1.1363668	0.00464	2.28e-05	0.0857096	NA	NA
Two-pool feedback	2.8636332	0.00464	2.28e-05	0.0863716	0.0076237	3.61e-05

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	0.8636332	0.00464	2.28e-05	0.0858698	0.0018560	NA

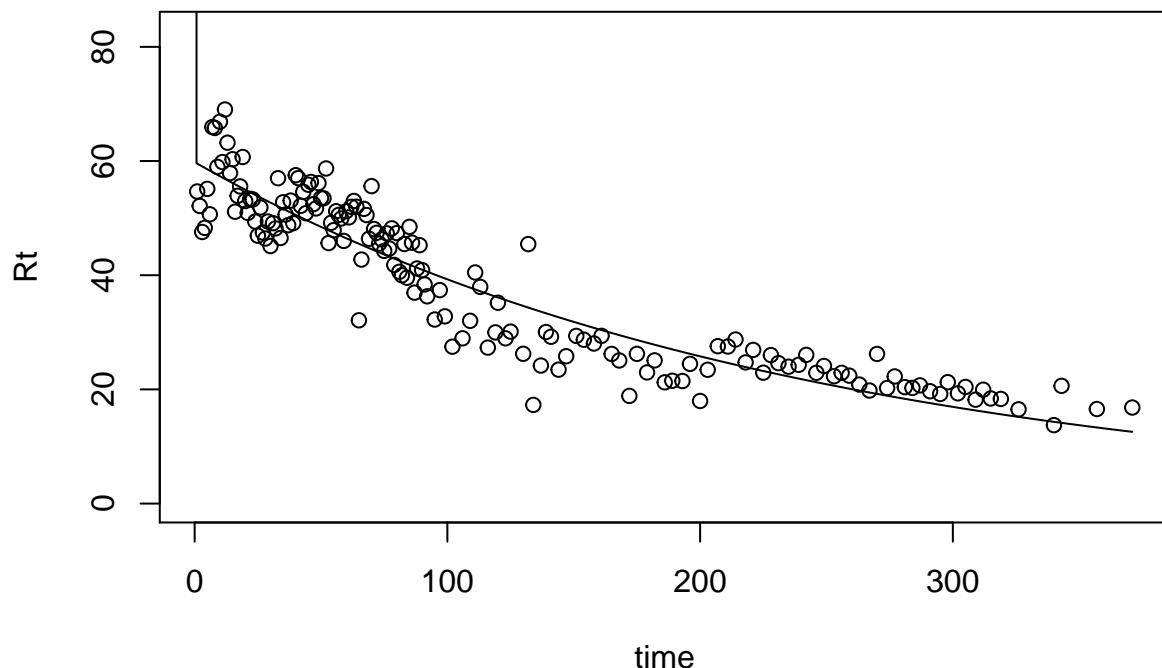
## Variable Site75:

CO2 production rate

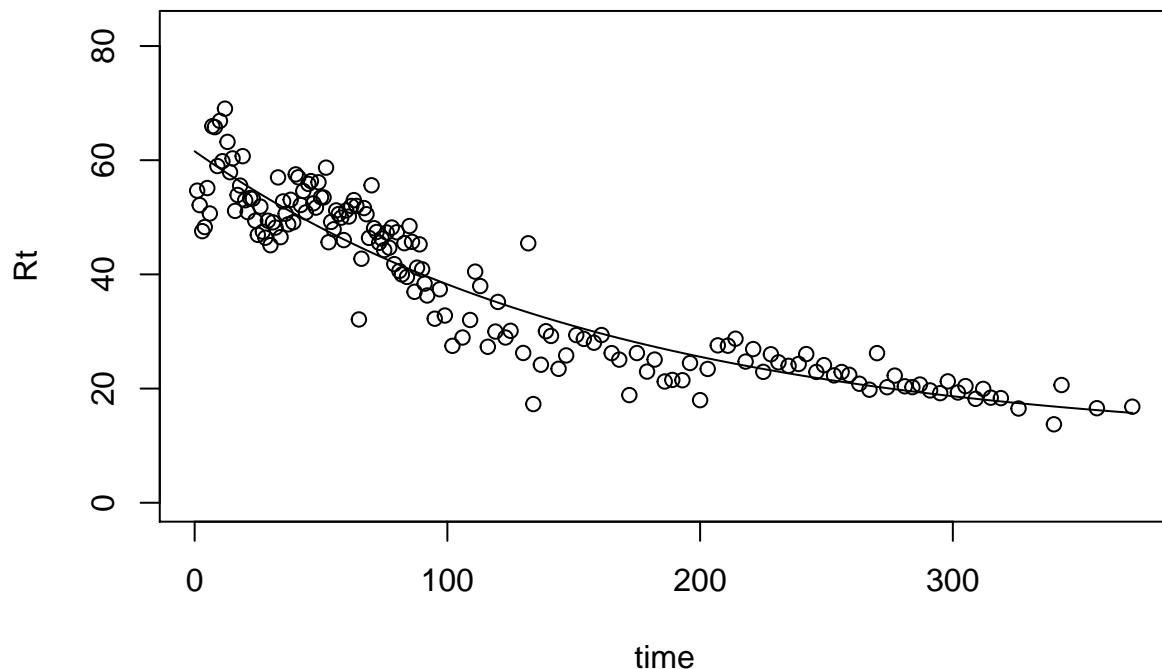
```
## [1] "k1= 0.00610980480055231"
## [2] "k2= 6.64473029132312e-05"
## [3] "proportion of C0 in pool 1= 0.0489614233572432"
```



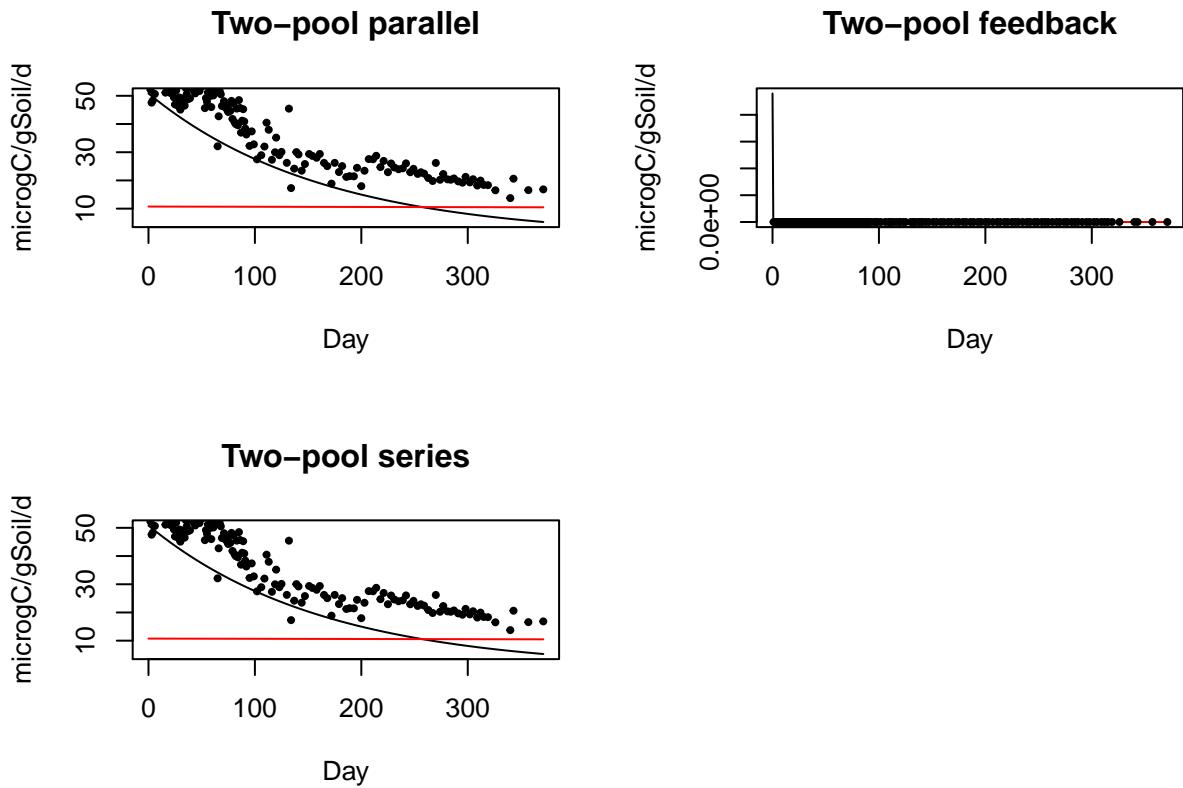
```
## [1] "AIC = -0.504182999292202"
## [1] "k1= 1540.48745523501"
## [2] "k2= 0.00420716571866288"
## [3] "a21= 0.000527526925972077"
## [4] "a12= 0.999993835608837"
## [5] "Proportion of C0 in pool 1= 0.916771489168731"
```



```
## [1] "AIC = 3.40803687504739"
## [1] "k1= 0.00610980662411944"
## [2] "k2= 6.6447341952045e-05"
## [3] "a21= 0.00108376806651717"
## [4] "Proportion of C0 in pool 1= 0.04901509162954"
```



```
## [1] "AIC = 1.49581700069815"
```

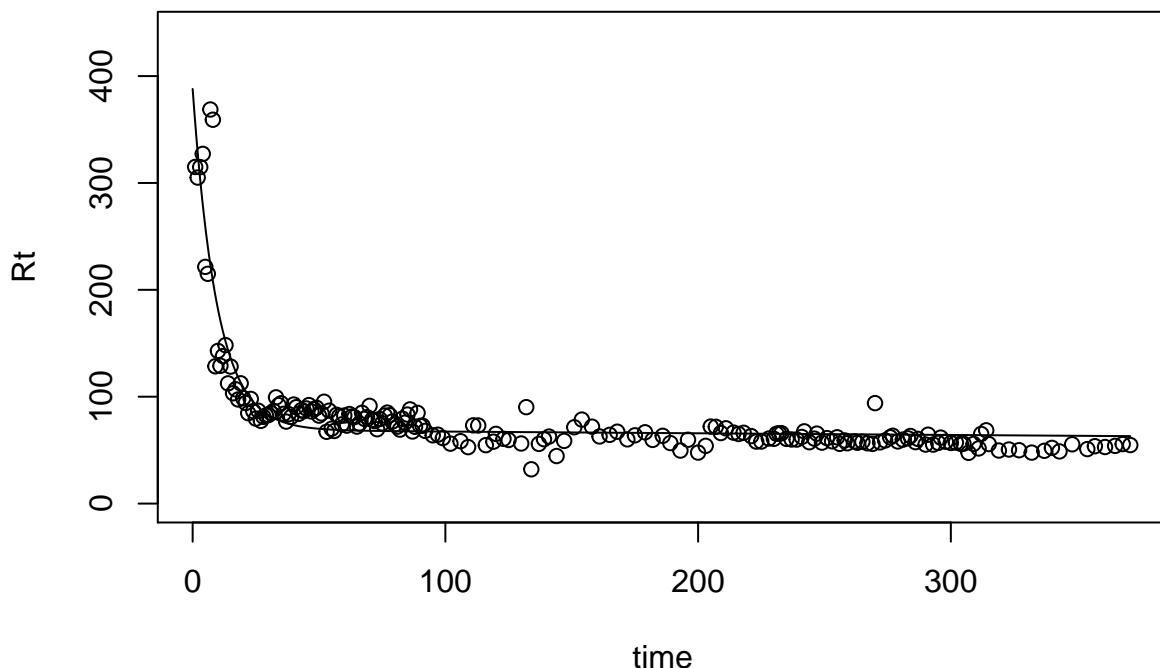


model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	- 0.504183	0.0061098	0.0000664	0.0489614	NA	NA
Two-pool feedback	3.408037	1540.4874552	0.0042072	0.9167715	0.0005275	0.9999938
Two-pool series	1.495817	0.0061098	0.0000664	0.0490151	0.0010838	NA

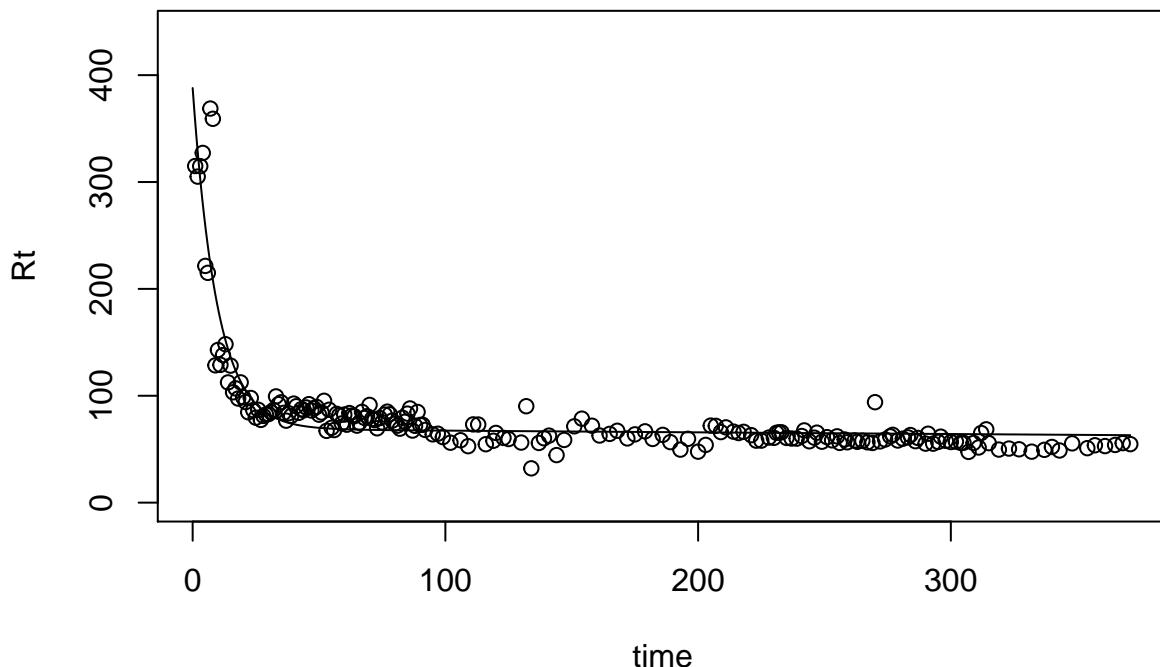
## Variable Site76:

CO2 production rate

```
## [1] "k1= 0.103540741159054"
## [2] "k2= 0.000241922875116518"
## [3] "proportion of C0 in pool 1= 0.0106805788364825"
```

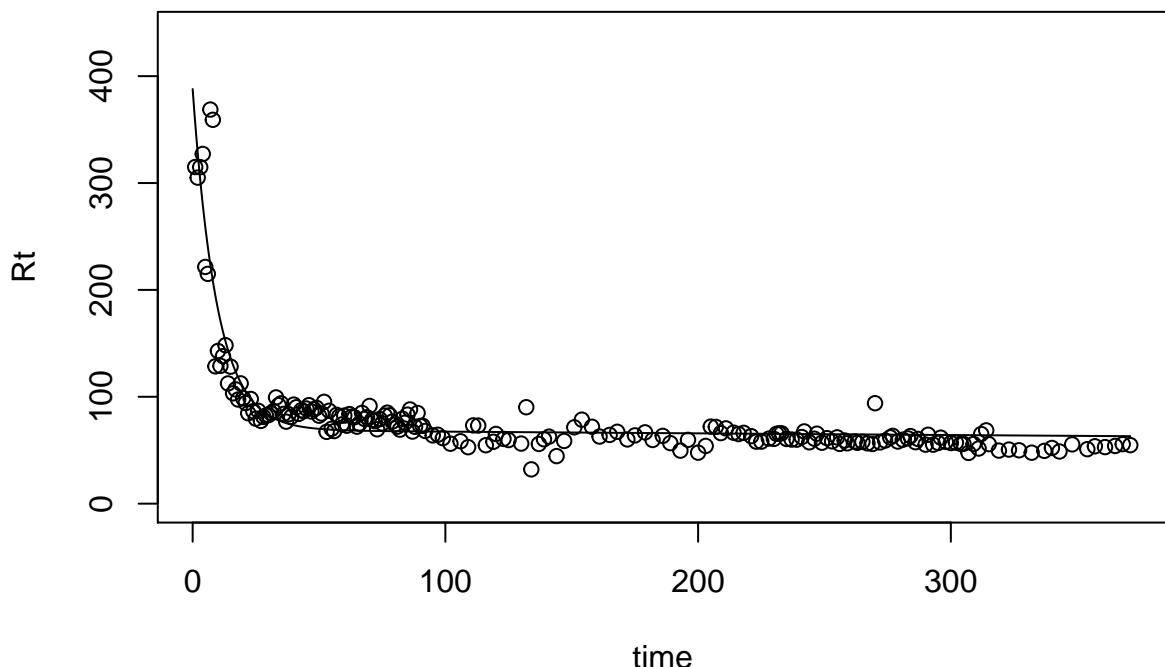


```
## [1] "AIC = -5.98965723699895"
## [1] "k1= 0.103540865208684"
## [2] "k2= 0.000241923682544172"
## [3] "a21= 0.393008866470666"
## [4] "a12= 8.10238329201907e-06"
## [5] "Proportion of C0 in pool 1= 0.017622418837703"
```

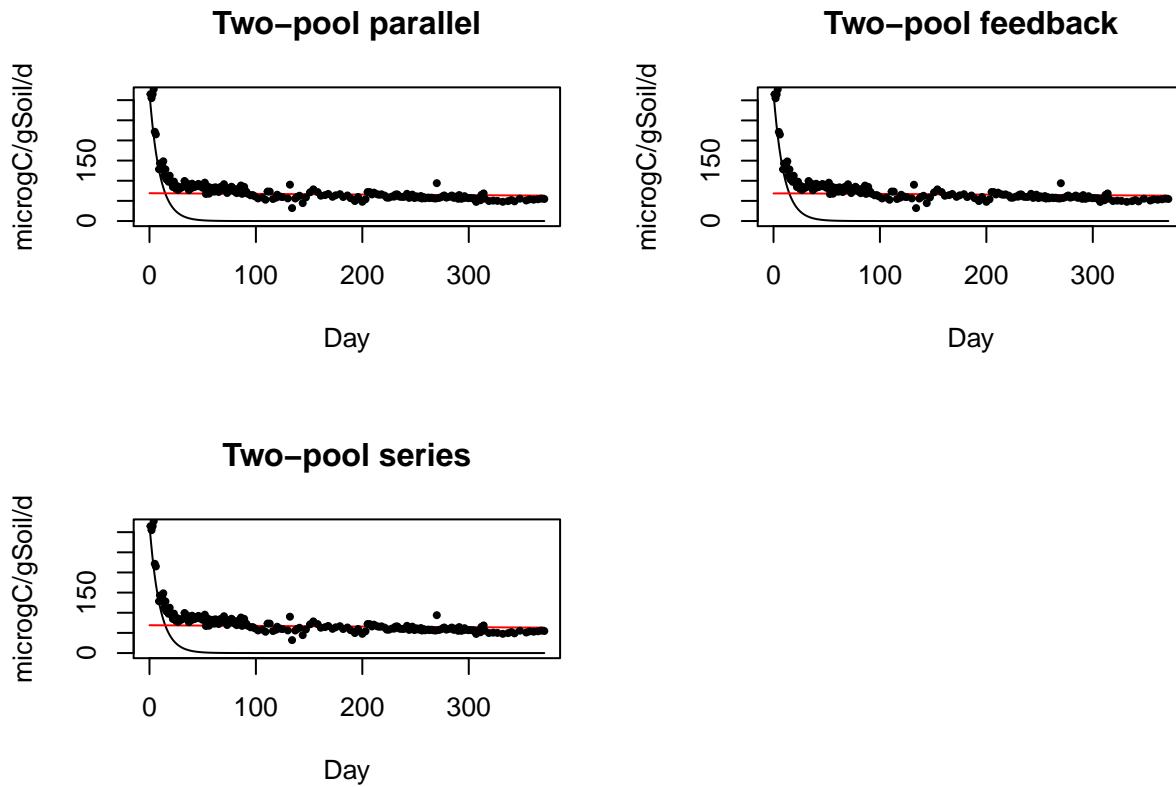


```
## [1] "AIC = -1.98965723928749"
## [1] "k1= 0.103540846843064"
## [2] "k2= 0.000241922915503896"
## [3] "a21= 4.20097987544055e-05"
```

```
## [4] "Proportion of C0 in pool 1= 0.0106809047842319"
```



```
## [1] "AIC = -3.98965723829363"
```



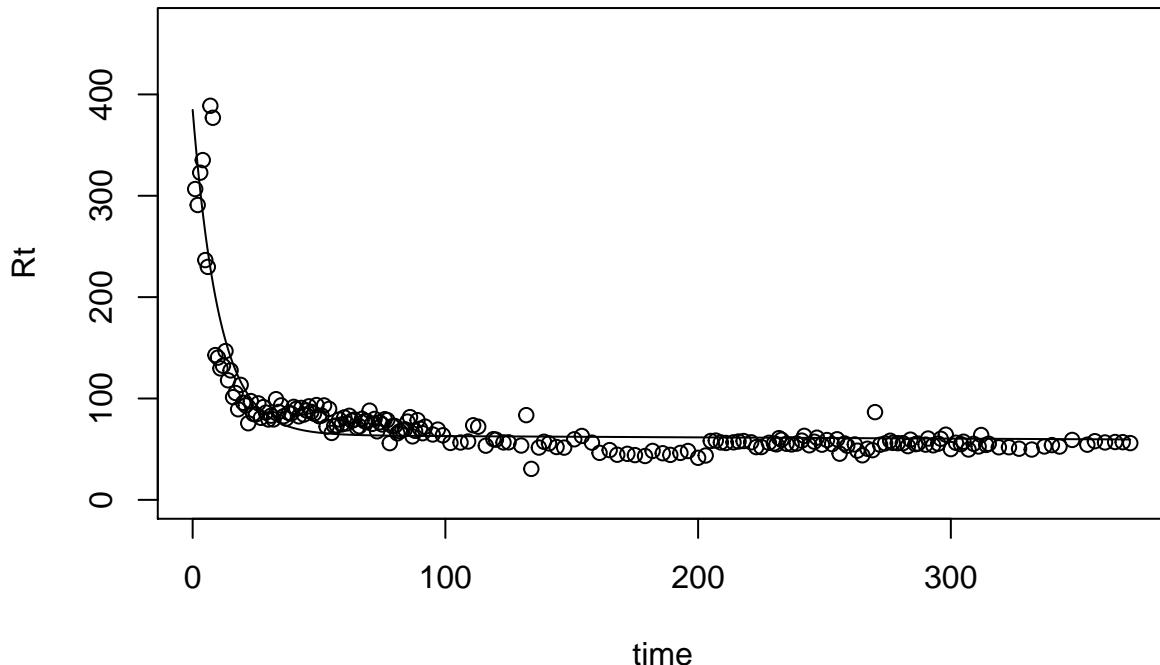
model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-5.989657	0.1035407	0.0002419	0.0106806	NA	NA
Two-pool feedback	-1.989657	0.1035409	0.0002419	0.0176224	0.3930089	8.1e-06

model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool series	-3.989657	0.1035408	0.0002419		0.0106809	0.0000420

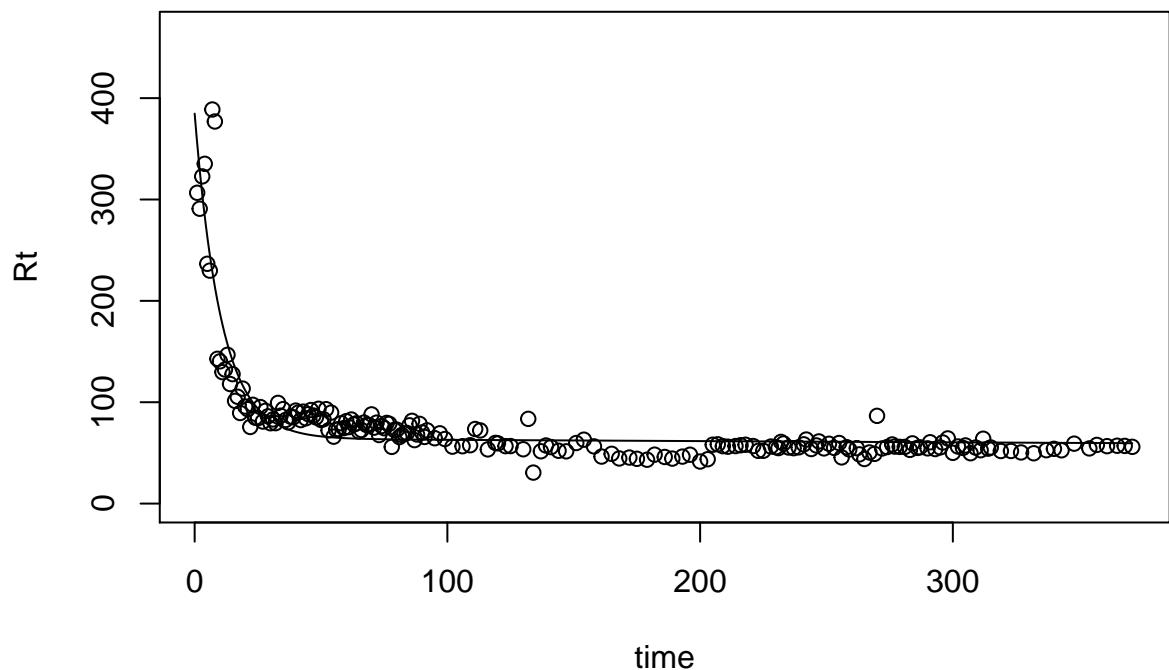
## Variable Site77:

CO2 production rate

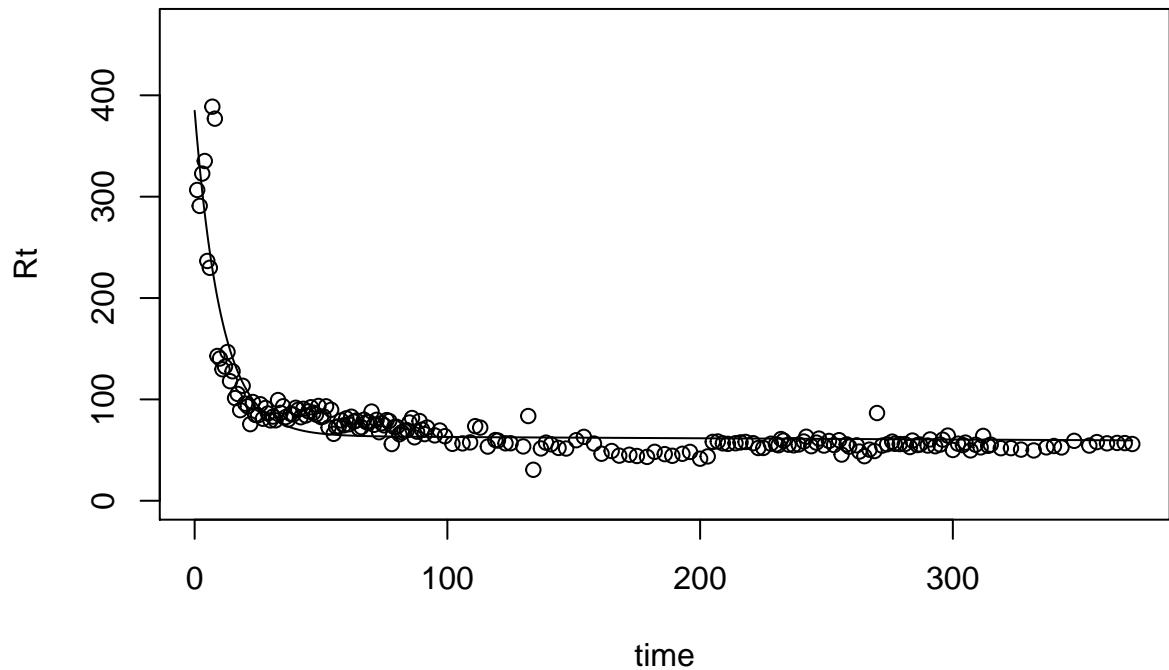
```
## [1] "k1= 0.0950712191971867"
## [2] "k2= 0.000200247067742093"
## [3] "proportion of C0 in pool 1= 0.0104134305241269"
```



```
## [1] "AIC = -6.32237392277772"
## [1] "k1= 0.0950712871215661"
## [2] "k2= 0.000200275307842507"
## [3] "a21= 0.437195314034128"
## [4] "a12= 0.000326102467487377"
## [5] "Proportion of C0 in pool 1= 0.018533792612125"
```

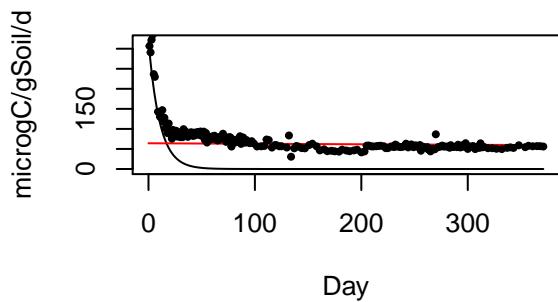


```
## [1] "AIC = -2.32237392297141"
## [1] "k1= 0.0950711995519188"
## [2] "k2= 0.000200247058671497"
## [3] "a21= 0.184034342306161"
## [4] "Proportion of C0 in pool 1= 0.0127681627510364"
```

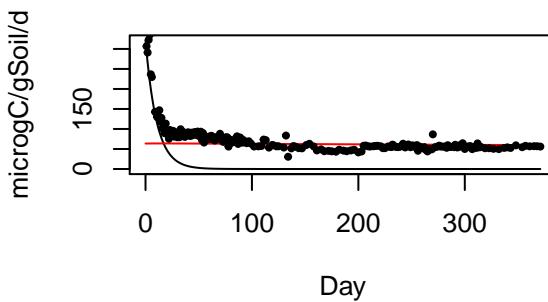


```
## [1] "AIC = -4.32237392285902"
```

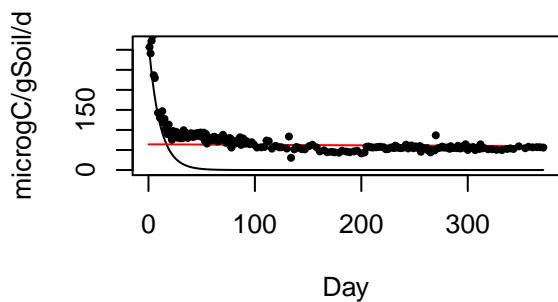
**Two-pool parallel**



**Two-pool feedback**



**Two-pool series**



model	AIC	k1	k2	Proportion.of.C0.in.pool.1	a21	a12
Two-pool parallel	-6.322374	0.0950712	0.0002002	0.0104134	NA	NA
Two-pool feedback	-2.322374	0.0950713	0.0002003	0.0185338	0.4371953	0.0003261
Two-pool series	-4.322374	0.0950712	0.0002002	0.0127682	0.1840343	NA