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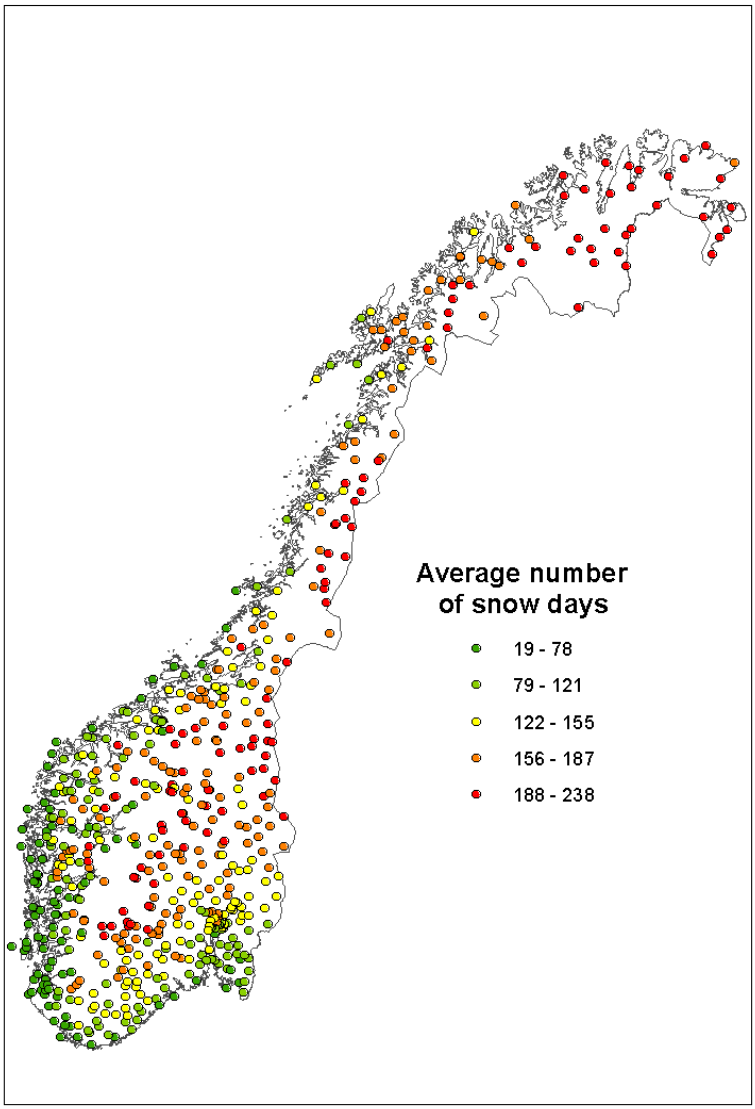
Climate

Trend analysis of number of snow days per winter season in Norway

Anita Verpe Dyrrdal



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Abstract

Trends in number of days with partly or full snow cover have been evaluated at 585 stations in Norway. The country was divided into 9 snow regions, based on typical climate regions and the geographic distribution of average number of snow days. A general decrease in the number of snow days is seen, particularly in the south-eastern part of the country, and along the entire southern coast. Negative trends are statistically significant at 247 stations, and the slope typically becomes steeper after 1990. Trends after 1961 have been compared to the www.senorge.no dataset at 323 of the stations, and reveal overestimation of snow days many places. The difference in real and model elevation is known to affect the results, but even where this difference is minimal we see serious estimation errors of up to 131 in average number of snow days. At stations experiencing the largest overestimation, there is an obvious link to exaggerated precipitation probably associated with inaccurate interpolation.

Keywords

Snow days, snow, Norway, snow cover

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Contents

1 Introduction

Snow cover is of great importance to the climate system, primarily due to its albedo - and insulation properties. One way of studying snow cover during the winter season is to look at days with partly or full snow cover, - or snow days. Changes in the number of snow days per winter season is a relevant concern to both winter activity enthusiasts, and when it comes to more serious aspects such as flooding and hydropower production. According to Vikhamar-Schuler et al (2006) the duration of the snow season is projected to be shorter almost everywhere in Norway, and the decrease is more moderate with increasing altitude and distance from the sea. In some areas along the western fjords the number of snow days might decrease by more than 80 days in the period 2071-2100 compared to the normal period 1961-1990.

In the present study we evaluate observed trends in the number of snow days at 585 stations all over Norway. Trends are studied for entire observational periods, which differ from station to station. In addition, we compare the number of snow days with simulations from the senorge.no grids for selected stations (323 of the 585 stations).

2 Dataset and analysis

2.1 Number of snow days

The number of snow days per winter season was computed by counting the days with 50% or more snow cover or snow depth larger or equal to 1 cm. This is the same definition used in Dyrrdal and Vikhamar-Schuler (2009). In the evaluation of observed trends, snow cover observations were used, while snow depth was used in the comparison with www.senorge.no, as in this dataset snow cover is not simulated. A simple linear trend analysis is performed, and slopes are evaluated at the 95% confidence level. In addition, a 10 year gauss filter is computed and a Mann-Kendall trend test is carried out for each station. In the comparison with senorge.no, correlation coefficients and root mean squared errors are computed to evaluate the goodness of fit of the snow senorge.no snow model. In addition, graphs with observed and simulated time series plotted on top of each other, including linear trends, are presented. Stations revealing a difference in real and model elevation greater than 100 meters are excluded from the last part of the study, since it’s likely that inconsistency between observations and simulations are mostly due to this elevation difference.

2.2 Snow regions

We divided the country into 9 snow regions (figure 1) based on typical temperature – and precipitation regions and geographical patterns in the average number of snow days (figure 2). The purpose was to recognize any regional patterns in the trends, and also easier evaluate the performance of the senorge.no snow model in the different parts if the country. The regions are presented in table 1 below.

Region	Name	# of stations (part I)	# of stations (part II)
1	South-eastern region, coast	95	57
2	South-eastern region, inland	64	44
3	Mountain region	103	65
4	South-western region	97	42
5	Western region	104	55
6	“Nordland” region, inland	26	18
7	“Nordland” region, coast	37	20
8	“Troms” region	30	11
9	“Finnmark” region	29	11

Table 1: Snow region and the number of stations in each region. Part I is the trend analysis of observed snow days, and part II is the comparison with senorge.no.

Figure 1: Location of the 9 snow regions.

3 Results

3.1 Observed trends

The trend periods studied varies from station to station. Figure 2 presents a histogram showing the number of stations with the same time series length, and figure 3 shows the distribution of station series over time. We see from both figures that observational data is digitalized back to 1957 at many stations and several of them run until 2007, giving a large number at a time series length equal to 51 years. Most other time series have shorter lengths. We can also see from figure 3 that few time series are available before 1957.

Figure 4 and figure 5 show the observed average number of snow days and the maximum number of snow days, respectively, at all 585 stations studied. There is a clear geographical distribution, depending on topography and latitude, where the greatest number of snow days is found in mountainous areas inland, and in the northern part of the country. The coastal areas in the southwest show average values as low as 15-16 snow days, while the most snow rich areas have average values up to 238 snow days. Maximum values range from 67 to 276 snow days per winter season, illustrating the great differences in snow season length throughout the country.

Linear trend analysis of observational time series shows a general decrease in the number of snow days in the entire country; however, there is a stronger tendency in the southeast and along the southern coast. Results from this analysis are presented in figures 7 and 8. Only 10 stations reveal statistically significant positive trends at the 95 % confidence level, compared to 247 statistically significant negative trends. Positive trends are mostly found inland, in high elevations or where the temperature stays low throughout the winter season. The Mann-Kendall trend test revealed a steeper negative trend in the recent decades, typically from 1990 until today. This is consistent with the observed warming associated with anthropogenic climate change. Also, most of the time series revealing strong positive trends end before 1990. Figure 6 presents examples from a station showing a negative trend and station showing a positive trend in the number of snow days.

Figure 9 shows the relationship between station elevation and the nature of the observed trends. There is a weak tendency to a less negative slope at higher elevated stations, which is expected. However, we have to keep in mind that the limited number of stations in these areas might affect the results. This plot also illustrates the dominance of negative slopes, confirming the decrease in the number of snow days at most stations around the country.

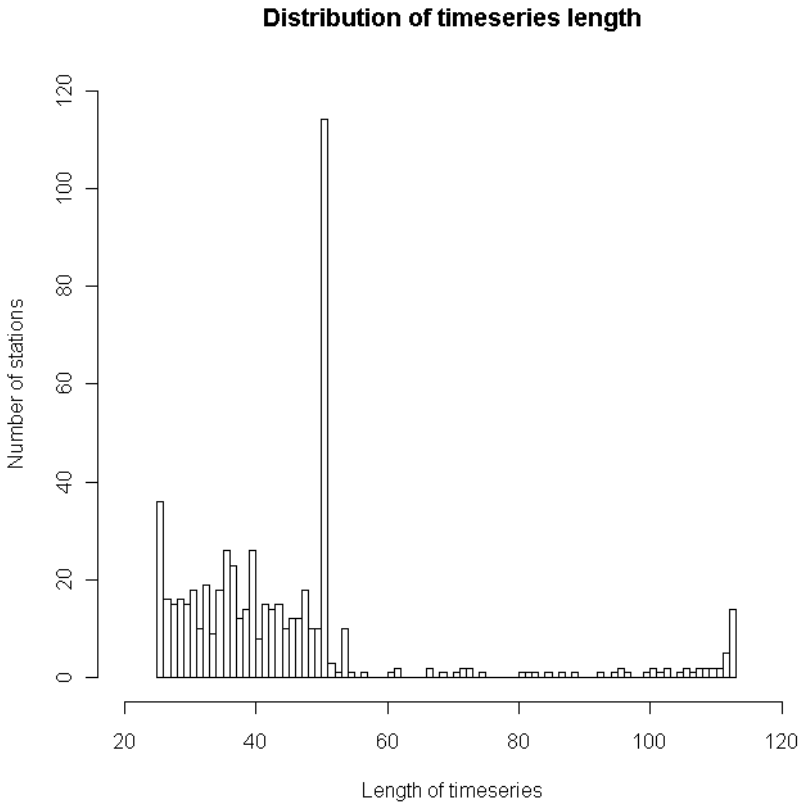


Figure 2: Number of stations with a certain time series length.

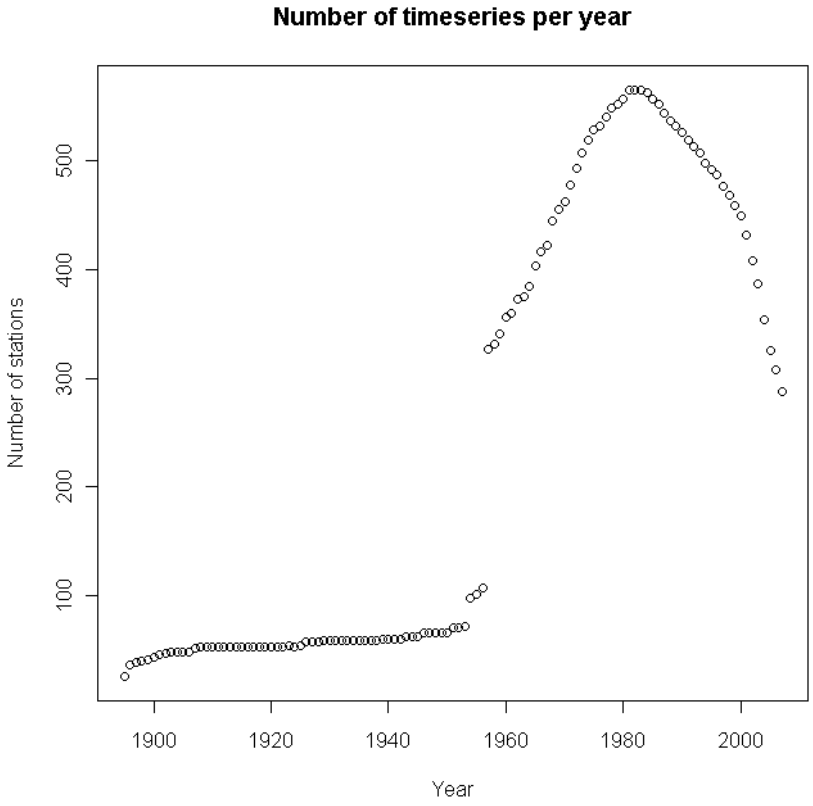


Figure 3: Number of time series studied each year.

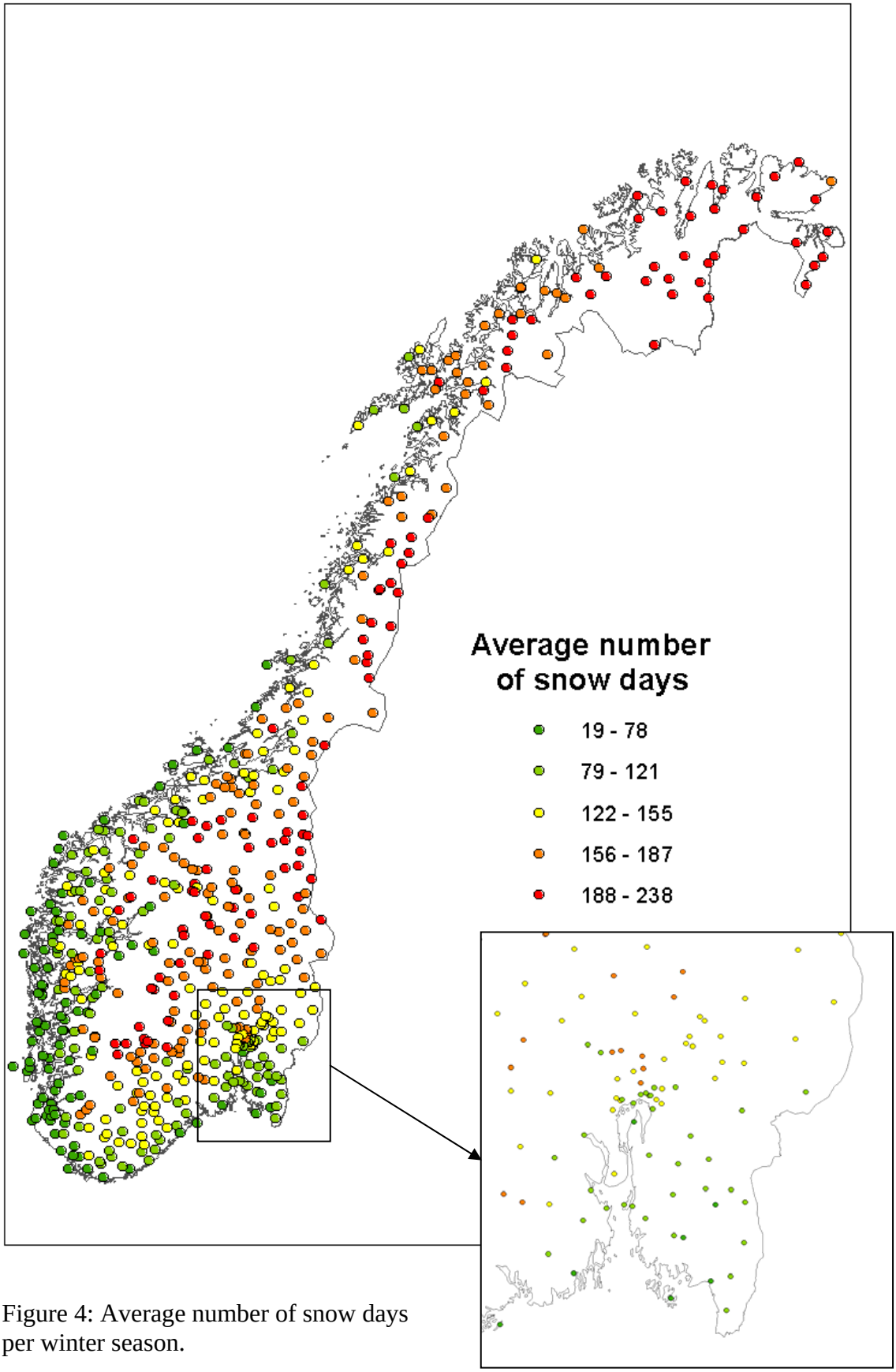


Figure 4: Average number of snow days per winter season.

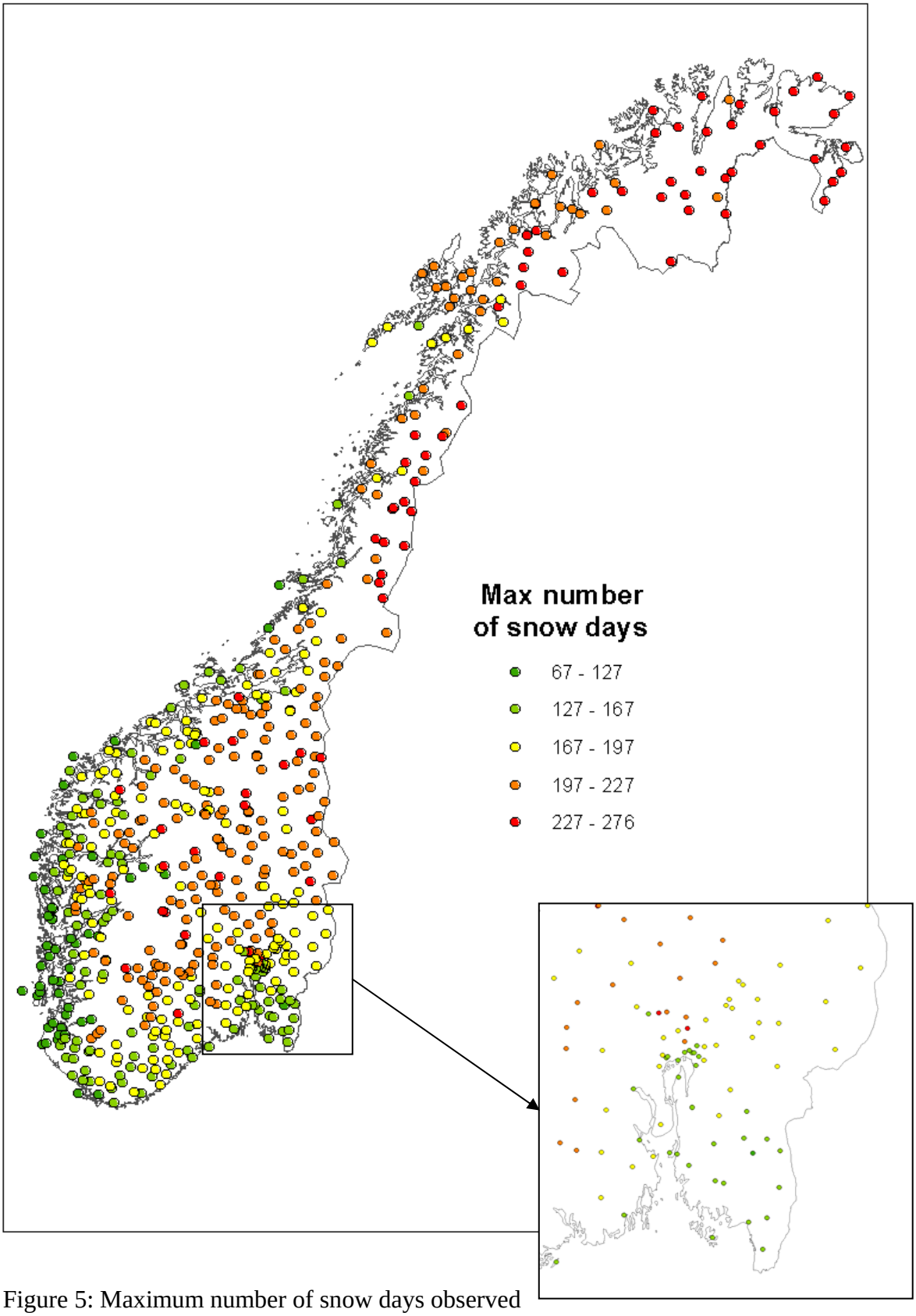


Figure 5: Maximum number of snow days observed at each station.

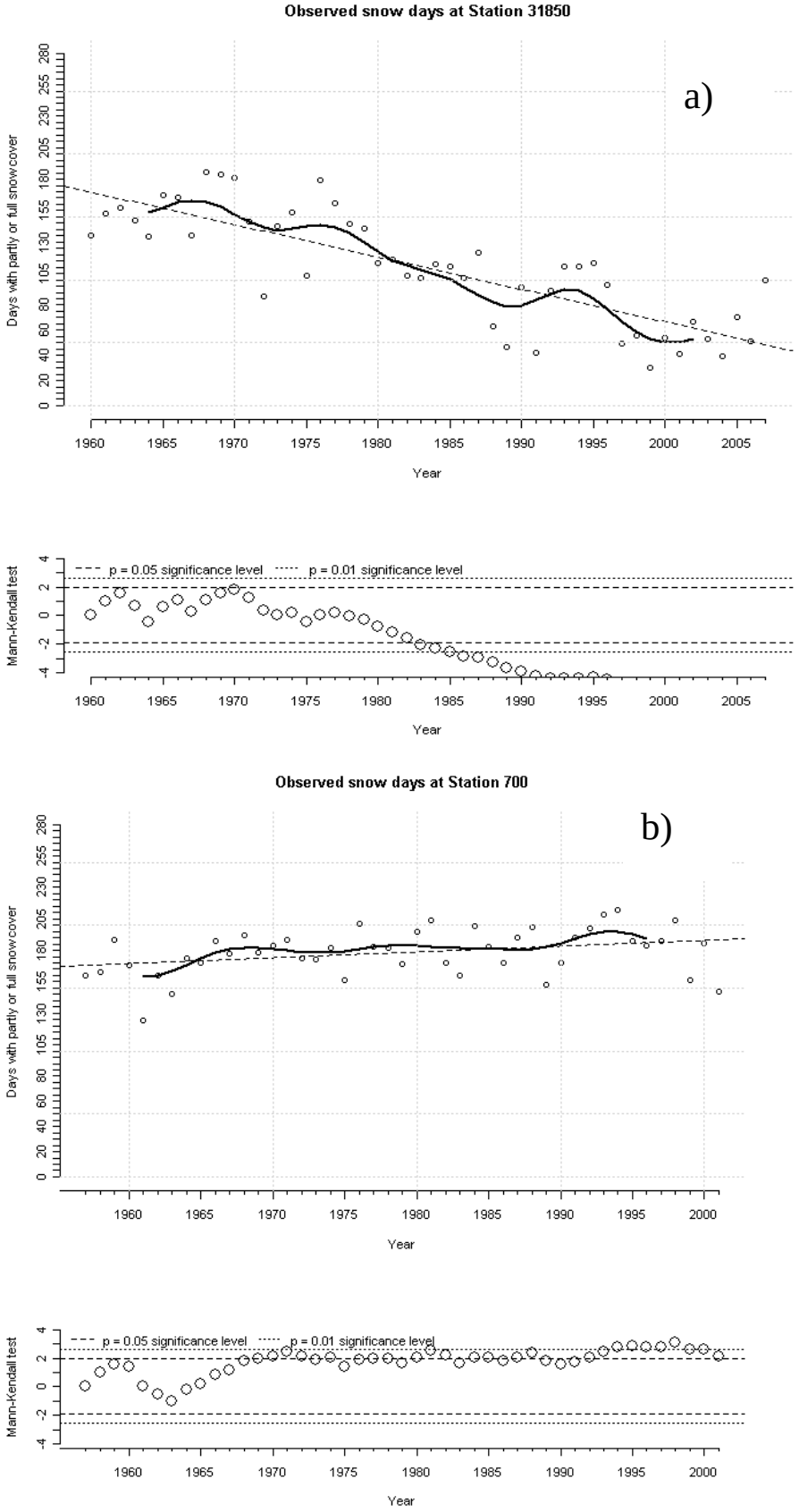


Figure 6: Observed number of snow days at stations a) 31850 Hjartdal in Telemark County and b) 700 Drevsjø in Hedmark County. The lowermost graphs show a Mann-Kendall trend test.

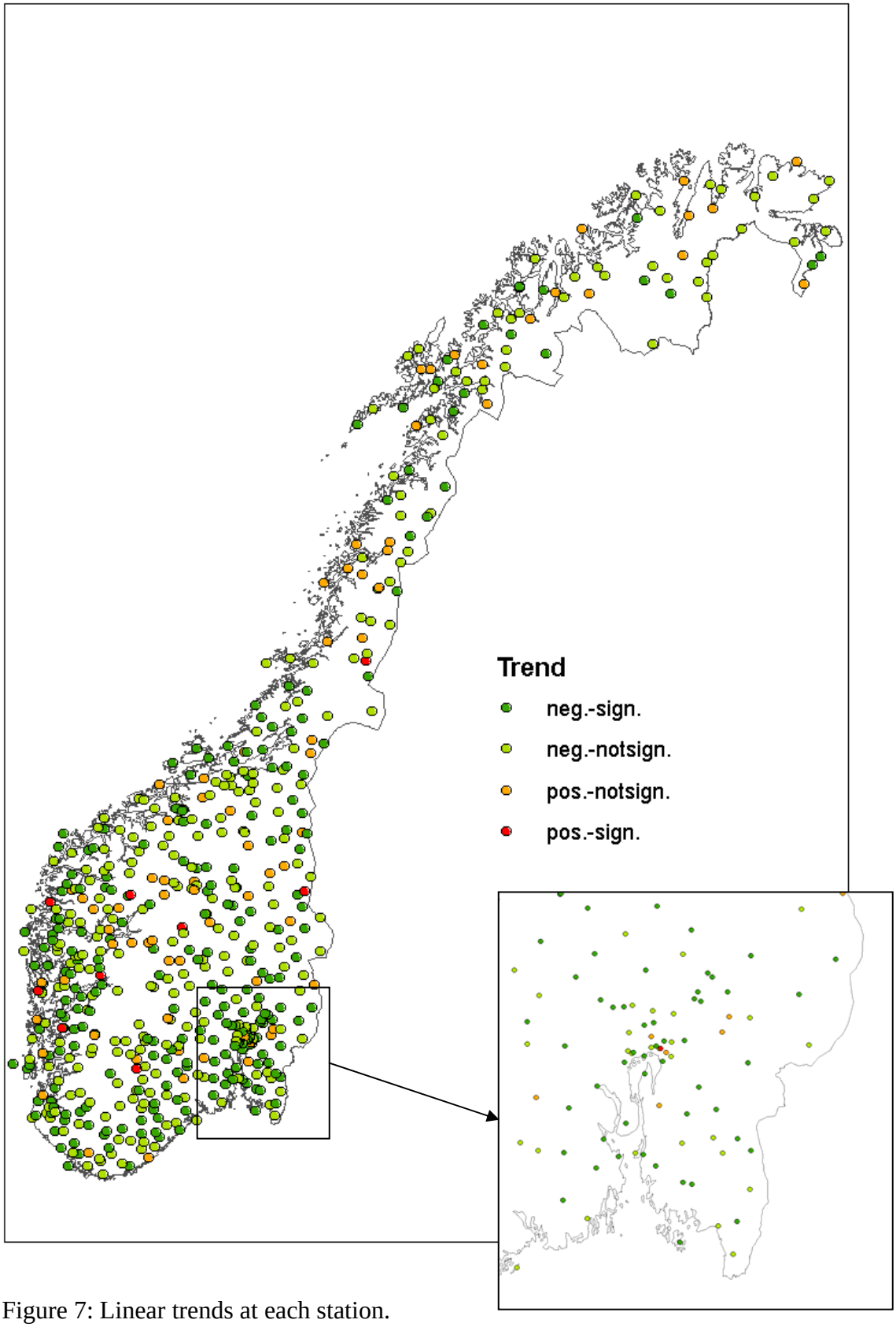


Figure 7: Linear trends at each station.
neg. (pos.) = negative (positive) trend,
sign. (notsign.) = trend is (not) significant at the 95% confidence level.

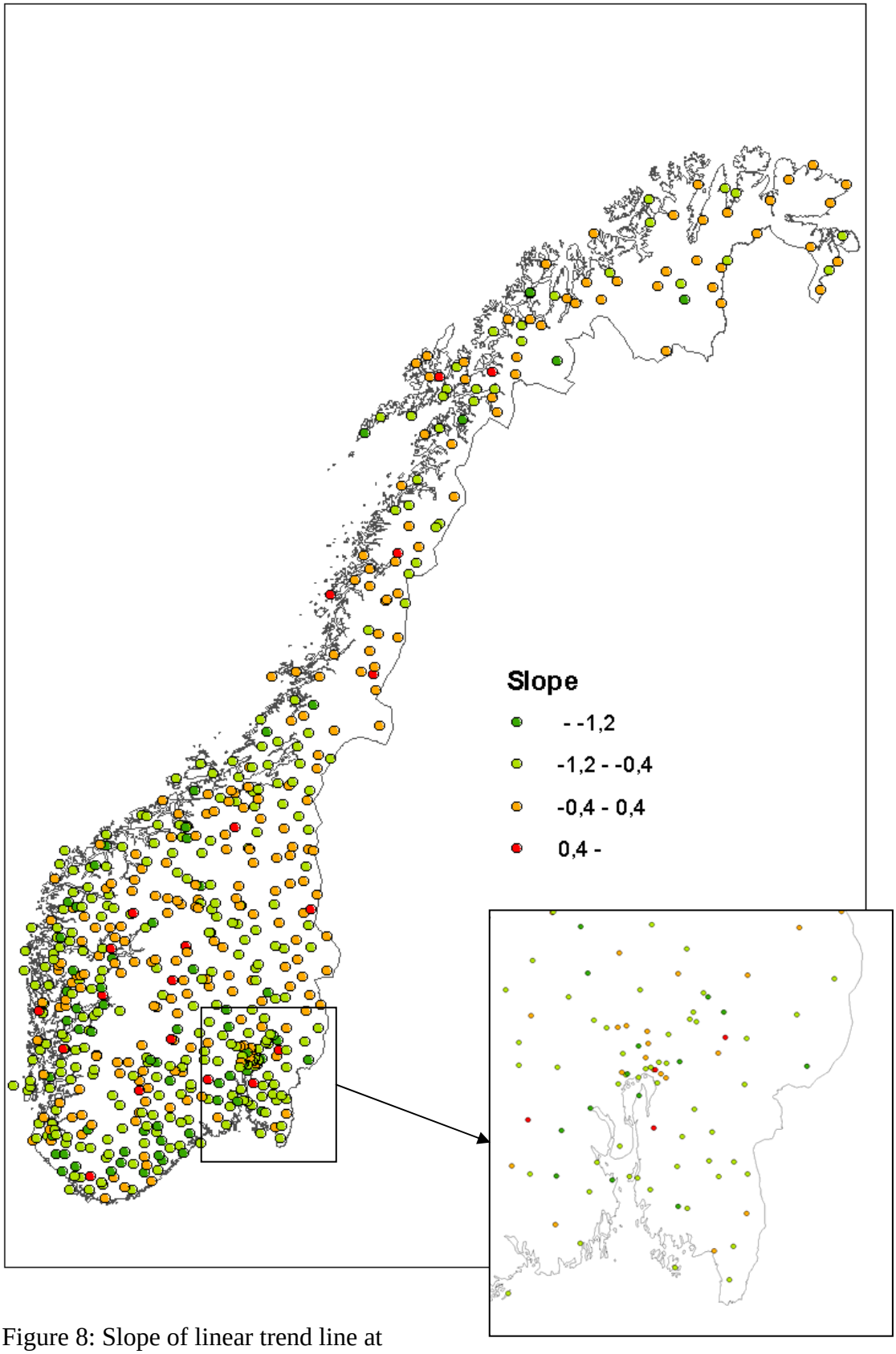


Figure 8: Slope of linear trend line at each station.

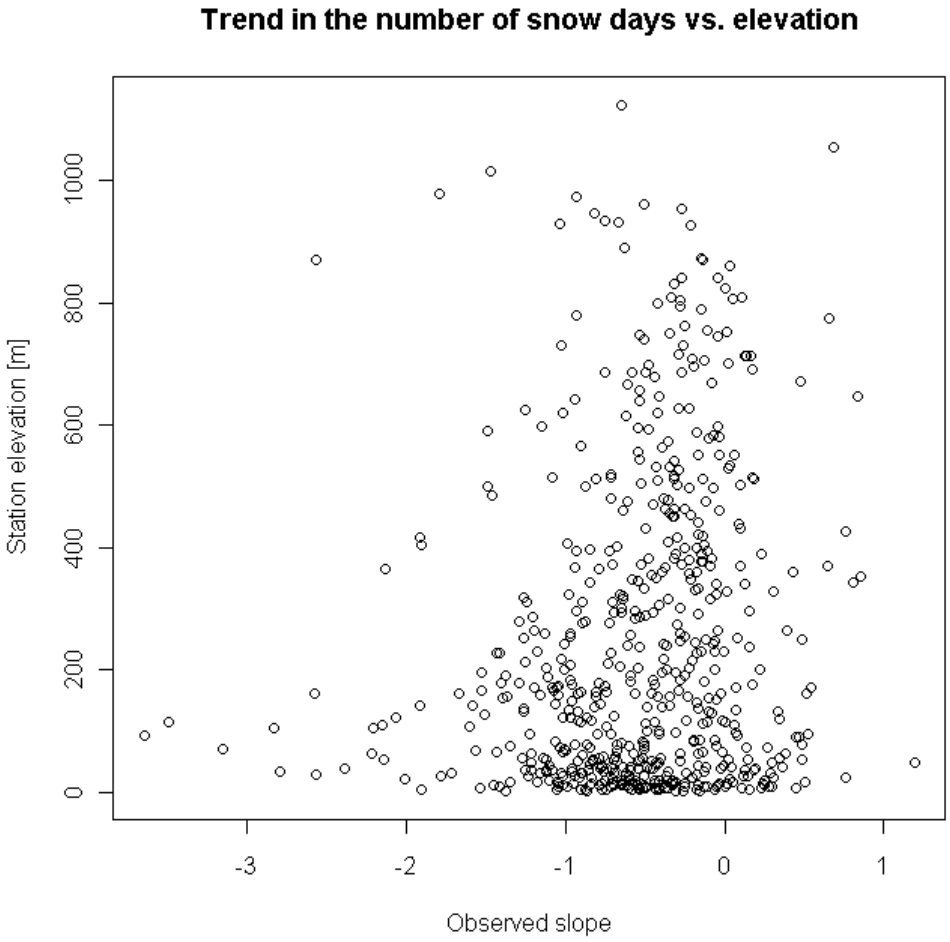
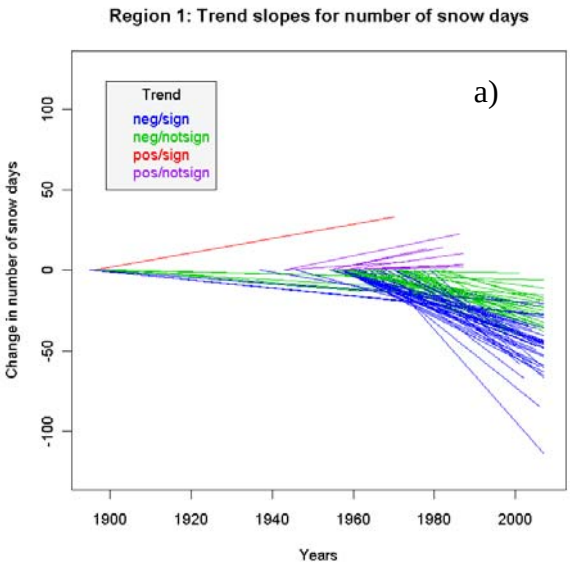
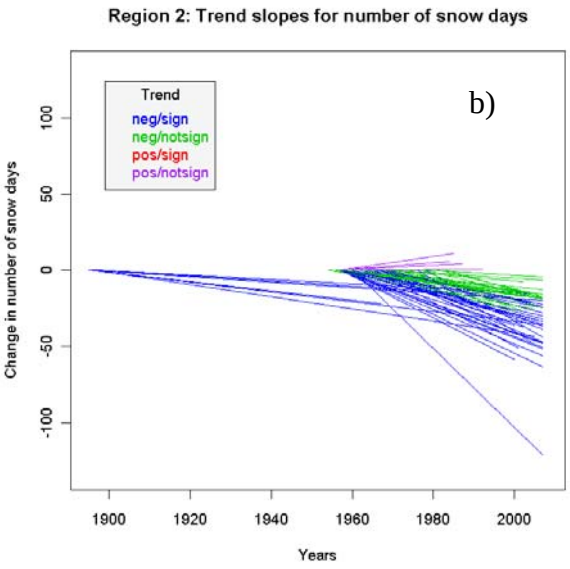


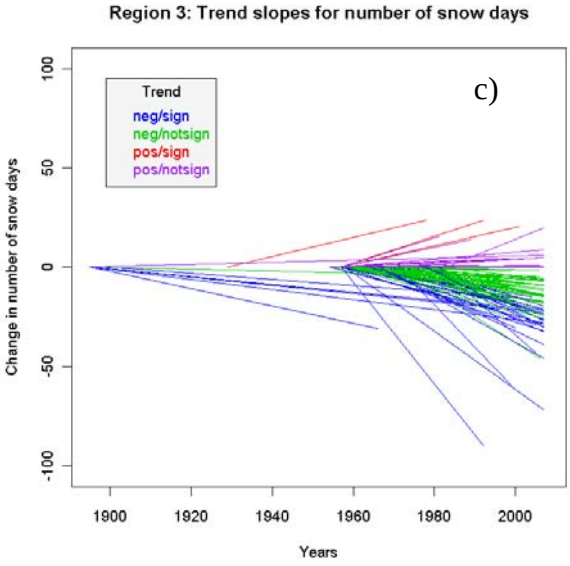
Figure 9: Slope for observed number of snow days versus station elevation.

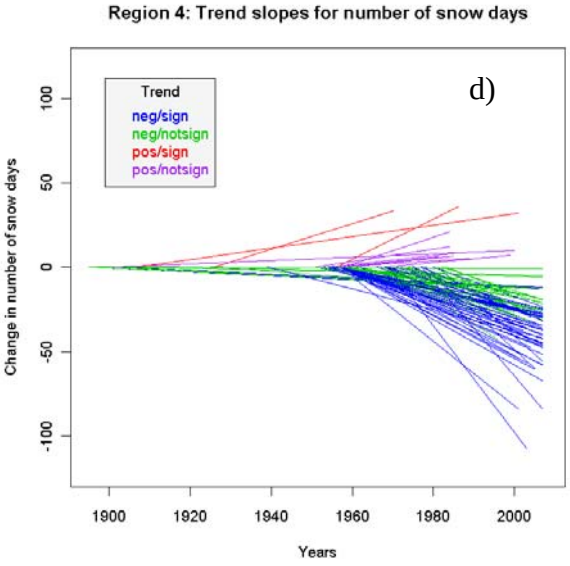
3.1.1 Snow regions

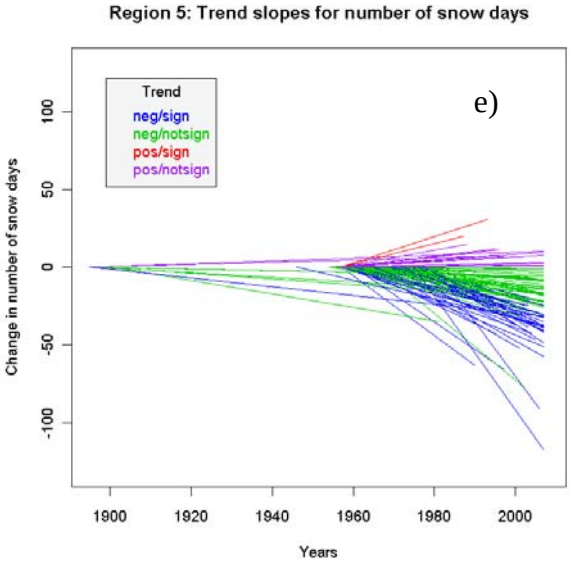
Figure 10 below present results from the linear trend analysis in the different snow regions. Again, it is evident that most trends are negative, and a large number of them are statistically significant at the 95% confidence level (blue lines). The southernmost regions (1, 2 and 4) show the highest percentage of significant negative trends, closely followed by Region 6 located in central Norway, inland. Regions 7 and 9 show the lowest percentage, while in Regions 3, 5 and 8 about 1/3 of the stations show significant negative trends. There are a few stations with significant positive trends in Regions 3-5, which includes the mountain areas in southern Norway. The figure also provides information on the time series periods, which differ significantly between the stations. Most of the longest series show a moderate slope compared to series after 1950. This is because they include greater cycles which incorporate both periods of increase and decrease in the snow, whereas there has mainly been a decrease in snow most places in the last part of the century. This decrease has also been more pronounced after 1970, contributing to the steeper slopes. However, according to properties of statistical significance testing, the longer the time series the gentler the slope needed for the trend to be significant. Trends after 1960 are further investigated in section 3.2. In addition, both observed and simulated time series are plotted and shown in the appendix, which allows for a more direct comparison of trends at different stations.

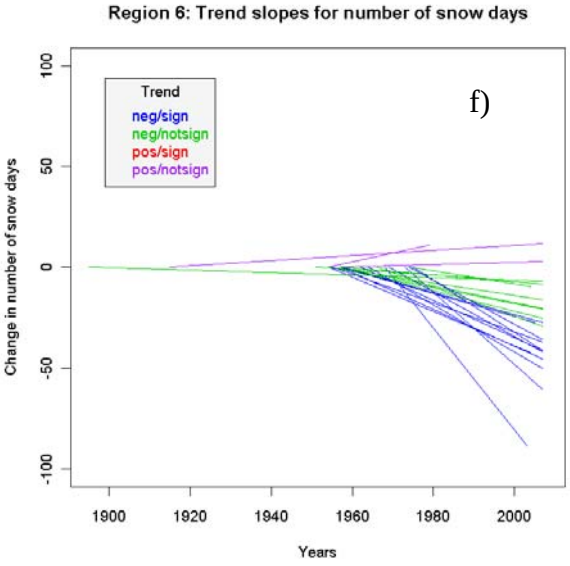

Region 1: Trend slopes for number of snow days
Trend
neg/sign
neg/notsign
pos/sign
pos/notsign
a)
Change in number of snow days
100
50
0
-50
-100
1900
1920
1940
1960
1980
2000
Years


Region 2: Trend slopes for number of snow days
Trend
neg/sign
neg/notsign
pos/sign
pos/notsign
b)
Change in number of snow days
100
50
0
-50
-100
1900
1920
1940
1960
1980
2000
Years


Region 3: Trend slopes for number of snow days
Trend
neg/sign
neg/notsign
pos/sign
pos/notsign
c)
Change in number of snow days
100
50
0
-50
-100
1900
1920
1940
1960
1980
2000
Years


Region 4: Trend slopes for number of snow days
Trend
neg/sign
neg/notsign
pos/sign
pos/notsign
d)
Change in number of snow days
100
50
0
-50
-100
1900
1920
1940
1960
1980
2000
Years


Region 5: Trend slopes for number of snow days
Trend
neg/sign
neg/notsign
pos/sign
pos/notsign
e)
Change in number of snow days
100
50
0
-50
-100
1900
1920
1940
1960
1980
2000
Years


Region 6: Trend slopes for number of snow days
Trend
neg/sign
neg/notsign
pos/sign
pos/notsign
f)
Change in number of snow days
100
50
0
-50
-100
1900
1920
1940
1960
1980
2000
Years

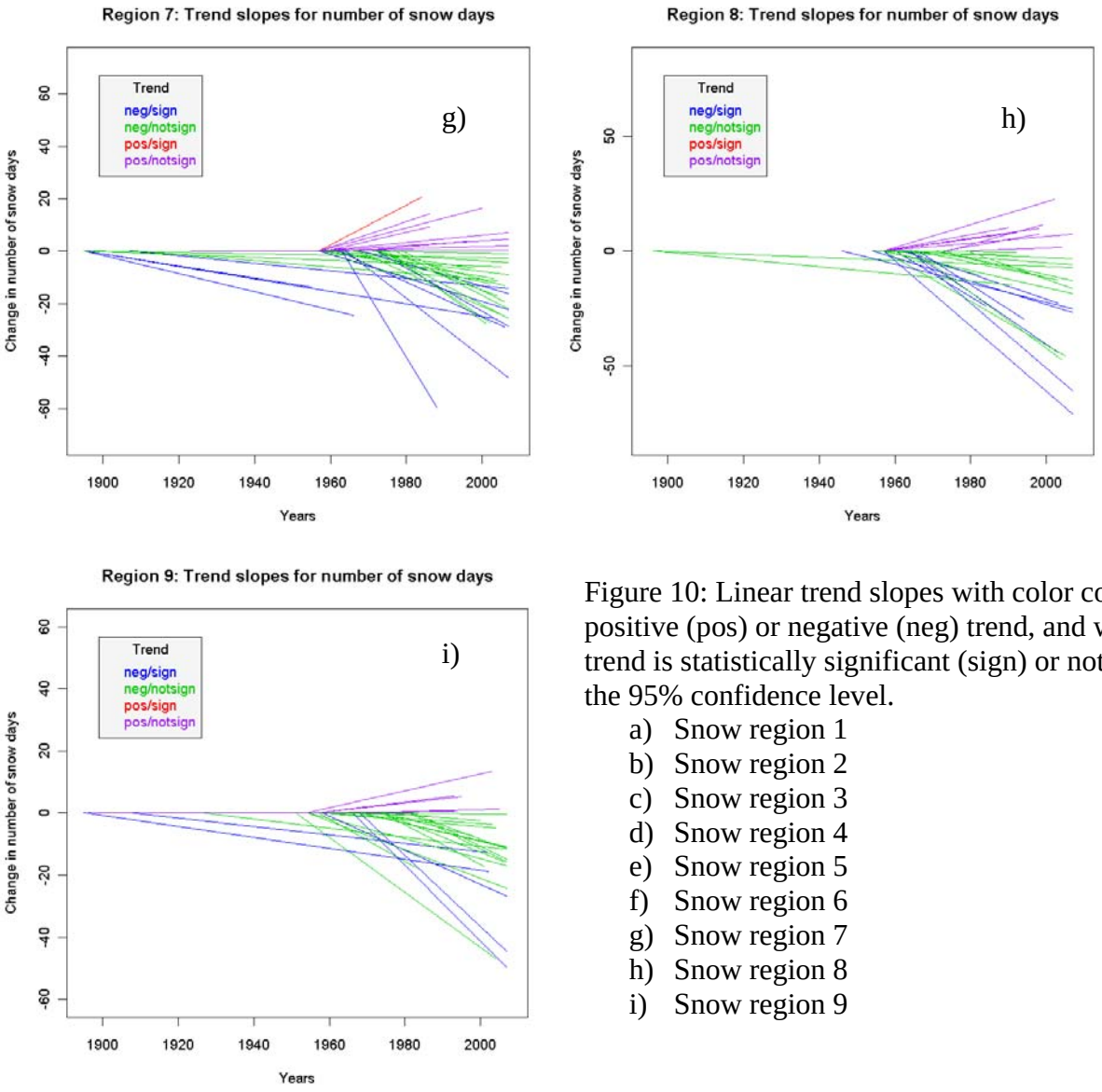


Figure 10: Linear trend slopes with color code, indicating positive (pos) or negative (neg) trend, and whether the trend is statistically significant (sign) or not (notsign) at the 95% confidence level.

a) Snow region 1
b) Snow region 2
c) Snow region 3
d) Snow region 4
e) Snow region 5
f) Snow region 6
g) Snow region 7
h) Snow region 8
i) Snow region 9

3.2 Comparison between simulations and observations

In this section we present the results from the comparison between observed number of snow days with the number of snow days simulated by the senorge.no snow model (Engeset et al., 2004a) at 323 of the 585 stations. Plots from every station are shown in the appendix. The slopes are compared for the same period based on available observations after the year 1961, when simulations start. It is known that elevation from the terrain model used in senorge.no differs from real elevation. At some stations this difference is large, and might have a significant effect on the snow simulations. Figure 11 illustrates the influence of this elevation difference on the difference between simulated and observed average number of snow days. There is a slight bias towards higher elevations in the model, but we see no clear pattern indicating whether greater elevation differences generate less accurate number of snow days. In order to isolate the stations where elevation difference clearly is not the main factor for inaccurate simulations, we looked at stations where elevation difference is less or equal to 50 meters. 72 stations show a difference in number of snow days greater or equal to 20 days, where 52 of them reveal overestimation of snow days. 16 stations show a difference in number of snow days greater or equal to 50 days, and all except one show overestimation of snow days.

The following stations demonstrate the greatest difference in number of snow days: 58480 Briksdal (131 days), 57390 Skei I Jølster (130 days), 61850 Eikesdal (103 days), and 53700 Aurland (95 days). There is overestimation of snow days at all these four stations, while station 55550 Hafslo reveal the greatest underestimation of snow days with a difference of 63 days. To further investigate the reason for the exaggerated over- and underestimation, we plotted accumulated winter (January through March) precipitation at the five before mentioned stations (Figure 12). All stations experience overestimation of precipitation, including at 55550 Hafslo, where snow days are underestimated. However, at this station there is only an overestimation of precipitation of approximately 100 mm on average, which is probably a result of the correction due to gauge undercatch. At the other stations the overestimation is greater (approximately 500 mm on average at 57390 Skei i Jølster and 58480 Briksdal). Among these stations, it is also seen that the larger the overestimation of snow days, the larger the overestimation of precipitation. From this we conclude that inaccurate interpolation of precipitation can explain some of the differences we see between simulated and observed number of snow days.

Figure 13 shows the correlation coefficient between the time series of observed and simulated number of snow days. The strongest correlations are found in the southeast and along the entire south coast, while lower correlations are found inland and in central Norway up to Troms County. Most of Finnmark, also show relatively high correlations. The root mean squared error (RMSE) of the average (figure 14) and the slope (figure 15) also reveal very good results in the southeast, while weak results are found in the mountain areas in Sogn og Fjordane and Møre og Romsdal Counties. One exception from the good results seen in the southeast is station 1650 Strømsfoss sluse (indicated in figure 14), where we see great overestimation in the number of snow days. Figure 16 shows the difference between simulated and observed average number of snow days. At more than 90 stations the simulated average is higher than the observed average, while a little more than 50 stations show a lower simulated average. We notice that overestimation of the number of snow days occurs mostly inland, and is probably linked to snow melt not being simulated accurately. One known problem with the senorge.no snow model is overestimation of precipitation in high altitudes, caused by an exaggerated elevation gradient (Engeset et al, 2004b). Due to the lack of stations in these areas, this is not seen in our study. To the contrary, underestimation of the number of snow days occurs along the coast in the southeast and in the western part of southern Norway. This is supported by figure 17, showing that most of the underestimation takes place in low elevations (coast). Other factors, such as misrepresentation of melting in the model or erroneous correction for gauge undercatch (Førland et al., 1996), might be the reason for this underestimation along the southern coast.

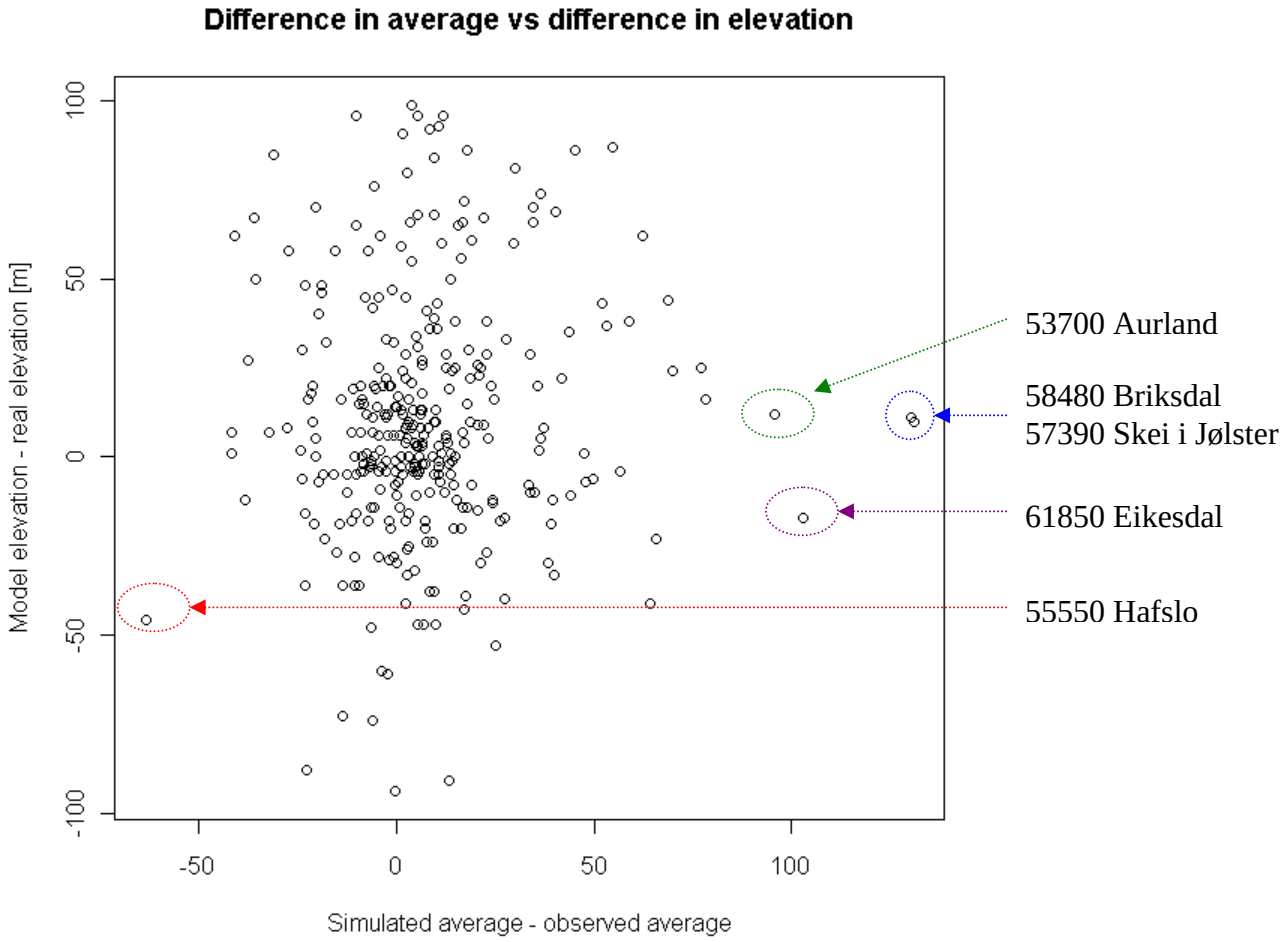


Figure 11: Difference between simulated and observed average number of snow days versus difference between model and real station elevation. The stations with greatest differences are indicated.

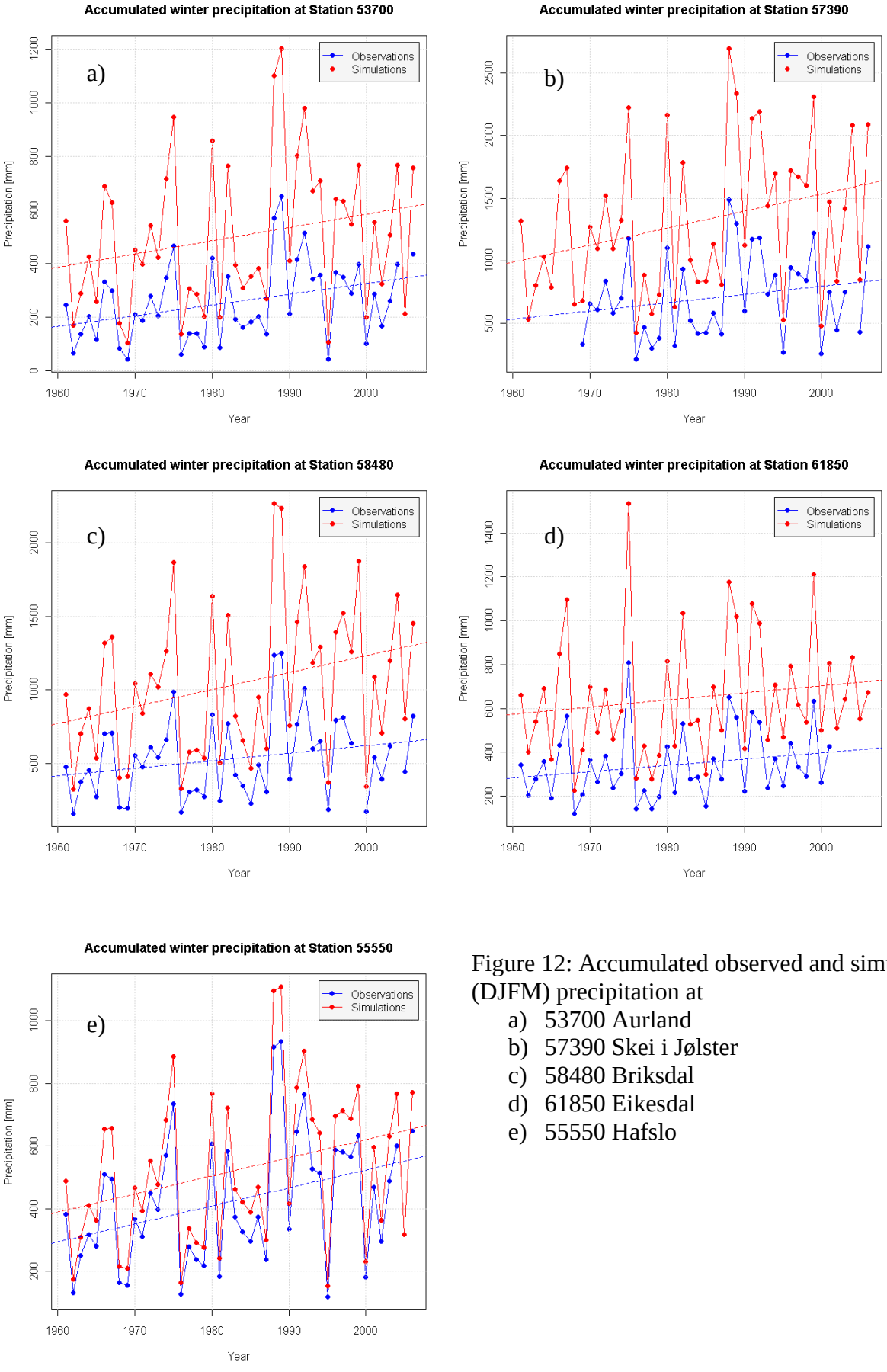


Figure 12: Accumulated observed and simulated winter (DJFM) precipitation at

a) 53700 Aurland
b) 57390 Skei i Jølster
c) 58480 Briksdal
d) 61850 Eikesdal
e) 55550 Hafslo

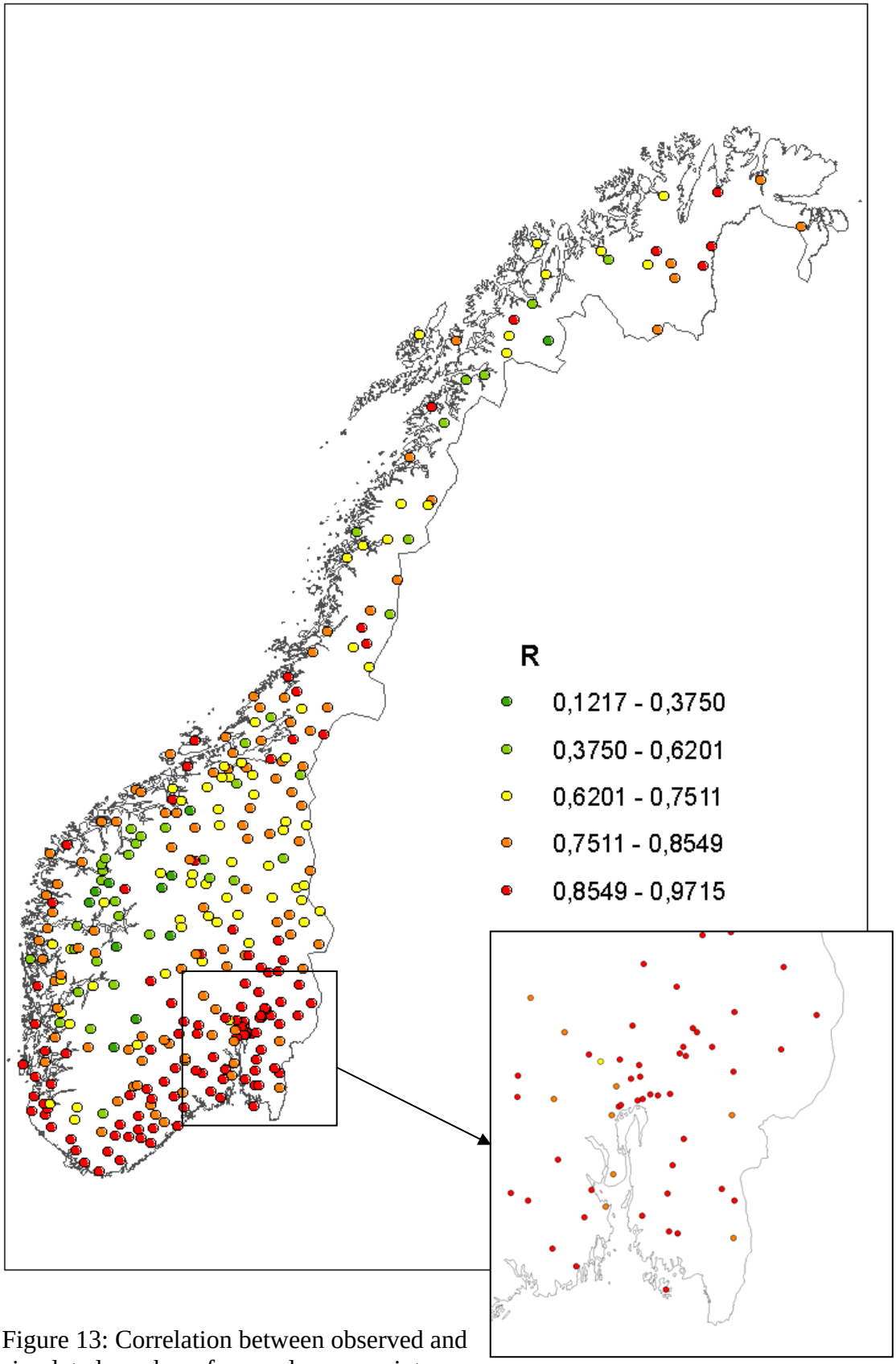


Figure 13: Correlation between observed and simulated number of snow days per winter season. R = correlation coefficient.

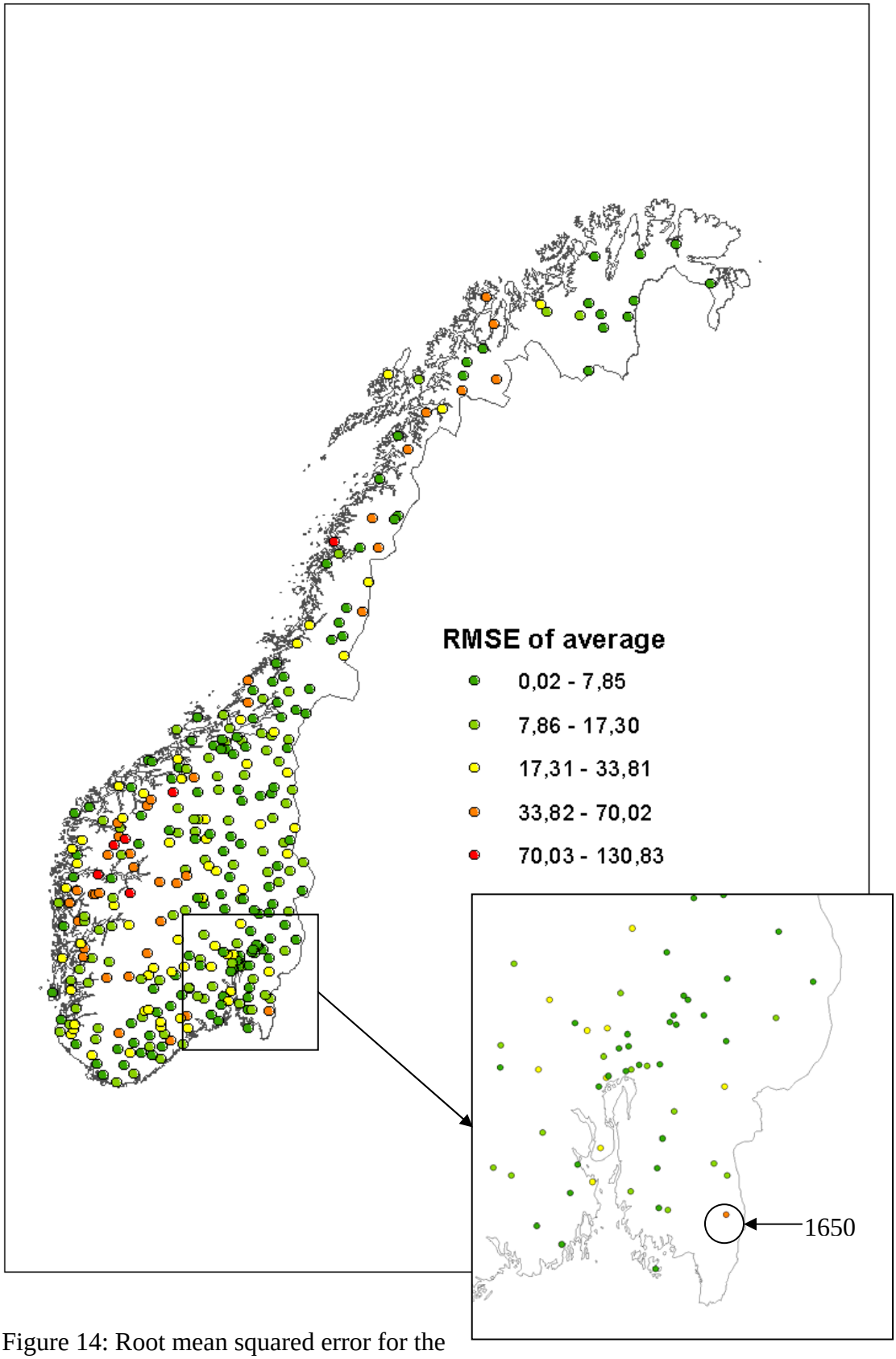


Figure 14: Root mean squared error for the average number of snow days per winter season. The circle indicates the station 1650 Strømsfoss sluse, where comparison results are poorer than at surrounding stations.

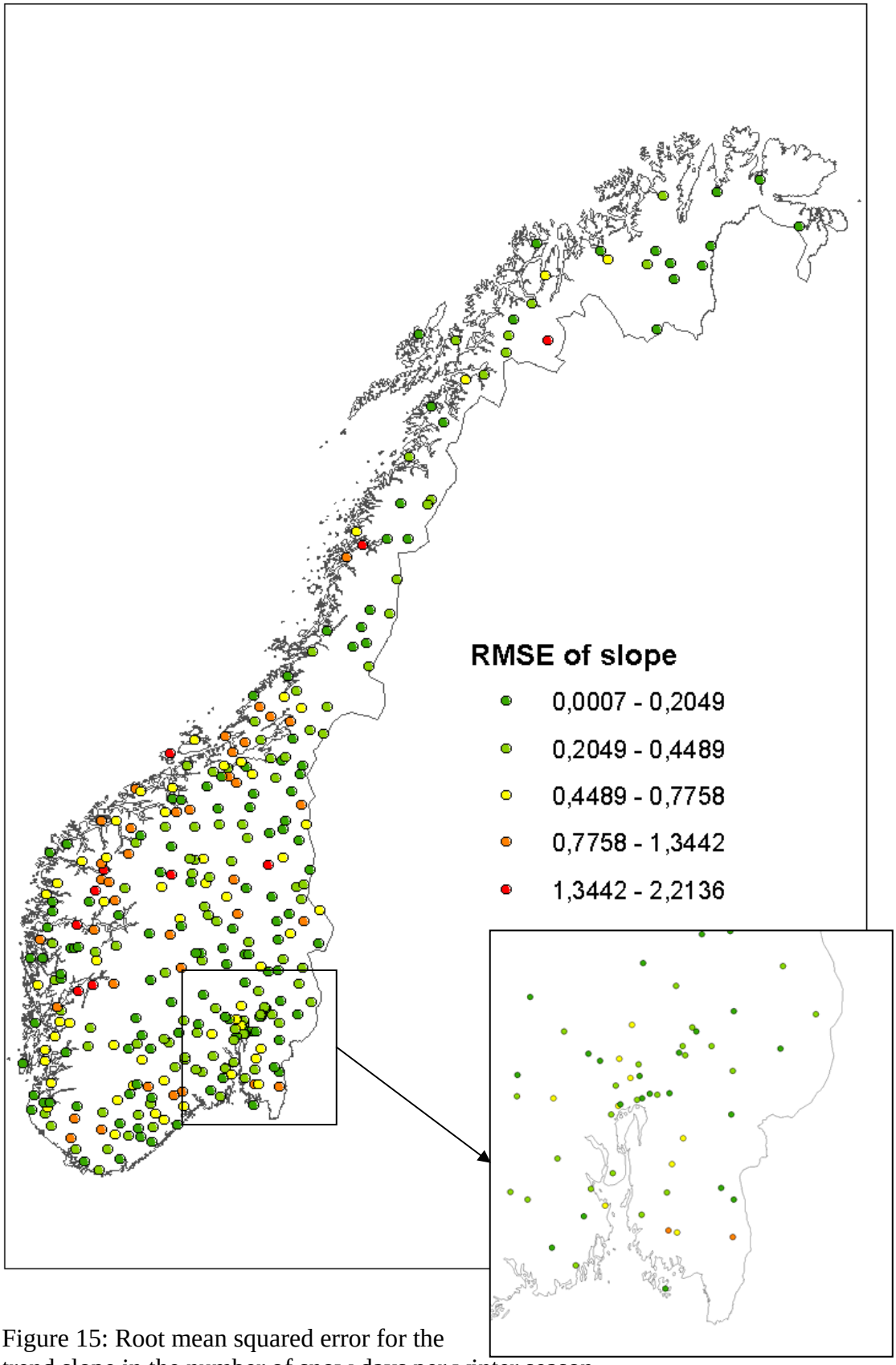


Figure 15: Root mean squared error for the trend slope in the number of snow days per winter season.

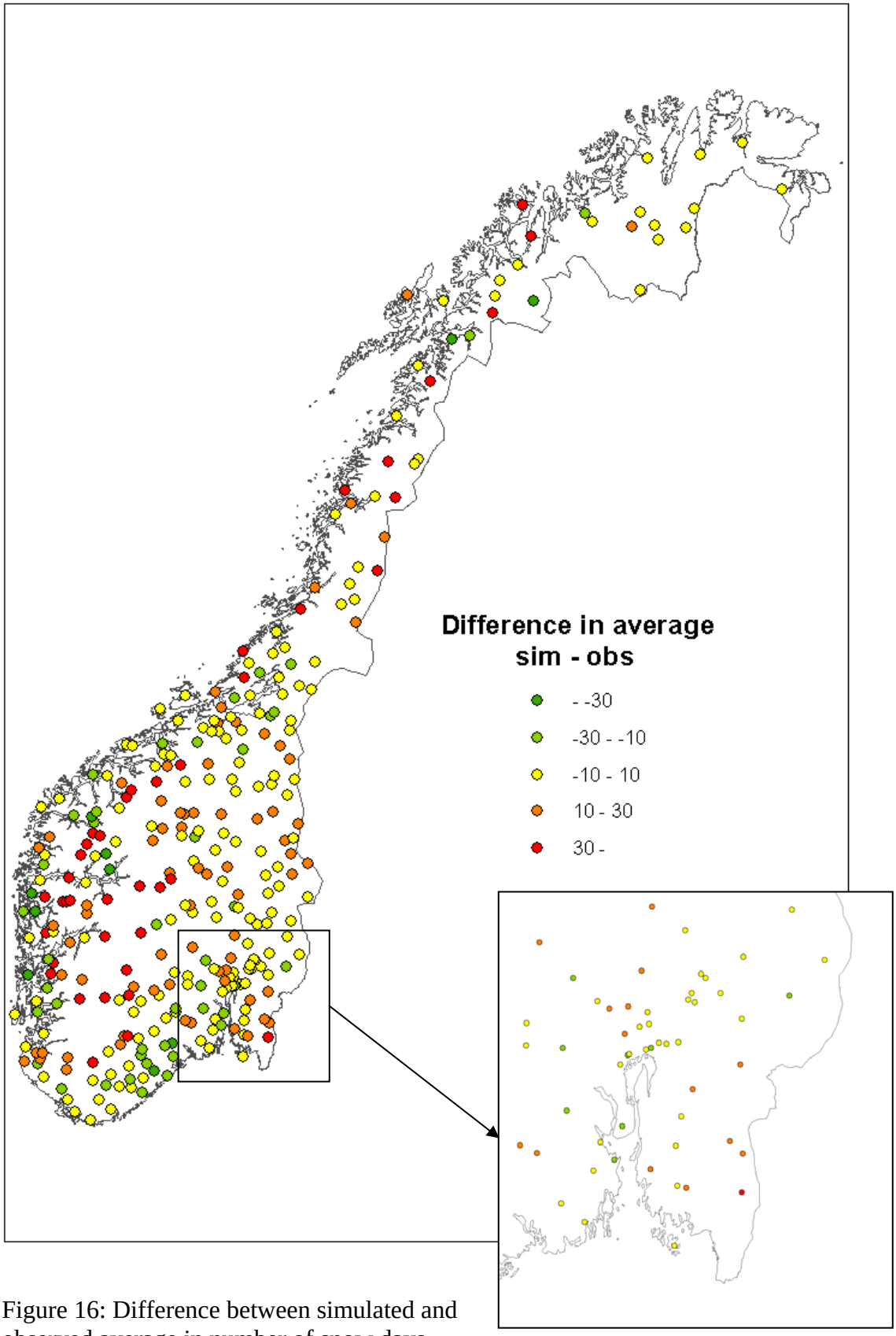


Figure 16: Difference between simulated and observed average in number of snow days.

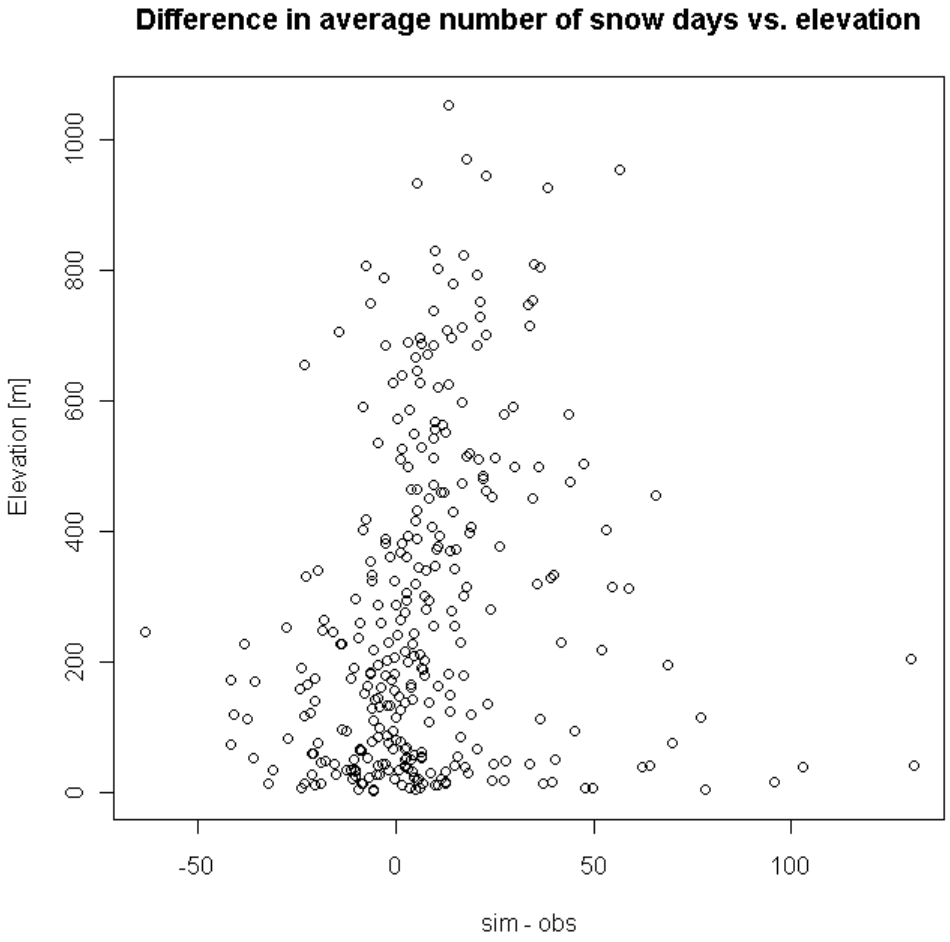


Figure 17: Difference between simulated and observed average number of snow days versus station elevation.

3.2.1 Snow regions

In table 2 we see that the highest correlation between observed and simulated number of snow days is found in Region 1, South-eastern region, coast, with $R^2 = 0.7864$. The average root squared errors are also relatively low here. Region 2, South-eastern region, inland, also shows good results ($R^2 = 0.7374$). Lowest correlation ($R^2 = 0.4030$) is found in Region 8, "Troms" region, which also shows rather high root squared errors. Region 5, Western region, follows closely with $R^2 = 0.4155$, and very high root squared errors. In general, we find the best results in the south-eastern regions, and decent results in Finnmark County (Region 9), while the rest of northern Norway and down to central Norway show weaker results.

	Reg1	**Reg2**	**Reg3**	**Reg4**	**Reg5**	**Reg6**	**Reg7**	**Reg8**	**Reg9**
R^2	0.7864	0.7374	0.5176	0.6399	0.4155	0.6485	0.4986	0.4030	0.6611
RMSEave	12.06	8.37	14.58	18.89	27.80	13.62	21.67	22.66	3.76
RMSEslope	0.3781	0.2597	0.3260	0.4332	0.5992	0.6324	0.3684	0.4456	0.1750

Table 2: Coefficient of determination (R^2) between observed and simulated number of snow days, and the mean root squared errors of the average and the slope for each region.

4 Conclusions

In this study, trends in the number of snow days were evaluated at 585 meteorological stations, 232 of which were compared to simulations from the senorge.no snow model. A majority of the stations show negative trends, and at 247 of the 585 stations studied, the negative trend is statistically significant at the 95% confidence level. In general there is a steeper negative trend after 1990, consistent with observed positive trends in temperature which directly shortens the snow season. Significant positive trends were found at no more than 10 stations. These stations were mostly located in elevated areas inland, characterized by low temperatures, and might be related to an increase in precipitation. The southernmost snow regions, including Regions 1, 2 and 4, show the largest fraction of stations with significant negative trends in the number of snow days.

It is seen that the senorge.no snow model performs best in the southeast, including snow regions 1 and 2, while central and northern Norway up to Troms County show weaker results, especially in Region 8. There are a greater number of stations in the southeast, and interpolation is based on more stations, which might explain the good results here. In Finnmark (Region 9), however, the snow model performs relatively well even with few stations, suggesting that other factors also play a role in the model performance. We found that the model employs elevations that differ with variable degree from real station elevations, but this does not seem to have a consistent influence on the results. We see a tendency of overestimation of snow days at a lot of the stations. This might partly be explained by inaccurate interpolation of precipitation, which is one of two inputs in the snow model, along with temperature. However, other factors such as is the snow model not handling melting correctly, and correction for gauge undercatch. It is clear that the model does not perform satisfactory in many areas, even where elevation differences are minimal. The stations demonstrating great differences in average number of snow days regarding small elevation differences are located below 300 meters, and should not be affected significantly by an exaggerated precipitation gradient.

5 Acknowledgements

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This study was done under the projects NorClim, EALAT, CAVIAR and NORADAPT.

6 References

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APPENDIX

Table 3 below presents all the stations applied in part II of this analysis, where observed number of snow days is compared to simulated number of snow days from the senorge.no datatset. The table contains the station number (met.no), station name, real station elevation, elevation used in the snow model, first year of comparison, last year of comparison, and the snow region where the station is located. In addition, a plot of simulated and observed number of snow days for each station is shown, including the coefficient of determination (R2), the number of years compared (n), and whether the linear trends are statistically significant at the 95% confidence level. “both” means that both observed and simulated trends are significant, “sim” means only the simulated trend is significant, “obs” means only the observed trend is significant, and “none” mean neither observed or simulated trend is significant.

Station number	Station name	Real elevation [m]	Model elevation [m]	Start year	End year	Region
60	LINNES	564	660	1968	2007	2
100	PLASSEN	333	340	1968	2007	3
290	TÅGMYRA	557	593	1966	2007	3
420	HEGGERISET - NORDSTRAND	481	490	1968	2007	3
600	GLØTVOLA	696	720	1960	1997	1
700	DREVSJØ	672	680	1960	2001	3
730	VALDALEN	794	820	1968	2007	2
770	ELLEFSPLASS	713	720	1968	2007	2
900	LANGEN	685	680	1968	2000	2
1080	HVALER	17	20	1960	2007	2
1650	STRØMSFOSS SLUSE	113	118	1960	2007	2
1950	ØRJE	123	118	1960	2007	2
2610	BJØRKELANGEN II	135	140	1962	2007	2
3150	KALNES	56	24	1960	2003	2
3200	BATERØD	31	60	1960	2007	2
3500	SVARVERUD I EIDSBERG	182	180	1960	2005	2
3780	IGSI I HOBØL	144	140	1960	2007	2
4050	ENEBAKK	163	160	1960	1996	3
4260	SKEDSMO - HELLERUD	141	160	1972	2001	3
4730	FURUSMO	200	200	1965	2000	3
4740	UKKESTAD	187	140	1965	2007	3
4780	GARDERMOEN	202	200	1960	2007	3
5050	SAGSTUA VED ÅRNES	191	194	1960	1991	3
5350	NORD-ODAL	147	153	1960	2007	3
5650	VINGER	175	157	1960	2003	3
5800	MELDALEN	293	298	1960	2004	3
6040	FLISA	184	182	1960	1997	5
6490	RUNDBERGET	347	300	1968	2002	5
6620	ELVERUM - FAGERTUN	230	250	1978	2007	5
7010	RENA - HAUGEDALEN	240	233	1960	2007	3
7250	OSSJØEN	450	440	1960	2004	3
7360	OSDALEN - BEKKEN	530	534	1963	1992	1
7570	NORDRE LØSSET	256	340	1968	2003	5

7660	ÅKRESTRØMMEN	260	267	1974	2007	5
7900	FINSTAD	513	460	1960	1996	5
8450	ATNDALEN - RØNNINGEN	535	580	1971	2006	1
8710	SØRNESSET	739	701	1960	1996	1
8720	ATNSJØEN	749	701	1960	2007	1
9100	FOLLDAL	709	713	1960	2004	1
9870	BLANKTJERNMOEN I KVIKNE	690	700	1960	2007	2
10100	OS I ØSTERDAL	788	800	1960	2004	2
10400	RØROS	628	641	1960	2000	1
10600	AURSUND	685	707	1960	2007	1
10900	VAULDALEN	830	840	1960	2004	2
11050	SVANFOSS	127	140	1978	2007	2
11080	HJÆRA	178	160	1965	2001	1
11120	EIDSVOLL VERK	181	180	1960	2007	1
11350	ROGNLIEN	394	410	1966	2001	1
11710	EINAVATN	406	398	1968	2007	2
11900	BIRI	190	190	1960	2007	1
12200	JØNSBERG LANDBRUKSSKOLE	218	204	1960	2007	1
12250	ROKO	324	230	1964	2002	2
12310	HAMAR VANNVERK	132	152	1967	1998	2
12600	VEA	161	260	1967	2007	2
12800	MESNA - TYRIA	520	530	1962	2007	3
13050	GAUSDAL - SKOGLI	647	600	1972	2007	3
13100	VESTRE GAUSDAL	580	540	1960	2006	3
13310	SØRE BREKKOM	780	760	1975	2007	3
13450	HOVDGRENDA	666	700	1972	2007	3
13640	OLSTAPPEN	687	700	1971	2006	3
13700	ESPEDALEN	752	722	1960	2007	2
13900	BYGDIN	1055	1074	1960	1992	2
14550	PRESTSTULEN	823	780	1960	2007	2
14710	GROV	808	820	1960	1998	3
15430	BØVERDAL	701	730	1960	2007	3
15480	SKJÅK II	372	415	1960	2007	3
15660	SKJÅK	432	500	1960	2007	1
16240	TOLSTADÅSEN	656	620	1965	2004	2
16270	HØVRINGEN	935	930	1972	2007	2
16610	FOKSTUGU	972	958	1968	2007	1
16740	KJØREMSGRENDE	626	535	1976	2007	1
16790	LESJA - SVANBORG	551	557	1975	2007	1
17150	RYGGE	40	40	1960	2005	1
17500	FLØTER	131	133	1972	2007	1
18250	ALNSJØEN VED OSLO	236	200	1960	1994	1
18450	MARIDALSOSET	173	220	1960	2007	2
18500	BJØRNHOLT	360	440	1960	2005	2
18550	HAKLOA I NORDMARKA	389	420	1960	1992	2
18700	OSLO - BLINDERN	94	84	1960	2007	3
18850	SMESTAD II	53	20	1960	2001	1
19100	KJELSÅS I SØRKEDALEN	319	308	1960	2007	1
19200	STORFLÅTAN I NORDMARKA	462	500	1960	1996	1
19480	DØNSKI	59	40	1970	2002	1
19490	GJETTUM	67	75	1970	2000	2

19530	AUREVANN	277	276	1963	1995	1
19710	ASKER	163	145	1960	2007	3
19850	HURUM	122	140	1960	2005	3
20250	HOLE	66	75	1960	2007	2
20520	LUNNER	372	360	1960	2007	3
21360	ODNES	156	148	1960	2007	1
21770	NORD TORPA - STAUM	526	550	1960	2002	1
22840	REINLI	628	660	1960	2007	3
22950	NORD-AURDAL II	452	440	1960	1999	1
23160	ÅBJØRSBRÅTEN	639	730	1960	2007	3
23560	BEITO	754	820	1960	2007	3
23720	VANG I VALDRES	477	466	1960	2007	3
24100	ASK PÅ RINGERIKE	77	77	1960	2007	1
24210	SOKNA II	140	140	1960	2007	1
24770	GULSVIK IV	149	150	1960	2007	1
24960	GOL - STAKE	542	610	1964	2007	1
25320	ÅL III	706	687	1960	2007	1
25590	GEILO - GEILOSTØLEN	810	800	1966	2004	1
26160	FOSSUM I MODUM	116	100	1960	2000	1
26240	HIÅSEN I SIGDAL	402	400	1960	2006	1
26670	HAKAVIK	21	40	1964	2006	3
27070	ROVE	78	120	1961	2004	1
27140	BORREVANNET	12	60	1965	2006	1
27300	RAMNES	44	40	1960	2001	1
27720	SANDEFJORD - BRØNNUM	34	20	1973	2003	1
27800	HEDRUM	31	40	1960	2007	3
28800	LYNGDAL I NUMEDAL	288	260	1960	2005	1
28920	VEGGLI	243	247	1960	2002	3
29310	UVDAL II	486	553	1960	2007	1
30220	MYKLE	430	422	1960	2007	1
30370	BESSTUL I GJERPEN	460	520	1960	2001	1
30530	NOTODDEN	34	16	1960	2007	1
30570	SVÆLGFOSS III	96	60	1960	2002	1
30860	BERGELIGREND	514	600	1960	2007	1
31570	MØSVATN - HAUG	946	919	1977	2007	1
31660	MOGEN	954	950	1960	2007	1
31900	TUDDAL	464	472	1960	2007	1
31940	REISJÅ I TUDDAL	686	671	1960	1993	3
32200	LIFJELL	354	340	1960	2007	1
32350	ÅMOTSDAL	567	580	1971	2007	1
32780	HØIDALEN I SOLUM	113	140	1960	2007	1
32900	HØYDALSMO	573	590	1960	2003	1
33250	RAULAND	715	705	1960	2007	4
33560	VINJESVINGEN	471	510	1962	1999	2
34400	FARSJØ	48	80	1960	2004	4
34600	DRANGEDAL	82	140	1960	2007	1
34900	POSTMYR I DRANGEDAL	464	560	1960	2007	4
35340	RISØR BRANNSTASJON	36	0	1968	2007	4
35590	VEGÅRSHEI - SPILLING	170	220	1971	2000	4
36300	REIERSØL	42	100	1960	2006	4
36560	NELAUG	142	138	1966	2007	4

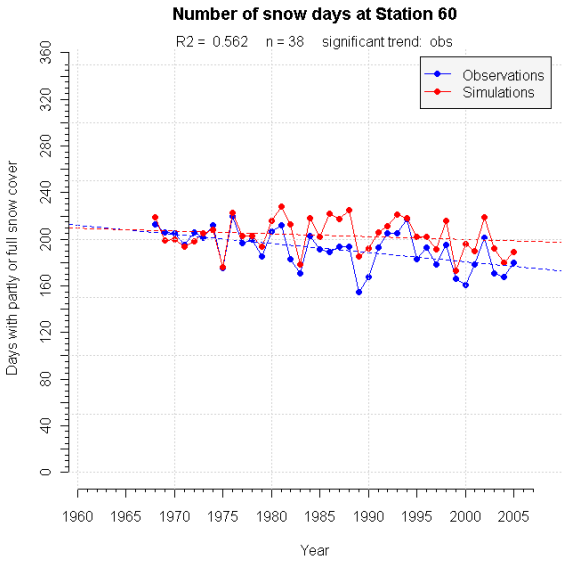
36970	TOVSLID	599	585	1960	1999	4
37040	KATTERÅS	227	243	1973	2003	4
37090	HØGEFOSS	164	180	1960	2003	4
37230	TVEITSUND	252	260	1960	2007	4
37300	FJALESTAD	344	340	1965	2007	4
37750	FYRESDAL	315	330	1960	2005	4
37800	FYRESDAL - LAUVDAL	499	580	1965	2000	4
38380	DOVLAND	259	256	1971	2007	4
38450	HEREFOSS	85	110	1960	2007	4
38600	MYKLAND	245	240	1960	2007	4
38800	TOVDAL	227	240	1960	2007	4
39220	MESTAD I ODDERNES	151	196	1960	2007	4
39550	HANNÅSMYRAN	190	220	1972	2001	2
39690	BYGLANDSFJORD - SOLBAKKEN	212	220	1970	2007	2
39840	AUSTAD - EKRON	207	203	1973	2004	4
40900	BJÅEN	927	897	1960	2000	2
41110	MANDAL II	138	100	1960	2006	4
41200	FINSLAND	275	320	1971	2007	4
41450	SKJERKA	263	260	1970	2001	4
41550	LJOSLAND - MONEN	504	505	1971	2007	4
41820	KVÅVIK	4	0	1972	2007	4
42250	FEDAFJORDEN II	26	40	1960	2007	4
42720	BAKKE	75	68	1960	2007	5
42810	TONSTAD - NETTFED	55	120	1972	2007	4
42890	SKREÅDALEN	474	540	1960	2006	4
43450	HELLELAND	94	100	1960	2003	4
44160	HOGNESTAD	19	20	1960	2007	4
44480	SØYLAND I GJESDAL	263	240	1960	2007	4
44520	HELLAND I GJESDAL	280	300	1962	2007	1
44560	SOLA	7	19	1960	2007	5
44800	SVILAND	230	210	1960	2007	5
44900	OLTEDAL	44	60	1972	2007	5
45600	BJØRHEIM I RYFYLKE	64	80	1960	2007	5
46150	SAND I RYFYLKE II	25	20	1960	2007	4
46300	SULDALSVATN	333	300	1960	2007	4
46450	RØLDAL	393	386	1960	2007	4
46910	NEDRE VATS	64	60	1969	2007	4
47020	NEDSTRAND	10	80	1960	2000	4
47240	KARMØY - BREKKEVANN	19	33	1968	2007	5
47500	ETNE	35	30	1960	2003	5
47820	EIKEMO	178	250	1962	2007	5
47890	OPSTVEIT	38	100	1969	2007	2
48090	LITLABØ - DALE	35	120	1971	2007	5
48500	ROSENDAL	51	120	1960	2007	3
49070	KVÅLE	342	380	1966	2007	5
49550	KINSARVIK	108	200	1960	2007	5
49750	LISET	748	740	1975	2007	5
50150	HATLESTRAND	45	91	1960	2007	5
50250	TYSSE	41	0	1960	2003	1
50300	KVAMSKOGEN	408	384	1960	2005	4
50350	SAMNANGER	370	420	1960	2000	4

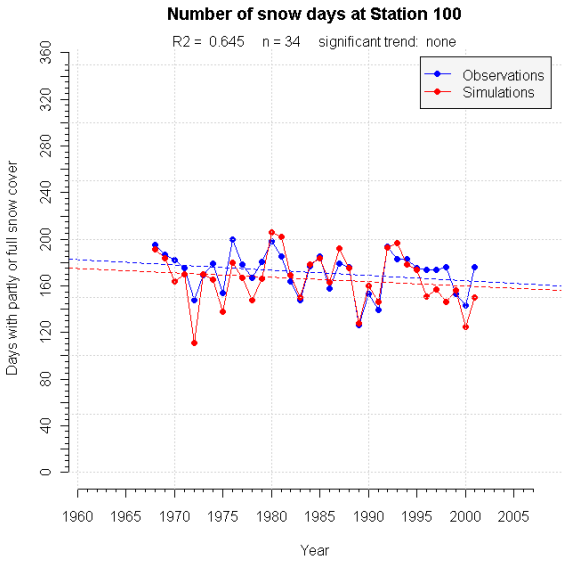
50450	FANA - STEND	54	80	1960	2002	5
51670	REIMEGREND	590	650	1960	1997	4
52110	FJELLANGER II	456	433	1962	2003	5
52170	EKSINGEDAL	450	520	1960	2007	4
52220	GULLBRÅ	579	614	1960	2007	2
52400	EIKANGER - MYR	72	73	1968	2007	5
52440	HOLSNØY - LANDSVIK	27	0	1975	2004	5
52600	HAUKELAND	196	240	1960	2001	5
52750	FRØYSET	13	20	1960	2007	5
52860	TAKLE	38	20	1960	2007	5
52990	ORTNEVIK	4	20	1973	2007	5
53070	VIK I SOGN III	65	37	1960	2007	4
53180	BRANDSET	460	450	1973	2007	4
53700	AURLAND	15	27	1960	2007	2
54600	MARISTOVA	806	880	1960	2007	3
55430	BJØRKEHAUG I JOSTEDAL	324	250	1964	2003	5
55550	HAFSLO	246	200	1960	2007	2
55670	VEITASTROND	172	179	1973	2007	5
55840	FJÆRLAND - SKARESTAD	10	20	1960	2003	5
56520	HOVLANDSDAL	60	80	1960	2007	5
56650	DALE I SUNNFJORD II	51	80	1960	2004	5
56960	HAUKEDAL	329	310	1960	2007	6
57110	OSLAND VED STONGFJORDEN	119	180	1960	2001	5
57390	SKEI I JØLSTER	205	216	1969	2007	5
57680	EIKEFJORD	30	60	1960	2006	5
58320	MYKLEBUST I BREIM	315	402	1960	2007	6
58400	INNVIK	32	97	1960	2004	6
58480	BRIKSDAL	40	50	1960	2007	5
58780	NORDFJORDEID - NYMARK	34	130	1973	2007	3
58880	SINDRE	118	180	1960	2004	3
58960	HORNINDAL	340	380	1960	2007	5
59200	ULVESUND	1	1	1960	1994	5
59610	FISKÅBYGD	41	47	1969	2007	5
60300	GEIRANGER	419	420	1960	2004	5
60500	TAFJORD	15	3	1960	2007	2
60620	GRØNNING	312	350	1973	2007	5
60710	STORDAL - OVERØYE	398	420	1973	2002	5
60800	ØRSKOG	4	80	1960	2007	5
60890	BRUSDALSVATN II	27	37	1973	2007	6
61770	LESJASKOG	621	620	1960	2007	6
61820	ERESFJORD	14	20	1960	2007	5
61850	EIKESDAL	39	22	1960	2001	5
62700	HUSTADVATN	80	69	1960	2007	5
62900	EIDE PÅ NORDMØRE	49	70	1960	2007	5
63100	ØKSENDAL	47	80	1960	2007	2
63530	HAFSÅS	698	710	1978	2007	5
63750	MJØEN	512	522	1965	2007	3
64460	HALSAFJORD II	12	60	1960	2007	3
64550	TINGVOLL - HANEM	69	78	1972	2007	3
64580	ÅLVUNDFJORD	5	20	1960	2007	5
64700	INNERDAL	403	440	1960	2000	3

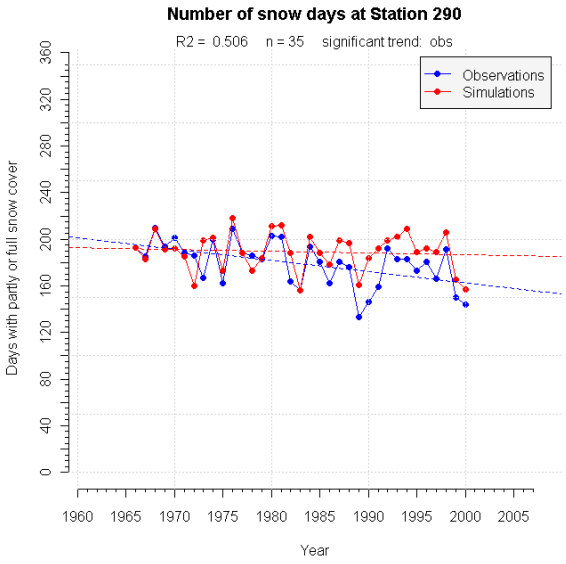
64900	RINDAL	228	155	1960	2007	3
65150	AUREDALEN	179	212	1969	2005	5
65270	SØVATNET	306	280	1965	2007	3
65370	SMØLA - MOLDSTAD	30	30	1964	2007	3
65600	HITRA	23	20	1960	2007	3
66030	LENSVIK	15	40	1969	2005	3
66070	SKJENALDFOSSEN I ORKDAL	84	140	1960	2007	5
66100	SONGLI	300	280	1960	2007	5
66190	LØFTEN	160	100	1960	2002	3
66210	HOSTON	203	209	1960	2007	3
66250	HØLONDA	360	340	1960	2003	3
66580	NERSKOGEN II	803	896	1965	2007	3
66850	KVIKNE I ØSTERDAL	550	547	1960	2007	3
67150	LEINSTRAND	13	18	1960	2007	2
67450	ENDALSVOLL	592	607	1963	2003	5
67540	RØSBJØRGEN	330	242	1960	2007	3
68000	BYNESET	98	89	1960	2003	6
68270	LØKSMYR	165	220	1960	2007	6
68330	LIEN I SELBU	255	280	1960	2007	6
68420	AUNET	302	306	1960	2007	6
68840	STUGUDAL - KÅSEN	730	755	1978	2007	5
69100	VÆRNES	12	12	1960	2007	5
69230	HEGRA II	33	40	1960	2007	6
69410	ROTVOLL	587	584	1962	1997	6
69470	KOPPERÅ	294	330	1964	2005	6
69550	ØSTÅS I HEGRA	175	180	1960	2007	6
69960	BURAN	182	181	1962	2007	6
70480	SKJÆKERFOSSEN	110	130	1960	2007	6
70500	VERA	368	368	1966	2007	2
70670	MÆRE	20	20	1969	2007	3
70820	UTGÅRD	50	22	1962	2007	2
70850	KJØBLI I SNÅSA	195	220	1960	2007	7
71150	SELAVATN	296	280	1960	2005	7
71280	LEKSVIK - MYRAN	138	160	1970	2007	7
71370	SLIPER	158	160	1965	2001	6
71550	ØRLAND III	10	5	1960	2007	6
71750	BREIVOLL	94	180	1966	2007	2
71810	ÅFJORD - MOMYR	280	256	1975	2007	6
71900	BESSAKER	12	20	1960	2007	3
72100	NAMDALSEID	86	25	1960	2007	3
72250	BANGDALEN	62	60	1960	2007	7
73800	TUNNSJØ	376	358	1960	2007	7
74510	SANDÅMO	216	220	1966	1998	7
74800	NAMSVATN	498	473	1960	2003	7
75020	OTTERØY	36	20	1974	2007	7
75100	LIAFOSS	44	73	1960	2007	7
76100	ØKSNINGØY	17	0	1960	2007	3
77420	MAJAVATN III	339	380	1967	1996	7
77510	FIPLINGDAL II	417	420	1961	2002	7
77850	SUSENDAL	498	500	1960	2007	7
78250	LEIRFJORD	53	80	1960	2007	7

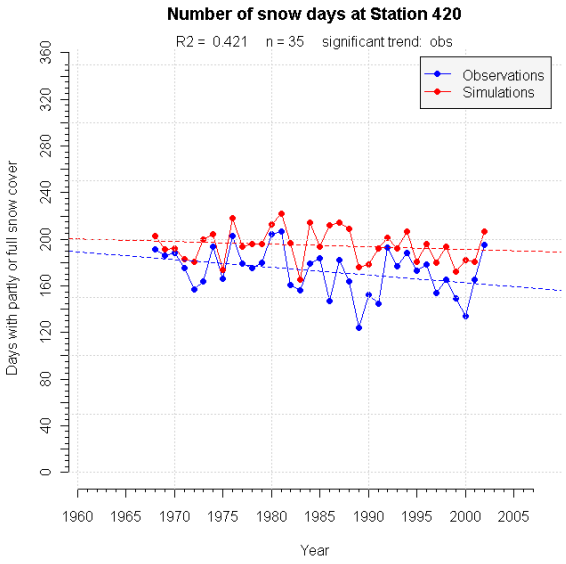
78350	BARDAL	39	0	1971	2007	7
78770	FAMVATNET	510	533	1968	2007	7
79480	MO I RANA III	41	0	1960	2007	7
79710	GRØNFJELLDAL	320	340	1967	2004	7
80200	LURØY	115	140	1960	2007	7
81250	LEIRÅMO	217	260	1972	2006	7
81730	JUNKERDAL	210	214	1977	2007	7
81770	LØNSDAL	511	570	1972	2007	3
82160	HEGGMOEN VED BODØ	7	73	1960	2007	8
83500	KRÅKMO	76	100	1960	2005	3
83550	FINNØY I HAMARØY	53	111	1972	2004	3
84070	BJØRKÅSEN	53	120	1964	2007	8
84450	ANKENES	249	244	1960	2004	8
86950	ALSVÅG I VESTERÅLEN II	18	5	1960	2007	8
87550	ERVIK	14	10	1960	1998	8
88100	BONES I BARDU	230	252	1960	2007	8
89350	BARDUFOSS	76	47	1960	2007	3
89500	SÆTERMOEN II	114	84	1960	2007	8
89950	DIVIDALEN	228	216	1960	2007	8
90200	STORSTEINNES I BALSFJORD	27	89	1960	2007	3
90650	GRUNNFJORD - STAKKEN	7	0	1971	2007	8
91110	ULLSFJORD II	6	0	1962	2003	8
92210	KVÆNANGSBOTN II	65	85	1960	1992	8
92350	NORDSTRAUM I KVÆNANGEN	6	0	1965	2007	9
93300	SUOLOVUOPMI	377	380	1960	2002	9
93500	JOTKAJAVRE	389	400	1960	2006	9
93900	SIHCCAJAVRI	382	394	1960	2007	9
94180	SKAIDI	62	80	1968	2007	9
95950	KUNES	22	20	1968	2005	9
96800	RUSTEFJELBMA	10	5	1960	2007	9
97150	VALJOK	132	144	1960	2004	9
97250	KARASJOK	129	140	1960	2003	9
97350	CUOVDDATMOHKKI	286	300	1966	2007	9
97580	MOLLESJOHKA	382	381	1974	2006	3
99330	VEINES I NEIDEN	44	64	1960	2007	9

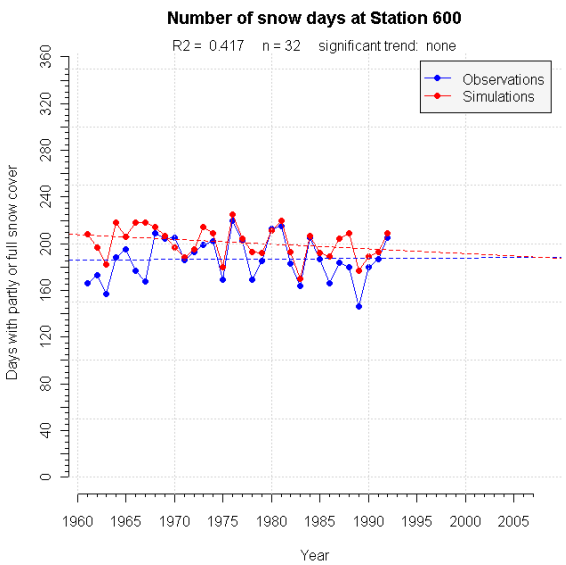
Table 3: Stations used in comparison between simulated and observed number of snow days.

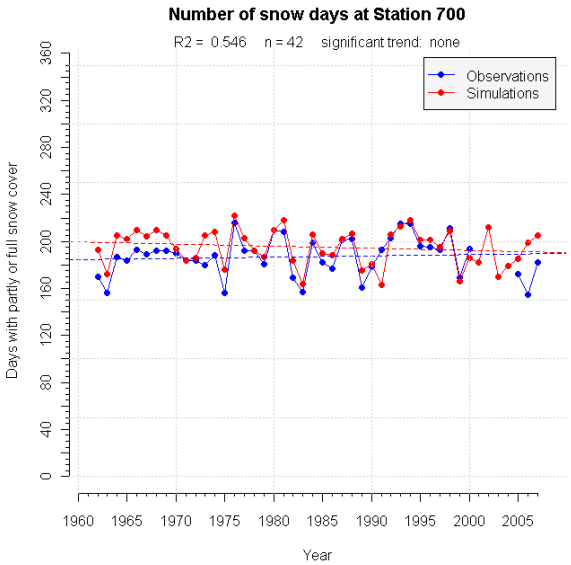

Number of snow days at Station 60
R2 = 0.562 n = 38 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

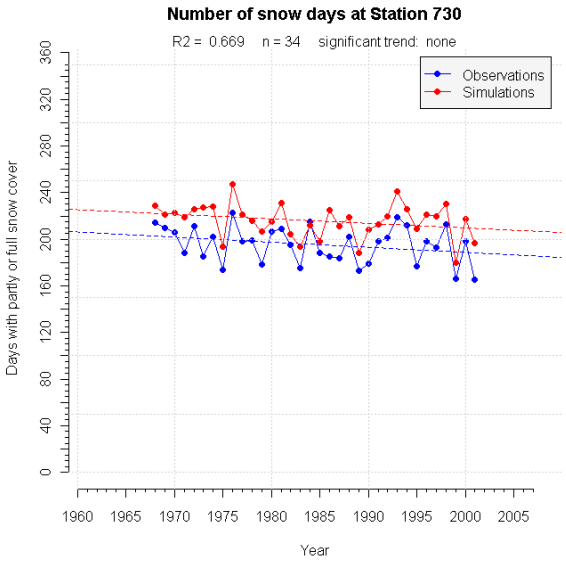

Number of snow days at Station 100
R2 = 0.645 n = 34 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

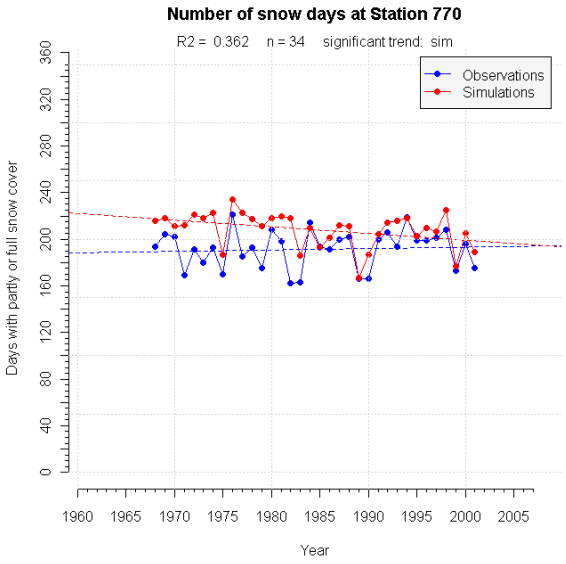

Number of snow days at Station 290
R2 = 0.506 n = 35 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

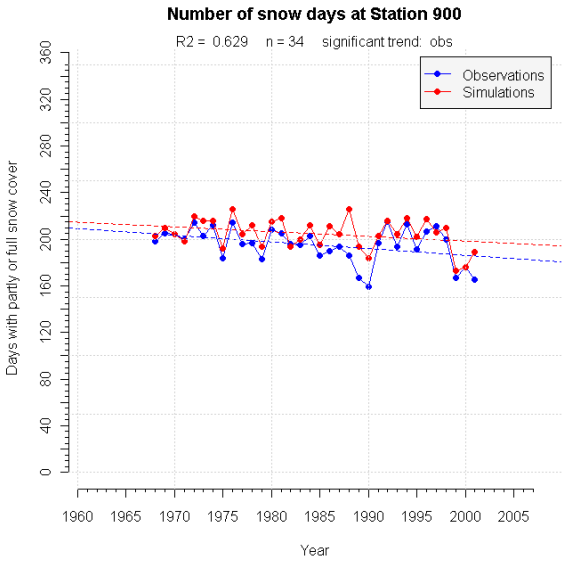

Number of snow days at Station 420
R2 = 0.421 n = 35 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

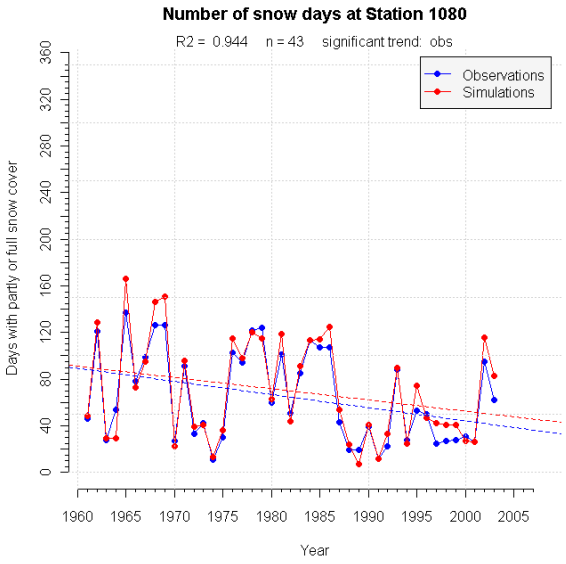

Number of snow days at Station 600
R2 = 0.417 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

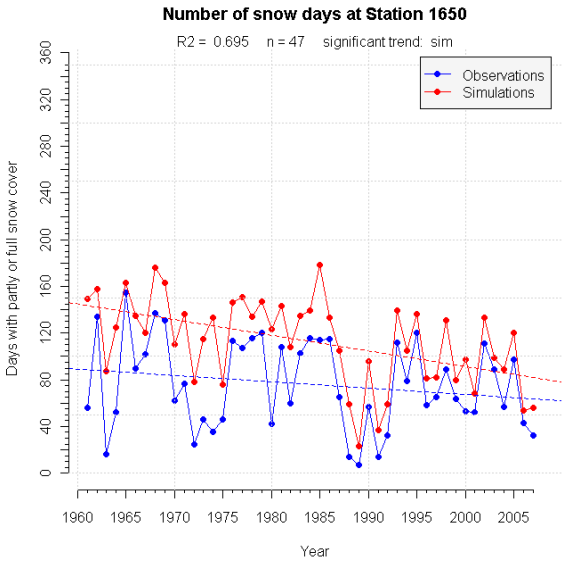

Number of snow days at Station 700
R2 = 0.546 n = 42 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

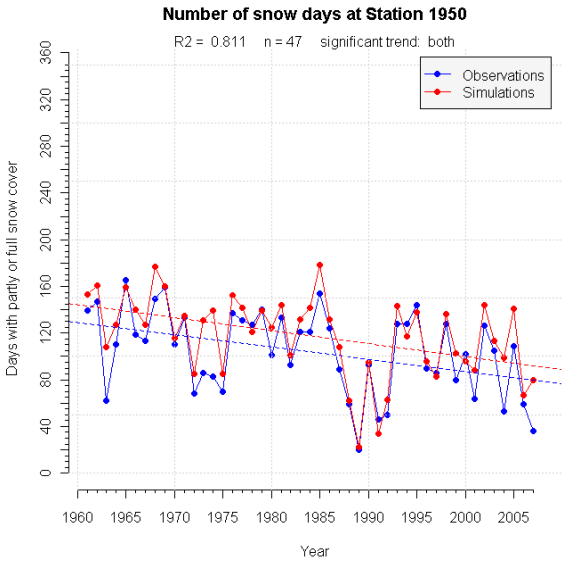

Number of snow days at Station 730
R2 = 0.669 n = 34 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

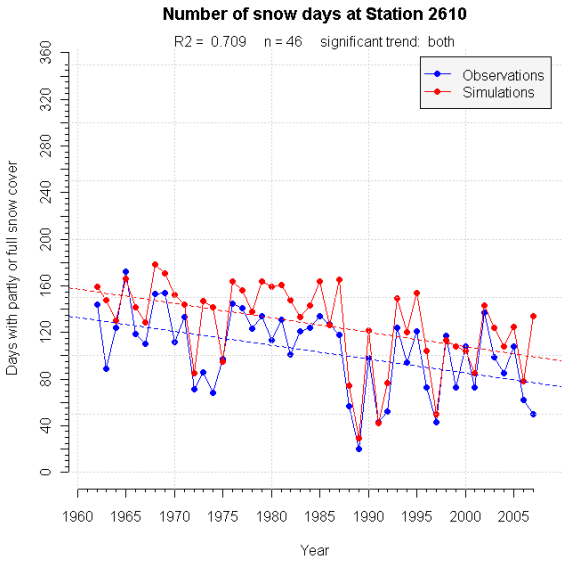

Number of snow days at Station 770
R2 = 0.362 n = 34 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

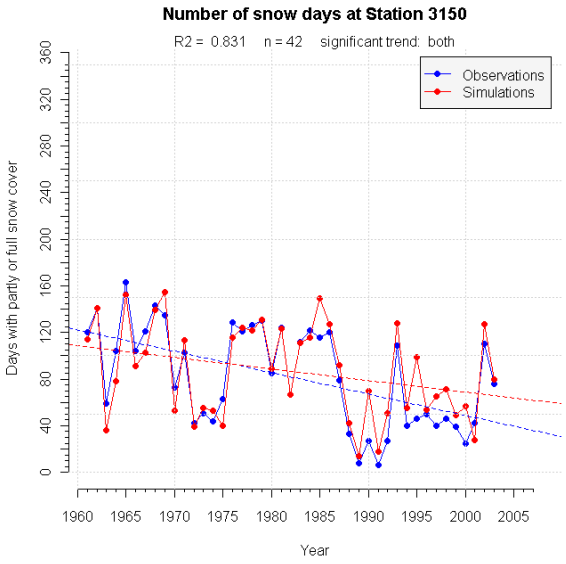

Number of snow days at Station 900
R2 = 0.629 n = 34 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

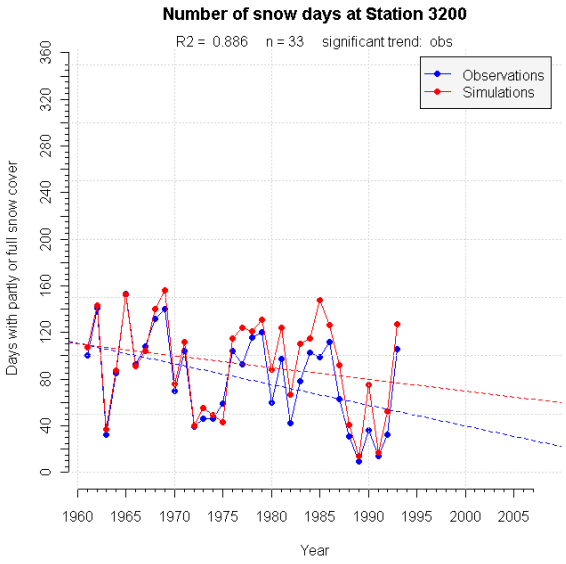

Number of snow days at Station 1080
R2 = 0.944 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

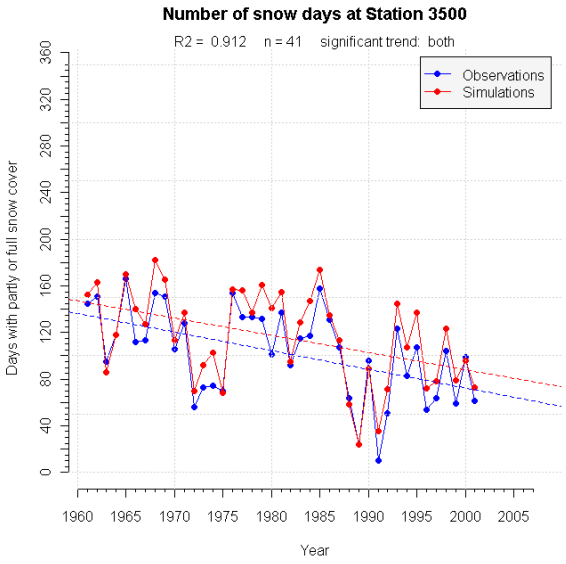

Number of snow days at Station 1650
R2 = 0.695 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

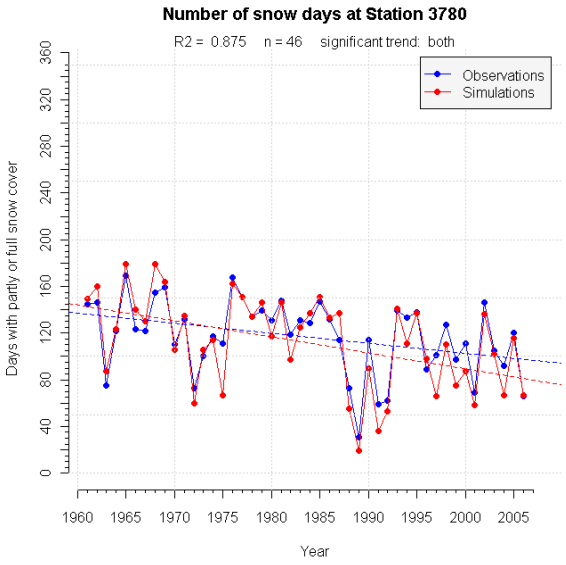

Number of snow days at Station 1950
R2 = 0.811 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

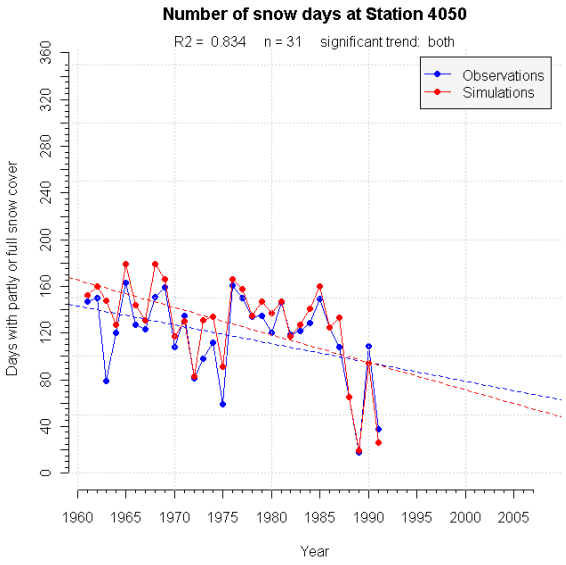

Number of snow days at Station 2610
R2 = 0.709 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

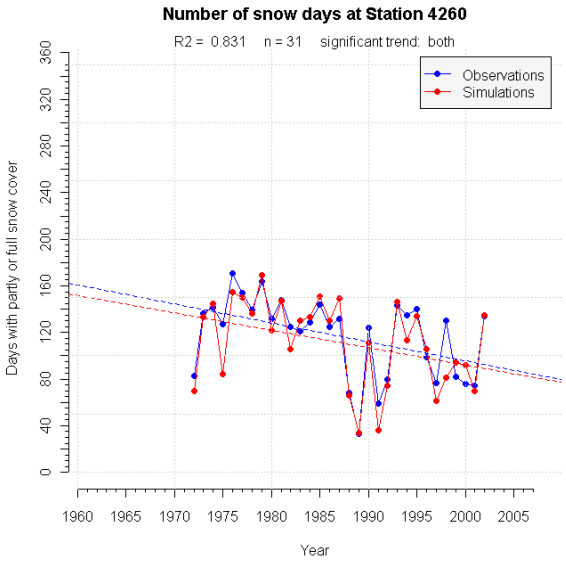

Number of snow days at Station 3150
R2 = 0.831 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

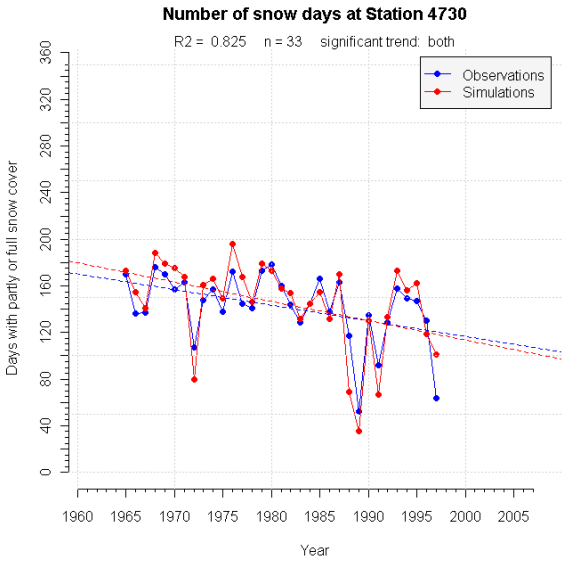

Number of snow days at Station 3200
R2 = 0.886 n = 33 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

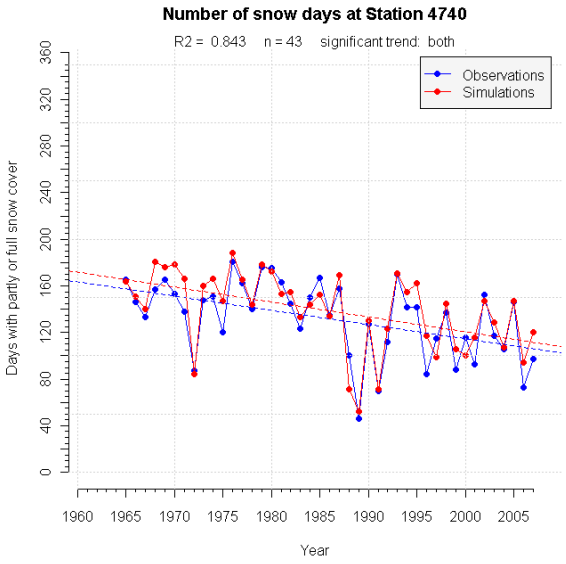

Number of snow days at Station 3500
R2 = 0.912 n = 41 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

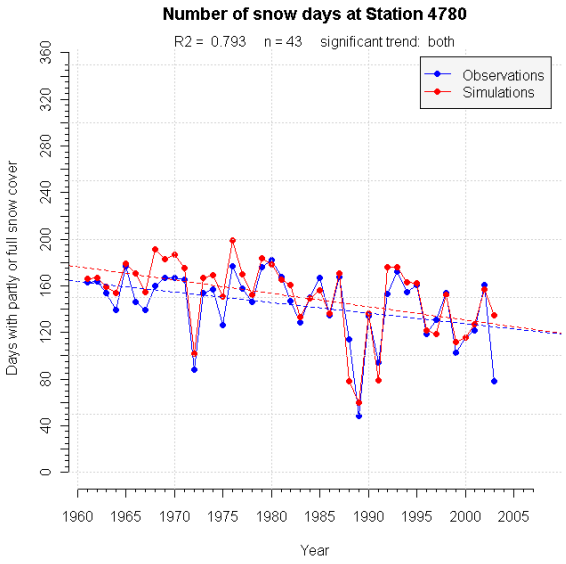

Number of snow days at Station 3780
R2 = 0.875 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

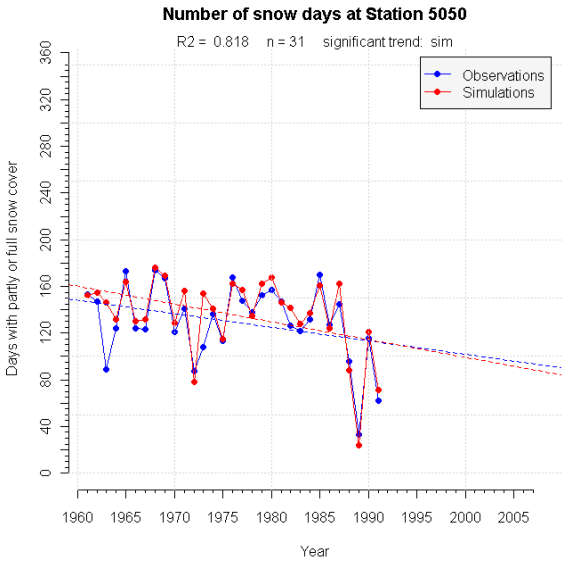

Number of snow days at Station 4050
R2 = 0.834 n = 31 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

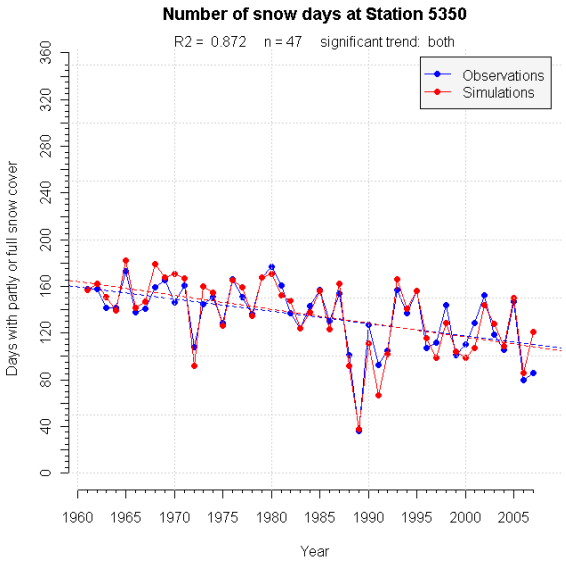

Number of snow days at Station 4260
R2 = 0.831 n = 31 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

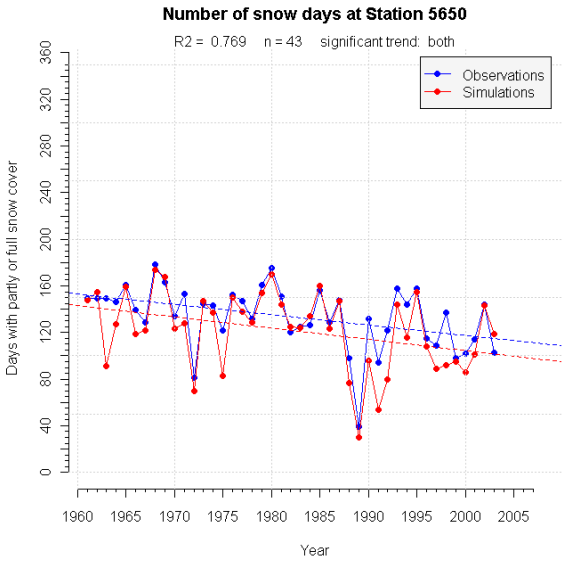

Number of snow days at Station 4730
R2 = 0.825 n = 33 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

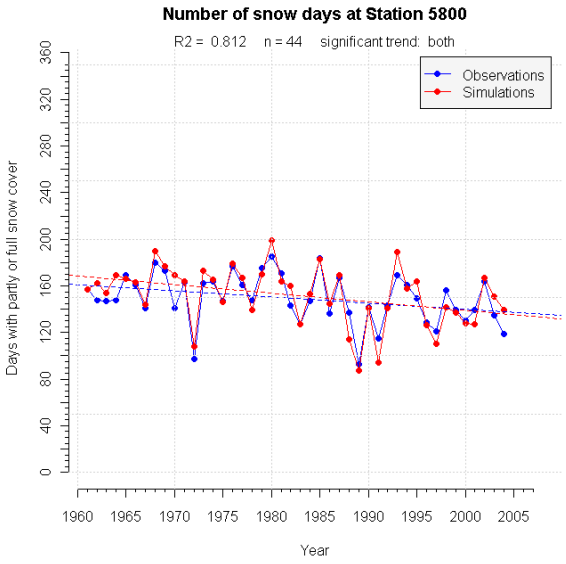

Number of snow days at Station 4740
R2 = 0.843 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

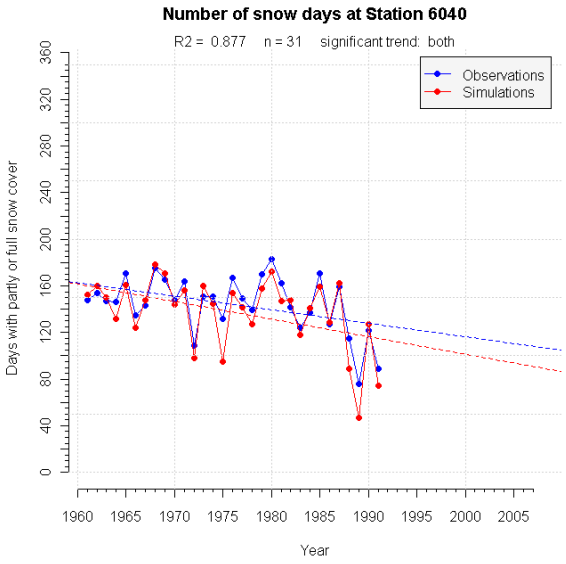

Number of snow days at Station 4780
R2 = 0.793 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

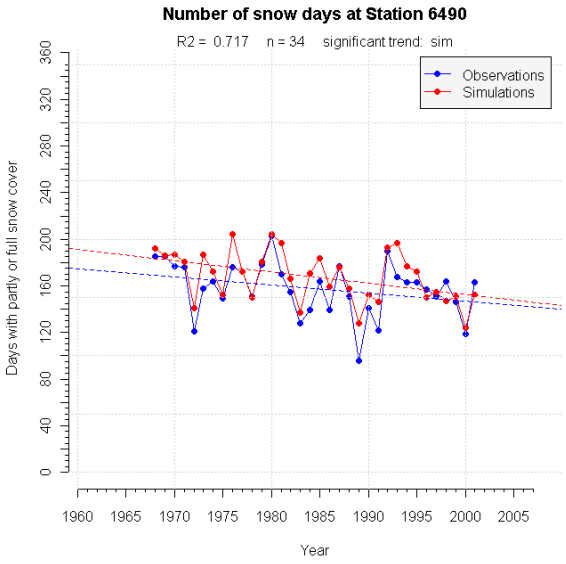

Number of snow days at Station 5050
R2 = 0.818 n = 31 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

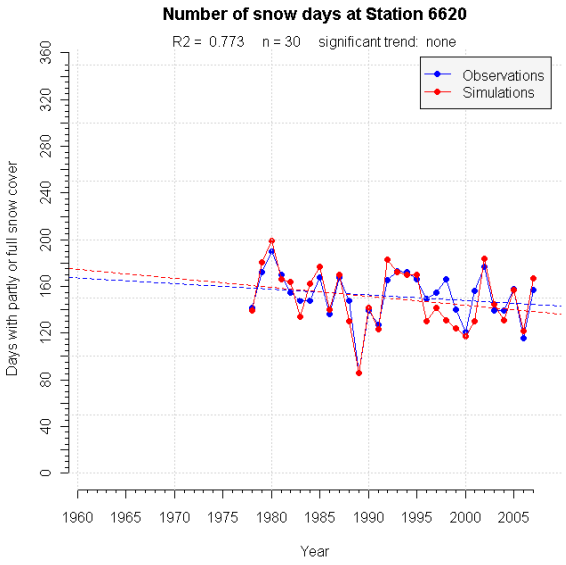

Number of snow days at Station 5350
R2 = 0.872 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

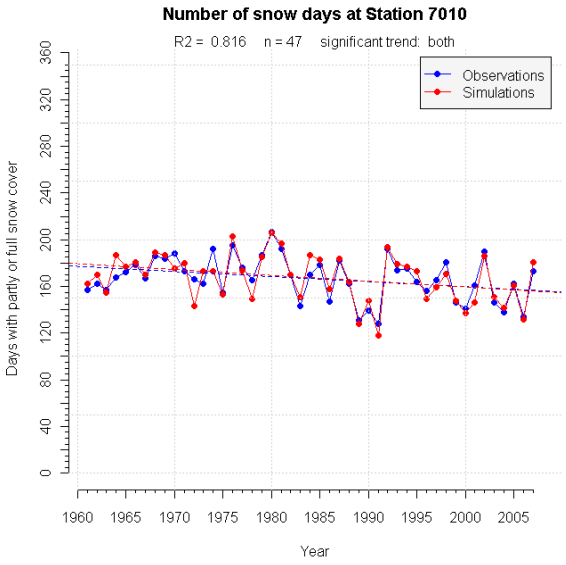

Number of snow days at Station 5650
R2 = 0.769 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

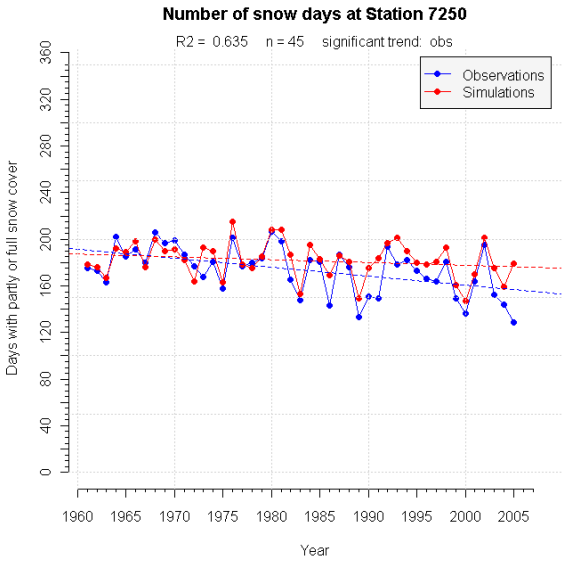

Number of snow days at Station 5800
R2 = 0.812 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

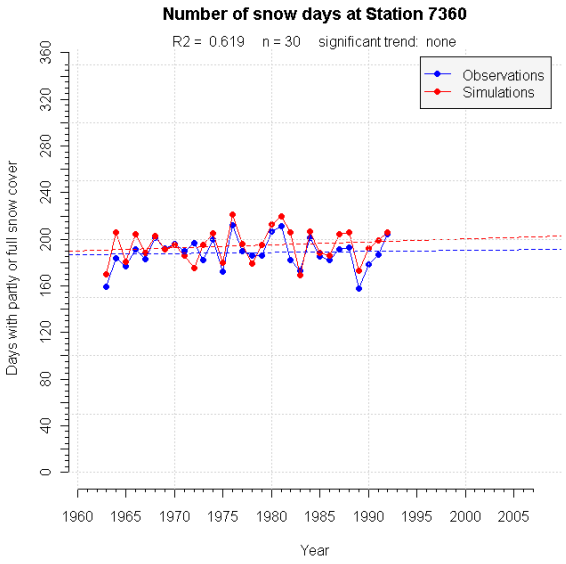

Number of snow days at Station 6040
R2 = 0.877 n = 31 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

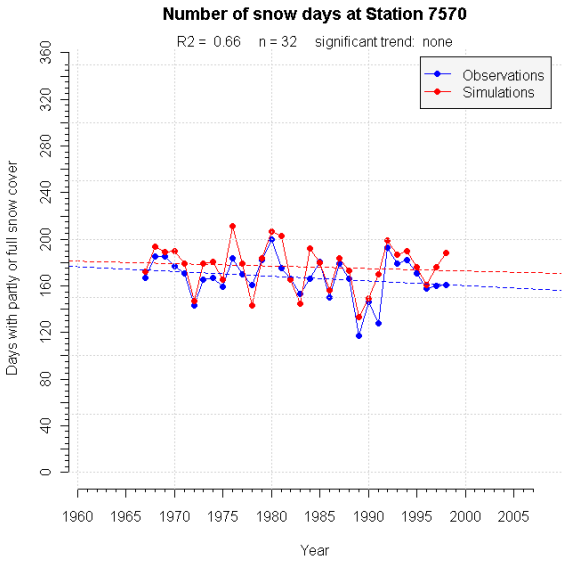

Number of snow days at Station 6490
R2 = 0.717 n = 34 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

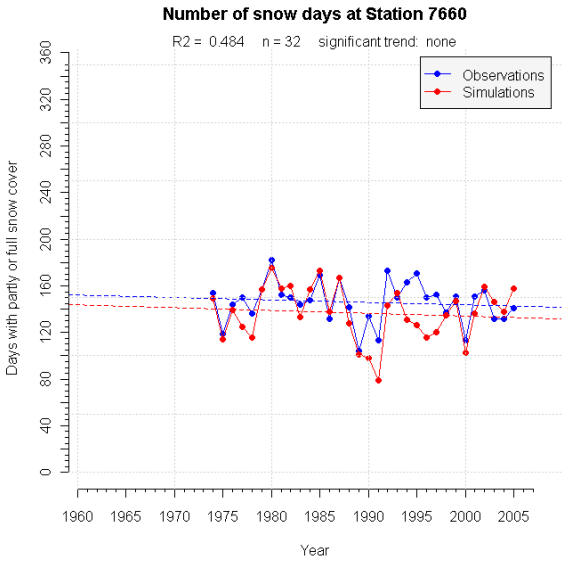

Number of snow days at Station 6620
R2 = 0.773 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

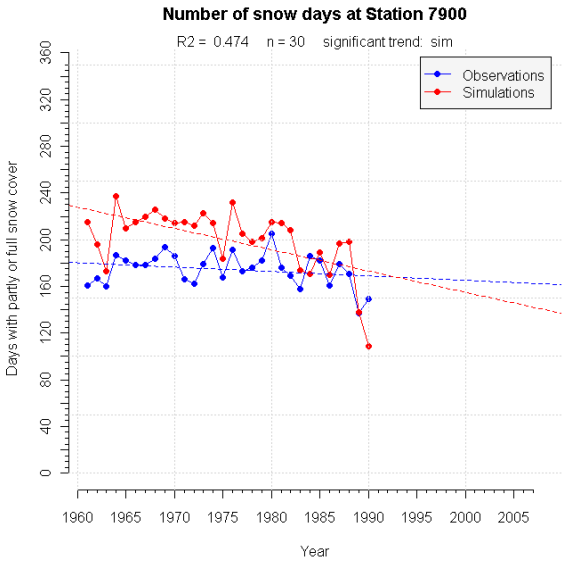

Number of snow days at Station 7010
R2 = 0.816 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

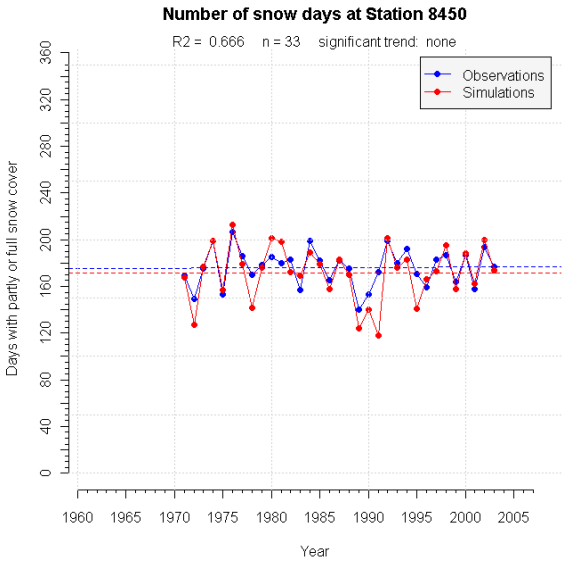

Number of snow days at Station 7250
R2 = 0.635 n = 45 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

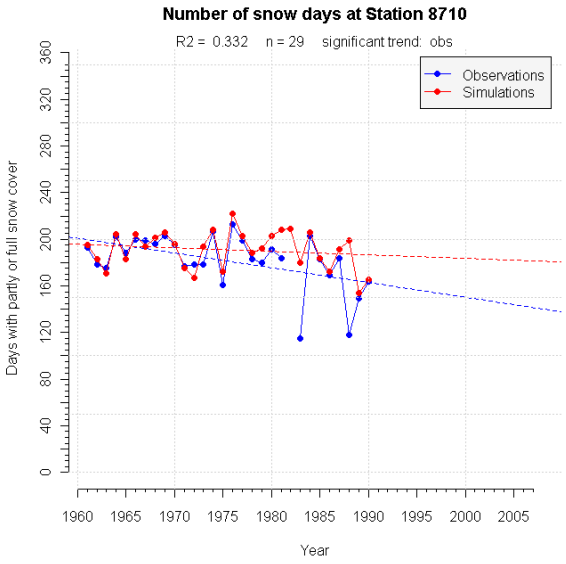

Number of snow days at Station 7360
R2 = 0.619 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

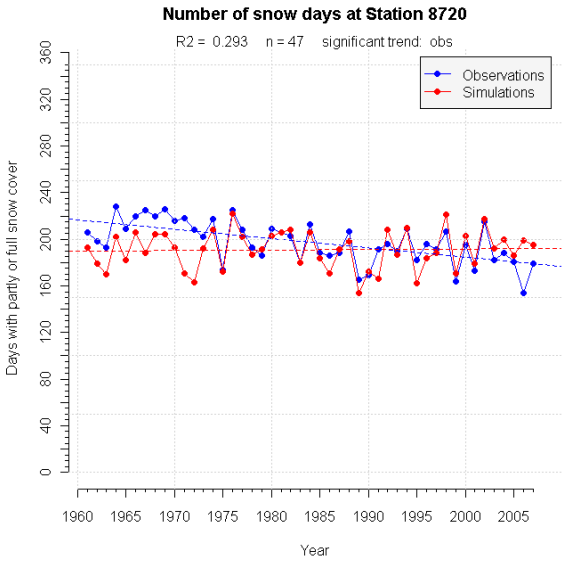

Number of snow days at Station 7570
R2 = 0.66 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

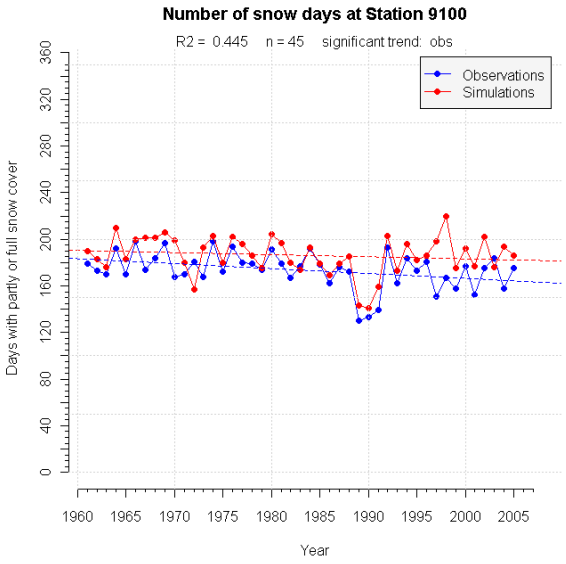

Number of snow days at Station 7660
R2 = 0.484 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

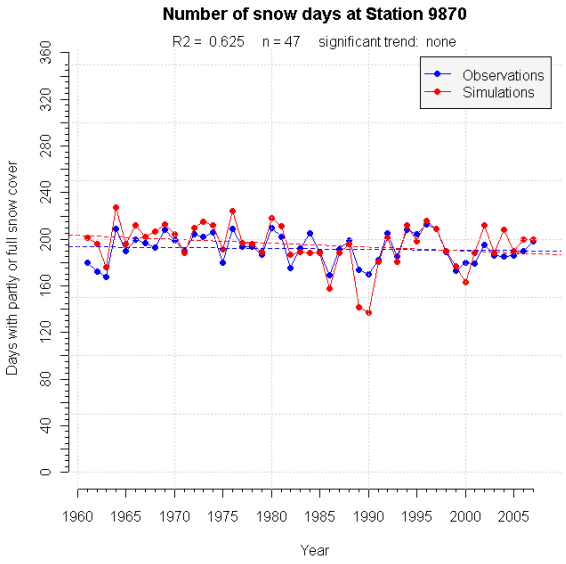

Number of snow days at Station 7900
R2 = 0.474 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

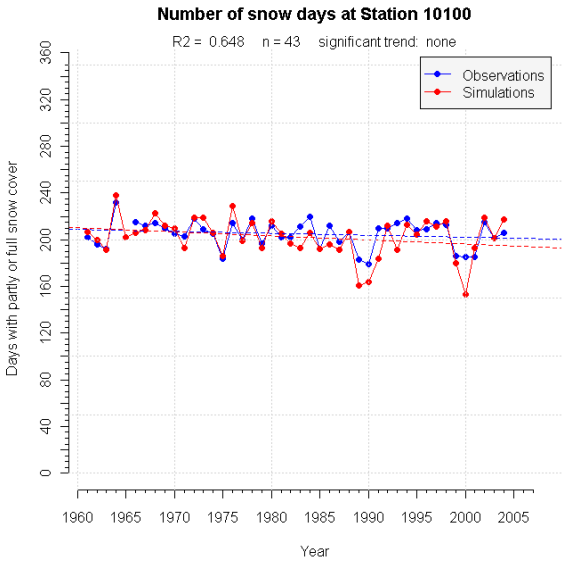

Number of snow days at Station 8450
R2 = 0.666 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

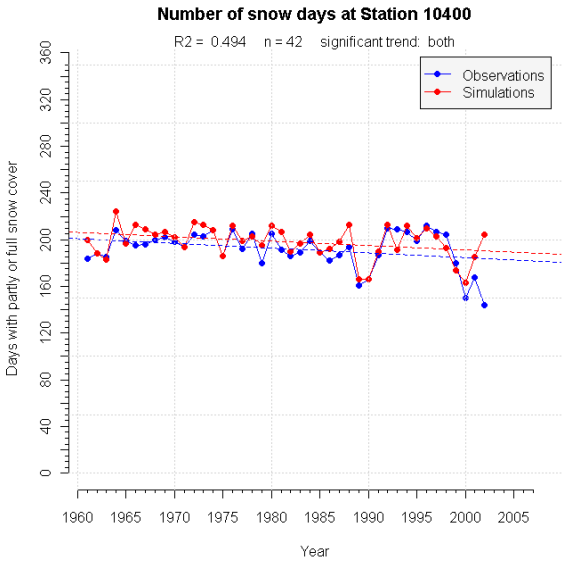

Number of snow days at Station 8710
R2 = 0.332 n = 29 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

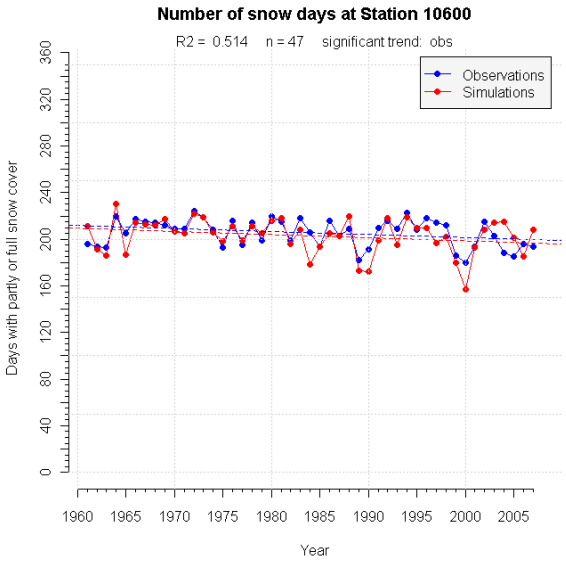

Number of snow days at Station 8720
R2 = 0.293 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

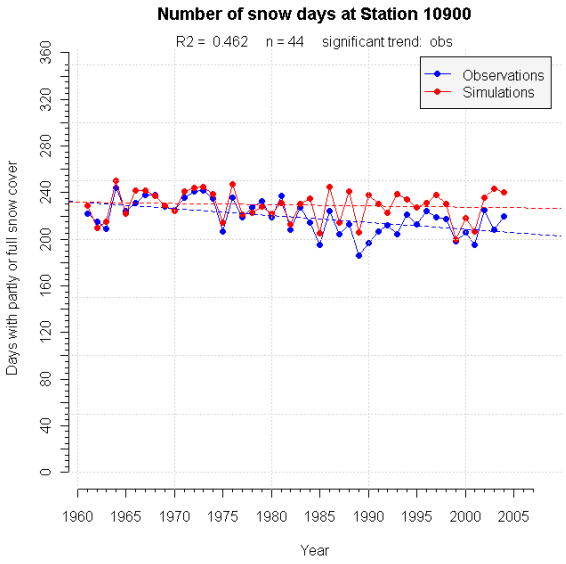

Number of snow days at Station 9100
R2 = 0.445 n = 45 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

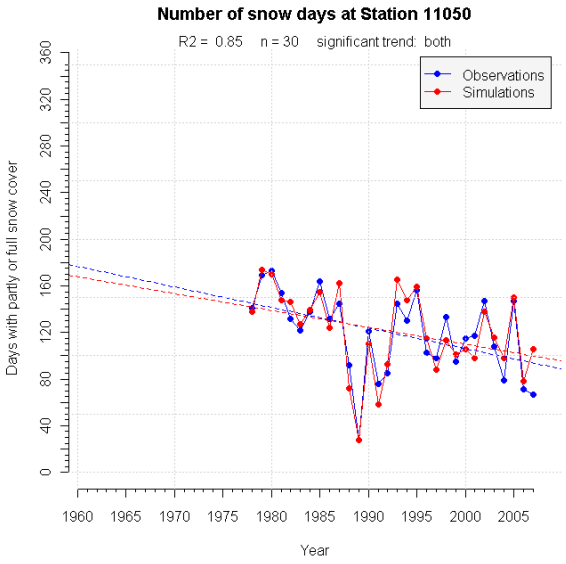

Number of snow days at Station 9870
R2 = 0.625 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

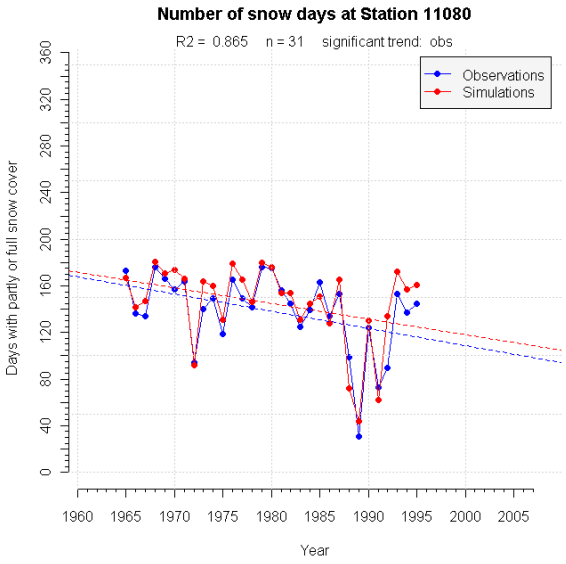

Number of snow days at Station 10100
R2 = 0.648 n = 43 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

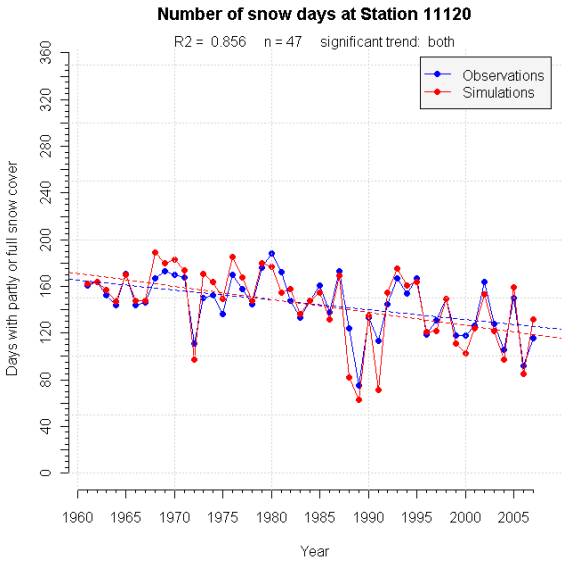

Number of snow days at Station 10400
R2 = 0.494 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

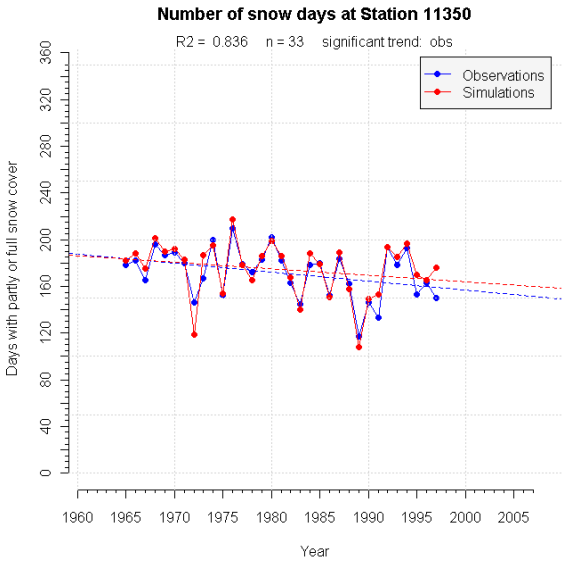

Number of snow days at Station 10600
R2 = 0.514 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

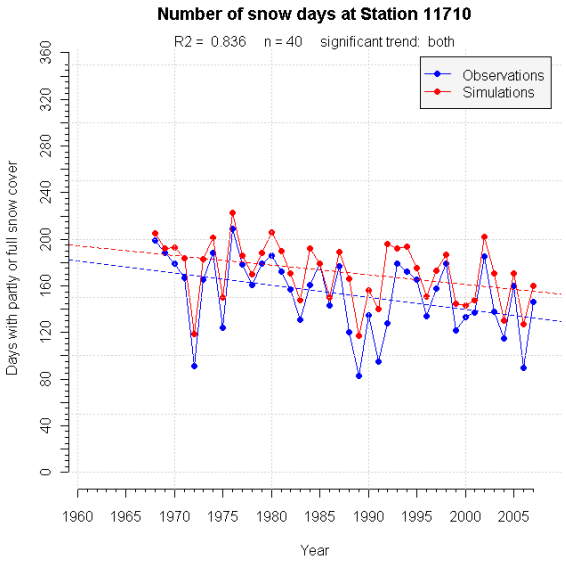

Number of snow days at Station 10900
R2 = 0.462 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

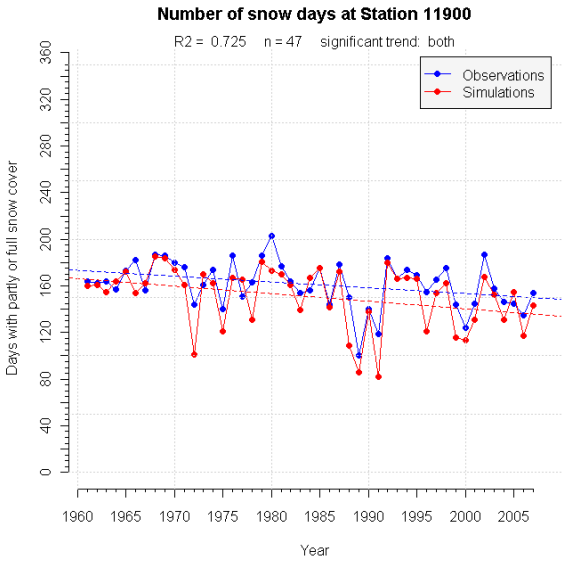

Number of snow days at Station 11050
R2 = 0.85 n = 30 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

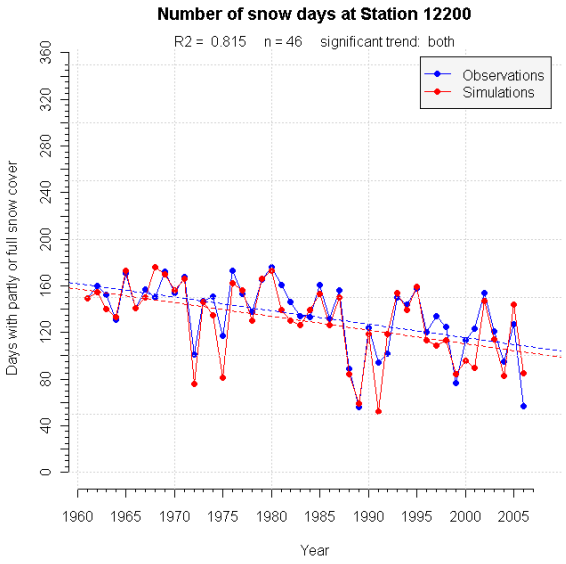

Number of snow days at Station 11080
R2 = 0.865 n = 31 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

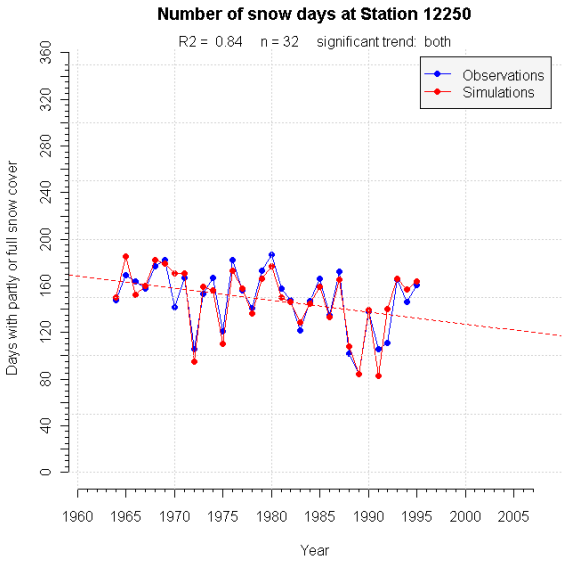

Number of snow days at Station 11120
R2 = 0.856 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

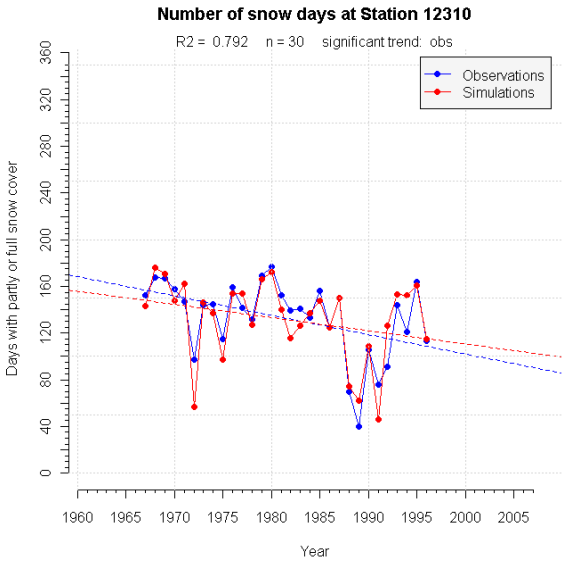

Number of snow days at Station 11350
R2 = 0.836 n = 33 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

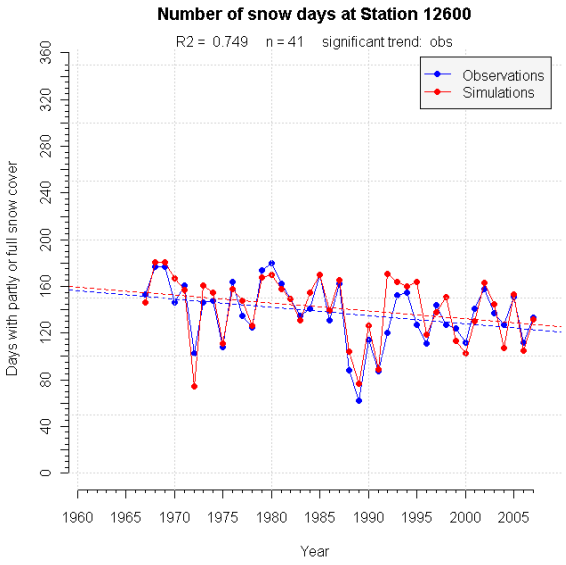

Number of snow days at Station 11710
R2 = 0.836 n = 40 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

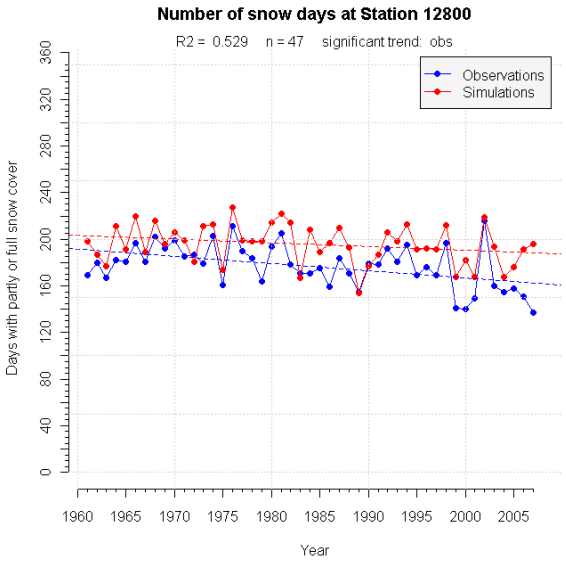

Number of snow days at Station 11900
R2 = 0.725 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

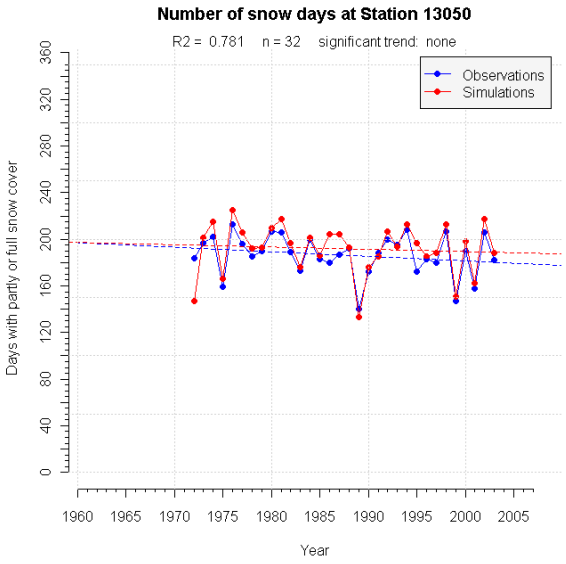

Number of snow days at Station 12200
R2 = 0.815 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

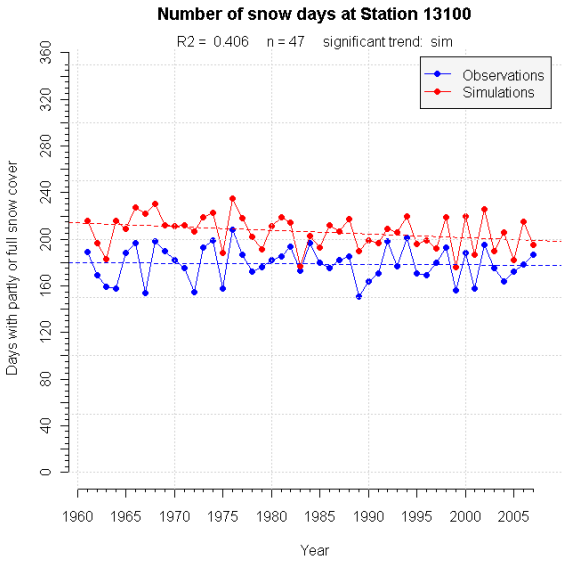

Number of snow days at Station 12250
R2 = 0.84 n = 32 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

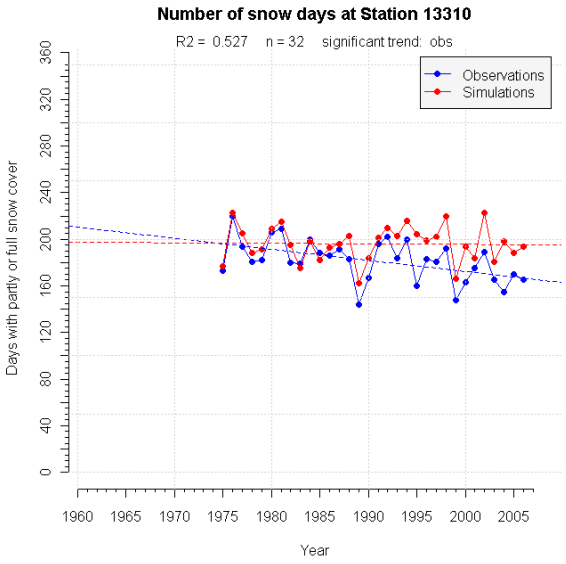

Number of snow days at Station 12310
R2 = 0.792 n = 30 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

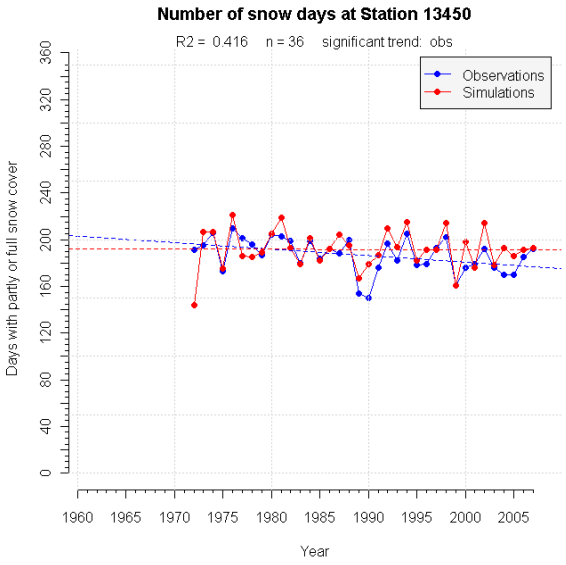

Number of snow days at Station 12600
R2 = 0.749 n = 41 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

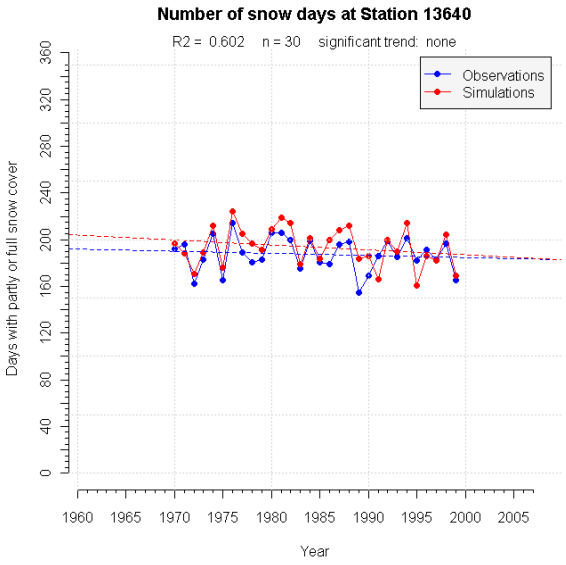

Number of snow days at Station 12800
R2 = 0.529 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

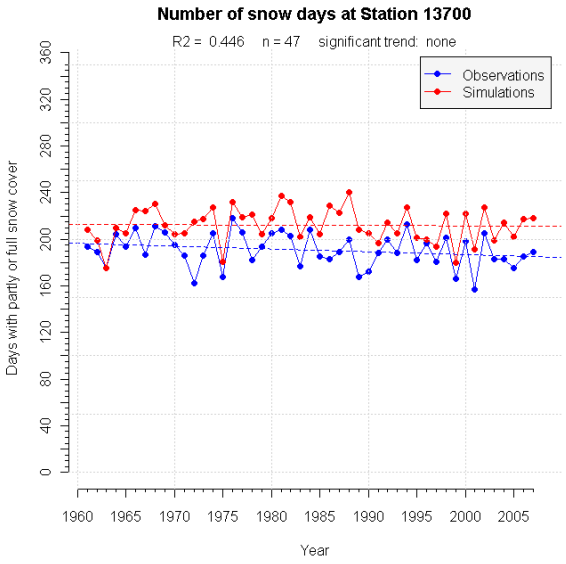

Number of snow days at Station 13050
R2 = 0.781 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

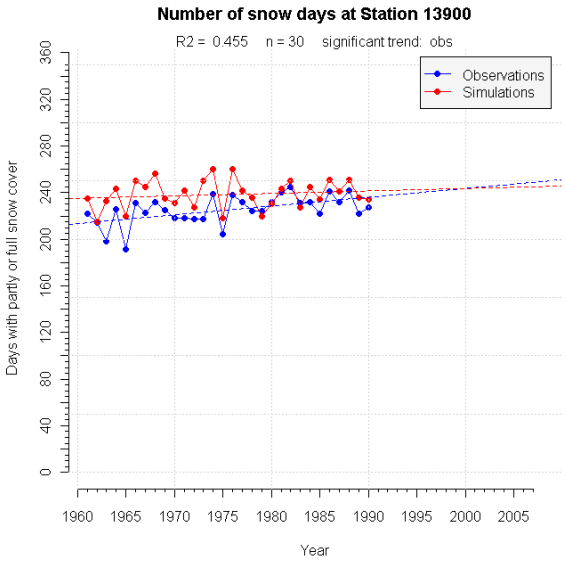

Number of snow days at Station 13100
R2 = 0.406 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

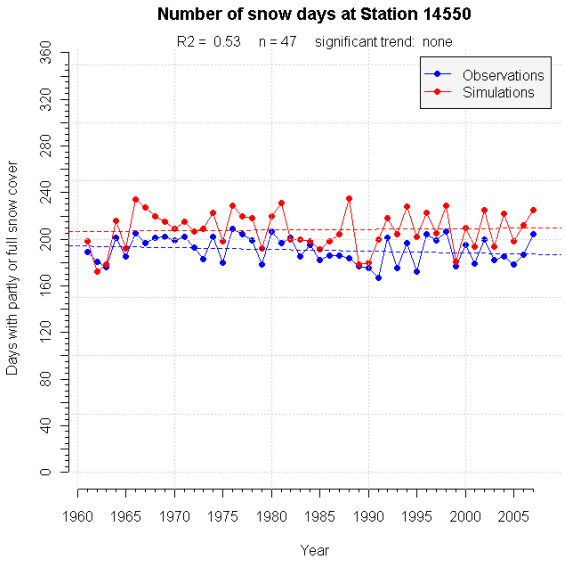

Number of snow days at Station 13310
R2 = 0.527 n = 32 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

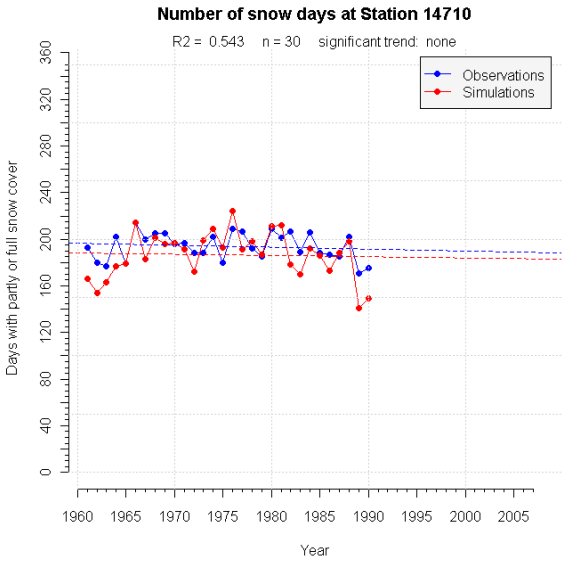

Number of snow days at Station 13450
R2 = 0.416 n = 36 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

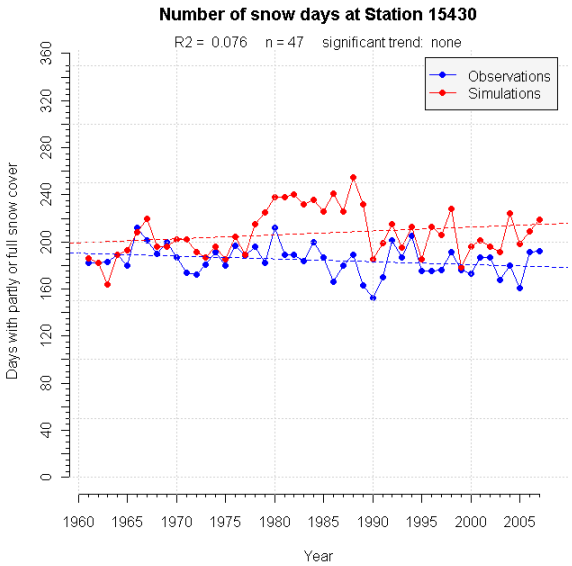

Number of snow days at Station 13640
R2 = 0.602 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

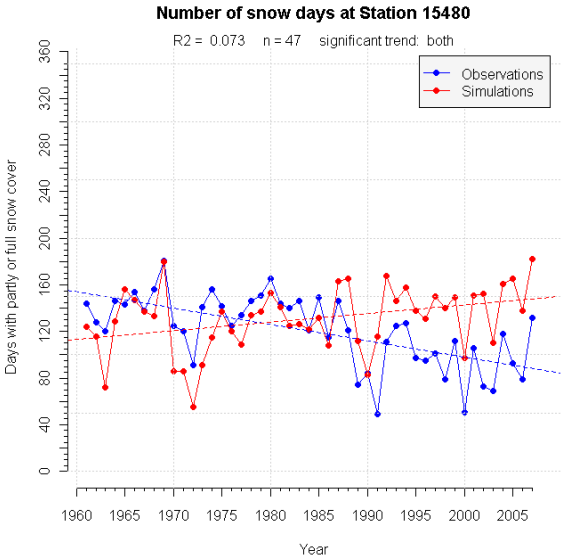

Number of snow days at Station 13700
R2 = 0.446 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

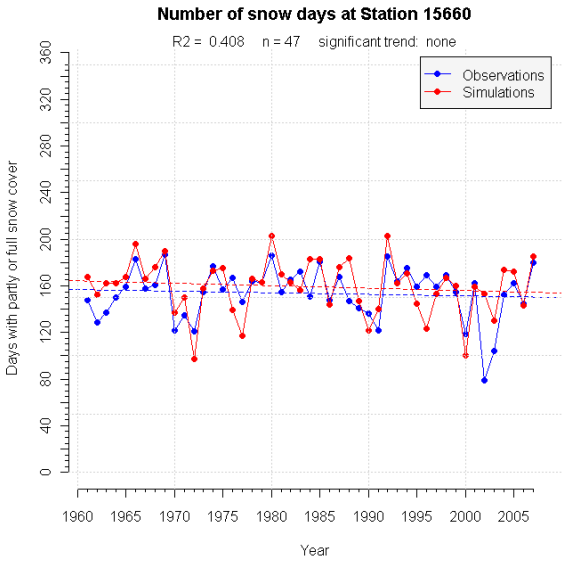

Number of snow days at Station 13900
R2 = 0.455 n = 30 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

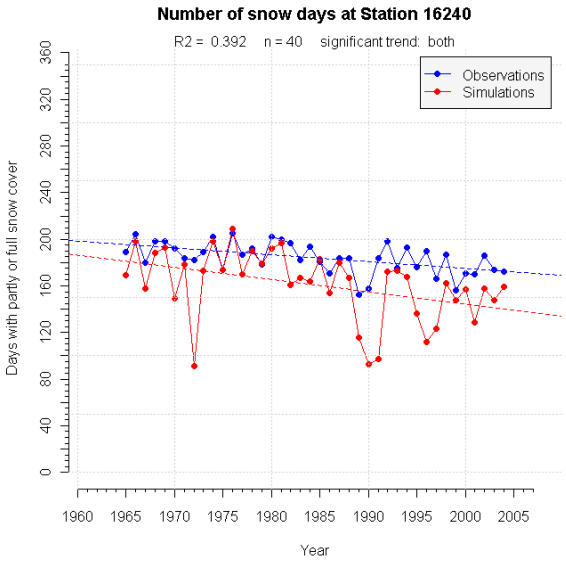

Number of snow days at Station 14550
R2 = 0.53 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

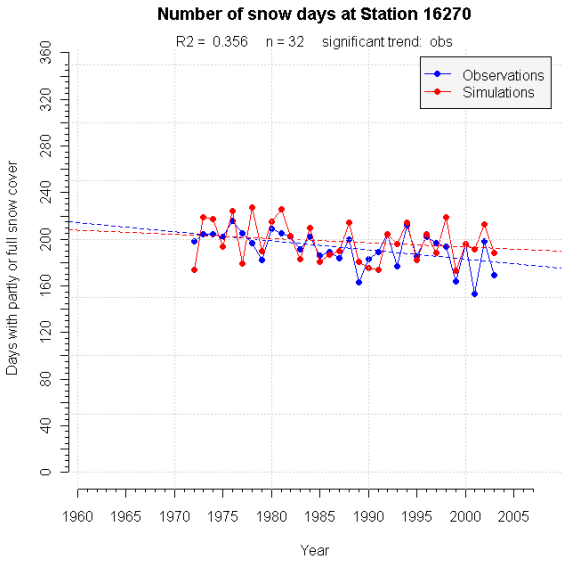

Number of snow days at Station 14710
R2 = 0.543 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

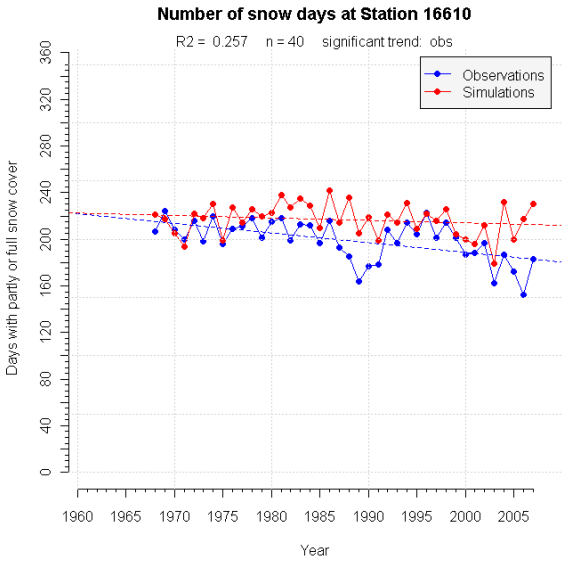

Number of snow days at Station 15430
R2 = 0.076 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

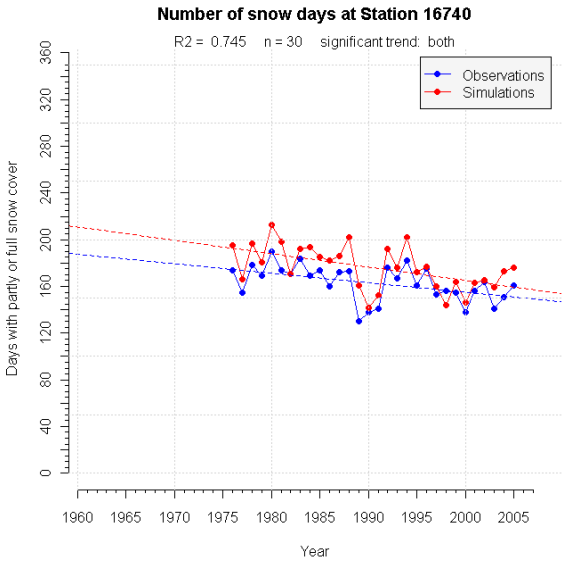

Number of snow days at Station 15480
R2 = 0.073 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

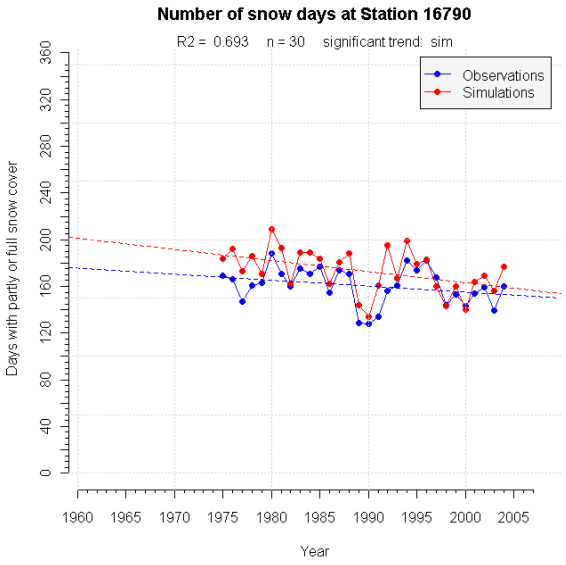

Number of snow days at Station 15660
R2 = 0.408 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

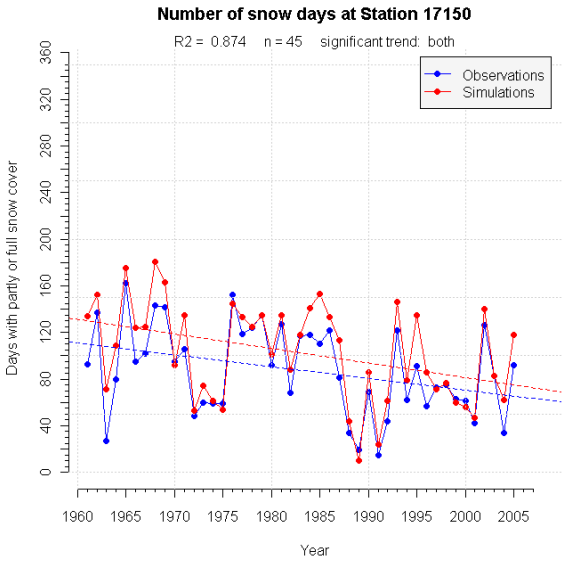

Number of snow days at Station 16240
R2 = 0.392 n = 40 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

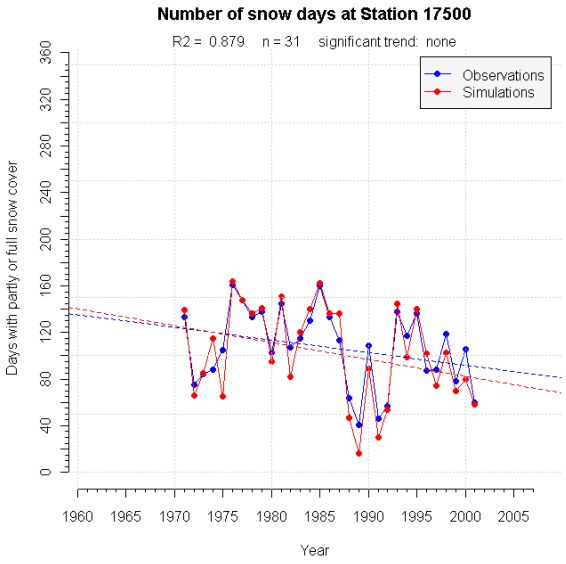

Number of snow days at Station 16270
R2 = 0.356 n = 32 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

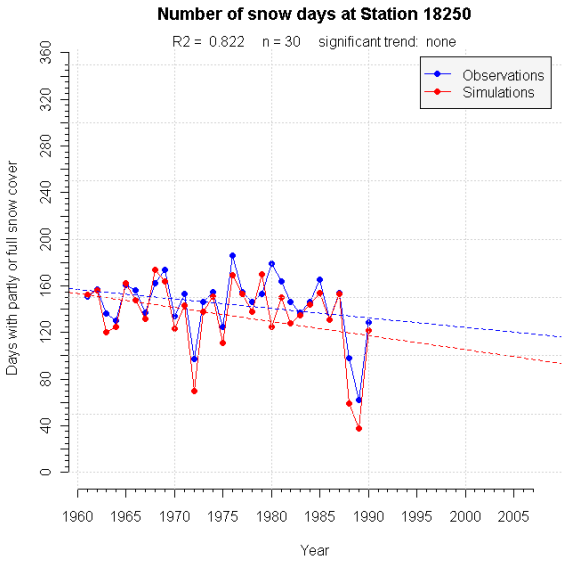

Number of snow days at Station 16610
R2 = 0.257 n = 40 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

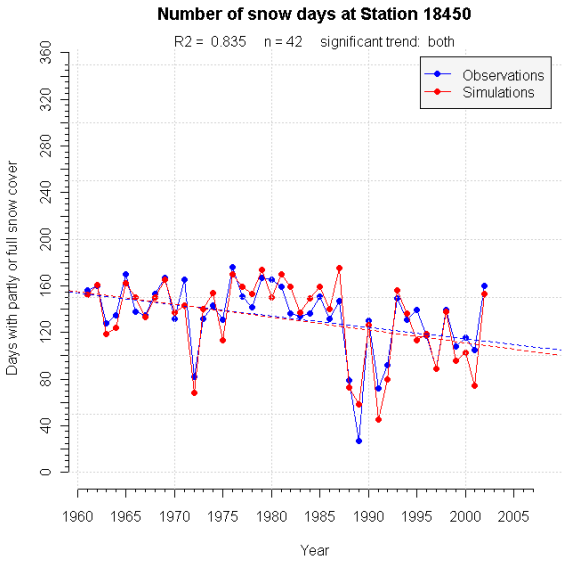

Number of snow days at Station 16740
R2 = 0.745 n = 30 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

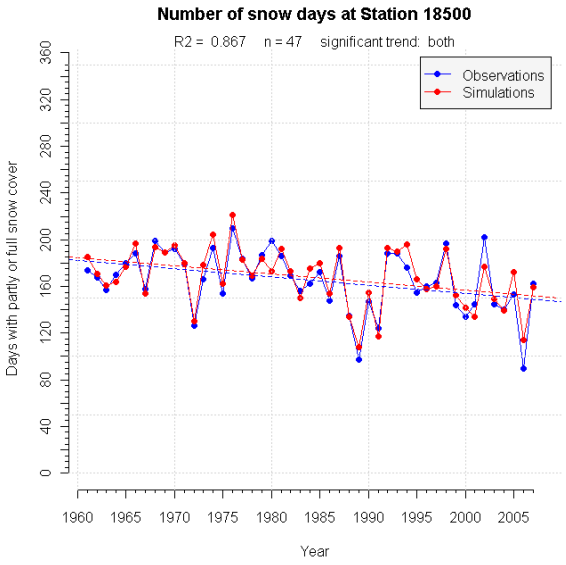

Number of snow days at Station 16790
R2 = 0.693 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

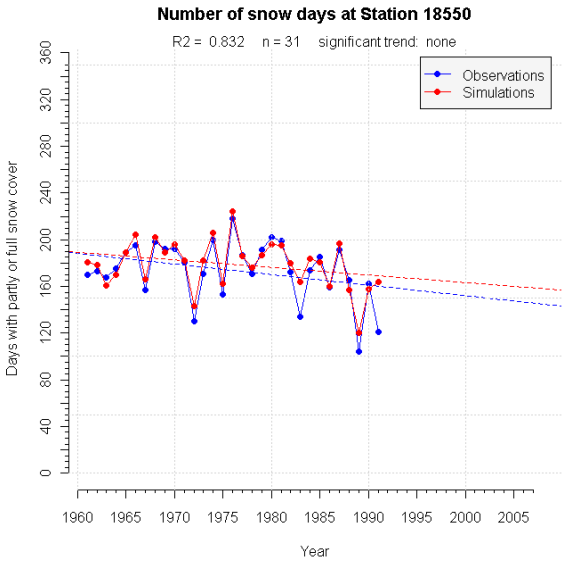

Number of snow days at Station 17150
R2 = 0.874 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

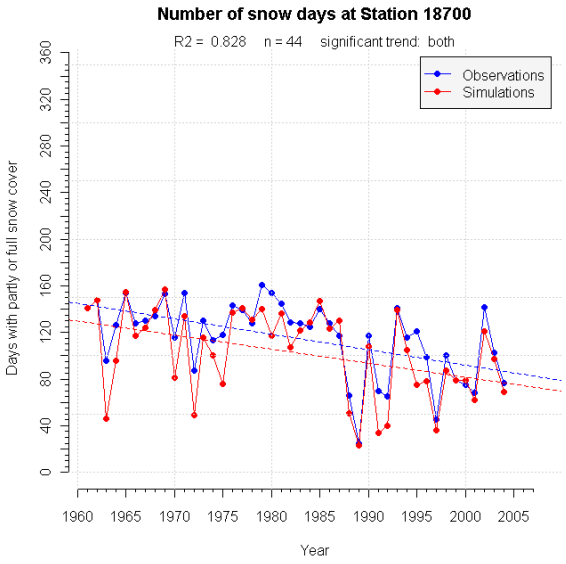

Number of snow days at Station 17500
R2 = 0.879 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

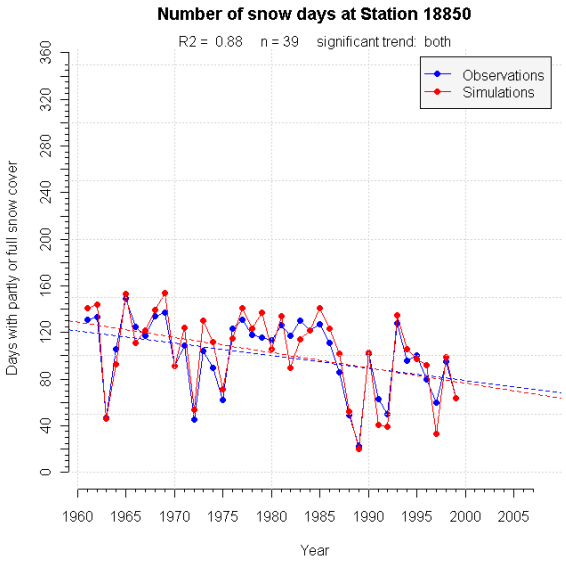

Number of snow days at Station 18250
R2 = 0.822 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

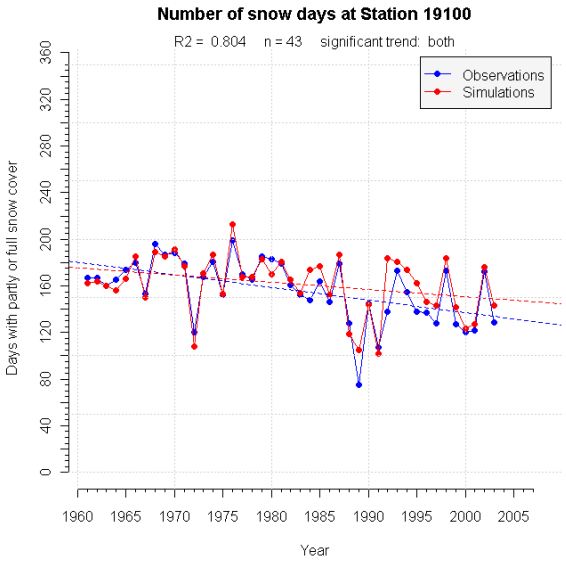

Number of snow days at Station 18450
R2 = 0.835 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

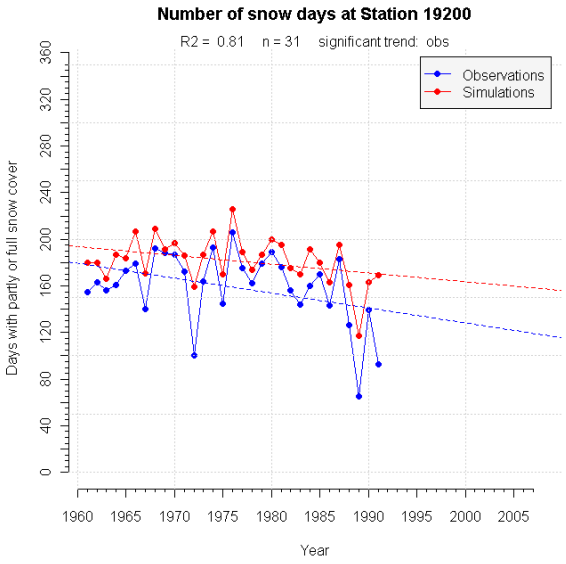

Number of snow days at Station 18500
R2 = 0.867 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

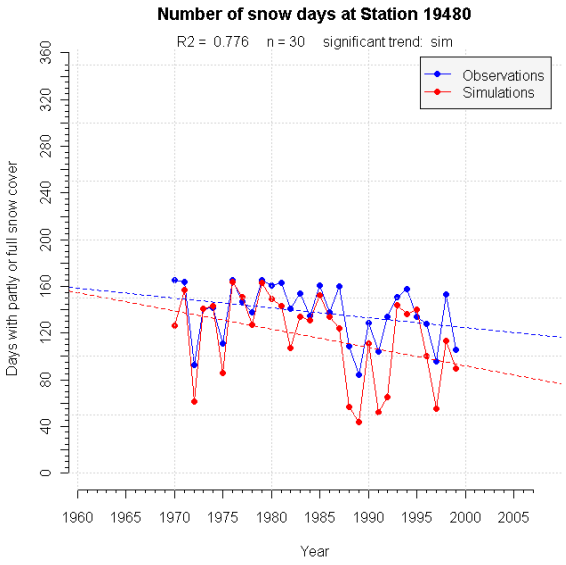

Number of snow days at Station 18550
R2 = 0.832 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

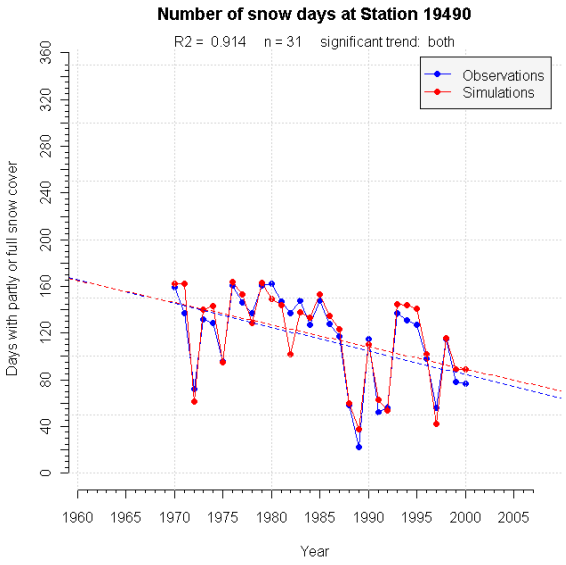

Number of snow days at Station 18700
R2 = 0.828 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

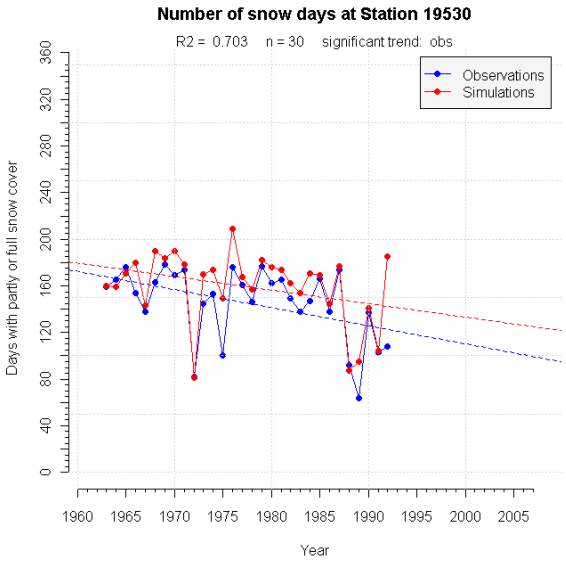

Number of snow days at Station 18850
R2 = 0.88 n = 39 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

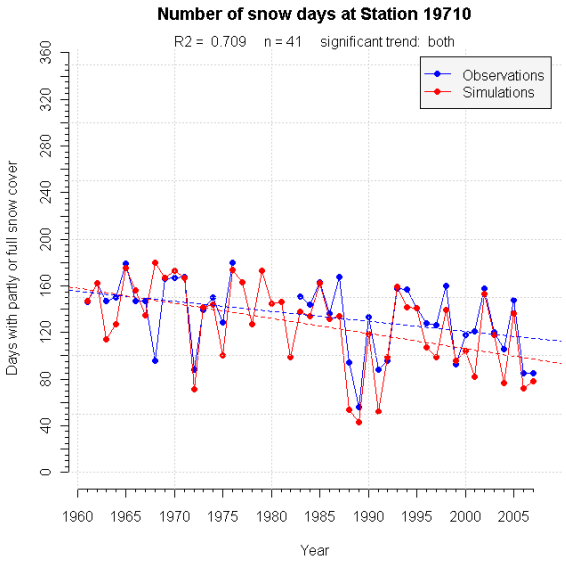

Number of snow days at Station 19100
R2 = 0.804 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

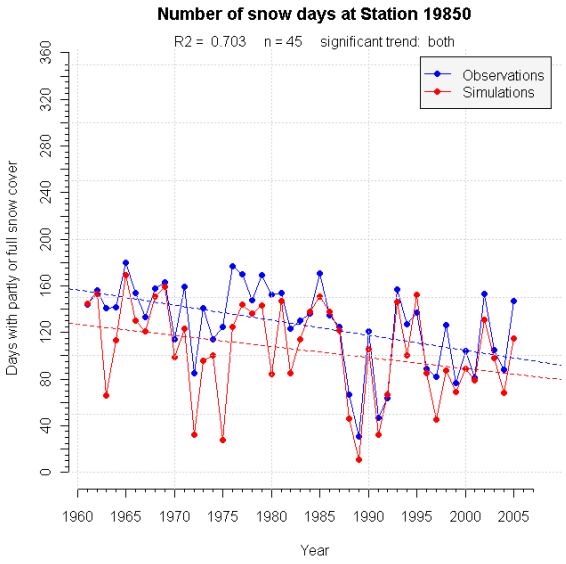

Number of snow days at Station 19200
R2 = 0.81 n = 31 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

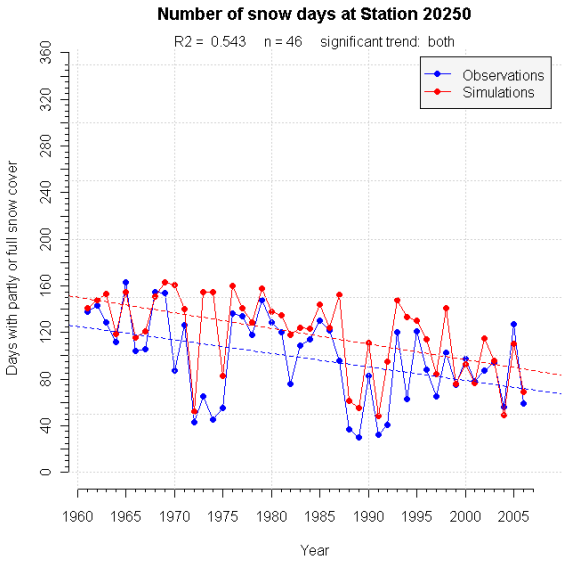

Number of snow days at Station 19480
R2 = 0.776 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

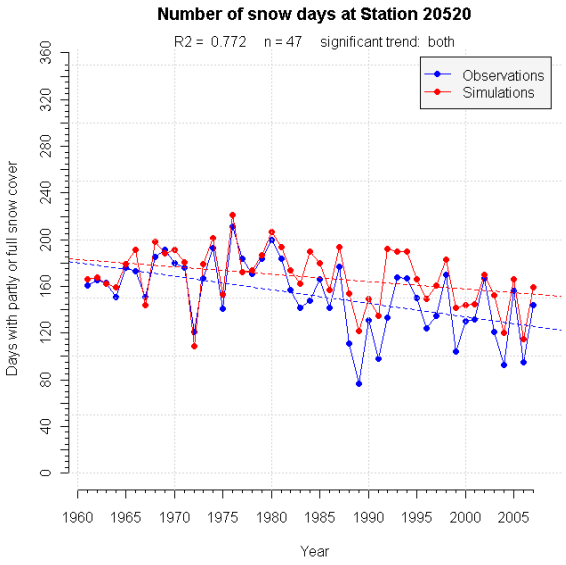

Number of snow days at Station 19490
R2 = 0.914 n = 31 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

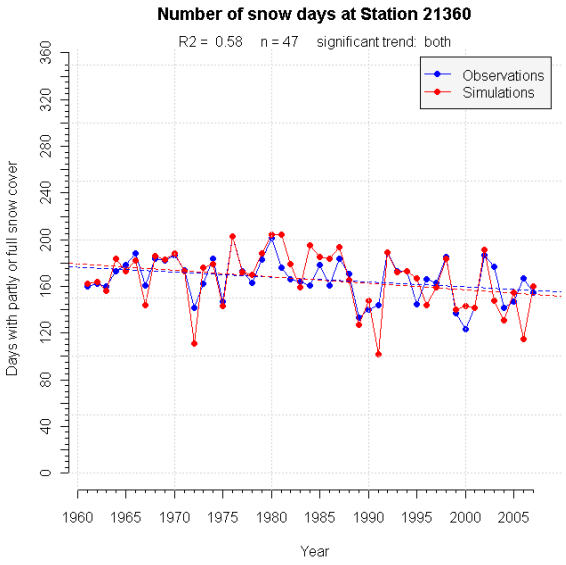

Number of snow days at Station 19530
R2 = 0.703 n = 30 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

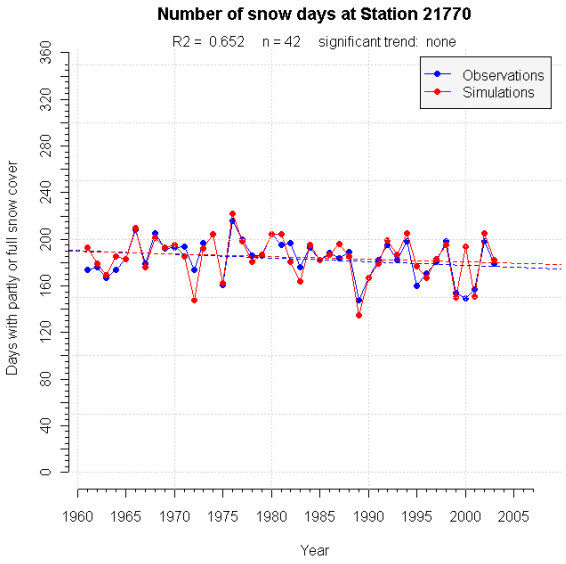

Number of snow days at Station 19710
R2 = 0.709 n = 41 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

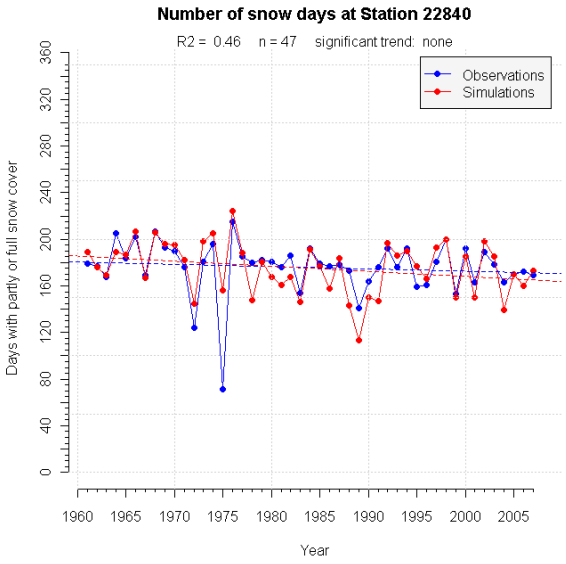

Number of snow days at Station 19850
R2 = 0.703 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

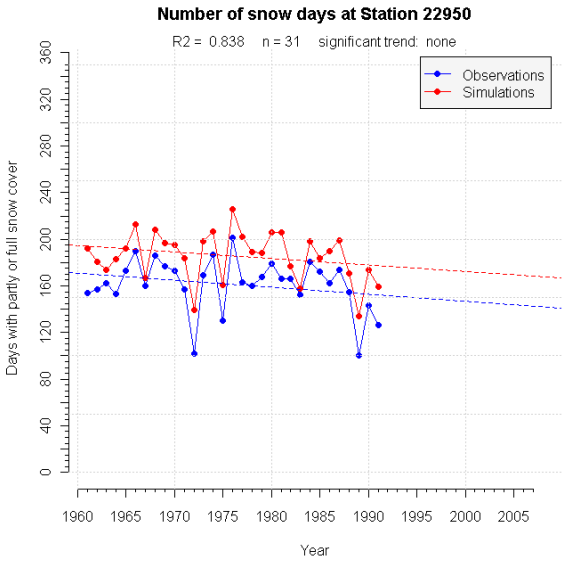

Number of snow days at Station 20250
R2 = 0.543 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

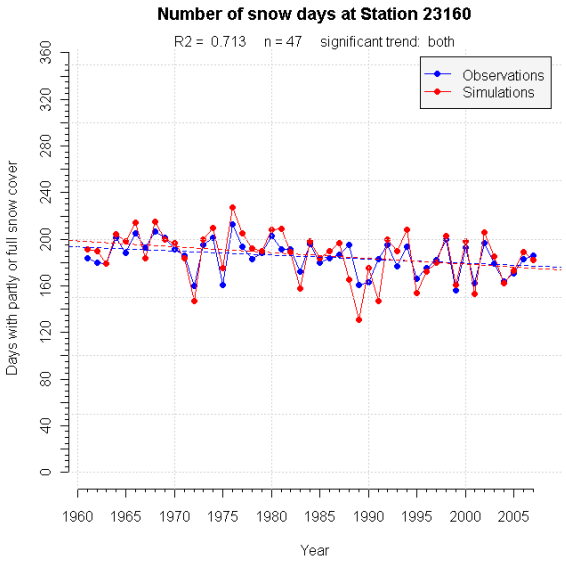

Number of snow days at Station 20520
R2 = 0.772 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

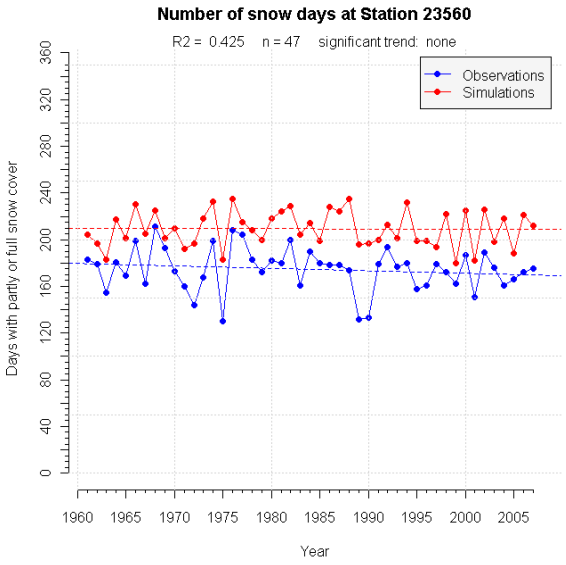

Number of snow days at Station 21360
R2 = 0.58 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

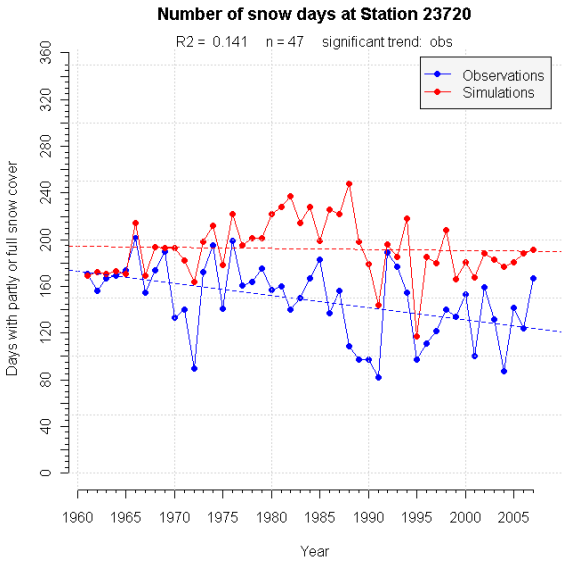

Number of snow days at Station 21770
R2 = 0.652 n = 42 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

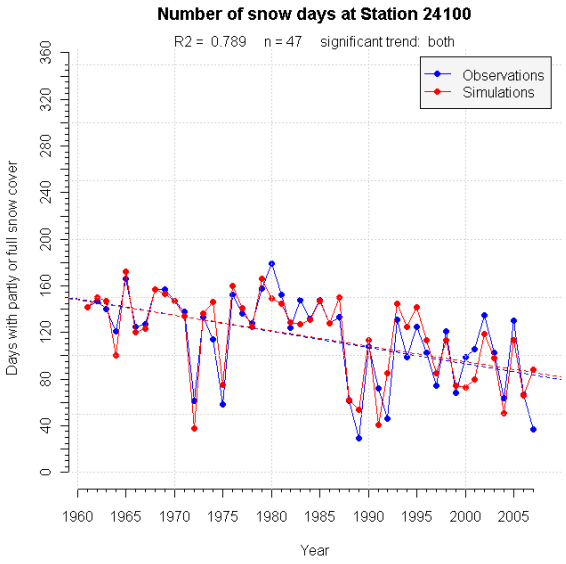

Number of snow days at Station 22840
R2 = 0.46 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

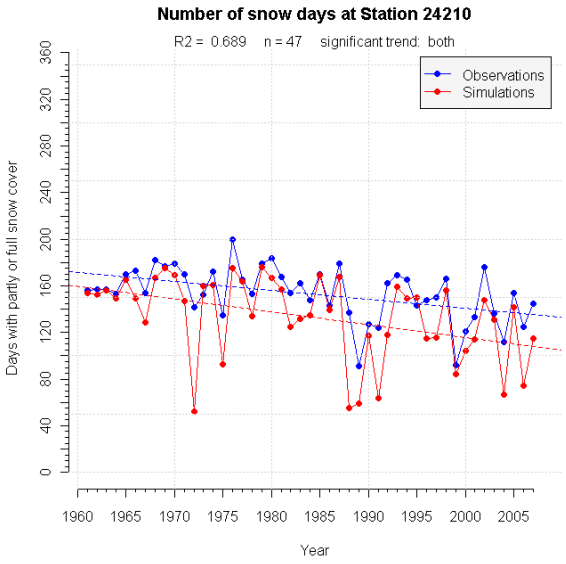

Number of snow days at Station 22950
R2 = 0.838 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

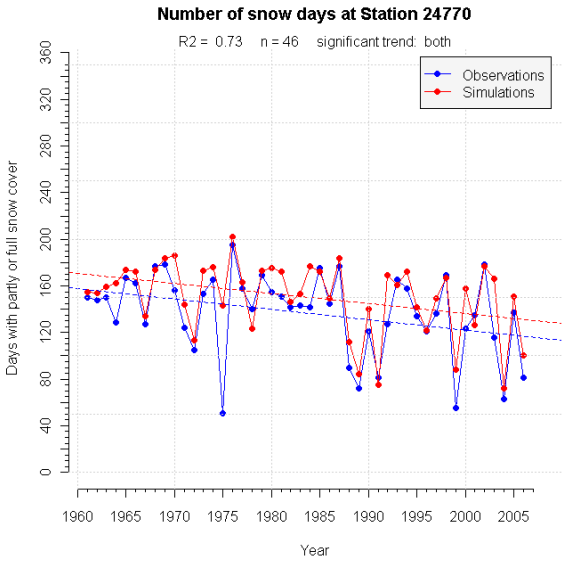

Number of snow days at Station 23160
R2 = 0.713 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

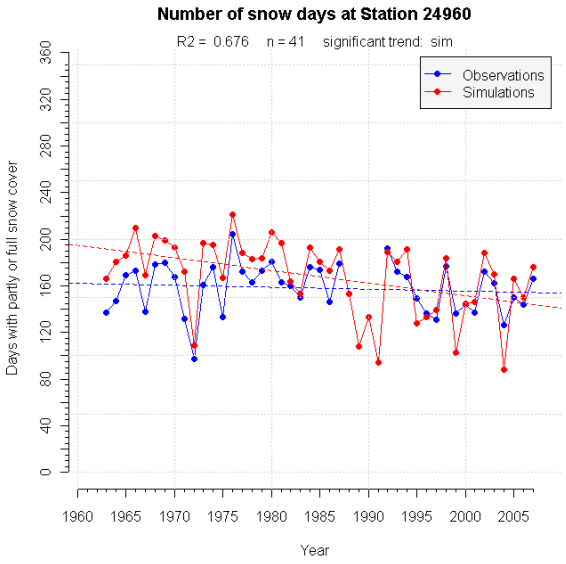

Number of snow days at Station 23560
R2 = 0.425 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

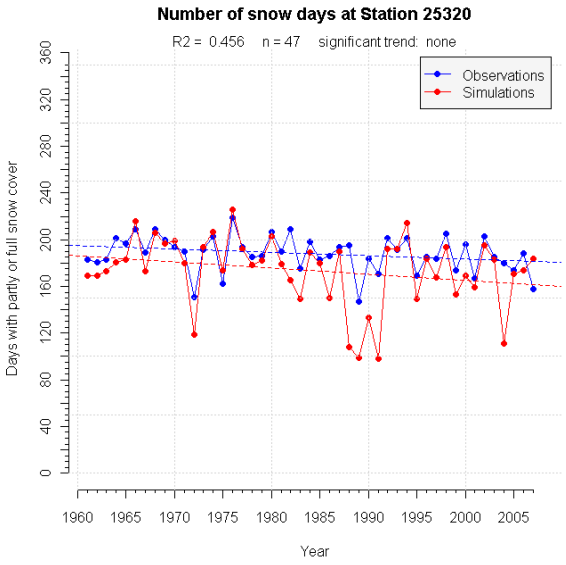

Number of snow days at Station 23720
R2 = 0.141 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

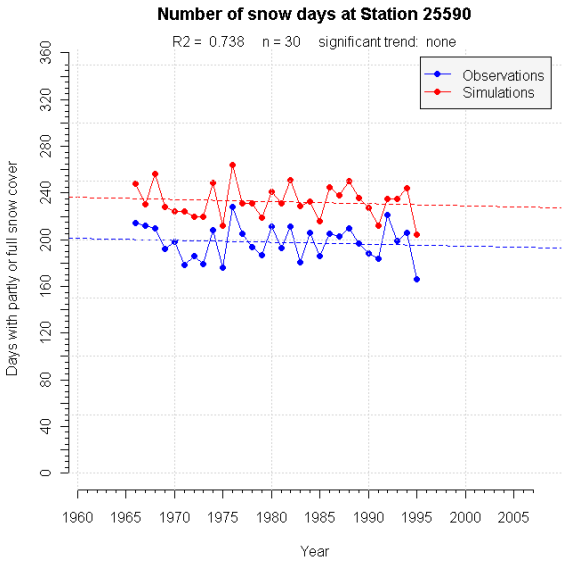

Number of snow days at Station 24100
R2 = 0.789 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

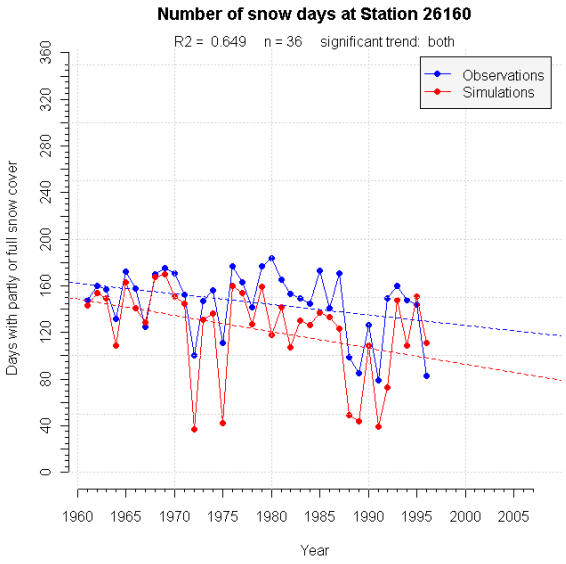

Number of snow days at Station 24210
R2 = 0.689 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

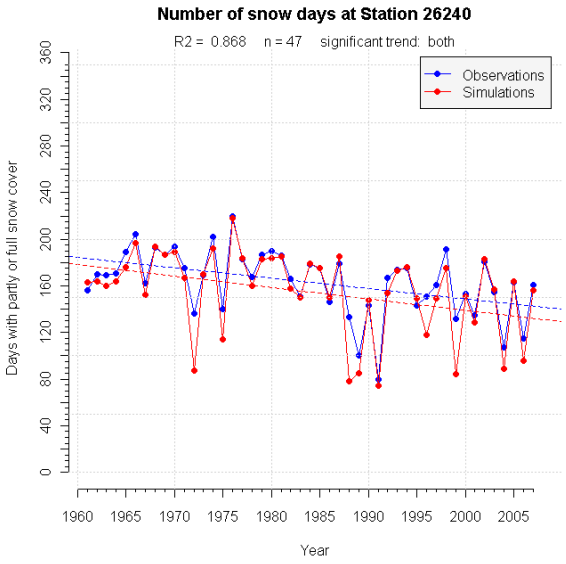

Number of snow days at Station 24770
R2 = 0.73 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

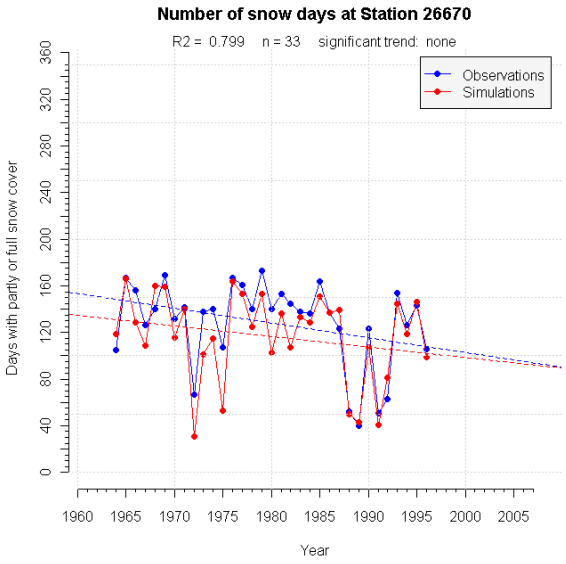

Number of snow days at Station 24960
R2 = 0.676 n = 41 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

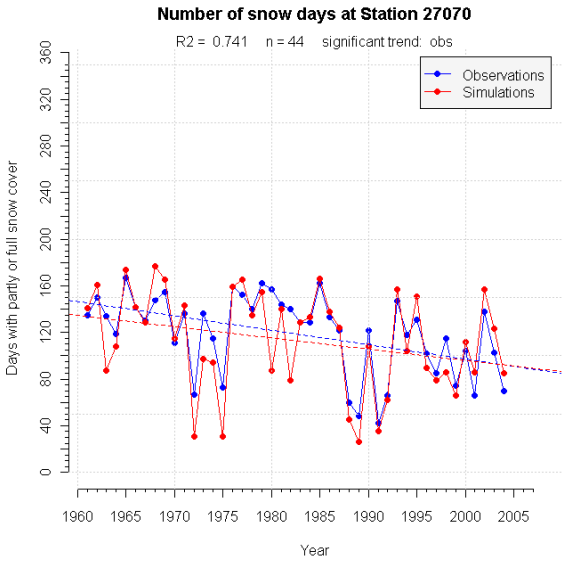

Number of snow days at Station 25320
R2 = 0.456 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

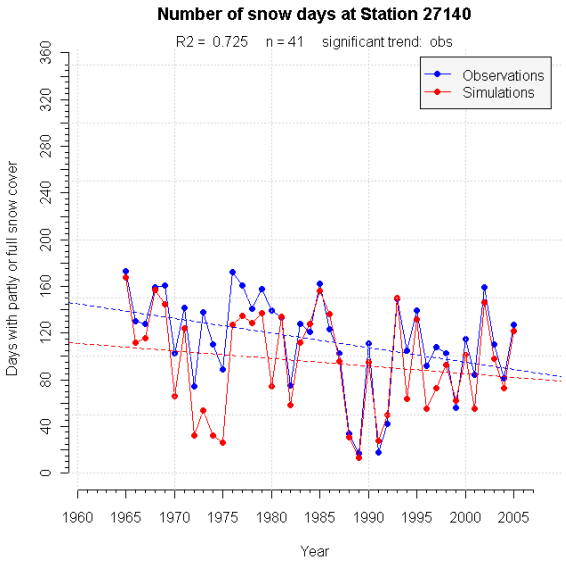

Number of snow days at Station 25590
R2 = 0.738 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

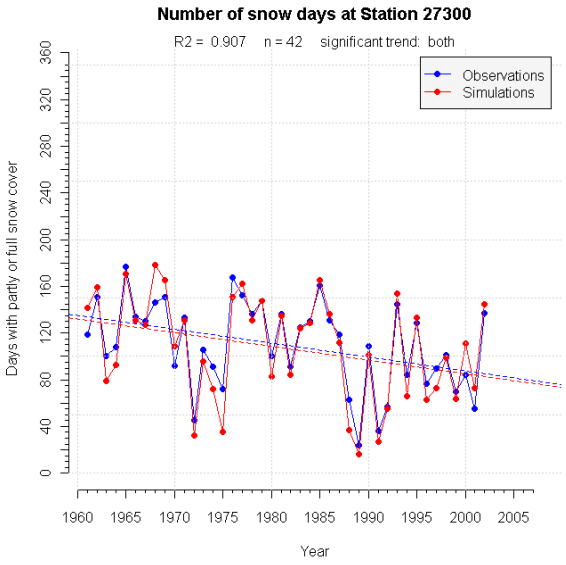

Number of snow days at Station 26160
R2 = 0.649 n = 36 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

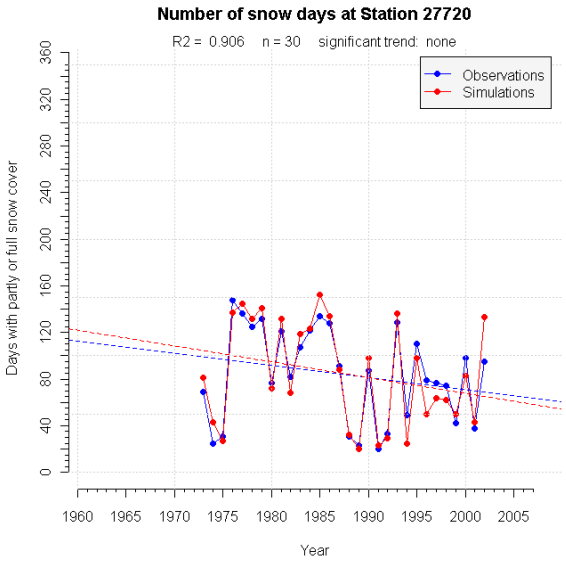

Number of snow days at Station 26240
R2 = 0.868 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

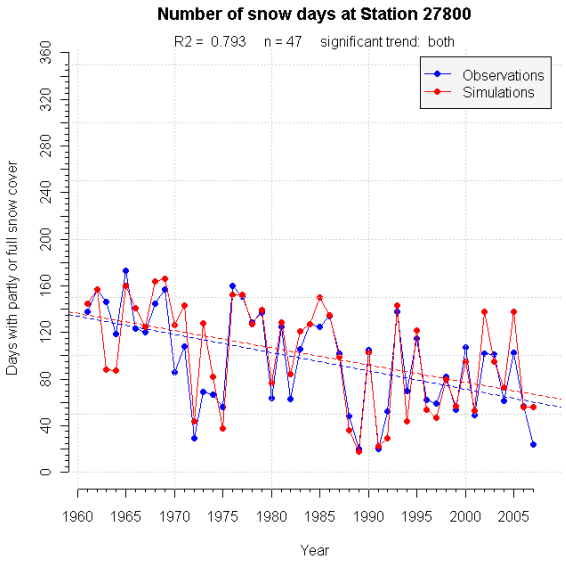

Number of snow days at Station 26670
R2 = 0.799 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

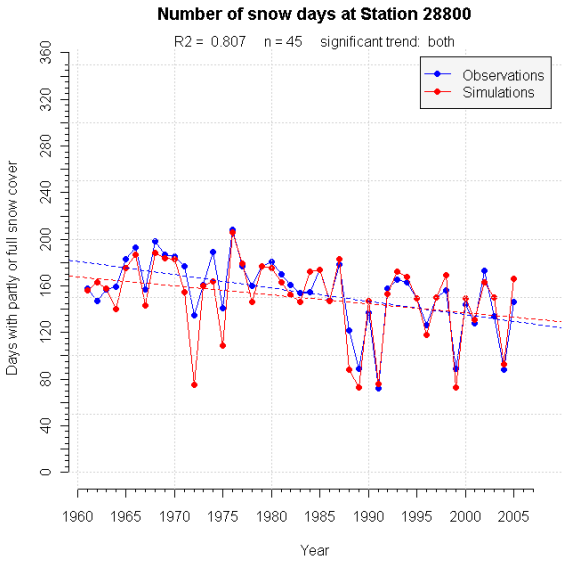

Number of snow days at Station 27070
R2 = 0.741 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

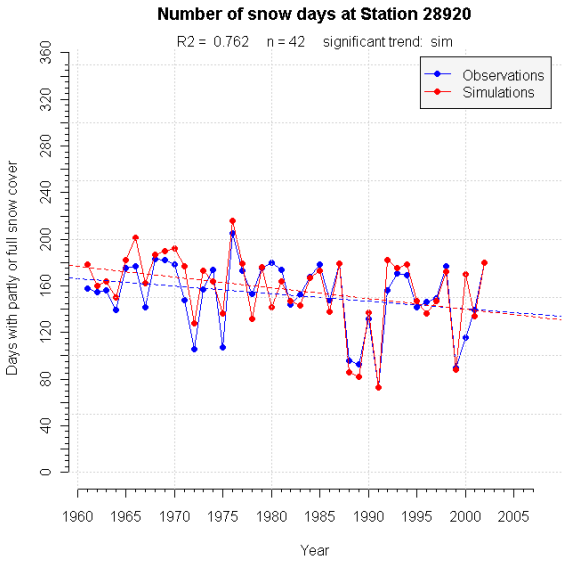

Number of snow days at Station 27140
R2 = 0.725 n = 41 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

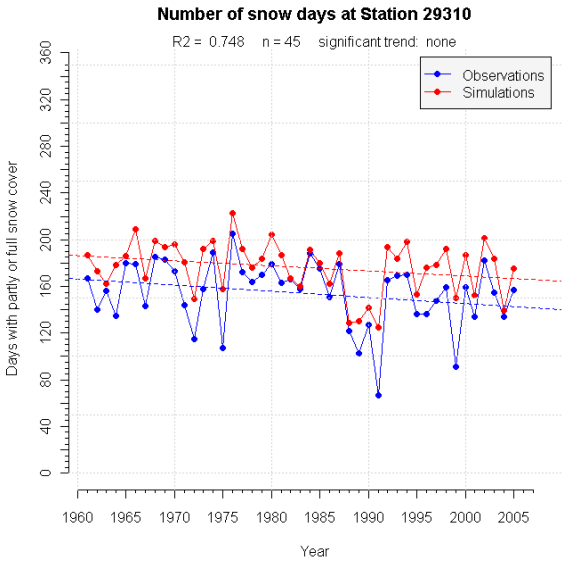

Number of snow days at Station 27300
R2 = 0.907 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

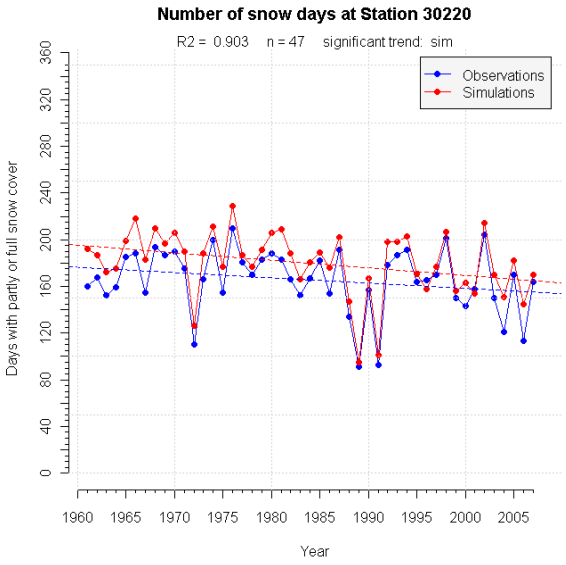

Number of snow days at Station 27720
R2 = 0.906 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

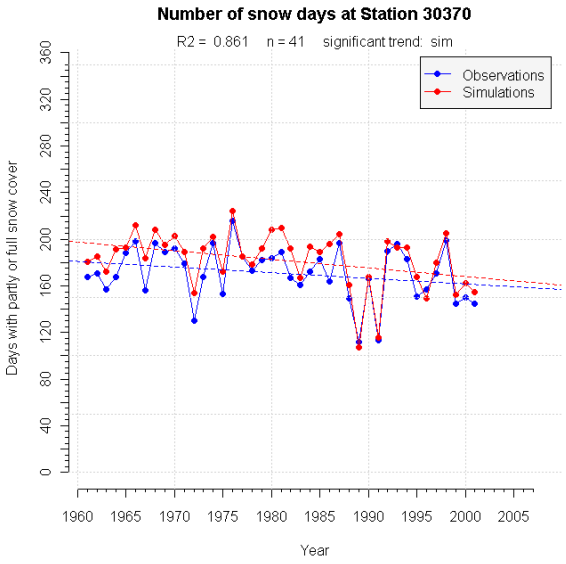

Number of snow days at Station 27800
R2 = 0.793 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

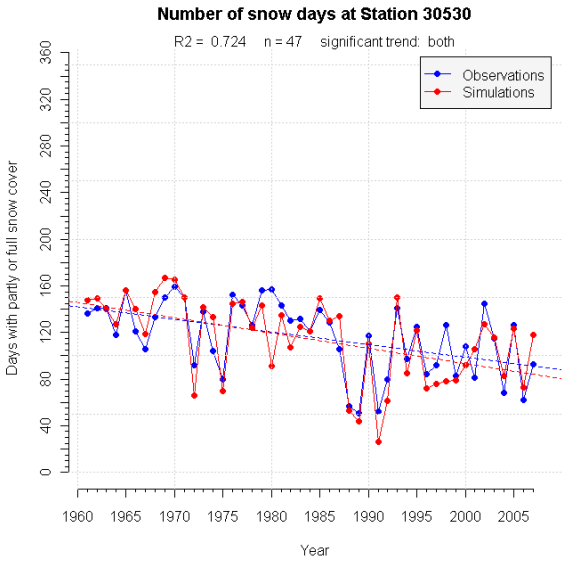

Number of snow days at Station 28800
R2 = 0.807 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

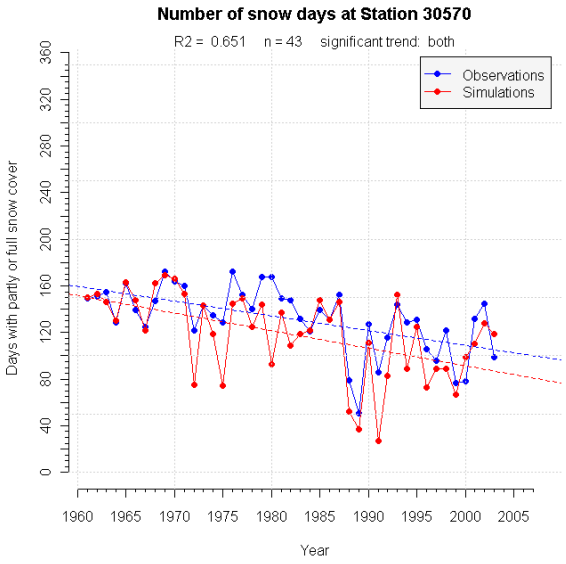

Number of snow days at Station 28920
R2 = 0.762 n = 42 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

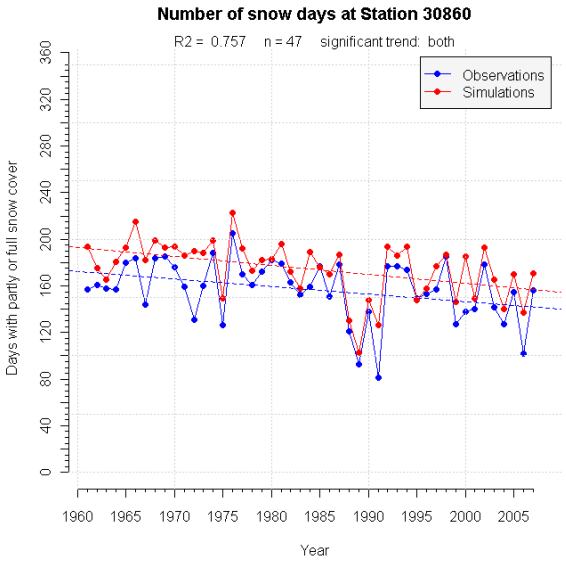

Number of snow days at Station 29310
R2 = 0.748 n = 45 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

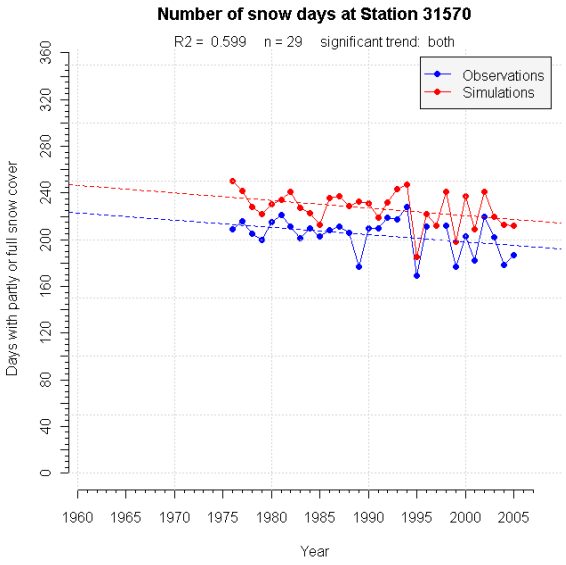

Number of snow days at Station 30220
R2 = 0.903 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

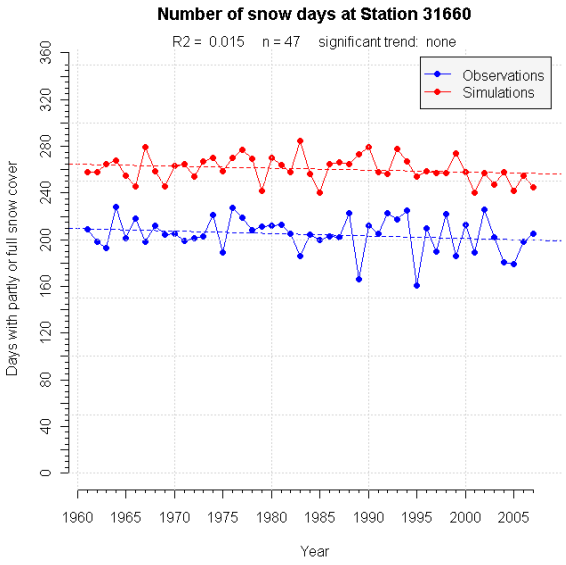

Number of snow days at Station 30370
R2 = 0.861 n = 41 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

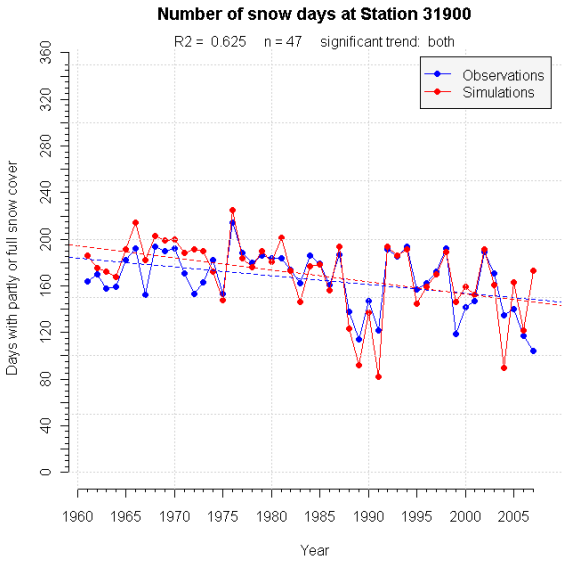

Number of snow days at Station 30530
R2 = 0.724 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

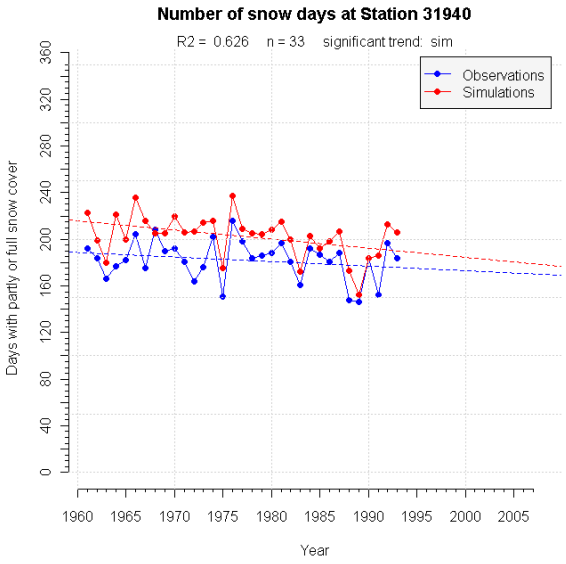

Number of snow days at Station 30570
R2 = 0.651 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

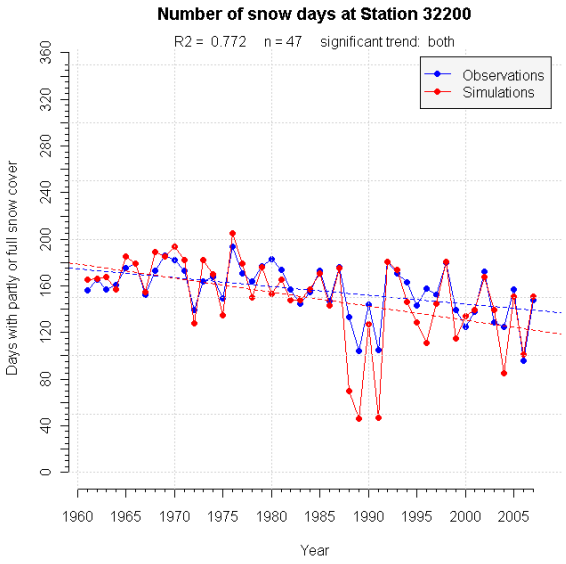

Number of snow days at Station 30860
R2 = 0.757 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

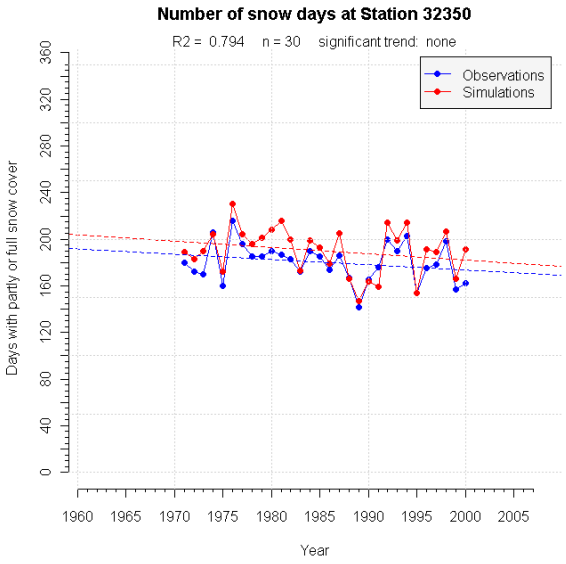

Number of snow days at Station 31570
R2 = 0.599 n = 29 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

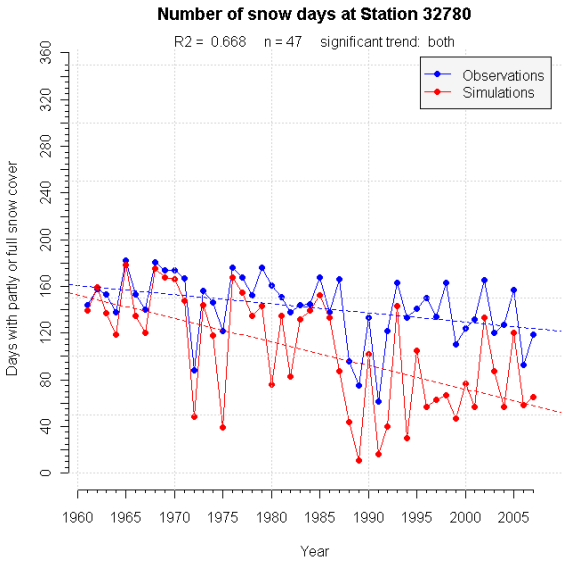

Number of snow days at Station 31660
R2 = 0.015 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

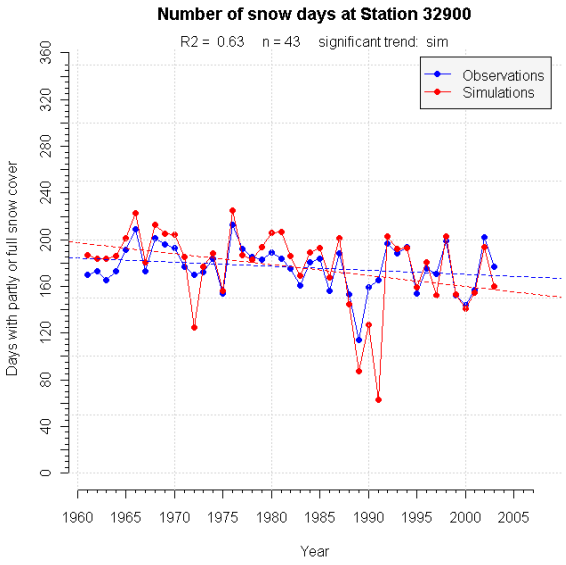

Number of snow days at Station 31900
R2 = 0.625 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

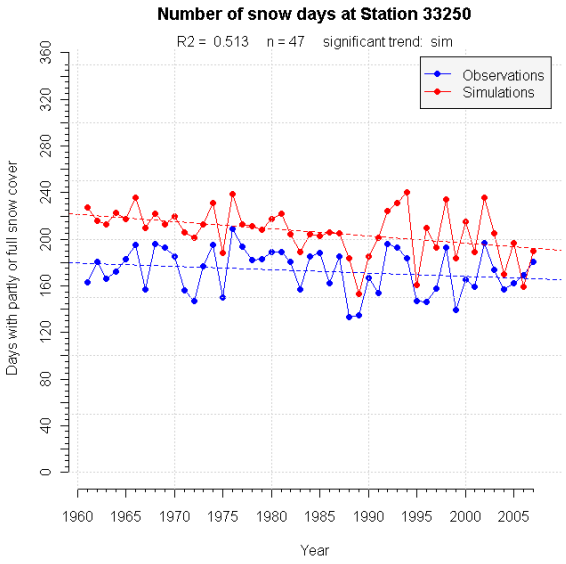

Number of snow days at Station 31940
R2 = 0.626 n = 33 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

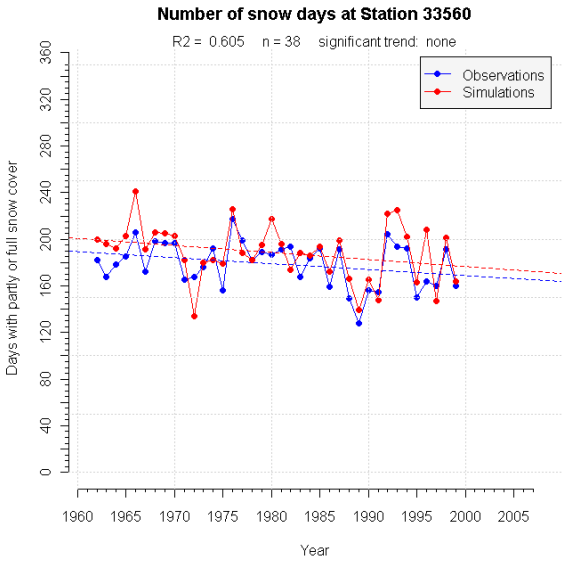

Number of snow days at Station 32200
R2 = 0.772 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

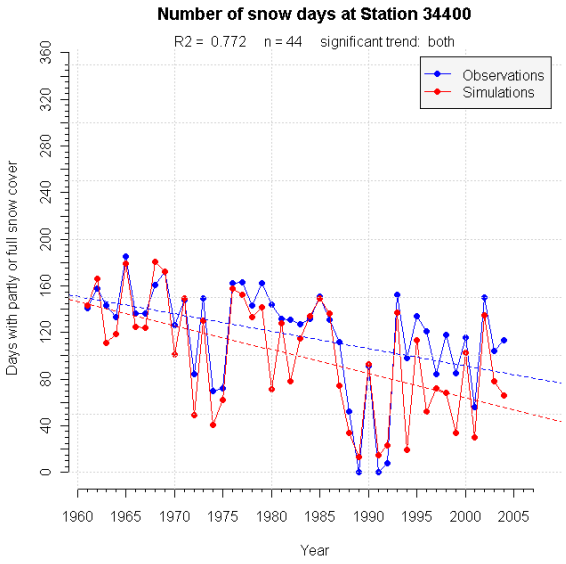

Number of snow days at Station 32350
R2 = 0.794 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

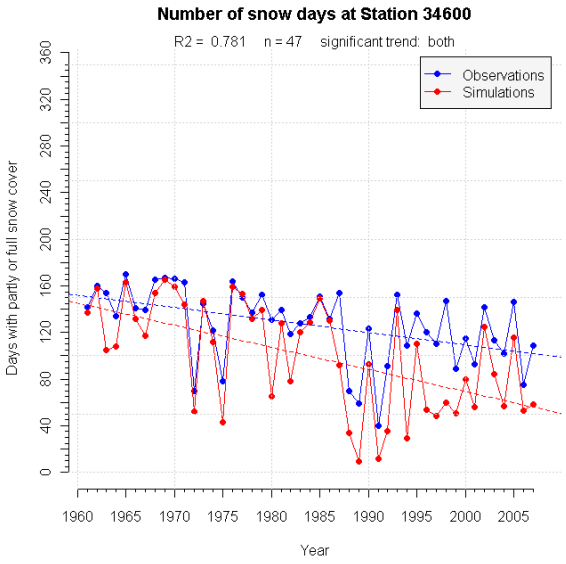

Number of snow days at Station 32780
R2 = 0.668 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

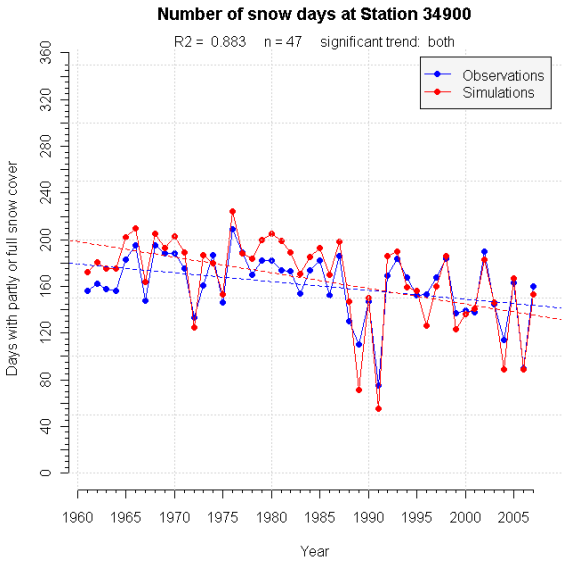

Number of snow days at Station 32900
R2 = 0.63 n = 43 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

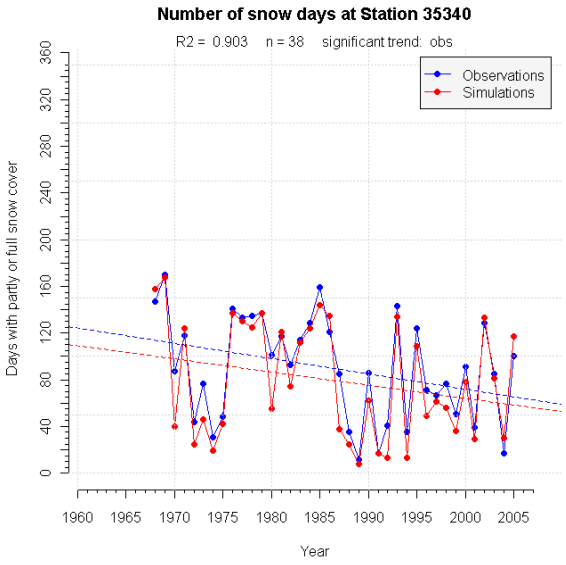

Number of snow days at Station 33250
R2 = 0.513 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

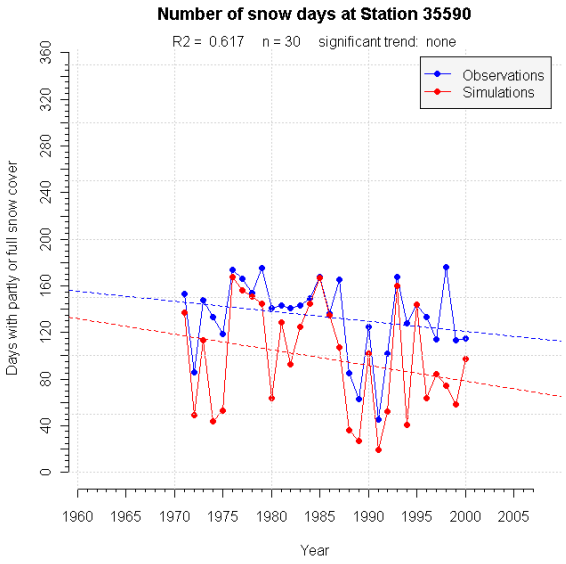

Number of snow days at Station 33560
R2 = 0.605 n = 38 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

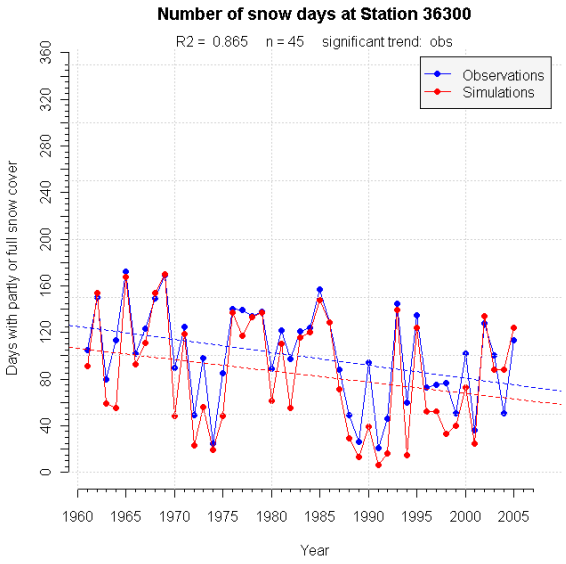

Number of snow days at Station 34400
R2 = 0.772 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

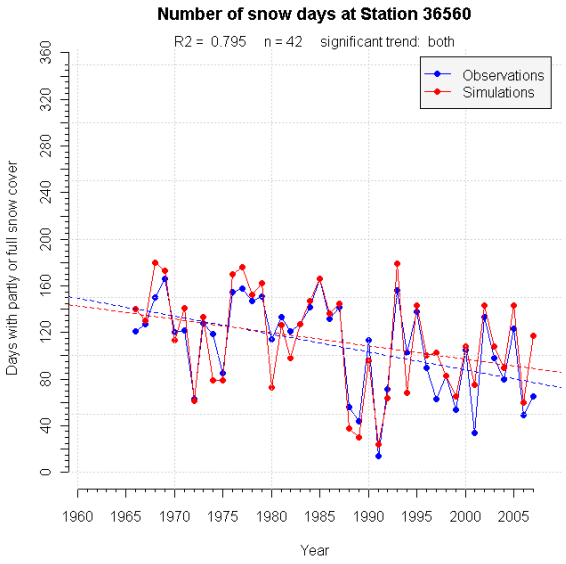

Number of snow days at Station 34600
R2 = 0.781 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

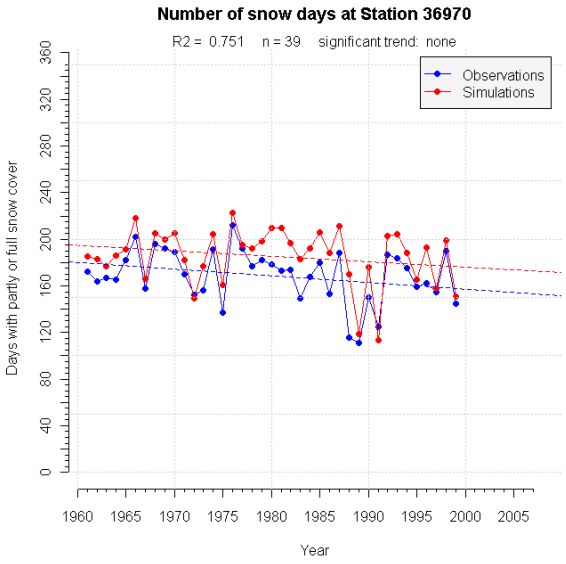

Number of snow days at Station 34900
R2 = 0.883 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

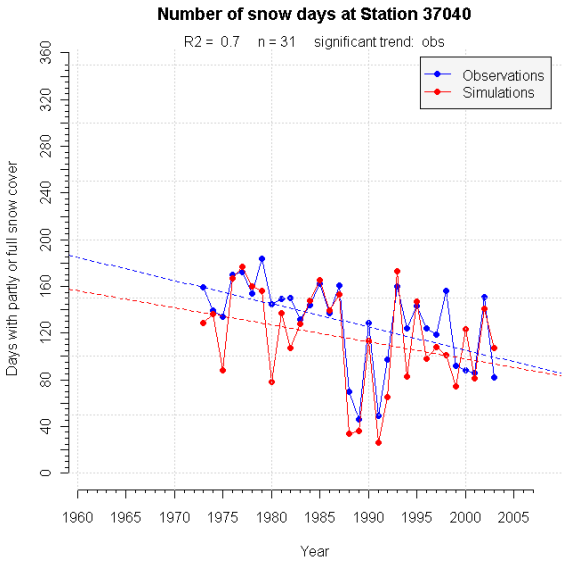

Number of snow days at Station 35340
R2 = 0.903 n = 38 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

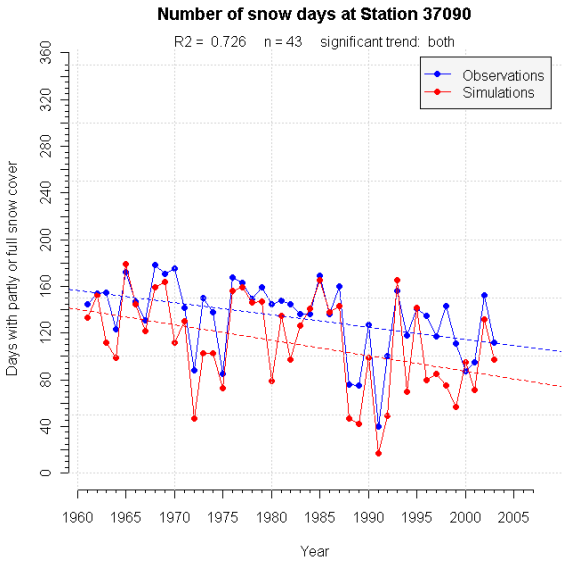

Number of snow days at Station 35590
R2 = 0.617 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

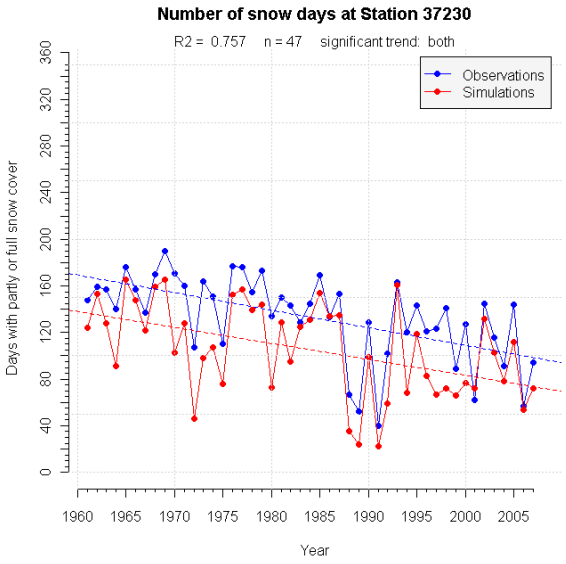

Number of snow days at Station 36300
R2 = 0.865 n = 45 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

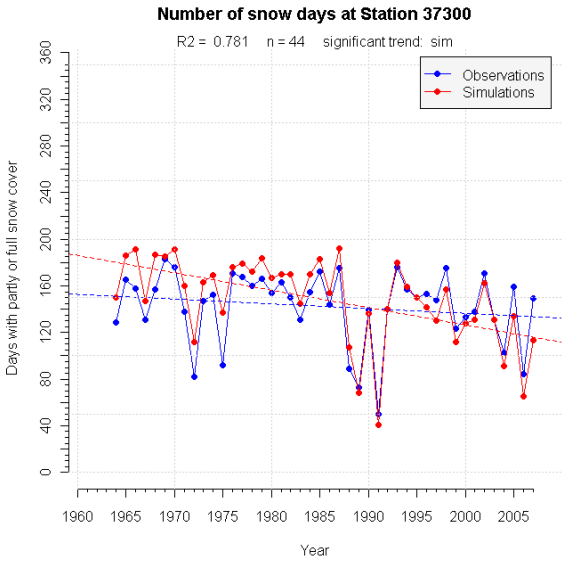

Number of snow days at Station 36560
R2 = 0.795 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

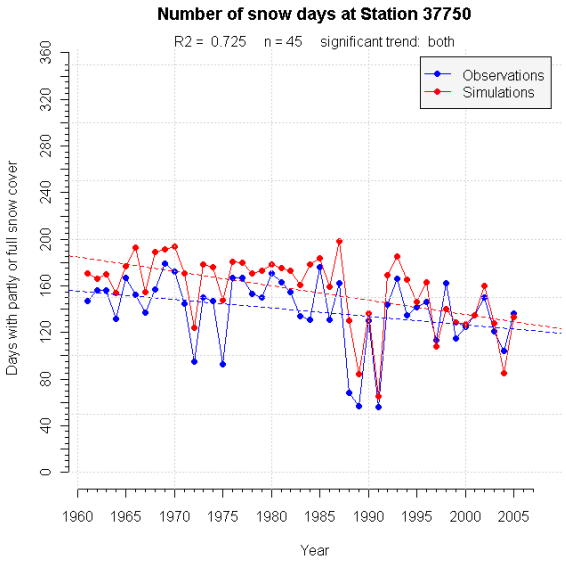

Number of snow days at Station 36970
R2 = 0.751 n = 39 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

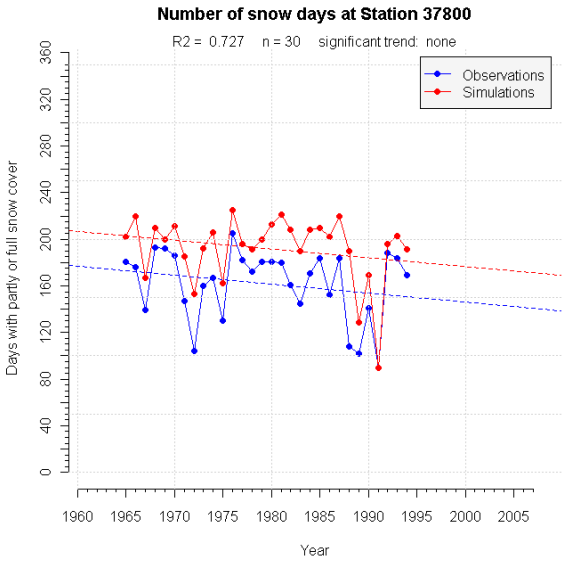

Number of snow days at Station 37040
R2 = 0.7 n = 31 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

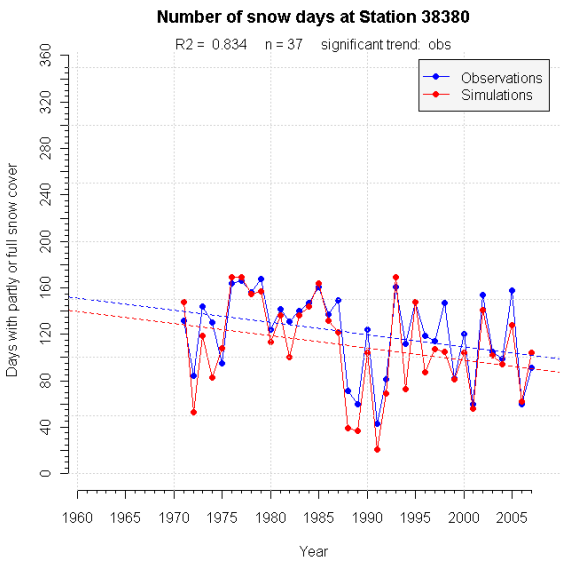

Number of snow days at Station 37090
R2 = 0.726 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

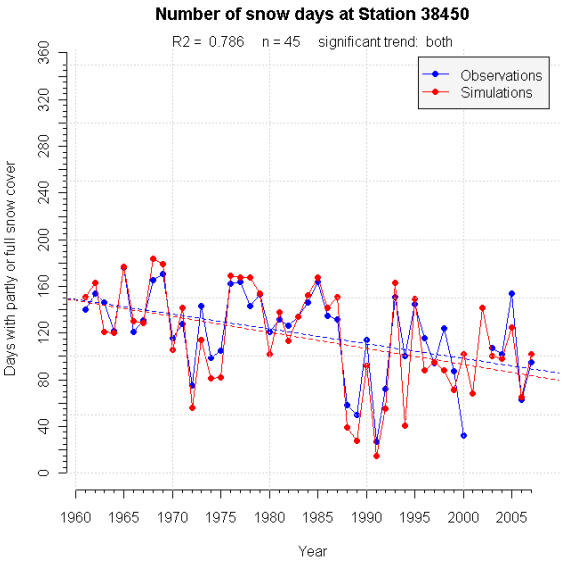

Number of snow days at Station 37230
R2 = 0.757 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

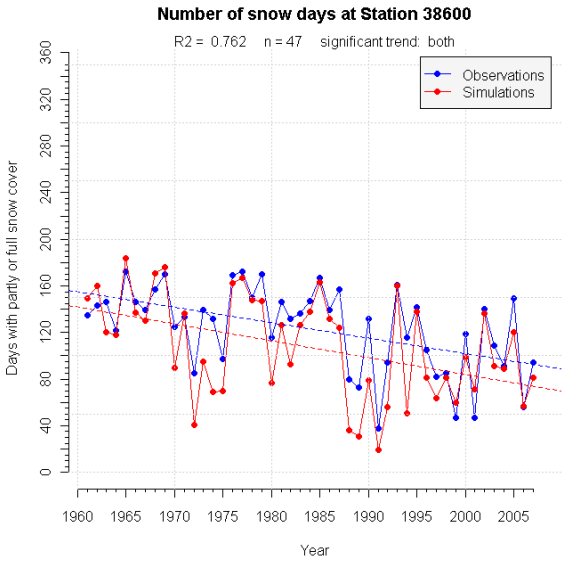

Number of snow days at Station 37300
R2 = 0.781 n = 44 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

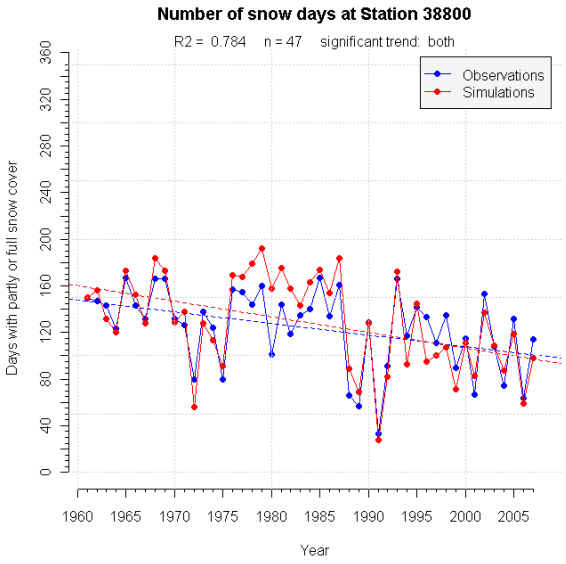

Number of snow days at Station 37750
R2 = 0.725 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

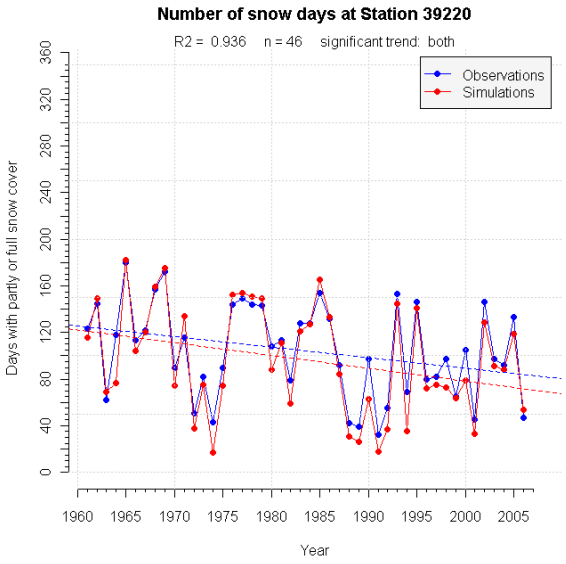

Number of snow days at Station 37800
R2 = 0.727 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

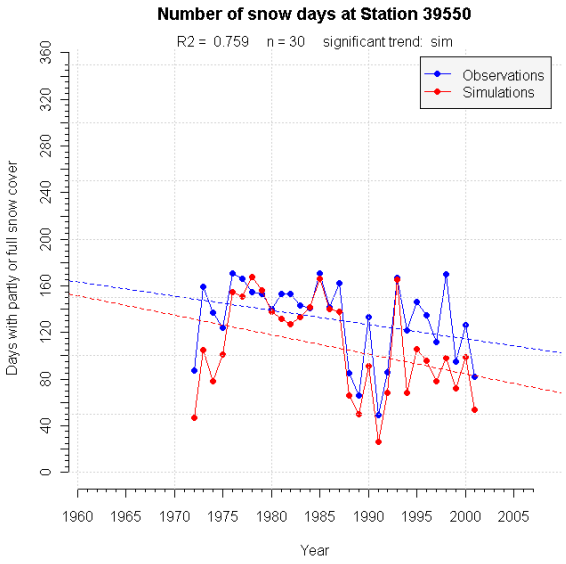

Number of snow days at Station 38380
R2 = 0.834 n = 37 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

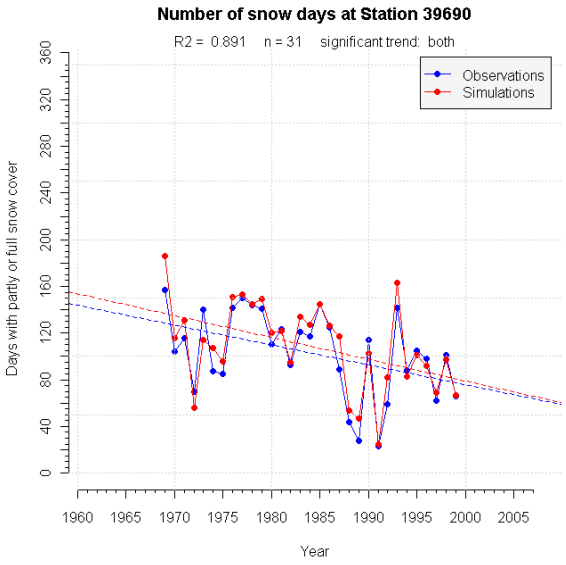

Number of snow days at Station 38450
R2 = 0.786 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

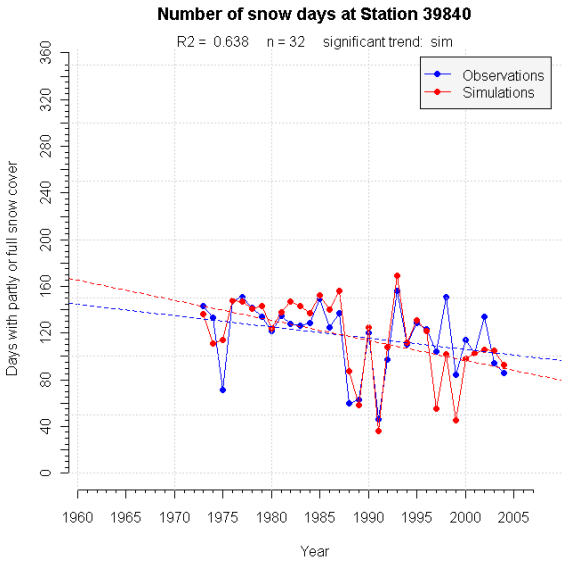

Number of snow days at Station 38600
R2 = 0.762 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

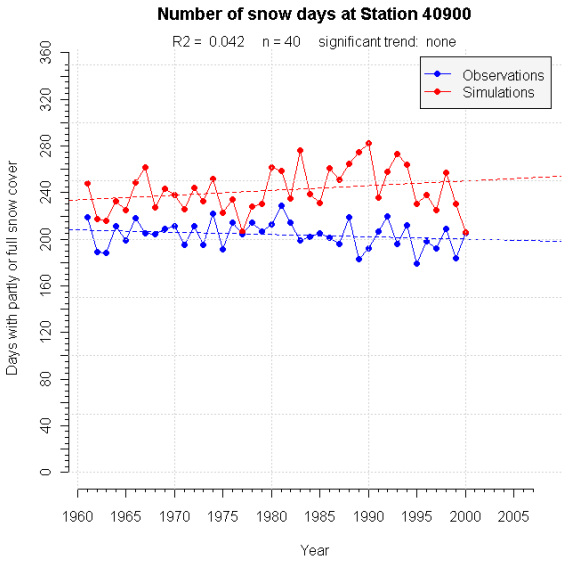

Number of snow days at Station 38800
R2 = 0.784 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

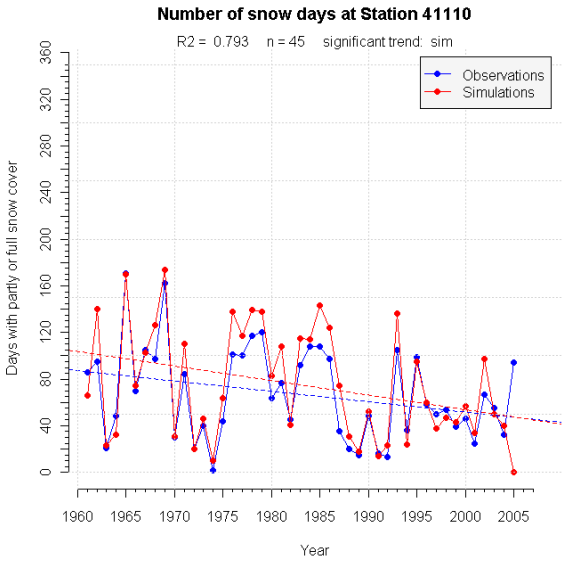

Number of snow days at Station 39220
R2 = 0.936 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

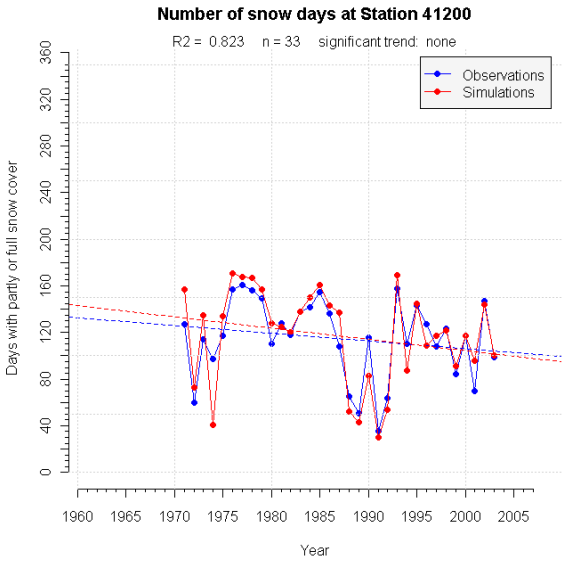

Number of snow days at Station 39550
R2 = 0.759 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

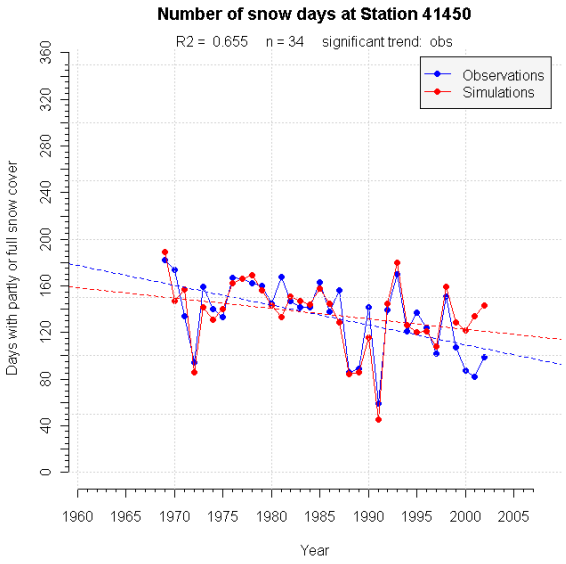

Number of snow days at Station 39690
R2 = 0.891 n = 31 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

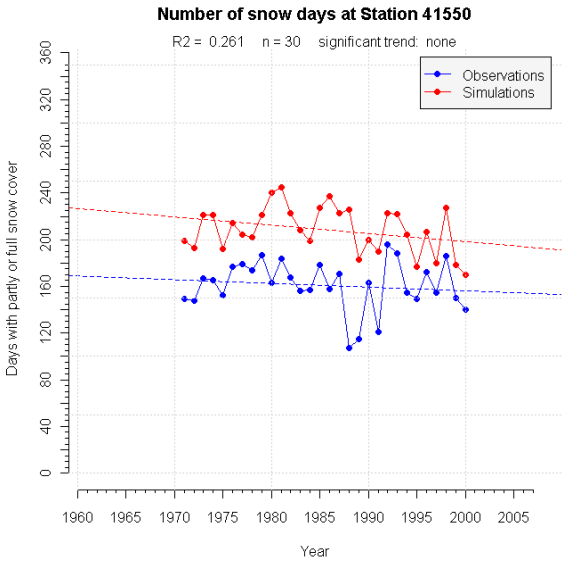

Number of snow days at Station 39840
R2 = 0.638 n = 32 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

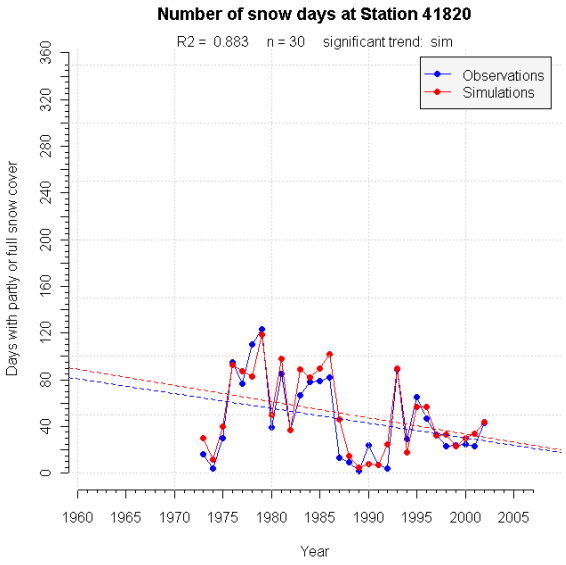

Number of snow days at Station 40900
R2 = 0.042 n = 40 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

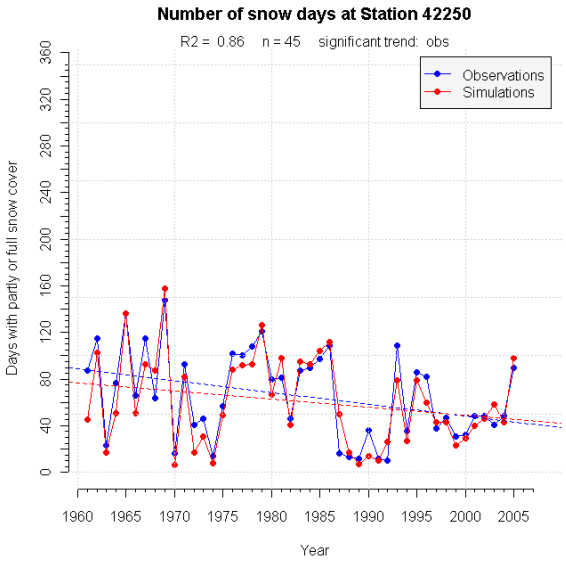

Number of snow days at Station 41110
R2 = 0.793 n = 45 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

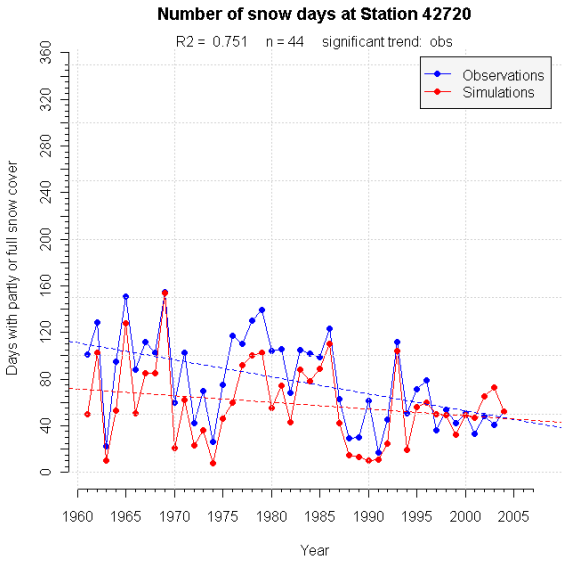

Number of snow days at Station 41200
R2 = 0.823 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

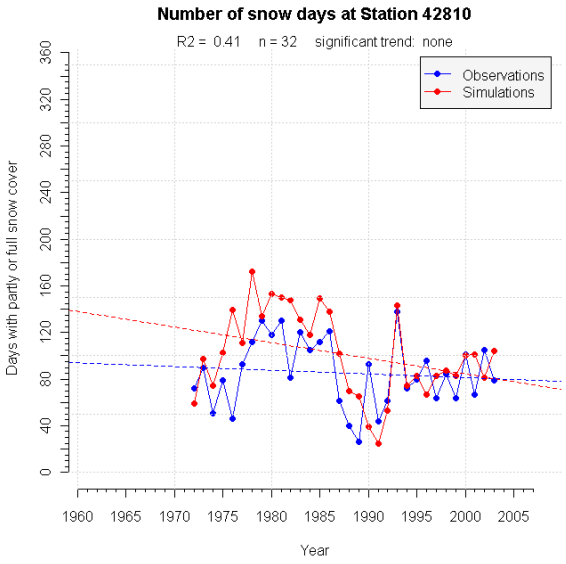

Number of snow days at Station 41450
R2 = 0.655 n = 34 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

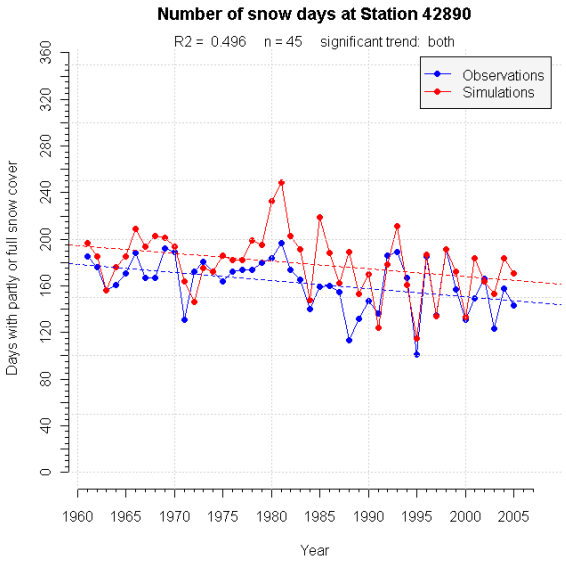

Number of snow days at Station 41550
R2 = 0.261 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

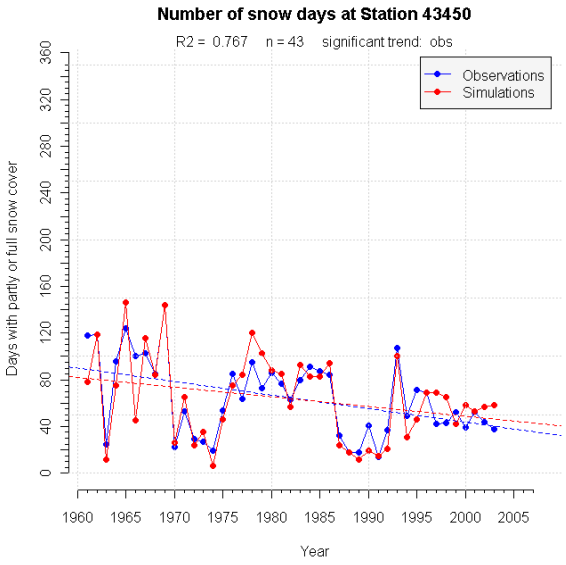

Number of snow days at Station 41820
R2 = 0.883 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

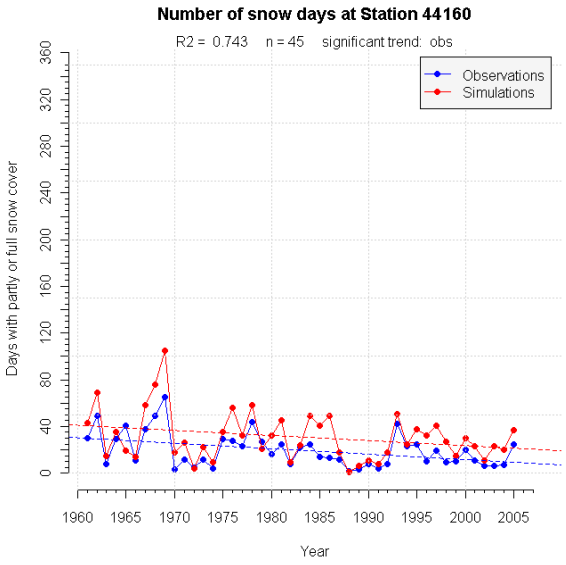

Number of snow days at Station 42250
R2 = 0.86 n = 45 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

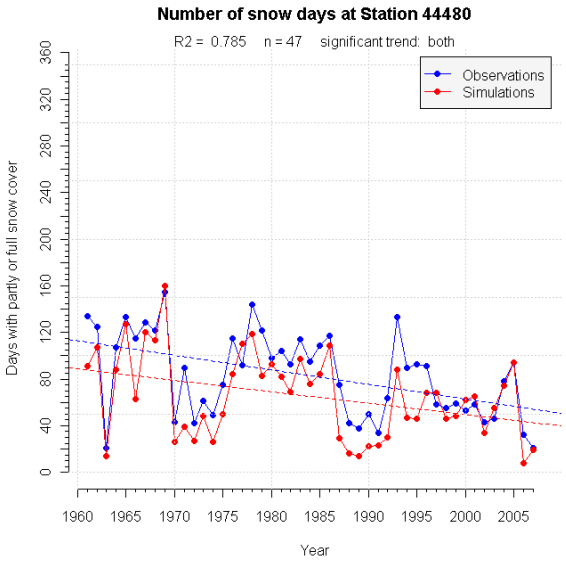

Number of snow days at Station 42720
R2 = 0.751 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

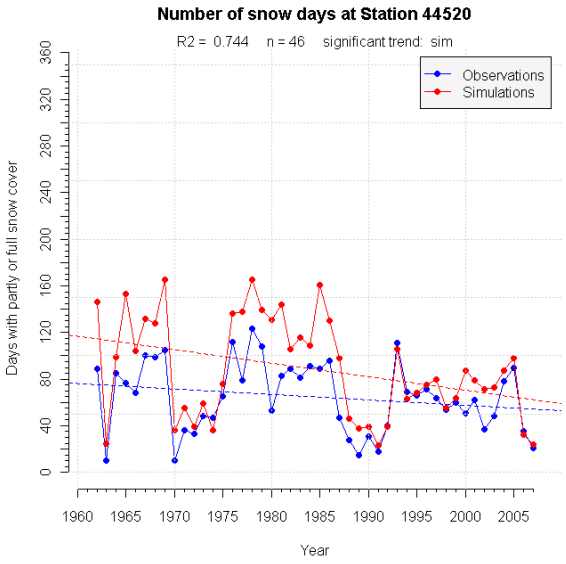

Number of snow days at Station 42810
R2 = 0.41 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

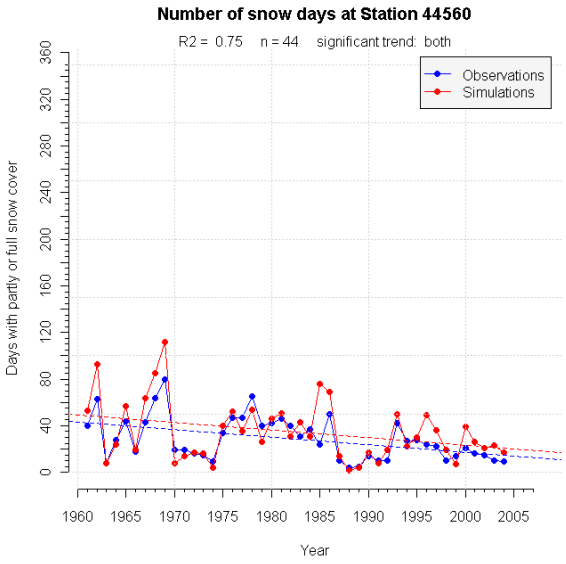

Number of snow days at Station 42890
R2 = 0.496 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

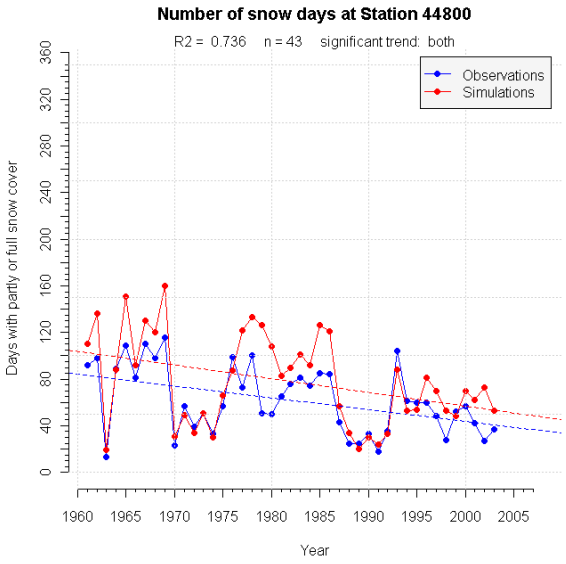

Number of snow days at Station 43450
R2 = 0.767 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

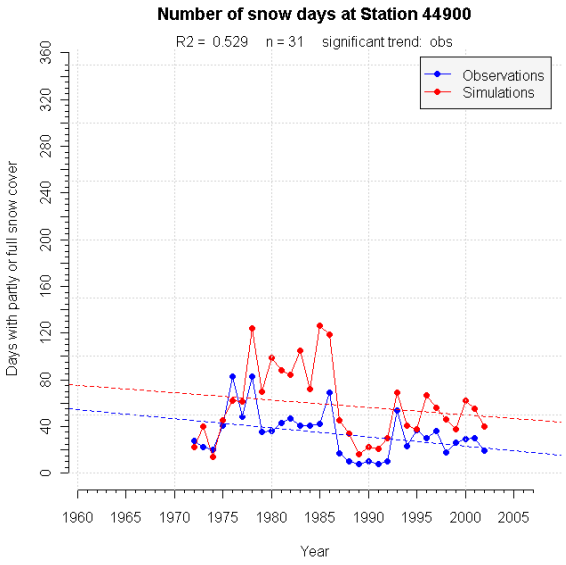

Number of snow days at Station 44160
R2 = 0.743 n = 45 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

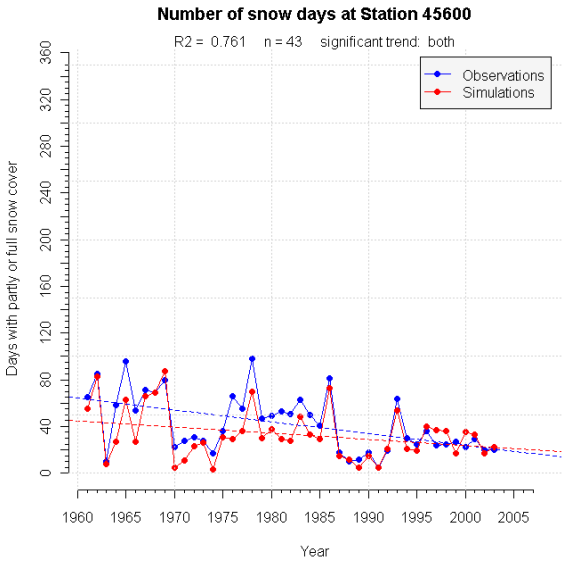

Number of snow days at Station 44480
R2 = 0.785 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

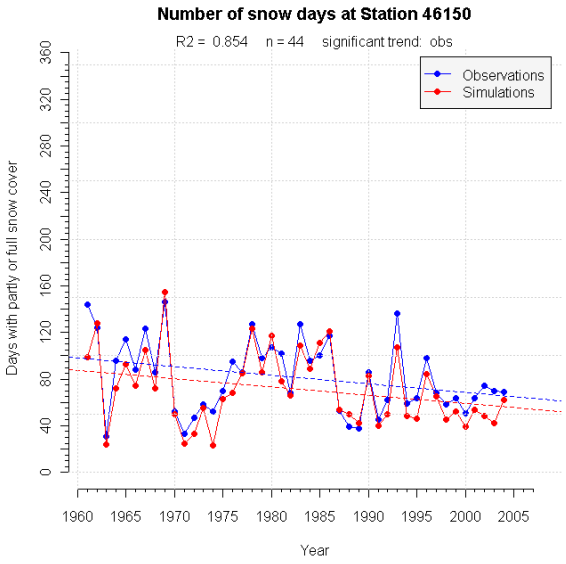

Number of snow days at Station 44520
R2 = 0.744 n = 46 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

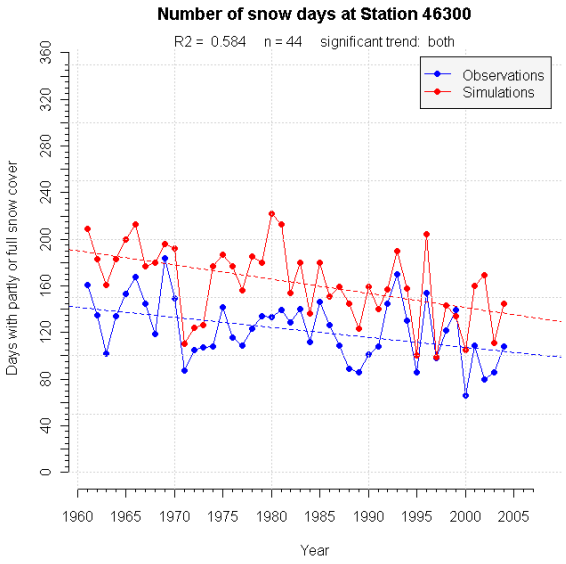

Number of snow days at Station 44560
R2 = 0.75 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

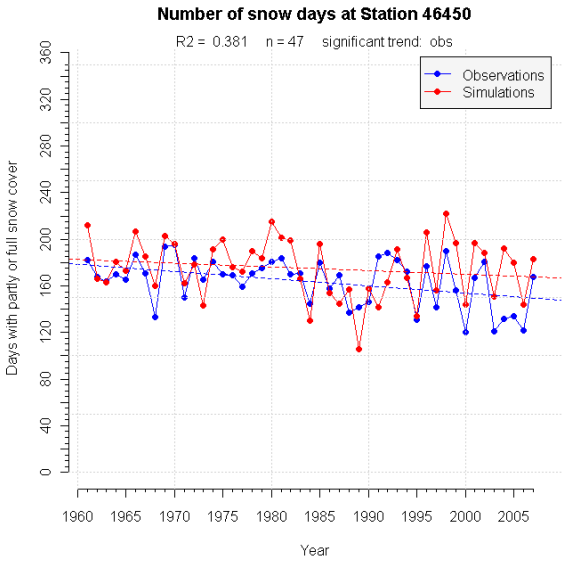

Number of snow days at Station 44800
R2 = 0.736 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

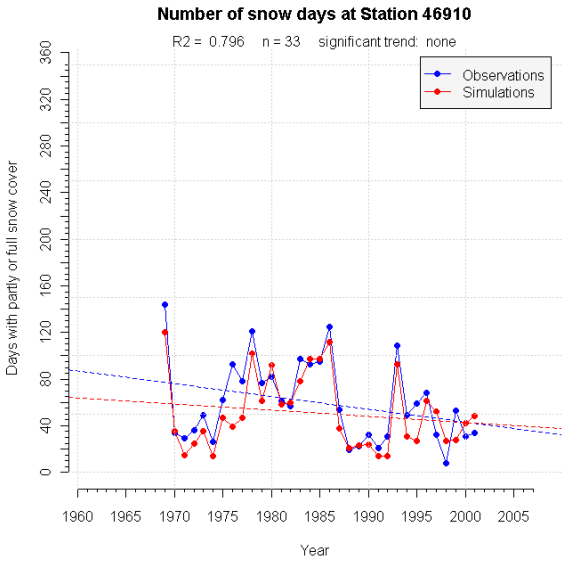

Number of snow days at Station 44900
R2 = 0.529 n = 31 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

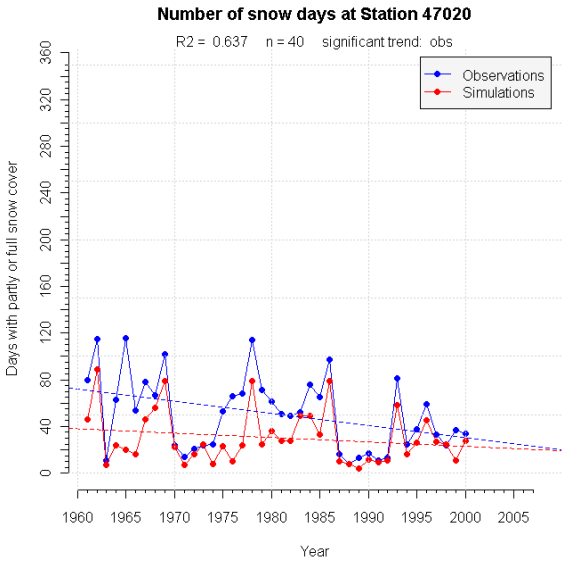

Number of snow days at Station 45600
R2 = 0.761 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

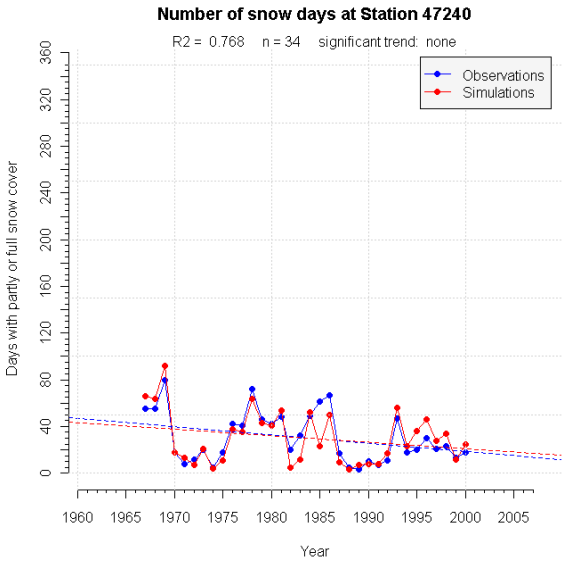

Number of snow days at Station 46150
R2 = 0.854 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

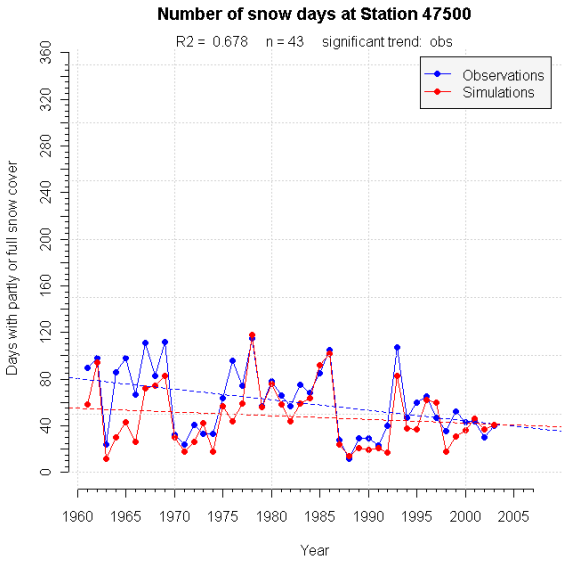

Number of snow days at Station 46300
R2 = 0.584 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

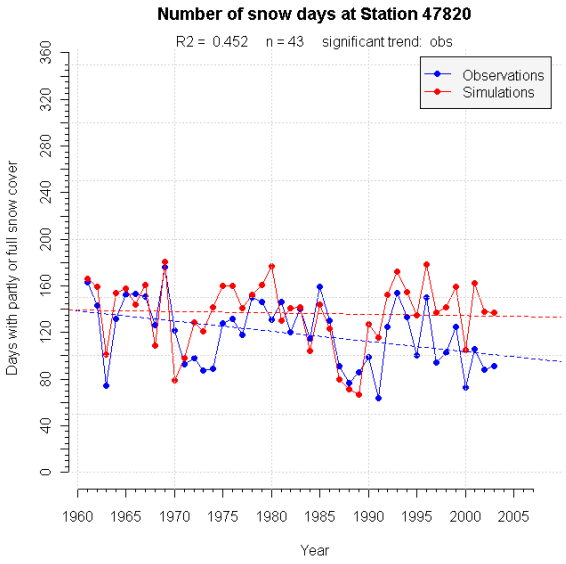

Number of snow days at Station 46450
R2 = 0.381 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

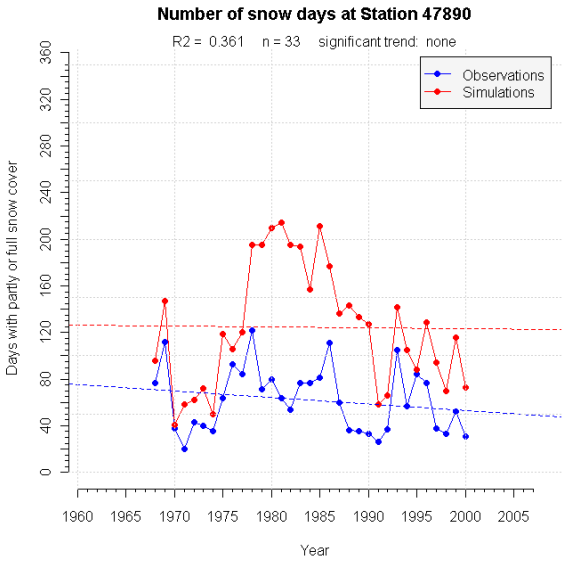

Number of snow days at Station 46910
R2 = 0.796 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

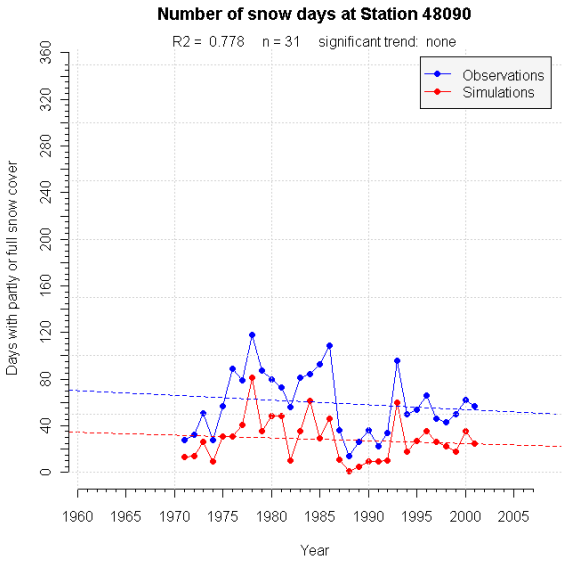

Number of snow days at Station 47020
R2 = 0.637 n = 40 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

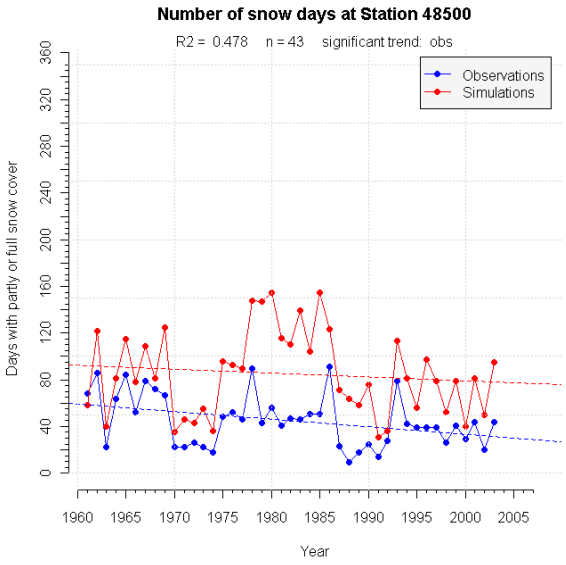

Number of snow days at Station 47240
R2 = 0.768 n = 34 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

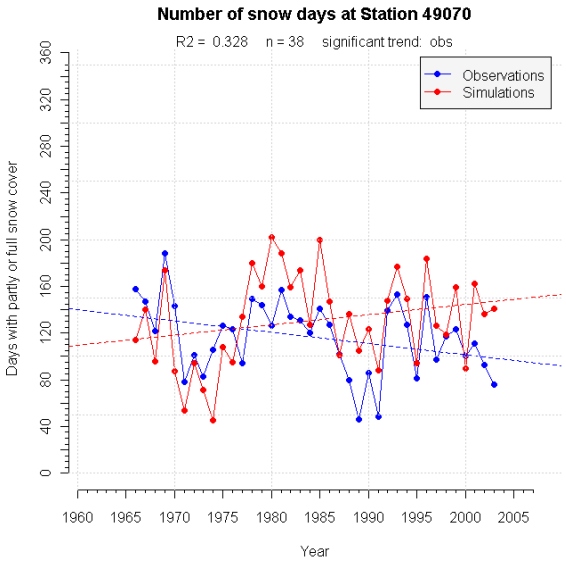

Number of snow days at Station 47500
R2 = 0.678 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

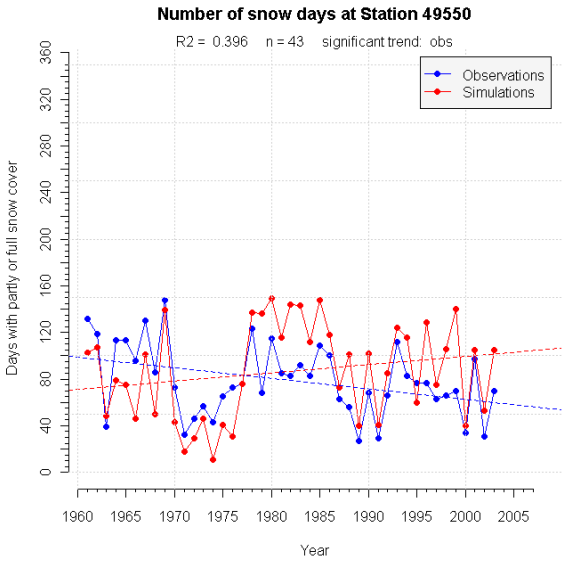

Number of snow days at Station 47820
R2 = 0.452 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

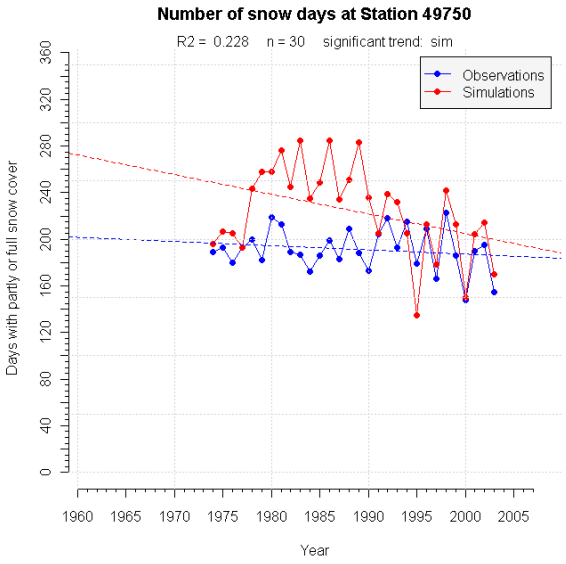

Number of snow days at Station 47890
R2 = 0.361 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

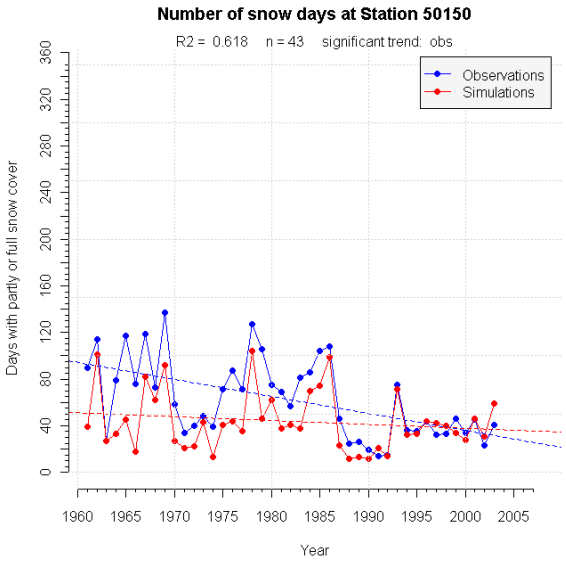

Number of snow days at Station 48090
R2 = 0.778 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

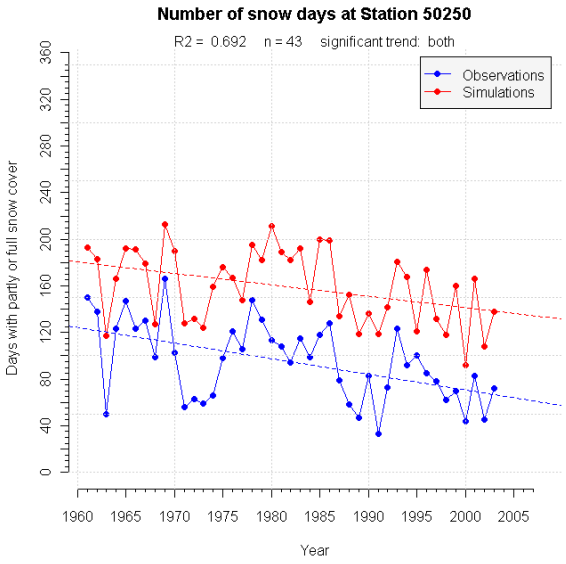

Number of snow days at Station 48500
R2 = 0.478 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

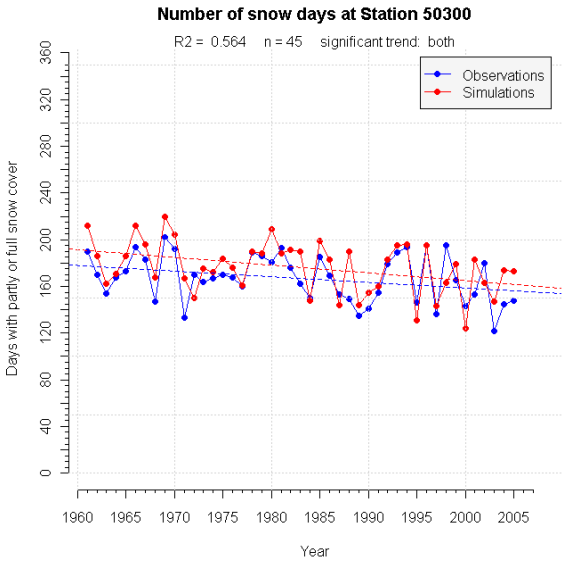

Number of snow days at Station 49070
R2 = 0.328 n = 38 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

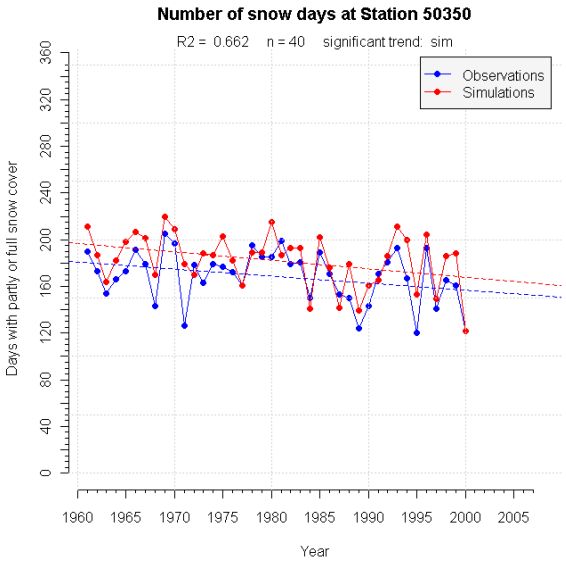

Number of snow days at Station 49550
R2 = 0.396 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

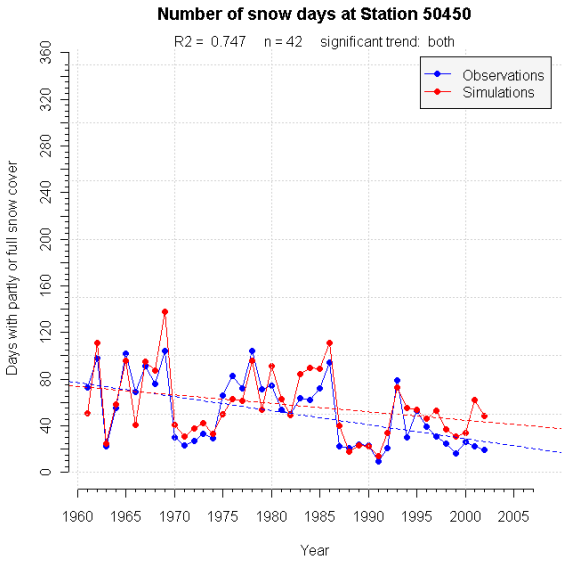

Number of snow days at Station 49750
R2 = 0.228 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

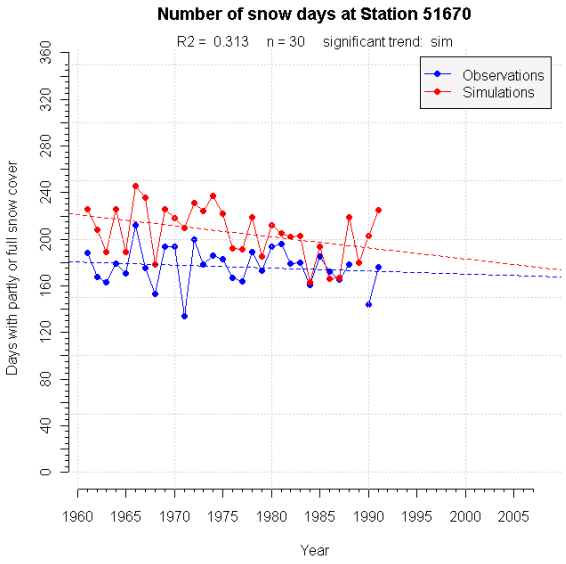

Number of snow days at Station 50150
R2 = 0.618 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

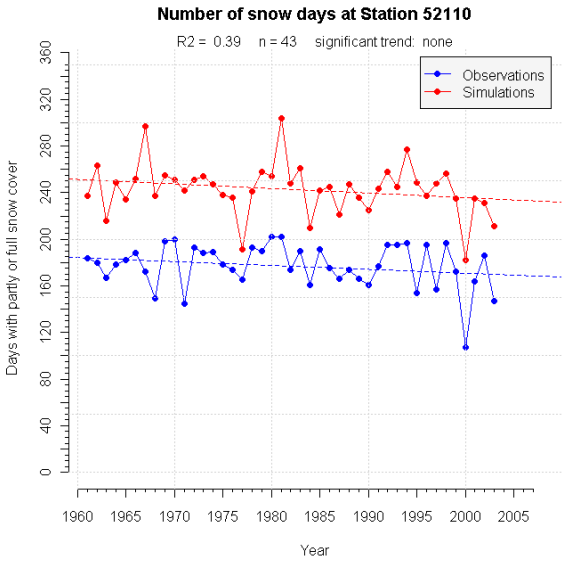

Number of snow days at Station 50250
R2 = 0.692 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

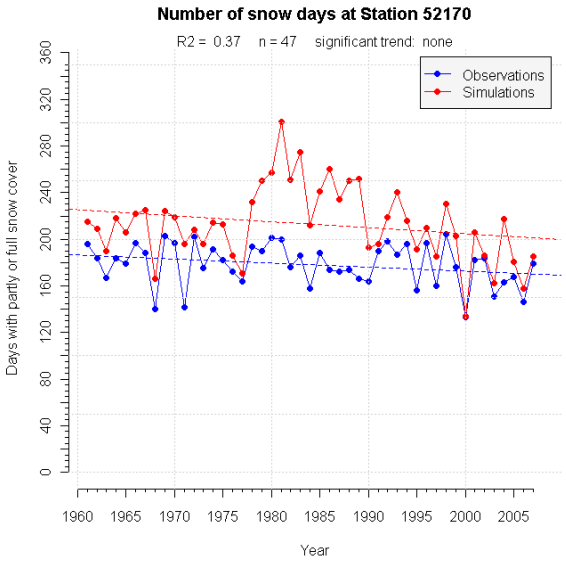

Number of snow days at Station 50300
R2 = 0.564 n = 45 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

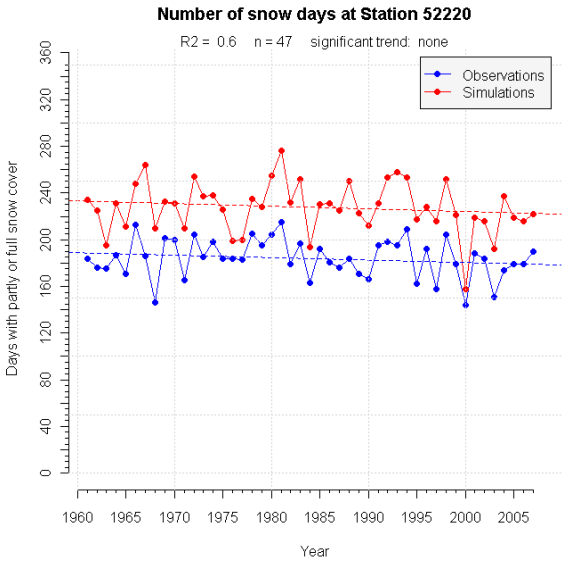

Number of snow days at Station 50350
R2 = 0.662 n = 40 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

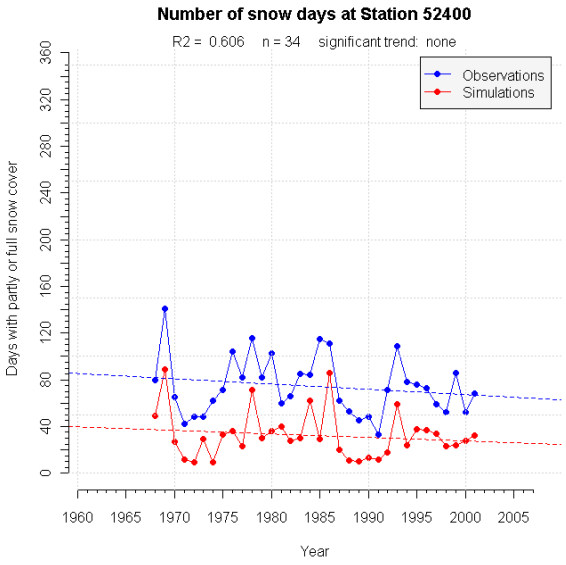

Number of snow days at Station 50450
R2 = 0.747 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

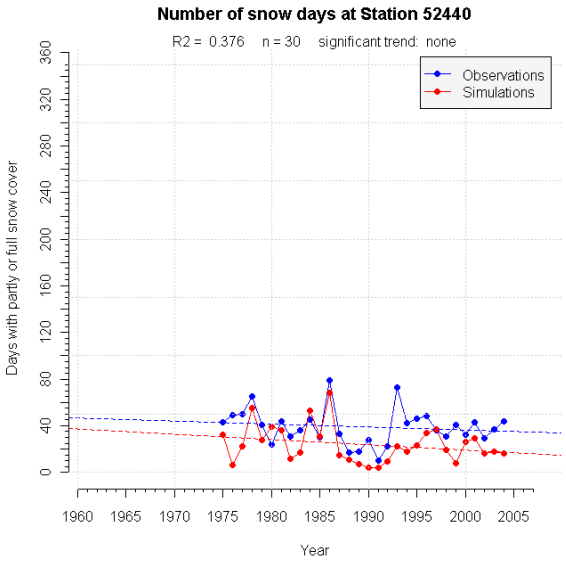

Number of snow days at Station 51670
R2 = 0.313 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

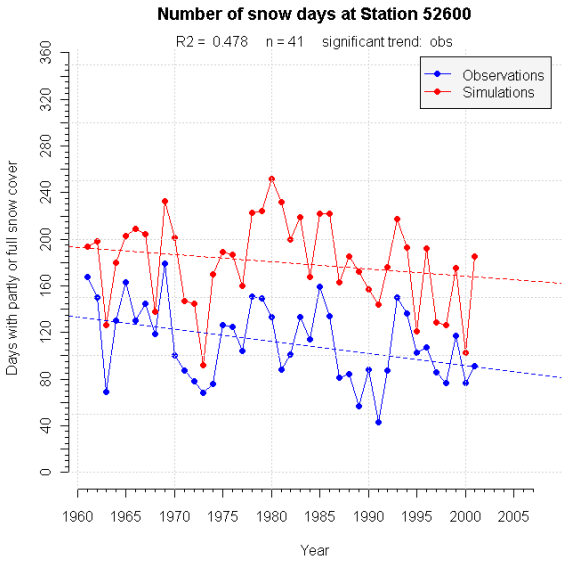

Number of snow days at Station 52110
R2 = 0.39 n = 43 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

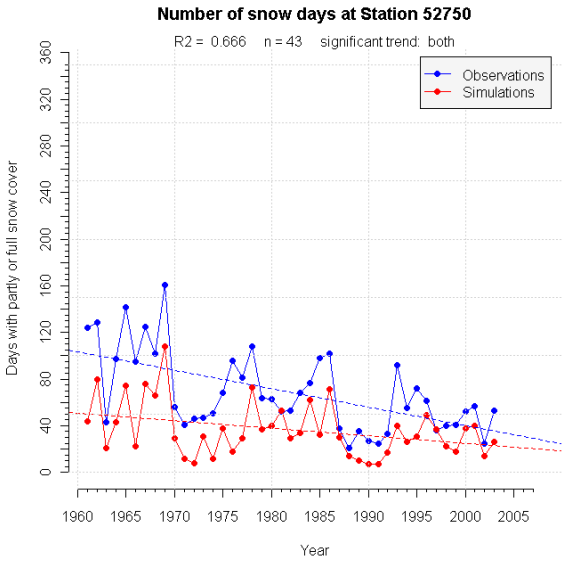

Number of snow days at Station 52170
R2 = 0.37 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

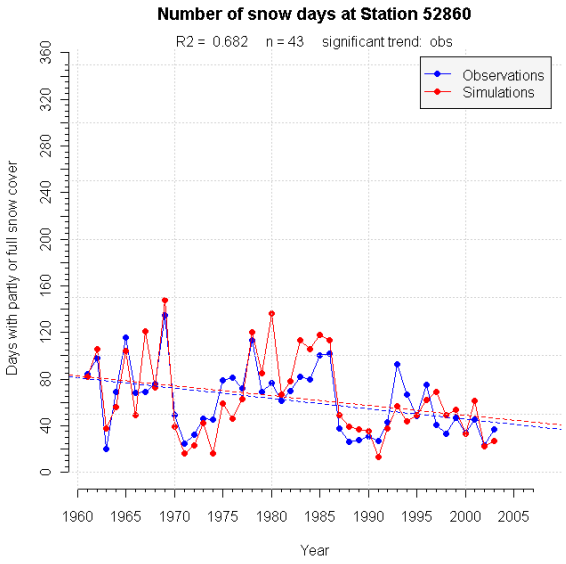

Number of snow days at Station 52220
R2 = 0.6 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

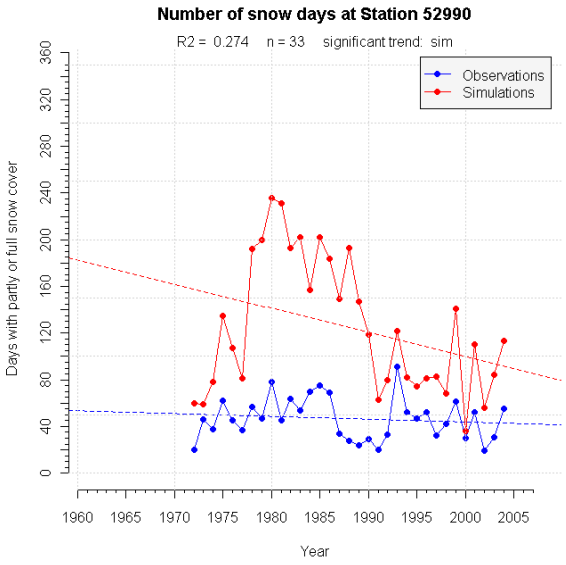

Number of snow days at Station 52400
R2 = 0.606 n = 34 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

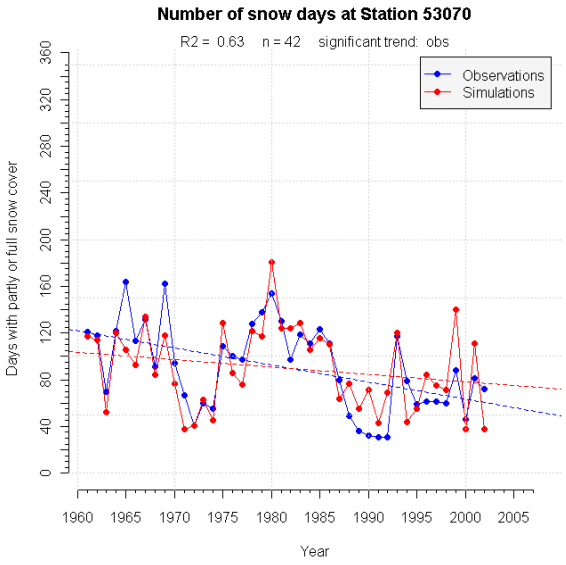

Number of snow days at Station 52440
R2 = 0.376 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

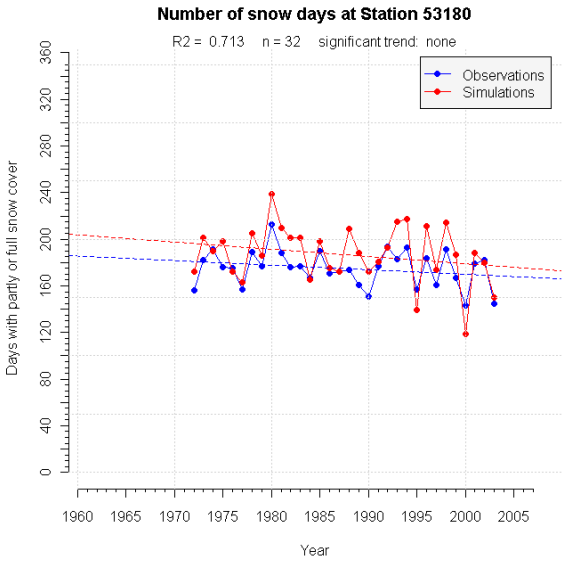

Number of snow days at Station 52600
R2 = 0.478 n = 41 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

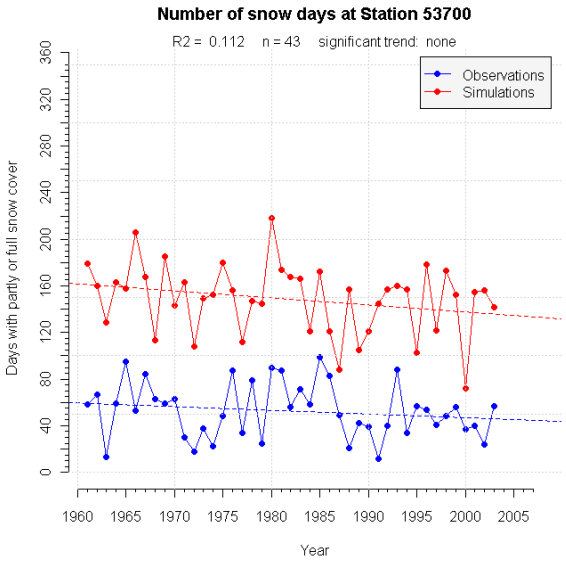

Number of snow days at Station 52750
R2 = 0.666 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

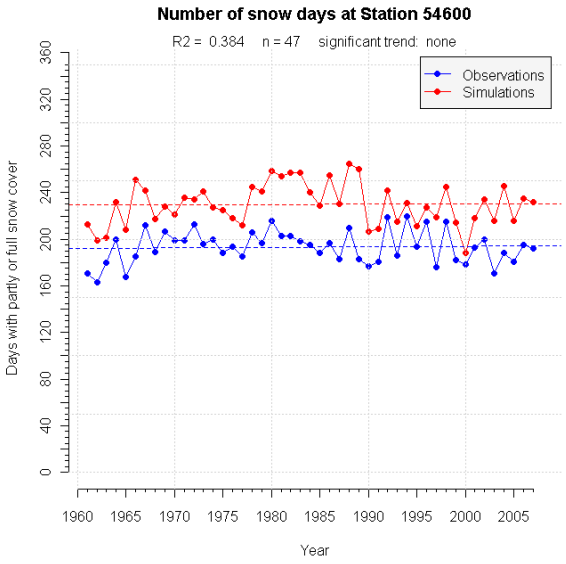

Number of snow days at Station 52860
R2 = 0.682 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

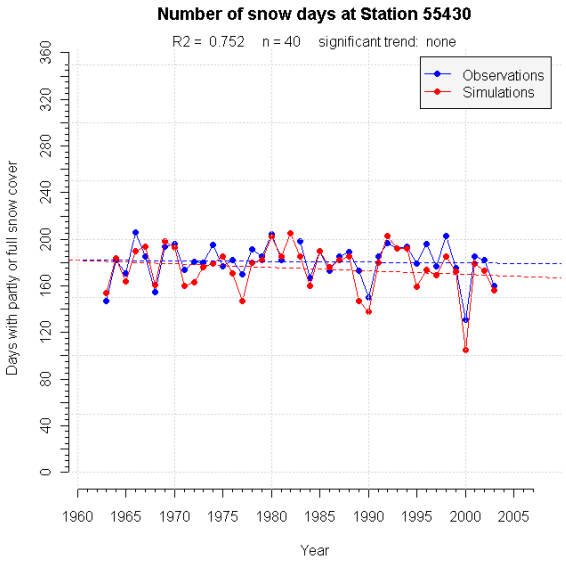

Number of snow days at Station 52990
R2 = 0.274 n = 33 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

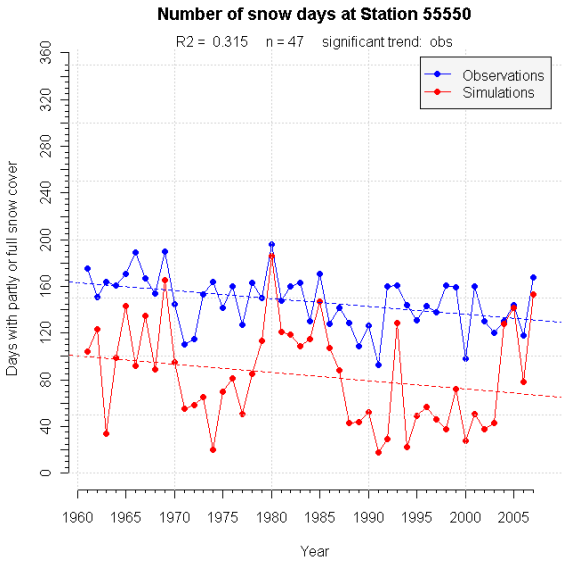

Number of snow days at Station 53070
R2 = 0.63 n = 42 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

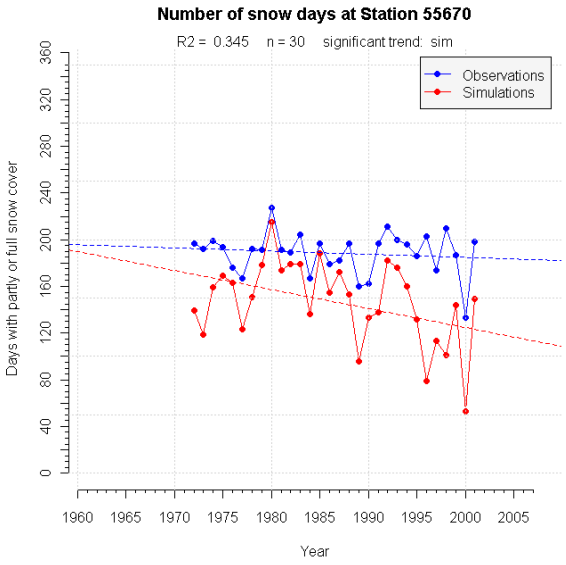

Number of snow days at Station 53180
R2 = 0.713 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

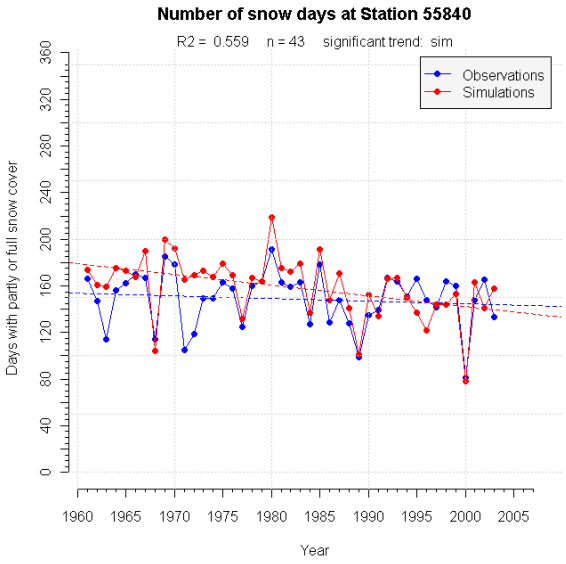

Number of snow days at Station 53700
R2 = 0.112 n = 43 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

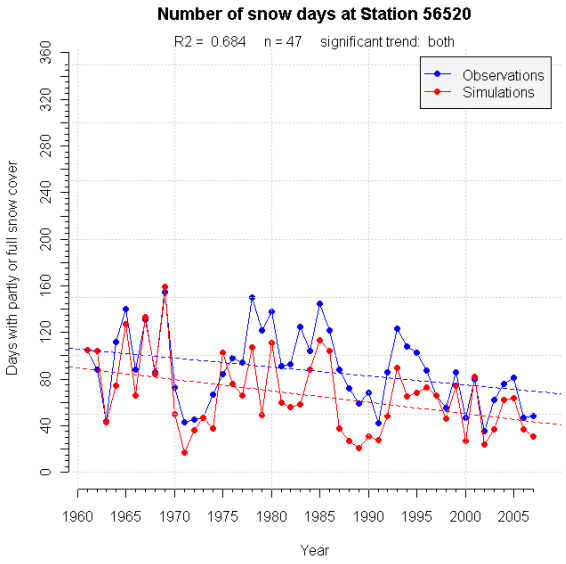

Number of snow days at Station 54600
R2 = 0.384 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

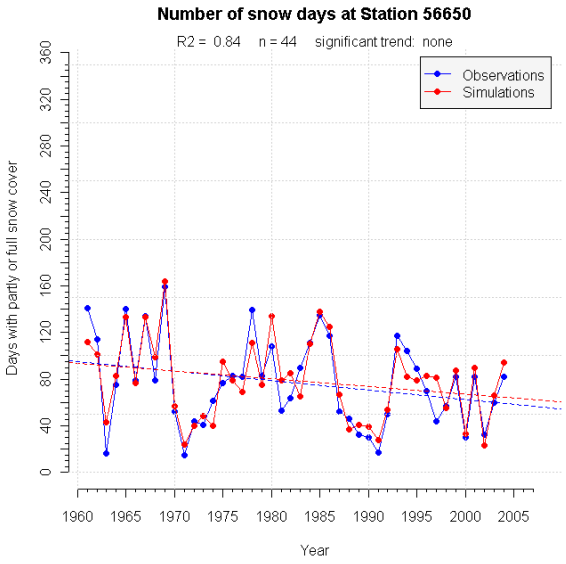

Number of snow days at Station 55430
R2 = 0.752 n = 40 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

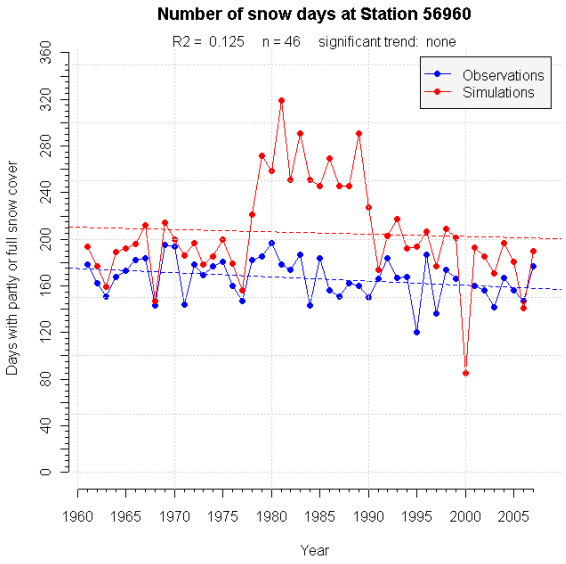

Number of snow days at Station 55550
R2 = 0.315 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

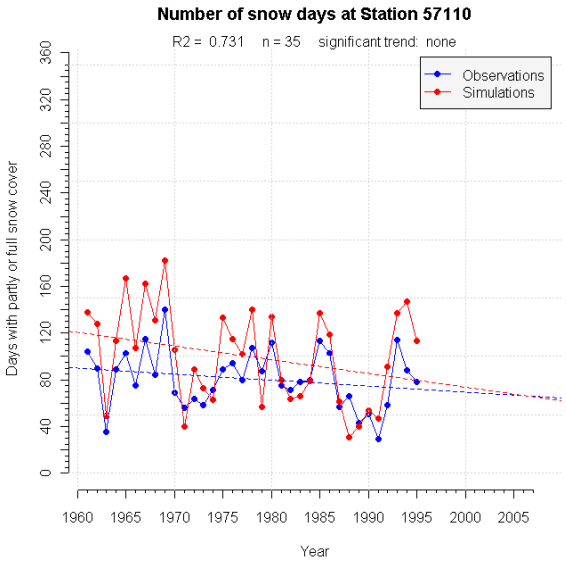

Number of snow days at Station 55670
R2 = 0.345 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

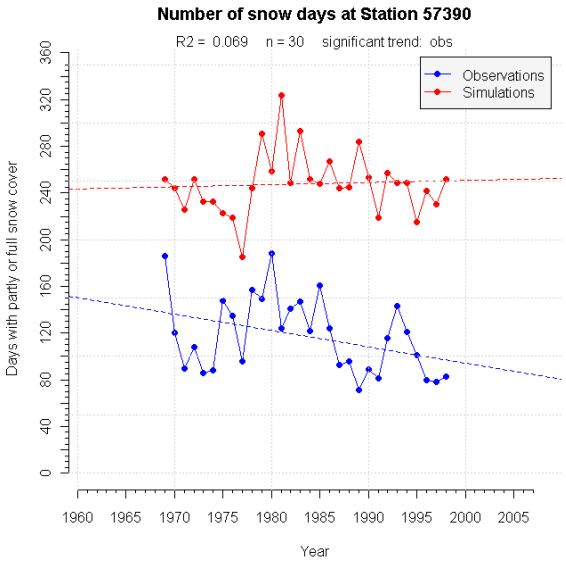

Number of snow days at Station 55840
R2 = 0.559 n = 43 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

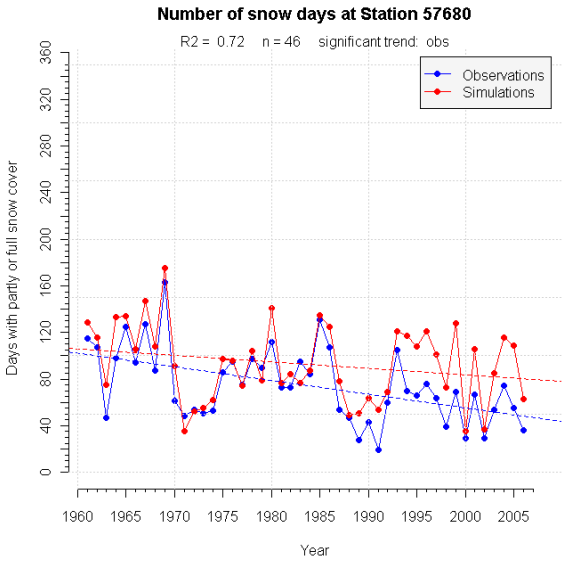

Number of snow days at Station 56520
R2 = 0.684 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

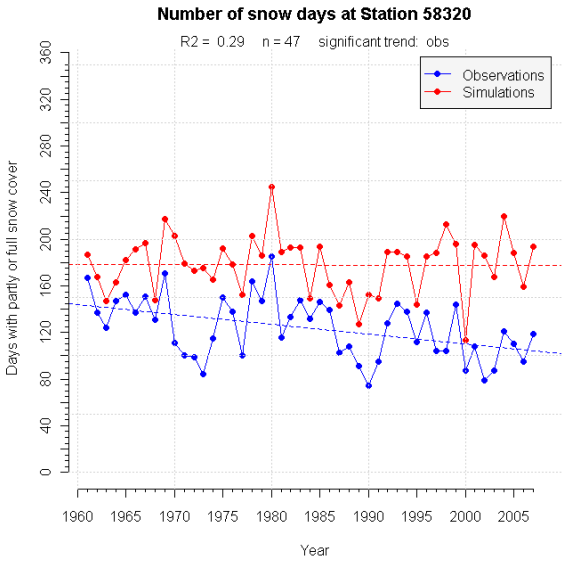

Number of snow days at Station 56650
R2 = 0.84 n = 44 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

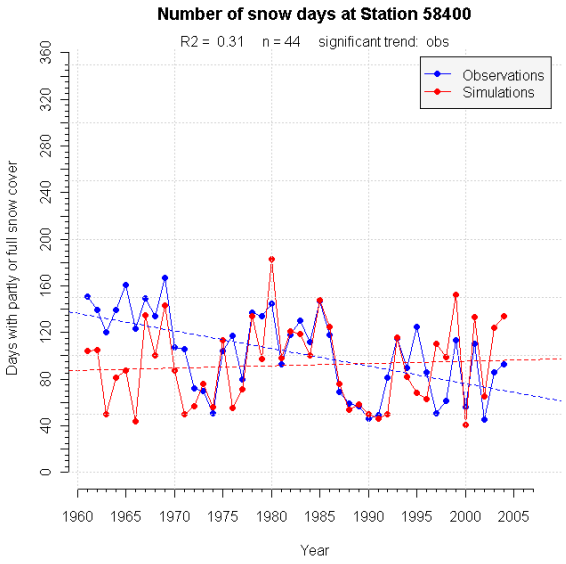

Number of snow days at Station 56960
R2 = 0.125 n = 46 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

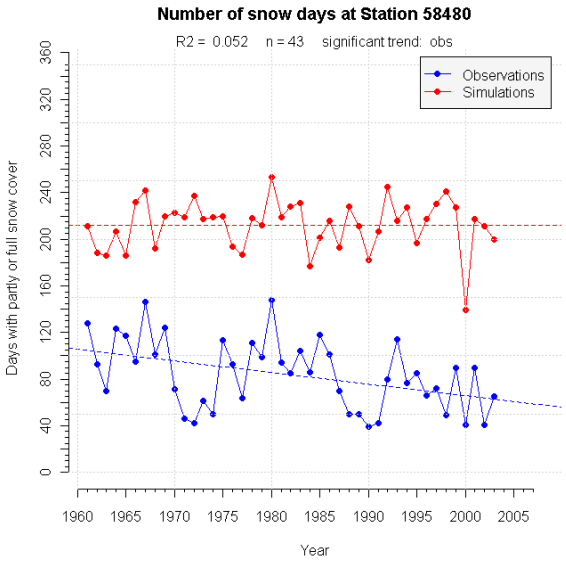

Number of snow days at Station 57110
R2 = 0.731 n = 35 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

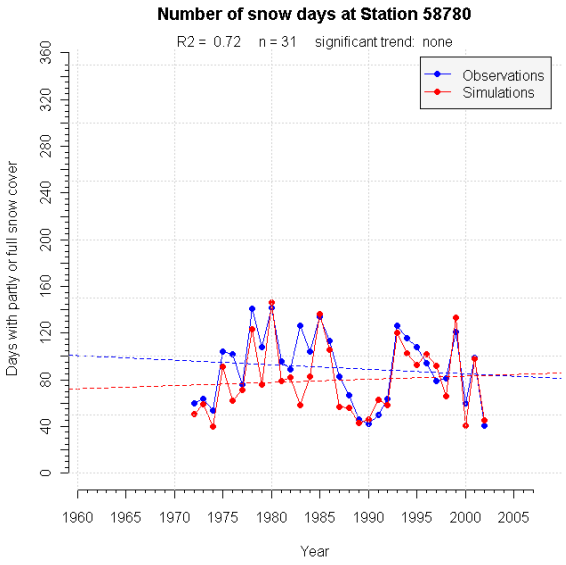

Number of snow days at Station 57390
R2 = 0.069 n = 30 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

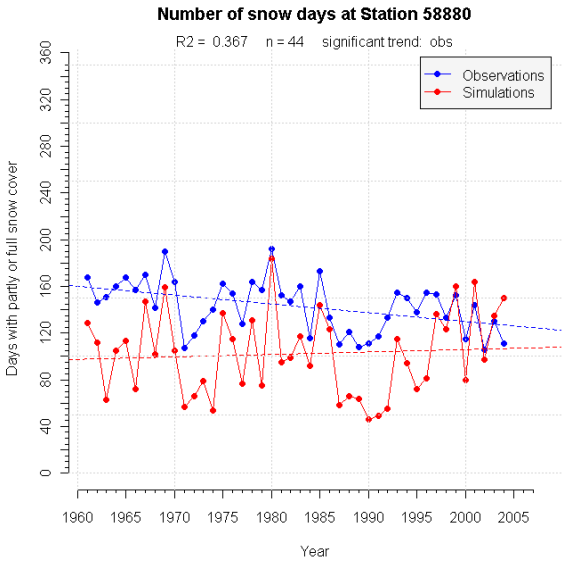

Number of snow days at Station 57680
R2 = 0.72 n = 46 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

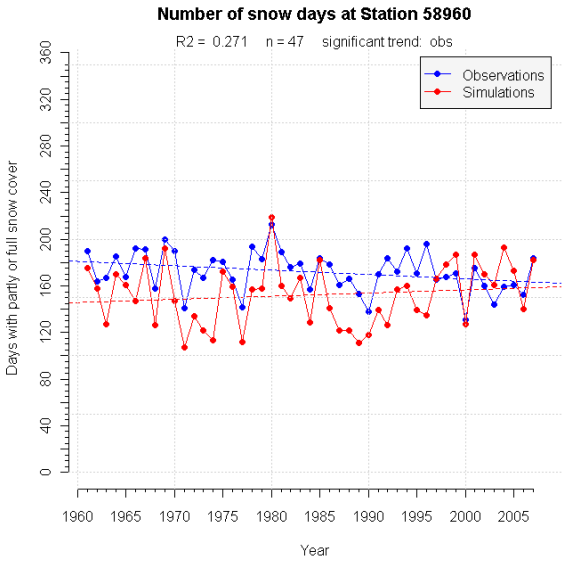

Number of snow days at Station 58320
R2 = 0.29 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

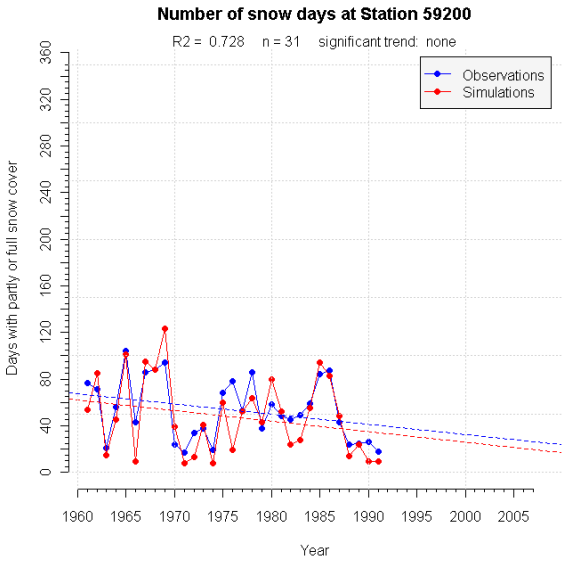

Number of snow days at Station 58400
R2 = 0.31 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

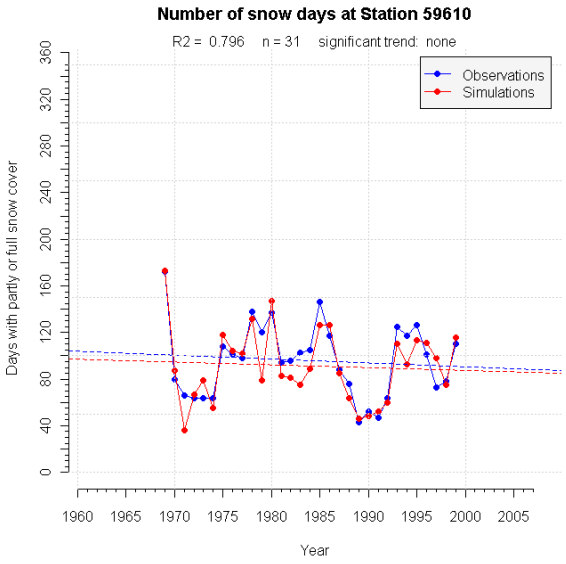

Number of snow days at Station 58480
R2 = 0.052 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

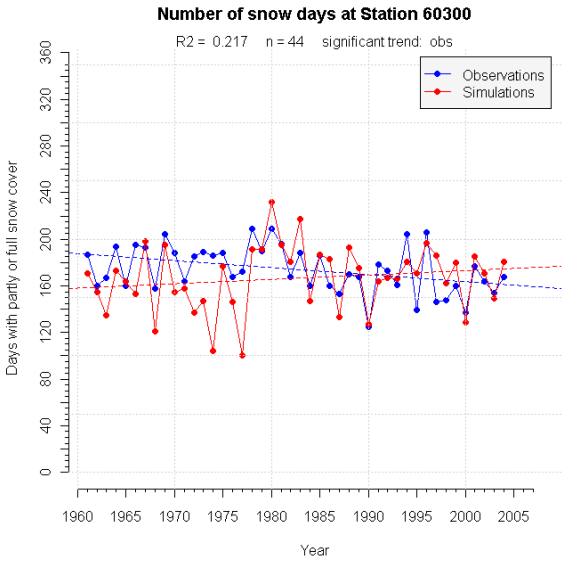

Number of snow days at Station 58780
R2 = 0.72 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

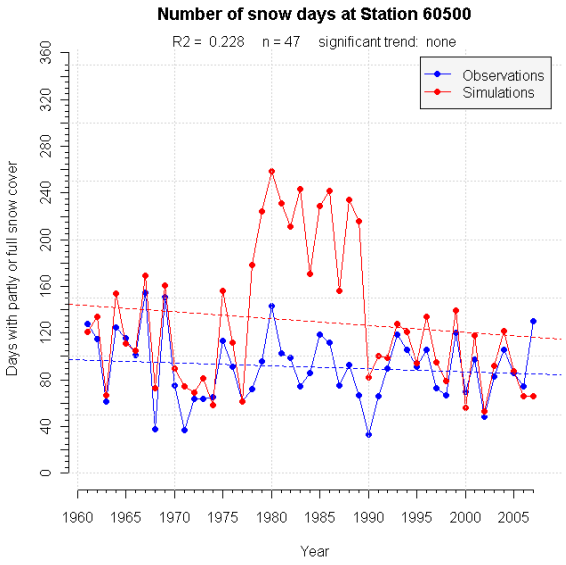

Number of snow days at Station 58880
R2 = 0.367 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

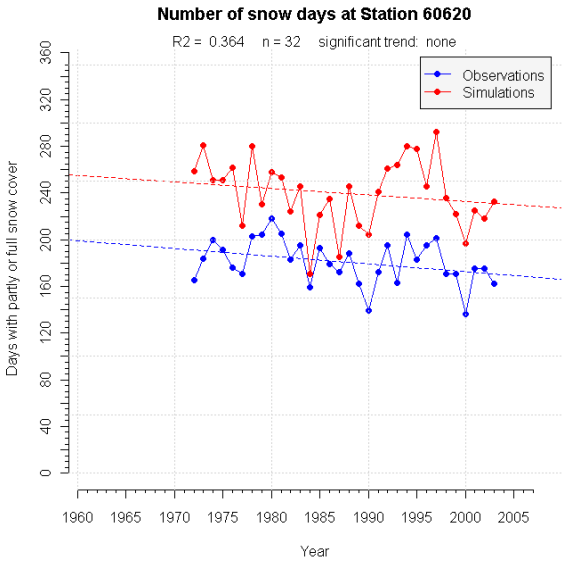

Number of snow days at Station 58960
R2 = 0.271 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

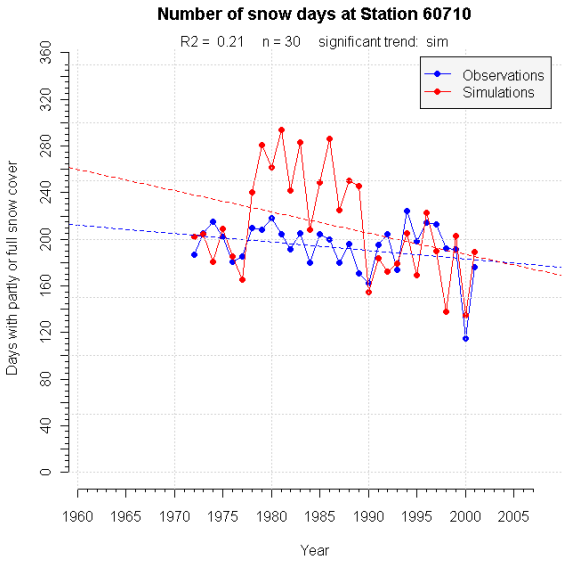

Number of snow days at Station 59200
R2 = 0.728 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

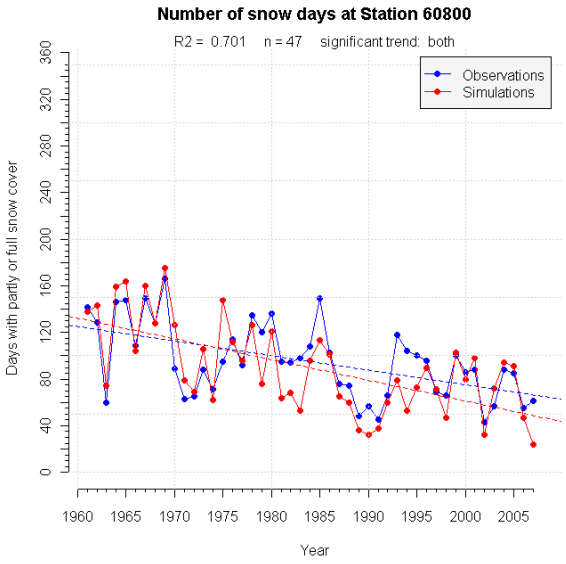

Number of snow days at Station 59610
R2 = 0.796 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

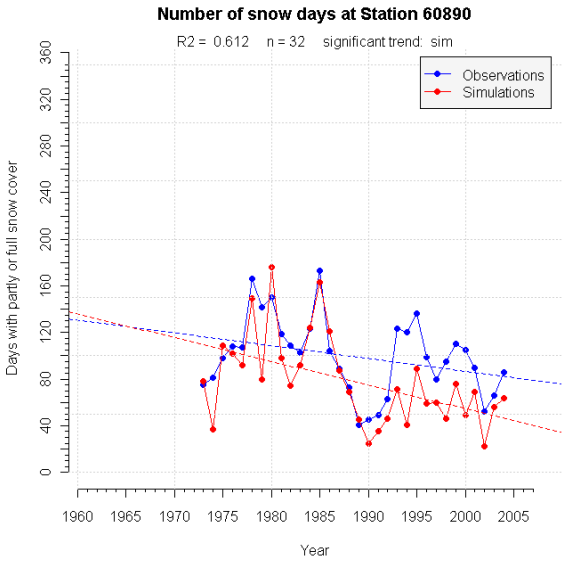

Number of snow days at Station 60300
R2 = 0.217 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

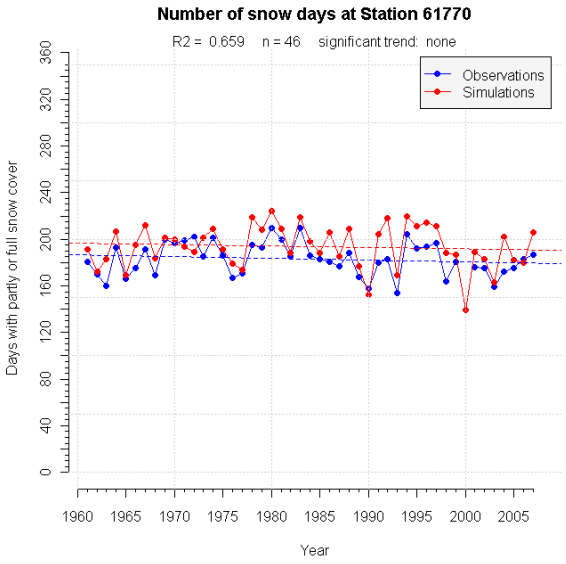

Number of snow days at Station 60500
R2 = 0.228 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

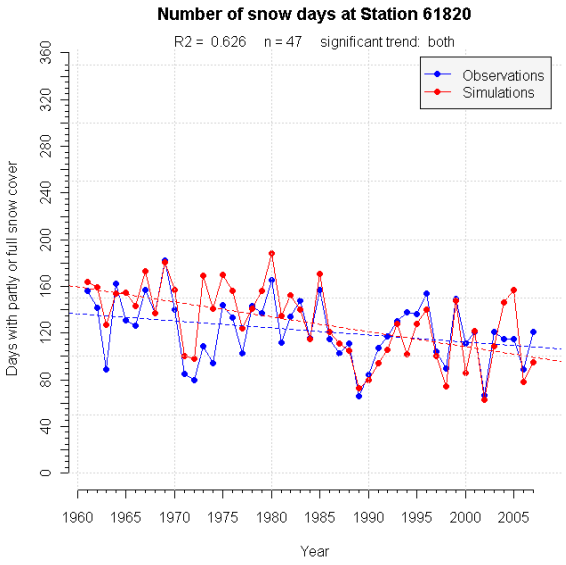

Number of snow days at Station 60620
R2 = 0.364 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

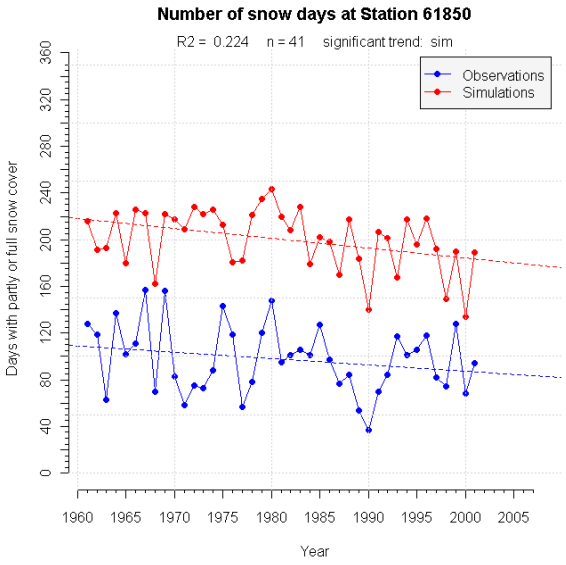

Number of snow days at Station 60710
R2 = 0.21 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

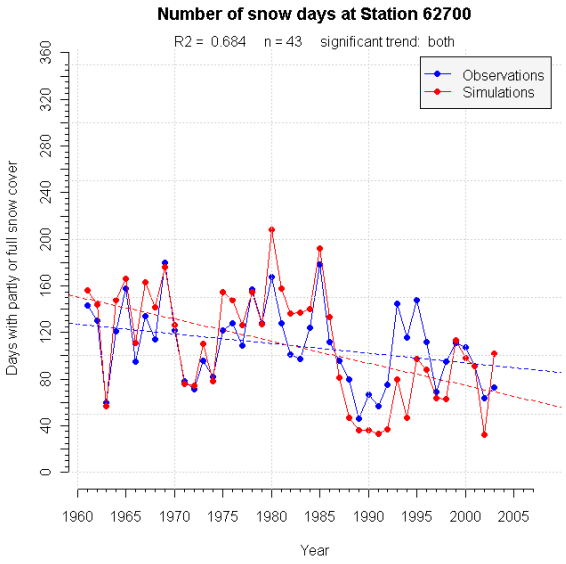

Number of snow days at Station 60800
R2 = 0.701 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

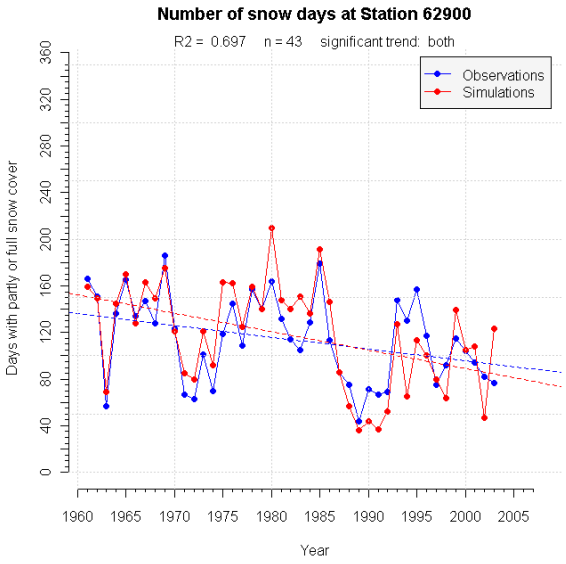

Number of snow days at Station 60890
R2 = 0.612 n = 32 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

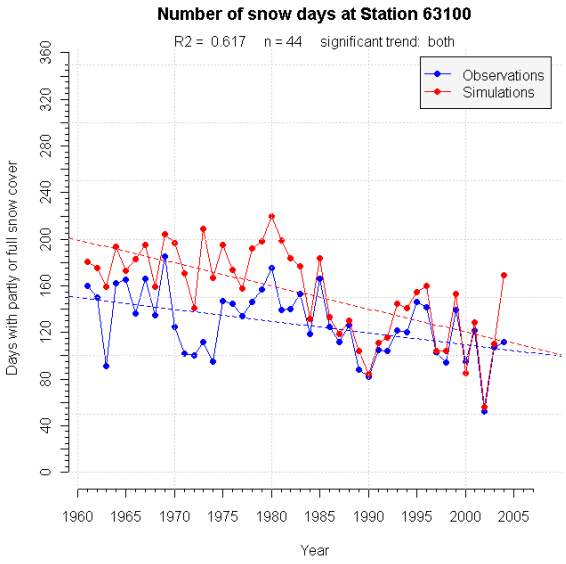

Number of snow days at Station 61770
R2 = 0.659 n = 46 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

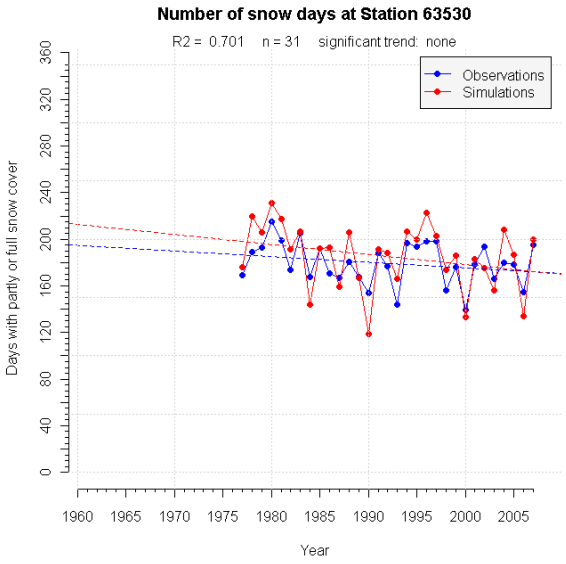

Number of snow days at Station 61820
R2 = 0.626 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

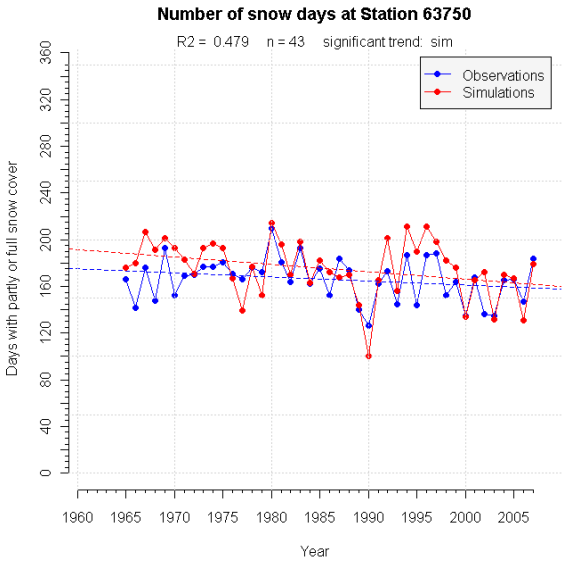

Number of snow days at Station 61850
R2 = 0.224 n = 41 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

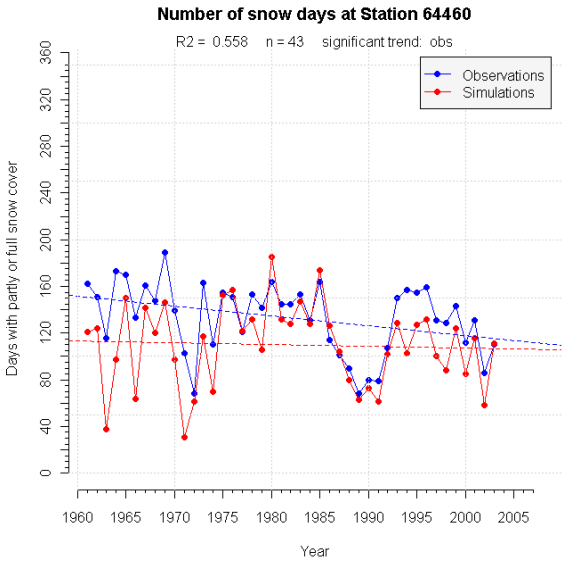

Number of snow days at Station 62700
R2 = 0.684 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

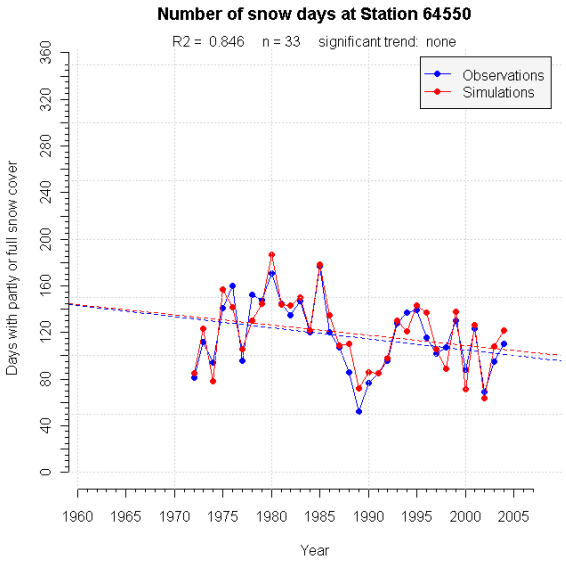

Number of snow days at Station 62900
R2 = 0.697 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

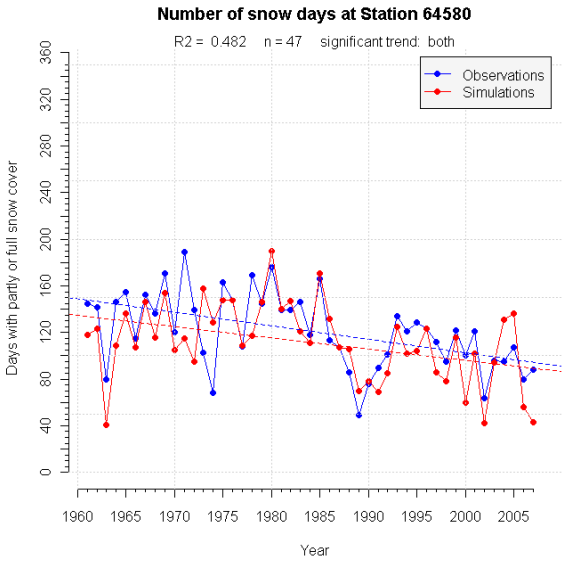

Number of snow days at Station 63100
R2 = 0.617 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

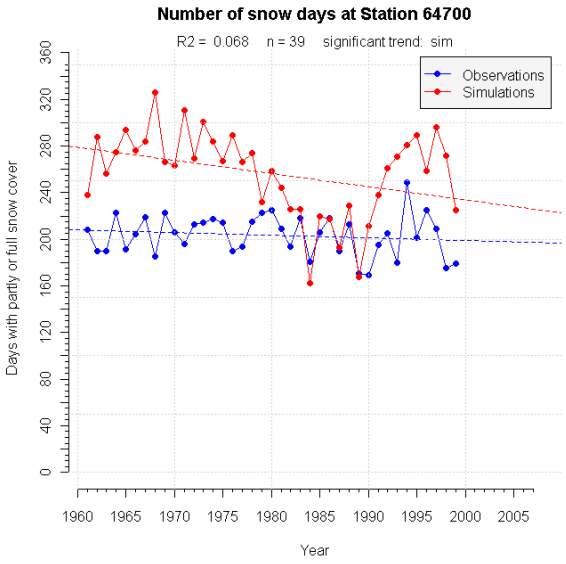

Number of snow days at Station 63530
R2 = 0.701 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

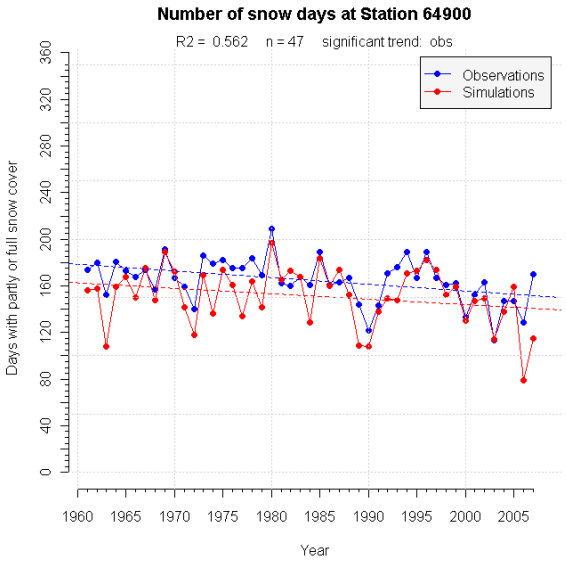

Number of snow days at Station 63750
R2 = 0.479 n = 43 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

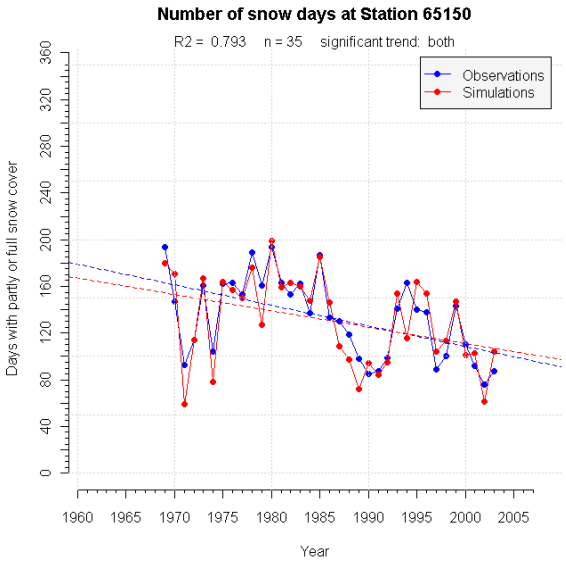

Number of snow days at Station 64460
R2 = 0.558 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

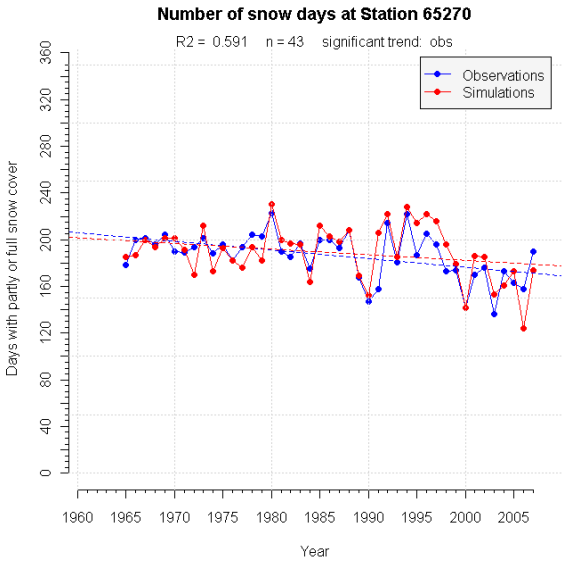

Number of snow days at Station 64550
R2 = 0.846 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

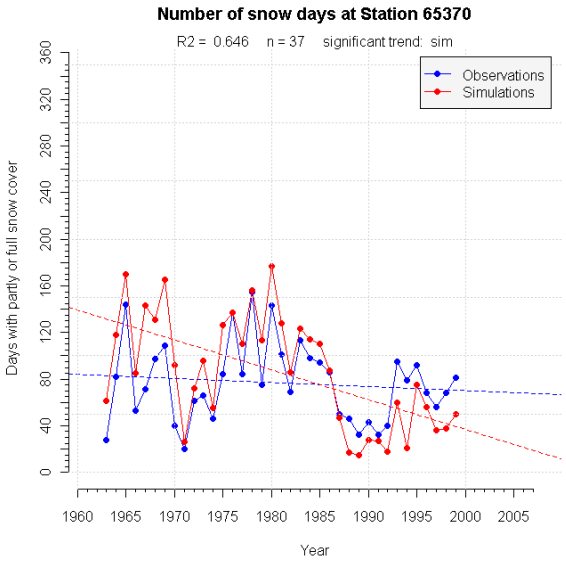

Number of snow days at Station 64580
R2 = 0.482 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

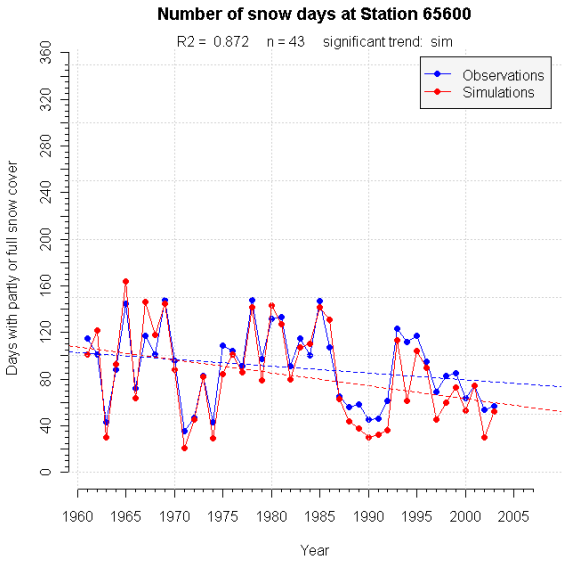

Number of snow days at Station 64700
R2 = 0.068 n = 39 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

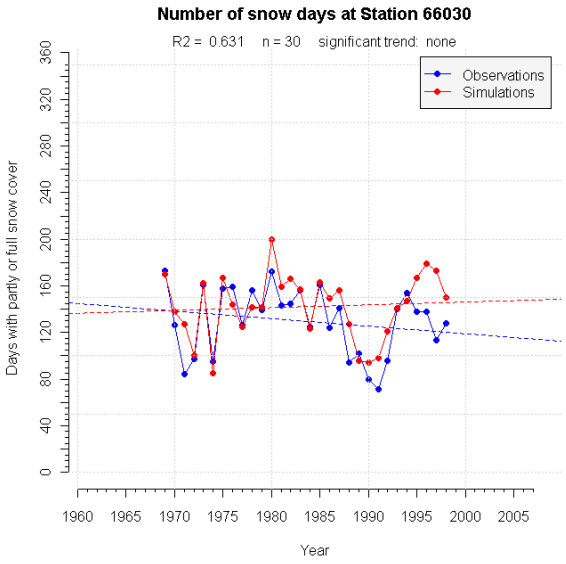

Number of snow days at Station 64900
R2 = 0.562 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

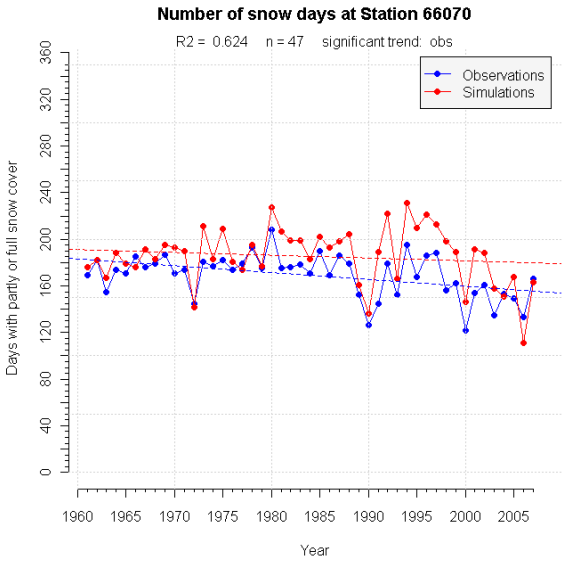

Number of snow days at Station 65150
R2 = 0.793 n = 35 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

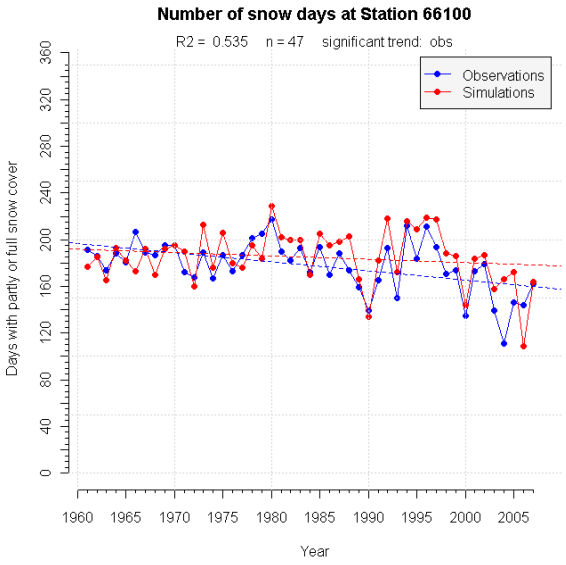

Number of snow days at Station 65270
R2 = 0.591 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

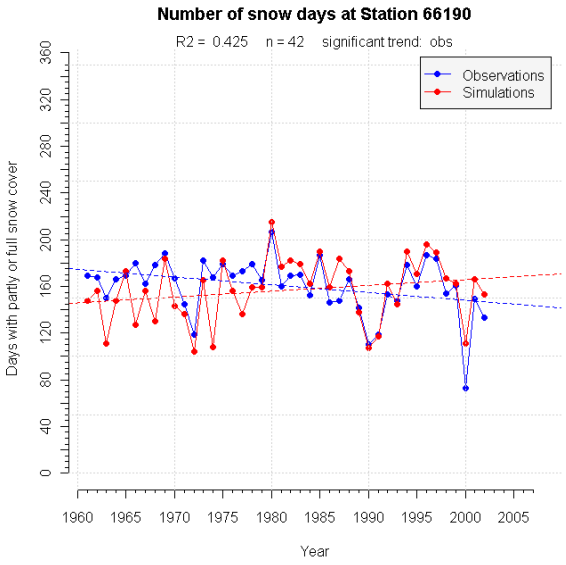

Number of snow days at Station 65370
R2 = 0.646 n = 37 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

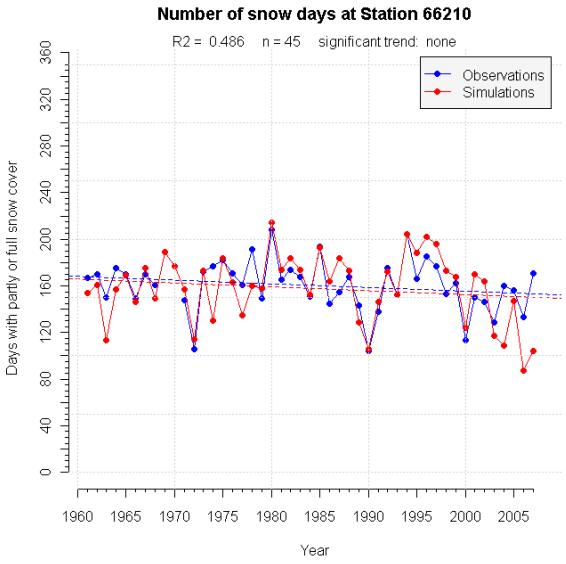

Number of snow days at Station 65600
R2 = 0.872 n = 43 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

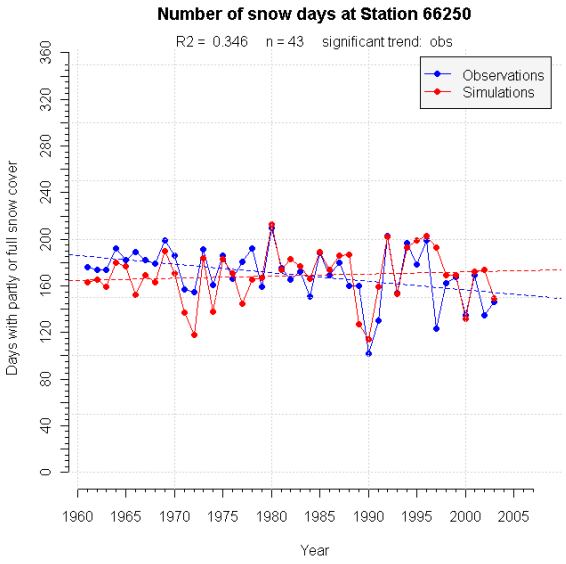

Number of snow days at Station 66030
R2 = 0.631 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

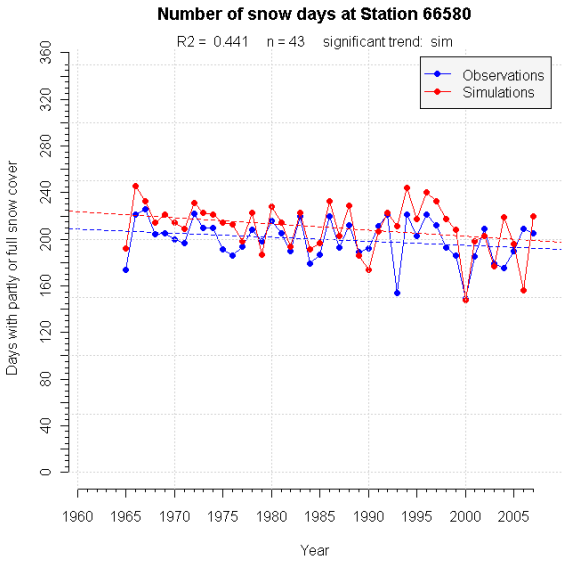

Number of snow days at Station 66070
R2 = 0.624 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

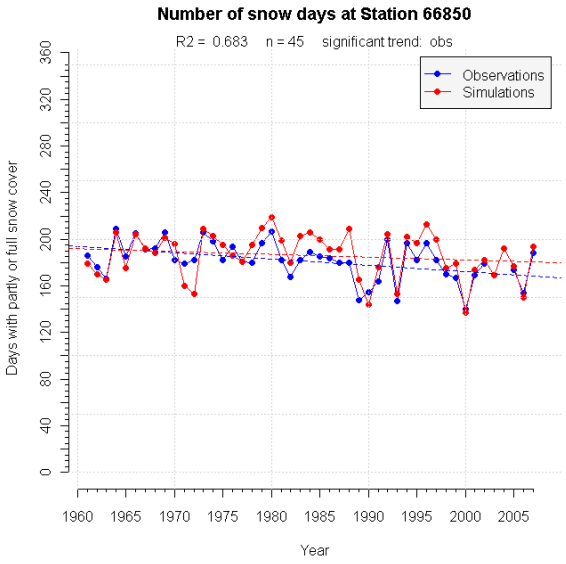

Number of snow days at Station 66100
R2 = 0.535 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

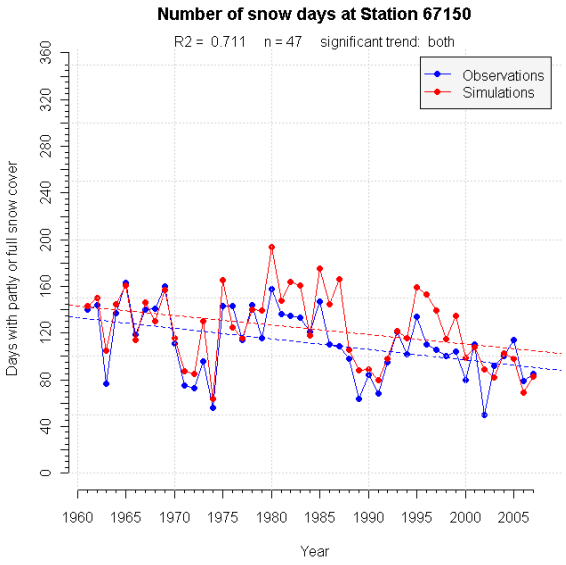

Number of snow days at Station 66190
R2 = 0.425 n = 42 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

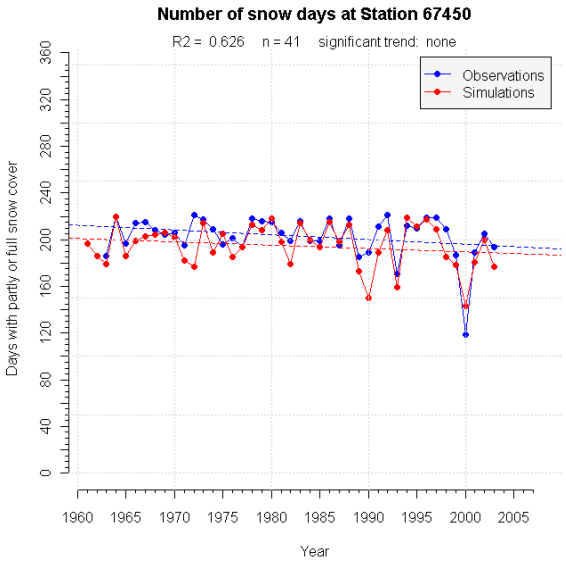

Number of snow days at Station 66210
R2 = 0.486 n = 45 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

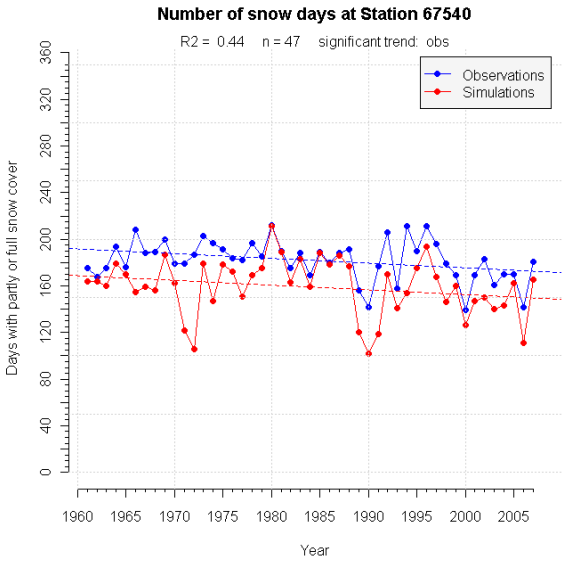

Number of snow days at Station 66250
R2 = 0.346 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

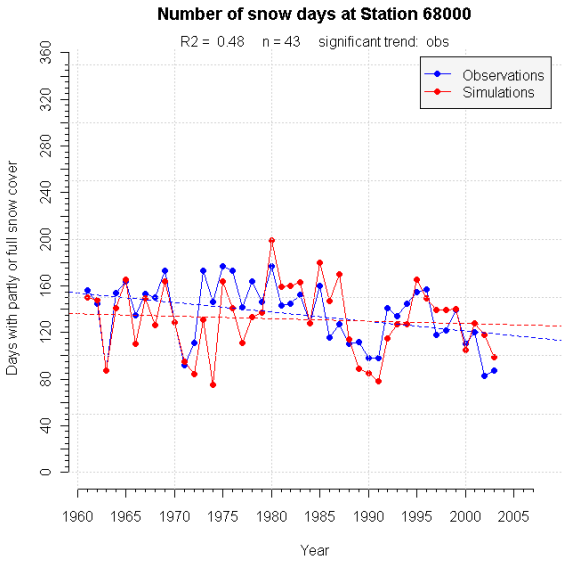

Number of snow days at Station 66580
R2 = 0.441 n = 43 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

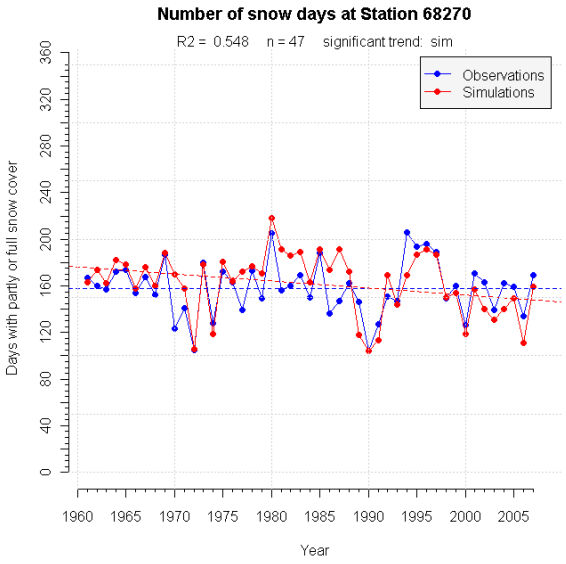

Number of snow days at Station 66850
R2 = 0.683 n = 45 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

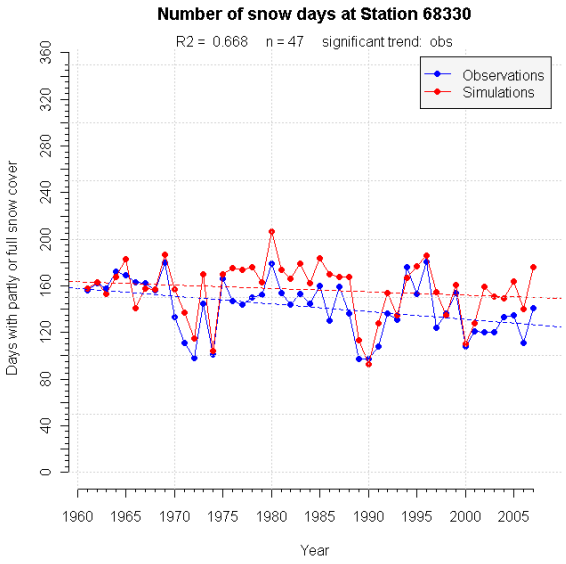

Number of snow days at Station 67150
R2 = 0.711 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

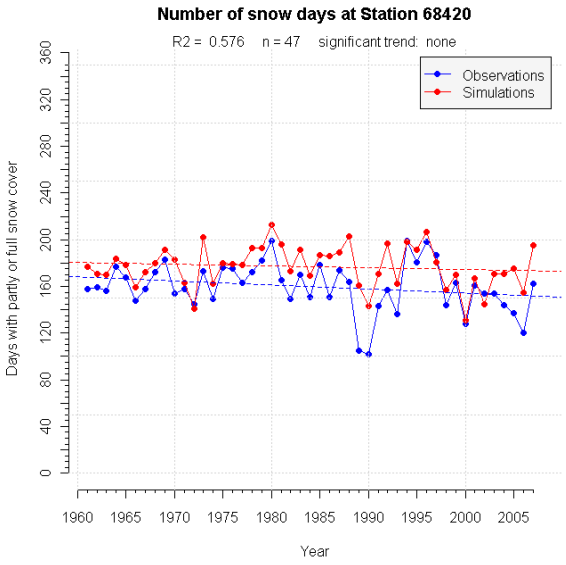

Number of snow days at Station 67450
R2 = 0.626 n = 41 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

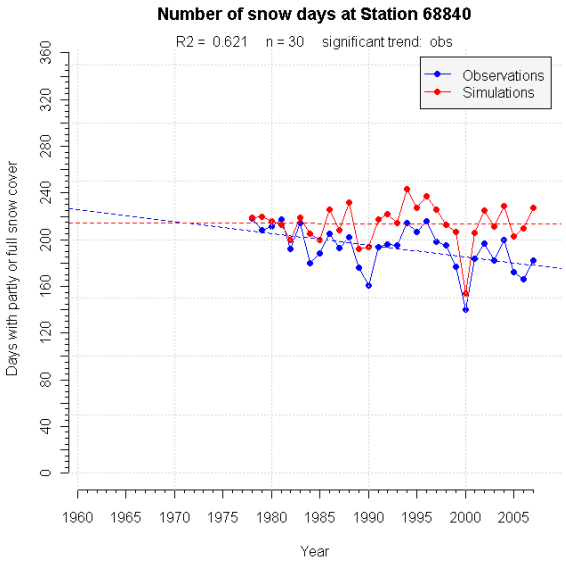

Number of snow days at Station 67540
R2 = 0.44 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

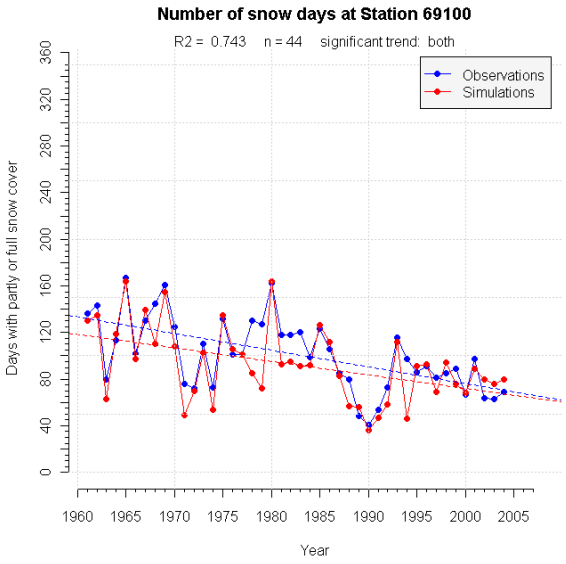

Number of snow days at Station 68000
R2 = 0.48 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

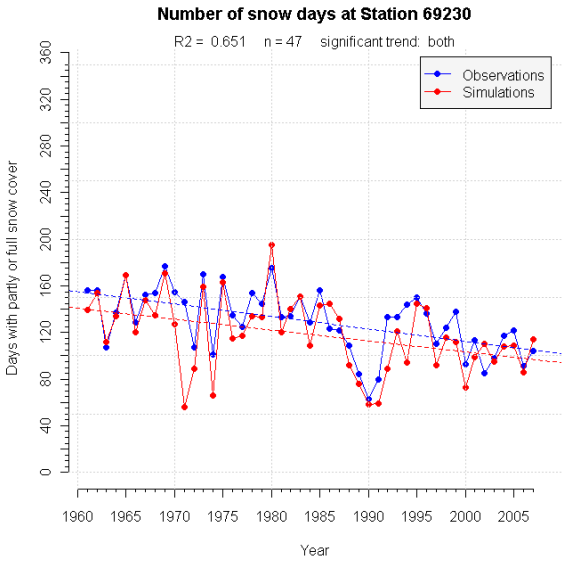

Number of snow days at Station 68270
R2 = 0.548 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

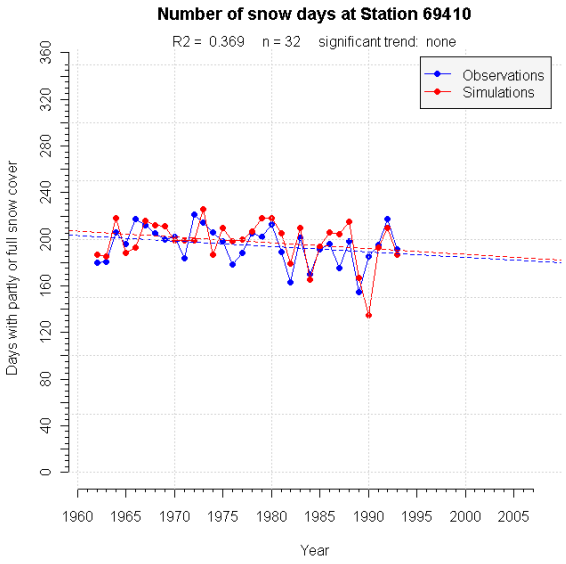

Number of snow days at Station 68330
R2 = 0.668 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

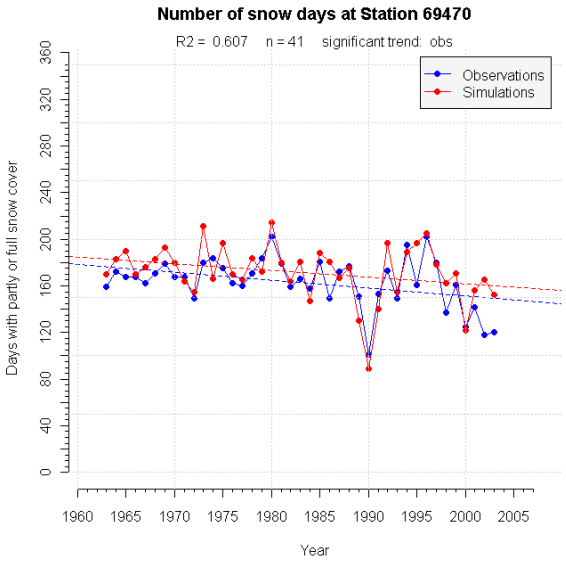

Number of snow days at Station 68420
R2 = 0.576 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

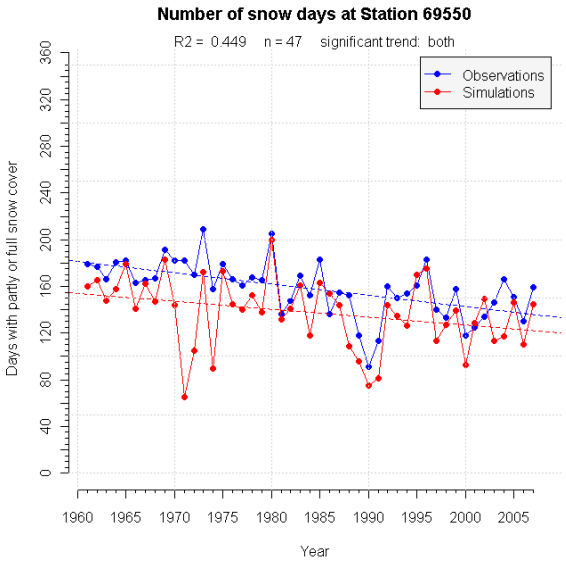

Number of snow days at Station 68840
R2 = 0.621 n = 30 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

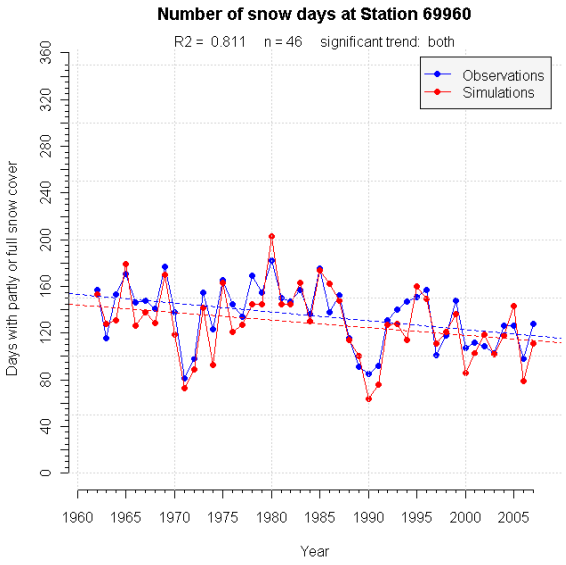

Number of snow days at Station 69100
R2 = 0.743 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

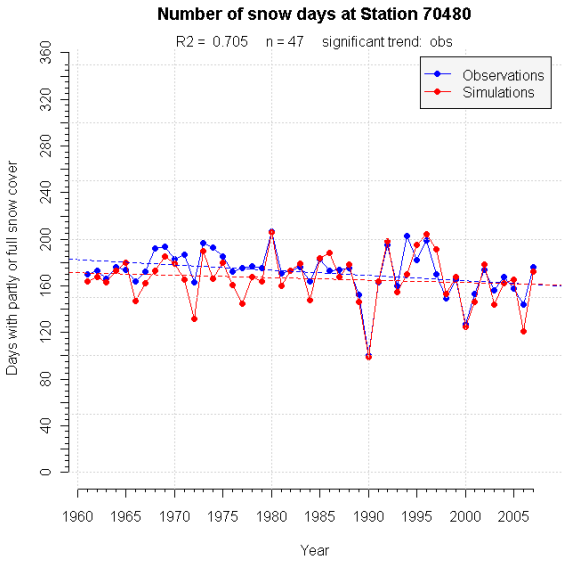

Number of snow days at Station 69230
R2 = 0.651 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

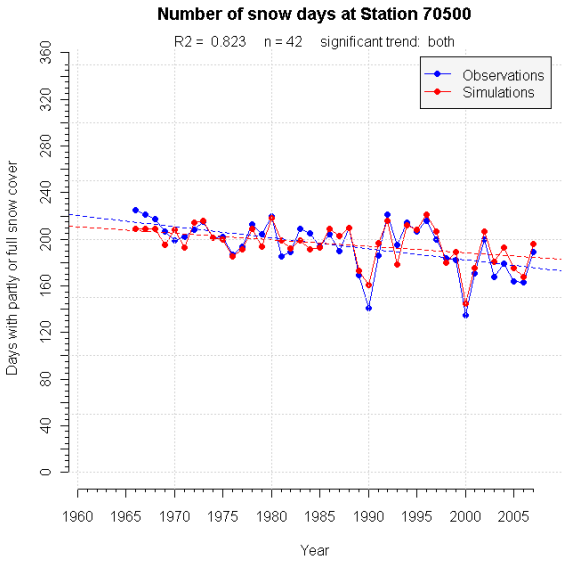

Number of snow days at Station 69410
R2 = 0.369 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

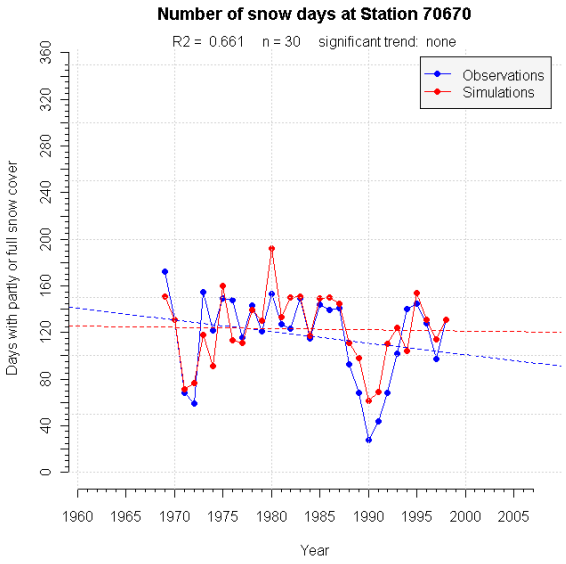

Number of snow days at Station 69470
R2 = 0.607 n = 41 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

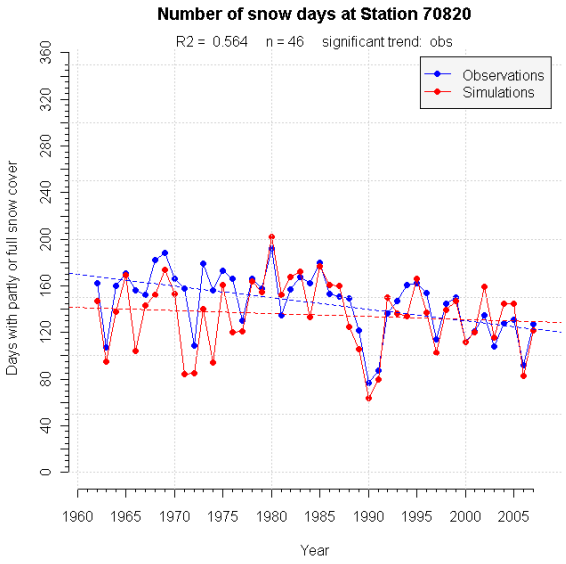

Number of snow days at Station 69550
R2 = 0.449 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

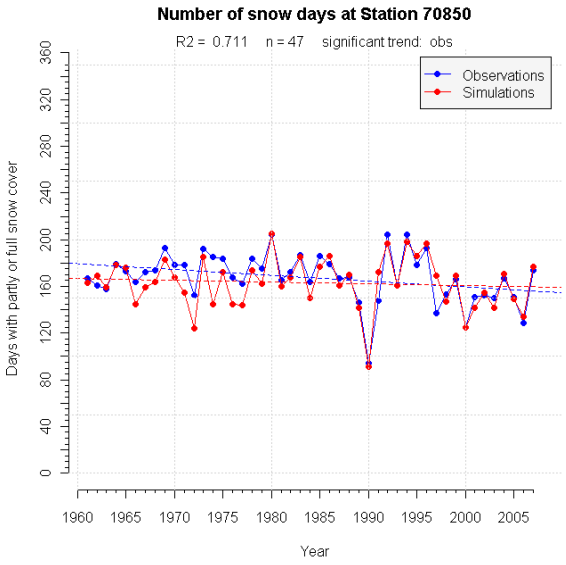

Number of snow days at Station 69960
R2 = 0.811 n = 46 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

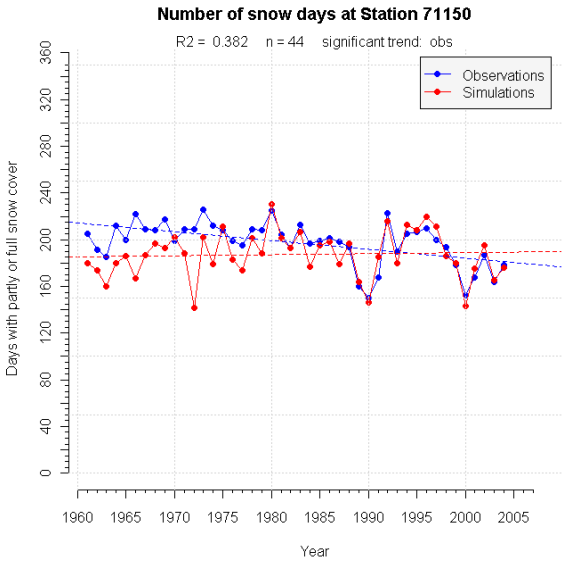

Number of snow days at Station 70480
R2 = 0.705 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

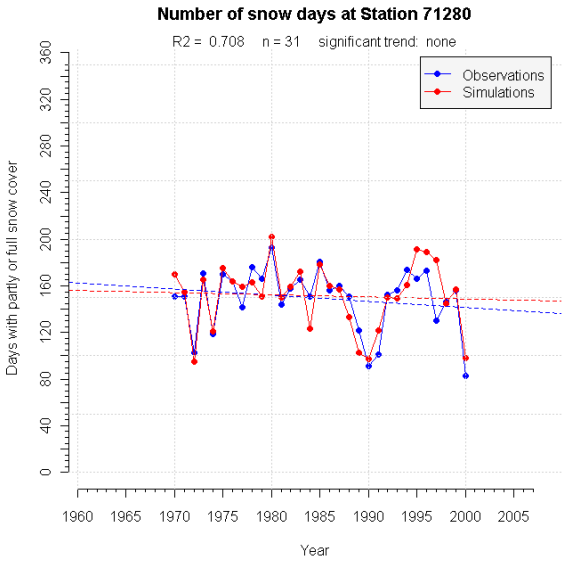

Number of snow days at Station 70500
R2 = 0.823 n = 42 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

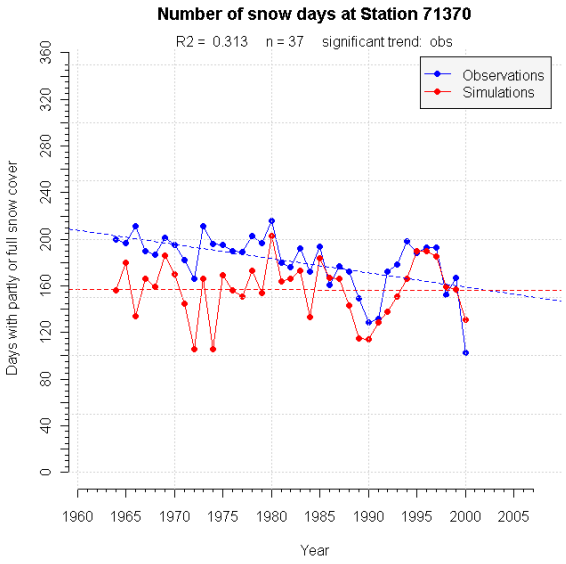

Number of snow days at Station 70670
R2 = 0.661 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

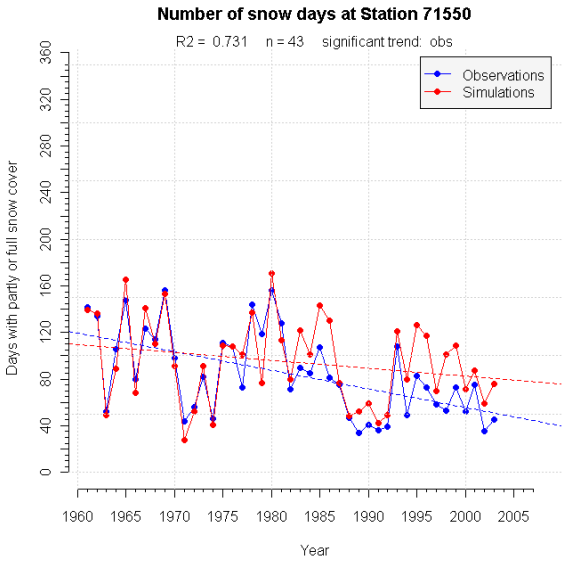

Number of snow days at Station 70820
R2 = 0.564 n = 46 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

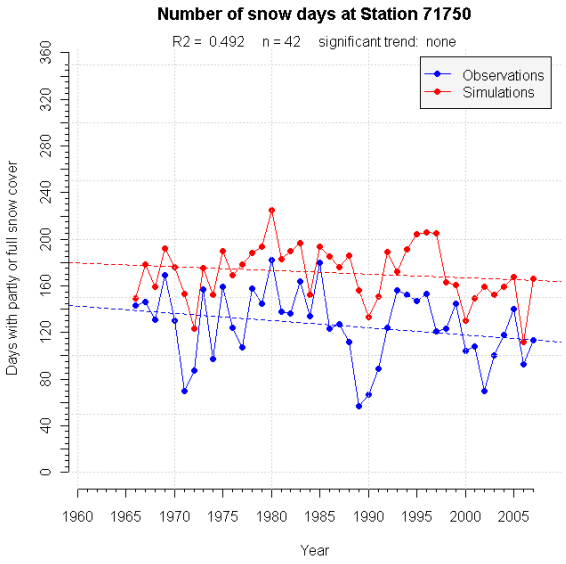

Number of snow days at Station 70850
R2 = 0.711 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

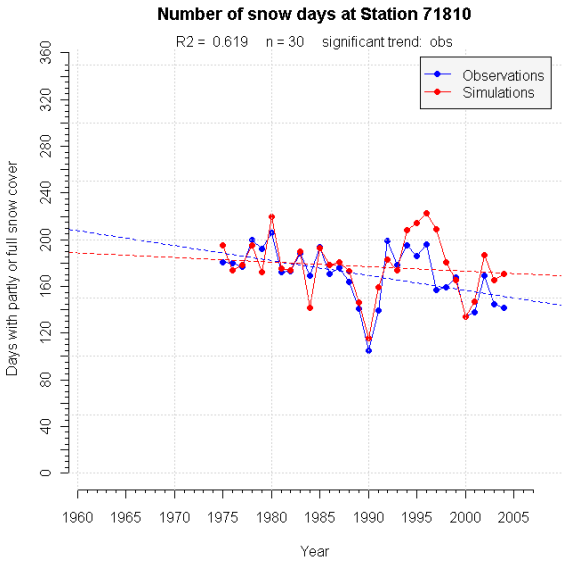

Number of snow days at Station 71150
R2 = 0.382 n = 44 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

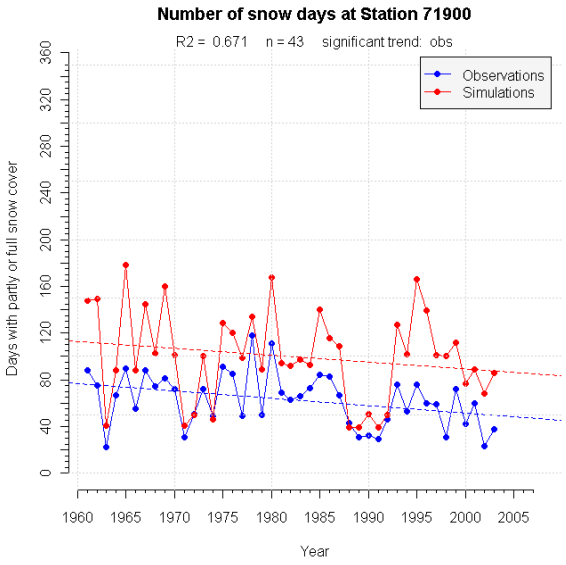

Number of snow days at Station 71280
R2 = 0.708 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

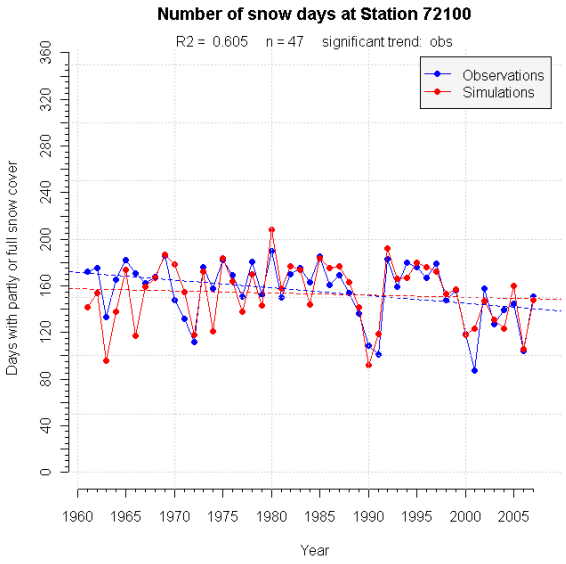

Number of snow days at Station 71370
R2 = 0.313 n = 37 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

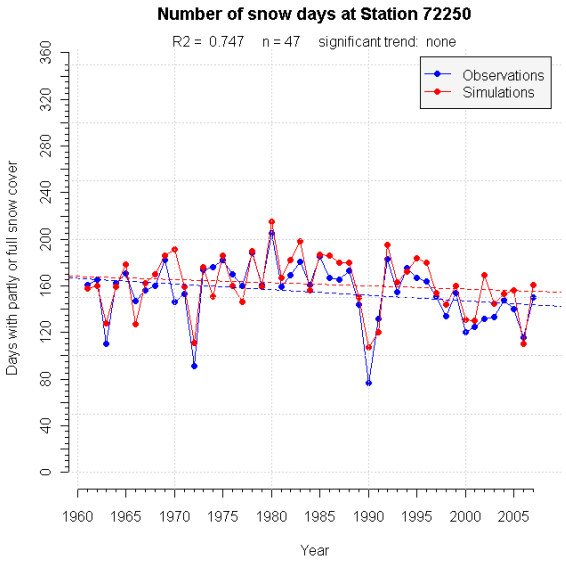

Number of snow days at Station 71550
R2 = 0.731 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

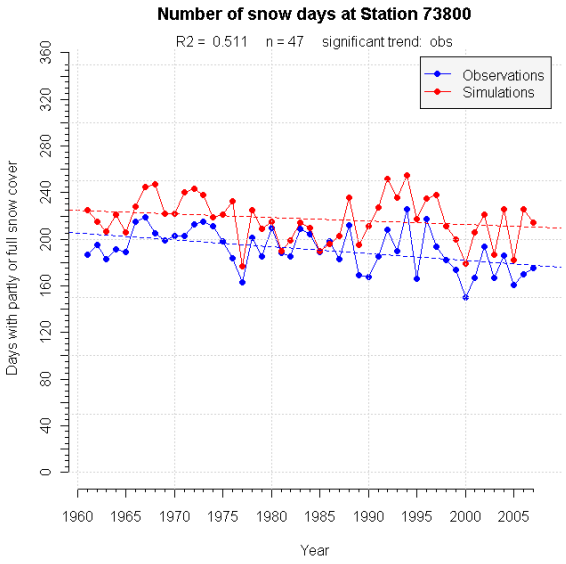

Number of snow days at Station 71750
R2 = 0.492 n = 42 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

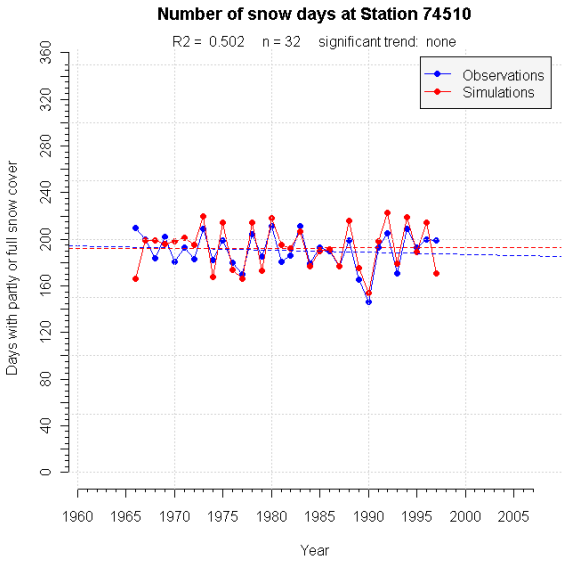

Number of snow days at Station 71810
R2 = 0.619 n = 30 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

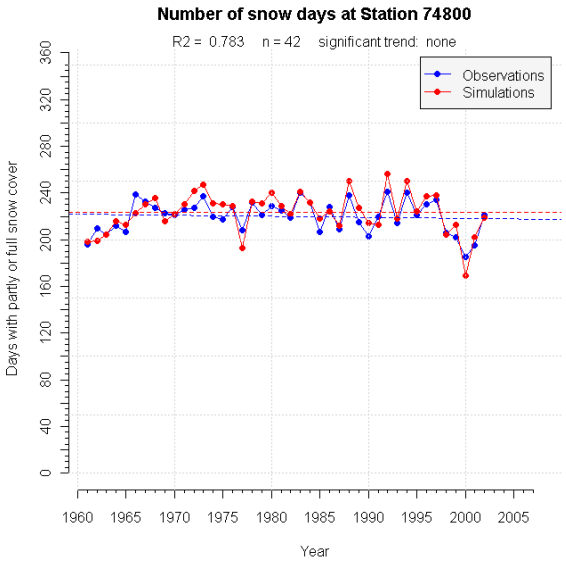

Number of snow days at Station 71900
R2 = 0.671 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

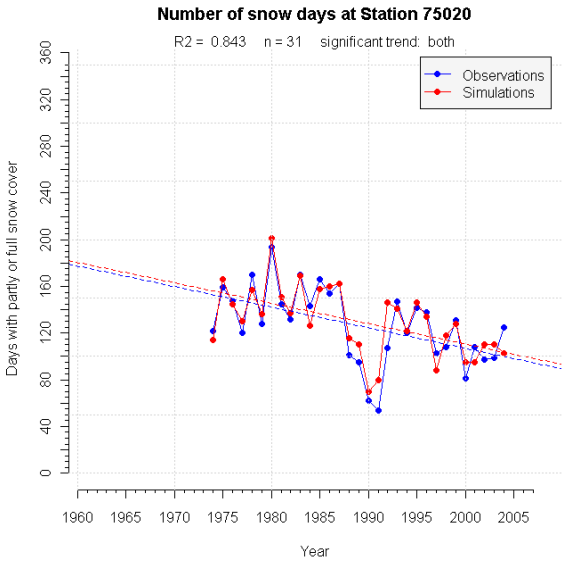

Number of snow days at Station 72100
R2 = 0.605 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

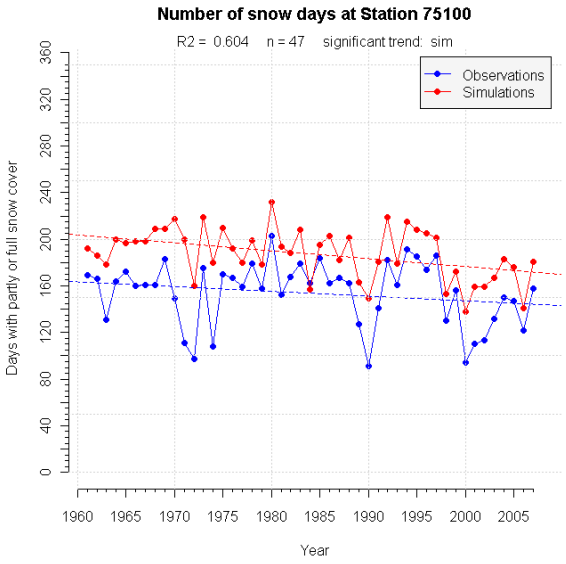

Number of snow days at Station 72250
R2 = 0.747 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

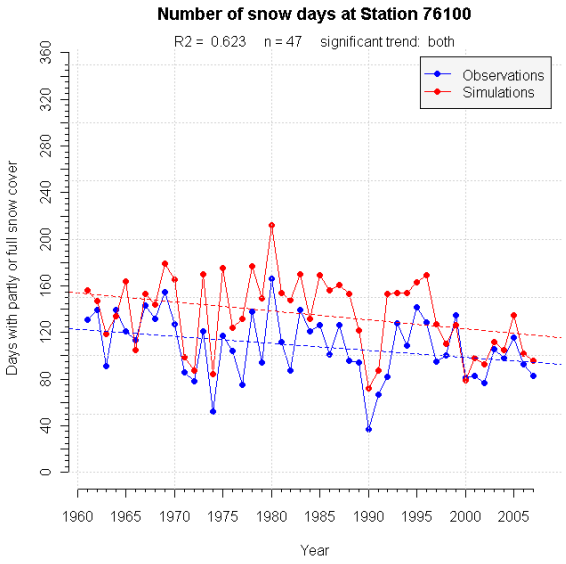

Number of snow days at Station 73800
R2 = 0.511 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

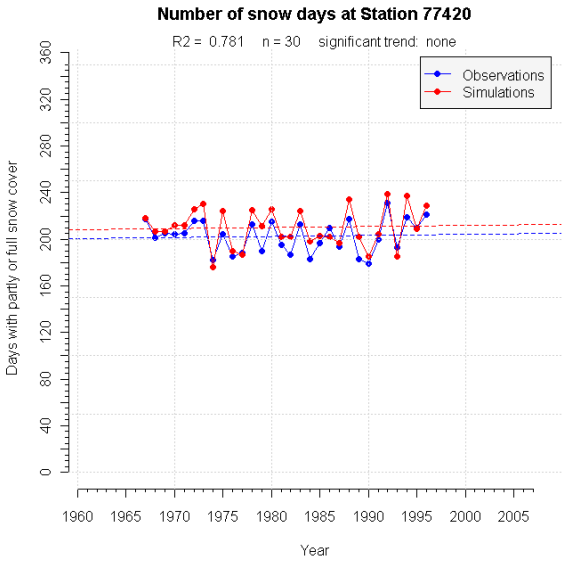

Number of snow days at Station 74510
R2 = 0.502 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

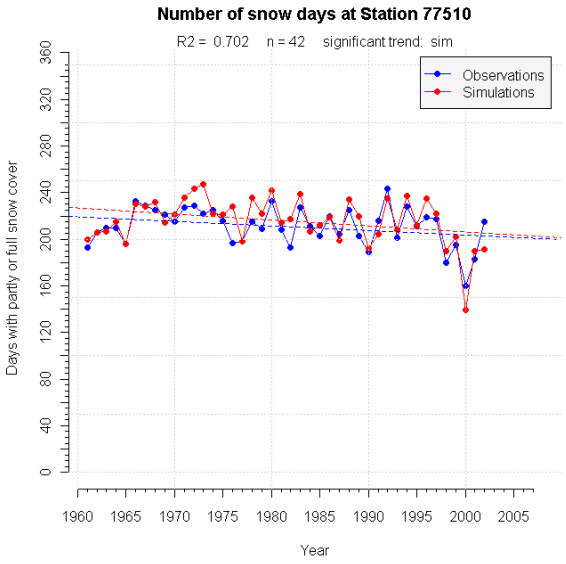

Number of snow days at Station 74800
R2 = 0.783 n = 42 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

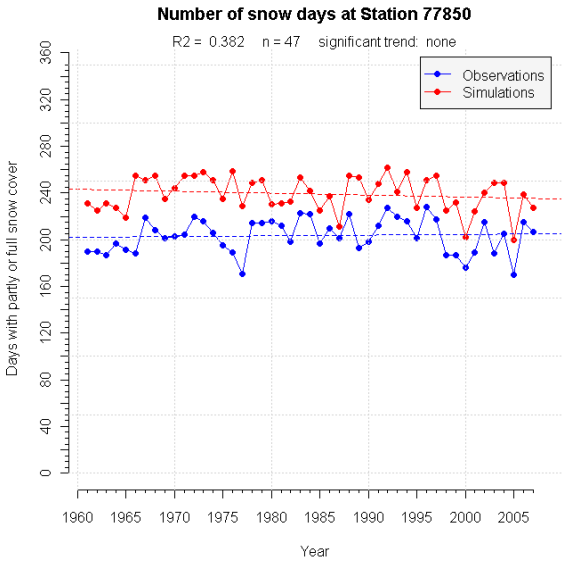

Number of snow days at Station 75020
R2 = 0.843 n = 31 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

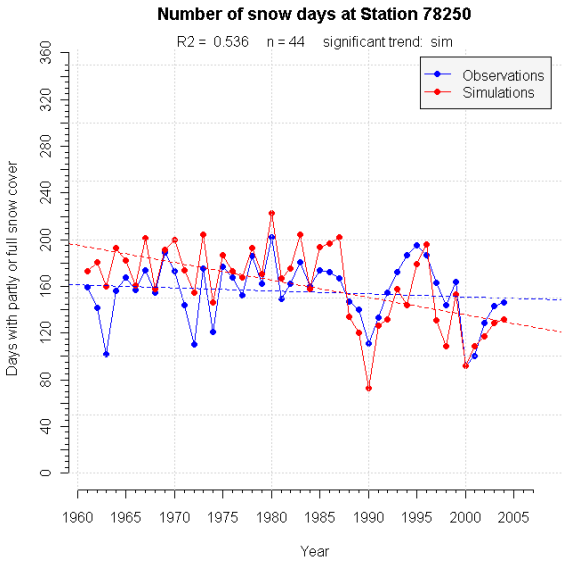

Number of snow days at Station 75100
R2 = 0.604 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

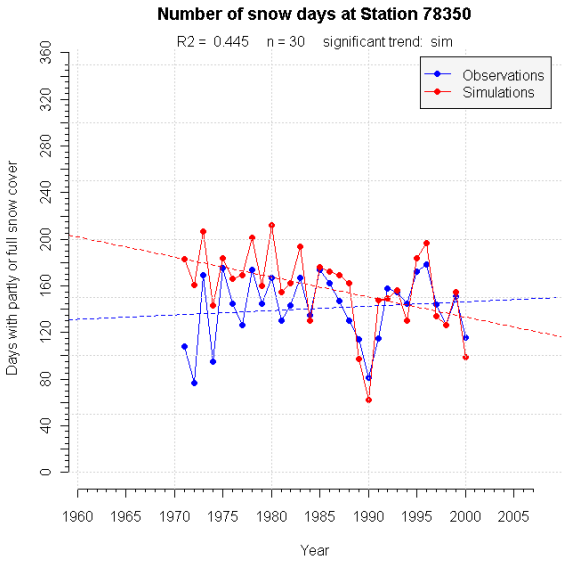

Number of snow days at Station 76100
R2 = 0.623 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

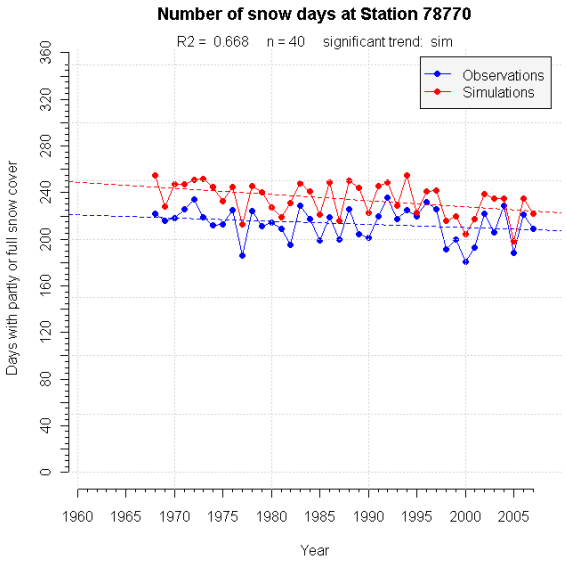

Number of snow days at Station 77420
R2 = 0.781 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

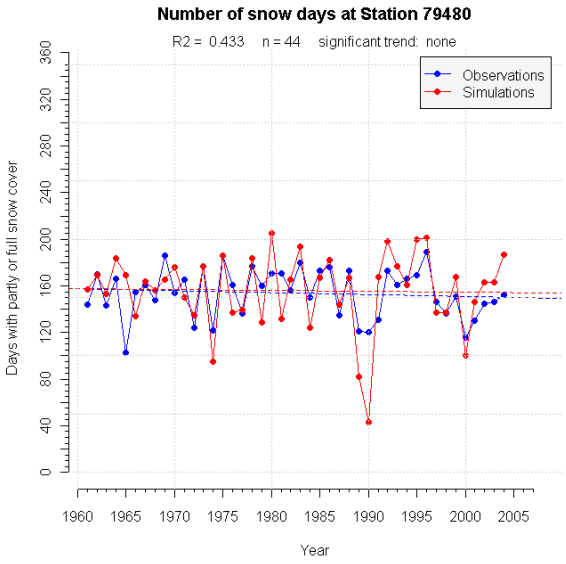

Number of snow days at Station 77510
R2 = 0.702 n = 42 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

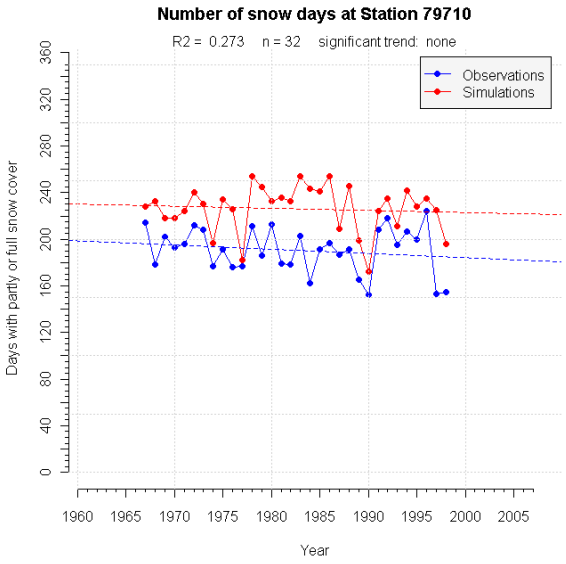

Number of snow days at Station 77850
R2 = 0.382 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

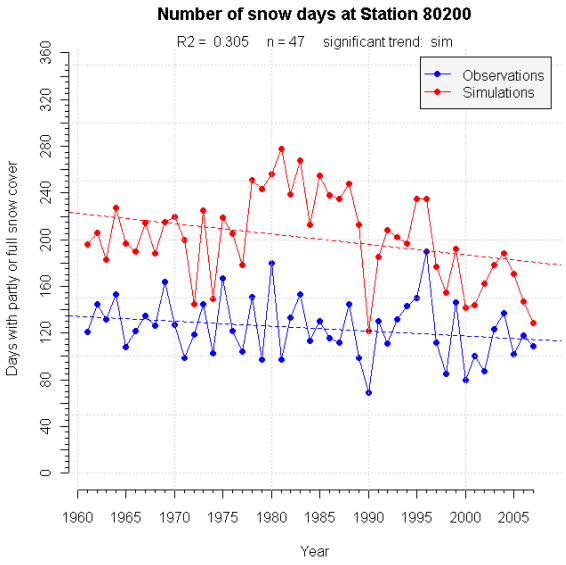

Number of snow days at Station 78250
R2 = 0.536 n = 44 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

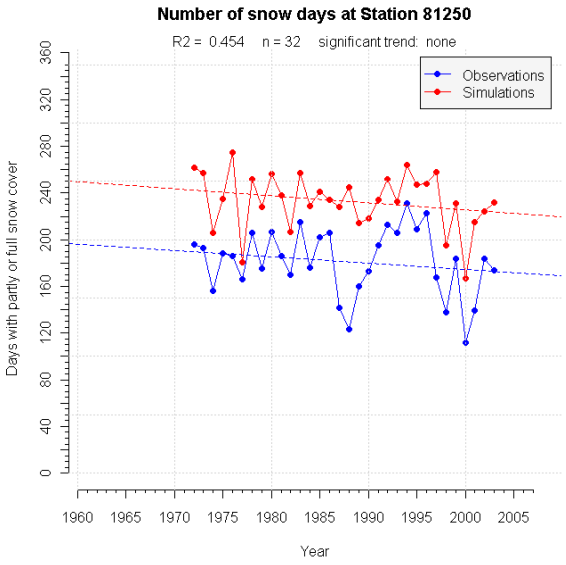

Number of snow days at Station 78350
R2 = 0.445 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

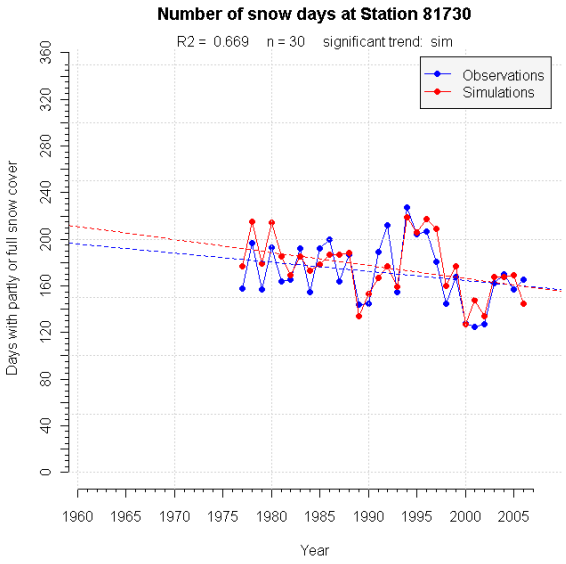

Number of snow days at Station 78770
R2 = 0.668 n = 40 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

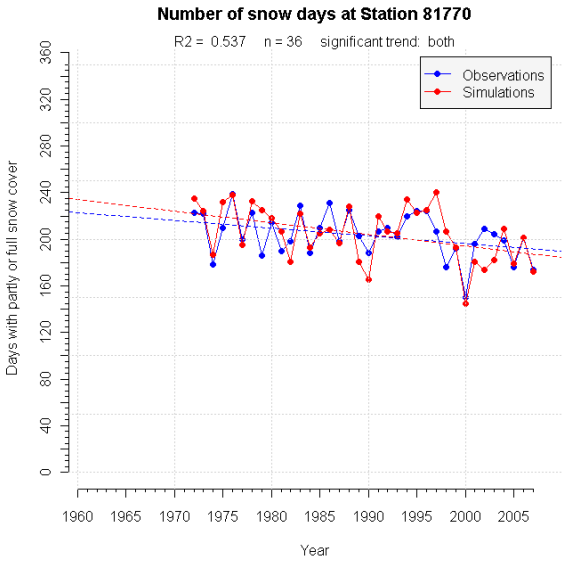

Number of snow days at Station 79480
R2 = 0.433 n = 44 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

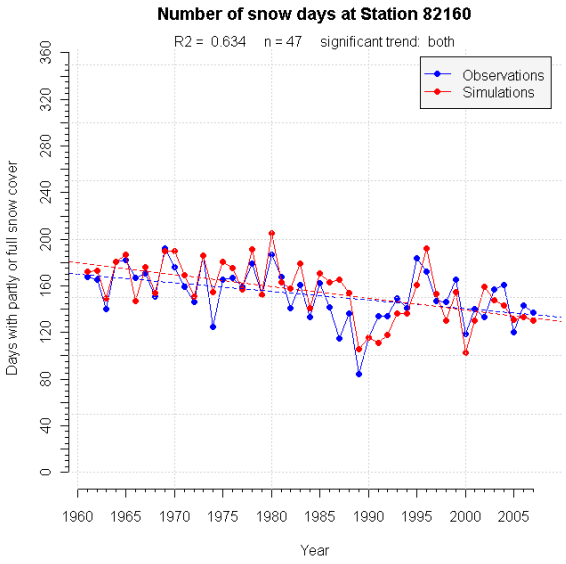

Number of snow days at Station 79710
R2 = 0.273 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

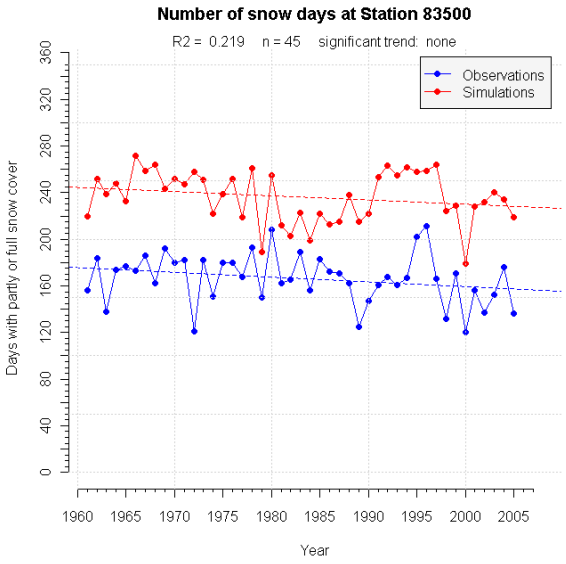

Number of snow days at Station 80200
R2 = 0.305 n = 47 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

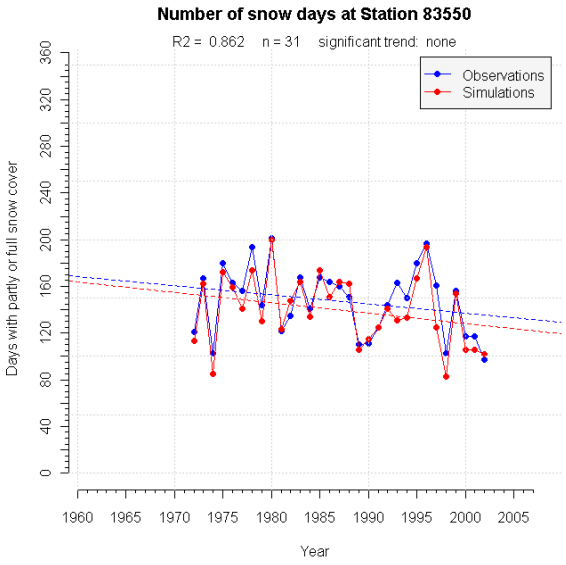

Number of snow days at Station 81250
R2 = 0.454 n = 32 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

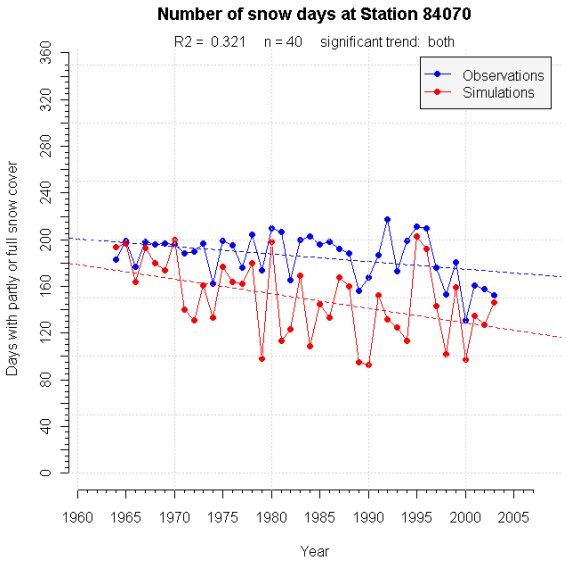

Number of snow days at Station 81730
R2 = 0.669 n = 30 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

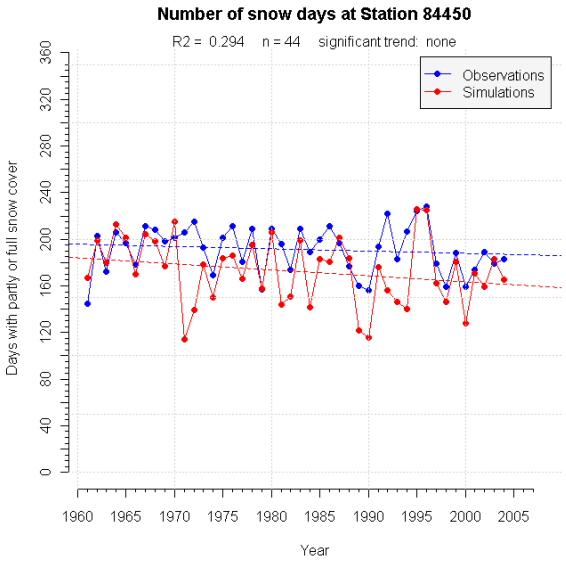

Number of snow days at Station 81770
R2 = 0.537 n = 36 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

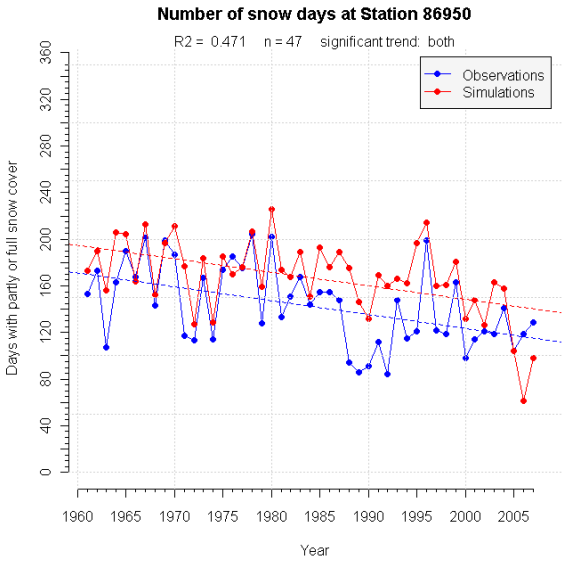

Number of snow days at Station 82160
R2 = 0.634 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

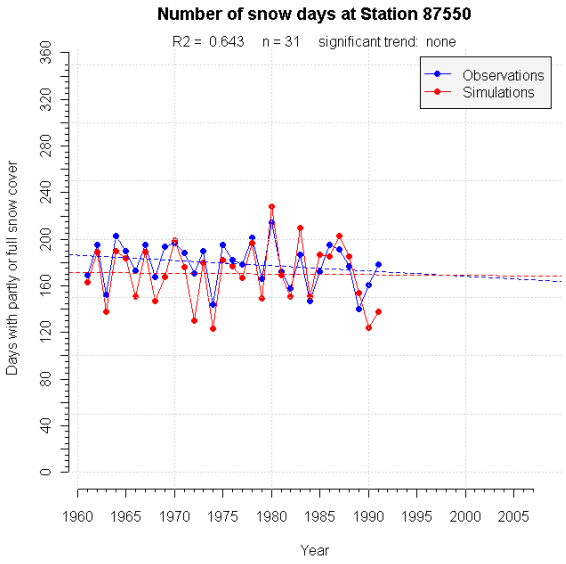

Number of snow days at Station 83500
R2 = 0.219 n = 45 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

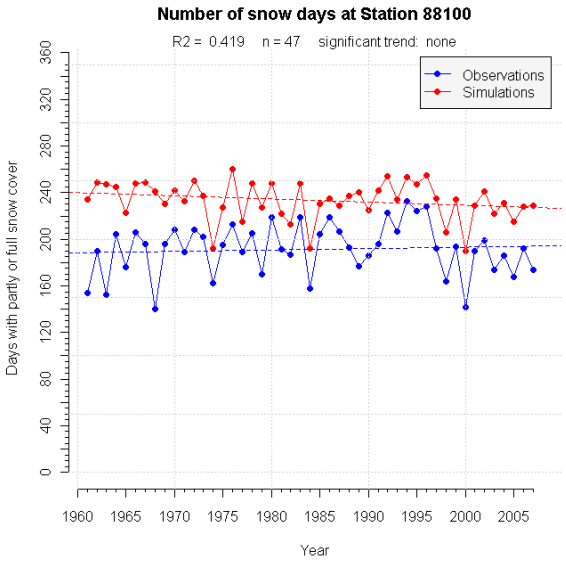

Number of snow days at Station 83550
R2 = 0.862 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

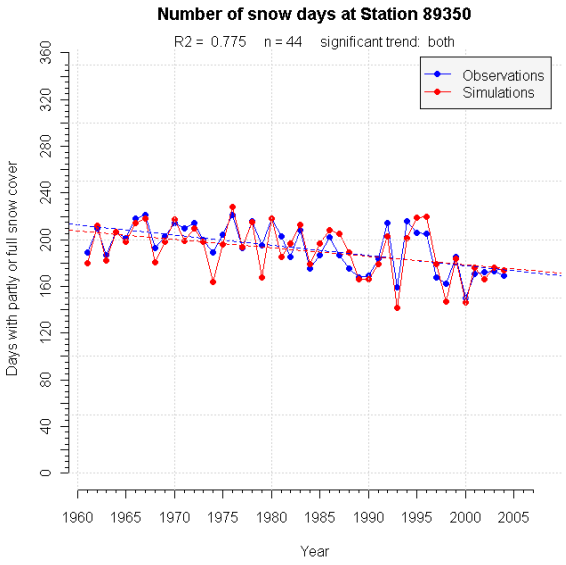

Number of snow days at Station 84070
R2 = 0.321 n = 40 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

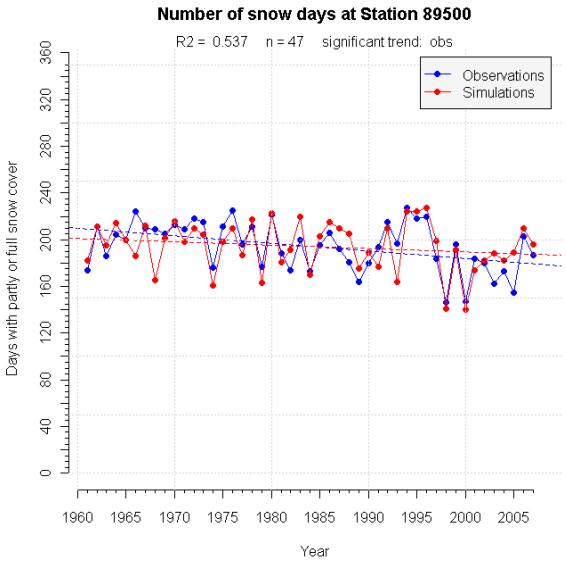

Number of snow days at Station 84450
R2 = 0.294 n = 44 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

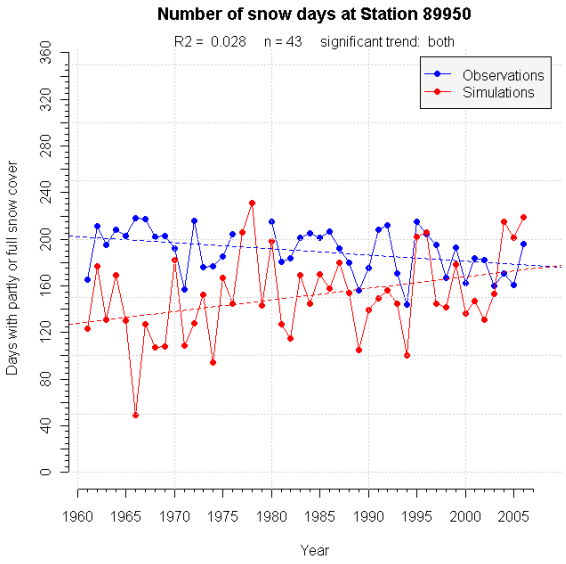

Number of snow days at Station 86950
R2 = 0.471 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

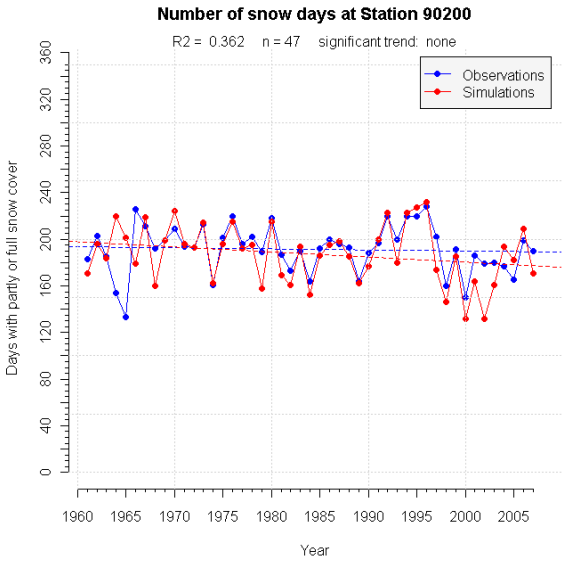

Number of snow days at Station 87550
R2 = 0.643 n = 31 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

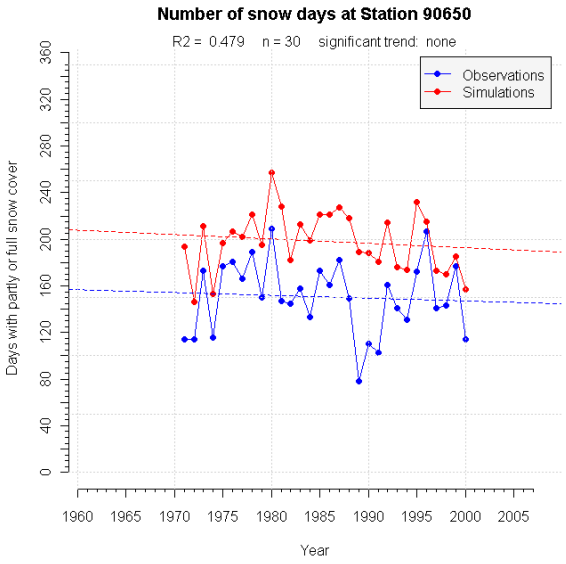

Number of snow days at Station 88100
R2 = 0.419 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

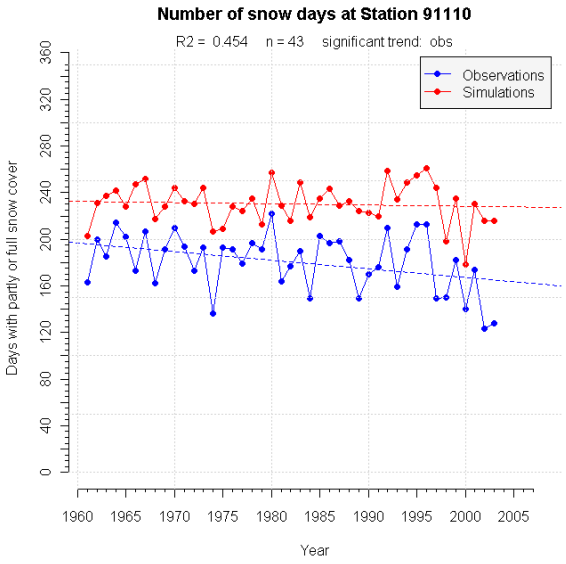

Number of snow days at Station 89350
R2 = 0.775 n = 44 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

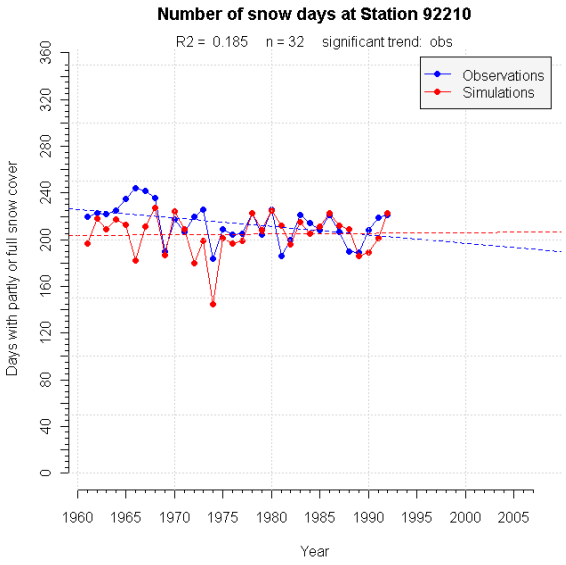

Number of snow days at Station 89500
R2 = 0.537 n = 47 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

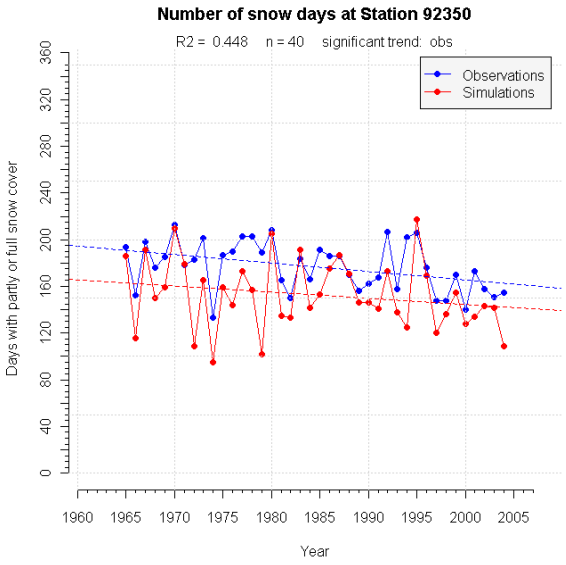

Number of snow days at Station 89950
R2 = 0.028 n = 43 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year

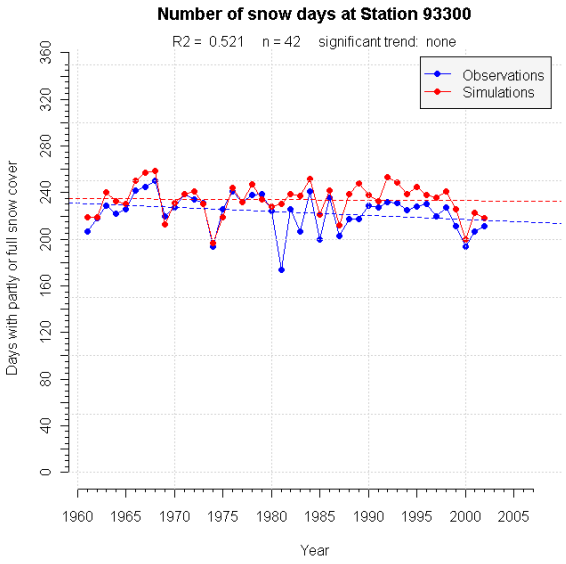

Number of snow days at Station 90200
R2 = 0.362 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

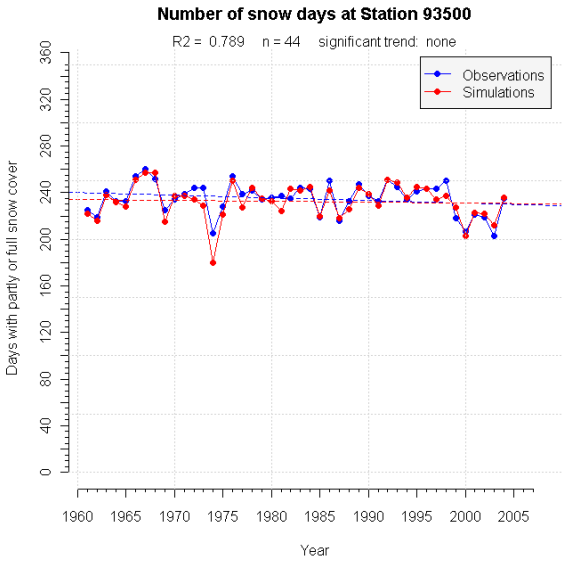

Number of snow days at Station 90650
R2 = 0.479 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

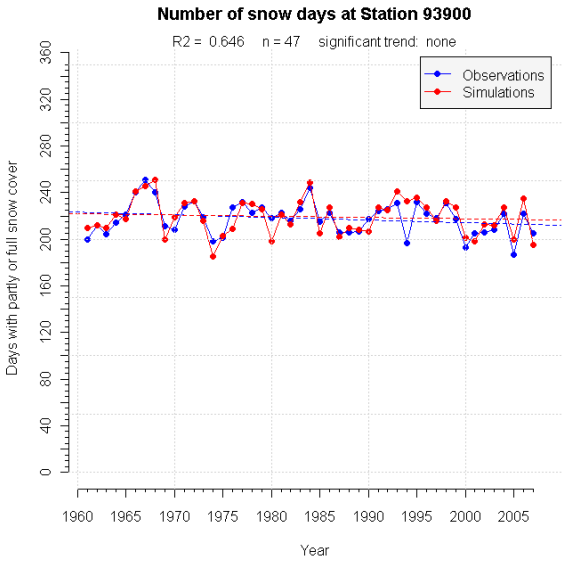

Number of snow days at Station 91110
R2 = 0.454 n = 43 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

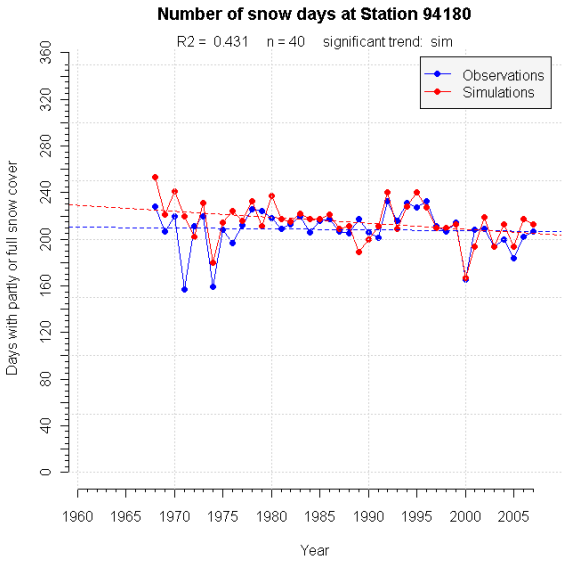

Number of snow days at Station 92210
R2 = 0.185 n = 32 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

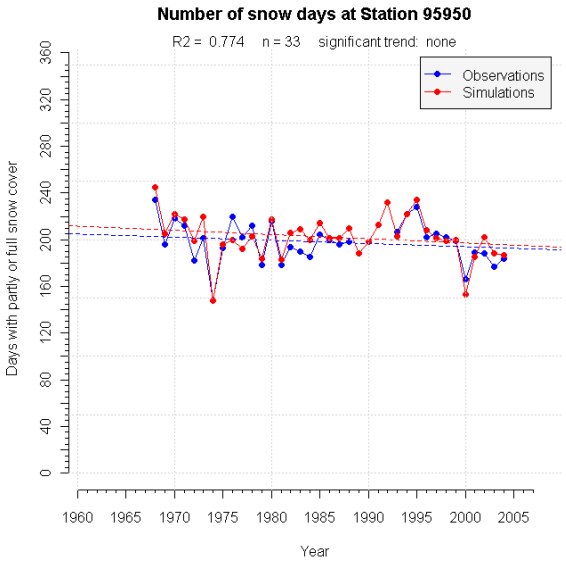

Number of snow days at Station 92350
R2 = 0.448 n = 40 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year

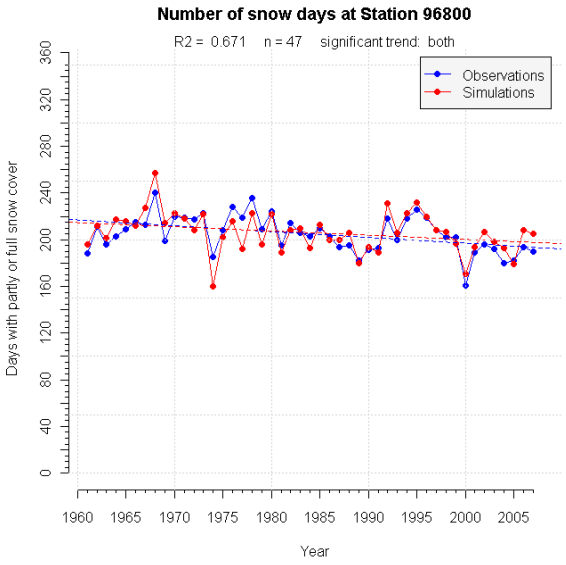

Number of snow days at Station 93300
R2 = 0.521 n = 42 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

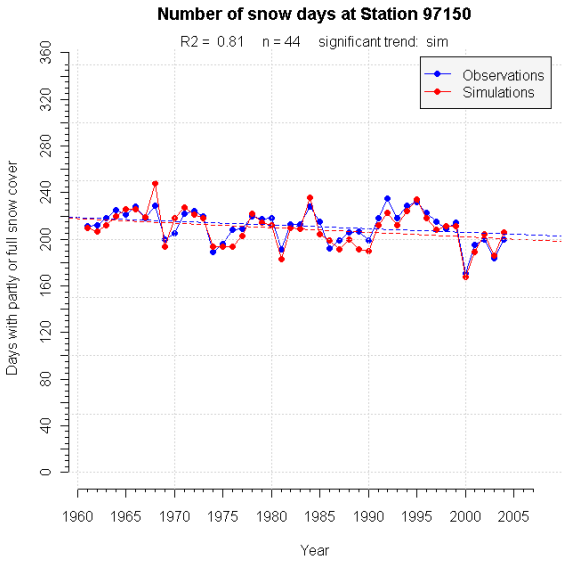

Number of snow days at Station 93500
R2 = 0.789 n = 44 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

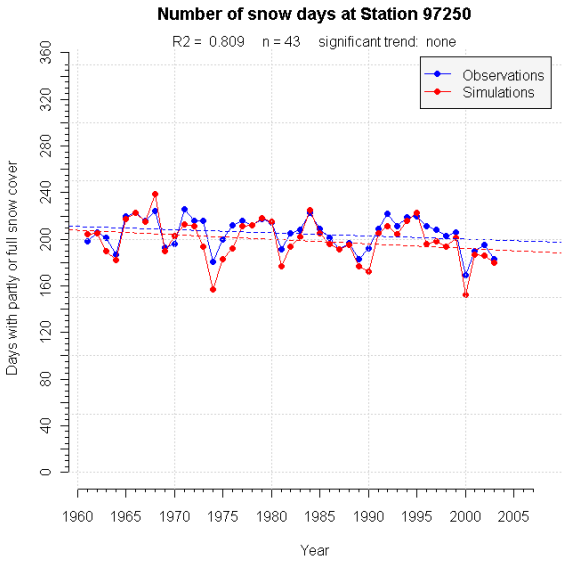

Number of snow days at Station 93900
R2 = 0.646 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

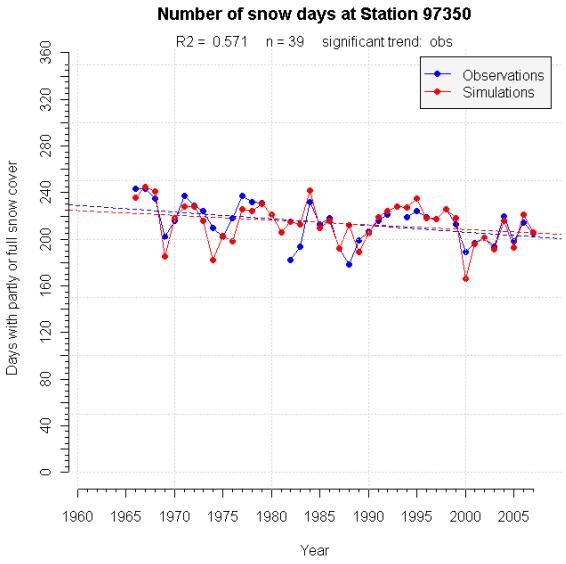

Number of snow days at Station 94180
R2 = 0.431 n = 40 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year

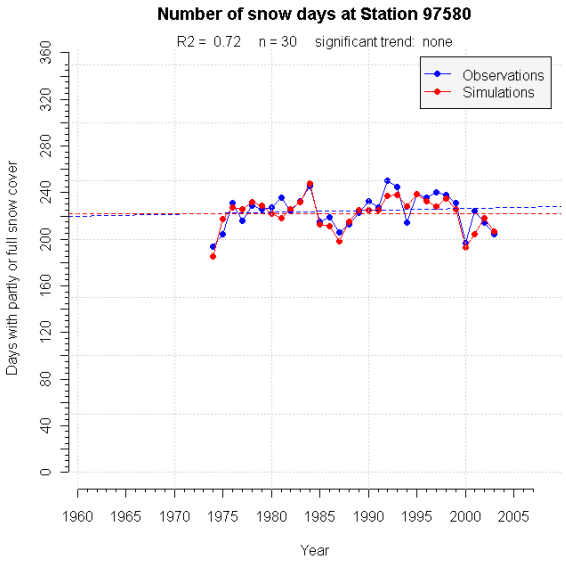

Number of snow days at Station 95950
R2 = 0.774 n = 33 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year

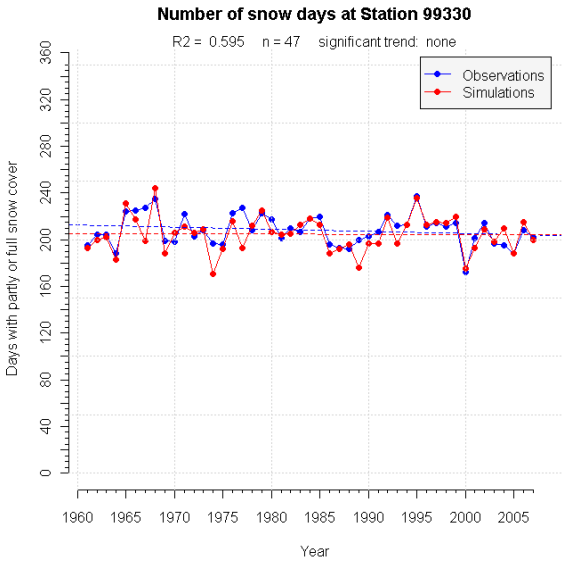

Number of snow days at Station 96800
R2 = 0.671 n = 47 significant trend: both
Observations
Simulations
Days with partly or full snow cover
Year


Number of snow days at Station 97150
R2 = 0.81 n = 44 significant trend: sim
Observations
Simulations
Days with partly or full snow cover
Year


Number of snow days at Station 97250
R2 = 0.809 n = 43 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year


Number of snow days at Station 97350
R2 = 0.571 n = 39 significant trend: obs
Observations
Simulations
Days with partly or full snow cover
Year


Number of snow days at Station 97580
R2 = 0.72 n = 30 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year


Number of snow days at Station 99330
R2 = 0.595 n = 47 significant trend: none
Observations
Simulations
Days with partly or full snow cover
Year