ABSTRACT

Title of Thesis: COMPARING SSM/I SNOW DEPTH ESTIMATES TO IN-SITU AND INTERPOLATED MULTI-SOURCE MEASUREMENTS

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Spaceborne remote sensing data from the Special Sensor Microwave Imager (SSM/I) have been used for several decades to estimate snow depth over large regions. The SSM/I snow depth accuracy is not well quantified in non-uniform terrain. In this study, SSM/I snow depth estimates for the Columbia River Basin and surroundings in the Western USA and Canada are compared with in-situ manual snow-course measurements and interpolated snow water equivalent from the National Operational Hydrologic Remote Sensing Center. Snow depth is estimated for 25-km pixels from SSM/I brightness temperatures with the widely used Chang algorithm, adjusted for canopy cover. Interactive Data Language and ESRI ArcGIS are used to generate maps and time-series graphs, and to analyze the agreement between SSM/I snow depth and the other data sources. Measures of agreement are cross-tabulated with quantitative landscape descriptors, including: mean pixel elevation, elevation standard deviation (a measure of terrain complexity), and evergreen canopy cover.

COMPARING SSM/I SNOW DEPTH ESTIMATES TO IN-SITU AND INTERPOLATED MULTI-SOURCE MEASUREMENTS

By

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Associate Professor K Brubaker, Chair
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DEDICATION

I dedicate this work to my mother Caroline Chin, my husband Thomas and my two wonderful boys Jonathan and Benjamin.

Many heartfelt thanks with great appreciation to Dr Kaye Brubaker and Dr Henry Snyder. Their wisdom and guidance made it possible for me to complete this thesis.

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Chapter 1 Introduction

Understanding snowpack characteristics through various types of physical measurement allows for the prediction of snowmelt runoff and better management of scarce water supply. The knowledge is also extremely valuable for flood forecasting purposes especially in the early spring. In mountainous regions, the snow-covered area is too vast, remote, and hazardous to cover by manual snowpack measurements. Satellite remote sensing, however, can cover these areas spatially and temporally. Remote sensing gives hope to cover vast space with abundant data.

Special Sensor Microwave Imager (SSM/I) snow retrieval has been used for several decades. The SSM/I algorithm estimates snow depth or snow water equivalent from a spectral gradient. The model was calibrated and has been confirmed in areas of uniform terrain and with shallow snowpack; its performance in complex terrain, such as mountains, is less well quantified. The algorithm was recently revised to include a canopy factor.

Study Goal

The SSM/I snow depth retrieval algorithm is tested against available ground measurements. In addition, independent snow water equivalent data from National Operational Hydrologic Remote Sensing Center (NOHRSC) are compared to the SSM/I snow depth retrieval. The goal is to assess how well the SSM/I estimates compare to the ground measurements and NOHRSC estimates, and to identify terrain characteristics where the SSM/I performs well or poorly.

Study Location

This study focuses on the Columbia River Basin in the western US and Canada. Additional nearby locations in the Rocky Mountains but outside the Columbia Basin are also included.

Objectives

The objectives of this study are to:

1. Compare the SSM/I snow depth estimates to ground measurements in the Columbia River Basin and nearby Rocky Mountains;
2. Compare the SSM/I snow depth estimates to NOHRSC SWE estimates in the Columbia River Basin; and
3. Analyze agreement and non-agreement between the SSM/I snow depth and the other data sources, specifically how the agreement varies with elevation, terrain complexity, and canopy cover.

Chapter 2 Literature Review

Importance of Snow

The occurrence of precipitation in the form of snow can change the drainage basin's response to the input of water. The modified hydrological response is due to the fact that snow is held in storage over an extended period of time before it enters in the runoff process (Rango, 1997).

Several variables affecting the occurrence of seasonal snow cover in a basin include the time of year, weather patterns, moisture sources, latitude, elevation, and landscape features. When the seasonal snow cover is deposited, several factors can affect the distribution of the snow, depending on the type of the basin. In a flat lowland basin, the type and number of winter storms are the primary factor affecting the amount of the snow accumulation, with terrain and landscape features as secondary factors. In the mountain basins, elevation is the primary factor with storm track and landscape features as secondary factors influencing the amount of snow accumulation. In some basins, wind is an important factor that strongly affects the original deposition pattern by moving and redepositing the snow. In many mountain basins, snow may still be accumulating at the higher elevations while the snow may have already disappeared at the lower elevations (Rango, 1997).

Snow depth and density

Snow depth is the vertical distance from the ground to the top of the snow pack. Snow accumulation or snowfall is the vertical depth of fresh snow deposited over a defined period (generally 24 hours) (Geer, 1996; Singh and Singh, 2001)

Snow density (mass per volume) varies according to the amount of air and liquid water in the snow. Fresh snow density can vary from 0.06 to 0.18 gm/cc, but the average density of fresh snow is about 0.1gm/cc and this value is usually used when actual measurements are not made (Singh and Singh, 2001).

The microstructure of snow changes over time, which affects the density of the snowpack. Table 2-1 shows how density increases with the age of the snow.

Table 2-1 Typical densities of snow in different forms

Snow Type	**Density (gm/cc)**
Wild snow (new snow at low temperature in calm)	0.01-0.03
New snow (immediately after failing in calm)	0.05-0.07
Damp new snow	0.10-0.20
Settled snow	0.20-0.30
Depth hoar	0.20-0.30
Wind packed snow	0.35-0.40
Firn*	0.40-0.65
Very wet snow and firn*	0.70-0.80
Glacier ice	0.85-0.91

(Source: Singh and Singh, 2001)

*Firn is the type of snow that survived at least one complete summer melt season and could be considered as an intermediate stage between fresh snow and ice.

Snow Water Equivalent

The water equivalent of snow is defined as the depth of water that would be produced by melting the snow, given in units of vertical depth [millimeter or inch]. The snow water equivalent of a snowpack having different layers of different density can be defined as

$$\text{SWE}= \sum_{i=1}^{n} d_i \rho_i = \bar{\rho} D \qquad 2\text{-}1$$

where the index *i* refers to one layer of the snow, ρ_i is that layer's density, d_i is that layer's depth, $\bar{\rho}$ is average density, and *D* is total snow depth (Singh and Singh, 2001).

Remote Sensing of Snow Depth and Snow Water Equivalent

Research has shown the microwave band has most potential for use in remote sensing applications for snow hydrology. Frequencies 37 and 19 GHz were found to be most useful for the SWE data.

Chang et al. (1987) presented a multi-frequency approach to estimate SWE from raw brightness temperature data using the 37-GHz and 18-GHz frequencies of the Scanning Multichannel Microwave Radiometer (SMMR). The algorithm was later revised for the 37- and 19-GHz frequencies of the SSM/I instrument (Chang, 1990). The 37 GHz frequency senses the near-surface (0-50cm) temperature, emissivity and surface roughness. The 19GHz frequency is useful to obtain the information about the internal characteristics of the snow pack (Butt, 2009).

The spatial resolution at these frequencies is poor, about 25km or greater. Observation times were limited to once every few days, depending on the latitudes. With this poor resolution, Rango (1997) stated that use of the SSM/I data to estimate SWE was limited to flat and relatively homogeneous terrain.

The earlier SMMR algorithm was revised to a snow depth (SD)/brightness temperature (T) relationship for a uniform snowfield. The algorithm to estimate the snow depth is based on the assumption of the entire snowpack consisting of snow density of 0.3 g/cm^3, corresponding to a snow crystal radius of 0.3 mm (Foster, 2005). This algorithm expresses SD [cm] as proportional to the difference between the microwave brightness temperature at the 37 and 19 SSM/I channels as follows,

$$SD = 1.59(T_{19H} - T_{37H}) \qquad 2\text{-}2$$

where T_{18H} and T_{37H} are the brightness temperature at 18 and 37 GHz, horizontal polarizations, respectively, and 1.59 is a constant derived by using the linear portion of the 37 and 18GHZ responses to obtain a linear fit of measured snow depth to the differences between these two channels. This approximation limits the use of the algorithm to detection of snow up to 1m deep. Snow at the margins of snow-covered area is believed to be underestimated since shallow, dry snow (< 2.5cm) is nearly transparent to microwave emission (Chang, 1990).

Forest poses a serious problem by obscuring the snowpack. A forest canopy over the snowpack can cause lower certainty of the SWE estimations by attenuating the microwave signal from the snowpack and at the same time emitting the forest microwave. In the extremely dense forest area with a significant snowpack, the apparent snow water equivalent can drop to zero. This indicates a need for finding a method to correct the forest cover's effect on the passive microwave snow signature (Rango,1997).

Most of the aircraft-derived SWE over flight lines without extensive forest covers are consistent with the SWE derived from SSM/I data. Over the forested regions, SWE retrievals without correcting for the forested cover gave much lower values than the

ground measurements (Chang, 1997). Foster (1997) incorporated the factor of forest canopy and produced a revised algorithm for North American, Eurasia and other non-Eurasia area.

Foster (2005) writes,

> "Because of low loss when snow is dry, part of the radiation emitted by the underlying ground is scattered within the snowpack and part contributes to the observed signal when the total snow depth is less than 10–100 times the microwave wavelength (Rango, 1983). Therefore, in most cases, additional scattering does not result when snow thickness exceeds 0.8 m—the approximate saturation limit for 37 GHz frequencies. For most locations in North America, usually, snow does not accumulate to these depths over an entire PM pixel (37 km x 28 km for SSM/I). In portions of the Rocky Mountains and the Alaska Ranges, and perhaps in a few isolated areas in the boreal forests of Quebec, depths of 1 m or more can be reached, but our analysis indicates that these pixels make up less than 2% of all the pixels in North America."

Mizukami (2011) writes,

> "Several algorithms for retrieving SWE from passive microwave data have been developed in the past two decades (e.g., Chang et al., 1987; Goodison and Walker, 1995; Foster et al., 1997; Tait, 1998; Pullianinen and Hallikainen, 2001; Josberger and Mognard,2002; Koenig and Forster, 2004; Gan et al., 2009). However, there has been little success in developing analogous algorithms for mountainous areas, partly due to the complex physiographic features and

> significant variations in snow distribution within each microwave pixel (approximately 25 x 25 km). Furthermore, there is a limitation of the passive microwave data to estimate large SWE due to passive microwave signal saturation (Tait and Armstrong, 1996; Dong et al., 2005). Dong et al., (2005) reported approximately 150 mm of SWE for this threshold. The mountainous areas typically receive well above this snow amount. Airborne gamma radiation SWE surveys, such as the one operated by the National Weather Service's National Operational Hydrologic Remote Sensing Center (e.g., Carroll, 2001), can provide reliable mean areal SWE estimates along flight lines (approximately 10 km x 300 m; e.g., Cline et al., 2009), but this approach is not feasible when continuous estimates of SWE over large areas are needed….."

Mizukami (2011) reported several other studies that demonstrate little success in developing analogous algorithms for mountainous areas due to complex physiographic features and significant variation in snow distribution within each microwave pixel (approximately 25 x 25km). Furthermore, there is a limitation of the passive microwave data to estimate large SWE due to passive microwave signal saturation.

EASE Grid

The Equal-Area Scalable Earth Grid (EASE-GRID) is a versatile tool for using and displaying global-scale gridded remote sensing data. The Northern Hemisphere is one of several possible projections in the EASE-GRID family (Figure 2-1)

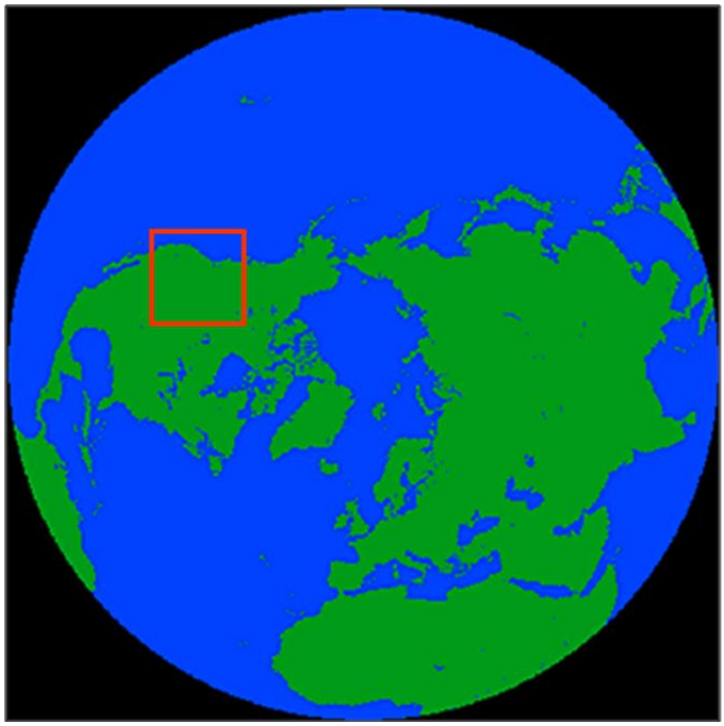


Figure 2-1 Northern Hemisphere EASE-Grid projection (Polar Azimuthal Equal-Area). The red box shows the study location in Western USA and Canada (Source: National Snow and Ice Data Center, 2011a)

A spherical earth model was chosen over elliptical model because of the reduced error introduced in the gridding geolocation in this model choice (NSIDC, 2011a). The projection is easier to project with known latitude and longitudes value which can be related to the column and row coordinates. A grid in the EASE-Grid family is described by four elements: the map projection, the numbers of columns and rows, the number of grid cells per map unit and the grid cell that corresponds to the map's origin.

The original SSM/I Grids were defined as 25-km grids for the SSM/I Level 3 Pathfinder project at NSIDC, which also included gridded Passive Brightness Temperatures. The Northern Hemisphere EASE- Grid is 721 rows by 721 columns. These grids have a nominal cell size of 25km x 25km; the actual cell size is slightly larger: 25.067525km.

The grid coordinates in decimal real numbers (r,s) start at the upper left corner as (0,0) with r, increasing from left to right as columns, and s increasing from top to bottom as rows. Rounding the (r,s) grid coordinates (rounding up at 0.5) gives an integer grid cell number. This grid cell (i,j) = (column,row) is centered at grid coordinates (r,s) = (i+0.5,j+0.5) and is bounded by: i - 0.5<= r < i + 0.5, j– 0.5 < = s < j + 0.5.

In units of meters, the Map Origin is at the Pole, 90.0N latitude and 0.0 longitude. The map origin corresponds to grid cell (360,360).

Snow course

Snow survey in the Western USA began around 1906. Snow courses were established in permanent sites for trained observers to take manual measurement of snow depth and snow water equivalent, usually around the first of the month during winter and spring; they are generally situated in small meadows protected from the wind (NRCS, 2009a). For this study, four states (Oregon, Washington, Montana and Idaho) are chosen as they are part of Columbia basin and Rocky Mountain area. The Natural Resource Conservation Service (NRCS) lists over 1090 sites in these four states, but only 516 sites are active.

Manual snow surveys in British Columbia are usually conducted up to 8 times per year around the beginning of the month from January to June, with extra measurements in the mid month of May and June (British Columbia River Forecast Centre, 2011). The snow surveys are ideally located in a relatively sheltered area with least tree canopy overhead and as wide as possible with the forest clearing at least as wide as the height of the tree.

Sites were selected to be representative of the elevation between 1000 to 2000 meters above sea level, with snow for at least a portion of the winter.

Five or ten points within the area are chosen with reference to a tree or other markers. Snow depth and snow water equivalent are measured with graduated aluminum tubes with a cutter affixed to the tubing section. The tubes are known as Standard Federal Snow Samplers. The tubes are driven through the snow to the ground, then withdrawn and the snow core extracted. The core and tube are first weighed, then the weight of the core is determined by difference; this weight gives the measurement of snow water equivalent in cm. Then the snow depths and snow water equivalents are averaged based on all measurements taken at the site during each sampling period. (British Columbia River Forecast Centre, 2011).

NOHRSC

The National Operational Hydrologic Remote Sensing Center (NOHRSC) provides remotely sensed and modeled hydrology products covering the USA. Estimates of snow water equivalent data are one of such products; they are assimilated by several dynamic data sources including satellite imagery, airborne gamma radiation survey, snow water equivalent data sets, and station observations. For the SWE data used in this study, satellite imagery was acquired daily at a variety of resolutions from variety of sensors such as Advanced Very High Resolution Radiometer (AVHRR) and Geostationary Operational Environmental Satellite (GOES). Each data type was analyzed and processed by its corresponding system (Hartman, 2011a).

Operational Processing of Multi-Source Snow Data is a system that processes all data from several sources to generate hydrologic products by streamlining and integrating all snow estimation data in one operational system. The spatial data processing algorithms were developed and used to produce snow estimation products from all input data sources. OPPS is capable of integrating raster data with point, line and area vector data. First satellite imagery were acquired and analyzed to produce a map of the areal extent of the snow cover. Then SWE station observations were spatially interpolated and stratified by elevation band. The SWE observations were averaged within each elevation band for individual hydrologic basins. (Hartman, 2011a).

National Weather Service Office of Hydrology developed a methodology to generate real-time gridded snow water equivalent estimates that were from ground-based airborne snow data collected over the Western United States. The spatial variability of the snowpack caused by the orographic effect in the West was incorporated in the gridded snow water equivalent estimates. Due to the difficulty in accurately estimating the precipitation in the mountains, Snow Estimation and Updating System (SEUS) was created for this task. SEUS mainly does analysis of historical snow observation data, and calibrating the parameters needed for estimating the snow water equivalently operational, updating and administering the gridded snow water equivalent (Hill, 2011). Since the process of SEUS implementation is somewhat laborious, only about 25 percent of the mountainous Western US could be estimated. This could lead to questionable accuracy of individual pixel estimates from SEUS. Gridded snow water equivalent could be estimated with simpler model but its accuracy and reliability may not be as high as SEUS's product (Hartman, 2011b).

Chapter 3 Methods

Location of study region in EASE-GRID

North America is in the upper left quadrant of the Northern Hemisphere version of EASE-GRID (Fig. 2-1). The latitudes and longitudes for this study region are from N40 to N53 and W108 to W125 respectively. The study location includes rows 168 to 218 (51 rows) and columns 243 to 302 (60 columns).

Calculating SSM/I snow depth

Brightness temperatures T_{19} and T_{37} in EASE Grid format were obtained from Dr. Ed Josberger, who processed the SSM/I data. Data were provided by pentad (5-day period) for water year 1997. Here, the water year is defined from September 23 1996 to September 24 1997. The pentad is identified by the middle date of the 5-day set. For example, Sept. 25 pentad represents Sept. 23 to Sept. 27. The next pentad would be Sept. 30 (Sept. 28 to Oct. 2). The data set for water year 1997 includes 70 pentads.

The Chang equation including forest canopy (Foster, 1997) was applied to compute SSM/I snow depth:

$$SD = \frac{1.59(T_{19H} - T_{37H})}{1.00 - f} \qquad (3\text{-}1)$$

where f = fraction of the EASE-grid cell covered by the forest canopy

If Eq. 3-1 results in a negative SD value, it is set to zero.

Forest canopy data in EASE-Grid were obtained from National Snow and Ice Data Center (2011b). The data set gives the percent coverage of each land cover class in each

25-km EASE-Grid pixel. The data set has 17 classes of land cover, including Evergreen Needleleaf and Evergreen Broadleaf. Both evergreen classes were added together to give forest canopy coverage in percentage, providing a value of *f* in Eq. (3-1) for each pixel.

Obtaining station data

Canadian ground measurement station data were obtained from the British Columbia River Forecast Centre online resource SNOWHIST (BCRFC, 2011). SNOWHIST provided a file containing snow depth and SWE from 440 ground measurement and pillow stations throughout BC for the years 1935 to 2007. Snow depth stations report up to 8 measurements per year in cm: generally on the first of the month from January to June, with additional 15th day of the month during May and June. The 115 stations that lie in the Columbia basin were identified and extracted.

Surface measurements of snow depth in the USA are available online from the Natural Resources Conservation Service (formerly Soil Conservation Service) (NRCS, 2011). The data are provided by state; data are available from as early as 1915 to the current year, with up to 6 measurements per year taken around the first of the month from January to June. The Columbia basin lies in four states: Montana, Oregon, Idaho and Washington. Surface snow depth measurements were gathered from all four states: 273 Idaho stations, 259 Montana stations, 313 Oregon stations, and 229 Washington stations.

Out of nearly 1200 ground stations from BC and 4 states, only 458 have data for Water Year 1997. These stations' data were entered into a spreadsheet in a consistent format and units. US snow depth reports (in) were converted to cm.

Mapping stations in EASE grid coordinates

The ground measurement station data provided the latitude/longitude location of each station. The stations were mapped to EASE grid coordinates, using the transformation equations for the North polar azimuthal equal-area projection provided by the National Snow & Ice Data Center (NSIDC, 2011a):

$$r = 2*R/C * \sin(lambda) * \sin(PI/4 - phi/2) + r0 \quad \text{3-2(a)}$$

$$s = 2*R/C * \cos(lambda) * \sin(PI/4 - phi/2) + s0 \quad \text{3-2(b)}$$

where:

r = column coordinate

s = row coordinate

lambda = longitude in radians

phi = latitude in radians

R = Radius of the Earth, set to 6371.228 km for EASE-Grid

C = nominal cell size (25067.525 m)

(r0, s0) = map origin column, row (360,360 for the North azimuthal grid)

With r and s computed, the stations could be assigned (x,y) locations in the EASE-GRID projection

$$x = (r - 360) * C \quad \text{3-3(a)}$$

$$y = (360 - s) * C \quad \text{3-3(b)}$$

The station point locations can be viewed in ArcMap (Figure 3-1). Some EASE-Grid pixels contain as many as 14 stations.

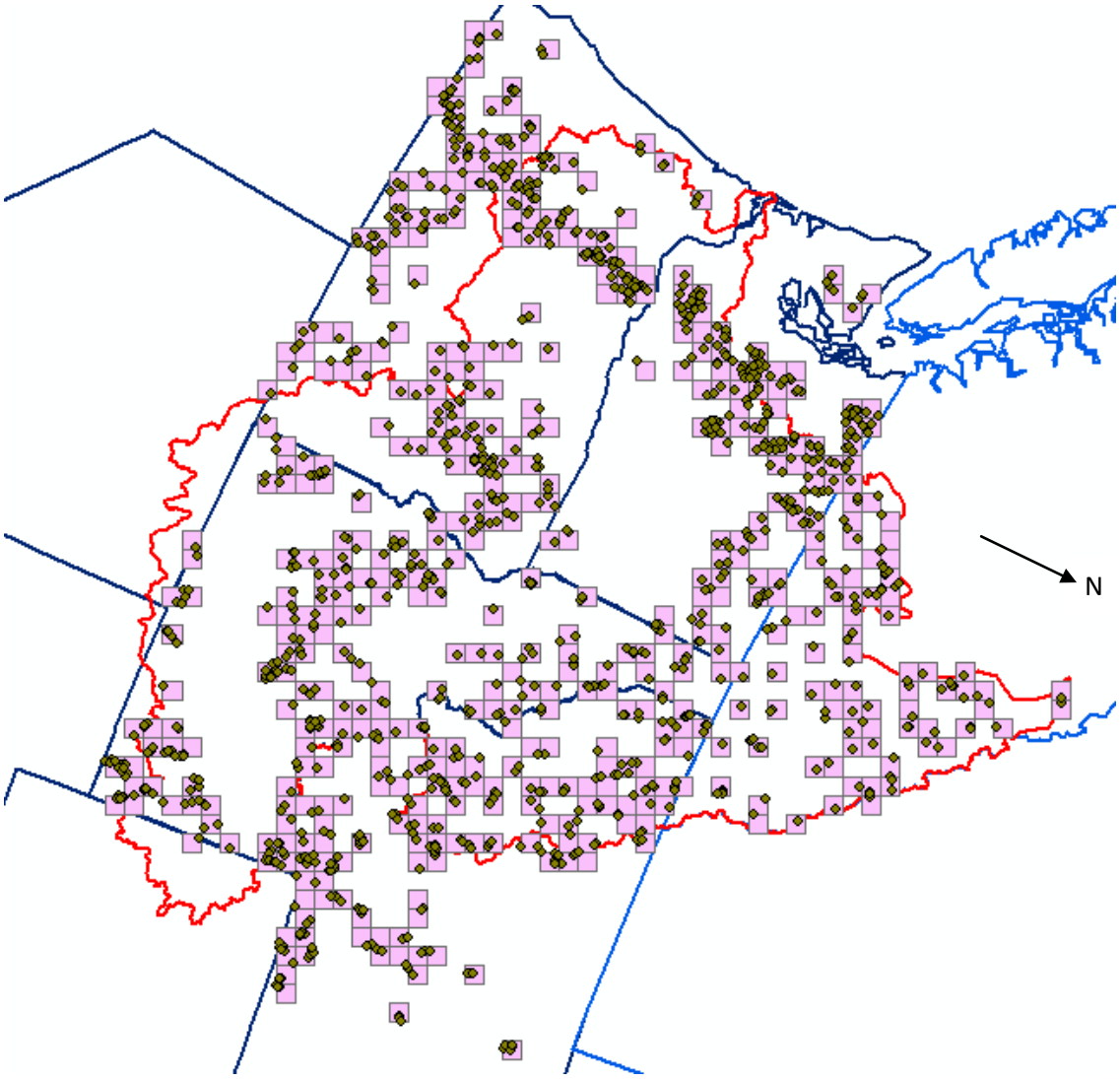


Figure 3-1 Locations of the ground stations and the EASE-GRID 25-km pixels that contain them. Red line indicates the Columbia Basin boundary.

Interactive Data Language (IDL) was used to generate time series graphs of snow depth for all pixels that contain at least one ground station and for which SSM/I SD estimates are available. A pixel's center coordinates lie halfway between integer values of r and s. Therefore, any station can be assigned to a pixel by rounding its (r,s) coordinates to the nearest integer. For example, the station located at (r,s) = (273.4, 301.9) is mapped to pixel (273,302). If the pixel contains multiple ground stations, they are all included in the

graph. For example, pixel (202,263), containing 12 stations, and pixel (201,264), containing a single station, are shown in Figure 3-2.

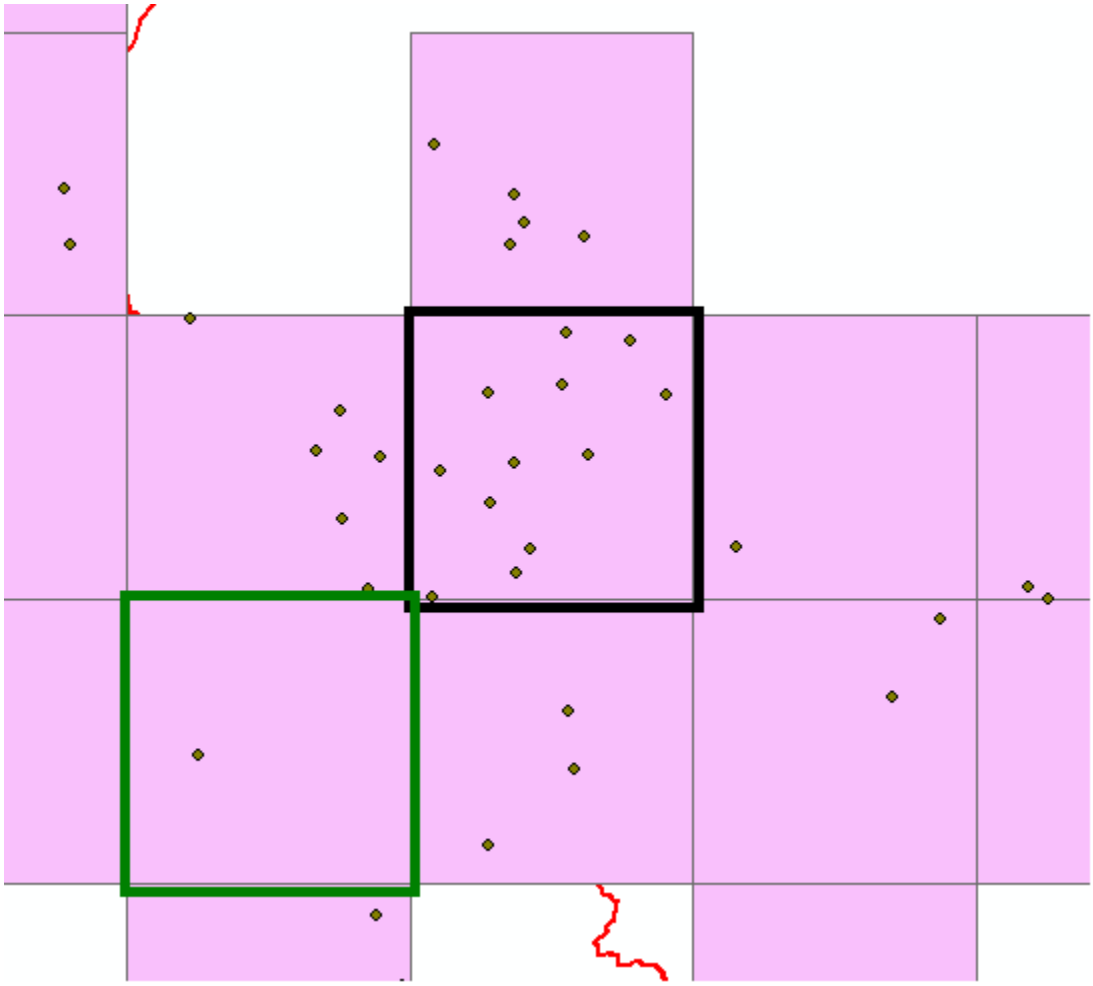


Figure 3-2 Pixel (202,263) in black box contains 12 stations and Pixel (201,264) in green box contains 1 station

Numerical measures of agreement

In general, the ground stations report SD once a month – at best, twice a month. Because they are collected in situ, according to a standard protocol, they can be assumed very accurate at a point scale. The SSM/I SD estimates are provided every 5 days; they

represent an estimated value over a 25x25 km area. Temporal variability in the SSM/I SD can be observed in Figure 3-3 and Figure 3-4.

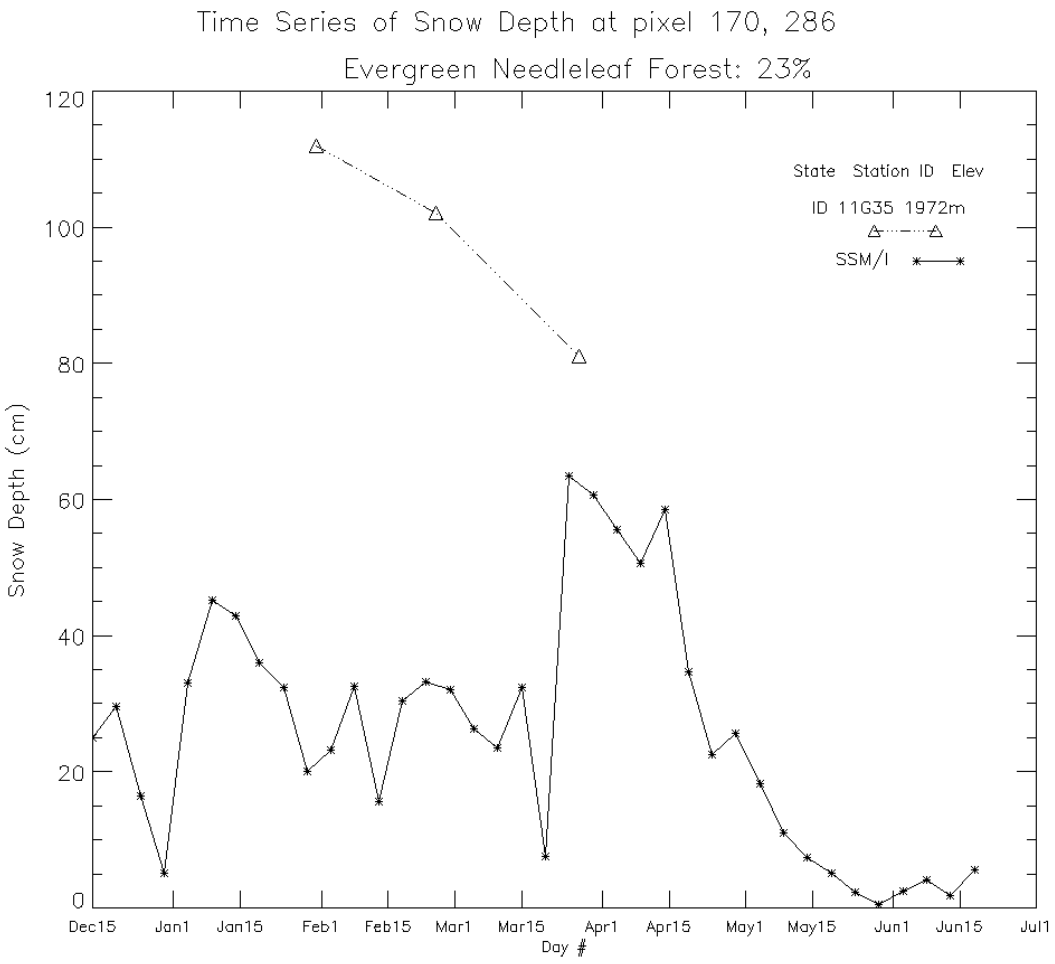


Figure 3-3 Time Series of ground station and SSM/I Snow depth, pixel (170, 286)

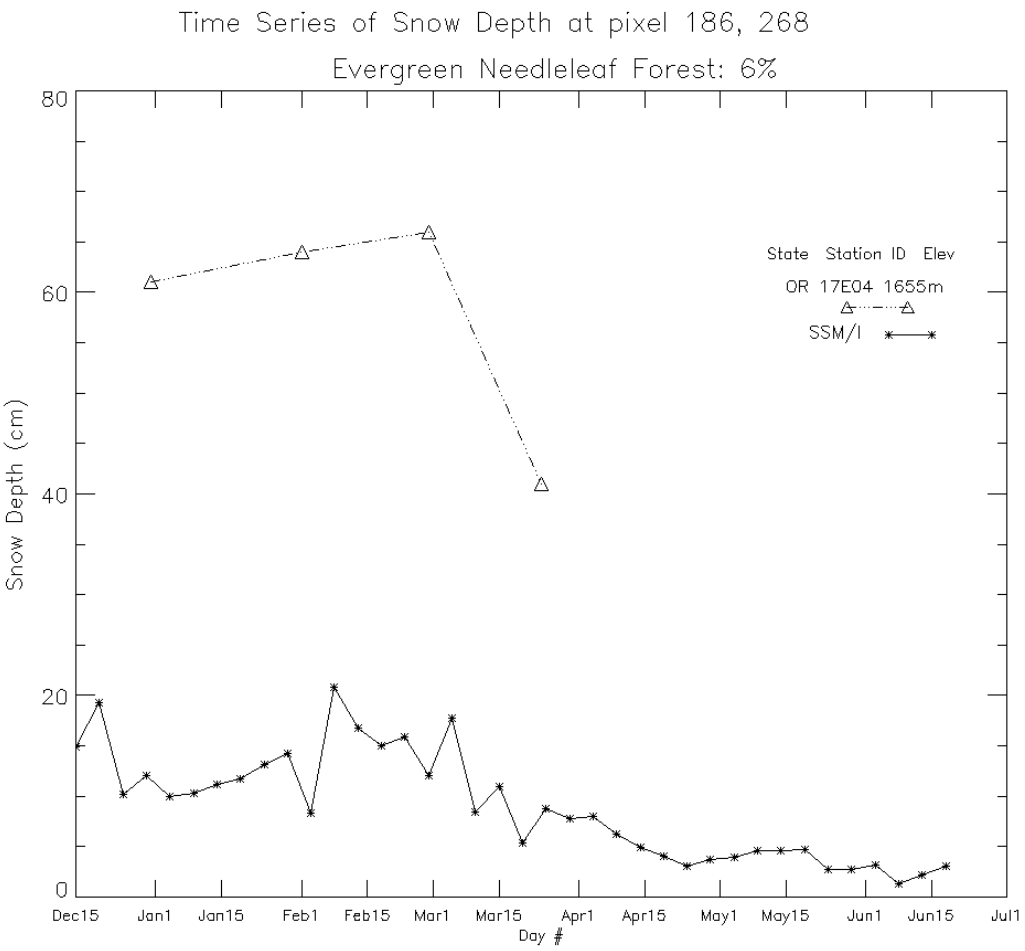


Figure 3-4 Time Series of ground station and SSM/I Snow depth, pixel (186, 268)

In this analysis, the 4 or 5 pentad values surrounding the surface measurement date were treated as a sample from which the mean value of SSM/I on the surface observation date was estimated. If ground measurement day falls on the center day of a pentad, *i*, then

$$SD\_SSMI\ (day\ i) = Sum\_j=i-2\ to\ i+2\ [SD\_SSMI(j)]/5 \qquad 3\text{-}4$$

Otherwise, *i* is set equal to the first pentad center before the ground measurement day, and

$$SD\_SSMI\ (day\ i) = Sum\_j=i-1\ to\ i+2\ [SD\_SSMI(j)]/4 \qquad 3\text{-}5$$

In other words, 2 pentad values are taken each from 10 days before and 10 days after the measurement date. If the measurement date is the center of a pentad, this date is the 5th pentad value.

A confidence interval (CI) can also be calculated for the mean SD_SSM/I using the t-distribution,

$$CI = t\_alpha * StdDev(SD\_SSMI) / sqrt(n) \qquad 3\text{-}6$$

where StdDev is the standard deviation of the 4 or 5 SSM/I SD measurements flanking the ground measurement, n equals either 4 or 5, and t_alpha is the value of the t statistic corresponding to n-1 degrees of freedom and a selected level of significance (alpha) . A 95% confidence interval was applied (alpha = 0.05). Confidence intervals were calculated in an MS Excel spreadsheet using the "CONFIDENCE" function. If the confidence interval contains the ground measurement value on that date, then the SSM/I estimate is said to agree with that ground measurement on that date. For each pixel, the number of agreements is tallied.

Comparing NOHRSC Snow Water Equivalent to SSM/I Snow depth

Obtaining SWE Data and Mapping in EASE-GRID

SWE data from January 1997 to June 1997 were obtained from a CD distributed by the National Operational Hydrologic Remote Sensing Center (NOHRSC, 1997). The values are provided on a 1km resolution grid in geographic coordinates. The gridded data were reprojected and resampled to the 25-km resolution EASE-GRID.

Using IDL, time-series graphs were plotted showing NOHRSC SWE and SSM/I SD for each pixel location. Examples are shown in Figure 3-5 and Figure 3-6.

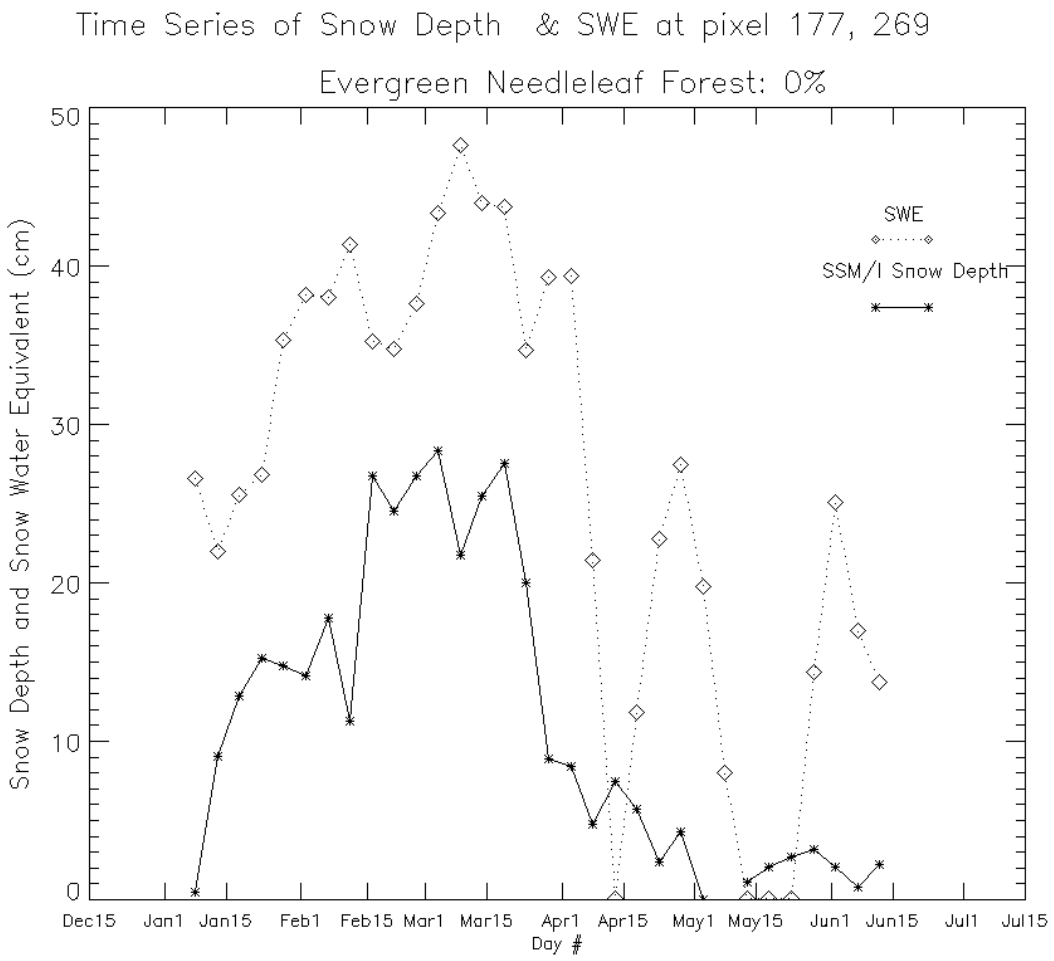


Figure 3-5 Time series of SSM/I Snow Depth and NOHRSC Snow Water Equivalent, pixel (177, 269)

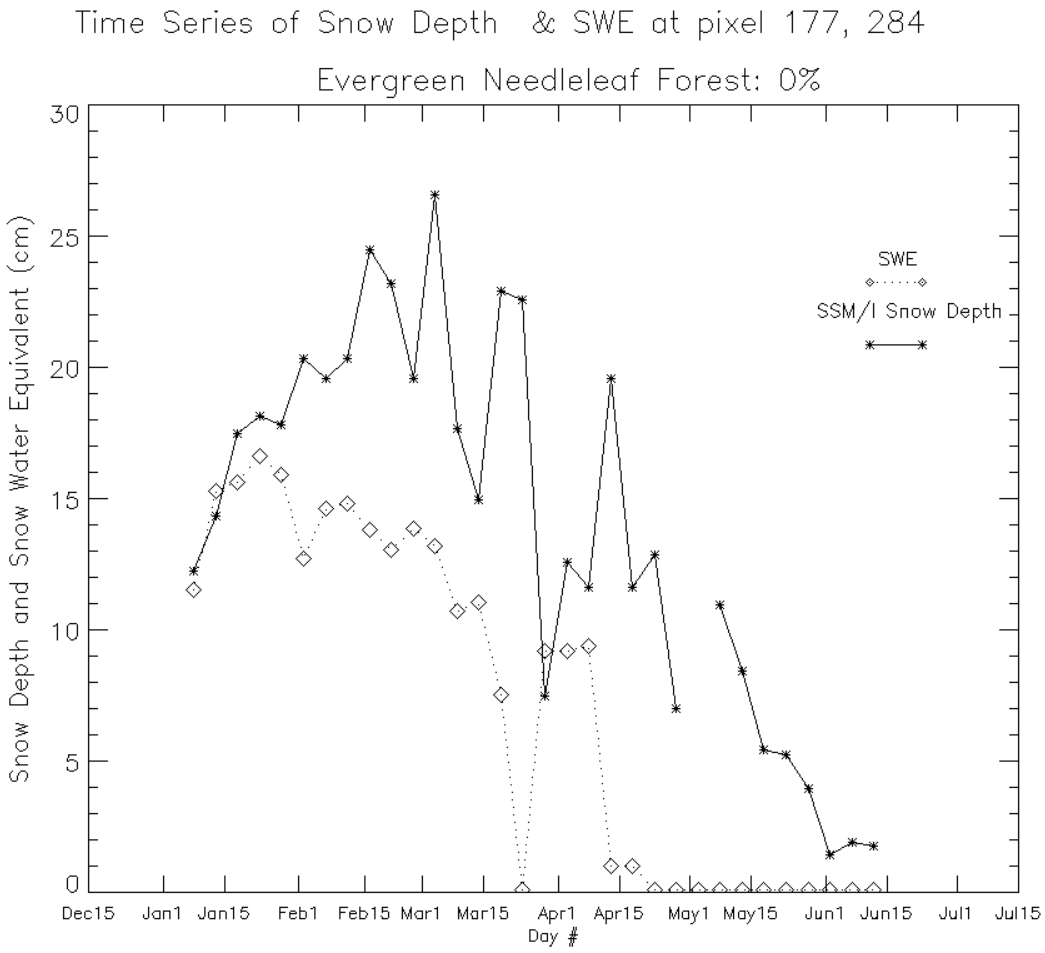


Figure 3-6 Time Series of SSM/I Snow Depth and NOHRSC Snow Water Equivalent, Pixel (177,284)

Numerical measures of agreement

Due to the time-varying density of snow, time series of SWE and SD cannot be directly compared. However, they would be expected to follow the same general trend or pattern, and when given in the same units (cm) SWE should be less than SD, with the ratio SWE/SD lying in the range of expected values for relative density of snow, 0.01 to 0.4. Two overall measures were selected as measures of agreement between the two time

series: correlation as a measure of similar pattern, and a bulk relative density indicating the general relationship between SWE values and SD values over the season.

Correlation

For each pixel, correlation coefficient was computed for SWE and SSM/I snow depth, paired by date, and excluding dates on which either measurement was missing. The correlations were calculated in IDL and the resulting values were arranged in grid form for viewing in ARCMAP. A strong positive correlation is interpreted as good agreement. Although a strong negative correlation indicates a linear relationship, in this case, it does not indicate good agreement. Pixels with at least 0.7 correlation are considered to be good agreement in terms of pattern. For the examples shown in Figure 3-7 and Figure 3-8, the correlation coefficients are -0.72481, and 0.865425, respectively.

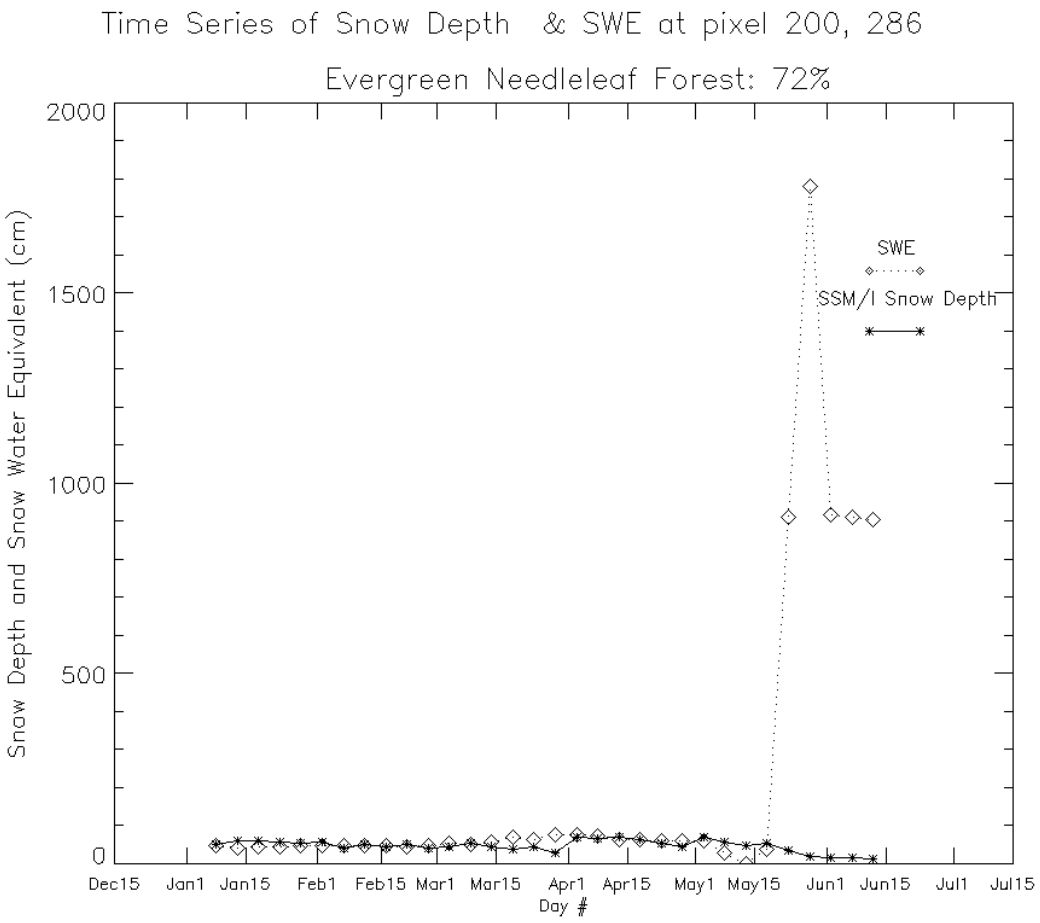


Figure 3-7 For pixel (200,286), the correlation between SSM/I Snow Depth and NOHRSC SWE is -0.72481.

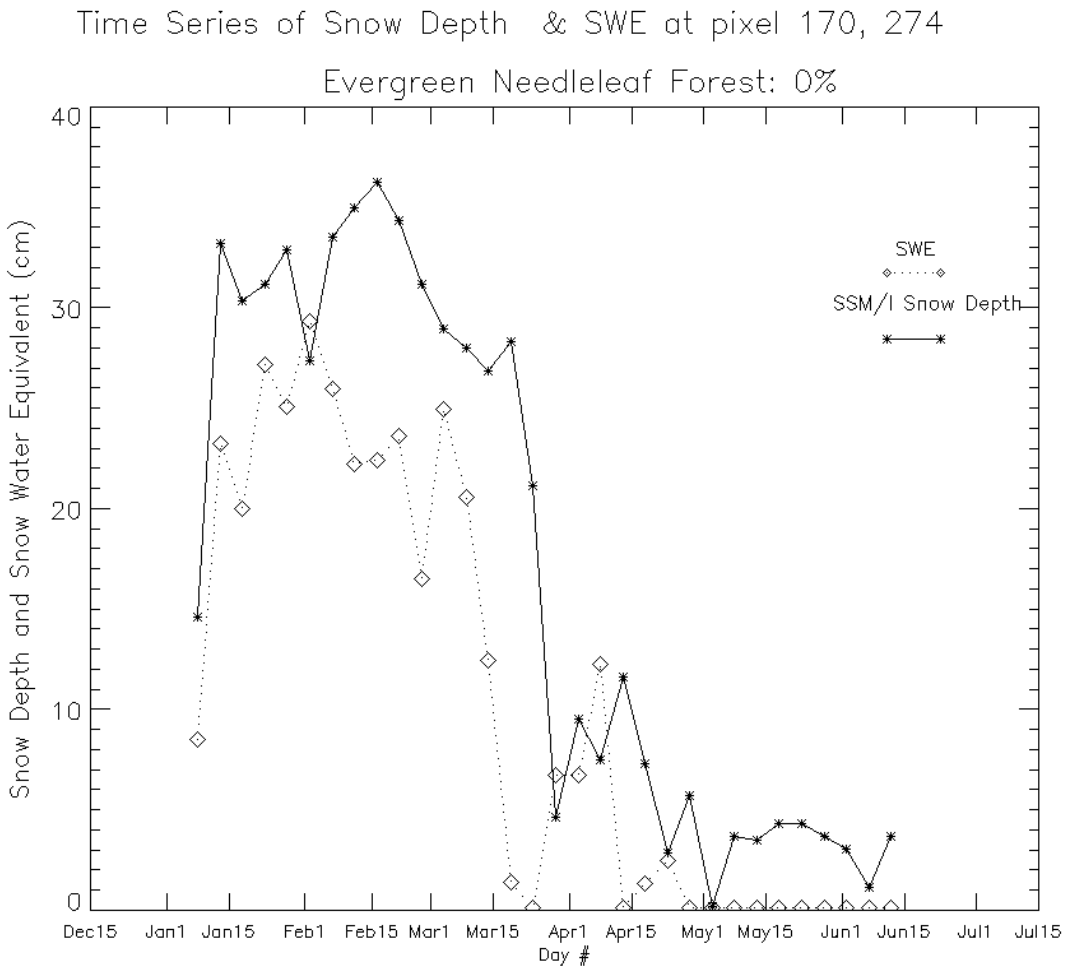


Figure 3-8 For pixel (170,274), the correlation between SSM/I Snow Depth and NOHRSC SWE is 0.865425

Relative Density

Relative density was computed for each pixel by dividing the average of SWE over the measurement period by the average of snow depth over the period. Relative density of up to 0.3 is considered to be good agreement in terms of magnitude. For the examples shown in Figure 3-9 and Figure 3-10 the relative density values are 0.289429 and 0.297567 respectively. Relative density was calculated in IDL and output in gridded form for viewing in ArcMAP.

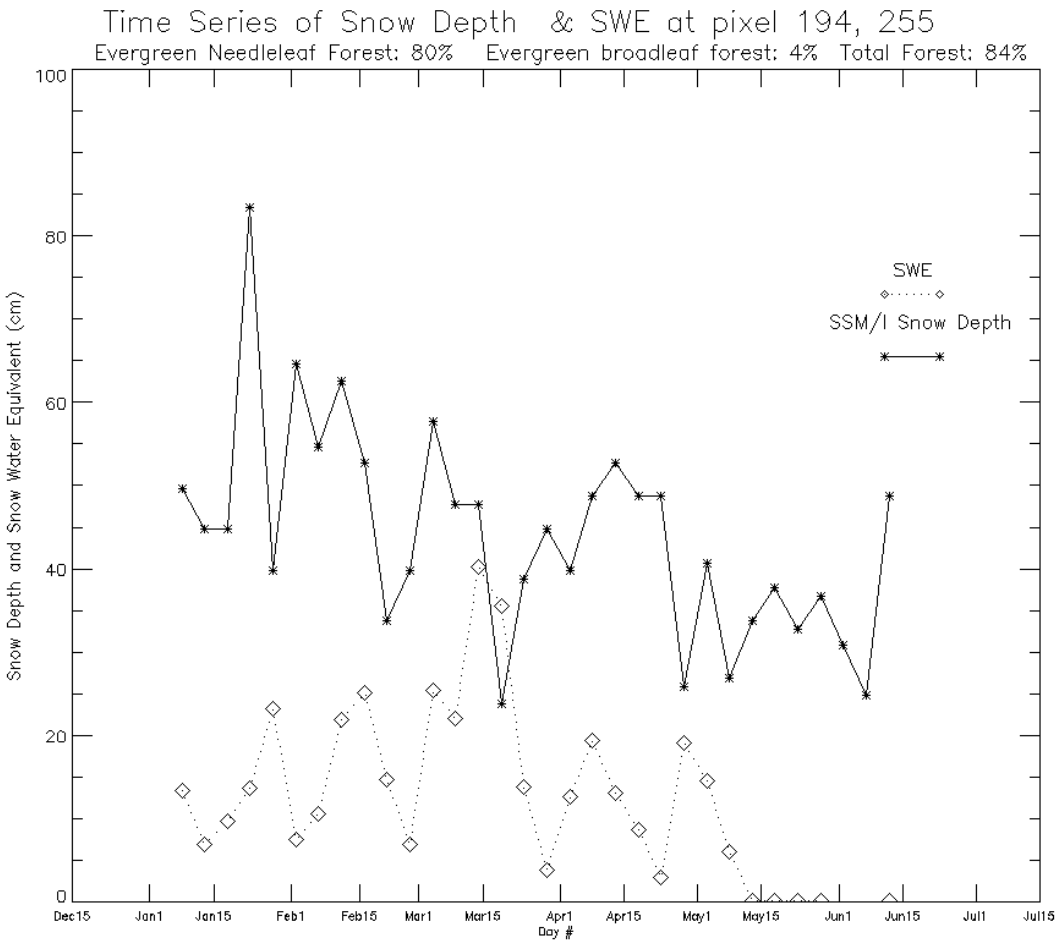


Figure 3-9 For the pixel (194,255) the relative density (NOHRSC SWE / SSM/I Snow Depth) is 0.289429

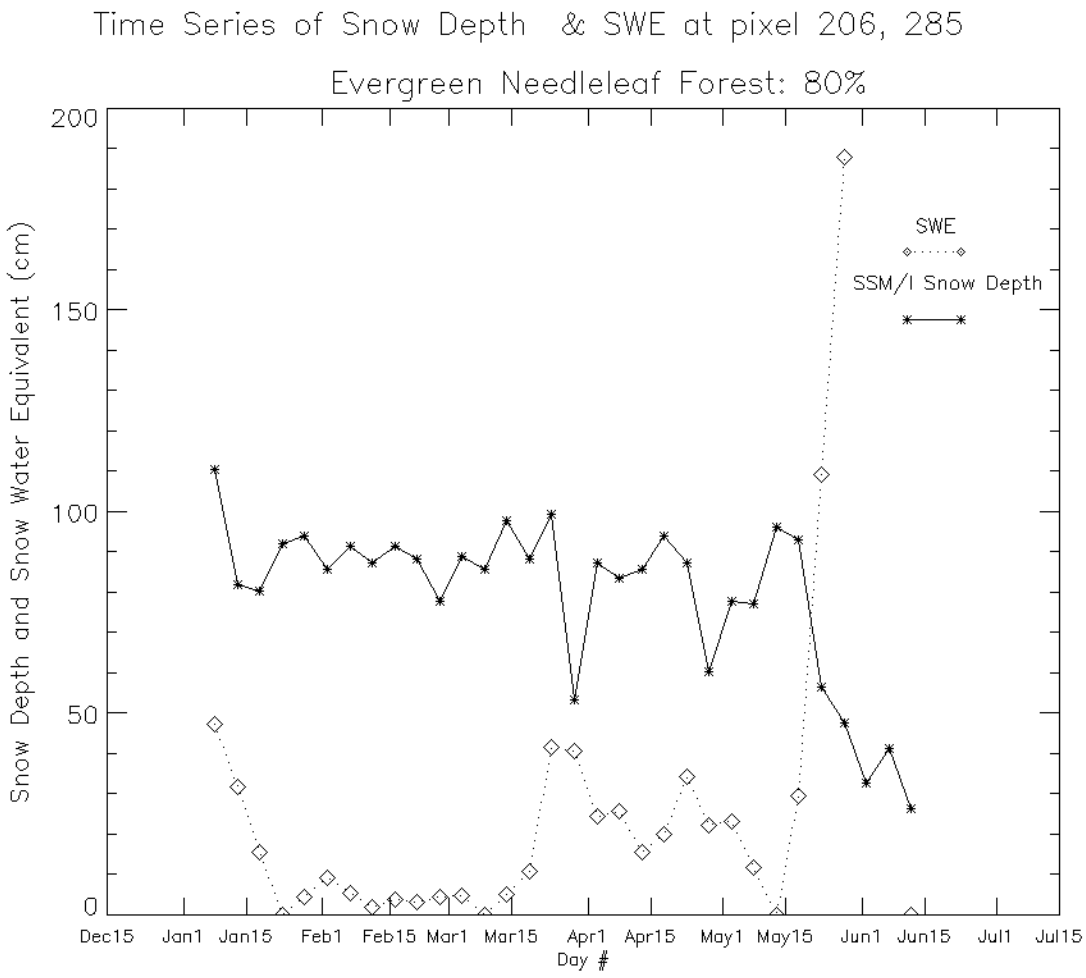


Figure 3-10 For pixel (206,285) the relative density (NOHRSC SWE / SSM/I Snow Depth) is 0.297567

Overall, SSM/I SWE is said to agree with NOHRSC SWE if agreement is found by both measures: strong positive correlation, and a physically reasonable relative density. Examples of good agreement by these measures are shown in Figure 3-11 and Figure 3-12.

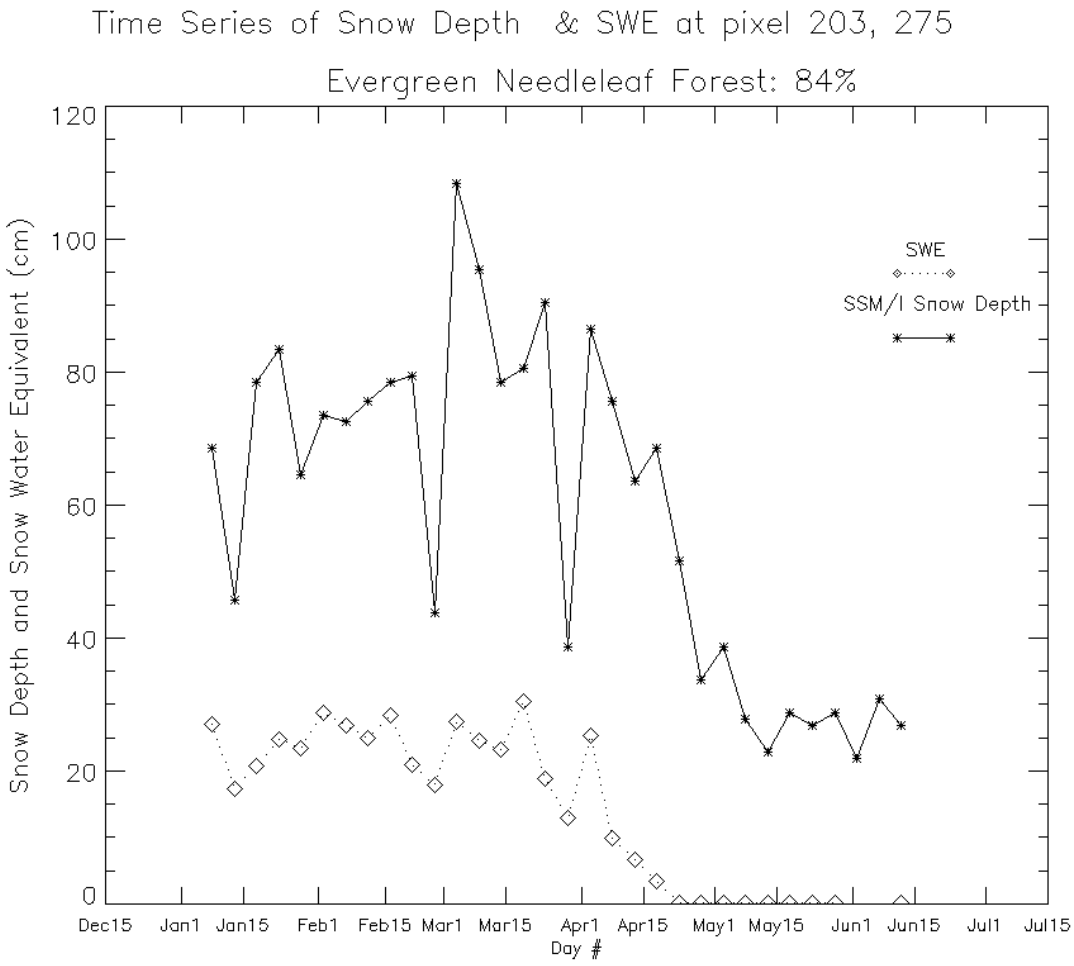


Figure 3-11 SSM/I Snow Depth and NOHRSC SWE for pixel (203,275), one of the best agreements with correlation of 0.813344 and relative density of 0.242506.

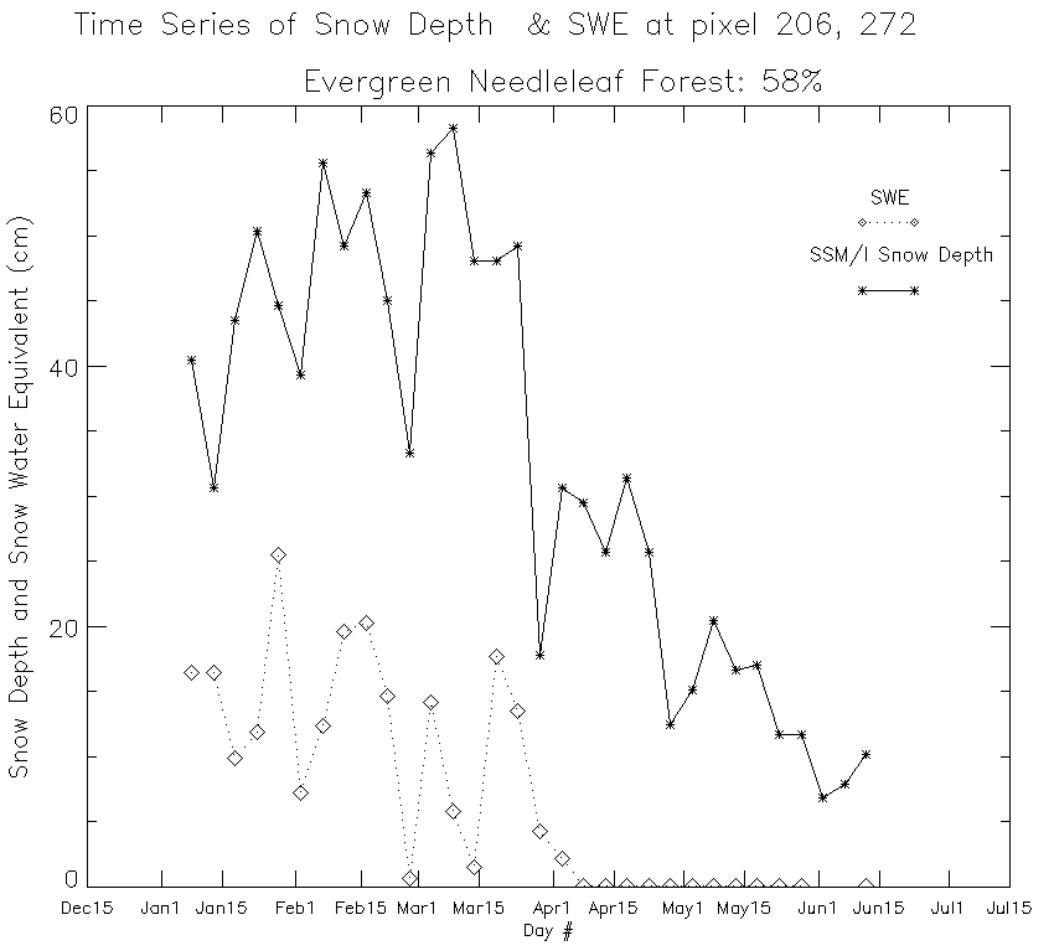


Figure 3-12 SSM/I Snow Depth and NOHRSC SWE for pixel (206,272), one of the best agreements with correlation of 0.718215 and relative density of 0.210978.

Analyzing agreement

For each EASE-Grid pixel analyzed, the following quantities were arranged in grid form and viewed in ArcMap:

Ground – SSM/I SD number of agreements and agreement fraction

SSM/I SD – NOHRSC SWE Correlation

SSM/I SD – NOHRSC SWE Relative Density

Using ArcMap tools, these results were stratified into agreement scores using the following rules.

For Ground/SSM/I SD, pixels were identified as either "having at least one agreement" (score 1) or "no agreement" (score 0). Given the differences in the number of stations and station-date pairs in the pixels, this was selected as the simplest overall treatment.

For SSM/I SD – NOHRSC SWE Correlation, scores were assigned from poor to excellent, as follows

correlation - 0.725 – - 0.3	score 1
correlation - 0.3 – 0.3	score 2
correlation 0.3 – 0.5	score 3
correlation 0.5 – 0.7	score 4
correlation > 0.7	score 5

For SSM/I SD – NOHRSC SWE relative density, scores were assigned from poor to excellent, as follows:

density 0.0005 – 0.005 or > 0.8	score 1
density 0.005 – 0.007	score 2
density 0.007 – 0.3	score 3
density 0.3 – 0.4	score 5
density 0.4 – 0-0.8	score 4

A total SSM/I SD – NOHRSC SWE score was calculated by multiplying the correlation score and the relative density score. Total scores could range from 1 to 25. The total scores were stratified to 5 levels: 1-5, 6-8, 9-12, 15-16, and 20-25.

Categories of Landscape Properties

The SRTM elevation data are given at 100-m resolution. ArcMap's Zonal Statistics tool was used to find the mean and standard deviation of elevation in each 25x25km EASE-Grid pixel, in the Columbia Basin for the SSM/I – NOHRSC comparison, and in the Ground Station pixels for the Ground – SSM/I comparison. Standard deviation of elevation is an estimate of terrain complexity in the pixel. For each data set, mean elevation and standard deviation were split into five categories by equal area (quantiles). The EASE-Grid evergreen canopy cover was also split into five categories for each data set.

Tabulating Agreement and Landscape Properties

ArcMap tools were used to tabulate the number of pixels in the analysis (the Columbia Basin domain for SSM/I – NOHRSC and the Ground station pixels for Stations – SSM/I) corresponding to each agreement score – landscape category combination. These tables and their 3-D column graph equivalents reveal any association between agreement and the landscape characteristics mean elevation, terrain complexity, and canopy cover. Six tables were produced, three for each analysis.

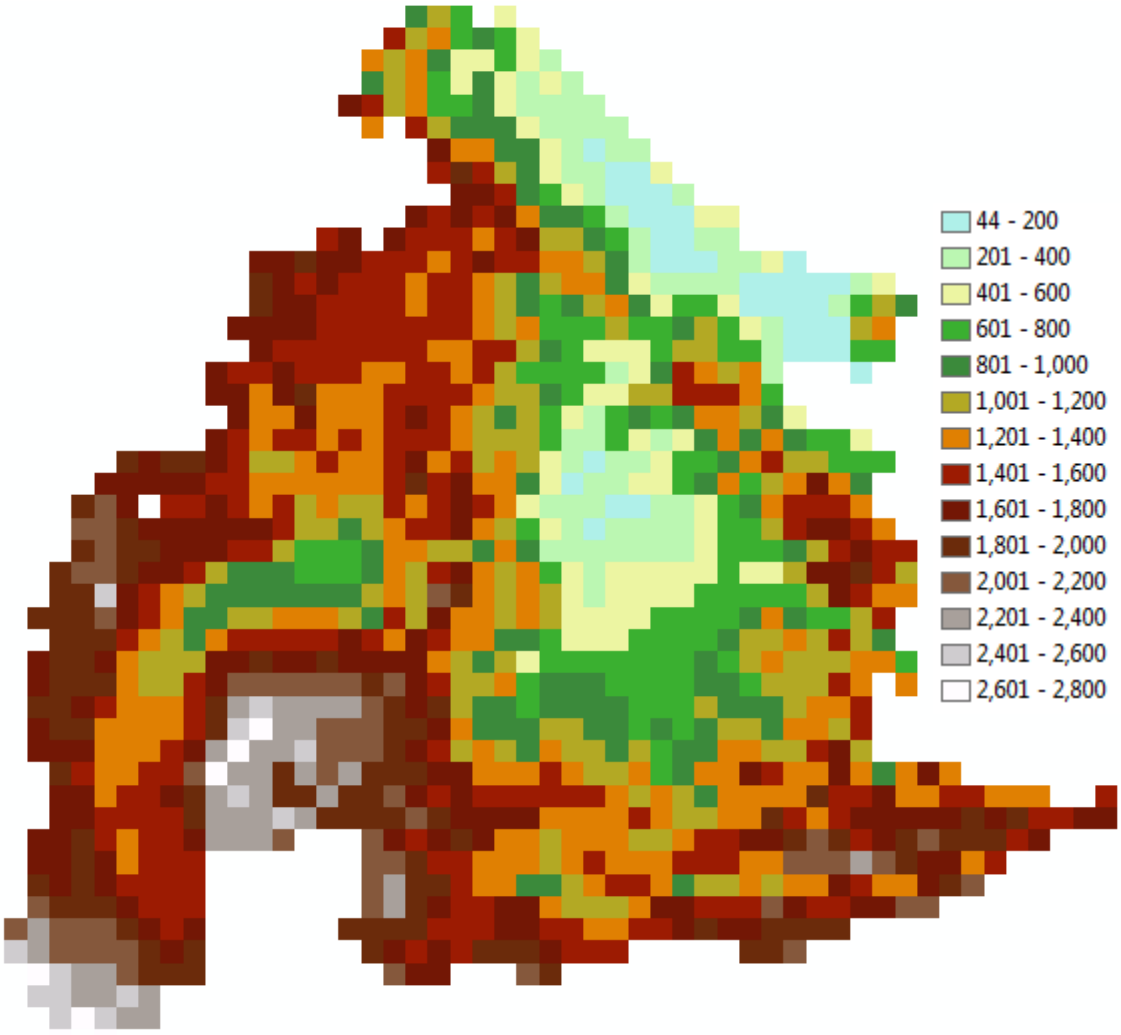


Figure 3-13 SRTM Elevation [m above sea level] averaged to 25-km EASE-Grid pixels, Columbia Basin.

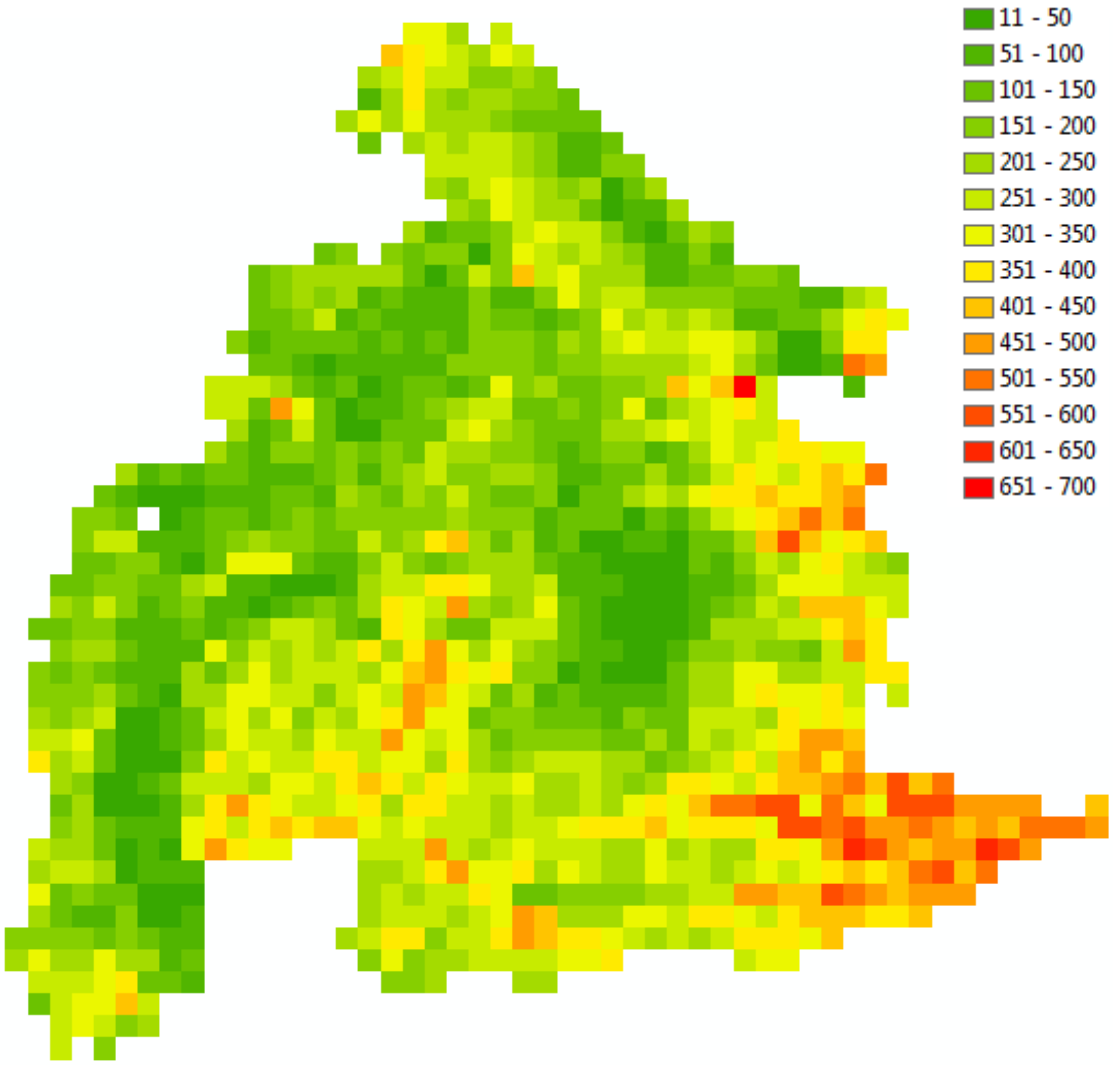


Figure 3-14 SRTM Elevation Standard Deviation [m] in EASE-Grid pixels, Columbia Basin.

Chapter 4 Results

Graphically Comparing SSM/I to Surface Snow Depth

307 graphs of time series of snow depths were generated and visually inspected. The majority showed a similar trend: ground station snow depths were much greater than SSM/I snow depths. Figure 4-1 to Figure 4-4 show the best locations and Figure 4.5 to Figure 4-10 the worst locations, by inspection. Among the worst locations, the greater the elevation, the greater the manually measured snow depth, and the greater the discrepancy between SSM/I and manual measurement.

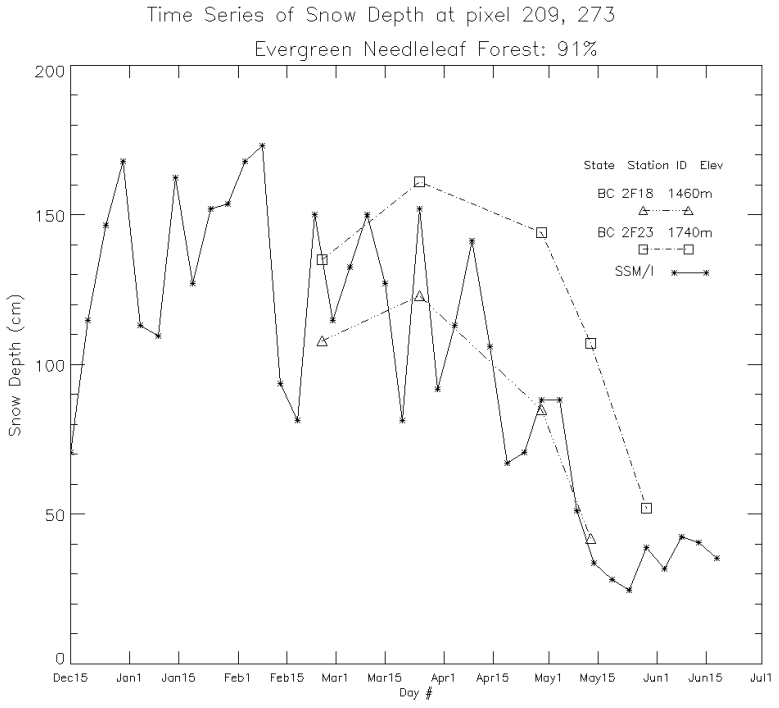


Figure 4-1 SSM/I Snow depth in pixel (209, 273) and manually measured snow depth at the station in the pixel. This is one of the best pixels observed with 4 agreements.

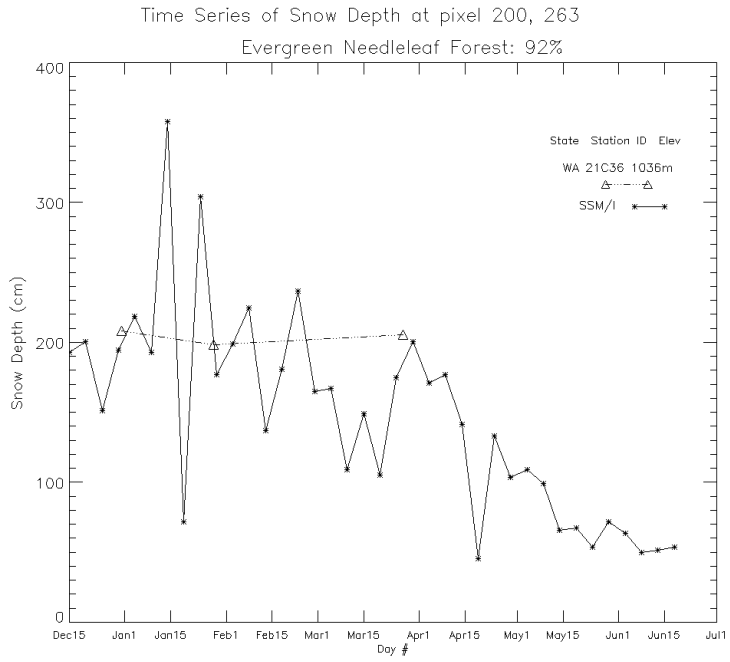


Figure 4-2 SSM/I Snow depth in pixel (200, 263) and manually measured snow depth at the station in the pixel. This is one of the best with two agreements observed.

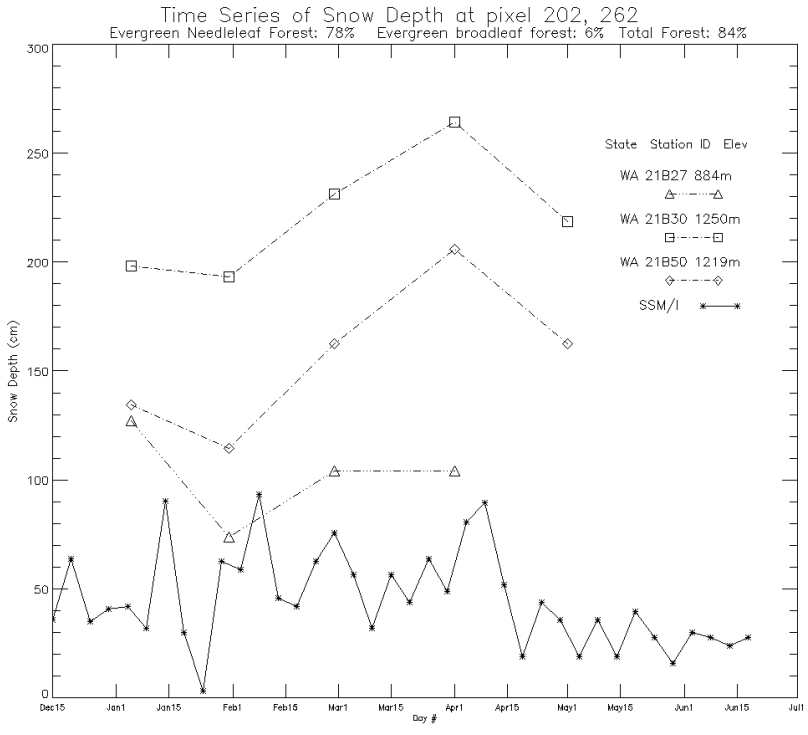


Figure 4-3 SSM/I Snow depth in pixel (202, 262) and manually measured snow depth at three stations in the pixel. Agreement is good for one station, but not for the other stations at higher elevation

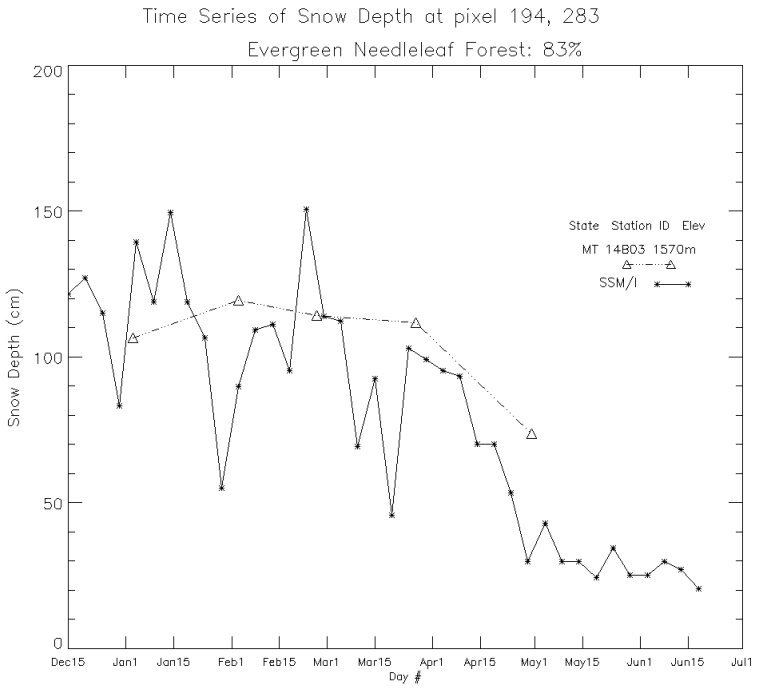


Figure 4-4 SSM/I Snow depth in pixel (204,270) and manually measured snow depth at the station in the pixel. This is one of the best agreements observed with three agreements.

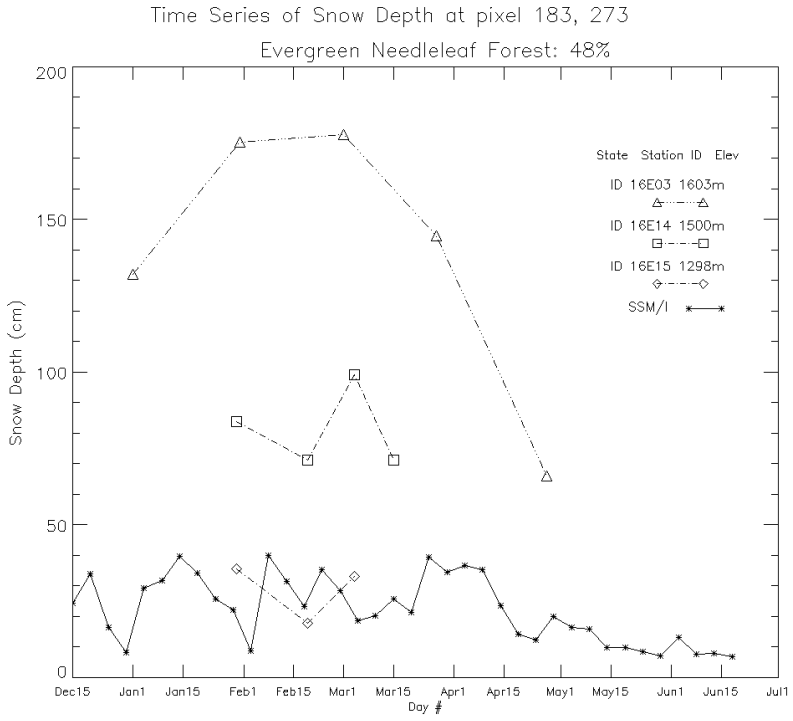


Figure 4-5 SSM/I Snow depth in pixel (183, 273) and manually measured snow depth at three stations in the pixel. This is considered poor agreement. The increase of snow depth with elevation is evident in the station data.

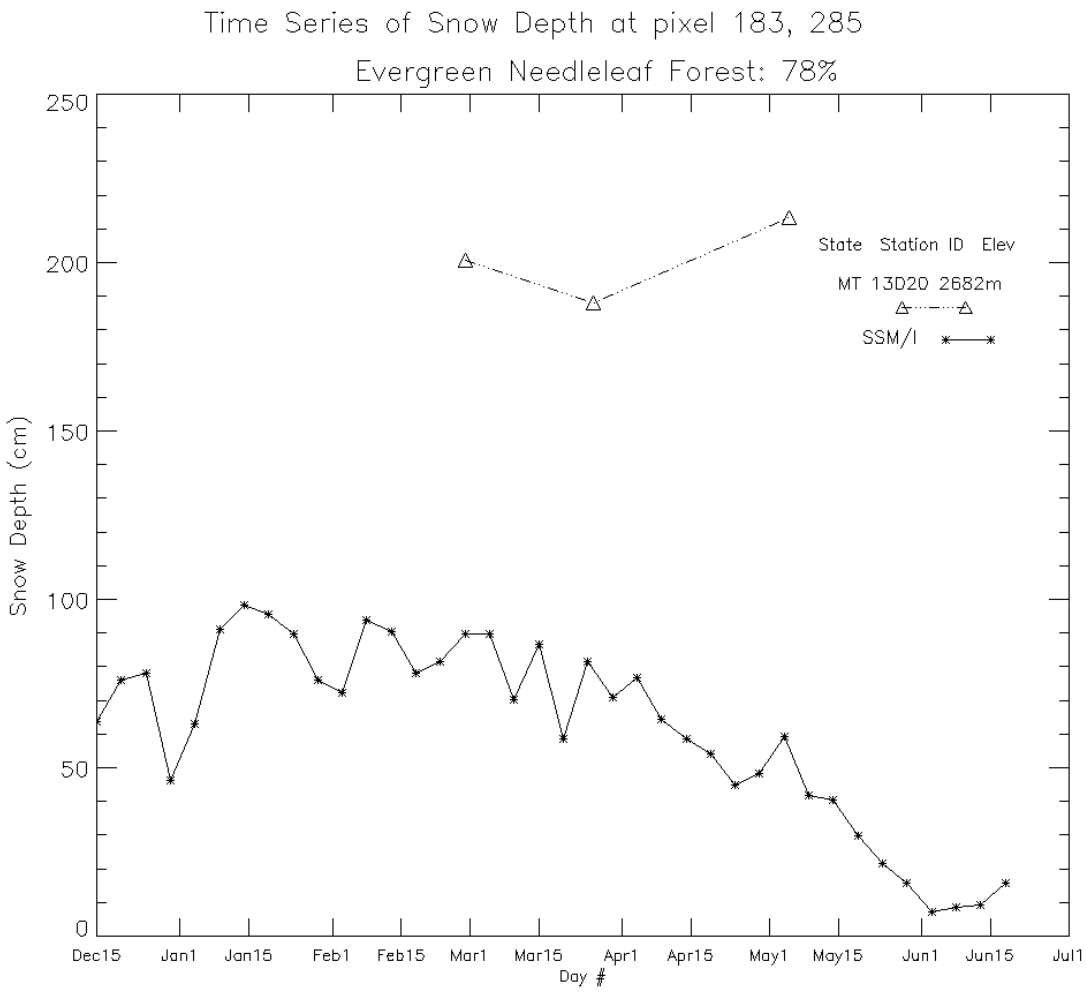


Figure 4-6 SSM/I Snow depth in pixel (183, 285) and manually measured snow depth at the station in the pixel. This is considered poor agreement.

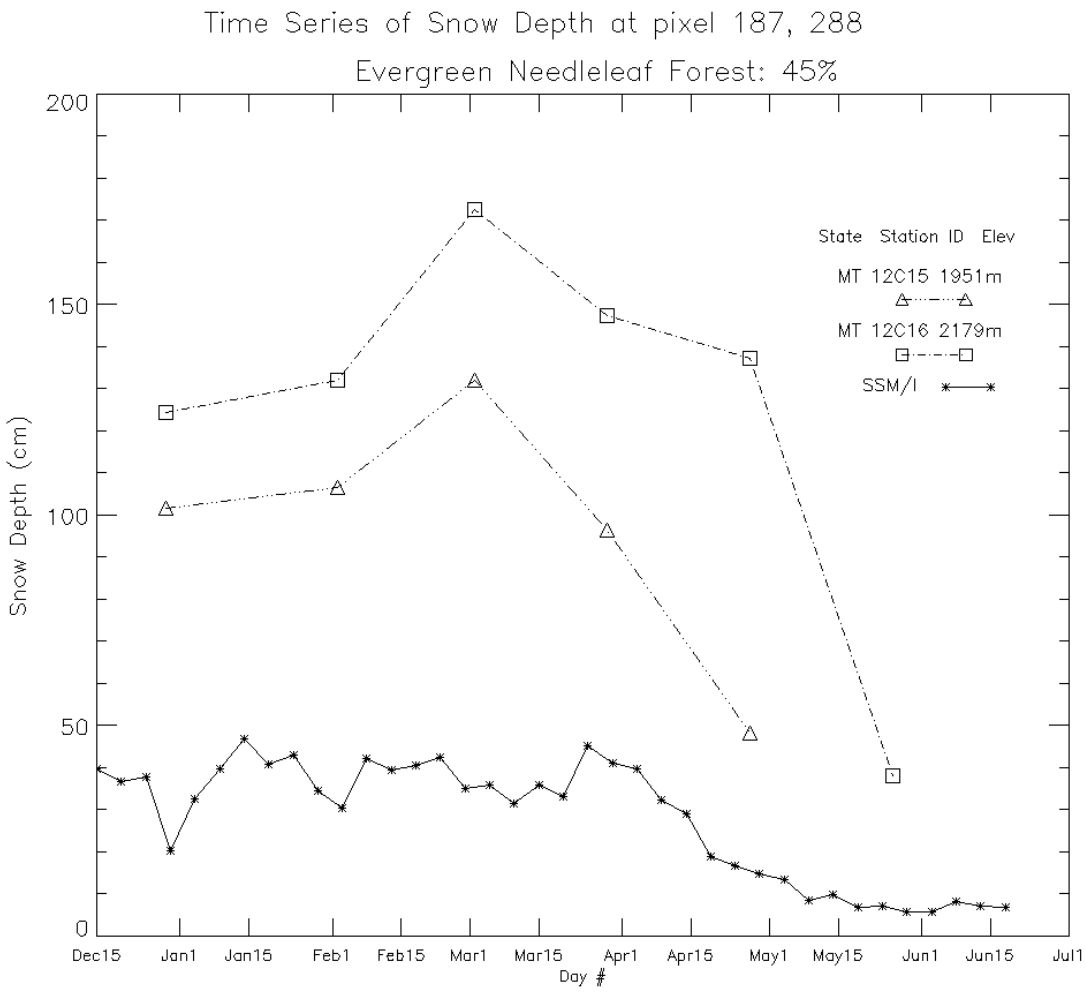


Figure 4-7 SSM/I Snow depth in pixel (187, 288) and manually measured snow depth at two stations in the pixel. This is considered poor agreement. The increase of snow depth with elevation is evident in the station data. At these high elevations, the canopy cover correction does not make up the difference between SSM/I and station SD.

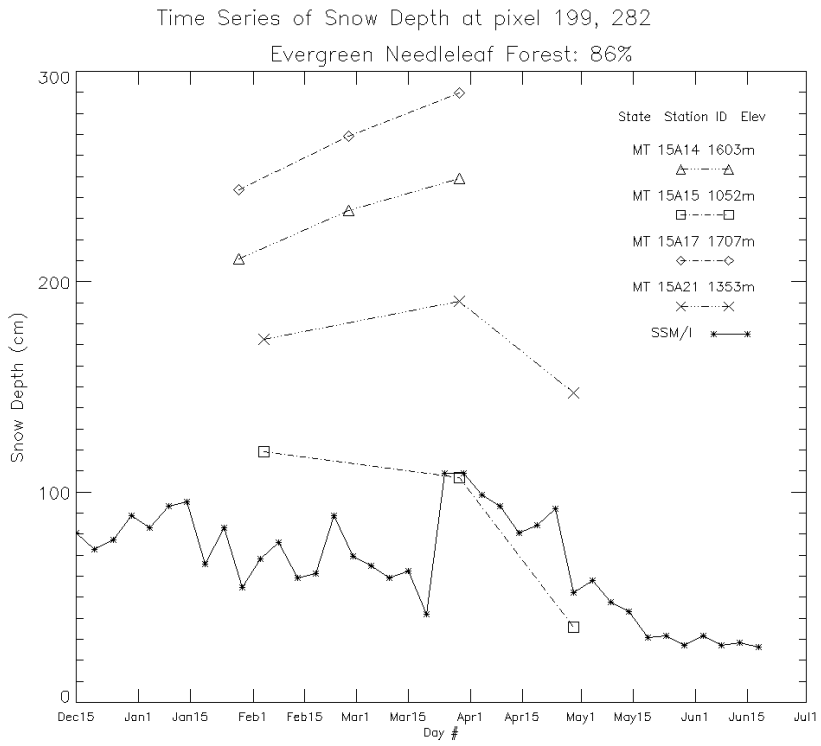


Figure 4-8 SSM/I Snow depth in pixel (199, 282) and manually measured snow depth at four stations in the pixel. The SSM/I estimates agree somewhat with the lowest elevation station, but not with the increased snow depth at higher elevation.

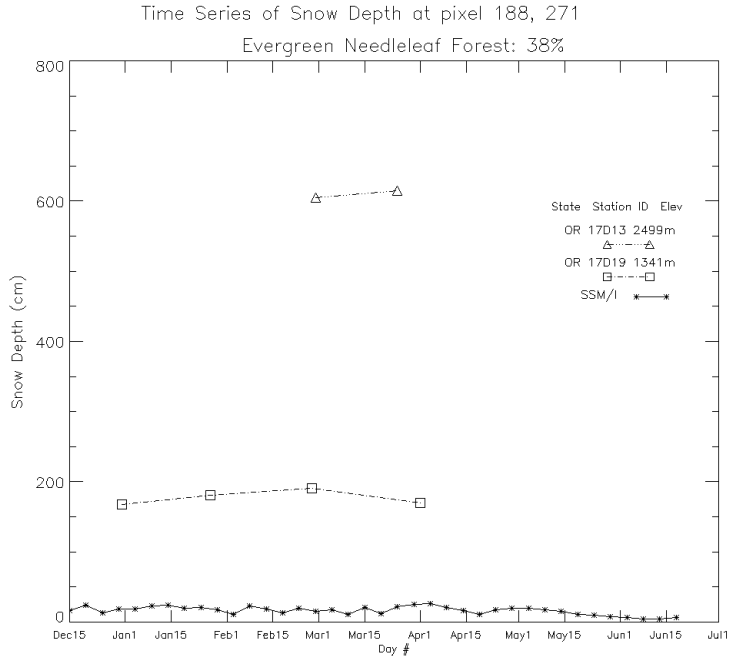


Figure 4-9 SSM/I Snow depth in pixel (188, 271) and manually measured snow depth at two stations in the pixel. This is considered very poor agreement. The increase of snow depth with elevation is evident in the station data.

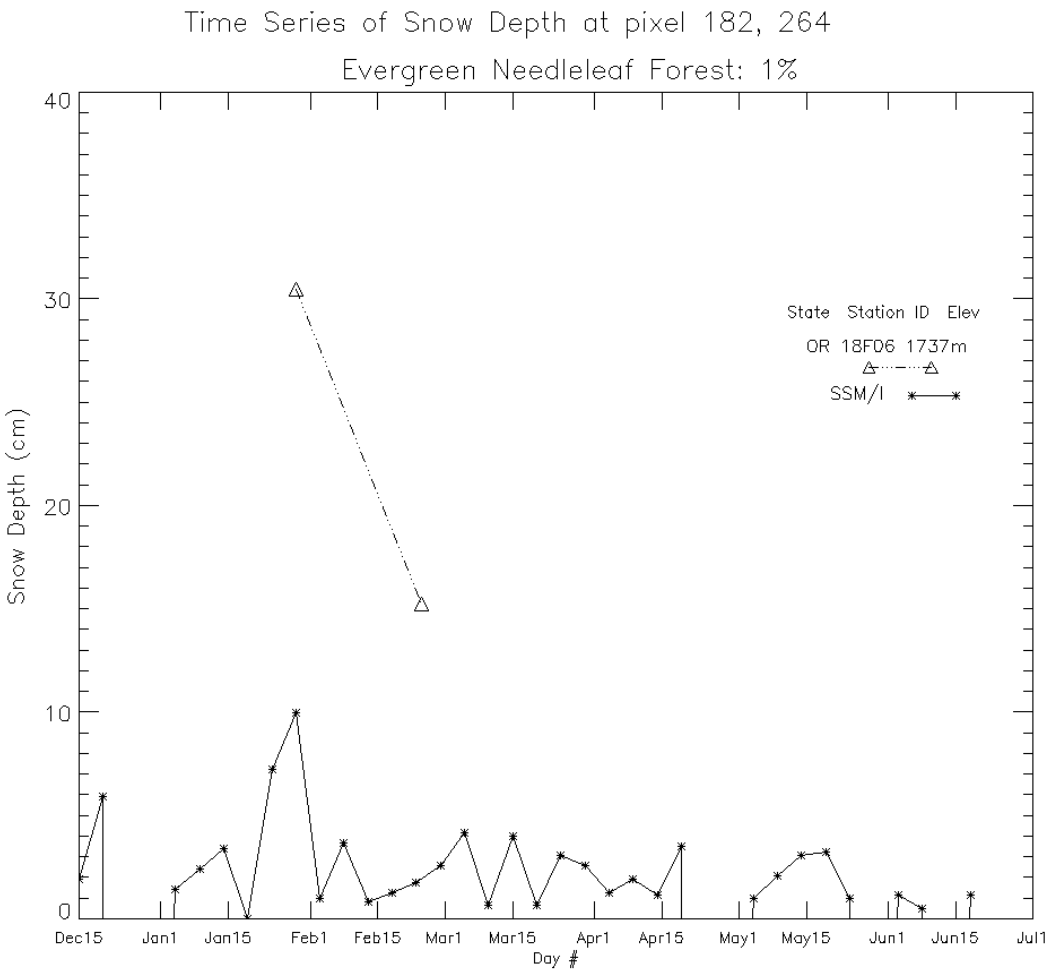


Figure 4-10 SSM/I Snow depth in pixel (182, 264) and manually measured snow depth at the station in the pixel. This is considered poor agreement; however, at this low elevation, less difference is observed between ground station and SSM/I snow depth

Comparing Station Measurements to Time-Averaged SSM/I Snow Depth

Confidence intervals on the mean of 4-5 pentads of SSM/I snow depth were calculated for each available ground station measurement. All results are graphed in Figure 4-11

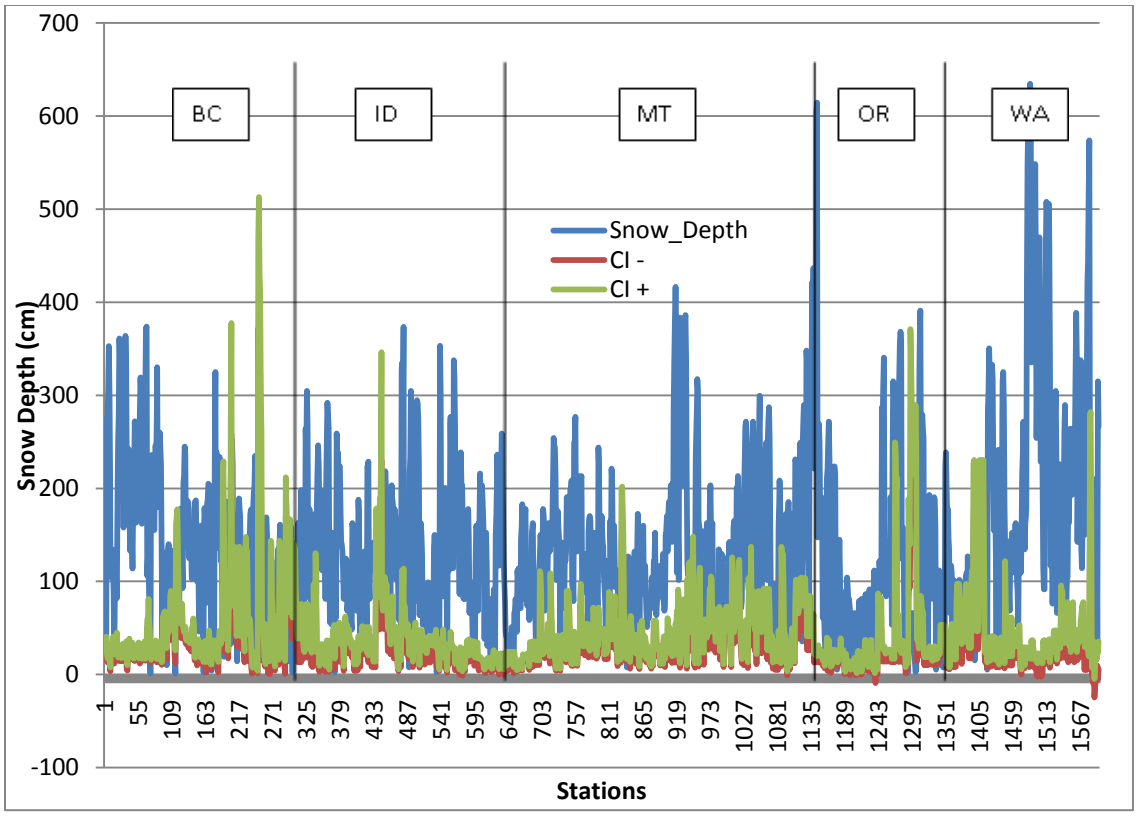


Figure 4-11 Station snow depth measurements with lower and upper bounds of 95% confidence interval (CI) for time-averaged SSM/I (4 or 5 pentads centered on the ground measurement date). All stations are from British Columbia, Montana, Idaho, Oregon and Washington. If ground SD lies within the confidence interval, the two are considered in agreement for that date.

As described in the "Numerical measures of agreement" section of Chapter 3, the numbers of agreements in each pixel were tallied (Figure 4-12) . The fraction of agreement (Figure 4-13) is the number of agreement divided by the total number of ground observations in the pixel (Figure 4-14).

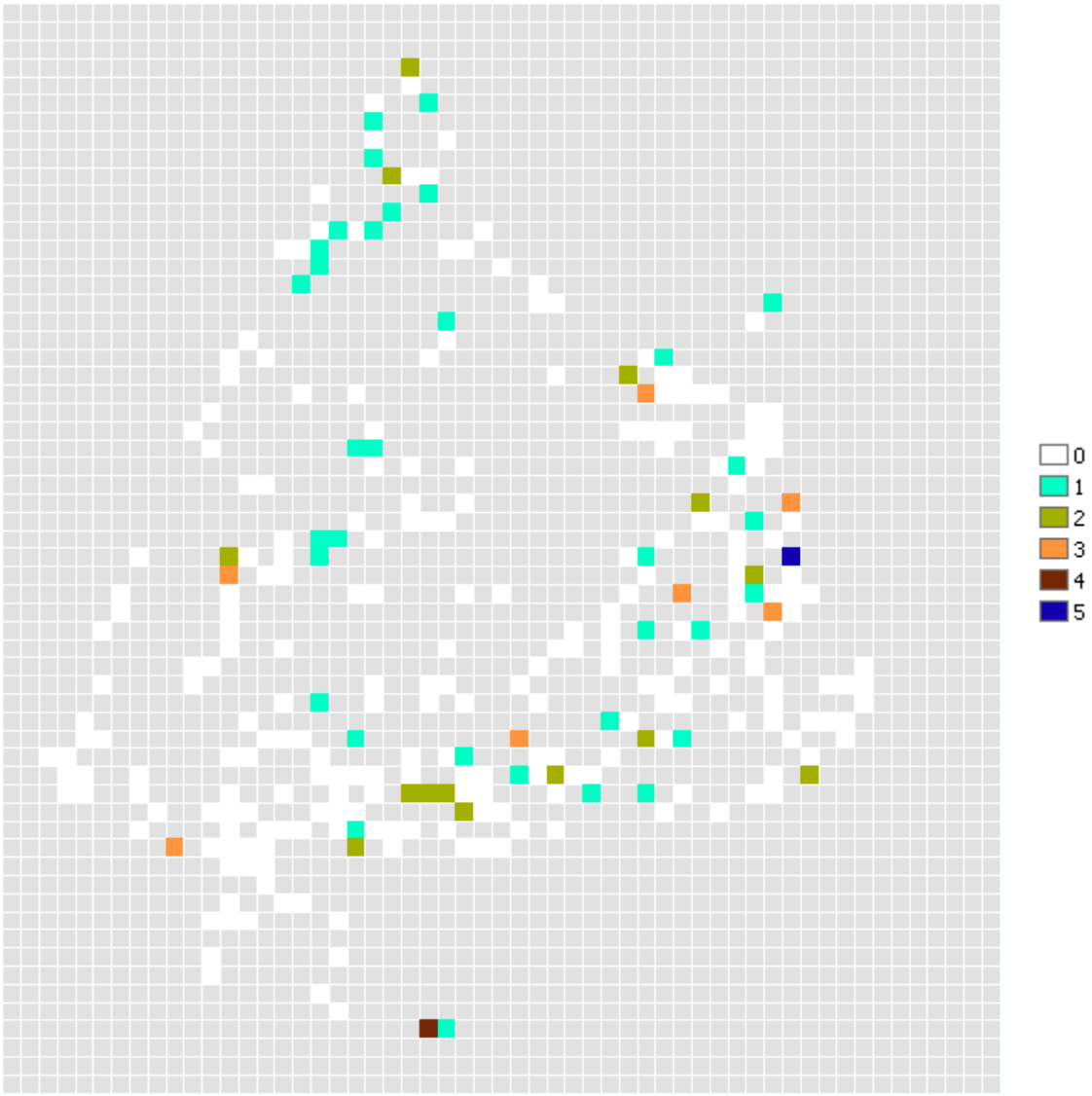


Figure 4-12 Number of agreements per pixel which ground snow depth observations were compared to 95% confidence interval for SSM/I snow depth (4 or 5 pentads centered on the ground measurement date). If ground SD lies within the confidence interval, the two snow depths are considered in agreement for that date

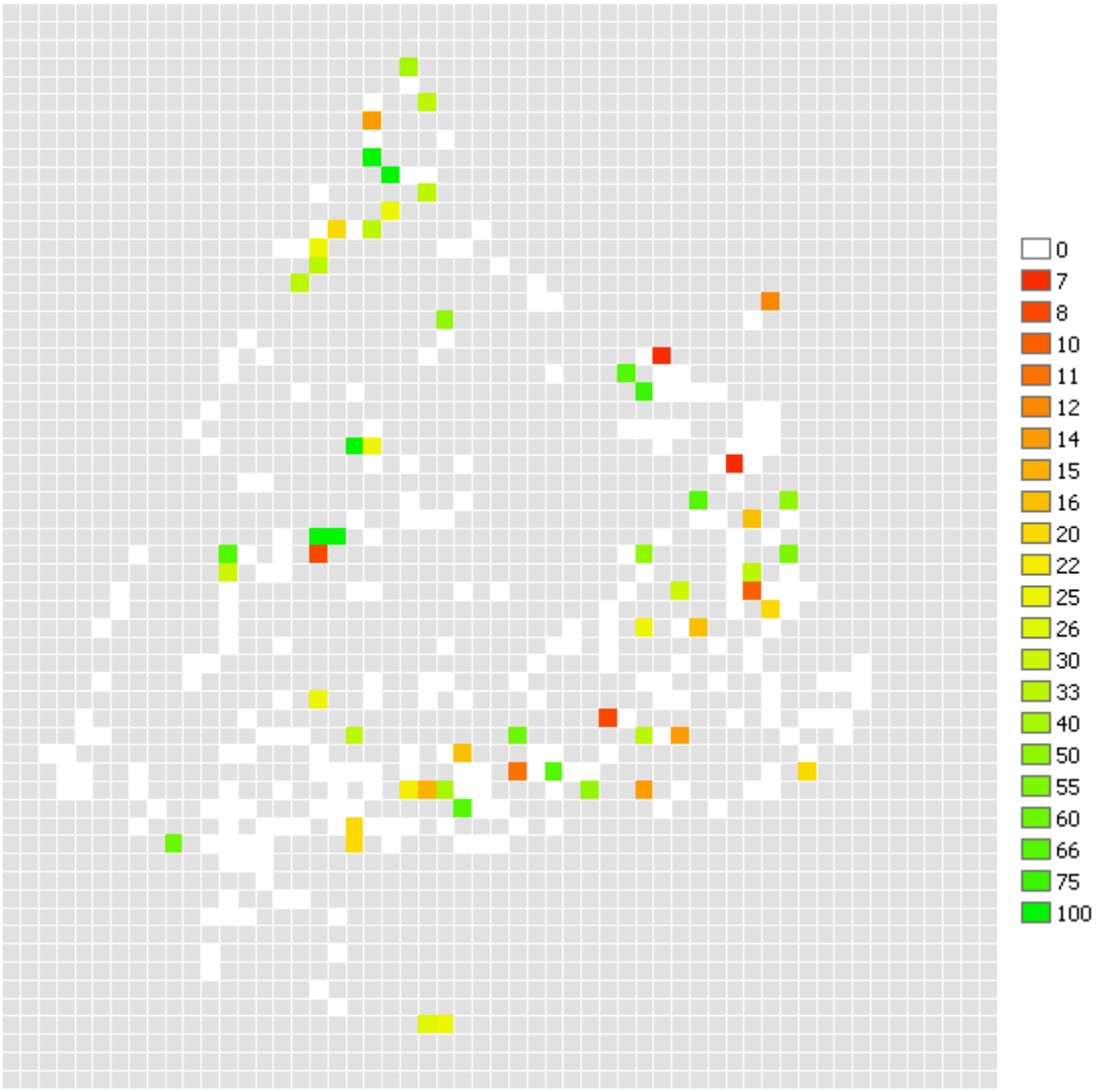


Figure 4-13 Percentage of Agreements per pixel. The fraction of agreement is the number of agreements divided by the total number of ground observations in the pixel

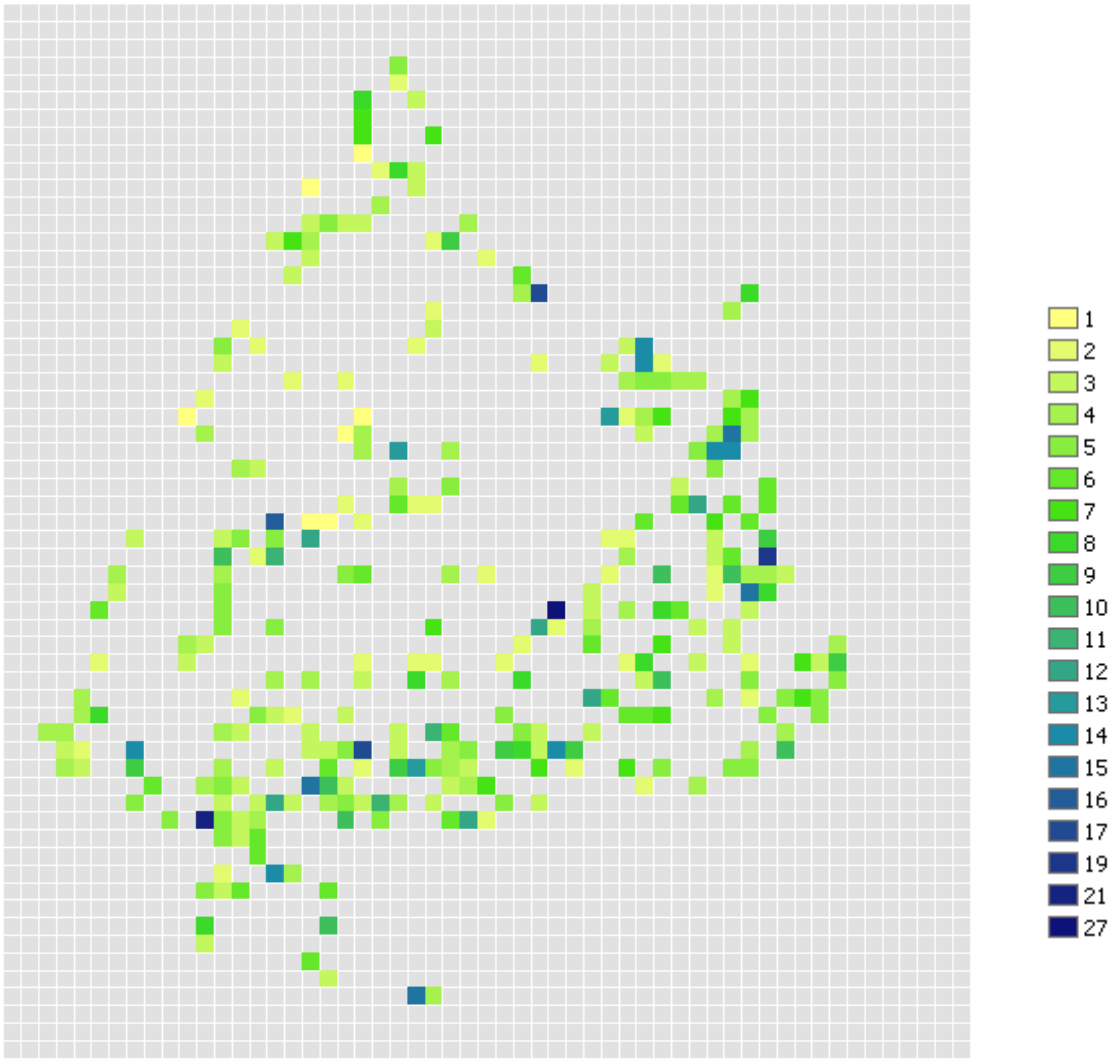


Figure 4-14 Number of ground observations per pixel (station-date pairs). Pixels contain from 1 to 27 ground snow depth observations.

Comparing NOHRSC SWE to SSM/I SD

IDL was used to plot the time series of NOHRSC SWE and SSM/I SD on the same graph by pixel for all pixels in the Columbia Basin study area. This generated over 1300 graphs of non-missing data. The majority of the graphs show poor agreement due to the general underestimation of SSM/I snow depth (SD); this underestimation is quickly apparent on visual examination of the graphs (for example, Figure 4-15); physically, SD must be

greater than SWE. Figure 4-16 is an example of a pixel where the relative density is physically realistic, but the temporal pattern does not match. Figure 4-17 shows both poor correlation and poor relative density.

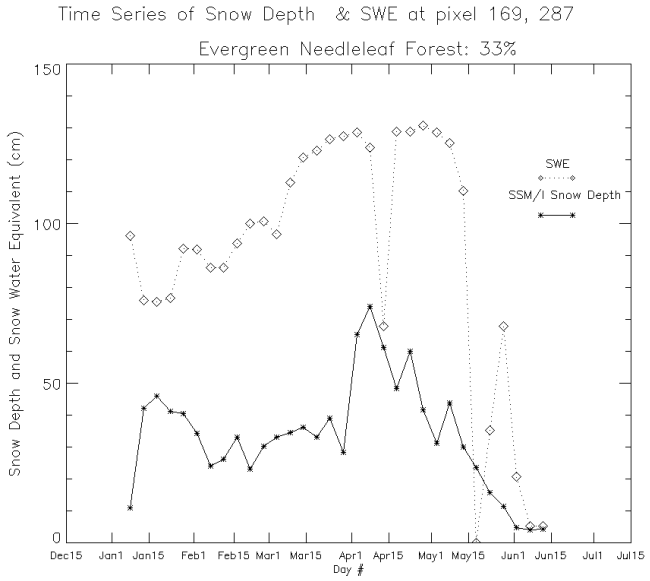


Figure 4-15 SSM/I Snow Depth and NOHRSC Snow Water Equivalent for pixel (169, 287). Although the time series show some similarity in pattern, the magnitudes are wrong; SD must be greater than SWE.

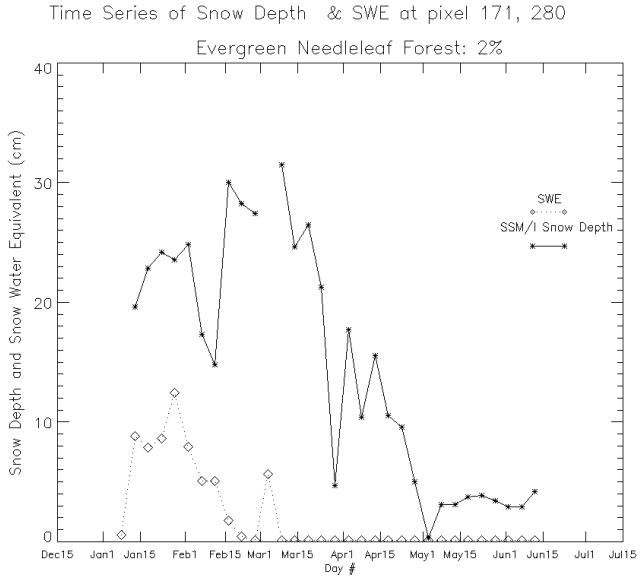


Figure 4-16 SSM/I Snow Depth and NOHRSC Snow Water Equivalent for pixel (171, 280). Good relative density but poor pattern consistency

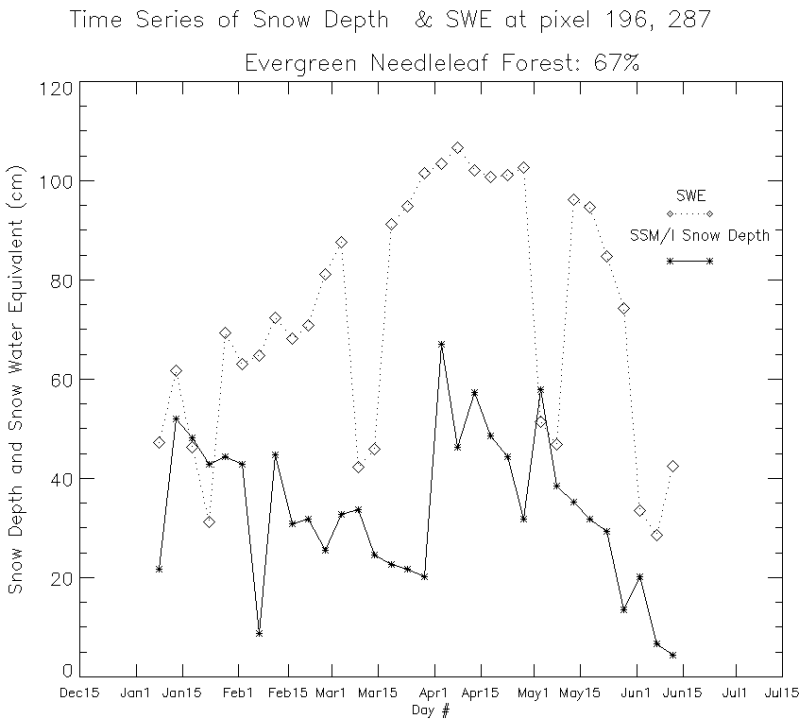


Figure 4-17 SSM/I Snow Depth and NOHRSC Snow Water Equivalent for pixel (196, 287). This result is among the worst: poor correlation in time, and SD less than SWE**.**

Figure 4-18 shows the temporal correlation between SSM/I SD and NOHRSC SWE for all pixels in the study area. Cluster of strong positive correlation are noted in the southeast corner of the region (lower left on map) and the north central part (right center on map). A striking cluster of strong negative correlation is found in the northeast corner of the region (lower right on map).

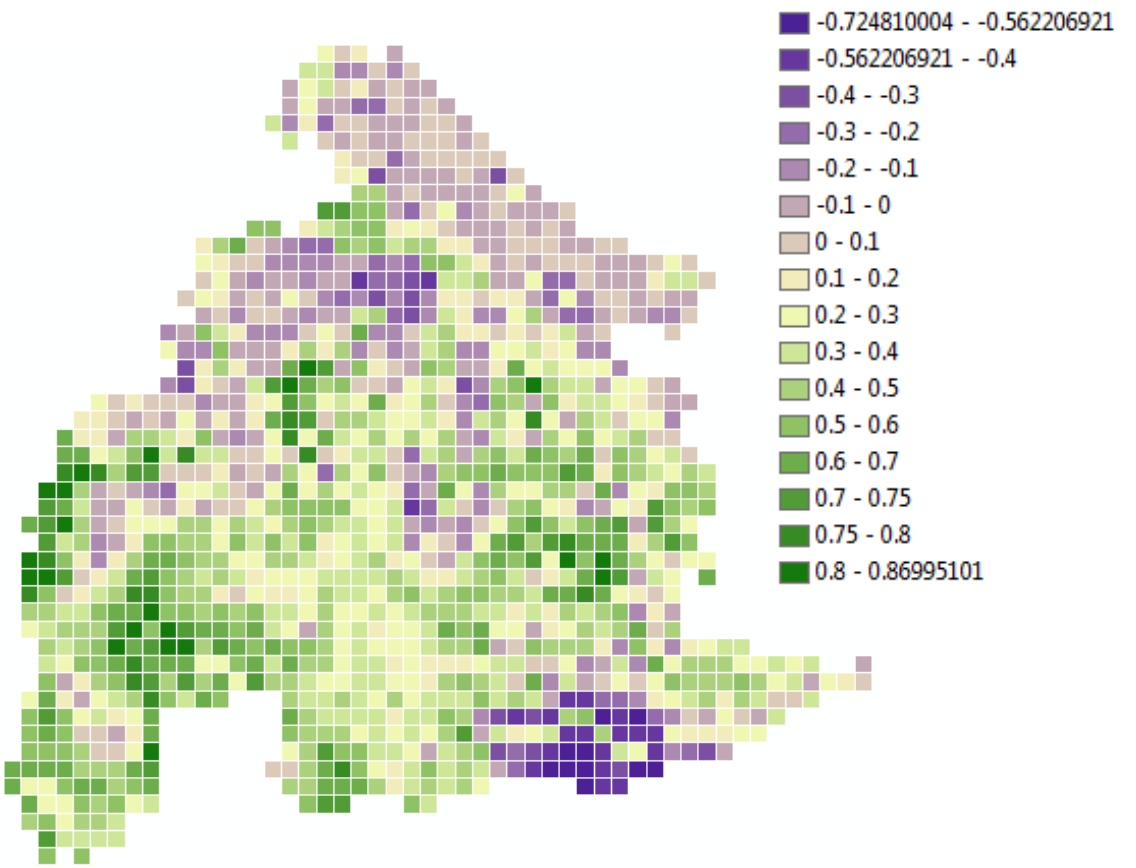


Figure 4-18 Correlation of SWE and SSM/I snow depth. Strong positive correlations indicate good agreement; strong negative correlations indicate a linear relationship, but lack of agreement.

Figure 4-19 shows the bulk seasonal relative density calculated (as described in the Relative Density Section of Chapter 3) by dividing average SWE by average SD. Any values over 1.0 are physically impossible, and correspond to time series such as the one shown in Figure 4-17. The very small relative density values are also physically unlikely over the course of a season.

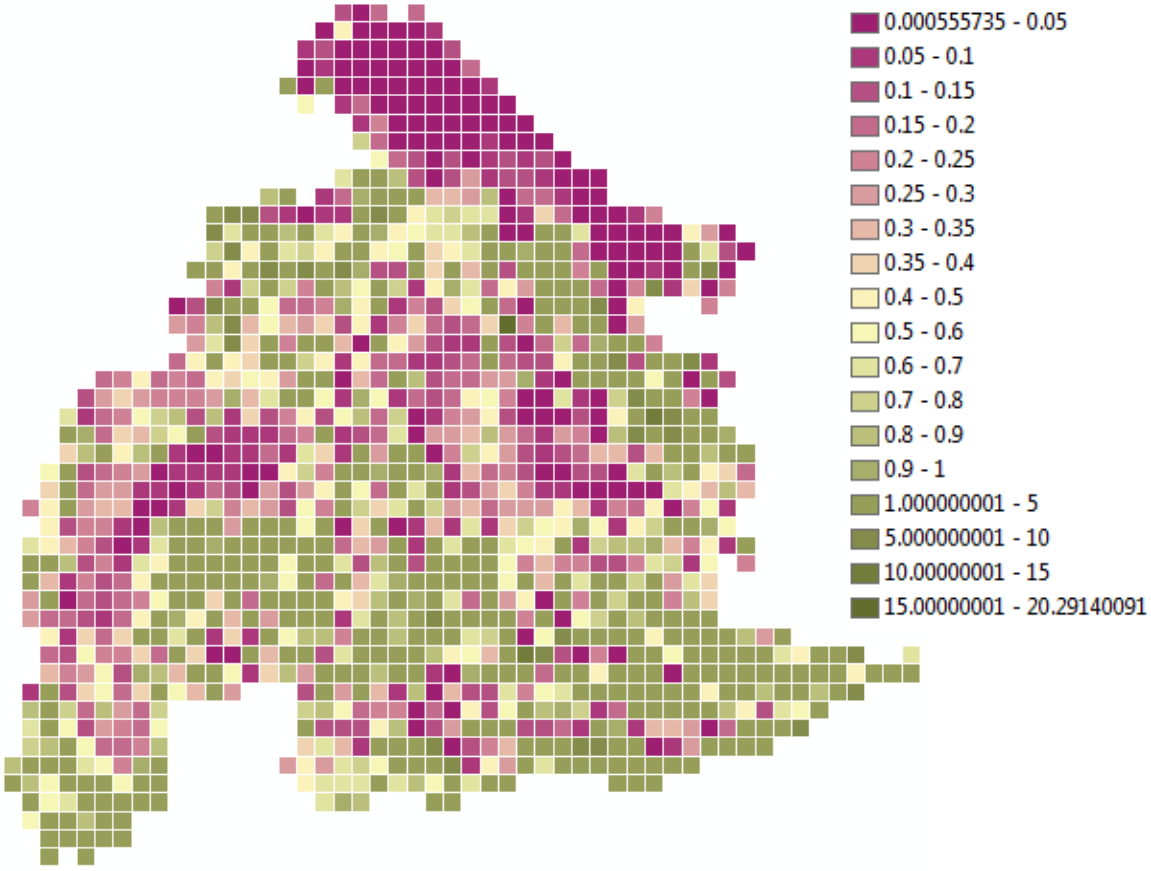


Figure 4-19 Relative density (Average NOHRSC SWE / Average SSM/I Snow Depth) – Up to 0.4 is considered good agreement. Values above one are physically impossible, and high fractions (near 1.0) unlikely.

Only 12 pixels were identified that have correlation above 0.7 and relative density below 0.4 (subjectively determined thresholds of agreement) as seen in Figure 4-20 and tabulated in Table 4-1 .

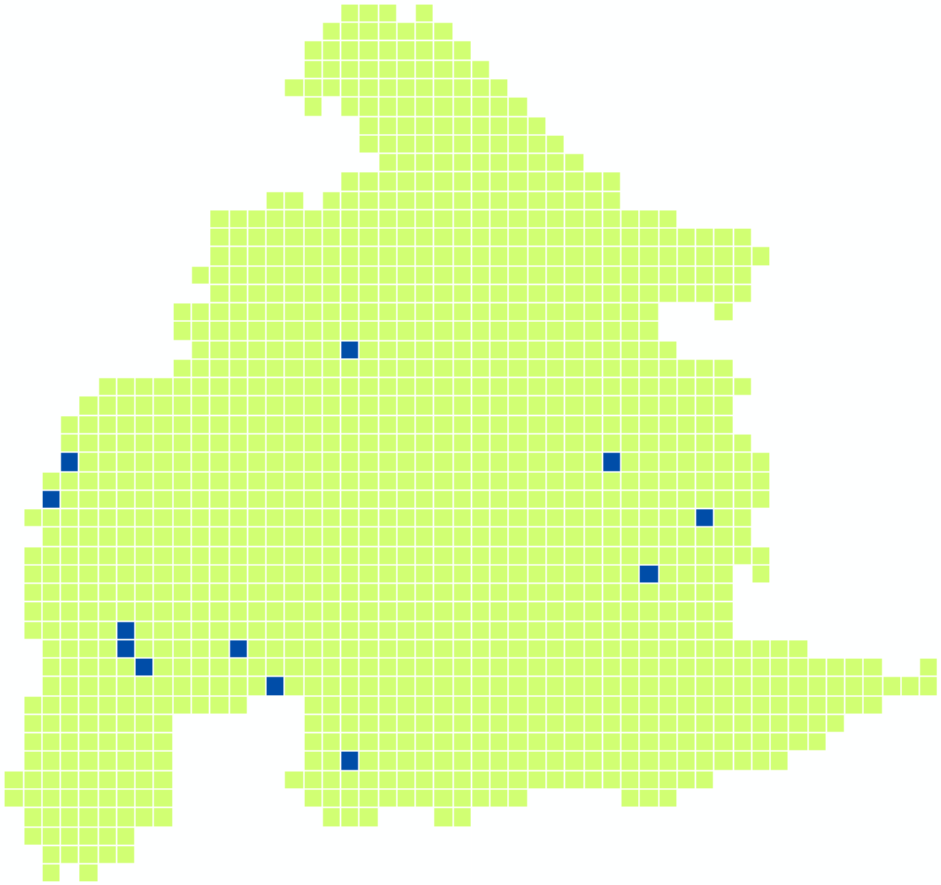


Figure 4-20 - Blue pixels represents 12 best agreements with correlation greater than 0.7 and relative density less than 0.4.

Table 4-1– Best agreements with correlation greater than 0.7 and relative density less than 0.4.

	R	S	Correlation	Relative Density
1	171	271	0.746523	0.375241
2	172	269	0.773299	0.363928
3	175	278	0.71962	0.192662
4	175	279	0.840386	0.391368
5	176	280	0.757374	0.397425
6	181	279	0.726029	0.385331
7	183	281	0.70592	0.378118
8	187	263	0.71165	0.315204
9	187	285	0.70233	0.346655
10	201	269	0.714258	0.307997
11	203	275	0.813344	0.242506
12	206	272	0.718215	0.210978

A few examples of best agreements based on greater than 0.7 correlation and less than 0.4 relative density can be seen in Figure 4-21 through Figure 4-23.

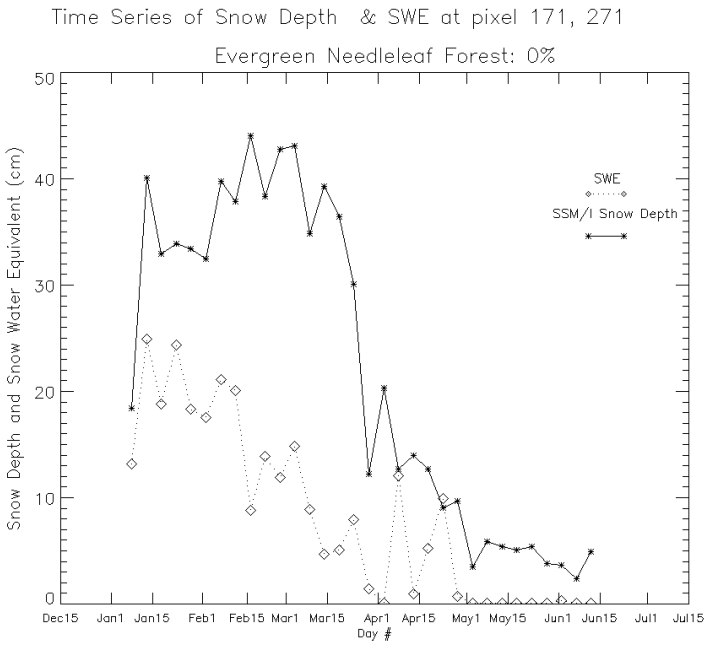


Figure 4-21 Shallow snow depth shows good agreement.

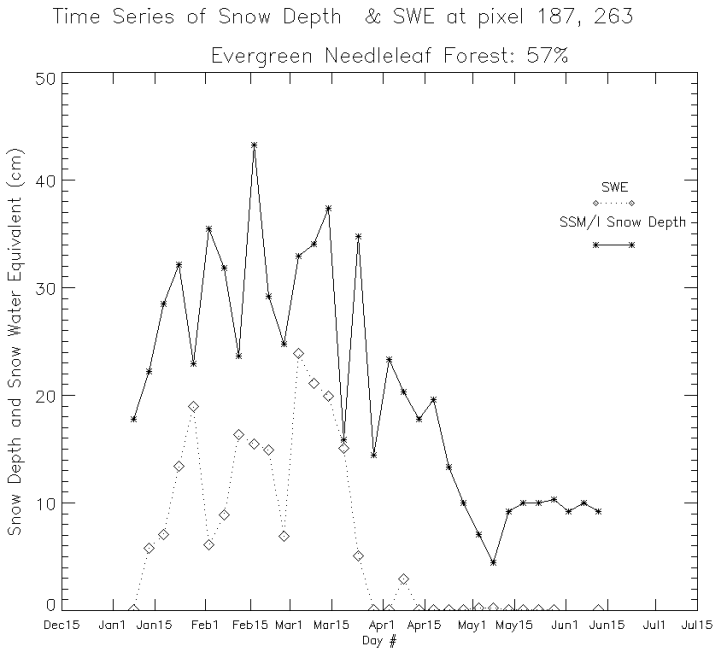


Figure 4-22 Despite canopy cover of 57%, shallow snow depths yield good agreement for the pixel (187,263)

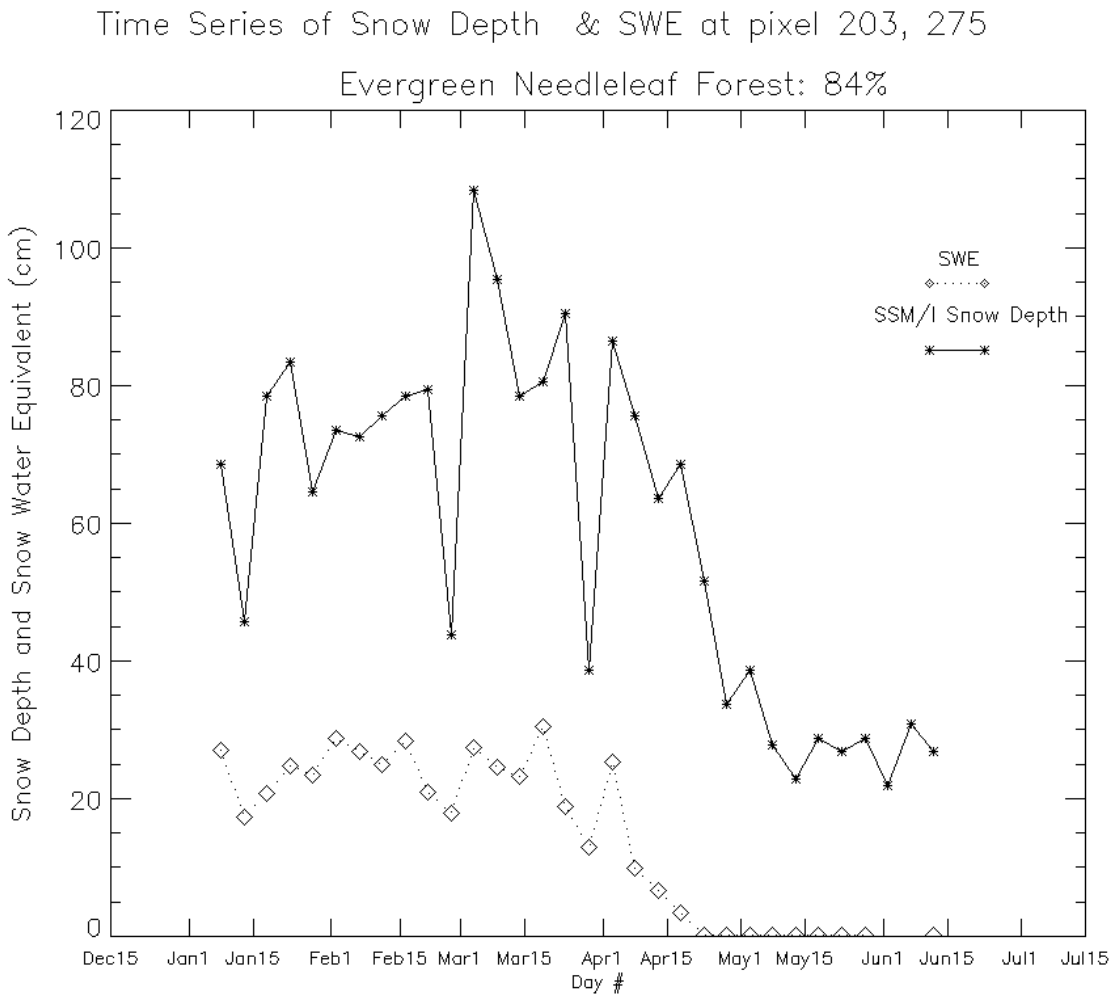


Figure 4-23 This is one of the best 12 pixels, with maximum snow depth about 110cm.

This result is consistent with other studies' findings that passive microwave snow retrieval is relatively good for measuring snow depth up to 120cm. (Mizukami, 2011).

Analyzing agreements between the ground stations with SSM/I snow depth

Out of 300 pixels, only 50 have at least 1 agreement, and the highest number in any one pixel is 4 agreements (refer to Figure 4-1).

Table 4-2 and Figure 4.24 show better agreement at the low to medium mean elevation. The snow depths tend to increase with elevation, and this would result in poorer agreement between ground snow depth and passive microwave snow depth.

Table 4-2 SSM/I – Ground Snow Depth Agreement and Mean Elevation Class

	Low	Medium Low	Medium	High Medium	High
NO agreement	46	45	43	55	54
Agreement(s)	14	15	17	4	7

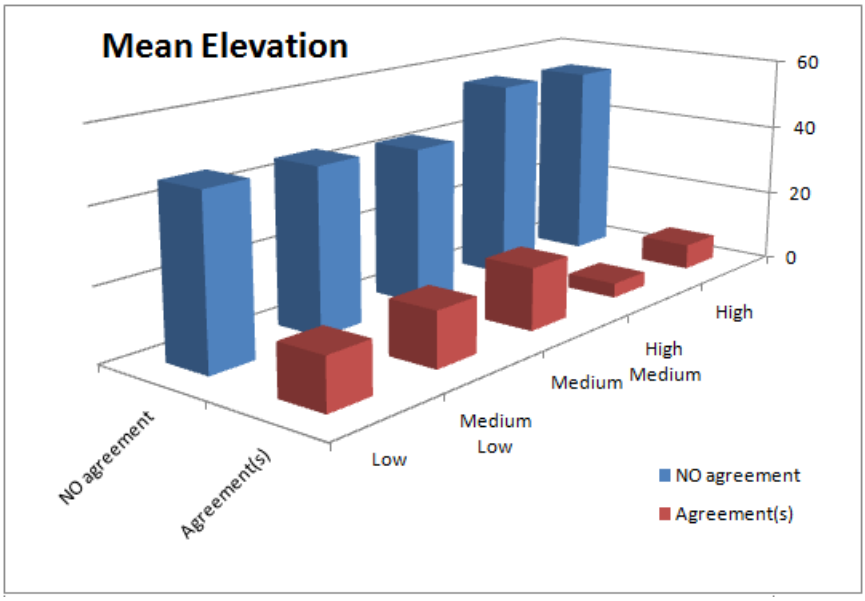


Figure 4-24 Mean pixel elevation class and number of pixels with no agreement and at least one agreement between SSM/I and ground snow depth.

Agreements were most frequent at higher evergreen canopy factor as seen in Table 4-3 and Figure 4.25. Low evergreen canopy factor is next best agreement group. Agreement in low evergreen canopy makes sense because the area is more uniform and less complex -- at least, with respect to vegetation. The second quantile seems to be the worst agreement, which may be due to patchy canopy and/or other vegetation type (Figure 4-26)

The best agreement groups are high and low evergreen canopy coverage, **which matches the 12 pixels with best correlation and relative density** in the NOHRSC SWE

– SSM/I SD comparison**. This indicate**s that **high canopy factor and** lack of canopy cover may **have** a positive **impact on agreement.**

Table 4-3 Evergreen Canopy Class and SSM/I – Ground Snow Depth Agreement (number of pixels)

	Low	Medium Low	Medium	High Medium	High
NO agreement	48	60	49	50	36
Agreement(s)	10	4	9	8	26

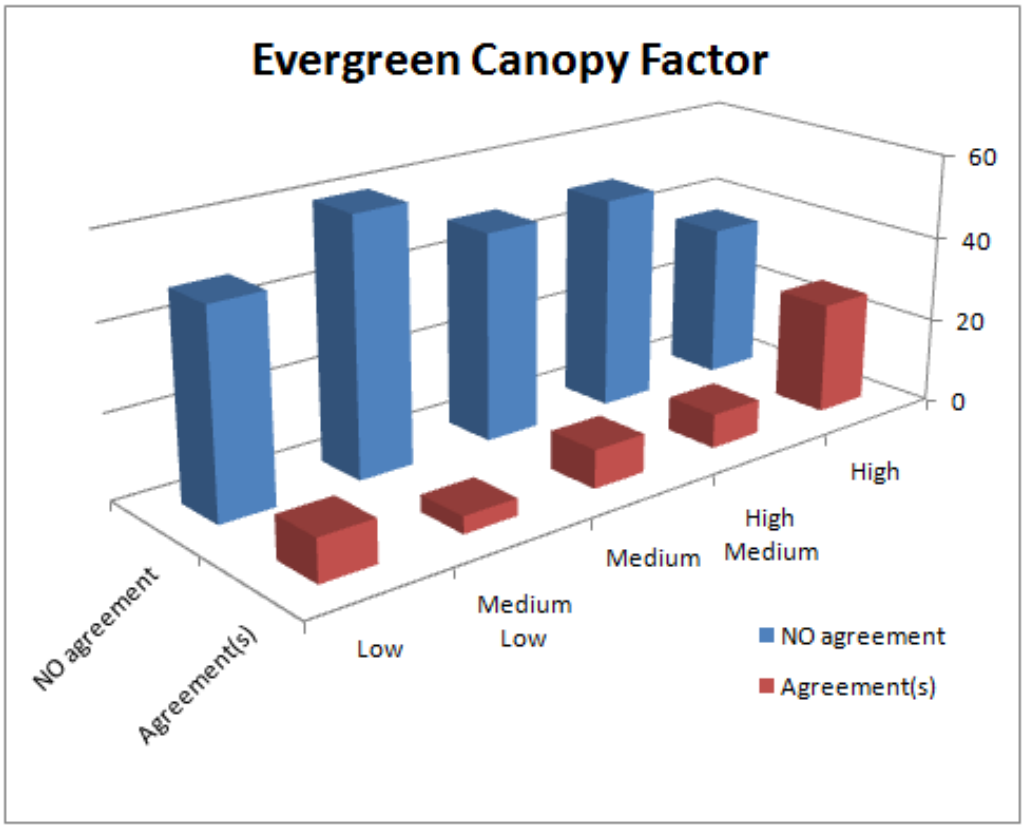


Figure 4-25 Evergreen canopy class and SSM/I – ground snow depth agreements (number of pixels).

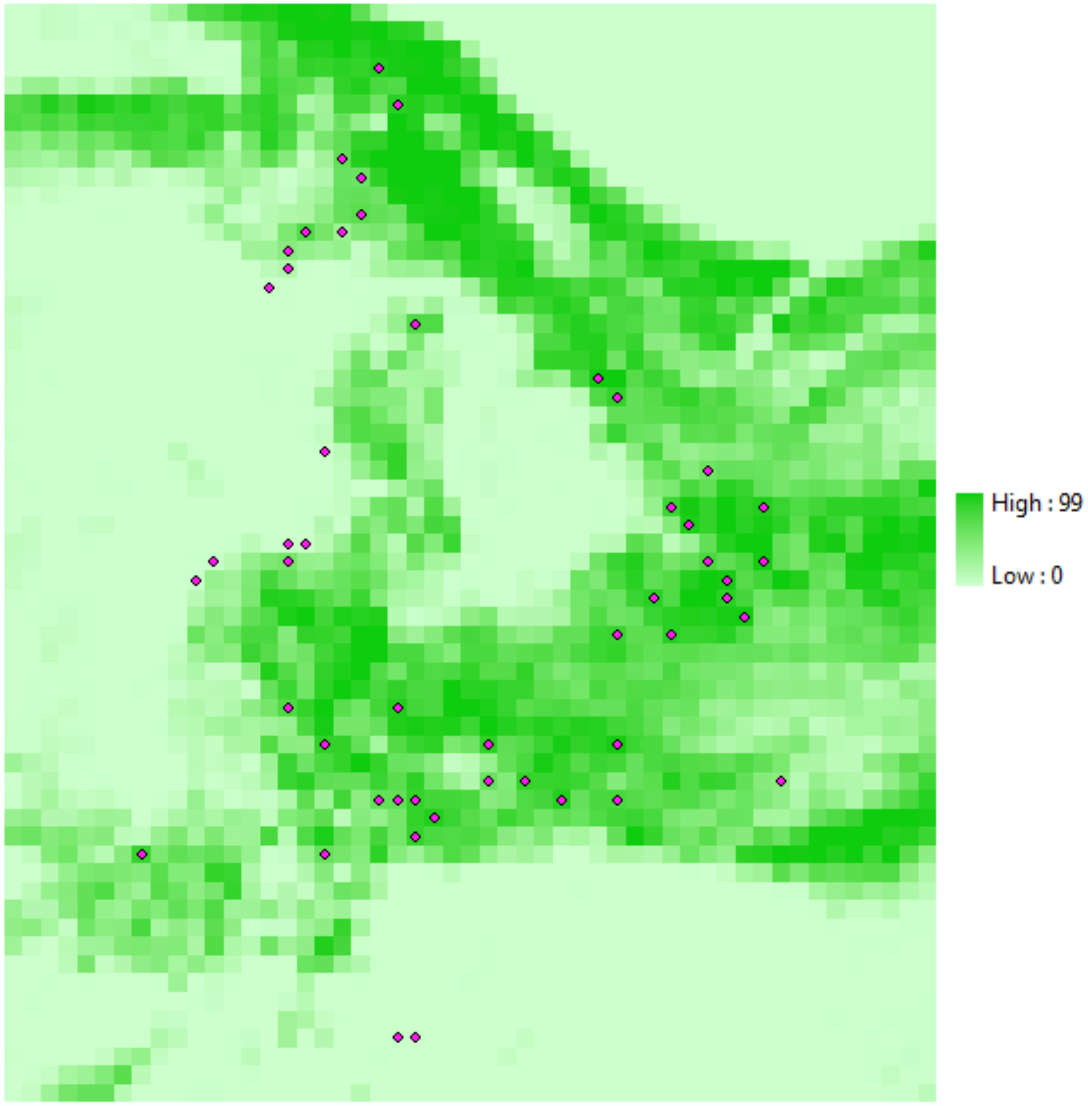


Figure 4-26 Evergreen Canopy Coverage and locations of 50 pixels with at least one agreement

Analyzing agreements between SWE with SSM/I snow depth

From Table 4.4 and Figure 4.27, about 10% of the 1279 pixels have good agreement with score of 4 or 5. Score of 1 have poor agreement between SWE and snow depth. The majority of snow depth was underestimated especially at higher elevation. Moderate to poor agreement at low elevation with score of 2 and 3 were unexpected and unexplained, similar trends to the Table 4.5 and Figure 4.28

Table 4-4 SSM-I Snow Depth – NOHRSC SWE Agreement Score by Mean Elevation Class (number of pixels)

Score	Low	Low – Medium	Medium	Medium-High	High	Count
5	7	7	4	10	22	55
4	8	14	13	15	15	69
3	59	60	95	61	49	327
2	127	96	57	50	13	345
1	51	76	84	117	154	483
						1279

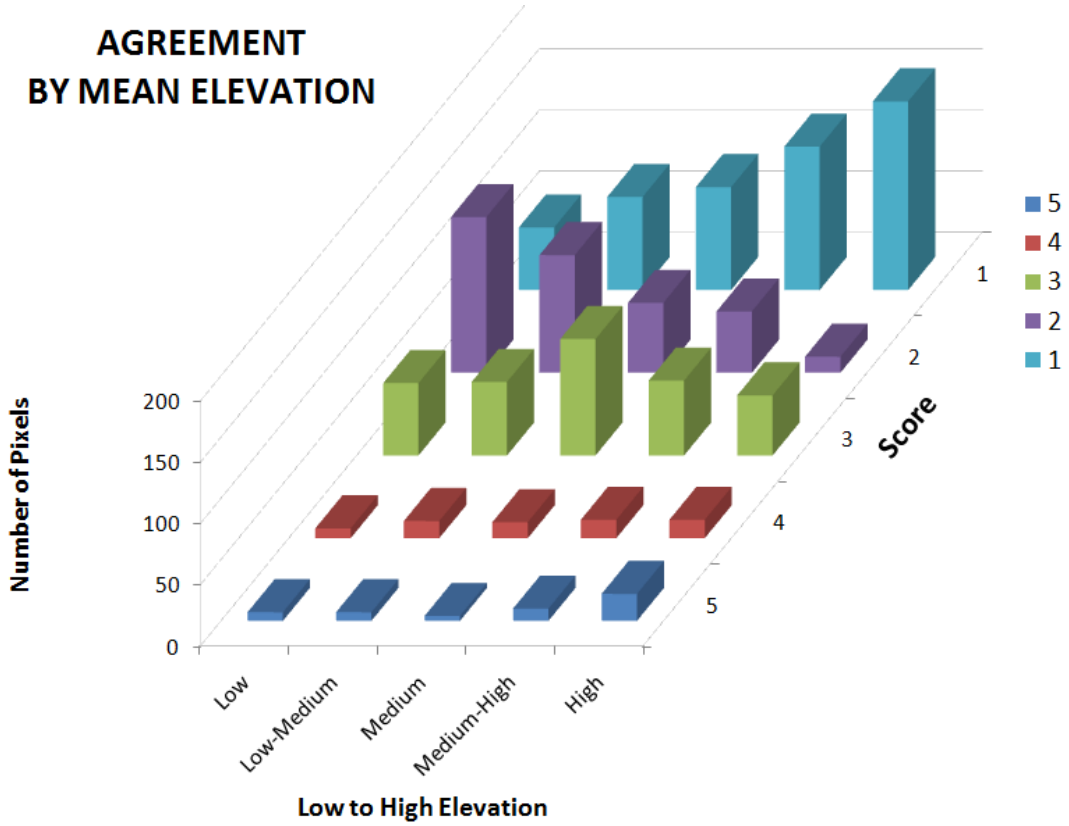


Figure 4-27 SSM/I Snow Depth and NOHRSC SWE Agreement Score by Mean Elevation Class.

Table 4-5 SSM/I Snow Depth – NOHRSC SWE Agreements by Elevation Standard Deviation Class (number of pixels)

Score	Low	Low-Medium	Medium	Medium-High	High
5	7	12	14	14	3
4	11	16	15	15	8
3	83	64	65	57	55
2	113	86	59	54	38
1	38	75	100	120	148

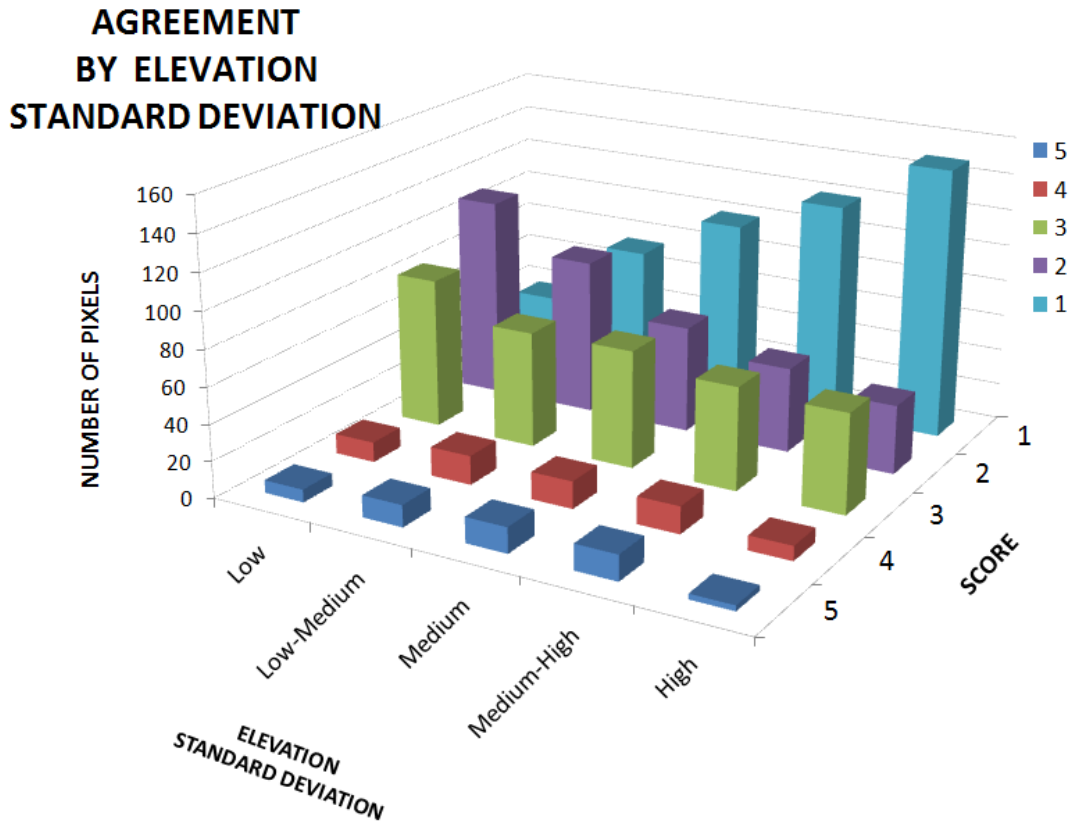


Figure 4-28 SSM/I Snow Depth – NOHRSC SWE Agreement Score by Elevation Standard Deviation Class

The trend for comparing high and low canopy between ground stations and SSM/I snow depth are seen similar in Table 4.6 and Figure 4.29. The better agreements are found either at higher or lower canopy coverage. For the lowest agreement score (1), the high and zero canopy are lower than their counterparts.

Table 4-6 SSM/I Snow Depth – NOHRSC SWE Agreement Score by Percentage of Evergreen Coverage

Score	Low	Low - Medium	Medium	Medium-High	High
5	19	11	5	8	7
4	11	19	16	8	11
3	93	69	53	42	67
2	106	57	57	57	67
1	35	94	126	139	89

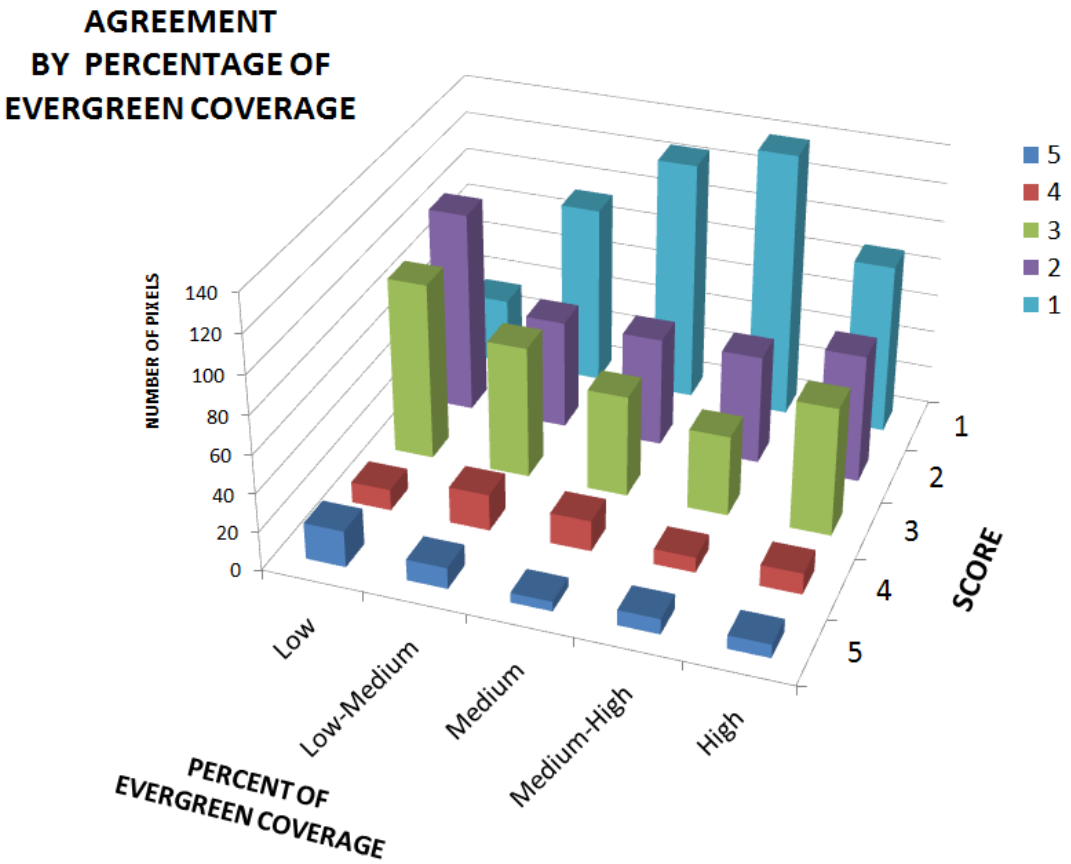


Figure 4-29 SSM/I Snow Depth – NOHRSC SWE Agreement Score by Percentage of Evergreen Coverage

Chapter 5 Discussion and Conclusions

Comparing SSM/I snow depth to ground station snow depth

From observing 307 graphs, the majority of the graphs show that SSM/I snow depth is significantly underestimated. About 80 percent of the ground measurements were at least twice the value of the SSM/I snow depth. Passive microwave satellite data have good agreements for locations with 120cm of snow depth or less. This supports several other studies' findings that the Chang algorithm seriously underestimates deep snow.

Under conditions of high canopy coverage, low elevation, low elevation standard deviation, and shallow snow depth, the SSM/I estimates have better agreements with either interpolated snow water equivalent or in situ snow depth.
Most likely the landcover type in two different areas may affect the microwave retrieval. Another consideration may be the slope and orientation of the terrain, as well as the SSM/I instrument's angle of view.

Comparing SSM/I SD to NOHRSC SWE

From over 1300 graphs of the time series of NOHRSC SWE and SSM/I, the majority indicate that SSM/I snow depth was underestimated, in some cases quite significantly. This conclusion is based on examination of the relative density measure. Any relative density greater than 1.0 is physically impossible,

Even if the magnitude of snow depth estimate is incorrect, the SSM/I retrievals may be useful if they can track the pattern of SD as it increases during snow accumulation and decreases during the melt season. The correlation is a measure of this agreement between SSM/I SD and NOHRSC SWE. Figure 4-20 summarizes this correlation. The Cascade range (top of the map) shows poor correlation, as does Eastern British Columbia. The time series for pixel (200,286) in this area shows a spike in NOHRSC SWE in late June which is not reflected in the SSM/I estimate (Figure 3-7); a similar spike appears in other NOHRSC time series. These may represent real events, or errors in the NOHRSC interpolation algorithm. Ground measurements do not capture an increase on this date but this is not conclusive because a late snow could have fallen and melted between the once-a-month measurements. Ground stations report no snow beyond June 1, while SSM/I continues to report snow.

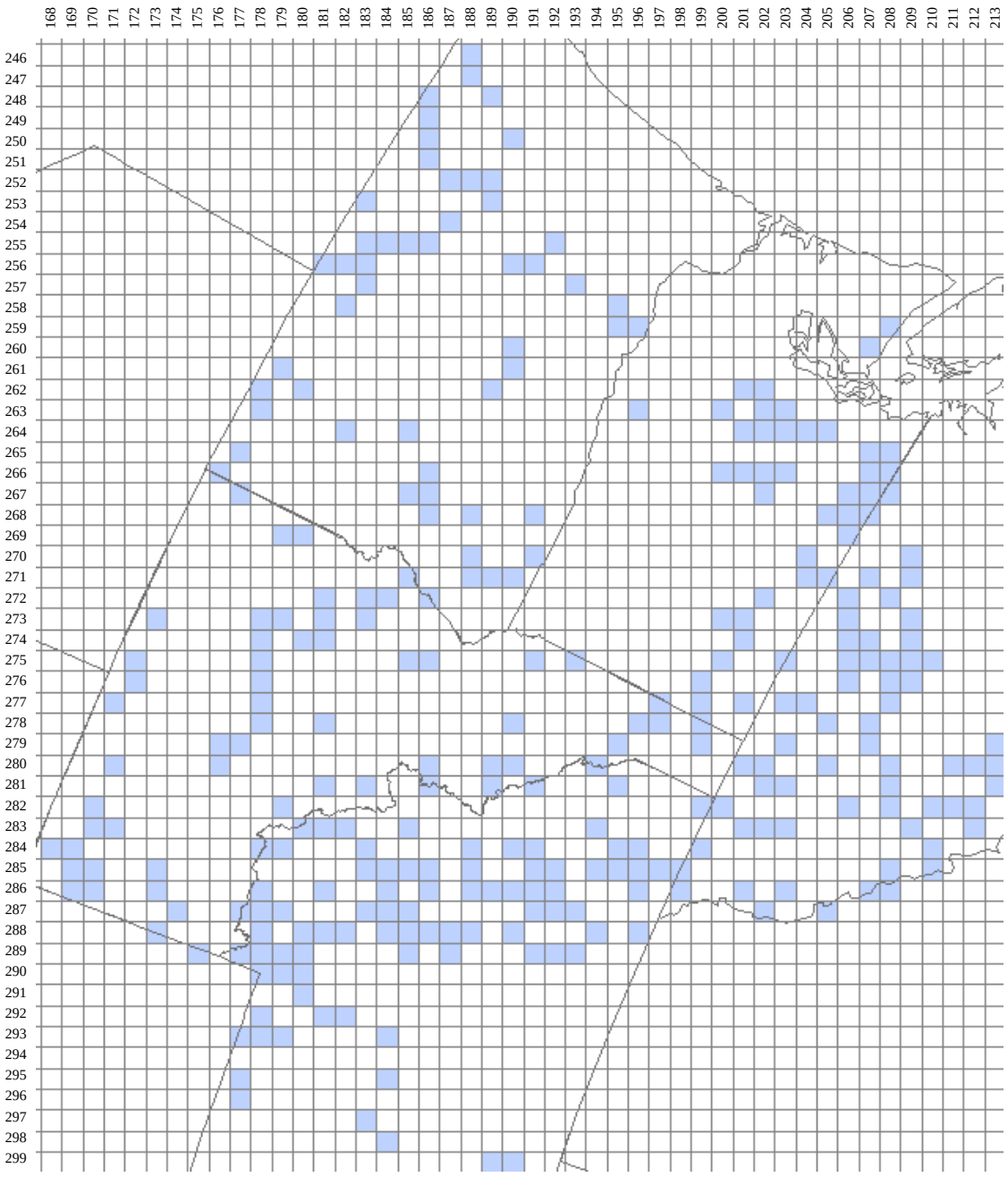
Conclusion

The current algorithm for SSM/I snow depth retrieval in the mountainous areas of the Western USA and British Columbia is poor, especially with snow depth greater than 200 cm. The results do not support any algorithm adjustments for elevation or terrain complexity. Further investigation is needed to include other considerations such as mountain orientation and slope

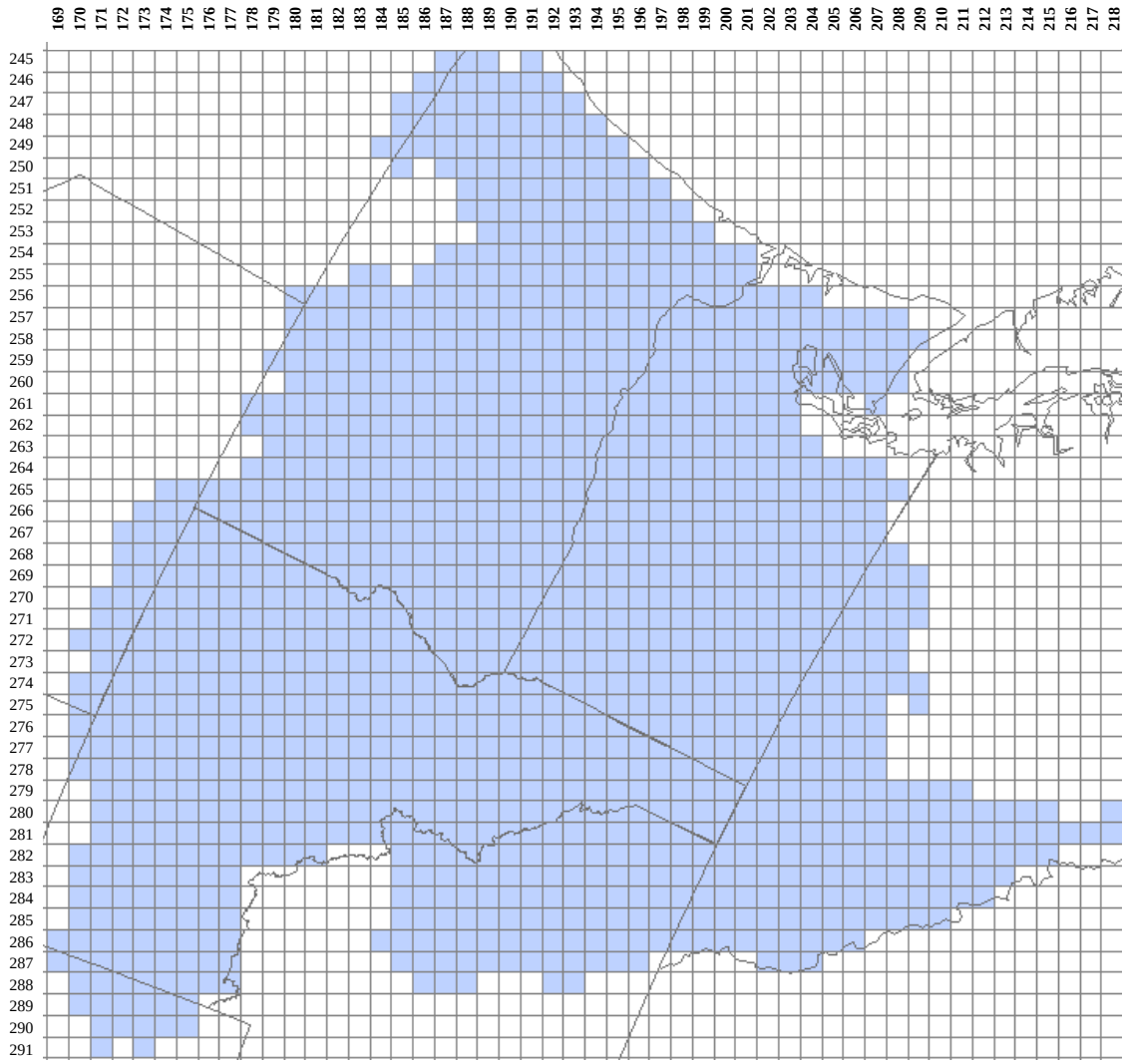
Appendix A

Index Maps of Study Region

The index map #1 below gives the (column, row) coordinates that identify the pixels containing ground stations.



The index map #2 below gives the (column, row) coordinates that identify the pixels in the Columbia Basin



Appendix B

Lists of All Pixels containing at least one agreement

The index maps in Appendix A show the locations of each pixel.

All Pixels containing Only One Agreement

R	S	AGREEMENT
175	289	1
179	273	1
182	258	1
183	256	1
183	257	1
183	272	1
183	273	1
183	281	1
184	255	1
184	272	1
185	267	1
185	283	1
186	251	1
186	255	1
187	254	1
189	248	1
190	286	1
190	288	1
190	299	1
194	285	1
198	286	1
201	277	1
201	286	1
203	275	1
204	277	1
206	268	1
206	273	1
207	275	1

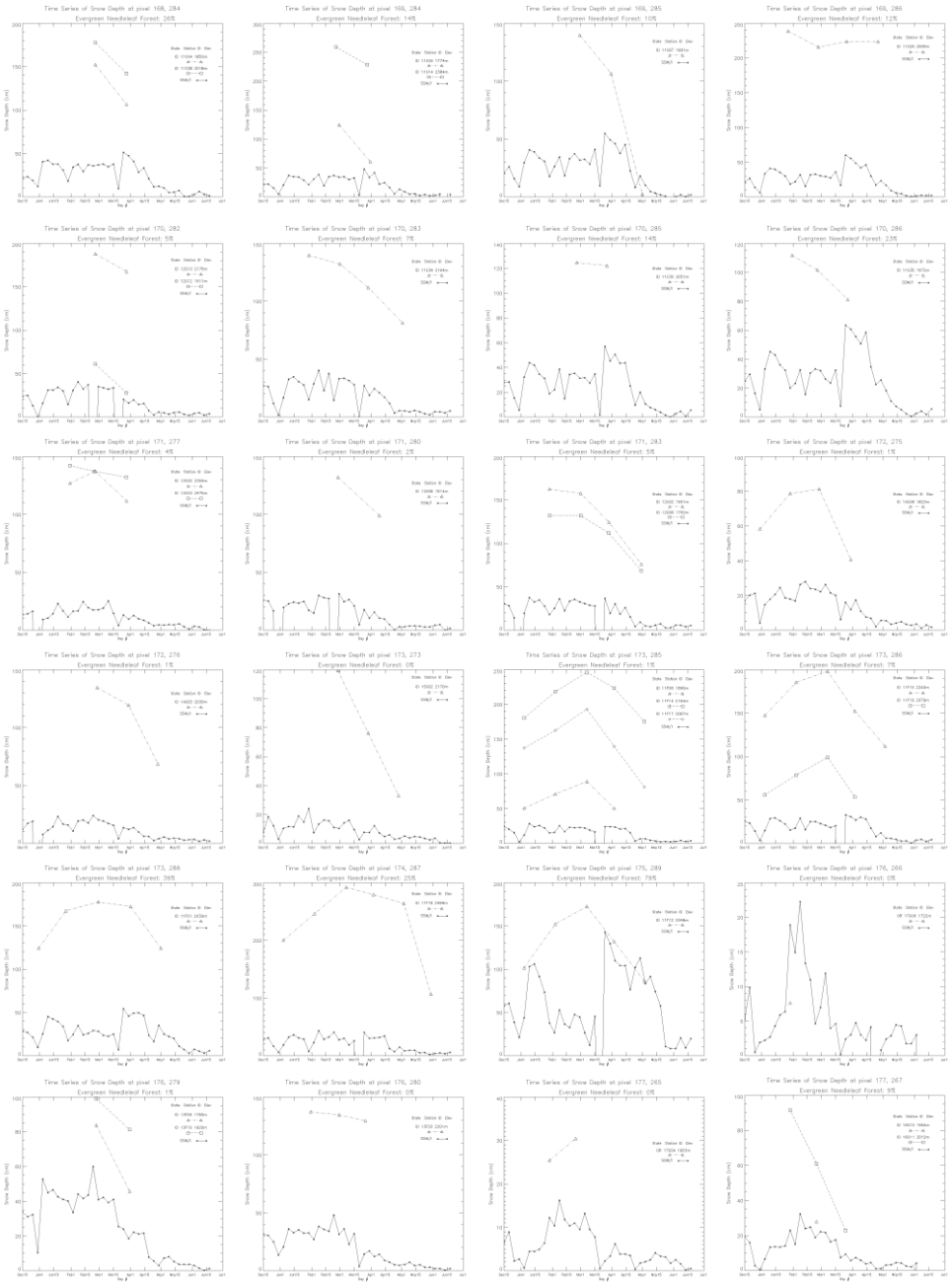
All Pixels containing at least 2 Agreements

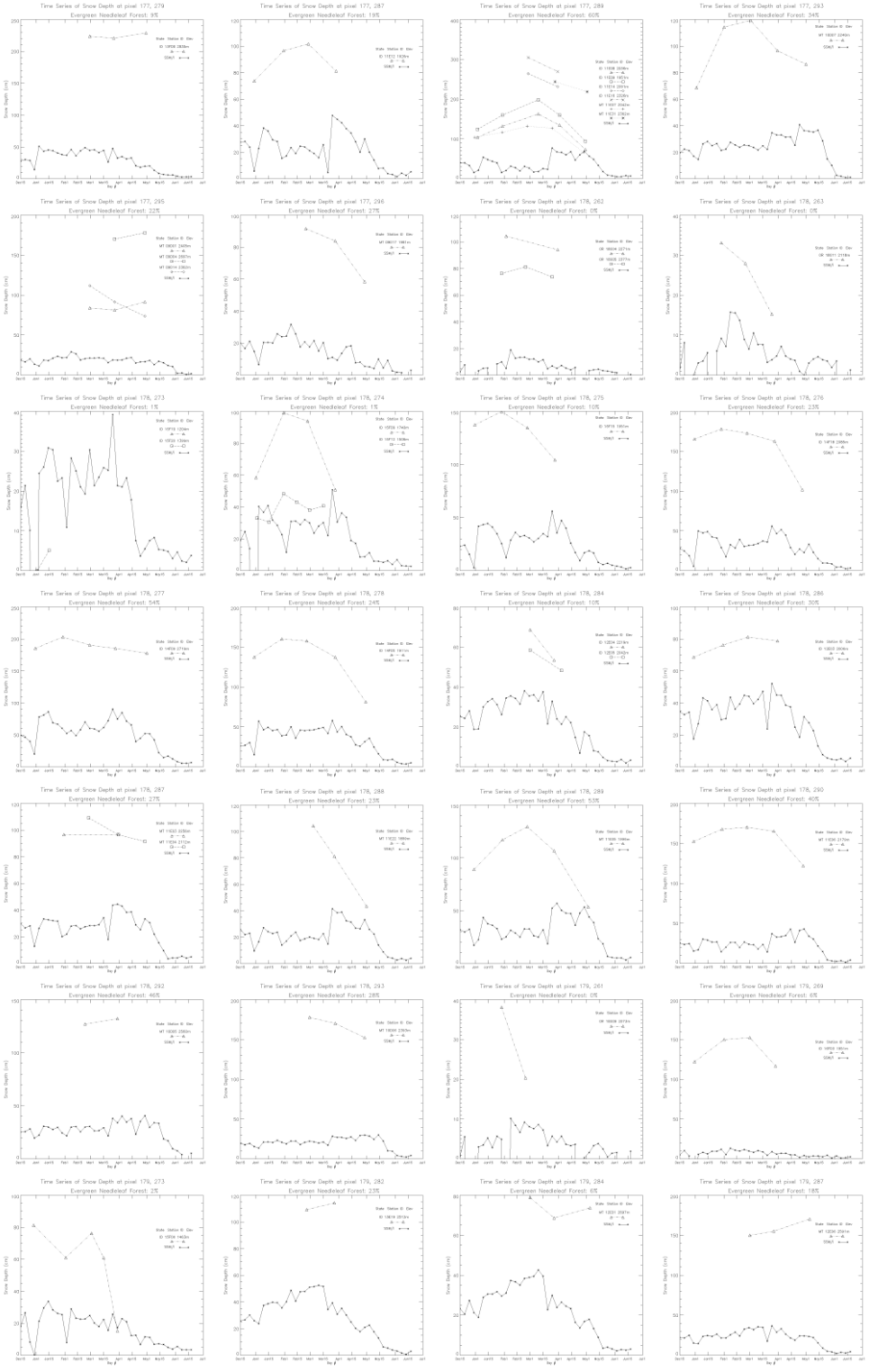
R	S	AGREEMENTS
178	274	2
185	289	2
187	252	2
188	246	2
188	286	2
189	281	3
189	286	2
189	299	2
190	260	2
191	287	2
194	283	2
196	285	2
200	263	2
201	264	3
201	283	3
204	270	2
205	271	2
207	274	3
208	276	3
209	270	3
209	273	4
210	285	2

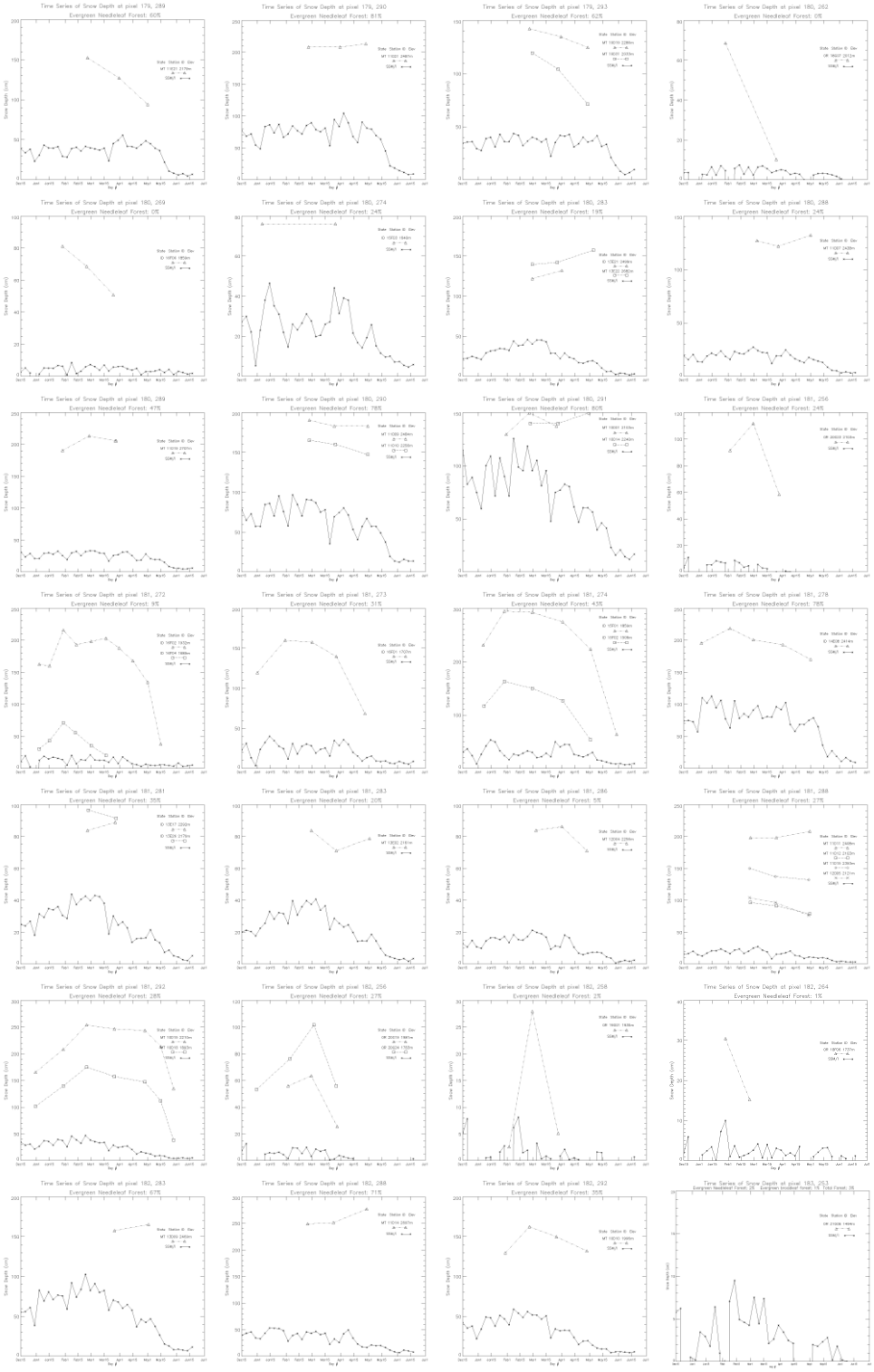
Appendix C

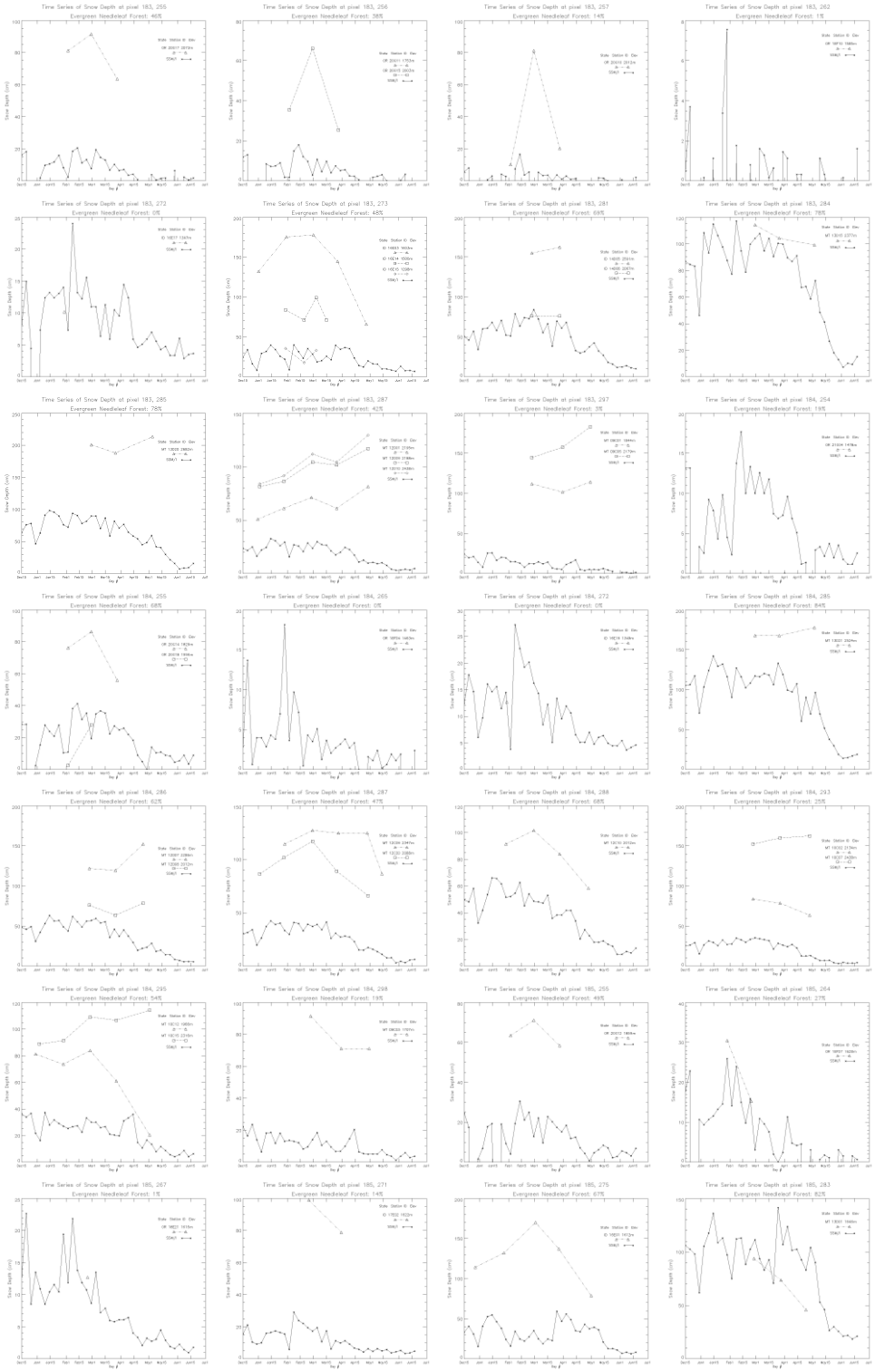
Time Series Graphs of Ground-Measured and SSM/I Snow Depth for All Pixels Containing Ground Stations

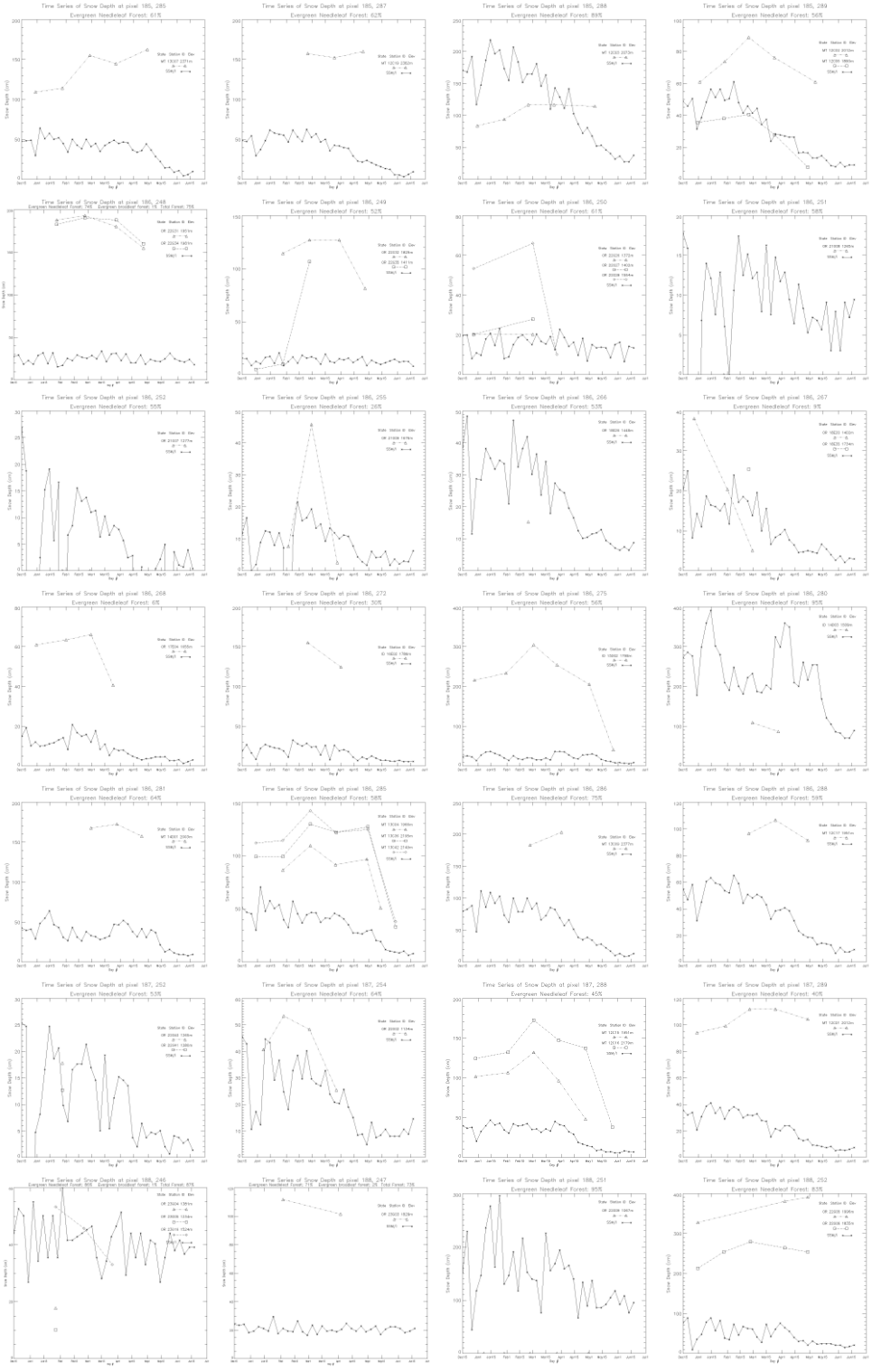
The index map #1 in Appendix A gives the (column, row) coordinates that identify the pixels containing ground stations.

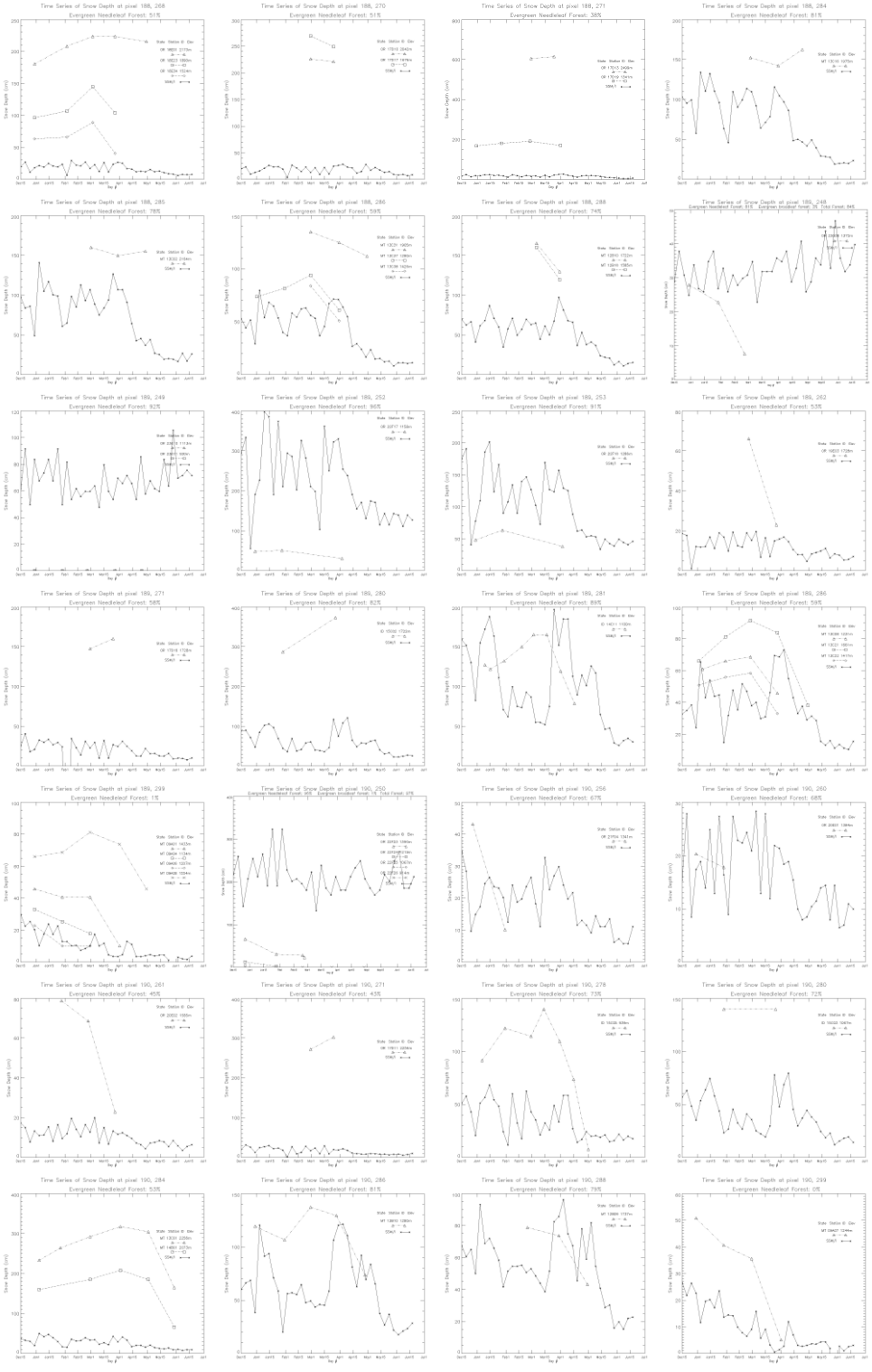



Time Series of Snow Depth at pixel 177, 279
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth at pixel 177, 287
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth at pixel 177, 289
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth at pixel 177, 293
Evergreen Needleleaf Forest: 34%
Time Series of Snow Depth at pixel 177, 295
Evergreen Needleleaf Forest: 22%
Time Series of Snow Depth at pixel 177, 296
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth at pixel 178, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 178, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 178, 273
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth at pixel 178, 274
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth at pixel 178, 275
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth at pixel 178, 276
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth at pixel 178, 277
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth at pixel 178, 278
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth at pixel 178, 284
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth at pixel 178, 286
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth at pixel 178, 287
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth at pixel 178, 288
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth at pixel 178, 289
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth at pixel 178, 290
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth at pixel 178, 292
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth at pixel 178, 293
Evergreen Needleleaf Forest: 28%
Time Series of Snow Depth at pixel 179, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 179, 269
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth at pixel 179, 273
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth at pixel 179, 282
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth at pixel 179, 284
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth at pixel 179, 287
Evergreen Needleleaf Forest: 18%


Time Series of Snow Depth at pixel 179, 289
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth at pixel 179, 290
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth at pixel 179, 293
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth at pixel 180, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 180, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 180, 274
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth at pixel 180, 283
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth at pixel 180, 288
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth at pixel 180, 289
Evergreen Needleleaf Forest: 47%
Time Series of Snow Depth at pixel 180, 290
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 180, 291
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth at pixel 181, 256
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth at pixel 181, 272
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth at pixel 181, 273
Evergreen Needleleaf Forest: 31%
Time Series of Snow Depth at pixel 181, 274
Evergreen Needleleaf Forest: 43%
Time Series of Snow Depth at pixel 181, 278
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 181, 281
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth at pixel 181, 283
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth at pixel 181, 286
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth at pixel 181, 288
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth at pixel 181, 292
Evergreen Needleleaf Forest: 28%
Time Series of Snow Depth at pixel 182, 256
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth at pixel 182, 258
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth at pixel 182, 264
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth at pixel 182, 283
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 182, 288
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth at pixel 182, 292
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth at pixel 183, 253
Evergreen Needleleaf Forest: 0%, Evergreen Needleleaf Forest: 0%, Open Shrubland: 0%, Open Shrubland: 0%, Open Shrubland


Time Series of Snow Depth at pixel 183, 255
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth at pixel 183, 256
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth at pixel 183, 257
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth at pixel 183, 262
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth at pixel 183, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 183, 273
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth at pixel 183, 281
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth at pixel 183, 284
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 183, 285
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth at pixel 183, 287
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth at pixel 183, 297
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth at pixel 184, 254
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth at pixel 184, 255
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth at pixel 184, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 184, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth at pixel 184, 285
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth at pixel 184, 286
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth at pixel 184, 287
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth at pixel 184, 288
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth at pixel 184, 293
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth at pixel 184, 295
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth at pixel 184, 298
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth at pixel 185, 255
Evergreen Needleleaf Forest: 49%
Time Series of Snow Depth at pixel 185, 264
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth at pixel 185, 267
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth at pixel 185, 271
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth at pixel 185, 275
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 185, 283
Evergreen Needleleaf Forest: 82%


Time Series of Snow Depth at pixel 185, 285
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth at pixel 185, 287
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth at pixel 185, 288
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth at pixel 185, 289
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth at pixel 186, 248
Evergreen Needleleaf Forest: 74% Evergreen Broadleaf Forest: 1% Total Forest: 75%
Time Series of Snow Depth at pixel 186, 249
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth at pixel 186, 250
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth at pixel 186, 251
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 186, 252
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth at pixel 186, 255
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth at pixel 186, 266
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth at pixel 186, 267
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth at pixel 186, 268
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth at pixel 186, 272
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth at pixel 186, 275
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth at pixel 186, 280
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth at pixel 186, 281
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth at pixel 186, 285
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 186, 286
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth at pixel 186, 288
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth at pixel 187, 252
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth at pixel 187, 254
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth at pixel 187, 288
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth at pixel 187, 289
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth at pixel 188, 246
Evergreen Needleleaf Forest: 90% Evergreen Broadleaf Forest: 1% Total Forest: 91%
Time Series of Snow Depth at pixel 188, 247
Evergreen Needleleaf Forest: 71% Evergreen Broadleaf Forest: 3% Total Forest: 73%
Time Series of Snow Depth at pixel 188, 251
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth at pixel 188, 252
Evergreen Needleleaf Forest: 83%


Time Series of Snow Depth at pixel 188, 268
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth at pixel 188, 270
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth at pixel 188, 271
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth at pixel 188, 284
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth at pixel 188, 285
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 188, 286
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth at pixel 188, 288
Evergreen Needleleaf Forest: 74%
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Evergreen Needleleaf Forest: 81% Evergreen Broadleaf Forest: 3% Total Forest: 84%
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Evergreen Needleleaf Forest: 82%
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Evergreen Needleleaf Forest: 96%
Time Series of Snow Depth at pixel 189, 253
Evergreen Needleleaf Forest: 91%
Time Series of Snow Depth at pixel 189, 262
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth at pixel 189, 271
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 189, 280
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth at pixel 189, 281
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth at pixel 189, 286
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth at pixel 189, 289
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth at pixel 190, 250
Evergreen Needleleaf Forest: 40% Evergreen Broadleaf Forest: 3% Total Forest: 43%
Time Series of Snow Depth at pixel 190, 256
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 190, 260
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth at pixel 190, 261
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth at pixel 190, 271
Evergreen Needleleaf Forest: 43%
Time Series of Snow Depth at pixel 190, 278
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth at pixel 190, 280
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth at pixel 190, 284
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth at pixel 190, 286
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Time Series of Snow Depth at pixel 190, 288
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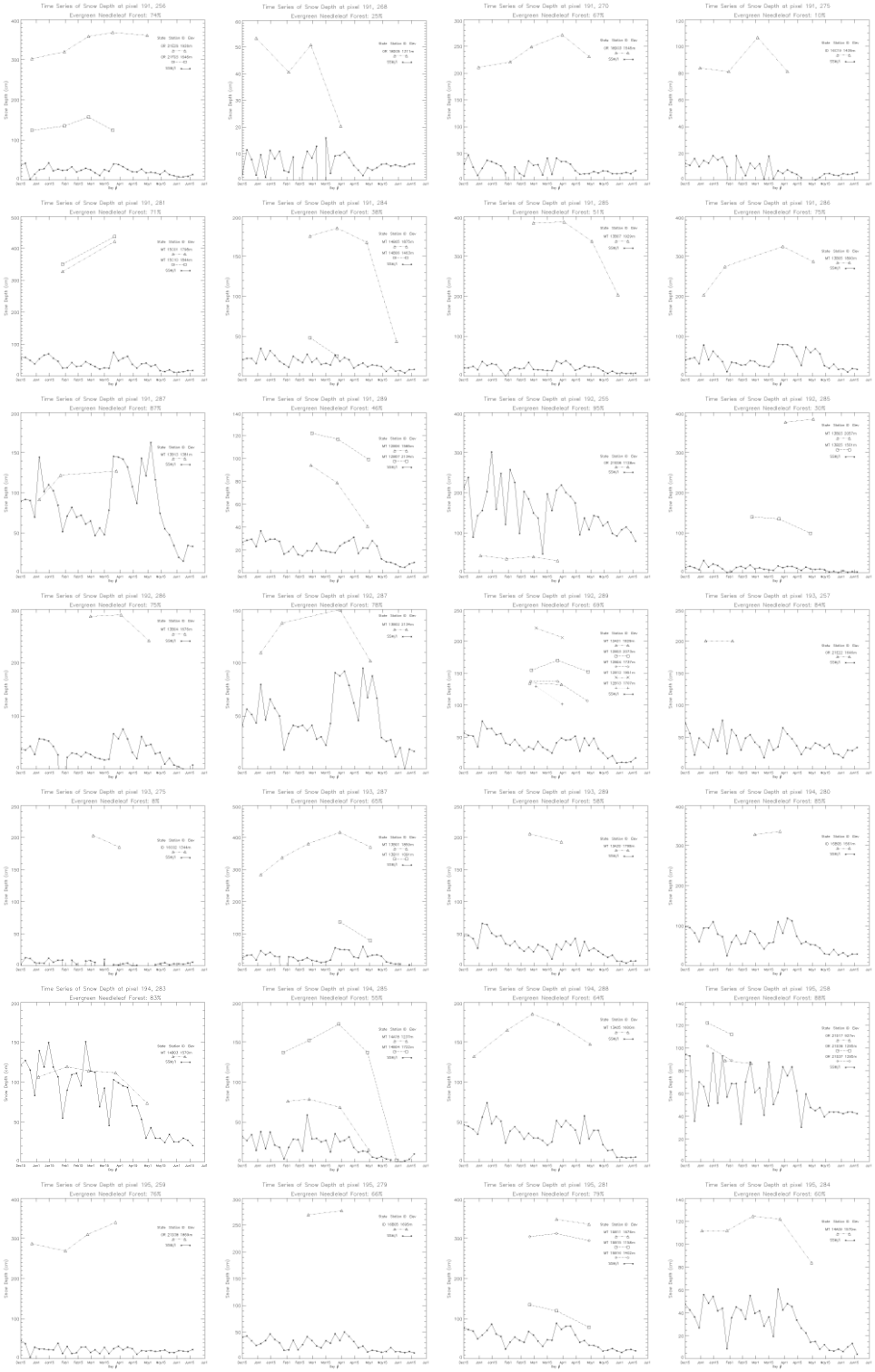
Time Series of Snow Depth at pixel 190, 299
Evergreen Needleleaf Forest: 0%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Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth at pixel 191, 268
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Time Series of Snow Depth at pixel 191, 270
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 191, 275
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth at pixel 191, 281
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth at pixel 191, 284
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth at pixel 191, 285
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth at pixel 191, 286
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth at pixel 191, 287
Evergreen Needleleaf Forest: 87%
Time Series of Snow Depth at pixel 191, 289
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth at pixel 192, 255
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth at pixel 192, 285
Evergreen Needleleaf Forest: 50%
Time Series of Snow Depth at pixel 192, 286
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth at pixel 192, 287
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 192, 289
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth at pixel 193, 257
Evergreen Needleleaf Forest: 84%
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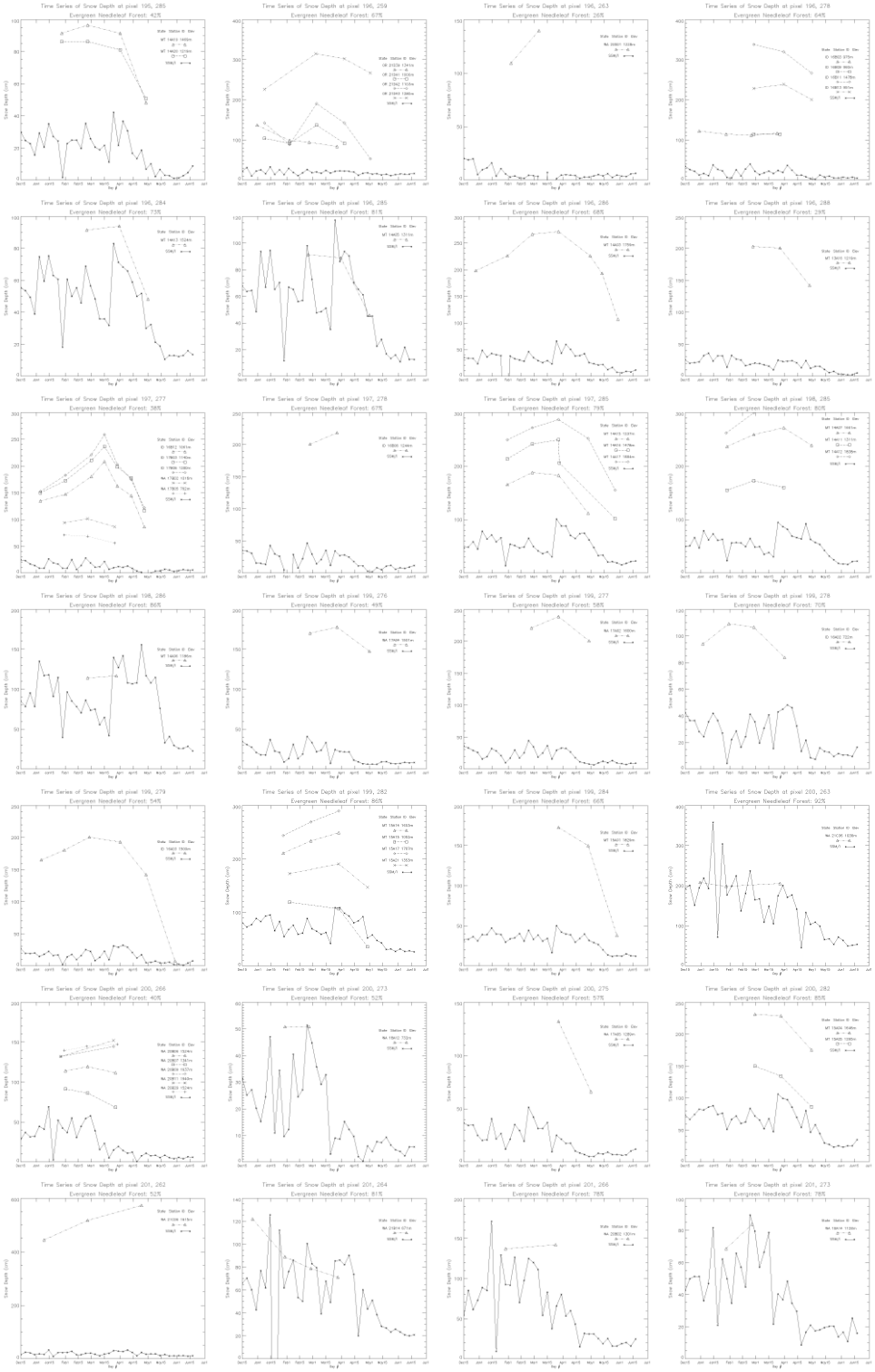
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth at pixel 193, 287
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth at pixel 193, 289
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 194, 280
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth at pixel 194, 283
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth at pixel 194, 285
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth at pixel 194, 288
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth at pixel 195, 258
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth at pixel 195, 259
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth at pixel 195, 279
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth at pixel 195, 281
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth at pixel 195, 284
Evergreen Needleleaf Forest: 60%


Time Series of Snow Depth at pixel 195, 285
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth at pixel 196, 259
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 196, 263
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth at pixel 196, 278
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth at pixel 196, 284
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth at pixel 196, 285
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth at pixel 196, 286
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth at pixel 196, 288
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth at pixel 197, 277
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 197, 278
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 197, 285
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Time Series of Snow Depth at pixel 198, 285
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth at pixel 198, 286
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth at pixel 199, 276
Evergreen Needleleaf Forest: 49%
Time Series of Snow Depth at pixel 199, 277
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 199, 278
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth at pixel 199, 279
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth at pixel 199, 282
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth at pixel 199, 284
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth at pixel 200, 263
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth at pixel 200, 266
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth at pixel 200, 273
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth at pixel 200, 275
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth at pixel 200, 282
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth at pixel 201, 262
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth at pixel 201, 264
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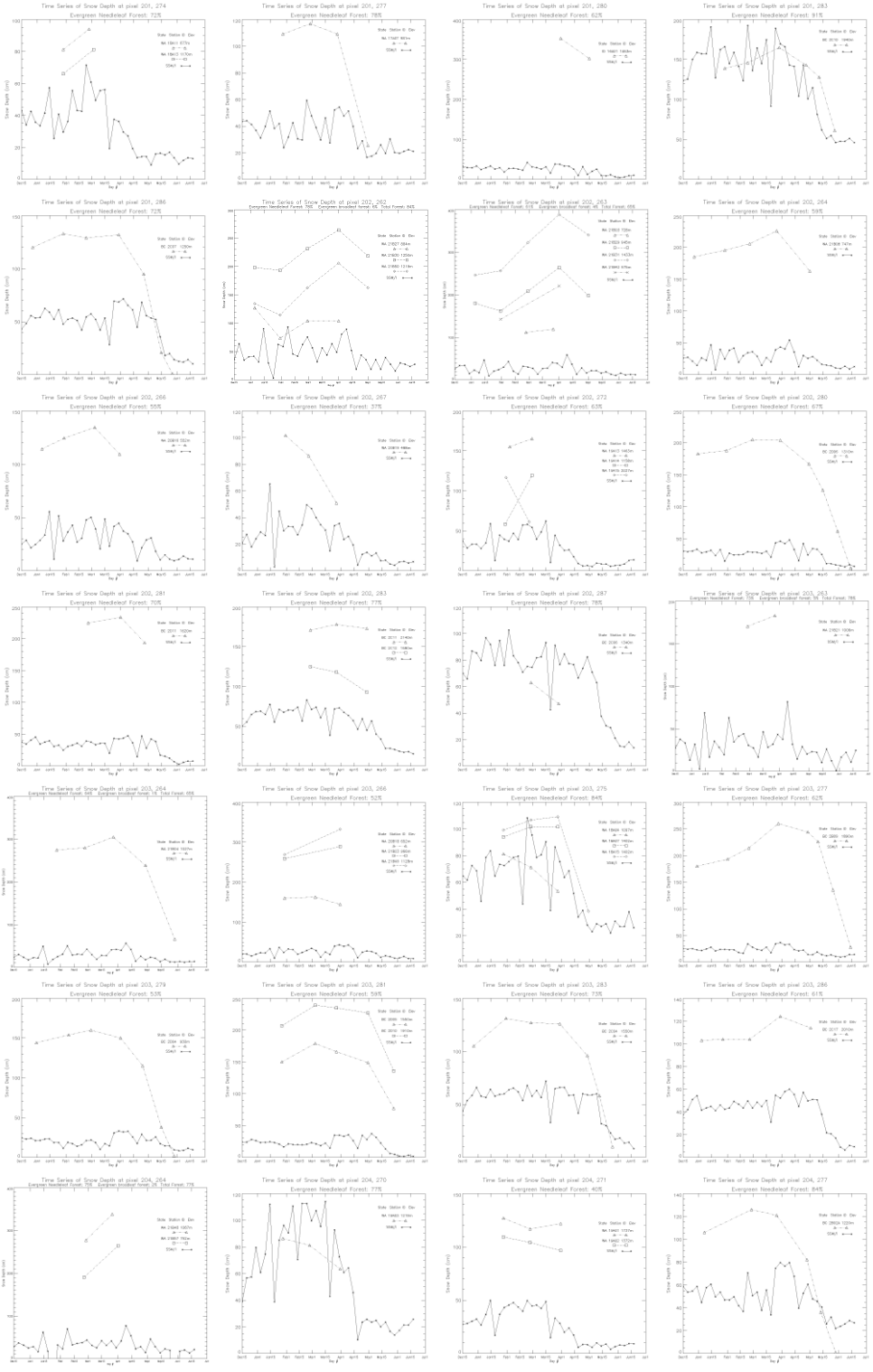
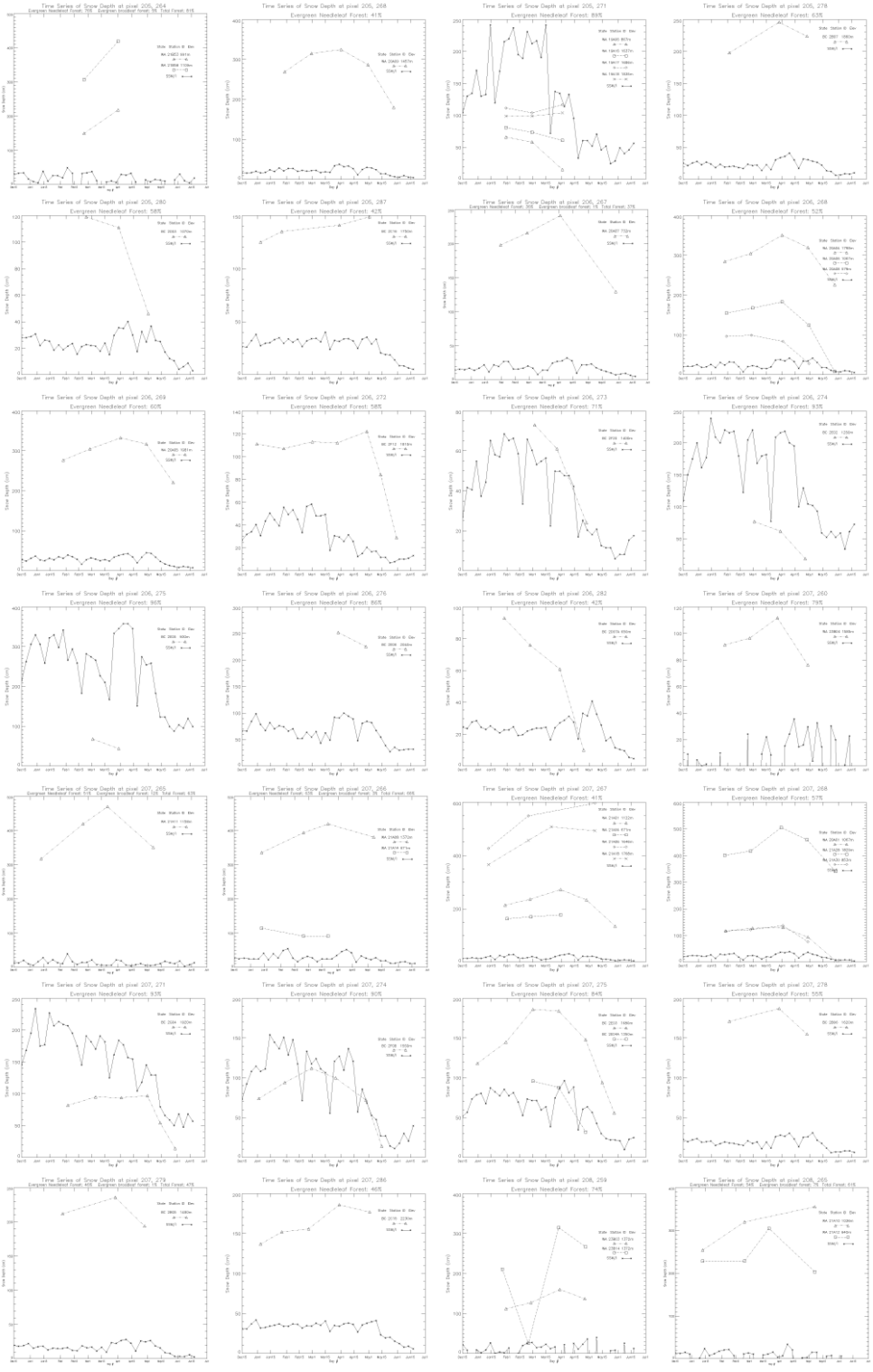
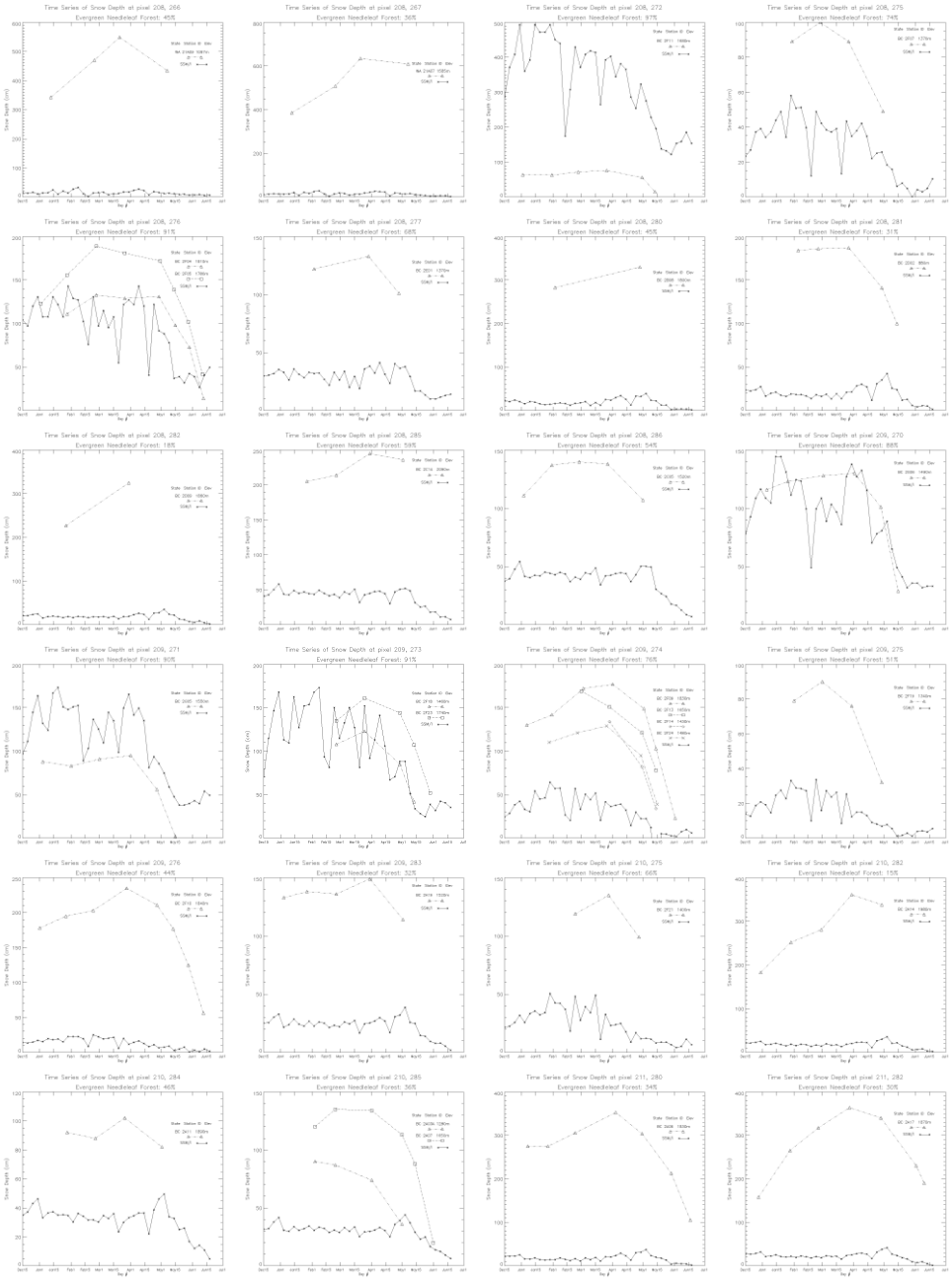
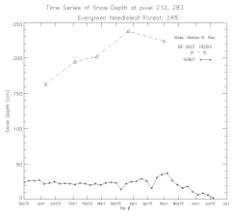
Time Series of Snow Depth at pixel 201, 273
Evergreen Needleleaf Forest: 78%

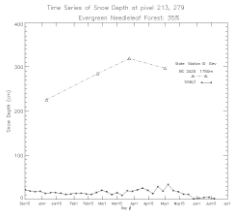

Time Series of Snow Depth at pixel 201, 274
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth at pixel 201, 277
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 201, 280
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth at pixel 201, 283
Evergreen Needleleaf Forest: 91%
Time Series of Snow Depth at pixel 201, 286
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth at pixel 202, 262
Evergreen Needleleaf Forest: 70% Evergreen Broadleaf Forest: 4% Total Forest: 74%
Time Series of Snow Depth at pixel 202, 263
Evergreen Needleleaf Forest: 91% Evergreen Broadleaf Forest: 4% Total Forest: 95%
Time Series of Snow Depth at pixel 202, 264
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth at pixel 202, 266
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth at pixel 202, 267
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth at pixel 202, 272
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth at pixel 202, 280
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth at pixel 202, 281
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth at pixel 202, 283
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth at pixel 202, 287
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth at pixel 203, 263
Evergreen Needleleaf Forest: 72% Evergreen Broadleaf Forest: 9% Total Forest: 78%
Time Series of Snow Depth at pixel 203, 264
Evergreen Needleleaf Forest: 54% Evergreen Broadleaf Forest: 1% Total Forest: 55%
Time Series of Snow Depth at pixel 203, 266
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth at pixel 203, 275
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth at pixel 203, 277
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth at pixel 203, 279
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth at pixel 203, 281
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth at pixel 203, 283
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth at pixel 203, 286
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth at pixel 204, 264
Evergreen Needleleaf Forest: 75% Evergreen Broadleaf Forest: 3% Total Forest: 77%
Time Series of Snow Depth at pixel 204, 270
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth at pixel 204, 271
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth at pixel 204, 277
Evergreen Needleleaf Forest: 84%

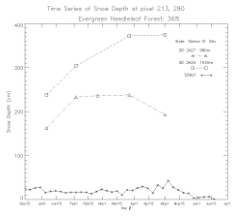

Time Series of Snow Depth at pixel 205, 264
Evergreen Needleleaf Forest: 78% Evergreen Broadleaf Forest: 1% Total Forest: 81%
Time Series of Snow Depth at pixel 205, 268
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth at pixel 205, 271
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth at pixel 205, 278
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth at pixel 205, 280
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 205, 287
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth at pixel 206, 267
Evergreen Needleleaf Forest: 76% Evergreen Broadleaf Forest: 1% Total Forest: 77%
Time Series of Snow Depth at pixel 206, 268
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth at pixel 206, 269
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth at pixel 206, 272
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth at pixel 206, 273
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth at pixel 206, 274
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth at pixel 206, 275
Evergreen Needleleaf Forest: 96%
Time Series of Snow Depth at pixel 206, 276
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth at pixel 206, 282
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth at pixel 207, 260
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth at pixel 207, 265
Evergreen Needleleaf Forest: 51% Evergreen Broadleaf Forest: 13% Total Forest: 63%
Time Series of Snow Depth at pixel 207, 266
Evergreen Needleleaf Forest: 63% Evergreen Broadleaf Forest: 3% Total Forest: 66%
Time Series of Snow Depth at pixel 207, 287
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth at pixel 207, 268
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth at pixel 207, 271
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth at pixel 207, 274
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth at pixel 207, 275
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth at pixel 207, 278
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth at pixel 207, 279
Evergreen Needleleaf Forest: 40% Evergreen Broadleaf Forest: 1% Total Forest: 41%
Time Series of Snow Depth at pixel 207, 286
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth at pixel 208, 259
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth at pixel 208, 265
Evergreen Needleleaf Forest: 54% Evergreen Broadleaf Forest: 7% Total Forest: 61%

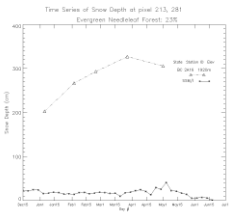

Time Series of Snow Depth at pixel 208, 266
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth at pixel 208, 267
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth at pixel 208, 272
Evergreen Needleleaf Forest: 97%
Time Series of Snow Depth at pixel 208, 275
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth at pixel 208, 276
Evergreen Needleleaf Forest: 91%
Time Series of Snow Depth at pixel 208, 277
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth at pixel 208, 280
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth at pixel 208, 281
Evergreen Needleleaf Forest: 31%
Time Series of Snow Depth at pixel 208, 282
Evergreen Needleleaf Forest: 18%
Time Series of Snow Depth at pixel 208, 285
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth at pixel 208, 286
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth at pixel 209, 270
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth at pixel 209, 271
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth at pixel 209, 273
Evergreen Needleleaf Forest: 91%
Time Series of Snow Depth at pixel 209, 274
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth at pixel 209, 275
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth at pixel 209, 276
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth at pixel 209, 283
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth at pixel 210, 275
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth at pixel 210, 282
Evergreen Needleleaf Forest: 15%
Time Series of Snow Depth at pixel 210, 284
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth at pixel 210, 285
Evergreen Needleleaf Forest: 36%
Time Series of Snow Depth at pixel 211, 280
Evergreen Needleleaf Forest: 34%
Time Series of Snow Depth at pixel 211, 282
Evergreen Needleleaf Forest: 30%


Time Series of Snow Depth at pixel 212, 282
Evergreen Needleleaf Forest: 7%
Snow Depth (cm)
Day of Year


Time Series of Snow Depth at pixel 212, 283
Evergreen Needleleaf Forest: 24%
Snow Depth (cm)
Day of Year


Time Series of Snow Depth at pixel 213, 279
Evergreen Needleleaf Forest: 35%
Snow Depth (cm)
Day of Year

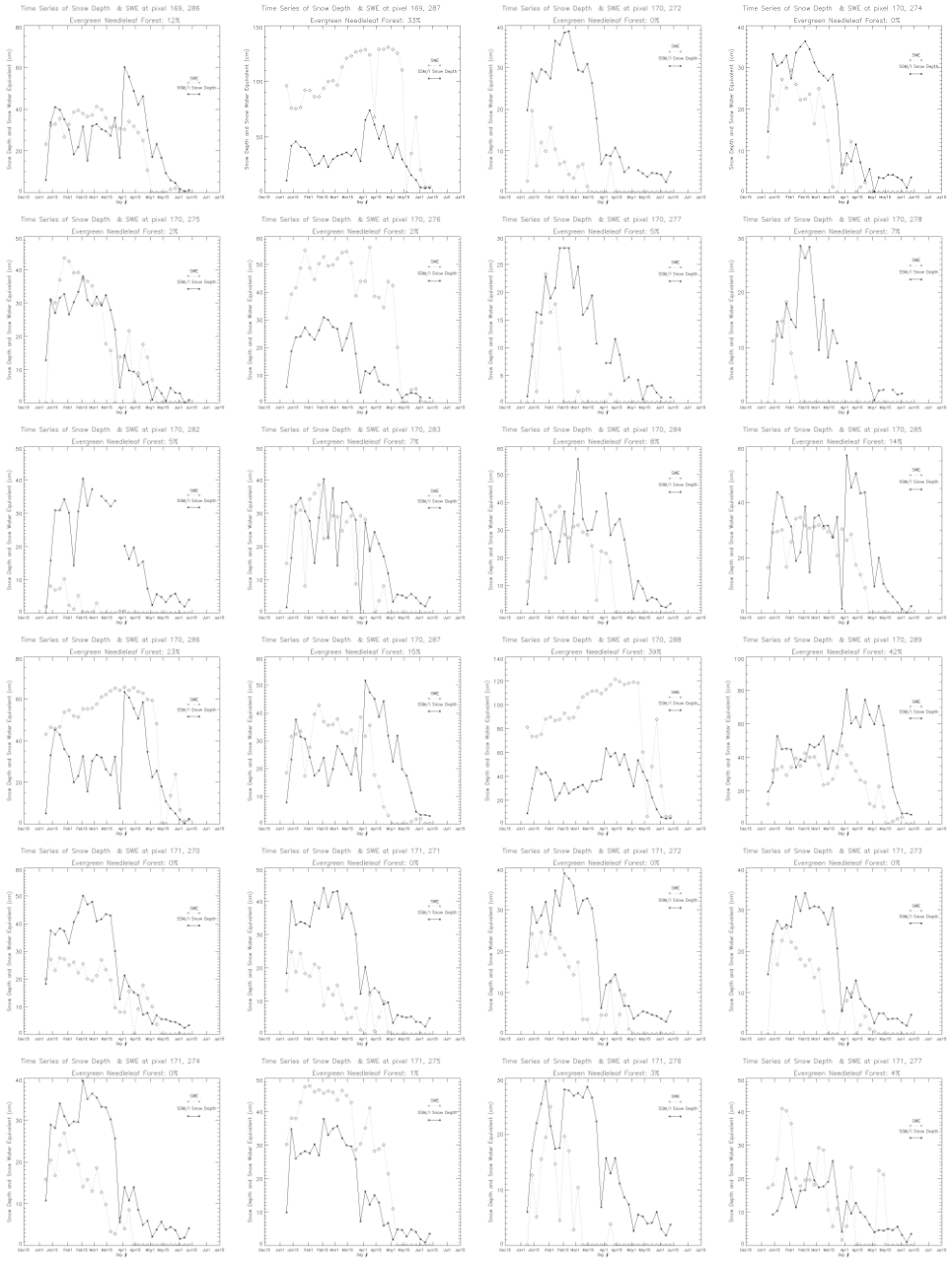

Time Series of Snow Depth at pixel 213, 280
Evergreen Needleleaf Forest: 36%
Snow Depth (cm)
Day of Year

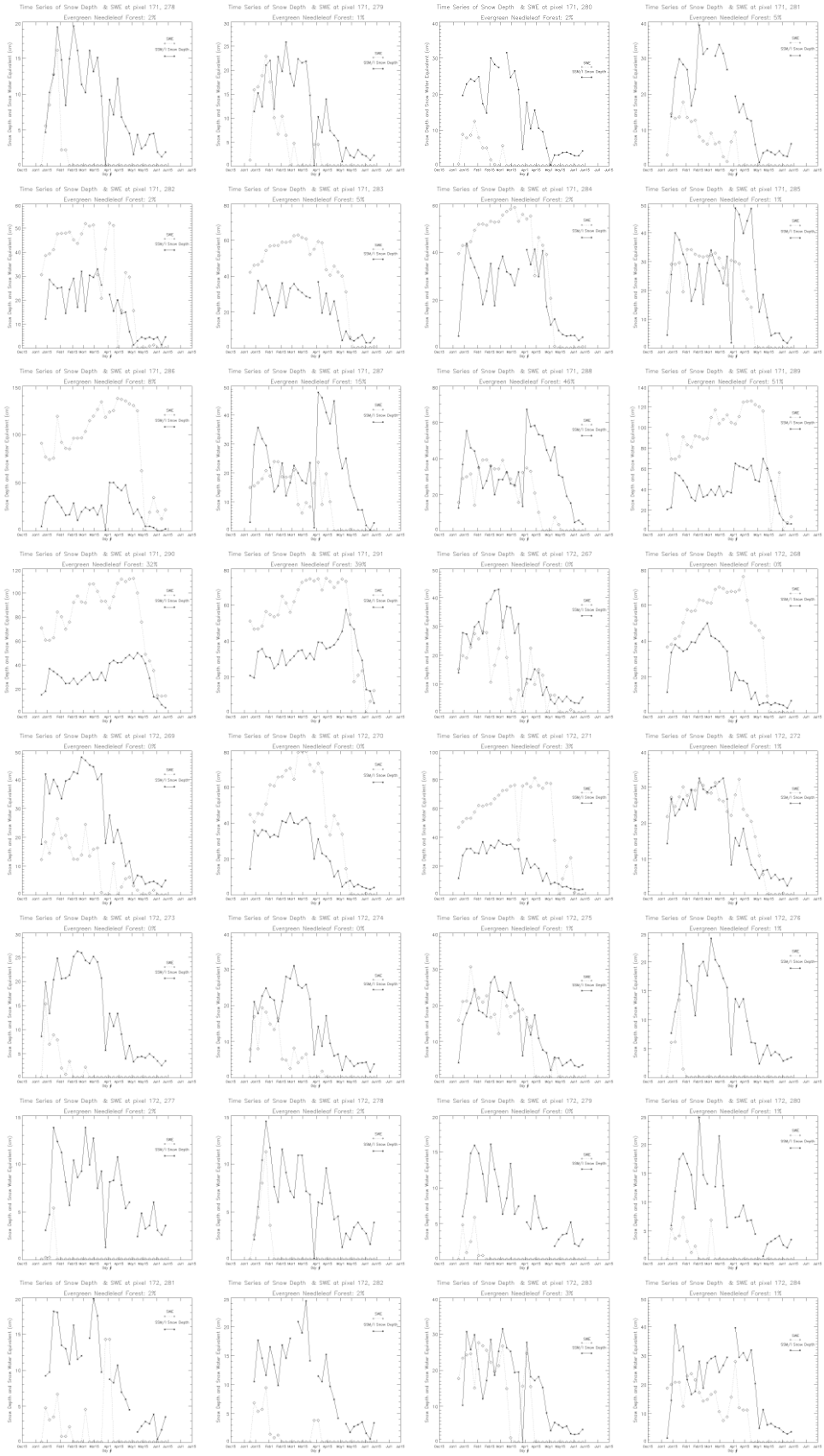

Time Series of Snow Depth at pixel 213, 281
Evergreen Needleleaf Forest: 23%
Snow Depth (cm)
Day of Year

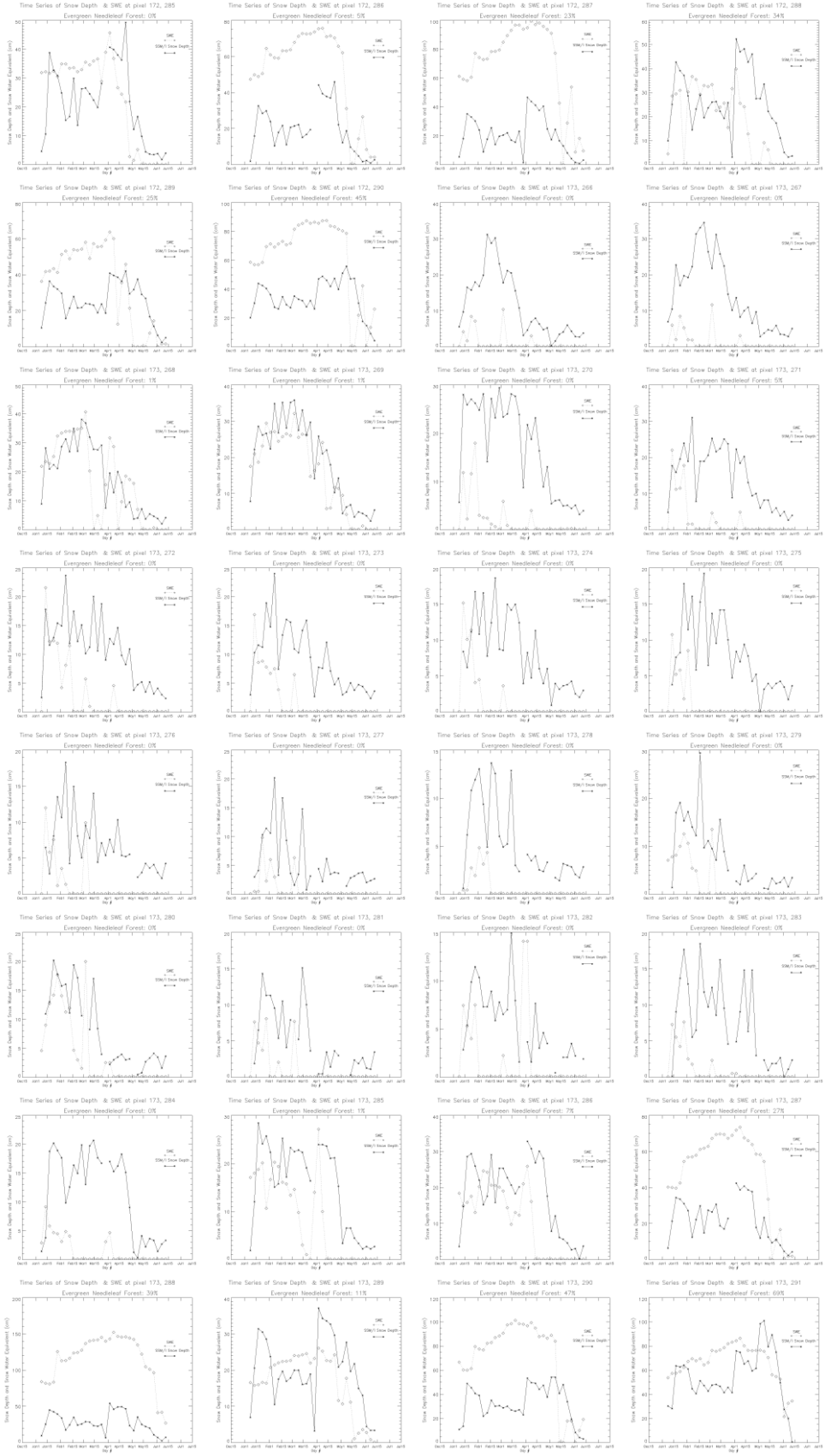
Appendix D

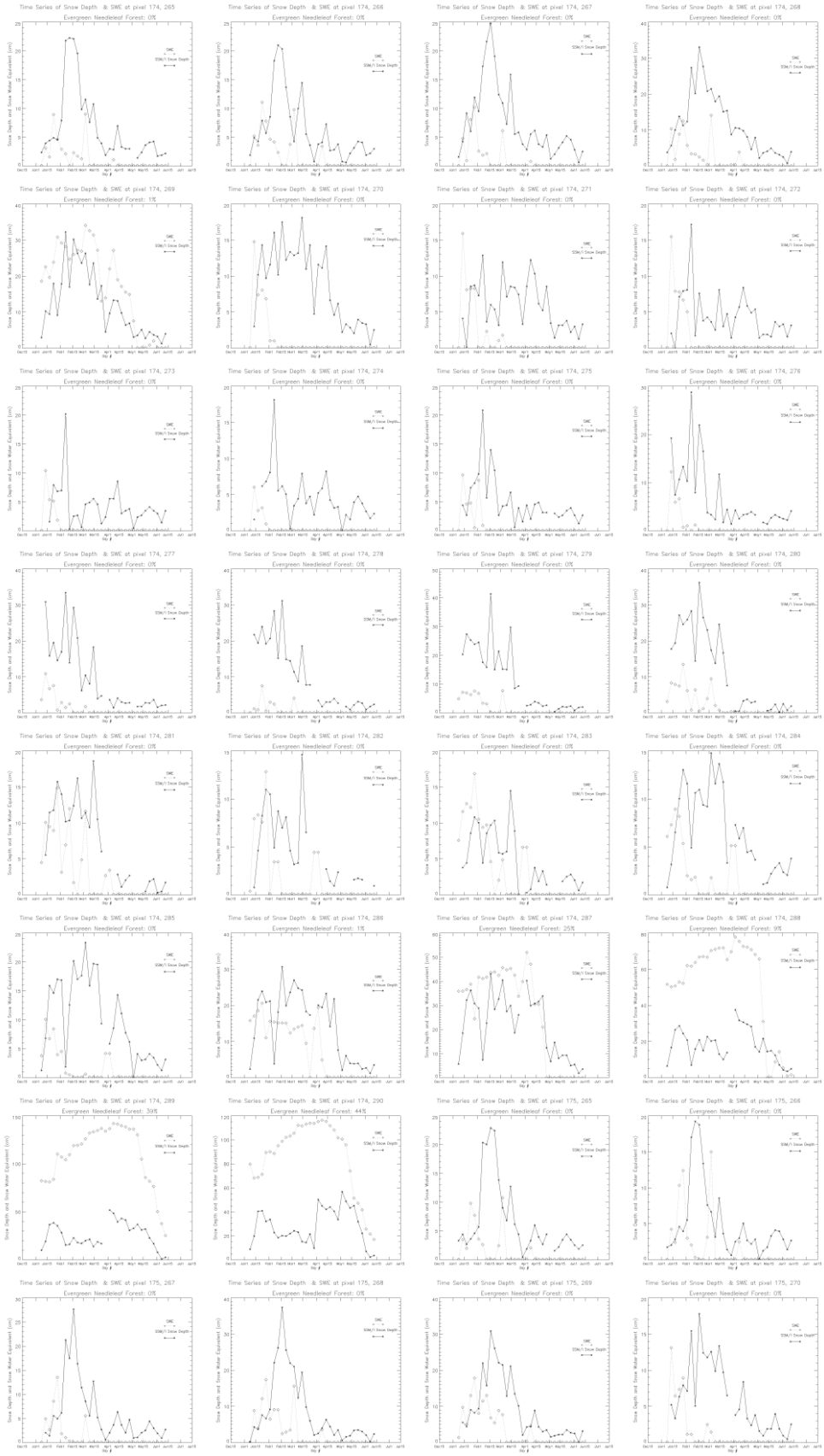
Time Series Graphs of SSM/I Snow Depth and NOHRSC SWE for Pixels in the Columbia Basin

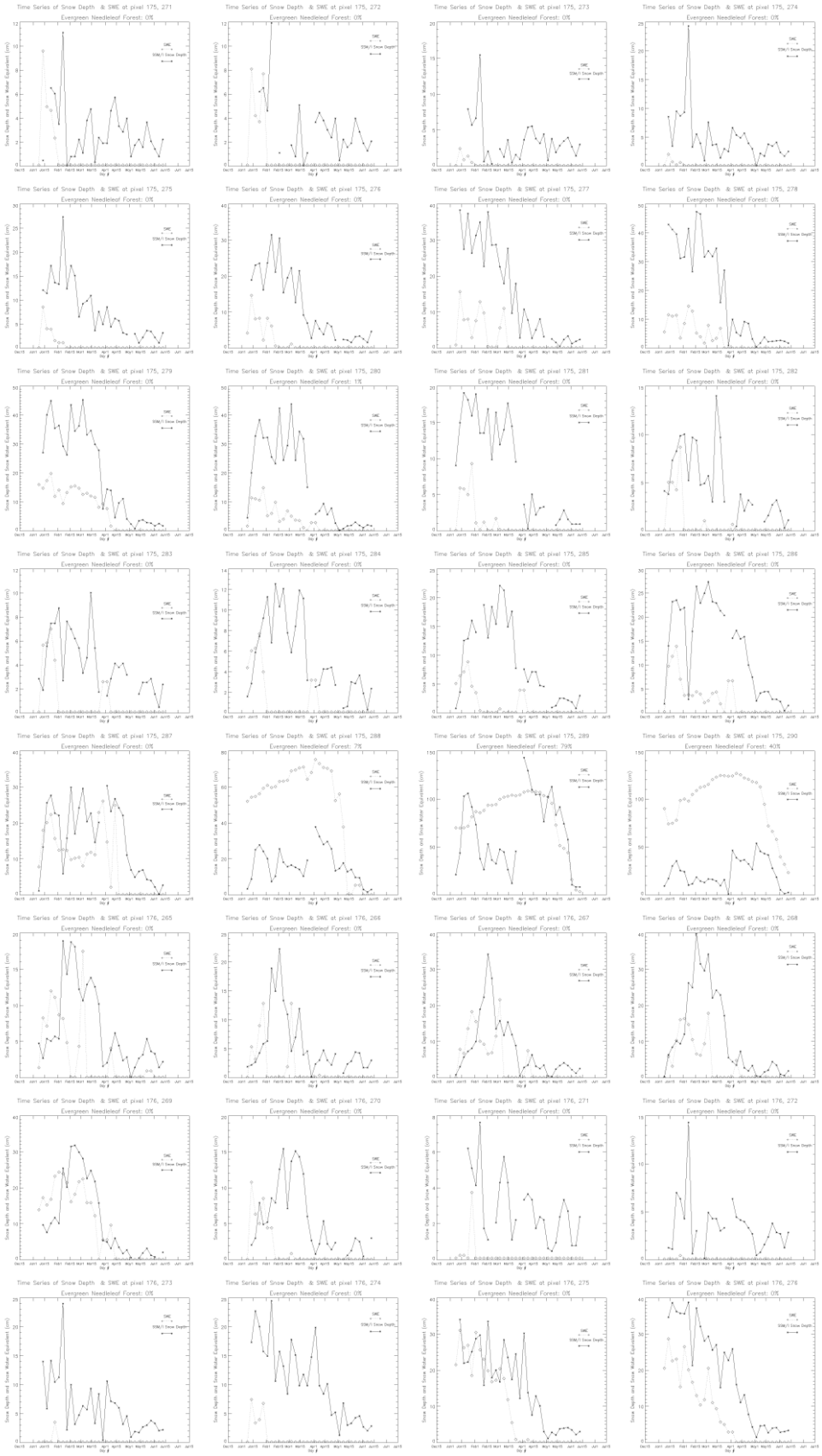
The index map #2 in Appendix A gives the (column, row) coordinates that identify the pixels in the Columbia Basin.

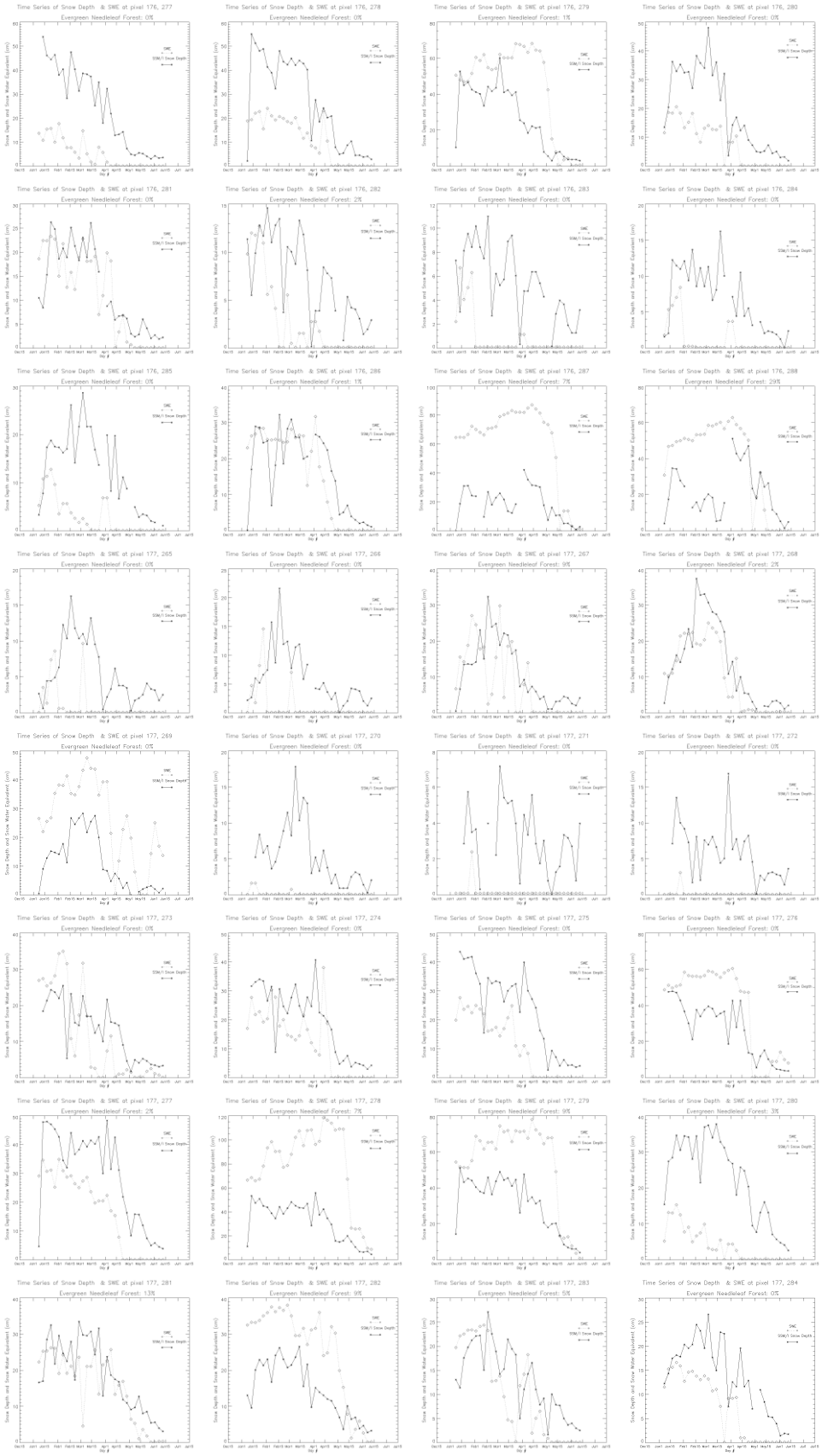


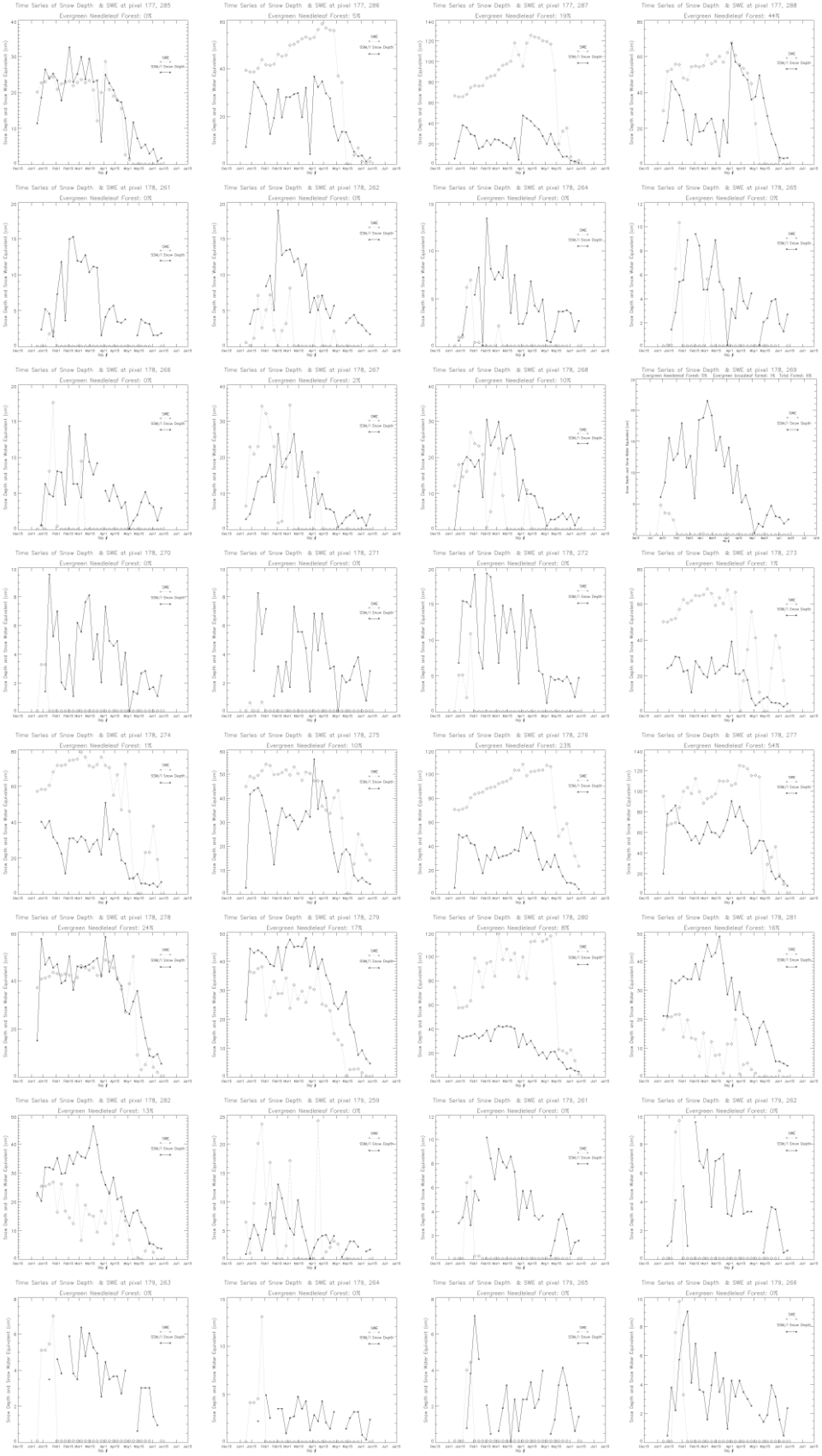

Time Series of Snow Depth & SWE at pixel 171, 278
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 171, 279
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 171, 280
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 171, 281
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 171, 282
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 171, 283
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 171, 284
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 171, 285
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 171, 286
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 171, 287
Evergreen Needleleaf Forest: 15%
Time Series of Snow Depth & SWE at pixel 171, 288
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth & SWE at pixel 171, 289
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 171, 290
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth & SWE at pixel 171, 291
Evergreen Needleleaf Forest: 39%
Time Series of Snow Depth & SWE at pixel 172, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 271
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 172, 272
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 172, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 275
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 172, 276
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 172, 277
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 172, 278
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 172, 279
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 280
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 172, 281
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 172, 282
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 172, 283
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 172, 284
Evergreen Needleleaf Forest: 1%
Snow Depth and Snow Water Equivalent (cm)
SWE
SSM/I Snow Depth

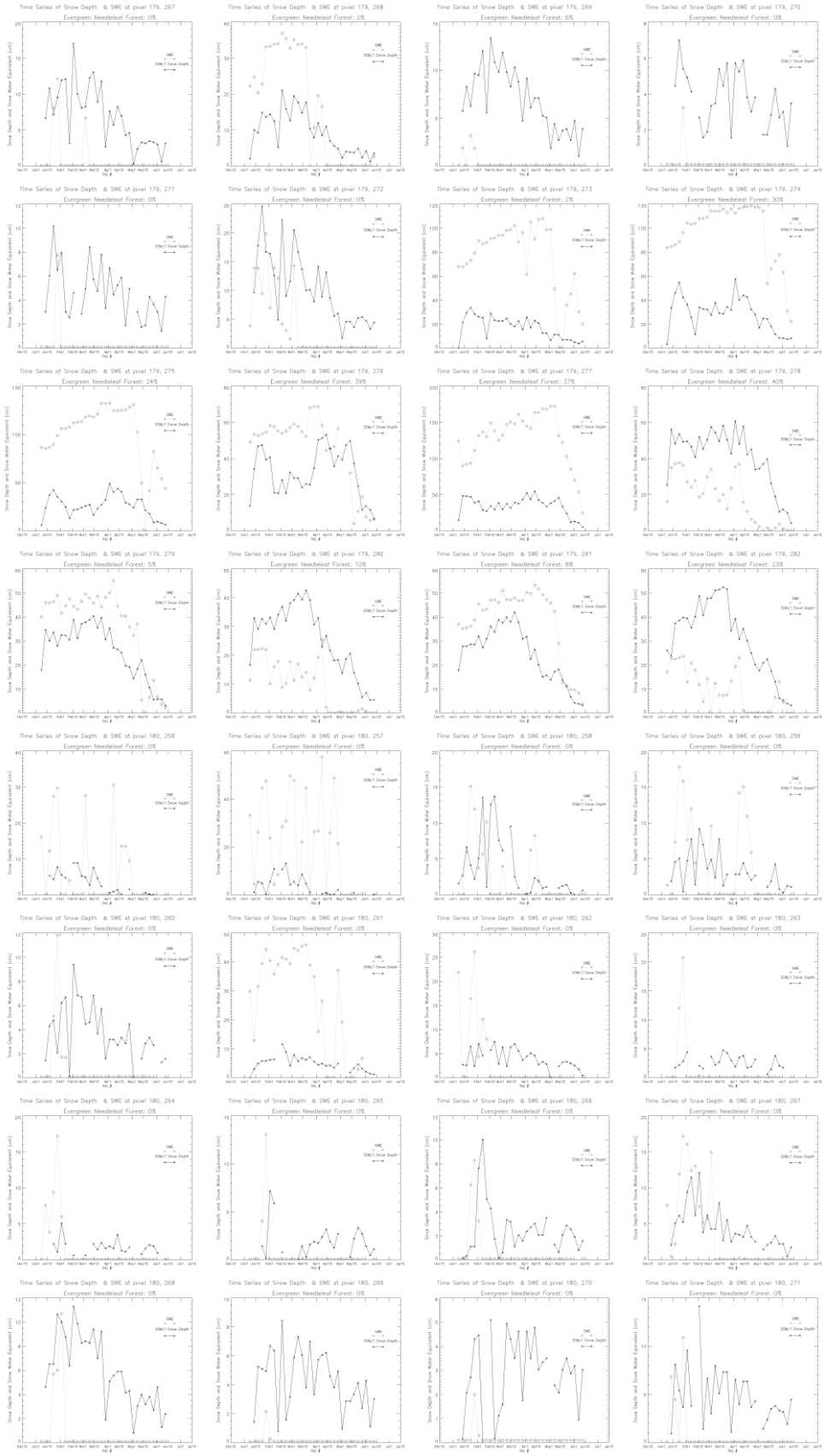

Time Series of Snow Depth & SWE at pixel 172, 285
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 172, 286
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 172, 287
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 172, 288
Evergreen Needleleaf Forest: 34%
Time Series of Snow Depth & SWE at pixel 172, 289
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth & SWE at pixel 172, 290
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth & SWE at pixel 173, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 268
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 173, 269
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 173, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 271
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 173, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 275
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 276
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 277
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 278
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 279
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 280
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 281
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 282
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 283
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 284
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 173, 285
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 173, 286
Evergreen Needleleaf Forest: 7%
Time Series of Snow Depth & SWE at pixel 173, 287
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth & SWE at pixel 173, 288
Evergreen Needleleaf Forest: 39%
Time Series of Snow Depth & SWE at pixel 173, 289
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 173, 290
Evergreen Needleleaf Forest: 47%
Time Series of Snow Depth & SWE at pixel 173, 291
Evergreen Needleleaf Forest: 69%

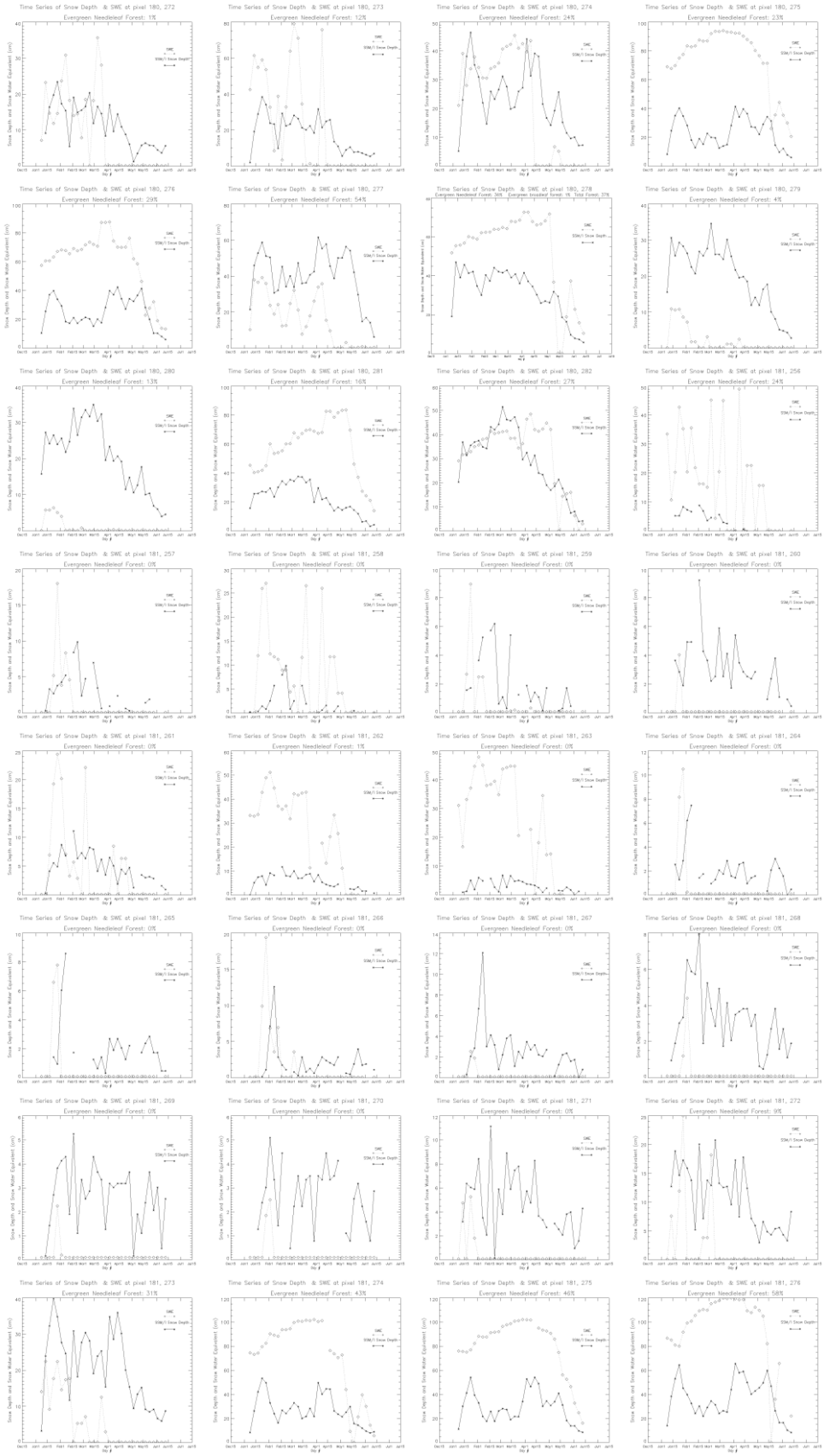

Time Series of Snow Depth & SWE at pixel 174, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 269
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 174, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 275
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 276
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 277
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 278
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 279
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 280
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 281
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 282
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 283
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 284
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 285
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 174, 286
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 174, 287
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth & SWE at pixel 174, 288
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 174, 289
Evergreen Needleleaf Forest: 39%
Time Series of Snow Depth & SWE at pixel 174, 290
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 175, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 270
Evergreen Needleleaf Forest: 0%

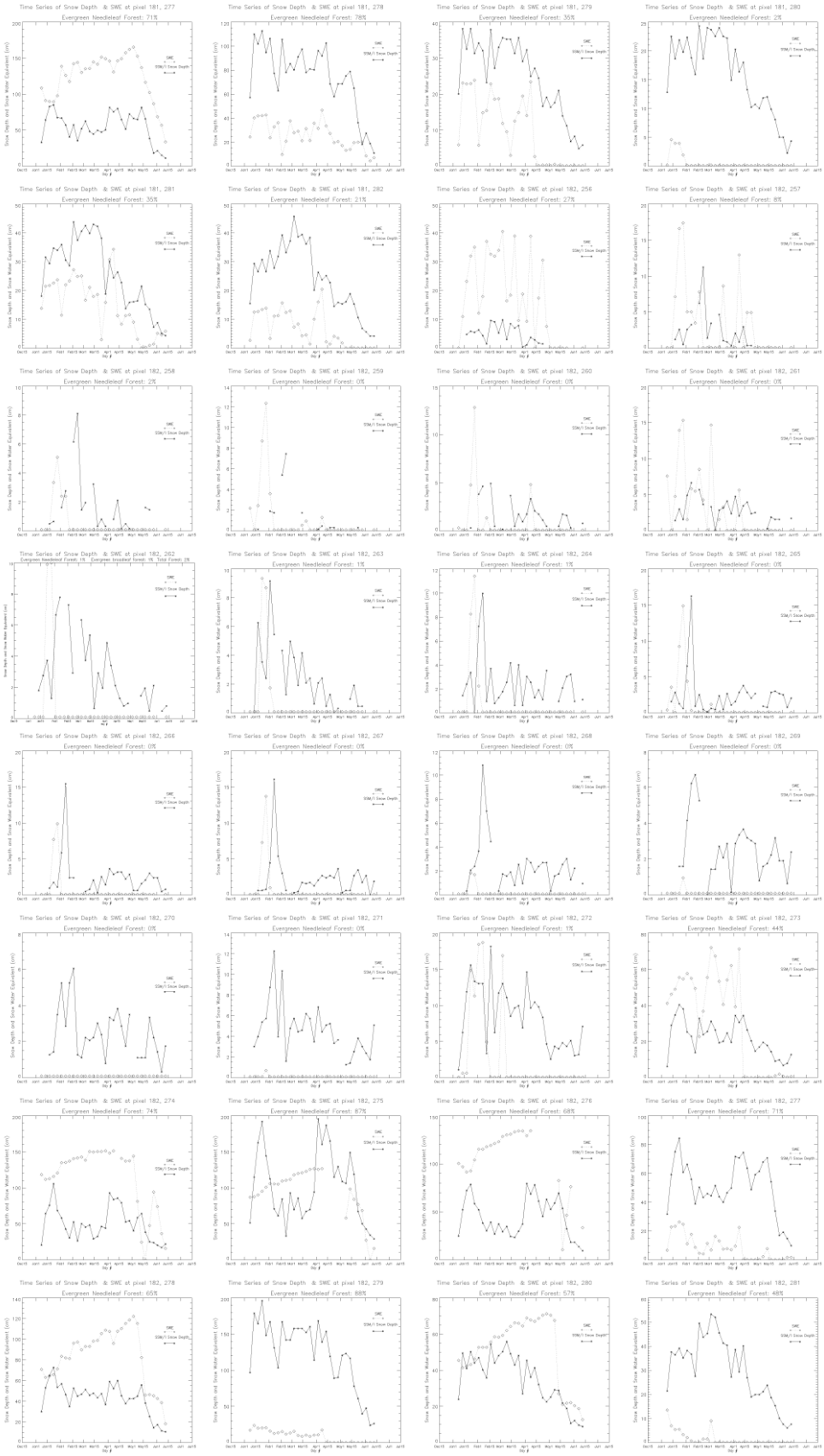

Time Series of Snow Depth & SWE at pixel 175, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 275
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 276
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 277
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 278
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 279
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 280
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 175, 281
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 282
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 283
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 284
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 285
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 286
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 287
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 175, 288
Evergreen Needleleaf Forest: 7%
Time Series of Snow Depth & SWE at pixel 175, 289
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 175, 290
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth & SWE at pixel 176, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 275
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 276
Evergreen Needleleaf Forest: 0%

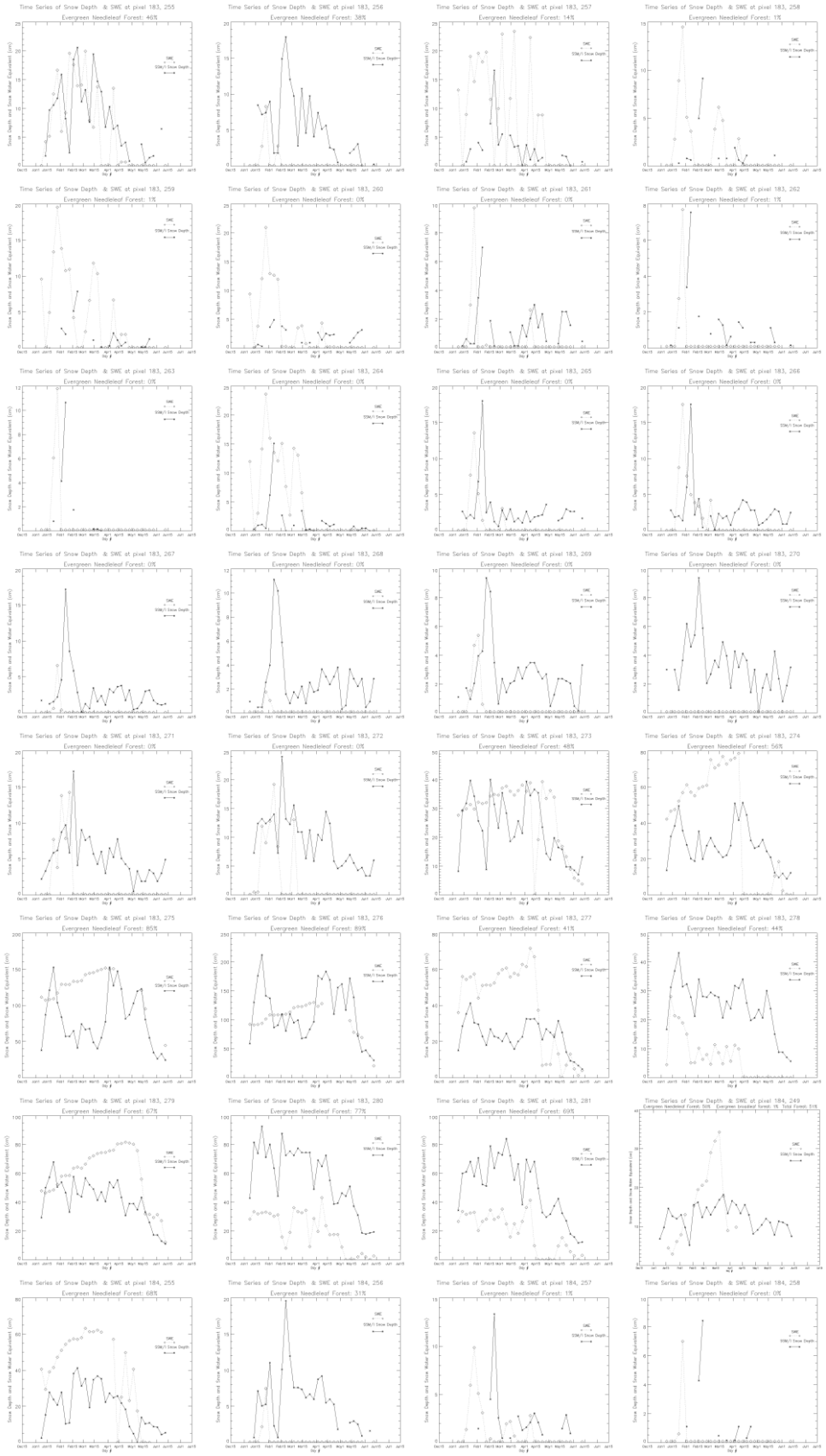

Time Series of Snow Depth & SWE at pixel 176, 277
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 278
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 279
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 176, 280
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 281
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 282
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 176, 283
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 284
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 285
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 176, 286
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 176, 287
Evergreen Needleleaf Forest: 7%
Time Series of Snow Depth & SWE at pixel 176, 288
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 177, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 267
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 177, 268
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 177, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 275
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 276
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 277
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 177, 278
Evergreen Needleleaf Forest: 7%
Time Series of Snow Depth & SWE at pixel 177, 279
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 177, 280
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 177, 281
Evergreen Needleleaf Forest: 13%
Time Series of Snow Depth & SWE at pixel 177, 282
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 177, 283
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 177, 284
Evergreen Needleleaf Forest: 0%

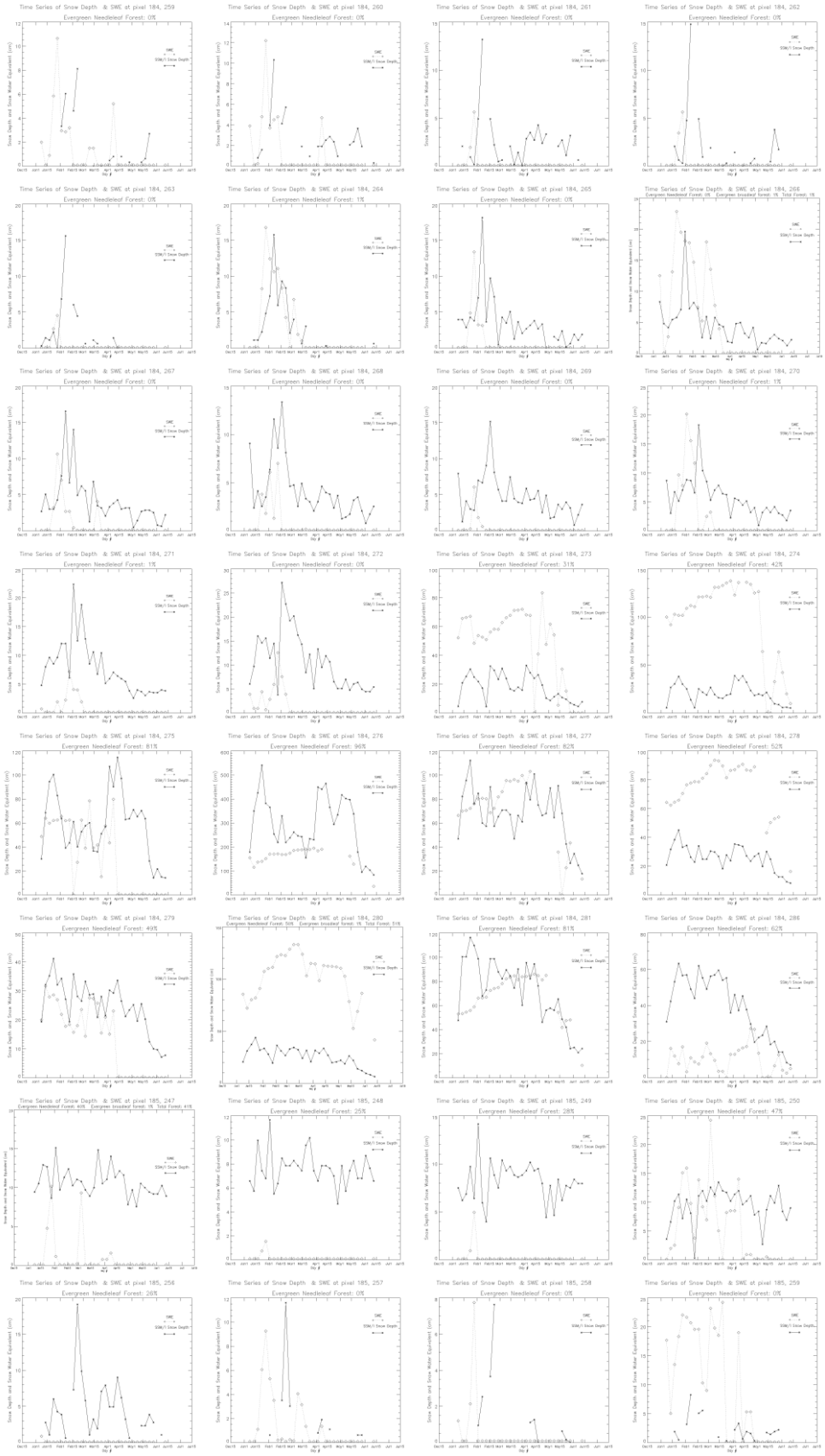

Time Series of Snow Depth & SWE at pixel 177, 285
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 177, 286
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 177, 287
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth & SWE at pixel 177, 288
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 178, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 267
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 178, 268
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth & SWE at pixel 178, 269
Evergreen Needleleaf Forest: 0% Evergreen Broadleaf Forest: 1% Total Forest: 6%
Time Series of Snow Depth & SWE at pixel 178, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 178, 273
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 178, 274
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 178, 275
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth & SWE at pixel 178, 276
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 178, 277
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth & SWE at pixel 178, 278
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 178, 279
Evergreen Needleleaf Forest: 17%
Time Series of Snow Depth & SWE at pixel 178, 280
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 178, 281
Evergreen Needleleaf Forest: 16%
Time Series of Snow Depth & SWE at pixel 178, 282
Evergreen Needleleaf Forest: 13%
Time Series of Snow Depth & SWE at pixel 179, 259
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 266
Evergreen Needleleaf Forest: 0%
SWE
SWI/I Snow Depth
Snow Depth and Snow Water Equivalent (cm)
Day of

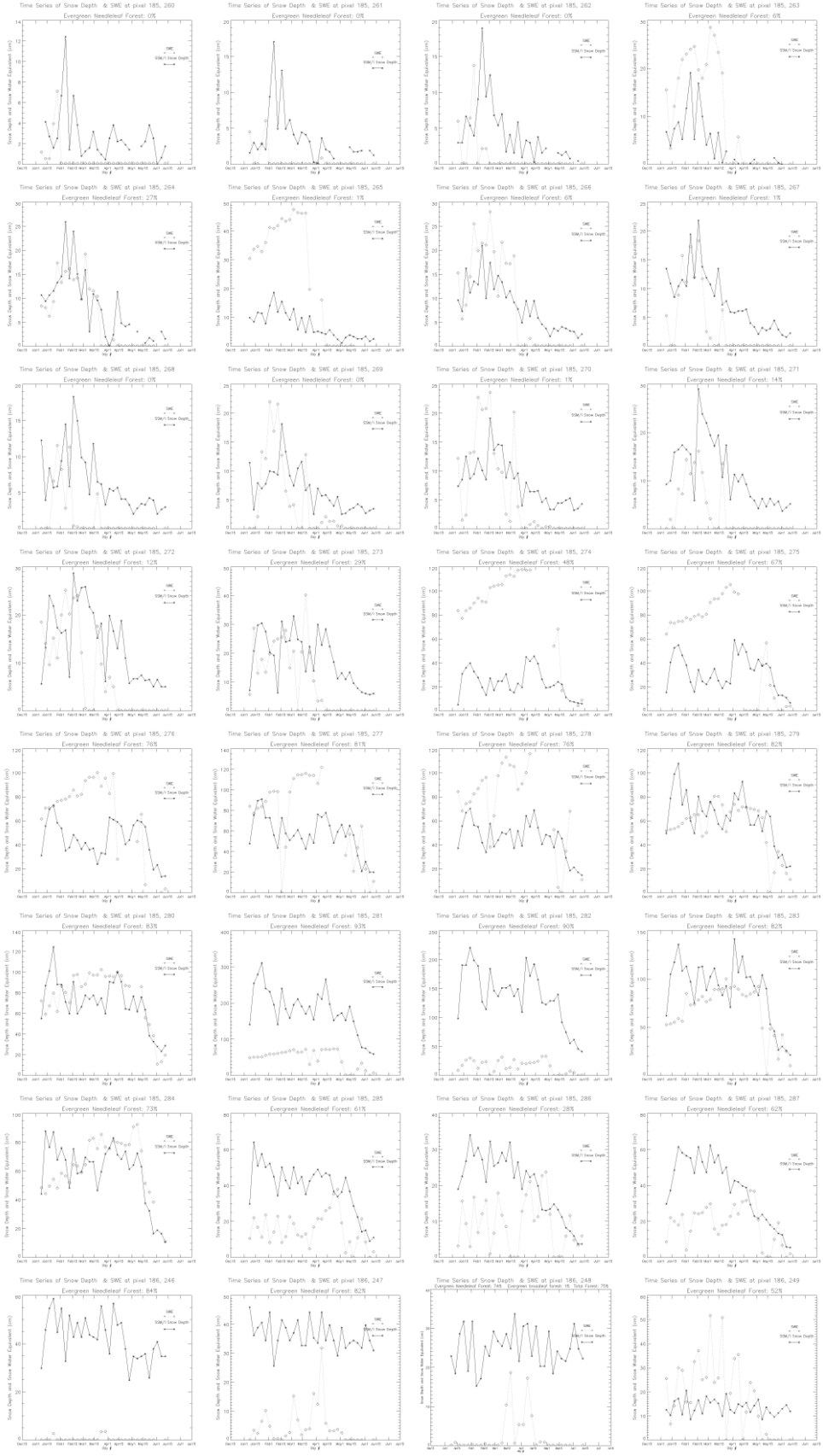

Time Series of Snow Depth & SWE at pixel 179, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 268
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 179, 269
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 179, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 179, 273
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 179, 274
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 179, 275
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 179, 276
Evergreen Needleleaf Forest: 39%
Time Series of Snow Depth & SWE at pixel 179, 277
Evergreen Needleleaf Forest: 37%
Time Series of Snow Depth & SWE at pixel 179, 278
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth & SWE at pixel 179, 279
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 179, 280
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth & SWE at pixel 179, 281
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 179, 282
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 180, 256
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 257
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 258
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 259
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 180, 271
Evergreen Needleleaf Forest: 0%

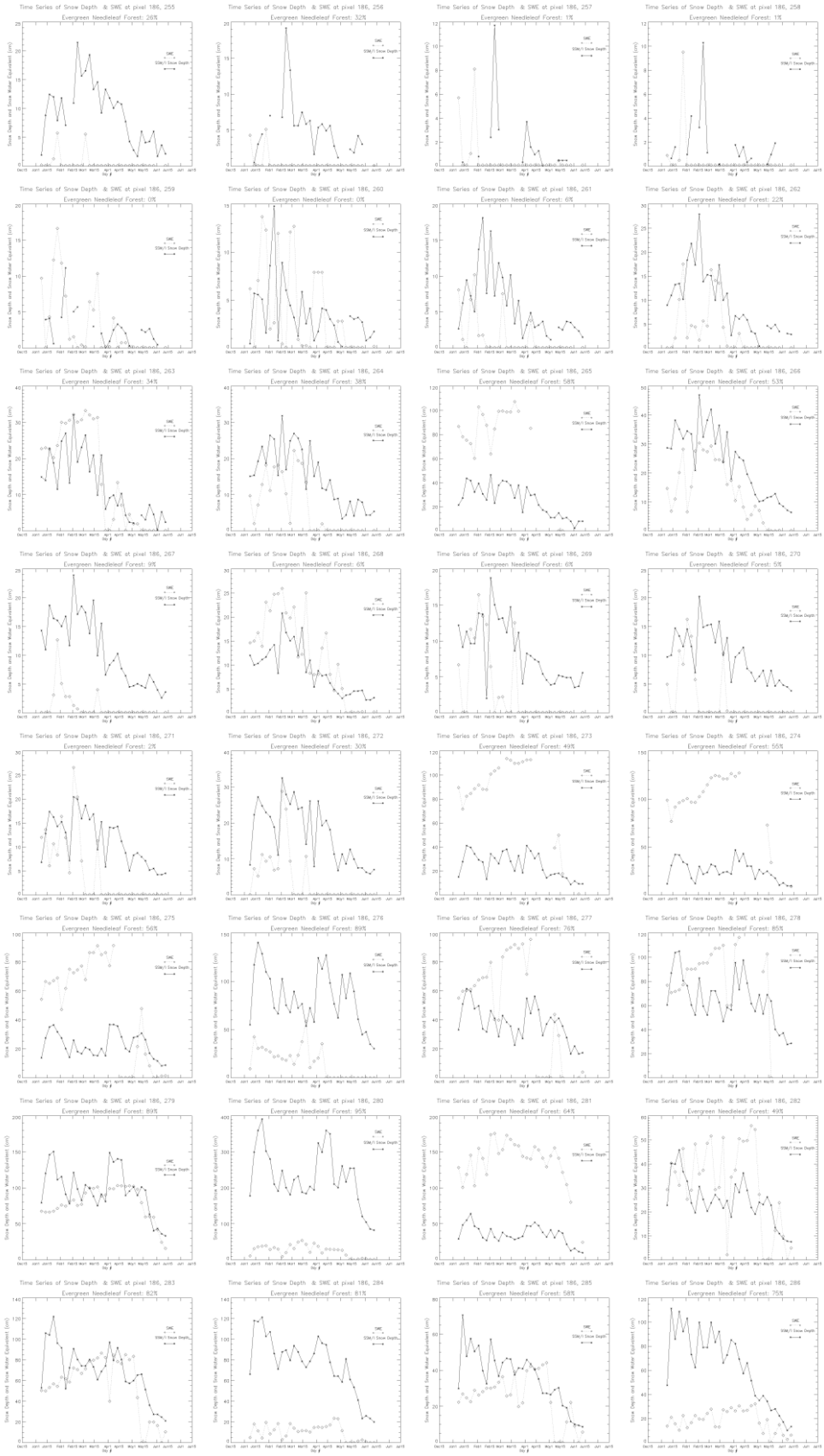

Time Series of Snow Depth & SWE at pixel 180, 272
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 180, 273
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 180, 274
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 180, 275
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 180, 276
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 180, 277
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth & SWE at pixel 180, 278
Evergreen Needleleaf Forest: 36% Evergreen broadleaf forest: 1% Total Forest: 37%
Time Series of Snow Depth & SWE at pixel 180, 279
Evergreen Needleleaf Forest: 4%
Time Series of Snow Depth & SWE at pixel 180, 280
Evergreen Needleleaf Forest: 13%
Time Series of Snow Depth & SWE at pixel 180, 281
Evergreen Needleleaf Forest: 16%
Time Series of Snow Depth & SWE at pixel 180, 282
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth & SWE at pixel 181, 256
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 181, 257
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 258
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 259
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 262
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 181, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 181, 272
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 181, 273
Evergreen Needleleaf Forest: 31%
Time Series of Snow Depth & SWE at pixel 181, 274
Evergreen Needleleaf Forest: 43%
Time Series of Snow Depth & SWE at pixel 181, 275
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth & SWE at pixel 181, 276
Evergreen Needleleaf Forest: 58%

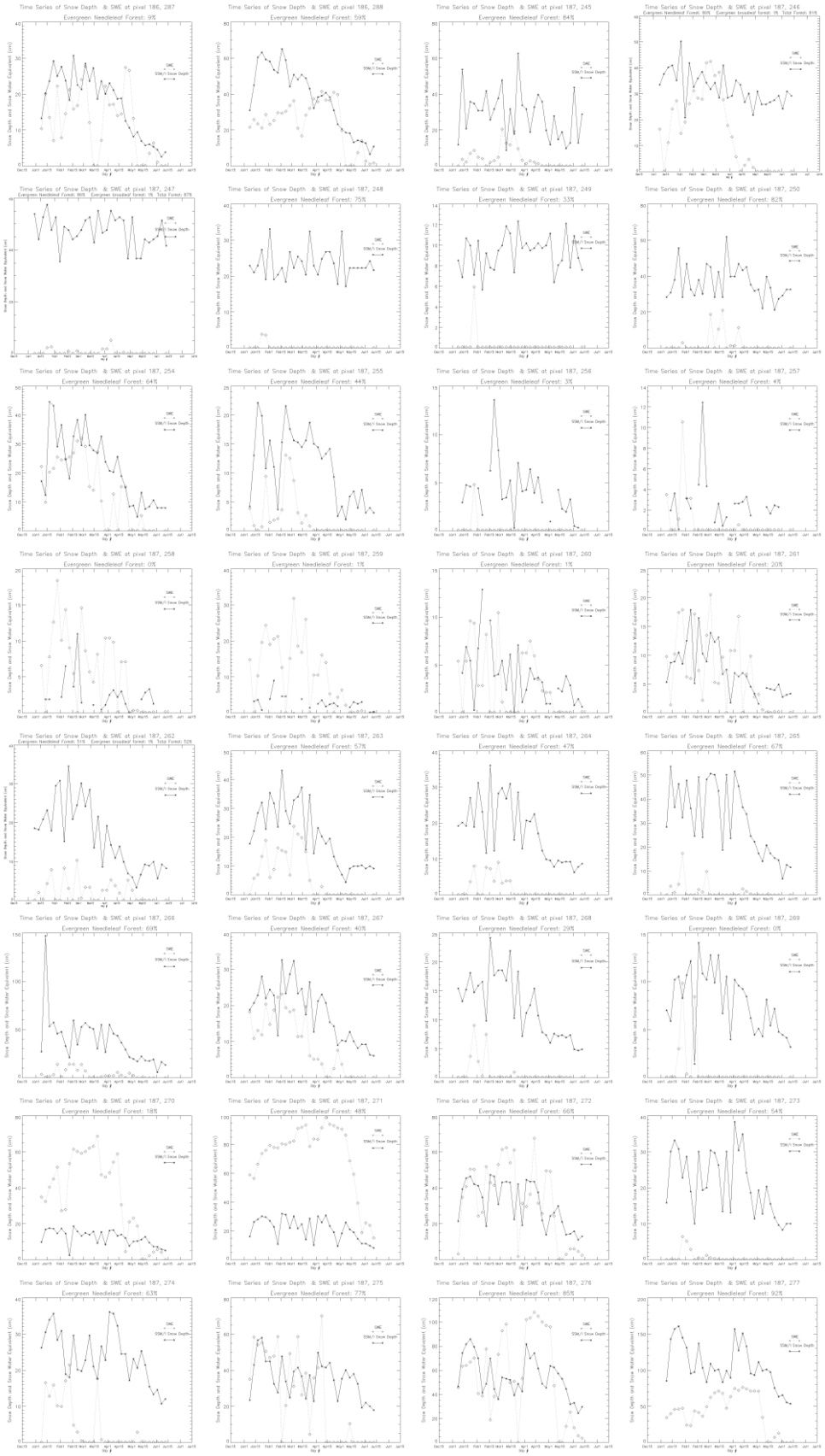

Time Series of Snow Depth & SWE at pixel 181, 277
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 181, 278
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 181, 279
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 181, 280
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 181, 281
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 181, 282
Evergreen Needleleaf Forest: 21%
Time Series of Snow Depth & SWE at pixel 182, 256
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth & SWE at pixel 182, 257
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 182, 258
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 182, 259
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 262
Evergreen Needleleaf Forest: 1% Evergreen Broadleaf forest: 1% Total Forest: 2%
Time Series of Snow Depth & SWE at pixel 182, 263
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 182, 264
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 182, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 182, 272
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 182, 273
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 182, 274
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 182, 275
Evergreen Needleleaf Forest: 87%
Time Series of Snow Depth & SWE at pixel 182, 276
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 182, 277
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 182, 278
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth & SWE at pixel 182, 279
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 182, 280
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 182, 281
Evergreen Needleleaf Forest: 48%

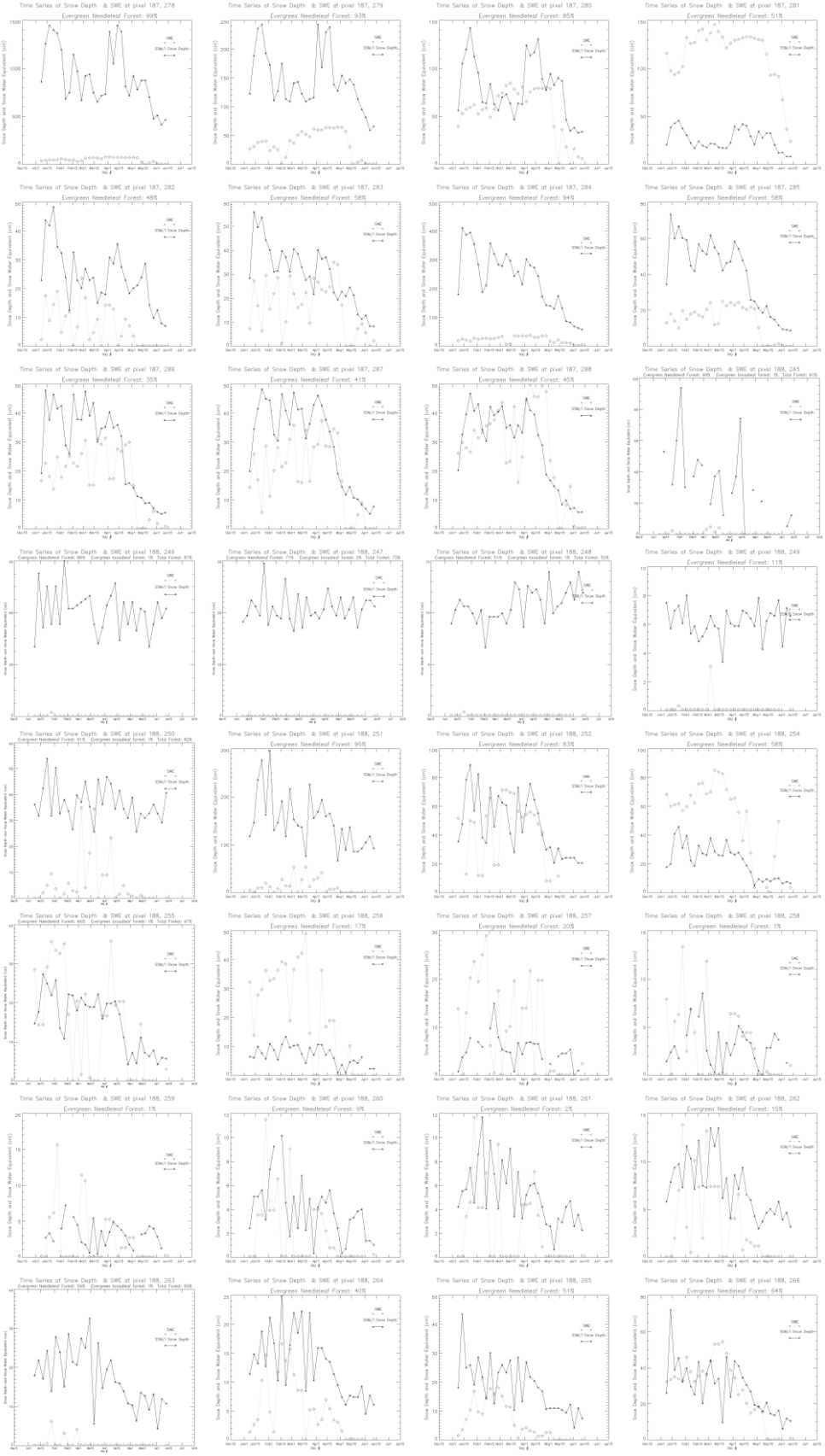

Time Series of Snow Depth & SWE at pixel 183, 255
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth & SWE at pixel 183, 256
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 183, 257
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth & SWE at pixel 183, 258
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 183, 259
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 183, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 262
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 183, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 183, 273
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth & SWE at pixel 183, 274
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth & SWE at pixel 183, 275
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth & SWE at pixel 183, 276
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 183, 277
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth & SWE at pixel 183, 278
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 183, 279
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 183, 280
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth & SWE at pixel 183, 281
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth & SWE at pixel 184, 249
Evergreen Needleleaf Forest: 50% Evergreen broadleaf forest: 1% Total Forest: 51%
Time Series of Snow Depth & SWE at pixel 184, 255
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 184, 256
Evergreen Needleleaf Forest: 31%
Time Series of Snow Depth & SWE at pixel 184, 257
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 184, 258
Evergreen Needleleaf Forest: 0%
SWE
SSM/I Snow Depth
Snow Depth and Snow Water Equivalent (cm)
day #

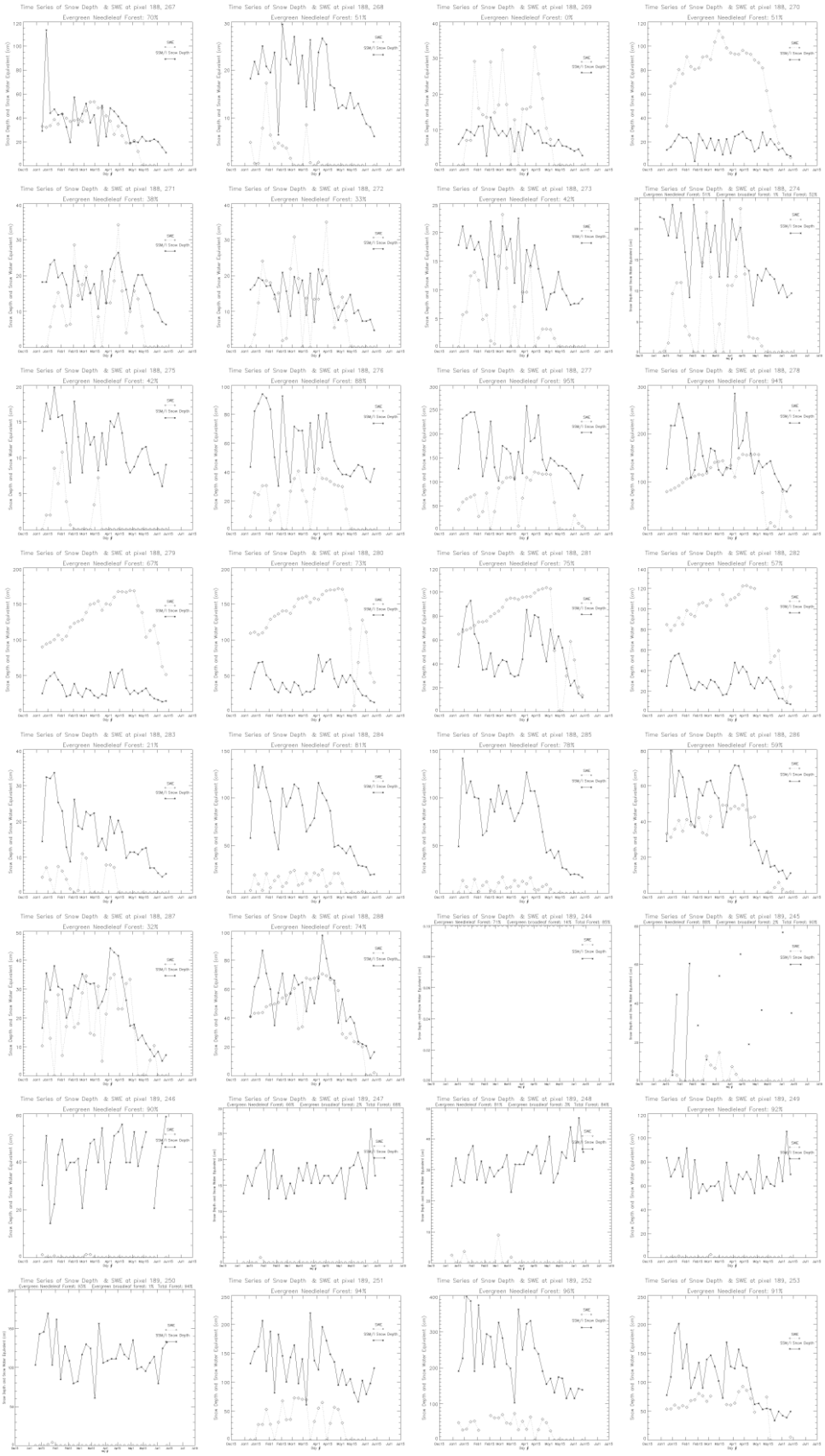

Time Series of Snow Depth & SWE at pixel 184, 259
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 264
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 184, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 266
Evergreen Needleleaf Forest: 0% Evergreen broadleaf forest: 1% Total Forest: 1%
Time Series of Snow Depth & SWE at pixel 184, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 270
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 184, 271
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 184, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 184, 273
Evergreen Needleleaf Forest: 31%
Time Series of Snow Depth & SWE at pixel 184, 274
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 184, 275
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 184, 276
Evergreen Needleleaf Forest: 96%
Time Series of Snow Depth & SWE at pixel 184, 277
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 184, 278
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 184, 279
Evergreen Needleleaf Forest: 49%
Time Series of Snow Depth & SWE at pixel 184, 280
Evergreen Needleleaf Forest: 50% Evergreen broadleaf forest: 1% Total Forest: 51%
Time Series of Snow Depth & SWE at pixel 184, 281
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 184, 286
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth & SWE at pixel 185, 247
Evergreen Needleleaf Forest: 60% Evergreen broadleaf forest: 1% Total Forest: 61%
Time Series of Snow Depth & SWE at pixel 185, 248
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth & SWE at pixel 185, 249
Evergreen Needleleaf Forest: 28%
Time Series of Snow Depth & SWE at pixel 185, 250
Evergreen Needleleaf Forest: 47%
Time Series of Snow Depth & SWE at pixel 185, 256
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth & SWE at pixel 185, 257
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 258
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 259
Evergreen Needleleaf Forest: 0%

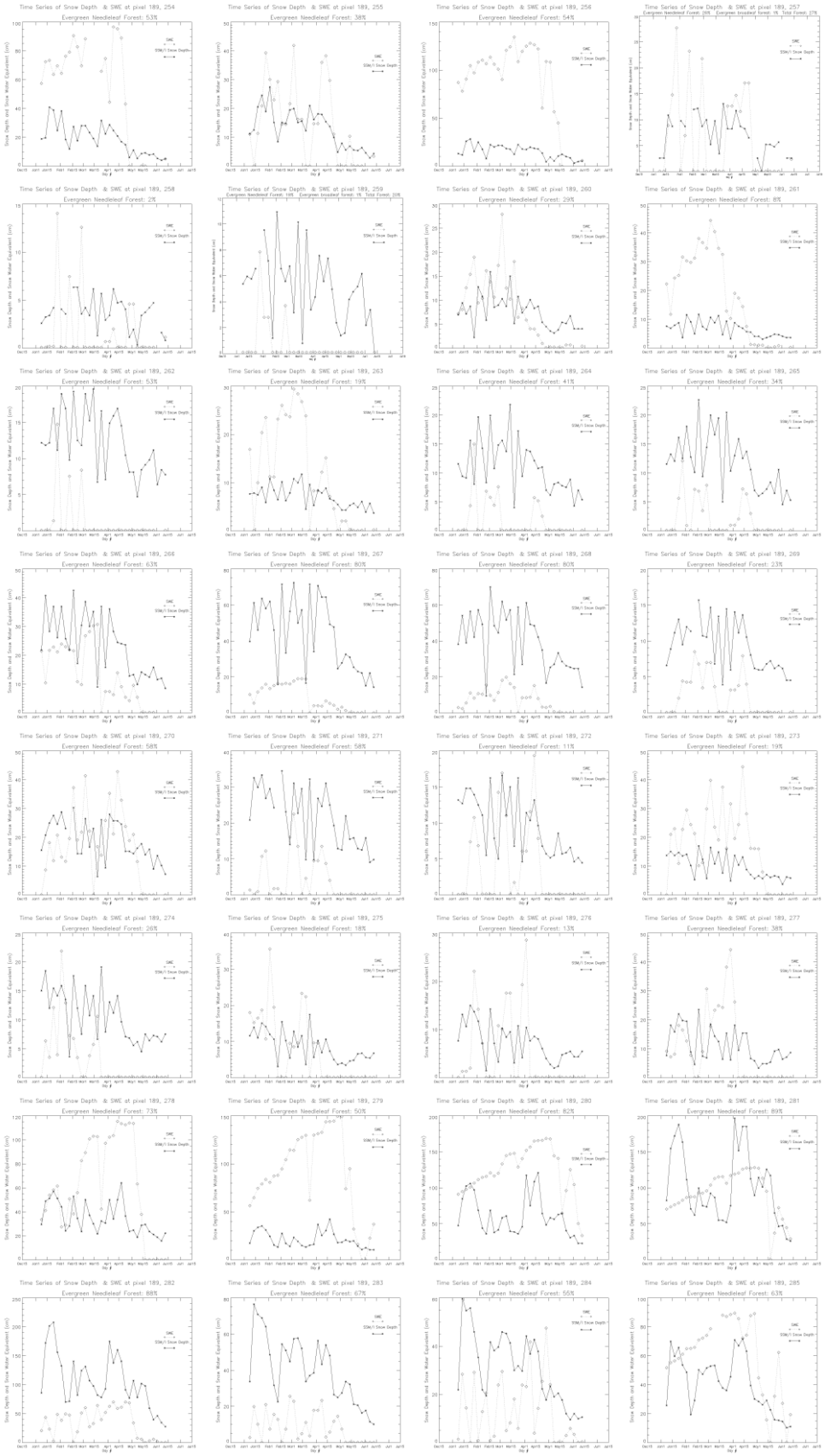

Time Series of Snow Depth & SWE at pixel 185, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 263
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 185, 264
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth & SWE at pixel 185, 265
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 185, 266
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 185, 267
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 185, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 185, 270
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 185, 271
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth & SWE at pixel 185, 272
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 185, 273
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 185, 274
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth & SWE at pixel 185, 275
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 185, 276
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 185, 277
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 185, 278
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 185, 279
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 185, 280
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 185, 281
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth & SWE at pixel 185, 282
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 185, 283
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 185, 284
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 185, 285
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth & SWE at pixel 185, 286
Evergreen Needleleaf Forest: 28%
Time Series of Snow Depth & SWE at pixel 185, 287
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth & SWE at pixel 186, 246
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 186, 247
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 186, 248
Evergreen Needleleaf Forest: 74% Evergreen broadleaf forest: 1% Total Forest: 75%
Time Series of Snow Depth & SWE at pixel 186, 249
Evergreen Needleleaf Forest: 52%

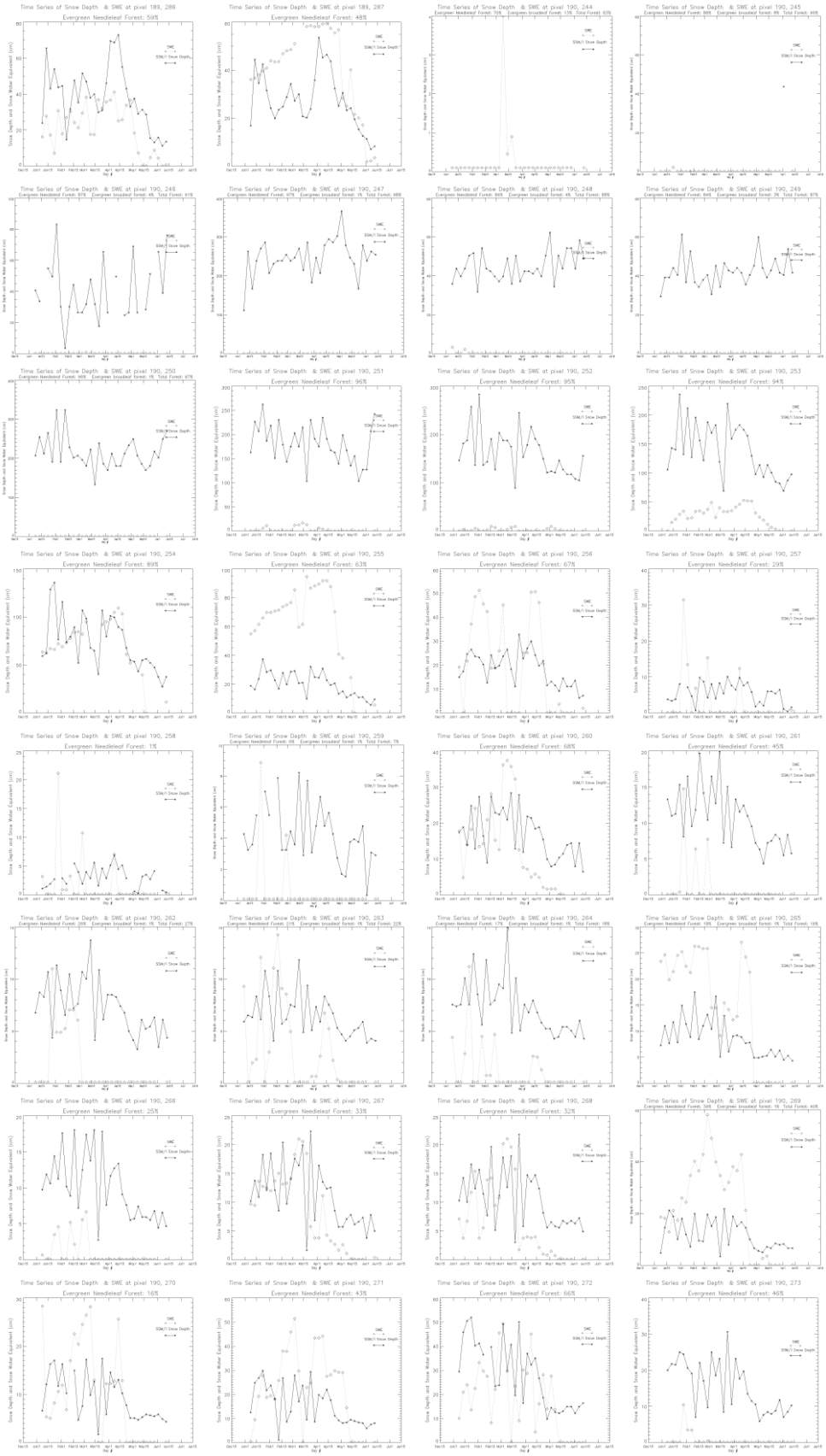

Time Series of Snow Depth & SWE at pixel 186, 255
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth & SWE at pixel 186, 256
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth & SWE at pixel 186, 257
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 186, 258
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 186, 259
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 186, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 186, 261
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 186, 262
Evergreen Needleleaf Forest: 22%
Time Series of Snow Depth & SWE at pixel 186, 263
Evergreen Needleleaf Forest: 34%
Time Series of Snow Depth & SWE at pixel 186, 264
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 186, 265
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 186, 266
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 186, 267
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 186, 268
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 186, 269
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 186, 270
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 186, 271
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 186, 272
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 186, 273
Evergreen Needleleaf Forest: 49%
Time Series of Snow Depth & SWE at pixel 186, 274
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 186, 275
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth & SWE at pixel 186, 276
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 186, 277
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 186, 278
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth & SWE at pixel 186, 279
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 186, 280
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 186, 281
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth & SWE at pixel 186, 282
Evergreen Needleleaf Forest: 49%
Time Series of Snow Depth & SWE at pixel 186, 283
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 186, 284
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 186, 285
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 186, 286
Evergreen Needleleaf Forest: 75%

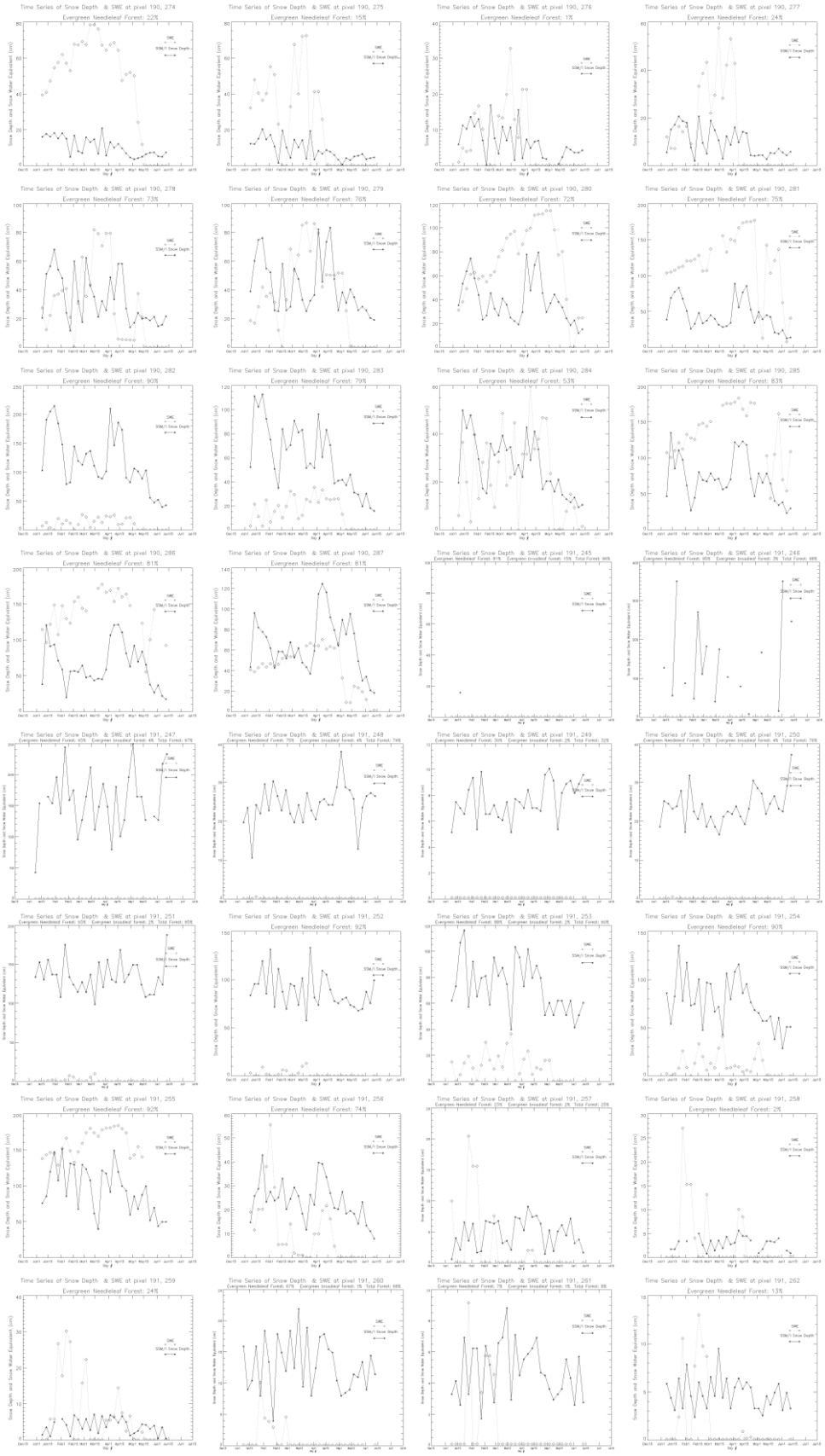

Time Series of Snow Depth & SWE at pixel 186, 287
Evergreen Needleleaf Forest: 99%
Time Series of Snow Depth & SWE at pixel 186, 288
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 187, 245
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 187, 246
Evergreen Needleleaf Forest: 80% Evergreen broadleaf forest: 1% Total Forest: 81%
Time Series of Snow Depth & SWE at pixel 187, 247
Evergreen Needleleaf Forest: 80% Evergreen broadleaf forest: 1% Total Forest: 87%
Time Series of Snow Depth & SWE at pixel 187, 248
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth & SWE at pixel 187, 249
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 187, 250
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 187, 254
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth & SWE at pixel 187, 255
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 187, 256
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 187, 257
Evergreen Needleleaf Forest: 4%
Time Series of Snow Depth & SWE at pixel 187, 258
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 187, 259
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 187, 260
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 187, 261
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth & SWE at pixel 187, 262
Evergreen Needleleaf Forest: 51% Evergreen broadleaf forest: 1% Total Forest: 52%
Time Series of Snow Depth & SWE at pixel 187, 263
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 187, 264
Evergreen Needleleaf Forest: 47%
Time Series of Snow Depth & SWE at pixel 187, 265
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 187, 266
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth & SWE at pixel 187, 267
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth & SWE at pixel 187, 268
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 187, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 187, 270
Evergreen Needleleaf Forest: 18%
Time Series of Snow Depth & SWE at pixel 187, 271
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth & SWE at pixel 187, 272
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 187, 273
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth & SWE at pixel 187, 274
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 187, 275
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth & SWE at pixel 187, 276
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth & SWE at pixel 187, 277
Evergreen Needleleaf Forest: 92%

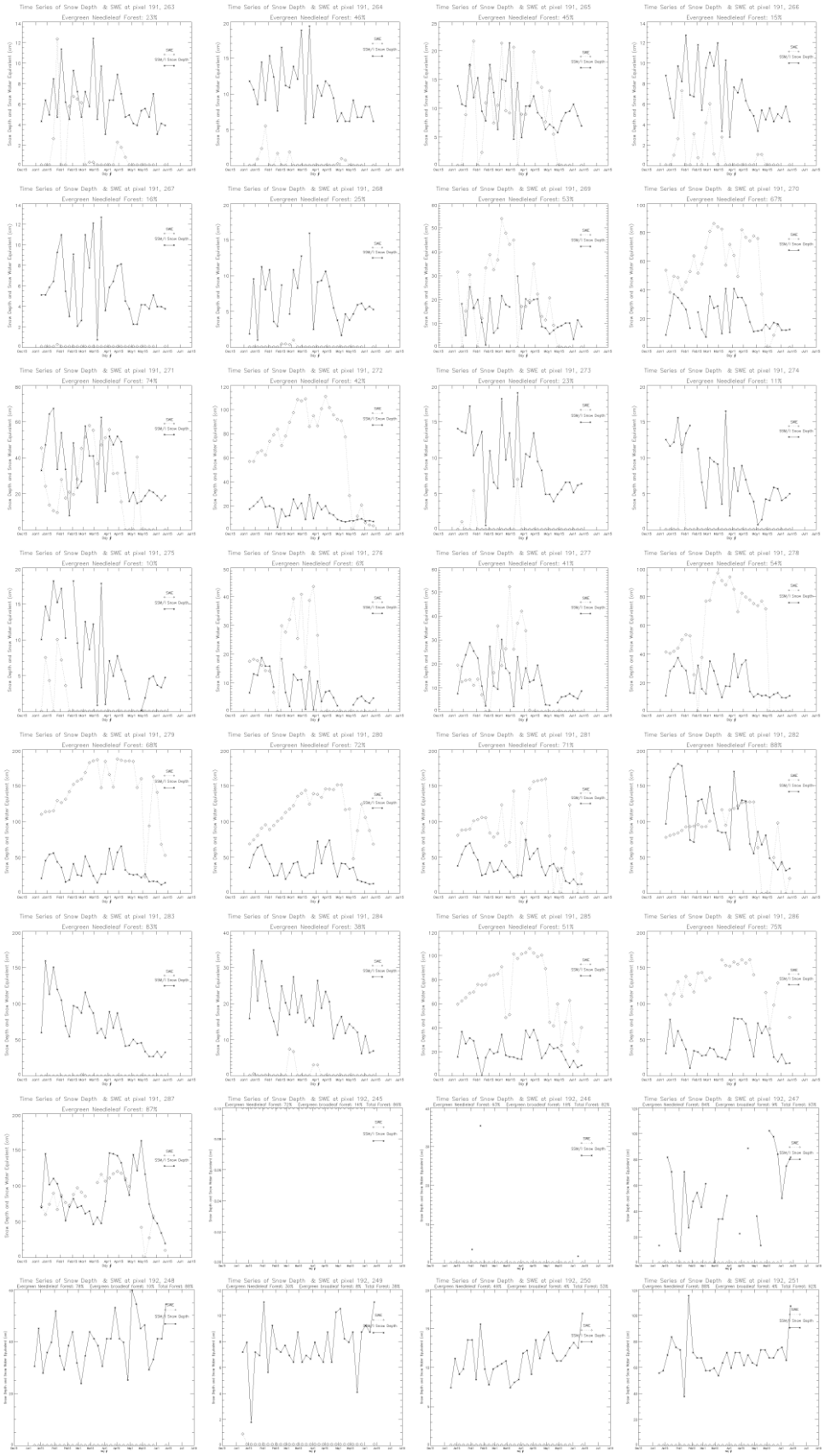

Time Series of Snow Depth & SWE at pixel 187, 278
Evergreen Needleleaf Forest: 99%
Time Series of Snow Depth & SWE at pixel 187, 279
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth & SWE at pixel 187, 280
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth & SWE at pixel 187, 281
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 187, 282
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth & SWE at pixel 187, 283
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 187, 284
Evergreen Needleleaf Forest: 94%
Time Series of Snow Depth & SWE at pixel 187, 285
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 187, 286
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 187, 287
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth & SWE at pixel 187, 288
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth & SWE at pixel 188, 245
Evergreen Needleleaf Forest: 90% Evergreen broadleaf forest: 1% Total Forest: 91%
Time Series of Snow Depth & SWE at pixel 188, 246
Evergreen Needleleaf Forest: 86% Evergreen broadleaf forest: 1% Total Forest: 87%
Time Series of Snow Depth & SWE at pixel 188, 247
Evergreen Needleleaf Forest: 71% Evergreen broadleaf forest: 2% Total Forest: 73%
Time Series of Snow Depth & SWE at pixel 188, 248
Evergreen Needleleaf Forest: 51% Evergreen broadleaf forest: 1% Total Forest: 52%
Time Series of Snow Depth & SWE at pixel 188, 249
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 188, 250
Evergreen Needleleaf Forest: 81% Evergreen broadleaf forest: 1% Total Forest: 82%
Time Series of Snow Depth & SWE at pixel 188, 251
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 188, 252
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 188, 254
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 188, 255
Evergreen Needleleaf Forest: 46% Evergreen broadleaf forest: 1% Total Forest: 47%
Time Series of Snow Depth & SWE at pixel 188, 256
Evergreen Needleleaf Forest: 17%
Time Series of Snow Depth & SWE at pixel 188, 257
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth & SWE at pixel 188, 258
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 188, 259
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 188, 260
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 188, 261
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 188, 262
Evergreen Needleleaf Forest: 15%
Time Series of Snow Depth & SWE at pixel 188, 263
Evergreen Needleleaf Forest: 59% Evergreen broadleaf forest: 1% Total Forest: 60%
Time Series of Snow Depth & SWE at pixel 188, 264
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth & SWE at pixel 188, 265
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 188, 266
Evergreen Needleleaf Forest: 64%


Time Series of Snow Depth & SWE at pixel 188, 267
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 188, 268
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 188, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 188, 270
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 188, 271
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 188, 272
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 188, 273
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 188, 274
Evergreen Needleleaf Forest: 51% Evergreen broadleaf forest: 1% Total Forest: 52%
Time Series of Snow Depth & SWE at pixel 188, 275
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 188, 276
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 188, 277
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 188, 278
Evergreen Needleleaf Forest: 94%
Time Series of Snow Depth & SWE at pixel 188, 279
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 188, 280
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 188, 281
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth & SWE at pixel 188, 282
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 188, 283
Evergreen Needleleaf Forest: 21%
Time Series of Snow Depth & SWE at pixel 188, 284
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 188, 285
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 188, 286
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 188, 287
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth & SWE at pixel 188, 288
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 189, 244
Evergreen Needleleaf Forest: 71% Evergreen broadleaf forest: 14% Total Forest: 85%
Time Series of Snow Depth & SWE at pixel 189, 245
Evergreen Needleleaf Forest: 88% Evergreen broadleaf forest: 2% Total Forest: 90%
Time Series of Snow Depth & SWE at pixel 189, 246
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 189, 247
Evergreen Needleleaf Forest: 90% Evergreen broadleaf forest: 2% Total Forest: 93%
Time Series of Snow Depth & SWE at pixel 189, 248
Evergreen Needleleaf Forest: 91% Evergreen broadleaf forest: 3% Total Forest: 94%
Time Series of Snow Depth & SWE at pixel 189, 249
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 189, 250
Evergreen Needleleaf Forest: 93% Evergreen broadleaf forest: 1% Total Forest: 94%
Time Series of Snow Depth & SWE at pixel 189, 251
Evergreen Needleleaf Forest: 94%
Time Series of Snow Depth & SWE at pixel 189, 252
Evergreen Needleleaf Forest: 96%
Time Series of Snow Depth & SWE at pixel 189, 253
Evergreen Needleleaf Forest: 91%


Time Series of Snow Depth & SWE at pixel 189, 254
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 189, 255
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 189, 256
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth & SWE at pixel 189, 257
Evergreen Needleleaf Forest: 33% Evergreen broadleaf forest: 1% Total Forest: 27%
Time Series of Snow Depth & SWE at pixel 189, 258
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 189, 259
Evergreen Needleleaf Forest: 19% Evergreen broadleaf forest: 1% Total Forest: 20%
Time Series of Snow Depth & SWE at pixel 189, 260
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 189, 261
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 189, 262
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 189, 263
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth & SWE at pixel 189, 264
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth & SWE at pixel 189, 265
Evergreen Needleleaf Forest: 34%
Time Series of Snow Depth & SWE at pixel 189, 266
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 189, 267
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 189, 268
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 189, 269
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 189, 270
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 189, 271
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 189, 272
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 189, 273
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth & SWE at pixel 189, 274
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth & SWE at pixel 189, 275
Evergreen Needleleaf Forest: 18%
Time Series of Snow Depth & SWE at pixel 189, 276
Evergreen Needleleaf Forest: 13%
Time Series of Snow Depth & SWE at pixel 189, 277
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 189, 278
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 189, 279
Evergreen Needleleaf Forest: 50%
Time Series of Snow Depth & SWE at pixel 189, 280
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 189, 281
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 189, 282
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 189, 283
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 189, 284
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 189, 285
Evergreen Needleleaf Forest: 63%


Time Series of Snow Depth & SWE at pixel 189, 286
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 189, 287
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth & SWE at pixel 190, 244
Time Series of Snow Depth & SWE at pixel 190, 245
Time Series of Snow Depth & SWE at pixel 190, 246
Time Series of Snow Depth & SWE at pixel 190, 247
Time Series of Snow Depth & SWE at pixel 190, 248
Time Series of Snow Depth & SWE at pixel 190, 249
Time Series of Snow Depth & SWE at pixel 190, 250
Time Series of Snow Depth & SWE at pixel 190, 251
Evergreen Needleleaf Forest: 96%
Time Series of Snow Depth & SWE at pixel 190, 252
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 190, 253
Evergreen Needleleaf Forest: 94%
Time Series of Snow Depth & SWE at pixel 190, 254
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 190, 255
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 190, 256
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 190, 257
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 190, 258
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 190, 259
Time Series of Snow Depth & SWE at pixel 190, 260
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 190, 261
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth & SWE at pixel 190, 262
Time Series of Snow Depth & SWE at pixel 190, 263
Time Series of Snow Depth & SWE at pixel 190, 264
Time Series of Snow Depth & SWE at pixel 190, 265
Time Series of Snow Depth & SWE at pixel 190, 266
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth & SWE at pixel 190, 267
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 190, 268
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth & SWE at pixel 190, 269
Time Series of Snow Depth & SWE at pixel 190, 270
Evergreen Needleleaf Forest: 16%
Time Series of Snow Depth & SWE at pixel 190, 271
Evergreen Needleleaf Forest: 43%
Time Series of Snow Depth & SWE at pixel 190, 272
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 190, 273
Evergreen Needleleaf Forest: 46%


Time Series of Snow Depth & SWE at pixel 190, 274
Evergreen Needleleaf Forest: 22%
Time Series of Snow Depth & SWE at pixel 190, 275
Evergreen Needleleaf Forest: 15%
Time Series of Snow Depth & SWE at pixel 190, 276
Evergreen Needleleaf Forest: 17%
Time Series of Snow Depth & SWE at pixel 190, 277
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 190, 278
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 190, 279
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 190, 280
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 190, 281
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth & SWE at pixel 190, 282
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 190, 283
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 190, 284
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 190, 285
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 190, 286
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 190, 287
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 191, 245
Time Series of Snow Depth & SWE at pixel 191, 246
Time Series of Snow Depth & SWE at pixel 191, 247
Time Series of Snow Depth & SWE at pixel 191, 248
Time Series of Snow Depth & SWE at pixel 191, 249
Time Series of Snow Depth & SWE at pixel 191, 250
Time Series of Snow Depth & SWE at pixel 191, 251
Time Series of Snow Depth & SWE at pixel 191, 252
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 191, 253
Time Series of Snow Depth & SWE at pixel 191, 254
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 191, 255
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 191, 256
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 191, 257
Time Series of Snow Depth & SWE at pixel 191, 258
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 191, 259
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 191, 260
Time Series of Snow Depth & SWE at pixel 191, 261
Time Series of Snow Depth & SWE at pixel 191, 262
Evergreen Needleleaf Forest: 13%


Time Series of Snow Depth & SWE at pixel 191, 263
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 191, 264
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth & SWE at pixel 191, 265
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth & SWE at pixel 191, 266
Evergreen Needleleaf Forest: 15%
Time Series of Snow Depth & SWE at pixel 191, 267
Evergreen Needleleaf Forest: 16%
Time Series of Snow Depth & SWE at pixel 191, 268
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth & SWE at pixel 191, 269
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 191, 270
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 191, 271
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 191, 272
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 191, 273
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 191, 274
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 191, 275
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth & SWE at pixel 191, 276
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 191, 277
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth & SWE at pixel 191, 278
Evergreen Needleleaf Forest: 54%
Time Series of Snow Depth & SWE at pixel 191, 279
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 191, 280
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 191, 281
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 191, 282
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 191, 283
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 191, 284
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 191, 285
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 191, 286
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth & SWE at pixel 191, 287
Evergreen Needleleaf Forest: 87%
Time Series of Snow Depth & SWE at pixel 192, 245
Time Series of Snow Depth & SWE at pixel 192, 246
Time Series of Snow Depth & SWE at pixel 192, 247
Time Series of Snow Depth & SWE at pixel 192, 248
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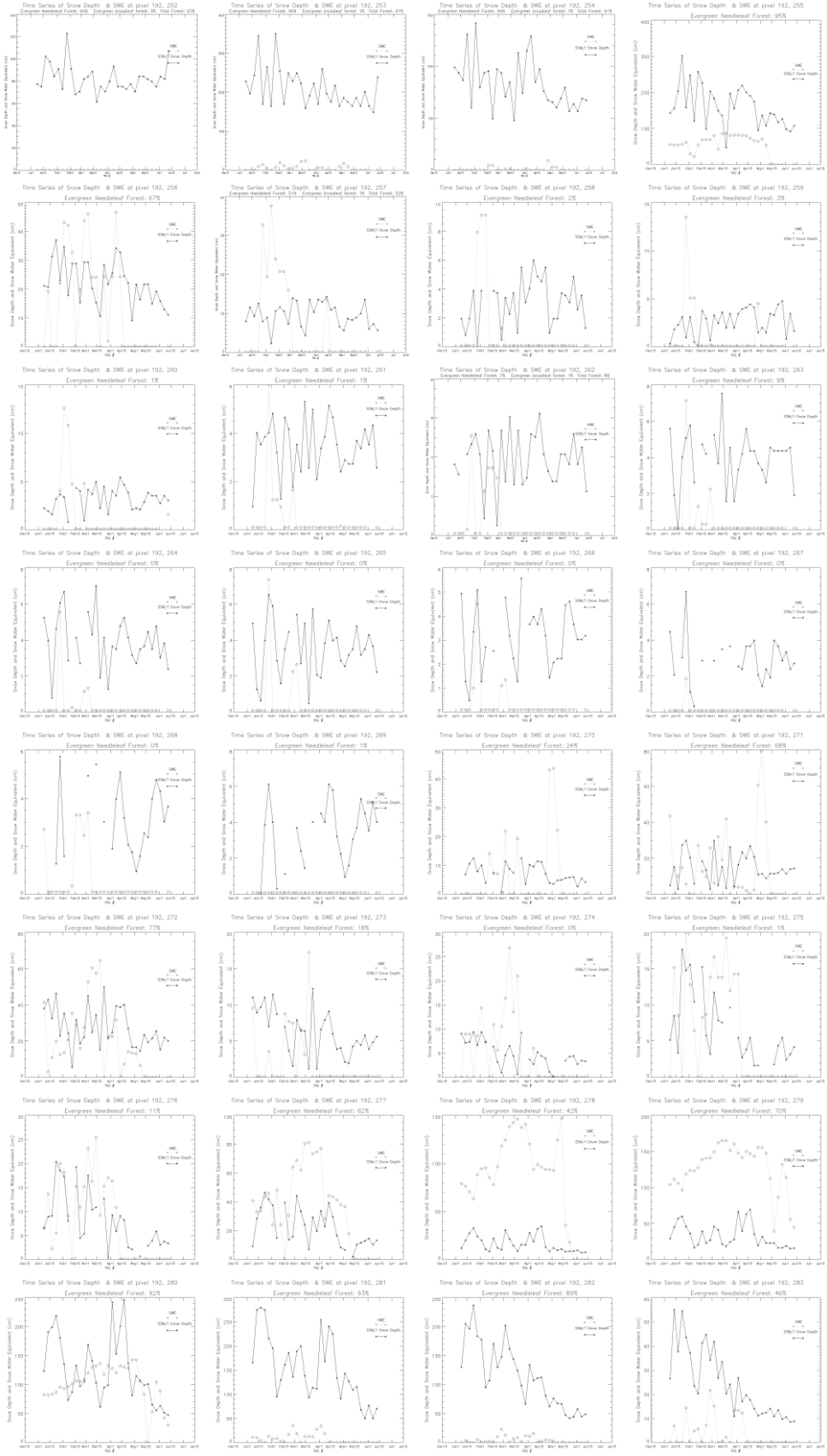
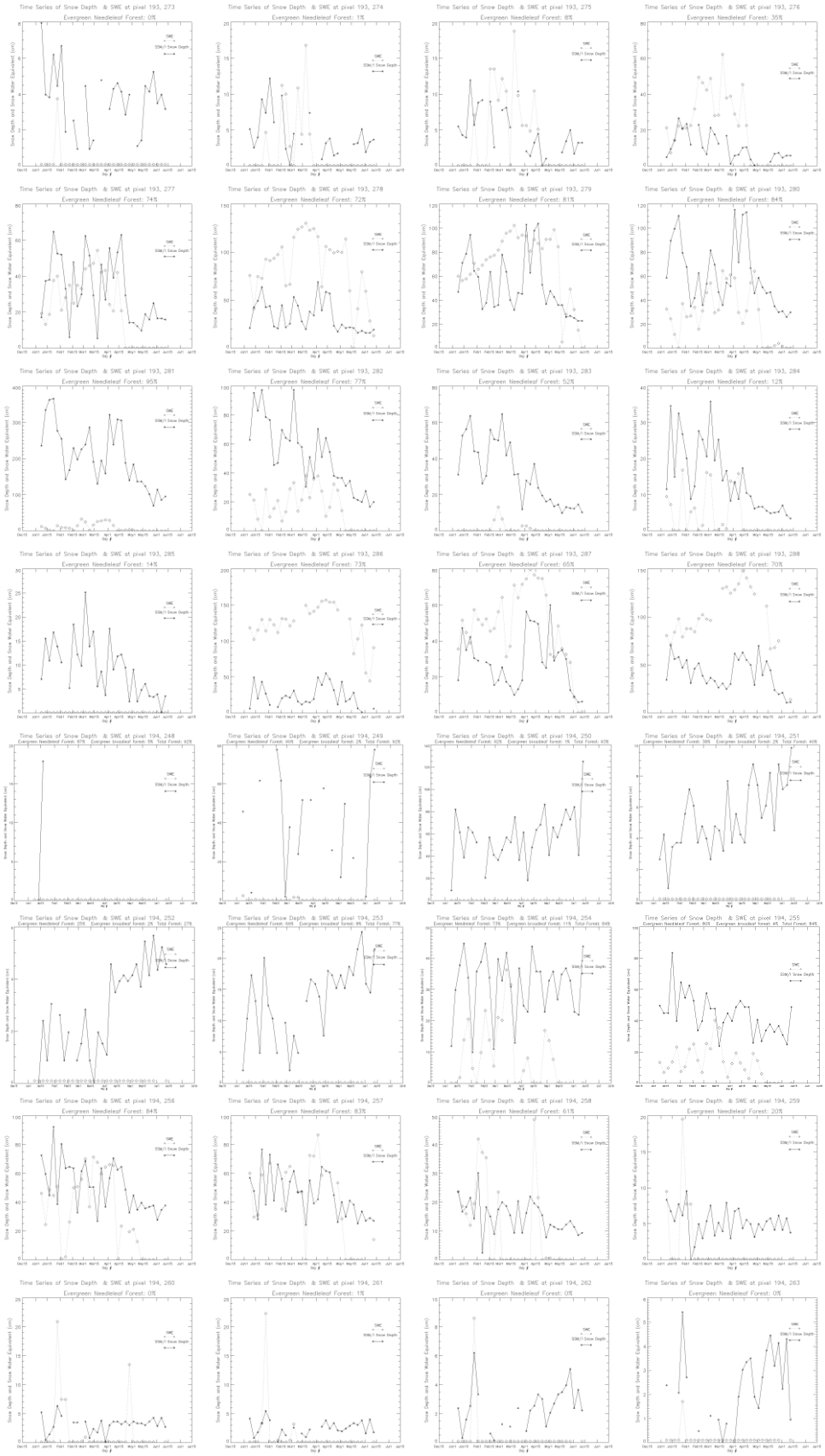
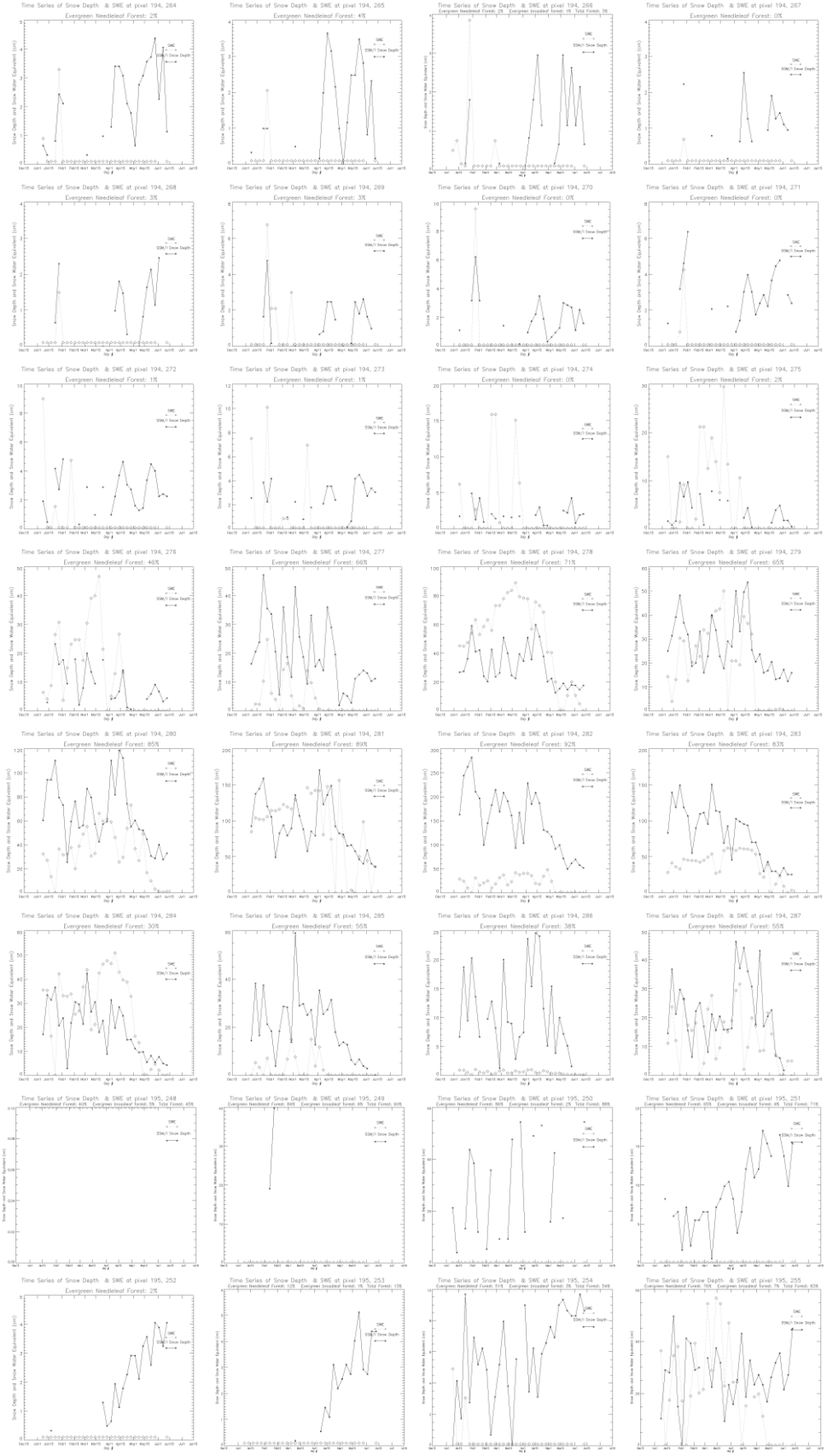
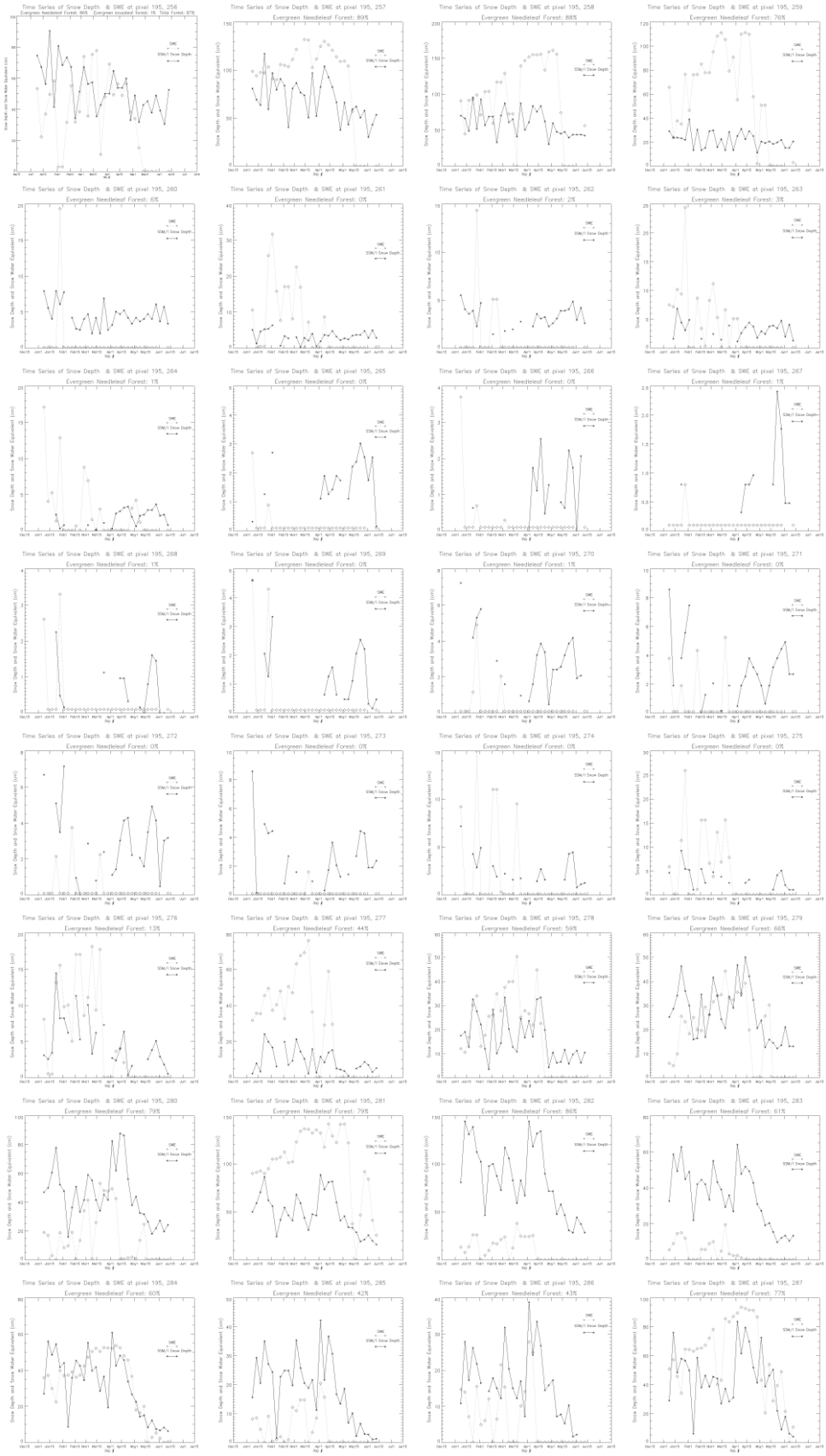
Time Series of Snow Depth & SWE at pixel 192, 250
Time Series of Snow Depth & SWE at pixel 192, 251

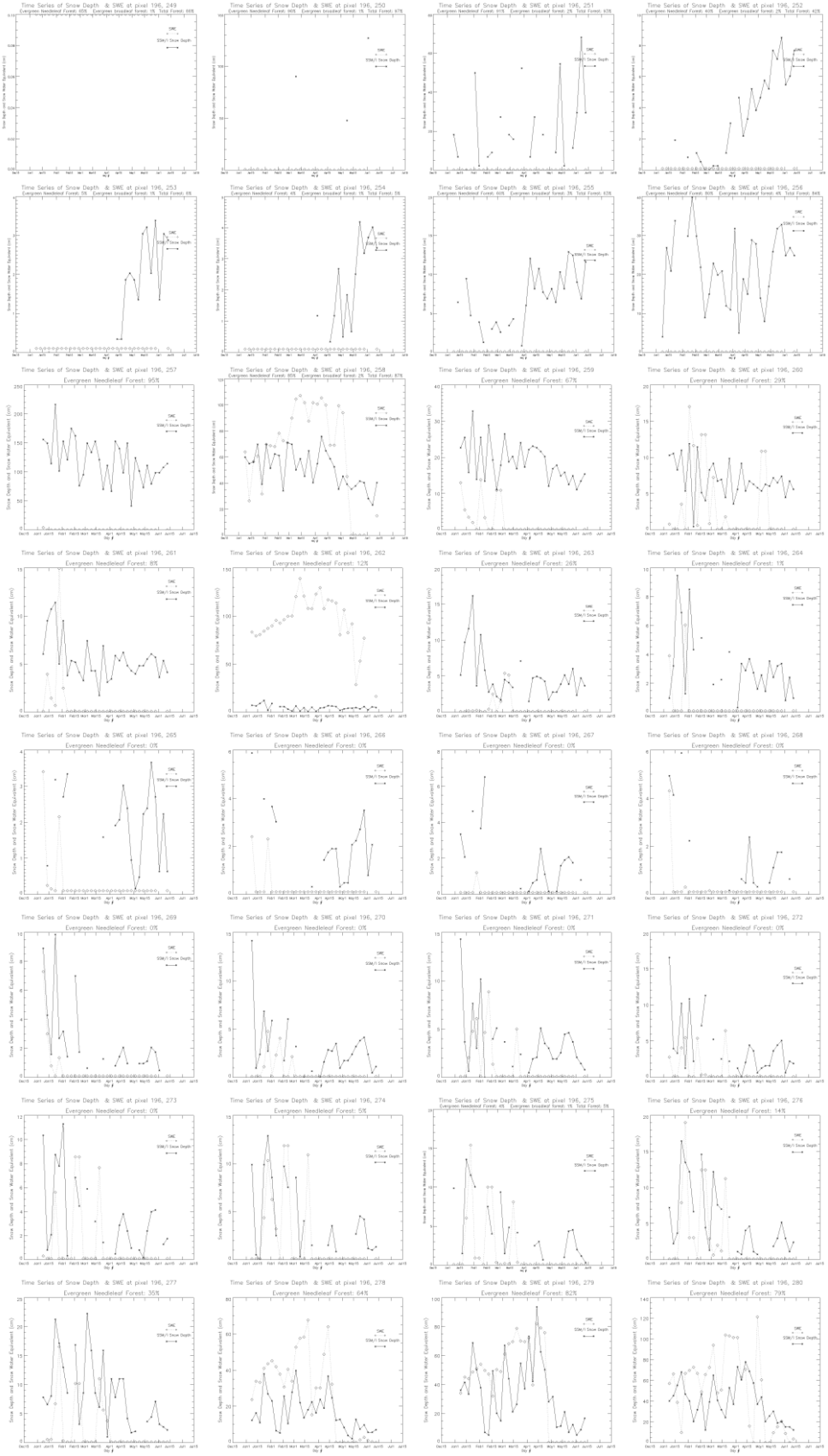

Time Series of Snow Depth & SWE at pixel 192, 252
Evergreen Needleleaf Forest: 93%
Evergreen broadleaf forest: 3%
Total Forest: 93%
Time Series of Snow Depth & SWE at pixel 192, 253
Evergreen Needleleaf Forest: 90%
Evergreen broadleaf forest: 1%
Total Forest: 97%
Time Series of Snow Depth & SWE at pixel 192, 254
Evergreen Needleleaf Forest: 90%
Evergreen broadleaf forest: 1%
Total Forest: 91%
Time Series of Snow Depth & SWE at pixel 192, 255
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 192, 256
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 192, 257
Evergreen Needleleaf Forest: 51%
Evergreen broadleaf forest: 1%
Total Forest: 52%
Time Series of Snow Depth & SWE at pixel 192, 258
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 192, 259
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 192, 260
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 192, 261
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 192, 262
Evergreen Needleleaf Forest: 7%
Evergreen broadleaf forest: 1%
Total Forest: 8%
Time Series of Snow Depth & SWE at pixel 192, 263
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 192, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 192, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 192, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 192, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 192, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 192, 269
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 192, 270
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 192, 271
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 192, 272
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth & SWE at pixel 192, 273
Evergreen Needleleaf Forest: 18%
Time Series of Snow Depth & SWE at pixel 192, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 192, 275
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 192, 276
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 192, 277
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth & SWE at pixel 192, 278
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 192, 279
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 192, 280
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 192, 281
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth & SWE at pixel 192, 282
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 192, 283
Evergreen Needleleaf Forest: 46%

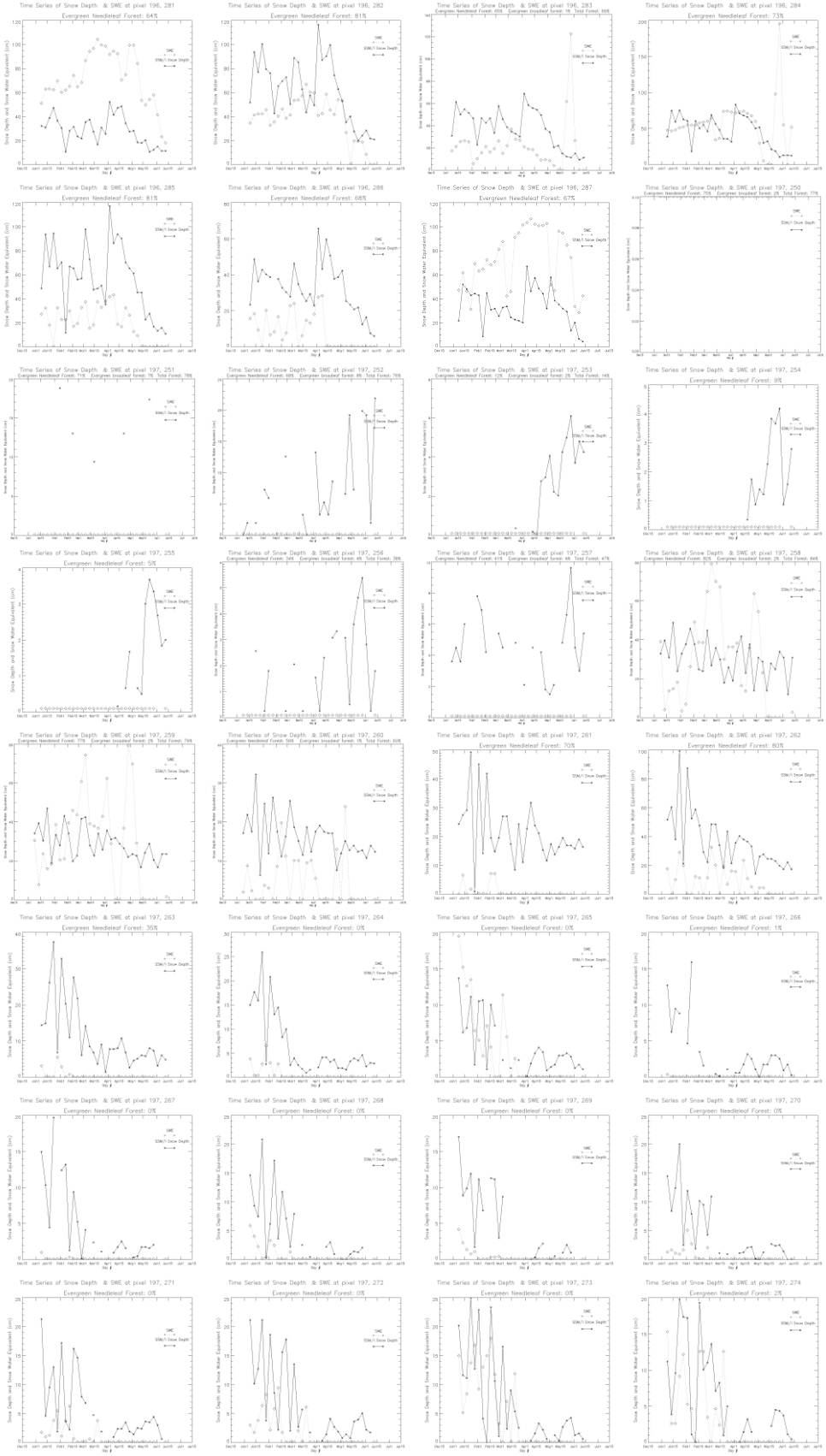

Time Series of Snow Depth & SWE at pixel 192, 284
Evergreen Needleleaf Forest: 4%
Time Series of Snow Depth & SWE at pixel 192, 285
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 192, 286
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth & SWE at pixel 192, 287
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 192, 288
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 193, 246
Evergreen Needleleaf Forest: 67% Evergreen broadleaf forest: 23% Total Forest: 70%
Time Series of Snow Depth & SWE at pixel 193, 247
Evergreen Needleleaf Forest: 83% Evergreen broadleaf forest: 19% Total Forest: 83%
Time Series of Snow Depth & SWE at pixel 193, 248
Evergreen Needleleaf Forest: 62% Evergreen broadleaf forest: 5% Total Forest: 67%
Time Series of Snow Depth & SWE at pixel 193, 249
Evergreen Needleleaf Forest: 80% Evergreen broadleaf forest: 8% Total Forest: 88%
Time Series of Snow Depth & SWE at pixel 193, 250
Evergreen Needleleaf Forest: 78% Evergreen broadleaf forest: 3% Total Forest: 81%
Time Series of Snow Depth & SWE at pixel 193, 251
Evergreen Needleleaf Forest: 62% Evergreen broadleaf forest: 5% Total Forest: 67%
Time Series of Snow Depth & SWE at pixel 193, 252
Evergreen Needleleaf Forest: 53% Evergreen broadleaf forest: 4% Total Forest: 57%
Time Series of Snow Depth & SWE at pixel 193, 253
Evergreen Needleleaf Forest: 84% Evergreen broadleaf forest: 8% Total Forest: 92%
Time Series of Snow Depth & SWE at pixel 193, 254
Evergreen Needleleaf Forest: 86% Evergreen broadleaf forest: 6% Total Forest: 92%
Time Series of Snow Depth & SWE at pixel 193, 255
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 193, 256
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 193, 257
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 193, 258
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 193, 259
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 193, 260
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 193, 261
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 193, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 263
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 267
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 193, 268
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 193, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 271
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 193, 272
Evergreen Needleleaf Forest: 4%


Time Series of Snow Depth & SWE at pixel 193, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 193, 274
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 193, 275
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 193, 276
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 193, 277
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 193, 278
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 193, 279
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 193, 280
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 193, 281
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 193, 282
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth & SWE at pixel 193, 283
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 193, 284
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 193, 285
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth & SWE at pixel 193, 286
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 193, 287
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth & SWE at pixel 193, 288
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 194, 248
Time Series of Snow Depth & SWE at pixel 194, 249
Time Series of Snow Depth & SWE at pixel 194, 250
Time Series of Snow Depth & SWE at pixel 194, 251
Time Series of Snow Depth & SWE at pixel 194, 252
Time Series of Snow Depth & SWE at pixel 194, 253
Time Series of Snow Depth & SWE at pixel 194, 254
Time Series of Snow Depth & SWE at pixel 194, 255
Time Series of Snow Depth & SWE at pixel 194, 256
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 194, 257
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 194, 258
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth & SWE at pixel 194, 259
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth & SWE at pixel 194, 260
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 194, 261
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 194, 262
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 194, 263
Evergreen Needleleaf Forest: 0%


Time Series of Snow Depth & SWE at pixel 194, 264
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 194, 265
Evergreen Needleleaf Forest: 4%
Time Series of Snow Depth & SWE at pixel 194, 266
Evergreen Needleleaf Forest: 2% Evergreen broadleaf forest: 1% Total Forest: 3%
Time Series of Snow Depth & SWE at pixel 194, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 194, 268
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 194, 269
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 194, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 194, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 194, 272
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 194, 273
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 194, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 194, 275
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 194, 276
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth & SWE at pixel 194, 277
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 194, 278
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 194, 279
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth & SWE at pixel 194, 280
Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth & SWE at pixel 194, 281
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 194, 282
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 194, 283
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 194, 284
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 194, 285
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 194, 286
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 194, 287
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 195, 248
Evergreen Needleleaf Forest: 60% Evergreen broadleaf forest: 5% Total Forest: 65%
Time Series of Snow Depth & SWE at pixel 195, 249
Evergreen Needleleaf Forest: 84% Evergreen broadleaf forest: 4% Total Forest: 90%
Time Series of Snow Depth & SWE at pixel 195, 250
Evergreen Needleleaf Forest: 86% Evergreen broadleaf forest: 2% Total Forest: 88%
Time Series of Snow Depth & SWE at pixel 195, 251
Evergreen Needleleaf Forest: 65% Evergreen broadleaf forest: 6% Total Forest: 71%
Time Series of Snow Depth & SWE at pixel 195, 252
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 195, 253
Evergreen Needleleaf Forest: 12% Evergreen broadleaf forest: 1% Total Forest: 13%
Time Series of Snow Depth & SWE at pixel 195, 254
Evergreen Needleleaf Forest: 51% Evergreen broadleaf forest: 3% Total Forest: 54%
Time Series of Snow Depth & SWE at pixel 195, 255
Evergreen Needleleaf Forest: 76% Evergreen broadleaf forest: 7% Total Forest: 83%
SWE
SNWLYr Snow Depth
Snow Depth and Snow Water Equivalent (cm)
Day of Year


Time Series of Snow Depth & SWE at pixel 195, 256
Evergreen Needleleaf Forest: 89% Evergreen Broadleaf Forest: 11% Total Forest: 87%
Time Series of Snow Depth & SWE at pixel 195, 257
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 195, 258
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 195, 259
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 195, 260
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 195, 261
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 262
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 195, 263
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 195, 264
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 195, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 267
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 195, 268
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 195, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 270
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 195, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 274
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 275
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 195, 276
Evergreen Needleleaf Forest: 13%
Time Series of Snow Depth & SWE at pixel 195, 277
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 195, 278
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 195, 279
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 195, 280
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 195, 281
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 195, 282
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 195, 283
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth & SWE at pixel 195, 284
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth & SWE at pixel 195, 285
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 195, 286
Evergreen Needleleaf Forest: 43%
Time Series of Snow Depth & SWE at pixel 195, 287
Evergreen Needleleaf Forest: 77%


Time Series of Snow Depth & SWE at pixel 196, 249
Evergreen Needleleaf Forest: 65% Evergreen broadleaf forest: 1% Total Forest: 66%
Time Series of Snow Depth & SWE at pixel 196, 250
Evergreen Needleleaf Forest: 90% Evergreen broadleaf forest: 1% Total Forest: 97%
Time Series of Snow Depth & SWE at pixel 196, 251
Evergreen Needleleaf Forest: 91% Evergreen broadleaf forest: 2% Total Forest: 93%
Time Series of Snow Depth & SWE at pixel 196, 252
Evergreen Needleleaf Forest: 40% Evergreen broadleaf forest: 2% Total Forest: 42%
Time Series of Snow Depth & SWE at pixel 196, 253
Evergreen Needleleaf Forest: 5% Evergreen broadleaf forest: 1% Total Forest: 6%
Time Series of Snow Depth & SWE at pixel 196, 254
Evergreen Needleleaf Forest: 4% Evergreen broadleaf forest: 1% Total Forest: 5%
Time Series of Snow Depth & SWE at pixel 196, 255
Evergreen Needleleaf Forest: 60% Evergreen broadleaf forest: 3% Total Forest: 63%
Time Series of Snow Depth & SWE at pixel 196, 256
Evergreen Needleleaf Forest: 80% Evergreen broadleaf forest: 4% Total Forest: 84%
Time Series of Snow Depth & SWE at pixel 196, 257
Evergreen Needleleaf Forest: 95%
Time Series of Snow Depth & SWE at pixel 196, 258
Evergreen Needleleaf Forest: 85% Evergreen broadleaf forest: 2% Total Forest: 87%
Time Series of Snow Depth & SWE at pixel 196, 259
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 196, 260
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 196, 261
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 196, 262
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 196, 263
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth & SWE at pixel 196, 264
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 196, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 266
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 196, 274
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 196, 275
Evergreen Needleleaf Forest: 4% Evergreen broadleaf forest: 1% Total Forest: 5%
Time Series of Snow Depth & SWE at pixel 196, 276
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth & SWE at pixel 196, 277
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 196, 278
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth & SWE at pixel 196, 279
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 196, 280
Evergreen Needleleaf Forest: 79%


Time Series of Snow Depth & SWE at pixel 196, 281
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth & SWE at pixel 196, 282
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 196, 283
Evergreen Needleleaf Forest: 65% Evergreen broadleaf forest: 1% Total Forest: 66%
Time Series of Snow Depth & SWE at pixel 196, 284
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 196, 285
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 196, 286
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 196, 287
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 197, 250
Evergreen Needleleaf Forest: 75% Evergreen broadleaf forest: 2% Total Forest: 77%
Time Series of Snow Depth & SWE at pixel 197, 251
Evergreen Needleleaf Forest: 71% Evergreen broadleaf forest: 7% Total Forest: 78%
Time Series of Snow Depth & SWE at pixel 197, 252
Evergreen Needleleaf Forest: 69% Evergreen broadleaf forest: 8% Total Forest: 76%
Time Series of Snow Depth & SWE at pixel 197, 253
Evergreen Needleleaf Forest: 12% Evergreen broadleaf forest: 2% Total Forest: 14%
Time Series of Snow Depth & SWE at pixel 197, 254
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 197, 255
Evergreen Needleleaf Forest: 5%
Time Series of Snow Depth & SWE at pixel 197, 256
Evergreen Needleleaf Forest: 34% Evergreen broadleaf forest: 4% Total Forest: 38%
Time Series of Snow Depth & SWE at pixel 197, 257
Evergreen Needleleaf Forest: 41% Evergreen broadleaf forest: 6% Total Forest: 47%
Time Series of Snow Depth & SWE at pixel 197, 258
Evergreen Needleleaf Forest: 60% Evergreen broadleaf forest: 2% Total Forest: 64%
Time Series of Snow Depth & SWE at pixel 197, 259
Evergreen Needleleaf Forest: 77% Evergreen broadleaf forest: 2% Total Forest: 79%
Time Series of Snow Depth & SWE at pixel 197, 260
Evergreen Needleleaf Forest: 59% Evergreen broadleaf forest: 1% Total Forest: 60%
Time Series of Snow Depth & SWE at pixel 197, 261
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 197, 262
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 197, 263
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 197, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 266
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 197, 267
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 268
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 269
Evergreen Needleleaf Forest: 0%
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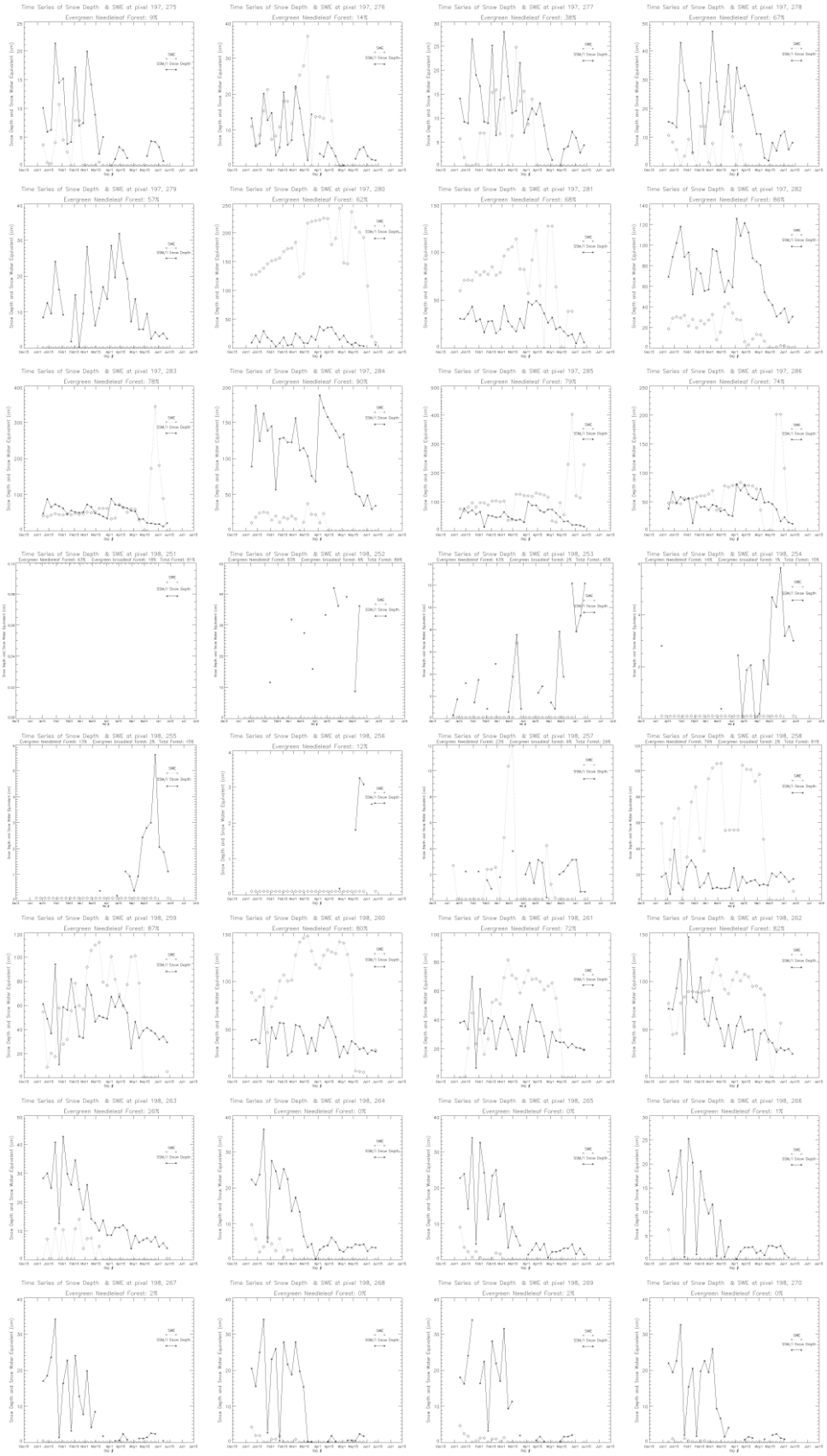
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 197, 274
Evergreen Needleleaf Forest: 2%


Time Series of Snow Depth & SWE at pixel 197, 275
Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 197, 276
Evergreen Needleleaf Forest: 14%
Time Series of Snow Depth & SWE at pixel 197, 277
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 197, 278
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 197, 279
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 197, 280
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth & SWE at pixel 197, 281
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 197, 282
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 197, 283
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 197, 284
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 197, 285
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 197, 286
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 198, 251
Time Series of Snow Depth & SWE at pixel 198, 252
Time Series of Snow Depth & SWE at pixel 198, 253
Time Series of Snow Depth & SWE at pixel 198, 254
Time Series of Snow Depth & SWE at pixel 198, 255
Time Series of Snow Depth & SWE at pixel 198, 256
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 198, 257
Time Series of Snow Depth & SWE at pixel 198, 258
Time Series of Snow Depth & SWE at pixel 198, 259
Evergreen Needleleaf Forest: 87%
Time Series of Snow Depth & SWE at pixel 198, 260
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 198, 261
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 198, 262
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 198, 263
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth & SWE at pixel 198, 264
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 198, 265
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 198, 266
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 198, 267
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 198, 268
Evergreen Needleleaf Forest: 0%
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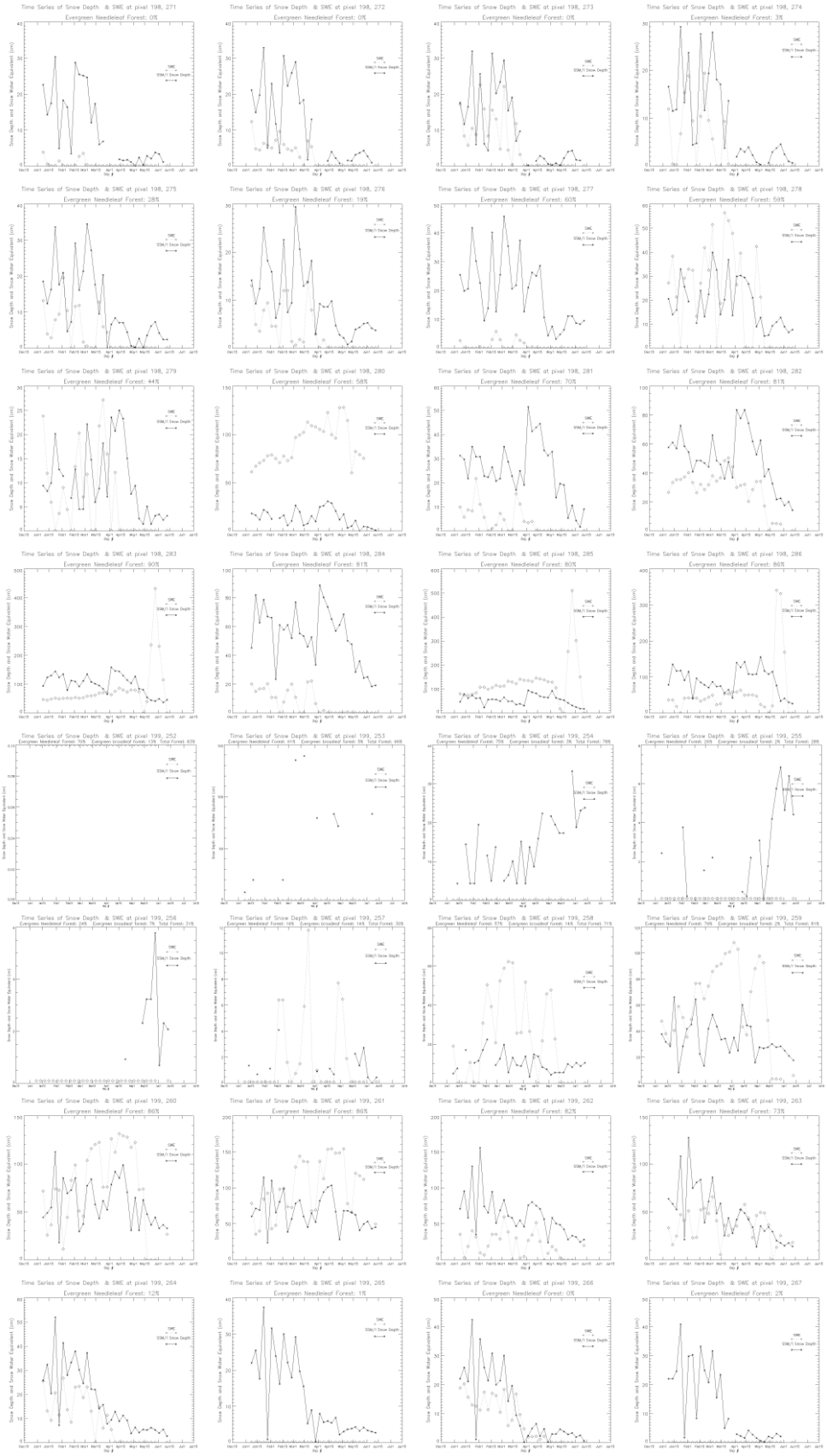
Time Series of Snow Depth & SWE at pixel 198, 270
Evergreen Needleleaf Forest: 0%


Time Series of Snow Depth & SWE at pixel 198, 271
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 198, 272
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 198, 273
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 198, 274
Evergreen Needleleaf Forest: 3%
Time Series of Snow Depth & SWE at pixel 198, 275
Evergreen Needleleaf Forest: 28%
Time Series of Snow Depth & SWE at pixel 198, 276
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth & SWE at pixel 198, 277
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth & SWE at pixel 198, 278
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 198, 279
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 198, 280
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 198, 281
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 198, 282
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 198, 283
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 198, 284
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 198, 285
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 198, 286
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 199, 252
Evergreen Needleleaf Forest: 70% Evergreen Broadleaf Forest: 13% Total Forest: 83%
Time Series of Snow Depth & SWE at pixel 199, 253
Evergreen Needleleaf Forest: 61% Evergreen Broadleaf Forest: 5% Total Forest: 66%
Time Series of Snow Depth & SWE at pixel 199, 254
Evergreen Needleleaf Forest: 75% Evergreen Broadleaf Forest: 3% Total Forest: 78%
Time Series of Snow Depth & SWE at pixel 199, 255
Evergreen Needleleaf Forest: 28% Evergreen Broadleaf Forest: 2% Total Forest: 29%
Time Series of Snow Depth & SWE at pixel 199, 256
Evergreen Needleleaf Forest: 29% Evergreen Broadleaf Forest: 3% Total Forest: 31%
Time Series of Snow Depth & SWE at pixel 199, 257
Evergreen Needleleaf Forest: 16% Evergreen Broadleaf Forest: 14% Total Forest: 30%
Time Series of Snow Depth & SWE at pixel 199, 258
Evergreen Needleleaf Forest: 57% Evergreen Broadleaf Forest: 14% Total Forest: 71%
Time Series of Snow Depth & SWE at pixel 199, 259
Evergreen Needleleaf Forest: 79% Evergreen Broadleaf Forest: 2% Total Forest: 81%
Time Series of Snow Depth & SWE at pixel 199, 260
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 199, 261
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 199, 262
Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 199, 263
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 199, 264
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 199, 265
Evergreen Needleleaf Forest: 1%
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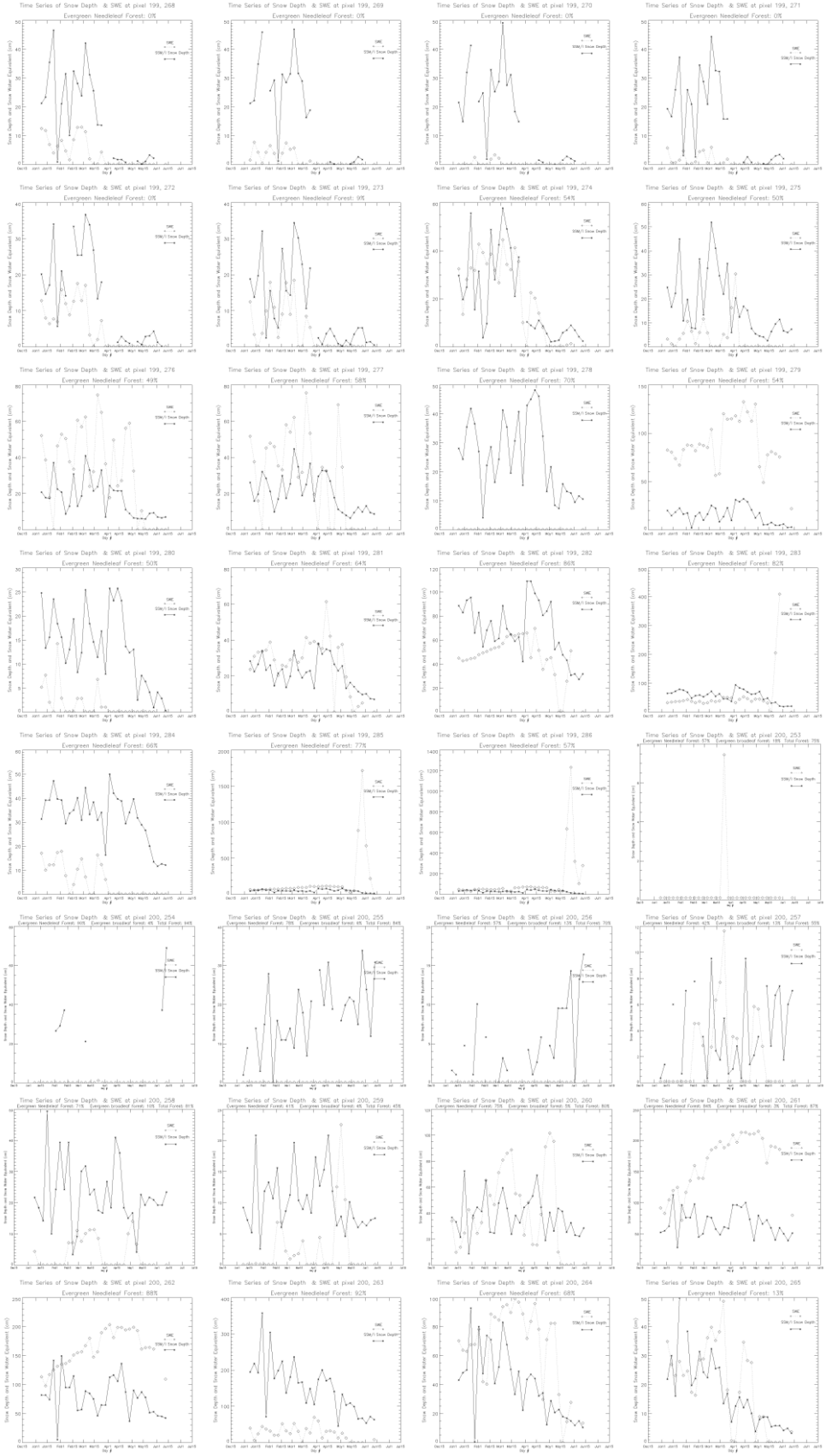
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 199, 267
Evergreen Needleleaf Forest: 2%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Time Series of Snow Depth & SWE at pixel 199, 271
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Time Series of Snow Depth & SWE at pixel 199, 272
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Evergreen Needleleaf Forest: 50%
Time Series of Snow Depth & SWE at pixel 199, 276
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Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 199, 278
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 199, 279
Evergreen Needleleaf Forest: 54%
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Evergreen Needleleaf Forest: 50%
Time Series of Snow Depth & SWE at pixel 199, 281
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth & SWE at pixel 199, 282
Evergreen Needleleaf Forest: 86%
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Evergreen Needleleaf Forest: 82%
Time Series of Snow Depth & SWE at pixel 199, 284
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 199, 285
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth & SWE at pixel 199, 286
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 200, 253
Time Series of Snow Depth & SWE at pixel 200, 254
Time Series of Snow Depth & SWE at pixel 200, 255
Time Series of Snow Depth & SWE at pixel 200, 256
Time Series of Snow Depth & SWE at pixel 200, 257
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Time Series of Snow Depth & SWE at pixel 200, 259
Time Series of Snow Depth & SWE at pixel 200, 260
Time Series of Snow Depth & SWE at pixel 200, 261
Time Series of Snow Depth & SWE at pixel 200, 262
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 200, 263
Evergreen Needleleaf Forest: 92%
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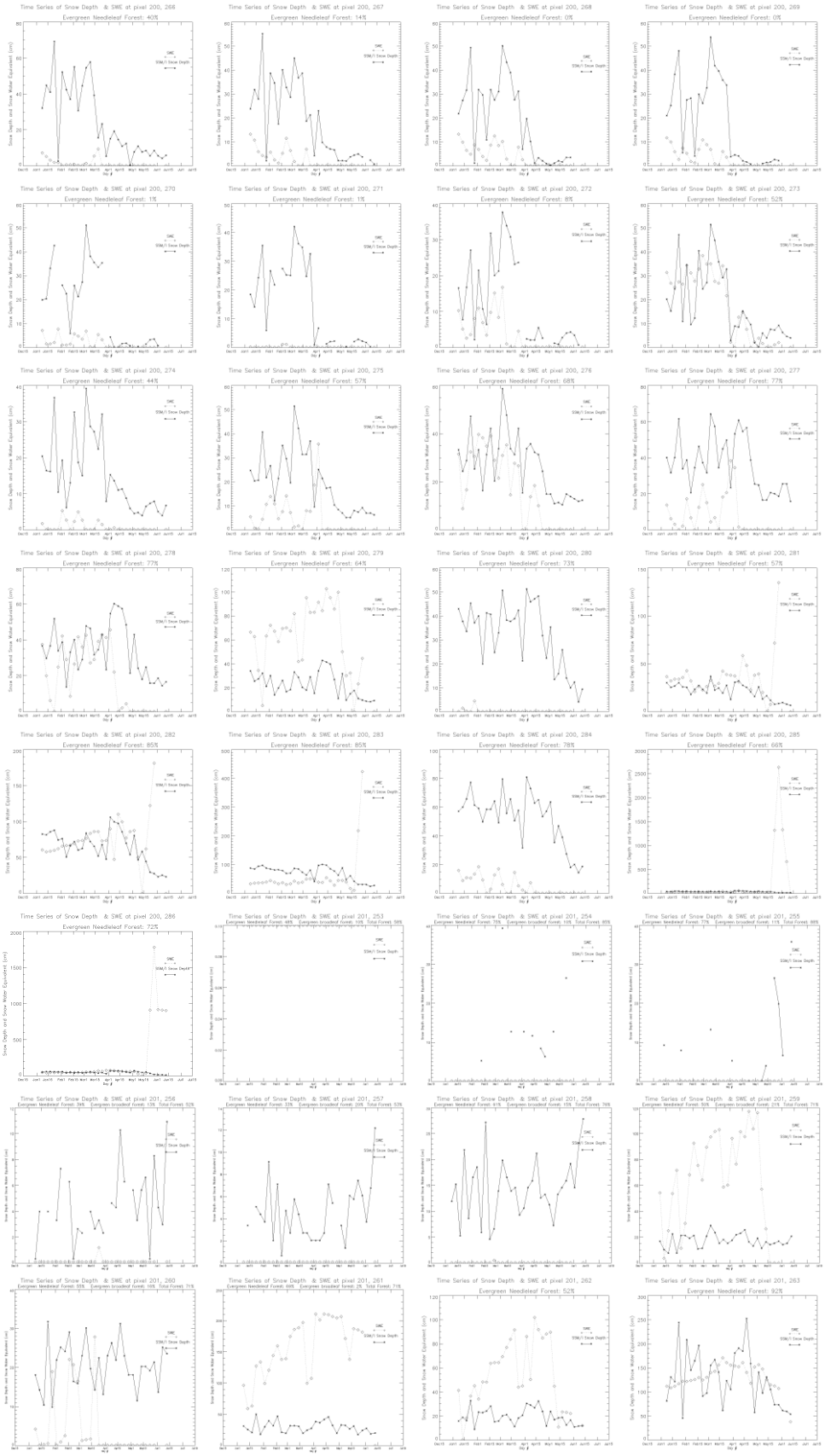
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 200, 265
Evergreen Needleleaf Forest: 13%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Time Series of Snow Depth & SWE at pixel 200, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 200, 270
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 200, 271
Evergreen Needleleaf Forest: 1%
Time Series of Snow Depth & SWE at pixel 200, 272
Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 200, 273
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 200, 274
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 200, 275
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 200, 276
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 200, 277
Evergreen Needleleaf Forest: 77%
Time Series of Snow Depth & SWE at pixel 200, 278
Evergreen Needleleaf Forest: 77%
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Evergreen Needleleaf Forest: 64%
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Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 200, 281
Evergreen Needleleaf Forest: 57%
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Evergreen Needleleaf Forest: 85%
Time Series of Snow Depth & SWE at pixel 200, 283
Evergreen Needleleaf Forest: 85%
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Evergreen Needleleaf Forest: 78%
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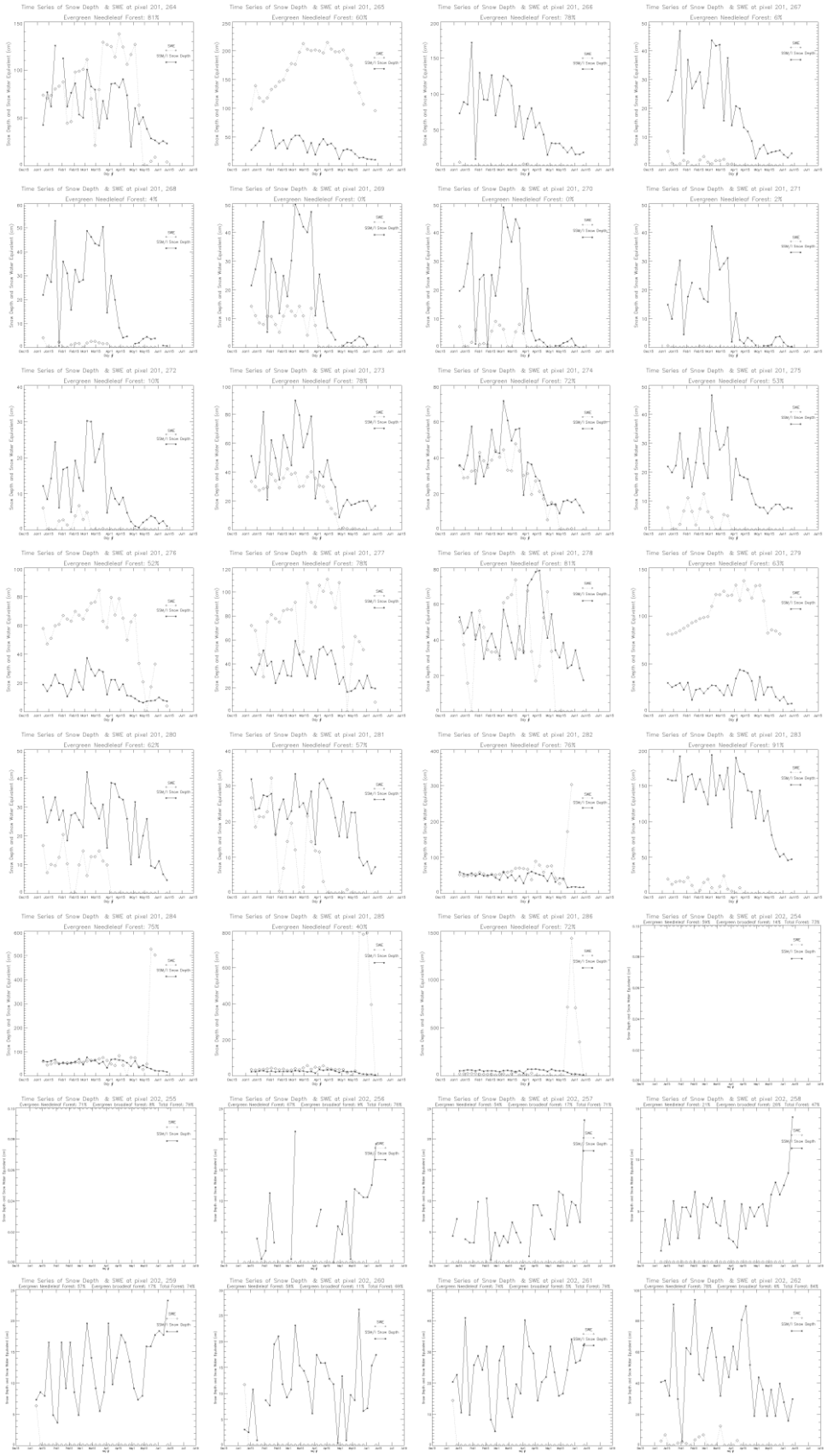
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 200, 286
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 201, 253
Time Series of Snow Depth & SWE at pixel 201, 254
Time Series of Snow Depth & SWE at pixel 201, 255
Time Series of Snow Depth & SWE at pixel 201, 256
Time Series of Snow Depth & SWE at pixel 201, 257
Time Series of Snow Depth & SWE at pixel 201, 258
Time Series of Snow Depth & SWE at pixel 201, 259
Time Series of Snow Depth & SWE at pixel 201, 260
Time Series of Snow Depth & SWE at pixel 201, 261
Time Series of Snow Depth & SWE at pixel 201, 262
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 201, 263
Evergreen Needleleaf Forest: 92%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Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 201, 267
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 201, 268
Evergreen Needleleaf Forest: 4%
Time Series of Snow Depth & SWE at pixel 201, 269
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 201, 270
Evergreen Needleleaf Forest: 0%
Time Series of Snow Depth & SWE at pixel 201, 271
Evergreen Needleleaf Forest: 2%
Time Series of Snow Depth & SWE at pixel 201, 272
Evergreen Needleleaf Forest: 10%
Time Series of Snow Depth & SWE at pixel 201, 273
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 201, 274
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 201, 275
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 201, 276
Evergreen Needleleaf Forest: 52%
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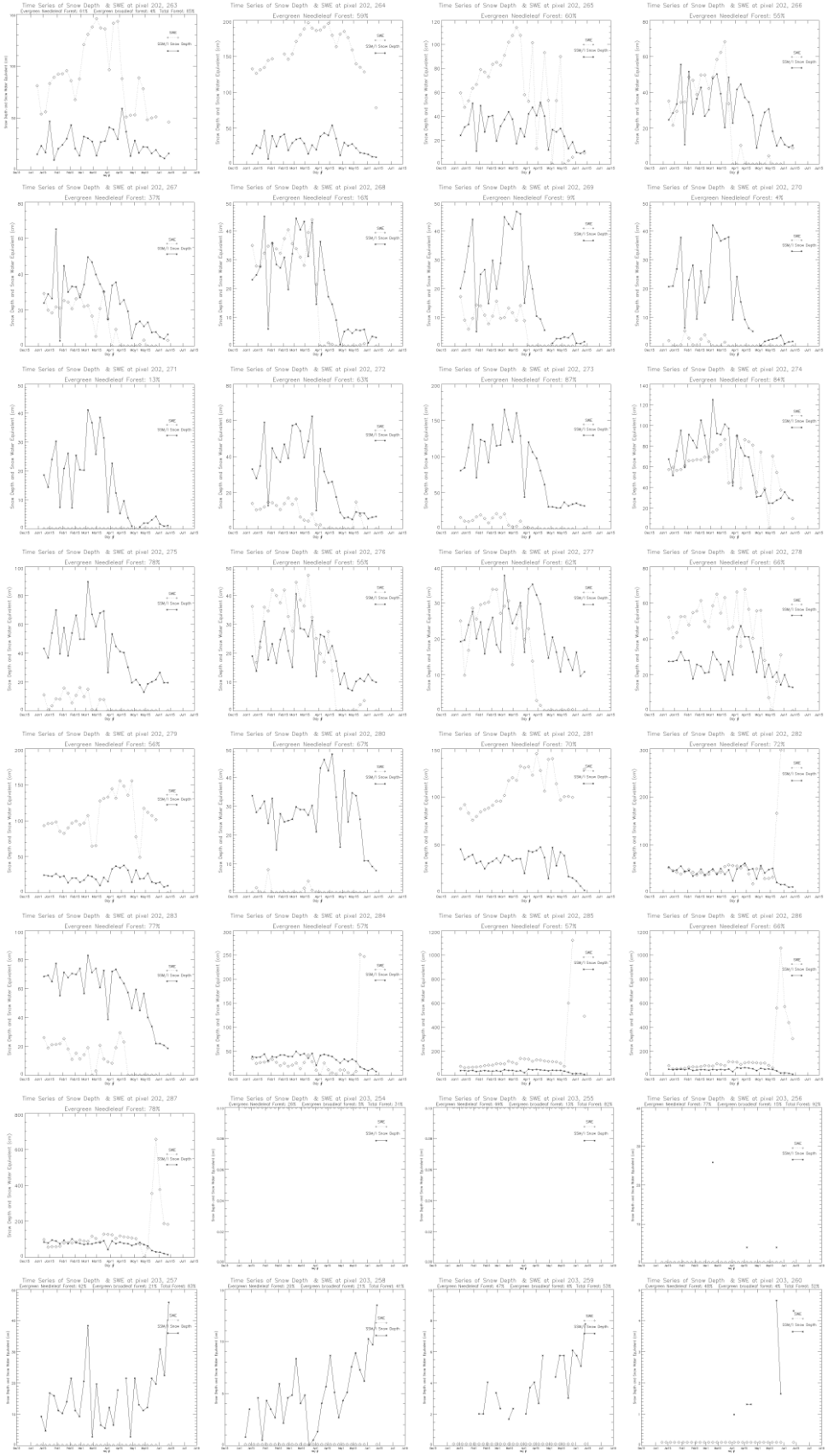
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 201, 278
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 201, 279
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 201, 280
Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth & SWE at pixel 201, 281
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 201, 282
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 201, 283
Evergreen Needleleaf Forest: 91%
Time Series of Snow Depth & SWE at pixel 201, 284
Evergreen Needleleaf Forest: 75%
Time Series of Snow Depth & SWE at pixel 201, 285
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth & SWE at pixel 201, 286
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 202, 254
Evergreen Needleleaf Forest: 84% Evergreen broadleaf forest: 14% Total Forest: 73%
Time Series of Snow Depth & SWE at pixel 202, 255
Evergreen Needleleaf Forest: 71% Evergreen broadleaf forest: 8% Total Forest: 78%
Time Series of Snow Depth & SWE at pixel 202, 256
Evergreen Needleleaf Forest: 67% Evergreen broadleaf forest: 4% Total Forest: 70%
Time Series of Snow Depth & SWE at pixel 202, 257
Evergreen Needleleaf Forest: 54% Evergreen broadleaf forest: 17% Total Forest: 71%
Time Series of Snow Depth & SWE at pixel 202, 258
Evergreen Needleleaf Forest: 21% Evergreen broadleaf forest: 26% Total Forest: 47%
Time Series of Snow Depth & SWE at pixel 202, 259
Evergreen Needleleaf Forest: 57% Evergreen broadleaf forest: 17% Total Forest: 74%
Time Series of Snow Depth & SWE at pixel 202, 260
Evergreen Needleleaf Forest: 58% Evergreen broadleaf forest: 11% Total Forest: 69%
Time Series of Snow Depth & SWE at pixel 202, 261
Evergreen Needleleaf Forest: 76% Evergreen broadleaf forest: 5% Total Forest: 79%
Time Series of Snow Depth & SWE at pixel 202, 262
Evergreen Needleleaf Forest: 78% Evergreen broadleaf forest: 6% Total Forest: 84%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Time Series of Snow Depth & SWE at pixel 202, 264
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Time Series of Snow Depth & SWE at pixel 202, 265
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth & SWE at pixel 202, 266
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Time Series of Snow Depth & SWE at pixel 202, 268
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Evergreen Needleleaf Forest: 9%
Time Series of Snow Depth & SWE at pixel 202, 270
Evergreen Needleleaf Forest: 4%
Time Series of Snow Depth & SWE at pixel 202, 271
Evergreen Needleleaf Forest: 13%
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Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 202, 273
Evergreen Needleleaf Forest: 87%
Time Series of Snow Depth & SWE at pixel 202, 274
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 202, 275
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 202, 276
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 202, 277
Evergreen Needleleaf Forest: 62%
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Evergreen Needleleaf Forest: 66%
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Evergreen Needleleaf Forest: 56%
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Evergreen Needleleaf Forest: 67%
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Evergreen Needleleaf Forest: 70%
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Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 202, 283
Evergreen Needleleaf Forest: 77%
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Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 202, 285
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 202, 286
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 202, 287
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 203, 254
Evergreen Needleleaf Forest: 25% Evergreen broadleaf forest: 5% Total Forest: 31%
Time Series of Snow Depth & SWE at pixel 203, 255
Evergreen Needleleaf Forest: 69% Evergreen broadleaf forest: 13% Total Forest: 82%
Time Series of Snow Depth & SWE at pixel 203, 256
Evergreen Needleleaf Forest: 77% Evergreen broadleaf forest: 15% Total Forest: 92%
Time Series of Snow Depth & SWE at pixel 203, 257
Evergreen Needleleaf Forest: 62% Evergreen broadleaf forest: 21% Total Forest: 83%
Time Series of Snow Depth & SWE at pixel 203, 258
Evergreen Needleleaf Forest: 30% Evergreen broadleaf forest: 11% Total Forest: 41%
Time Series of Snow Depth & SWE at pixel 203, 259
Evergreen Needleleaf Forest: 47% Evergreen broadleaf forest: 6% Total Forest: 53%
Time Series of Snow Depth & SWE at pixel 203, 260
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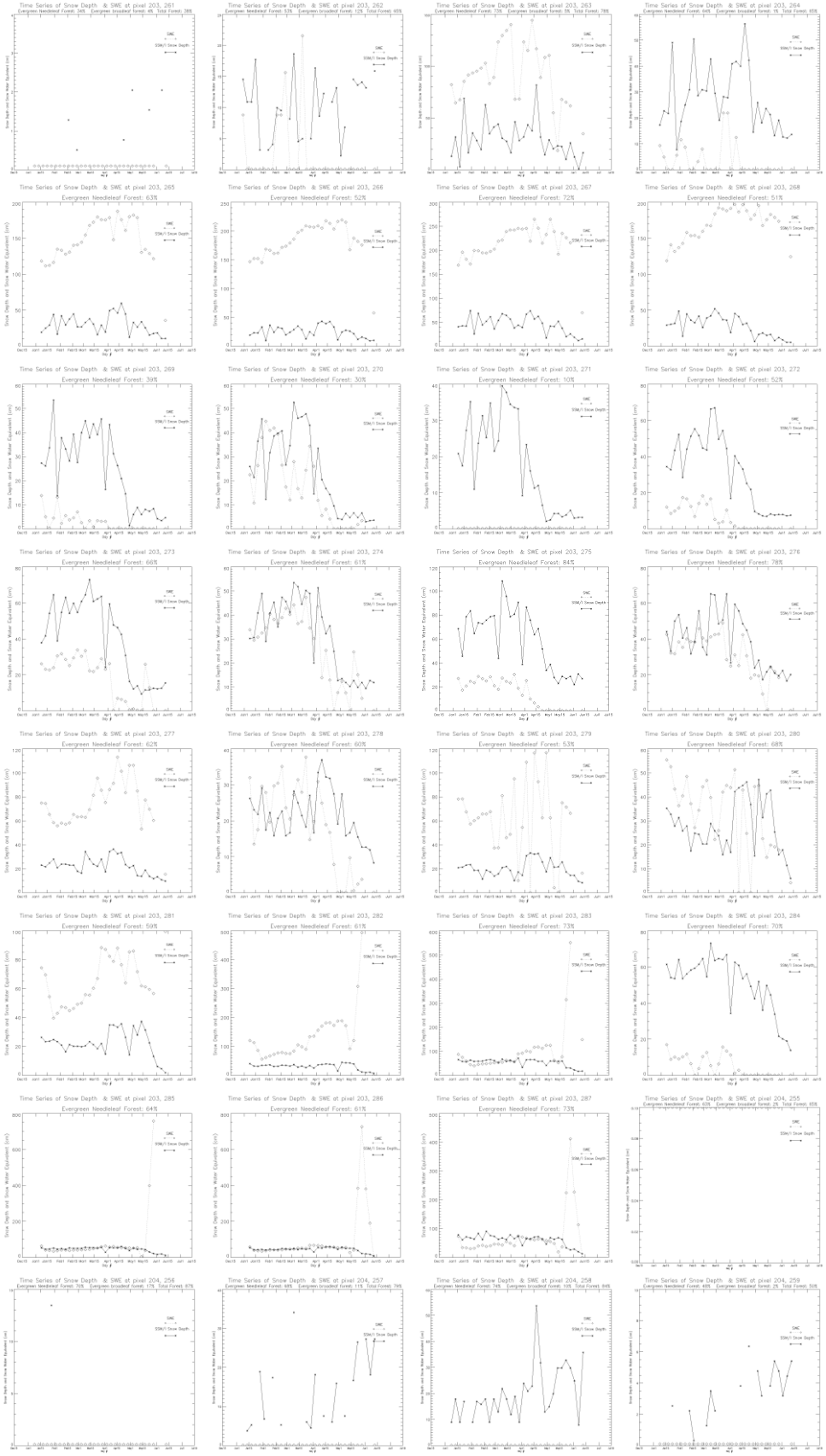
SWE
SSM/I Snow Depth
Snow Depth and Snow Water Equivalent (cm)
day #


Time Series of Snow Depth & SWE at pixel 203, 261
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Time Series of Snow Depth & SWE at pixel 203, 262
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Time Series of Snow Depth & SWE at pixel 203, 263
Evergreen Needleleaf Forest: 73% Evergreen broadleaf forest: 5% Total Forest: 78%
Time Series of Snow Depth & SWE at pixel 203, 264
Evergreen Needleleaf Forest: 64% Evergreen broadleaf forest: 1% Total Forest: 65%
Time Series of Snow Depth & SWE at pixel 203, 265
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 203, 266
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 203, 267
Evergreen Needleleaf Forest: 72%
Time Series of Snow Depth & SWE at pixel 203, 268
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 203, 269
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Time Series of Snow Depth & SWE at pixel 203, 270
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 203, 271
Evergreen Needleleaf Forest: 10%
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Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 203, 273
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 203, 274
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth & SWE at pixel 203, 275
Evergreen Needleleaf Forest: 84%
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Evergreen Needleleaf Forest: 78%
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Evergreen Needleleaf Forest: 62%
Time Series of Snow Depth & SWE at pixel 203, 278
Evergreen Needleleaf Forest: 60%
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Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 203, 280
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 203, 281
Evergreen Needleleaf Forest: 59%
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Evergreen Needleleaf Forest: 61%
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Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 203, 284
Evergreen Needleleaf Forest: 70%
Time Series of Snow Depth & SWE at pixel 203, 285
Evergreen Needleleaf Forest: 64%
Time Series of Snow Depth & SWE at pixel 203, 286
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth & SWE at pixel 203, 287
Evergreen Needleleaf Forest: 73%
Time Series of Snow Depth & SWE at pixel 204, 255
Evergreen Needleleaf Forest: 63% Evergreen broadleaf forest: 2% Total Forest: 65%
Time Series of Snow Depth & SWE at pixel 204, 256
Evergreen Needleleaf Forest: 70% Evergreen broadleaf forest: 17% Total Forest: 87%
Time Series of Snow Depth & SWE at pixel 204, 257
Evergreen Needleleaf Forest: 68% Evergreen broadleaf forest: 11% Total Forest: 79%
Time Series of Snow Depth & SWE at pixel 204, 258
Evergreen Needleleaf Forest: 74% Evergreen broadleaf forest: 10% Total Forest: 84%
Time Series of Snow Depth & SWE at pixel 204, 259
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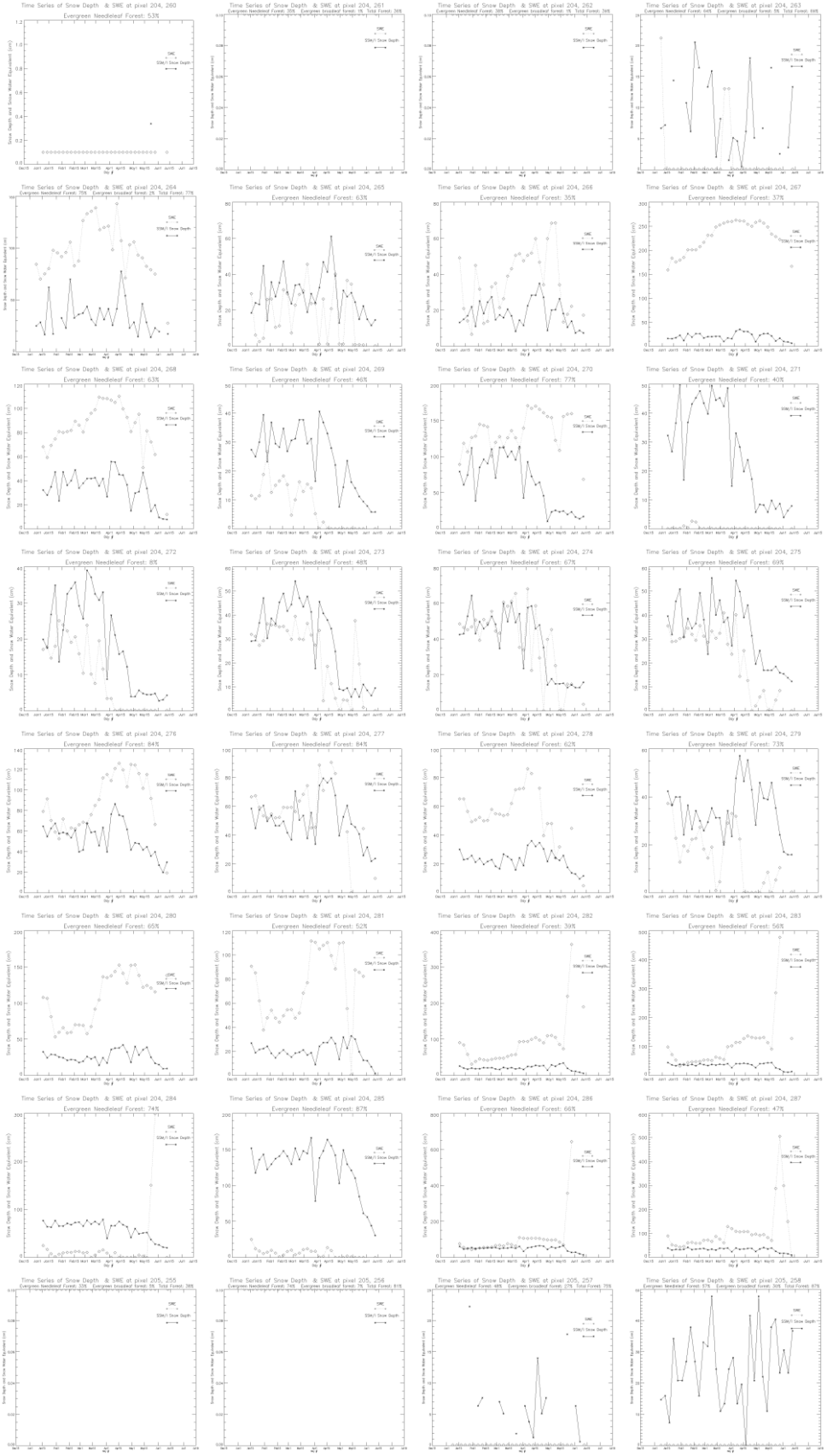
SWE
SSM/I Snow Depth
Snow Depth and Snow Water Equivalent (cm)
Day #


Time Series of Snow Depth & SWE at pixel 204, 260
Evergreen Needleleaf Forest: 53%
Time Series of Snow Depth & SWE at pixel 204, 261
Evergreen Needleleaf Forest: 35% Evergreen broadleaf forest: 1% Total Forest: 36%
Time Series of Snow Depth & SWE at pixel 204, 262
Evergreen Needleleaf Forest: 38% Evergreen broadleaf forest: 1% Total Forest: 39%
Time Series of Snow Depth & SWE at pixel 204, 263
Evergreen Needleleaf Forest: 64% Evergreen broadleaf forest: 3% Total Forest: 68%
Time Series of Snow Depth & SWE at pixel 204, 264
Evergreen Needleleaf Forest: 75% Evergreen broadleaf forest: 2% Total Forest: 77%
Time Series of Snow Depth & SWE at pixel 204, 265
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 204, 266
Evergreen Needleleaf Forest: 35%
Time Series of Snow Depth & SWE at pixel 204, 267
Evergreen Needleleaf Forest: 37%
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Evergreen Needleleaf Forest: 63%
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Evergreen Needleleaf Forest: 46%
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Evergreen Needleleaf Forest: 77%
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Evergreen Needleleaf Forest: 40%
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Evergreen Needleleaf Forest: 8%
Time Series of Snow Depth & SWE at pixel 204, 273
Evergreen Needleleaf Forest: 48%
Time Series of Snow Depth & SWE at pixel 204, 274
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 204, 275
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth & SWE at pixel 204, 276
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 204, 277
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 204, 278
Evergreen Needleleaf Forest: 62%
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Evergreen Needleleaf Forest: 73%
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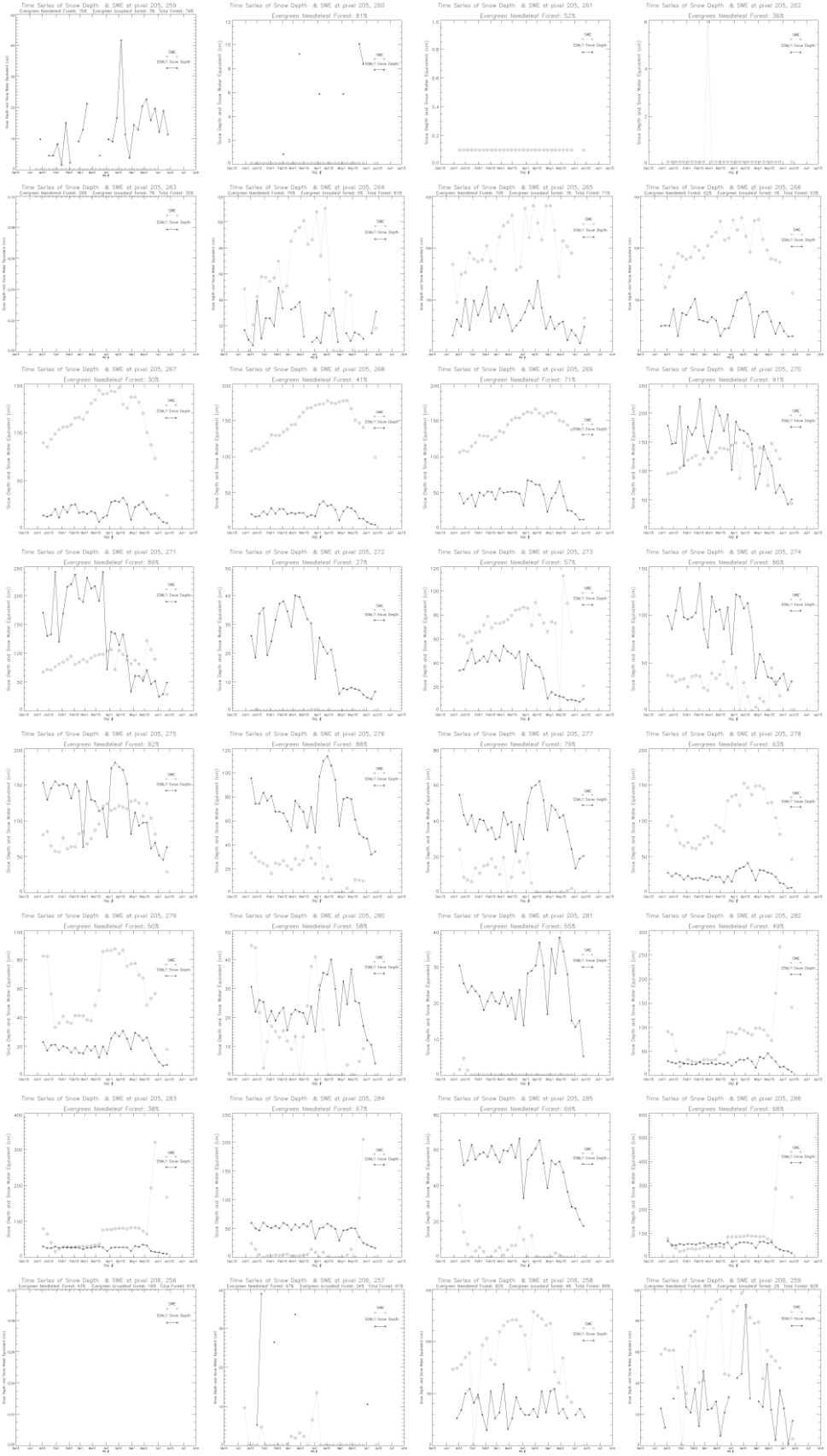
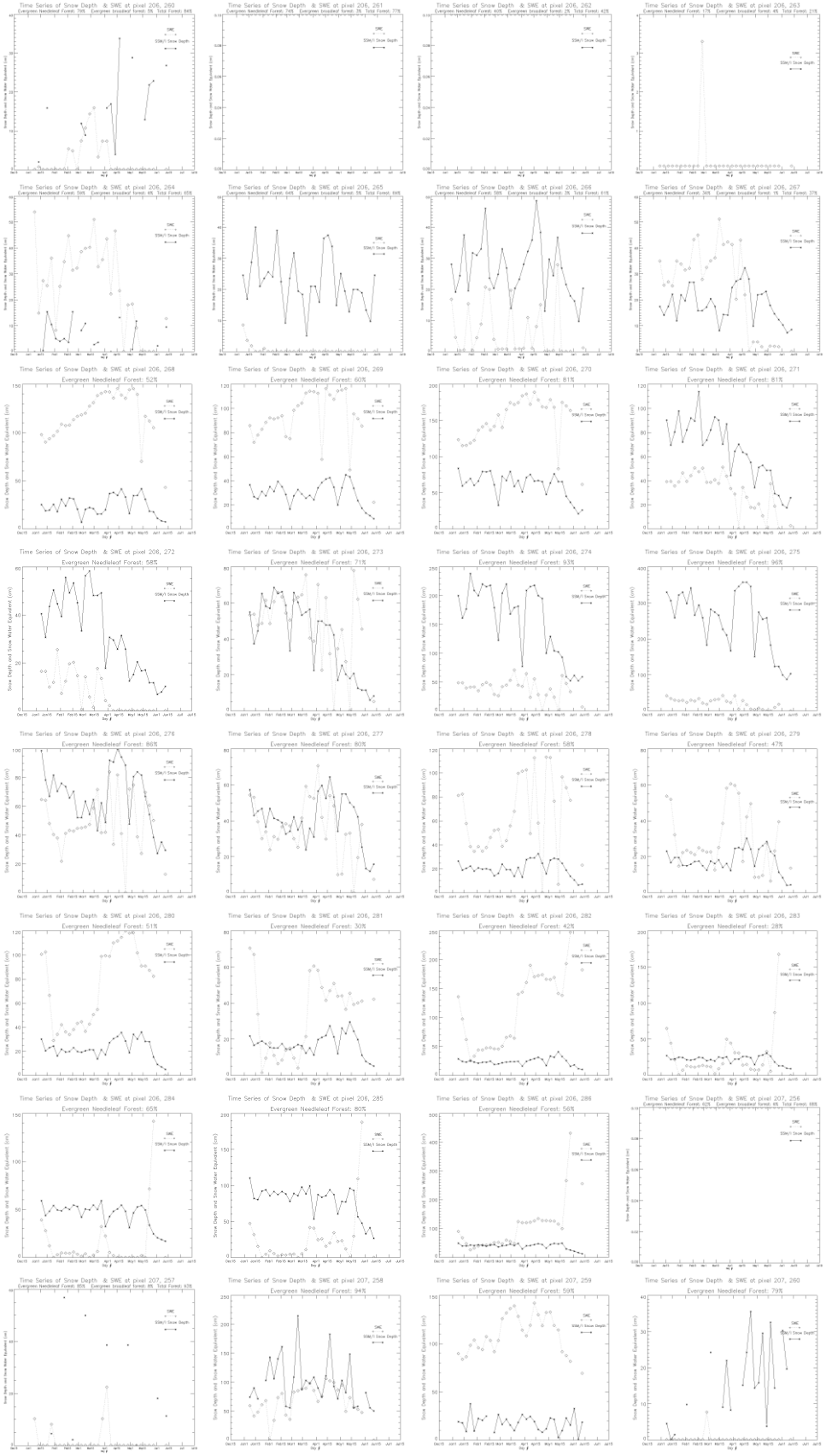
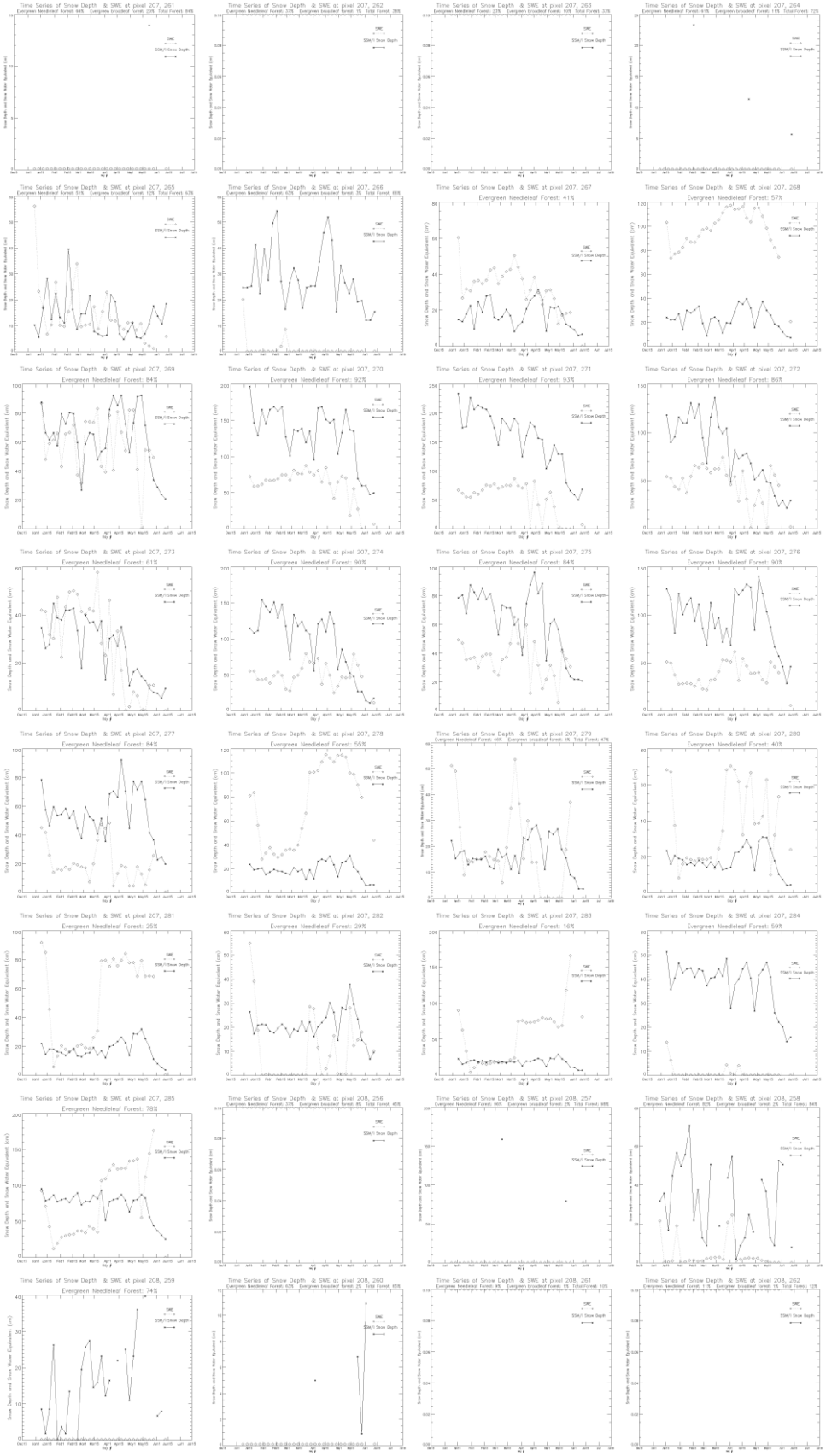
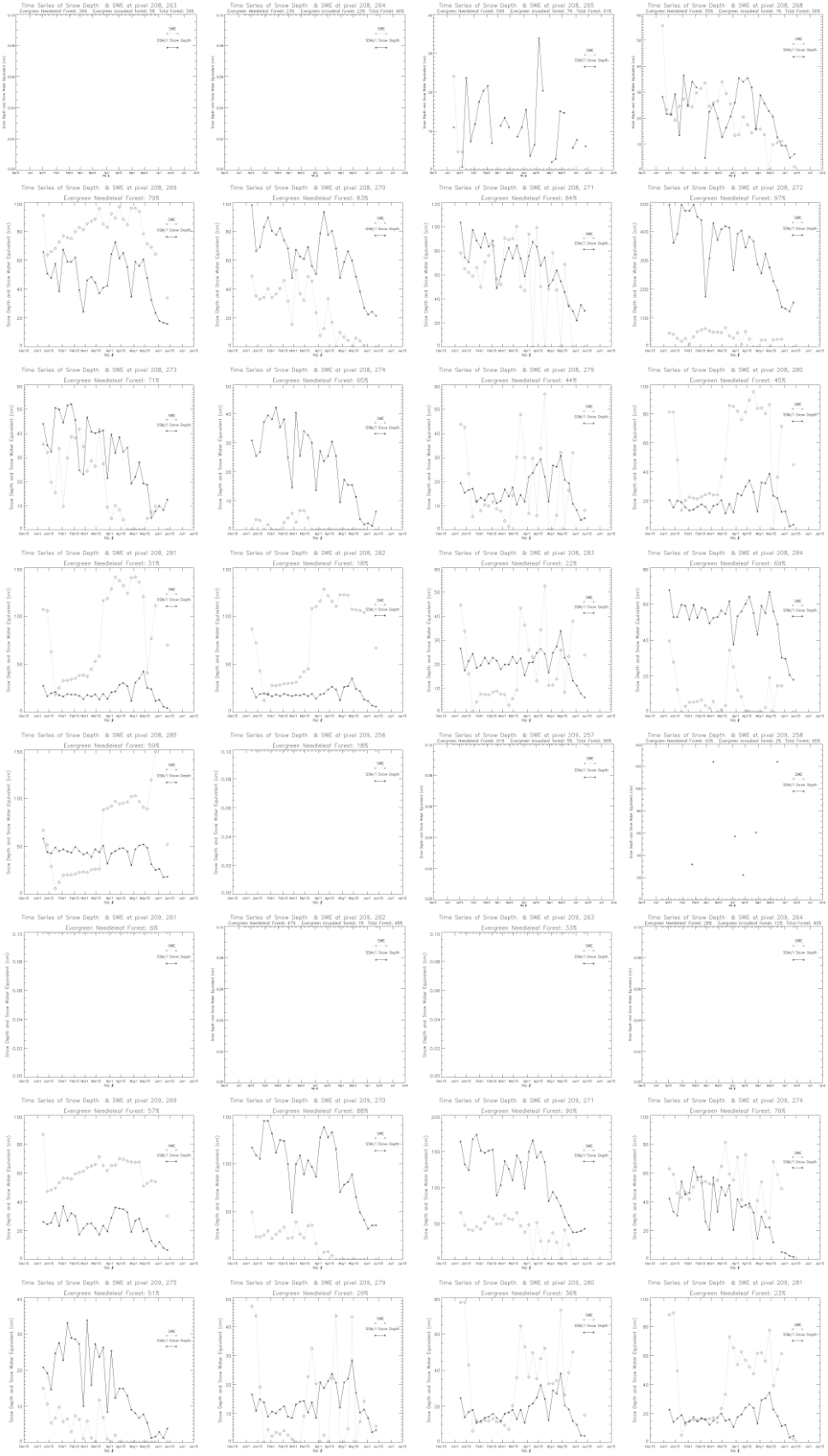
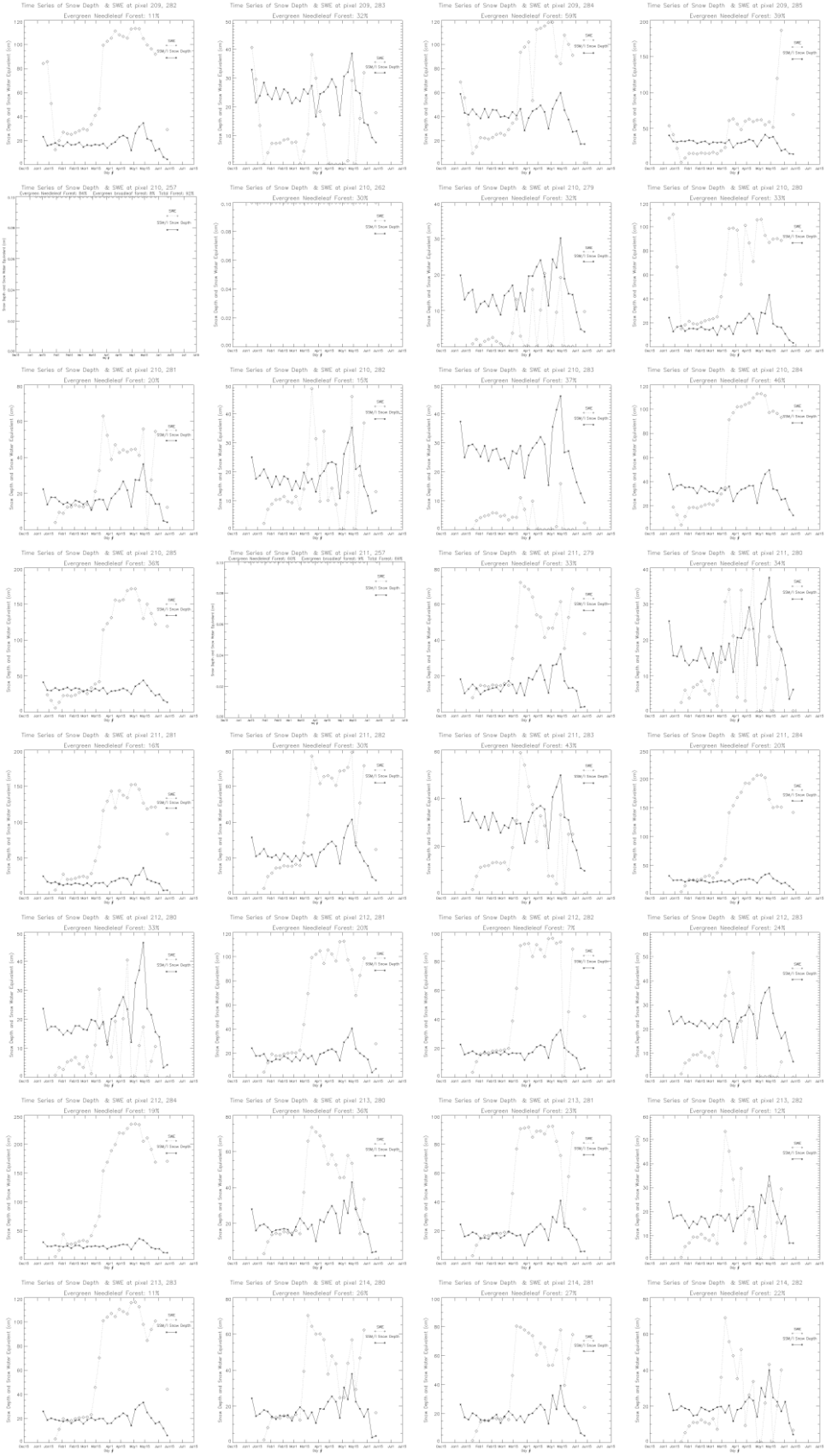
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth & SWE at pixel 204, 281
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 204, 282
Evergreen Needleleaf Forest: 39%
Time Series of Snow Depth & SWE at pixel 204, 283
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth & SWE at pixel 204, 284
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 204, 285
Evergreen Needleleaf Forest: 87%
Time Series of Snow Depth & SWE at pixel 204, 286
Evergreen Needleleaf Forest: 66%
Time Series of Snow Depth & SWE at pixel 204, 287
Evergreen Needleleaf Forest: 47%
Time Series of Snow Depth & SWE at pixel 205, 255
Evergreen Needleleaf Forest: 33% Evergreen broadleaf forest: 5% Total Forest: 38%
Time Series of Snow Depth & SWE at pixel 205, 256
Evergreen Needleleaf Forest: 74% Evergreen broadleaf forest: 7% Total Forest: 81%
Time Series of Snow Depth & SWE at pixel 205, 257
Evergreen Needleleaf Forest: 68% Evergreen broadleaf forest: 27% Total Forest: 75%
Time Series of Snow Depth & SWE at pixel 205, 258
Evergreen Needleleaf Forest: 57% Evergreen broadleaf forest: 30% Total Forest: 87%
SWE
SNWI Snow Depth
Snow Depth and Snow Water Equivalent (cm)
Day #

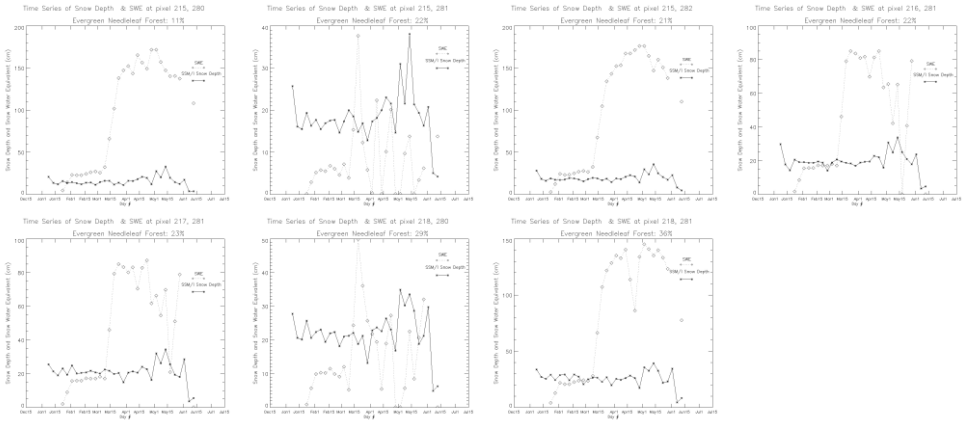

Time Series of Snow Depth & SWE at pixel 205, 259
Evergreen Needleleaf Forest: 70% Evergreen broadleaf forest: 3% Total Forest: 74%
Time Series of Snow Depth & SWE at pixel 205, 260
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 205, 261
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 205, 262
Evergreen Needleleaf Forest: 36%
Time Series of Snow Depth & SWE at pixel 205, 263
Evergreen Needleleaf Forest: 25% Evergreen broadleaf forest: 7% Total Forest: 33%
Time Series of Snow Depth & SWE at pixel 205, 264
Evergreen Needleleaf Forest: 76% Evergreen broadleaf forest: 5% Total Forest: 81%
Time Series of Snow Depth & SWE at pixel 205, 265
Evergreen Needleleaf Forest: 70% Evergreen broadleaf forest: 1% Total Forest: 71%
Time Series of Snow Depth & SWE at pixel 205, 266
Evergreen Needleleaf Forest: 62% Evergreen broadleaf forest: 1% Total Forest: 63%
Time Series of Snow Depth & SWE at pixel 205, 267
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 205, 268
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth & SWE at pixel 205, 269
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 205, 270
Evergreen Needleleaf Forest: 91%
Time Series of Snow Depth & SWE at pixel 205, 271
Evergreen Needleleaf Forest: 89%
Time Series of Snow Depth & SWE at pixel 205, 272
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth & SWE at pixel 205, 273
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 205, 274
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 205, 275
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 205, 276
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 205, 277
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 205, 278
Evergreen Needleleaf Forest: 63%
Time Series of Snow Depth & SWE at pixel 205, 279
Evergreen Needleleaf Forest: 50%
Time Series of Snow Depth & SWE at pixel 205, 280
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 205, 281
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 205, 282
Evergreen Needleleaf Forest: 49%
Time Series of Snow Depth & SWE at pixel 205, 283
Evergreen Needleleaf Forest: 38%
Time Series of Snow Depth & SWE at pixel 205, 284
Evergreen Needleleaf Forest: 67%
Time Series of Snow Depth & SWE at pixel 205, 285
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth & SWE at pixel 205, 286
Evergreen Needleleaf Forest: 68%
Time Series of Snow Depth & SWE at pixel 206, 256
Evergreen Needleleaf Forest: 63% Evergreen broadleaf forest: 18% Total Forest: 81%
Time Series of Snow Depth & SWE at pixel 206, 257
Evergreen Needleleaf Forest: 67% Evergreen broadleaf forest: 24% Total Forest: 91%
Time Series of Snow Depth & SWE at pixel 206, 258
Evergreen Needleleaf Forest: 82% Evergreen broadleaf forest: 4% Total Forest: 86%
Time Series of Snow Depth & SWE at pixel 206, 259
Evergreen Needleleaf Forest: 80% Evergreen broadleaf forest: 2% Total Forest: 82%
SWE
SNWI Snow Depth
Snow Depth and Snow Water Equivalent (cm)
Day #


Time Series of Snow Depth & SWE at pixel 206, 260
Evergreen Needleleaf Forest: 79% Evergreen broadleaf forest: 0% Total Forest: 84%
Time Series of Snow Depth & SWE at pixel 206, 261
Evergreen Needleleaf Forest: 74% Evergreen broadleaf forest: 3% Total Forest: 77%
Time Series of Snow Depth & SWE at pixel 206, 262
Evergreen Needleleaf Forest: 40% Evergreen broadleaf forest: 2% Total Forest: 42%
Time Series of Snow Depth & SWE at pixel 206, 263
Evergreen Needleleaf Forest: 17% Evergreen broadleaf forest: 4% Total Forest: 21%
Time Series of Snow Depth & SWE at pixel 206, 264
Evergreen Needleleaf Forest: 59% Evergreen broadleaf forest: 6% Total Forest: 65%
Time Series of Snow Depth & SWE at pixel 206, 265
Evergreen Needleleaf Forest: 64% Evergreen broadleaf forest: 3% Total Forest: 66%
Time Series of Snow Depth & SWE at pixel 206, 266
Evergreen Needleleaf Forest: 59% Evergreen broadleaf forest: 2% Total Forest: 61%
Time Series of Snow Depth & SWE at pixel 206, 267
Evergreen Needleleaf Forest: 36% Evergreen broadleaf forest: 1% Total Forest: 37%
Time Series of Snow Depth & SWE at pixel 206, 268
Evergreen Needleleaf Forest: 52%
Time Series of Snow Depth & SWE at pixel 206, 269
Evergreen Needleleaf Forest: 60%
Time Series of Snow Depth & SWE at pixel 206, 270
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 206, 271
Evergreen Needleleaf Forest: 81%
Time Series of Snow Depth & SWE at pixel 206, 272
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 206, 273
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 206, 274
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth & SWE at pixel 206, 275
Evergreen Needleleaf Forest: 96%
Time Series of Snow Depth & SWE at pixel 206, 276
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 206, 277
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 206, 278
Evergreen Needleleaf Forest: 58%
Time Series of Snow Depth & SWE at pixel 206, 279
Evergreen Needleleaf Forest: 47%
Time Series of Snow Depth & SWE at pixel 206, 280
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 206, 281
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 206, 282
Evergreen Needleleaf Forest: 42%
Time Series of Snow Depth & SWE at pixel 206, 283
Evergreen Needleleaf Forest: 28%
Time Series of Snow Depth & SWE at pixel 206, 284
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth & SWE at pixel 206, 285
Evergreen Needleleaf Forest: 80%
Time Series of Snow Depth & SWE at pixel 206, 286
Evergreen Needleleaf Forest: 56%
Time Series of Snow Depth & SWE at pixel 207, 256
Evergreen Needleleaf Forest: 82% Evergreen broadleaf forest: 6% Total Forest: 88%
Time Series of Snow Depth & SWE at pixel 207, 257
Evergreen Needleleaf Forest: 85% Evergreen broadleaf forest: 8% Total Forest: 93%
Time Series of Snow Depth & SWE at pixel 207, 258
Evergreen Needleleaf Forest: 94%
Time Series of Snow Depth & SWE at pixel 207, 259
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 207, 260
Evergreen Needleleaf Forest: 79%


Time Series of Snow Depth & SWE at pixel 207, 261
Evergreen Needleleaf Forest: 84%
Evergreen broadleaf Forest: 20%
Total Forest: 84%
Time Series of Snow Depth & SWE at pixel 207, 262
Evergreen Needleleaf Forest: 57%
Evergreen broadleaf Forest: 1%
Total Forest: 58%
Time Series of Snow Depth & SWE at pixel 207, 263
Evergreen Needleleaf Forest: 23%
Evergreen broadleaf Forest: 10%
Total Forest: 33%
Time Series of Snow Depth & SWE at pixel 207, 264
Evergreen Needleleaf Forest: 61%
Evergreen broadleaf Forest: 11%
Total Forest: 72%
Time Series of Snow Depth & SWE at pixel 207, 265
Evergreen Needleleaf Forest: 51%
Evergreen broadleaf Forest: 12%
Total Forest: 63%
Time Series of Snow Depth & SWE at pixel 207, 266
Evergreen Needleleaf Forest: 63%
Evergreen broadleaf Forest: 2%
Total Forest: 66%
Time Series of Snow Depth & SWE at pixel 207, 267
Evergreen Needleleaf Forest: 41%
Time Series of Snow Depth & SWE at pixel 207, 268
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 207, 269
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 207, 270
Evergreen Needleleaf Forest: 92%
Time Series of Snow Depth & SWE at pixel 207, 271
Evergreen Needleleaf Forest: 93%
Time Series of Snow Depth & SWE at pixel 207, 272
Evergreen Needleleaf Forest: 86%
Time Series of Snow Depth & SWE at pixel 207, 273
Evergreen Needleleaf Forest: 61%
Time Series of Snow Depth & SWE at pixel 207, 274
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 207, 275
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 207, 276
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 207, 277
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 207, 278
Evergreen Needleleaf Forest: 55%
Time Series of Snow Depth & SWE at pixel 207, 279
Evergreen Needleleaf Forest: 46%
Evergreen broadleaf Forest: 1%
Total Forest: 47%
Time Series of Snow Depth & SWE at pixel 207, 280
Evergreen Needleleaf Forest: 40%
Time Series of Snow Depth & SWE at pixel 207, 281
Evergreen Needleleaf Forest: 25%
Time Series of Snow Depth & SWE at pixel 207, 282
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 207, 283
Evergreen Needleleaf Forest: 16%
Time Series of Snow Depth & SWE at pixel 207, 284
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 207, 285
Evergreen Needleleaf Forest: 78%
Time Series of Snow Depth & SWE at pixel 208, 256
Evergreen Needleleaf Forest: 37%
Evergreen broadleaf Forest: 8%
Total Forest: 45%
Time Series of Snow Depth & SWE at pixel 208, 257
Evergreen Needleleaf Forest: 86%
Evergreen broadleaf Forest: 2%
Total Forest: 88%
Time Series of Snow Depth & SWE at pixel 208, 258
Evergreen Needleleaf Forest: 82%
Evergreen broadleaf Forest: 2%
Total Forest: 84%
Time Series of Snow Depth & SWE at pixel 208, 259
Evergreen Needleleaf Forest: 74%
Time Series of Snow Depth & SWE at pixel 208, 260
Evergreen Needleleaf Forest: 63%
Evergreen broadleaf Forest: 2%
Total Forest: 65%
Time Series of Snow Depth & SWE at pixel 208, 261
Evergreen Needleleaf Forest: 9%
Evergreen broadleaf Forest: 1%
Total Forest: 10%
Time Series of Snow Depth & SWE at pixel 208, 262
Evergreen Needleleaf Forest: 11%
Evergreen broadleaf Forest: 1%
Total Forest: 12%
SWE
SSM/I Snow Depth
Snow Depth and Snow Water Equivalent (cm)
day #


Time Series of Snow Depth & SWE at pixel 208, 263
Time Series of Snow Depth & SWE at pixel 208, 264
Time Series of Snow Depth & SWE at pixel 208, 265
Time Series of Snow Depth & SWE at pixel 208, 268
Time Series of Snow Depth & SWE at pixel 208, 269
Evergreen Needleleaf Forest: 79%
Time Series of Snow Depth & SWE at pixel 208, 270
Evergreen Needleleaf Forest: 83%
Time Series of Snow Depth & SWE at pixel 208, 271
Evergreen Needleleaf Forest: 84%
Time Series of Snow Depth & SWE at pixel 208, 272
Evergreen Needleleaf Forest: 97%
Time Series of Snow Depth & SWE at pixel 208, 273
Evergreen Needleleaf Forest: 71%
Time Series of Snow Depth & SWE at pixel 208, 274
Evergreen Needleleaf Forest: 65%
Time Series of Snow Depth & SWE at pixel 208, 279
Evergreen Needleleaf Forest: 44%
Time Series of Snow Depth & SWE at pixel 208, 280
Evergreen Needleleaf Forest: 45%
Time Series of Snow Depth & SWE at pixel 208, 281
Evergreen Needleleaf Forest: 31%
Time Series of Snow Depth & SWE at pixel 208, 282
Evergreen Needleleaf Forest: 18%
Time Series of Snow Depth & SWE at pixel 208, 283
Evergreen Needleleaf Forest: 22%
Time Series of Snow Depth & SWE at pixel 208, 284
Evergreen Needleleaf Forest: 69%
Time Series of Snow Depth & SWE at pixel 208, 285
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 209, 256
Evergreen Needleleaf Forest: 18%
Time Series of Snow Depth & SWE at pixel 209, 257
Time Series of Snow Depth & SWE at pixel 209, 258
Time Series of Snow Depth & SWE at pixel 209, 261
Evergreen Needleleaf Forest: 6%
Time Series of Snow Depth & SWE at pixel 209, 262
Time Series of Snow Depth & SWE at pixel 209, 263
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 209, 264
Time Series of Snow Depth & SWE at pixel 209, 269
Evergreen Needleleaf Forest: 57%
Time Series of Snow Depth & SWE at pixel 209, 270
Evergreen Needleleaf Forest: 88%
Time Series of Snow Depth & SWE at pixel 209, 271
Evergreen Needleleaf Forest: 90%
Time Series of Snow Depth & SWE at pixel 209, 274
Evergreen Needleleaf Forest: 76%
Time Series of Snow Depth & SWE at pixel 209, 275
Evergreen Needleleaf Forest: 51%
Time Series of Snow Depth & SWE at pixel 209, 279
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 209, 280
Evergreen Needleleaf Forest: 36%
Time Series of Snow Depth & SWE at pixel 209, 281
Evergreen Needleleaf Forest: 23%


Time Series of Snow Depth & SWE at pixel 209, 282
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 209, 283
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth & SWE at pixel 209, 284
Evergreen Needleleaf Forest: 59%
Time Series of Snow Depth & SWE at pixel 209, 285
Evergreen Needleleaf Forest: 39%
Time Series of Snow Depth & SWE at pixel 210, 257
Evergreen Needleleaf Forest: 0% Evergreen Broadleaf Forest: 0% Total Forest: 0%
Time Series of Snow Depth & SWE at pixel 210, 262
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 210, 279
Evergreen Needleleaf Forest: 32%
Time Series of Snow Depth & SWE at pixel 210, 280
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 210, 281
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth & SWE at pixel 210, 282
Evergreen Needleleaf Forest: 15%
Time Series of Snow Depth & SWE at pixel 210, 283
Evergreen Needleleaf Forest: 37%
Time Series of Snow Depth & SWE at pixel 210, 284
Evergreen Needleleaf Forest: 46%
Time Series of Snow Depth & SWE at pixel 210, 285
Evergreen Needleleaf Forest: 36%
Time Series of Snow Depth & SWE at pixel 211, 257
Evergreen Needleleaf Forest: 0% Evergreen Broadleaf Forest: 0% Total Forest: 0%
Time Series of Snow Depth & SWE at pixel 211, 279
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 211, 280
Evergreen Needleleaf Forest: 34%
Time Series of Snow Depth & SWE at pixel 211, 281
Evergreen Needleleaf Forest: 16%
Time Series of Snow Depth & SWE at pixel 211, 282
Evergreen Needleleaf Forest: 30%
Time Series of Snow Depth & SWE at pixel 211, 283
Evergreen Needleleaf Forest: 43%
Time Series of Snow Depth & SWE at pixel 211, 284
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth & SWE at pixel 212, 280
Evergreen Needleleaf Forest: 33%
Time Series of Snow Depth & SWE at pixel 212, 281
Evergreen Needleleaf Forest: 20%
Time Series of Snow Depth & SWE at pixel 212, 282
Evergreen Needleleaf Forest: 7%
Time Series of Snow Depth & SWE at pixel 212, 283
Evergreen Needleleaf Forest: 24%
Time Series of Snow Depth & SWE at pixel 212, 284
Evergreen Needleleaf Forest: 19%
Time Series of Snow Depth & SWE at pixel 213, 280
Evergreen Needleleaf Forest: 36%
Time Series of Snow Depth & SWE at pixel 213, 281
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 213, 282
Evergreen Needleleaf Forest: 12%
Time Series of Snow Depth & SWE at pixel 213, 283
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 214, 280
Evergreen Needleleaf Forest: 26%
Time Series of Snow Depth & SWE at pixel 214, 281
Evergreen Needleleaf Forest: 27%
Time Series of Snow Depth & SWE at pixel 214, 282
Evergreen Needleleaf Forest: 22%


Time Series of Snow Depth & SWE at pixel 215, 280
Evergreen Needleleaf Forest: 11%
Time Series of Snow Depth & SWE at pixel 215, 281
Evergreen Needleleaf Forest: 22%
Time Series of Snow Depth & SWE at pixel 215, 282
Evergreen Needleleaf Forest: 21%
Time Series of Snow Depth & SWE at pixel 216, 281
Evergreen Needleleaf Forest: 22%
Time Series of Snow Depth & SWE at pixel 217, 281
Evergreen Needleleaf Forest: 23%
Time Series of Snow Depth & SWE at pixel 218, 280
Evergreen Needleleaf Forest: 29%
Time Series of Snow Depth & SWE at pixel 218, 281
Evergreen Needleleaf Forest: 36%
Snow Depth and Snow Water Equivalent (cm)
SWE
SSM/I Snow Depth
Day

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