

Special aspects of snow cover formation in Siberia

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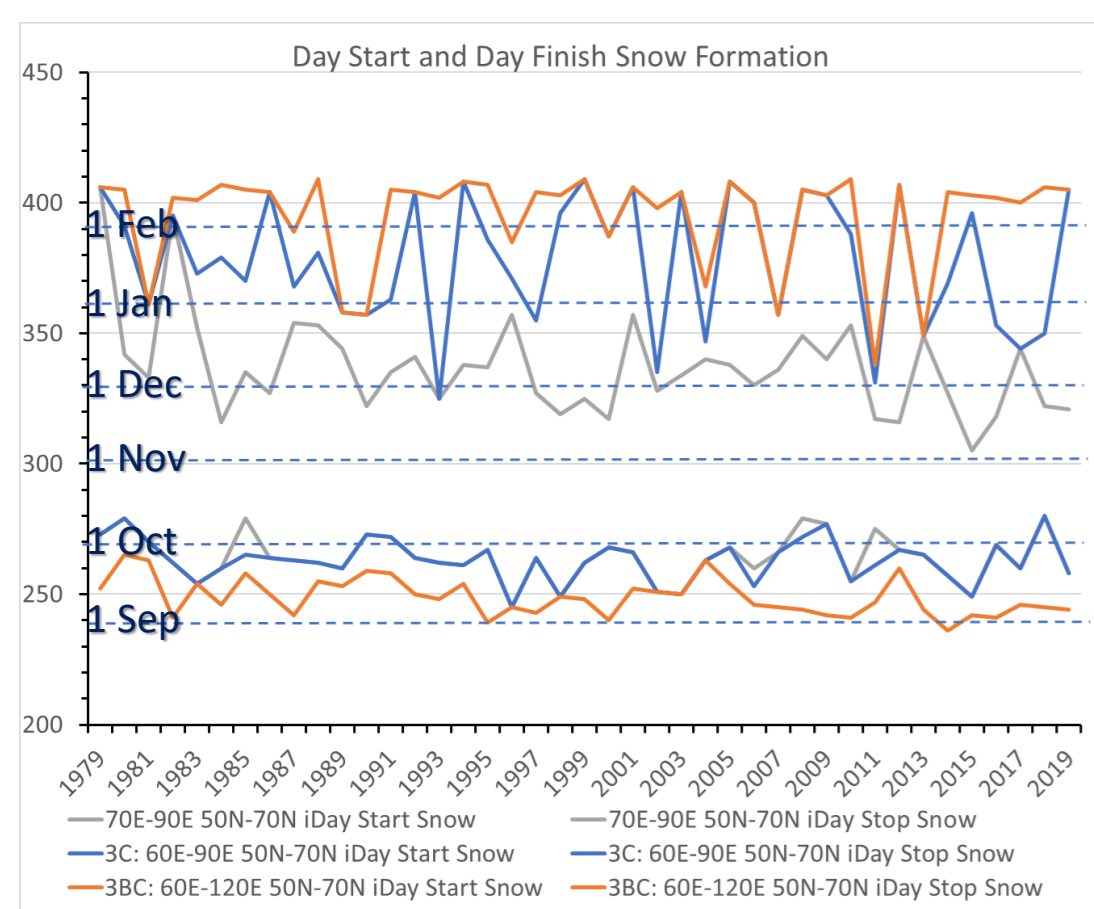


Introduction

There are a number of studies on the behavior of snow cover (SC). In some, the attention of researchers is concentrated on the territory of Eurasia as a whole. For example, it has been shown that in general for Eurasia, the duration of the cold season and duration of the period with a stable SC decrease [1, 2]. Other studies, considering individual regions, rely on datasets previously selected as the best, but for a large territory [3-5]. There are also works devoted to the comparison of various datasets of SC [6, 7]. However, such comparisons were carried out for rather large territories.

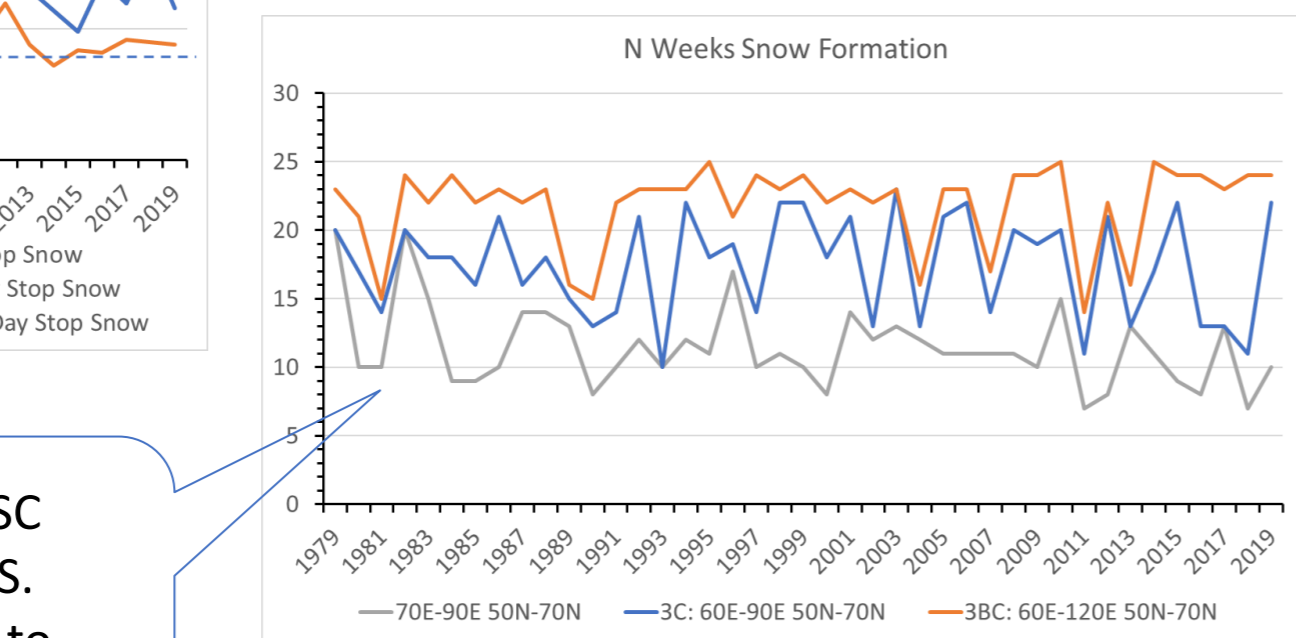
Results

Dates and Duration of SC Establishing

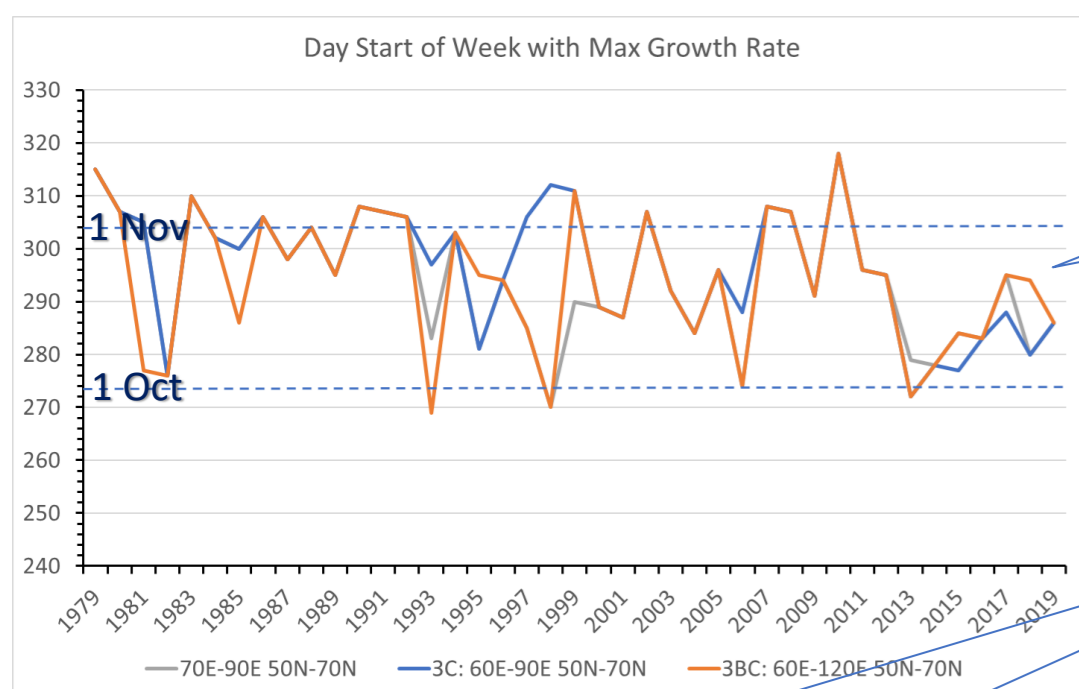


- Dates of SC formation start are the same for WS and small WS for most of the years.
- For WES SC formation starts earlier.
- Dates of SC formation end from region to region vary significantly.

- The longest time period of the SC formation was obtained for WES. For WS SC establishes faster up to about 5 weeks.

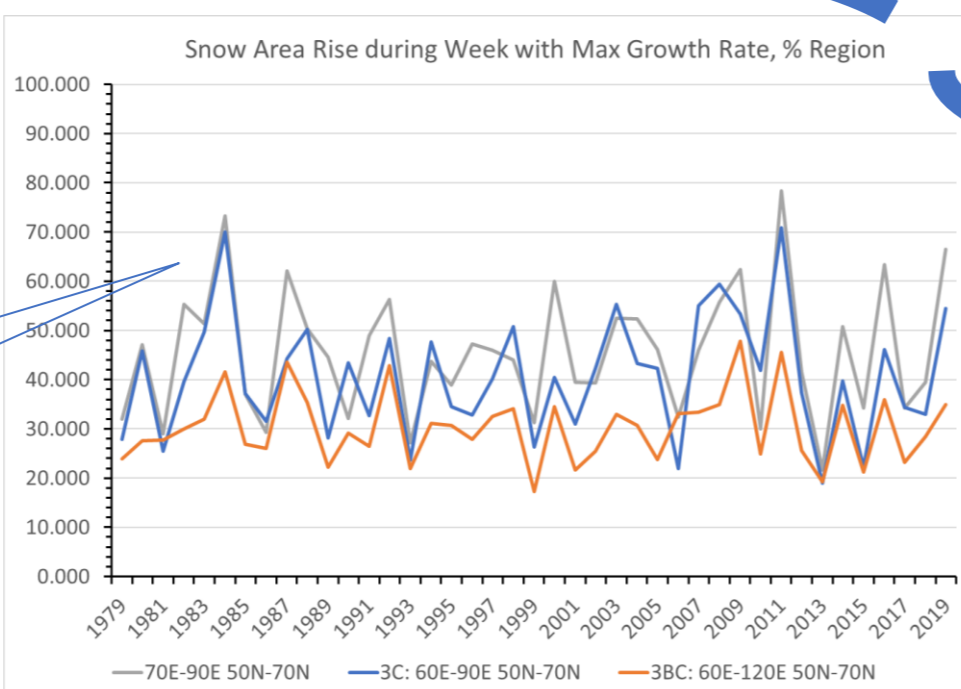


Week with MAX of Fall SC Growth Rate

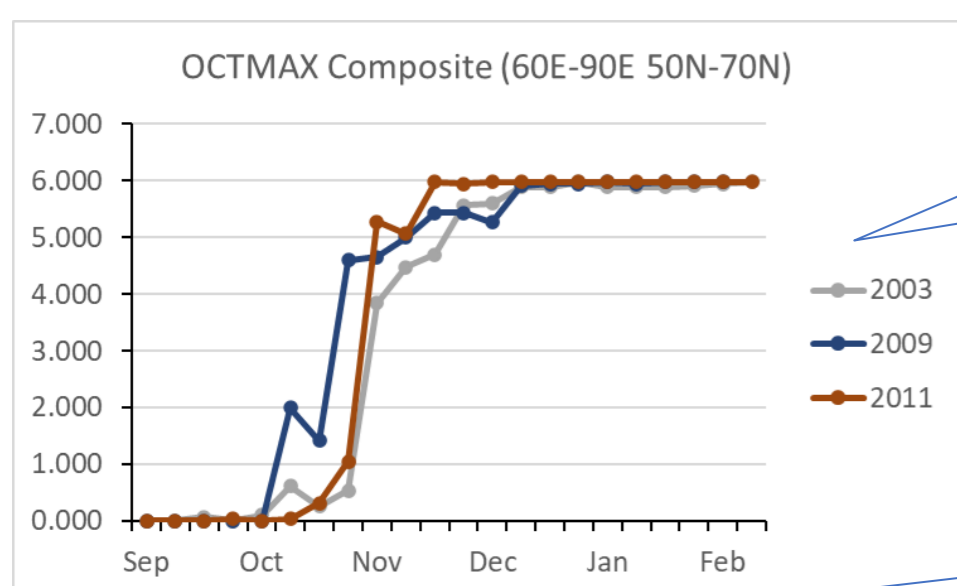


- Trend to earlier appearing of the week with max fall SC growth rate.

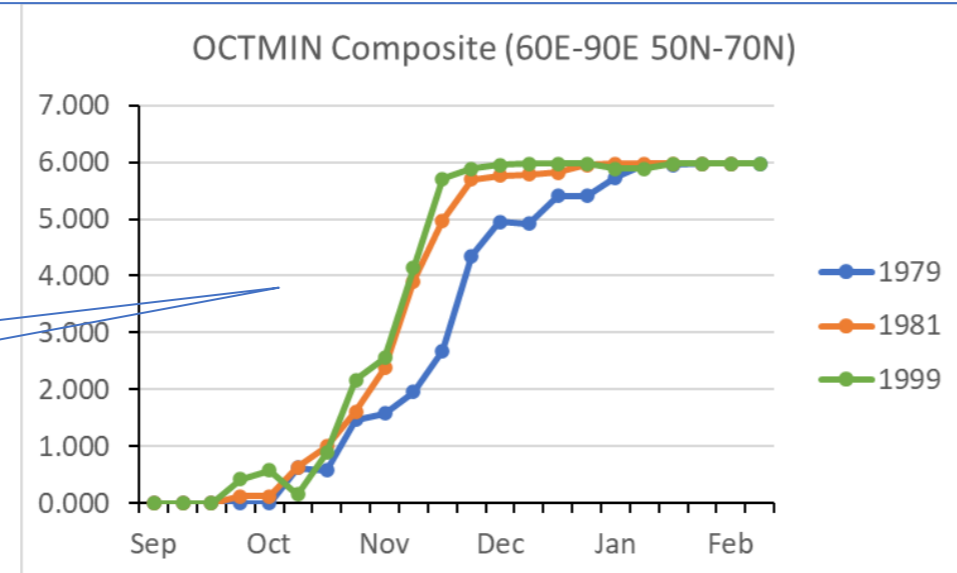
- For WS for some years more than 50% of SC establishes during this week



Years with the fastest and the sharpest snow cover growth rate. Most of the area forms during one week in October



Years with the slowest and the smoothest snow cover growth rate. The week with the highest formation rate is not in October

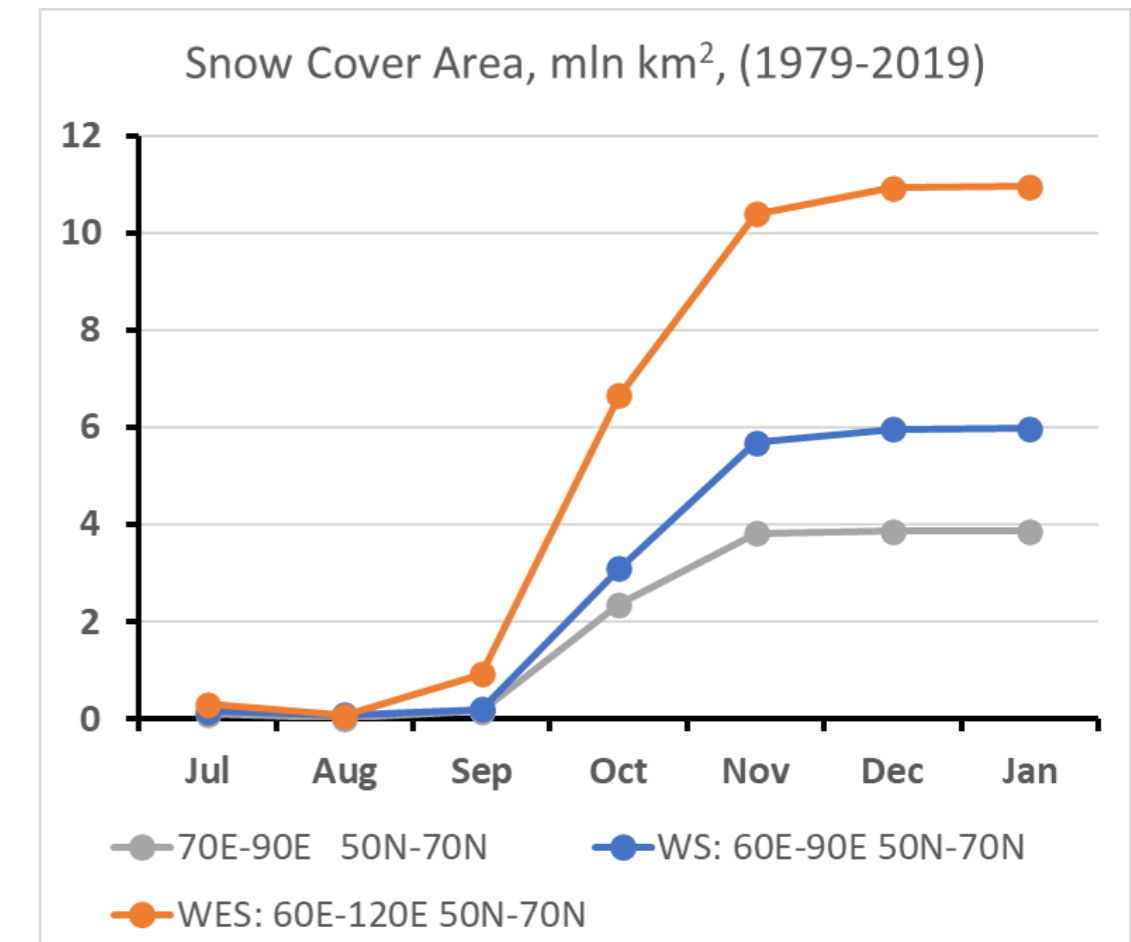


The aim of the study:

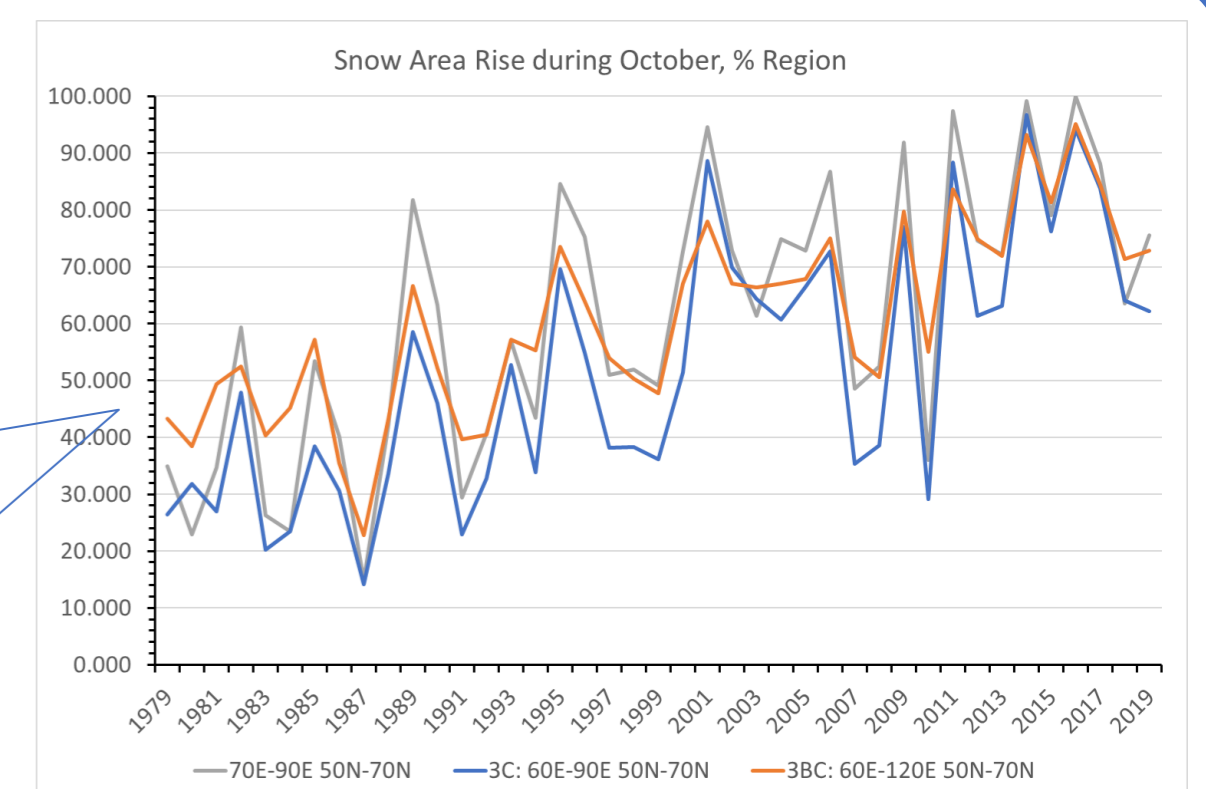
to assess the interannual variation of the snow cover characteristics for Western and Eastern Siberia

Data and Regions

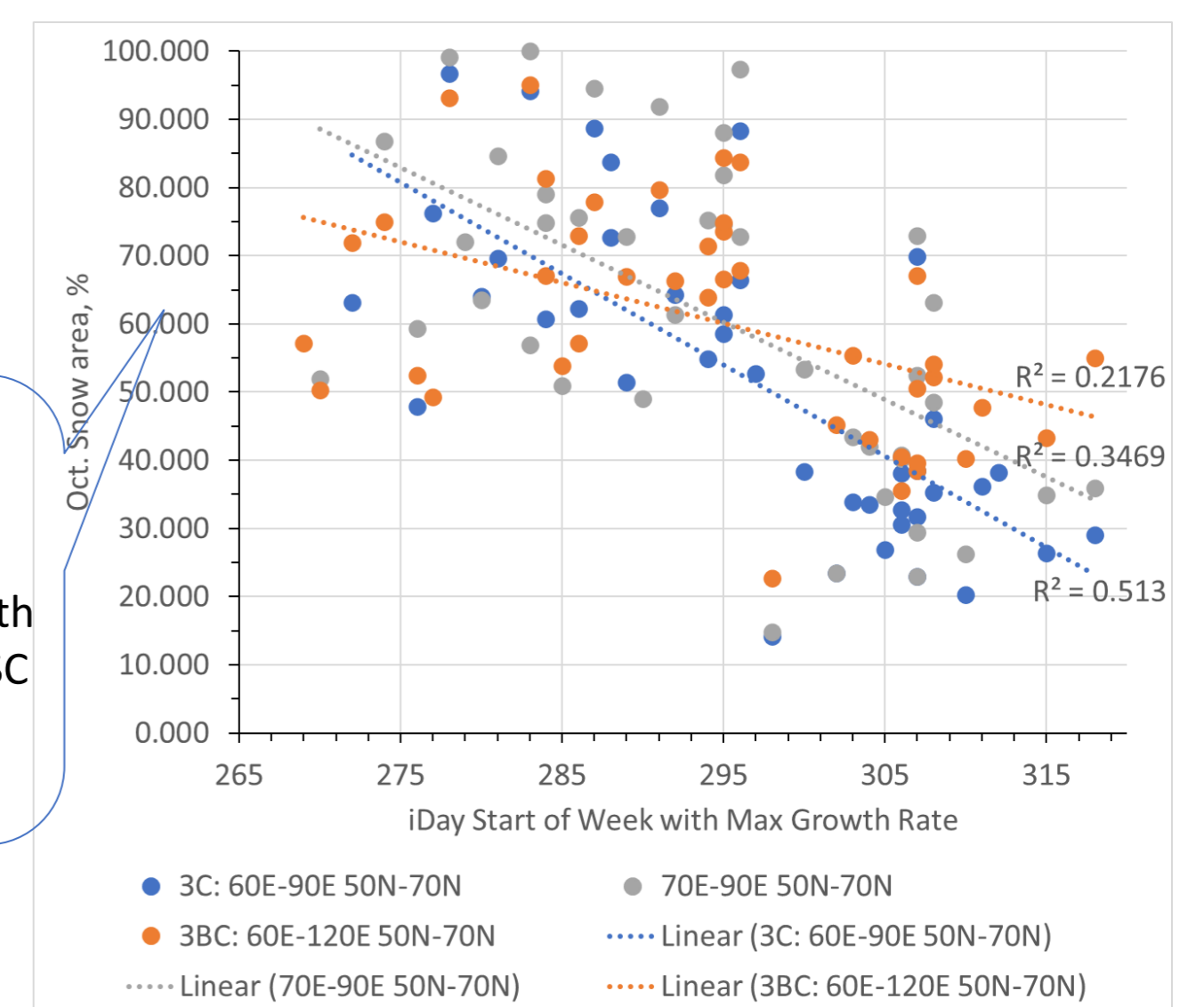
NOAA weekly satellite data on snow cover from the Rutgers University Global Snow Lab (GSL) (Robinson, 2012)



- Significant trend for all regions under consideration
- Some studies suggest the trend is an internal feature of this data [6]



October SC area correlate with the date of the week with the most intensive SC growth rate.



Conclusion

- We show the trend to earlier appearing of the week with max fall SC growth rate. The trend is the same for regions under consideration.
- The October SC trend can be explained by an earlier appearance of the week with intensive SC growth.

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