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Germar H. and Bhatt, Uma S. and Bjerke, Jarle W. and Boisvert, L. N. and Box, Jason E. and
Brettschneider, B. and Burgess, D. and Butler, Amy H. and Cappelen, John and Christiansen,
Hanne H. and Decharme, B. and Derksen, C. and Divine, Dmitry and Drozdov, D. S. and Elias,
Chereque A. and Epstein, Howard E. and Farrell, Sinead L. and Fausto, Robert S. and Fettweis,
Xavier and Fioletov, Vitali E. and Forbes, Bruce C. and Frost, Gerald V. and Gerland, Sebastian
and Goetz, Scott J. and Groo{\ss}, Jens-Uwe and Haas, Christian and Hanna, Edward and
Hanssen, -Bauer Inger and Heijmans, M. M. P. D. and Hendricks, Stefan and Ialongo, Iolanda
and Isaksen, K. and Jensen, C. D. and Johnsen, Bj{\o}rn and Kaleschke, L. and Kholodov, A. L. and
Kim, Seong-Joong and Kohler, J. and Korsgaard, Niels J. and Labe, Zachary and Lakkala, Kaisa
and Lara, Mark J. and Lee, Simon H. and Loomis, Bryant and Luks, B. and Luoju, K. and
Macander, Matthew J. and Magn{\u}sson, R. {\l} and Malkova, G. V. and Mankoff, Kenneth D.
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M{\u}ller, Rolf and Nyland, K. E. and Overland, James E. and P{\a}lsson, F. and Park, T. and
Parker, C. L. and Perovich, Don and Petty, Alek and Phoenix, Gareth K. and Pinzon, J. E. and
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Nikolai I. and Smith, Sharon L. and Stafford, K. M. and Steer, A. and Streletskiy, Dimitri A. and
Svendby, Tove and Tedesco, Marco and Thomson, L. and Thorsteinsson, T. and {Tian-Kunze}, X.
and Timmermans, Mary-Louise and T{\o}mmervik, Hans and Tschudi, Mark and Tucker, C. J. and
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indicators were at record levels, the ongoing trends provide a stark illustration of an Arctic that
is a very different place than the Arctic of the twentieth century. Air and ocean temperatures in
the Arctic are intimately linked with sea ice and are directly connected to the biological
productivity of the region. Terrestrial snow cover, or the lack thereof, plays an important role in
modulating air temperatures and the hydrologic cycle. During the winter, lower latitude drivers
such as the El Ni~no-Southern Oscillation, the Madden-Julian Oscillation, and the evolution of
the stratospheric polar vortex affect regional conditions and sub-seasonal variability. These
processes add to the complexity of annually assessing the state of the Arctic, despite numerous
examples of observed broadscale directional change across the region},
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Arctic.pdf;/Users/zlabe/Zotero/storage/M5PZ6ZHI/Thoman et al. - 2022 - The Arctic.html}  
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