

The Past, Present, and Future of the Antarctic Automatic Weather Station Network

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The United States Antarctic Automatic Weather Station (AWS) Program at the University of Wisconsin-Madison turns 40 years old in January 2020. The initial establishment and evolution of this network represents a decades-long endeavor to observe the weather and climate the near-surface Antarctic atmosphere. This presentation will review origin of the AWS network, denote its current status today, and will outline the future plans. The AWS network successes and ongoing challenges will be discussed. The growth of essential collaborations with other nations has allowed the AWS network to live up to the Antarctic treaty ideals of cooperative scientific research, support, and perhaps most critically: data sharing. The network has been invaluable in understanding the behavior of basic and unique Antarctic weather phenomena (e.g. temperature and pressure patterns, katabatic winds, etc.). Examples will be discussed along with the field work required in maintaining the network.

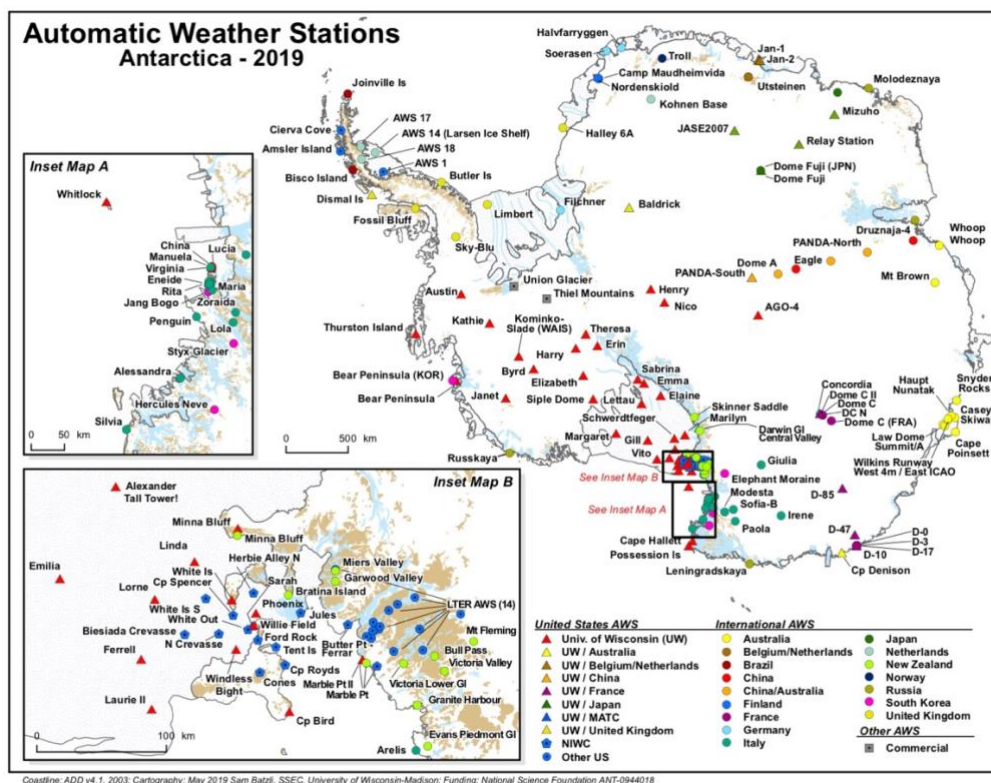


Figure 1. A map of all known Automatic Weather Stations in the network across Antarctica for 2019.

References

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