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Analysis of the evolution of Martian polar caps during Martian Years 34-35 from Mars Express Visual Monitoring Camera

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The wide field of view of the Visual Monitoring Camera (VMC) onboard Mars Express, together with the polar orbit of the spacecraft, make VMC very suitable to monitor polar phenomena on Mars¹. During Martian Years 34 and 35, Martian polar regions were imaged regularly by VMC, and in this work we use this set of images to analyze the evolution of both north and south polar ice caps. We determine the limits of the ice cap at different longitudes and the total area covered by ice as the season evolves, and we analyze the possible influence of the Global Dust Storm in the evolution of the ice caps regression curves. Finally, we describe a number of mid-scale atmospheric features that develop at the edge of the polar caps.

¹ Hernández-Bernal et al. "The 2018 Martian Global Dust Storm Over the South Polar Region Studied With MEx/VMC" *Geophys. Res. Lett.* 46, pp 10330-10337 (2019)