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The Sun and heliosphere are far simpler at solar activity minima than at other phases of the solar activity cycle. The complexity that remains gives us information about both the preceding cycle and the following cycle. Space-age observations of conditions on the Sun and throughout the heliosphere give us detailed information on the last three or four cycles. Historical observations of the visible Sun and of geomagnetic variations from networks of ground-based observatories provide important but less detailed information on many more cycle minima. Laboratory measurements of radioisotopes in tree rings and ice cores provide many centuries of data but only about time-scales longer than the 11-year solar activity cycle. I will present some of these datasets along with what they tell us about previous minima.

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