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China's Kunlun Station is an extraordinarily good site for deep infrared surveys

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At any infrared/THz wavelength longer than about 2.3 microns, China's Kunlun Station in Antarctica has very possibly the darkest sky and best conditions - seeing, cloud coverage, atmospheric stability, transparency - of any site on Earth. This directly translates into dramatic improvements in survey speed and depth. In the near-infrared, the Kdark region just longward of 2.3 microns is particularly favourable, with flux from the night sky and telescope being factors of around 50 times less that temperate-latitude observatories. The Nanjing Institute of Astronomical Optics and Technology has an Antarctic-rated 0.5m telescope ready to go, the Australian Astronomical Observatory is building the camera cryostat, the UK Astronomical Technology Centre is integrating the detector system, and the University of New South Wales is designing the support electronics and power supplies. Together, these contributions form the Kunlun Infrared Sky Survey, which will explore new regions of parameter space and act as a pathfinder for even more ambitious projects that can be undertaken nowhere else on Earth.

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