Neutrinos are unique astronomical messengers which may provide critical information in identifying sources of cosmic rays and the physics processes out of which they are born. The search for astrophysical neutrinos has given rise to a new generation of neutrino telescopes of an unprecedented scale, including the IceCube Neutrino Observatory, the world's first kilometer scale neutrino telescope, which was constructed by instrumenting the clear, deep ice at the South Pole with 5160 photomultiplier tubes. However, even IceCube's unparalleled cubic kilometer of instrumented volume is not large enough to measure the flux of the so called GZK neutrinos produced by the interaction of the highest energy cosmic rays with the cosmic microwave background. Development of a 100 kilometer scale observatory designed to detect the GZK neutrinos using radio frequency emissions via the Askaryan effect is currently underway. This colloquium will discuss the motivation for the search for astrophysical neutrinos, the unique challenges associated with working in the Antarctic, as well as a few recent results from IceCube.