Near-infrared observations of the variable crab nebula

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We present three near-infrared (NIR) observations of the Crab Nebula obtained with CISCO on the Subaru Telescope and Quick Infrared Camera on the University of HAWAII 88 inch Telescope. The observations were performed on 2004 September, 2005 February, and 2005 October, and were coordinated with X-ray observations obtained with the Chandra X-ray observatory within 10 days. As shown in previous optical and X-ray monitoring observations, outward-moving wisps and variable knots are detected also in our NIR observations. The NIR variations are closely correlated with variations in the X-ray observations, indicating that both variations are driven by the same physical process. We discuss the origin of NIR-emitting particles based on the temporal variations as well as the spectral energy distributions of each variable component.