

K04a **Infrared observations of supernova remnant Kes 17**

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We present the results of infrared (IR; 2.5-160  $\mu\text{m}$ ) observations of the supernova remnant (SNR) Kes 17 based on the data obtained with AKARI and Spitzer. We first detect bright continuum emission of its western shell in the mid- and far-IR wavebands together with its near-IR molecular line emission. We also detect hidden mid-IR emission of its southern shell after subtraction of the background emission in this region. The existence of hot ( $\sim 2000$  K), shocked dense molecular gas revealed by the near-IR molecular line emission in the western shell suggests that the near-IR emission originates from the interaction between the SNR and nearby molecular gas. The far-IR luminosity of the western shell is  $\sim 8100L_{\odot}$ , which makes Kes 17 one of the few SNRs of significant far-IR emission. We discuss possibilities for the origin of the bright far-IR emission in the western shell: the emission of dust in the inter-clump medium of shocked molecular clouds, the emission of dust in evaporating flows of molecular clouds engulfed by hot gas, and the emission of dust of nearby molecular clouds illuminated by radiative shocks.