

Q08a **Looking at PAH Distribution and Anomalous Microwave Emission of the Lambda Orionis Region with AKARI**

Aaron Bell, Takashi Onaka (U. Tokyo), Frederic Galliano (CEA), Ronin Wu (Obs. Paris), Daisuke Ishihara, Hidehiro Kaneda (Nagoya U.), Yasuo Doi, Takafumi Ohtsubo (U. Tokyo), Martin Giard (IRAP)

The anomalous microwave emission (AME) continues to mystify those studying dust at both the infrared wavelengths, and on into the microwave domain. What physical mechanism/s produce this strongly dust-correlated microwave (20 to 70 GHz) galactic foreground? We investigate the hypothesis that AME arises from rapidly spinning polycyclic aromatic hydrocarbons (PAH type molecules). The AKARI space telescope contributed a wealth of data across the whole sky. We focus on the Infrared Camera (IRC) all-sky maps, centered at 9 and 18 μm . The 9 μm band offers a unique band-shape, and coverage of several major unidentified infrared band (UIR) features, otherwise called “the PAH features”. Here we investigate the PAH and dust emission of an AME prominent region, the Lambda Orionis molecular ring. We map the PAH abundance across this wide (10 degree) structure, and compare to the AME spatial variation, finding a difference between the molecular ring portion and the central, warm dust dominated region.