

# Report problem of Interstellar Physics II

Answer one of the following two questions in Japanese or English and send your report to onaka @ astron.s.u-tokyo.ac.jp via e-mail with the subject of Interstellar Physics by August 1. If you cannot make it in time, please contact me.

(1) Dust formation in SNe is a hot topic in present astronomy. Read the papers on SNI 987A by Wesson et al. (2015, MNRAS, 446, 2089) and Dwek & Arendt (2015, ApJ, 810, 75). Summarize the difference in the conclusions between the two papers and explain why they reached the different conclusions. Give your comments on the dust formation/growth in SNe.

(2) Identification of the carriers for the UIR bands is an unsettled issue. Kwok & Zhang (2011) Nature, 479, 80 proposed MAON (Mixed aromatic/aliphatic organic nanoparticles) model as a possible alternative to PAHs. Read Li & Drains (2012, ApJL, 760, L35), Kwok & Zhang (2012, ApJL, 760, L35; 2013, ApJL 771, 5) and summarize pros and cons of PAH and MAON models. Give your comments on the identification on the carriers.