

Possibility of emigrants from the trans-Neptunian planetesimal region: 203 Pompeja and 269 Justitia

*長谷川 直¹、Marsset Michaël^{2,3}、DeMeo Francesca³、Bus Schelte⁴、Geem Jooyeon⁵、石黒 正晃⁵、Im Myungshin⁵、黒田 大介⁶、Vernazza Pierre⁷

*Sunao Hasegawa¹、Michaël Marsset^{2,3}、Francesca E. DeMeo³、Scheltes J. Bus⁴、Jooyeon Geem⁵、Masateru Ishiguro⁵、Myungshin Im⁵、Daisuke Kuroda⁶、Pierre Vernazza⁷

1. 宇宙航空研究開発機構、2. ヨーロッパ南天天文台、3. マサチューセッツ工科大学、4. ハワイ大学、5. ソウル大学、6. 京都大学、7. マルセイユ天体物理学研究所

1. Japan Aerospace Exploration Agency, 2. European Southern Observatory, 3. Massachusetts Institute of Technology, 4. University of Hawaii, 5. Seoul National University, 6. Kyoto University, 7. Laboratoire d'Astrophysique de Marseille

We (Hasegawa et al. 2021, ApJL 916, L6) found very red main-belt asteroids, 203 Pompeja and 269 Justitia, compared to the D-type asteroids, which are the reddest objects in the main belt from observations and in the past literature in the overall visible and near-infrared wavelength range. The spectra of these very red asteroids are similar to those of the RR and IR objects found TNOs and Centaurs in outer Solar System. Spectroscopic and polarimetric results suggest the presence of complex organic materials in the surface layer of these very red asteroids. The very red asteroids 203 Pompeja and 269 Justitia are thought to have formed in the vicinity of Neptune and transplanted to the main belt region through a planetary migration phase. 203 Pompeja is the only very red MBA discovered this time of about 250 MBAs with a diameter of more than 100 km. These discoveries will place important constraints on models of early solar system formation.