
[EE] Eveningポスター発表 | セッション記号 P (宇宙惑星科学) | P-PS 惑星科学

[P-PS03] 太陽系小天体研究：現状の理解と将来の展望

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本セッションでは、太陽系小天体（小惑星、彗星、惑星間ダスト、衛星、太陽系外縁天体など）に関する実験、観測、探査、理論、さらにサンプル分析による研究成果を広く募集する。特に、本年度ははやぶさ2探査機の到着を間近に控え、探査天体（リュウグウ、C型小惑星）のリモートセンシング観測から、この天体に関する詳細な情報が得られようとしている。こうした現状を踏まえ、様々な太陽系小天体に関する最新研究を持ち寄ることによってこれまでに得られた知見を整理し、今後の展望を議論することを目的としている。

[PPS03-P02] Colors of Centaurs observed by the Subaru/Hyper Suprime-Cam

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キーワード：ケンタウルス族天体、すばる望遠鏡、太陽系外縁天体

Centaurs have orbits between Jupiter and Neptune. They are thought to originate from the trans-Neptunian region, but the actual mechanism of delivery into their current orbits is not well known. Also, it is not clear which dynamical group of trans-Neptunian objects (TNOs) are the source of Centaurs. Colors of small solar system bodies obtained by multi-band photometry provide us with clues to their origin and evolution. Comparison between the colors of Centaurs and TNOs would provide constraints on the origin and dynamical evolution of Centaurs. In the present work, we analyzed the imaging data of nine known Centaurs observed by the Hyper Suprime-Cam (HSC) installed at the prime focus of the 8.2-m Subaru Telescope with the g (0.4-0.55 μm) and i (0.7-0.85 μm) band filters by the end of June, 2017. The data we used are those available in the public data archive as well as those obtained by the Hyper Suprime-Cam Subaru Strategic Program (HSC-SSP), which is a three-layered imaging survey using 300 nights with the Subaru Telescope. Using these data, we obtained their g-i colors, and compared with those of TNOs obtained by Terai et al. (2018), who also used the HSC-SSP data. We found that the color distribution of the above nine Centaurs is similar to that of those TNOs with high orbital inclinations (larger than 6 degrees). This suggests that these Centaurs likely originated from TNOs with high orbital inclinations. We also examined correlations between colors and orbital elements for these Centaurs, and found no strong correlations with any orbital elements. This is consistent with the fact that Centaurs have a short dynamical lifetime and their current orbits do not represent their birth places.