PLANETARY ANALOG FIELD TRIPS AT HUNGARIAN SITES WITH UNIVERSITY SPACE PROBE MODELS HUNVEYOR AND HUSAR. ***Gy. Hudoba[1], S. Hegyi[2], B. Drommer[2], S. Józsa[3], H. Hargitai[3], Sz. Bérczi[3]***. [1]Budapest Polytechnik, H-6000, Székesfehérvár, Budai út, Hungary, [2]Pécs University, Dept. Informatics and G. Technology, H-7624 Pécs, Ifjúság u. 6. Hungary, [3]Eötvös University, Institute of Physics, H-1117, Budapest, Pázmány P. s. 1/a, Hungary (bercziszani@ludens.elte.hu)

Introduction. Hungarian localities were visited where planetary (mainly Mars) analog studies were carried out by the educational lander Hunveyor and rover Husar at North-Balaton, Mecsek, Nógrád Mountains where igneous rocks (basalt, lherzolite, phonolite) are exposed, river transported rock assemblages were delivered to a plain by floods, on Earth (Dunavarsány) and on Mars (Chryse-plains). The localities are as follows*:*

*Andesite eruption lava columns: Bér, Cserhát Mts.*Although basalt lava columnar morphology is a frequent its occurrence in andesite is rare. (near Bér village, Cserhát Mountains).

Phonolite of Mecsek Mountains. Venus-Venera 13 analog rock by high K content.

High-Ti gabbro from Szarvaskő, Bükk Mountains. High-Ti basalts found by both Apollo 11 and Apollo 17 is sometimes over the 10 weight percent Ti abundance: as their counterpart rocks among Hungarian gabbros from Szarvaskő [2].

Ophiolite from Darno Hill, Bükk Mountains. In the Darnó Hill (basalts and microgabbros) textural sequence of an ophiolite can be found. From the outer edge high cooling rate textures to the bottom of the lava layer (or to the center of a pillow lava "sphere") the following textures represent this series: spherulitic, variolitic, intersertal, intergranular, subophitic, ophitic, poikilitic, analog to lunar cooling layered textural sequence [3].

River and flood transported boulders and gravels: Dunavarsány, South Budapest Region. Surface gravel formation at South Pest (part of Budapest) in the Plain with Pliocene-Pleistocene age, thickness of 20-100 m in this region, consisting of sediments of the terraces of Danube. Various transported rocks from the middle and upper flow of the Danube: quartzite from the Alps, (ca. 500 km of transporting distance), andesite from the Börzsöny Mts. (ca. 50 km transporting distance), and sedimentary rocks. This site is analog to the Chryse Plains where Viking-1 and Pathfinder observed flood transported boulders delivered by ancient rivers with dry beds of Kasei and Ares [4].

Wind formed sharp pebbles: Nógrád, Börzsöny Mts. Northwest from the Nógrád Fortress Hill there are plough fields where dreikanters (sharp pebbles) can be found from the desert period of Miocene.

*Sand dunes: Fülöpháza, Great Hungarian Plain.*West from Kecskemét there are remnants of the old sand “puszta” in the Great Hungarian Plain. There moving sand dunes can be found, even today. They are counterparts of the Martian sand dunes found at every landing sites.

Szentbékálla, Hegyestű. The basaltic rocks of North-Balaton Mountains (Sátorma-hill and Boncostető eruptions 3 Myears ago) contain various inclusions, especially a peridotite xenolithic series with several types being important for planetary analog studies as counterparts of Martian shergottites. Not far from Szentbékálla the Hegyestű left query is a beautiful basalt peak and a Mining Museum. There the basalt flow formed hexagonal columns and a landscape where broken hexagon prisms.