

The 2017 joint Italian – Iranian expedition to Lut desert for meteorite recovery

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Abstract

A field trip in the Lut Desert has been realized in march 2017 by the University of Firenze and the Shahid Bahonar University of Kerman.

1. Introduction

Lut desert extends in an area of about 240 x 80 km in the south – east region of Iran. High temperatures, very little precipitation rate (less than 50mm/year) and high amounts of evaporation are some of the main properties of Lut Desert. Previous expedition in this area confirmed that it is suitable for preservation of meteorites and their recovering [1-4]. According to the international agreement signed between the University of Firenze and the Shahid Bahonar University of Kerman, a first field trip to Lut Desert and related fieldwork for searching and collecting meteorites has been realized from 10 to 25 march 2017.

2. Field trip details

The explored area was a part of the Kalut desert (Figure 1), that is the north west part of the Lut Desert. This area is characterized by the presence of 50-100 meters high ridges consisting of loess deposits. These reliefs have been modeled by the action of wind forming long channels oriented north-west to south-east. During the expedition 45 specimens of meteorites and several doubtful stones have been recovered in the field. The weight of the samples ranges from few grams to one kilo with a total amount of 3670 grams.



Figure 1: Trail of the field trip.



Figure 2: the biggest specimen recovered.

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References

- [1] J. Gattacceca et al. 2011. *Meteoritics & Planetary Science* 46:1276–1287.
- [2] A. Al-Khatiri et al. 2005. *Meteoritics & Planetary Science* 40:1215–1239.
- [3] H. Pourkhorsandi et al. 2016. *Journal of the Earth and Space Physics* 41:125–130.
- [4] H. Pourkhorsandi et al. 2016. 79th Annual Meeting of the Meteoritical Society, abs. 6195.