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Observation (Geomorphology) of the largest mega sand of central Iran Desert, Lut, Using Remote sensing data

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Abstract:

It is believed that the Lut desert features, in elevation and volume, are unique (even in the world) in central Iran. These huge morphological features will be an excellent Sedimentary Archive in quaternary explaining the climate condition and distribution of desert surface features on the earth, meanwhile the attention less has gone on the Aeolian features in the area of interest because it is hard to access. This papers aims to present these unique features by remote sensing data. Remote sensing data including, Irs Aster, Srtm and Arial photograph data were used to measure the dune migration and other aspects of desert environment. Sand dune morphology encompasses almost all typical desert features including single, linear, pyramid, star sand and others. compressing remote sensing data between 1955 and 2000 approves the single Barkhan is being migrated at the rate of 22.65 M per year and accelerate at the last period between 2000 and 2008. A large part of scarce vegetation represents active and rapid migration creating huge morphological features. Linear dune elevation reaches more than 430 M and shows the highest elevation of dune activity on Earth. To evaluate surface temperature Aster 08 production were used. The surface temperature on the sand is probably the highest temperature received by solar energy around 84 Celsius degrees resulting High thermal cell in central Iran. This causes to create huge morphological features in central Iran reaching more than 400 m high due to repetition and reactivation under closed circumstance system.