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# HGR.01: Geographic Information System of the Moonquakes

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Our purpose was to create a visualized GIS moonquake database, which is available to everyone and support a convenient introduction to the moonquake's world for anybody.
At the Moon surface the moonquakes are regular events, but the reason of the occurrence and their attributes are different from the earthquakes. In order to identify the moonquakes, in the framework of the Apollo programs seismometers have been deployed on the surface of the Moon. These experimental devices have been operated in the period of 1969 and 1977. The number of the recorded events are not that large (ca.: 12,500), but it's huge enough to visualize and analyse them inconveniently without making use of a GIS software.
The HGR.01 moonquake map have been prepared in ESRI ArcGIS Online application. The ArcGIS Online is a web-based solution that does not require local software installation. It allows users to create, publish and share online maps, in addition there are premade tools, which can be customized and built into the created web maps.
During the development we were focused on to support the researchers with the most convenient and most helpful solutions for visualizing and analysing moonquakes.
There is information, which is not directly connected to the moonquake events (Apollo landing sites, moon craters, lunar mares, lunar wrinkle ridges), these pieces of information are collected, organised, and thematised on the map.
The catalogued moonquake events have four big group in our GIS.
The full Nakamura moonquake catalogue is published in our GIS in a table as well. These data are overlaps with the visualised layers, but most of them does not have specified locations, however it can be very helpful if they can be searchable and exportable on the same site as the moonquake events.
The Moonquake GIS is available here: http://arcg.is/2hnp5F5