Will my next phone be from space?

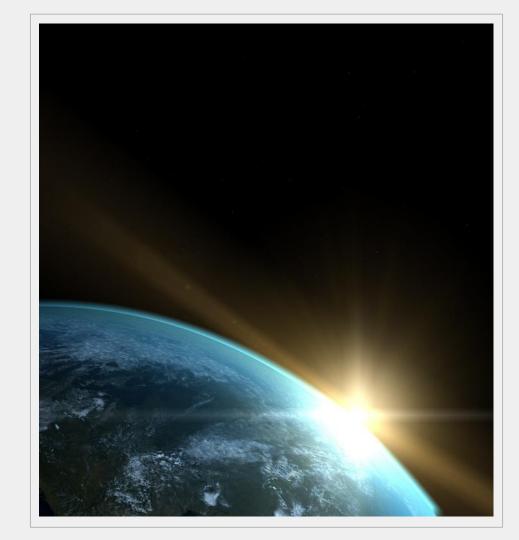
Linda Ritter 13.09.2019



rare earth elements REE

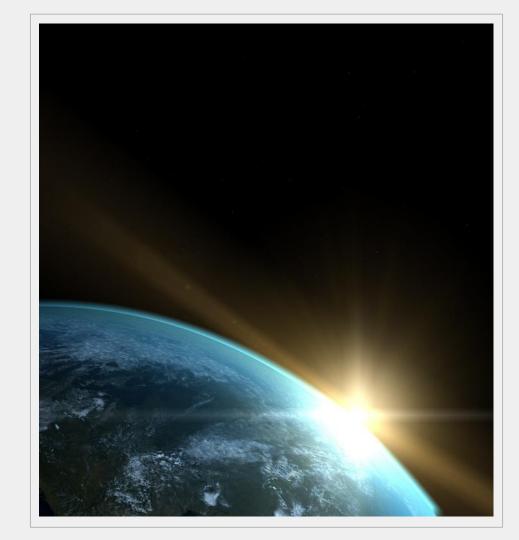


- Motivation | Data
- Question
 - 1. Occurrence of rare earth in the world and associated conflicts
 - 2. Governmental effort for space mining?
- Conclusion

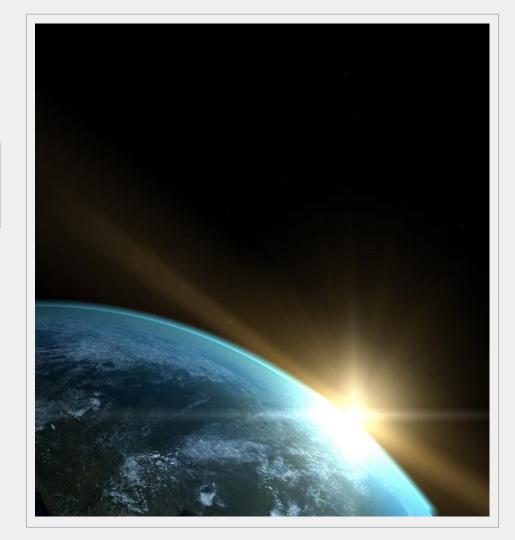


Data

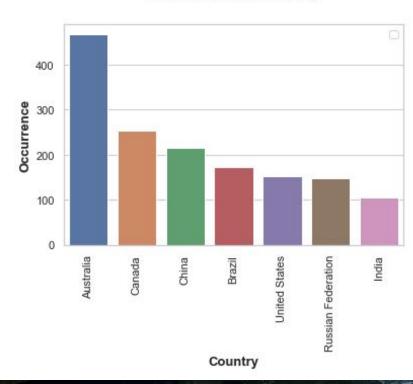
- □ U.S. Geological Survey Database | CSV
- Budget of each governmentspace programs | Web Scraping



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Occurrence per Country

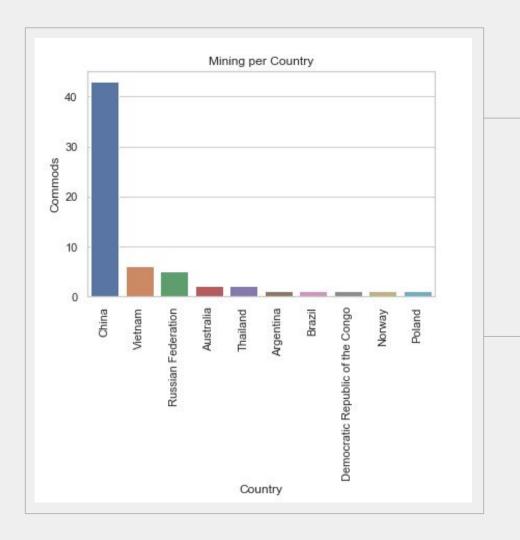


rare earth elements REE not so rare as expected

biggest occurrence in Australia

costly and complex extraction

only producer is China



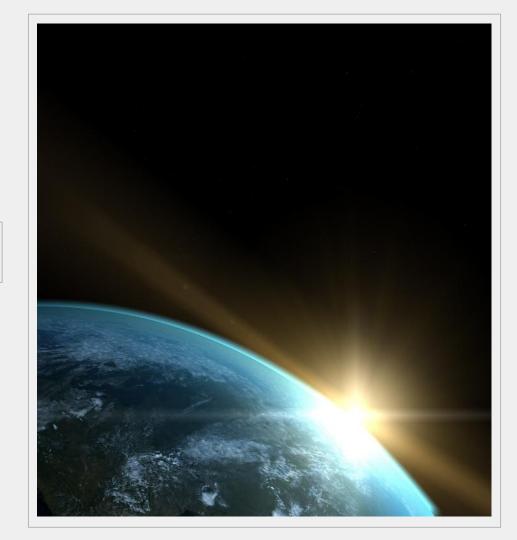
biggest producer is China

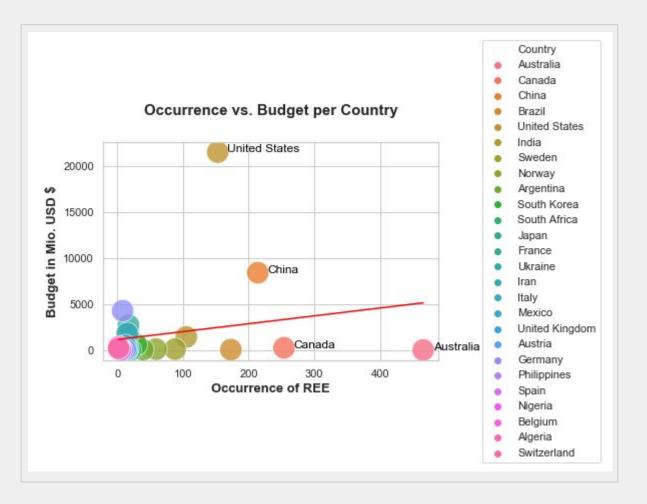


Space Mining



- Motivation | Data
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Correlation between REE and

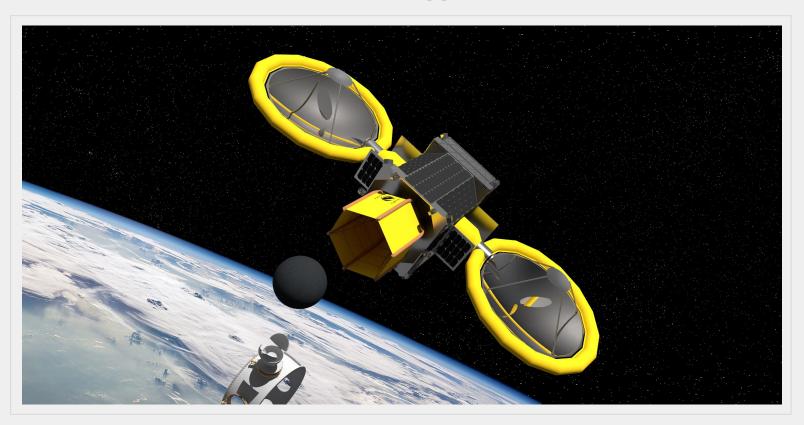
Government Budget

United States | NASA: 21,500 Mio \$

Budget in 2019

→ Mission Mini Bee

Mini Bee



Thank you! Questions?