

NASA's OSIRIS - REx Spacecraft Returns To Earth With Asteroid Samples After 7 Years

Why In The News?

- After Years Of Anticipation And Hard Work **By NASA's OSIRIS - REx (Origins, Spectral Interpretation, Resource Identification And Security - Regolith Explorer) Team**, A Capsule Of Rocks And Dust Collected From Asteroid Bennu Is Finally On Earth.
- It Landed In A Targeted Area Of The **Department Of Defense's Utah Test And Training Range** Near Salt Lake City. The Capsule Was Transported By Helicopter To A Temporary Clean Room Set Up In A Hangar On The Training Range, Where It Now Is **Connected To A Continuous Flow Of Nitrogen.**



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Today's [#OSIRISREx](#) asteroid sample landing isn't just the end of a 7-year, 3.9-billion-mile journey through space. It takes us 4.5 billion years back in time.

These rocks will help us understand the origin of organics and water that may have seeded life on Earth. [go.nasa.gov/48tadwj](https://www.nasa.gov/48tadwj)

About Asteroid Bennu

- **Currently Orbiting The Sun** 50 Million Miles (81 Million Kilometers) From Earth, Bennu Is About One-third Of A Mile (One-half Of A Kilometer) Across, Roughly The Size Of The Empire State Building But Shaped Like A Spinning Top. It's Believed To Be The Broken Fragment Of A Much Larger Asteroid.
- Bennu Is Expected To Come **Dangerously Close To Earth In 2182** Possibly Close Enough To Hit. The Data Gleaned By Osiris-rex Will Help With Any **Asteroid-deflection Effort**. Osiris-rex Is Already Chasing After The **Asteroid Apophis** And Will Reach It In 2029.



Why Is This Significant?

- The Returned Samples Collected From Bennu Will Help Scientists Worldwide Make Discoveries To **Better Understand Planet Formation And The Origin Of Organics And Water That Led To Life On Earth**, As Well As Benefit All Of Humanity By Learning More About **Potentially Hazardous Asteroids**.

About The Mission

- The Quest To Acquire Fragments Of Bennu **Began In 2016**, When NASA Launched The Osiris-Rex On **Sept. 8, 2016**, To Probe Towards The 500m (1,640ft) Wide Object.
- The Team Then Guided It To **Arrival At Bennu On Dec. 3, 2018**, Through The Search For A Safe Sample-Collection Site Between 2019 And 2020, Sample Collection On Oct. 20, 2020, And During The **Return Trip Home Starting On May 10, 2021**.
- After Traveling Billions Of Miles To Bennu And Back, **The Osiris-Rex Spacecraft Released Its Sample Capsule Toward Earth's Atmosphere**. The Spacecraft Was 63,000 Miles From Earth's Surface At The Time About One-Third The Distance From Earth To The Moon.

What's Next?

- The Bennu Sample **An Estimated 8.8 Ounces, Or 250 Grams** Will Be Transported In Its Unopened Canister By Aircraft To NASA's Johnson Space Center In Houston.

- Curation Scientists There Will **Disassemble The Canister**, Extract And Weigh The Sample, Create An **Inventory Of The Rocks And Dust**, And, Over Time, **Distribute Pieces Of Bennu To Scientists Worldwide.**

