

OSIRIS-REx mission to Bennu asteroid

The OSIRIS-REx spacecraft will touch down in 2020 to collect a sample from the surface of Bennu – a carbon-rich asteroid which may contain the molecular precursors to the origin of life on Earth

OSIRIS REX: Launched 2016. Will begin survey of Bennu from Feb 2019

Bennu: 510m wide. Probably part of much larger asteroid – leftover debris from formation of solar system



Sample Return Capsule (SRC): Sample arm places sample head into SRC. Capsule is closed and sealed for cruise back to Earth, arriving in 2023

Heat shield

Cameras, spectrometers, sensors

Sample head

Sample Return Capsule

TAGSAM: Two-metre long Touch-and-Go Sample Arm Mechanism uses high-pressure nitrogen to kick up regolith material

Sample head: Captures particles up to two centimetres in diameter during five-second contact

