

NASA targets moon crater in search for water

In a bid to confirm the existence of water vital to future lunar exploration, NASA will deliberately crash two spacecraft into the moon's south pole, causing a display of pyrotechnics visible to amateur astronomers on Earth

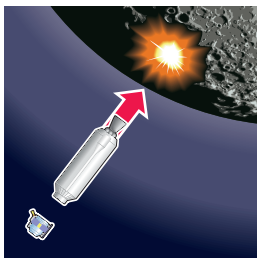
IMPACT SEQUENCE

Centaur impactor

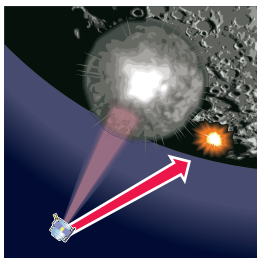


LCROSS spacecraft

1 LCROSS spacecraft positions Centaur for separation and impact



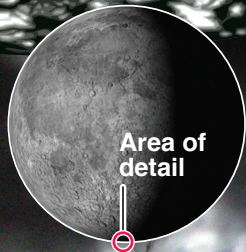
2 Impact creates 5km-high plume of debris, visible for 30 seconds



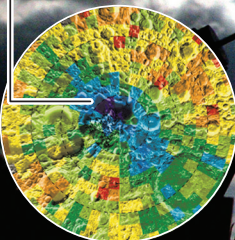
3 LCROSS collects data then crashes to create second debris plume

Estimated impact times
Oct 9, 11:31 and 11:35 GMT

CABEUS CRATER
Scientists hope that Earth and space-based observation of impact debris will show that water ice exists in permanently shadowed area of target crater



Cabeus crater



1998 Lunar Prospector probe indicated water deposits (blue areas) at polar craters

Impacts should be visible to observers in North America using 25cm telescope or larger