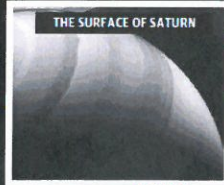


Spacecraft takes unique Saturn shots in final months



MYSTERY OBJECTS IN RINGS



THE SURFACE OF SATURN



ONE OF ITS MANY MOONS



Cassini has completed multiple outer orbits

Final orbits began this week, taking Cassini between the planet and its rings

Cassini's last orbit (orange) will see it smash into Saturn on September 17

Entering the ring at 110,000kmh

MARK DUNN

AUSTRALIA'S deep space antenna dishes were among the first to receive unique close-up images of Saturn last night, as NASA's Cassini spacecraft hurtles beneath the giant planet's rings and toxic cloud cover.

Travelling at more than 110,000kmh, Cassini began its dive through Saturn's stormy 2400km-wide ring gap at 7pm on Wednesday.

But scientists had to wait until late yesterday to receive confirmation and data from the space probe, working 1.3 billion km from Earth.

Over the next five months, Cassini will attempt 22 passes between the planet and its in-

WINDING UP TO THE GRAND FINALE

7 years to get to Saturn, 13 years orbiting the planet

5 current passes through its atmosphere

2400 km gap between planet and inner ring

22 inner orbits

nermost ring to assess Saturn's atmosphere, before a "grand finale" September 15 nose-dive into the huge gas planet as it runs out of fuel.

The antenna dishes at the CSIRO-managed Canberra Deep Space Communication Complex have been a key installation for sending and receiving data and flight control for Cassini since lift-off in 1997 and across its seven-year journey to Saturn, the second-largest planet in our solar system.

NASA operations support officer Glen Nagle said: "The Canberra complex has also performed unique experiments which use the power and sensitivity of the antenna dishes to detect signals which scientists use to probe the lakes on the surface of Titan (one of the planet's 53 to 62 moons) or investigate Saturn's rings."

The spacecraft, with its 12 superhuman sensors which "survey, sniff, analyse" and collect electromagnetic data,

used its own antenna dish as a protective shield during the rings dive.

"Assuming it survived this first passage, Cassini was programmed to 'phone home' 20 hours later," Mr Nagle said.

"It would then start transmitting the data it collected during the close encounter with the planet and its inner rings back to Earth, with the Canberra station receiving some of the first high-resolution images."

After 20 years in space, the

final months of the Cassini odyssey as it skirts Saturn's atmosphere aim to give a clearer picture of the volatile cloud structure, learn more about the planet's mass of rings and provide clues as to the planet's structure and whether it has a solid core.

"Now nearly depleted of fuel, Cassini will take the final plunge in September, ending its life as a shooting star in the atmosphere of this amazing planet," Mr Nagle said.

"The Canberra Deep Space Communication Complex will be there once again, taking in the final moments and science collected by the Cassini spacecraft, right up until its last breath of data."

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Kidnap caught on CCTV

WAYNE FLOWER

A MAN captured on CCTV dragging his pregnant ex-girlfriend out of a petrol station by her hair has been described as an "ice zombie" by a magistrate.

But Chris Josevski's lawyer, George Balot, says his client insists he's not a user of the deadly drug.

"He suffers from ADHD hence the extreme hyperactive reaction," Mr Balot said.

The 24 year old is accused of throwing his victim down in a Derrimut service station on February 23 and dragging her by the hair into his car.

He yesterday abandoned an application for bail and has spent the past six weeks in jail on charges of kidnap, unlawful imprisonment, possessing cannabis and unlawful assault.

Magistrate John Bentley, who initially bailed Mr Josevski before he was rearrested and jailed again, said he was shocked at the alleged thug's denials.

"He looked like something out of *The Walking Dead*," he said.

Mr Bentley said his behaviour was a "tell-tale" sign that someone was using illicit drugs.

The court heard Mr Josevski spat in the face of a journalist on being released on bail and was suspected of further gun offences.

Mr Balot said his client attacked his 23-year-old victim after she allegedly told him she was pregnant to another man.

He also said Mr Josevski wished to apologise to his ex-partner for his actions in the service station.

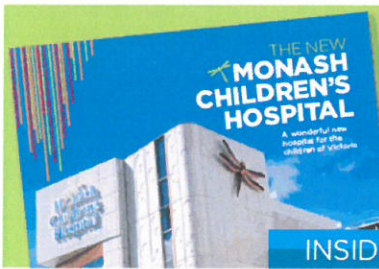
Mr Balot told the court he hoped the matter could be resolved when it returned to court next month.

LONG-RANGE MISSILE TEST

THE US military has launched an unarmed intercontinental ballistic missile from California in a test of a weapon system that forms part of its nuclear force.

The Minuteman 3 missile blasted off from Vandenberg air force base, delivering a single re-entry vehicle to a target some 6759km away in the Pacific Ocean.

The timing of the launch comes amid growing tensions with North Korea.



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INSIDE THIS WEEK'S SUNDAY HERALD SUN

