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# SR75 - 1

MISSION OVERVIEW | APRIL/MAY 2024

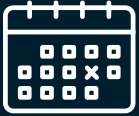
# LAUNCH DETAILS

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**LAUNCH COMPLEX**  
Koonibba Test Range  
Koonibba, South Australia

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**LAUNCH WINDOW**  
Opens 29 April 2024

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**DAILY LAUNCH OPPORTUNITY**  
08:00 - 18:00

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**LAUNCH VEHICLE**  
Hylmpulse SR75 hybrid rocket

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**CUSTOMER**  
Hylmpulse



# MISSION OVERVIEW

The SR75-1 mission is the maiden launch of the HyImpulse SR75 rocket and will be the first launch from the permanent facilities at the Koonibba Test Range.

The SR75 rocket uses a unique propulsion technology which combines paraffin wax (candle wax) and liquid oxygen to create a hybrid rocket. This launch will be the first time the SR75 lifts off from Earth to validate this groundbreaking technology.



*The SR-75 mission patch designed by Koonibba artist Trevor Peel*

The SR75-1 mission is a suborbital launch to validate HyImpulse's unique hybrid propulsion technology.

The SR75 rocket is a 14 metre, single stage, suborbital rocket. The SR75 is powered by the HyImpulse rocket engine technology that uses a solid paraffin fuel and liquid oxygen. It is designed to launch microgravity experiments and be used as a versatile rocket booster. The maiden launch will flight-qualify the innovative hybrid propulsion technology which is a cornerstone in the development of SL1, HyImpulse's orbital launch vehicle.

The SR75-1 mission will be the first from the permanent facilities at the Koonibba Test Range. Southern Launch and the Koonibba Community Aboriginal Corporation have partnered to develop the Koonibba Test Range which is the largest commercial testing range in the Southern Hemisphere.

The SR75-1 mission will be the first launch from the new permanent launch pad at the Koonibba Test Range and the first launch to use the mid-range launch rail which was designed and manufactured in South Australia.

The SR75 rocket will launch and land in the Koonibba Test Range enabling HyImpulse to recover their rocket and analyse the performance from onboard systems – something not possible from any other commercial ranges.

The SR75-1 mission is an incredibly exciting for Southern Launch, HyImpulse and the Koonibba Community Aboriginal Corporation and is the first of many to come at the Koonibba Test Range.

## SR75 ROCKET

### Dimensions

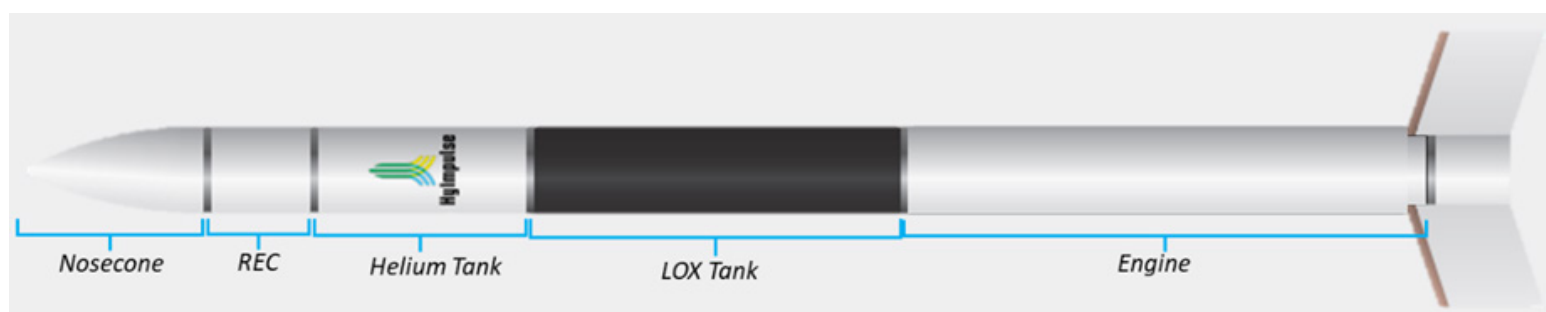
Diameter - 0.64m Length - 14m

### Thrust

Takeoff thrust - 75kN

### Altitude

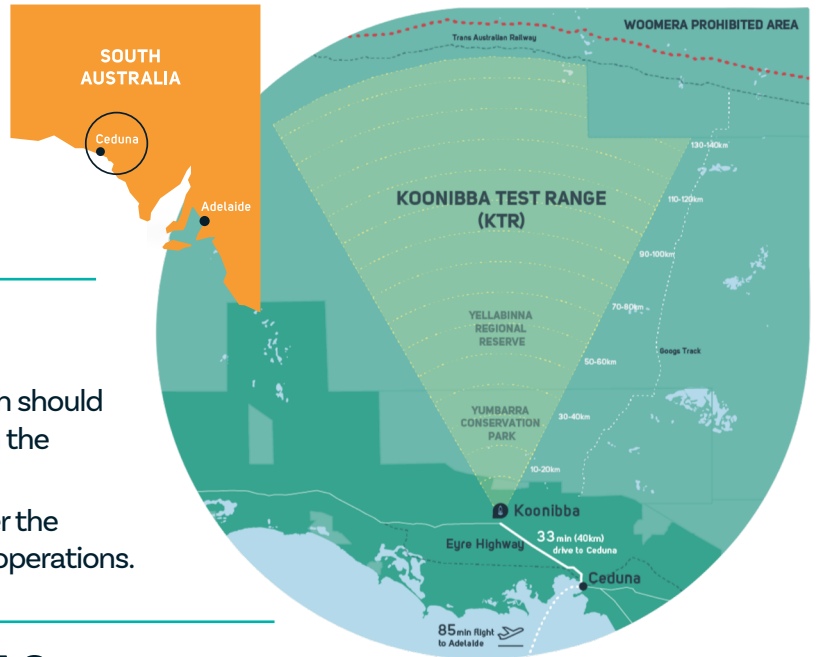
SR75-1 Mission altitude - 50km



# COMMUNITY INFORMATION

## KOONIBBA TEST RANGE

The Koonibba Test Range (KTR) is located 40km north-west of Ceduna on the West Coast of the Eyre Peninsula, South Australia.



## PUBLIC VIEWING

Members of the public wishing to view the launch should follow the directions to the public viewing area in the township of Koonibba.

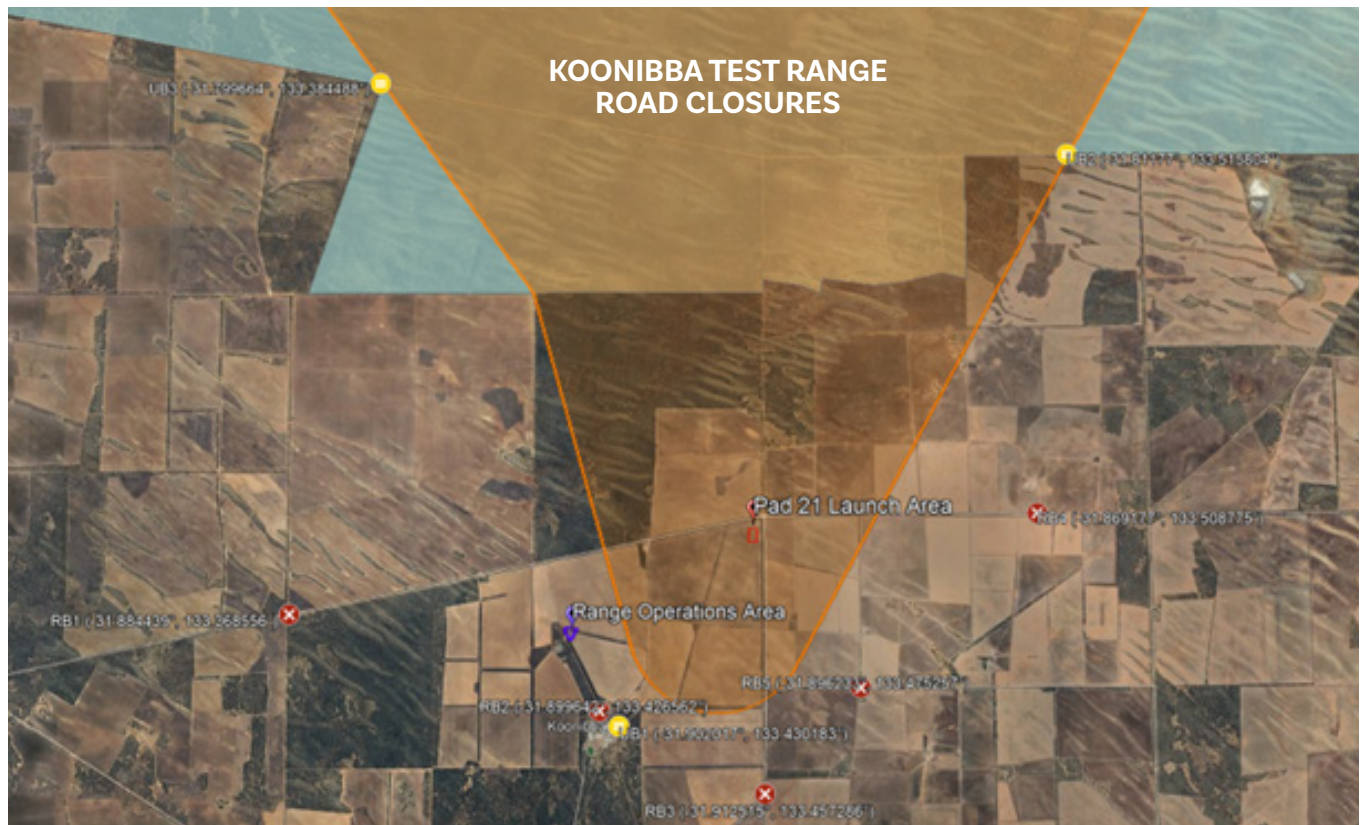
Members of the public are not permitted to enter the Koonibba Test Range at any point during launch operations.

## LAUNCH EXCLUSION AREAS

### GROUND EXCLUSION AREA

Roads surrounding the Koonibba Test Range will be closed to ensure the safety of the surrounding community on the day of launch. Trained members of the Koonibba Community will staff roadblocks preventing entry into the range area. To minimise disruptions to community members, road closures will be in place for the minimum amount of time possible.

Adjacent landowners will be notified at least 24-hours prior to the enforcement of road closures.



### AIRSPACE RESTRICTIONS

A Notice to Airmen (NOTAM) providing details of airspace restrictions will be published on the National Aeronautical Information Processing System (NAIPS).

# SOUTHERN LAUNCH

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**Southern Launch expands space exploration from the Southern Hemisphere with end-to-end launch and return services for space missions.**

**Southern Launch owns and operates two commercial space facilities in Australia: The Koonibba Test Range for sub-orbital missions and returns from space and the Whalers Way Orbital Launch Complex for orbital missions to polar and sun-synchronous orbits.**

## Launch

As the evolution of technology continues, launch performs the key role in sending satellites into space. Without space launch, there is no GPS, no broadband internet, and no effective way to monitor the environment or handle emergency situations. Space technologies are also critical for national security.

Southern Launch's unique offering relates to all elements of launch, including designing, building, testing, and flying the next generation of smart rocket vehicles.

## Land

The Southern Launch orbital and suborbital launch facilities are located on the Eyre Peninsula in South Australia.

We believe that the space industry and biodiversity conservation can coexist. Our Conservation Policy Statement and our Biodiversity Management Strategy illustrate our commitment to establishing two world-class launch complexes that minimise the impact on biodiversity, natural scenic beauty and cultural heritage conservation.

As part of the development of our launch sites, we have consulted with experts from numerous disciplines to ensure our developments have minimal environmental and cultural impacts.

## Leadership

Southern Launch has been at the forefront of fostering a full-spectrum, strategic, sovereign and globally engaged Australian space sector.

We believe Australia is ideally placed to be the leading Indo-Pacific hub for launch operations and to play an innovative and significant role in shaping the future global space economy.

We remain a close and committed partner of the Australian Space Agency in pursuit of its vision and strategic objectives.



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