MΤ SSETPRESENTS

PACE & STEM STUDENT XPERIENCE

**MEET** 

LEARN

**DESIGN** 

LAUNCH

**TEAM-UP WITH STEVE SWANSON** - ASTRONAUT & ISS COMMANDER AND LAUNCH YOUR IDEAS **INTO SPACE!** 







SPONSORED BY





"I can say without doubt that Mission Discovery is the best thing I have ever taken part in."

> Riya Khan Student

# WELCOME TO MISSION DISCOVERY AN OPPORTUNITY FOR ORDINARY STUDENTS TO DO SOMETHING EXTRAORDINARY

**MEET** 

LEARN

**DESIGN** 

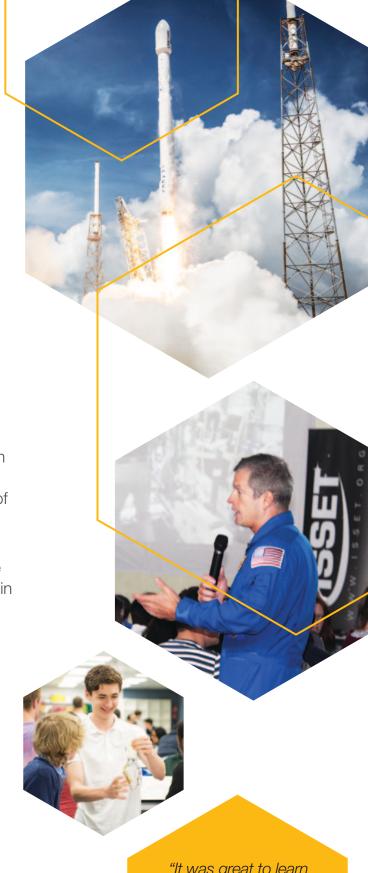
LAUNCH

# YOUR MISSION

SPEND 5 DAYS AT THE UNIVERSITY OF MELBOURNE WORKING WITH A NASA ASTRONAUT, RENOWNED SCIENTISTS AND NASA LEADERS, IN AUSTRALIA'S MOST EXCITING STEM PROGRAM!

- Take on the role of a research scientist and work with your team on a Science project. Your mission is to create an experiment which will be carried out in space and present your idea to our board of esteemed judges
- The judges will pick one winning team whose experiment will be built by NASA, launched to the International Space Station (ISS), and carried out in space by the astronauts aboard the ISS
- Sign-up for the 1<sup>st</sup> annual Mission Discovery Program at the University of Melbourne, enhance your CV and STEM knowledge and join the forefront of human space exploration

Are you Australia's next astronaut or STEM leader?



"It was great to learn from such inspirational astronauts and experts through Mission Discovery. I had a fantastic time"

> **Emily Yeomans** Student





# LEARN HOW TO ....

- Work successfully in a team
- Plan the execution of a project
- Achieve a goal
- Follow efficiently and lead effectively

- Deliver a persuasive presentation
- Confidently speak in public
- Make your CV stand out!

Mission Discovery focuses on Science, Technology, Engineering and Maths...

THE FUTURE OF STEM STARTS WITH YOU!

# MISSION AGENDA



# **MONDAY 24TH SEPTEMBER 2018**

- NASA team building
- Mission Patch Team challenge
- The Journey to Mars
- Mars Lander Team Challenge
- The Best Science Experiment



# **TUESDAY 25TH SEPTEMBER 2018**

- Becoming an Astronaut and The Story of a Space Mission
- Headline Story Team Challenge
- How to design a space experiment



# **WEDNESDAY 26TH SEPTEMBER 2018**

- Budgeting and Planning Skills
- The International Space Station Environment, Experiments and An Expedition
- Work on experiments



# **THURSDAY 27TH SEPTEMBER 2018**

- Improve Your Presentation Skills
- Working on experiments and presentation
- The Earth From Space
- Hear a range of exciting Space and Science career paths



# **FRIDAY 28TH SEPTEMBER 2018**

- Presentation preparation
- First round presentations
- Finalists selected
- Final presentations
- Winners announced





<sup>\*</sup> Itinerary subject to change

# THE MISSION TEAM

# 2018 MELBOURNE MISSION DISCOVERY PROGRAM TEAM MEMBERS

Mission Discovery introduces you to the highest level of NASA Leadership, Space Exploration and Scientific Research



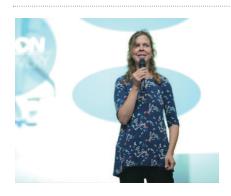
# STEVE SWANSON NASA ASTRONAUT & ISS COMMANDER

Space Shuttle flights, STS-117 and STS-119, and Expedition 39 to the ISS aboard the Soyuz. Steve has also served as a CAPCOM for ISS and Space Shuttle missions. He has logged 643 hours in space and completed four spacewalks totalling 26 hours and 14 minutes. Steve is a recipient of the NASA Exceptional Achievement Medal



# SARAH MURRAY NASA MISSION SUPPORT & PARTNERSHIP COUNCIL EXECUTIVE

Sarah is the Council Executive for NASA's Mission Support Council & Partnership Council at NASA HQ. Working with NASA's Deputy Administrator and Deputy Associate Administrator, she is responsible for facilitating NASA's governance process across NASA centres throughout the US. She has also served as Assistant Division Chief for EVA, Robotics and Crew Systems where she was responsible for the Neutral Buoyancy Laboratory Space Walking training facility. She has held roles in Astronaut Training and Mission Control. She has been Deputy Chief of Space Flight Training Management where she was the Chair of the International Training Control Board, responsible for training astronauts and cosmonauts.



# **DR. JULIE KEEBLE**LECTURER OF PHARMACOLOGY AND ISSET'S CHIEF SCIENTIST

Dr. Julie Keeble is a lecturer in the Institute of Pharmaceutical Science at King's College London and is jointly affiliated with the Centre for Human & Aerospace Physiological Sciences. Her research focuses on the role of sensory nerves, pain, inflammation and thermoregulation. Dr Keeble is also ISSET's Chief Scientist and is responsible for ensuring that all winning Mission Discovery experiments are launched to the International Space Station.





### **PROFESSOR RACHEL WEBSTER**

HEAD OF ASTROPHYSICS, THE UNIVERSITY OF MELBOURNE

Professor Rachel Webster has had a stellar career teaching and researching astronomy for more than 20 years. Originally gaining her doctorate at Cambridge University, she returned to the University of Melbourne in 1992 to take up a position as a teaching and research academic within the School of Physics, where she currently leads the Astrophysics research group comprising more than 60 research students and staff. Her group is varied and diverse and covers both observational and theoretical research areas. Professor Webster's observational program utilises world class equipment, such as the Australia Telescope Compact Array, the Gemini Telescopes, the Hubble Space Telescope and the Chandra X-ray Observatory, among other instruments.



### **CHRIS BARBER**

FOUNDER & DIRECTOR OF ISSET

Chris founded ISSET in 1998 with the aim of inculcating in young people the NASA 'you can do it' spirit. Chris has a long record of school leadership and transformation. Prior to his work in education he worked in finance in the City of London as an insolvency loss underwriter and corporate credit management specialist. His school leadership includes being Deputy Head Teacher in two large high schools. In his last school, he was instrumental in taking the school from below average to be the most successful school in England and Wales' at A level and in trebling the schools GSCE results. In that post Chris raised over £7 million to rebuild the school buildings. Since founding ISSET, Chris has worked with space centres, schools and young people in the UK, USA, Norway, India and Australia.



# **MENTORS**

Team mentors will consist of senior Science and Engineering students from the University of Melbourne





The International Space School Educational Trust (ISSET) works in partnership with some of the world's leading space organisations to deliver unique learning opportunities for students of all ages.

Each of our programs offer something unique, whether it be on an international excursion learning from some of the greatest minds in the world, or our unique Mission Discovery challenge where you can send your experiment into space. Through close working relationships with different aerospace organisations, ISSET lets you team up with astronauts, rocket scientists and leading business professionals at the highest level.

At ISSET we categorise all participants as students, undertaking programs from which they can gather new knowledge. ISSET is a registered UK charity founded in 1998.

### **ISSET'S GOALS**

- Inspire and motivate young people through STEM and space exploration
- Give ordinary people the opportunity to achieve something extraordinary
- Recognising what humans can achieve
- Instilling the NASA 'you can do it' spirit!



Latitude Group Travel offers custom designed, curriculum linked, educational tours and programs unlike any other organisation. In fact, we are completely unique in our approach.

All our programs and tours include experiential learning activities to engage students and engender real educational outcomes. We are thought leaders, providing cutting edge programs that reflect the innovation and change occuring in education and educational institutions.

Our itineraries, programs, service and delivery are world class. The research and focus on experiential learning that underpins everything we do ensures that each itinerary is unique. We actually understand what you teach and the electives/strands you have chosen for your subject/s and focus our efforts on delivering a tour that is truly linked to the curriculum you teach. Our range of 5 day programs, which includes Mission Discovery, are intended as a real adjunct to classroom education by providing experiential learning that is so essential to student development.

In short – what we do and how we do it really matters to us. All of us at Latitude Group Travel genuinely care about delivering the best possible service and the most engaging, life-changing programs and tours. We genuinely want to ensure that we positively impact student learning and that our partner schools are investing in authentic educational programs of tangible merit.





# It starts with curiosity.

Do you want to discover the mysteries of the Universe? So do we! We were part of the team that confirmed the existence of gravitational waves, and we helped create the instruments that identified the elusive Higgs Boson.

# The future is full of surprises. Join us in our discovery.

The University of Melbourne's beautiful and historic Parkville campus is located in a vibrant community on the edge of Melbourne's central business district. Our Bachelor of Science allows you to explore your interest in STEM. You can specialise in one of 40 areas, including physics, mathematics and statistics, engineering and climatology.

Have a look around while you're here. Hopefully you'll like the place as much as we do.

science.unimelb.edu.au





# PROGRAM INFORMATION

# **LOCATION**

The programme will be held in Carrillo Gantner Theatre (Room B02), Sidney Myer Asia Centre, the University of Melbourne Parkville Campus, entry off Swanston Street, Carlton VIC

# REGISTRATION

Daily registration will be made in the entrance to the building and is as easy as providing your name.

The program will run daily from 9.30am to 4.30pm. Please arrive by 9:00am the 24th September and by 9.15am other days to ensure a prompt start at 9:30am.

# WHAT TO BRING

- A notepad and pen to take notes during the program
- Morning tea and lunch will be provided for the students. Students can to bring an additional bottle of water if they wish
- Students who have their own iPad or Laptop would benefit by bringing it to the program each day

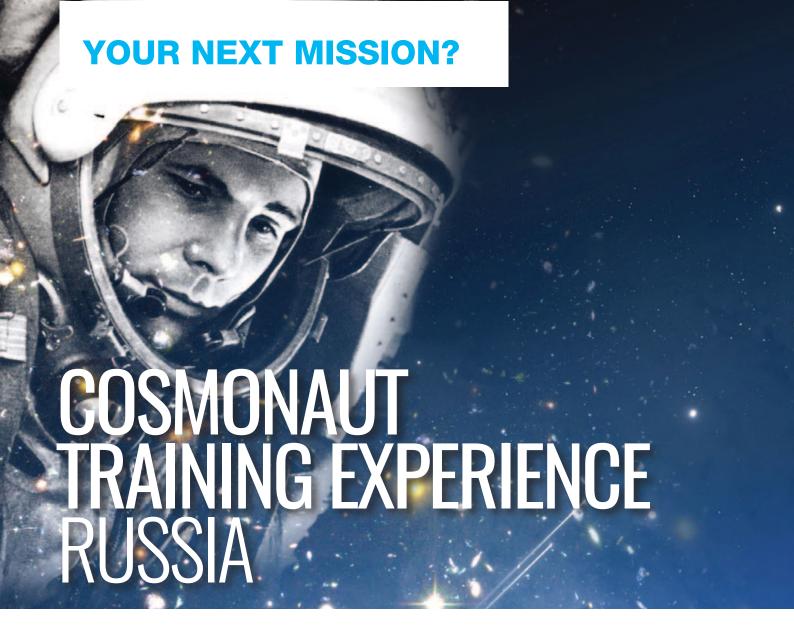
### CONDUCT

- You will be in a professional environment with some of the world's elite in the fields of space and science
- You will be expected to behave in an appropriate manner politely, attentively and with tolerance towards everyone
- There will be photo opportunities so dress smart-casual
- Consumption of alcohol, drugs and cigarettes is not permitted
- Parents will be contacted if their child has failed to register before 9.30am each day, without giving prior notice





"Mission Discovery is the most complete and exciting educational program I have worked with. I'm always excited to see where the students imagination takes them and watch them develop throughout the week. When I was young, I would have loved the chance to have an experiment flown in space"



A unique opportunity to train like the real Cosmonauts and Astronauts on the same equipment and facilities at the Yuri Gagarin Cosmonaut Training Centre in Star City, near Moscow.

- > Stay in Star City, the world's training centre for Cosmonauts and Astronauts who are about to venture into space.
- > Develop the exceptional team building and communication skills acquired by astronauts using the same scenarios, equipment and challenges that enable human space flight.
- > Mir training: Learn how to operate the Mir Space Station
- > Undertake wilderness survival training Russian style
- > See the sights of Moscow, including Red Square and the Kremlin

CONTACT LATITUDE
GROUP TRAVEL
TO FIND OUT MORE
ABOUT THIS AND ALL
OUR OTHER TOURS
AND PROGRAMS!





FROM ALL THE TEAM AT LATITUDE GROUP TRAVEL AND ISSET, WE HOPE YOU ENJOY THE 2018 MISSION **DISCOVERY PROGRAM HOSTED BY OUR EDUCATION PARTNER,** THE UNIVERSITY OF MELBOURNE.







Call +61 3 9646 4200 www.latitudegrouptravel.com.au















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