

Rolls-Royce and UK Space Agency launch first ever study into nuclear-powered space exploration

This new research contract will see planetary scientists work together to explore the game-changing potential of nuclear power as a more plentiful source of energy, capable of making possible deeper space exploration in the decades to come.

Nuclear propulsion, which would involve channelling the immense energy released in splitting the atom to accelerate propellants, like hydrogen, at huge speeds, has the potential to revolutionise space travel.

By some estimates, this kind of engine could be twice as efficient as the chemical engines that power our rockets today. Spacecraft powered by this kind of engine could, conceivably, make it to Mars in just 3 to 4 months – roughly half the time of the fastest possible trip in a spacecraft using the current chemical propulsion.

Nuclear space power is anticipated to create new skilled jobs across the UK to support the burgeoning UK space economy.

Science Minister Amanda Solloway said:

As we build back better from the pandemic, it is partnerships like this between business, industry and government that will help to create jobs and bring forward pioneering innovations that will advance UK spaceflight.

Nuclear power presents transformative possibilities for space exploration and this innovative study with Rolls-Royce could help to propel our next generation of astronauts into space faster and for longer, significantly increasing our knowledge of the Universe.

Dr Graham Turnock, Chief Executive of the UK Space Agency, said:

Space nuclear power and propulsion is a game-changing concept that could unlock future deep-space missions that take us to Mars and beyond.

This study will help us understand the exciting potential of atomic-powered spacecraft, and whether this nascent technology could help us travel further and faster through space than ever before.

Dave Gordon, UK Senior Vice President, Rolls-Royce Defence said:

We are excited to be working with the UK Space Agency on this pioneering project to define future nuclear power technologies for space. We believe there is a real niche UK capability in this area and this initiative can build on the strong UK nuclear network and supply chain.

We look forward to developing this and other exciting space projects in the future as we continue to develop the power to protect our planet, secure our world and explore our Universe.

It would not just mean a time saving – it would also radically reduce the dose of radiation taken on by astronauts that would be making future trips to Mars or other planets. The size of the dose increases the longer you spend in deep space, away from the bubble of protection given by the Earth's magnetosphere.

The appeal of a small nuclear power generator for propulsion also comes from the fact that power in space becomes increasingly precious with distance from the Sun. In the outer Solar System, sunlight gets too dim for solar panels, and other technologies like fuel cells are often too patchy as a source of energy.

Nuclear propulsion is an idea that has existed since the 1950s, when the United States attempted to develop a rocket propelled by small atomic bombs tossed out the back.

[International travel update, 11 January 2021](#)

Last week the Prime Minister announced that the Government had made the difficult but necessary decision to introduce a new national lockdown.

Both globally and domestically we are seeing significant increases in levels of coronavirus, including the emergence of worrying new strains. It is therefore imperative that we ensure we are doing all we can to protect travel, reduce the risk of imported infections, including from new variants, and protect our NHS while national lockdown and vaccinations take effect.

We already have strong safeguards in place, including a requirement for mandatory 10-day self-isolation for the vast majority of arrivals and our Travel Corridors system remains critical in managing the risk of imported cases from high-risk countries. We also successfully launched the test to

release scheme last month, which provides passengers with the option to reduce self-isolation, through isolating for five days after they have left a destination not on the Travel Corridors list and then taking a test. Pre-departure testing does not remove the public health need for international arrivals travelling from non-exempt countries to isolate for 10 days or opt into test to release.

However, as a result of increasing instances of COVID-19 around the world, including the emergence of new variants, we are now taking additional steps to add a further layer of protection to safeguard public health. From 04:00am on 15 January, we will be introducing pre-departure testing requirements for all inbound passengers to England. Passengers arriving by ship, plane or train will have to take a test up to 3 days before departure and provide evidence of a negative result before they travel.

This will be an additional requirement that applies to all passengers, including those travelling from a Travel Corridor country, other than those on a very short list of exemptions. This extra layer of protection is in addition to existing self-isolation requirements.

We will establish the standards that tests must meet in regulations. This will include that the test must be of a diagnostic-standard test such as a Polymerase Chain Reaction (PCR) test, and could in some cases include LAMP and Lateral Flow tests within set limits. We will provide clear guidance and advice to passengers regarding testing standards and capacity.

Guidance will be available to passengers and carriers on what to look for to assure tests and the results provided meet the standards required.

We will keep test standards and innovative testing technologies under review.

In addition, we will also set out the information passengers will need to have with them at check-in and the UK border to show they have had a qualifying negative test. This will include set data fields which test result certificates must include. All information on test requirements will be made available to passengers and transport operators through guidance on gov.uk.

The current advice for those across the UK remains that you must stay at home and not travel abroad unless it is for a permitted exempt reason. The requirements apply equally to visitors from other states and British Nationals, and carriers may deny boarding if passengers are not in receipt of a qualifying negative test. British Nationals that need consular assistance should contact the nearest consulate, embassy or high commission.

If British Nationals test positive for Covid-19 while abroad they should not travel and should follow the local relevant guidance on self-isolation. Transport operators will be required to check that a passenger has proof of a negative test result before they board their flight, train or ferry, and may deny boarding where appropriate to reduce numbers of non-compliant individuals arriving in England. Border Force will also conduct further checks upon arrival.

If a passenger arrives in England without a pre-departure negative test result they will be fined. We will amend the International Travel Regulations so that fines, starting at £500, can be levied on non-compliant passengers. Operators will also be fined for transporting non-compliant passengers.

Passengers travelling to England from the Common Travel Area (the United Kingdom, Ireland, Isle of Man, Jersey and Guernsey), will not be in scope of the regulations.

Children under the age of 11 will also not be required to complete pre-departure testing.

There will be a very restricted number of exemptions, including hauliers to allow the free flow of freight, and air, international rail and maritime crew.

Certain limited reasonable excuses for not undergoing testing will also be permitted, for example, lack of testing infrastructure in the departure country. This will apply to three overseas territories – St Helena, Ascension Island and the Falklands.

Arrivals from three additional countries will be considered to have a reasonable excuse not to comply due to lack of testing infrastructure. However, for these countries this will only apply for a specific, time limited window. This includes:

- Antigua and Barbuda – until Thursday 21 January 04.00
- St Lucia – until Thursday 21 January 04.00
- Barbados – until Thursday 21 January 04.00

If passengers are arriving from one of the above three countries after the time limited window has ended, they will be required to meet all pre-departure testing requirements.

Further details on exemptions and reasonable excuses will be set out in regulations and in guidance. We will keep exemptions and reasonable excuses under regular review.

We will be making detailed guidance available to both passengers and transport operators to support the implementation of these changes.

Measures are likely to be in place until the end of the current lockdown, although a review will take place before the end of that period.

The Government recognises the continued challenges that the pandemic poses, both for individuals and for businesses.

We have worked closely with the international travel sector during the course of the pandemic and will continue to do so as we emerge from lockdown and are able to encourage people to travel again with confidence. We are also continuing to implement recommendations set out in the Global Travel Taskforce Report to support the safe recovery of international travel.

The delivery of a safe, effective vaccine is also the best way to protect the most vulnerable, save thousands of lives and support the removal of many of the restrictions and return to international travel. We are already making great progress, including having currently vaccinated more people than the rest of Europe combined.

In the immediate term our priority has to be on safeguarding public health and the NHS. With the addition of pre-departure testing requirements, our already robust system to protect against imported cases of coronavirus is further strengthened and will provide the greatest overall protection against the risk of transmission during travel to England and after arrival.

[PM call with UN Secretary-General: 11 January 2021](#)

Press release

The Prime Minister spoke to the UN Secretary-General Antonio Guterres today.



The Prime Minister spoke to the UN Secretary-General Antonio Guterres today, to mark the 75th anniversary of the first UN General Assembly in London.

He reiterated the UK's long-standing commitment to multilateralism and the rules-based international order, remembering the long service of renowned British diplomat Brian Urquhart to the United Nations as a model for the UK's global outlook.

They discussed the leadership of the UN and UK in driving action on tackling climate change and committed to working together to deliver a successful COP26 Summit in Glasgow in November.

The PM and Secretary-General welcomed progress on the COVAX vaccines procurement pool, but shared concerns about the fractured approach the international community has taken to dealing with Covid-19 and agreed on the

need for greater coordination.

They also discussed the crises in Yemen and Libya and the prospects for peaceful resolution, noting ongoing challenges and opportunities for progress.

The Prime Minister warmly welcomed the Secretary-General's decision to run for a second term and congratulated him on a successful first term.

He invited Secretary-General Guterres to attend the G7 leaders' summit hosted by the UK later this year, as well as the Global Partnership for Education replenishment event.

Published 11 January 2021

[Developing a holistic response to humanitarian challenges in the Sahel and West Africa](#)

Thank you Mr President. I would like to thank Special Representative Chambas for his briefing today and for his ongoing work over the past six months, during the terrible security and humanitarian challenges across the region. The United Kingdom will continue to work with UNOWAS and the countries in the region to form a well-calibrated and holistic response.

Mr President, the United Kingdom also welcomes the largely peaceful elections and strong voter turnout last year in Burkina Faso, Niger and Ghana. And we remain concerned by the violence and tension which have marked some elections in the region. And we encourage all parties to continue to use dialogue to resolve their political differences. We're grateful to you, SRSB Chambas for your personal, quiet diplomacy, which, while not always in the public eye, has a significant impact across the region.

Mr President, regarding the situation in Mali, the United Kingdom believes that the transition period is an opportunity not only to prepare for free and fair elections, but to make progress on key issues such as the peace process and tackling corruption. The authorities in Mali should focus on these issues as a matter of urgency. Resuming the regular meetings of the Comité de Suivi de l'Accord is a positive first step, and we welcome the inclusion of women for the first time.

We remain deeply concerned by the continuing deteriorating humanitarian situation across much of the region, and we are concerned by the growing instances of forced displacement in central Sahel and north east Nigeria.

Last year, the UK provided an additional \$21 million humanitarian funding to the Sahel, taking our funding there since 2019 to over \$200 million. This assistance has supported over seven million people in the hardest hit areas. But the assistance needs to reach those who need it. And we urge all parties to ensure unhindered humanitarian access to allow the delivery of goods and services. Without this, food insecurity and protection needs will continue to rise.

Mr President, the UK is concerned by the rise in human rights violations across West Africa and the Sahel, and we call for strengthened accountability from governments and improved compliance with international human rights standards. We are committed to supporting action on this. For example, with our contribution to international humanitarian law training for Malian armed forces and the support for the implementation of the Human Rights Compliance Framework for the G5 Sahel Joint Force.

We also, in these meetings, colleagues will recall, frequently advocate for the protection of children, educators and schools across the region and encourage all governments to follow the Safe Schools Declaration in these meetings. We welcome the release of over 300 boys abducted in north west Nigeria late last year. This event reinforces the importance of this initiative.

Finally, Mr President, on climate, it is good to hear many Council members talk about the impact of climate change on security in this region, regardless of your views on the causes of climate change. The UK's views on this are quite clear. We know that the climate is changing and that it is negatively impacting security, as Ambassador Kimani set out very clearly. We have a responsibility as this Council to consider the impact of climate change more fully and factor it into the UN system response to ensure that we do what we can to prevent further risks to peace and security from the challenges posed by climate change.

Mr President, with these interconnected challenges facing this region, we welcome the continued implementation of the UN integrated strategy for the Sahel and UNOWAS's close engagement with the region and with regional bodies. As Ambassador Kimani says, we need a holistic approach with the security efforts that the G5, Sahel, Tacuba, Barkhane, but also national security efforts being joined up with the efforts of wider development partners to address the root causes of violence because the region is not going to make real progress unless security gains are underpinned by quick and effective development activity.

So I hope, Mr Chambas, that you can continue to champion this approach within the UN system to the region and beyond.

Thank you very much.

United Arab Emirates removed from travel corridor list

- United Arab Emirates (UAE) to be removed from list of travel corridors following a concerning increase in confirmed COVID-19 cases
- from 4am on 12 January 2021, travellers arriving into England, Wales, Scotland and Northern Ireland from the UAE will need to self-isolate
- current national restrictions do not permit international travel, unless for a limited set of reasons

Following a significant increase in both the level and pace of change in confirmed cases, the United Arab Emirates (UAE) has been removed from the UK list of [travel corridors](#).

From 4am on 12 January 2021, people returning to the UK from the UAE (Abu Dhabi, Dubai, Ajman, Fujairah, Umm Al-Quwain, Sharjah and Ras Al Khaimah) will need to self-isolate for 10 days, as the country has been removed from the [travel corridor list](#).

The decision has been made following a significant acceleration in the number of imported cases, along with the number of reported new cases over the past 7 days, which have risen in the UAE by 52%.

People currently in the UAE are encouraged to follow the local rules, return home as normal and check [FCDO travel advice](#) for further information.

Passengers arriving from all international destinations, including the UAE, will be [required to present a negative COVID-19 test result taken up to 3 days before departing for England or Scotland](#) to help protect against new strains of coronavirus circulating internationally.

Passengers will need to present this proof to carriers, along with their [passenger locator form](#). The UK Border Force will conduct spot checks on arrival into England to ensure that passengers are fully compliant.

At the same time, the FCDO has updated its [travel advice](#) to advise against all but essential travel to UAE.

The government has made consistently clear it will take decisive action if necessary to contain the virus, including if the public health risk of people returning from a particular country without self-isolating becomes too high.

The devolved administrations have all taken the same decision today, so travellers arriving from the UAE into all parts of the UK will need to self-isolate.

[National restrictions for England](#) introduced on 6 January 2021 remain in place, meaning everyone must stay at home unless travelling for a very limited set of reasons, including for work. This means people can no longer

travel to take holidays or travel internationally unless for work or other [legally permitted reasons](#). Those in breach of the rules face penalties starting at £200, rising to a maximum of £6,400.