European ‘comet chaser’ probe to be designed in UK

Thales Alenia Space, who have three sites in the UK and employ nearly 200 highly skilled engineers and scientists, have won one of two parallel mission study contracts for the design concept of the mothership and a smaller robotic probe for the European Space Agency (ESA) Comet Interceptor mission. Design work is also taking place in Italy.

The mission will see one main spacecraft and two smaller robotic probes – the other built by the Japanese Space Agency – travel to an as-yet unidentified comet, and map it in three dimensions.

The UK is also leading on the science. The mission was first proposed by an international team led by University College London and Edinburgh, and the mission’s lead scientist is based at the Mullard Space Science Laboratory in Surrey. Several UK academic teams are also proposing contributions to onboard scientific instruments that will study the target comet in unprecedented detail.

Comets are what is left over when a planetary system forms and in each ancient object is preserved information about the formation of the Solar System 4.6 billion years ago.

Once in space, Comet Interceptor will wait in a parking orbit – possibly for years – until a suitable target has been spotted by astronomers. It will then set out on an intercept course, deploying the two smaller probes, which will make extremely close passes of the comet’s nucleus and beam their data back to the main craft.

This new ambush tactic is the first of its kind. The fly-by of the two probes, which are roughly 30cm in length, is likely to take just a few hours but could illuminate conditions that prevailed more than 4 billion years ago.

Science Minister Amanda Solloway said:

> The UK’s space industry is thriving and this out-of-this-world mission is testament to our world-leading expertise.
>
> I am very proud that scientists and engineers in Bristol and Harwell will be designing the Comet Interceptor spacecraft – their incredible work will not only further our understanding of the evolution of comets but help unlock the mysteries of the Universe.

Previous missions have studied comets trapped in short-period orbits around the Sun, meaning they have been significantly altered by our star’s light and heat. Breaking from that mould, Comet Interceptor will target a pristine comet on its first approach to the Sun.

The scientists are likely to target a comet travelling from the Oort Cloud – a band of icy debris that lies about halfway between the Sun and the next nearest star.

This debris was formed during the conception of the Solar System, but was rapidly ejected to its outermost edge. Unlike more familiar comets, their surface will not have been vaporised by the Sun's energy – a process that leads to dust building up on a comet, obscuring its original state.

Once the probes reach a pristine comet, they will study and scrutinise the chemical composition of it, with one aim being to evaluate whether similar objects may have brought water to planet Earth in the past.

Andrew Stanniland, CEO of Thales Alenia Space in the UK commented:

> I am delighted ESA has once again placed its trust in our scientists and engineers at Thales Alenia Space in the UK who have excellent heritage from previous scientific missions such as Giotto and Rosetta.
>
> We all look forward to supporting this exciting and unprecedented scientific mission to uncover more information about the origins of our Universe.

Comet Interceptor is the first of the European Space Agency's new class of "fast" missions. Each mission must weigh less than 1,000kg and be ready for launch around 8 years after selection, so they can hitchhike into space on an already scheduled launch.

Comet Interceptor will launch in 2029 alongside the Ariel space telescope – another UK-backed ESA mission to study the atmospheres of exoplanets orbiting other distant stars.

In 1986, a UK-led mission to Halley's Comet became the first to observe a cometary nucleus.

HMG suspends import tariffs on Covid-19 products to fight virus

- Tariffs suspended on a wide range of goods in the fight against Covid-19
- These build on tariff reliefs in place through 2020, are available to all importers and are automatically applied.
- Suspensions planned to last for a year, subject to regular reviews

Tariffs on medical products used to help fight against coronavirus have been

suspended by the Government in the fight against the pandemic, lowering costs on these critical items for organisations across the UK.

The new measures, which ensure no tariffs will be due on imports of goods including face masks, gloves and other protective equipment, will come into effect from 1 January 2021.

In May, the Government announced the UK Global Tariff (UKGT), which will apply to products from countries not covered by alternative trade agreements following the end of the EU transition period. Many medical and pharmaceutical goods, including vaccines, will be made tariff-free under the UKGT, but the Government is now going one step further and ensuring there are no additional costs on any items on the World Health Organisation's latest list of critical goods. This includes items like protective goggles, face masks, hand sanitiser, medical scrubs and face shields.

Since the start of the pandemic, the UK has removed tariffs on critical medical products for the NHS and other public bodies through tariff reliefs. These new suspensions extend to private sector organisations, including care homes, which were previously paying tariffs between 2% and 12% on these goods.

The procurement process will also be more streamlined for the NHS and other front-line public services, which will now automatically get these goods tariff-free rather than having to apply for reliefs. It will keep costs down for care providers across the public and private sector as we continue the fight against the virus.

Secretary of State for International Trade, Liz Truss, said:

> Throughout this global pandemic, we have been working tirelessly to protect the public and those bravely working on the front line. The global need for these vital goods in 2021 will be just as great as it has been this year and we continue to work with partners around the world to keep supply chains flowing.
>
> As we emerge as an independent trading nation, we will shape our trade policy to the needs of the UK economy and society and will be a powerful voice for open markets and free trade.

Financial Secretary to the Treasury Jesse Norman said:

> Since the beginning of the crisis the Government has worked to provide those working on the front line the protective equipment they need. Scrapping tariffs and streamlining the procurement of these essential items, such as face masks and gloves, will keep costs down for care providers as we continue the fight against the virus.

This follows the Prime Minister's announcement at the UN General Assembly in September that the UK would suspend tariffs on COVID-critical items, as part of the UK's five-point global plan to deal with the current crisis and prevent future pandemics.

Today's announcement comes as the UK welcomes the Ottawa Group's Trade and Health Initiative which encourages international partners to continue the flow of essential goods in tackling the COVID-19 pandemic. The UK will implement some of the measures suggested and the tariff suspensions will come into force for 12 months to the 31 December 2021 and will be subject to ongoing reviews.

Sellafield computer donation helps West Cumbrian school children

Almost 500 recycled laptops and computers have been donated by the company to schools across West Cumbria with further donations planned soon.

Although no longer needed by us, our Information Services Organisation team and supply chain partners ATOS and Allvotec, were able to identify which machines were still in good working order.

Ian Skipper, ISO head of integration support services and transition, at Sellafield Ltd explained:

> An internal hardware and software update meant that we have equipment that was surplus to our requirements but of a high enough specification for use in schools.
>
> After a quick clean down, memory replacement and new blank hard drives inserted they were packed up ready for new academic homes rather than being packed up for landfill.
>
> This really was a Sellafield Ltd, Atos, and Allvotec joint initiative and I cannot give enough credit to the team who turned the donation idea into a reality.

The next challenge was making sure that the equipment made it into the hands of schools and children who really needed it.

Gary McKeating, head of community and development, at Sellafield Ltd said:

> One of the key aspects of SiX – our social impact, multiplied programme is that we target the support we are able to provide to

> areas of real and demonstrated need.
>
> We know that some students have struggled to access laptops to help with their learning during the first lockdown and if they need to isolate for any period of time.
>
> Another feature of our social impact work is collaboration. We aren't best placed to say which schools need the support the most, which is why we've worked with the WELL Project to identify where the equipment should go.

The laptops have become available as a result of the company's migration to the Windows 10 platform. This has included a roll-out of new machines to all our employees. The process is ongoing and is expected to be complete next year.

The donated equipment is now in use in schools across West Cumbria, including Dean School.

Chair of the local governing body at Dean School, Claire Kirkpatrick, said:

> This equipment has made a massive difference to the way that lessons can be delivered.
>
> Previously we only had a very small number of laptops, all of which were extremely old, that had to be shared between a large number of children across the school.
>
> This was never ideal but especially in the current climate. However, thanks to Sellafield Ltd's kind donation, every pupil in a whole class can now have access to a laptop.

More than 137,000 people in UK receive first dose of COVID vaccine in one week

More than 137,000 people in the UK have received the first dose of the Pfizer/BioNTech COVID-19 vaccine in the first week of the largest vaccination programme in British history.

The government has today released provisional figures which show at least 137,897 people received their first dose of the vaccine by the end of Tuesday 15 December. 108,000 people were vaccinated in England.

The figures are provisional and subject to change. Formal statistics will be published every week from next week.

The majority of the vaccines have been administered to the over-80s, care home workers and NHS staff through more than 70 sites across the UK.

GP-led centres started vaccinating patients this week in England and the roll out will expand to care homes soon.

Over the coming weeks and months, the rate of vaccinations will increase as more doses become available and the programme continues to expand.

Health and Social Care Secretary Matt Hancock said:

> Thanks to the hard work of the NHS across the UK, over 137,000 people have already received the first dose of the coronavirus vaccine.
>
> This is just the start and we will steadily expand our vaccination programme – ultimately helping everyone get back to normal life.

The Pfizer/BioNTech vaccine is the first vaccine to be authorised for use by the medicines regulator, the Medicines and Healthcare products Regulatory Agency (MHRA). Patients require 2 doses of the vaccine – 21 days apart – for the vaccine to be fully effective.

Thanks to the work of the government's Vaccines Taskforce, 40 million doses of the Pfizer/BioNTech vaccine have been secured for the whole of the UK.

Rolling reviews on the Oxford/AstraZeneca and Moderna vaccines are underway and, if authorised by the MHRA, will mean there are more doses available to vaccinate those most in need.

All vaccinations in England are recorded between 8 December and 15 December and represent the first doses only.

The data for England is drawn from 2 sources depending on the vaccination site:

- for hospital sites the data is reported from the National Immunisation Management Service, which is the system of record for the NHS vaccination programme
- for local vaccination services this is an initial data extract from the Pinnacle system, which is being used by GPs to record COVID-19 vaccination events. This data will also be aggregated into the National Immunisation Management Service

A formal COVID-19 vaccine uptake publication will be published from next week.

New UK Government Covid testing site opens in Kilmarnock

The UK Government has today (Wednesday 16 December), opened a new walk-through coronavirus testing centre at the Grand Hall in Kilmarnock (KA3 7AA). The centre is easily accessible for people without a car.

The test centre is part of the largest network of diagnostic testing facilities created in British history. In Scotland, this comprises of six drive through sites, 21 walk-through sites, 21 mobile units, plus the Glasgow Lighthouse Lab which is working round the clock to process samples.

In Scotland, the UK Government is providing all COVID testing and test processing outside of the NHS. Around two thirds of all daily tests are provided by the UK Government, in support of Scotland's health services.

Tests must be booked in advance at: NHS Inform or by calling 0800 028 2816. People should only book at test if they have coronavirus symptoms (a high temperature, a new and continuous cough, or a loss or change to their sense of smell or taste).

Health Minister Lord Bethell said:

"To respond to the coronavirus, we have built a major testing and tracing system from scratch. We are constantly working to expand and improve it with new technologies and innovations so everyone with symptoms can get a test.

"New walk-in sites like this one makes it even easier to get a test no matter where you live. If you have symptoms of coronavirus, I urge you to book a test today and follow the advice of NHS Test and Protect if you are contacted to protect others and stop the spread of the virus."

Baroness Dido Harding, Interim Executive Chair of the National Institute for Health Protection, said:

"Walk through sites offer communities better access to coronavirus testing, so everyone with symptoms can get a test. This new site is part of our ongoing work to expand our testing network across the UK which now has the capacity to process more than 500,000 tests a day. We will continue to expand capacity to improve test turnaround times and push forward testing innovations to make sure anyone who needs a test can get one.

"Please book a test if you have coronavirus symptoms: a new continuous cough, a high temperature and a loss or change in sense of smell or taste, and follow the advice of NHS Test and Protect if you are contacted."

UK Government Minister for Scotland, Iain Stewart, said:

“The UK Government is helping all parts of the UK fight the coronavirus pandemic.

“Testing is vital, helping to manage local outbreaks and protecting people’s livelihoods. The UK Government is providing the bulk of Covid testing in Scotland, and this new walk-through centre is just the latest in our extensive testing network.

“We are pleased to be working with local and commercial partners. These sites are not possible without the hard work of many people. I would like to thank everyone involved for their incredible efforts for the good of the country at this difficult time.”

Lynne McNiven, Joint Director of Public Health for NHS Ayrshire & Arran, said:

“This testing centre in Kilmarnock will ensure those living in East Ayrshire have access to tests as quickly and easily as possible. This is vital so that we can identify cases quickly, allowing them to self-isolate and limit the spread of COVID-19.”

Simon Venn, Mitie Chief Government & Strategy Officer, said:

“Our priority during the pandemic is to support the nation’s efforts to fight COVID-19 and help keep the country running. Testing is a critical part of the UK’s strategy to combat coronavirus and we’re proud to support the UK Government with this vital task. A big thank you to all the NHS staff, Mitie employees and other frontline heroes in Kilmarnock, who are working tirelessly to keep us all safe.”