



WUSAT Newsletter

August 2019

University of Warwick Satellite Engineering Team 2018-19

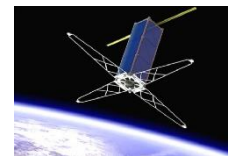
WUSAT Receives ESA Call for Launch Programme Preparation!

Following four years of development of the WUSAT-3 satellite, we have finally received a European Space Agency call to begin preparation for admission to the launch programme. ESA have already requested two previous indicative submissions from us, and we understand that they were well received. Hence, we believe that we are in a strong position to make the final move to gain a place on their launch programme.



Project Directors, Bill Crofts & Julia Hunter-Anderson, will be putting together the final submission over the summer in order to meet the Oct 16th deadline. Our expectation is that members of the 2019-20 WUSAT team will be joining us to attend a selection workshop at ESA in December, so clearly a big year for them coming up!

To remind you – WUSAT-3 is being designed for launch to the International Space Station where it will be placed into a Low Earth Orbit via the NanoRacks CubeSat deployment system on board the ISS. Its payload will be a ‘proof of concept’ signal direction finding technology that could enable smaller/lighter tracking tags to be developed for wildlife monitoring. This could make a significant contribution to those conducting research into the preservation of biodiversity.



RS/WUSAT Promotional Video

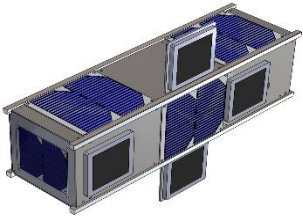
Our long-term partner **RS Components** recently produced a promotional video with the **WUSAT** team. They have made a brilliant job of it. We are absolutely delighted with the end result and the way they have used the students to describe the WUSAT mission. This 4½ minutes is a ‘**must watch**’ for Warwick Engineering! See it at: - <https://www.youtube.com/watch?v=KGx1ZoWE3ss&feature=youtu.be>



A big ‘Thank You’ to Tracey and her team at RS!!

AIRBUS Complete 'Critical Design Review' of the WUSAT-3 Mission! **AIRBUS**

Last July a subset of the **WUSAT** team visited **AIRBUS** Headquarters at Stevenage. **AIRBUS** had very generously put together a team of engineers who carried out a review of our WUSAT-3 mission and sub-system designs to date. They had previously received a sub-set of our mission design document, and on the day, they received supporting presentations from Co-Director, **Prof Julia Hunter-Anderson**, and WUSAT team members **Kulan Gunawardena**, **Anjali Yadav**, **Hamish Fothergill** and **Michael Kaniou**.



Overall, the **AIRBUS** team were very positive about progress made and the standard of work achieved at this stage of the project. They offered a considerable range of extremely useful suggestions regarding analysis, testing, failure modes, etc. This will prove invaluable when we face a 'full-blown' Critical Design Review with the **European Space Agency** at some point in the near future.

We are extremely appreciative of **AIRBUS** taking the time, trouble and expense of arranging for a team of their guys to do this for us. We are even more delighted that they have offered continuing support of this nature.

Many thanks to **Arthur Dunlop**, **Rob Sandford** and **Haider Razzaq** for the time they put in to providing this for us.

HARWIN/WUSAT Team Day!

Last June (18th) we enjoyed an excellent Team Day supported by our long-term partner **Harwin**. Bill & Julia gave a presentation on general developments with the WUSAT programme and the team presented their work on WUSAT-3. It is always good to see a good selection of representatives from our partner companies, and we always learn something, or make new plans when we get together. Thanks once again to **Harwin** for their continued & generous support of this important end-of-year event! Pictures below.



Karen Holland (2nd from left), CEO of XCAM, was unable to attend the Team Day, but we were delighted that she could come along to the team's official presentation day where they received their final assessment. XCAM are generously donating a flight-tested C3D CubeSat camera for the WUSAT-3 mission. This will form the heart of WUSAT-3's signal direction finding payload.

Goodbye & Thanks to the 2018-19 WUSAT Team!

Once again, and all too soon, we have to say goodbye to this year's WUSAT team. It seems to go more quickly every year! Julia and Bill attended the Engineering Graduation ceremony on July 22nd, and it was great to see each of them graduate. We were also very pleased to meet some of their family members who had clearly heard all about WUSAT. That's what we like!

Anyway, in order of the pictures below, well done and thank you to Ellen, Hamish, Diella, Anjali, Kulan, Ken & Michael for all you have done to progress WUSAT-3 this year. Good luck in all you do, and we will keep in you touch with all developments.



WUSAT 2019-20 Team

We haven't met them yet, but we are very pleased to have the new team already in place. We are currently ordering their WUSAT shirts so that they are already to go in October. They are,

Isabella Curtis (Systems Engineer)

Emma Osbiston (Electronic Engineer)

Josiah Carmona (Mechanical Engineer)

Riddhi Patel (Electronic Engineer)

David Yorke (Mechanical Engineer)

Ole Ørke (Electronic Engineer)

William Hill (Systems Engineer)

Pictures and more information to follow once we meet them. They are all very capable students and we have no doubt that they will take WUSAT-3 through this major next step of securing a place on ESA's launch programme.

Upcoming WUSAT Programme Activities!

- Sept 2019 – Bill & Julia will provide a WUSAT display as part of Warwick's 'Space Zone' in the British Science Festival. We will include material from Harwin, Eurocircuits, and AMSAT-UK who will display satellite communications equipment and possible a live satellite link! In particular, RS will be bringing Titan, their articulated lorry full of interactive modern technology equipment.
- Sept 2019 - Bill & Julia will be presenting a paper at ESA's Symposium for Space Educational Activities at the University of Leicester.