



## **UK CHAPTER NEWSLETTER**

### **February 2022**

### **Happy New Year**

The UK Chapter Board of Directors would like to take this opportunity to wish all our members a most prosperous, happy, and healthy New Year. It is sincerely hoped that 2022 will finally allow us all to return to somewhat normal activities when we can once again resume our frequent gatherings, events and of course friendships.

### **Latest EW News Roundup**

(Kindly supplied by Dr Thomas Withington – Writer and analyst, editor of the Armada International EW webpage and newsletter)

#### **A China-US war in space: The after-action report**

Interest in space warfare is growing against a backdrop of tense relations between the United States and the People's Republic of China (PRC). An intriguing article from the *Bulletin of Atomic Scientists* ruminates on the potential shape and fallout of a space war between the United States and PRC. Conclusions are drawn from an exercise hosted by a US-based international security thinktank involving several US military space stakeholders.

<https://thebulletin.org/premium/2022-01/a-china-us-war-in-space-the-after-action-report/>

#### **Stealing secrets from the ether: missile and satellite telemetry interception during the Cold War**

Staying on the subject of space a fascinating recent article from *The Space Review* discusses Cold War espionage. More information is entering the public domain on space signals intelligence during the Cold War thanks to a growing trove of declassified official documents. Dwayne Day has written widely on this subject. His latest article examines Central Intelligence Agency and National Security Agency space telemetry Intelligence efforts, including programmes like TACKSMAN and EGG SHELL.

<https://www.thespacereview.com/article/4316/1>



## **Aviation experts warn 5G rollout could result in wildly wrong altimeter readings**

Commercial aviation is slowly finding its mojo after several months of acute disruption caused by the global Covid-19 pandemic. Nonetheless, new challenges are on the horizon. The proliferation of fifth-generation cellular communications could have an impact on avionics and possibly flight safety. This article highlights the challenge 5G poses to global aviation. It may well be the first of many examining an issue which will pit the interests of the global aviation against the wireless communications industry.

<https://verticalmag.com/news/aviation-experts-warn-5g-rollout-could-result-in-wildly-wrong-altimeter-readings/>

## **China Is Ramping Up Its Electronic Warfare and Communications Capabilities near the South China Sea**

An insightful new report from the Centre for Strategic and International Studies sheds more light on PRC electronic warfare capabilities. Specifically, the report focuses on Chinese EW capabilities deployed to Hainan Island in the South China Sea. Using open-source imagery intelligence the report shares analysis on the People's Liberation Army's (PLA) electronic warfare capabilities it is deploying to the island. This helps us understand Chinese EW doctrine and how these capabilities support the PLA.

<https://www.csis.org/analysis/china-ramping-its-electronic-warfare-and-communications-capabilities-near-south-china-sea>

## **Russian Radiation**

At the time of writing (late January 2022) tensions between Russia and Ukraine remain high with an invasion of the latter by the former seeming sadly inevitable. This article examines the electronic warfare capabilities that Russia may have deployed to the Ukraine theatre in preparation for a possible invasion. It also examines how these capabilities might be used to support Russian Army manoeuvre units at the tactical and operational levels.

<https://www.armadainternational.com/2022/01/ukraine-russia-electronic-warfare/>

## **Electronic Warfare – Technology, Regulatory and Macroeconomic Trends**

A series of three articles from the *army-technology.com* website profile possible trends which may be seen in the electronic warfare domain over the next year and beyond. The first article examines ongoing technological trends including artificial intelligence and electromagnetic hardening. The second looks at regulatory issues affecting EW. These include electronic warfare and the law of armed conflict, and ethical questions concerning directed energy weapons. The final article examines macroeconomic trends and EW, specifically expected growth in the electronic warfare market over the coming twelve months.

<https://www.army-technology.com/comment/electronic-warfare-technology-trends/>

<https://www.army-technology.com/comment/electronic-warfare-regulatory-trends/>

<https://www.army-technology.com/comment/electronic-warfare-macroeconomic-trends/>

## **Additional Item of Interest** (kindly submitted by John Stubbington)

**Russia flies newbuild Tu-160M bomber** (Janes, by Gareth Jennings, 13 January 2022)



The first newbuild Tu-160M made its maiden flight on 12 January.

Russia has flown the first Tupolev Tu-160M 'Blackjack' strategic bomber to roll of its newly reconstituted production line. The flight took place at Kazan Aviation Plant on 12 January.

"The flight took place at an altitude of 600 meters [1,969 ft] and lasted about 30 minutes. The crew of test pilots of Tupolev performed manoeuvres to test the stability and controllability of the aircraft in the air," Rostec said.

The Tu-160 first entered Soviet service in the late 1980s, with production running through to 1995. In 2015, Russian President Vladimir Putin ordered the restart of production of the upgraded Tu-160M variant to bolster the air force's strategic bomber capabilities at a time of increasing tension with the West, and to offset delays to the PAK-DA future bomber programme.

Russia plans to eventually buy about 50 Tu-160M bombers and is upgrading 16 existing Tu-160s to the standard. With the first Tu-160M set to be delivered imminently, series production is to begin by 2023 at a production rate of at least three aircraft a year. This would fit with the order for 10 aircraft in the 2023–27 timeframe

The Tu-160M upgrade is being rolled out in two phases, with the first Tu-160M1 phase comprising the new K-042K-1 navigation system and ABSU-200-1 autopilot, as well as

the removal of some previous systems, such as bomb sighting systems. This Tu-160M1-variant has been operational with the air force since late 2014.

The newly produced Tu-160M is equipped with a new NK-32-02 engine, with a flight speed of 2,000 km/h, while reducing fuel consumption, increasing flight range and airborne time, with a maximum load of 45 tons and a range of about 13,500 kilometres. The aircraft is equipped with the latest on-board computers, navigation systems and electronic warfare systems, which can deal with high-precision weapon strikes. According to public information, the Tu-160M strategic bomber can carry two cruise missiles, Kh-55SM and Kh-101, and can hit targets at up to 5,500 kilometres. In addition, the upgraded Tu-160M can also carry at least three "Dagger" hypersonic missiles.

## Latest UK Chapter Awards

The recent UK Chapter Christmas Awards dinner once again provided the perfect opportunity to present awards (belated due to COVID restrictions) to Chapter members.



Mrs Jane Clifford was presented with a posthumous award for her husband, the late Chapter President, Wg Cdr John Clifford, OBE. John was awarded the Anton D Tony Brees Lifetime Service Award in 2020 but sadly his award was announced shortly after he passed away. Mrs Jane Clifford was at the dinner to not only receive John's award but also to receive an Honorary Membership of the UK Chapter for herself.



Mr Tim Gosling was also finally presented with an AOC Outstanding Achievement Award. Presentation made by Chris Howe MBE, UK Chapter President. BZ Tim



Cathy Hastings was also presented with an Honorary Membership of the UK Chapter. Cathy has been a long-standing supporter of the AOC and UK Chapter going back many years, when she would often be seen in company with our late friend David Kitching who was a long-time serving Board member of the UK Chapter.

## **EW Job Advertising on UK Chapter Website**

<https://www.ukaoc.org/ew-job-vacancies>

I would like to continue to make all aware of the initiative to provide a low-cost EW Job Advertising section on the UK Chapter website which has continued to be popular with UK EW Industry. Why not take a moment to see what your next challenging role in EW might be in 2022?

Any companies/organisations interested in taking advantage of this low-cost job advertising facility, simply contact the UK Chapter President Chris Howe MBE for more information [cahowe500@gmail.com](mailto:cahowe500@gmail.com)

## **UK Chapter – Election of Officers**

Every 3 years in accordance with the Constitution we need to elect a Secretary, Treasurer and Membership Director to the AOC UK Chapter Board of Directors (BOD) prior to our AGM, which this year is on 25 March 2022.

You are invited to nominate yourself for one of these posts or to support another nomination by completing the attached proforma. Please complete the attached proforma (see below) and return it by email to David J Peck the Elections Volunteer at [aocukballot@djpeck.net](mailto:aocukballot@djpeck.net) no later than 1 March 2022.

Any questions please contact me by email at [aocukballot@djpeck.net](mailto:aocukballot@djpeck.net) if you need to discuss the matter, please send me your phone number and I will call you.

Regards

David J Peck – UK Chapter Elections Volunteer

## Letters to the Editor

Once again, I invite any UK Chapter member to consider sending any feedback you may have on any aspect of this Newsletter, the UK Chapter, or indeed the AOC. If you have a comment, a suggestion or observation to make, (hopefully positive) then please contact me direct at [cahowe500@gmail.com](mailto:cahowe500@gmail.com) when I will be only too pleased to respond and consider your thoughts for change or indeed items of interest for future newsletters. Thank you.

## Future Events/Visits

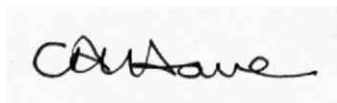
**AOC Region 1 Chapters' Virtual Presentations** – This series of presentations has proved to be very popular, and it is hoped to continue in 2022. The next presentation will be announced in due course. To take part you simply need to register with the AOC Region 1 Director, Dr Sue Robertson @ [sue@gpl.co.uk](mailto:sue@gpl.co.uk)

## UK Chapter AGM 2022

A date for your diary - The UK Chapter AGM for 2022 will be held in the RAF Club, London on Friday 25 March 2022, start time 1830. A cash bar will be available from 1800, and a finger buffet will be provided on completion. It is hoped to see many of our members in attendance. Registration flyer at the foot of this newsletter.

**AOC Europe 2022** – Montpellier, France 10 – 12 May 2022

Full details here: <https://www.aoceurope.org/>

A handwritten signature in black ink that reads "Chris Howe".

Chris Howe MBE  
AOC UK Chapter - President

**Keep Checking out the UK Chapter website at:**

**[www.ukaoc.org](http://www.ukaoc.org)**



# **ANNUAL GENERAL MEETING 2022**

## **Royal Air Force Club, 128 Piccadilly, London W1J 7PY**

**1830 Friday 25 March 2022**

The Annual General Meeting of the AOC UK Chapter will be held in the Royal Air Force Club, 128 Piccadilly (Hyde Park end) at 1830 on **Friday 25 March 2022**. All AOC members are encouraged to take this opportunity to meet the UK Chapter Board, to hear a report on the Chapter's activities and its financial health and to help shape its future. Guests with a view to becoming AOC members will be most welcome but will have no voting rights at the AGM.

The programme for the AGM, to be held in the Battle of Britain Suite (downstairs next to the Flying Horse), is:

**1800: Pre-AGM drinks (cash bar)**

**1830: AOC AGM**

**1930: Finger Buffet**

Members wishing to attend should complete the proforma below and send it by e-mail to Phil Davies ([phildavie@aol.com](mailto:phildavie@aol.com)) as soon as possible. There is no charge to attend the AGM and the application is for administrative and RAF Club security purposes only.

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To: Phil Davies      E-mail: [phildavie@aol.com](mailto:phildavie@aol.com)      Mobile: 07387 200554

I wish to attend the AOC Annual General Meeting on **Friday 25 Mar 2022**.

Name: \_\_\_\_\_ AOC Membership No: \_\_\_\_\_

Guest(s): \_\_\_\_\_

Telephone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Any special dietary requirements (e.g. vegetarian)? \_\_\_\_\_



**AOC UK Board of Directors Nomination Form for Executive Directors - Secretary, Treasurer and Membership Director (see note 3) for a term of three years by an online ballot. (The completed form is to be return by email to David J Peck the Elections Volunteer at [aocukballot@dipeck.net](mailto:aocukballot@dipeck.net) no later than 1 March 2022.)**

**Nominee:**

Full Name & Title:

Membership Status in AOC & Membership Number:

Address:

Telephone Number:

Email address:

Proposed position for nomination:

**Nominee Declaration:**

*I hereby declare that the above information is correct and valid to my knowledge. In accordance with the Constitution of the AOC UK Chapter (see note 1), I hereby agree to be nominated for the position named above of the UK Chapter.*

Signature of Nominee (see note 2) :

Date:

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*In accordance with the Constitution of the AOC UK Chapter (see note 2), we the undersigned hereby nominate the above-named person for the above position of the UK Chapter from 25 March 2022, this being the date of the Annual General Meeting of the UK Chapter.*

**Nominator:**

Full Name & Title:

Membership Status in AOC & Membership Number:

Address:

Telephone Number(s):

Email address:

**Nominator Declaration:**

*I hereby declare that above information is correct and valid to my knowledge.*

Signature of Nominator (see note 2) :

Date:

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**Supporter's Name, Signature and AOC Membership Number**

*(In addition to the above; Minimum of 2 for a Vice-President, Secretary, Treasurer and Membership Director and 5 for a President, see note 3))*

No.	Name	Membership Number	Signature (see note 2)
1			
2			
3			
4			
5			
6			

Notes:

1. AOC BOD Approved 14 September 2018 copy available on the website [www.ukaoc.org](http://www.ukaoc.org)
2. Because of COVID 19, alternatively, email your confirmation to Elections Volunteer in lieu of actual "signatures".
3. The President, Vice-President were elected at the 2021 AGM and are not due for re-election until before the 2024 AGM