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**State of the art of French nuclear weapons, anti-satellite systems,  
military satellites and spatial electronic warfare - and peaceful  
action against it**

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I am a member of the National Bureau of the Mouvement de la Paix; President of the departmental peace committee in Doubs, Besancon (in the eastern part of France near the Swiss-German border).

In this paper I will report on aspects of the campaigns of the French peace movement which are relevant to the militarisation of space.

First, a reminder of our organization and the several thousand activists who are members. Mouvement de la Paix was founded in 1948 and this year we celebrate our seventieth anniversary. It was created after World War II by prominent personalities such as Picasso, Joliot-Curie and Raymond Aubrac, to oppose wars, and especially nuclear wars. Since then we have opposed wars and the French military involvement in Africa, Afghanistan, Syria, Yugoslavia, etc., we join the fight against colonialism, nuclear weapons, new weapons technologies, and more generally work towards a more peaceful and secure world for all, through diplomacy and dialogue and the building of mutual respect between all countries and people on the planet. Our philosophy also encompasses the recommendations for the Millennium Development Goals as adopted by the UN in 2000. Building for peace locally and globally, joining the fight against racism, standing up for human rights and opposing nuclear weapons. Our motto is "never do to others what you don't want them to do to you".

We organise protests against French missiles and nuclear forces and each year we celebrate the UN International Day of Peace. We seek to develop relationships with foreign countries and people based on confidence and respect and we aim to make France once again a country that honours human rights by, for example, aiding refugees not persecuting them.

I am mandated by our movement to participate in this meeting of the Global Network against Weapons and Nuclear Power in Space, and to request to become a member if we have not already joined.

I would like to remind you briefly of the programmes that France runs (either parallel to, or in total collaboration with, other NATO countries) in the following areas:

1. nuclear weapons,
2. anti-satellite systems,
3. satellites used for military information,

#### 4. spatial electronic warfare.

Note that France does not participate with NATO on nuclear weapons after becoming totally reintegrated within NATO ten years ago. Remember too that France is the 5<sup>th</sup> or 6<sup>th</sup> biggest arms exporter in the world. France is also a leading country in the use of nuclear power to generate electricity and the concept of technologies that have “dual use” applications (i.e. for military and civilian purposes) is of increasing importance to research and development in the development of nuclear, imaging and electronic systems and devices.

Some of those programmes are developed in cooperation with the United States, as our military, space, electronics and aircraft industry can be in direct agreement in some areas.

1. Programmes for new generations of nuclear weapons [1 – 4] are under the supervision of CEA/DAM (Commissariat à l'énergie atomique). The major research project is the Megajoule Laser, which is part of the “Simulation” programme and which became operational in 2014.

This powerful laser is used to study materials under extreme conditions, comparable to those of a nuclear explosion, in a hyper confined structure. It is currently being used to complete development of the new generation of French M51 missiles [5]. These are the short, medium and long range ballistic missiles as well as those with an intercontinental range for use on French nuclear submarines.

Of course, the French peace movement is fighting against these programmes and wants the abolition of those weapons [6 – 7].

2. The 1967 Outer Space Treaty forbids the placing of weapons of mass destruction in orbit around the Earth and to date, only 3 nations have projects to develop anti-satellite (ASAT) weapons with the ability to destroy satellites. These are the USA (with a specific programme running from 1959 to 1985 and restarted again in 2006 and which actually destroyed a US satellite in 2008); the Peoples' Republic of China (with a test in 2007 that destroyed one of their satellites) and the Russian Federation (with a programme started in 1961 and 4 test launches from 2015-2018). Officially, France does not have an ASAT programme. There are risks involved in destroying satellites in space involving possible damage by debris travelling at 25-30,000 km/hr from an impact on other satellites or on the International Space Station (which has cosmonauts on board).

Note that some analysts have argued that the 2015 US Space Act [8] violates the Outer Space Treaty by recognising that space resources (including water and minerals) can be owned. This encouragement to exploit space would appear to contradict the Outer Space Treaty which states that "outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means".

3. There are no international laws or agreements on the use of intelligence gathering or observational satellites used for military purposes. France still has two second generation military satellites - Helios 2A and Helios 2B [9]. The first of the previous generation, Helios 1A, was launched in 1995. Two other satellites with imaging systems useful for gathering information are Pléiades 1A and Pléiades 1B.

The international programme known as “MULTinational Space-based Imaging System for Surveillance, Reconnaissance and Observation” (MUSIS) [10] has six partners - France, Italy, Belgium, Germany, Greece, and Spain – and allows them to share imagery from various military satellites through a common, generic user ground segment (UGS). As a project of the European Defence Agency (EDA), it is managed by the “Organisation conjointe de coopération en matière d'armement” (or OCCAR, the Organisation for Joint Armament Cooperation) which facilitates and manages collaborative armament programmes through their lifecycle between Belgium, France, Germany, Italy, Spain, and the UK. MUSIS was intended to provide access to a number of missions:

- the successor of French Hélios 2 called Composante Spatiale Optique (CSO – a French military Earth observation satellite programme);
- the successor of German SAR-Lupe called SARah;
- the successor of Italian COSMO-SkyMed called COSMO Second Generation (CSG);
- the Spanish wide area optical satellite Ingenio (formerly known as Seosat).

The first two systems are entirely military, but the other two are dual-use. One satellite, COS 1, is due to be launched this year and 2 others, COS 2 and COS 3, in 2021. All of these satellites will be under the control of the French Ministry of the Armed Forces. They will provide information to be used for modelling the terrain and for producing maps for guiding missiles and drones and helping plan and execute airstrikes by military airplanes.

4. I cannot say much about electronic warfare and space weapons. Weapons which use particular technologies to dazzle or destroy a target or satellite, or the development of radars with a range of 100 km (needed for aircraft to destroy a target at a safe distance).

Our organization is involved in campaigns against all such weapons and we protest, for instance, at Eurosatory (the international Defence and Security industry trade fair, held every two years in the Paris-Nord Villepinte Exhibition Centre). We ask our government to sign the Treaty on the Prohibition of Nuclear Weapons [11, 12] and to significantly reduce military spending. We are also completely opposed to our new government leading wars and to its military presence in approximately 15 foreign countries [13 – 15].

I also have not mentioned the US missile defence system. We condemn this too and consider it not as a defence system but an instrument of aggression, linked with the possibility for the US to attack countries that they consider to be enemies, such as

Russia, China, Iran, etc., without fear of retaliation.

I hope that these notes concerning the French programmes involved in the militarization of space [16 – 21] and the peace campaign against it are helpful. There are strong arguments against the absurdity of weapons of mass destruction, such as nuclear weapons, and the shocking increase in military budgets while, at the same time, our government attacks social welfare, social security, pensions, and education.

The action for peace in France is a question of developing our strategies and strongly opposing some of the policies of our own government [22 – 31].  
Thank you for your attention.

### References:

[1] Table of French Nuclear Forces, Natural Resources Defense Council, <http://www.nrdc.org/nuclear/nudb/datab16.asp> (2002).

[2] Status of World Nuclear Forces, <https://fas.org/issues/nuclear-weapons/status-world-nuclear-forces/> (2017).

[3] Modernization of French nuclear forces <http://www.reachingcriticalwill.org/images/documents/Publications/modernization/france-2015.pdf> (2015)

[4] Assuring destruction forever: 2017 edition, Women's International League for Peace and Freedom, April 2017. <http://www.reachingcriticalwill.org/images/documents/Publications/modernization/assuring-destruction-forever-2017.pdf>

[5] Succès du premier tir du nouveau missile nucléaire M51 depuis un sous-marin, Libération, 27 janvier 2010 <http://www.liberation.fr/depeches/0101615956-succes-du-1er-tir-d-essai-du-missile-nucleaire-m51-depuis-un-sous-marin>

[6] Penmarc'h. Tir de M51 : le Mouvement pour la Paix a manifesté, Ouest France, June 2016 <https://www.ouest-france.fr/bretagne/pont-labbe-29120/penmarch-tir-de-m51-le-mouvement-pour-la-paix-manifeste-4296616>

[7] Tir d'essai réussi pour le missile nucléaire M51, L'Usine Nouvelle, June 2016 <https://www.usinenouvelle.com/article/tir-d-essai-reussi-pour-le-missile-nucleaire-m51.N397107>

[8] H.R.2262 - 114th Congress (2015-2016): U.S. Commercial Space Launch Competitiveness Act, congress.gov, 25 november 2015 <https://www.congress.gov/bill/114th-congress/house-bill/2262>

[9] Espace : La France renouvelle ses capacités militaires,, Air&Cosmos, 24 January 2018 <http://www.air-cosmos.com/espace-la-france-renouvelle-ses-capacites-militaires-106139>

[10] Multinational Space-Based Imaging System (MUSIS) <https://www.army-technology.com/projects/multinational-space-based-imaging-system-musis-europe/>

[11] UN Treaty on the Prohibition of Nuclear Weapons (full text), 2017 <http://www.icanw.org/treaty-on-the-prohibition-of-nuclear-weapons/>

[12] Signature/ratification status of the Treaty on the Prohibition of Nuclear Weapons, 2018 <http://www.icanw.org/status-of-the-treaty-on-the-prohibition-of-nuclear-weapons/>

[13] Opérations dans le monde, effectifs, chars, avions... Quelle est la situation de l'armée française ? [https://www.francetvinfo.fr/france/14-juillet/infographies-operations-dans-le-monde-effectifs-chars-avions-quelle-est-la-situation-de-l-armee-francaise\\_2281865.html](https://www.francetvinfo.fr/france/14-juillet/infographies-operations-dans-le-monde-effectifs-chars-avions-quelle-est-la-situation-de-l-armee-francaise_2281865.html)

[14] Armée : la présence des forces françaises à travers le monde, Le Figaro, 28 November 2016 <http://www.lefigaro.fr/international/2016/10/28/01003-20161028ARTFIG00185-armee-la-presence-des-forces-francaises-a-travers-le-monde.php>

[15] Carte des opérations et missions militaires, Ministère des Armées, 14 May 2018 [https://www.defense.gouv.fr/operations/rubriques\\_complementaires/carte-des-operations-et-missions-militaires](https://www.defense.gouv.fr/operations/rubriques_complementaires/carte-des-operations-et-missions-militaires)

[16] "The militarization and weaponization of space: Towards a European space deterrent," Space Policy, 24(2), 61-66 (2008). <https://doi.org/10.1016/j.spacepol.2008.02.001>

[17] Militarization and Weaponization of Outer Space, January 2007 <http://www.globalissues.org/article/69/militarization-and-weaponization-of-outer-space>

[18] Militarisation of space, [https://en.wikipedia.org/wiki/Militarisation\\_of\\_space](https://en.wikipedia.org/wiki/Militarisation_of_space)

[19] Allan Rosas, "The Militarization of Space and International Law," Journal of Peace Research, 20 (4), 357-364 (1983). <https://doi.org/10.1177/002234338302000406>

[20] D. Stephens, "Increasing Militarization of Space and Normative Responses," Recent Developments in Space Law. Springer, Singapore (2017). [https://doi.org/10.1007/978-981-10-4926-2\\_7](https://doi.org/10.1007/978-981-10-4926-2_7)

[21] Francis Grimal, Jae Sundaram, "The Incremental Militarization of Outer Space: A Threshold Analysis," Chinese Journal of International Law, 17(1), 45–72 (2018).  
<https://doi.org/10.1093/chinesejil/jmy006>

[22] Ils ont marché pour la paix à Besançon, France Bleu, May 2015  
<https://www.francebleu.fr/infos/economie-social/ils-ont-marche-pour-la-paix-besancon-1431195562>

[23] Rennes. Le Mouvement de la Paix alerte sur le nucléaire, Ouest France, Août 2017 <https://www.ouest-france.fr/bretagne/rennes-35000/rennes-le-mouvement-de-la-paix-alerte-sur-le-nucleaire-5180012>

[24] Rassemblement contre un nouveau tir de missile M51, France 3, June 2016  
<https://france3-regions.francetvinfo.fr/bretagne/finistere/penmarc-h-29-rassemblement-contre-un-nouveau-tir-de-missile-m51-1021727.html>

[25] 200 manifestants dans les rues pour la paix à Besançon, Macommune.info September 2017 <http://www.macommune.info/article/200-manifestants-dans-les-rues-pour-la-paix-a-besancon-168452/>

[26] Mouvement de la Paix: les pacifistes en ordre de bataille, L'Humanité, November 2017 <https://www.humanite.fr/mouvement-de-la-paix-les-pacifistes-en-ordre-de-bataille-645113>

[27] Concarneau. Un ancien général contre le nucléaire, Ouest France, April 2018  
<https://www.ouest-france.fr/bretagne/concarneau-29900/concarneau-un-ancien-general-contre-le-nucleaire-5729154>

[28] Penmarc'h. Un tir de missile la semaine prochaine, Le Telegramme, april 2018  
<https://www.letelegramme.fr/finistere/penmarch/penmar-ch-un-tir-de-missile-la-semaine-prochaine-06-04-2018-11916901.php>

[29] Antinucléaires: Stop les va-t'en guerre !, Le Télégramme, June 2018  
<https://www.letelegramme.fr/finistere/quimper/antinucleaires-stop-les-va-t-en-guerre-16-06-2018-11996609.php>

[30] Une soirée cinéma contre les armes nucléaires, La Dépêche, June 2018  
<https://www.ladepeche.fr/article/2018/06/15/2818350-une-soiree-cinema-contre-les-armes-nucleaires.html>

[31] Un plaidoyer pour une culture de paix La presqu'île parée pour la fête de la Saint-Pierre, Var Matin, July 2018 <http://www.varmatin.com/vie-locale/un-plaidoyer-pour-une-culture-de-paix-la-presqu-ile-paree-pour-la-fete-de-la-saint-pierre-242620>