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TEXTS ADOPTED

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An EU approach for Space Traffic management - an EU contribution addressing a global challenge

European Parliament resolution of 6 October 2022 on an EU approach for space traffic management – an EU contribution addressing a global challenge (2022/2641(RSP))

The European Parliament,

– having regard to the joint communication from the Commission and the High Representative of the Union for Foreign Affairs and Security Policy of 15 February 2022 entitled ‘An EU Approach for Space Traffic Management – An EU contribution addressing a global challenge’ (JOIN(2022)0004),

– having regard to the Council conclusions of 11 November 2020 on orientations on the European contribution in establishing key principles for the global space economy,

– having regard to the Commission communication of 22 February 2021 entitled ‘Action Plan on synergies between civil, defence and space industries’ (COM(2021)0070),

– having regard to the UN Committee on the Peaceful Uses of Outer Space Guidelines for the long-term sustainability of outer space activities of 20 June 2019,

– having regard to the question to the Commission on space traffic management (O-000035/2022 – B9-0022/2022),

– having regard to Rules 136(5) and 132(2) of its Rules of Procedure,

– having regard to the motion for a resolution of the Committee on Industry, Research and Energy,

A. whereas space traffic management (STM) is of strategic importance for the Union and contributes to guaranteeing safe, secure and autonomous access to, return from and use of space, guaranteeing long-term sustainability of outer space and promoting and ensuring the continued competitiveness of the EU space industry;

B. whereas in recent years, the number of space operations, satellites in orbit and debris have significantly increased; whereas this development has led to the exponential increase in risk for the safety of in-orbit space operations and the sustainability of outer space; whereas this potentially jeopardises the services provided by the components of the Union space programme;

C. whereas new industrial trends have appeared, which has led to the emergence of more commercial approaches as regards the use of space, new non-public actors entering the space sector, planned and ongoing launches of so-called mega-constellations into low-earth orbit, and other commercial trends such as space mining;

D. whereas a number of technologies provide reliable solutions with regard to space traffic, congestion and collision risks; whereas a number of EU innovations and private and public initiatives for debris identification and tracking have been developed; whereas spacecraft (automated) collision avoidance, space debris avoidance, space debris mitigation and remediation and space debris removal techniques are efficient tools that need an adequate regulatory and implementation framework;

E. whereas the Union space programme includes a space situational awareness component, which contains a space surveillance and tracking (SST) sub-component that constitutes the operational pillar for STM;

F. whereas unlike other (transport) sectors, a comprehensive international regulatory framework with detailed rules and technical specifications for STM does not exist to the same extent and is limited to voluntary guidelines;

1. Welcomes the planned actions outlined in the joint communication entitled ‘An EU Approach for Space Traffic Management – An EU contribution addressing a global challenge’;

2. Welcomes the recent developments in the space sector, with new companies entering the market and the market uptake of the services provided by the various components of the Union space programme;

3. Underlines that the increase in space operations, the number of space actors and the unprecedented increase in satellite constellation size are quantitative aspects that present serious challenges that need to be addressed, notably through preventive measures and the development and deployment of advanced, automated techniques such as automated collision avoidance; highlights, in this regard, that artificial intelligence, high performance computing and machine learning constitute enabling technologies for required automation and tracking processes;

4. Points out that in order to properly manage space traffic, data based on quantitative metrics and measurement tools is needed and to this end an increase in the number and quality of sensors, robust data sharing and debris advances are also needed;

5. Stresses that the development of the space sector requires the EU to take a strategic and ambitious approach covering regulatory aspects, the international dimension and SST services;

6. Stresses the need to promote an internationally recognised definition of STM in order to ensure a common understanding of all parameters and thereby contribute to the safety of space operations in increasingly congested outer space;

7. Considers that in order to guarantee safe and secure space operations, a clear regulatory framework for space activities should serve as a basis for an EU-wide level playing field for space activities and a comprehensive framework for European binding legislation on space; calls on the Commission to develop a set of EU rules, standards,

technical specifications and guidelines and to actively promote these rules at international level;

8. Underlines that security and safety need to be taken into account from the design stage, space launches and assets need to be based on sustainability by design, current best practices and guidelines are not being sufficiently used and fragmentation is not conducive to an efficient large-scale approach; underlines that these changes should be carefully and clearly drafted to support quick international uptake and prevent excessive administrative burdens on the space sector industry;

9. Calls on the Commission to take both civilian and defence/security needs into consideration, to evaluate the impact of STM development on European public and private stakeholders and to also consult interested stakeholders from outside the EU;

10. Calls on the Commission to reach out to third countries and international organisations, without prejudice to the Union's autonomy;

11. Calls on the Commission to enhance the Union SST services with regard to collected data, re-entry and fragmentation analyses and to further develop the EU SST database, including detected, catalogued and predicted movements of space objects;

12. Stresses the need to support the development of improved SST capabilities and boost research and innovation in STM;

13. Underlines that space debris is an urgent problem and that space debris operations are needed; calls therefore on the Commission to further invest in research on and the deployment of debris reduction technologies by using all opportunities for EU funding of research and innovation activities via Horizon Europe, the Cassini–Huygens space-research mission, pilot projects, including synergy between and the blending of different EU programmes and national funds, and, to the extent possible, European Space Agency funds;

14. Calls on the Commission to make all political and diplomatic efforts, including engaging with the UN, to develop a comprehensive international approach for the application of common standards and rules and implementation of concrete STM solutions at global level;

15. Encourages the Commission to facilitate EU participation in the UN Rescue Agreement[1], Liability Convention[2] and Registration Convention[3];

16. Calls on the Commission to propose STM legislation before 2024, including on system governance and the responsibilities of the proposed EU Agency for the Space Programme and, based on the mid-term review of the 2021-2027 multiannual financial framework and the current Union space programme, STM integration in the next space programme;

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1 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space of 1967.

2 Convention on International Liability for Damage Caused by Space Objects of 1971.

3 Convention on Registration of Objects Launched into Outer Space of 1974.

17. Instructs its President to forward this resolution to the Commission, the Vice-President of the Commission / High Representative of the Union for Foreign Affairs and Security Policy, the Council and the governments and parliaments of the Member States.