

IAF COMMERCIAL SPACEFLIGHT SAFETY COMMITTEE (CSSC)

International Collaboration For Safe Space Operations

1. Introduction

The present brief has been prepared to provide an outlook of the major areas onto which the CSSC focused from beginning of 2022. The IAF Spring Meetings in Paris on 28-30 March 2022 was very productive and a great occasion to meet and network in person after the long pandemic restrictions. The great number of received abstracts and their extremely valuable contents anticipated a very successful IAC Congress in September 2022.



2. Summary

SPACEPORTS: The European Spaceport Forum (ESF) took place at CNES HQ in Paris on 23rd September; -main topics included spaceport status update from respective countries; in particular there was a very interesting interaction with Thilo Kranz of ESA on the ESA Boost Programme, the ESA space transportation and support programme. Other discussion topics included legal process, micro launcher initiative at ESA, relationship between institutional and commercial aspects. Chairmanship of the group was handed over from Sweden to Norway.

REGULATORY: Italy is pursuing the regulations for suborbital flights in the Country; while the Spaceport regulation has already been published, a working group is going on, led by the Italian Civil Aviation Authority (ENAC), aimed at generating the Operator Regulation; focus is on the designated site of Taranto Grottaglie Airport.

2021-2022 was a record year for FAA-AST Licensing (13 Flights, 59 Occupants); they also provided support to SpaceX, Virgin Galactic, Blue Origin and Boeing. Licenses issued included 5 for SpaceX and 6 for Blue Origin including first crewed Blue Shepard, 1st Private SpaceX Inspiration Flight with 4 paying passengers to orbit, 1st AXIOM private flight to the ISS; private EVAs are planned in the future.

Ariane 6 Ground Tests are currently in progress at Kourou Space Center (CSG) to check the Launcher/ Pad compatibility, 1st flight is expected in 2023.

Dawn Aerospace is making progress with its Mk 1 Gas-and-go rocket-powered flight and Mk 2 "Aurora" same-day reusable suborbital technology demonstrator. Flight testing are being conducted in New Zealand.



Space Renaissance International, a “Space Philosophical Organization” created multiple committees amongst others on micro-gravity and leaving in space, including protection from gravity and radiation effects.



3. Highlights

The number of licensed commercial flights is relevant and had potential to increase in the United States. Europe is catching up with growing interest in Spaceports, infrastructures, regulatory aspects. Significant progress has been made by Dawn Aerospace in the development and testing of their Spaceplane. Major focus is on international cooperations and safety.

Announcement was made during the 2022 International Astronautical Congress (IAC) in Paris regarding

O-G Launch and SpaceLand Signed Partnership for International Zero-Gravity Flight Services in Switzerland, Italy, and Mauritius.

4. Future Outlook

Increase the networking activities and foster mutual exchange of information and dialog. Monitor the current initiatives for commercial space access and their technological developments. Increase awareness on safety issues and provide advice to the community. Prepare a very successful IAC Congress in Baku in 2023.

5. Committee Activities

Foster mutual relationship and network with periodic teleconferences, try to engage young students in the Committee Activities providing support to their university CV development, support industry with recommendations in the specific field, attract more participants in the Committee, spread the word for IAC 2023 in Baku. Encourage attendance to events organized by the International Association for the Advancement of Space Safety (IAASS), including the 1st Lunar SAR Conference 13-15 October 2022 (hybrid) and the 12th IAASS Conference in Osaka 22-24 May 2023 <https://iaass.space-safety.org/events/conferences/>