

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS (D2)
Commercial Human Spaceflight Safety (9)

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OPERATING COMMERCIAL SPACE TOURISM VEHICLES FROM SWEDEN – REGULATORY
CHALLENGES

Abstract

Near the mining town of Kiruna in northernmost Sweden there are two adjacent facilities ideal for operating suborbital commercial space tourism vehicles currently under development – a commercial airport with a relatively low traffic rate and the Esrange sounding rocket range. Together these facilities make up the future Spaceport Sweden. Before tourists fly into space from Kiruna a permit to fly must be obtained.

The Swedish National Space Board has ruled that operating suborbital commercial space tourism vehicles is not “space activity” in the sense of the Swedish Space Law. This law is peculiar in that the launching of sounding rockets is not regarded as space activity either. Launching such rockets is covered by a regulatory framework pre-dating the Outer Space Treaty and the Liability Convention and has been kept intact since.

The Space Board’s ruling leaves the possibility of treating the safety aspects of the part of tourism flights that take place outside the atmosphere in the same way as for sounding rocket flights. There is an established regime for handling third-party liability and insurance terms for sounding rockets. The risk of damaging third parties when operating suborbital commercial space tourism vehicles outside the atmosphere is probably much lower than for a sounding rocket flying along a similar trajectory.

However, in the United States a suborbital commercial space tourism vehicle is treated as a “space launch system” even if its flight can be divided into an “aviation” and “space” part. In Europe no corresponding regulatory framework exists so the division into “aviation” and “space” permits may be a way forward in Europe – especially since space law is a national matter in Europe and presently not under EU jurisdiction. In addition, European aviation safety authorities have not yet formulated a policy or rules for handling permits for such vehicles.

Potentially, so-called “third country approvals” mechanism could be used, i.e. a vehicle permitted to fly in e.g. the United States could be permitted to fly in a country in Europe. At any rate, the FAA will probably insist on issuing licenses for U.S. suborbital commercial space tourism vehicles when they operate outside the United States. The FAA is also likely to examine the safety of the foreign spaceport as part of this licensing process.