

IAF SYMPOSIUM ON COMMERCIAL SPACEFLIGHT SAFETY ISSUES (D6)
Enabling safe commercial spaceflight: vehicles and spaceports (3)

Author: Mr. Wei Shang

China Academy of Launch Vehicle Technology (CALT), China, weishang@pku.edu.cn

Mr. Zhe Li

China Academy of Launch Vehicle Technology, China, tanggis_d@126.com

Mr. Jiwei Sun

China Academy of Launch Vehicle Technology, China, 3168969541@qq.com

Mr. Haoyang Wang

China Academy of Launch Vehicle Technology, China, qfeng1991@126.com

Mr. Guiming Zeng

China Academy of Launch Vehicle Technology (CALT), China, zengguiming@163.com

HOW WILL ITU AGENDA “REGULATORY PROVISIONS TO FACILITATE
RADIOCOMMUNICATIONS FOR SUB-ORBITAL VEHICLES” AFFECT COMMERCIAL SOV
ACTIVITY REGULATIONS, ESPECIALLY IN CHINA.

Abstract

ITU recommended WRC-23 with a new agenda item to consider, in accordance with Resolution COM6/5 (WRC-19), regulatory provisions to facilitate radiocommunications for sub-orbital vehicles. The Resolution wants to study spectrum needs for communications between stations on board sub-orbital vehicles (SoV) and terrestrial/space stations providing functions such as voice/data communications, navigation, surveillance and TTC. This agenda brings challenges to determine radiocommunication requirements before final commercialization of SoV activities at global level. As a new category of vehicle that SoV may have hybrid characteristics of a rocket and aircraft, to accommodate with ICAO's safety interests and functioning of SoV activities, future studies on radiocommunication regulatory, operations and services, within the frameworks of ITU regulations are highly desired. The interpretations from the contributions to this agenda may affect global commercial SoV activity regulations. On the other hands, along with the blossoming of commercial space, the commercial space transportation authorities need to update their clauses to face the fact that commercial SoV are really ready for business services, the market is ready! This paper will introduce agenda previous background on ITU's work, then give a briefing introduce of nowadays sub-orbital industry, discussing current launch licensing regulations and its authorities. Then the article will analysis potential influences on aviation activates and ICAO's concerns and interests. As a consequence, conclude some challenges and opportunities for global commercial SoV activities. Take both technical, operational and regulatory aspects into consideration, give some suggestions to China's commercial SoV development from industry perspective, along with some international cooperation frameworks that may benefit commercial SoV development.