

SPACE TOURISM: A NEW EXPOSURE



The planned flight to the moon and back scheduled for 2018 will be the first manned space mission to the moon for some forty-five years. The payload will include two space tourists, who will be the first private individuals to orbit the moon. They will be on board the Dragon 2 spacecraft to be launched on SpaceX's Falcon rocket.

Space tourism has been around for a while, but the concept is one thing and practice quite another. Virgin Galactic came about in October 2004 when SpaceShipOne delivered the weight of three people to space and back via a privately-funded vehicle. Since then, people from more than fifty nations have signed up with Virgin Galactic, paying US\$250,000 to fly into space on SpaceShipTwo (SS2). Despite the long lead-in time, the first commercial passenger flight is still pending – it suffered a setback when SS2 was lost during an October 2014 test flight. Virgin Galactic is hopeful of its first manned flight this year.

Virgin Galactic is not unique in hitting bumps in the road towards private space flight. XCOR, founded in 2008, expected to fly one passenger accompanied by one flight crew in the Lynx Mark 1. A conventional take-off and landing aircraft was to propel the craft 60-100km into space but the project is on hold for now.

Another of the high-profile space tourism companies is Blue Origin, which will use a conventional vertical take-off rocket. The capsule, seating six astronauts, separates from the launch vehicle to coast quietly into space before dropping

back down to Earth using parachutes. The first test flight was in April 2015, the first successful vertical landing was in November 2015 and the latest test flight in September 2016 tested the capsule's emergency escape from the booster. Following a further test, the target for the first paying customers is 2018.

Last, and by no means least, founded in 1998, Space Adventures is the first private space flight company, sending its clients via the Russian Soyuz spacecraft to the International Space Station on eight occasions so far.

How is the insurance community responding to this new and exciting exposure? Is this an aviation risk or a space risk? Space insurance is very technical and most underwriters employ space engineers to provide expert knowledge on the launch vehicles and the payloads/satellites. However, this knowledge does not extend to passenger liability for space tourists, which many brokers/underwriters argue is more akin to aircraft passenger liability. In addition, operators' customers are purchasing very expensive tickets, giving an unusual risk profile coupled with the dangers of space flight. Space Adventures,

the only current private operation sending tourists into space, has purchased PA insurance for its clients.

The liability regime is unclear. All commercial passenger aircraft operations are subject to several international conventions and prescribed liability regimes in states in which they operate. However, space liability conventions only address damage caused by space objects. The UN Outer Space Treaty addresses the need to protect astronauts engaged in space exploration but does not define astronauts or refer to space tourists.

United States' legislation has three categories of people on board space vehicles – crew, government astronauts and space flight participants (SFP). The Commercial Space Launch Act (CSLA) uses the term SFP rather than passenger to avoid confusion with use of passenger in common law and aviation-related law. The amended CSLA (CSLCA 2014) now provides for cross-party waivers in respect of SFP, which was not addressed in earlier legislation.

The insurance market is certainly up to the challenge and the aviation, PA and space markets will no doubt vie for a piece of the action. But there is still a great deal of uncertainty, not only in the performance of commercial space flight operators but also in the status of the space tourist in terms of government regulations and international law. ●



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