

**002**

## **SHARING THE SKIES SAFELY: FUTURE CHALLENGES TO AVIATION SAFETY (ERNSTING PANEL OVERVIEW)**

*PARTAGER LES CIEL EN TOUTE SÉCURITÉ: DÉFIS FUTURS POUR LA SÉCURITÉ AÉRIENNE  
(APERÇU DE LA PRÉSENTATION)*

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Introduction: The skies are the aviator's work environment, within which are many hazards threatening the aviator's safety and the safety of his/her passengers. There are many factors within the aviator-endogenous factors-that affect his/her performance and safety while in flight, but many other factors are exogenous and system-related. The International Academy of Aviation and Space Medicine is comprised of senior aviation medicine practitioners who play a role in constructing and regulating this global aviation environment. The objective of this panel is to highlight emerging factors affecting safe operations in the aviator's work environment, related to "sharing the skies safely."

Background: There are many challenges in sharing the aviation environment safely. First, the natural occupants of the airspace (e.g., birds, bats); Second, man-made flying objects (i.e., aircraft and flying vehicles of various sizes). Great resources have been expended to minimize the continuing hazard of bird strikes, which continue to pose a threat to aviation safety.

As commercial air travel has grown worldwide, so has the attention to commercial airspace safety, with ever-increasing technologies to maintain margins of safety among passenger-carrying aircraft. On-board collision avoidance systems, as well as air traffic control innovations, have been designed to keep pace with increased traffic demands.

The recent growth in unmanned aerial vehicles (UAVs) is forecast to increase exponentially with increased demand from industry as well as general aviation / air taxi interests. The projected congestion of low-level airspace, particularly in urban areas, is a challenge for the transportation industry and aviation safety regulators into the future.

Finally, the growth of commercial space travel has created great future need for space launch (vertical) vehicles to share airspace with conventional (horizontal) aircraft.

Summary: This panel will present the major areas of concern for future safe airspace sharing: commercial airspace management, UAVs, and commercial spaceflight. Policies and regulations will continue to evolve to ensure passage while preserving safety for all forms of flight.