

Grand Neal Winner 2017

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& SPACE TECHNOLOGY

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An image from a drone captures the static display at Le Bourget, where the Lockheed Martin F-35A demonstrated at its Paris Air Show debut how it could dominate a dogfight, and Boeing launched its 737-10 MAX with 240 orders from 10 customers.



AERO3A

20 Basic details unveiled about Boeing's proposed new midsize aircraft became a hot topic

22 Boeing's newest 737 MAX- family member racked up more orders than expected

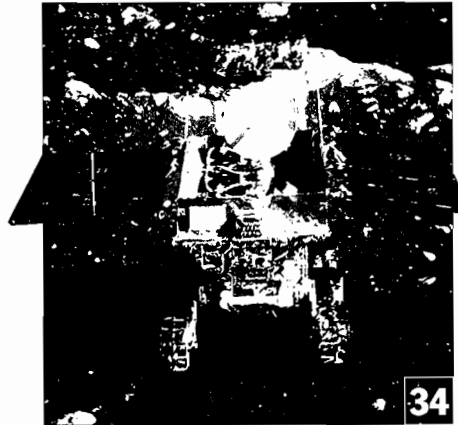
23 A380plus faced a make-or-break point at show; interest from airlines remains lukewarm

24 F-35 aerial demonstration highlighted the aircraft's unique enhanced fighter capabilities

26 UAV studies indicate Europe is taking sovereign unmanned capability more seriously

28 French Mirage air-to-ground 2000D will be upgraded with an improved weapon system

29 China's armed UAV in the static display signals country's growing presence in export market



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30 Airbus's Clean Sky 2 high-speed rotorcraft uses radical box-wing pusher-propeller configuration

31 French Air Force fleet renewal effort features Airbus A330, A400M and Dassault Rafale aircraft

SPACE

32 China's studies for manned Moon effort include launching equipment in stages, assembling on site

34 Deep-space effort in China includes studying origin of Solar System and dangers posed by Sun

TECHNOLOGY

36 Airframe integration is key to hybrid-electric regional aircraft, says NASA

47 Compact sense-and-avoid system is scaled for drones, electric vertical-takeoff-and-landing uses

48 Slowing pace of NASA's X-plane development could negatively affect new market entrants

50 NASA's electric X-plane makes some progress, although a few concerns remain

51 Airbus A3 contends modular reconfigurable cabins can increase airline revenue, passenger comfort

ON THE COVER

After more than a decade of cost, schedule and technical challenges, the F-35 appears to have turned a corner. Lockheed Martin's stealth fighter made its first aerial demonstrations at the Paris Air Show last week (see page 24). Mark Wagner's cover photo captures one dramatic maneuver. Also in this issue: NASA's subsonic X-plane plan (page 48), Boeing's new midsize aircraft plans (page 20) and China's launcher for sending humans to the Moon (page 32). Aviation Week publishes a digital edition every week. Read it at

and on our app.





53 Vortex Control Technologies targets its drag-reducing finlets at Boeing 737 next-gen aircraft

54 Startup Metro Aerospace takes Lockheed-developed microvane technology into production

DEFENSE

38 Skunk Works uses open system architecture to turn U-2 into a communications relay



39 Lockheed Martin plans series of sensor upgrades to keep U-2 relevant through 2045

42 F-22 Raptor stealth aircraft has become critical component in deconflicting Syrian skies

43 Kratos CEO talks about displaying two armed combat drones at Paris Air Show and future plans

44 South Korea receives signals-intelligence aircraft based on Dassault Falcon 2000

COMMERCIAL AVIATION

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58 IATA raises profit outlook but warns airlines of growing cost challenges ahead

58 Air New Zealand shapes next phase of its aircraft strategy, revises Airbus A320 delivery schedule

60 Ryanair prepares to make the most of Europe's legacy airlines' retrenchment

60 Thai Airlines, Nok Air plan to upgrade their international operations with new aircraft types

62 Airbus and partners leave room to double their Chinese H135 assembly line

VIEWPOINT

66 For unmanned aircraft, a self-regulatory organization could speed rulemaking, spur innovation



Aviation Week Editor-in-Chief Joseph C. Anselmo and Pentagon Editor Lara Seligman

were among journalists who went on a 1-hr. demonstration flight of Embraer's KC-390 military airlifter at the Paris Air Show. Embraer scheduled meetings at Le Bourget with 60 potential buyers of the aircraft, which is scheduled for first delivery next year. After the show, the KC-390 embarks on a sales tour that will take it to Portugal, the Middle East, Southeast Asia, New Zealand and North Africa.