

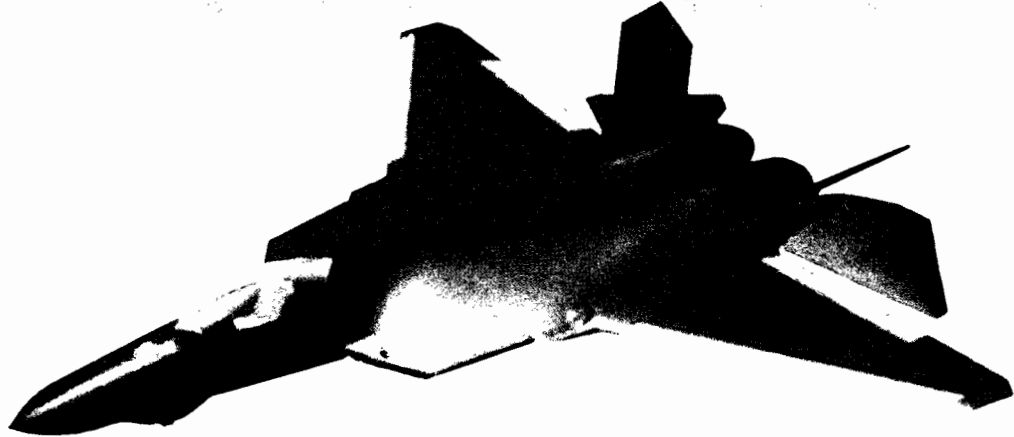
AVIATION



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- 8 Feedback
- 10 Who's Where
- 12-14 The World
- 15 Up Front
- 16 Leading Edge
- 17 Reality Check
- 18 Airline Intel
- 19 In Orbit
- 20 Washington Outlook
- 47 Classified
- 48 Contact Us
- 49 Aerospace Calendar

22 Engineers from the Japanese Aerospace Establishment's Technical Research & Development Institute and IHI Corp. are well into preliminary development of a powerful turbofan for a new twin-engine fighter, which would enter service around 2030 as the F-3.



THE WORLD

- 12 U.S. spacecraft** have been detecting fireballs generated when small asteroids hit Earth's atmosphere
- 14 Maven orbiter** remains in high-data-rate communications with controllers after relaying Mars image

DEFENSE

- 22 In defining their** country's next combat aircraft, Japanese find flying far is more important than flying fast

- 24 Japanese researchers** point to the advantages of big fighters with fuel capacity, aerodynamic optimization

- 25 E-radar agreement** expected to help propel Eurofighter Typhoon into the 4.5-generation category

- 26 U-2 advocates** push optionally manned variant as an intelligence aircraft rival to Global Hawk

- 27 Russia making** its presence felt in West with wave of long-range probing flights, large-scale air exercises

- 28 France delays** delivery of first Mistral helicopter warship to Russia, despite its threats

- 29 British Army** has greater confidence in new Watchkeeper UAS after short stint in Afghanistan

SPACE

- 30 SpaceX/Cats mission** to bolster ISS's value as a platform for high-resolution observation of the Earth

- 43 NASA on track** for first flight test of Orion capsule for human 'pioneering' missions to Mars

- 44 Space Launch System** to carry Orion beyond low Earth orbit is a work in progress, starting with the engines

AIR TRANSPORT

- 31 ATR in acceleration** mode: Its turboprops have been selling like hot cakes, backlog tops 320

- 34 Airbus launches** second generation of its outsize cargo aircraft, based on larger and heavier A330-200

- 35 Tensions between** European and Middle East airlines grow as Gulf carriers seek better market access

- 36 Air Berlin gets** a new CEO and now has to deliver on promises to large shareholder Etihad

- 36 Fuzhou Airlines** is the latest Chinese carrier to be backed by a local government

- 38 Norwegian Air Shuttle** takes the low-cost carrier business model far beyond where the pioneers stopped

ON THE COVER

Norwegian Air Shuttle, the low-cost carrier that plans to expand by 35% this year through long-haul operations, may upend airline industry conventions in Europe and across the Atlantic. Here, a Norwegian Boeing 737-800 approaches a landing. Our report on Scandinavian airlines looks at both the rapid rise of Norwegian and the recent struggles of SAS Scandinavian Airlines and Finnair. It begins on page 38. Elsewhere, there is coverage of the upcoming first flight test of the Orion crew capsule (page 43) and Lockheed Martin's bid to "optionally man" the U-2 spy plane (page 26).



27 Air forces around Europe have noted a rise in Russian air operations over the last 18 months, but recently have noted activity not seen since the Cold War.



30 Next SpaceX mission is expected to expand the Earth-monitoring role for International Space Station.

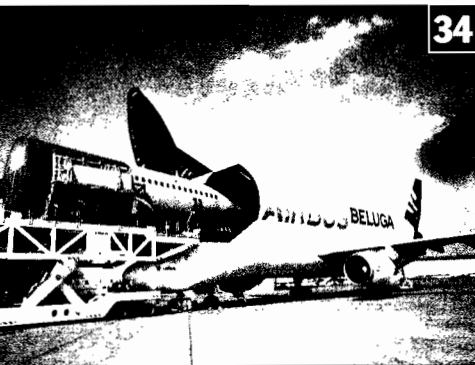
40 SAS and Finnair still facing challenges, but new aircraft, route expansions give them room to hope

EDITORIALS

50 Defense gridlock and lack of commercial innovation pose dire threat to U.S.

26

34



50 Transportation Department should allow Norwegian Air International to fly to the U.S.

28

