

AVIATION WEEK & SPACE TECHNOLOGY

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Supersonics and Hypersonics

THE ROAD AHEAD

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Chuck Yeager
and Scott Crossfield on

THE FUTURE OF HIGH-SPEED FLIGHT

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AVIATION WEEK & SPACE TECHNOLOGY

About the Cover

A technical configuration High-Speed Civil Transport is taking shape in the NASA-industry High-Speed Research program. Coverage of the future of high-speed flight begins on p. 58. Computer-drawn image of the computational aircraft was produced by the NASA Langley Research Center.



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HEADLINE NEWS

Europe focused on high-stakes launch

As space managers gather at IAF, Ariane 5 approaches crucial second flight, moves made to buy more Ariane 4s 22

France reiterates space station attack

Education minister wants to reorient space policy toward exploration and applications 23

New cooperative spirit bodes well for Mars exploration

NASA success, discovery of possible life on Mars reignite excitement about red planet 24

Initial images from MGS at Mars

Show deep canyons with 6,500-ft.-high walls plus runoff channel with dunes visible on the canyon floor 25

NASA to seek major shift in U.S. shuttle policy

Backs proposal that would change law to allow shuttle to carry commercial satellites into orbit 26

Navy eyes stealthy unmanned aircraft

First contract for development of an uninhabited combat air vehicle expected before the end of 1998 27

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Vows to continue low-fare operating strategy, but needs substantial cash infusion for turnaround 28

Legend Airlines cleared for Dallas Love Field service

U.S. Congress eases restrictions at airport to allow carrier's service to key business destinations 29

Boeing begins MD-90 integration in China

Reassures Chinese that company will buy parts from their plants 30

<http://www.awgnet.com>

See *Aviation Week's* Web site for additional **high-speed flight** resources, as well as daily news updates, the **Safety Resource Center**, a gallery of photos and features from special issues. We're available on CompuServe, too; just **GO AWG**.

Conferees cite need for fuel research

Say aircraft designers and operators know little about specific conditions that lead to a tank explosion

Carriers will check fuel system conditions

Launch program to survey their aircraft for flawed components that could cause a fuel-tank explosion

Garuda probe eyes ATC role

Unverified transcripts show controller confusion over the position of aircraft

Supply crunch may put carriers on edge

Impact of a late delivery can be substantial, so cooperative mood the industry could wear thin

Northrop Grumman meets demand despite shortages

Instituting programs designed streamline production flow and improve procurement procedure

MD-11 trijet may get green light from Boeing

Aircraft's freighter capabilities and strong cargo market likely drive decision



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Turkish carrier in deal for 49 Boeing 737-800s
\$2-billion-plus deal for THY aircraft, purchases of parts made in Turkey

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Horizontal stabilizer fix delays 737-700 certification
After slight 'tone' detected during tests under abnormal flight conditions

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FUTURE OF HIGH-SPEED FLIGHT

Yeager: Pragmatic realist on military technology's future
'If you can't out-run or out-jam or out-decoy a missile, you have to depend on stealth and smart tactics'

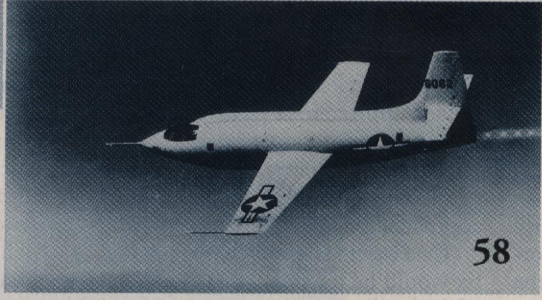
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Aeronautical progress demands pioneering spirit, taking risk
Void in endeavors will be filled, entry into 21st century will be with a vigor not too evident recently

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Missiles lead hypersonics revival
U.S. Navy taking the lead to develop requirements for what will likely be a joint-service missile, plans to fly Mach 4 demonstrator in '99

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Hyper-X production begins in support of 1999 flight test
Goal is to validate design tools for development of hypersonic propulsion technology

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HSCT computer model takes shape at NASA
December deadline quickens pace to complete work on a preliminary technical configuration aircraft

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Redefined propulsion tests target HSCT scale-up issues
U.S. propulsion industry probably would have had insufficient data for making engine launch decision

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HSCT engine materials moving forward
Researchers striving to meet the stringent emission, noise and durability requirements

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Engine team on track to meet HSCT emissions goals
GE focused on lean premixed/prevaporized technology, Pratt on rich burn/ quick quench/lean burn approach

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European industry pursues SST technology readiness
Despite tight budget constraints in research and technology funding

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Dassault assesses outlook for supersonic bizjet
Will poll corporate jet operators, look at technical feasibility, measure potential impact on ozone layer

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