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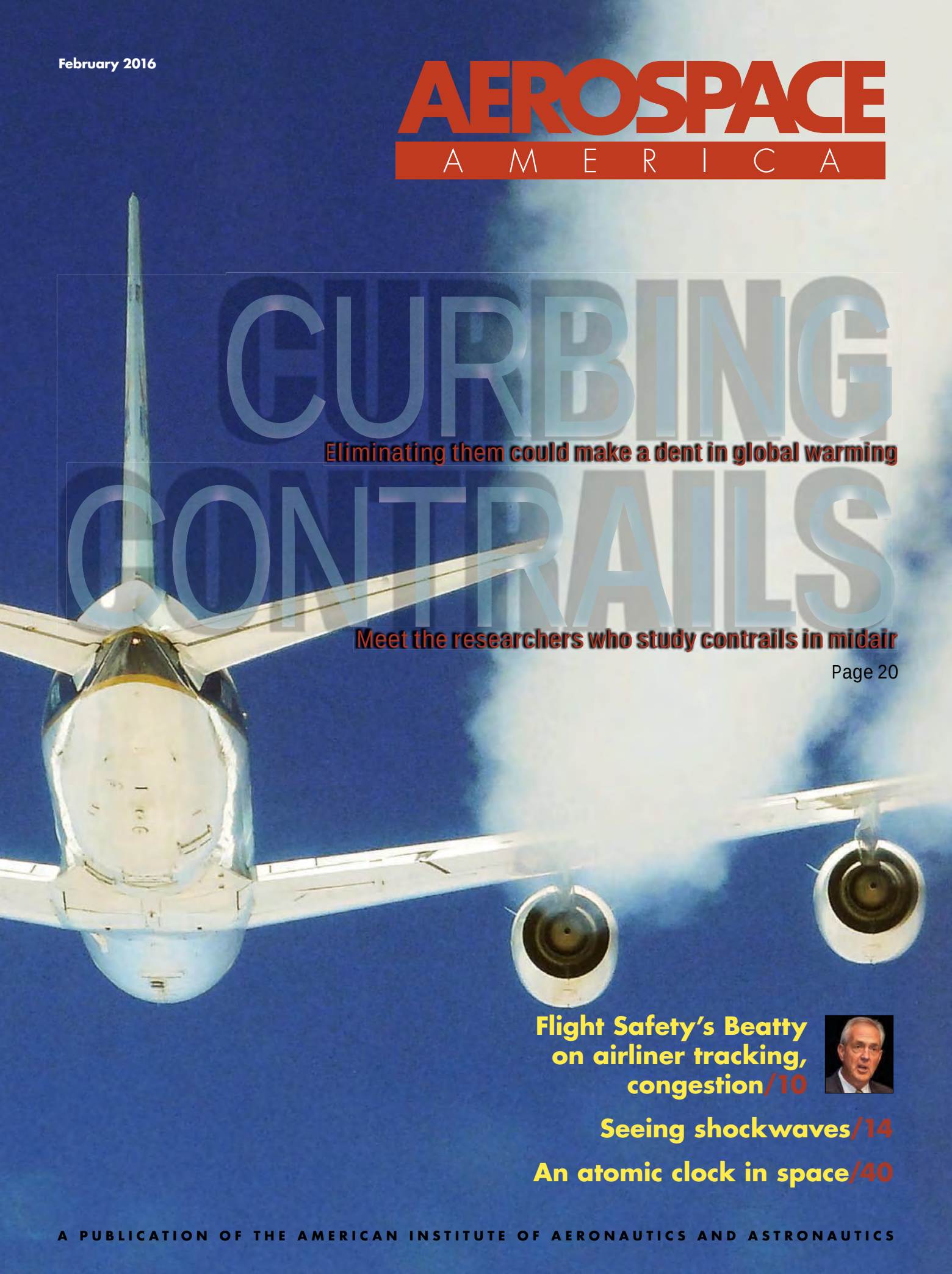
# AEROSPACE AMERICA



# CURBING CONTRAILS

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# Nudging NOAA to use commercial data

**U.S. Rep. Jim Bridenstine**, a Republican from Oklahoma first elected in 2012, has quickly staked ground as a vocal supporter of all things space, particularly the fast-growing commercial sector.

Bridenstine is drafting a bill he calls the Space Renaissance Act. He characterizes the legislation as a repository of ideas that could be tacked piecemeal onto other legislative vehicles, such as the defense authorization bill.

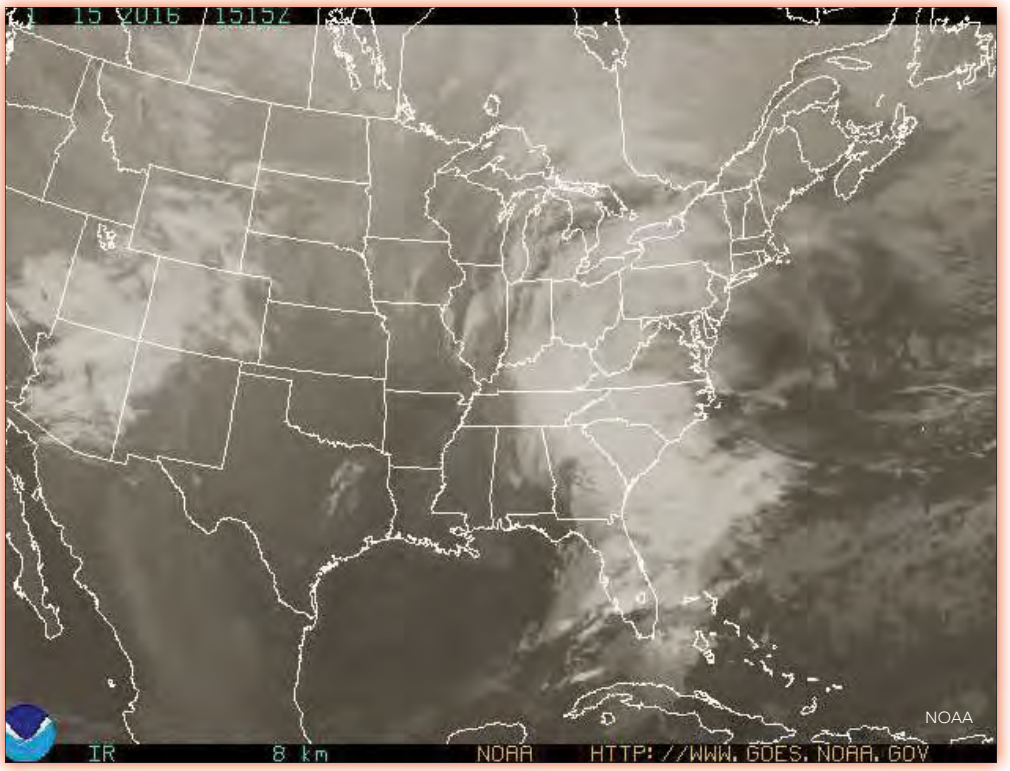
Bridenstine says he has no illusions about the bill's chances of passage. "My goal with this bill is to start conversations, and where we can achieve consensus then we can take elements of the bill and insert them into parts of other bills," he told a Washington Space Business roundtable audience in January in Washington, D.C.

One of the conversations Bridenstine would like to start has to do with weather forecasting, a topic important to him and his constituents due to Oklahoma's reputation for tornadoes. Norman, Oklahoma, is home to NOAA's Storm Prediction Center, which tracks tornadoes and other severe weather.

As chairman of the subcommittee that oversees NOAA and its weather satellites, Bridenstine has been pushing the agency to bring commercial capabilities into the mix, something the Pentagon has already done in areas such as satellite communications, launch and Earth imaging.

At least three companies, Spire, PlanetIQ and GeoOptics, are planning constellations of satellites equipped with sensors that would measure distortion, or occultation, of GPS satellite signals caused by changes in atmospheric conditions. Algorithms would then be applied to derive temperature and humidity measurements, also known as soundings.

Spire, one the new breed of entrepreneurial space companies that have tapped into Silicon Valley's ethos, technology and capital, appears to have leapt ahead of the pack with the September launch of four GPS radio occultation microsatellites aboard an Indian rocket.




An infrared weather image from a NOAA geostationary satellite. Privately owned satellites could soon play a role, too.

PlanetIQ, meanwhile, last year selected satellite and launch vehicle providers for its planned constellation of 12 satellites. Chris McCormick, CEO of PlanetIQ, said the company is fully financed through the launch of its first two satellites, which are slated to fly in December as secondary payloads on an Indian rocket. PlanetIQ is now raising financing for the remainder of the constellation, McCormick said, adding that the company is already working on its fourth generation antenna.

Another company, Tempus Global Data, has the rights to a different type of sensor that also would perform atmospheric soundings. The company is seeking partners that would host the hyperspectral sensors aboard geosynchronous communications satellites.

An obvious target market for these companies is NOAA, which Bridenstine and others complain has been slow to lay out specific terms and conditions under which it would buy commercial weather data. The agency last year released a draft commercialization strategy, but points out that its obligation to share weather data, regardless of source, with other nations could undercut commercial providers in other markets.

Bridenstine in the past has pushed legislation intended to force NOAA to be more proactive in engaging with the commercial providers. So far, the measure has failed to gain real traction. But in a small step, this year's omnibus appropriations bill includes $3 million for a NOAA pilot program to experiment with commercial data.

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