

CALLBACK

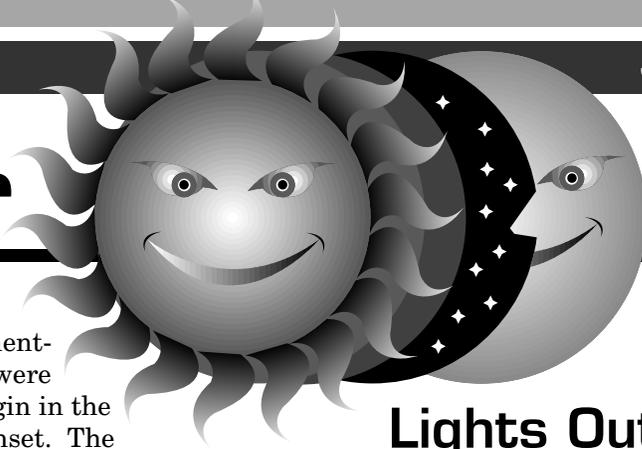
From NASA's Aviation Safety Reporting System



Number 199

January 1996

Night for Day



December 22nd was the winter solstice, the shortest day of the year. In much of the continental U.S., flights that only a few months earlier were conducted completely in daylight, may now begin in the darkness before the dawn or conclude after sunset. The following ASRS reports illustrate two of the potential hazards associated with these additional hours of winter darkness.

First, a commuter flight crew learned that looks can be deceiving during a pre-dawn pre-flight.

■ *Three out of four fuel caps were left off the aircraft, and missed on pre-flight and pre-takeoff checks. The aircraft was flown with the caps off, and returned to its point of origin for landing without incident. The caps had been removed for painting. The PIC assumed they were replaced since all pre-flight paperwork released the aircraft for flight. The PIC did not physically touch the caps, but rather looked at them in pre-dawn lighting. The caps looked recessed. A "look pre-flight" as opposed to a "touch or close inspection pre-flight" in low ambient light was a factor affecting performance. ...So much for the dreaded flashlight pre-flight.*

The reporter does not specify whether a flashlight was actually used in this incident. A good flashlight would have been the minimum equipment needed for a thorough pre-flight of the aircraft. Additionally, a ladder might have allowed the PIC to get close enough to touch the fuel caps and confirm that they were in place and properly seated.

An early evening flight almost became a "graveyard" flight for this non-instrument-rated pilot, who met clouds and darkness at the same time.

■ *I left XYZ later than I originally intended. In retrospect, I should not have left at a time that would require night VFR flight, given the cloud conditions. [When] I came upon a large cloud front... I tried to climb over it, but soon elected to descend below it. I did not notice entering IMC at first, and, in fact, remember being curious why the anti-collision lights were illuminating the cockpit and causing a strobe effect on the prop. Shortly thereafter, I noticed that the turn coordinator was pegged in a left turn, the attitude indicator showed a 45-60° left bank, the directional gyro was spinning rapidly...and the airspeed indicator dropped to 60 knots, then to zero. I recognized the signs of [an impending] "graveyard spiral" and was able to return the plane to straight-and-level flight. The real cause [of this incident] was...lack of appreciation of the danger of night VFR.*

Lights Out !

A corporate pilot almost found himself left in the dark when his aircraft experienced a total electrical failure.

■ *I activated the pilot-controlled runway lighting and proceeded with my run-up and pre-flight checks. [After takeoff], I turned off my aircraft landing light, after which I lost all electricals. I turned back to the field... I did not feel I could spend much time in the pattern because the pilot-controlled lighting might go out and I would have no way to reactivate the runway lights. I decided to land in the reverse direction...*

Posting of "on times" (5 minutes, 10 minutes, etc.) for lighting on charts, airport guides, etc. would allow pilots to determine how much time is left before shutoff of runway lights in emergency electrical failures.

Some additional pre-flight reading might have saved our reporter a lot of worry. The Airport/Facility Directory indicates that this airport has pilot-controlled Medium Intensity Runway Lighting (MIRL), an FAA-approved system. The AIM explains that FAA-approved lighting systems illuminate the lights for a period of 15 minutes from the time of the most recent activation. The AIM suggests that, even when runway lights are on, pilots should key their mikes seven times, to ensure that the full 15-minute lighting duration is available.

"Dark Amid the Blaze of Noon"

— John Milton

An unusual solar eclipse was at the heart of the near-midair collision described in the next report.

■ *We were cleared [down] to 7000 feet. [We] saw a light twin directly in front of us, moving left to right...and the First Officer immediately grabbed the yoke and rolled the plane into a 20° left bank. We notified the Approach Controller, who did not have the aircraft on radar.*

At the time of the incident, a rare eclipse of the sun was occurring, and we were told afterward there were many targets on radar. We theorize that the light twin was a sightseer of the eclipse, and in all probability never saw us.

In any lighting situation—daylight or dark—the key concept is to "see-and-avoid." ▲

ASRS Recently Issued Alerts On...
Elevator trim icing problems in older DHC-8 aircraft
False localizer indications on a Mexican ILS approach
Reportedly unreliable wind sensors at a Hawaii airport
B737-300 runaway rudder trim caused by a short circuit
NICAD battery fire hazard in carry-on electronic equipment

A Monthly Safety Bulletin from
The Office of the NASA
Aviation Safety Reporting
System,
P.O. Box 189,
Moffett Field, CA
94035-0189

October 1995 Report Intake	
Air Carrier Pilots	1776
General Aviation Pilots	724
Controllers	77
Cabin/Mechanics/Military/Other	47
TOTAL	2624

Altered States

Some well-intentioned friends thought they were doing the next reporter a favor, by "helping" him get his paperwork in order. The results left the reporter sick-at-heart:

■ *I noticed that my First Class medical certificate had expired for First and Second Class privileges, and was now basically a Third Class medical. I thought I needed a First Class certificate to receive authorization to take an ATP written exam. My friends suggested that I white-out the date to change it to a '95, which would make it appear to be a First Class certificate. I said no, I would see if the FAA would give me an authorization with a Third Class certificate if everything else was in order.*

In an effort to help me, my friends changed the date from '94 to '95. Not knowing this, I went to the FSDO and showed them everything, whereupon they noticed the alteration on the medical certificate. After some probing

questions from the Inspectors, I confessed that my non-aviation friends had falsified my medical, not knowing the consequences and the trouble they could get me into. The FAA Inspectors were not very sympathetic, and said I would be hearing from them.

I do have a new medical now, but am very worried what is going to happen. I have my whole career ahead of me. I hope that this can be resolved without major action being taken against me.

Pilots and other aviation professionals can avoid this type of situation by monitoring the expiration dates of their medical certificates, flight reviews, and other date-limited certifications. There may be a further need to educate friends that the FAA takes a dim view of "whitewashed" documents, regardless of how they came to be that way. Falsification of certificates is a violation of Federal law. ▲

ASRS on the "Web"



The ASRS is now on the Internet World Wide Web. You can access the ASRS Home Page using a Web browser (such as Netscape or Mosaic) on any computer platform. Our address is:

<http://www-afo.arc.nasa.gov/ASRS/ASRS.html>

Web URLs (Uniform Resource Locators) are case sensitive, so make sure you type the "ASRS" in uppercase.

This new Internet offering provides electronic information and services to the aviation community, including:

Program Overview. A brief overview of the ASRS program, including program purposes, reporter immunity and confidentiality, report processing, the ASRS database, and ASRS program outputs.

Program Briefing. A more detailed review of the ASRS, with an examination of the ASRS program structure and inner workings.

ASRS Database. How to request database information from the ASRS.

Reporting Forms. Download a pilot or controller reporting form. Then print, fill out, and mail the completed form to us.

Immunity Policy. A look at FAA immunity policies as they apply to ASRS incident reports, including Advisory

Circular 00-46C, Federal Aviation Regulation 91-25, and Facility Operations and Administration Handbook (7210.3K), paragraph 2-38.

ASRS Publications. Adobe Acrobat versions of recent *CALLBACK* and *Directline* aviation safety newsletters. We will continue to add more issues as these are produced, as well as various research publications.

The Adobe Acrobat Reader. The ASRS reporting forms and publications require the Adobe Acrobat Reader for viewing and printing. The Reader is free, and can be accessed via a "hotlink" to Adobe. Just click on "Adobe Acrobat Reader," and follow the prompts to download the appropriate application for your computer. ▲

FMS on the World Wide Web

Another recent Internet addition is the NASA-Ames FMS Bluecoat Digest Home Page. The Bluecoat Digest was created as a means of encouraging ongoing discussion between the engineers who build flight deck automation systems, and the pilots who use these systems. It offers a monthly electronic publication containing articles authored by line pilots and aviation industry engineers and researchers. The Bluecoat Digest Web address is:

<http://olias.arc.nasa.gov/projects/bluecoat-digest/bluecoat.html>