



NASA Aviation Safety Reporting System (ASRS)

CFI Special Emphasis Quarterly Webinar

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**AVIATION SAFETY
REPORTING SYSTEM**



The Flight Plan for today...

- What is ASRS?
- ASRS Reporting
 - Who, What, When, Where, and Why
- CFI Tips for using ASRS data in Flight Training
- Our ask of you



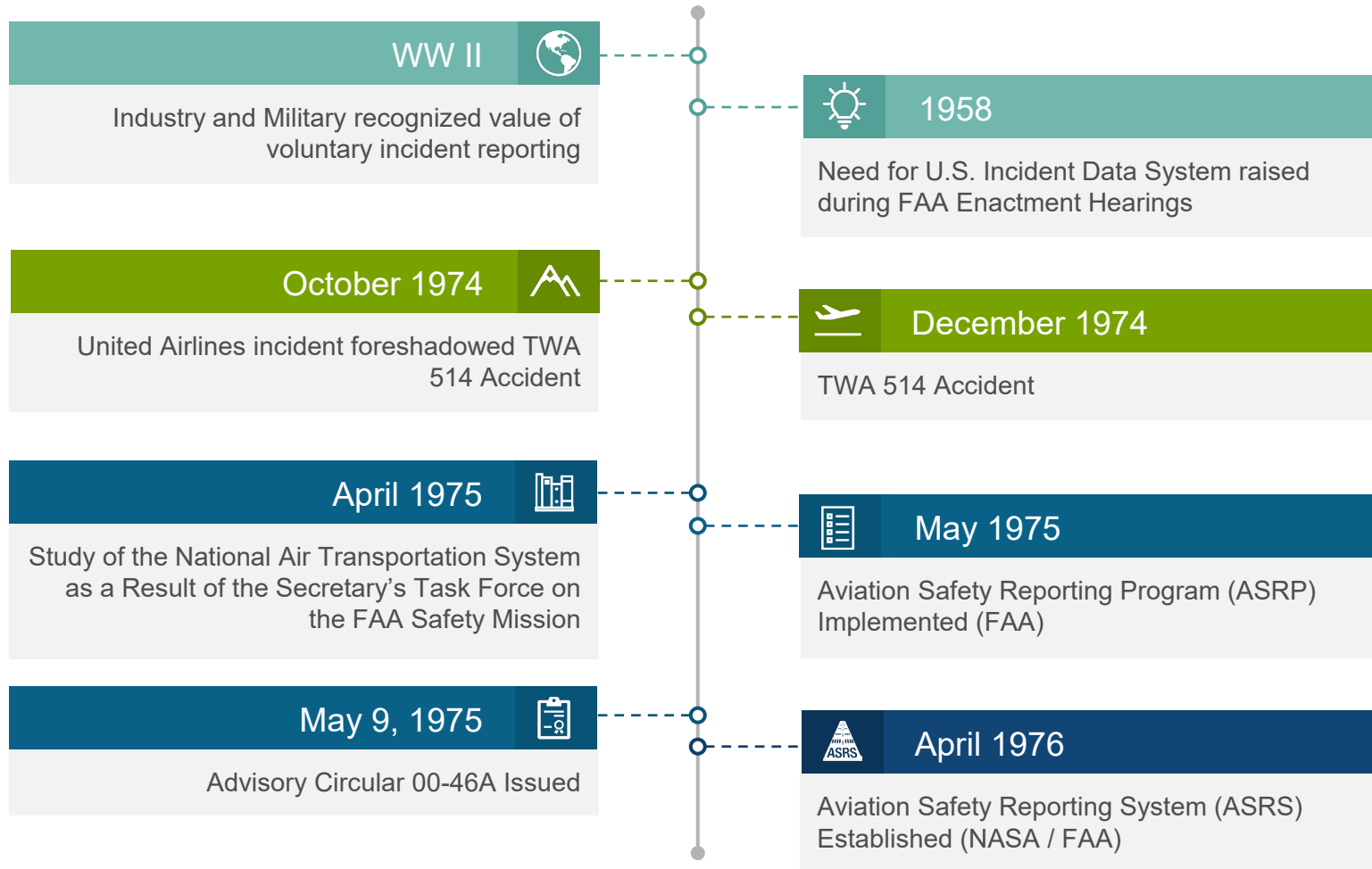
What is ASRS?



Aviation Safety Reporting System



ASRS Background



NASA Aviation Safety Reporting System

- NASA ASRS is a **confidential, voluntary, non-punitive** reporting system that receives safety reports from Pilots, Air Traffic Controllers, Dispatchers, Cabin Crew, Ground Ops, Maintenance Technicians, and UAS Operators.
- ASRS welcomes reports describing close-calls, hazards, violations, and safety-related incidents.
- With 47 years of confidential safety reporting, ASRS has received more than 2,000,000 reports so far (~100,000 reports received annually pre-pandemic).
- The ASRS Staff is composed of highly experienced pilots, ATC, and mechanics with over 600 cumulative years of aviation expertise covering the full spectrum of aviation activity. Analyst cumulative flight time exceeds 175,000 hours in over 90 different aircraft.



ASRS Principles

The success of ASRS depends on active participation from the aviation community

1. VOLUNTARY

Aviation personnel voluntarily submit reports concerning events related to safety for the purpose of system alerting, understanding and learning

4. INDEPENDENT

NASA serves as the independent honest-broker; separate from employer / certificate holder / regulator



2. CONFIDENTIAL

Protection of identity is provided by NASA through de-identification of persons, companies, and any other identifying information

3. NON-PUNITIVE

FAA will not use, nor will NASA provide, any qualifying report submitted to ASRS (or information derived therein) for use in disciplinary or other adverse action.

(14 CFR 91.25 & AC 00-46F)



FAA Advisory Circular 00-46F



Advisory Circular

Subject: Aviation Safety Reporting Program Date: 4/2/21 AC No: 00-46F
Initiated by: AFS-200 Change:

Use Restrictions. The FAA will not use any reports submitted to NASA under the ASRS (or information derived therefrom) in any enforcement action...except information concerning criminal offenses or accidents which are excluded.

Confidentiality. The FAA will not seek, and NASA will not release or make available to the FAA, any report filed with NASA under the ASRS or any information that might reveal the identity of any party involved in an occurrence or incident reported under the ASRS.

Waiver of Imposition of Sanction. The FAA considers the filing of a report with NASA ... to be indicative of a **constructive attitude** towards safety. Such an attitude will tend to prevent future violations. Accordingly, although a finding of violation may be made, neither a civil penalty nor certificate suspension will be imposed if ...

- Inadvertent and not deliberate
- Did not involve a criminal offense, accident or action under 49 U.S.C § 44709, which discloses a lack of qualification or competency
- Reported within 10 days of the violation, or first aware of the violation



FAA AC 00-46F was updated April 2021 to include UAS Operations



The Who, What, When, Why, and How

Who? What? Why? When? How?

Who can report to ASRS?

- Any person who is aware of a safety concern in the National Airspace System
- Any person involved in or observing a safety incident, including:
 - Pilots
 - Cabin Crews
 - Dispatchers
 - Maintenance Technicians (A&Ps), Inspectors
 - Ground Operations Crews
- Unmanned Aircraft Systems (UAS) / Unmanned Aerial Vehicles (UAV) Operators

Participants in all sectors of Aviation are encouraged to report:

- General Aviation
- Business / Corporate – including Aerial Pipeline Inspection & Patrol Services
- Participants in Airline and Air Taxi ASAP programs
- Repair Stations, Company employees / contractors, etc.



Who? **What?** When? Why? How?

What should I report?

- Reports submitted to ASRS may describe **unsafe occurrences**, **hazardous situations**, as well as **violations** (as long as the violation was inadvertent and not deliberate, and did not involve a criminal offense or accident)
- Tell us What happened and Why you think it happened

Sample Report Topics:

- Near-mid air collisions,
- Airspace violations,
- Runway incursions
- Confusing airport signage
- Charting / navigation issues
- Confusing phraseology
- Aircraft / Equipment failures
- Automation Failures / Over-reliance
- Training



Who? What? When? Why? How?

Tips for Excellent Reporting

■ Providing **detailed and complete reports** is vital to making the National Airspace safer. To ensure you are submitting a report that would result in a safety improvement, *ask yourself* :

- **Who** was involved in the event?
 - Were you the Pilot in Command?
 - What was the pilot's function at the time?
- **What** was the type of event / situation?
 - Provide as much detail as possible about the close-call or event.
 - What was the outcome?
- **Where** was the aircraft?
 - What was the waypoint and altitude?
 - What airspace were you operating in?
- **When** did it happen?
 - Did the event happen at night?
 - Was it at the end of a long work shift?
- **Why** do you think it happened?
 - What were the contributing factors that lead up to the event?
 - How could this kind of event be prevented in the future?

Example Report with Excellent Information:

WHO I was **PIC** that **evening** and we were cleared for the LOC 25 Approach and confirmed Approach mins of 1550 MSL were set in the FMS. We tracked the LOC inbound and met all waypoint altitudes. Inside the FAF, just prior to **WHERE** **waypoint TOOLO**, the **aircraft descended below 2700 MSL**, the **crossing altitude**. Tower gave us low altitude alert and asked if there was a problem and to climb. The aircraft terrain avoidance system activated and called to climb. Once we corrected back to altitude, we continued to an uneventful landing. **WHAT**

WHY After the flight, we debriefed why descent below published altitude happened. SIC had visual contact with the ground prior to TOOLO and **inadvertently allowed aircraft to descend below published altitude**. We discussed importance of **situation awareness and crew coordination** throughout entire phase of flight to shutdown. Also discussed importance of flying a **stabilized approach** throughout to landing. Multiple lessons learned today. **SUGGESTIONS**



Who? What? **When?** Why? How?

When should I report?

- Report whenever the aviation industry could benefit from your experience - (there is **no limit to the number of reports** you can submit)
- For protections from civil penalty and certificate violation, you must **report within 10 days after the violation** (or date you became aware or should have been aware of the violation)
- While you may only **exercise your waiver once in a five-year period**, you may report as many times as you wish



Who? What? When? Why? How?

Why should I report to ASRS?

- Share your stories and lessons learned so others don't experience the same problem or make the same mistake
- Contribute to aviation safety data – your report could be the one that is pivotal to action being taken to remedy a problem in the NAS
- Help ASRS identify emerging issues so we can be proactive in sharing that information
- Your insights contribute to the ever evolving and critical field of human factors safety research
- The FAA considers the filing of a report with NASA concerning an incident or occurrence involving a violation to be indicative of a constructive attitude. Such an attitude will tend to prevent future violations.



Filing an ASRS Report could save lives



Who? What? When? Why? **How?**

How do I report to ASRS?

- Report Directly to ASRS at:
<https://asrs.arc.nasa.gov>
- Or, download and print and mail to NASA ASRS at the address provided on the form



Aviation Safety Reporting System

[Program Information](#) | [Report to ASRS](#) | [Search ASRS Database](#) | [Publications/Studies](#)

ELECTRONIC REPORT SUBMISSION (ERS)

Securely send any of the four Aviation Safety reports to ASRS via the internet. For information on reporter confidentiality, immunity policy, and other program information please refer to the pages found under [Program Information](#).

To report electronically, select an ASRS Report Form:

► General Report Form	e.g. Pilot, Dispatcher, Ground Ops, & Other
► ATC Report Form	e.g. Air Traffic Controller
► Maintenance Report Form	e.g. Repairman, Mechanic, Inspector
► Cabin Report Form	e.g. Cabin Crew
► UAS Report Form	e.g. UAS Pilot, Visual Observer, & Crew

ASRS Report Form

- The ASRS report form includes three main sections:
 - ▶ **An Identification Strip (ID Strip)**
 - ▶ **Event and Operational Information** with several sub sections:
 - ▶ Reporter Involvement
 - ▶ Flight Experience
 - ▶ Weather and Airspace
 - ▶ Equipment / Location / Near Miss Conflicts
 - ▶ Contributing Factors
 - ▶ **Narrative** box - tell us your story!
 - ▶ Who, When, What, Where, Why



ID Strip / Proof of Submission

UAS FORM

For immediate action of UNSAFE or UNAUTHORIZED drone operations contact local authorities.

DO NOT REPORT UAS ACCIDENTS AND CRIMINAL ACTIVITIES ON THIS FORM. ACCIDENTS AND CRIMINAL ACTIVITIES ARE NOT INCLUDED IN THE ABOVE REPORT AND WILL BE SUBMITTED TO NASA. ALL IDENTITIES CONTAINED IN THIS REPORT WILL BE REMOVED TO ASSURE COMPLETE REPORTER ANONYMITY.

DISCLAIMER: THIS ID STRIP: Please fill in all blanks to ensure return of strip. NO REPORT WILL BE KEPT OF YOUR IDENTITY. This section will be returned to you.

TELEPHONE NUMBERS where we may reach you for further details of this occurrence.

HOME: _____	HOURS: _____		TYPE OF EVENT / SITUATION (select all that apply): ☐ Airspace Incursion / Excursion ☐ Collision (aircraft, person, object) ☐ Deviation (altitude, procedure) ☐ Equipment Issue ☐ Other: _____ (Use Command/Ctrl to multi-select)
WORK: _____	HOURS: _____		
NAME (required): _____	Other: Event / Situation _____		
ADDRESS (required): _____		DATE OF OCCURRENCE (MM/DD/YYYY) MM/DD/YYYY	
PHONE: _____			
CITY (required): _____	STATE: _____	LOCAL TIME (24 HR, 01:00-24:00) HH MM	

PLEASE FILL IN APPROPRIATE SPACES AND CHECK ALL ITEMS WHICH APPLY TO THIS EVENT OR SITUATION.

Event:

- Reporter
- Weather
- Equipment
- Location ...

WEATHER ELEMENTS	LIGHT / VISIBILITY
All event location: ☐ Clear ☐ Icing ☐ Turbulence ☐ Fog ☐ Rain ☐ Wind ☐ Hail ☐ Snow ☐ Windshear ☐ Haze / Smoke ☐ Thunderstorm ☐ Other: _____	(Select Light) ▼ Cloud Ceiling: _____ feet Visibility: _____ miles
AIRSPACE	AIRSPACE AUTHORIZATION PROVIDER Reset
☐ Class A ☐ Class E ☐ Class B ☐ Class G ☐ Class C ☐ Special Use (e.g. MOA, Restricted, Prohibited) ☐ Class D ☐ Temporary Flight Restriction (TFR)	☐ Authorized Third Party (e.g. UAS / UTM App, LAANC provider) ☐ FAA Authorization (e.g. FAA Drone Zone, Fixed Flying Site (LOS)) ☐ N/A (e.g. drone, no airspace) ☐ Other: _____
UAS / AIRCRAFT 1 INVOLVED IN EVENT Reset	
UAS Make / Model / Series _____ (or name / description) _____ (do not include registration or serial number)	
Weight Category: (Select Weight Category) ▼ (or select with payload) _____	
Configuration: (Select Configuration) ▼ Other: _____	
How many UASs were you controlling? (at time of event) _____	
Rule Flying Under: (Select Rule Flying Under) ▼ Other: _____	
Airworthiness Approval Certification (if applicable) ☐ Standard AC ☐ Special AC ☐ Special Authorization / Section 44807	
Waivers / Exemptions / Authorizations: Where you operating under any Waivers / Exemptions / Authorizations? ☐ Yes ☐ No FAR Section Number / Other: _____	

Narrative

DESCRIBE EVENT / SITUATION

The space shown below, discuss those which you feel are relevant and anything else you think is important. Include what you believe really caused the event can be done to prevent a recurrence, or correct the situation.

Who, Why, Where, When, Why?

If relevant, describe:

- Communication system frequencies.
- Drone software versions (indicate if recently updated and/or any third party software).

“Tell us your story”

☐ How the problem arose
☐ Contributing factors

☐ How it was discovered
☐ Corrective actions

☐ HUMAN PERFORMANCE CONSIDERATIONS
☐ Perceptions, judgments, decisions ☐ Actions or inactions
☐ Factors affecting the quality of human performance

NASA ARC 270 (January 2021)

UAS FORM

ONS No. 270-0172 Epp 7/20/2022

Tips for Writing Your Story

Example: Insufficient information

DESCRIBE EVENT / SITUATION

Keeping in mind the topics shown below, discuss those which you feel are relevant and anything else you think is important. Include what you believe really caused the problem, and what can be done to prevent a recurrence, or correct the situation.

WHO?

WHERE?

WHEN?

WHY?

I operated my drone 92 feet above the allowed altitude.

CHAIN OF EVENTS

- How the problem arose

- Contributing factors

- How it was discovered

- Corrective actions

HUMAN PERFORMANCE CONSIDERATIONS

- Perceptions, judgements, decisions

- Factors affecting the quality of human performance

- Actions or inactions

NASA ARC 277U (January 2021)

UAS FORM
v1.5.0

OMB No. 2700-0172 Exp 7/31/2022

Reset Form

View Printable Format

Submit Report

Tips for Writing Your Story

Example: Insufficient information

DESCRIBE EVENT / SITUATION

Keeping in mind the topics shown below, discuss those which you feel are relevant and anything else you think is important. Include what you believe really caused the problem, and what can be done to prevent a recurrence, or correct the situation.

WHO?

WHERE?

WHEN?

WHY?

I operated my drone 92 feet above the allowed altitude.

CHAIN OF EVENTS

- How the problem arose
- Contributing factors
- How it was discovered
- Corrective actions

HUMAN PERFORMANCE CONSIDERATIONS

- Perceptions, judgements, decisions
- Factors affecting the quality of human performance
- Actions or inactions

NASA ARC 277U (January 2021)

UAS FORM v1.5.0

OMB No. 2700-0172 Exp 7/31/2022

Reset Form

View Printable Format

Submit Report

Example: Excellent information

DESCRIBE EVENT / SITUATION

Keeping in mind the topics shown below, discuss those which you feel are relevant and anything else you think is important. Include what you believe really caused the problem, and what can be done to prevent a recurrence, or correct the situation.

WHO

WHERE

WHEN

WHAT

WHY

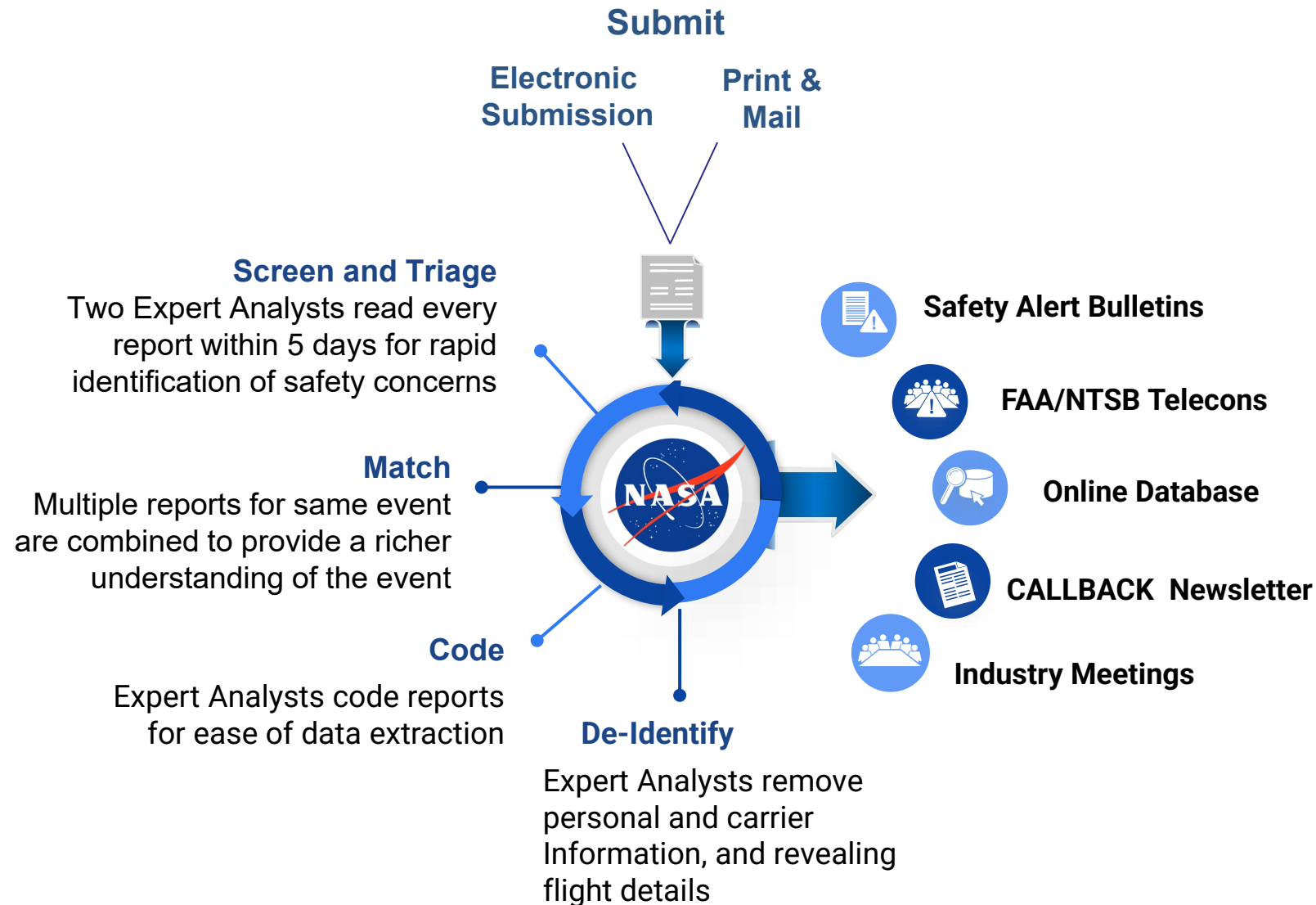
As the Remote Pilot in Command (RPIC), I was operating a two-pound small UAS quadcopter for a training flight in an open field in uncontrolled airspace. It was daytime with clear skies. My drone was flying at 150 meters, which is 492 feet above ground, a FAA violation. The unit of measurement on the remote control was inadvertently set to metric (meters) instead of imperial (feet). I failed to notice this during the pre-flight inspection. I have added an item to my pre-flight checklist to ensure this does not happen again.

Reset Form

View Printable Format

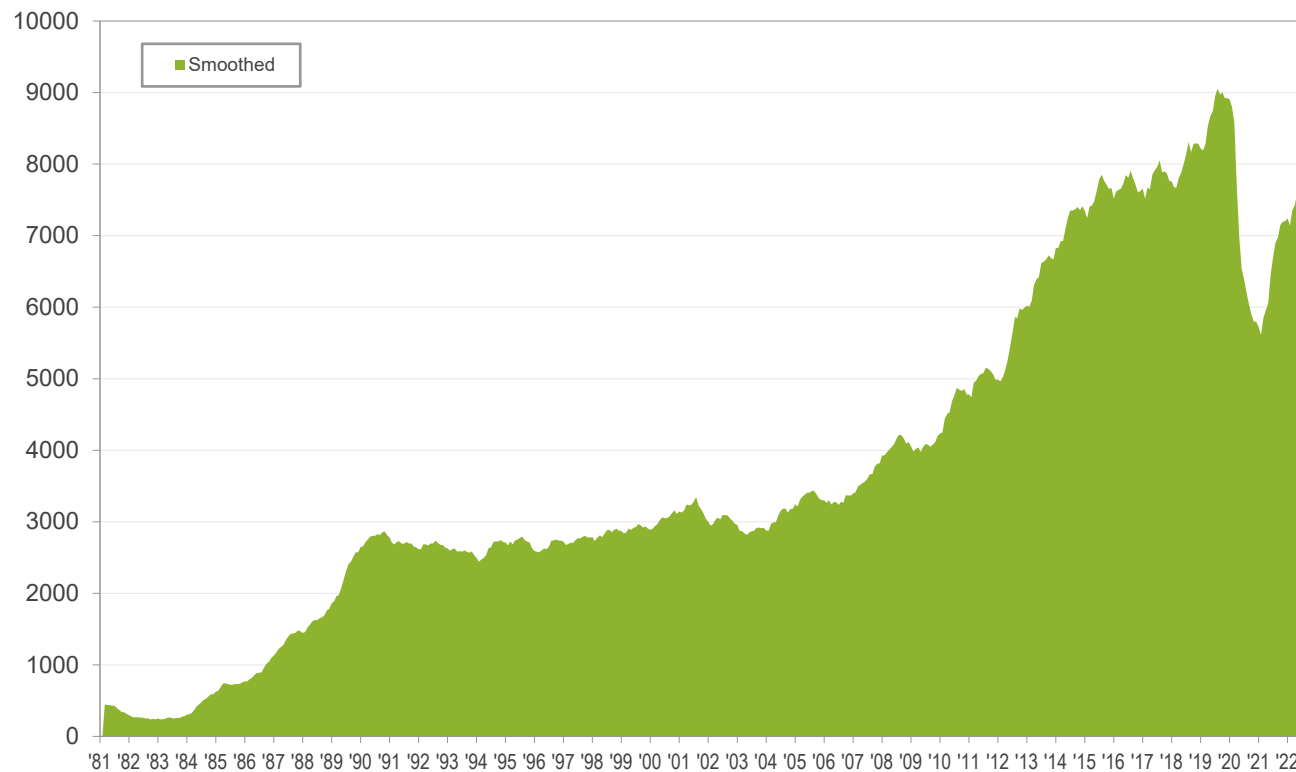
Submit Report

The Life of an ASRS Report



Report Intake Metrics

Monthly Report Intake (January 1981 – December 2022)



- Total Program Report Intake = **1,962,697**
- Total Report Intake for 2022 = **95,509**
- Averaging **7,959** reports per month, **387** per working day

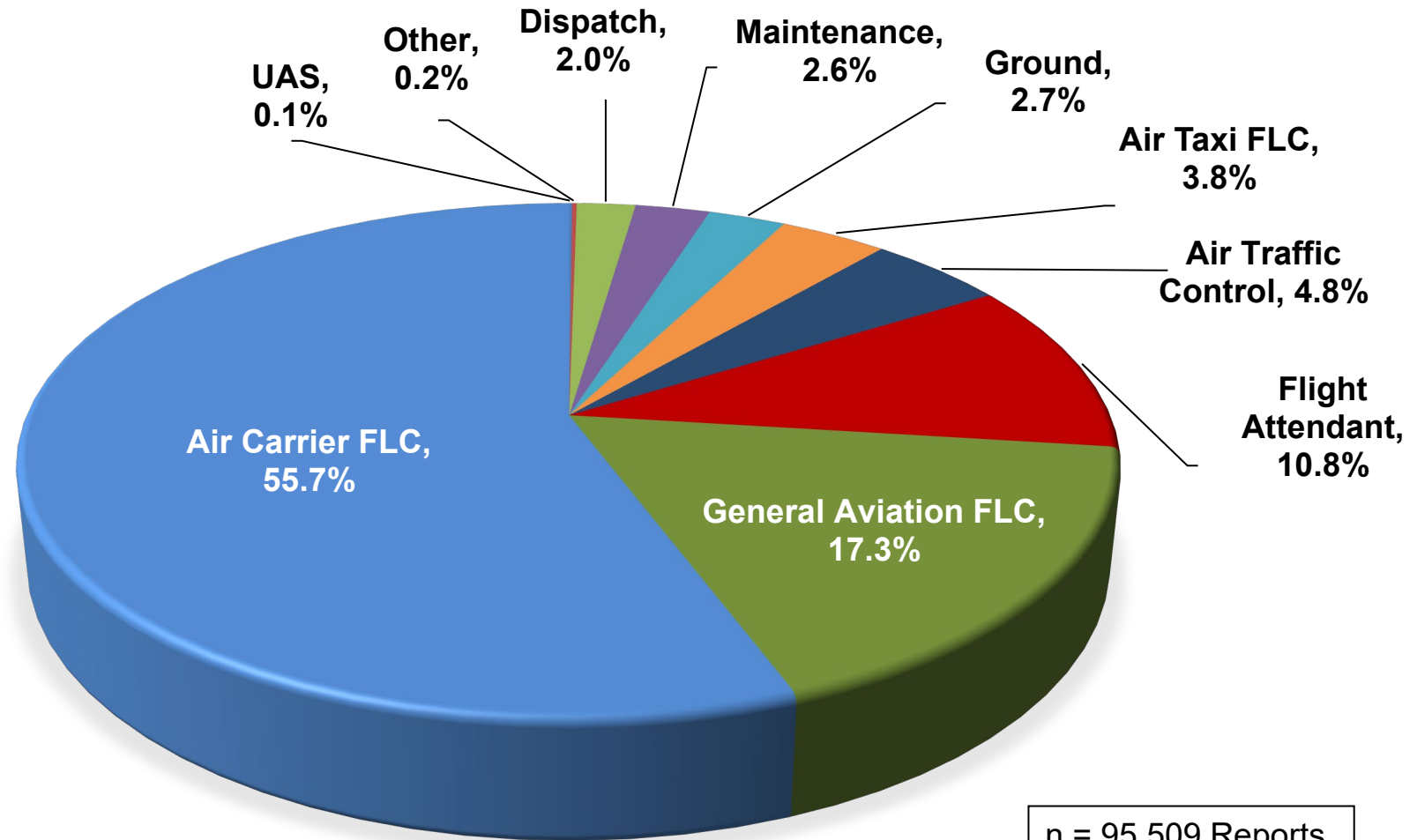


Aviation Safety Reporting System



Incident Reporter Distribution

January 2022 – December 2022



n = 95,509 Reports

FLC = Flight Crew

Source: NASA ASRS Screening Data



ASRS Safety Products



ASRS Products & Services



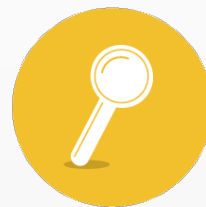
ALERT MESSAGES

Safety information issued to organizations in positions of authority for evaluation and possible corrective actions.



QUICK RESPONSES

Rapid data analysis by ASRS staff on safety issues with immediate operational importance generally limited to government agencies.



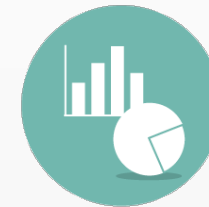
ASRS DATABASE

The public ASRS Database Online and data available in Database Report Sets or Search Requests full filled by ASRS staff.



CALLBACK NEWSLETTER

Monthly newsletter with a lessons learned format, available via website and email.



FOCUSED STUDIES

Studies/Research conducted on safety topics of interest in cooperation with aviation organizations.

ASRS Products & Services Metrics



(April 1976 – December 2022)





Alert Messages

Alerts and Safety Telecon Topics Generated from GA Business Reports

- Cirrus SF50 Inflight Dual Fuel Valve Failure
- Similar Sounding Fix Names - KENLN/KENLL
- Cessna C650 Inflight Dual Inverter Failure
- Airborne Conflicts near TPA Class B Airspace
- SQL ATCT Staffing
- Diamond DA40 Cabin Door Issues
- BIH Ramp Markings
- MIA FROGZ3 STAR
- LAX Airport Taxiway Markings, Signage, and Charting
- EMB 550 Ground Cooling Fan Issues
- Cirrus SR22 Landing Gear Strut Fairing Failure
- MIA Ramp Markings
- Airborne Conflicts Involving Paraglider Activity

ASRS GA/Business Alert Message – LAX Airport Taxiway Markings, Signage, and Charting



1/19/2023 **FOR YOUR INFORMATION** 2023-8/5-2
1951947

To: Airport Manager, Los Angeles Int'l (LAX), CA, FAA (AAS-1), Jeppesen Sanderson Inc.

Info: FAA (AFS-200, AVP-1, AVP-200, AAS-300, AJV-A, AWP-600, AFS-260, AFS-400, AJI-144, Runway Safety Team), ATSG, AFA, ALPA, IFALPA, APA, APFA, ASAP, A4A, IATA, CAPA, ICAO, ICASS, IPA, NTSB, RAA, SWAPA

From: Becky L. Hooley, Director
NASA Aviation Safety Reporting System

Re: LAX Airport Taxiway Markings, Signage, and Charting

We recently received ASRS reports describing a safety concern related to operational responsibility. We do not have sufficient details to assess the possible gravity of the report. It is our policy to relay the report to the appropriate authorities for evaluation and any necessary follow-up. We feel your report is a deidentified report.

To properly assess the usefulness of our alert message service, you would take the time to give us your feedback on the value we have provided. Please contact Dr. Becky Hooley at (408) 541-1234 or becky.l.hooley@nasa.gov.

1/19/2023 **FOR YOUR INFORMATION** 2023-8/5-2
1951947

To: Airport Manager, Los Angeles Int'l (LAX), CA, FAA (AAS-1), Jeppesen Sanderson Inc.

Info: FAA (AFS-200, AVP-1, AVP-200, AAS-300, AJV-A, AWP-600, AFS-260, AFS-400, AJI-144, Runway Safety Team), ATSG, AFA, ALPA, IFALPA, APA, APFA, ASAP, A4A, IATA, CAPA, ICAO, ICASS, IPA, NTSB, RAA, SWAPA

From: Becky L. Hooley, Director
NASA Aviation Safety Reporting System

Re: LAX Airport Taxiway Markings, Signage, and Charting



Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189



ASRS GA/Business Alert Message – LAX Airport Taxiway Markings, Signage, and Charting

Response – Corrective Action



On January 25, 2023 we received an email from an **LAX airport representative** concerning alert item 2023-8/5-2. The email stated the following:

In response to the attached ASRS Safety report #1951947, we have reviewed the incident/recommendations and have determined the following. It appears that the pavement being referenced is the area depicted in the aerial picture below. This pavement is part of the Sepulveda tunnel system and cannot be removed. The area has been painted green and there is a yellow “X” painted on it to distinguish it from active movement areas. Additionally, there are edge and shoulder markings painted south of Runway 07R/25L to ensure the pavement is not mistaken for an active taxiway. There are also no lead-off lines from the runway to this area. While this area meets standards, we understand that in inclement weather markings may be difficult to identify. For this reason, **we will be refreshing and enlarging the painted “X” on this pavement. We will also be relocating it closer to the runway edge to ensure that it is not mistaken for an active movement area in the future.**



Thank you for bringing this to our attention and please let us know if there any additional comments or concerns regarding this area.





ASRS Database



<https://asrs.arc.nasa.gov/>



The screenshot shows the NASA Aviation Safety Reporting System (ASRS) homepage. At the top, the ASRS logo is on the left, and navigation links for 'Home' and 'Contact Us' are on the right. Below this is a horizontal menu with links: 'Program Information', 'Report to ASRS', 'Search ASRS Database', 'Publications/Studies', 'International', and 'Online Resources'. The main banner features a night-time airport scene with the text 'Confidential. Voluntary. Non-Punitive.' and a description of ASRS's role. Below the banner, there are three main sections: a 'CALLBACK' newsletter sign-up, a 'Submit a Report' section with links for General, ATC, Maintenance, Cabin, and UAS, and two side-by-side boxes for 'UAS Safety Reporting' and 'HAZMAT Safety Reporting', each with a 'Learn More' link. At the bottom left of the page content, there are links for 'HTML' and 'PDF' versions of the 'What Would You Have Done?' report.

Aviation Safety Reporting System

Home Contact Us

Program Information Report to ASRS Search ASRS Database Publications/Studies International Online Resources

Confidential. Voluntary. Non-Punitive.

ASRS captures confidential reports, analyzes the resulting aviation safety data, and disseminates vital information to the aviation community.

CALLBACK
Receive FREE monthly newsletter by email! ([Read Policy](#))
[Subscribe to CALLBACK](#)

What Would You Have Done? NEW
March 2022, Issue 506
[HTML](#) | [PDF](#)

Submit a Report:

- ▶ [General](#) - Pilots, Dispatchers, Others
- ▶ [ATC](#) - Air Traffic Control
- ▶ [Maintenance](#) - Mechanics
- ▶ [Cabin](#) - Cabin Crew
- ▶ [UAS](#) - Pilots, Visual Observers, Crew

NASA ASRS UAS Safety Reporting
[Learn More](#)

NASA ASRS HAZMAT Safety Reporting
[Learn More](#)



ASRS Database Online User Interface

Direct access to search de-identified reports in the ASRS database is available through **ASRS Database Online (DBOL)**

How To Search:

Step 1: Click + to add search items. Note: Make sure your Pop-up Blocker is off.

Step 2: In "Current Search Items" section, select "Click Here" in a statement and choose items from lookup window.

Date & Report Number + Report Number (ACN) was [number] + Date of Incident was between [date] and [date]	Place + Location was [identifier] + State was [abbreviation]
Environment + Flight Conditions were [conditions] + Lighting was [conditions] + Weather was [element]	Person + Reporter Organization was [type] + Reporter Function was [position]
Aircraft + Federal Aviation Regs (FAR) Part was [regulation] + Flight Plan was [type] + Flight Phase was [phase] + Make/Model was [aircraft type] + Mission was [operation]	Event Assessment + Event Type was [anomaly] + Detector was [equipment/human] + Primary Problem was [most prominent factor] + Contributing Factors were [problem areas] + Human Factors (since 6/09) were [factor] + Result was [consequence]

Text: Narrative / Synopsis

- + Text contains [words]



<https://asrs.arc.nasa.gov/search/database.html>





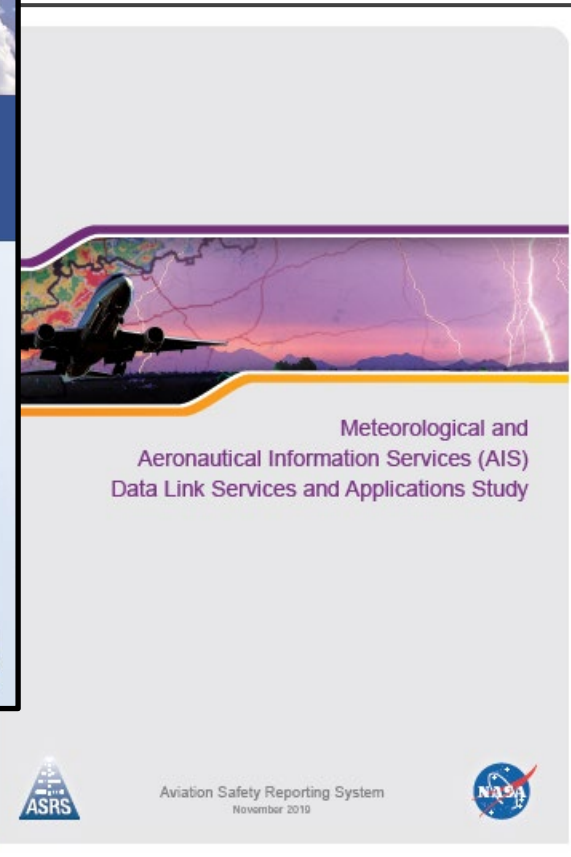
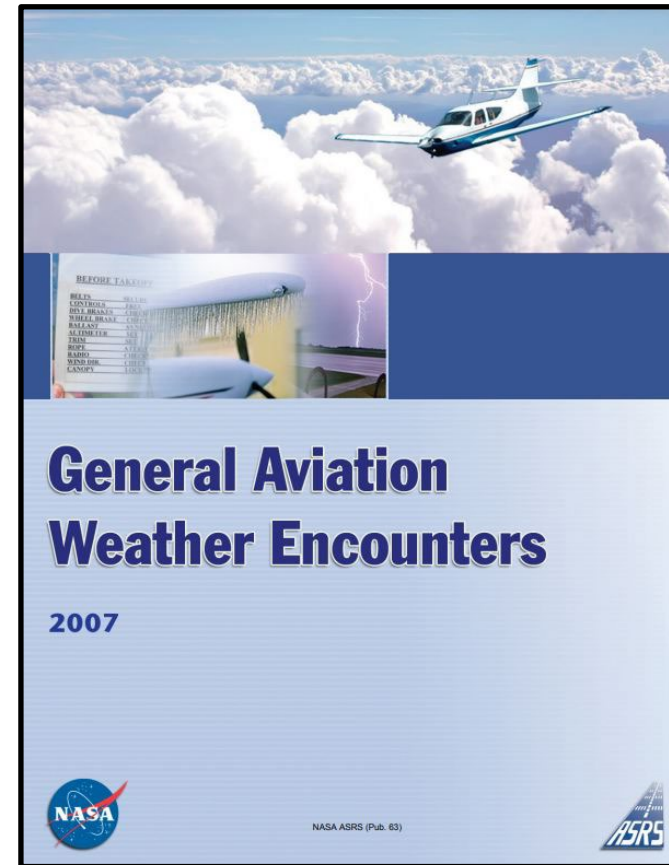
Focused Studies/Research

Publications / Studies on ASRS Website



[Click on:](#)
[ASRS Research Papers](#)

Research Studies

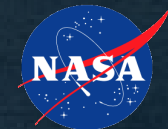


Aviation Safety Reporting System

CFI Tips for Using ASRS for Training



Aviation Safety Reporting System



1. Ask your students to watch the 8-minute Webinar



Aviation Safety Reporting System

Home Contact Us

Program Information Report to ASRS Search ASRS Database Publications/Studies International Online Resources

PROGRAM BRIEFING

Summary

The ASRS is an important facet of the continuing effort by government, industry, and individuals to maintain and improve aviation safety. The ASRS collects voluntarily submitted aviation safety incident/situation reports from pilots, controllers, and others.

The ASRS acts on the information these reports contain. It identifies system deficiencies, and issues alerting messages to persons in a position to correct them. It educates through its newsletter *CALLBACK*, its journal *ASRS Directline* and through its research studies. Its database is a public repository which serves the FAA and NASA's needs and those of other organizations world-wide which are engaged in research and the promotion of safe flight.

Duration

- Program Briefing
- About Our
- Confidential Report
- Immunity
- Report Pro
- Database
- Program O
- Caveats

NASA ASRS video – Your safety story counts!

Watch and share this short eight-minute video to learn how you can share your safety stories and lessons learned. Your report may save lives. In exchange for your valuable safety information, you may be eligible for protections from civil penalty and certificate suspension.



NASA ASRS Video

NASA Aviation Safety Reporting System (ASRS)

<https://asrs.arc.nasa.gov/>

08:09

Email: asrs@mail.nasa.gov

vimeo



Aviation Safety Reporting System



2. Teach your students how to report online

How do they report to NASA ASRS and what happens next?

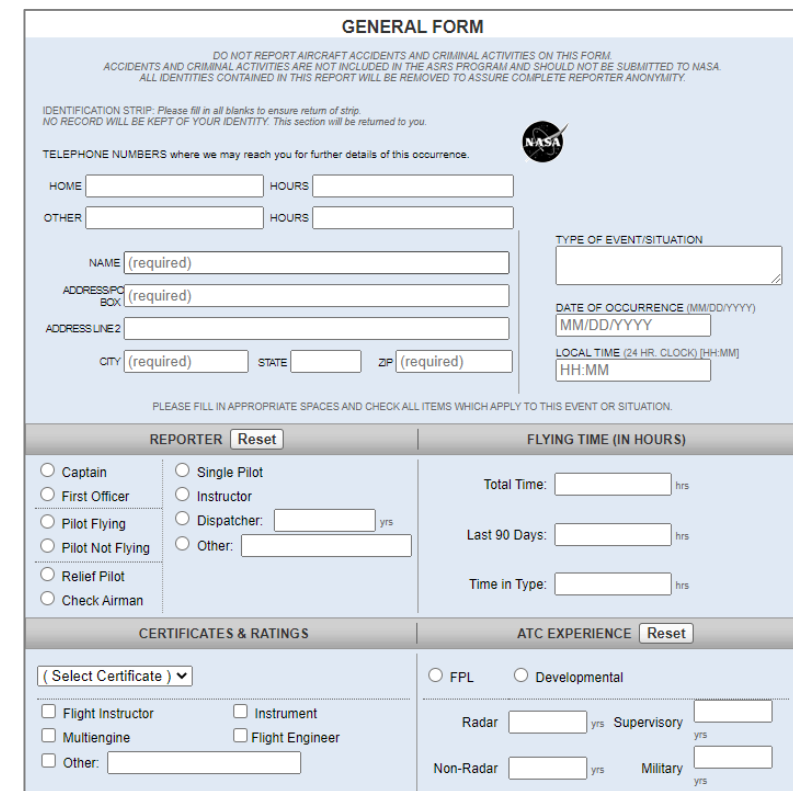
Report directly to ASRS at: <https://asrs.arc.nasa.gov>

Watch for a NASA envelope in the U.S. Mail containing their ID Strip, retain this in a safe place



The screenshot shows the NASA Aviation Safety Reporting System (ASRS) website. At the top is the ASRS logo and the title "Aviation Safety Reporting System". Below this is a navigation bar with links: "Program Information", "Report to ASRS", "Search ASRS Database", and "Publications/Studies". The main heading is "ELECTRONIC REPORT SUBMISSION (ERS)". Below this, a paragraph explains that users can securely send reports via the internet and refers them to the "Program Information" page for confidentiality and immunity details. A section titled "To report electronically, select an ASRS Report Form:" lists five report types with example roles:

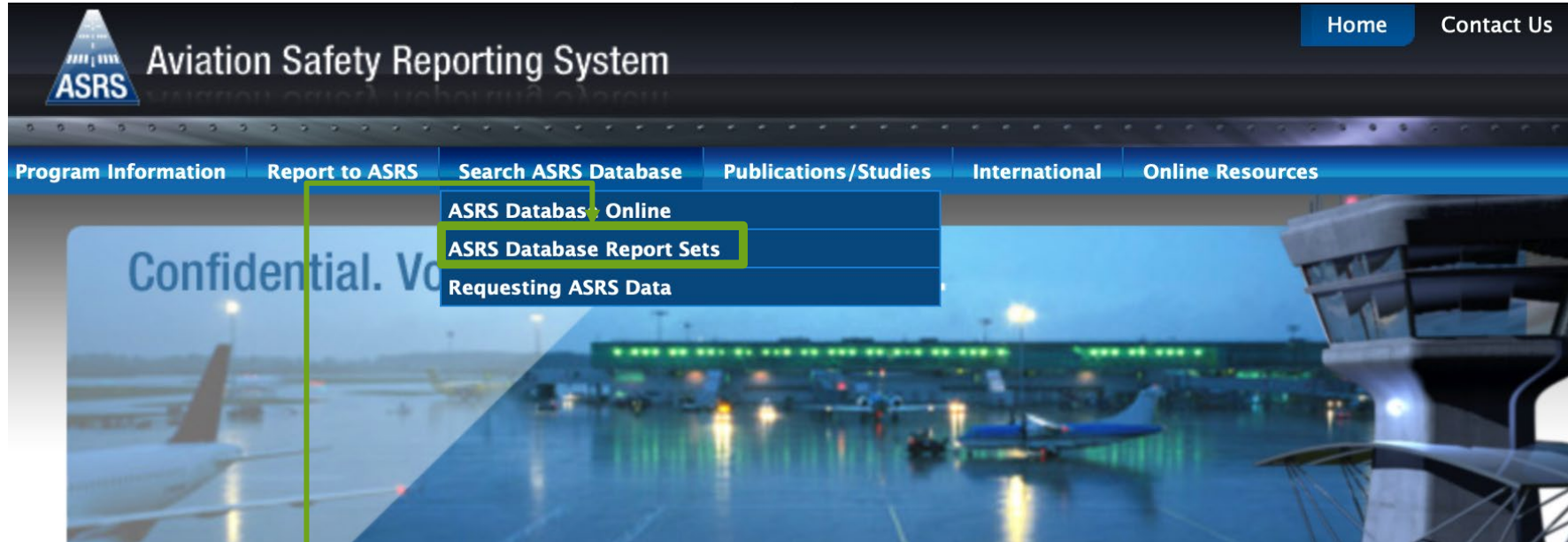
- General Report Form**: e.g. Pilot, Dispatcher, Ground Ops, & Other
- ATC Report Form**: e.g. Air Traffic Controller
- Maintenance Report Form**: e.g. Repairman, Mechanic, Inspector
- Cabin Report Form**: e.g. Cabin Crew
- UAS Report Form**: e.g. UAS Pilot, Visual Observer, & Crew



The screenshot shows the "GENERAL FORM" for reporting. It includes a NASA logo and a disclaimer: "DO NOT REPORT AIRCRAFT ACCIDENTS AND CRIMINAL ACTIVITIES ON THIS FORM. ACCIDENTS AND CRIMINAL ACTIVITIES ARE NOT INCLUDED IN THE ASRS PROGRAM AND SHOULD NOT BE SUBMITTED TO NASA. ALL IDENTITIES CONTAINED IN THIS REPORT WILL BE REMOVED TO ASSURE COMPLETE REPORTER ANONYMITY." Below this is an "IDENTIFICATION STRIP" section with fields for NAME (required), ADDRESS BOX (required), ADDRESS LINE 2, CITY (required), STATE, and ZIP (required). There are also fields for HOME and OTHER telephone numbers with associated hours. A "TYPE OF EVENT/SITUATION" dropdown menu is present. The "DATE OF OCCURRENCE" is entered as MM/DD/YYYY, and the "LOCAL TIME (24 HR. CLOCK)" is entered as HH:MM. A section titled "REPORTER" includes a "Reset" button and radio buttons for Captain, First Officer, Pilot Flying, Pilot Not Flying, Relief Pilot, Check Airman, Single Pilot, Instructor, Dispatcher, and Other. The "FLYING TIME (IN HOURS)" section includes fields for Total Time, Last 90 Days, and Time in Type. The "CERTIFICATES & RATINGS" section includes a dropdown for "Select Certificate" and checkboxes for Flight Instructor, Multiengine, Other, Instrument, Flight Engineer, and Radar. The "ATC EXPERIENCE" section includes a "Reset" button and radio buttons for FPL and Developmental, with fields for Radar, Non-Radar, Supervisory, and Military experience in years.



3. Have students search the database before going to a new airport or getting checked out in an aircraft



Report Sets
with 50 most
recent reports

Over 25 prepared ASRS Data Report Sets
Topics such as:

- Commuter and GA Icing Incidents
- Inflight Weather Encounters
- UAS Reports

- Air Carrier (FAR 121) Flight Crew Fatigue Reports**
A sampling of reports involving air carrier (FAR 121) flight crew fatigue.
- Altitude Deviations**
A sampling of altitude deviation reports.
- Air Traffic Controller Reports**
A variety of reports from ATC Controllers.
- Bird or Animal Strike Reports**
A sampling of reports referencing a bird or animal strike incident.
- Cabin Smoke, Fire, Fumes, or Odor Incidents**
A sampling of air carrier reports concerning cabin smoke, fire, fumes or odor related events.
- Checklist Incidents**
A sampling of reports from all aviation arenas referencing checklist issues (design, procedures, distraction, etc.).
- Commuter and Corporate Flight Crew Fatigue Reports**
A sampling of reports referencing Commuter and Corporate flight crew fatigue issues and duty periods.
- Commuter and GA Icing Incidents**
A sampling of aircraft icing encounter reports from GA and Commuter flight crews.
- Controlled Flight Toward Terrain**
A sampling of reports referencing inadvertent controlled flight towards terrain.
- CRM Issues**
Crew Resource Management (CRM) inflight situations (conflicts, NMACs, and emergencies).
- Emergency Medical Service Incidents**
A sampling of reports concerning Emergency Medical Service (EMS) incidents.



3. From the database search they can read lessons learned from other pilots

Direct access to search de-identified reports in the ASRS database is available through **ASRS Database Online (DBOL)**

How To Search:

Step 1: Click + to add search items. Note: Make sure your Pop-up Blocker is off.

Step 2: In "Current Search Items" section, select "Click Here" in a statement and choose items from lookup window.

Date & Report Number	Place
+ Report Number (ACN) was [number]	+ Location was [identifier]
+ Date of Incident was between [date] and [date]	+ State was [abbreviation]

Environment	Person
+ Flight Conditions were [conditions]	+ Reporter Organization was [type]
+ Lighting was [conditions]	+ Reporter Function was [position]
+ Weather was [element]	

Aircraft	Event Assessment
+ Federal Aviation Regs (FAR) Part was [regulation]	+ Event Type was [anomaly]
+ Flight Plan was [type]	+ Detector was [equipment/human]
+ Flight Phase was [phase]	+ Primary Problem was [most prominent factor]
+ Make/Model was [aircraft type]	+ Contributing Factors were [problem areas]
+ Mission was [operation]	+ Human Factors (since 6/09) were [factor]
	+ Result was [consequence]

Text: Narrative / Synopsis

+ Text contains [words]

Sample Searches:

FAR Part:

Part 91

Place → Location:

DAB (Daytona Beach International Arpt)

Event:

Conflict->Airborne Conflict

Conflict>Ground Conflict

Inflight Event/Encounter->CFTT/CFIT



<https://asrs.arc.nasa.gov/>



4. Sign up for Safety Newsletters

- **CALLBACK** is a monthly publication - distributed by email.
- Subscription is free and available via the ASRS website.



34,700+

Total number of email subscribers for 2022

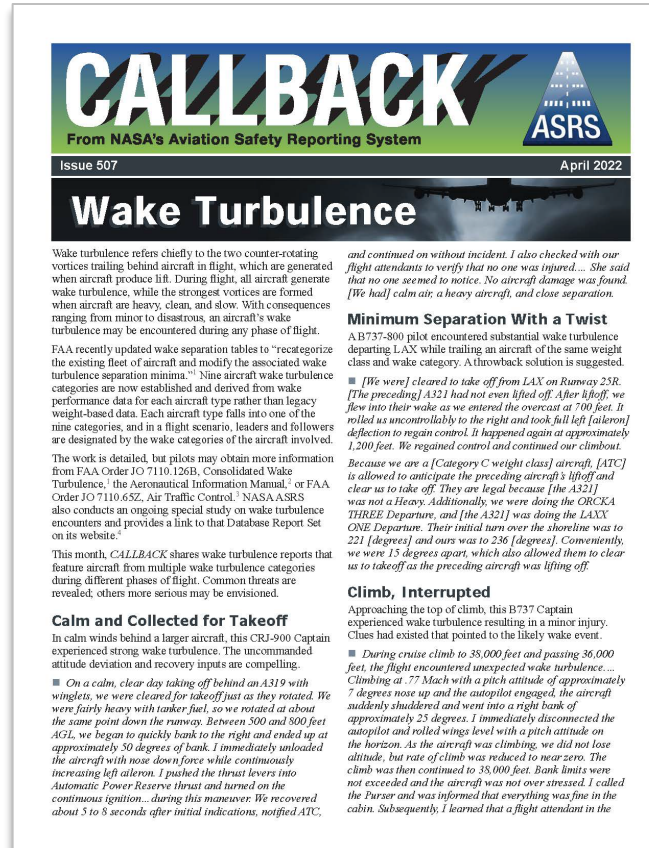


457,670+

CALLBACK views for 2022 (HTML and PDF)



Aviation Safety Reporting System



Scan to Sign Up



4. Sign up for Safety Newsletters

- In addition to *CALLBACK*, an Unmanned Aircraft System (UAS) specific publication is distributed by email. Subscription to ***UAS Safety In Sight*** is free and available via the ASRS website.



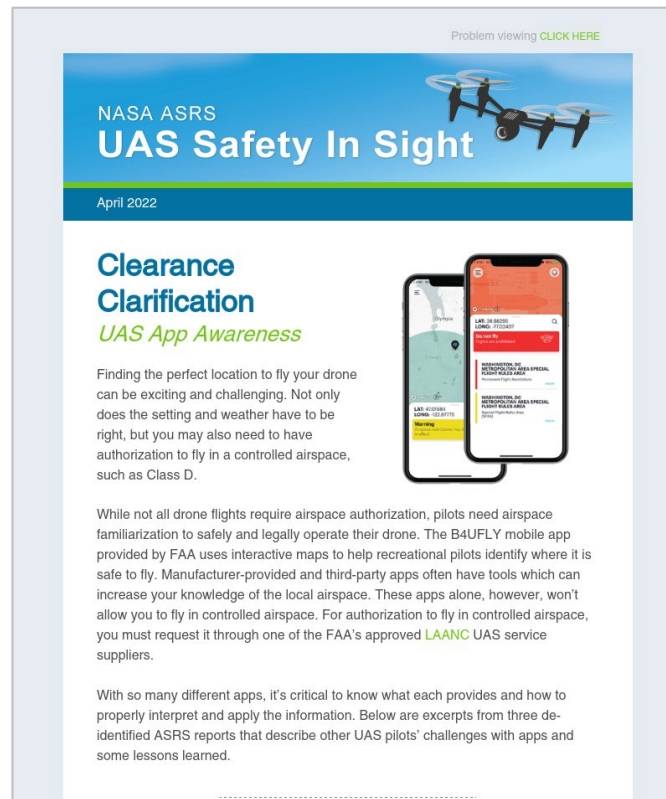
155+

Total number of email subscribers for 2022



6 Issues

Published to date



Sign up for UAS Safety in Sight email today!

Stay connected to find out more about the new ASRS UAS report form and emerging UAS safety topics.



5. Try “What Would You Have Done” Scenarios



- Present a “The First Half of the Story” of an ASRS report excerpt describing an event up to a point where a specific decision must be made, an immediate action must be taken, or a non-normal situation must be actively managed.
- Ask student to exercise your own judgment to make a decision, determine a possible course of action, or devise a plan that might best resolve the situation.
- Prior issues of ASRS *CALLBACK* found online have examples



Callback 421 - Situation #1 Cessna 172 Pilot's Report

- The weather briefing advised my route was VFR and forecast to be so until around 0300 local time.... Enroute the weather quickly deteriorated
- I noticed larger cumulonimbus clouds forming around me and a thick cloud deck forming in front of me
- I opted to drop my altitude to 3,500 feet to maintain VFR cloud clearance and duck below it. Once the weather opened up I decided to climb to 5,000 feet to get a better look at what was going on around me



Callback 421 - Situation #1 Cessna 172 Pilot's Report

- I saw that the weather was worse than I thought. It was solid IMC everywhere and deteriorating rapidly....
- I started checking different enroute weather services to get a picture of what was going on
- At this point I had 1.3 hours of fuel left and realized that any airport within range was heavy IMC.... I decided to continue towards [my home airport].... I maintained 1,000 feet above the cloud deck for some form of traffic separation, but could not see the ground as it was a solid [layer]



Callback 421 - Situation #1 Cessna 172 Pilot's Report

- Shortly after, both NAV 1 and NAV 2 failed, but DME was still operational. I then attempted to call Center for vectors and help, but to no avail.
- It appeared my radio could receive but not transmit. I then attempted to navigate via my iPad, but the battery died shortly after
- At this point the weather had gotten so poor that flying through clouds became unavoidable. I was in complete IMC.



Callback 421 - Situation #1 Cessna 172 Pilot's Report

- I executed an emergency 180 using my turn coordinator and my stopwatch and held that heading for a few minutes
- Realizing it wasn't improving, I decided to climb to get above the deck once again for traffic separation. I climbed for approximately 20 minutes and popped out above the deck at 10,000 feet.
- It was solid overcast as far as the eye could see.... At this point, I was very disoriented as to where I was, and had no way to call for help.



▶▶ What would you have done?



Callback 421 - Situation #1 Cessna 172 Pilot's Report

The Rest of the Story - The Reporter's Actions

- Using my DME, I determined where I was relative to the tuned VOR/DME by flying different headings and observing the DME's reaction
- On my sectional chart I drew a line straight from the VOR, and determined I was roughly six miles south of [the departure airport]
- I then turned direct north and held this heading for 10 more minutes to get far north of the field where I knew there were no obstacles while descending from 10,000 down to 2,000



Callback 421 - Situation #1 Cessna 172 Pilot's Report

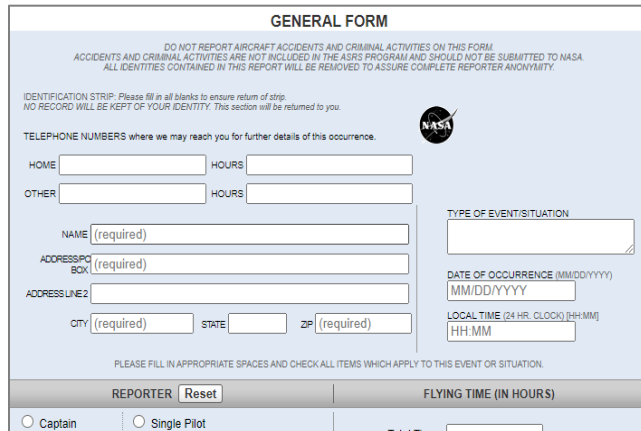
The Rest of the Story - The Reporter's Actions

- Once [my passenger's] cell phone got signal, I pulled up a computerized satellite map and used that to line myself up with the runway coming from the north
- I maintained a slow but steady descent as I continued essentially a poor man's GPS approach
- I broke through the clouds at roughly 1,200 feet AGL and landed.



6. Explain how reports can contribute to safety

Report Submitted to ASRS



GENERAL FORM

DO NOT REPORT AIRCRAFT ACCIDENTS AND CRIMINAL ACTIVITIES ON THIS FORM. ACCIDENTS AND CRIMINAL ACTIVITIES ARE NOT INCLUDED IN THE ASRS PROGRAM AND SHOULD NOT BE SUBMITTED TO NASA. ALL IDENTITIES CONTAINED IN THIS REPORT WILL BE REMOVED TO ASSURE COMPLETE REPORTER ANONYMITY.

IDENTIFICATION STRIP: Please fill in all blanks to ensure return of strip. NO RECORD WILL BE KEPT OF YOUR IDENTITY. This section will be returned to you.

TELEPHONE NUMBERS where we may reach you for further details of this occurrence.

HOME HOURS

OTHER HOURS

NAME (required)

ADDRESS BOX (required)

ADDRESS LINE 2

CITY (required) STATE ZIP (required)

TYPE OF EVENT/SITUATION

DATE OF OCCURRENCE (MM/DD/YYYY)

LOCAL TIME (24 HR. CLOCK) (HH:MM)

PLEASE FILL IN APPROPRIATE SPACES AND CHECK ALL ITEMS WHICH APPLY TO THIS EVENT OR SITUATION.

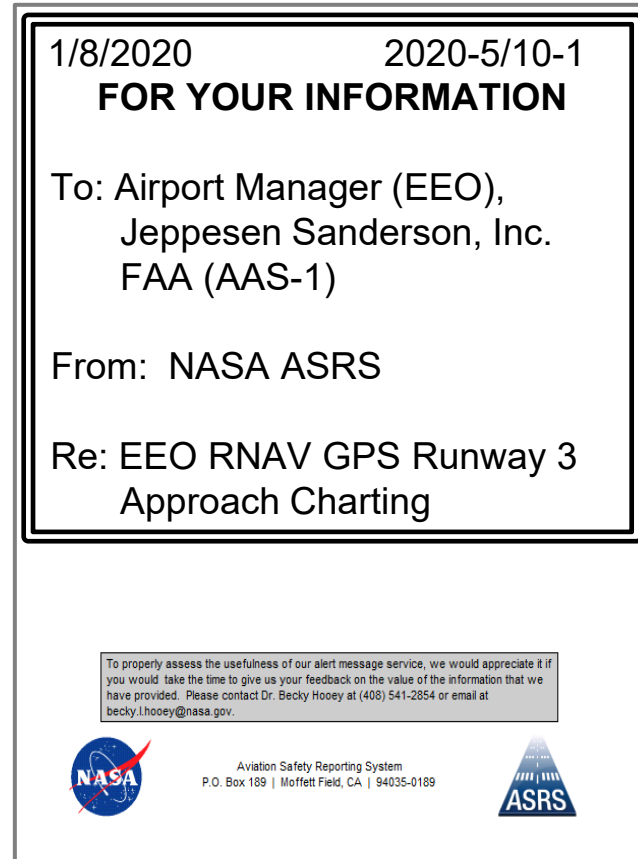
REPORTER FLYING TIME (IN HOURS)

☐ Captain ☐ Single Pilot

Synopsis: Corporate aircraft Captain reported receiving a GPWS terrain caution while on the RNAV (GPS) RWY 3 approach to EEO airport. Charting issues were cited as contributing to the event



ASRS Issued Safety Alert



1/8/2020 2020-5/10-1
FOR YOUR INFORMATION

To: Airport Manager (EEO),
Jeppesen Sanderson, Inc.
FAA (AAS-1)

From: NASA ASRS

Re: EEO RNAV GPS Runway 3
Approach Charting

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooley at (408) 541-2854 or email at becky.l.hooley@nasa.gov.

 Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189 



Corrective Action

Jeppesen Response: This one was very interesting and fortunately, I had a number of people here to help me understand AND get some improvements to our charts.

In first order, we have correctly charted the information on the RNAV (GPS) Rwy 3 Instrument Approach Procedure Chart according to the FAA Source Form 8260. Just so you know, there have been a number of source provided changes since AMDT 3A (2014); we are all at 3D now.

That said, in our evaluations, we have decided that all the charts at Meeker qualify for contours. So similar to the 7000 foot contour 'ridge' that is shown on the FAA chart, you will now see that terrain contouring on our charts (and we will keep that 7754 foot high point, too). Additionally, we are now adding (according to source) due to newer charting specifications the note: 34:1 is not clear. Due to this ASRS [Alert], I did ask that Chart Change Notice go out (last week).



Aviation Safety Reporting System



6. Explain how reports can contribute to safety

ASRS Safety Alert – FCH PAPI Out of Service

FCH PAPI Out of Service (ACN 1569882)

GA pilot reported the approach for Runway 30 at FCH is unsafe because the PAPI lights are non-operational.

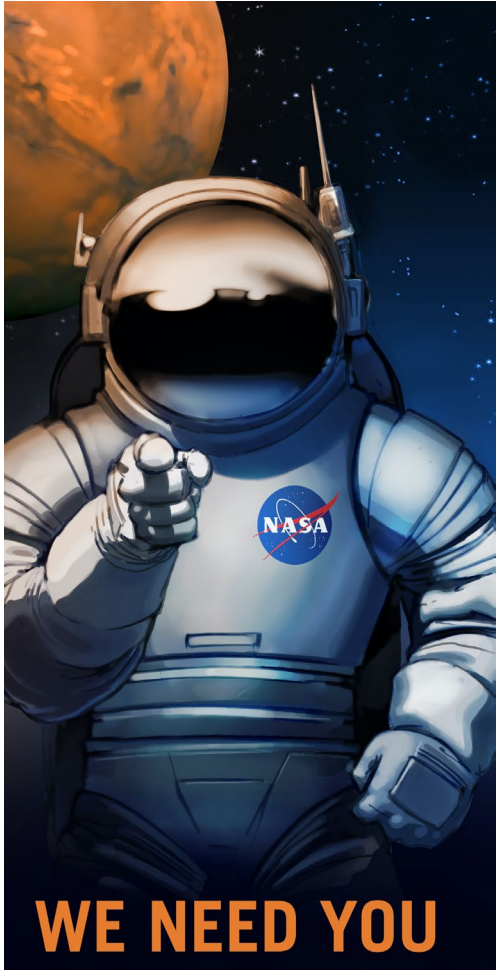
- **“This report is submitted to address an unsafe airport condition at the Fresno Chandler Airport (FCH) Fresno, California.”**
- **“A PAPI system has been installed for runway 30 to insure obstacle clearance from residential trees** on the approach end of runway 30.”
- **Recently the FAA Flight Inspection shut down the PAPI system** at Chandler due to one tree protruding into the approach path of the PAPI light system area.
- **Flight Inspection needs to inspect and evaluate system for proper operation and clearance and place it back in service immediately in order to mitigate the risk**

The FAA Fresno FSDO responded stating: This letter is in response to Aviation Safety Reporting System (ASRS) (ACN: 1569882)

...The City of Fresno removed several trees to get this issue corrected and once this was accomplished notified the FAA Flight Inspection Team for a re-certification. ... the FAA Flight Inspection Team returned and approved the PAPI System. ...the PAPI lighting System was put back into service.



7. Help us spread the word about NASA ASRS



- Include ASRS in your FBO and CFI aviation training programs and curriculum - ASRS can provide a slide or one-page handout
- Encourage your students to report any and all safety concerns they experience or witness, including:
 - Violations
 - Hazards
 - Mistakes / slips / errors
 - Confusion and misunderstanding
 - Equipment, chart, app issues
- Subscribe to *CALLBACK* and/or *UAS Safety in Sight (for drone operators)* and share these newsletters freely
 - Encourage your students to subscribe too!
- Explore our database for teaching material, lessons-learned, and research



Aviation Safety Reporting System



POC: Becky Hooey, NASA ASRS Director
Becky.L.Hooey@nasa.gov, 650-604-2399

Thank You!

Additional Information & Resources

- ✓ Confidentiality & Incentives to Report
<https://asrs.arc.nasa.gov/overview/confidentiality.html>
- ✓ Immunity Policies
<https://asrs.arc.nasa.gov/overview/immunity.html>
- ✓ Requesting ASRS Data
<https://asrs.arc.nasa.gov/search/requesting.html>



Questions?



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