AIRBORNE SCIENCE PROGRAM

FLIGHT REQUEST PROCEDURES

User Guide

NASA Science Mission Directorate

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STEP 1 Log into SOFRS

Flight requests are entered into the Airborne Science Program's (ASP) Science Operations Flight Request System (SOFRS). The SOFRS curators are Vidal Salazar (vidal.salazar@nasa.gov) and Sommer Beddingfield (sommer.l.beddingfield@nasa.gov). Please feel free to contact them if you have any questions.

SOFRS

SOFRS can be accessed directly using the following link https://airbornescience.nasa.gov/sofrs/ or by clicking on "Flight Request" on the top right menu bar of the ASP website.

On the left side bar, you may log into the Flight Request system. If this is your first visit, please click the option to "Create new account" and establish your account.

If you've forgotten your password, enter your username and click on "Request new password." SOFRS will send you a new password by email right away. Follow the instructions in the email to reset your password.

If you've forgotten your username, enter your email address. You will receive an email with your username and a one-time login link.

STEP 2   Create a Flight Request

After you've logged in, click "New Flight Request" and follow the submittal instructions. Please note that "Flight Requests" is a link to a running list of the Flight Requests that you are associated with.
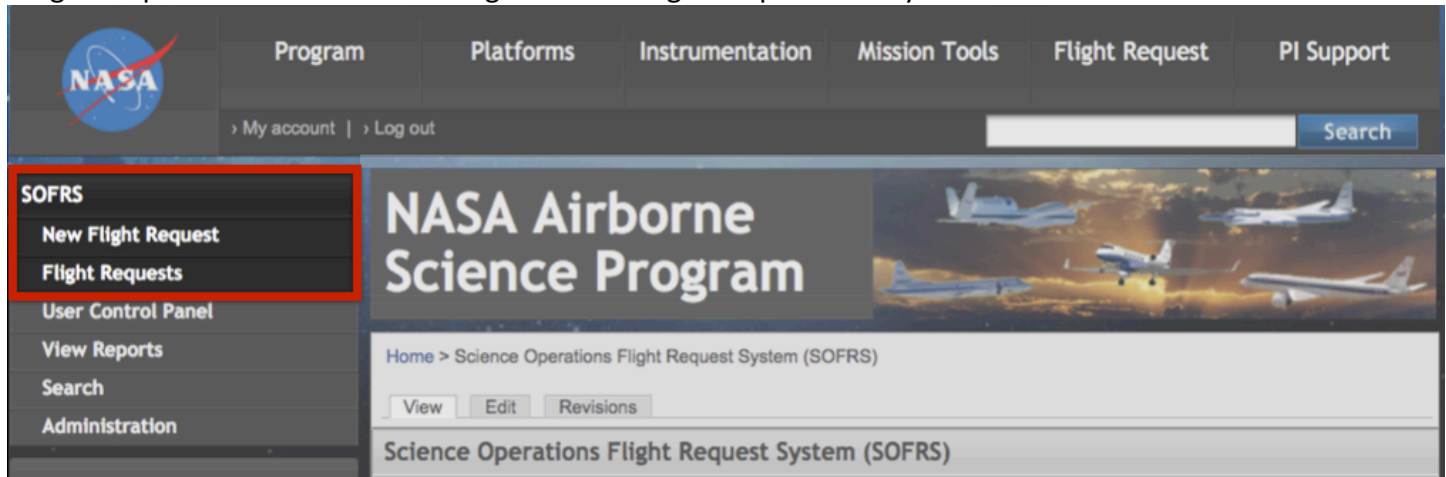
To begin, name the project and enter as much information as possible. All of the information requested in the form is important for tracking and reporting throughout the life of your request. Missing info will not hold up the submittal. There is, however, certain basic information (PI, aircraft, instrument(s), dates of data collection, mission location, funding source, and science concurrence) that is critical to ensure your request is properly routed and addressed in a timely manner and processed for approval.

SOFRS reporting is based on the fiscal year (designated by the first two digits of the log number) and the aircraft (third digit). Therefore, a separate flight request must be submitted for each fiscal year of the project, as well as separate aircraft. The curators can copy a flight request for you for a different year or aircraft.

There are information buttons for most fields to define what needs to be entered there. Just hold your mouse over the icon for additional text to appear.

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STEP 2   Complete a Flight Request (Cont.)

Project Title: The name you are giving to your project.

Fiscal Year: The US Government fiscal year is from October 1st – Sept 30th. Please indicate the fiscal year in which you plan to fly your experiment.

Request Type: A Normal FR is a request for a planned flight opportunity, while a Placeholder is a project in the proposal process (this informs the program of anticipated need for purposes of scheduling missions and allows the PI to get a good cost estimate for the proposal). Piggyback is a no cost instrument addition to an existing flight request. Costs related to integration and other mission peculiar costs for the piggyback instrument will be the responsibility of the piggyback group. The goals of the piggyback instrument cannot change flight track. Piggybacks are essentially along for the ride, as the flight tracks are determined by the primary FR owner.

Contract Grant #: If the flight request is funded, please include the name of the contract or the NASA grant number.

NASA Funded: Select Yes of No.

ROSES Call: If this is being submitted as part of a NASA Research Opportunities in Space and Earth Sciences (ROSES) call, select Yes and enter the call number into the field provided.

Flight Hours Requested: The number of actual flight hours requested to obtain the needed measurements. This figure should not include time for integration.

Rationale for use of NASA Facilities: NASA maintains a fleet of unique, highly modified, science capable aircraft. This information should explain why NASA aircraft are appropriate for the observations requested. If a NASA instrument is being used, its use should also be explained here.

STEP 2 Complete a Flight Request (Cont.)

PI & Funding   View - Hide - Edit

Principal Investigator
Select a listed PI:

Search for last name   / Select from list

[ ]   [--- ▲▼]

Or ☐ I am the PI

Or Create a new Principal Investigator.

PI – Choose from one of the three options. Please note, you can have someone else submit the FR (the author) and list you as PI. Both of you will then have access and edit permissions. If you are not the PI and the PI is not in the list provided, choose "Create a new Principal Investigator" and fill out the additional information.

Funding Source ⓘ
Add a Funding Source from the list:

[--- ▲▼]

Or Create a new Funding Source.

FUNDING SOURCE – Select from the drop down list of Program Managers and/or Funding Sources.

NASA HQ Science Concurrence ⓘ
Add a NASA HQ Science Concurrence from the list:

[--- ▲▼]

Or Create a new NASA HQ Science Concurrence.

NASA HQ SCIENCE CONCURRENCE - This shows a dropdown list of NASA Program Managers and their disciplines. To get the NASA rate for flight hour costs, you must have a NASA SMD Funding Source or a NASA SMD Science Concurrence. If NASA SMD is not the funding source, please select a name from the NASA HQ Science Concurrence list *only if* the Program Manager has already agreed to provide the concurrence.

If the appropriate Funding Source or NASA HQ Science Concurrence is not listed in the dropdown, please note you can request an addition be made to the list. Select "Create a new Funding Source/NASA HQ Science Concurrence" to do so. Upon approval, they will automatically be added to your FR.

> NOTE: When new PIs / Funding Sources / Science Concurrence are submitted, SOFRS will notify the curators. The request must be reviewed and approved by the curator(s) before the addition to the SOFRS system is final.

Associated Users ⓘ
Add a new associated user:
Search for last name   / Select from list

[ ]   [--- ▲▼]

ASSOCIATED USER – This category is for adding team members who need to access the Flight Request or file Flight Reports (see Step 7 for more information). You can give view or edit permissions, as well as add team members to the list of personnel notified of any Flight Request changes. This person must have a SOFRS account, and could be useful for a Co-Investigator or Project Manager.

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STEP 2 Complete a Flight Request (Cont.)

Science Objectives and Mission Concept-of-Operation   View - Hide - Edit

Science Objectives: ⓘ

Mission Concept-of-Operation: ⓘ

Science Objectives: Please describe in as much detail as possible the overall science goals of the requested flight(s).

Mission Concept-of-Operation: Briefly describe the operation of the payload and the proposed flight operations required to meet the science objectives of the mission.

Supported Satellites   View - Hide - Edit

☐ **None**

Add satellite: ⓘ   --- ▲▼

Specific Requirements:
ⓘ

Add Satellite: Please select any satellite mission(s) that will be supported by this Flight Request (e.g., will be calibrated or validated by some or all of the flights).

Specific Requirements: Please provide any additional information about how satellite requirements will affect the requested flights, including details about necessary satellite overpasses.

Additional Contact   View - Hide - Edit

This field provides the aircraft leads with an additional contact who is not already listed in this FR. (This field has been modified from "advanced notification" to "additional contact").

None have been provided yet. Click here to create a new additional contact.

Additional Contact: You can add other members of your team that can be an alternate point of contact for the aircraft team.

STEP 2 Complete a Flight Request (Cont.)

Aircraft: This selection provides a list of the ASP Supported Aircraft and other commonly used aircraft. Please select the aircraft you would like to use from the list. For unlisted NASA aircraft or for independently contracted aircraft select the "Other" option, and type in the aircraft's make/model.

Some listed aircraft have multiple options --if you do not know which one to use (or don't care which one is used), please select the "Any" option. In that case, the aircraft leads for all of that type of aircraft will be notified, and they will contact you to clarify the requirement once the request has been submitted.

If you are using a non-NASA aircraft, an Airworthiness Review will need to be completed by a NASA center. The Aircraft Safety Offices at one of the NASA Centers will contact you after your FR is submitted and prior to your flight dates. If your flights will take place in international territories, the process may take several months.

Multi-Aircraft Mission: If there will be more than one aircraft participating in the mission, please check this box. Remember that each FR is specific to an aircraft and a fiscal year.

Mission Location: NASA Center(s)/State(s)/Country(ies) of main collection sites

Foreign Airspace: Please check this box if the mission requires flying over and/or will be based in foreign airspace/territory

Instrument Communication via Satellite: Please indicate whether the instrument will require real-time downlink from the aircraft (such as INMARSAT, Iridium, or Ku) during these flights. If it does, you will then be asked to indicate the required bandwidth configurations (high, low, or both). Please note that costs for low bandwidth are covered by the ASP program, while high bandwidth may incur additional costs, depending on bandwidth and total hours required.

Bandwidth: If you know specifically what bandwidth types you'll be using please specify here, otherwise please discuss this with the aircraft and instrument teams to determine what options are available to you.

STEP 2 Complete a Flight Request (Cont.)

Instrument: Select the instrument that you wish to use from the list. If you do not see your desired instrument, select "other" and type the instrument name into the box that appears. Facility instruments are supported by the ASP, but others may require the PI to contact the instrument lead directly. **Instrument Concurrence:** Some instruments, (i.e. AVIRIS, UAVSAR) have NASA HQ sponsors who will need to give their permission for the use of the instrument. This is known as Instrument Concurrence. Please note, data processing fees may not be covered even if Instrument Concurrence has been granted.

New Integration: Indicate if the instrument has been integrated into the selected aircraft before.

Ground Resolution or Altitude: For remote sensing missions, please indicate the maximum ground pixel resolution that will achieve the science objectives.

Comments: Any additional instrument specific information/requests should be included here.

FLIGHT PLANS: Insert flight lines, boxes, or points when they are available. If you have flight plans already generated, which is often the case with the UAVSAR instrument, then you may skip this section and attach a *kml* file with the proposed flight plan to the "Attached Files" section. Another option is to put a link to another website with the proposed flight plan in the "Additional Comments" section for Data Collection Window (shown below).

STEP 2 Complete a Flight Request (Cont.)

Data Collection Window   View - Hide - Edit

Create new data collection window:

Start Date ⓘ [ ]	End Date [ ]
Time of Day: ⓘ [ ]	Weather Conditions: ⓘ [ ]
Ground Condition: ⓘ [ ]	Tidal Cycle: ⓘ [ ]
Cloud Cover: ⓘ [ ] %(Max)	Sea State: ⓘ [ ]
Sun Angle Limits: ⓘ [ ]	

Other Observation Requirements or Additional Comments: ⓘ

[   ]

Save new data collection window   Cancel

Start Date/End Date: Dates must be entered in mm/dd/yyyy or mm-dd-yyyy format of the fiscal year of the Flight Request. Please update this information as dates become finalized. It is important to be sure your Flight Request is approved well before your flight window begins.

Time of Day: Indicate particular weather conditions that are either required for mission success, or conditions that need to be avoided in order to gather scientifically useful data.

Weather Conditions: Describe observational requirements as they relate to ground cover type, phenology, etc.

Ground Condition: Describe the observational requirements as they relate to ground cover type, phenology, etc.

Tidal Cycle: For measurements in the coastal zone, indicate whether high or low tide conditions are desired.

Cloud Cover: Please indicate the maximum amount of cloud cover that is permissible as a percent of total cover (100% is complete cloud cover).

Sea State: Please describe the observational requirements as they relate to the height, period, and character of waves on the surface of a large body of water.

Sun Angle Limits: Please indicated any limitations to the measurement introduced by high or low sun angles.

Attached Files   View - Hide - Edit

New attachment: [Choose File] no file selected   [Upload]
No attached files

Attached Files – You may also attach files, including flight plans, if needed.

STEP 3 Submit the Flight Request

When you are done filling in the Flight Request press "Submit Request" at the bottom of the page.

Alternatively, if you are not done filling out the Flight Request, you can save your work by clicking "Save for Later." No one else will see the Flight Request until you have submitted it. As soon as the Flight Request has been submitted, SOFRS will notify the curators. The curators will, in turn, assign a Flight Request log number.

If information needed to complete the flight request is missing, a note will appear identifying the missing items. This will not stop the submittal of the FR, but is a reminder that more information will be required for approval to be granted.

The SOFR system will notify the aircraft leads for the aircraft you choose and, if you've chosen one of the facility instruments, that lead will also be notified. The Aircraft Leads will then contact you to discuss the details of your request. If you need to reach them, their contact info is in the current Call Letter (https://airbornescience.nasa.gov/asp_call_letter).

The SOFR system will also notify the NASA HQ Science Concurrence, Instrument Concurrence, Funding Source(s), and the SOFRS curators. You will receive an email showing your Flight Request has been submitted. There will be a PDF of the Flight Request attached. If you wish to get an updated version of the PDF you can use the button at the bottom of the FR page as well.

FRs remaining "un-submitted" for more than 3 months can be deleted at the discretion of the curators. If a PI is listed in the FR, the PI will be contacted before the un-submitted FR is deleted.

Submitted FRs will never be deleted. They can be deferred or canceled, but the record will still be in the system and can be viewed by those associated with the Flight Request.

STEP 4   Editing the Flight Request

The FR is considered a "living document" and will be updated throughout the approval process. All changes must be made to the Flight Request in SOFRS. To have access to your FRs, when logged into the SOFR system, click on "Flight Requests" and select the appropriate log number from your list. Changes to the FR are saved as they are entered. When you are done making revisions, click "Save Changes" at the bottom of the screen and it will take you back to the main page.

If major revisions are made to the FR; you; the aircraft and instrument leads, sponsor, and curators will be notified by email. Changes to the following are considered major revisions:

1. Log Number
2. Instrument
3. Funding Source/NASA Science Concurrence
4. Status
5. Flight Lines
6. Aircraft
7. PI
8. Flight Hours Requested
9. Estimated Cost
10. Flight Hours for Approval
11. Location
12. Supported Satellites

Several edits may occur at the same time or on the same day. To avoid numerous mass email notifications, edits will be collected at midnight and only one email for each FR will be sent out. The email will identify the FR with Log #, PI name, Experiment Title, Grant #(if available), and a list of the categories changed will be in the text. It will also have the URL for the website and a PDF of the Flight Request attached.

STEP 5   Schedule Flight(s) and Coordinate Experiment

After your Flight Request Log Number has been issued, you should begin coordinating the Instrument Lead, the Aircraft Lead and any other relevant parties.

STEP 6   Review and Approval Process

After the Aircraft/Instrument Leads have discussed the FR with the PI and created an estimated number of flight hours to be approved, as well as an overall cost, this information is added to the FR by the aircraft lead. The curators then request approval of the funds from the funding source you've listed as well as approval of the use of the aircraft from the Airborne Science Program Director. Once these approvals are confirmed, the curators will change the status of the FR from OPEN to APPROVED.
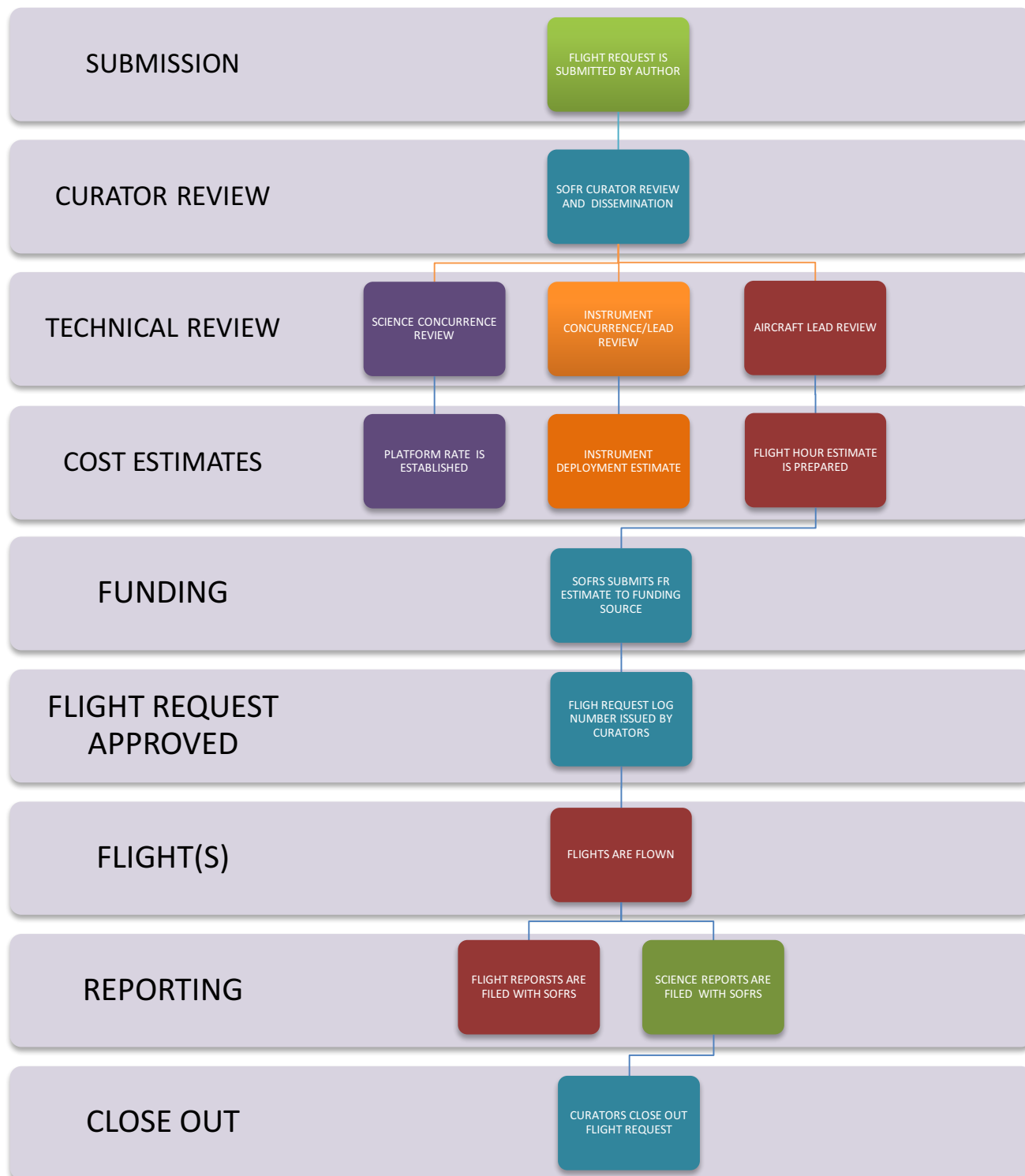
Again, if using a non-NASA aircraft, an airworthiness review by one the NASA Centers is required before the FR can be approved. The safety board leads are automatically notified and should contact the PI to schedule the

review. If the flights will take place in international territories, the process is likely to take several months. Please notify the curators if you do not hear from a safety representative in a timely manner.

Note: Once the Flight Request status is "Approved", the FR cannot be edited. If changes are needed, please contact the curators.

Flight Requests must have a log number that reflects the fiscal year in which it will fly. If a Flight Request slips from one fiscal year to the next (example: Sept 17 to Oct 18), the curators must rollover the FR to FY18 and give it a new log number, beginning with the number 18. If at any point in the process the curators are notified that the FR is deferred or canceled, the FRs status will be changed accordingly.

OVERVIEW OF FLIGHT REQUEST PROCESS
FOR A PREVIOUSLY INTEGRATED INSTRUMENT ON NASA AIRCRAFT IN DOMESTIC AIRSPACE

| Stage	
SUBMISSION	FLIGHT REQUEST IS SUBMITTED BY AUTHOR
CURATOR REVIEW	SOFR CURATOR REVIEW AND DISSEMINATION
TECHNICAL REVIEW	SCIENCE CONCURRENCE REVIEW · INSTRUMENT CONCURRENCE/LEAD REVIEW · AIRCRAFT LEAD REVIEW
COST ESTIMATES	PLATFORM RATE IS ESTABLISHED · INSTRUMENT DEPLOYMENT ESTIMATE · FLIGHT HOUR ESTIMATE IS PREPARED
FUNDING	SOFRS SUBMITS FR ESTIMATE TO FUNDING SOURCE
FLIGHT REQUEST APPROVED	FLIGH REQUEST LOG NUMBER ISSUED BY CURATORS
FLIGHT(S)	FLIGHTS ARE FLOWN
REPORTING	FLIGHT REPORSTS ARE FILED WITH SOFRS · SCIENCE REPORTS ARE FILED WITH SOFRS
CLOSE OUT	CURATORS CLOSE OUT FLIGHT REQUEST

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STEP 7 Reporting

Flight Reports
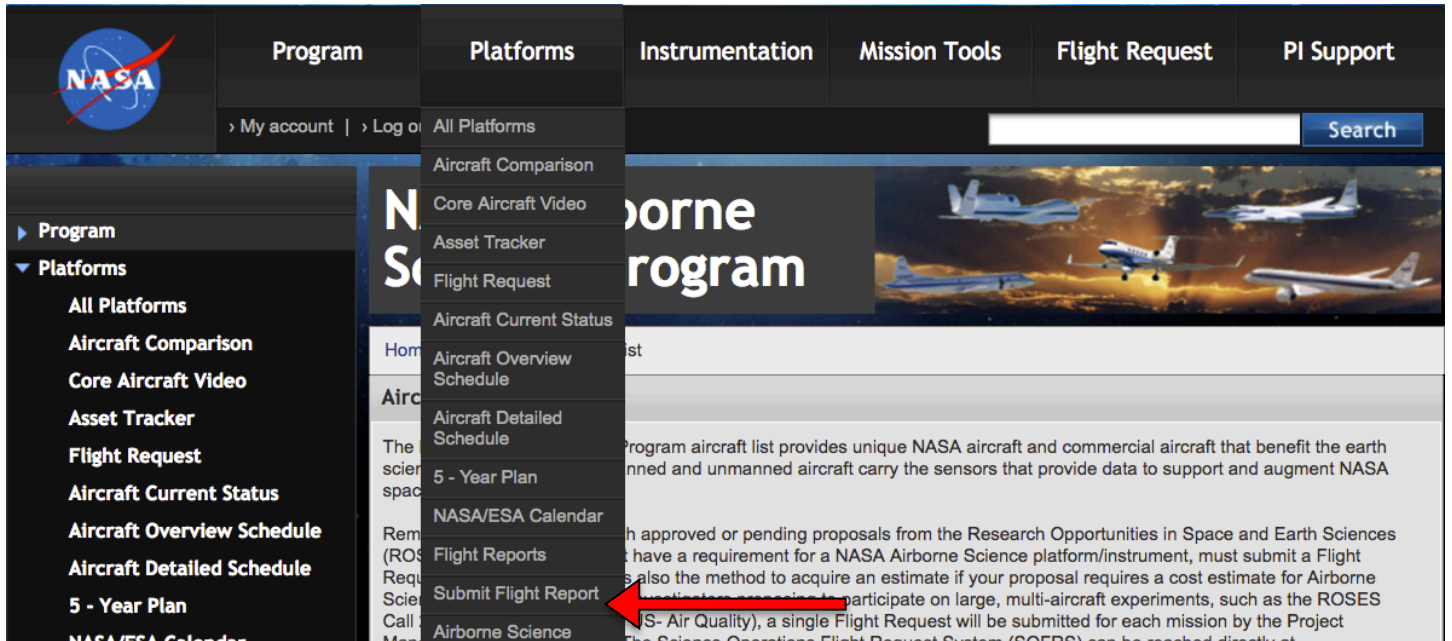
The timely submission of Flight Reports is required for the use of the NASA assets and facilities. Flight Reports for NASA Aircraft are submitted by the aircraft lead. If your Flight Request is not utilizing one of the NASA aircraft listed, it may be classified with a log number that has "M" for miscellaneous. In this case you will receive an email that will notify you that you are responsible for submitting a Flight Report after each flight. A Flight Report can be submitted by the person who submitted the Flight Request, the PI, or a team member listed in the Associated Users section and has been given the appropriate permissions. The flight report form is on the Airborne Science Program website. To learn how to submit a Flight Report visit http://airbornescience.nasa.gov/content/How_To_Submit_Flight_Reports
Please contact the curators with any questions.

Science Reports

The Airborne Science Program is now providing an online form for Science Reports. Your login is the same as your login to SOFRS. As with the Flight Report above, a Science Report can be submitted by the person who submitted the Flight Request, the PI, or an Associated User, who has been given permission to edit the Flight Request.
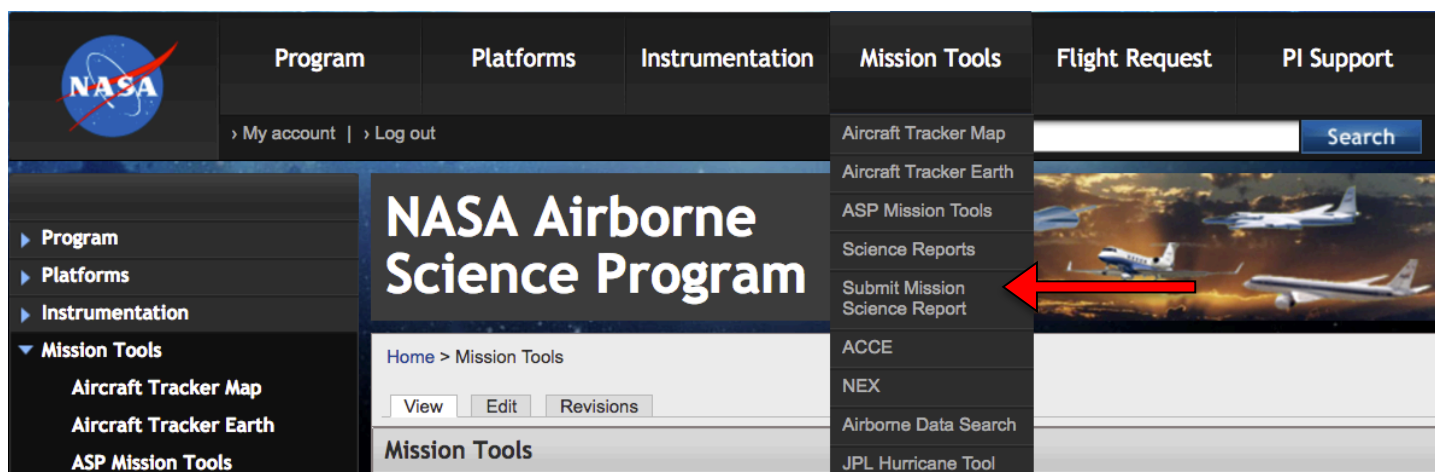
STEP 8   Flight Request Close Out

When the last flight report is entered, please check the "Completes Flight Request" box on the flight report. The SOFRS curators will then change the status of the FR from APPROVED to COMPLETE.

For more information and questions, please contact the SOFRS curators.

Vidal Salazar (vidal.salazar@nasa.gov) and Sommer Beddingfield (sommer.l.beddingfield@nasa.gov).