

AIRBORNE SCIENCE PROGRAM
FLIGHT REQUEST PROCEDURES



NASA Science Mission Directorate

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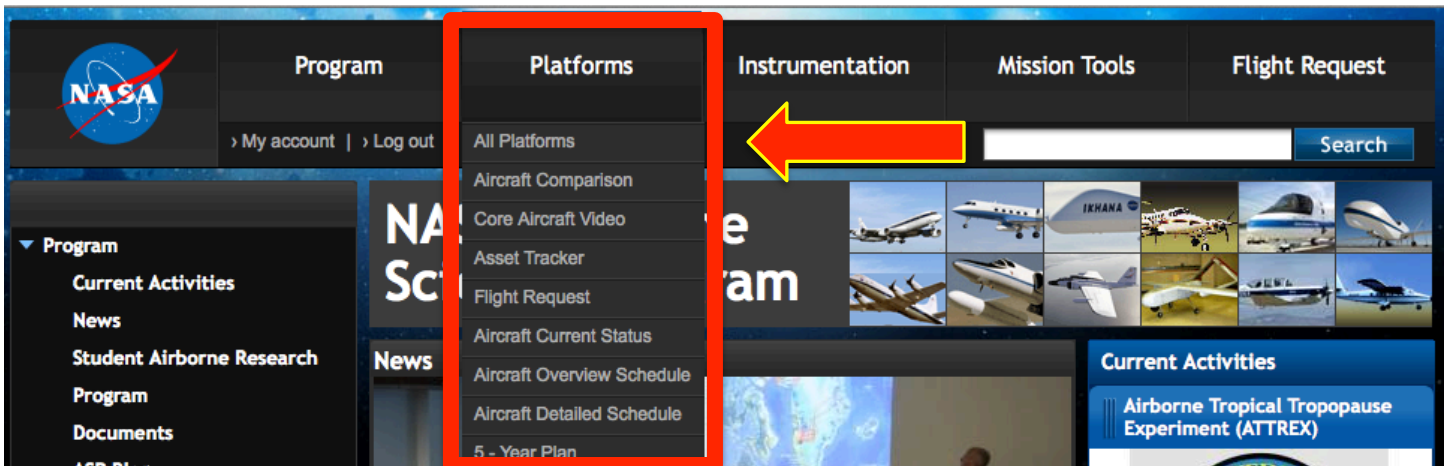
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Before You Begin...

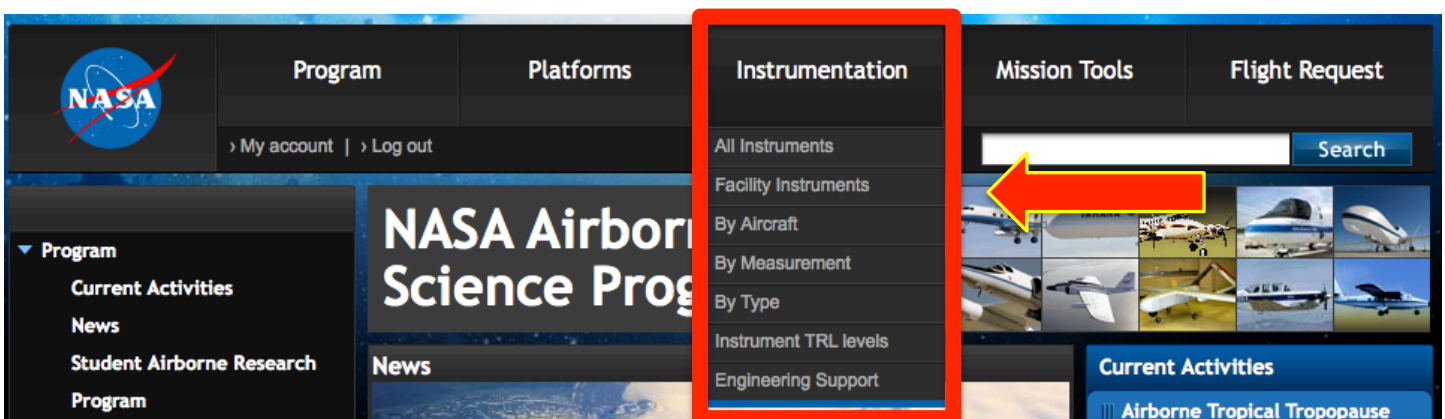
If you don't know which aircraft or instrument you want to use you can start here.

To determine the correct aircraft (platform) and instrument(s) for the experiment visit the Airborne Science Program (ASP) website at, <https://airbornescience.nasa.gov/>. Here you will find information pertaining to NASA's core and contract aircraft, as well as, NASA's airborne science facility instruments.

For information on the aircraft available, hover over "Platforms" then click on "All Platforms" in the top bar to view the list of aircraft. Each aircraft has a page with information to help you confirm the associated aircraft's capabilities will conform to the experiment requirements. There is information regarding platform payload and flight operation specifications, current schedules, and asset home base of operations.



You can hover over "Instrumentation" and then click on "Facility Instruments" at the top bar to access the list of facility instruments currently supported by ASP. "All Instruments" is a list of other instruments that have supported the Airborne Science Program in the past, but may or may not be currently available.



There is an annual call letter to announce yearly costs and contact information for the ASP Supported Aircraft, Other NASA Aircraft, Other Federal Aircraft and recently used Commercial Aircraft listed in the "Platform" section. It can be found at the same website. Below the left hand menu you will find the "Documents" box; click on "Call Letter".

STEP 1 Log into SOFRS

All Flight Requests are entered into the Airborne Science Program’s Science Operations Flight Request System (SOFRS). SOFRS is managed by Steven Todorov (steven.m.todorov@nasa.gov) and administered by Sommer Beddingfield (<mailto:sommer.l.beddingfield@nasa.gov>). Please contact them with any questions. If you have an active Flight Request (FR), please include the log number in the subject of the email.

SOFRS

Go to the website <https://airbornescience.nasa.gov/sofrs/> by clicking on “Flight Request” on the top right bar of the ASP website.

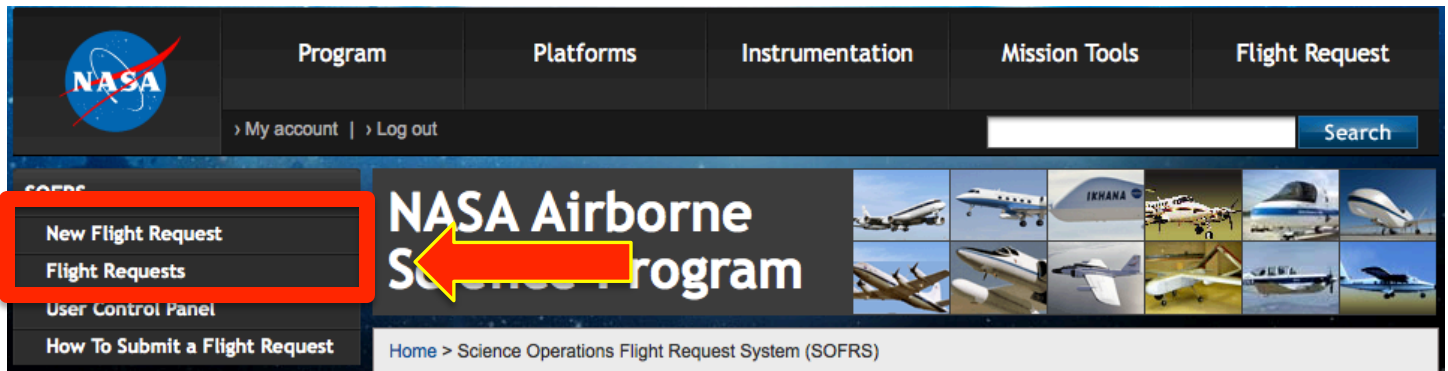
The screenshot shows the NASA Airborne Science Program website. The top navigation bar includes links for Program, Platforms, Instrumentation, and Flight Request. The Flight Request link is highlighted with a red box and a yellow arrow. Below the navigation bar, there is a search bar and a main content area. The main content area features a grid of images of various aircraft and a section titled "Science Operations Flight Request System (SOFRS)". The SOFRS section contains text about accessing NASA Airborne Science Platforms and Instruments, and a "User login for SOFRS" section on the left sidebar. The "User login for SOFRS" section is highlighted with a red box and contains fields for Username and Password, along with links for "Create new account" and "Request new password". A yellow arrow points to the "ASP" text in the main content area.

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

If you’ve forgotten your username or password, click on “Request new password”. Enter your username, or if you’ve forgotten your username enter your email address into the form provided. You will receive an email with your Username and a one-time log in link. Follow the instructions in the email to reset your password.


STEP 2 Create a Flight Request

After you've logged in, click "New Flight Request" and fill out the form. Please note that "Flight Requests" is a link to a running list of the Flight Requests 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, sensor, 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.

The SOFRS reporting is based on the fiscal year (designated by the first two digits of the log number) and 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 so you don't have to enter the information for a second or third 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.

SOFRS Home > New Flight Request

New Flight Request 18 Feb, 2014 View - Hide - Edit

General Info

Project Title: Fiscal Year:

Request Type: Contract Grant # (if applicable):

NASA Funded:

ROSES Call: No

Flight Hours Requested (if known):

Rationale for use of NASA Facilities:

FR ID: 20140218-160036

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.](#)

Funding Source

Add a Funding Source from the list:

Or [Create a new Funding Source.](#)

NASA HQ Science Concurrence

Add a NASA HQ Science Concurrence from the list:

Or [Create a new NASA HQ Science Concurrence.](#)

Associated Users

Add a new associated user:

Search for last name / Select from list

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

Science Objectives:

Mission Concept-of-Operation:

Supported Satellites View - Hide - Edit

None

Add satellite:

Specific Requirements:

STEP 2 Create a Flight Request (Cont.)

New Flight Request 3 Feb, 2014

General Info View - Hide - Edit

Project Title: Fiscal Year:

Request Type: Contract Grant # (if applicable):

NASA Funded:

ROSES Call:

Flight Hours Requested (if known):

Rationale for use of NASA Facilities:

FR ID: 20140203-100925

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

Fiscal Year: The US Government fiscal year is from October 1st – Sept 31st. 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 the flight track. Flight tracks are determined by the primary FR owner, not the piggyback.

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

NASA Funded: See above.

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 sensor is being used, its use should also be explained here.

STEP 2 Create 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, if you are not the PI and the PI is not in the list provided, please fill in the information requested under “create a new Principal Investigator”. You can have someone else submit the FR (the owner) and list you as PI. Both of you will then have access and edit permissions.

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 drop down 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 only select a name from the NASA HQ Science Concurrence pull down if the Program Manager has already agreed to provide the concurrence.

If the PI, Source or Concurrence are not listed in the drop down list then choose “Create a new Principal Investigator/Funding Source/NASA HQ Science Concurrence” to request they be added to the list.

NOTE: When new PIs / Funding Sources / Science Concurrence are submitted, SOFRS will notify the curators. The request must be processed 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. You can give view or edit permissions for the FR, mail permissions so that they are notified of any Flight Request changes, and Flight Report permissions (see step 7). This person must have a SOFRS account and could be useful for a Co-Investigator or Project Manager.

STEP 2 Create 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). If no satellites will be supported, please mark None.

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 contact for the aircraft team.

STEP 2 Create a Flight Request (Cont.)

Aircraft
View - Hide - Edit

For more information on ASP Supported Aircraft, Other NASA Aircraft, and the sensors listed here, please view the Airborne Science Portal Platforms and Instrumentation pages.

Aircraft: i

Multi-Aircraft Mission: i

Mission Location: i

Foreign Airspace: i

Instrument Communications via Satellite: i Yes No Don't know

Bandwidth: i Low High Both

Comments Regarding Bandwidth:

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 "Other" and type in the aircraft 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 Aircraft Flight Safety Review will need to be completed. 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 processes will take several months.

Multi-Aircraft Mission: If there will be more than one aircraft participating in this 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

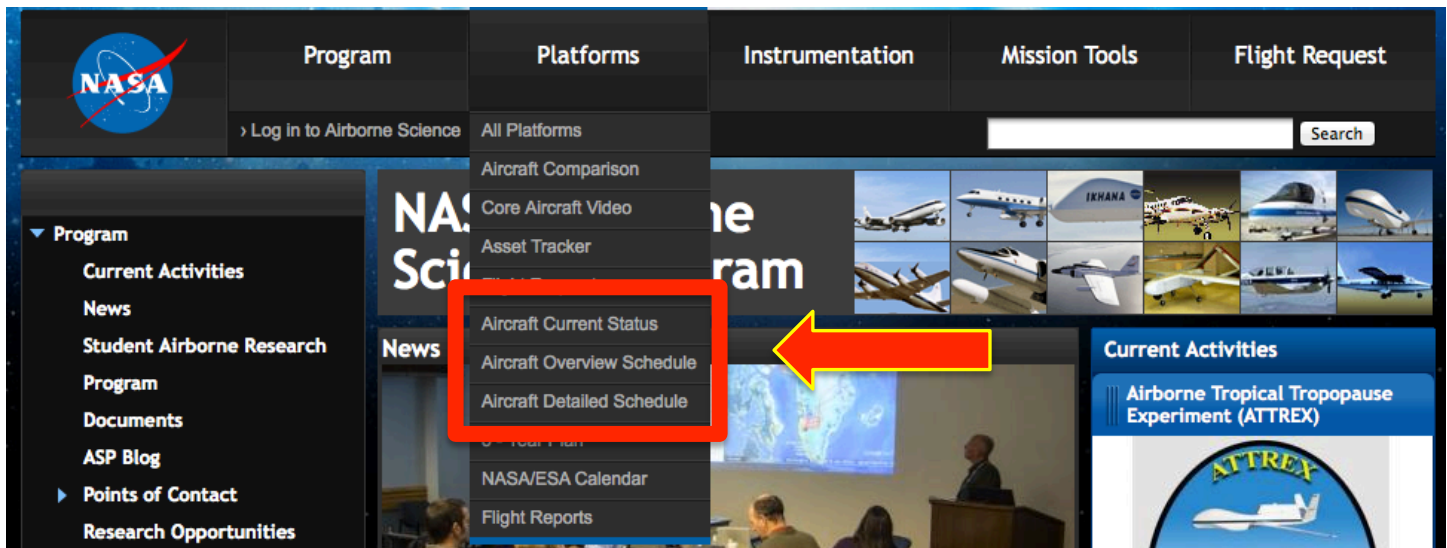
Foreign Airspace: Please check this box if the mission requires flying over or will be based in foreign airspace/territory


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 whether high, low or both bandwidth configurations will be required. 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 when they contact you.


STEP 2 Create a Flight Request (Cont.)

You may view aircraft availability by looking at the Overview and Detailed schedules of the NASA Airborne Science Program (ASP) aircraft on the ASP site under “Platforms”. These schedules will give you a general idea of the aircraft’s availability, but you will need to discuss your schedule with the aircraft manager when they contact you.



Sensor: 

New Integration?: Yes No Don't know

Ground Resolution or Altitude (if applicable): 

Comments:

[Save sensor](#) [Cancel](#)

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 the others will require the PI to contact the instrument lead directly. Some instruments (i.e. AVIRIS, UAVSAR) have HQ sponsors who will need to give their permission for use of the instrument (Instrument Concurrence). See step 3 for more info on Instrument Concurrence.

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.

STEP 2 Create a Flight Request (Cont.)

Flight Plans	View - Hide
Flight Lines	View - Hide - Edit
<i>None have been provided yet. Click here to create a new Flight Line</i>	
Flight Boxes	View - Hide - Edit
<i>None have been provided yet. Click here to create a new Flight Box</i>	
Flight Points	View - Hide - Edit
<i>None have been provided yet. Click here to create a new Flight Point</i>	

FLIGHT PLANS: Insert flight lines, boxes, or points when they are available. If you have flight plans already generated, such as 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.

Data Collection Window		View - Hide - Edit	
Create new data collection window:			
Start Date ⓘ	<input type="text"/>	End Date	<input type="text"/>
Time of Day: ⓘ	<input type="text"/>	Weather Conditions: ⓘ	<input type="text"/>
Ground Condition: ⓘ	<input type="text"/>	Tidal Cycle: ⓘ	<input type="text"/>
Cloud Cover: ⓘ	<input type="text"/> %(Max)	Sea State: ⓘ	<input type="text"/>
Sun Angle Limits: ⓘ	<input type="text"/>		
Other Observation Requirements or Additional Comments: ⓘ			
<input type="text"/>			
Save new data collection window			Cancel

Start Date/End Date: Dates must be entered in mm/dd/yyyy or mm-dd-yyyy format. 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.

STEP 2 Create a Flight Request (Cont.)

Attached Files View - Hide - Edit

New attachment: no file selected

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.


Attached Files View - Hide - Edit

New attachment: no file selected

No attached files

[Save for Later](#) [Generate PDF](#) 

  + Freedom of Information Act
+ Budgets, Strategic Plans and Accountability Reports
+ The President's Management Agenda
+ NASA Privacy Statement, Disclaimer,
and Accessibility Certification

 Webmaster: Erin Justice
NASA Official: Bruce Tagg
Last Updated: July 13, 2012
+ Contact NASA

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 your FR 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 the FR a 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 Call Letter.

The SOFR system will also notify the NASA HQ Science Concurrence, Instrument Concurrence, Funding sponsors, 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 SOFRS 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 page.

If major revisions are made to the FR; you; the aircraft and instrument leads, Funding Source, Science Concurrence 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 # and ID #, 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 and Coordinate Experiment

After your Flight Request Log Number has been issued, you should be contacted by the aircraft leads to begin coordinating the flight planning.

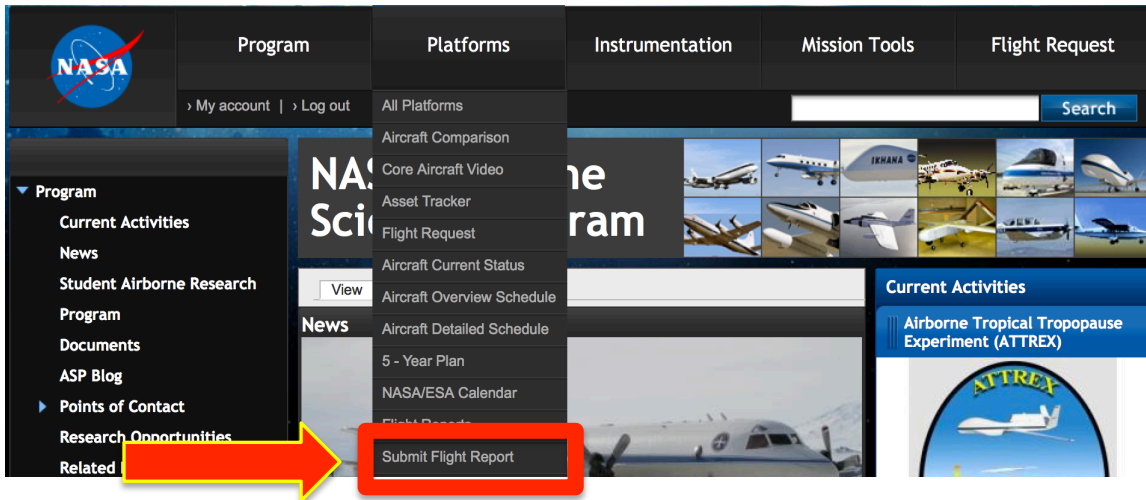
STEP 6 Review and Approval Process

After the aircraft lead has discussed the FR with the PI and created an estimated number of flight hours to be approved, as well as, an overall cost estimate, this information is added to the FR by the aircraft lead. The curators then request approval from the funding source listed (science and instrument concurrence if appropriate) and approval of the use of the aircraft from the Airborne Science Program Manager. Once these approvals are confirmed, the curators will change the status of the FR from OPEN to APPROVED.

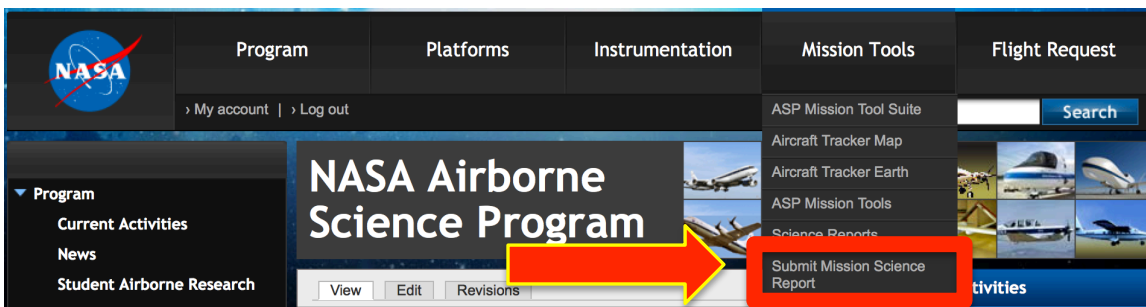
If using a Non-NASA aircraft, a safety review by one of the aircraft safety boards at a NASA Center is required before the FR can be approved. The safety board leads are automatically notified and should contact the PI to schedule the review. If the flights will take place in international territories, the process is likely to take several months. 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.

A Flight Request must have a log number that reflects the fiscal year in which it will fly. If a FR slips from one fiscal year to the next (example: Sept 15, 2014 (FY14) to Oct 15, 2014 (FY15)) it has now become a FY15 Flight Request and the curators must roll the FR to FY15 and give it a new log number, beginning with the number 15. 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.

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 person listed in the Associated Users section who has been given 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
Your login is the same as your login to SOFRS.

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. A Science Report can be submitted by the person who submitted the Flight Request, the PI, or an Associated User, who has been given the appropriate permissions.

STEP 8 Flight Request COMPLETE

When the last flight report is entered, the person submitting the Flight Report, usually the aircraft lead, checks the “Completes Flight Request” box on the flight report. The SOFRS curators will then change the status of the FR to COMPLETE.

The screenshot shows a web form for flight requests. It includes the following elements:

- Flight Time***: A text input field containing the value "17.5".
- Log Number**: A text input field containing the value "12X001".
- Completes Flight Request**: A checkbox that is checked, highlighted with a red rectangular box. Below it is the instruction: "Check this box if this is the last flight for the identified flight request. This will set the status to Completed in the Flight Request system."
- Total Hours Flown**: A text input field containing the value "43.5". To its right is a red-bordered box containing the text: "This is the final number that will be used as total hours flown for the associated flight request. Please confirm it is correct and update here if needed."
- Principal Investigator**: A label for a text input field, which is currently empty.

SOFRS is managed by Steven Todorov (steven.m.todorov@nasa.gov) and administered by Sommer Beddingfield (<mailto:sommer.l.beddingfield@nasa.gov>). Please contact them with any questions. If you have an active Flight Request (FR), please include the log number in the subject of the email.

OVERVIEW OF FLIGHT REQUEST PROCESS

FOR A PREVIOUSLY INTEGRATED INSTRUMENT ON NASA AIRCRAFT IN DOMESTIC AIRSPACE

