



Introduction

Student teams can monitor and operate their payloads remotely during HASP flight operations. During operations, a member of the HASP management team will be logged in to the HASP Ground Station (GSE), referred to as the HASP Operator, monitoring these interfaces to communicate with teams.

Teams request commands and power operations from the HASP operator using the **HASP Commanding Web App**. This was previously accomplished via a **Google Sheets spreadsheet**, which still serves as a backup for the web app.

Downlinked payload data, GPS tracking, and HASP Housekeeping Data (temperature, voltages, and currents) can be accessed from the **HASP website**.

Teams are expected to actively monitor both of these interfaces during Thermal Vac(TV) tests and flight operations. Even teams without active commanding should be logged in, monitoring downlink telemetry. During TV tests, teams are expected to demonstrate that their payload is functioning, using plots, logs, etc., to be certified flight-ready.

Be aware that flight operations typically start at 3:00 AM MDT and may last longer than 24 hours. It is recommended that teams set up a shift schedule to monitor their payload.

HASP Commanding Web App

<https://hasp-command-hub.lovable.app>

General notes:

The web app does not directly interface with the HASP hardware or software. It is monitored by the HASP Ground Station operator, who will uplink requested commands, control payload power, or provide status updates to teams.

All times are given in 24-hour format, in the UTC timezone. Date format is MM/DD/YYYY. Local time in Palestine (PSN) for HASP Integration will be CDT (UTC-5). Local time in Ft. Sumner for HASP Flight will be MDT (UTC-6).

1. Interface Sections Overview

1.1. When you open the commanding page you will see four major sections.

At the top is the payload status summary. This section provides a quick overview of the status of all 24 payloads.



HASP Data and Commanding Interface



Below that is the Overall HASP Status Log. This is where the HASP Operator will post status updates that affect all teams, such as the launch timeline or TV Chamber changes.

Below the HASP Status log are the individual team payload cards numbered from 1 to 24. This is where teams will log in and communicate with the HASP Operator.

On the right-hand side is the command queue. There are three separate queues, one for commands waiting to be sent (pending), one for commands successfully sent (executed), and one for canceled commands(canceled).

The screenshot displays the HASP Command Interface. At the top, there are tabs for 'HASP FLIGHT DATA', 'HASP VIDEO STREAM #1', 'HASP VIDEO STREAM #2', and 'HASP VIDEO STREAM #3'. The main interface is divided into several sections:

- STATUS SUMMARY:** A section with a 'STATUS LEGEND' and a grid of payload cards (Payload #01 to #24). Each card shows its current status (e.g., 'PAYLOAD FUNCTIONING NORMALLY', 'PAYLOAD NOT FUNCTIONING', 'COMMAND REQUESTED').
- OVERALL HASP STATUS LOG:** A scrollable log of status updates from HASP, including launch timeline and TV Chamber changes.
- Pending Command Queue:** A list of commands waiting to be sent, including 'T01 #x1231', 'T02 #x3344', 'T03 #x2334', 'T04 #x3457', 'T05 #x3468', 'T06 #x3467', 'T07 #x5663', and 'T08 #x4678'.
- Executed Commands:** A list of commands that have been successfully sent, including 'T01 #x0803', 'T02 #x0804', 'T03 #x0805', 'T04 #x0806', 'T05 #x0807', 'T06 #x0808', 'T07 #x0809', and 'T08 #x0810'.
- Canceled Commands:** A list of commands that have been canceled, including 'T01 #x0811', 'T02 #x0812', 'T03 #x0813', 'T04 #x0814', 'T05 #x0815', 'T06 #x0816', 'T07 #x0817', and 'T08 #x0818'.
- OPERATOR LOGIN:** A section for the operator to log in, with fields for 'OPERATOR CODE' and a 'Login' button.

Figure 1: Example screenshot of the HASP Student Command interface. This image shows the interface in the middle of an active flight or TV Test, with commands in the queue, payloads powered on, status messages, and

At the top of the page, there are also links to the HASP Website and the Flight Camera YouTube livestreams for quick access to the flight data and video.



HASP Data and Commanding Interface



The screenshot displays the HASP Command Interface. At the top, there are tabs for 'HASP FLIGHT DATA', 'HASP VIDEO STREAM #1', 'HASP VIDEO STREAM #2', and 'HASP VIDEO STREAM #3'. The main section is titled 'STATUS SUMMARY' and includes a 'STATUS LEGEND' with color-coded boxes: 'HASP IS REQUESTING STATUS UPDATE FROM TEAM' (purple), 'COMMAND REQUESTED' (blue), 'COMMAND SENT' (green), 'PAYLOAD FUNCTIONING NORMALLY' (light green), 'PAYLOAD FUNCTIONING REDUCED' (red), 'PAYLOAD NOT FUNCTIONING' (dark red), and 'TEAM LOGGED IN MONITORING PAYLOAD' (cyan). Below the legend is a grid of 24 payload status blocks, each labeled 'Payload #01' through 'Payload #24' with a 'PWR OFF' indicator. To the right of the grid is a 'PENDING COMMAND QUEUE [0]' section with 'No pending commands...' and an 'OPERATOR LOGIN' section with an 'OPERATOR CODE' input field and a 'Login' button. Below the grid is an 'OVERALL HASP STATUS LOG' section with 'No HASP status messages yet.'. At the bottom, three detailed payload status cards are shown for 'Payload #01', 'Payload #02', and 'Payload #03'. Each card displays 'CURRENT PAYLOAD STATUS: HASP IS REQUESTING STATUS UPDATE FROM TEAM', 'CURRENT POWER STATUS: OFF 19/06/2026 21:44:26 UTC', an 'ACCESS CODE' input field, a 'MESSAGE LOG' section with 'No messages yet.', and 'Locked'/'Unlock' buttons.

Figure 2: Example screenshot of the HASP Student Command interface. This is what the display should look like when it is opened at the start of a launch attempt or TV Test. At this point, no commands are entered, all payloads are powered off, and the operator is waiting for teams to change their status to “Team logged in ...”

2. Status Summary

- 2.1. The color of each payload block shows the current status; the legend is shown above the payload blocks.
- 2.2. The power status for each payload is shown below the payload number.
- 2.3. The first few characters of the most recent entry from the individual payload message log are shown below the power status.
- 2.4. Clicking on a payload block will jump to the matching Team Payload Card.

3. Overall HASP Status Log

- 3.1. The HASP Operator will type general status updates here. These will give big picture updates, like the stages of the launch or the current step of the TV Test.
- 3.2. Each update is time-stamped
- 3.3. Past updates can be viewed by scrolling up.

4. Team Payload Card

4.1. Logging in

- 4.1.1. Each team will be provided a 6-digit access code to log in to their Payload Card.

This is a close-up of a payload card for 'Payload #01'. It shows 'CURRENT PAYLOAD STATUS: HASP IS REQUESTING STATUS UPDATE FROM TEAM' in a purple box. Below this is 'CURRENT POWER STATUS: OFF 19/06/2026 21:44:26 UTC'. There is an 'ACCESS CODE' input field and an 'Unlock' button. Below the input field is a 'MESSAGE LOG' section with 'No messages yet.'.

Figure 3: Payload Card before logging in.



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4.1.2. To log in, type the access code into the box and then hit unlock.

4.1.3. When you log in, the other payload cards will disappear, and your card will change to match Figure 4.

4.1.4. At the top, you will see your current payload status, current power, the timestamp your status last changed, and the log out button.

4.1.5. Nothing prevents multiple people from being logged in at the same time, but we recommend only having one team member at a time entering commands or status updates to prevent confusion.

4.2. Changing Payload Status

4.2.1. To change your payload status, click on the dropdown and select a new payload status. Shortly after selecting the status, your card border color should change, and the color of your summary block should change.

4.2.2. Throughout normal operation, both the team and the HASP operator will change the payload status.

4.2.3. Payload status definitions:

- 4.2.3.1. **HASP is requesting status update from team** – Used by the HASP operator to request information from the team. Teams should check telemetry to determine if their payload is operating normally and update their status. Also used at the start of the launch or TV test to check if teams are online.
- 4.2.3.2. **Command Requested** – Used by teams to indicate they have requested an uplink command or power operation
- 4.2.3.3. **Command Sent** – Used by HASP operator to indicate they have successfully sent a requested command or performed the requested power

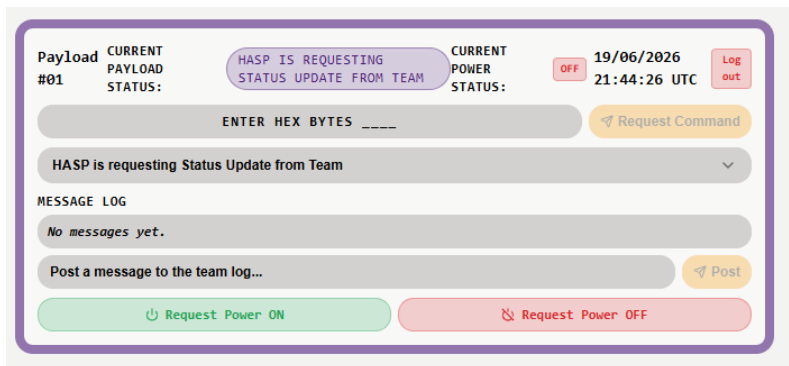


Figure 4: Payload Card after logging in.

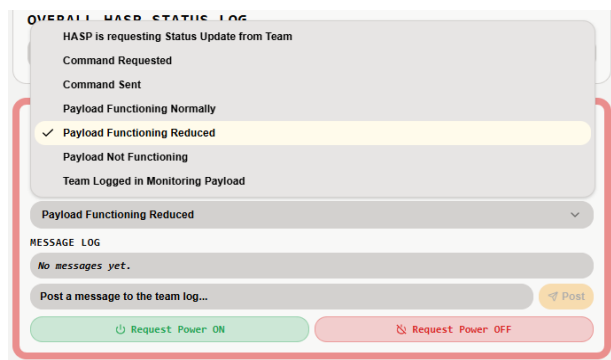


Figure 5: Changing payload status via the dropdown menu.



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operation. Teams should use telemetry to check for a response from their payload and then update status.

4.2.3.4. **Payload Functioning Normally** – Payload is operated as expected.

4.2.3.5. **Payload Functioning Reduced** – Payload is working, but some part of the payload is not correctly operating. The team should use the message log to indicate troubleshooting or the intent to accept a reduced status operation.

4.2.3.6. **Payload Not Functioning**– Payload does not appear to be operating at all, i.e., no downlink data or power draw.

4.2.3.7. **Team logged in monitoring payload** – Used at the start of a test or launch attempt to notify the HASP operator a team is logged in ready to monitor their payload.

4.3. Team Message Log

4.3.1. Each team has a message log that they and the HASP operator can use to provide amplifying information.

4.3.2. To post a message, type it in the text box and hit the post button.

4.3.3. The message will appear with a timestamp.

4.3.4. The HASP operator can also send messages to the team logs; the source for each message will be shown (Team or HASP) prior to the message.

4.4. Requesting Commands

4.4.1. The command interface is intended for commands to be sent in response to changing test and flight conditions. For commands that are going to be sent on a known timeline (for example, a series of commands to shut down the payload prior to flight termination), teams should include those commands in their FLOP document timeline. The HASP operator will add those commands to the command queue and execute them at the appropriate time without additional action by the team.

4.4.2. There are two types of commands teams may request: Power operations and Serial Commands.

4.4.2.1. Power operations can be requested by clicking the **Request Power On** or **Request Power Off** buttons at the bottom of the Payload Card.

4.4.2.2. Serial Commands are a 7-byte packet sent to the Payload Serial connection, with a two-byte payload being specified by the team.

Figure 6: The message log can be used to exchange brief messages with the HASP operator.



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4.4.2.2.1. The 7-byte packet format (in hexadecimal) is: **0x01, 0x02, P1, P2, 0x03, 0x0D, 0x0A**. Where P1 and P2 are bytes specified by the team.
Note: commas or spaces are not sent; those are separators. The previous is hex notation so 0x01 means the single binary byte “00000001” not the characters “0x01”.

4.4.2.2.2. To request type in 4 hex digits in the “ENTER HEX BYTES ____” field. Only valid hexadecimal digits can be entered (0-9, ABCDEF). The first two digits are the first byte, the second two digits are the second byte. All four digits are required (including leading 0s).

4.4.2.2.3. When a valid hex string is entered, clicking the **Request Command** button will add the command to the pending queue.

4.4.2.2.4. For example, if 4599 is entered, the payload will receive 0x01, 0x02, 0x45, 0x99, 0x03, 0x0D, 0x0A

The screenshot displays the HASP interface. At the top, it shows 'Payload #01' and 'CURRENT PAYLOAD STATUS:'. A blue button indicates 'TEAM LOGGED IN MONITORING PAYLOAD'. To the right, 'CURRENT POWER STATUS: OFF' is shown with a red indicator, along with the date and time '22/06/2026 19:05:40 UTC' and a 'Log out' button. Below this, a text input field contains '2235'. To its right is an orange 'Request Command' button. Underneath is a dropdown menu labeled 'Team Logged in Monitoring Payload'. A 'MESSAGE LOG' section shows three entries: '[22/06/2026 19:05:14 UTC] Team Sample Message', '[22/06/2026 19:05:27 UTC] Team Another message', and '[22/06/2026 19:05:41 UTC] HASP Reply message'. At the bottom, there is a text input for 'Post a message to the team log...' with a 'Post' button. Two large buttons at the very bottom are 'Request Power ON' (green) and 'Request Power OFF' (red).

Figure 7: Once 4 valid hex digits are entered, the command can be requested.

- 4.4.3. After a command is requested, your status will automatically change to **Command Requested** to notify the operator you have a command in the queue.
- 4.4.4. The requested command will be added to the pending command queue, with the oldest request appearing at the top. The HASP operator will execute commands from oldest to newest.
- 4.4.5. Once the HASP operator receives an indication that the command was executed on the gondola (a change in voltage for power or an acknowledgment packet from the FCU for Serial Commands), they will move the command to the executed list and update the payload status to **Command Sent**.
- 4.4.6. After a command is sent, teams should check for a response from the payload and update their payload status (operating normally, reduced, etc.). **The payload status should not remain Command Sent for an extended period of time.**



HASP Data and Commanding Interface



5. Command Queue

5.1. Pending Commands

5.1.1. Once commands are requested, they will appear in the pending command queue. TXX indicates the team requesting the command (so T01 for team/payload 1), followed by the requested bytes. The timestamp shows the time the command was requested. Teams will see all pending commands.

5.1.2. If a command is no longer needed or was requested in error, teams can cancel it by clicking the red X. The canceled command will then move to the canceled command queue. Be aware that there can be a significant delay between command transmission and response. So, a canceled command may have already been transmitted; in this case, the HASP operator will move the command from canceled to executed.

5.2. Executed Commands with two timestamps, when requested and when executed. Only the HASP Operator can mark commands as executed.

5.3. Canceled Commands similarly show timestamps for the request and the time canceled.

PENDING COMMAND QUEUE [4]		
T01 0x2235	Requested: 22/06/2026 20:21:58 UTC	
T01 0x3153	Requested: 22/06/2026 20:30:08 UTC	
T01 PWR ON	Requested: 22/06/2026 20:30:15 UTC	
T03 PWR ON	Requested: 22/06/2026 20:30:35 UTC	

EXECUTED COMMANDS [2]		
T03 PWR ON	Req: 22/06/2026 20:30:35 UTC	Exec: 22/06/2026 20:30:54 UTC
T01 0x2355	Req: 22/06/2026 20:30:10 UTC	Exec: 22/06/2026 20:30:51 UTC

CANCELLED COMMANDS [2]		
T21 PWR ON	Req: 22/06/2026 15:55:54 UTC	Cancelled: 22/06/2026 15:56:00 UTC
T21 PWR OFF	Req: 22/06/2026 15:55:57 UTC	Cancelled: 22/06/2026 15:55:59 UTC

Figure 8: Sample view of the command queue when logged in as Payload 1.



Accessing HASP Data and Payload Data

1. Accessing the Flight Information Page
 - 1.1. To access flight data first open the HASP website
<https://laspace.lsu.edu/hasp>
 - 1.2. Then, from the menu at the top of the page, select **HASP FLIGHT INFORMATION** and then select the option for the current flight year.
Note: The year is the year the flight will occur, not the year when the application was submitted.

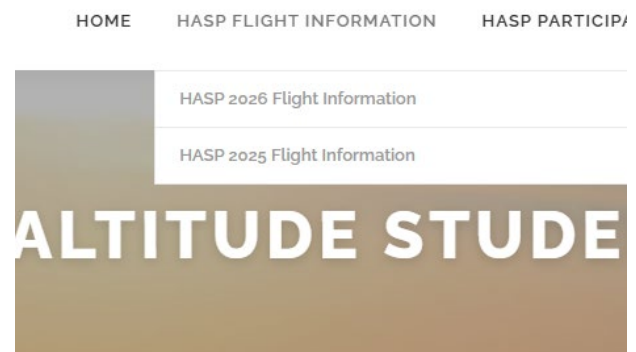


Figure 9: The flight data is accessed from the flight information page. Each year has a separate flight information page that can be accessed from the menu of the HASP website <https://laspace.lsu.edu/hasp/>

[HASP Environmental Display](#)[HASP Map Tracking](#)[HASP Video Feeds](#)[Payload Commanding Sheet](#)

HASP 2026 Flight Info

Flight Number: TBD
Launch Time: TBD
Launch Location: Ft. Sumner Municipal Airport Ft. Sumner, New Mexico
Float Start: TBD
Termination: TBD
Float Time: TBD
Impact: TBD
Impact Location: TBD

HASP Processed Data Sets

- Integration Thermal Vac Test #1 ADC values
- Integration Thermal Vac Test #2 ADC Values
- HASP Flight Housekeeping Raw Data
- HASP Flight GPS Log

HASP Integration Payload Datasets

[Payload 01](#)[Payload 02](#)[Payload 03](#)

HASP Flight Payload Datasets

[Payload 01](#)[Payload 02](#)[Payload 03](#)

Figure 10: The 2026 Flight Information Page as seen prior to the 2026 Integration.



HASP Data and Commanding Interface



2. Sections of the Flight Information Page

2.1. Link Menu

2.1.1. Below the HASP site menu is the Flight Info Link menu



Figure 11: The Flight Information Link Menu provides links to various pages used during an active, live flight.

2.1.2. The **HASP Environmental Display** provides a near real-time readout of HASP Voltage, Current, and Temperature monitors.

2.1.3. The **HASP Map Tracking** link will show the real-time position of HASP during the flight.

2.1.4. **HASP Video Feeds** provides links to the YouTube livestreams from the flight cameras.

2.1.5. **Payload Commanding** links to HASP Commanding Web App and Backup Google Sheet Interfaces.

2.2. General Flight Information

2.2.1. At the top of the page is a section showing important general information about the flight, such as launch time, landing location, etc.

2.2.2. This section may not be updated in real time; it is intended for use in post-flight analysis.

2.3. Processed Data Sets

2.3.1. The recorded HASP ADC and GPS will be provided to teams post-flight. This data will be provided in the form of timestamped, plaintext comma-separated value (CSV) files.

Flight Number: 753N

Launch Time: 14:27 UTC

Launch Location: Ft. Sumner Municipal Airport Ft. Sumner, New Mexico

Float Start: 16:52 UTC

Termination: 01:25 UTC

Float Time: 8:33 Hours

Impact: 02:07 UTC

Impact Location: [Map Link](#)

2.3.2. An ADC file will be provided for each TV Test and the flight.

Figure 12: The upper portion of the page provides general information about that year's HASP flight and will be updated during/post-flight as the it becomes available.

Be aware that HASP's ADC sample rate is ~4 HZ across 128 channels, so these files can become quite large. It is not recommended to open them directly in Excel.

2.3.3. Although a GPS signal is available during the TV test, HASP does not move during the tests. GPS Data will only be provided for the flight.

2.3.4. These datasets will be posted shortly (~1 day) after the test or flight.

2.4. Payload Datasets



HASP Data and Commanding Interface



2.4.1. The link at the bottom of the page will take you to pages to access the serial data downlinked from each student payload. Integration data will include both TV tests and data from when the payload is initially integrated on the gondola before the test. Flight Data will include data from the preflight Hang Test and any data produced during a launch attempt.

3. HASP Environmental Display

3.1. Approximately every minute the most recent readout of ADC data is pushed from the GSE to the HASP website.

3.2. HASP has a 128 Channel ADC, which is used to monitor the voltages being supplied, current draw, and temperatures on HASP or student payloads.

3.3. The page has separate displays for HASP itself,

Payloads 1-12, Payload 13-24, and Temperatures. This is merely for readability. The display should automatically refresh every 60 seconds. Be aware that the page will refresh even if no new data is received, pay attention to the timestamp.

3.4. The displayed times come from the FCU system time; during flight, this timestamp may drift due to a lack of NTP access.

3.5. **SYS**, **PLD1**, **PLD2**, **PLD3**, and **PLD4** are the voltages and currents being supplied to power distribution boards.

3.6. Individual loads like **FCU** or **Payload 1** current or voltage are measured downstream of the control relay, so they will only read a value when that load is being supplied with power.

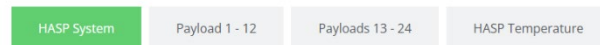
3.7. Each payload's power connector has an analog pin that is read out and displayed with its current and voltage.

3.8. Since current monitors are calibrated up to 2.5A, their zero may cause them +/- 20 mA when no current is flowing.

3.9. Temperature sensors are distributed across the gondola and may be attached to a payload if desired.

HASP Environmental and ADC Displays

Refreshing in 3 seconds



HASP Flight System ADC

LABEL	VALUE	LABEL	VALUE
UNIX Time	1781292424.779	UMN CAM Voltage(V)	-0.007
Timestamp	2026/06/12 19:27:04	UMN Cam Current(A)	-0.016
SYS Voltage(V)	-0.017	SYS Load 4 Voltage(V)	-0.018
SYS Current(A)	0.000	SYS Load 4 Current(A)	-0.013
FCU Voltage(V)	-0.020	SYS Load 5 Voltage(V)	-0.010
FCU Current(A)	-0.015	SYS Load 5 Current(A)	-0.015
POE Voltage 1(V)	-0.015	SYS Load 6 Voltage(V)	-0.011
POE Current 1(A)	-0.016	SYS Load 6 Current(A)	-0.017

Figure 13: The HASP Environmental Display. The display is currently showing the voltage and currents for HASP Flight computer and related loads.



HASP Data and Commanding Interface



4. HASP Map Tracking

4.1. Clicking HASP Map

Tracking will bring a Google Maps display showing HASP's current position and previous track.

4.2. Clicking on the

current position pin will bring up a more detailed display showing time and altitude.

4.3. Be aware that it is not uncommon for GPS Testing from nearby White Sands Missile Range to affect HASP's GPS.

5. HASP Payload Data

5.1. When you click on the appropriate Payload Data link you will see a table listing one or more files named with the format pyldXX_YYMMDD_HHmmSS.log.

5.2. XX is your payload. The remaining numbers give the date and time the file was created by FCU: YY is the year, MM is the month, DD is the day, HH is the hour (24-hour format), mm is minutes, and SS is seconds.

5.3. When the data logging process on the HASP FCU starts, a new empty file is created. As bytes are received from a team's serial port, they are appended to the file without modification. So if a team transmits a binary data stream, the file will contain binary data; if they transmit plain ASCII text, the file will be plain ASCII text.

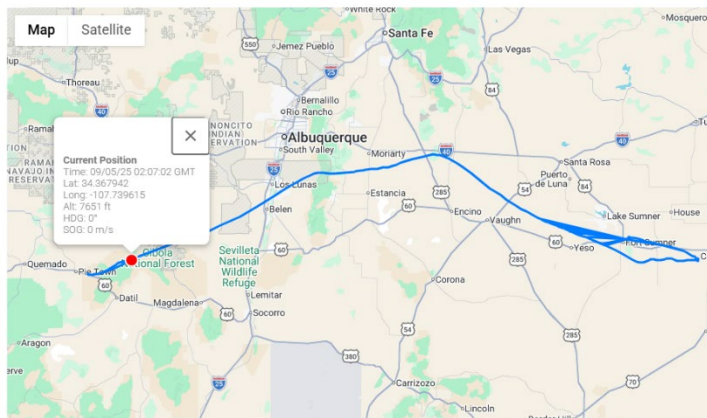


Figure 14: The HASP Map Tracking. This displays the position from the 2025 HASP flight with the final position clicked.

Integration Data files for Payload PYLD05

FILENAME	LAST MODIFIED (GMT)	FILE SIZE (KB)
pyld05_250727_183101.log	2025-07-27 18:31:01	0
pyld05_250728_224901.log	2025-07-29 21:28:51	9.4
pyld05_250730_125301.log	2025-07-30 19:51:26	471.92
pyld05_250731_140601.log	2025-07-31 14:06:01	0
pyld05_250731_175501.log	2025-08-01 18:28:50	386.13

Figure 15: Sample set of data files from Payload 5 from the 2025 Integration. The payload was integrated on July 29 with the small data file (9.4 kb) from initial testing. The two 400 KB files were from Wednesday and Friday's TV Tests. The other empty (0kb) files are from HASP being powered on and off.



HASP Data and Commanding Interface



- 5.4. Those files are then downlinked to the HASP GSE and uploaded to the website, where teams may download them for analysis and monitoring. As data is written the **LAST MODIFIED** timestamp will update.
- 5.5. Normally, new files should only be created when the HASP FCU reboots. This means a single file should contain your full data stream after launch, but multiple files will be created during a launch attempt as HASP is powered on and off during the launch sequence (which may be 0 KB files if your payload does not transmit any data during that portion of the launch).
- 5.6. Some payloads have noted random bytes when their payload is powered on (likely due to GPIO cycling on boot or floating IO pins).
- 5.7. Payload serial data is downlinked via the Starlink Network. If there is a Starlink outage, the HASP FCU will continue to log the data, and it will be downlinked when the connection is restored. During such an outage, the HASP operator will be able to see the data being written, assuming other telemetry systems are still operating.



HASP Data and Commanding Interface



Backup Command Interface (Google Sheets)

	A	B	C	D	E	F
1		Status	Command Requested	Additional Comments	Timestamp (DO NOT EDIT)	
2						
3	HASP Payload 01 - MU				7/13/2021 13:47:00	
4	HASP Payload 02 - WHS				7/13/2021 13:47:00	
5	HASP Payload 03 - LSU				7/13/2021 13:47:01	
6	HASP Payload 04 - FLC				7/13/2021 13:47:01	
7	HASP Payload 05 - UNIP				7/13/2021 13:47:01	
8	HASP Payload 06 - IUPR				7/13/2021 13:47:02	
9	HASP Payload 07 - UNF/UND				7/13/2021 13:47:02	
10	HASP Payload 08 - CoTC				7/13/2021 13:47:03	
11	HASP Payload 09 -				7/13/2021 13:47:03	
12	HASP Payload 10 - ASU				7/13/2021 13:47:03	
13	HASP Payload 11 - MSU				7/13/2021 13:47:04	
14	HASP Payload 12 -				7/13/2021 13:47:04	
15	HASP Payload 13 -				7/13/2021 13:47:04	
16					7/13/2021 13:43:03	
17						
18	HASP Status				7/13/2021 12:29:10	
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

Figure 16: The HASP Command Sheet. For simplicity, the status column is empty, and only 12 (of 24) payloads are shown.

1. Previously, HASP used a formatted Google Sheet to provide a commanding uplink and communication with the HASP Operator. This interface will be used as a backup to the HASP Commanding Web App.
2. Logging in to the Google Sheet
 - 2.1. The Week of integration, the Team Lead and the Faculty Advisor will receive an email from hasp@lsu.edu giving them the username and password for a Google account for your payload.
 - 2.2. Go to Gmail at mail.google.com. If you already have a Gmail account, you will need to click on the account button in the upper right corner and select **Add another account**. If you are not signed in to a Google account, you should go directly to the sign-in prompt.

2026 HASP Command Sheet Log-In for Payload 4

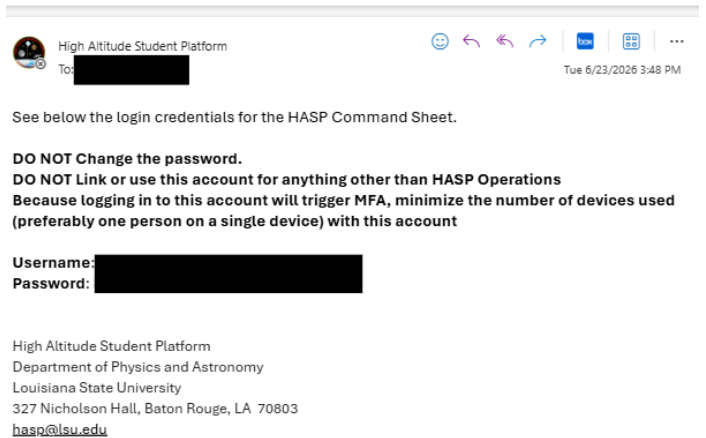


Figure 17: Sample Command Login Email.

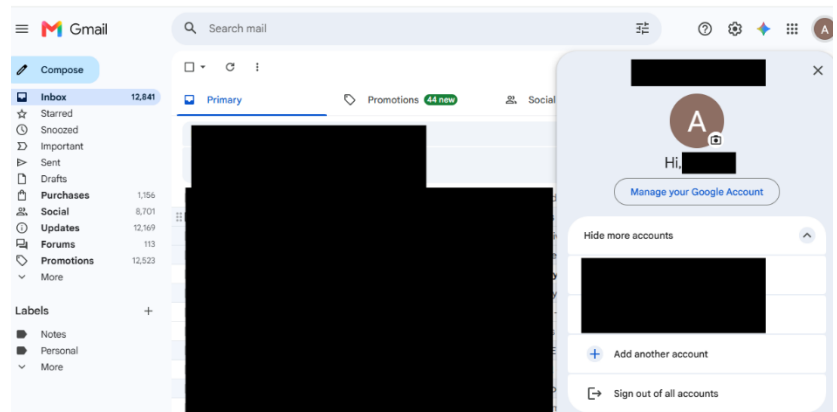


Figure 18: Sample Command Login Email.



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2.3. At the sign-in prompt, use the username you were sent (email) followed by the password provided.

2.4. This will most likely trigger an MFA verification. Select the option for a code to the phone number ending in 97.

2.5. This will send a code to Doug Granger. Please be patient, as Doug will also be working with CSBF and may not be able to provide the code immediately. Because of this MFA we ask teams to only sign in on the minimum number of devices strictly necessary (preferably designate a single control laptop).

2.6. Skip any request for additional information.

2.7. Selected on the **Starred** emails option below the inbox to find the HASP Flight Control 1.0 email.

2.8. Clicking that link will open the commanding sheet.

2.9. You may need to reselect the HASP account from the account control on the upper right. The new browser tab may have switched back to your default account, and the cells are locked to prevent teams from modifying others' statuses.

3. Once you have successfully opened the control interface sheet, you will see a table of this year's HASP participants along with a Status, Command Requested, Additional Comments, and Timestamp (launch facility local time – MDT) column. Each team account can only edit information in its payload's row.

3.1. To update your payload status, change the number next to your payload in the status column. Statuses correspond to 1-7 as shown below the 24 payload rows.

3.2. To request a command, type the 4 hex digits into the **Command Requested** cell and change your status to 2. The operator will send the command and then change your status to 3 to indicate the command was sent.

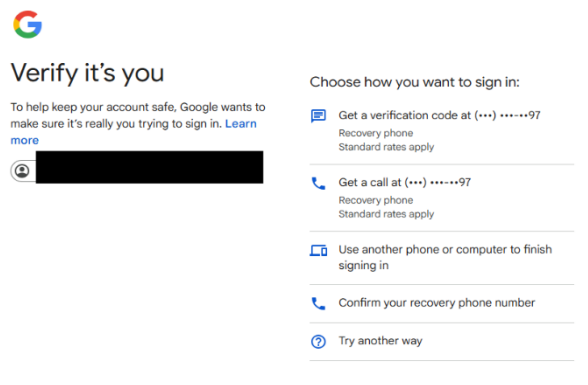


Figure 19: Select the phone text MFA option (phone number should end in 97).

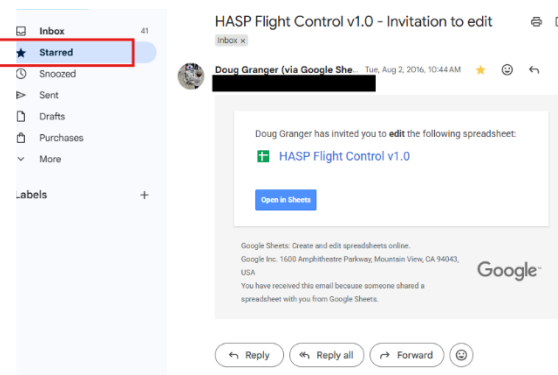


Figure 20: Finding the control invite email.



HASP Data and Commanding Interface



- 3.3. To request a Power off or Power on, just type that in **Command Requested** and change the status to 2.
- 3.4. The additional comments field can be used to ask questions or provide additional information.
- 3.5. Overall HASP Status updates will be provided using the large **Note** cell below the payloads.

		11/13/2021 13:43:03
NOTE	HASP 2026 Integration Operations will commence Monday, July 20, 2026 at 0800 CDT	6/23/2026 14:01:48
	Link to Payload Data	https://sg-webserver.phys.lsu.edu/hasp-2025-flight-information/
	Streaming link to Video #1	https://www.youtube.com/c/LouisianaSpaceGrant/live
	Streaming link to Video #2	https://www.youtube.com/@HASPpayload/live
	Streaming link to Video #3	https://www.youtube.com/@laacesprogram527/live
	Streaming link to CSBF Video	https://video.ibm.com/channel/nasa-educational
	GPS Tracking Link	https://towerfts.csbf.nasa.gov/Maps/ConvGps753N.htm
	Raw Housekeeping Data	https://sg-webserver.phys.lsu.edu/hasp-2025-flight-information/
1 HASP Team requesting Status Update		

Figure 21: Overall HASP Status and useful links are provided below the 24 payload rows.