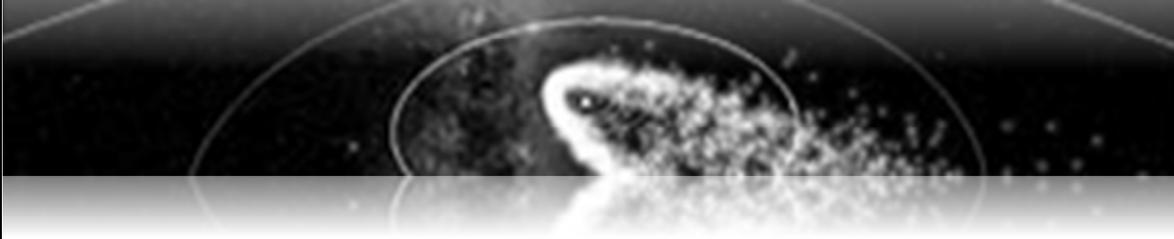




★
CAMS ★
★



How to Read the CAMS2 GetStatus Report Files

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In this presentation, we will explain how to read the CAMS2 GetStatus reports and the status_check reports.

The status reports are only compatible with a CAMS2 system running based on Steve Rau's LaunchCapture and Dave Samuels' upload and archiving scripts.

Introduction

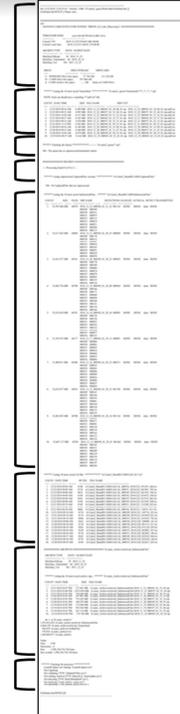


- The GetStatus reports try to give a fairly complete picture of the overall status of a CAMS2 system in a quick glance
- Closer study “can” reveal issues that need to be corrected or monitored
- They are automatically uploaded to the NASA server so that they can be viewed from anywhere in the world – even if the station is down
 - It was important to be able to determine when the last time a station reported in and perhaps how long it has been down

Layout



- The report is laid-out in 8 sections:
 1. **Header** section
 2. **Transmitted** section
 3. **Queue** section
 4. **CapturedFiles** section
There is one section for each board or CAMS instance
 5. **SubmissionFiles** section
There is one section for each board or CAMS instance
 6. **CAL files** section
There is one section for each board or CAMS instance
 7. **Archive** section
 8. **Runtime Status** section



1. Header Section



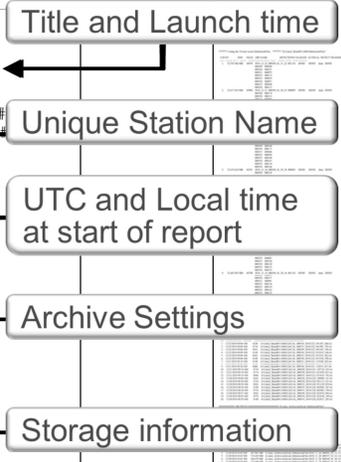
```
=====
Sat 12/22/2018 11:03:55.63 - Version: 3.000 - D:\cams2_queue\RunFolder\GetStatus.bat []
[GetStatus.bat:SETUP ] Please wait...

#####
##### CAMS STATUS FOR STATION: "000549_LO_Lick_Observatory" #####

TIMESTAMP_ZONE          yyyy-mm-dd hh:mm:ss.ddd zzzzz
-----
Current UTC              2018-12-22T19:04:01.060+00:00
Current Local time      2018-12-22T11:04:01.279-08:00

ARCHIVE_TYPE            DAYS  OLDEST_DATE
-----
MaxDaysToKeep           30   2018_11_22
MaxDays_Transmitted     60   2018_10_23
MaxDays_Cal              365  2017_12_22

DRIVE                   FREE STORAGE          DRIVE SIZE
-----
C:  WINDOWS Drive free space.  57.764 GB             111.126 GB
D:  CAMS Drive free space.     397.086 GB            5,767.167 GB
d:  CAMS Archive free space.   ..... GB              Same as CAMS Drive
```



CAMS2 GetStatus Reports

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The **Title and Launch time** is a header that is standard with all my batch files. It also shows any command line arguments, however in this case, GetStatus.bat does not require any.

Unique Station Name – The unique station name is a combination of the first camera on the site, plus the last two columns from the CameraSites.txt file for that camera.

UTC and Local time at start of report – This is displayed in universal format. The purpose is to help you know the exact time and date information, both local and UTC, when the report was started.

Archive Settings – This is to show you how much data you should expect to see in the various sections.

Storage Information – This section shows you storage information for three areas. The Windows drive, the CAMS working drive, and the CAMS Archive drive. In some cases, like West Melton, all three are drive C:. In other cases, like Arizona, they have more than 3 drives, but we report on only the CAMS related drives.

2. Transmitted Section



- The Transmitted section reports the last 10 capture sessions verified as successfully uploaded from all capture boards.
- The capture session is uniquely identified by the date_camera_time_count.
- Where camera is the first camera in that capture card.
- Each .zip file should have a matching .md5.txt file.

```
***** Listing the 10 most recent Transmitted ***** "d:\cams2_queue\Transmitted\????_??_??_*.zip"
NOTE: Each zip should have a matching "*.md5.txt" file.
COUNT  DATE TIME      SIZE  FILE NAME                                     MD5.TXT
-----  -
1.      12/22/2018 09:36 AM  0.306 MB  2018_12_22_000565_01_34_06_01.zip            2018_12_22_000565_01_34_06_01.zip.md5.txt
2.      12/22/2018 09:33 AM  4.992 MB  2018_12_22_000557_01_32_44_01.zip            2018_12_22_000557_01_32_44_01.zip.md5.txt
3.      12/22/2018 10:58 AM  4.331 MB  2018_12_22_000549_01_31_22_01.zip            2018_12_22_000549_01_31_22_01.zip.md5.txt
4.      12/21/2018 09:37 AM  0.183 MB  2018_12_21_000565_01_33_37_01.zip            2018_12_21_000565_01_33_37_01.zip.md5.txt
5.      12/21/2018 09:33 AM  5.470 MB  2018_12_21_000557_01_32_15_01.zip            2018_12_21_000557_01_32_15_01.zip.md5.txt
6.      12/21/2018 12:19 PM  5.526 MB  2018_12_21_000549_01_30_53_01.zip            2018_12_21_000549_01_30_53_01.zip.md5.txt
7.      12/20/2018 09:36 AM  0.140 MB  2018_12_20_000565_01_33_09_01.zip            2018_12_20_000565_01_33_09_01.zip.md5.txt
8.      12/20/2018 09:33 AM  4.540 MB  2018_12_20_000557_01_31_47_01.zip            2018_12_20_000557_01_31_47_01.zip.md5.txt
9.      12/20/2018 10:58 AM  4.479 MB  2018_12_20_000549_01_30_25_01.zip            2018_12_20_000549_01_30_25_01.zip.md5.txt
10.     12/19/2018 09:37 AM  0.142 MB  2018_12_19_000565_01_32_43_01.zip            2018_12_19_000565_01_32_43_01.zip.md5.txt
```

Queue section heading

Transmitted dir contents

The Queue section is shared between all the CAMS Instances. Therefore, it is considered “global”.

The Queue section reports on two parts, the Transmitted dir and the Queue dir. The section heading shows you the exact directory where this information can be found.

Transmitted dir

What you’re looking for in this section are (a) That all transmitted File Names have a matching MD5.txt file. (b) the size of the zip files are normal.

Files only get moved to the Transmitted dir “after” a successful upload has been verified as complete and successful. Any failed uploads will remain in the queue and they will be retried.

If a zip file exists in the Transmitted dir without a matching .md5.txt file, then there is some kind of processing error or someone has manually manipulated the files in the directory.

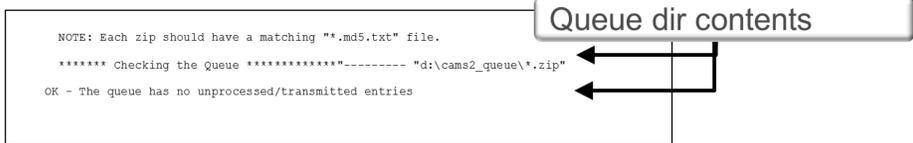
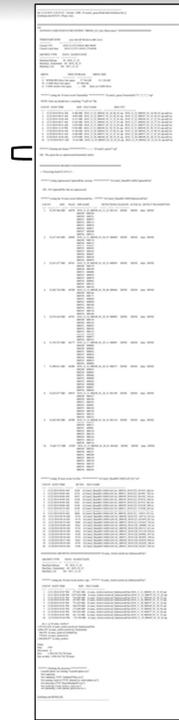
The Date/Time shown are the windows timestamp of the zip file when it was created.

The Size is in MB, which represents the size of the zip file that was uploaded to the server.

Since the Transmitted dir can contain a lot of entries, the report only includes the 10 most recent files in the directory.

3. Queue Section

- The Queue section reports on files that are ready to be uploaded next time upload_queue.bat script runs.
- Each .zip file should have a matching .md5.txt file.
- The queue should normally be empty so the report should normally show:
"OK - The queue has no unprocessed/transmitted entries"



The Queue section is shared between all the CAMS Instances. Therefore, it is considered "global".

The section heading shows you the exact directory where this information can be found.

Queue dir

Files that exist in the queue dir are files that are ready to be uploaded to the server and that will be uploaded the next time the upload_queue.bat script performs its function. It is also possible that, if the upload_queue.bat script is currently running, the file will be uploaded in a few minutes by the currently running upload_queue.bat pass.

The queue directory listing follows the same format as the Transmitted dir format.

4. CapturedFiles section



- For each CAMS Instance, the report will show all the CapturedFiles sessions in the CapturedFiles directory of each board

```
##### BOARD 0 #####
---- Processing board=0 of 0 to 2 ...
***** Listing unprocessed CapturedFiles sessions ***** "d:\Cams2_Board0\CAMS\CapturedFiles"

OK - No CapturedFiles that are unprocessed.
```

Cams Instance number

List of ALL unprocessed CapturedFiles sessions

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The **CAMS Instance** section has one section of CapturedFiles, SubmissionFiles, and CAL files for each CAMS Instance (or board).

CapturedFiles sessions – Identifies **ALL** Capture sessions for this board that remain unprocessed.

There should be no CapturedFiles sessions unless LaunchCapture is still running. Each CapturedFiles session is “moved” into the SubmissionFiles directory tree when it is processed.

5. SubmissionFiles Section



- The CAMS Instance section has one section for each CAMS Instance (or board)

Cams Instance number

```

##### BOARD 0 #####
---- Processing board=0 of 0 to 2 ...

***** Listing the 10 most recent SubmissionFiles... ***** "d:\Cams2 Board0\CAMS\SubmissionFiles"
COUNT  SIZE      FILES  DIR NAME      DETECTIONS VALIDATE  AUTOCAL  DETECT  TRANSMITTED
-----  -
1.      52,707.966 MB  44978   2018_12_22_000549_01_31_22  001134      DONE      DONE      done     DONE
      2021_05_27_000526_03_54_23  000524      000062      22.1 x 29.4      2.760 (arcmin/pix) "CAL_000524
      2021_05_27_000526_03_54_23  000525      000018      22.1 x 29.4      2.760 (arcmin/pix) "CAL_000525
      2021_05_27_000526_03_54_23  000526      000058      22.1 x 29.4      2.760 (arcmin/pix) "CAL_000526
      2021_05_27_000526_03_54_23  000527      000002      22.1 x 29.5      2.764 (arcmin/pix) "CAL_000527
      2021_05_27_000526_03_54_23  000529      000345      22.0 x 29.4      2.757 (arcmin/pix) "CAL_000529
      2021_05_27_000526_03_54_23  000530      000085      22.0 x 29.3      2.755 (arcmin/pix) "CAL_000530
      2021_05_27_000526_03_54_23  000531      000035      22.1 x 29.4      2.760 (arcmin/pix) "CAL_000531
      2021_05_27_000526_03_54_23  000532      000034      22.0 x 29.5      2.760 (arcmin/pix) "CAL_000532
      ...
2.      52,617.843 MB  44904   2018_12_21_000549_01_30_53  000889      DONE      DONE      done     DONE
      000543      000178
      000550      000212
    
```

List of the 10 recent SubmissionFiles sessions plus their camera details

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The **CAMS Instance** section has one of these sections for each CAMS Instance (or board). It's divided into 4 sections:

Heading – Identifies the board number

SubmissionFiles sessions – This section shows only the 10 most recent SubmissionFiles sessions. For each session, it shows the size of the entire directory (ArchivedFiles, CapturedFiles, ConfirmedFiles, FTP, and Logs) along with the total number of files under the directory. This is not just the number of FF files, but the total number of files. A higher than normal number here might indicate that there are excessive noisy files in the ArchivedFiles dir. The status fields are as follows:

Detections – This is the number of detections in the detect file, if there is one. The detections are listed as a Total, and then for each camera. An excessively high number of detections can be an indication of a bad camera.

Validate – DONE means that the FTP_ValidateFFfiles.exe tool was run and cleaned up all the corrupt FF files.

AutoCal – DONE means that FTP_MeteorCal_AutoUpdate.exe was not only run, but completed.

Detect – DONE means that FTP_DetectMultipleFF.exe was run and produced a detect file that has updated the Meteor Count field in the top of that file.

Transmitted – DONE means that a zip file with a matching .md5.txt file, which match the date_camera_time of the SubmissionFiles session, are found in the Queue\Transmitted dir. Thus, that session is completed.

Each SubmissionFiles session has a camera details section (see description on the next page).

5.1. SubmissionFiles Camera Details



- For each capture session in SubmissionFiles, the details for each camera are shown:
- Capture session, camera, detections, FOV, Image scale, CAL file referred to in detect file, Channel number, Total dropped frames, Dropped frames per minute

CONF#	SIZE	FILES	DIR NAME	DETECTIONS	VALIDATE	AUTOCAL	DETECT	TRANSMITTED					
1.	52,707.966 MB	44978	2018_12_22_000549_01_31_22	001134	DONE	DONE	done	DONE					
		2021_05_27_000526_03_54_23	000524	000062	22.1 x 29.4	2.760 (arcmin/pix)	"CAL_000524_20210527_090655_132.txt"	Channel 1	0	dropped	0.00	dropped/min	
		2021_05_27_000526_03_54_23	000525	000018	22.1 x 29.4	2.760 (arcmin/pix)	"CAL_000525_20210527_090703_465.txt"	Channel 2	1	dropped	0.00	dropped/min	
		2021_05_27_000526_03_54_23	000526	000058	22.1 x 29.4	2.760 (arcmin/pix)	"CAL_000526_20210527_090711_819.txt"	Channel 3	5	dropped	0.01	dropped/min	
		2021_05_27_000526_03_54_23	000527	000002	22.1 x 29.5	2.764 (arcmin/pix)	"CAL_000527_20210527_045239_903.txt"	Channel 4	0	dropped	0.00	dropped/min	
		2021_05_27_000526_03_54_23	000529	000345	22.0 x 29.4	2.757 (arcmin/pix)	"CAL_000529_20210526_094740_911.txt"	Channel 5	5600	dropped	11.28	dropped/min	
		2021_05_27_000526_03_54_23	000530	000085	22.0 x 29.3	2.755 (arcmin/pix)	"CAL_000530_20210527_103821_849.txt"	Channel 6	0	dropped	0.00	dropped/min	
		2021_05_27_000526_03_54_23	000531	000035	22.1 x 29.4	2.760 (arcmin/pix)	"CAL_000531_20210527_082108_565.txt"	Channel 7	0	dropped	0.00	dropped/min	
		2021_05_27_000526_03_54_23	000532	000034	22.0 x 29.5	2.760 (arcmin/pix)	"CAL_000532_20210527_084139_296.txt"	Channel 8	0	dropped	0.00	dropped/min	
2.	52,617.843 MB	44904	2018_12_21_000549_01_30_53	001139	DONE	DONE	done	DONE					
			000549	000118									
			000550	00112									

Excessive detections indicates a noisy camera. This will slow the post-capture processing and fill up the hard drive. **NEED TO FIX THIS!**

Excessive dropped frames indicates CPU or hard drive or I/O interference by some other program running during capture. **NEED TO FIX THIS!**

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For each SubmissionFiles section, there is a subsection that describes the details for each camera. There are 9 sections/columns for these details:

- **Capture session** – The SubmissionFiles capture session with date_camera_time format to uniquely identify the session. These should all be the same for each camera.
- **Camera** – The camera number that's being reported. (Extracted from the detect file)
- **Detections** – Detections for this specific camera only. (Calculated from the detect file)
- **FOV** – Field of View in degrees, height by width. (Comes from the specified CAL file)
- **Image Scale** – Image scale in arc minutes per pixel. This should not change from night to night. (Comes from the specified CAL file)
- **CAL File** – CAL file referred to in the detect file. If calibration failed today, it should show a previous date in the CAMS timestamp. (Extracted from the detect file).
- **Channel** – For multi-channel boards, this shows which channel number it was assigned to. (Deduced from CaptureStats.log).
- **Dropped Frames total** – DONE means that FTP_DetectMultipleFF.exe was run and produced a detect file that has updated the Meteor Count field in the top of that file. (Extracted from CaptureStats.log)
- **Dropped Frames per minute** – DONE means that FTP_DetectMultipleFF.exe was run and produced a detect file that has updated the Meteor Count field in the top of that file. (Extracted from CaptureStats.log)

What is Qubole?

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6. CAL files section



- The board number/CAMS Instance number will be shown at the top.
- The 20 most recent CAL files are shown, with their size and creation dates

```
##### BOARD 0 #####
---- Processing board=0 of 0 to 2 ...

***** Listing 20 most recent Cal files ***** "d:\Cams2_Board0\CAMS\Cal\CAL*.txt"

COUNT  DATE TIME          BYTES  FILE NAME
-----  -
1.      12/22/2018 09:09 AM    8148  d:\Cams2_Board0\CAMS\Cal\CAL_00055_20181222_041102_196.txt
2.      12/22/2018 09:09 AM    8718  d:\Cams2_Board0\CAMS\Cal\CAL_00055_20181222_041102_196.txt
3.      12/22/2018 09:08 AM    8832  d:\Cams2_Board0\CAMS\Cal\CAL_000549_20181222_041102_196.txt
4.      12/22/2018 09:09 AM    8148  d:\Cams2_Board0\CAMS\Cal\CAL_000556_20181222_033914_248.txt
5.      12/22/2018 09:09 AM    8262  d:\Cams2_Board0\CAMS\Cal\CAL_000555_20181222_015532_962.txt
6.      12/22/2018 09:08 AM    8148  d:\Cams2_Board0\CAMS\Cal\CAL_000550_20181222_015528_298.txt
7.      12/21/2018 09:19 AM    8148  d:\Cams2_Board0\CAMS\Cal\CAL_000551_20181221_135246_693.txt
```

Cams Instance number

20 recent CAL files

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Cal Files section - The Cal File section contain a list of the 20 most recent Cal files in the Cal files directory for this board. For each cal file, we list the windows timestamp, the size in bytes, and the full path to the cal file name. You can see from this section whether some of the cameras have calibrated or not. The size of the Cal file indicates how many n-Stars the cal file used.

One thing you can look for here is when was the last time calibration was successful.

7. Archive Section



- 4 sections
- Shows 10 most recent archives, Archive settings, and size of archive sections

***** ARCHIVES ***** "d:\cams_Archive\archived_SubmissionFiles"

ARCHIVE TYPE	DAYS	OLDEST DATE
MaxDaysToKeep	30	2018_11_22
MaxDays_Transmitted	60	2018_10_23
MaxDays_Cal	365	2017_12_22

***** Listing the 10 most recent archive zips... ***** "d:\cams_Archive\archived_SubmissionFiles"

COUNT	DATE TIME	SIZE	FILE NAME
1.	12/21/2018 03:07 PM	277.681 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_21_000565_01_25_05.zip
2.	12/21/2018 03:06 PM	2,872.028 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_21_000557_01_31_45.zip
3.	12/21/2018 03:01 PM	338.608 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_21_000549_01_30_25.zip
4.	12/20/2018 03:05 PM	287.081 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_20_000565_01_33_33.zip
5.	12/20/2018 03:03 PM	735.429 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_20_000557_01_32_14.zip
6.	12/20/2018 03:01 PM	349.479 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_20_000549_01_30_55.zip
7.	12/19/2018 03:03 PM	172.690 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_19_000565_01_34_04.zip
8.	12/19/2018 03:03 PM	592.928 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_19_000557_01_32_44.zip
9.	12/19/2018 03:01 PM	261.116 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_19_000549_01_31_25.zip
10.	12/18/2018 03:03 PM	174.748 MB	d:\cams_Archive\archived_SubmissionFiles\2018_11_18_000565_01_34_36.zip

```

du -v -g "d:\cams_Archive"
1,555,432,624 d:\cams_archive\archived_SubmissionFiles
4,866,329 d:\cams_archive\archived_Transmitted
566,870 d:\cams_archive\Cal\BinFiles
570,924 d:\cams_archive\Cal
1,560,869,877 d:\cams_archive

Totals:
Files: 3785
Directories: 4
Size: 1,598,330,754,726 bytes
Size on disk: 1,598,330,754,726 bytes
    
```

The Archiving section has 4 sections:

1. **Archive directory location**
2. **Archive Settings**
3. **Archived files** - List of the 10 most recent archived files and their size.
4. **Total size of the entire archive directory**

8. Runtime Status section



- Lists the CAMS processes and whether they were running at the time the status report was generated
- Ideally, nothing was running except “uploading”
- If Capturing is running, then it will report on unprocess capture sessions
- If archiving is running, the report will not be complete

```
***** Checking the processes *****
LaunchCapture not running "LaunchCapture.exe"
Not Capturing
Not validating ["FTP_ValidateFFfiles.exe"]
Not running AutoCal ["FTP_MeteorCal_AutoUpdate.exe"]
Not detecting ["FTP_DetectMultipleFF.exe"]
Not archiving ["cmd_archive_cams.exe"]
Not uploading ["cmd_upload_queue.bat.exe"]

[GetStatus.bat:DONE] [0]
~~~~~
```

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This section lists the running processes. This information can be useful to identify hung LaunchCapture processes or hung detection passes. Each section in here lists the status of one of the 7 phases of a capture session.



CAMS



Status Check Reports

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- Designed so that site operators or network operators can get a quick snapshot of the status of all their sites
- This script “reads” the GetStatus reports off the server
- Only reports on problem areas
- Some sections have 3 levels of warning:
WARNING – something to be aware of
WATCH – probably something to fix or watch closely
CRITICAL – something you must fix
- It gets the GetStatus reports off the server so that it can check the status on systems that are down

How to Run Status_check



- From a ...\\cams2_queue\RunFolder command prompt
- status_check “..\temp\status” status_check_XXX.txt
Where: XXX identifies your network
- Example:
status_check “..\temp\status” “d:\cams2_queue\RunFolder\status_check_cams.txt”
- Produces a status_check_XXX.txt file and status_check_XXX.html file in the queue directory.
- Launches the HTML file in your browser
- All the data comes from GetStatus files from the server, not from your local computer
- The last argument defines the network status check file. It is a file that lists the GetStatus filespec for the first camera for each board at each site

There are several status check “network” files in the RunFolder, one for each CAMS network. Each contains a list of the first cameras for each board in a site’s GetStatus report. You can use wildcards, for example: 004??? for Arkansas, since all their camera numbers are allocated in the 4000 range.

Status Check HTML file



- Each station starts with “Station: #####”
- The “File” refers to a local copy of the GetStatus report file.
- Clicking on the link opens that GetStatus report for further examination
- Click the Back button in the browser to return to the status_check report
- Examples:

```
Station: ##### CAMS STATUS FOR STATION: "000525_FP_Fremont_Peak" #####  
File: 3.000 Total Detections=1059 GetStatus\_000525\_FP\_Fremont\_Peak.txt [2021-06-03T09:50:33.185-07:00 2021-06-03T16:50:32.904+00:00 UTC]  
000527 Detections=000029/1059 ***** EXCESSIVE DROPPED FRAMES 78894 dropped 161.76 dropped/min
```

```
File: 3.000 Total Detections=583 GetStatus\_000900\_DC\_DiscoveryChannel.txt [2021-06-03T10:17:22.181-07:00 2021-06-03T17:17:22.150+00:00 UTC]
```

```
Station: ##### CAMS STATUS FOR STATION: "000916_MH_MarsHill_" #####  
File: 3.000 Total Detections=1071 GetStatus\_000916\_MH\_MarsHill\_.txt [2021-06-03T10:20:22.024-07:00 2021-06-03T17:20:21.993+00:00 UTC]  
000931 Detections=001015/1071 WARNING - CHECK CAMERA NOISE
```

```
File: 3.000 Total Detections=1810 GetStatus\_000941\_ER\_Prescott.txt [2021-06-03T09:42:35.564-07:00 2021-06-03T16:42:35.517+00:00 UTC]  
File: 3.000 Total Detections=90 GetStatus\_000957\_MC\_Meteor\_Crater.txt [2021-06-03T08:26:20.408-07:00 2021-06-03T15:26:20.361+00:00 UTC]
```