

## Global Hawk #872 08/29/16 - 08/30/16

**Aircraft:** [Global Hawk - AFRC #872](#) ([See full schedule](#))

**Flight Number:** 872-0172

**Payload Configuration:** NOAA SHOUT HRR

**Nav Data Collected:** Yes

**Total Flight Time:** 23.8 hours

**Submitted by:** Frank Cutler on 08/31/16

**Flight Segments:**

<b>From:</b>	KWFF	<b>To:</b>	KWFF
<b>Start:</b>	08/29/16 22:19 Z	<b>Finish:</b>	08/30/16 22:08 Z
<b>Flight Time:</b>	23.8 hours		
<b>Log Number:</b>	<a href="#">16H004</a>	<b>PI:</b>	Gary Wick
<b>Funding Source:</b>	Robbie Hood - NOAA - UAS Program Manager		
<b>Purpose of Flight:</b>	Science		

SHOUT 2016 Hurricane Rapid Response Launches 3rd Science Flight Over TD 8 & TD 9  
NASA/NOAA Global Hawk concludes 24 hour mission after dropping a record 90 sondes  
supplying real-time data to the National Hurricane Center. The NOAA Sensing Hazards  
with Operational Unmanned Aircraft Systems (SHOUT) flew the NASA Global Hawk  
unmanned aircraft taking off the evening of August 29th from NASA Wallops Flight Center  
over two tropical depressions threatening to make U. S. landfall within the next 24-48  
hours. The aircraft flew flight track southward over Tropical Depression Eight (TD-8) off  
Cape Hatteras and then southwestward to TD-9 southwest of the Florida Keys as shown in  
the above image superimposed upon a NOAA GOES East visible satellite image, which  
also shows Hurricane GASTON East of Bermuda, flown by 24-hour Global Hawk missions  
on 24-25 Aug and 27-28 Aug. The SHOUT Team flying the NASA Global Hawk concluded  
the 24 hour mission at 1800 EDT August 30th after dropping a record 90 sondes into  
Topical Depression (TD) 8 & 9 in close coordination with the National Hurricane Center  
(NHC). Once again, this real-time data influenced the NHC's forecast and was mentioned  
in the Tropic Weather Discussion: TROPICAL DEPRESSION NINE DISCUSSION  
NUMBER 7 NWS NATIONAL HURRICANE CENTER MIAMI FL AL092016 400 AM CDT  
TUE AUG 30 2016 "Although there has been an increase in convection over the  
southeastern portion of the depression's circulation, the system is still being affected by  
westerly shear, with the low-level center exposed to the west of the deep convection.  
Recent observations from a NOAA Hurricane Hunter aircraft and the unmanned NASA  
Global Hawk indicate that the tropical cyclone remains just below tropical storm strength.  
The NOAA aircraft has reported peak flight level winds in the southeastern quadrant of 32  
kt, and believable SFMR winds of around 30 kt. A dropsonde from the Global Hawk  
reported 33 kt surface winds, but the mean-layer wind over the lowest 150 m supportwinds  
closer to 30 kt. A very recent center drop from the unmanned aircraft indicate thatthe  
minimum pressure is 1003 mb." Forecaster Brown SHOUT's Co-PI, Jason Dunion,  
coordinated with the NHC throughout the mission, optimizing the flight pattern designs to  
capture both atmospheric events. "This was a great demonstration of man and unmanned  
aircraft teaming as the NOAA WP-3 was flying TD-9 and providing data at the same time,"  
says Dunion. "More good things will follow." The National Center for Atmospheric  
Research's Airborne Vertical Atmospheric Profiling System's (AVAPS) operated flawlessly  
throughout this record setting mission. AVAPS PI, Terry Hock, was present as the final  
dropsondes were being launched. The operational capabilities of this system continue to  
grow. The SHOUT Team continues to take advantage of the successes during NASA's  
Hurricane and Severe Storm Sentinel (HS3) moving closer to AVAPS' standard operations  
from unmanned aircraft. The NOAA Sensing Hazards with Operational Unmanned Aircraft  
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AVAPS' standard operations from unmanned aircraft. -- John "JC" Coffey Cherokee Nation  
Company supporting: NOAA UAS Program Office National Oceanic and Atmospheric  
Administration SSMC3/ OAR-R/ Room 11100 1315 East West Highway Silver Spring, MD  
20910 Email: John.J.Coffey@noaa.gov Office Telephone: 301-734-1104 Cell Telephone:  
904-923-1709

**Comments:**

**Flight Hour Summary:**

	16H004	17H006
<b>Flight Hours Approved in SOFRS</b>	220	
<b>Flight Hours Previously Approved</b>		54
<b>Total Used</b>	166	73.2
<b>Total Remaining</b>		-19.2

**17H006 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">10/05/16 - 10/06/16</a>	872-0177	Science	24.7	24.7	29.3	
<a href="#">10/07/16 - 10/08/16</a>	872-0178	Science	23.7	48.4	5.6	
<a href="#">10/09/16 - 10/10/16</a>	872-0179	Science	24.8	73.2	-19.2	

**Source URL:** [https://airbornescience.nasa.gov/flight\\_reports/Global\\_Hawk\\_872\\_08\\_29\\_16\\_-\\_08\\_30\\_16#comment-0](https://airbornescience.nasa.gov/flight_reports/Global_Hawk_872_08_29_16_-_08_30_16#comment-0)

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Page Editor: Brad Bulger

NASA Official: Bruce A. Tagg

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

**16H004 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">07/27/16</a>	872-0168	Check	4.9	4.9	215.1	
<a href="#">08/19/16</a>	872-0169	Ferry	10.3	15.2	204.8	
<a href="#">08/24/16 - 08/25/16</a>	872-0170	Science	23.9	39.1	180.9	
<a href="#">08/26/16 - 08/27/16</a>	872-0171	Science	23.8	62.9	157.1	
<a href="#">08/29/16 - 08/30/16</a>	872-0172	Science	23.8	86.7	133.3	
<a href="#">09/01/16 - 09/02/16</a>	872-0173	Science	22.8	109.5	110.5	
<a href="#">09/22/16 - 09/23/16</a>	872-0174	Science	24	133.5	86.5	
<a href="#">09/24/16 - 09/25/16</a>	872-0175	Science	22.8	156.3	63.7	
<a href="#">09/28/16</a>	872-0176	Ferry	9.7	166	54	