

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:

From:	KWFF	To:	KWFF
Start:	08/29/16 22:19 Z	Finish:	08/30/16 22:08 Z
Flight Time:	23.8 hours		
Log Number:	16H004	PI:	Gary Wick
Funding Source:	Robbie Hood - NOAA - UAS Program Manager		
Purpose of Flight:	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
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capabilities of this system continue to grow as the SHOUT Team takes advantage of the
successes during NASA's Hurricane and Severe Storm Sentinel (HS3) moving closer to
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
Flight Hours Approved in SOFRS	220	
Flight Hours Previously Approved		54
Total Used	166	73.2
Total Remaining		-19.2

17H006 Flight Reports

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

Source URL: https://espo.nasa.gov/atom/flight_reports/Global_Hawk_872_08_29_16_-_08_30_16#comment-0

Page Last Updated: April 22, 2017

Page Editor: Brad Bulger

NASA Official: Marilyn Vasques

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
07/27/16	872-0168	Check	4.9	4.9	215.1	
08/19/16	872-0169	Ferry	10.3	15.2	204.8	
08/24/16 - 08/25/16	872-0170	Science	23.9	39.1	180.9	
08/26/16 - 08/27/16	872-0171	Science	23.8	62.9	157.1	
08/29/16 - 08/30/16	872-0172	Science	23.8	86.7	133.3	
09/01/16 - 09/02/16	872-0173	Science	22.8	109.5	110.5	
09/22/16 - 09/23/16	872-0174	Science	24	133.5	86.5	
09/24/16 - 09/25/16	872-0175	Science	22.8	156.3	63.7	
09/28/16	872-0176	Ferry	9.7	166	54	