



## Data User Guide

# Flight Reports EPOCH

### Introduction

The Flight Reports EPOCH dataset consists of flight number, purpose of flight, and flight hours logged during the East Pacific Origins and Characteristics of Hurricanes (EPOCH) project. EPOCH was a NASA program manager training opportunity directed at training NASA young scientists in conceiving, planning, and executing a major airborne science field program. The goals of the EPOCH project were to sample tropical cyclogenesis or intensification of an Eastern Pacific hurricane and to train the next generation of NASA Airborne Science Program leadership. The mission reports are available from July 27, 2017 through August 31, 2017 in PDF format.

### Citation

Emory, Amber. 2021. Flight Reports EPOCH [indicate subset used]. Dataset available online from the NASA Global Hydrometeorology Resource Center DAAC, Huntsville, Alabama, U.S.A. doi: <http://dx.doi.org/10.5067/EPOCH/REPORTS/DATA101>

### Keywords:

NASA, GHRC, EPOCH, Global Hawk, UAV, flight reports

### Project

The East Pacific Origins and Characteristics of Hurricanes (EPOCH) project was a NASA program manager training opportunity directed at training NASA young scientists in conceiving, planning, and executing a major airborne science field program. Combined with this goal the EPOCH project was to sample tropical cyclogenesis or intensification of an Eastern Pacific hurricane. The EPOCH project consists of three payload instruments, ER-2 X-band Radar (EXRAD), High Altitude Monolithic Microwave Integrated Circuit Sounding Radiometer (HAMSR), and Advanced Vertical Atmospheric Profiling System (AVAPS), onboard the AV-6 Global Hawk Unmanned Aerial Vehicle research aircraft. The launch site

was at the Armstrong Flight Research Center located on Edwards Air Force Base in California. The launch/flight window consisted of up to six 24-hour science flights from August 1, 2017 through August 30, 2017 over the Pacific Ocean. More information about the EPOCH project can be found at [NOAA UAS Program Participates in NASA's East Pacific Origins and Characteristics of Hurricanes \(EPOCH\) Project](#), [Emory et al., 2015](#), and [EPOCH: East Pacific Origins and Characteristics of Hurricanes | Earth](#).



Figure 1: EPOCH airborne instrument suite  
(Image source: [Emory et al., 2015](#))

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## Data Characteristics

The Flight Reports EPOCH dataset consists of flight number, purpose of flight, and flight hours logged during the EPOCH project. These reports are stored in PDF format and are considered to be at a Level 0 processing level. More information about the NASA data processing levels are available on the [EOSDIS Data Processing Levels](#) webpage. The characteristics of this dataset are listed in Table 1 below.

Table 1: Data Characteristics

Characteristic	Description
Platform	Global Hawk UAV
Instrument	Visual Observations
Spatial Coverage	N: 40.0 , S: 10.0, E: -80.0, W: -130.0 (Pacific Ocean)
Temporal Coverage	July 27, 2017 - August 31, 2017
Temporal Resolution	Daily -< Weekly
Parameter	Flight report
Version	1
Processing Level	0

## File Naming Convention

The Flight Reports EPOCH dataset files are available in PDF format and named using the following convention:

**Data:** FlightReports\_EPOCH\_<start>\_<end>.pdf

Table 2: File naming convention variables

Variable	Description
<start>	Start time of collection in YYYYMMDD_hhmm format where, YYYY = four-digit year MM = two-digit month DD = two-digit day hh = two-digit hour in UTC mm = two-digit minute in UTC
<end>	End time of collection in YYYYMMDD_hhmm format where, YYYY = four-digit year MM = two-digit month DD = two-digit day hh = two-digit hour in UTC mm = two-digit minute in UTC

## Data Format and Parameters

The Flight Reports EPOCH dataset consists of flight number, purpose of flight, and flight hours logged in PDF format.

## Software

No special software is required to read the PDF mission report files.

## Known Issues or Missing Data

There are no known issues with these data or any known gaps in the dataset.

## References

NASA Earth Sciences: EPOCH: East Pacific Origins and Characteristics of Hurricanes.  
<https://earth.gsfc.nasa.gov/meso/campaigns/epoch>

NOAA UAS, 2017: Program Participates in NASA's East Pacific Origins and Characteristics of Hurricanes (EPOCH) Project.  
<https://uas.noaa.gov/News/Articles/ArtMID/6699/ArticleID/401/NOAA-UAS-Program-Participates-in-NASAs-East-Pacific-Origins-and-Characteristics-of-Hurricanes-EPOCH-Project>

## Related Data

All data collected during the EPOCH field campaign are considered to be related. These data can be located by searching the term 'EPOCH' using the GHRC [HyDRO 2.0](#) data search tool.

## Contact Information

To order these data or for further information, please contact:

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