

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, D.C. 20594

November 1, 2016

Errata #1 to the Aircraft Performance Radar & Cockpit Visibility Study

by John O'Callaghan

ACCIDENT

Location: San Diego, California
Date: August 16, 2015
Time: 11:03 Pacific Daylight Time (PDT) / 18:03 Coordinated Universal Time (UTC)
Aircraft: Cessna 172M, registration N1285U
North American Rockwell NA265-60SC Sabreliner, registration N442RM
NTSB#: WPR15MA243A (C172)
WPR15MA243B (Sabreliner)

GROUP

Not Applicable

SUMMARY

On August 16, 2015, about 11:03 PDT, a Cessna 172M, N1285U, and an experimental North American Rockwell NA265-60SC Sabreliner, N442RM (call sign EAGLE1), collided in midair about 1 mile northeast of Brown Field Municipal Airport (KSDM), San Diego, California. The pilot (and sole occupant) of N1285U and the two pilots and two mission specialists aboard EAGLE1 died; both airplanes were destroyed. N1285U was registered to a private individual and operated by Plus One Flyers under the provisions of 14 Code of Federal Regulations (CFR) Part 91 as a personal flight. EAGLE1 was registered to and operated by BAE Systems Technology Solutions & Services, Inc. (BAE), for the US Department of Defense as a public aircraft in support of the US Navy. No flight plan was filed for N1285U, which originated from Montgomery-Gibbs Executive Airport, San Diego, California (KMYF). A mission flight plan was filed for EAGLE1, which originated from KSDM about 08:30 and was returning to KSDM. Visual meteorological conditions prevailed at the time of the accident.

The *Aircraft Performance Radar & Cockpit Visibility Study* dated October 11, 2016 presents the results of using North Island Naval Air Station (NZY) and San Diego Miramar (NKX) Airport Surveillance Radar (ASR) data, Cockpit Voice Recorder (CVR) information from the Sabreliner, and the wreckage locations of the airplanes to calculate the position and orientation of each airplane in the minutes preceding the collision. This information is then used to estimate the approximate location of each airplane in the other airplane's field of view (the "visibility study"), and to estimate the Cockpit Display of Traffic Information (CDTI) data that could have been presented to the pilots had the airplanes been equipped to provide this information.

D. DETAILS OF THE INVESTIGATION

The *Aircraft Performance Study* should be corrected as follows:

Table 4 on page 10 and Figure 8 on page 46 incorrectly depict N5058U as already under KSDM air traffic control tower (ATCT) control at the time that N1285U contacts the ATCT at 10:49:44. In fact, N5058U contacted the KDSM ATCT about 23 seconds after N1285U, at 10:50:07. Consequently, Table 10 and Figure 8 should be replaced with the corrected Table and Figure presented below.

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REPLACE:

Time HH:MM:SS PDT	Operation	# aircraft under KSDM ATCT ground control	# aircraft under KSDM ATCT local control	Total # aircraft under KSDM ATCT control
10:49:44	N1285U calls for touch-n-goes; N6ZP pattern work 26R; N5058U inbound landing; N8360R pattern work 26L	0	4	4
10:51:52	N81962 calls for landing	0	5	5
10:52:43	N5058U lands and taxis to parking	0	4	4
10:53:48	XALVV calls for landing	0	5	5
10:55:10	N5058U calls for taxi for takeoff	1	5	6
10:55:57	N18WZ calls for landing	1	6	7
10:57:01	XALVV lands, holds between runways	2	5	7
10:58:02	N81962 lands & stops at alpha	3	4	7
10:58:48	N5161U calls for landing	3	5	8
10:59:04	EAGLE1 calls for landing	3	6	9
10:59:36	N81962 taxis to ramp	2	6	8
11:00:31	N5058U cleared for takeoff	1	7	8
11:01:02	N5442P calls over Tijuana for landing	1	8	9
11:01:20	XALVV taxis to customs	0	8	8
11:01:23	N18WZ lands and exits at bravo	1	7	8
11:01:42	N18WZ taxis to customs	0	7	7
11:02:51	N5161U lands and taxis to parking	0	6	6
11:03:10	Collision	0	4	4

Table 4. Summary of KSDM ATCT aircraft operations, 10:49:44 – 11:03:10.

WITH:

Time HH:MM:SS PDT	Operation	# aircraft under KSDM ATCT ground control	# aircraft under KSDM ATCT local control	Total # aircraft under KSDM ATCT control
10:49:44	N1285U calls for touch-n-goes; N6ZP pattern work 26R; N8360R pattern work 26L	0	3	3
10:50:07	N5058U calls for landing	0	4	4
10:51:52	N81962 calls for landing	0	5	5
10:52:43	N5058U lands and taxis to parking	0	4	4
10:53:48	XALVV calls for landing	0	5	5
10:55:10	N5058U calls for taxi for takeoff	1	5	6
10:55:57	N18WZ calls for landing	1	6	7
10:57:01	XALVV lands, holds between runways	2	5	7
10:58:02	N81962 lands & stops at alpha	3	4	7
10:58:48	N5161U calls for landing	3	5	8
10:59:04	EAGLE1 calls for landing	3	6	9
10:59:36	N81962 taxis to ramp	2	6	8
11:00:31	N5058U cleared for takeoff	1	7	8
11:01:02	N5442P calls over Tijuana for landing	1	8	9
11:01:20	XALVV taxis to customs	0	8	8
11:01:23	N18WZ lands and exits at bravo	1	7	8
11:01:42	N18WZ taxis to customs	0	7	7
11:02:51	N5161U lands and taxis to parking	0	6	6
11:03:10	Collision	0	4	4

Table 4 (corrected). Summary of KSDM ATCT aircraft operations, 10:49:44 – 11:03:10.

WPR15FA243AB: Midair collision, Sabreliner EAGLE1 / C172 N1285U, San Diego, CA, 8/16/2015

Summary of KSDM aircraft operations, 10:49:00 – 11:03:10 PDT

REPLACE:

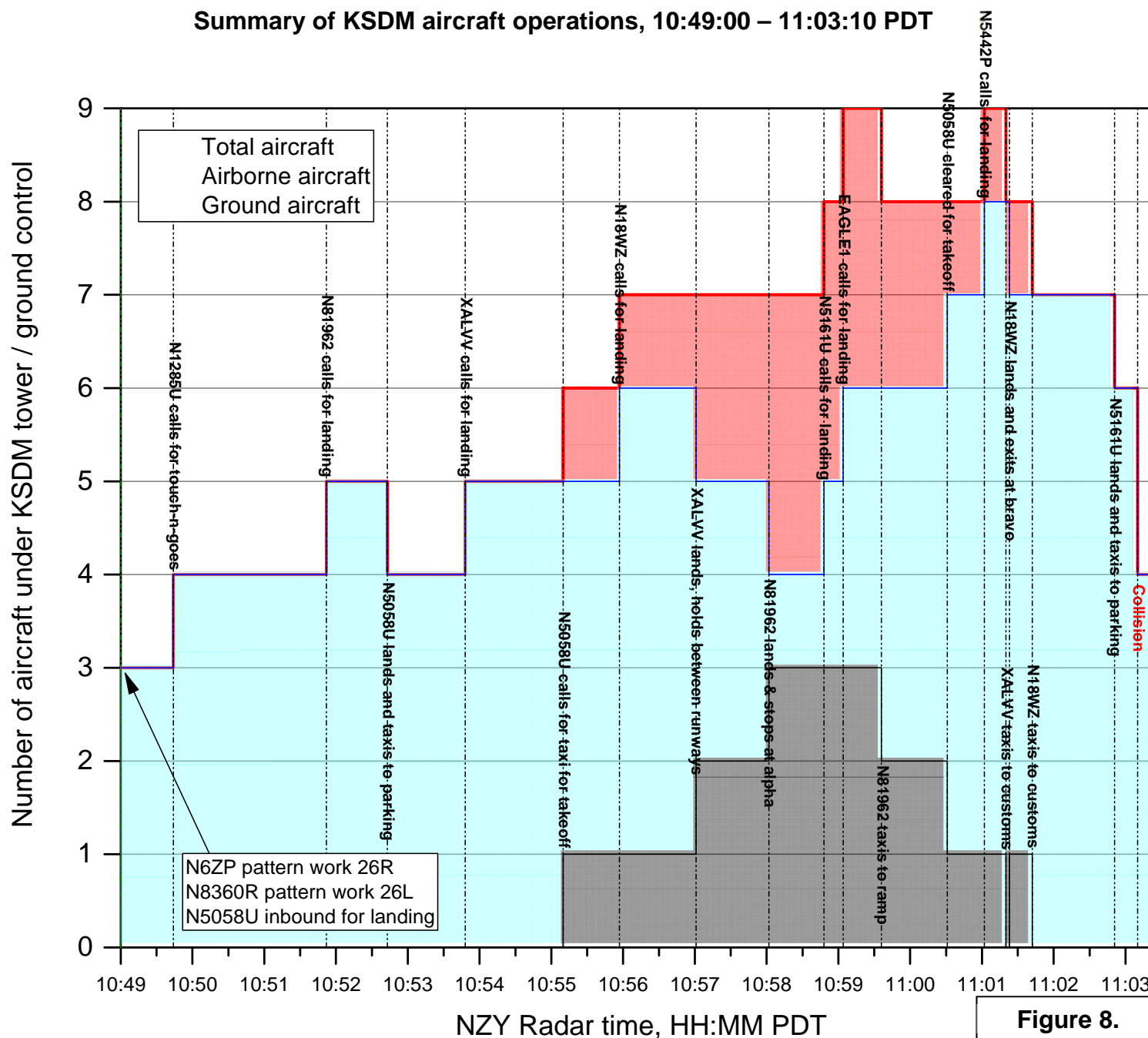


Figure 8.

WITH:

Summary of KSDM aircraft operations, 10:49:00 – 11:03:10 PDT

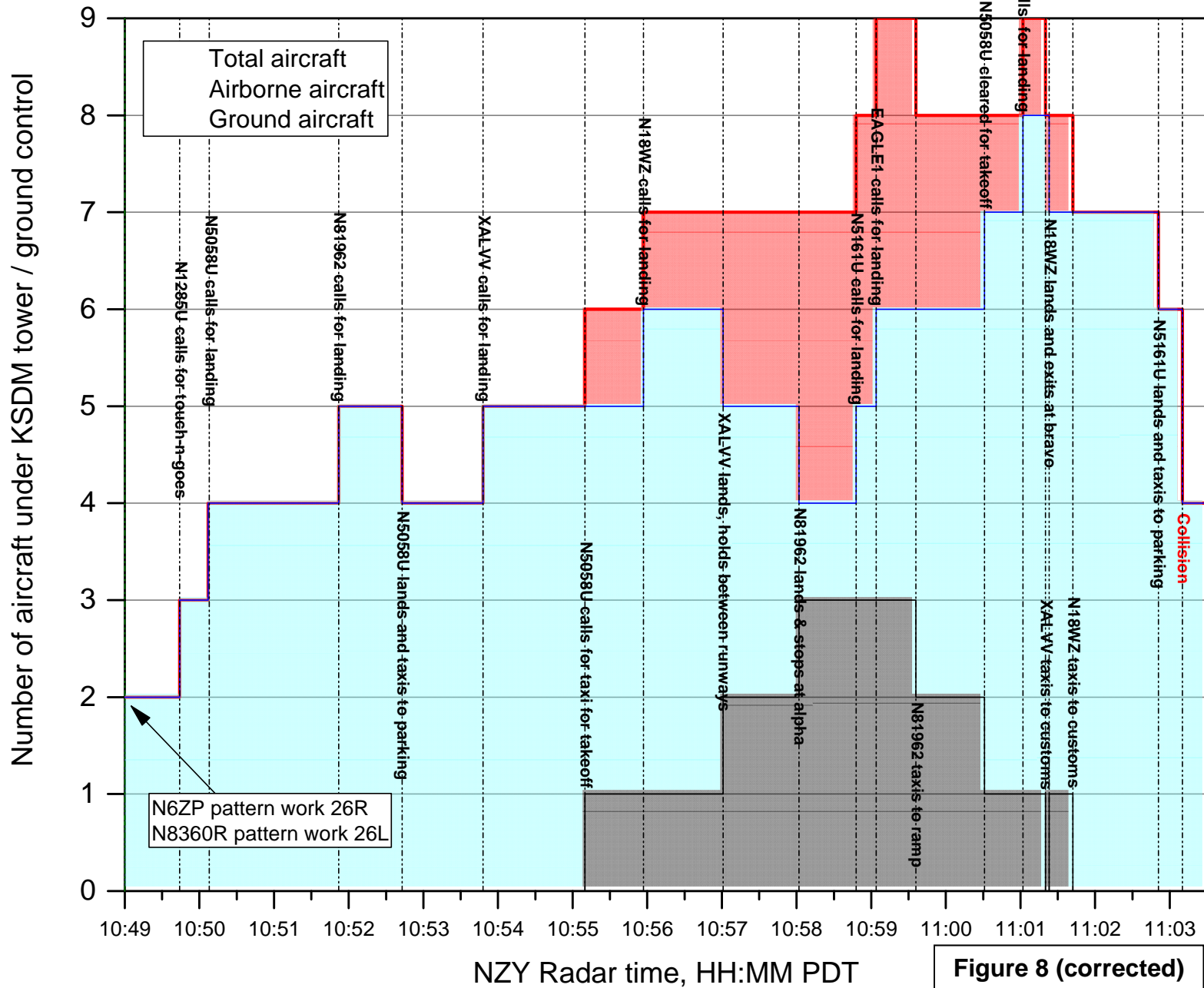


Figure 8 (corrected)