

AVIATION SAFETY STATISTICAL HANDBOOK

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This report presents in tabular and graphical format monthly aviation safety statistical information for national airspace incidents and aircraft accidents. Data are presented for near midair collisions (NMAC's), operational errors (OE's), operational deviations (OD's), pilot deviations (PD's), vehicle/pedestrian deviations (VPD's), surface incidents (SI's), Runway Incursions (RI's), Flight Assists (FA's) and aircraft accidents in the NAS. Comparing January through October 2001 with January through October 2002, all incident types showed a decrease except for PD's.

NEAR MIDAIR COLLISIONS

For January through October 2002, the number of pilot-reported near midair collisions decreased from 188 to 159, compared to January through October 2001 (see Graph on Page ES-3). Over this period, the number of NMAC's reported by air carriers (Part 121 and Part 135) decreased from 71 to 63 and General Aviation (GA) decreased from 71 to 65. NMAC's where the reporting aircraft was flying IFR and the other was flying VFR decreased from 81 in 2001 to 73 for the same period in 2002. Those where both aircraft were flying VFR decreased from 81 to 62; and those where both aircraft were flying IFR decreased from 17 to 16. Twelve percent of NMAC's reported thus far during 2002 were judged to represent a critical hazard.

OPERATIONAL ERRORS/DEVIATIONS

Operational errors decreased from 1026 to 899 during January through October 2002 compared to January through October 2001. En route operational errors for this period decreased from 607 to 583, while errors at terminals decreased 25 percent from 418 to 315. For the 12-month period ending October 2002, the top air route traffic control centers, based on operational errors per 100,000 operations, had error rates ranging from 2.55 for Indianapolis Center to 1.50 for the Oakland Center. Compared to the previous 12-month period, operational error rates increased in nine of the top centers. TRACON operational errors varied from 2.05 for Omaha to .80 for the Phoenix TRACON.

Operational deviations for January through October 2002 decreased 26 percent from 213 to 158 compared to January through October 2001.

PILOT DEVIATIONS

Reports of pilot deviations for January through October 2002 increased two percent from 1571 to 1598, compared to January through October 2001. Over this period, air deviations increased from 996 to 1144, while surface deviations decreased from 532 to 425. The number of Class B airspace violations increased from 78 to 105.

VEHICLE/PEDESTRIAN DEVIATIONS

Total vehicle/pedestrian deviations during 2002 decreased from 405 to 317 for January through October 2001. Cincinnati/Lunken Municipal Airport recorded a decrease in VPD's over the last 12 months, from 9 to 4.

SURFACE INCIDENTS

The number of SI's for January through October 2002 decreased 21 percent from 1096 to 862 compared to January through October 2001. Surface OE's decreased from 96 to 66; PD SI's decreased from 575 to 454, while VPD's decreased from 405 to 317. Operational deviation SI's increased from 20 to 25.

The number of runway incursions for January through October 2002 decreased from 340 to 282, compared to January through October 2001.

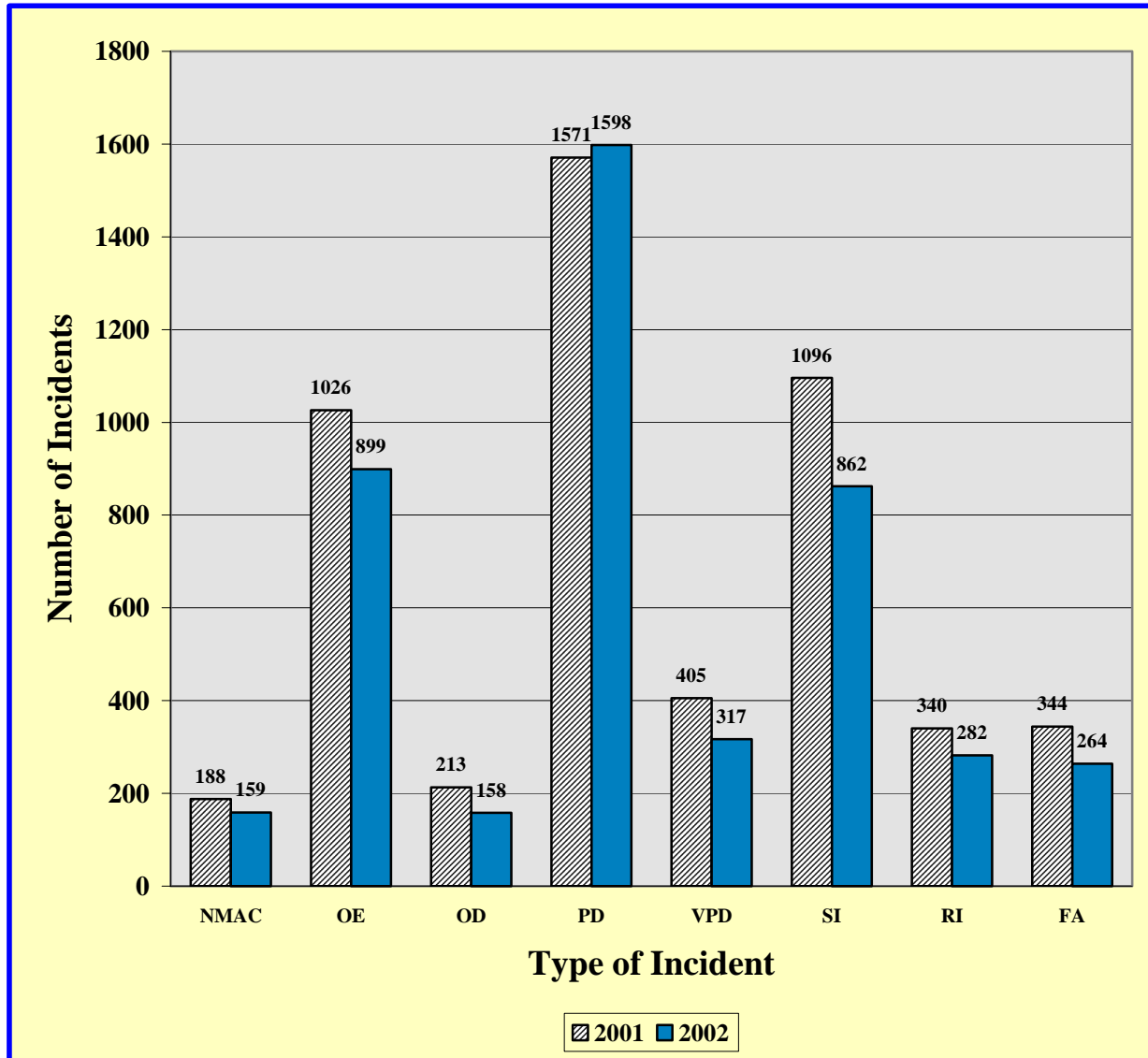
FLIGHT ASSISTS

Flight assists for January through October 2002 decreased from 340 to 264 compared to January through October 2001. Ninety-four percent of flight assists handled in January through October were for General Aviation aircraft. A 12-month comparison of flight assists by facility showed that Atlanta Center had the highest number of assists with 16.

ACCIDENT DATA

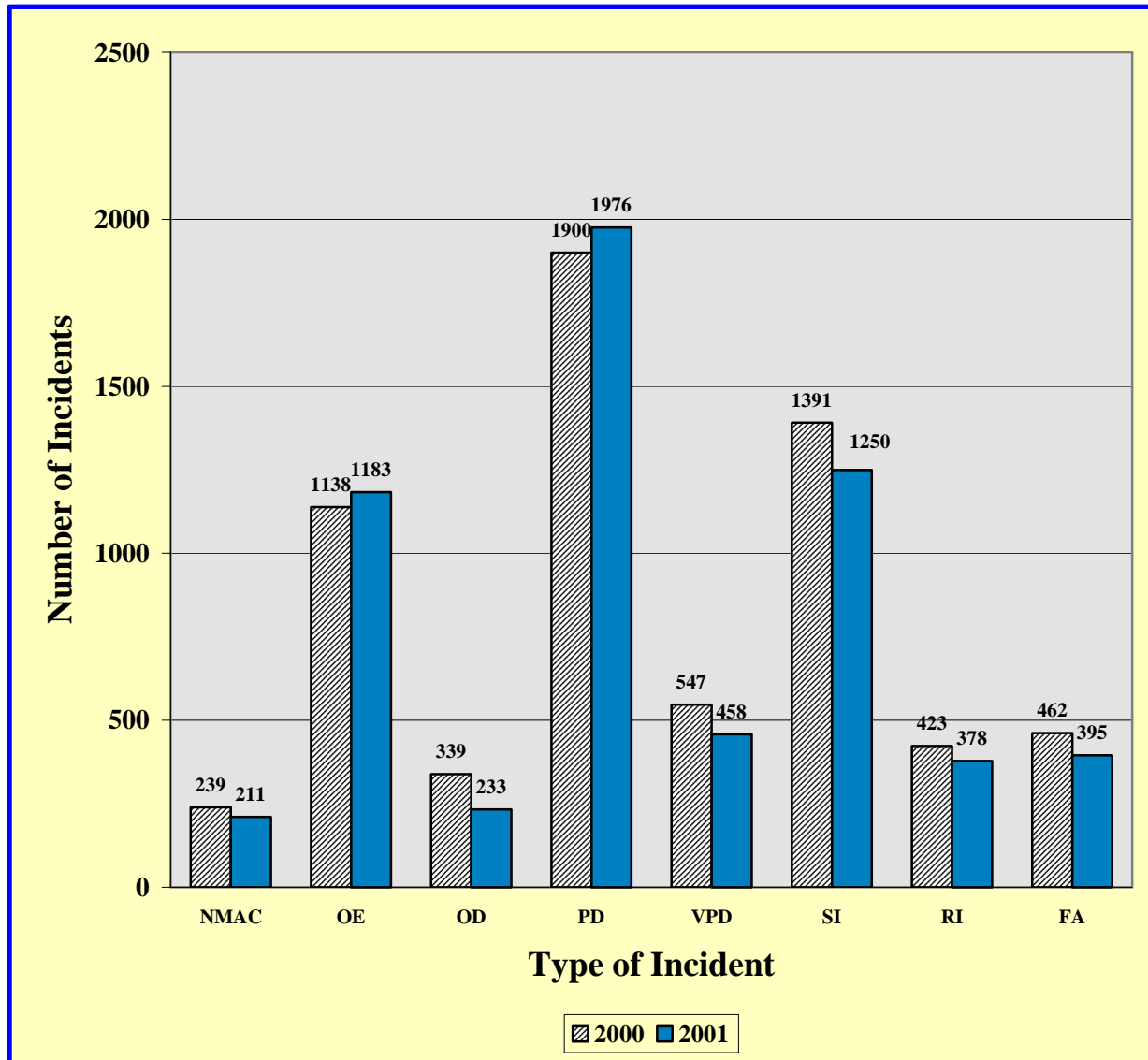
Total system accidents decreased from 1628 during January through October 2001 to 1598 for January through October 2002. There were 36 large air carrier accidents in 2002 compared to 39 in the 2001 period. The number of fatal accidents decreased from 301 to 295. The corresponding fatal accident rate held steady at 18%. The total system fatalities decreased 38 percent from 812 to 502.

**Exhibit ES-1
National Airspace Incidents Year to Date Comparison
2001 versus 2002
(January through October)**



NMAC – Near Midair Collision
 OE – Operational Error
 OD – Operational Deviation
 VPD – Vehicle/Pedestrian Deviation
 PD – Pilot Deviation
 SI – Surface Incident
 RI – Runway Incursion
 FA – Flight Assist

Exhibit ES-2
National Airspace Incidents Calendar Year Comparison
Calendar Years 2000 and 2001

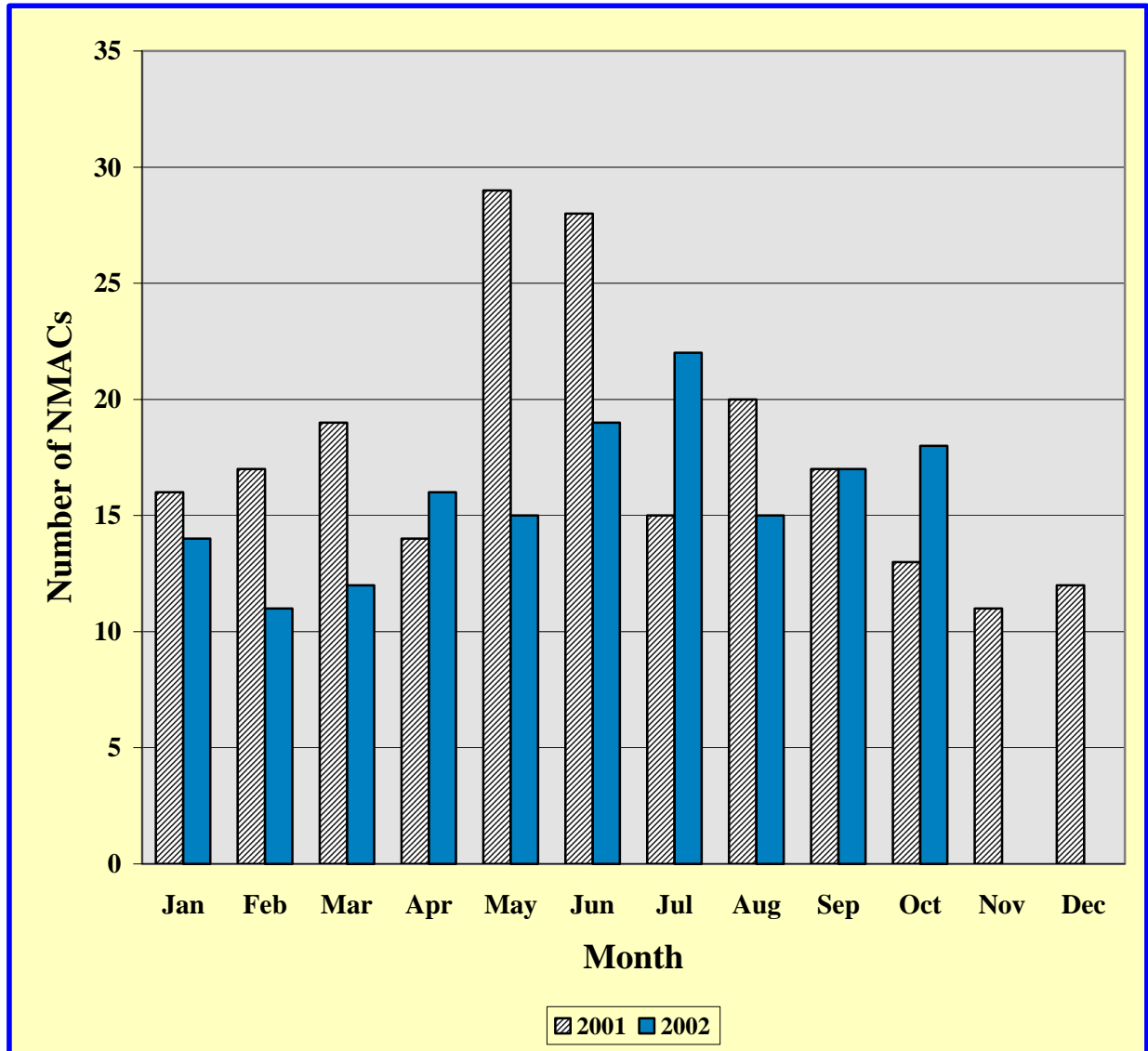


- NMAC – Near Midair Collision
- OE – Operational Error
- OD – Operational Deviation
- PD – Pilot Deviation
- VPD – Vehicle/Pedestrian Deviation
- SI – Surface Incident
- RI – Runway Incursion
- FA – Flight Assist

NEAR MIDAIR COLLISIONS*

*The reporting of a **Near Midair Collision** is voluntary and depends in part on the individual's perception of a situation. A report does not necessarily involve the violation of regulations or an error by air traffic controllers, nor does it necessarily represent an unsafe condition. Significant factors influencing the submission of a report may include the proximity of the aircraft involved, the element of surprise in the encounter, or the heightened alertness of the flight crew to the possibility of a Near Midair Collision because of the publicity surrounding a near, or actual, midair collision. Some Near Midair Collisions, including those which may involve unsafe conditions, may not be reported. Some reasons are the failure to see the other aircraft or to perceive accurately the distance from another aircraft due to restricted visibility or the relative angle of approach. Others are the fear of penalty, or lack of awareness of the NMAC reporting system. **Data are preliminary and subject to change.**

**Exhibit 1-1
Pilot Reported Near Midair Collisions
By Month
2001 through October 2002**



		MONTH												
YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
2001	16	17	19	14	29	28	15	20	17	13	11	12	211	
2002	14	11	12	16	15	19	22	15	17	18			159	

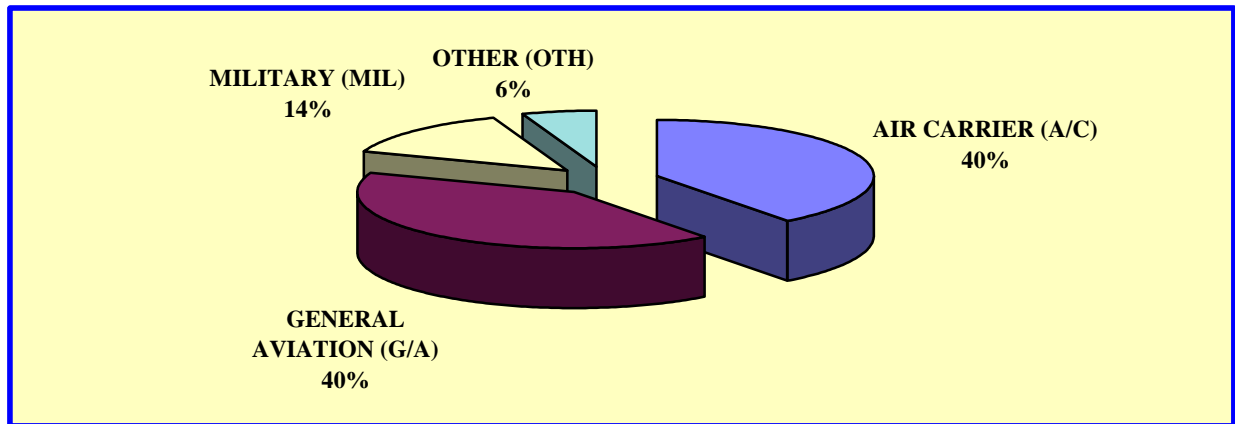
Exhibit 1-2
Pilot Reported Near Midair Collisions
By Region and Month
2001 through October 2002

2001													
REGION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AAL	0	0	0	1	3	2	2	1	3	0	1	0	13
ACE	0	1	1	0	1	1	0	1	0	0	0	2	7
AEA	1	2	1	1	1	5	2	1	0	2	1	0	17
AGL	1	0	1	2	1	1	1	1	0	2	0	2	12
ANE	1	0	0	1	0	1	0	0	1	0	0	0	4
ANM	1	1	1	1	1	4	1	3	3	1	2	1	20
ASO	3	4	7	5	11	3	1	2	5	4	4	2	51
ASW	3	2	2	1	7	2	3	1	1	2	1	1	26
AWP	6	7	6	2	4	9	5	10	4	2	2	4	61
<i>Total</i>	16	17	19	14	29	28	15	20	17	13	11	12	211

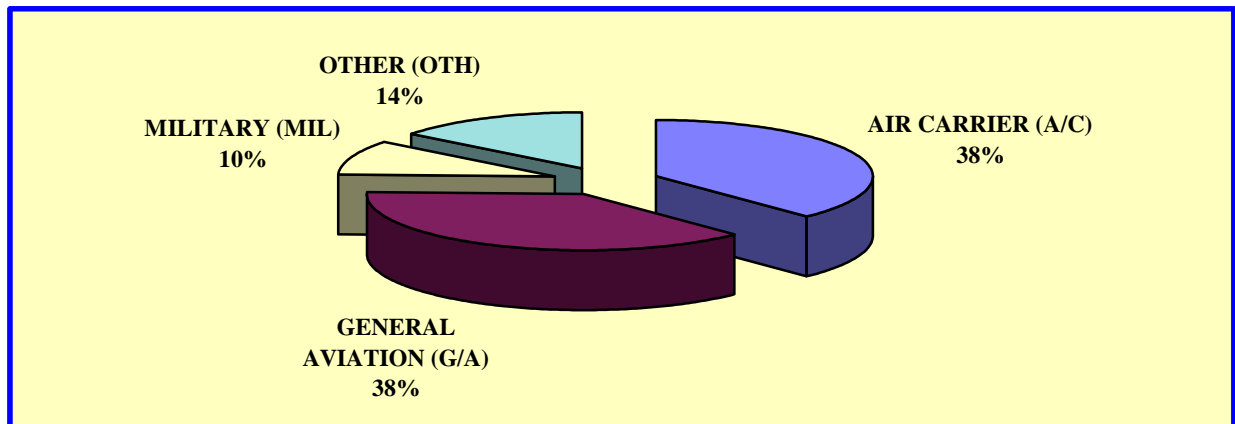
2002													
REGION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AAL	0	1	0	0	2	0	0	2	1	0			6
ACE	0	0	0	0	1	1	4	0	1	2			9
AEA	0	0	2	3	2	3	1	1	1	5			18
AGL	0	2	0	0	1	1	2	0	3	1			10
ANE	0	0	1	0	0	0	2	0	0	0			3
ANM	1	0	0	4	2	4	3	1	3	2			20
ASO	6	2	3	3	3	3	3	4	1	2			30
ASW	0	1	1	3	0	0	3	3	1	1			13
AWP	7	5	5	3	4	7	4	4	6	5			50
<i>Total</i>	14	11	12	16	15	19	22	15	17	18			159

Exhibit 1-3
Pilot Reported Near Midair Collisions
By Reporting Operator Type
2001 versus 2002
(January through October)

2001



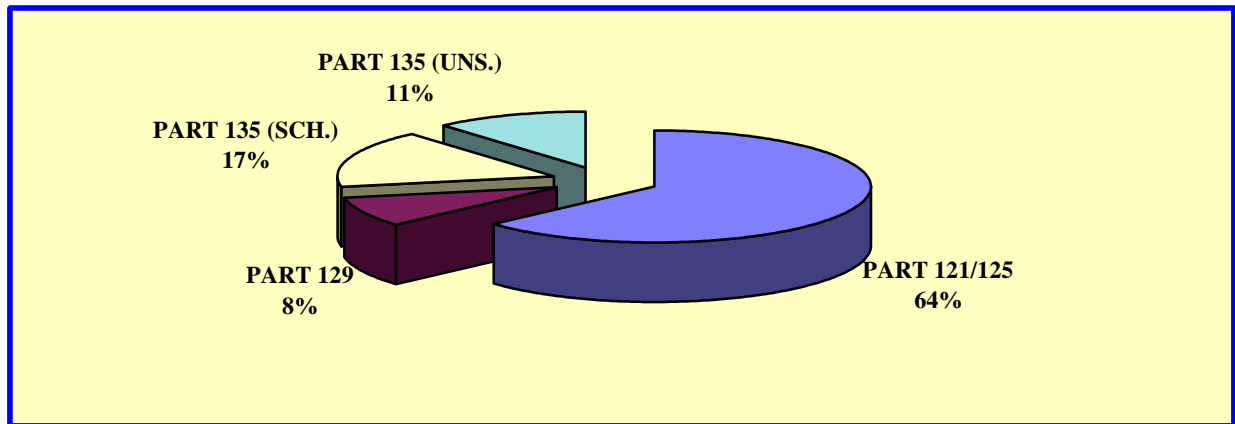
2002



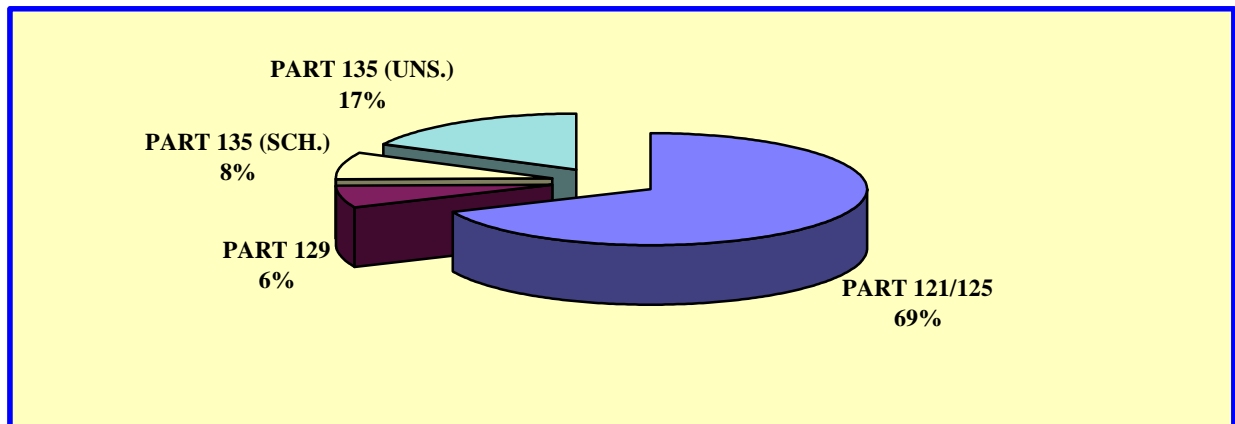
OPERATOR TYPE	2001	2002	Total
Air Carrier (A/C)	71	63	134
General Aviation (G/A)	71	65	136
Military (MIL)	19	22	41
Other (OTH)	27	9	36
Total	188	159	347

Exhibit 1-4
Pilot Reported Near Midair Collisions
By Reporting Air Carrier Type
2001 versus 2002
(January through October)

2001



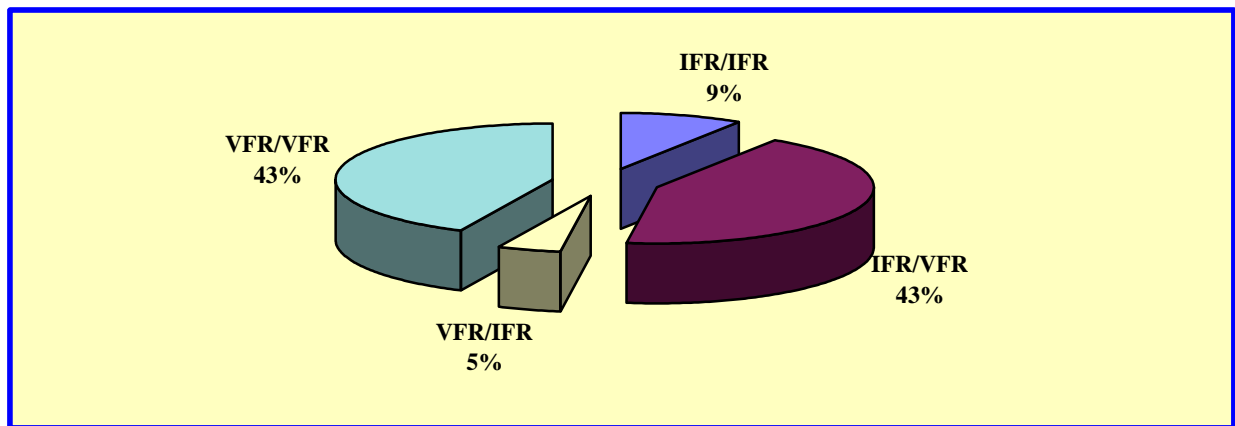
2002



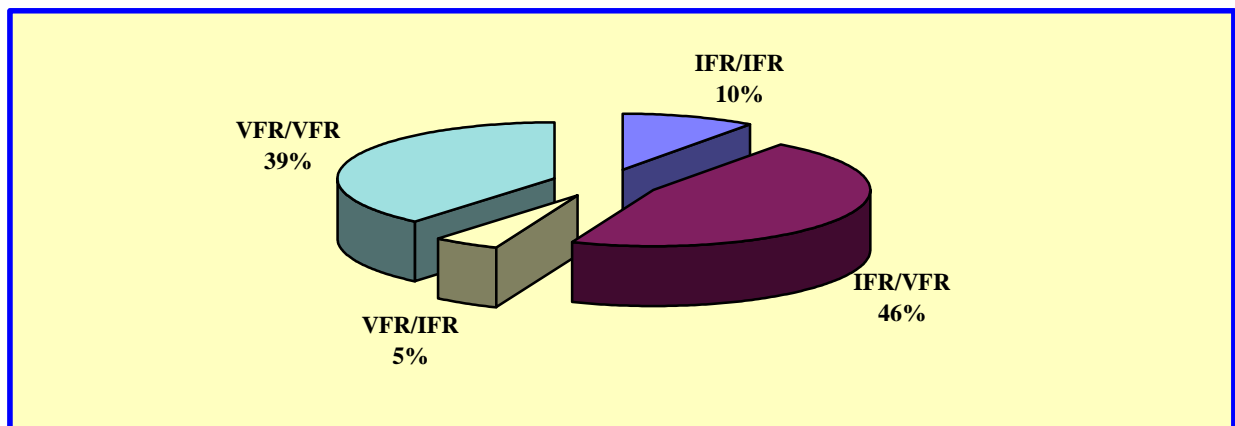
AIR CARRIER TYPE	2001	2002	Total
Part 121/125	45	43	88
Part 129	6	4	10
Part 135 (Sch.)	12	5	17
Part 135 (Uns.)	8	11	19
<i>Total</i>	71	63	134

**Exhibit 1-5
Pilot Reported Near Midair Collisions
By Type of Flight Plan
2001 versus 2002
(January through October)**

2001



2002



REPORTING/OTHER	2001	2002	Total
IFR/IFR	17	16	33
IFR/VFR	81	73	154
VFR/IFR	9	8	17
VFR/VFR	81	62	143
Total	188	159	347

Exhibit 1-6
Pilot Reported Near Midair Collisions
By Degree of Hazard and Month
2001 through October 2002

2001													
HAZARD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Critical	3	1	3	1	7	5	7	3	3	1	0	3	37
No Hazard	9	8	9	11	9	12	3	13	3	8	6	5	96
Not Reported	4	5	7	2	7	6	4	3	8	1	3	1	51
Potential	0	3	0	0	6	5	1	1	3	3	2	3	27
<i>Total</i>	16	17	19	14	29	28	15	20	17	13	11	12	211

2002													
HAZARD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Critical	3	2	1	2	2	2	2	3	2	0			19
No Hazard	5	3	2	6	6	3	5	0	3	1			34
Not Reported	2	3	0	3	2	4	7	6	8	17			52
Potential	4	3	9	5	5	10	8	6	4	0			54
<i>Total</i>	14	11	12	16	15	19	22	15	17	18			159

Exhibit 1-7
Pilot Reported Near Midair Collisions
By State and Territory
2001 versus 2002
(January through October)

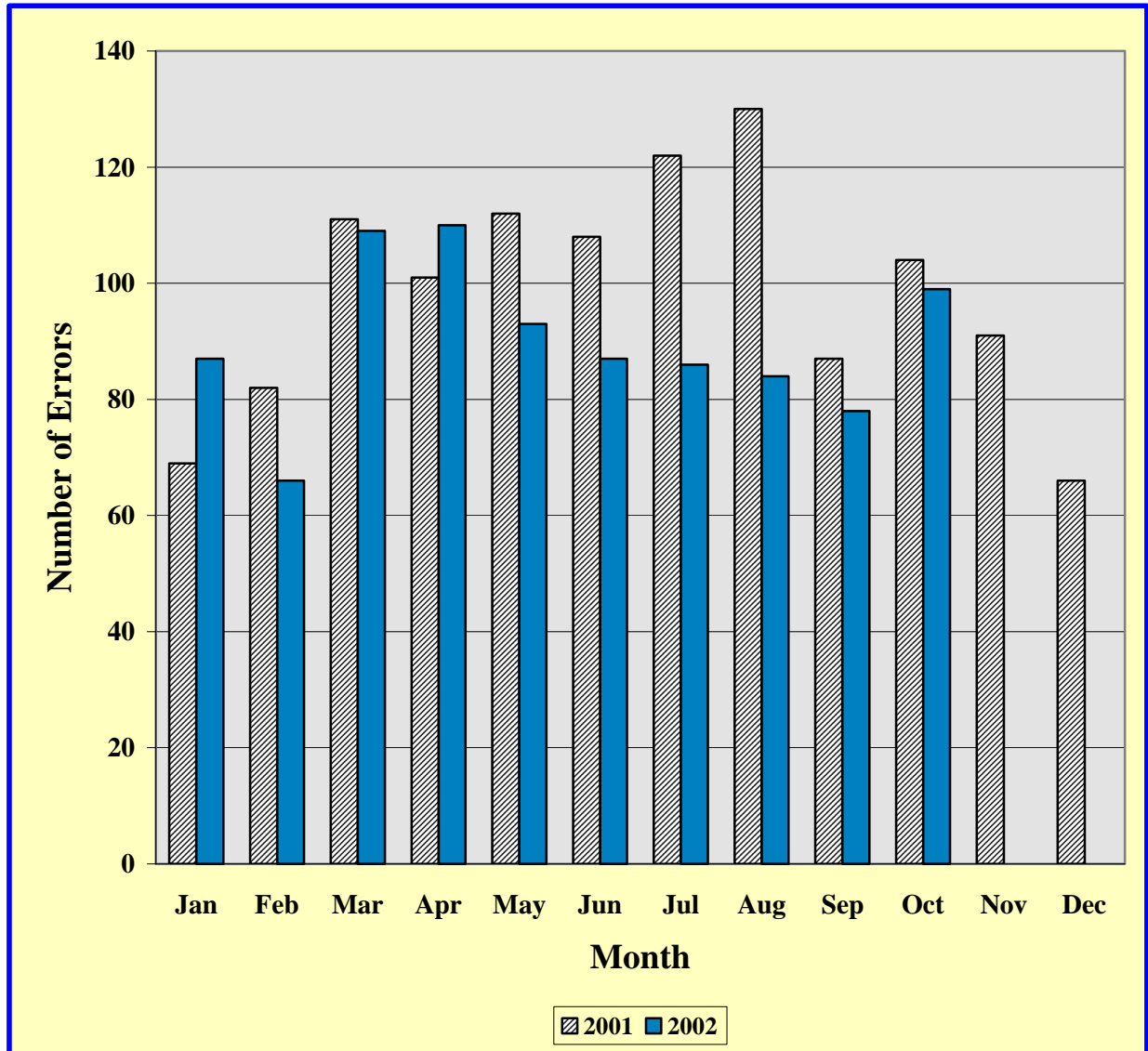
State	2001	2002	State	2001	2002
Alabama	0	2	Montana	0	0
Alaska	12	7	Nebraska	1	1
American Samoa*	0	0	Nevada	1	4
Arizona	17	12	New Hampshire	1	0
Arkansas	0	3	New Jersey	4	4
Atlantic Ocean	1	0	New Mexico	3	1
Bahamas*	1	1	New York	3	6
California	37	28	North Carolina	3	2
Colorado	2	4	North Dakota	0	0
Connecticut	1	2	Ohio	3	0
Delaware	2	1	Oklahoma	6	0
District of Columbia	0	0	Oregon	4	2
Florida	25	13	Pacific Ocean	0	0
Georgia	5	3	Pennsylvania	4	1
Guam*	0	0	Puerto Rico*	1	0
Hawaii	0	5	Rhode Island	2	0
Idaho	2	1	South Carolina	1	1
Illinois	1	2	South Dakota	0	0
Indiana	3	2	Tennessee	3	5
Iowa	0	0	Texas	11	7
Kansas	2	4	Utah	2	4
Kentucky	5	2	Vermont	0	0
Louisiana	3	2	Virgin Islands*	0	0
Maine	0	1	Virginia	0	5
Maryland	1	1	Wake Island*	0	0
Massachusetts	0	1	Washington	7	8
Michigan	0	3	West Virginia	0	0
Minnesota	2	2	Wisconsin	1	1
Mississippi	3	1	Wyoming	0	1
Missouri	2	3	Not Reported	0	0
Total				188	159

* U.S. Controlled Airspace

OPERATIONAL ERRORS/DEVIATIONS*

*The use of absolute numbers of **Operational Errors/Deviations** as an indication of the performance of the air traffic control system can be misleading because of the apparent relationship between Operational Errors/Deviations and traffic activity. An increase or decrease in the error/deviation count may merely reflect a corresponding rise or fall in the number of aircraft using the national airspace over a given period. **Data are preliminary and subject to change.**

Exhibit 2-1
ATC Operational Errors
By Month
2001 through October 2002



		MONTH											
YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2001	69	82	111	101	112	108	122	130	87	104	91	66	1183
2002	87	66	109	110	93	87	86	84	78	99			899

Exhibit 2-2
ATC Operational Errors
By Region and Month
2001 through October 2002

2001													
REGION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AAL	1	0	1	2	1	1	3	4	1	3	0	3	20
ACE	4	4	6	0	3	7	5	5	4	5	2	4	49
AEA	15	30	21	26	34	22	28	21	16	18	20	7	258
AGL	13	7	25	17	23	25	25	32	24	21	20	16	248
ANE	4	2	3	2	3	1	4	4	5	0	0	2	30
ANM	1	10	7	6	5	6	7	12	9	10	6	5	84
ASO	15	17	34	29	24	31	28	22	10	25	18	14	267
ASW	4	7	3	11	6	7	8	15	8	10	11	5	95
AWP	12	5	11	8	13	8	14	15	10	12	14	10	132
Total	69	82	111	101	112	108	122	130	87	104	91	66	1183

2002													
REGION	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AAL	0	3	2	1	2	0	2	0	2	1			13
ACE	4	1	7	4	4	4	1	2	4	5			36
AEA	11	9	18	22	17	22	14	13	14	15			155
AGL	26	18	29	27	26	25	28	31	24	32			266
ANE	3	0	5	1	1	6	4	3	3	2			28
ANM	6	6	6	4	6	2	3	9	5	10			57
ASO	23	19	24	28	19	18	24	10	12	19			196
ASW	5	5	12	9	9	6	5	11	6	5			73
AWP	9	5	6	14	9	4	5	5	8	10			75
Total	87	66	109	110	93	87	84	83	78	99			899