

Workshop: Improving Railroad Safety through Understanding Close Calls

Don McClure Presentation

**FEDERAL RAILROAD
ADMINISTRATION
CLOSE CALL WORKSHOP
APRIL 23-24, 2003**

Safety Programs that increase the Safety Margin and Reduce the Accident Risk

Flight Operations Quality
Assurance(FOQA)

and

Aviation Safety Action Programs(ASAP)



Flight Operations Quality
Assurance
FOQA

What is a FOQA Program?

A program designed to enhance safety through the controlled, automated recording and analysis of flight data generated during routine line operations.

FOQA Around the World

- European/Asian carriers have operated FOQA for more than 30 years
- A different litigious environment
- No fear of misuse by governing agencies, press
- Data is respected
- Long recognized need for anonymity in reporting

FOQA Around the World ...

Continued

Accident Rates Per Million Departures

- Mature FOQA programs have proven hull loss prevention statistics

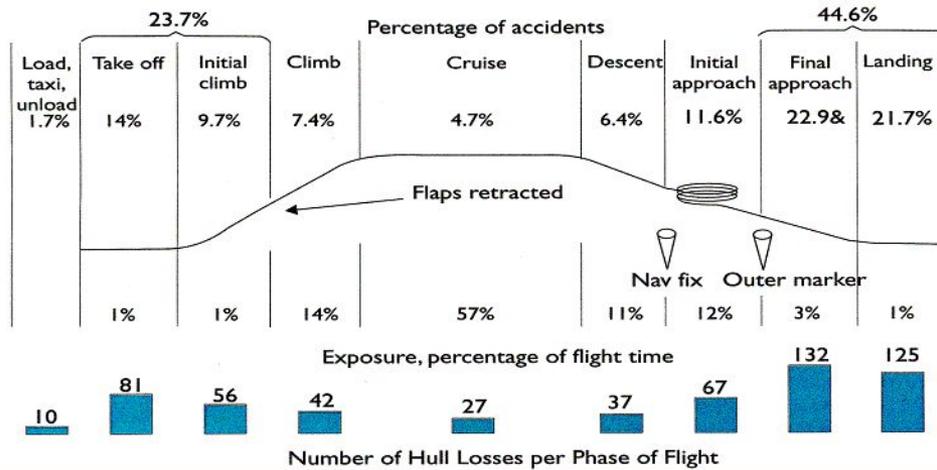
Accident Type	Non-U.S. Carrier/ FOQA Users	European Carriers/ NOT using FOQA	United States Where most carriers are NOT using FOQA data
Hull Loss	0.51	1.10	0.60
Hull Loss, Crew Factor	0.20	0.52	0.37

Common Terms

- **Parameter** - A recorded value associated with a specific aircraft system or flight regime, i.e. Altitude, Aileron Position and Fuel Flow, etc.
- **Event** - Detected operation of the aircraft that is unusual or beyond established limits
- **Exceedence** - The amount by which a detected event has gone beyond the established limits

Hull Loss Accidents Worldwide Commercial Jet Fleet 1959–1996

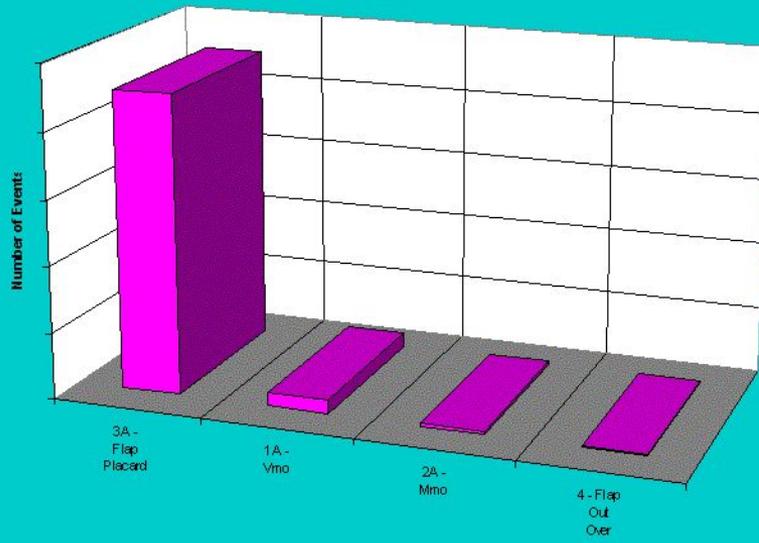
Exposure percentage based on flight duration of 1.5 hours



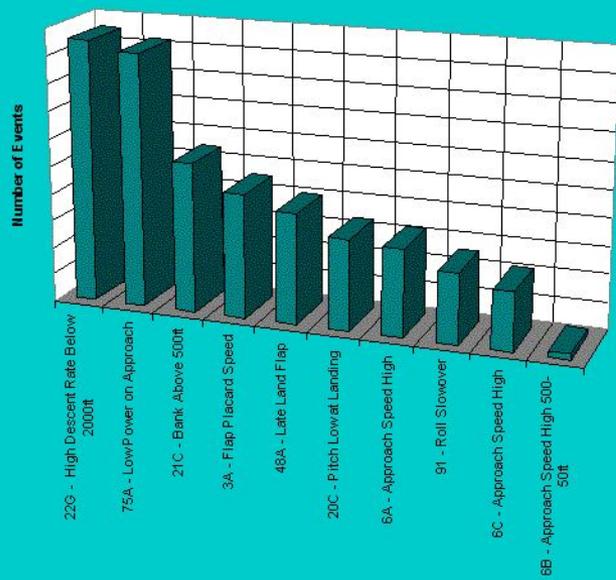
Reporting Examples

- Aircraft Limitations
- Top 10 Events by total count
- High Rate of descent by arrival airport
- Top 9 low power approaches by arrival airport
- Approach Speed Event trending

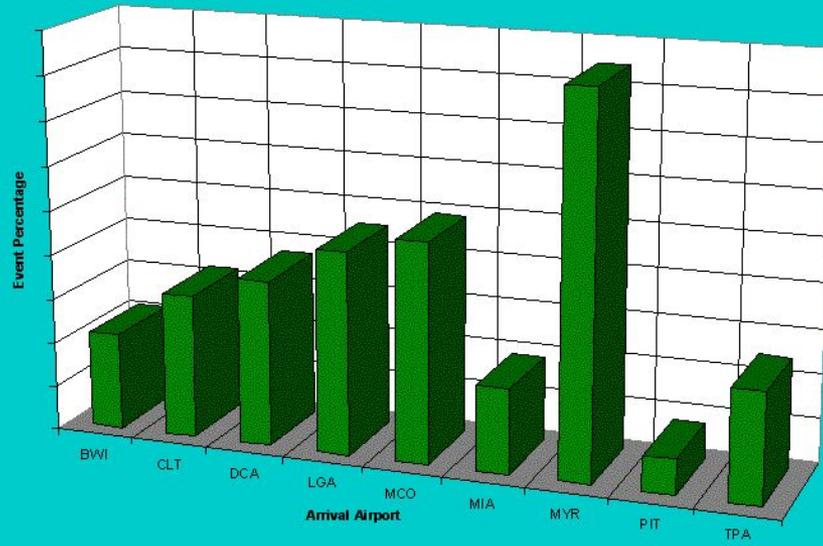
Aircraft Limitations



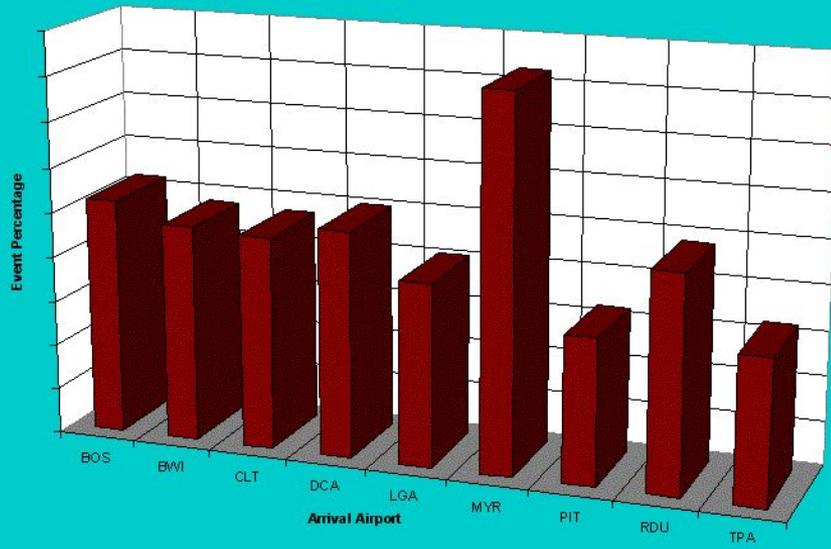
Top 10 Events for 1997



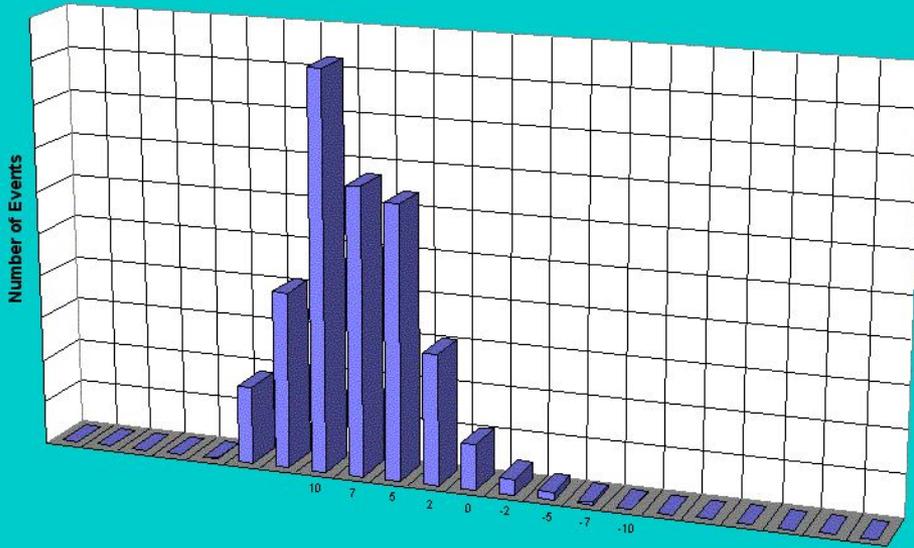
High Rate of Descent By Arrival Airport



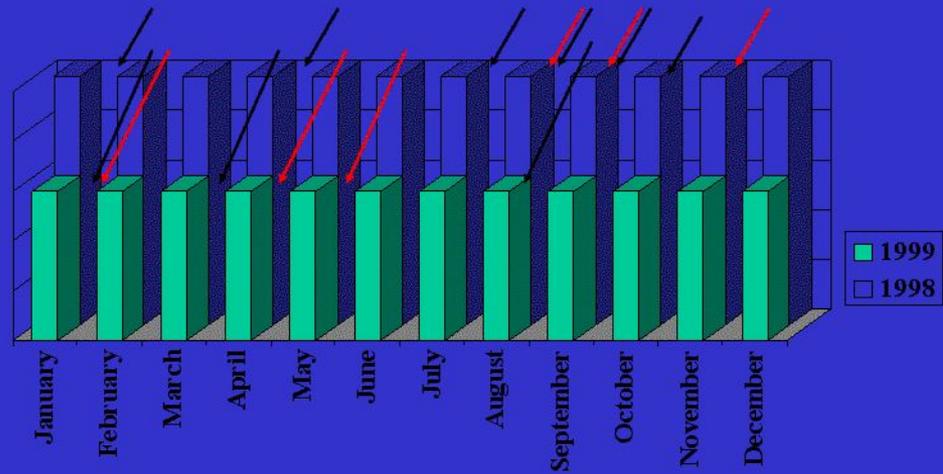
Top 9 Low Power Approach



CAS at 500ft relative Vref

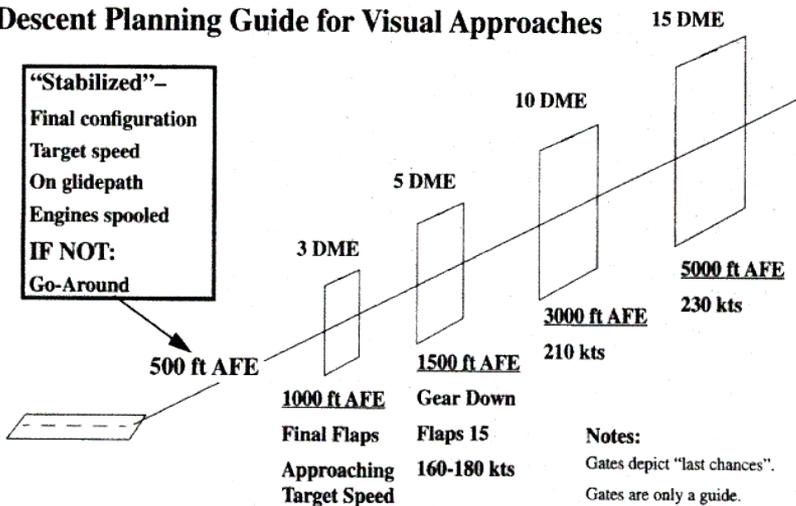


Initiatives to Reduce Unstabilized Approaches



Descent Planning Guide for Visual Approaches

"Stabilized"–
 Final configuration
 Target speed
 On glidepath
 Engines spooled
IF NOT:
 Go-Around



Notes:

Gates depict "last chances".
 Gates are only a guide.
 Stable at 500 ft is mandatory.

18-32-4
 11 SEP 98

TRAINING
 B-737-300/400 PILOTS HANDBOOK
 USAir



Waypoints

Issue #2 July 1999

Unstabilized Approaches From the FOQA Point of View

Data from the Flight Operations Quality Assurance (FOQA) Program shows that we still have occurrences of unstabilized approaches. While this problem is not unique to US Airways, and in proportion the overall number of unstabilized approaches is small, we must continue to strive to eliminate them from our operation.

A joint ALPA/US Airways committee has proposed an enhanced stabilized approach policy (in box below) utilizing recommendations from the Flight Safety Foundation's Approach and Landing Accident Reduction (ALAR) Task Force. There will soon be a Flight Operations Bulletin issued explaining this in detail. Before this enhancement becomes effective as policy, you will be given an opportunity to utilize it and provide feedback. Start using it today and let us know what you think.

Stabilized Approach. An approach where an aircraft has established the proper rate of descent and flight parameters.

Policy. All approaches will comply with the following unless non-normal conditions require deviation and are briefed:

Rate of Descent. By 1,000 feet AFE the descent rate is transitioning to no greater than 1,000 fpm.

Flight Parameters. Below 1,000 feet (IMC) or 500 feet (VMC) AFE the aircraft is

- on the proper flightpath (visual or electronic) with only small changes in pitch and heading required to maintain that path,
- at a speed no less than V_{ref} and not greater than $V_{ref} + 20$ (except when generated by Airbus FMCG) allowing for

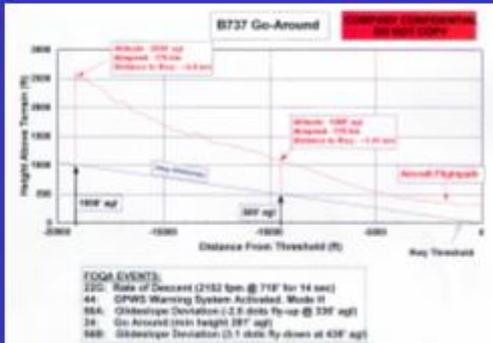
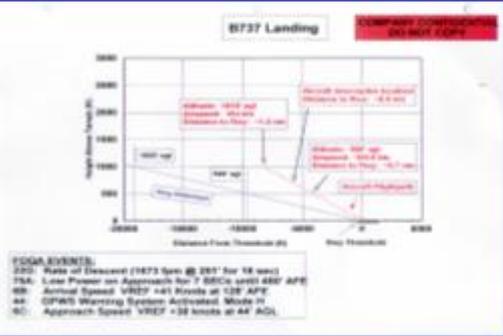
Don't compromise SAFETY...

It's YOUR choice!

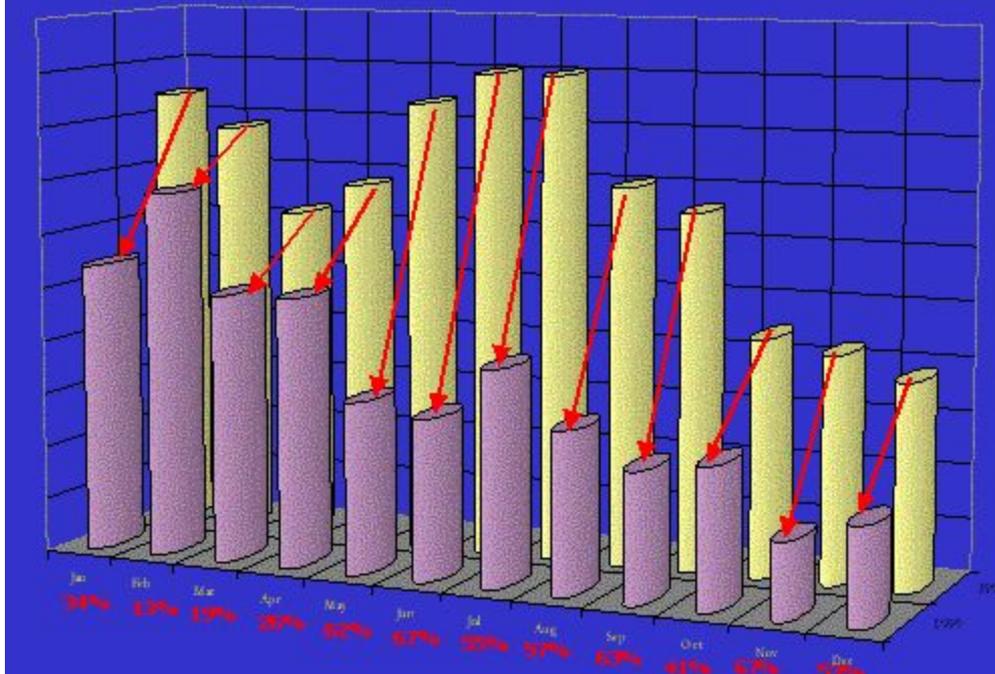
Just say go around

JUST SAY

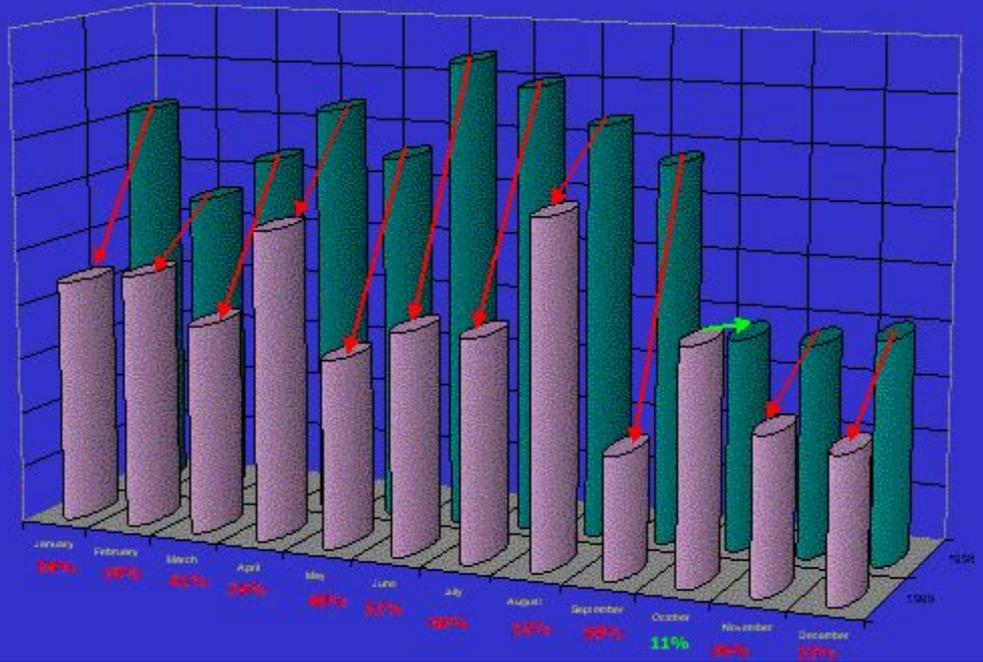
"GO AROUND"

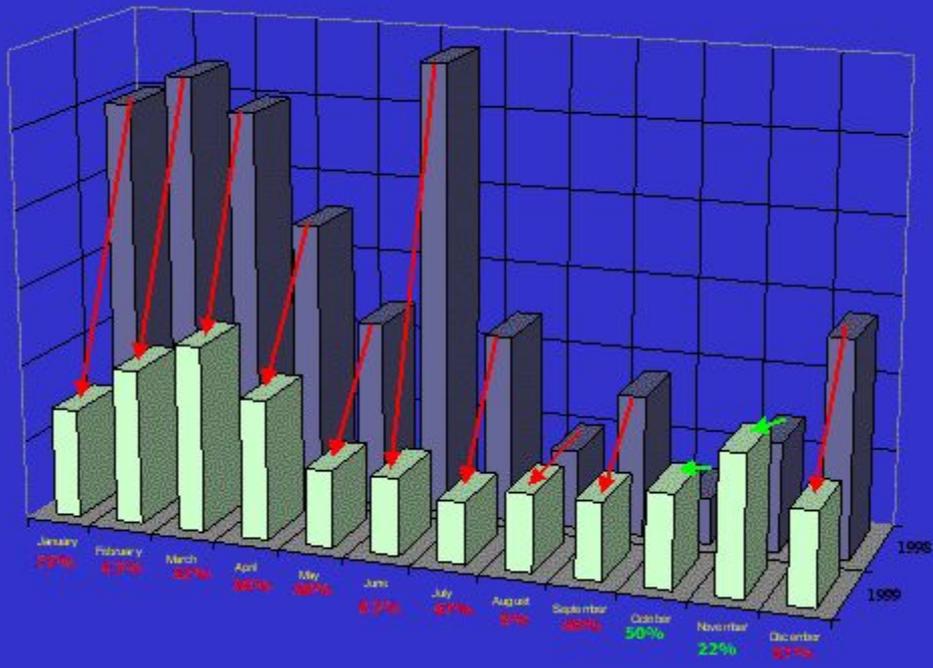
High Rate of Descent Below 2000 feet (22G)

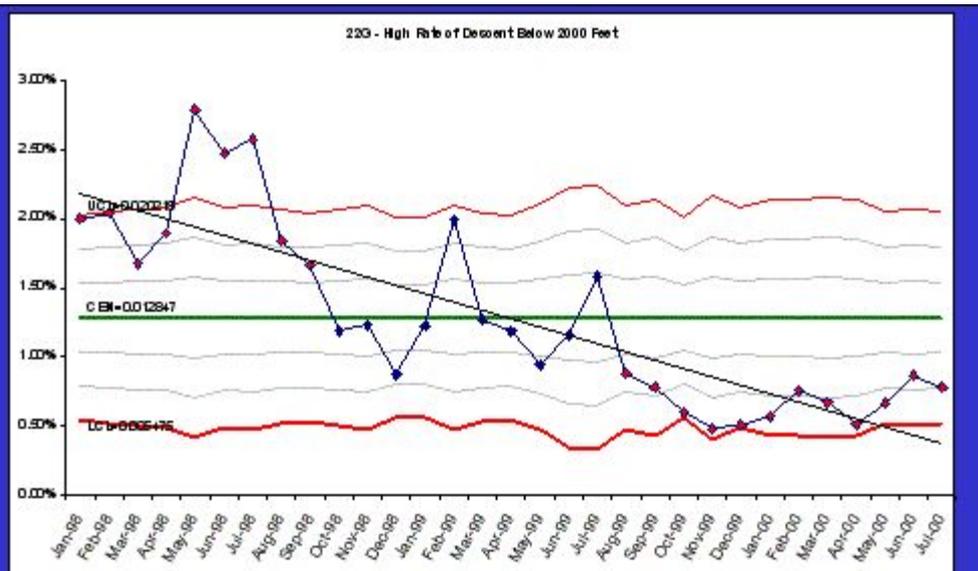


Low Power on Approach (75A)



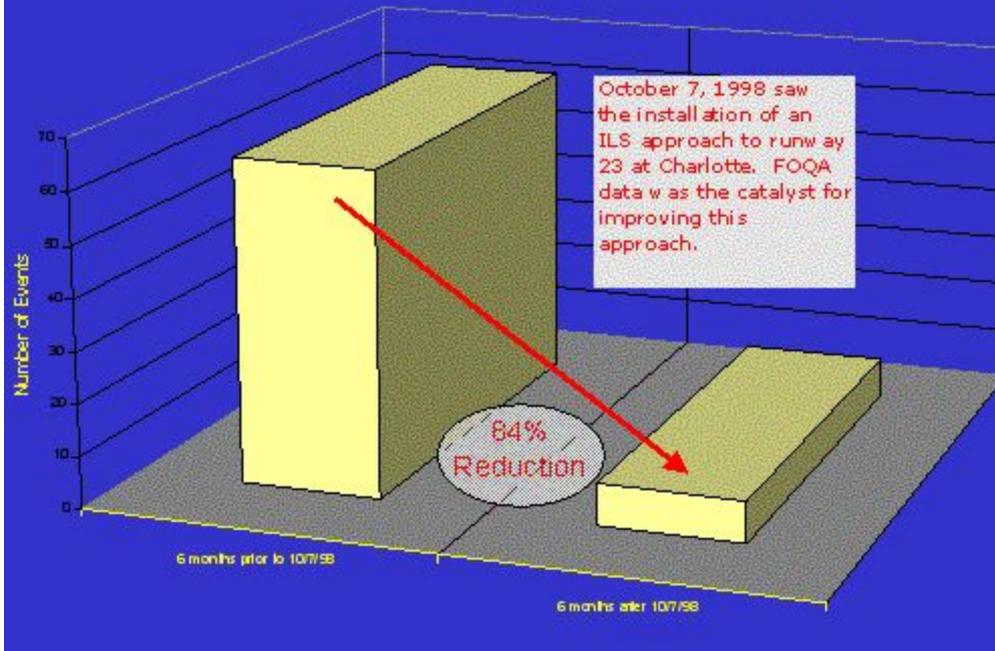
Pitch Low At Landing (20C)





- Baseline is $1.3\% \pm 0.8\%$, on 1780 approaches this is 23 ± 14
- Trendline decreasing, clear statistical evidence of lower risk
- It is reasonable to adjust the baseline of expected exceedences twice during this period
- Post Sep 98 baseline is $0.8\% \pm 0.6\%$, on 1780 approaches this is 15 ± 11
- Data is very similar to Low Power on Approach

Number of unstable conditions relative to the installation of the ILS approach on runway 23 at Charlotte, NC



CFM56-3 EGT Exceedence Due Takeoff N1 Overset



Crew Feedback is Essential

- FOQA Bulletin Board
- “Event of the Month”
- Crew contact by ALPA Gatekeeper
- Monthly data available to Fleet Manager
- Promotion through Company Safety Publication
- Airport analysis page FOQA alert



Ultimately ...

the industry will recognize that
FOQA is the highest level of safety
management

INTRODUCTION TO



ASAP



- A Corporate Commitment at the highest level to Air Safety is a prerequisite for ASAP
- A Corporate Non-reprisal policy must be put in place

USAir Non-Reprisal Policy

USAir is committed to the safest flight operation possible.

Therefore, it is imperative that we have uninhibited reporting of all incidents and occurrences that in any way affect the safety of our operations.

It is the responsibility of each employee to communicate any information that may affect the integrity of flight safety. To promote a timely, uninhibited flow of information, this communication must be free of reprisal.

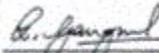
USAir will not initiate disciplinary proceedings against an employee who discloses an incident or occurrence involving flight safety. This policy shall not apply to information provided to the company by a source other than the employee.

USAir has developed a format of Air, Ground, and Cabin Safety Reports for disseminating information regarding flight safety that protects to the extent permissible by law the identity of the employee who provides the information.

We urge all employees to use this program to help USAir be a leader in providing our customers and our employees with the highest level of flight safety in our industry.



Stephen M. Wolf
Chairman, CEO



Rakesh Gangwal
President, COO



- The Corporate Safety Mandate must be Subscribed to by all levels of Airline Management
- The employee is the ultimate corporate safety information provider.



AIRLINE COMMITMENT, RESPONSE, AND ACCOUNTABILITY

- ✓ Airline management must commit to provide personnel and staff support. At ALPA carriers, Air Safety personnel are a valuable resource.
- ✓ Airline's response to ERT recommendations must cross departmental boundaries: system operational control, dispatch, maintenance, flight, etc. ASAP must have the full support of senior airline operations management.
- ✓ ASAP system accountability must allow documented response to ERT recommendations both within the airline and from the FAA.



- The ASAP Report is the backbone of an air carrier ASAP program.



Aviation Safety Action Program (ASAP) Report

(One reporting form per flight event, if details are agreed upon)

____/____/____
Ref: YY / Flt#
(For Internal Use Only)

This Form MUST Be Submitted To the Corporate Safety Department Within 24 Hours of the Event. Always Submit the Original.

Phone: Toll-free (800) 298-3338 In-state 747-4134 Out-state (412) 747-0134	Fax: In-state 747-1056 Outside (412) 747-1056	Company Mail: PIT / 1A-443	U.S. Mail: US Airways Corporate Safety PO Box 12346 - PIT / B-463 Pittsburgh, PA 15231				
(1) CAPT / PG / OTHER NAME EMPLOYEE #		(2) OTHER PERSONNEL NAME EMPLOYEE #					
(3) Date of Event (MM/DD/YY)		(4) Approximate Local Time of Event DAWN / DAY / DUSK / NIGHT / TIME _____					
(5) Flight Segment FROM: 3D DESTINY CITY (if applicable):		(6) Flight Number (7) Location of Event (if applicable) (8) Gate # (if applicable) (9) Aircraft Type (10) Aircraft Registration Number					
(11) Flight Phase (Circle one or all that apply!) <p style="text-align: center;"> Parked - Push-back - Taxi-out - Takeoff - Initial Climb - Climb Cruise - Holding - Descent - Approach - Landing - Taxi-in - Taxiing - Parked </p>							
(12) Runway # (if applicable)		(13) Runway Condition (if applicable) DRY / WET / ICE / SNOW / OTHER _____					
(14) RWY Speed		(15) ETDPS YES / NO					
(16) RWYSM YES / NO		(17) ETDPS YES / NO					
(18) Event Title (check if applicable)							
<table style="width: 100%; border: none;"> <tr> <td style="width: 25%; vertical-align: top;"> <input type="checkbox"/> Aircraft Damage <input type="checkbox"/> Altitude Deviation <input type="checkbox"/> Bird Strike <input type="checkbox"/> Control/Instrument Failure <input type="checkbox"/> Dangerous Goods <input type="checkbox"/> Deviation <input type="checkbox"/> Emergencies <input type="checkbox"/> E/ETM / AFD Usage <input type="checkbox"/> Engine Shutdown </td> <td style="width: 25%; vertical-align: top;"> <input type="checkbox"/> Evacuation <input type="checkbox"/> Excursion <input type="checkbox"/> Fire or Smoke Warning <input type="checkbox"/> FOD <input type="checkbox"/> Go-Around <input type="checkbox"/> Ground Support <input type="checkbox"/> Handling Difficulties <input type="checkbox"/> Intoxicated Passenger <input type="checkbox"/> Loss of Restraint </td> <td style="width: 25%; vertical-align: top;"> <input type="checkbox"/> Navigation Error <input type="checkbox"/> NMAC / ATC Incidents <input type="checkbox"/> Operating Procedures <input type="checkbox"/> Overweight Landing <input type="checkbox"/> Passenger Issues <input type="checkbox"/> Passenger Intoxication <input type="checkbox"/> Rejected Take-off (RTO) <input type="checkbox"/> Return To Field (RTF) <input type="checkbox"/> Safety Equipment <input type="checkbox"/> Security Breach </td> <td style="width: 25%; vertical-align: top;"> <input type="checkbox"/> Snd Warning <input type="checkbox"/> TCAS RA / TCAS / GPWS <input type="checkbox"/> Use of Reserve Fuel <input type="checkbox"/> Wake Turbulence <input type="checkbox"/> Weight and Balance <input type="checkbox"/> Other Safety Concern(s) <input type="checkbox"/> FILE DISRUPTIVE <input type="checkbox"/> PASSENGER INCIDENT <input type="checkbox"/> REPORT </td> </tr> </table>				<input type="checkbox"/> Aircraft Damage <input type="checkbox"/> Altitude Deviation <input type="checkbox"/> Bird Strike <input type="checkbox"/> Control/Instrument Failure <input type="checkbox"/> Dangerous Goods <input type="checkbox"/> Deviation <input type="checkbox"/> Emergencies <input type="checkbox"/> E/ETM / AFD Usage <input type="checkbox"/> Engine Shutdown	<input type="checkbox"/> Evacuation <input type="checkbox"/> Excursion <input type="checkbox"/> Fire or Smoke Warning <input type="checkbox"/> FOD <input type="checkbox"/> Go-Around <input type="checkbox"/> Ground Support <input type="checkbox"/> Handling Difficulties <input type="checkbox"/> Intoxicated Passenger <input type="checkbox"/> Loss of Restraint	<input type="checkbox"/> Navigation Error <input type="checkbox"/> NMAC / ATC Incidents <input type="checkbox"/> Operating Procedures <input type="checkbox"/> Overweight Landing <input type="checkbox"/> Passenger Issues <input type="checkbox"/> Passenger Intoxication <input type="checkbox"/> Rejected Take-off (RTO) <input type="checkbox"/> Return To Field (RTF) <input type="checkbox"/> Safety Equipment <input type="checkbox"/> Security Breach	<input type="checkbox"/> Snd Warning <input type="checkbox"/> TCAS RA / TCAS / GPWS <input type="checkbox"/> Use of Reserve Fuel <input type="checkbox"/> Wake Turbulence <input type="checkbox"/> Weight and Balance <input type="checkbox"/> Other Safety Concern(s) <input type="checkbox"/> FILE DISRUPTIVE <input type="checkbox"/> PASSENGER INCIDENT <input type="checkbox"/> REPORT
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(19) Brief description of event with any relevant factors (weather, ATC, airfield facilities, etc.) (Additional space provided on reverse side)							

Mandatory Reporting Events

File The Necessary Report According to the Color

Air Safety Reporting

- 1) When a system **DEFECT** occurs, which adversely affects the handling characteristics of the aircraft or renders it unfit to fly.
- 2) When an inflight **ENGINE SHUTDOWN** occurs.
- 3) When there is a warning of **FIRE** or **SMOKE**.
- 4) When an **EMERGENCY** is declared.
- 5) When **SAFETY EQUIPMENT** or **PROCEDURES** are defective or inadequate.
- 6) When deficiencies occur in **OPERATING PROCEDURES** or **MANUALS**.
- 7) When there is incorrect **LOADING** of **FUEL**, **CARGO**, or **DANGEROUS GOODS**, or when there is a significant error in the **WEIGHT & BALANCE**.
- 8) When operating standards are degraded due to deficient **GROUND SUPPORT** or ground facilities.
- 9) When an incident occurs resulting in **GROUND, AIRCRAFT, or PROPERTY DAMAGE**.
- 10) When a **REJECTED TAKEOFF** is executed after 80 kts.
- 11) When an **EXCURSION** occurs, if any part of the aircraft leaves the paved surface during taxi, takeoff, or landing.
- 29) When the use of **DRUGS** or **ALCOHOL** by on-duty crewmembers has been detected.
- 30) When **LAVATORY SMOKE DETECTORS** are activated or vandalized.
- 31) When an act of aggression (e.g. **BOMB THREAT** or **HIJACKING**) occurs, or when **SECURITY** procedures are breached.
- 32) When a **BIRD STRIKE** or **FOREIGN OBJECT DAMAGE** occurs.
- 33) **ANY EVENT WHERE SAFETY STANDARDS MAY HAVE BEEN COMPROMISED.**
- 34) **ANY EVENT WHICH MAY PROVIDE USEFUL INFORMATION FOR THE ENHANCEMENT OF FLIGHT SAFETY.**

Cabin Safety Reporting

- 1) When an act of aggression (e.g. **BOMB THREAT** or **HIJACKING**) occurs.
- 2) When **SECURITY** procedures are breached.
- 3) When the cabin is **PREPARED** for an **EMERGENCY LANDING**.
- 4) When a **COMMUNICATION SYSTEM** (e.g. PA, Video Equipment, or Call Bell) fails or becomes impaired.
- 5) When there is a **DECOMPRESSION** of the aircraft.
- 6) When a **DISRUPTIVE PASSENGER** is **corbated**.
- 7) When **DEATH** occurs to crew or passengers.
- 8) When **EMERGENCY EQUIPMENT** is **NON OPERATIONAL** or **NOT PRESENT**. (also notify Captain).
- 22) When there is a **passenger SMOKING** incident.
- 23) **ANY EVENT WHERE SAFETY STANDARDS MAY HAVE BEEN COMPROMISED.**
- 24) **ANY EVENT WHICH MAY PROVIDE USEFUL INFORMATION FOR THE ENHANCEMENT OF CABIN SAFETY.**

All Crews Must File a Safety Report Within 24 Hours

Air Safety Report

Cabin Safety Report

Disruptive Passenger Incident Report



KEY ELEMENTS OF ASAP

- ✓ PROACTIVE SAFETY PROBLEM IDENTIFICATION AND RESOLUTION
- ✓ STRONG REPORTING INCENTIVES
- ✓ ASSOCIATION WITH NASA ASRS
- ✓ AIRLINE AND EMPLOYEE COMMITMENT, RESPONSE, AND ACCOUNTABILITY
- ✓ FLIGHT SAFETY BENEFITS TO AIRLINES, PILOTS, THE FAA, AND THE TRAVELING PUBLIC



ASAP's Value to the Airline . . .

ASAP builds mutual trust through cooperative safety relationship between employees, ALPA, the FAA, and an airlines management.

- ✓ ASAP teamwork encourages preventative, rather than reactive, response. This cooperation requires that all parties to the agreement abandon traditional roles in favor of consensus recommendations for solutions to joint concerns.
- ✓ Non-disciplinary corrective action provides strong reporting incentive and instills employee confidence in Event Review Team recommendations.



. . . ASAP's Value to the Airline . . .

ASAP provides a cross-disciplined approach to problem solving that is efficient and effective in the following ways:

- ✓ Promotes cooperation and accountability between airline departments.
- ✓ Provides better utilization of safety personnel resources.
- ✓ Establishes direct-line communication for important real-time safety information to airline managers.
- ✓ Reveals a clearer, more accurate view of the safety of airline operations.
- ✓ Complements AQP, CRM, Internal Safety Audit, FOQA, and Air Carrier Voluntary Self-Disclosure Programs.



. . . ASAP's Value to the Airline

Bottom Line

ASAP maximizes the input of employees as an airline's most valuable safety resource and offers a corrective-action approach for safety problem resolution and the prevention of incidents and accidents.



POTENTIAL VALUE OF ASAP TO THE AIRLINE INDUSTRY

- ✓ ASAP properly implemented and operated provides increased safety problem identification and resolution leading to accident and incident prevention strategies.
- ✓ ASAP accident and incident prevention strategies may be shared industry-wide.
- ✓ ASAP can promote FAA enforcement by ensuring compliance through corrective action.
- ✓ ASAP can assist the NTSB with proactive recommendations, preventing accidents.
- ✓ ASAP can lead to improvements in National Air Space operations.



PROACTIVE SAFETY PROBLEM SOLVING

Equal participation from airline management, the employee association, and The FAA is the building block for employee confidence and the overall success of ASAP.



STRONG REPORTING INCENTIVES

- ✓ Sole-source protection
- ✓ Corrective action, non-punitive approach:
 - Airline: Comprehensive employee community feedback and education of safety problem identification and resolution
 - FAA: Administrative action or no action in lieu of legal enforcement action taken against reporting crew
- ✓ Confidentiality-ASAP report handled in a confidential manner by ERT - no record kept in a employee's airline personnel file
- ✓ Anonymity provided after event review and corrective action completed



FLIGHT CREW FEEDBACK OF SAFETY INFORMATION IS ESSENTIAL FOR PROGRAM SUCCESS

- ✓ Reporting of real-time safety events prevents the reoccurrence of same and similar incidents.
- ✓ Identification of safety problems
- ✓ Highlighting of safety problem solutions, and
- ✓ The monitoring of the flight crews' response to the identified problems and solutions which confirm safety enhancement

Lessons Learned

The following are incidents involving altitude deviations that have been brought into the Safety Partnership with the FAA. They are intended to provide insight into the events in the hope that everyone may learn from their experience.

Do you hear what I hear?

From the left seat, I was Captain on a flight involving an altitude deviation. The incident started by my hearing what I thought was an urgent request to descend

to FL370 (the F/O) by saying "370" in the transcript, then, make the same statement to an area of the F/O; I initiate the descent from 380 to 370, at the time the F/O looked at me quietly. I then reconfirmed the clearance to 370. ATC immediately responded by confirming an altitude of 380 ft.

that time we had responded by saying "ok going to 380." In retrospect, ATC had merely called our traffic at 370, but the transcript showed signs of

to doubt what I heard in the first place which I thought was a "traffic alert" and figured what ATC was instructing us to do was to stay down because of traffic ahead and climbing and asked the Captain to reconfirm our descent clearance. ATC reconfirmed my original understanding of a traffic alert and stated "maintain FL380." I stopped the descent and climbed back to FL380. My advice... challenge anything that you are uncomfortable with and always use CRM. The use of correct radio vocabulary "TR" should be used to describe altitude, climb or descent, heading, left, right, speed, increase, decrease, not to mention the full call sign.

"...In retrospect ATC had merely called out traffic at 370, but the transcript showed areas of possible confusion...."

and I had begun to do the PA for the passengers. As I came back on the radio, we were switched to approach. I dialed in

In fact both the F/O and F/As were suggesting strongly at the time that we should be removed after the first 2 or 3 legs for fatigue. Unfortunately I took this as a second early morning crew gallop and did not follow up on their requests. On the 2 legs prior to the incident both the F/O and I were having great difficulty staying alert. Another factor is the MCP on the MD-80. I have heard tales over the years of the thing changing all by itself but have always dismissed them as some fancy toy for CJA after an incident. The F/O and I can state without doubt that FL380 was set and armed. Since then, I have been playing with the altitude knob and find that if you rotate it to a position between the detents, you can tap the glassfield freely and cause a 1,000 ft change in selected altitude. I think it reasonable to surmise that it would be possible for this to occur accidentally. The third factor is all mine. Had I just stopped the descent at the first talking of doubt, we could have avoided this entire mess. Better to have the F/O level off immediately, then talk it over. Since thinking back of fatigue contributed to this, I am sure.

What did I learn, and what will I do differently? Listen to my crew. If they really are that tired, probably, so am I. Have yourself taken off the company gives no medals for being Iron Man, and the consequences can be costly, embarrassing, or worse. Watch that altitude window, we both fell into the trap that if 37000 was set then that's where we were going. Don't trust the darn thing! I now set the altitude, then give the knob a little wiggle, just to be sure it is in. Because I was... the... the... the...

ALTITUDE AWARENESS ALERT

USA's Altitude Awareness Program was initiated in September of 2016 and since the program inception the flightcrew of USA's have consistently reduced the number of altitude deviations on all recent tests **EXCEPT** for 1916. During the last seven months there has been a marked increase in altitude deviations which lead to the issuance of the Altitude Awareness Alert.

With the cooperation of those flightcrews who have participated in the safety feedback process, we have learned that these deviations are occurring for the following reasons:

- 1) Clearances have been taken which were for either descent, climb with and climb without (climb) call sign.
- 2) When a traffic advisory was issued by ATIS, the crew ignored the altitude of the traffic in the **ACFT/Altitude** memo and began a climb.
- 3) Altitudes have not been read prior to the last leg of the trip.

A focused trend analysis of these errors indicates there may be a lack of attention to detail, especially as it relates to the monitoring of ATIS communications. Additionally, we may have become inured to the "front and back" portion of our procedures that we have relaxed our diligence when it comes to monitoring ATIS. Highlights of the webinar are included in the Altitude Awareness Briefing documents which support the **Altitude Verification Process** below for your review.

- **Feedback/Feedback** Items: These types of items are released to all Controller identifying failures and almost always occur during periods of high traffic volume. Make every effort to hear what the clearance CONTAINS, not what you expect to hear.
- **Altitude Integrities**: Insist that all pilots in the cockpit agree to every new altitude assignment. Keep one syllable of any clearance that is not understood explicitly or is understood differently

by any communication. Never receive a clearance from a cockpit clearance officer. **When in doubt always verify the clearance with ATIS.**

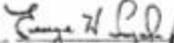
- Do not move a previously assigned altitude when there is any question as to the newly assigned altitude until it has been verified with ATIS.
- When vacating one altitude for another always advise ATIS of the leaving altitude and the new altitude you are going to, holding full call sign.
- **Probe sounding call signs** are a source of a great many **miscommunications**. USA's and United call signs are often misheard by both ATIS and flightcrews. Be particularly cautious of descent call signs containing "two" and "three".
- **Make every effort not to become inured to other call signs** such as "two" and "three" when you are not the flight leader. **Verify** the altitude of the aircraft you are talking to during altitude changes, other than monitoring the descent, and never when within 100 feet of your assigned altitude.
- Acknowledge all clearances with a "750" without, not a partial acknowledgement such as "topper" or "750". **Always use your full call sign, not just the flight number**. **Hold on** good communication procedure and proper phraseology.
- **Do not call expected altitudes in the (last) ACFT/Altitude memo** when cleared to altitude for "two" (20) or "three" (30) **verbalize** and set the next expected altitude as opposed to the applicable altitude.

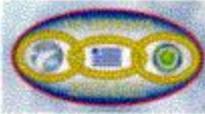
Remember, once an altitude has been set in the **ACFT/Altitude** memo it becomes the **COPIED**, make sure that the altitude you set in the **ACFT/Altitude** memo is the correct altitude. **Make sure that you and the other communication verify the correct altitude.** If there is the slightest doubt or anyone isn't clear on your assigned altitude, **VERIFY THAT ALTITUDE WITH ATIS.**

Heightened adherence to these procedures and guidelines has proven to significantly reduce human altitude deviations. A renewed and continuing commitment to altitude awareness will assist in our goal of preventing future altitude deviations.


Captain Wilson L. Kim, II
Vice President Flight Operations


Captain Kenneth Kopp
Director Flight Training and
Operations


Captain Dwight H. Wright, II
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Aviation Safety Action Program SAFETY BULLETIN

Pilot ASAP Safety Bulletin # 01-01

February 27, 2001

To: All US Airways Pilots

Ref: Altitude Deviations

The US Airways Aviation Safety Action Program (ASAP) has been in effect for nearly five months. During this time, the Event Review Committee (ERC) has reviewed over 1300 ASAP/ASR reports submitted by flight crewmembers. One vitally important part of our ASAP is to periodically provide feedback to you on any significant problem areas that have been discovered as a part of the review process.

An area that has shown a significant increase over the past 12 months is altitude deviations. An analysis of the ASAP/ASR reports, as well as flight crew debriefings conducted during ASAP Safety Partnership meetings, have identified the following five similar causal factors (listed in the order most frequent occurrence):

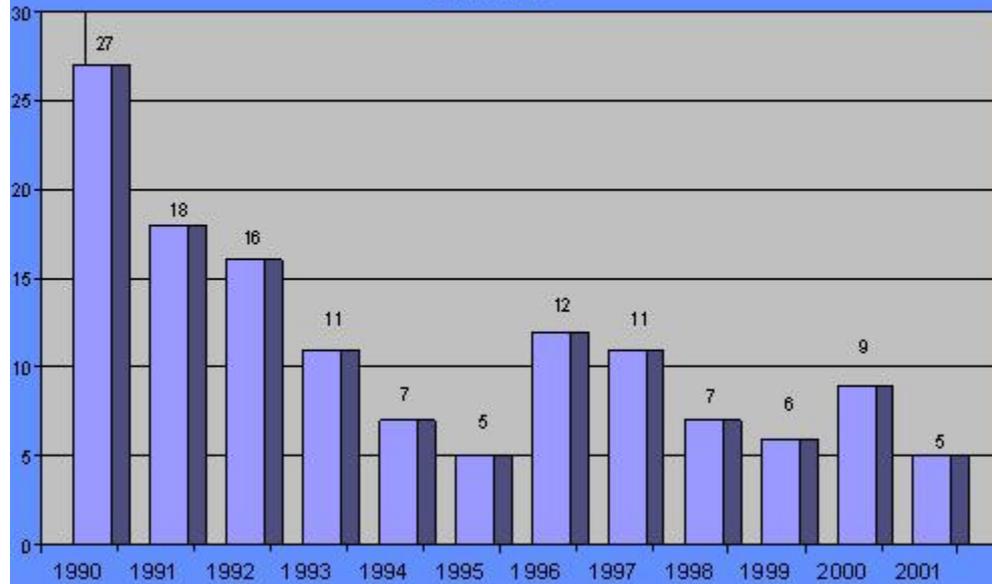
1. Cockpit human redundancy split (i.e., one pilot out of the loop).
2. Reliance by one pilot on the other pilot(s) for an understanding of an ATC clearance.
3. Lack of attention by one or all pilot(s) in receiving ATC communications.
4. Attempting to resolve a difference of understanding of an assigned altitude among the pilots, instead of verifying the clearance with ATC.
5. The assumption by one crewmember that the altitude displayed in the Mode Control Panel is correct during the cross-cockpit verification.

In order to reduce the number of altitude deviations we are experiencing at US Airways, the following recommended preventative actions are offered for your consideration:

1. If both crewmembers did not hear the entire ATC clearance, verify the altitude assignment with ATC when time and frequency congestion permits.
2. Whether you are the Pilot Flying (PF) or the Pilot Not Flying (PNF), pay close attention to all ATC communications. If you did not hear any portion or all of the communication, verify the clearance with ATC.

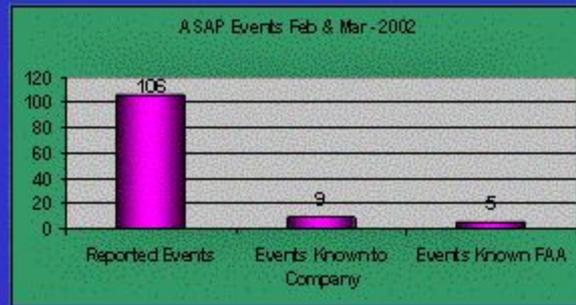
US AIRWAYS ALTITUDE DEVIATIONS

Source: ASY-100



Proactive Safety Potential of ASAP

- Collect
- Categorize
- Archive
- Analyze





SCOPE OF ASAP

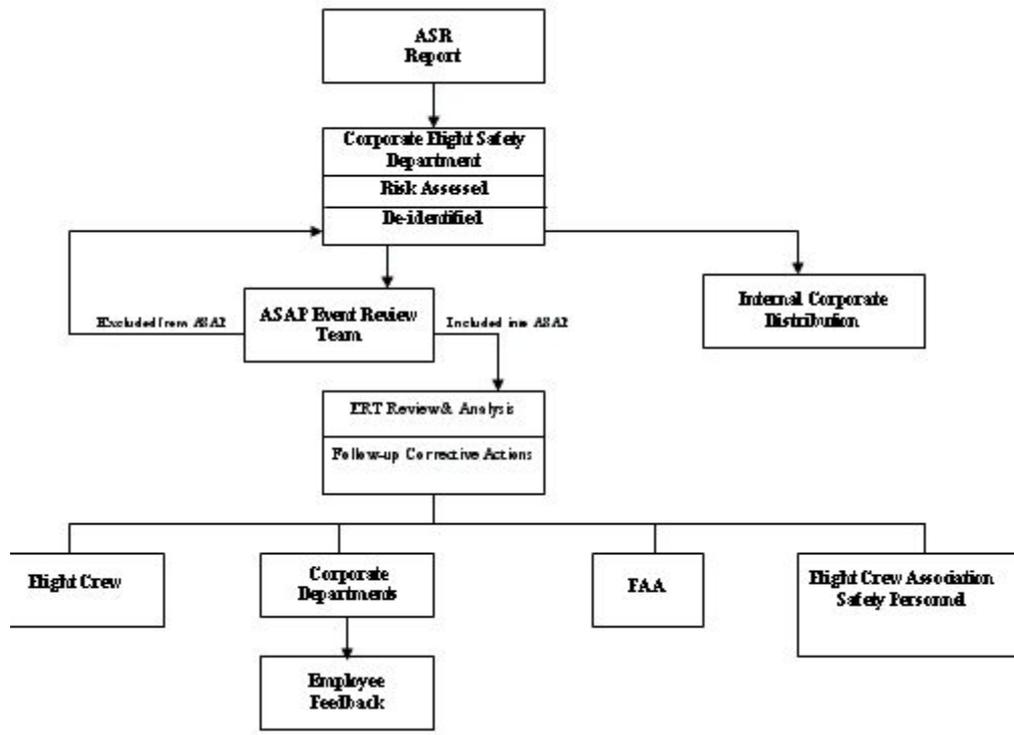
Any report which describes a flight safety concern or possible FAR deviation should be considered. At a minimum, ASAP should seek to address:

- ✓ All phases of ground and flight operations and procedures
- ✓ Air Traffic Control
- ✓ Dispatch, loads, and aircraft performance
- ✓ Charting and Instrument procedures
- ✓ Maintenance and MEL
- ✓ Human Factors
- ✓ Technology and aircraft equipment



FLIGHT SAFETY BENEFITS TO AIRLINES, PILOTS, AND THE FAA . . .

- ✓ Corrective-action approach allows preventative action to be taken by those given flight safety responsibilities. ASAP allows real solutions to potential flight safety hazards identified by employees with natural applications to training, and flight operations procedures.
- ✓ ASAP is cost-effective. Previously required legal, representational, and investigative expenses can now be applied to corrective and safety initiatives.





What an ASAP Program is Not

- ✓ It is not an immunity program
- ✓ It does not apply to deliberate acts
- ✓ It does not apply to criminal activities

What an ASAP Program is

- ✓ ASAP is a proactive, corrective action-based safety program.
- ✓ ASAP requires an equal commitment by all partners, company, FAA and employees