



CONFIDENTIAL HUMAN FACTORS
INCIDENT REPORTING PROGRAMME

FEEDBACK

December 1988

Number 18

Sometimes things get fixed because of a CHIRP report, but often the report serves mainly to allow a pilot to get something off his or her chest. For example:

* Two fuel tanks - out of balance so began transfer at beginning of flight on the ground with the crewman out of the aircraft handling a Medevac. After the Medevac, straight into Dawn Patrol. However, I did not advise him I had begun to transfer fuel so he did not monitor. I forgot and towards end of flight, red flashing light. Upon checking one tank (feeding one eng.) read empty on gauge. System designed to give 2mins warning. It worked - fortunately - but cutting it rather fine! Flew around for half an hour so tanks would even up as too embarrassing to return with such a split.

As you can see from the above report, we've changed our convention in this Feedback and put our comments in italics. Your reports are in normal type, since this makes them easier to read, and allows us to get more in. To go back to the report above, however, we print such reports because we feel that they serve an "I learned about flying from that" function and keep the problem of human error at the front of everybody's mind. The same goes for many of the reports that we receive from controllers. These reports frequently address a breakdown of separation - not surprising really since separation maintenance must be the first task of any controller - but separation breakdowns obviously come about for a variety of reasons, not all of which can be fixed. We hope that the following selection of reports gives a fair impression of the problems that you feel to be important.

* Dash 7 departed 27R LHR and two minutes later a DC9 was released from the same runway. The Dash 7 aircraft was on a SID via WOD, the DC9 via Burnham and by the time the two aircraft were approx seven miles out from LHR they were three-quarters of a mile apart at the same level (3000ft) - Dash 7 on extended centreline of 27L, DC9 extended centreline of 27R.

This situation is a common occurrence and has been the subject of a number of MORs, although little action has been taken. The Chief Sector Controller spoke to . . . and asked whether an MOR should be filed. The response was that it was unnecessary as a number of other incidents were documented, yet the situation is allowed to continue as any changes would dramatically affect the LHR runway utilisation.

* At a very busy period, I accepted an aircraft from Brussels at FL290, and another from Manchester routing via Midhurst also at FL290. Although there were only 4 minutes separation on strips I failed to recognize this, due perhaps in part to the fact that there were some 6 other flight progress strips under the Woodley designator at the relevant time. The aircraft passed very close, and my attention was only alerted by a controller from another sector running over to point out the confliction.

My attention to the sector was constantly being diverted by the need to try and ensure that both radar and assistant sector controllers had fatigue breaks, since manning did not cater for sufficient staff to provide these. Even if there had been enough staff the workload on the Chief Sector Controller is frequently so high that he cannot give the proper attention to the traffic.

* Short of staff again. Frequency so busy that I start to feel that I am losing the picture. Nobody spare to split the sector. Flow control is on but as far as I am concerned it wasn't working. Eventually airmis occurs between 1 a/c on my frequency and another co-ordinated through my sector but not talking to me. Cause:- 1 strip displaced from my strip display due ensuing chaos allows a/c to be co-ordinated at unsafe level.

RISKY SHIFT

* Following about two weeks of IMC in an Aberdeen winter both of us (Co and myself) were gripped with an overwhelming desire to SEE something other than white mist. Between rigs, with cloud base at destination known to be 200ft. No problem, but IMC at the time. Tell FO to set Rad Alt bug at 100ft - set the Radar on 5 miles scale and tell me if any hard bits show up. I then start a descent to regain VMC. Still no sign of the sea at 200ft. Keep on down slowly. Radar screen still clear. Keep descending, way below limits but have to actually get to SEE again, and after all - this is the North Sea where men are men, etc., etc. We actually level out at 75ft, still IMC but can see the waves below. No problem as you never come across 75ft waves. Decca playing up and became engrossed in navigation problem, radio calls, and an intermittent engine "ANTI-ICE" caption.

Co-pilot suddenly points to radar screen and says "What's that?". Large solid blob at the extreme bottom of the screen (i.e. about ten feet in front of us). Haul back on stick - haul up on collective - heart stopping few seconds waiting for massive lump of machinery to appear in front of us. Needless to say we missed it - whatever it was - didn't even see it; bet we gave them a fright though.

* Runway lights failed simultaneously with my call for start up. Then all airport lights went out, coming back on again after about 5 minutes. Runway lights remained out for approx 1 hour. About 10 mins after r/w light failure occurred, a 737 called Beacon Outbound for localiser only approach (G/P U/S) then Beacon Inbound, and subsequently landed without runway lights. Wind 18kts across r/w so own lights must have been of limited use.

The purpose of this report is to let that pilot know that had I or my family been on board I would have been extremely perturbed at his excessively press-on and illegal landing. Two alternatives were not that far away, and the night was cloudy with thunderstorms close by, so no moon to help approach.

There may not seem much in common between these reports, but they both involve crews making what must have seemed riskier than normal decisions. Although at least part of the point of having two pilots on board is for one of the pilots to stop the other doing stupid things, it often doesn't seem to work like this - neither pilot wants to look like a weeny. This is an effect that the social psychologists call 'risky shift'; paradoxically a group of people will often come to a more risky joint decision than any of the individuals. Daft, eh?

COULD DO BETTER

* A/C initially called on 117.25 (old Approach Freq - changed ages ago). Transferred to correct freq. A/C was below terrain safe level IMC requesting IFR clearances. Informed of SA and given entry clearance. A/C elected to remain at unsafe level. A/C called visual over coast. A/C cleared for visual approach and transferred to tower. A/C unsure of twr freq even though given. A/C seen to go through final approach into cloud. A/C given QDMs (x2). A/C cannot find A/D. Asked A/C its heading - "220 degrees" (QDM 190 -previously given 210 and 200). Suggested pilot steer the QDM given. Pilot reports field in sight. A/C told to report final. A/C reports final. Cannot see A/C - looked at DF. A/C seen on final to runway 06 (runway 24 in use). A/C given wind - 260/15kt and asked if wanted to land with 15kt tailwind! A/C elects to reposition for 24, A/C calls final runway 24. A/C lands "SAFELY" (?!!!*?) runway 24. If MOR action were taken on all the occasions such as above then there would be a shortage of forms.

Gullibility is our strong point at CHIRP, but even we can't believe that this sort of thing happens very often. The last point's definitely wrong - there are millions of MOR forms.

Is this a dagger that I see before me? No, it's FL120.

* All aircraft in fleet have manually selected Altitude Alert. The Alt. Alert on aircraft flown was inop and had been for some days due lack of spares. A/C was cleared to FL150 and this was copied by both pilots. Co-pilot (v. experienced) was handling and as we descended through FL170, I chose to go on PA to tell pax about adverse weather and put seat belt signs on. On completion of PA noticed altitude was 145 and still descending and assumed further descent had been given. I queried co-pilot who had misread 150 for 120. Air traffic queried me, admitted error. Fortunately no other traffic around and no harm done. *It's easy to see what you expect to see.*

WHO DAT?

* Twin-Jet, southbound from XYZ at FL290, reported a problem with pressurization and was given descent to FL250. After passing ALVIN it was transferred to my freq. using c/s BB 3355.

Suddenly on my freq. "Mayday Mayday Mayday GNJ descending to FL150". I acknowledged the Mayday and asked for the position. The response was "Standby". After about a minute I called again, saying "I have no information on your flight; what is your position, Squawk A7700". There was no reply! Eventually; BB 3355 calls and admits he's GNJ, has had a pressurization failure, and requests immediate landing at destination.

The radar had been cluttered by other squawks and I had not been able to see this aircraft's mode C change! (Never did squawk A7700).

It subsequently became known that BB 3355 could not land immediately as it was too heavy!

This is the first "Mayday" call I have had as a radar controller and was totally unable to help initially because I was given meaningless information. At least, I needed a correct callsign or position!

* LHR were using 27L for landing. F/O was the handling pilot. We were receiving radar vectors from radar 120.4 to intercept the ILS. Were turned left onto 360 degrees, meanwhile I preselected tower freq in other "window". As I moved my hand away I must have touched the Freq Transfer switch accidentally, it was the "flipover" type, and went straight to the tower freq. Meanwhile still heading 360 degrees went through 27L localiser, called what we thought was the radar approach controller, only to find we were talking to the tower. Red faces all round! Called radar back and were vectored back onto the ILS from the other side.

* The single jet, which I was expecting from another airfield to the west, free-called me on UHF. I saw a radar blip 10NM west heading north east. The DRDF "apparently" showed the aircraft to be due west. I allocated a secondary squawk, but this did not appear immediately on the blip that I was watching so I assumed that his transponder was warming up. Then, uncharacteristically, without any FORMAL identification of the aircraft, I descended the aircraft to 1500ft QFE and turned the aircraft to 090 in preparation for a SRA runway 28. The radar blip did not turn as expected and while I was pondering this,

a colleague, who had fortunately been watching, pointed to the real aircraft blip 25NM SW. I immediately climbed the aircraft to a safe level and resumed normal service.

I discovered that the DRDF was set on a VHF frequency and I had in fact seen a previous VHF transmission held in store.

I believe that: 1. I tried to fit the facts to a pre-conception of what I expected to happen. It was a coincidence that some irrelevant facts fitted that pre-conception. 2. I wrongly used the DRDF information as positional information rather than as an aid to identification. 3. I did not stick to the formal procedures for identification. 4. I was not busy and had lulled myself into a false sense of security.

* At 0940 the Air UK came onto my frequency and reported he was descending to FL40. (This was unusual as this service normally works Border Radar and they give a radar-handover, however this aircraft was operating unpressurized and so was below Border's cover - as I found later). I asked for information for identification and the pilot replied that he thought he had been handed to Teesside by Brough Radar. I denied this and he said that whoever the Brough controller had been speaking to was not expecting the aircraft which struck him as unusual; he had after all called for our weather at time 0925 and was a regular scheduled flight on a stored plan.

I contacted the Brough controller who was under the impression that he had been speaking to Teesside but had been told that there was no radar available and that the aircraft was unexpected but would free-call.

This incident illustrates the importance of ALWAYS identifying yourself by unit when answering telephones and of confirming who you are speaking to if the respondent at the other end does not react as expected. It may well also indicate the unreliability of the ATOTN switching system which frequently gives wrong numbers. *[Did you follow that?]*

It's said that the Chairman of Ansett (or was it Australian?) phoned reservations (without identifying himself) to find out whether there was any space on one of the company's F27s. The unknowing clerk replied "I'm sorry Okker, the Fokker's chokka". End of promising career. There's a similar story about the airline chairman who phoned ops. "Hello, this is the chairman, who's that?" "The Archbishop of Canterbury" "Very funny, this really is the chairman - WHO AM I SPEAKING TO?" "Don't you know?" "Of course I don't." "Thank God for that". Click. . . . Brrrrr

LET'S GO FLYING - IT WAS ONLY A *LITTLE* HEART ATTACK

* It was Good Friday. I was rostered for a Malaga flight with a departure of 0730. After completing my pre-flight preparations I left my First Officer in AIS to "tidy up" while I went to the bank in the airport concourse. On the way there I suddenly experienced an intense pain high up in the centre of my chest. My first thought was maybe this was a heart attack. At that time in the morning I was able to find an empty office where I was able to rest until the pain subsided. The pain felt like an intense rasping in the air passages like one experiences when undertaking prolonged violent exercise. I also became aware that I was breathing very deeply.

A few years earlier, during a line check, my training Captain suffered a heart attack, losing consciousness for a short while. I tried to compare my feelings with the symptoms he had experienced, but there was no comparison. I did not consider there was any likelihood of my losing consciousness, my pulse was beating its regulation 72, I had no pain in my left shoulder or arm and there was no tingling in my fingers. I concluded that what I had experienced was not a heart problem but a respiratory one.

After about 10 minutes I felt able to continue to the bank, complete my business and return to AIS to acquaint my First Officer with what had happened. By now I was feeling quite normal. The F/O and I pooled our respective medical knowledge (not a lot) and concluded that as I now felt OK we could do the flight, he would take the outbound leg and keep an eye on me, and if there was no recurrence of my problem, I would bring it back.

At that time of the morning in Manchester Airport there was no one available to give medical advice at short notice. I had 119 passengers already on the aircraft and a tight departure slot, missing which would have meant a five hour delay.

The flight was completed and was completely uneventful. The following day I was rostered for Palma with the same depart time of 0730. I had had a good night's rest and felt perfectly normal while I was at rest, but exercise brought back some pain and deep breathing. As the company was pressed for crews that weekend I informed Ops that I would do my Palma flight but would report sick on my return. It was quite a stressful day, a 3 hour delay at Manchester, considerable re-routing en route and a 3 hour delay at Palma. This time I had a different F/O

and briefed him about my problem, but at all times when I was not physically active I felt completely normal. However, on return to Manchester I found that I was not able to walk in from the aircraft without the pain returning. The F/O carried my flight bag for me and eventually escorted me to the car park.

I rested at home for the remainder of the Easter break and on the Tuesday morning contacted my aviation medical examiner who arranged for me to go immediately to the Manchester specialist heart hospital for examination. Despite a thorough examination with 2 ECGs being taken, nothing wrong was found with me. I was asked to return the following day to see the senior cardiologist for a stress test. Despite telling this doctor I was unable to walk 50 yards I was put on the tread-mill and collapsed shortly after it started. I was admitted to the CCU where I suffered a massive heart attack 3 hours later - 8 out of 10 I was told subsequently, where 10 is death. The heart attack also produced a considerable aneurysm in my left ventricle.

Eighteen months later I started to experience angina, which got progressively worse and following an angiogram it was decided a quadruple by-pass operation was necessary and for the aneurysm to be corrected. The pain from the angina bore no relationship to the chest pains I experienced prior to my heart attack! The by-pass operation was a complete success, but I unfortunately suffered a stroke during the operation which has left me with a lack of dexterity in my left hand, the rest of my left side having returned to normal.

I do seem to have rambled on a bit to get to the point of my letter. Although I have finished with aviation, or rather aviation has finished with me, it still perturbs me to think that although my medical condition was very serious, I was not aware at all of the nature of the problem, and unwittingly I could have precipitated a disaster. It perturbs me to think that maybe another pilot could experience what I went through but without such a successful conclusion, due to lack of knowledge of the symptoms of an impending heart problem. I appreciate it is possible to turn people into hypochondriacs, but I feel that some guide lines could be made available to the aircrew fraternity to help initially with a self diagnosis, and whether or not to fly in the absence of medical advice.

Dr Michael Joy, CAA cardiologist, comments:

Cardiovascular problems - stroke, heart attack, etc - account for nearly half of all current UK deaths and for the biggest number of licences lost (1-2 per thousand per year).

The heart pumps blood, but its muscle, like any other, has its own blood supply, the coronary artery system. These arteries, unfortunately, are inclined to become occluded by "atheroma". "Atherogenesis" is associated with increasing age, high blood pressure, high blood cholesterol, smoking, and a family history of heart problems. If the process proceeds gradually, the patient may, with exercise, experience "angina pectoris" (a crushing, constricting, or burning pain, normally in the middle of the breast bone with a tendency to radiate to the shoulder, arm, or hand, usually on the left). Less commonly, it occurs in the throat, jaw, or back. It is often associated with the sensation of breathlessness, and may feel remarkably like indigestion. Angina is shortlived - 30 seconds to 5 minutes - as it brings the patient to a halt following which there is relief. If the "plaque" of atheroma ruptures, a clot forms that may partially or completely obstruct the artery causing unstable angina or a heart attack (myocardial infarction).

About one third of heart attacks are fatal: roughly 50% of all deaths occur within an hour of symptom onset, the majority during the first 15 minutes. Fortunately, there is much we can do now. Over two fifths of all deaths are due to rhythm disturbances which can be corrected in a coronary care unit. Early treatment can dissolve the freshly formed clot (thrombolysis); even the humble aspirin taken immediately, and for 5 weeks subsequently, has been shown to reduce mortality by 20%, a benefit persisting for 2 years.

After the event, patients are investigated to determine the extent of disease, and, if needed, such procedures as angioplasty (blowing up a small balloon to widen a narrowed vessel), or grafting (using a strip of vein to by-pass a narrowed area of coronary artery), are available. Individuals with little damage or disease may be re-certificated to fly by the CAA.

To help avoid a heart attack, do not smoke, maintain an optimum weight, avoid excessive animal fat in the form of red meat, hard cheese, cream and eggs, and take sensible exercise. Increasing the heart rate to 80% of maximum for 15 minutes 2-3 times a week improves physical fitness and alters the plasma fats in a favourable direction. In the event of symptoms suggestive of angina pectoris or of heart attack, medical advice should be sought at once and the pilot should declare himself unfit to fly.

CONDITIONAL CLEARANCES

* I still find your write ups on conditional clearances extremely misleading as you never quote even a fictitious callsign at the start of your examples. "Speedbird 010, after the departing 747, line up 27R". If the aircraft receives his callsign at the start and his instruction to line up at the end, he cannot fail to receive the condition in the middle. The system is 100% FAIL SAFE and does not need pursuing further. Any pilot, however, who receives an ATC instruction bearing a condition which is not correctly phrased as above should be encouraged to take immediate reporting action.

Keep up the good work; you're doing a grand job.

We understand this point - and thanks for the compliment - but we can't really agree with it. It is possible to miss the middle bit of a transmission, and then you're left with "Speedbird 010line up 27R", which makes pretty good sense. The next report (complete with callsign) highlights another problem that can arise. It's also been suggested to us that conditional runway crossing clearances are never used in the USA. Can anyone confirm that?

* A/C approaching Holding Point C for take off from R/W17 using partial runway length. Called Tower for T/O clearance. Reply as follows:-

"53E, after departing Bandeirante, cleared Line Up" (and hold? - can't remember). However, both co-pilot and I looked towards the runway threshold to see a BA748 starting its take off roll and the mentioned Bandeirante waiting to line up in turn.

Daylight, good visibility - but?

* Changed to Tower and arrived at holding point C. A 748 was cleared to line up RWY 35 from the full length. Another fixed wing A/C was cleared to line up in turn. We were cleared to line up at "C" after the departing 748 and another helicopter was cleared to line up behind us and after the departing 748. The 748 was cleared for T/O.

WHY NOT TELL US TO LINE UP WHEN IT'S OUR TURN. Lining up "in turn" and "after" is all very well when all traffic is lining up at the same point but a mixture of fixed wing from the full length and helicopters from a number of holding points well up the runway is asking for another Tenerife.

* The emergency runway at Gatwick is in no way safe. The runway is short, but no worse than those we use on schedules to Scotland so we cannot criticise that. It is though, in the middle of a mass of flickering flashing lights. It has two flickering candles which are erroneously called strobe lights, but are totally useless. Why cannot proper strobe lights be installed. Would it be beneath the dignity of Gatwick management to visit Berlin/Tegel and see what strobe lights are really like. The total lack of approach aids is ghastly. The BIA Captain on the taxiway has all my sympathy.

LGW

* I received a standard handover from London TMA of inbound E110 descending to 4000 north of the field all quite standard stuff. On first contact though, I am asked "What is the frequency of 26R ILS is it the same as 26L?" to which I replied "Negative 26R has no ILS it is a visual runway". "Oh that explains it", said our pilot friend, "I've been looking for the plate for the last half hour." "No it is a visual r/w, surveillance radar approach terminating 2n miles from touchdown, based on a 3 degree glidepath, please check your minima for the S.R.A." "Oh yes minima checked" - I'm not convinced.

Anyway I vectored him onto final and it all looked very nice until TWO miles at completion of approach when I am asked "Is the runway the one to the right of the two strobes?" "Negative the runway is between the strobes and please check your minimum descent height once more." "Oh roger landing between strobes, good job I asked!" The TWR controller subsequently advises that the a/c was approaching taxiway 3 and veered left and landed 26R at the last minute. This is not a rare event.

* Returning to Gatwick. Cleared localiser only approach to 08R. Wx 4/8 1400ft good visibility but hazy. First sighted the threshold at around 900 feet so concentrated on achieving and maintaining a visual glidepath. Suddenly at 600 feet ground visibility improved and I realized that it was the emergency runway that I was concentrating on - instead of 08R. Quickly jinked to the right and landed on 08R.

How could I make such an error? Well the ILS is localiser only, and being offset, at 900 feet the approach path is as close to 08L as 08R. The crosswind was from the North so our lookout favoured the left of the centreline. There were no approach lights on 08 Right - or strobes, and the VASIs don't stand out in haze. Finally with the work in progress on 08R the newly surfaced emergency runway presents a much more presentable "picture" of how a runway should look.

We've had a number of reports from pilots and controllers who are less than enthusiastic about Gatwick for a variety of reasons - particularly surprising are those describing a morning when 26 was used for landings and 08 for take-offs. There's something not sanitary about that. It's not our job, however, to rebut (or endorse) the points made, but if anyone out there would care to do so, we'd be happy to make space in Feedback available to them. In the last Feedback we printed a report from a pilot who nearly did a taxiway landing, and we hear that suggestions were subsequently made that the report was a "put up job" or even that we made it up. Perish the thought. We make up hardly any of the reports. Perhaps things will improve now that the resurfacing is complete.

TOO MANY HOURS

* A recent correspondent revealed that his Company had obtained an exemption from the 30hrs/7day rule once a week for a specific sector (?). I can Black Cat that! My Company now has carte blanche to extend the limit to 35hrs (36 at Captain's discretion!) subject to certain obscure conditions. This exemption is presented in the guise of a "trial".

Having just completed 7 days duty involving over 75hrs duty and almost 35hrs flying (100+ sectors) I can vouch for the suitability of a 30hr limit. I am no longer safe to fly, nor will I until adequately recuperated. I am at a loss to understand the CAA's rationale in permitting this, since it is clearly a device designed to avoid repeated requests for specific exemptions, fundamentally due to undermanning.

* Working on a 2 on/2 off schedule. Pilots exceeding 30 hours per week. No extra pilots available so application made to CAA for extension to weekly hours. Application was granted immediately, we can now fly 35 hours in a week. It is probably acceptable in the summer, but working in the East Shetlands Basin during the winter it is definitely too much.

WAKEY, WAKEY

* The aircraft left base as an evening flight delayed about 45 minutes for some of the usual reasons. Scheduled to wait in Greece for some three hours so as not to arrive back before the end of the night curfew. Departure for return flight arranged so as to be in the queue early enough to be actually landing as close as possible to scheduled time of arrival.

On first calling Gatwick Approach, it was number 8 to land gradually descending in the hold as others left the stack. During the second hold, the aircraft descended on autopilot to FL070 and the handling pilot opened the throttles (no autothrottle) to maintain holding speed inbound to the fix. He woke up again almost two miles beyond the fix where he should have turned.

* Flight was second of two night flights. Outbound leg both crew bright eyed/alert. Inbound leg both crew starting to wilt and F/O frequently dozing off, only just managing to stay awake myself. During descent started to ask F/O to make radio call, realised he was in dozing mode so made call myself.

Background info: daytime "rest" taken at private accommodation with usual 'phone ringing/dog barking/doorbell ringing etc.etc

* The previous day I operated a flight of 13h45m duty 10 hours flying. Arrived back at base at approximately 0815 local having departed at 1810 the previous evening. Our local regulations are that for flights departing between 6.00am and 6.00pm 13.45 duty - for flights scheduled to depart 6.00pm to 6.00am 12 hours duty this being local and scheduled. By changing the departure to 1755 it thus becomes a DAYLIGHT flight! The next night I was rostered for a flight leaving base at 1.00am and 5 hours flight time. Very little sleep during the day due to poor facilities and thin curtains. During flight I informed the F/O and S/O that I wanted 10mins rest - eyes shut. I opened my eyes 3MINS later to find both the F/O and S/O sound asleep! Had I fallen asleep the results could have been disaster.

Thanks to all of those who took part in the sleep study. Many of you will already know that the CAA is about to announce some modifications to CAP 371 for next year's operations, and will, next year, produce a wholly revised publication after discussion with interested parties. The results of the sleep study should be available (as well, of course, as all your fatigue reports) for consideration in this revision.

CHIRP NEWS

Need a Job?

Coming up for retirement? Medically grounded? Sick of flying or staring at a screen? Put some zip into life by coming to work for us. We're looking for someone to look after CHIRP, starting, probably, next April/May. There are no special requirements, but sentience and open-mindedness would be considered major advantages. The job is situated in lovely Farnborough, jewel of the NE Hants Riviera, and you'll be relieved to know that we won't damage the appointee's self respect by paying very much, giving a free car, or world travel. Interested? How could you not be? Phone Roger Green on 0252 24461 X4363.

Chirp Do

The Royal Aeronautical Society has asked us to give a presentation about CHIRP at a meeting to be held on 26 January 1989 at 1800hrs. The talk might not be up to much, but you'll get the chance to ask us questions and give a hard time to any big wigs that show up. The RAeS is at 4 Hamilton Place (just off Piccadilly and Park Lane, round the corner from the RAF Club). It's free, you don't need to be a member, and there will be a bar. If you can make it, we'll be delighted to see you.

Happy Christmas..

.. to everybody, but we'd especially like to wish that 1989 will be a year that is safe and profitable (in that order) for aviation.

What Comes In

Flight Deck: 65 reports

Fatigue, Comm press, CAP371 . . .	34
Own Errors	8
ATC Related	12
Tech Problems	5
Misc	6

ATC: 33 reports

Separation Erosion	15
Management	10
Staffing, Workload	2
RT	2
Own Errors	2
Misc	2

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 NAME AND ADDRESS
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YOURSELF
CREW POSITION
TOTAL FLYING HOURS
HOURS ON TYPE

THE FLIGHT
DATE
FROM :-
TO :-
IFR/VFR
TYPE OF OPERATION

THE INCIDENT
TIME (PLEASE STATE LOCAL/GMT)
DAY/NIGHT
LOCATION
PHASE OF FLIGHT
WEATHER (IMC/VMC)

THE AIRCRAFT
TYPE
No. OF CREW

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