GOVERNMENT OF INDIA MINISTRY OF CIVIL AVIATION LOK SABHA STARRED QUESTION NO.: 141 (To be answered on the 28th November 2019)

INCIDENTS OF AIR MISS

*141. SHRI BHARTRUHARI MAHTAB SHRI RAHUL RAMESH SHEWALE

Will the Minister of CIVIL AVIATION नागर विमानन मंत्री

be pleased to state:-

(a) whether it is a fact that the Delhi Airport has witnessed maximum number of incidents of air miss during each of the last three years and the current year;

(b) if so, the details thereof along with the details of such incidents reported in the country during the said period, State/UT/ airline-wise;

(c) whether the Government has conducted any enquiry in such cases;

(d) if so, the details and the outcome thereof and if not, the reasons therefor; and

(e) the other steps taken/being taken by the Government in this regard?

ANSWER

Minister of State (IC) in the Ministry of CIVIL AVIATION
नागर विमानन मंत्रालय मंत्री(स्वतंत्रप्रभार) (Shri Hardeep Singh Puri)

(a) to (e) A statement is laid on the Table of the House.

Statement referred in reply to Part (a) to (e) of Lok Sabha Starred Ques. No. 141 regarding "Incidents of Air Miss" to be answered on 28.11.2019.

(a) to (d) During the last three years and the current year (till 22.11.2019) a total of 34 Air Miss have occurred in the Delhi Flight Information Region (FIR). All Air Miss incidents' investigations are carried out either by the Aircraft Accident Investigation Bureau (AAIB) or by the Directorate General of Civil Aviation (DGCA) depending upon the severity of the incident. Safety recommendations emanating from the investigation reports are followed up for implementation with the concerned agencies so as to prevent recurrence of similar incidents in future. The details of such incidents reported in the country during the said period, State/UT wise/ Airline wise is attached at Annexure A.

(e) Further steps taken in this regard are attached at Annexure B.

SNo	Date	Place/ Unit	Brief Details of Incident and outcome
1.	13.01.2016	Delhi RSR	Air Miss occurred between Vistara flight VTI830, A320, Hyderabad to Delhi and Air Asia flight IAD2222, A320, HAL to Delhi. Outcome of incident- The controller was operating in an environment having limited airspace for holding/orbiting of aircraft due local flying at Gwalior airspace. VTI830 was instructed to descend to FL280 overlooking the conflicting traffic IAD2222 which was maintaining FL290. The radar controller could not detect the conflicting traffic
2.	21.01.2016	Delhi TAR	Air Miss occurred between Indigo flight IGO495, A320, Delhi-Ranchi and Air India flight AIC466, A321, Cochin to Delhi Outcome of incident- The controller intended to give descend to AIC446 to FL80 but inadvertently issued descend clearance to other aircraft AIC466. Also read-back by AIC466 was not corrected by the controller due to his expectancy bias. Minimum lateral separation was 2.2 NM when vertical separation was 700 feet.
3.	25.02.2016	Delhi RSR/ TAR	Air Miss occurred between Spice Jet flight SEJ2624, Q400, Jaipur to Delhi and Go Air flight GOW319, A320, Mumbai to Delhi. Outcome of incident- Loss of situational awareness by RSR (SW) controller and his clearance to descend to GOW319 to the same level as maintained by SEJ2624 which was being held by TAR controller were probable causes.
4.	03.05.2016	Delhi TAR	Airmiss occurred between Air India flight AIC 011, A321, Ahmedabad to Delhi and Indigo flight IGO 684, A320, Hyderabad to Delhi. Outcome of incident- The incident occurred when IGO684 descending from FL100 to 2600 feet, did not comply with the ATC instruction to turn right on heading 075 and continued on previously assigned heading 015. It came in conflict with AIC011 descending to FL080.
5.	22.08.2016	Delhi TAR	Airmiss occurred between Air India flight AIC995, B787, Muscat to Cochin and Indigo flight IGO528, A320, Pune to Delhi. Outcome of incident- Inadvertent use of wrong call-sign by the controller and his inability to identify the error from the read-back; and inappropriate delaying technique bringing two aircraft in conflicting situation were causal factors.
6.	01.09.2016	Delhi RSR	Airmiss occurred between Alliance Air flight LLR9613, ATR72, Delhi to Jammu and Thai air flight THY713, A330. Dhaka to Istanbul. Outcome of incident- Clearance to climb LLR9613 to FL360 while overlooking the conflicting traffic THY713 was the causal factor. Inadequate surveillance by RSR (W) controller, non-transfer of communication of THY713 in timely manner by controller.
7.	21.10.2016	Jaipur Tower/APP	Airmiss occurred between Jet Airways flight JAI2053, B737, Mumbai to Jaipur and Air India Express flight AXB195, B737, Jaipur to Dubai. Outcome of incident- The departing aircraft AXB195 from Jaipur was cleared to Dubai unrestricted climb to FL200. The incident took place when AXB195 came in conflict with arriving aircraft JAI2053 which was instructed to descend to FL065

			The relieving controller who issued initial ATC clearances to arriving and departing aircraft did not ensure separation minimum and relieving controller also did not identify the emerging conflict situation and amend the clearances in timely manner for conflict resolution.
			Airmiss occurred between KLM airways flight KLM811, B787, Amsterdam to Manchester and Indigo flight IGO977, A320, Delhi to Hal.
8.	02.11.2016	Delhi	Outcome of incident- Aircraft was instructed by controller to climb to FL350 without considering the crossing traffic KLM811 at FL350. The controller also overlooked the conflict between the aircraft and breach in separation occurred between IGO977 and KLM811.
9.	10.11.2016	Delhi RSR	Airprox between AlC142 & AlC154 Airmiss occurred between Air India flight AlC 142, B787, Vienna to Delhi and Air India flight AlC154, B787, Paris to Delhi. Outcome of incident- AlC142 was given descent to FL210. Later, AlC154 was also given descent to FL210 and subsequently from FL210 to FL190. The last transmission of descent from FL210 to FL190 was not read back by AlC154 and it descended and maintained FL210. Controller did not corrected readback error by the pilot.
10.	21.12.2016	Delhi RSR (E)	Airmiss occurred between Air India flight AIC 408, A319, Patna to Delhi and AIC 236, A320, Gaya to Delhi. Outcome of incident- The descent clearances given to AIC236 without considering the closure speed of the preceding aircraft was the causal factor to the incident.
11.	30.01.2016	Delhi TAR- SA	Airmiss occurred between Air India flight AIC 543, A321, Hyderabad to Delhi and Jet Airways flighjt JAI833, B737, HAL to Delhi. Outcome of incident- Wrong selection of frequency by the flight crew of AIC543 and misleading report from AIC543 that she is established on runway 11 were causal factors.
12.	19.02.2016	Delhi Tower	Airmiss occurred between Jet Lite flight JLL 4237, B737, Chandigarh to Delhi and Indigo flight IGO 605, A320, Delhi to Kolkata. Outcome of incident- Departing aircraft JAI365 was cleared to line up runway 29 when arriving aircraft JLL4237 was established on localizer RWY29 and 5.5 NM. JAI365 was issued take off clearance when JLL4237 was 4NM from touch down. Landing clearance was issued to JLL4237 and JAI365 was airborne. However JLL4237 initiated missed approach. Non-adherence to published missed approach procedure by flight crew of JLL4237.
13.	17.04.2017	Delhi TAR	Airmiss occurred between Indigo flight IGO303, A320, Delhi to Hyderabad and Air India flight AIC 411, A320, Delhi to Lucknow. Outcome of incident- AIC411 departure from runway 11 was instructed by controller to climb to FL090. The conflicting traffic was IGO303, which departed from runway 09 and was maintaining FL080. Both aircraft were following standard and their flight path were crossing each.
14.	21.04.2017	Delhi	Airmiss occurred between Jet Airways flight JAI597, B737, Muscat to Delhi and Vistara flight VTI811, A320, Delhi to Bangalore. Outcome of incident- VTI811 was given take-off was given when arrival JAI597 was 5.5NM. VTI811 commenced its takeoff run when JAI597 was 4NM from touchdown. JAI597 initiated go-around at 3NM from touchdown due to high approach and VTI811 also took off from runway 11. Observing the conflict, the Tower controller passed corrective traffic information to VTI811. The Approach controller took avoiding action but infringement of separation could not be avoided.

15.	17.06.2017	Delhi RSR	Airmiss occurred between Indigo flight IGO652, A320, Chennai to Delhi and flight IGO4065, A320, Delhi to Trivandrum. Outcome of incident- IGO652 was descending to FL180 and was deviating to the right due to weather. IGO4065 was climbing to FL290 and requested for left deviation due to weather which was approved. IGO652 requested for left deviation on heading 350. The controller tried to resolve the conflict by issuing heading instructions, which were not accepted by the aircraft due to weather leading to breach in separation. Both aircraft reported RA.
16.	27.06.2017	Delhi TAR	Airmiss occurred between Indigo flight IGO 956, A320, Mumbai to Delhi and Jet Airways flight JAI568, B777, Delhi to Dammam. Outcome of incident- JAI568 a departure from Delhi was climbing to and maintaining FL100. Arriving IGO956 descending to FL110. Later IGO956 was advised to rejoin the star and maintain FL100. Though the aircraft was descending to FL110 but the controller inadvertently advised her to maintain FL100, which brought IGO956 into conflict with JAI568.
17.	16.07.2017	Delhi RSR	Airmiss occurred between Air Canada flight ACA042D, B787, Toronto to Delhi and Indigo flight IGO048, A320,, Dubai to Delhi. Outcome of incident- ACA042D at FL390 was given descend to FL340 and advised to hold enroute. IGO048 at FL370 was given descend to FL350 and advised to hold enroute. Immediately after giving descend to IGO048, the controller realized that there was a conflicting traffic JAI763 at FL350. In order to resolve the conflict, IGO048 was given further descend to FL340 without considering the holding traffic ACA042D at FL340, leading to breach in separation.
18.	07.10.2017	Delhi Tower	Airmiss occurred between British Airways flight BAW143, B787, Heathrow to Delhi and Thai Air flight THA316. B777, Delhi to Bangkok. Outcome of incident- THA316 was given take-off clearance when BAW143 was 4NM from touchdown. It was observed that THA316 was continuously moving on runway at 10 kts without actually rolling for a significant period of 35 seconds. By the time THA316 got airborne, BAW143 initiated go-around at 1NM which resulted in breach in separation between the aircraft. The controller could have prevented the airprox by timely cancellation of departure of THA316.
19.	06.07.2017	Delhi TAR (AD)	Airmiss occurred between Alliance Air flight LLR617, ATR72, Delhi to Jabalpur and Indigo flight IGO211, A320, Delhi to Bhubneshwar. Outcome of incident- LLR617 after departure turned left instead of assigned right turn. The incident occurred due to wrong turn executed by the flight crew.
20.	01.09.2017	Delhi TAR	Airmiss occurred between Air India flight AIC 432, A319, Lucknow to Delhi and Cargo Airlines flight TZS570, B747, Kandahar to Delhi. Outcome of incident- AIC432 was instructed to climb to FL060. However information showed AIC432 maintaining FL063. When queried AIC432 reported maintaining FL060. Since AIC432 was in close proximity to TZS570, who was maintaining FL070, a conflict alert was generated between the aircraft.

21.	23.01.2018	Delhi	Air Miss occurred between Vistara flight VTI812, A320, Delhi to Varanasi and Air Charter flight VTFAE, B200, Delhi to Patna. Outcome of incident- The longitudinal separation was reduced to 6.71 NM due to the speed differential between slow moving aircraft VTFAE ahead and succeeding faster moving aircraft VTI812.
22.	13.05.2018	Delhi	Air Miss occurred between Jet Aieways flight JAI818,B737, Delhi to Lucknow and Go Air flight GOW805, A320, Bengaluru to Lucknow. Outcome of incident- JAI818 came in conflict with GOW805.
23.	25.05.2018	Delhi	Air Miss occurred between Jet Airways flight JAI316, B739, Delhi to Mumbai and Jet Airways flight JAI837,B737, Delhi to Udaipur. Outcome of incident- Separation breach was due to the speed differential between the two aircraft. The lateral separation reduced to 9.7 NM while the vertical separation was 600 feet.
24.	30.05.2018	Delhi	Air Miss occurred between Spice Jet flight SEJ130,B738, Kolkata to Delhi and Alliance Air flight LLR945,AT42, Delhi to Dehradun. Outcome of incident- LLR945 was maintaining FL100 and SEJ130 was descending to FL100. The vertical separation reduced to 500 feet when both aircraft were laterally 2 NM apart.
25.	29.06.2018	Delhi	Air Miss occurred between Go Air flight GOW174,A320, Pune to Delhi and Air India flight AIC102,B77W, New York to Delhi. Outcome of incident- Breach of separation occurred when both the aircraft were in the process of executing the turn. The lateral separation between both the aircraft was reduced to 2.1 NM when both the aircraft were at same level (Required separation 3 NM).
26.	17.10.2018	Delhi	Air Miss occurred between Indigo flight IGO2299,A320, Udaipur to Delhi and Jet Airways flight JAI928,B737, Bhopal to Delhi. Outcome of incident- The inter-arrival spacing between the two rendered insufficient.
27.	25.10.2018	Delhi	Air Miss occurred between Air India flight AlC646,A320, Jodhpur to Mumbai and Indian Air Force flight VUAUH,C17, Phalodi to Sulur. Outcome of incident- A breach of separation occurred between AlC646 & VUAUH at F250.

28.	22.12.2018	Delhi	Airprox between flight NCR840, B744, Bagram to Hongkong & flight EVA061, B77W, Bangkok to vienna & flight KLM875, B77W, Amsterdam to Bangkok Outcome of incident- Breach of standard separation occurred, between NCR840 and KLM875, B77W, FL330, same direction traffic and subsequently between NCR840 & EVA061, B77W, reciprocal traffic at FL320 on the same route. NCR840 had requested for climb to higher level (FL390), but only FL350 was available for it. NCR840 was accordingly informed and instructed to "STANDBY FOR HIGHER" by the controller. The crew acknowledged by replying "STANDING BY." After sometime, NCR840 was observed climbing and the radar controller immediately instructed avoiding heading (Left 090) to NCR840 w.r.t. EVA061. Simultaneously, the controller also instructed EVA061, reciprocal traffic at FL320, to turn left (on heading 270) for expeditious resolution of the conflict. However, while turning left (on heading 090), NCR840 climbed to FL330, resulting in loss of standard separation with KLM875. Later, the controller instructed NCR840 to descend to FL320 for early restoration of standard vertical separation with KLM875. When NCR840 commenced descend (to FL320) EVA061 was in the turn (heading 270) and standard separation with EVA061 also got infringed.
29.	16.01.2019	Delhi	Loss of separation between Air India flight AlC411, A320, Delhi to Lucknow and Jet Airways flight JAI364, B738, Pune to Delhi Outcome of incident- An occurrence of loss of separation occurred between departing AlC411 and JAI364 carrying out missed-approach at Delhi Tower.
30.	30.05.2019	Delhi	Loss of separation between Indigo IGO191, A320, Patna to Delhi and flight JAL749, B789, Narita to Delhi Outcome of incident- Due to differential rate of descend and speed of the two aircraft, TA reported by IGO191 as both were on converging flight paths.
31.	05.08.2019	Delhi	Loss of separation between Spice Jet SEJ104, B737, Delhi to Srinagar and Vistara VTI794, A320, Raipur to Delhi Outcome of incident- VTI794 was cleared to descend to FL100 and SEJ104 was given climb to FL120. Due to the left deviation of VTI794, both the aircraft became conflict The standard vertical separation was reduced to 800 feet when both the aircraft were 2.27 NM apart.
32.	23.08.2019	Delhi	Loss of separation between Go Air GOW204, A320, Leh to Delhi and Go Air GOW715, A320, Delhi to Leh Outcome of incident- GOW715 maintaining FL350 was changed over by Delhi ACC to Northern control (IAF Unit). In-bound flight GOW204 was given descend from FL360 to FL300 when both the aircraft were approximately 7 NM apart in opposite direction. The standard vertical separation was reduced to 700 feet when the lateral separation did not exist.
33.	15.02.2019	Delhi	Loss of separation between Indigo IGO417, A320, Car Nicobar to Delhi and Vistara VTI997, A320, Lucknow to Delhi Outcome of incident- The incident occurred due to unauthorized descend of IGO417, which was intended for IGO032.

34.	18.10.2019	Delhi f other region	Loss of separation between Indigo IGO129, A320, Delhi to Mumbai and Vistara VTI998, A320, Pune to Delhi Outcome of incident- IGO129 TOOK A RIGHT TURN WITHOUT PRIOR INFORMATION TOWARDS VTI998 WHICH WAS MAINTAINING F120.
35.	04.01.2016	Ahmedabad RSR	Air Miss occurred between Air India flight AlC634, A319, Bhopal and Jet Lite flight JLL4054, B737, Indore to Mumbai. Outcome of incident- Inadequate surveillance by the RSR controller in south-east sector at the time of incident and Tunnel vision of controller, as the controller was involved in resolving the traffic in the north sector of Ahmedabad and not keeping surveillance over the airspace where conflict between aircrafts was developing.
36.	16.02.2016	Mumbai TAR	Air Miss occurred between Indigo flight IGO483, A320, Chandigarh to Mumbai and Jet Airways flight JAI472, B737, Chandigarh to Mumbai. Outcome of incident- Airprox incident occurred between IGO483 and JAI472 in Mumbai TAR, wherein IGO483 picked up the descend clearance issued to JLL4380 and confirmed with controller with non-standard phraseology to which the controller also gave positive clearance. At this point of time, the controller could not detect the hear-back error. Vertical separation reduced to 900 feet vertical when longitudinal separation was 2.8NM.
37.	20.03.2016	Chennai	Air Miss occurred between Emirates flight UAE 547, B777, Chennai-Dubai and Jet Airways flight JAI2307, ATR72, Chennai-Bangalore. Outcome of incident- The incident occurred when UAE547 who was climbing to FL200 came in conflict with preceding aircraft JAI2307 climbing to FL160 on same path. The separation between the aircraft on diverging headings reduced to 4.7NM laterally and 200Ft vertically. Delay in identifying conflict and taking avoiding action by TAR controller is the probable cause.
38.	26.03.2016	Agartala Tower	Air Miss occurred between Jet Airways flight JAI2876, ATR72, Silchar to Kolkata and Defence aircraft flight VUDBY; AN32, Agartala to Guwahati. Outcome of incident- Assumption on part of the Agartala controller that Aircraft from Silchar will reach FL140 by 30 NM from Silchar. Also Lack of situational awareness on part of Agartala Controller as the controller never checked the distance of JAI2876 and VUDBY from Silchar or Agartala.
39.	29.03.2016	Chennai Tower	Air Miss occurred between Air Mauritius flight MAU746, A340, Bangalore-Chennai and Spice Jet flight SEJ614, B737, Chennai to Mumbai. Outcome of incident- SEJ614 was issued take off clearance twice when MAU746 was at 2.5 NM & 1 NM from touchdown and thereafter MAU746 was issued landing clearance at less than 1 NM from touchdown, while SEJ614 was still rolling on the runway. MAU746 carried out missed approach observing the preceding departure SEJ614 still on takeoff roll leading to conflict. Lack of situational awareness on part of Controller is the probable cause.
40.	30.04.2016	Chennai ASR	Airmiss occurred between Indigo flight IGO 889, A320, Bangalore to Chennai and Jet Airways flight JAI2736, ATR72, Bangalore to Chennai. Outcome of incident- Incident happened in Chennai when IGO889 while descending came in conflict with JAI2376, as the TAR controller inadvertently assigned FL070 to IGO889 while simultaneously talking to ATC driver on phone.

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41.	01.05.2016	Chennai RSR	Airmiss occurred between Indigo flight IGO316, A320, Guwahati to Chennai and Air India flight AIC 771, A319, Kolkata to Chennai. Outcome of incident- The incident happened when RSR controller working in UBL sector at Chennai used the wrong call sign and descended IGO316 to FL260 instead of IGO357.
42.	06.05.2016	Chennai	Airmiss occurred between Spice Jet flight SEJ 3592, Q400, Tuticorin to Chennai and Jet Airways flight JAI 613, B737, Chennai to Port blair. Outcome of incident- The incident occurred when Tower controller, who wanted to give revised instructions to JAI613 to climb, used the call sign of SEJ3592.
43.	07.05.2016	Chennai	Airmiss occurred between Air Asia flight IAD177, A320, Delhi to Bangalore and Indigo flight IGO333, A320, Bhubaneswar to Bangalore. Outcome of incident- The incident occurred when IAD177 mistook the descend clearance meant for IG0333 and started descending from FL370. It came in conflict with a converging traffic IGO333 which was descending from FL360 to FL320. Inability of the concerned controller in detecting the readback by the wrong aircraft and Delay by concerned controller in taking appropriate avoiding action.
44.	20.05.2016	Bengaluru	Airmiss occurred between Indigo flight IGO 233, A320, Bangalore to Chennai and Spice Jet flight SEJ 1069, Q400, Hyderabad-Coimbatore. Outcome of incident- The Incident happened when SEJ1069 at FL200 came in conflict with departing IGO233 aircraft which was initially cleared to climb to FL190, requested FL210 that was approved by the controller. On-the-Job training was being imparted when the incident took place. Error on part of the trainee controller and the RSR controller in not taking into consideration the conflicting traffic.
45.	07.07.2016	Mumbai OCC	Airmiss occurred between Israel Airlines flight ELY071, Tel Aviv to Mumbai and Air India Express flight AXB350, B737, Muscat to Calicut. Outcome of incident- Non-detection of conflict by the OCC-South controller due non-updation of position reports / estimates on flight progress strips.
46.	11.08.2016	Chennai RSR (UBL Sector)	Airmiss occurred between Spice Jet flight SEJ511, B737, Hyderabad to Cochin and Emirates flight UAE433, B777, Brisbane to Dubai. Outcome of incident- SEJ511 had mistakenly taken the climb instructions meant for SEJ514 to FL360, and hence continued climb above its cleared level (i.e. FL340) resulting in AIRPROX. Error in listening to controller's instructions on part of the crew of SEJ511 due to which they mistook the climb instructions meant for SEJ514 and continued climb above the cleared level.
47.	22.10.2016	Goa	Airmiss occurred between Go Air flight GOW141, Mumbai to Goa and Spice Jet flight SEJ3604, Goa to Hyderabad. Outcome of incident- RADAR was unserviceable at Goa and Aircraft was adviced to follow VOR/DME RWY 26 approach whereas aircraft continued to follow the STAR leading to the Airprox with departing aircraft SEJ 3604 at FL210.
48.	04.11.2016	Mumbai	Airmiss occurred between Air Arabia flight ABY401, A320, Sharjah to Mumbai and Emirates flight UAE508, B777, Dubai to Mumbai. Outcome of incident- The descend given to two aircraft without considering the conflicting traffic ABY401 was the causal factor to the incident.
49.	10.11.2016	Goa	Airmiss occurred between Go Air flight GOW141, Mumbai to Goa and Spice Jet flight SEJ141, Delhi to Goa. SEJ was cleared to descent to FL210 while holding and Go air flight G8-141 also maintaining FL 210.

E			Airmiss occurred between Jet Airways flight JAI 358, B737, Delhi to Mumbai and Jai 536, B737 Mumbai to Dubai.
50.	13.11.2016	Mumbai	Outcome of incident- Runway 14 was operational at Mumbai Airport. JAI536 after lining up RWY14 and receiving take-off clearance requested 30 seconds more for departure due to wake-turbulence generated by previous heavy departure. JAI358 on finals RWY14 was instructed to go around, and JAI536 also took-off simultaneously resulting in airprox between both aircraft. Allowing the take-off of JAI536 after the additional 30 seconds on runway was the causal factor to the incident.
51.	02.12.2016	Nagpur	Airmiss occurred between Jet Airways flight JAI792, B737, Indore to Delhi and Alliance Air flight LLR628, ATR72, Gwalior to Mumbai. Outcome of incident- The incident occurred due to human error on part of the Surveillance Controller in giving unintentional climb to FL180 to JAI 792. The controller wanted to clear it to climb to FL160 but he transmitted FL180 by slip which could not be detected by him.
			Airmiss occurred between Indigo flight IGO6619, A320, Kolkata to Hyderabad and Silk Air flight SLK488, B737, Singapore to Kolkata.
52.	11.12.2016	Kolkata	Outcome of incident-IGO 6619 was taking-off from RWY19L and at that time SLK488 was on finals of same runway. IGO6619 departed. Even though SLK488 was given landing clearance.
			Airmiss occurred between Indigo flight IGO315, A320, Trivandrum to Chennai and Jet Airways flight JAI 2344, ATR72, Madurai to Chennai.
53.	14.12.2016	Chennai ASR	Outcome of incident-
		7.6.	Arriving aircraft IGO315I descended below its assigned level and hence came in conflict with preceding slow moving aircraft, JAI2344. Controller not ensuring readback of issued descent clearance to flight crew by the TAR controller. Lack of appropriate action on the part of controller on system generated warnings.
	,		Airmiss occurred between Etihad flight ETH628, B787, Ethiopia to Bangkok and Neos flight NOS710, B767, Milan to Male.
54.	19.12.2016	Mumbai	Outcome of incident- ETH628 was descended from FL390 to FL330 due crossing traffic with respect to another traffic on route. Controller revised direct route of ETH628 was conflicting with the flight path of NOS710, both now maintaining same level.
			Airmiss occurred between Air India flight AIC763, A321, Kolkata to Chennai and Turkish Air flight THY713, A330, Dhaka to Istanbul.
55.	20.02.2017	Varanasi	Outcome of incident- THY713 and AIC763 converged over LKN at same level FL340 and both aircraft were released to Delhi ACC without identifying the conflict over LKN. The separation between the aircraft reduced to 8.7NM.
2			Airmiss occurred between Emirates flight UAE530, B777, Dubai to Cochin and Oman Air flight OMA376, B787, Colombo to Muscat.
56.	21.02.2017	Chennai	Outcome of incident- UAE530 was given descent initially from FL390 to FL370. Subsequently when UAE530 was approaching FL370 the controller cleared it to FL340, overlooking the opposite direction traffic OMA376 at FL360.
			Airmiss occurred between Go Air flight GOW451, A320, Chennai to Pune and Indigo flight IGO342, A320, Chennai to Bangalore.
57.	23.03.2017	Chennai UBE	Outcome of incident- AIRPROX between GOW451 and IGO342 on crossing route occurred when GOW451 continued climb above its cleared level FL300 and through the level of IGO342 FL 310 when the radar separation between these two aircraft was not available.

58.	29.03.2017	Mumbai TAR	Airmiss occurred between Kuwait Airlines flight KAC301, A330, from Kuwait to Mumbai, and Air India flight AIC 984, A321, Dubai to Mumbai Outcome of incident- At approx. 3NM from touchdown, KAC301 requested right turn to lose height with Tower controller which was approved by the Tower controller and the flight was immediately released to Approach controller. The Approach controller instructed KAC301 to fly on Heading 050 and to climb to 3700 feet. The subsequent arrival AIC984 was established on ILS and released to Tower. The variation in compliance by KAC301, led to breach of separation between KAC301 and AIC984 i.e. 2.8NM longitudinal and 600 feet vertical.
59.	13.04.2017	Nagpur ARSR	Airmiss occurred between Qatar Airways flight QTR817, B787, Hong Kong to Doha and Etihad flight ETD833, A330, Hong Kong to Abu Dhabi. Outcome of incident- Loss of separation occurred when QTR817 was given descend from F400 to FL360 through the preceding aircraft ETD833 which was maintaining FL380. During descend of the longitudinal separation between QTR833 and ETD833 reduced to 9.1NM at a point when vertical separation was 100feet. The controller took action by assigning deconflicting levels and headings to aircraft but the actions were not appropriate to the situation.
60.	16.04.2017	Varanasi	Airmiss occurred between Air Asia flight IAD768, A320, Bagdogra to Delhi and Indigo flight IGO398, A320, Delhi to Bagdogra. Outcome of incident- IAD768 was given descend to FL340, however IAD768 continued descend to FL320, resulting in airprox with opposite direction traffic IGO398 maintaining FL330.
61.	17.04.2017	Ahmedabad	Airmiss occurred between Spice Jet flight SEJ501, B737, Ahmedabad to Chennai and Indigo flight IGO643, A320, Delhi to Pune. Outcome of incident- SEJ501 was initially cleared to FL250 and subsequently was cleared to climb to FL310. The controller overlooked the crossing conflicting traffic, IGO643 which was maintaining FL300.
62.	09.06.2017	Mumbai	Airmiss occurred between Go Air flight GOW171, A320, Bhopal to Pune and Jet Airways flight JAI392, B737, Hyderabad to Mumbai. Outcome of incident- GOW171 and JAI392 reported getting Resolution Advisory (RA) near Mumbai Control Area, around 70 NM east of Mumbai.
63.	19.06.2017	Chennai FIR	Airmiss occurred between Jet Airways flight JAI476, B737, Goa to Mumbai and Indigo flight IGO161, A320, Ahmedabad to Goa. Outcome of incident- Airmiss reported by JAI476, while climbing to FL240 with IGO161 descending to FL230. IGO161 was in contact with Goa ATC descending to FL280 and was given further descend up to FL230 by Goa ATC, whereas JAI476 had been cleared to climb to FL240 by Goa ATC and released to Mumbai.
64.	13.08.2017	Guwahati TAR	Airmiss occurred between Air India AlC889, A321, Delhi to Guwahati and Indigo flight IGO6204, A320, Guwahati to Kolkata. Outcome of incident- Arriving A1C889 was descending to 6000 feet and Departing IGO6204 was climbing to FL140. AlC889 was given right heading to 220 by Guwahati radar controller but AlC889 requested left heading 220 due to weather, which was approved by the controller, notwithstanding the fact that there was a conflicting traffic.
65.	21.08.2017	Mumbai	Airmiss occurred between Jet Airways flight JAI426, B737, Calicut to Mumbai and Air India flight AIC696, A321, Varanasi to Mumbai. Outcome of incident- Loss of separation between Jet Airways, JAI426, and Air India, AIC696 took place in Mumbai approach control when JAI426, who was orbiting right and maintaining flight level FL120, was given descend to F100 through the level of AIC696, who was maintain flight level FL110.

66.	05.09.2017	Delhi ACC (Defense)	Airmiss occurred between Indigo flight IGO367, A320, Delhi to Amritsar and Airforce aircraft (Phonix).
*			Airmiss occurred between Jet Airways flight JAI 119, B777, Mumbai to Hyderabad and JAI 354, B737, Mumbai to Hyderabad.
67.	19.09.2017	Chennai	Outcome of incident- JAI119, JAI2054 and JAI354 proceeding direct to 'GGB' VOR after diverting from VABB for VOHS were maintaining FL310, FL270 and FL 290 respectively. Separation between JAI119 which was ahead of the other two aircraft with respect to JAI2054 was 11NM when the controller initiated its descent. At that time JAI354 was flying few miles to the left and slightly behind JAI2054. Conflict alert were generated between JAI119 and JAI354 while JAI119 was descending to FL260.
			Airmiss occurred between Etihad flight ETD91F, A321, Hyderabad to Abu Dhabi and Jet Airways flight JAl354, B737, Delhi to Mumbai.
68.	19.09.2017	Mumbai	Outcome of incident- Loss of Standard Separation occurred between ETD91F and JAI354 when both aircraft at same level FL300, had deviated from the assigned route due to weather. The temporary loss of Situational Awareness by the controller resulted in reduction of Separation between the aircraft.
			Airmiss occurred between Indigo flight IGO283, A320, Delhi to Kolkata and Jet Airways flight Jai610, B737, Kolkata to Mumbai.
69.	17.10.2017	Kolkata	Outcome of incident-IGO283 was cleared to descend to FL60 and the departure JAI610 after departure, was climbing to FL120. Subsequently due to change of runway, IGO283 was vectored for RWY19L and became conflicting traffic for JAI610. IGO283 was instructed to stop descend and climb to FL131. JAI610 was instructed to stop climb at FL110. IGO283 requested whether she can maintain FL120, which the controller approved. However JAI610 did not stop at FL110 and continued climb up to FL116 resulting in breach in separation between the aircraft.
		0.2017 Chennai	Airmiss occurred between Singapore Airlines flight SIA346, A380, Singapore to Zurich and Kenya Airways flight KQA887, B787, Bangkok to Nairobi
70.	27.10.2017		Outcome of incident- Airmiss occurred when SIA346 was given climb from FL340 to FL360 by controller came in conflict with KQA887, B788 maintaining FL360 and converging over IDASO.
			Airmiss occurred between Emirates flight UAE414, A380, Dubai to Sydney and Etihad Airways flight ETH606, B777, Ethiopia to Guangzhou.
71.	03.11.2017	Mumbai	Outcome of incident- UAE414, operating at FL310 was approved climb to FL330 by Mumbai OCC, resulting in potential conflicting traffic over waypoint LEMAX with the crossing traffic ETH606
			Airmiss occurred between Flydubai flight FDB445, B737, Dubai to Mumbai and Qatar Airways flight QTR557, B777, Mumbai to Hamad.
72.	18.11.2017	Mumbai	Outcome of incident- Flight QTR557 was given line-up and take-off clearance RWY27. At that time, flight FDB445 was established on ILS RWY27. The take-off clearance to QTR557 was inappropriate in view of the inadequate inter-arrival spacing between FDB445. FDB445 was instructed to go-around in the interest of safety.
			Airmiss occurred between Sri Lanka Airlines ALK129, A320, Colombo to Chennai and Air India flight AIC509, A320, Chennai to Cochin.
73.	03.12.2017	Chennai	Outcome of incident- AIRPROX between AIC5O9 and ALK 129 occurred when both these aircraft were given continuous climb and descend respectively on converging headings and reciprocal tracks while radar separation between them was not available.

74.	05.12.2017	Chennai	Airmiss occurred between Air India flight AlC408, A321, Delhi to Cochin and Emirates flight UAE333, B777, Manila to Dubai. Outcome of incident-
			On detection of conflict between AlC048 at FL350 and crossing traffic Enter Air flight ENT7095, Ras al Khaimah to Colombo at FL350 (same level) when the surveillance controller gave AlC048 a left turn heading 150 and climb to FL360, it came in conflict with another crossing traffic, UAE333 on same as route of ENT7095at FL360.
			Airprox between Air Asia flight IAD1982, A320, Bengaluru to Guwahati & Air India flight AIC706, A319, Mohanbadi to Kolkata.
75.	12.01.2018	Dhaka	Outcome of incident- AIC706 at FL340, while operating in Dhaka FIR under control of Dhaka ACC reported receiving RA w.r.t opposite direction flight IAD1982 via R472, which was also under control of Dhaka ACC in Dhaka FIR.
			Air Miss occurred between Indigo flight IGO334, A320, Shamshabad to Raipur and Emirates flight UAE353, B77W, Singapore to Dubai.
76.	28.01.2018	Mumbai	Outcome of incident- The separation minima was infringed when IGO334 was given descend from FL330 to FL250 through the level of UAE353 who was maintaining FL300.
			Air Miss occurred between Indigo flight IGO226, A320, Lucknow to Bengaluru and Emirates flight UAE545, B77W Chennai to Dubai.
77.	02.02.2018	Chennai	Outcome of incident- UAE545 climbing to FL320 came in conflict with crossing traffic IGO226 descending to FL260 from FL370
		-	Air Miss occurred between Air India flight AIC668, A321, Trivandrum to Mumbai and Cathey Pacific flight CPA696, A333 Mumbai to Hong Kong.
78.	02.02.2018	Mumbai	Outcome of incident- CPA696 was given take-off clearance when AIC668 was 02 Nm from touchdown. After few seconds AIC668 was instructed to go-around.
		i	Air Miss occurred between Air India flight AIC631, A320, Mumbai to Bhopal and Vistara flight VTI997, A320 Delhi to Pune.
79.	07.02.2018	Mumbai	Outcome of incident-AIC631 was climbing to FL270 and VTI997 was cleared to descend to FL290. However, VTI997 descended below FL290. The separation reduced to less than 2NM with no vertical separation.
			Air Miss occurred between Air India flight AlC6678, A321, Delhi to Mumbai and Indigo flight IGO179, A320 Mumbai to Goa.
80.	08.02.2018	Mumbai	Outcome of incident- The inter arrival spacing between previous arrival and AlC678 was not appropriate to accommodate the departure of IGO179. AlC678 went around at approximately 1NM before touchdown due to non-receipt of landing clearance.
			Air Miss occurred between Qatari flight QTR956, B788, Hamad to Soekarno-Hatta International Airport and Qatari flight QTR825, A332 Krabi International Airport, to Hamad.
81.	17.02.2018	Chennai	Outcome of incident- QTR956 came in conflict with QTR825 maintaining FL380 when QTR956 was given climb from FL370 to FL390 by ATC
			Air Miss occurred between Emirates flight 432, B773, Dubai to Singapore and Indigo flight IGO199, A320 Mumbai to Bengaluru.
82.	18.02.2018	Mumbai	Outcome of incident-IGO199 was climbing from FL290 to FL390 while UAE432 was maintaining FL350. The crossing flight path of both aircraft were in conflict. Standard lateral separation reduced to 8.2 NM while vertical separation reduced to 300 ft

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83.	20.02.2018	Chennai	Air Miss occurred between Spice Jet flight SEJ3072, DH8D, Madurai to Chennai and Indian Air Force flight IFC7201, AN32 Yalanka to Yalanka. Outcome of incident- SEJ3072 climbing to FL230 came in conflict with IFC7201 maintaining FL 210. Horizontal distance between these two aircraft was 14 NM when the vertical distance between them reduced to a minimum of 300 feet.
84.	28.03.2018	Kolkata	Airprox between Arabia flight ABY539, A320, Sharjaha to Kathmandu and flight KAC285, B77W, Kuwait to Dhaka Outcome of incident-
			The unauthorized descend of ABY539 from FL350 to FL330 resulted in breach of standard separation with same directional traffic KAC285 at FL330.
85.	19.04.2018	Chennai	Air Miss occurred between True Jet flight TRJ433, AT73, Vijayawada to Kadapa and Spice Jet flight SEJ1042, DH8D from Tirupati to Shamshabad
00.	10.04.2010	Chlorina	Outcome of incident- Both the flights were cleared to operate at FL160 mistakenly by the ATC controller.
			Airprox between flight JAL740, B789, Delhi to Narita & Unknown Traffic (IAF)
86.	19.04.2018	Delhi (Defense)	Outcome of incident- An unidentified traffic squawking 3105 with unverified mode C showing flight level 292 was observed approaching corridor-1 and not in contact. At that time JAL740 was climbing on ATS R460 to flight level 350 and passing flight level 286. As the unidentified traffic continued to close in towards JAL740, avoidance heading was given to JAL740 to provide separation with respect to the unidentified traffic and was also asked to stop climb. However, there was a loss of separation and current conflict warning (CCW) was generated by the Delhi ATM automation system. Later, the unidentified traffic seemed to have switched OFF the Transponder and crossed corridor-1.
87.	20.04.2018	Muscat (Mumbai)	Airprox between flight KAC301, B777, Kuwait to Mumbai and flight GFA274, A320, Bahrain to Shamshabad Outcome of incident- KAC301 FL370 came in contact through CPDLC at FL350 instead of FL370. GFA274 FL350 had checked RASKI at 2058 and became immediate traffic to KAC301. KAC301 was given climb to FL370 to resolve traffic. OOMS supervisor accepted that RASKI
	*		(Muscat) controller forgot to give climb to KAC301 to FL370. Attributable to Other ANSPs
			Air Miss occurred between Indigo flight IGO6488, A320, Kolkata to Delhi and Go Air flight GOW585, A320, Mumbai to Patna.
88.	23.04.2018	Kolkata	Outcome of incident- GOW585 was given descend from FL370 to FL330 and came in conflict with IGO6488 maintaining FL360.
а		es .	Air Miss occurred between Emirates flight UAE355, A388, Singapore to Dubai and Qatari flight QTR947, A359, Singapore to Hamad.
89.	30.04.2018	Chennai	Outcome of incident- UAE355 was given climb from FL380 to FL400. Controllers not aware of the conflicting traffic, QTR947 flying approximately 3 minutes (19 NM) behind UAE355 at the same level i.e. FL400.
		-	Airprox between Indigo flight IGO892, A320, Kolkata to Agartala & Flight DN602, B190, Agartala to Kolkata
90.	02.05.2018	Kolkata	Outcome of incident-IGO892was descending to F090 via ATS route B593 and DN602 was cleared to climb to F080 via B593 by Agartala ATC. DN602 was advised to request level change from Dhaka ACC. when asked for higher climb. However, DN602 continued its climb upto F083 against the cleared level authorized by the ATC. Both the aircraft were on reciprocal track and reported RA.

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	* - ±	1 30 1 35	Air Miss occurred between Indigo flight IGO5533, A320, Mumbai to Bengaluru, and Indigo flight IGO279,A320, Bengaluru to Goa.
91.	11.05.2018	Chennai	Outcome of incident- Controller authorized climb of IGO279 to FL320 and IGO5533 was simultaneously descended by controller to FL310. Closest distance, horizontal-8.7 NM, Vertical-400 feet.
02	21.05.2018	Chennai	Air Miss occurred between Indigo flight IGO647 A320, Vijeg to Bengaluru and Navy aircraft HK053 Vijayawada to Vijeg.
92.	21.05.2016	Cileillai	Outcome of incident- HK053 was climbing to FL250 and IGO647 was maintaining FL240 and came in conflict.
9 8		F × H	Air Miss occurred between Jet Airways flight JAI462, B738, Chennal to Mumbai and Air Asia flight IAD1729, A320, Jaipur to Bengaluru.
93.	22.05.2018	Chennai	Outcome of incident- IAD1729 on route Q21 while descending from FL350 to FL260 came in conflict with JAI462 maintaining FL340. Separation between both aircraft reduced to 4NM lateral and 800 feet vertical.
			Airprox between Air Asia flight IAD539, A320, Guwahati to Kolkata & Air India flight AIC731, A320, Kolkata to Guwahati
94.	28.05.2018	Dhaka (Guwahati)	Outcome of incident-IAD539 was maintaining FL240 and AIC731 was given descent to FL250. While IAD539 was approximately 70 NM southwest of Guwahati, RSR controller (Guwahati) observed IAD539 climbing above FL240 without coordination with Guwahati due to which breach of separation (7 NM) occurred. IAD539 reported that Dhaka control had given climb above FL240.
			Airprox between Air India Express flight AXB435, B738, Cochin to Dubai & Emirates flight UAE654, B77W, Dubai to Colombo
95.	31.05.2018	Mumbai	Outcome of incident- UAE654 was an eastbound flight via route M300 at FL370 which had deviated left of track upto 50NM. AXB435 was a westbound flight via route M300 at FL380. AXB435 also deviated right of track by approximately 20NM and descended to FL377 as weather deviation procedure. Both aircraft reported TCAS RA while crossing each other at about 50NM west of 'IGAMA'.
			Air Miss occurred between Indigo flight IGO511,A320, Shamshabad to Bengaluru and Air Asia flight IAD1563,A320, Bhubneshwar to Bengaluru.
96.	15.06.2018	Chennai	Outcome of incident-IGO511 maintaining FL290 and IAD1563 holding over the fix 'TELUV' at FL290 and came in conflict. Closest distance between IGO511 and IAD1563 was: Horizontal-8.7 NM and Vertical-700 feet.
			Airprox between Air India flight AIC788, A319, Port Blair to Kolkata & Qatari flight QTR932, B77W, Hamad to Manila
97.	06.07.2018	Kolkata	Outcome of incident- Breach of separation occurred near RUMUN (Over Bay of Bengal) between AlC788 and QTR932 in the oceanic airspace where procedural control was in progress under limited VHF coverage. AlC788, A319, Port Blair to Kolkata, FL340 EST DOPID 0450 UTC and QTR932, B77W, Hamad to Manila, FL350, BUBKO 0433 UTC. Both aircraft deviated due to weather. At 0434 UTC, radar track of AlC788 appeared in SDD at FL350 and on converging heading with QTR932. AlC788 had inadvertently selected FL350 resulting in climb to FL350.

98.	09.07.2018	Mumbai	Airprox between Air India flight AlC042, A320, Delhi to Chennai & Indigo flight IGO2988 A320, Bengaluru to Delhi Outcome of incident- IGO2988 was a northbound flight via route Q23 at FL360. AlC042 was a southbound flight via route Q24 at FL370. Both aircraft were deviating due weather and were reciprocal to each other. At around 35NM south of Bhopal, AlC042 reported experiencing turbulence and requested for descend to FL360. The controller instructed AlC042 to standby due reciprocal conflicting traffic at FL360. However, AlC042 started descending in the next instance rapidly up to FL360. By that time both flights had crossed each other. The descend of AlC042 immediately after crossing with IGO2988 led to breach in separation between the aircraft.
99.	09.07.2018	Kolkata	Air Miss occurred between Indigo flight IGO492,A320, Bhubaneshwar to Bengaluru and Indigo flight IGO141,A320, Chennai to Bhubaneshwar. Outcome of incident-IGO492 after departure was cleared to F240, but IGO492 deviated from its cleared path due to weather and became conflicting traffic with the arriving IGO141.
100.	10.07.2018	HAL	Airprox between Indigo flight IGO779, A320 Coimbtore to Shamshabad & Indigo fligh IGO6505, A320, Bengaluru to cochin Outcome of incident- An incident of airprox between IGO779 and IGO6505 was reported while both the aircraft were under jurisdiction of HAL ATC.
101.	12.07.2018	Mumbai	Air Miss occurred between Indigo flight IGO732,A320, Shamshabad to Lucknow and Air Arabia flight ABY521,A320,Sharjaha to Chittagong . Outcome of incident- Both aircraft were in conflict at FL350. The separation between the aircraft reduced to 6.5NM when vertical separation did not exist.
102.	05.08.2018	Mumbai	Air Miss occurred between Oman flight OMA203, Muscut to Mumbai and German Cargo flight BOX531,B77L, Bengaluru to Leipzig/Halle Airport. Outcome of incident-BOX531 was maintaining FL300 and OMA203 was maintaining FL350. The RSR controller instructed OMA203 to descent from FL350 to FL250. The flight path of both aircraft were in conflict.
103.	09.08.2018	Mumbai	Air Miss occurred between Indigo flight IGO5994,A320, Hubli to Ahmedabad and Indian Air Force flight IAF107, SU30, Pune to Goa and back Pune. Outcome of incident- Two SU30 aircraft were flying at FL145. The Controller instructed IGO5994 to climb to FL200 and they came in conflict.
104.	16.08.2018	Chennai	Air Miss occurred between flight AlQ137,A320, Bangkok to Bengaluru and flight AXM69, A320, Singapore to Shamshabad. Outcome of incident- AlQ137 and AXM69 both maintaining F340 and converging over 'BBZ' VOR (almost at the same time, MINSEP 4 NM) came in conflict with each other.
105.	28.08.2018	Chennai	Air Miss occurred between Emirate flight UAE353,B777, Singapore to Dubai and Go Air flight GOW830, A320, Bengaluru to Kolkata. Outcome of incident- GOW830 came in conflict with UAE353, maintaining FL360 on route N571, when GOW830 was given climb from FL350 to FL370.
106.	29.08.2018	Chennai	Air Miss occurred between Air Asia flight IAD2389,A320, Bengaluru to Chennai and Indigo flight IGO137,A320, Goa to Chennai. Outcome of incident-IGO137 came in conflict with IAD2389, on route W116 (approx. 9.6 NM behind), while descending to FL 160 through the level of IAD2389

107.	11.10.2018	Chennai	Air Miss occurred between Spice Jet flight SEJ925,B737, Ahmedabad to Chennai and Indigo flight IGO518,A320, Lucknow to Chennai. Outcome of incident- IGO518 and SEJ925 both aircraft following the same arrival came in conflict with each
			other, when SEJ925 also mistakenly continued descent to FL130.
			Air Miss occurred between Indigo flight IGO797,A320, Kolkata to Bagdogra and Air Asia flight IAD583,A320, Bagdogra to Kolkata.
108.	15.10.2018	Kolkata	Outcome of incident-IAD583 was operating on ATS route W69 while Indigo Flight IGO797 was climbing to FL300 on a direct track to ONOTO (reporting point on ATS route W69). IAD583 requested descent near ONOTO. The controller asked IGO797 to stop climb at FL290 and cleared IAD583 also to descent to FL290.
	16.10.2018		Air Miss occurred between Saudia flight SVA862,B77W, Riyad to Manila and flight UPS15,B744, Suvarnabhumi to Mumbai.
109.		Kolkata	Outcome of incident- UPS15 was given climb from FL320 to FL340 when SVA862 was maintaining FL330. Minimum separation was 3 NM and vertical separation was 300 feet.
			Airprox between True Jet flight TRJ304, AT72, & VTPSB, C25A, Nanded to Mumbai
110.	03.11.2018	Mumbai	Outcome of incident- Arriving TRJ304 was instructed to descend to FL070 while departing VTPSB was instructed to climb to FL160 with a restriction to cross 17 NM at or below 5000 feet. However VTPSB did not follow the ATC instructions and reported at 10000 feet at 17 NM from NND. Incident attributable to flight crew of VTPSB
			Air Miss occurred between Air India flightAlC634,A319, Bhopal to Mumbai and Jet Air ways flight JAl70, B739, Mumbai to Suvarnabhumi.
111.	07.11.2018	Mumbai	Outcome of incident- Jet Airways flight JAI70 climbing to FL350 via route Q19 and conflicting with Air India flight AIC634 maintaining FL340.
	14.11.2018	Kolkata	Air Miss occurred between Air India flightAIC308,B788, Delhi to Melbourne and Spice Jet SEJ954, B738, Ahmedabad to Patna.
112.			Outcome of incident- SEJ954 via route G590 at FL330 and AIC308 via route R460 at FL330 were converging over BBN at the same level. The conflict remained undetected till STCA warning
			Air Miss occurred between Air India flightAlC636, A319, Delhi to Indore and Indigo flight IGO5409,A320, Indore to Delhi.
	22.12.2018	Mumbai	Outcome of incident-
113.			Arriving AIC636 was instructed to descend and maintain 5000 feet for ILS (Z) Approach Runway 25 via 14 DME arc. Departing IGO5409 was cleared via R360 IID and instructed to climb to 4000 feet. When IG05409 reported established on R360 IID, AIC636 reported passing FL060 on DME arc procedure. IG05409 was given further climb to FL280 and AIC636 was given further descend as per ILS procedure, without ascertaining the position of AIC636. The instructions were erroneous which led to breach in separation between the aircraft.
	45	2.5	Loss of Separation between Air India Express flight AXB021, Vijayawada to Mumbai and Saudia flight SVA834, B787, Jedah to Kwalalampur
114	08.01.2019	Mumbai	Outcome of incident-
114.			SVA834 at FL350 was routing via L505. AXB021 at FL360 was routing direct to OPAKA on route W18. AXB021 was instructed to descend from FL360 to FL300 and advised to expedite passing FL330. The controller missed the conflicting traffic SVA834 and the standard separation was reduced between the aircraft.

		*	Loss of separation between Jet Airways JAI742, ATR72, Manglore to Bengaluru and Unknown Traffic
115.	25.01.2019	Yelahanka (Bangaluru)	Outcome of incident- JAI742 maintaining FL150 at approximately 70NM west of BIA, reported sighting another traffic 2'O clock 6NM at same level. VOR185D was active upto FL140 at that time. LBL sector was exercising control over the airspace at and above FL150. The sector controller did not have any other traffic that was operating in the vicinity at FL150. However, the controller gave appropriate instructions to JAI742 for avoiding action keeping in mind the location of the traffic as reported by JAI742. Automation System Warning was not generated. No RA was reported.
			Loss of separation between Indigo flight IGO5991, A320, Chennai to Hubli and Alliance Air LLR510, AT76, Hubli to Bengaluru
116.	31.01.2019	Chennai	Outcome of incident- Arriving aircraft IGO5991 descending to 4500 feet and cleared for the VOR DME approach RWY 26 appeared to have proceeded outbound from HBL VOR as part of the offset entry procedure. Both the aircraft reported having received TCAS RA when IGO5991 (around 4900 feet) was apparently on its inbound leg in the offset entry procedure and the departing aircraft LLR510 (around 3800 feet) was climbing on runway heading to 6000 feet. Subsequently LLR510 climbed through the level of IGO5991 and there was no procedural separation between these two aircraft.
			Loss of separation between Jet Airways flight JAI606, B737, Guwahati to Delhi and Go Air flight GOW145, A320, Delhi to Ranchi
117.	04.02.2019	Kolkata	Outcome of incident- JAI606 commenced descend from FL280 to FL260 resulting in loss of separation between the aircraft. The vertical separation was reduced to 700 feet when both aircraft were laterally 1.574 NM apart.
			Loss of separation between Qatari flight QTR906, B77W, Hamad to Sydney and Etihad ETD24D, B77W, Abu Dhabi to Sydney
118.	12.02.2019	Mumbai	Outcome of incident- Both flights were on converging track over waypoint 'KADOL' at the same level FL310. The involved OCC (South Sub-sector) controller missed to notice the position reported by the aircraft on CPDLC on two occasions. The separation between QTR906 and ETD24D at the same level reduced to approximately 12 NM instead of standard 15 minutes.
			Loss of separation between Qatari QTR942, A350, Hamad to Singapore and Air India Express AXB536, B738 Sharjah to Trivandrum
119.	23.02.2019	Muscat (Mumbai)	Outcome of incident- QTR942 FL310 EST PARAR -1914 UTC came in contact with CPDLC and checked PARAR at 1907 UTC FL390 instead of FL310; Traffic AXB536, B738 checked PARAR 1903 UTC at FL390. Faster aircraft was released behind by Muscat Control only at 6 min separation.
			Loss of separation between Oman Air OMA225, B738, Muscut to Cochin and Etihad ETH686, B763, Addis Ababa to Delhi
120.	27.02.2019	Mogadishu (Mumbai)	Outcome of incident- For ETH686, SANA control had coordinated FL330, but ETH686 was maintaining FL350. Level change was not coordinated by SANA control. ETH686 had mentioned in his position report that she is maintaining FL350 and the same was updated in the automation system. However the concerned controller could not detect the level change and therefore the conflicting traffic. OMA225 via M300 and ETH686 via P571 crossed their flight-path at LEMAX at same level with one minute separation instead of standard 15 minutes.
,	ů.	÷	Loss of separation between Vistara VTI725, A320, Bagdogra to Guwahati and Go Air GOW151, A320, Delhi to Guwahati
121.	27.02.2019	Kolkata	Outcome of incident- VTI725 was given climb to FL270. GOW151 was given descend to FL280. Breach of separation between VTI725 and GOW151 as GOW151 descended below FL280 on its own.

122.	15.03.2019	Mumbai	Loss of separation between Etihad ETD290, A320, Abu Dhabi to Kathmandu and Air France AFR253, B77W, Tân Sơn Nhất International Airport to Paris Outcome of incident- The controller had lost the situational awareness on the crossing traffic while issuing climb to ETD290. Further, he did not use the automation tools while issuing climb instructions through the conflicting traffic. The closest distance between the aircraft was 5.2 NM horizontal and 600 feet vertical.
123.	28.03.2019	Yangon (Kolkata)	Loss of separation between Go Air GOW102, A320, Port Blair to Kolkata & flight IRM056, A340, Bangkok to Tehran Outcome of incident- IRM056 EST received from Yangon RINDA-0625 FL320 via route L301. At 0638z GOW102 and IRM056 both reported RA at FL360 near point LEBIS. No level change received in respect of IRM056 from Yangon. There was no surveillance coverage and communication with IRM056.
124.	19.04.2019	Chennai	Loss of separation between Indigo IGO6215, A320, Chennai to Shamshabad and Indigo IGO192, A320, Kolkata to Chennai Outcome of incident- IGO6215 mistook the instructions meant for SEJ3265 and commenced climb to FL140. This resulted in breach of separation between IGO6215 and IGO192. Closest distance between the aircraft was 2.6 NM and 600 Feet.
125.	29.05.2019	Northern Control (Delhi)	Loss of separation between Air Asia IAD713, A320, Sri Nagar to Delhi and Indigo IGO955, A320, Delhi to Jammu and Loss of separation between IAD713, A320, Sri Nagar to Delhi and Go Air GOW185, A320, Delhi to Jammu Outcome of incident- IAD713 was in-bound to Delhi via W31E at FL330. Opposite direction traffic IGO955 was operating from Delhi to Jammu on route W31W at FL320. When IAD713 was approximately 40 NM north of ASARI, it received an RA due to abrupt change in level of IGO955 from FL320 to FL323. The standard vertical separation between IAD713 and IGO955 got infringed due to the unauthorized climb by IGO955. IAD713 responded to RA and executed a climb maneuver. There was another aircraft in close vicinity of IAD713, in the opposite direction, GOW185 at FL340 from Delhi to Jammu via route W31W. The RA climb of IAD713 also resulted in a loss of standard separation with respect to opposite direction traffic GOW185. The incident occurred under the jurisdiction of Northern Control (Defense).
126.	08.06.2019	Mumbai	Loss of separation between Indigo IGO245, A320, Indore to Goa and Emirates UAE433, B77W, Singapore to Dubai Outcome of incident- IGO245 and UAE433 both operating at FL360 on crossing tracks (W10S-BBB-W15 & AGELA-N571-PARAR respectively) came in conflict in surveillance environment resulting in loss of separation. The Lateral separation reduced to 3.7 NM at the same level
127.	09.07.2019	Chennai	Loss of separation between Indigo IGO6309, A320, Goa to Shamshbad and Air Asia IAD1519, A320, Shamshbad to Bengaluru Outcome of incident- Arrival IGO6309 VOGO-VOHS descending to FL110 and departure IAD1519 VOHS- VOBL climbing to FL120, separation reduced to less than standard separation. The separation reduced to 2.9 NM while the required standard separation was 3.0 NM.
128.	17.07.2019	Kolkata	Loss of separation between Crony CKS247, B744, Delhi to Hong Kong and Air India AIC2691, A320, Delhi to Guwahati and LoS between Crony CKS247, B744, Delhi to Hong Kong and Thai THA315, B77W, Bangkok to Delhi Outcome of incident- CKS247 started climb from FL330 to FL370 without authorization. Breach of separation occurred between CKS247 and AIC2691 and also between CKS247 and THA315.

29.	26.07.2019	Dhaka (Kolkata)	Loss of separation between flight CCA941, A333, Beijing to Dubai and flight BOX514, B77L, Dubai to Hong Kong and Loss of separation between Etihad ETD811, B789, Chengdu to Abu Dhabi and BOX514, B77L, Dubai to Hong Kong Outcome of incident- CCA941 was observed by Kolkata ATC to be climbing under Dhaka. This triggered conflict climb of BOX514 (from FL370 which in turn induced conflict climb of ETD811 (Etihad 811) from FL380. Later the Air China flight CCA941 reported, on 132.5 with UKW (west radar), to have been authorized climb by Dhaka from FL360. Incidentally all three aircraft were under VHF control of Dhaka.
30.	26.07.2019	Ambala (Delhi) (Defense)	Loss of separation between Air India AlC174, B777, San Francisco to Delhi & Unknown IAF Aircraft Outcome of incident- Local flying was in progress in Air-force Local Flying Area VIR154/ VIR145, which is adjacent to Delhi TMA. AlC174 was descending from FL390 to FL270 via route A466 within the Delhi TMA. An unknown traffic squawking 4400 which was part of the air exercise inside the LFA, unexpectedly, turned right and entered Delhi TMA at FL264 and came in conflict with AlC174. Conflict warning was generated by the automation system and the RSR controller took immediate avoidance action. Prior coordination was not effected by airforce ATC regarding the intruder aircraft and the intruder aircraft never contacted Delhi ACC. The RSR controller gave traffic information to AlC174 regarding the intruder traffic. The intruder aircraft continued its climb, turned back towards the IAF local flying area, and joined the participating formation again. Meanwhile the standard separation got infringed and the lateral separation was reduced to 7.1 NM.
131.	02.08.2019	Mumbai	Loss of separation between Spice Jet SEJ734, B738, Shirdi to Chennai and Spice Jet SEJ2767, DH8D, Shamshabad to Surat Outcome of incident- There was a revision of approx. 20 minutes in its estimates (came early) which was not coordinated by Shamsabad ATC with Mumbai due to which position of the synthetic track displayed on SDD was not correct. Within seconds of SEJ2767 appearing on SDD, PCA, CCA, RA and breach in standard separation occurred w.r.t. SEJ734. The standard vertical separation was reduced to 800 feet when both the aircraft were 0 NM apart.
132.	10.08.2019	Kolkata	Loss of separation between Spice Jet SEJ341, B738, Jaipur to Guwahati and Indigo IGO457, A320, Guwahati to Agartala Outcome of incident- SEJ341 initiated go around at 1NM to touchdown Runway 02 due non-receipt of landing clearance from tower while IGO457 was departing from Runway 02 also taking off leading to breach in separation between the aircraft.
133	. 04.09.2019	Mumbai	Loss of separation between Spice Jet SEJ8191, B737, Pune to Delhi and Qatari QTR891 B77W, Zurich to Hamad Outcome of incident- Breach of separation incident occurred between SEJ8191 climbing to FL370 on ATS route Q1 & QTR891 maintaining fl360 on ATS route I301. Both the aircrafts were deviated right of track. The position of the incident was 110 nm north of BBB. Minimum lateral separation was approximately 5 nm when breach of separation occurred.
134	4. 05.09.2019	Mumbai	Loss of separation between Air India AlC5294, B77W, Medina to Nagpur and Emirate UAE313, B77W, Haneda to Dubai Outcome of incident- AlC5294 was maintaining FL370 while UAE313 was given climb from FL360 to FL380. Minimum separation: vertical:-400 feet horizontal: 5 nm

	23.09.2019	Bagdogra (Kolkata)	Loss of separation between Indigo IGO6054, A320, Bagdogra to Ahmedabad and Go Air GOW153, A320, Delhi to Bagdogra Outcome of incident-
135.			IGO6054 came in first contact with Kolkata ATC. Aircraft reported to have received RA at FL228. The conflicting reciprocal traffic was GOW153. GOW153 was observed to have descended through the level of IGO6054. Both the aircraft were on route Q18 and in the area jurisdiction of Bagdogra ATC and under their control. Earlier, GOW153 was released to Bagdogra when the aircraft had passed FL270.
			Loss of separation between Air India AlC978, A320, Muscat to Shamshabad and Spice Jet SEJ052, B738, Dubai to Pune
136.	27.09.2019	Mumbai	Outcome of incident- Due to heavy weather aic978 deviated right from route I301 and lost separation with sej052 b738 Dubai to Pune on route n571, both at FL350. Later SEJ052 was descended to f330 through relay. There was no direct communication with both aircraft and had to do relay transmission through other aircraft.
	12.10.2019	IAF (Silchar)	Loss of separation between Spice Jet SEJ3214, DHC8, Silchar to Kolkata and Indigo IGO164, A320, Kolkata to Silchar
137.			Outcome of incident-Indigo Flight IGO164, A320, Kolkata To Silchar was given descend to FL 210 and maintaining FL 210. Spicejet Flight SEJ3214, Q400, Silchar to Kolkata was given climb to FL 200. IGO 164 descended below FL 210 in coordination with Silchar though Guwahati has not released IGO164 to Silchar.
	15.10.2019	Mumbai	Loss of separation between Fly Dubai FDB445, B737, Dubai to Mumbai and Qatari QTR557, B77W, Mumbai to Hamad
138.			Outcome of incident- FDB445, initiated missed approach procedure RWY27 due delayed roll by departure QTR557 leading to breach in separation between the aircraft.
	18.10.2019	Chennai	Loss of separation between Indigo IGO6616, A320, Port Blair to Kolkata and Go Air GOW101, A320, Kolkata to Port Blair
139.			Outcome of incident- GOW101 WAS MAINTAINING FL330. IGO6616 WAS INITIALLY GIVEN CLIMB TO FL320. LATER AT 0522 UTC, IGO6616 WAS GIVEN CLIMB TO FL360 LEADING TO BREACH IN SEPARATION.
4.40	20.10.2019	Mumbai	Loss of separation between Arebia ABY522, A320, Chittagong to Sharjahan and Vistara VTI856, A320, Goa to Delhi
140.			Outcome of incident- ABY522 WAS GIVEN CLIMB from FL360 TO FL380. TRAFFIC VTI856 A320 VOGO-VIDP WAS MAINTAINING FL370.
	01.11.2019	019 Mumbai	Loss of separation between Emirates UAE399, B777, Ngurah to Dubai and Oman Air OMA371, B738, Muscut to Columbo
141.			Outcome of incident- UAE399 MAINTAINING FL360 ON APPROVED DEVIATION 50NM LEFT OF TRACK ON ROUTE N571 REPORTED GETTING TCAS RA WITH RESPECT TO OMA371 ON ROUTE N571 WHICH HAD DEVIATED 40NM RIGHT OF TRACK AND WAS MAINTING FL353.

FOLLOWING SAFETY MEASURES ARE TAKEN BY DGCA:

- ATCO's and Pilot proficiency checks are being carried out regularly.
- ATC services are being modernized to include conflict warning in the system to assist ATCO's.
- Coordination procedures of handing over from one unit to another have been laid out. Coordination of handing over traffic to adjoining FIR has been worked out & any deviation is being pointed out to the concerned units for taking corrective action.
- Whenever required, corrective training is being given to Pilots and Air Traffic Controller, and training procedures amended.
- Controllers are given training on ATC simulator at major stations and sensitized on the subject.
- Implementation of Safety Management System at airports to mitigate the risk of accident/ incident.
- Implementation of flexible use of airspace which will reduce traffic congestion in the airspace.
- Airlines have been directed to avoid use of similar / confusing call signs.
- One separate Directorate of Air Space and Air traffic Management in DGCA has been created in DGCA for better surveillance and regulatory functions in Air traffic Management (ATM).
- Case studies of Airprox /ATC incidents are discussed and analysed to avoid recurrence of such incidents.
- AAI had issued an Air traffic management circular on confusing call-signs, which is now incorporated in the ATS Manual Part-1.