

Table 1 summarizes the results of the horizontal risk estimate for flight operations on Air Traffic Service routes N892, L625, N884 and M767 within the South China Sea region as of December 2016.

Type of Risk	Risk Estimation	TLS	Remarks
Lateral Risk	1.99×10^{-9}	5×10^{-9}	Below TLS
Longitudinal Risk	0.38×10^{-9}	5×10^{-9}	Below TLS

Table 1: Lateral and Longitudinal Risk Estimation

Figure 1 presents the lateral and longitudinal collision risk estimates for flight operations on Air Traffic Service routes N892, L625, N884 and M767 within the South China Sea region during the period January 2016 to December 2016.

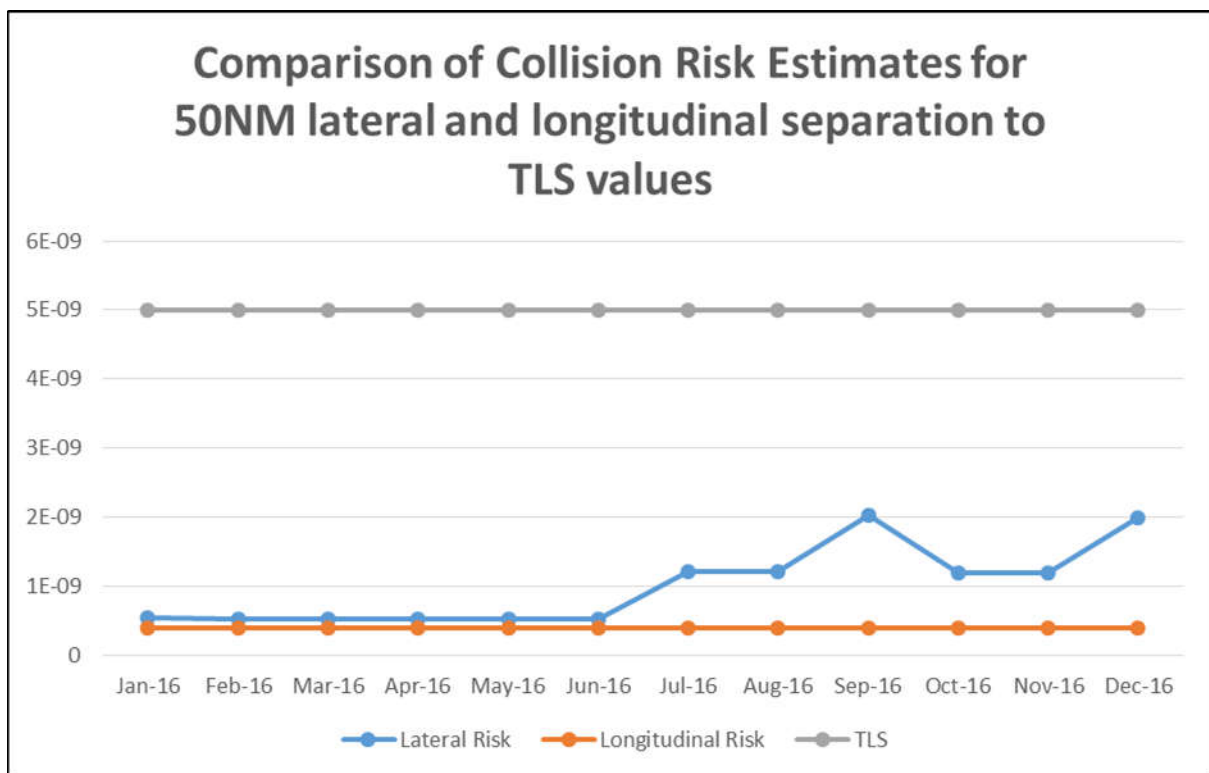


Figure 1 - South China Sea Region Horizontal Risk Estimates

The estimates of lateral and longitudinal risk show compliance with the corresponding respective target level of safety (TLS) values during all the months of the monitored period.

Figure 2 provides the geographical location of risk bearing LLDs and LLEs within the South China Sea Region.

Geographical location of LLDs and LLEs



Figure 2: Geographical location of LLDs (Blue) and LLEs (Red)

The majority of the LLDs and LLEs were from CAT E - ATC coordination errors. There is also a growing trend of CAT B - Incorrect operation by flight crew or interpretation of airborne equipment. This is due to pilot providing inaccurate waypoint estimates. Such errors are usually caused by the frequent occurrence of weather phenomena in the South China Sea airspace that require aircraft to deviate from course thereby leading to inaccurate waypoint estimates. Lastly there are a group of LLDs and LLEs in CAT I – Others, that are shown to be within limits of ATC and pilot procedures but fall into the criteria of airspace deviation error. Such errors are still reported but are considered non-risk bearing for the risk assessment.