

ABSTRACT**Mode S anti-reflection algorithm for eliminating false tracks due to reflected replies in ground radar systems**

A Mode S anti-reflection method for eliminating false tracks due to reflected replies in ground radar systems, wherein the information contribution of the replies (at the level of raw video) is analysed with the aim of calculating the position of the reflectors. The possible presence of ADS-B reports can be used, otherwise it will be effectuated a geometrical analysis of the distribution of the replies and will be compared with the plot(s) extracted by the radar sensor. The possibility of correlating along time the moving of the plots, their place of origin and average duration of the tracks generated by them will allow to understand whether the plot is relevant to a reflection or not. In the case of "reflection", a reflectors map is updated automatically in order to avoid the enabling of the initialization of the track in that area.

Fig. 10