



















significant extra factor in acceleration of the rare event MC simulations. A third direction of research is to evaluate operational concepts that are mixtures of ground-based and airborne self separation TBO.

### VIII. DISCLAIMER

Opinions expressed in this work reflect the authors' view only and EUROCONTROL and/or the SJU shall not be considered liable for them or for any use that may be made of the information contained herein.

### IX. REFERENCES

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### ABBREVIATIONS

4D = Four dimensional  
A3 = Advanced airborne self-separation  
A3G = Ground-based version of A3  
a/c = aircraft  
ADS-B = Airborne Derived Surveillance – Broadcast  
ANP = Actual Navigation Performance  
ASAS = Airborne Separation Assistance System  
ATC = Air Traffic Control  
ATCo = Air Traffic Controller  
ATCo-P = ATCo-Planning  
ATCo-T = ATCo-Tactical  
ATM = Air Traffic Management  
ConOps = Concept of Operations  
FMS = Flight Management System  
ft = foot  
GNC = Guidance Navigation and Control  
GNSS = Global Navigation Satellite System  
iA3G = improved version of A3G  
IRS = Inertial Reference System  
LPN = Local Petri Net  
MC = Monte Carlo  
MTCR = Medium Term Conflict (detection and) Resolution  
MTCR-IIS = MTCR Internal Iteration System  
Nm = Nautical mile  
OSED = Operational Services and Environmental Description  
PBC = Periodic Boundary Condition  
PF = Pilot Flying  
RBT = Reference Business Trajectory  
SDCPN = Stochastically and Dynamically Coloured Petri Net  
SSR = Secondary Surveillance Radar  
STCR = Short Term Conflict (detection and) Resolution  
STCR-IIS = STCR Internal Iteration System  
SWIM = System Wide Information Management  
TBO = Trajectory Based Operations  
TCP = Trajectory Change Point  
VO = Velocity Obstacle