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# Airports and Airlines' Measures on Preventing Runway Incursion and Runway Excursion

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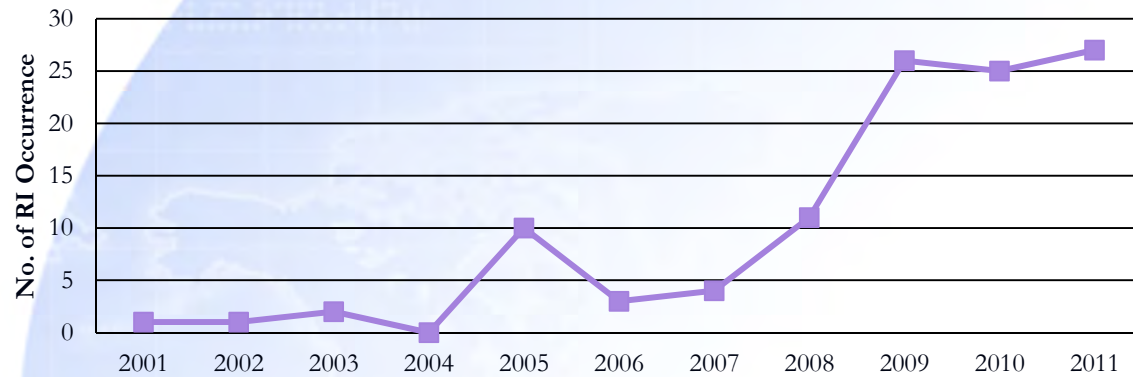


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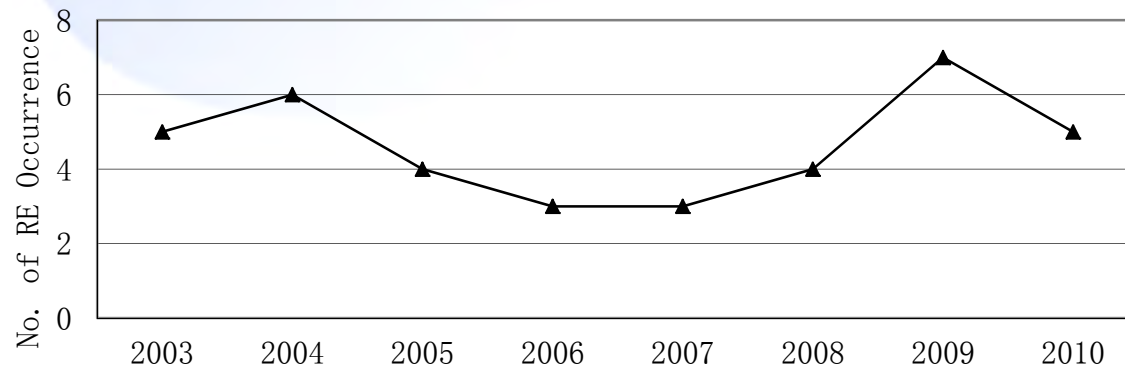
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# 1. Background

## RI Occurrence



## RE Occurrence



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## 2. Deployment by CAAC

CAAC issued *China Civil Aviation Runway Safety Plan* in 2008.

- Administration and responsibility;
- Requirements of operation;
- Risk management;
- Supervision and inspection;
- Human factors;
- Information management;
- Education and training.



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## 2. Deployment by CAAC

CAAC revised *Civil Airport Aircraft Movement Area Technology Standard* in 2009.

- Signal facilities and marking;
- Taxiway signs;
- Visual aids on restriction area.

CAAC developed an *Administration Program for Preventing RI By Airport's Vehicles and Persons* in 2011.

- Runway Safety Team;
- Requirements on operation of vehicles and persons .



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# 3. Training in Airline

## RI

- Runway-holding position marking
- Use Taxi route map
- Non-suspend air construction notice

## RE

- Stabilized approach
- Go around firstly
- Call out actively
- Brake use regularly
- Relation between RE and others
- Psychology

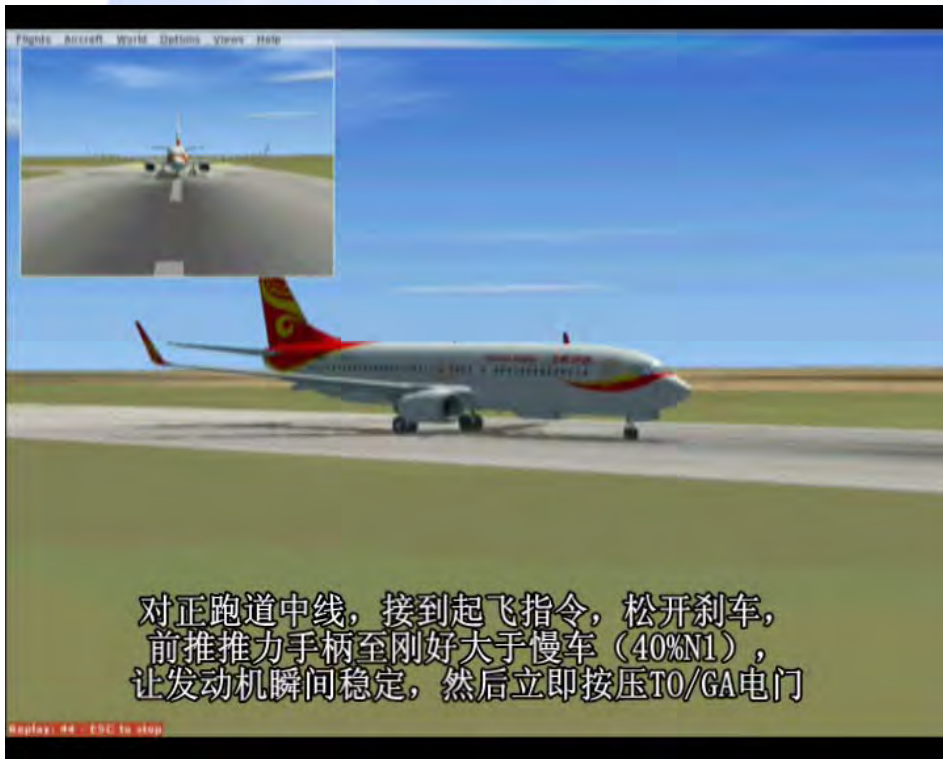


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# 3. Training in Airlines

## Standard Control in Take-off and Landing



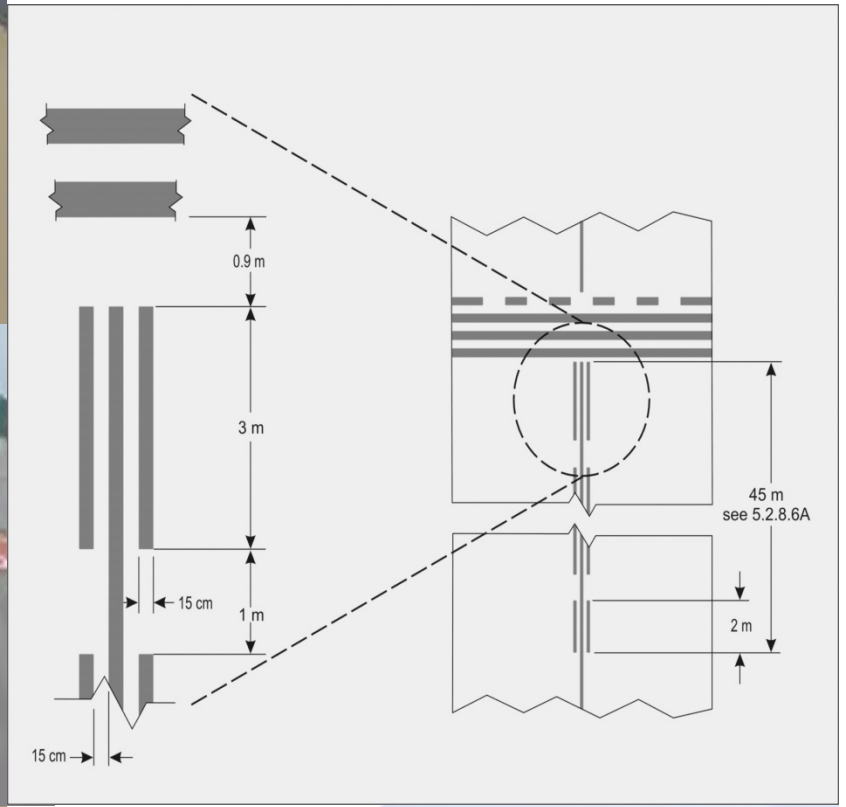
All pilots have accepted the training



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# 3. Training in Airline





## 4. Measures for Airports

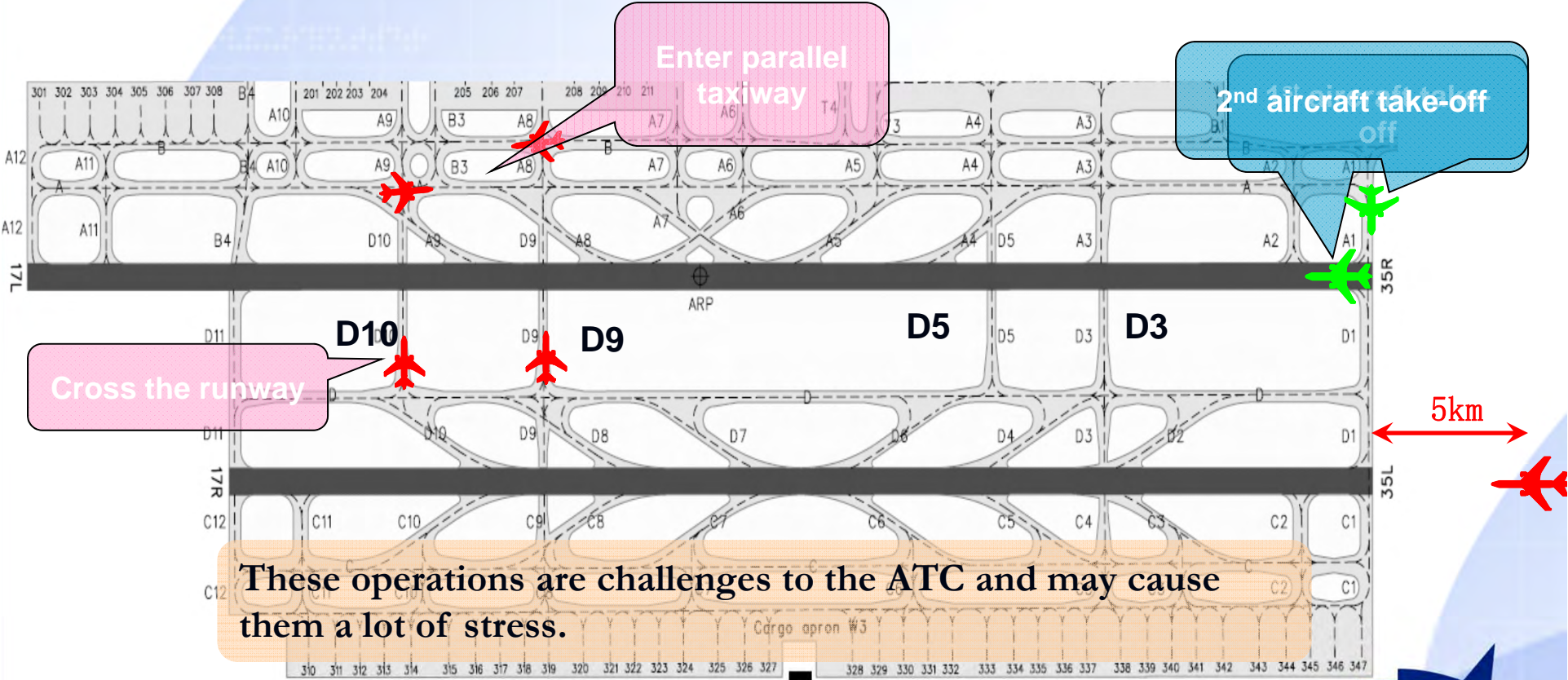
- **Design, Layout and Operation**
- **Visual aids**
- **EMAS**



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# Design, Layout and operation



# Visual Aids

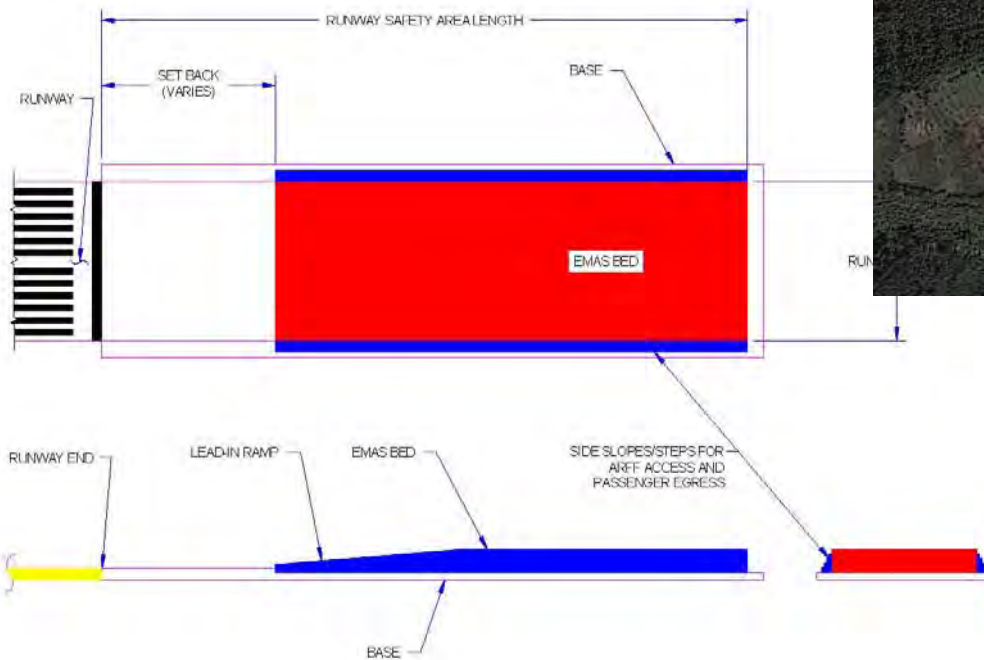
**NO ENTRY**



# Rwy Guard Light



# EMAS R&D



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# EMAS R&D

- 6 demonstration tests in 2011
- 20 to 60 kt



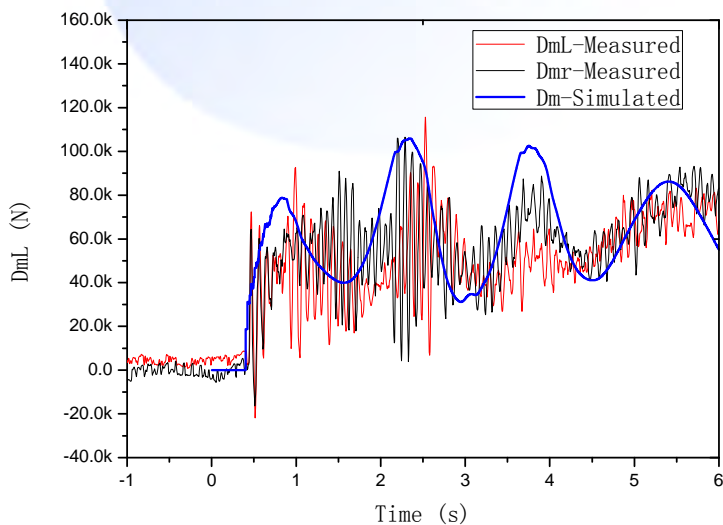
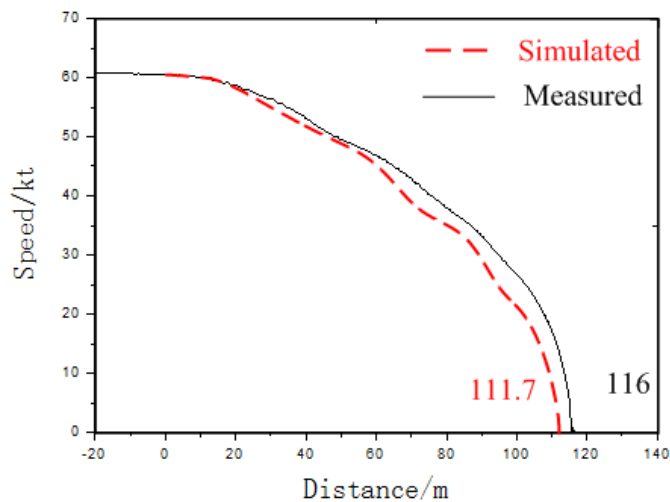
- materials
- model
- safety



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# EMAS R&D



- Material productivity (quality assurance system)
- Ability to design the system (accuracy)
- Design methodology
- Specific design scheme (rationality and feasibility)



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# 5. Future Development

- **From plan to reality**
- **From training to use**
- **From technology to standard**



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# Thank you!



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