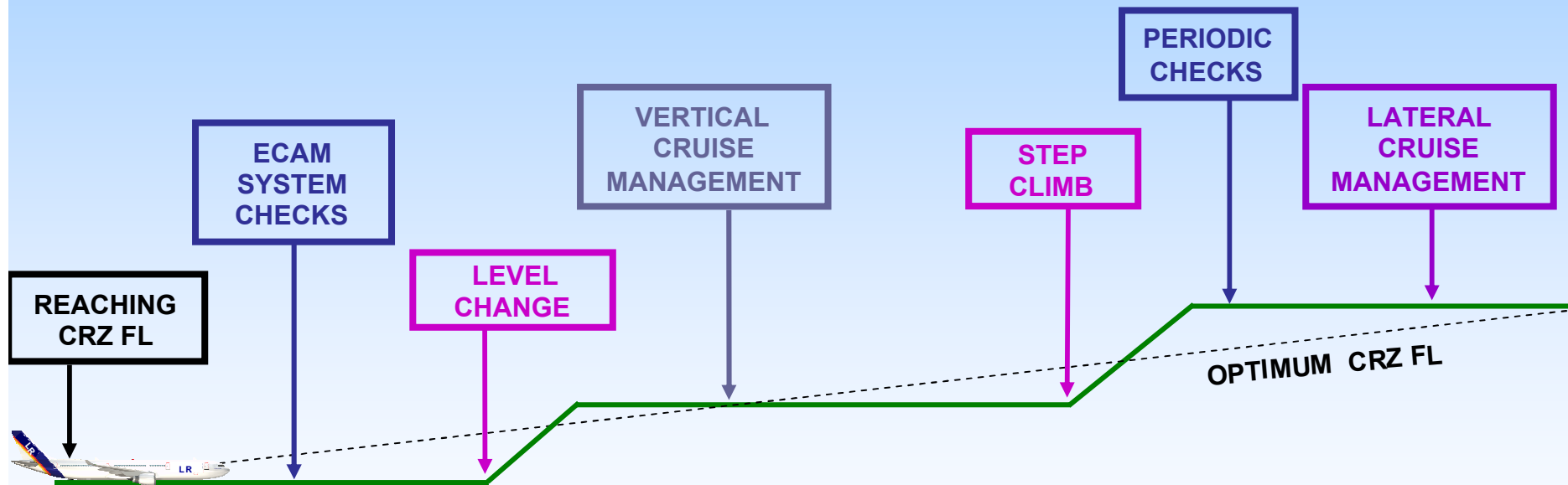


# CRUISE



Automatic control of CG in CRZ ...



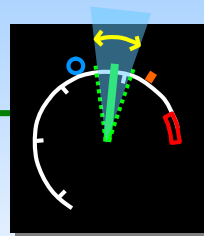
PF

PNF

## 1. CRUISE INITIATION

*When reaching initial CRZ FL*

**CHECK ALT CRZ on FMA**



**SOFT THRUST MODE**



*Minimised thrust variations in turbulence  
corresponding to +/- 3kt range of the target speed*

PF

PNF

## 2. PERIODIC CHECKS: SYSTEM MONITORING

*Periodically:*

ECAM MEMO .....REVIEW

ECAM SYS PAGES.....REVIEW

CABIN TEMP .....MONITOR



RADAR TILT.....ADJUST

TCAS traffic sel.....ALL or BLW



### **IN CRUISE TASK SHARING**

***In cruise, the task sharing is let to crew appreciation.***

***Data entered in the MCDU should be crosschecked.***

PF

PNF

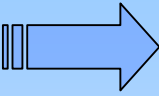
### 3. LEVEL CHANGE

New ATC clearance : FL280

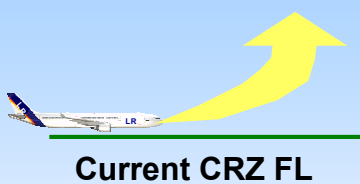
FCU ALT .....SET & MANAGE

FMA

FCU FL selected above



New FCU FL has to be under REC MAX alt



FCU FL selected below



PF

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#### 4. VERTICAL CRUISE MANAGEMENT

INSERT WIND AND TEMP AT VARIOUS  
CRZ WPTs IN MCDU WIND PAGES



CHECK APPROPRIATE STEP, AND REQUEST ATC  
CLEARANCE

*When FL Clearance obtained:*

STEP CLIMB.....ENTER AS APPROPRIATE

For FL strategy, refer to FMS computation via the **STEP ALT** pages using...

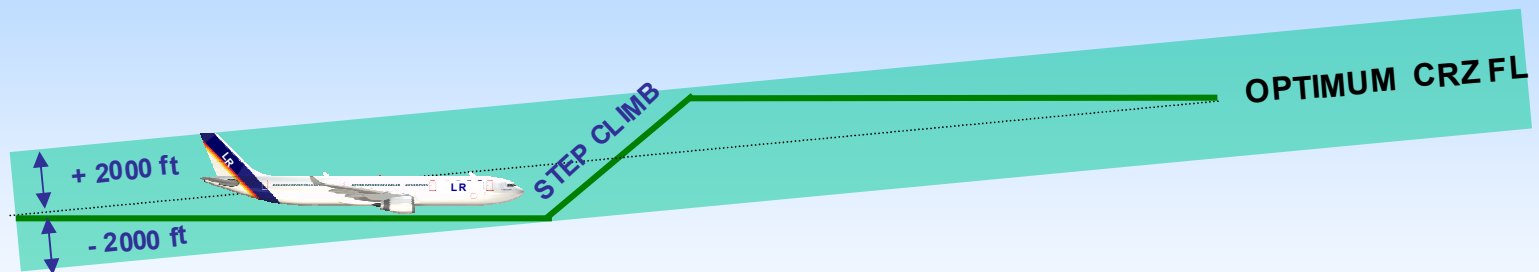


Key (Vertical Revision) ,

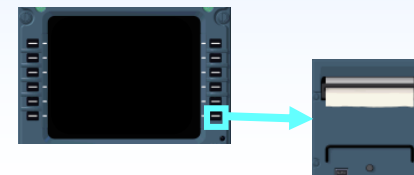
Or



Key (PERF CRZ page)



The updated F-PLN can be printed via the  
print function pages using the DATA key



**PF**

**PNF**

**5. STEP CLIMB**

*When reaching STEP point:*

**SELECT.....NEW CRZ FL**

**ALT.....SET AND MANAGE**

**FMA**





PF

PNF

### 7. LATERAL CRUISE MANAGEMENT (OFFSET)

*In case of ATC request, or when adverse weather conditions are expected ahead:*

LATERAL REV at P POS ..... SELECT

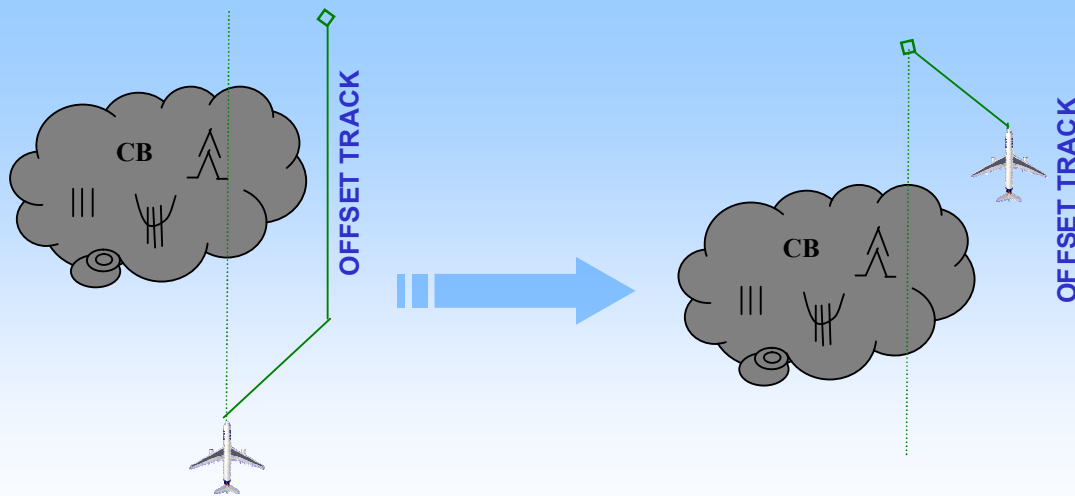
RQRD OFFSET VALUE/DIRECTION ..... WRITE

OFFSET ..... INSERT



*When cleared to resume own navigation:*

CANCEL THE OFFSET



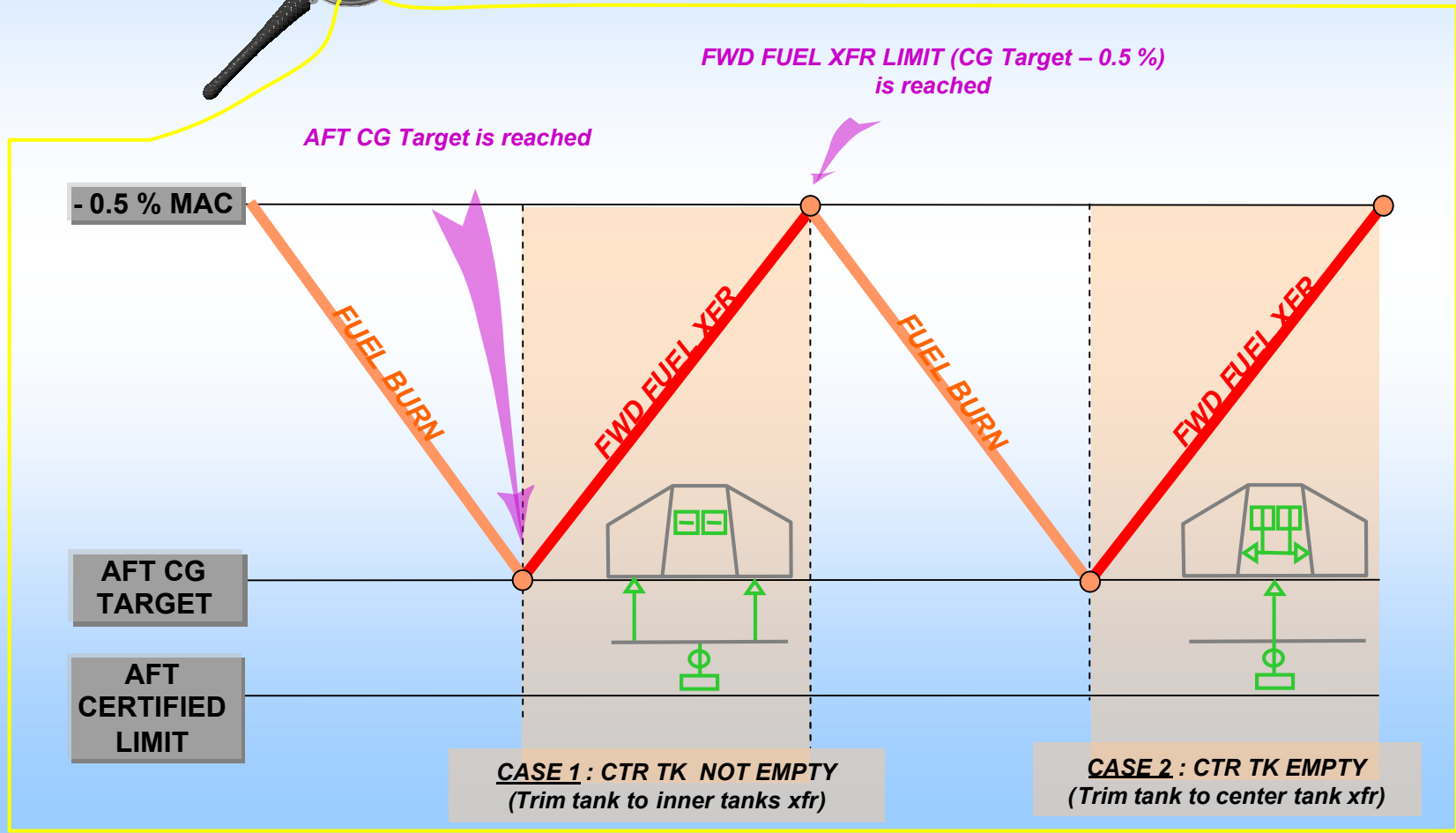
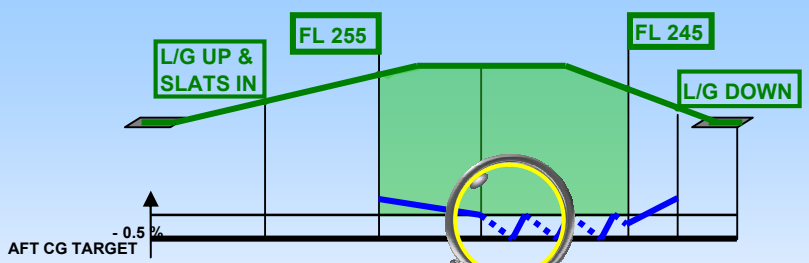
**TWO** methods for offset cancellation  
According to ATC clearance

**SELECT DIR TO  
a waypoint  
(e.g. next WPT)**

**SELECT a  
Lateral Revision  
at P POS  
(clear the offset)**



# AUTOMATIC CONTROL OF CG IN CRZ



## SYSTEM DISPLAY REVIEW



Oil pressure and temperature



BLEED parameters



Parameters, GEN loads



Fluid quantity.

Green system is higher than on ground, following landing gear retraction



Fuel distribution, trim tank quantity and CG



Duct temperature, compared with zone temperature  
Avoid large differences for passenger comfort



Note any unusual control surface position

# TRAFFIC AND MODE SELECTORS



## TRAFFIC SELECTOR (Used for detection)

## MODE SELECTOR (Used for resolution)

CLIMB

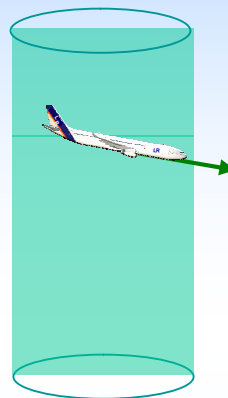
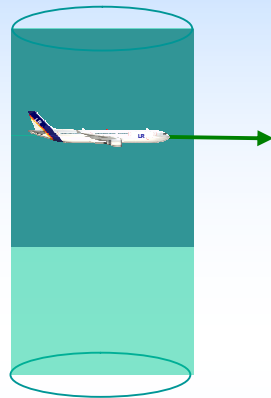
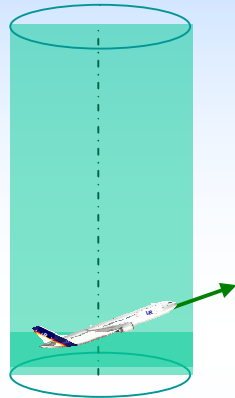
CRUISE

DESCENT

ABV

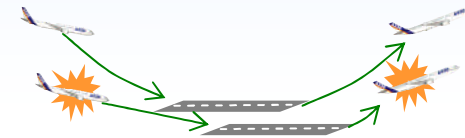
BLW Or ALL

BLW



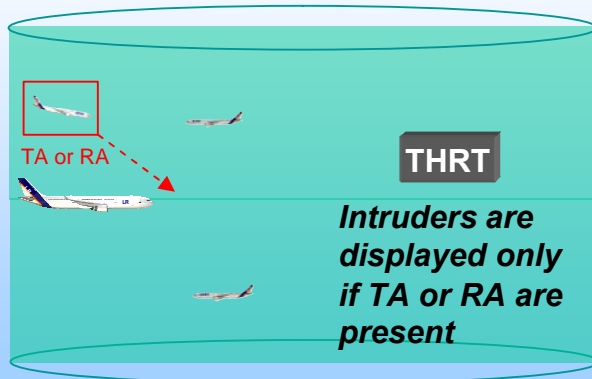
Use **TA** only

➤ Landings & Take off  
on specific airports (spaced  
parallel runways)



➤ Abnormal situations  
(engine failure, L/G  
extended)

DENSE TRAFFIC



Range values :



# TRAFFIC AND MODE SELECTORS



## TRAFFIC SELECTOR (Used for detection)

## MODE SELECTOR (Used for resolution)

CLIMB

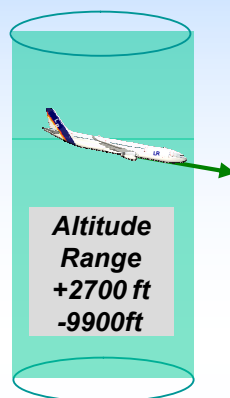
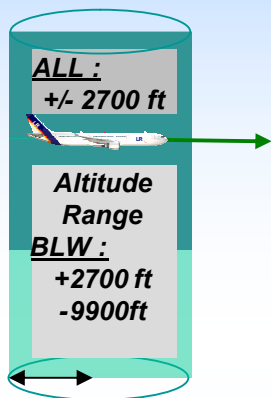
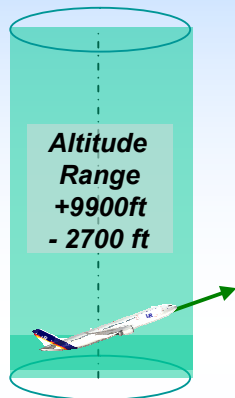
CRUISE

DESCENT

ABV

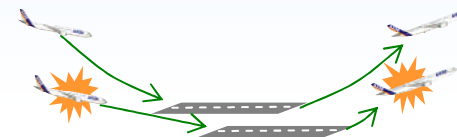
BLW Or ALL

BLW



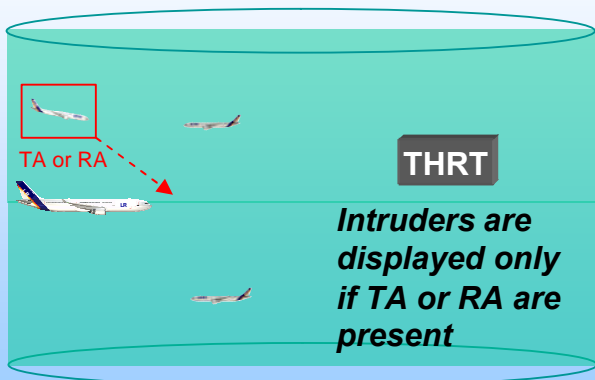
Use **TA** only

➤ Landings & Take off on specific airports (spaced parallel runways)



➤ Abnormal situations (engine failure, L/G extended)

DENSE TRAFFIC

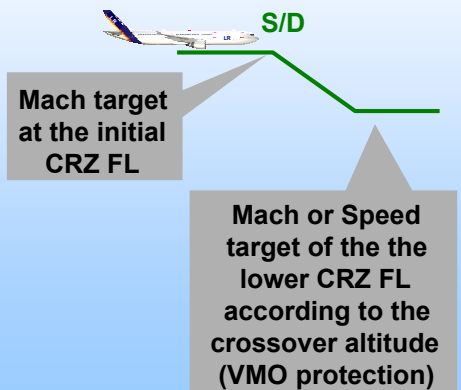
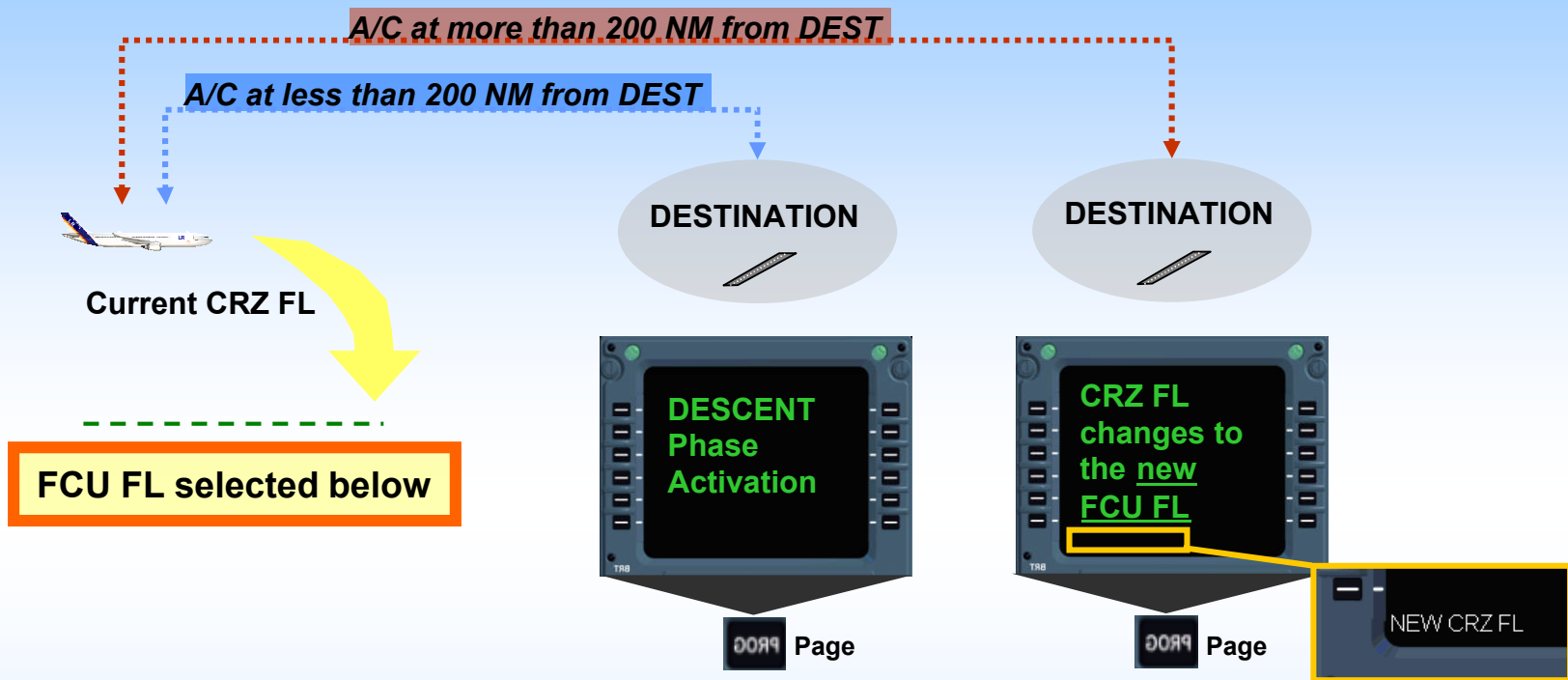


Range values :



Altitude Range +/- 2700 ft

# FCU ALT SELECTION CONSEQUENCES



# WINDS



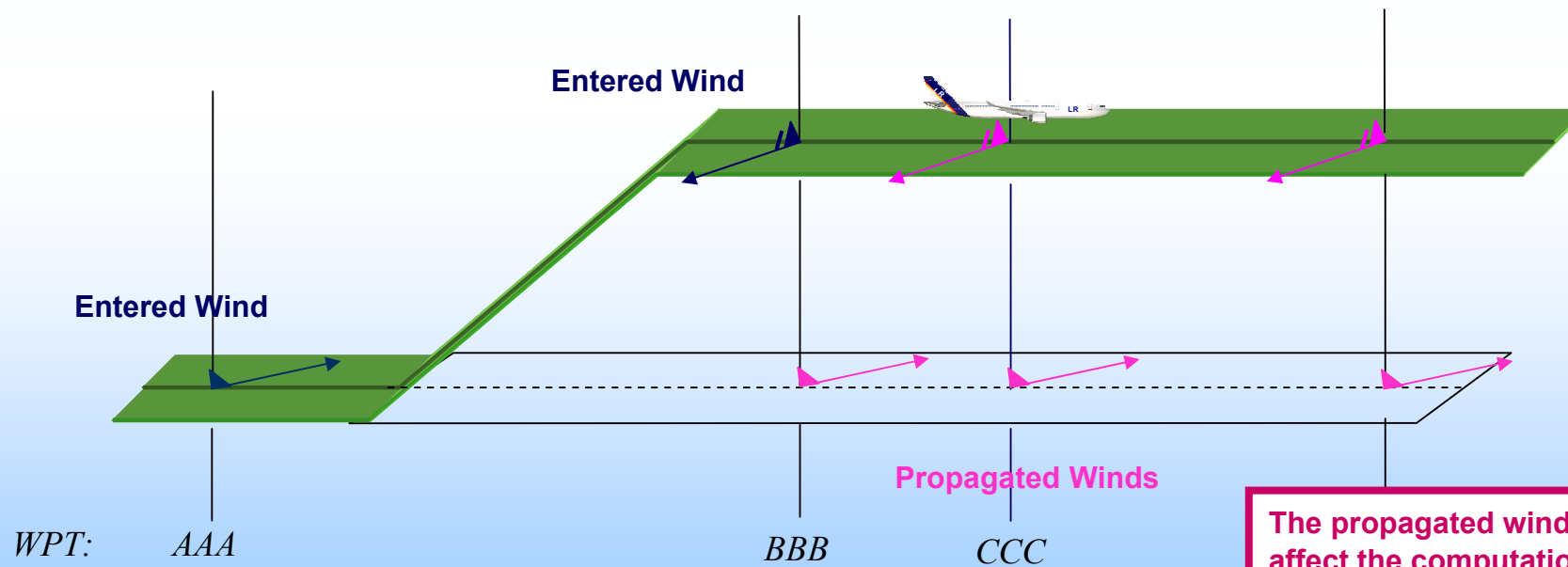
## UPDATE WIND AND TEMP VALUES WHEN :

$\Delta$  WIND SPEED > 30 kt

$\Delta$  WIND ORIENTATION > 30°

$\Delta$  TEMPERATURE > 5°

## WIND PROPAGATION :

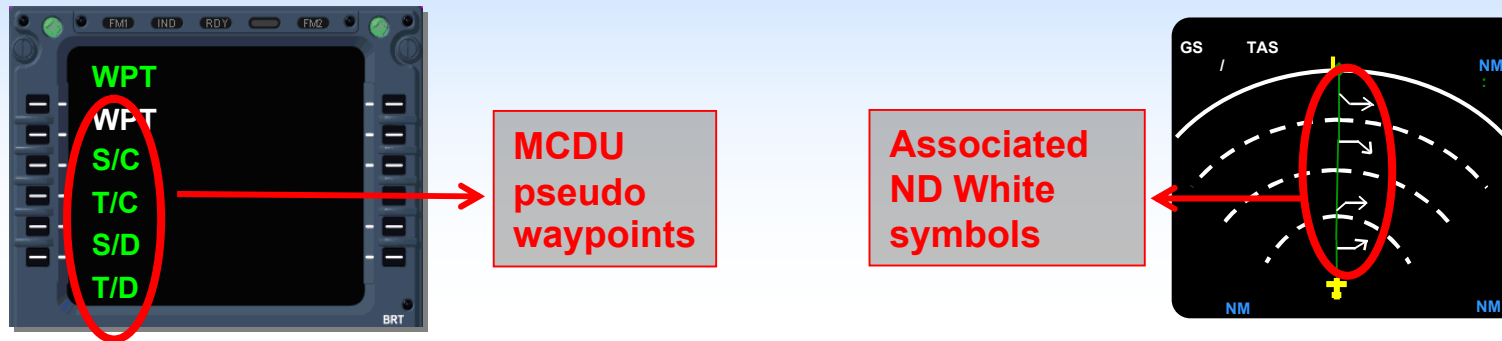


The propagated winds may affect the computation of the OPT FL if the winds for the lower levels, are not updated down to the end of the cruise.

## STEPS



- Up to 4 GEOGRAPHICAL STEPs may be inserted along the F-PLN using the **STEP ALTS** page



## OPTIMUM STEP

- The FM proposes **OPTIMUM STEP** start of climb for the first STEP CLB
- Inserted by the Pilot, **OPTIMUM STEP** becomes a **GEOGRAPHICAL STEP**

# NAV ACCURACY CHECK

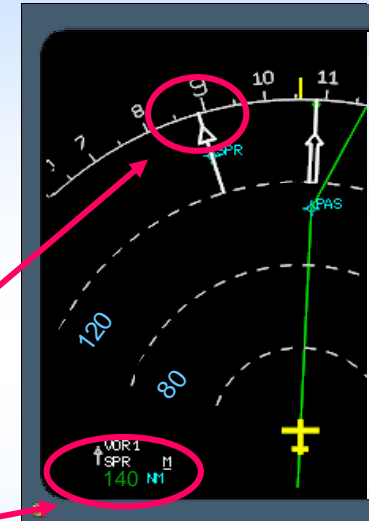


**PRINCIPLE OF THE CHECK:** Compare **FMS computed data** and **raw data**

## METHOD

- Tune manually VOR (VOR DME or ADF) on the RAD NAV page.
- Select associated Needles on the ND
- Enter the VOR ident on the BRG/DIST TO field of the PROG page

```
BRG / DIST  
89° / 140 TO SPR
```



Compare bearings

Compare distances

## RESULT

If {  
    **POS ERROR ≤ 3 NM, FM position is reliable**  
    **POS ERROR > 3 NM, FM position is not reliable**



PF

PNF

## 7. LATERAL CRUISE MANAGEMENT (OFFSET)

*In case of ATC request, or when adverse weather conditions are expected ahead:*

LATERAL REV at P POS ..... SELECT

RQRD OFFSET VALUE/DIRECTION ..... WRITE

OFFSET ..... INSERT



**BEWARE of entering an OFFSET when the A/C is too close to the TO WPT**



**FMGS may refuse to accept it (“ **ENTRY OUT OF RANGE** ” message)**