CRUISE

REACHING CRZ FL

ECAM SYSTEM CHECKS

LEVEL CHANGE

VERTICAL CRUISE MANAGEMENT

STEP CLIMB

PERIODIC CHECKS

LATERAL CRUISE MANAGEMENT

OPTIMUM CRZ FL

1. CRUISE INITIATION

When reaching initial CRZ FL

CHECK ALT CRZ on FMA

+/- 50 ft

SOFT ALTITUDE MODE
(Minimised thrust variations & Fuel economy)
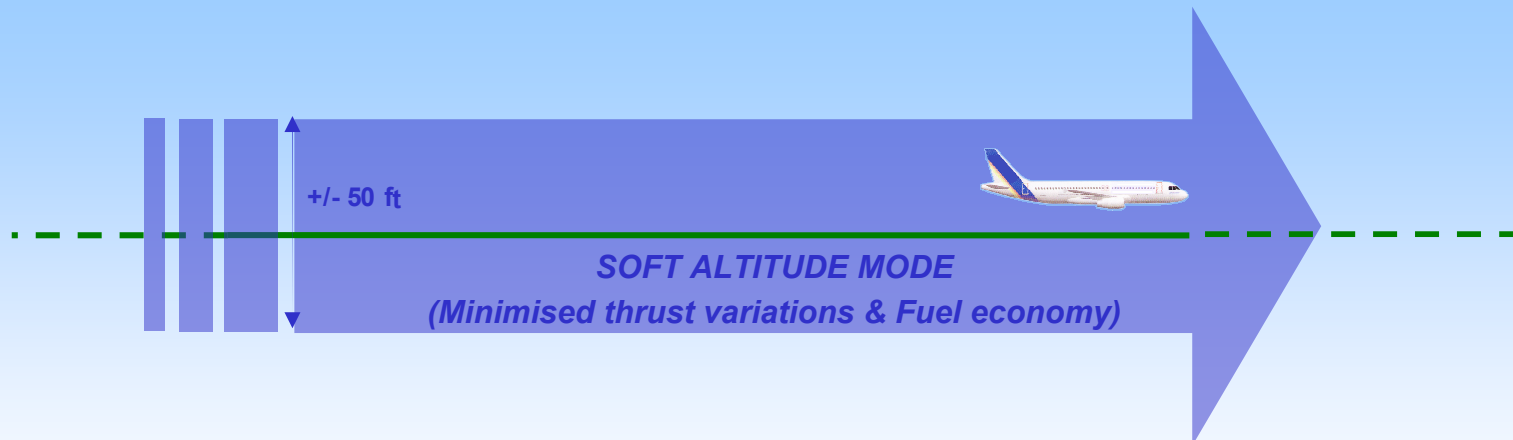
2. PERIODIC CHECKS: SYSTEM MONITORING

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.
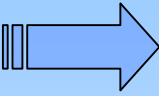
Data entered in the MCDU should be crosschecked.

PF	PNF

3. LEVEL CHANGE

New ATC clearance : FL280

FCU ALT ……………………..…SET & MANAGE

FMA

FCU FL selected above

⇨

CRZ FL changes to the new FCU FL

New FCU FL has to be under REC MAX alt

PROG Page

Current CRZ FL

FCU FL selected below

Current CRZ FL
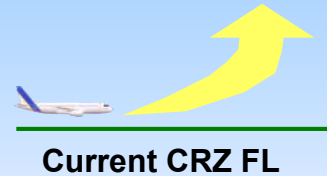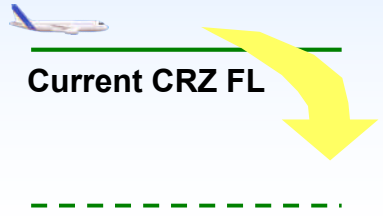
4. VERTICAL CRUISE MANAGEMENT

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 APROPRIATE

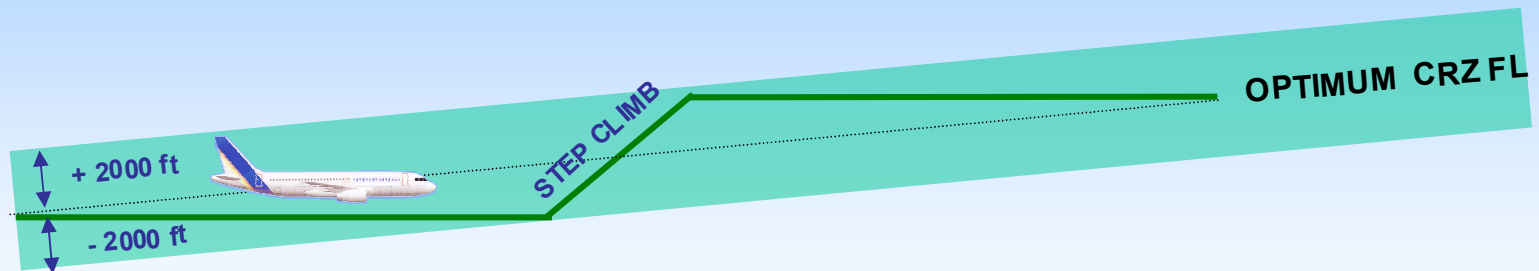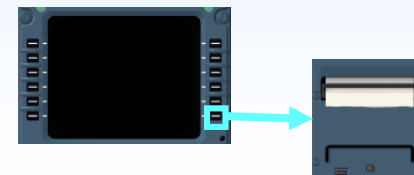**For FL strategy, refer to FMS computation via the STEP ALTS pages using..** F-PLN **Key (Vertical Revision) ,** *Or* PERF **Key (PERF CRZ page)**

+ 2000 ft

- 2000 ft

STEP CLIMB

OPTIMUM CRZ FL

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

6. PERIODIC CHECKS

When overflying a waypoint:

TRACK AND DISTANCE………………CHECK

When overflying a waypoint or every 30 minutes:

CHECK FOB (E/WD) AND PREDICTIONS (FMGS)

CHECK FOB + FU

If GPS primary not available:

NAV ACCURACY ....……………..CHECK ⓘ

F-PLN PAGE

E/WD ◯ FOB

FU
FOB

FOB at departure

COMPARE values

E/WD ◯ FOB

DEST   **EFOB**

FU1 FU2

CRUISE page

If **FOB** + **FU** **<** **FOB at departure**

or, if the sum decreases :

Suspect a fuel leak

WPT FLT WIND TAS TT MT DST NAM E.T. B.TA ECBO EFOB. E.WT.
ANV MSA OAT S GS   RDST EMAM C.T. A.TA ACBO AFOB. .....

CHATA 330   242.6
J120 070 M53 1 469   1469 3943 0050 ...

FYU 330 07   0 061.1 241.1
J120 079 M54   5

ADREW 330 040/004 473 033 003 183 184 0023 .... 012.8 058.2 238.2
J160 140 M54 1 469   3910 3681 0112 ....

7. LATERAL CRUISE MANAGEMENT (OFFSET)

In case of ATC request, or when adverse weather conditions are expected ahead:
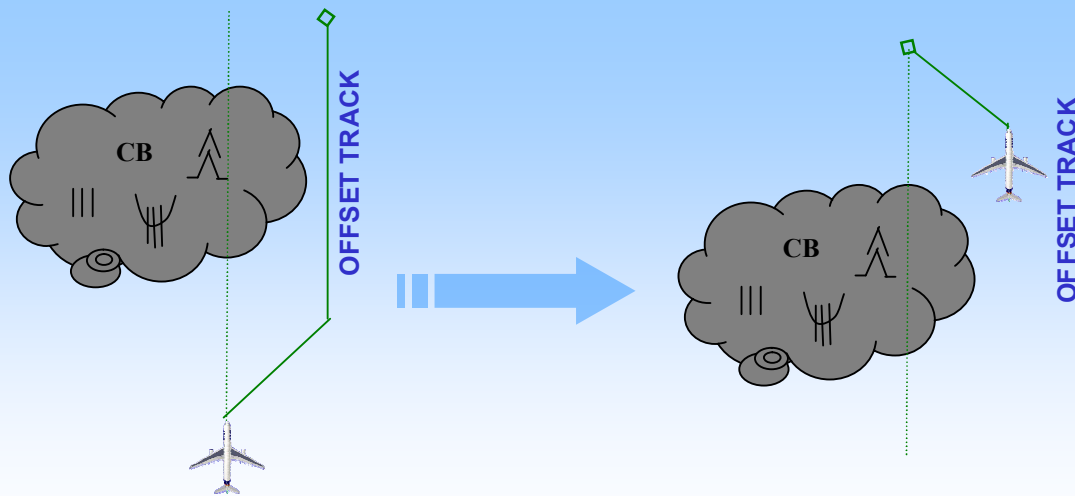
LATERAL REV at P POS …………………... SELECT

RQRD OFFSET VALUE/DIRECTION ……… WRITE

OFFSET……………..………………….…INSERT ℹ

When cleared to resume own navigation:

CANCEL THE OFFSET

CB

OFFSET TRACK

CB

OFFSET TRACK

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)

SYSTEM DISPLAY REVIEW ⓘ

ENG — Oil pressure and temperature

BLEED — BLEED parameters

ELEC — Parameters, GEN loads

HYD — A slight decrease in quantity is normal
Fluid contraction during cold soak can be expected
Green system is lower than on ground,following landing gear retraction

FUEL — Fuel distribution

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

F/CTL — Note any unusual control surface position

TRAFFIC SELECTOR   (Used for detection)
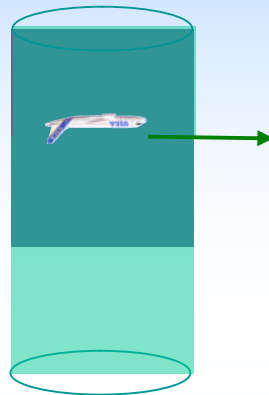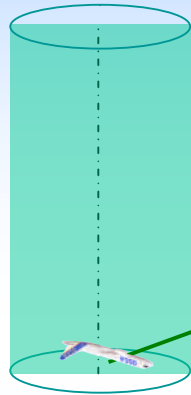
MODE SELECTOR   (Used for resolution)

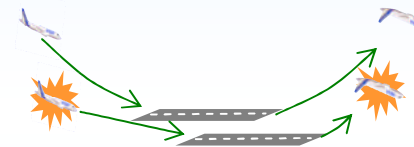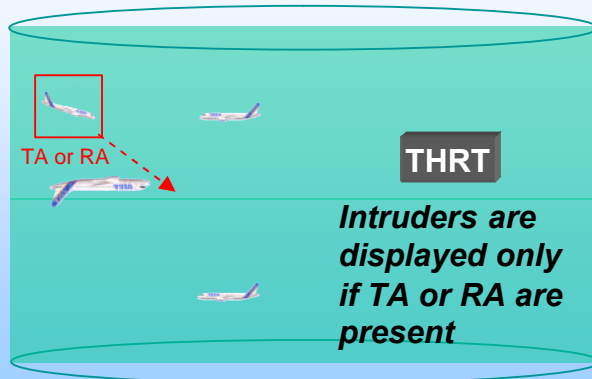| CLIMB	CRUISE	DESCENT
ABV	BLW *Or* ALL	BLW
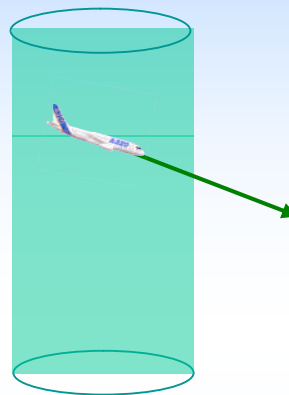
Use TA only

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

➢ **Abnormal situations**
(engine failure, L/G extended)

DENSE TRAFFIC

TA or RA

THRT

Intruders are displayed only if TA or RA are present

Range values :

🛈

TRAFFIC AND MODE SELECTORS ⓘ

TRAFFIC SELECTOR (Used for detection)

CLIMB

ABV

Altitude Range +9900ft - 2700 ft

CRUISE

BLW *Or* ALL

ALL : +/- 2700 ft

Altitude Range BLW : +2700 ft -9900ft

DESCENT
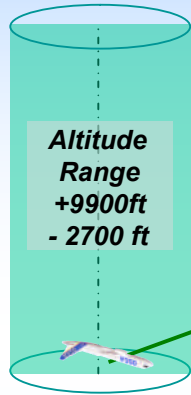
BLW

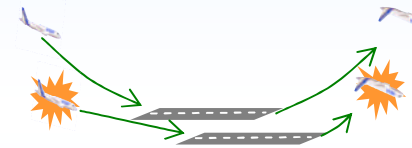Altitude Range +2700 ft -9900ft

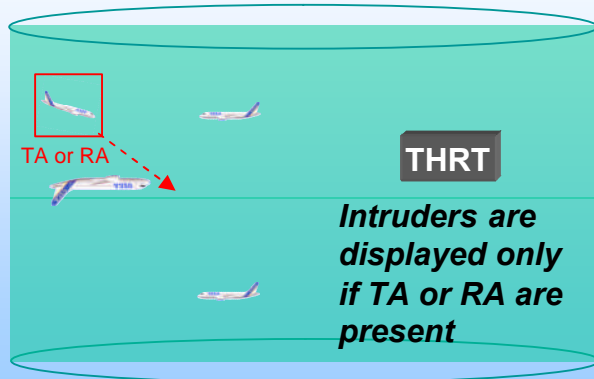## MODE SELECTOR (Used for resolution)

Use TA only

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

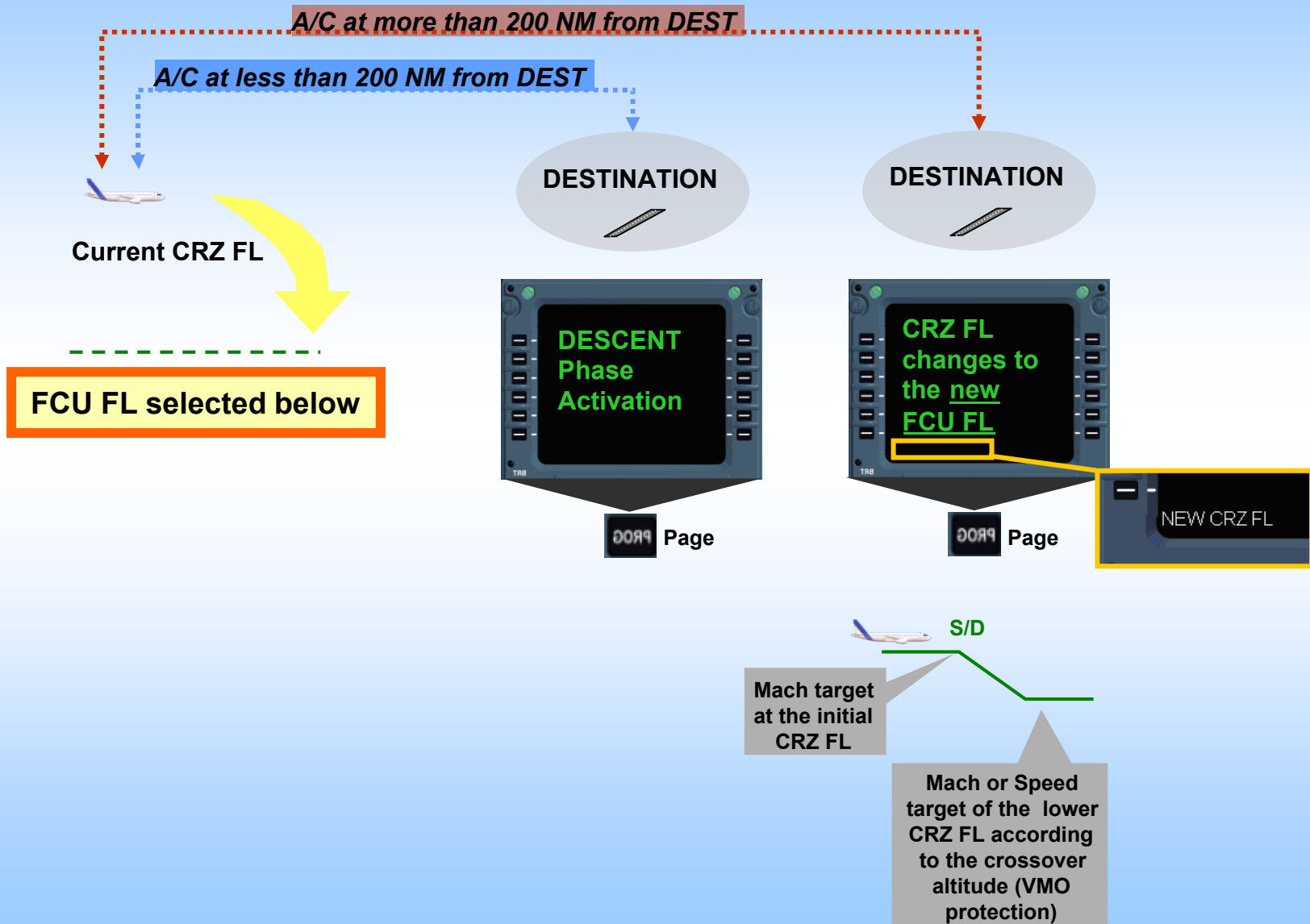➤ **Abnormal situations** (engine failure, L/G extended)

DENSE TRAFFIC

TA or RA

THRT

Intruders are displayed only if TA or RA are present

Range values :

ⓘ

Altitude Range +/- 2700 ft

FCU ALT SELECTION CONSEQUENCES ℹ️

A/C at more than 200 NM from DEST

A/C at less than 200 NM from DEST

Current CRZ FL

FCU FL selected below

DESTINATION

DESTINATION

DESCENT Phase Activation

CRZ FL changes to the new FCU FL

NEW CRZ FL

PROG **Page**

PROG **Page**

S/D

Mach target at the initial CRZ FL

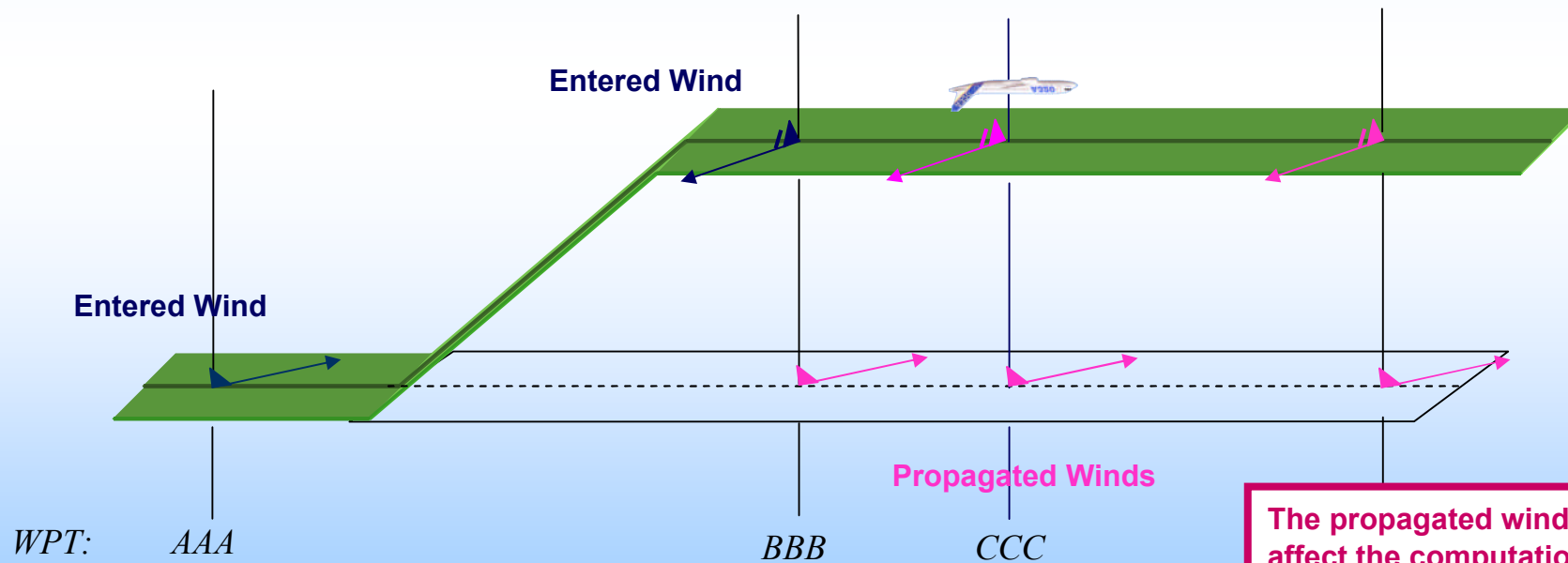Mach or Speed target of the lower CRZ FL according to the crossover altitude (VMO protection)

UPDATE WIND AND TEMP VALUES WHEN :

Δ WIND SPEED > 30 kt

Δ WIND ORIENTATION > 30°

Δ TEMPERATURE > 5°

WIND   PROPAGATION :

Entered Wind

Entered Wind

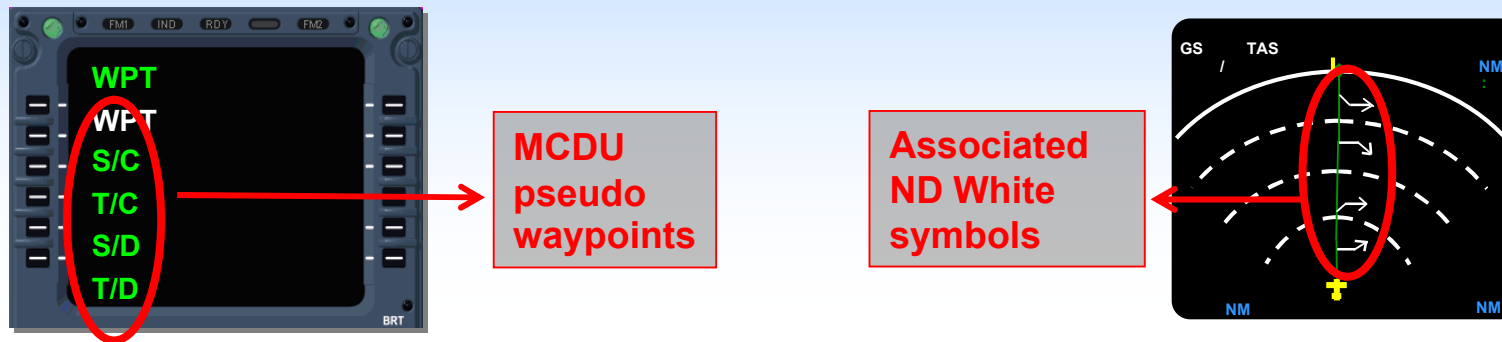Propagated Winds

WPT: AAA   BBB   CCC

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.

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

WPT
WPT
S/C
T/C
S/D
T/D

MCDU pseudo waypoints

Associated ND White symbols

OPTIMUM STEP

➢ The FM proposes OPTIMUM STEP start of climb for the first STEP CLB

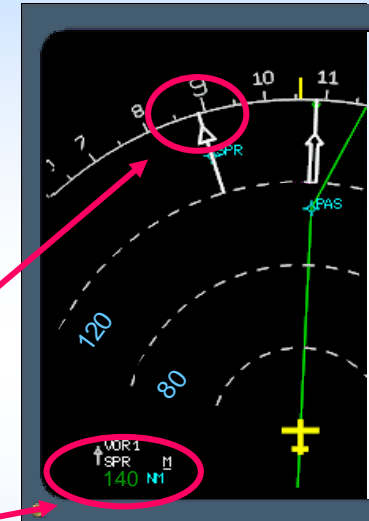➢ Inserted by the Pilot, OPTIMUM STEP becomes a GEOGRAPHICAL STEP

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
}

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)