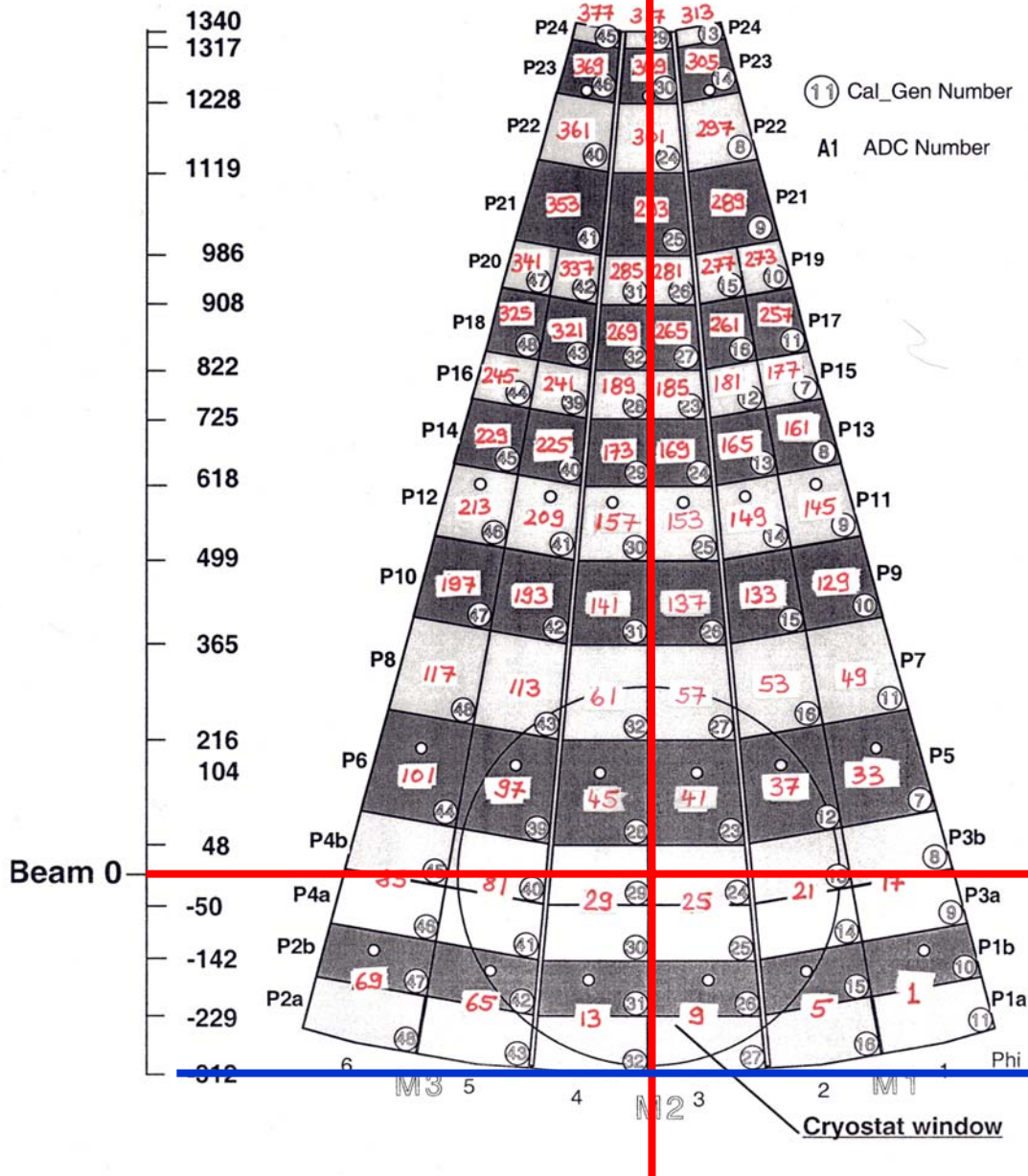


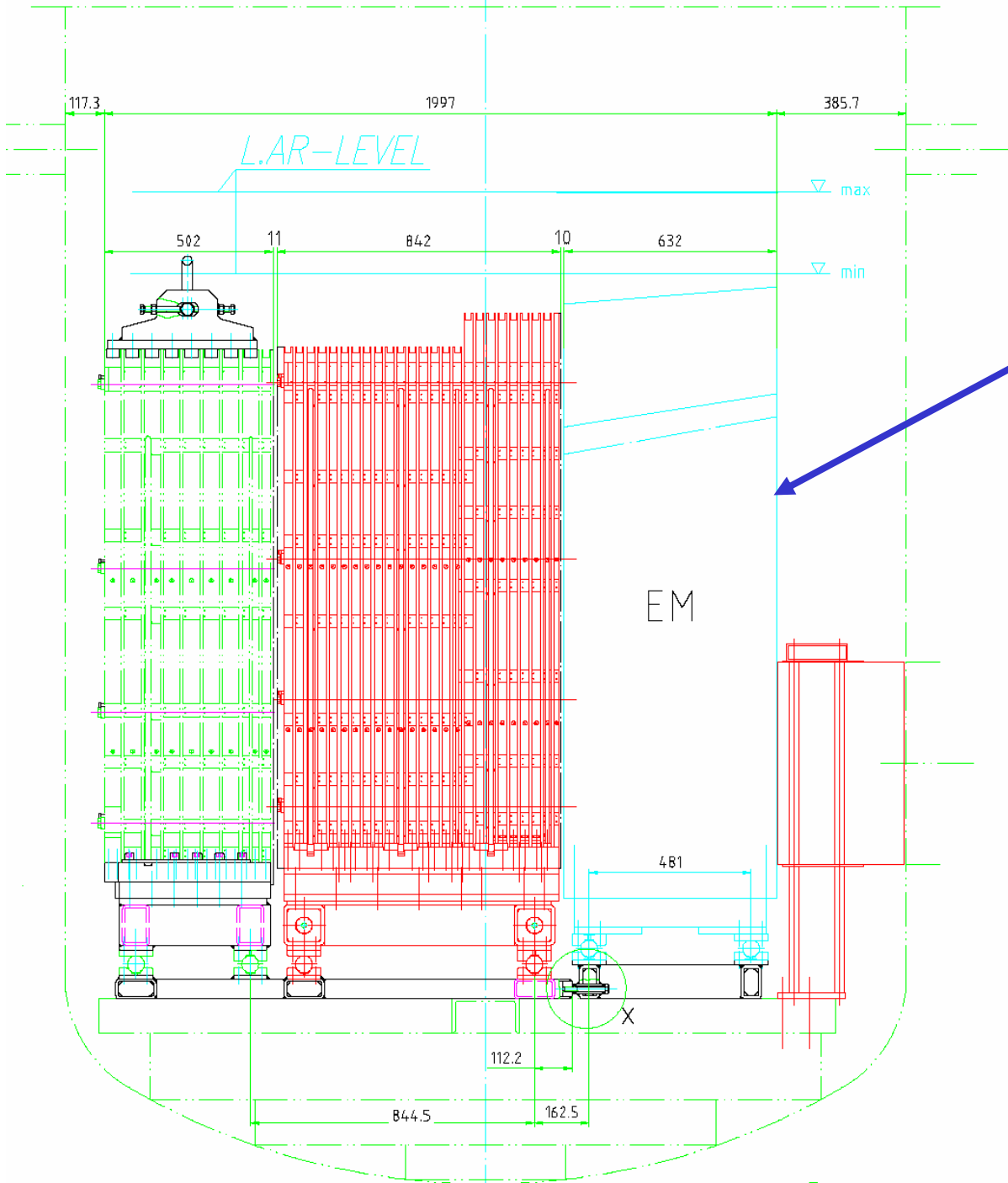
$x=0$



Coordinates  
already defined

$y = 0$

$y = -312$  mm  
(Atlas:  $R_0 = 2030$  mm ?)



Front face of active  
EMEC volume

In Atlas:

Z = 3704 mm

(this is an ASSUMPTION!)

Total depth of active  
EMEC volume in Z:

$\Delta Z = 510$  mm

## Suggestion:

Choose Testbeam x,y and pointing-Atlas z

Advantage: It is relatively easy to convert between  $\eta$  and  $r$  for the pointing  $z$ :

$$\tan \vartheta = r/z \quad \eta = -\ln \tan \vartheta/2$$

$$r = z \cdot \tan ( 2 \cdot \arctan (e^{-\eta}) )$$

$$R' = R_o - 312 \text{ mm}$$

$$\triangleq y = 0$$

$$\phi_t = \pi/8 - \phi$$

$$y' = r \cdot \cos \phi_t$$

$$y = R' - y'$$

$$x = r \sin \phi_t$$



$$y = R_o - 312 - z \cdot \tan ( 2 \cdot \arctan (e^{-\eta}) ) \cdot \cos(\pi/8 - \phi)$$

$$x = z \cdot \tan ( 2 \cdot \arctan (e^{-\eta}) ) \cdot \sin(\pi/8 - \phi)$$

$$y = 0$$

$$y = -312 \text{ mm}$$

$$x=0$$

