Vacuum related works in case of TCLIA displacement

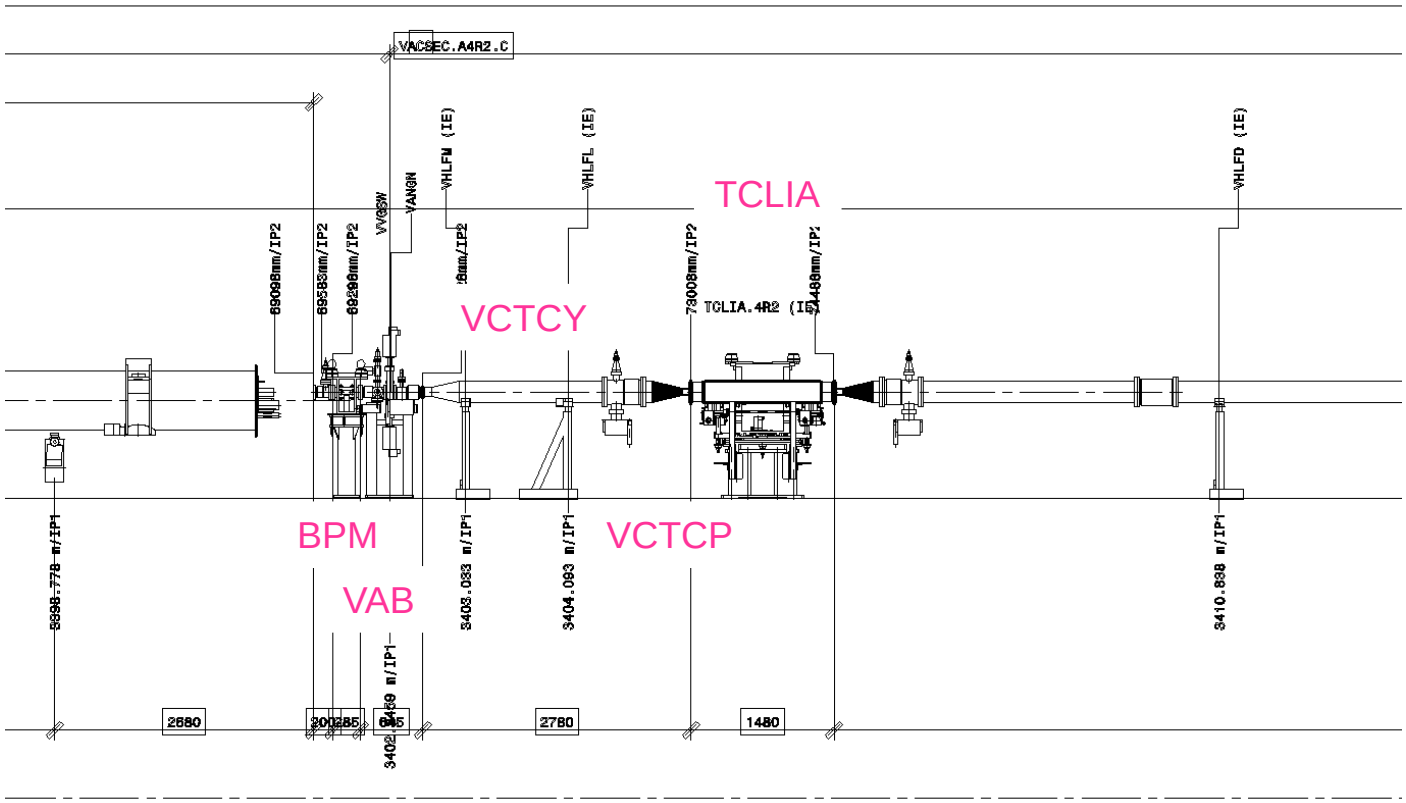
V. Baglin – on behalf of WP12

WP14 Meeting, CERN, 28th February 2017

Input March 2016

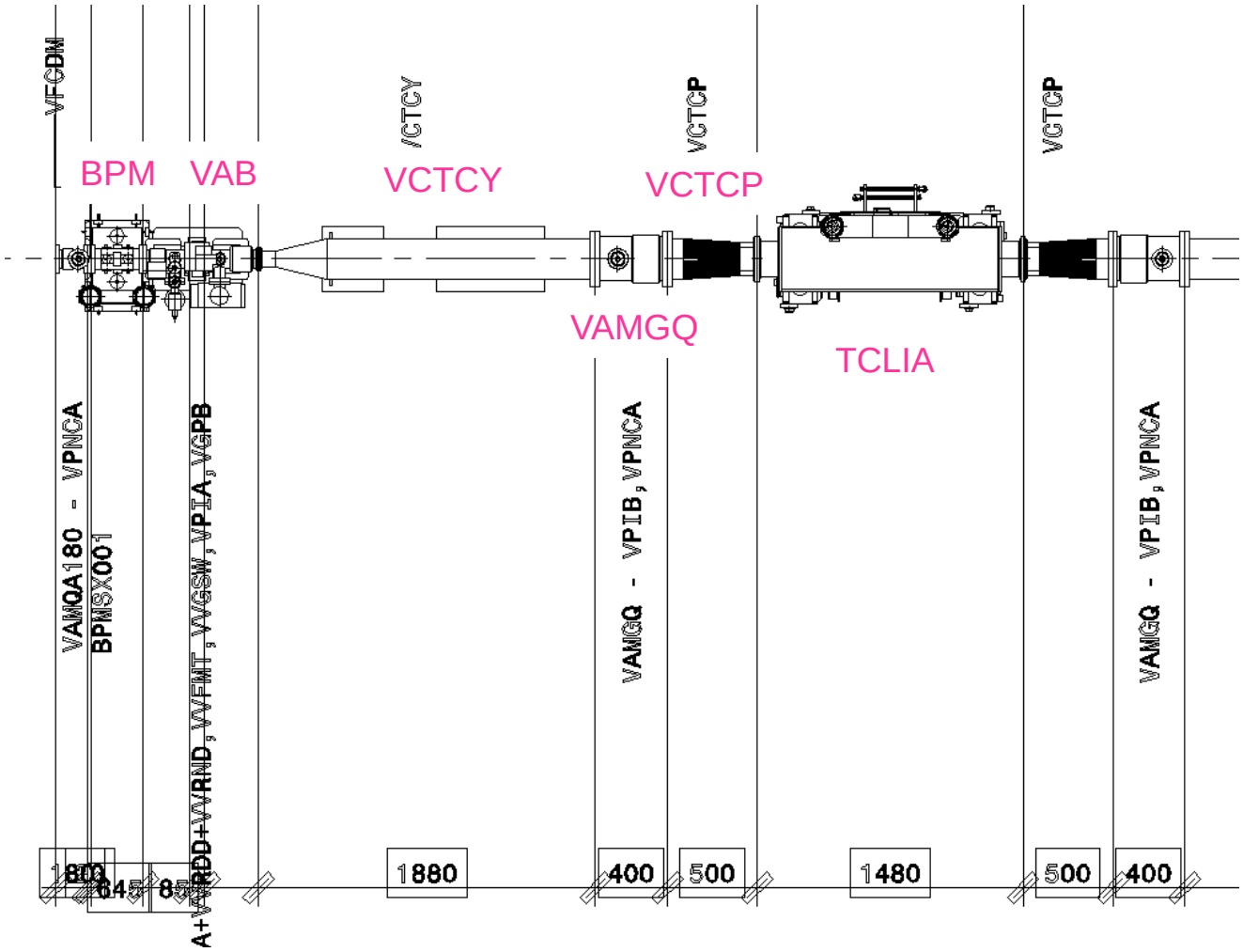
- For LS2
- Movement of TCLIA towards the IP by a few meters … how many?
- Vacuum sector A4R2

Layout A4R2


VACSEC.A4R2.C
VHLFW (IE)
VHLFL (IE)
VHLFD (IE)
TCLIA
VCTCY
TCLIA.4R2 (IE
BPM
VCTCP
VAB
2680
2780
1480

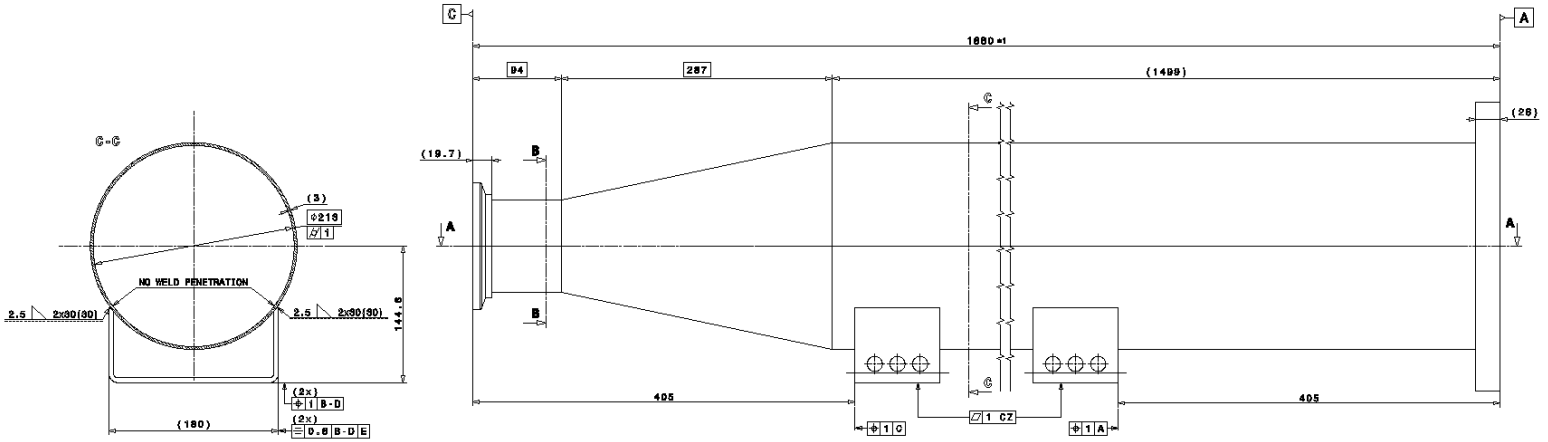
Layout A4R2

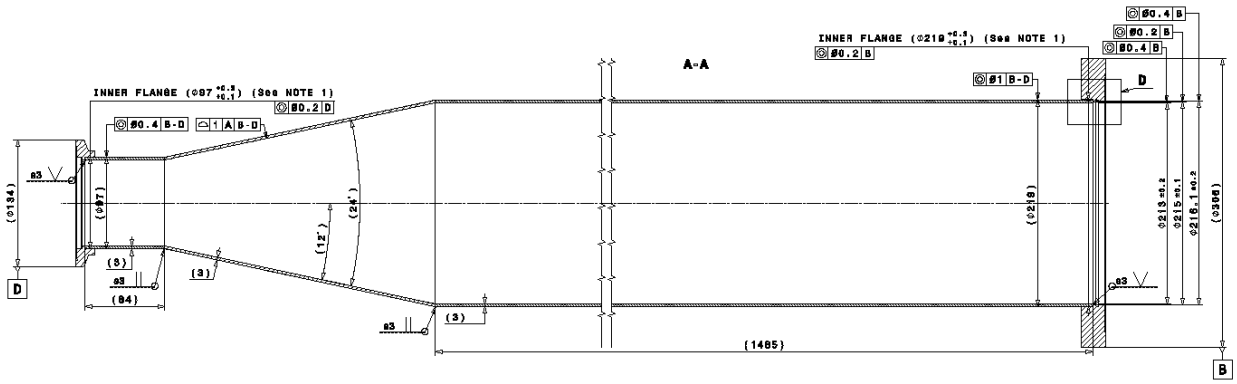
- BPM, VAB, VCTCY, VAMGQ, VCTCP, TCLIA



VCTCY

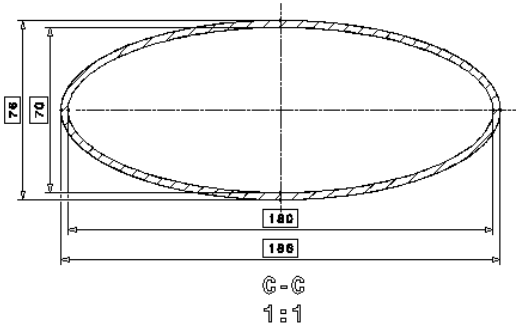
- LHCVCTCY0001 – Transition ID90 to 212
- 1880 = 94 + 287 + 1499
- Minimum length ~ 30 + 287+ 30 = 347 mm
- Gain in length of ~ 1.5 m

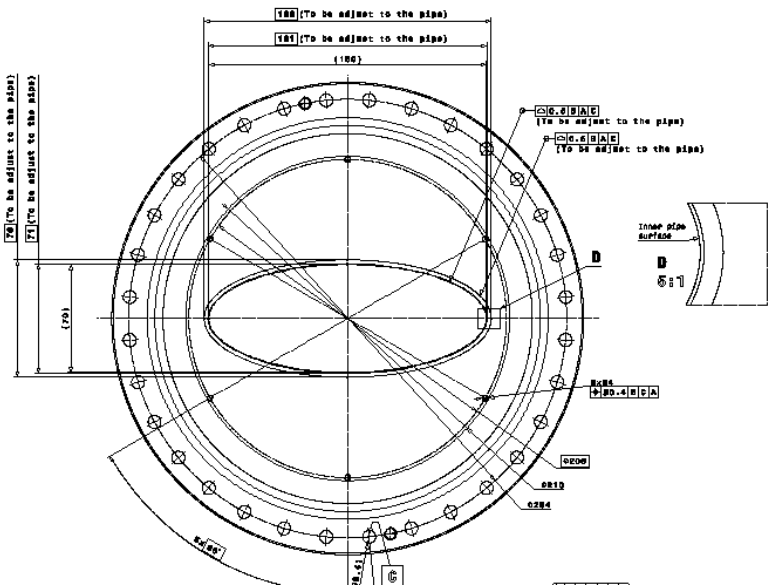


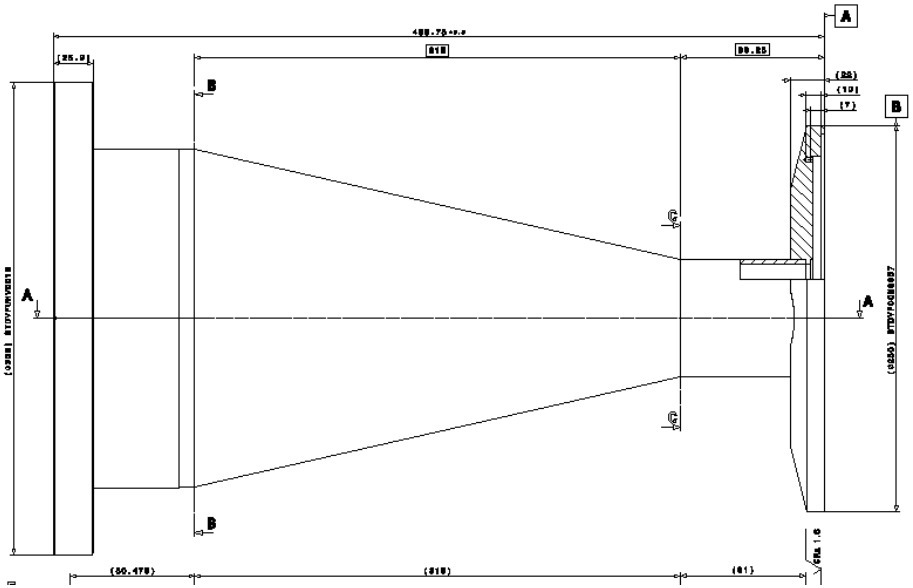


VCTCP

- LHCVCTCP0001
- Transition circular ID212 to elliptical 180/70
- Length 500
- If VCTCY+VAMGQ+VTCTP replaced by new VCT : ID90 to elliptical 180/70
  - Gain in length of ~ 2.2 m
  - In this case, the TCLIA is very close to the VAB, be careful with induced interlock in case of pressure rise due to malfunctioning







Cost estimate

- Input March 2016
  - Design study
  - Procurement (vacuum & bake-out systems)
  - Test & installation

				LS2					LS3			
Item	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Sum
TCLIA		20	25	35								80

- Next?
  - Decision? The sooner … the better
  - Which WP14 BC for WP12
  - Declaration in PLAN
  - New layout study
  - ECR
  - Production of new components
  - Validation at surface of new components (<2019)
  - Installation (2019-2020)

Thank you for your attention