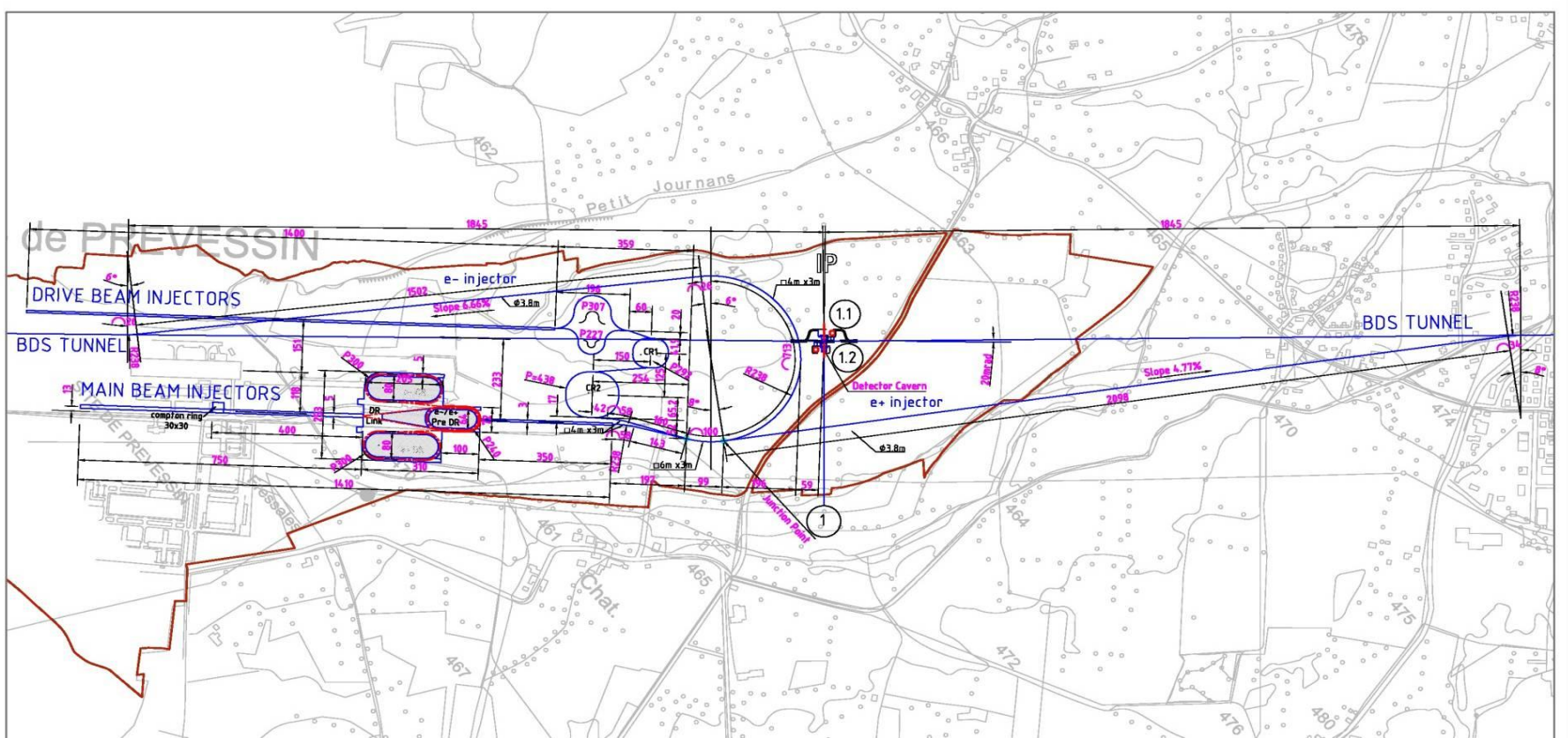


-Injection Complex 2010 Layout



INJECTORS TUNNELS	DRIVE BEAM INJECTORS COMPLEX						MAIN BEAM INJECTORS COMPLEX						TRANSFER TUNNEL COMMUN	FINAL TRANSFER TUNNELS (after TT comun)		
	LINAC	DL1	DL2	CR 1	CR 2	TT to Junction Point	LINAC SOURCE	e- DR	e+ / e- Pre DR	e+ DR	DR Link	LINAC Booster+BC1		TT to Junction Point	e- TT	e+ TT
Length (l) m	1400	227	307	292	438	191	750	300	240	300	2x165	350	131	739	1528	2132
Section (w x h) m	6 x 3	4 x 3	4 x 3	4 x 3	4 x 3	4 x 3	5 x 3	5 x 3	5 x 3	5 x 3	8 x 3	3 x 3	4 x 3	4 x 3	φ 3.8	φ 3.8
delta e-/e+ = 135m																

CLIC- MAIN / DRIVE BEAM INJECTORS AND EXPERIMENTAL AREA LAYOUT



GROUP : TS-CE
 CIVIL ENGINEERING
 SUPERVISOR : J.OSBORNE
 DESIGNER : N.BADDAMS

SCALE : 1/10000(A3_FORMAT) DATE : 13_APR-2010
 CLIC.CE-1.1799.0002 3 H

Civil engineering

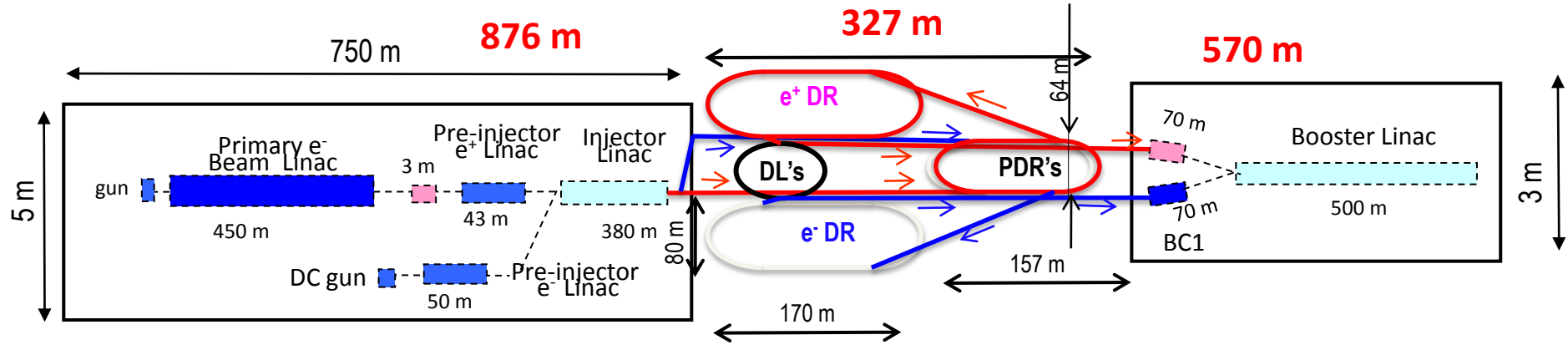
for the Main Beam Injector complex

Not to scale

Base Line configuration

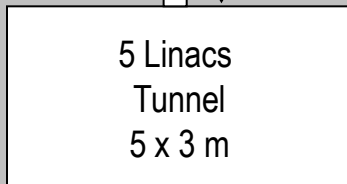
Linac tunnel (incl. e+ source)

Linac tunnel (incl. bunch compressor)



Shafts for waveguides
Ø 0.3 m

5 meters



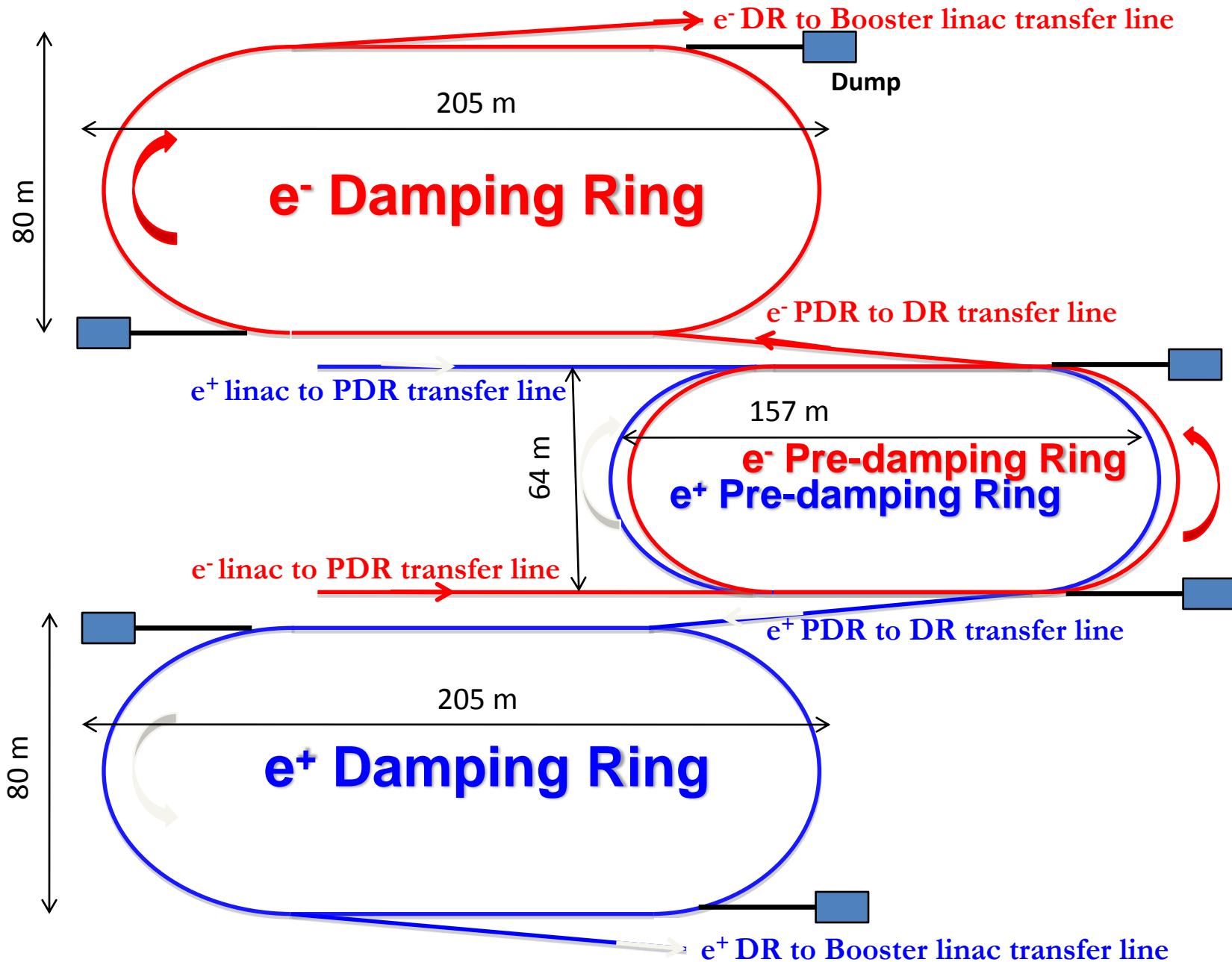
Cut and cover ground halls

1773 m

- + 100 m for beam diagnostics upstream BC1
- + 100 m for beam diagnostics downstream BC1
- + 100 m for Spin Rotator between DL and BC1

2100 m

Damping rings still to be finalised

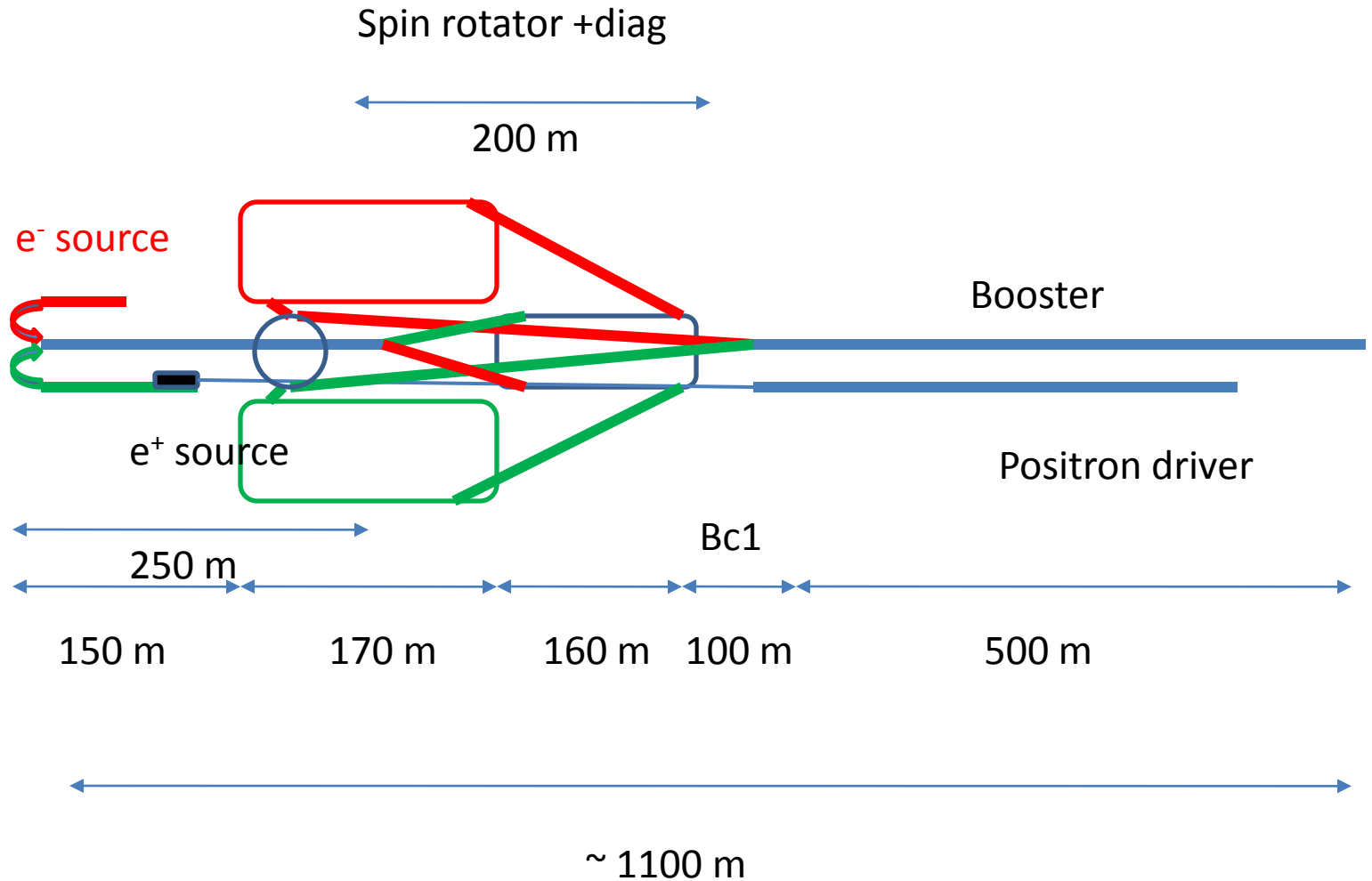


CLIC main injectors layout

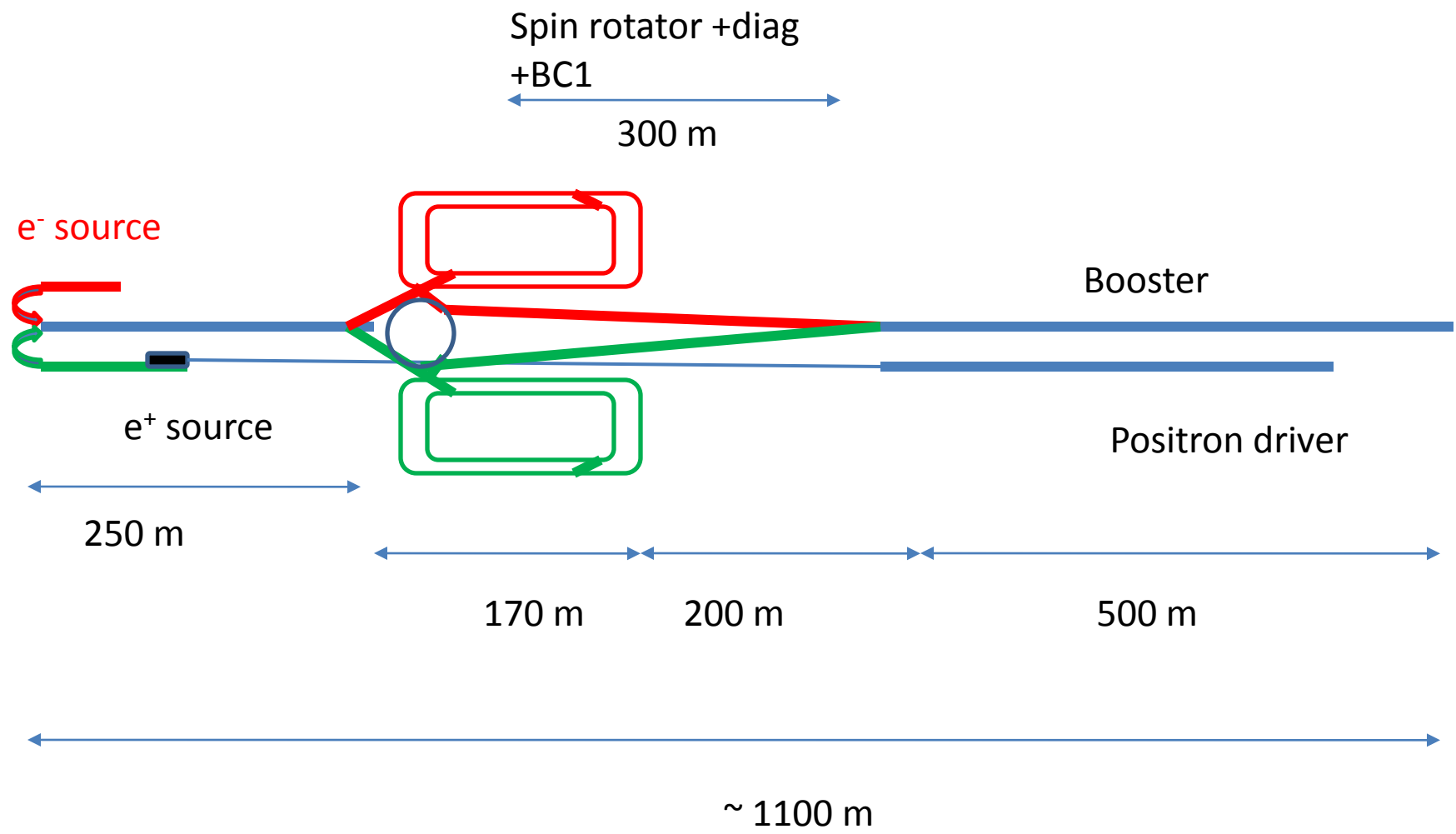
Assuming 2 GHz linacs, 15 MV/m loaded, 0.85 filling factor

e^- Source + 200 MeV linac:	50 m
2.66 GeV pre linac for e^- and e^+ :	250 m
6.14 GeV booster linac for e^- and e^+ :	500 m
5 GeV drive linac for e^+ :	400 m
Positron target + 200 MeV capture linac:	100 m
BC1:	70 m
Spin rotator:	135 m
Diagnostics upstream BC1:	100 m
Diagnostics downstream BC1:	100 m

possible layout keeping proposed DR layout



possible layout DR with PDR inside



Questions and proposal

- **Propose to put booster and positron driver in the same tunnel**
- Is a 180 deg arc at 200 MeV a problem for positrons ?
- Function of the transfer lines between rings ?
- Is there a optimal layout for the ring positions ?
- Is 300 m enough for spin rotator, diag, BC1 and diag ?
- Can we use the long transfer lines down to the tunnel for diagnostics, spin rotation ?
- Spin rotation before damping ring, needed ?, where?, how long ?