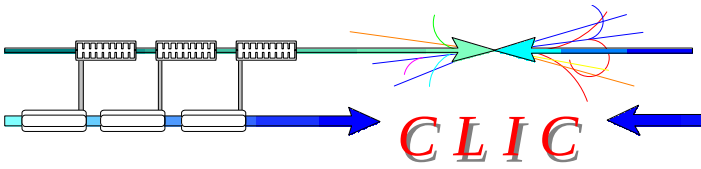
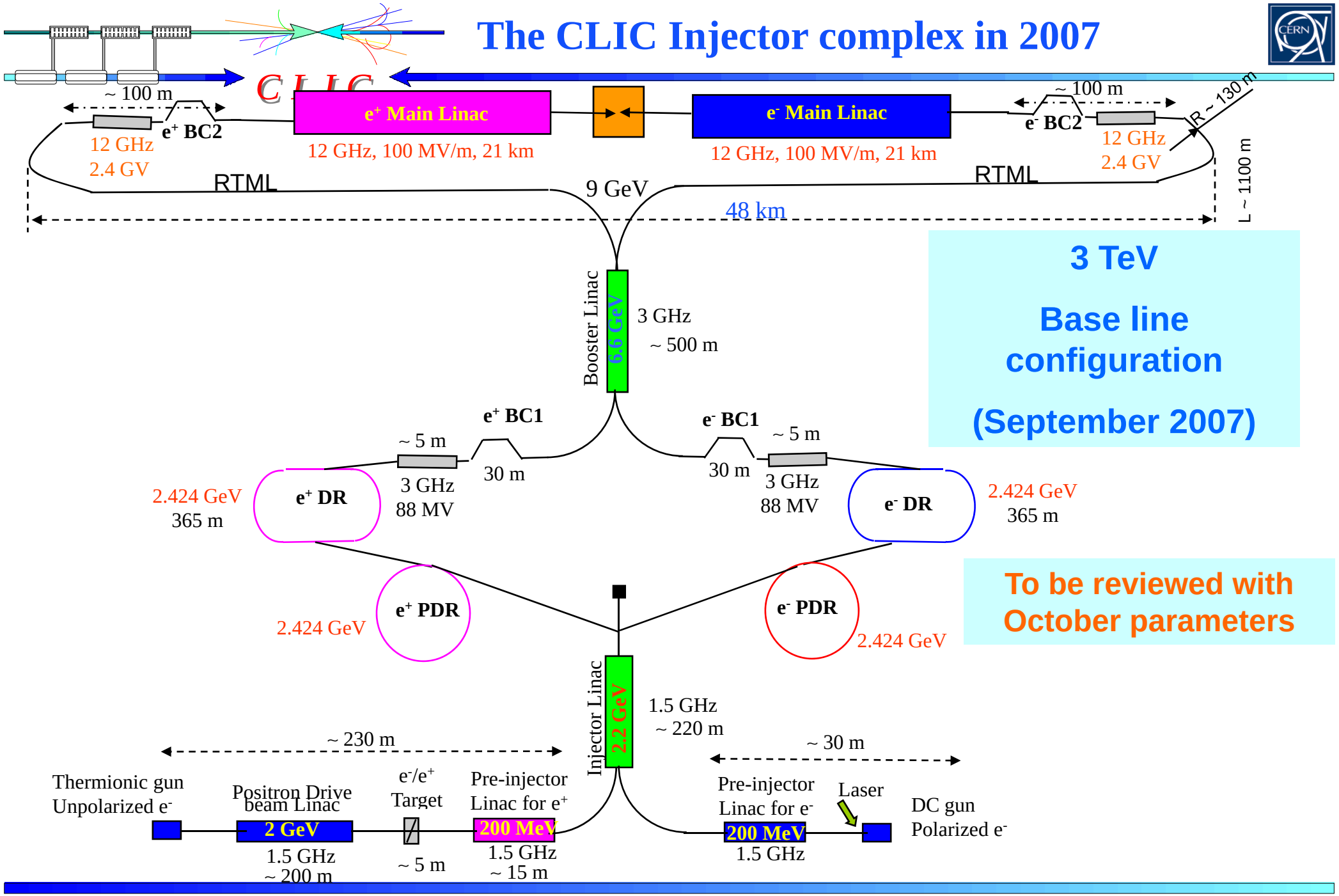


CLIC Main Beam Transfer Lines

A. Latina, L. Rinolfi

The CLIC Injector complex in 2007

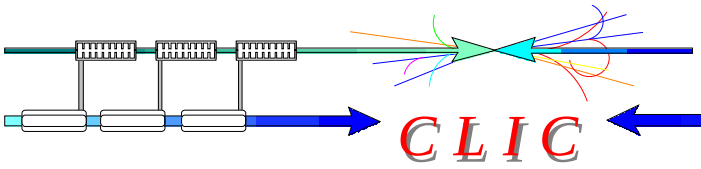


3 TeV

Base line configuration

(September 2007)

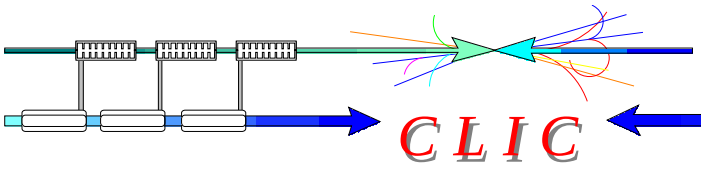
To be reviewed with October parameters



Components to be aligned for e^-

	RF Cavities	Magnets	BPM and other BI
DC gun for e^-	2	4	4
Bunching system for e^-	6	4	4
Pre-injector linac for e^-	10	10	5
Injector linac for e^- and e^+	26	112	30
BC1 for e^-	1	4	3
Booster linac for e^- and e^+	75	300	100
RTML for e^-	0	1600	800
Turn around for e^-	0	600	50
BC2 for e^-	60	4	4
TOTAL	**180**	**2638**	**1000**

Alignment precision :
0.1 mm

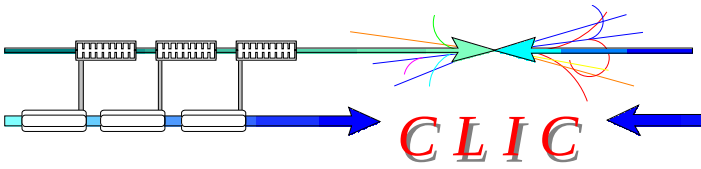


Components to be aligned for e^+

	RF Cavities	Magnets	BPM and other BI
Thermionic gun for e^-	2	4	4
Bunching system for e^-	6	4	4
Positron Drive beam linac for e^-	24	74	30
Pre-Injector linac for e^+	10	10	5
BC1 for e^+	1	4	3
RTML for e^+	0	1600	800
Turn around for e^+	0	600	50
BC2 for e^+	60	4	4
TOTAL	**103**	**2300**	**900**

Alignment precision : **0.1 mm**

The Injector linac and the Booster linac are common for e^- and e^+ beams **=>** Components have been already counted on the previous e^- Table



Components to be aligned for e^- and e^+

(without PDR and DR)

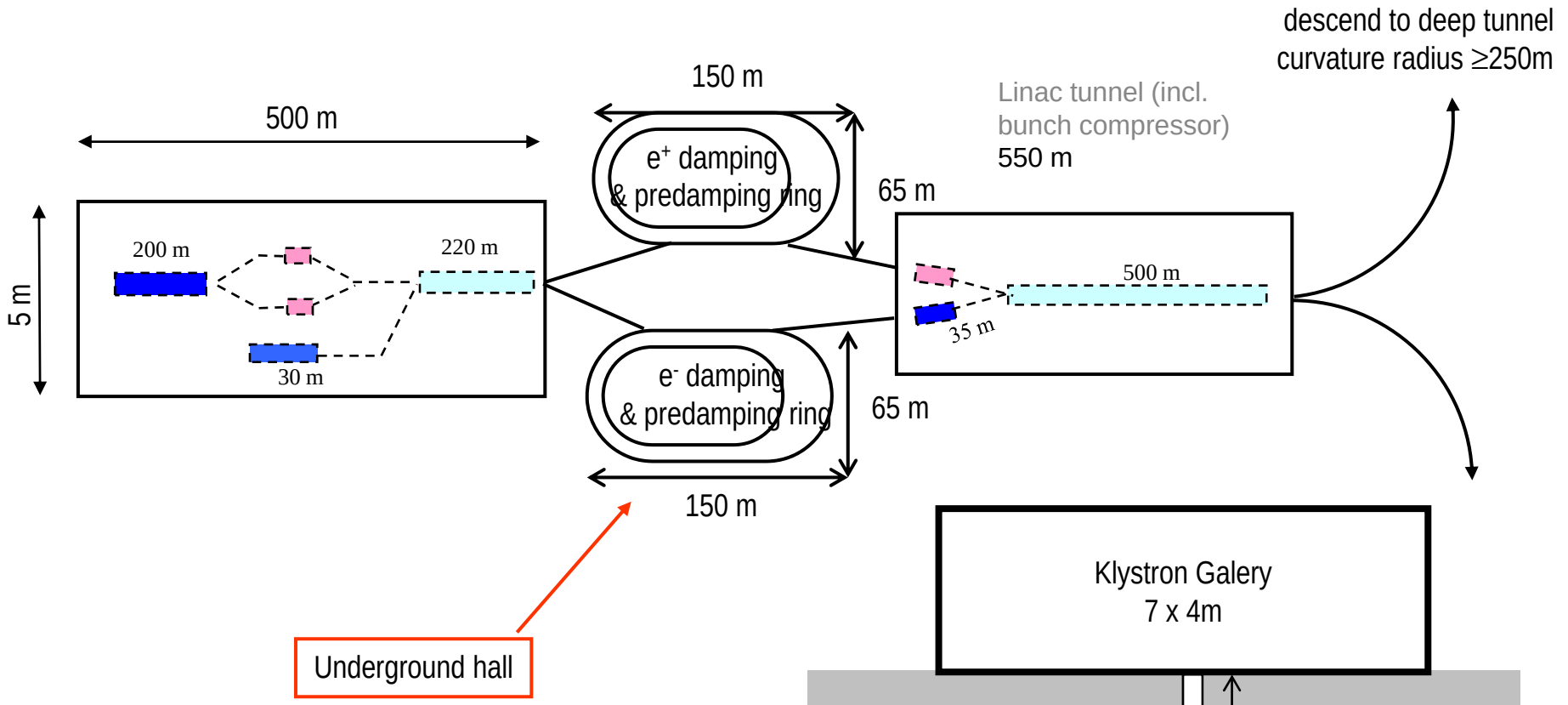
	RF Cavities	Magnets	BPM and other BI	
For e^- beam (including both common linacs)	180	2638	1000	
For e^+ beam (without the Injector and the Booster Linacs)	103	2300	900	
GRAND TOTAL	**283**	**4938**	**1900**	**= 7121**

Alignment precision : **0.1 mm**

For the RF cavities => stabilized water at 30 °C

For the magnets => demineralized water

Civil engineering layout



Total length ~ 1.2 km
If possible on CERN Prevessin site close to power substation
Power consumption and cooling requirements ~ 10 MW
Deeper tunnel to put main beam injectors into Molasse for better stability ?