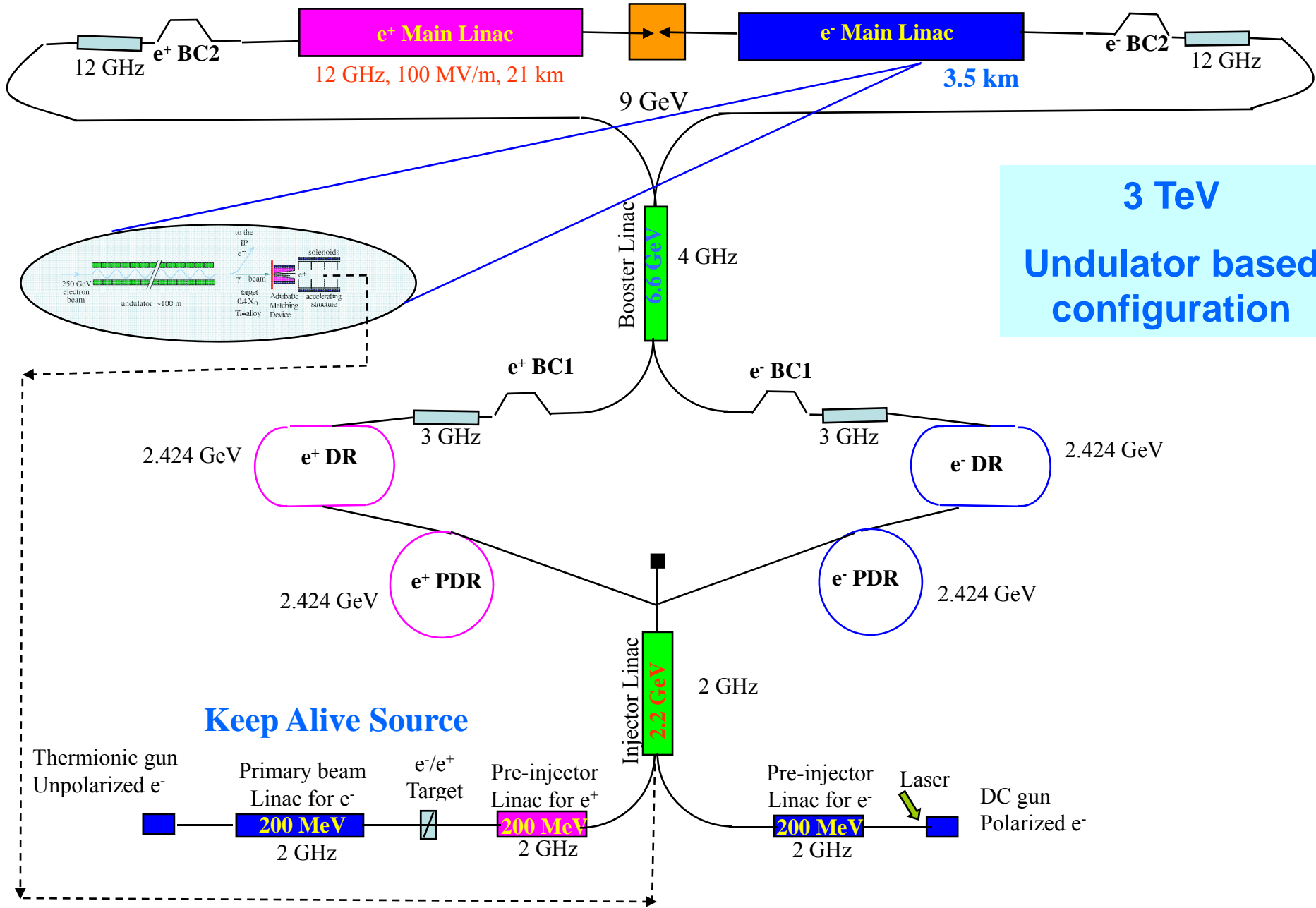
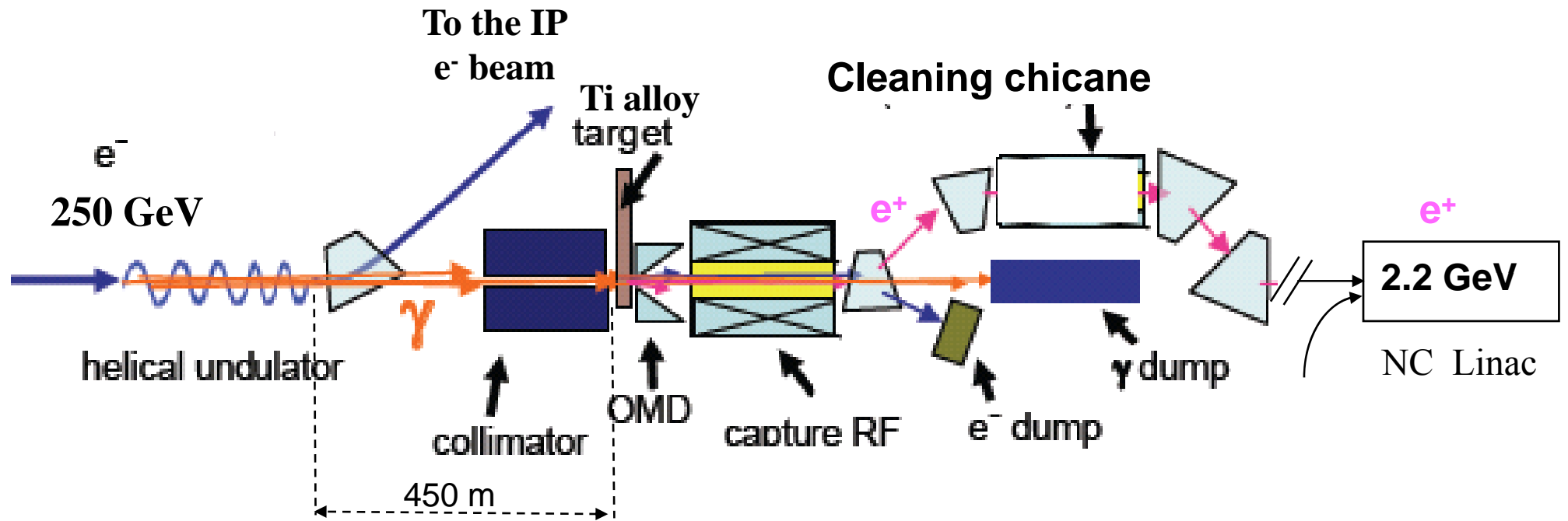


The CLIC Injector complex



A possible CLIC scheme for polarized e^+



Undulator

$$K = 0.75$$

$$\lambda_u = 1.5 \text{ cm}$$

$$L = 100 \text{ m}$$

Pre-Injector Linac

$$G = 12 \text{ MV/m}$$

$$E = 200 \text{ MeV}$$

$$f_{\text{RF}} = 2 \text{ GHz}$$

$$B = 0.5 \text{ T}$$

Injector Linac

$$G = 17 \text{ MV/m}$$

$$E = 2.424 \text{ GeV}$$

$$f_{\text{RF}} = 2 \text{ GHz}$$

$$f_{\text{rep}} = 50 \text{ Hz}$$

Main beam parameters comparison

At the entrance of the Main Linac for e^- and e^+

		NLC (1 TeV)	CLIC 2007 (3 TeV)	ILC (Nominal)
E	GeV	8	9	15
N	10^9	7.5	3.72 - 4	20
n_b	-	190	312	2625
Δt_b	ns	1.4	0.5 (6 RF periods)	369
t_{pulse}	ns	266	156	968625
$\epsilon_{x,y}$	nm, nm	3300, 30	600, 10	9 000, 24
σ_z	μm	90-140	43 - 45	300
σ_E	%	0.68 (3.2 % FW)	1.5 - 2	1.5
f_{rep}	Hz	120	50	5
P	kW	219	90	630

Nominal CLIC positron source parameters

	Symbol	Value	Units
Positron per bunch at IP	n_b	3.72×10^9	number
Bunches per pulse	N_b	312	number
Pulse repetition rate	f_{rep}	50	Hz
Positron energy (PDR injection)	E_0	2.424	GeV
Pre-Damping transverse acceptance	$\gamma (A_x + A_y)$	0.09	m - rad
Pre-Damping energy acceptance	δ	± 1	%
Pre-Damping longitudinal acceptance	A_l	4980	eV . m
Electron drive beam energy	E_e	250	GeV
Electron beam energy loss in undulator	ΔE_e	?	?
Positron polarization	P	~ 60	%