

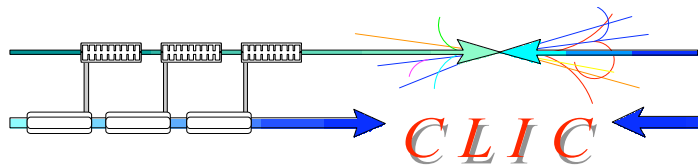
CDR



# Conceptual Design Report for CLIC

Chapters related to the Injectors

Louis Rinolfi



## Mail from the CDR editor



Monday 31<sup>st</sup> May 2010

Dear future authors of the CLIC CDR,

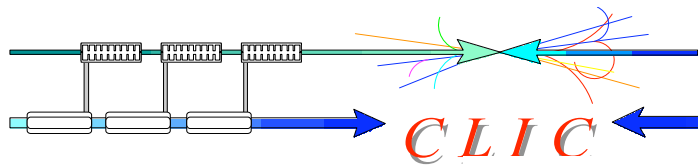
With this email I send out detailed instructions for the writeup of the CLIC CDR. Also in one of the next CLIC Friday meetings I shall explain some details.

Please read carefully first the "letter to authors" document.

The interaction over the next days will be email exchanges in case you can not accept the mandate of an authorship and in particular, in case you are proposed as responsible author, further iterations on the CDR skeleton and a completion of the author list.

It is a bit difficult to find the name of an author in the CDR skeleton, so as soon as we know how to do that, we will send another file containing an alphabetic list of the authors and the chapters/sections that they should write.

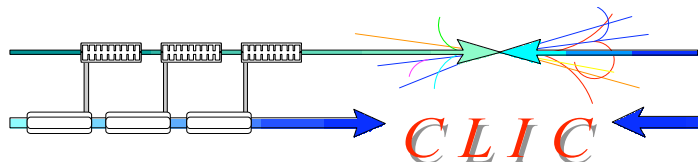
Kind regards Hermann Schmickler



# CDR Volumes 1 and 2



<b>Conceptual Design Report of a Multi-TeV Linear Collider based on CLIC technology</b>
Volume 1:
<b>Executive Summary</b>
1) Foreword
1) Physics Motivation
2) Requirements on energy and luminosity
3) The CLIC Accelerator Complex
4) The CLIC Physics Detectors
5) Feasibility demonstration of the CLIC technologies
6) Available parameter space for a CLIC based Linear Collider
7) Description of the following technical design phase for machine and detectors
Volume 2:
<b>The CLIC 3 TeV Accelerator Design</b>
1) Overview and key issues of the CLIC concept; details on feasibility demonstration
2) Accelerator Physics description of the Main Beam Complex
3) Accelerator Physics description of the Drive Beam Complex
4) Preliminary design of a 500 GeV intermediate stage
5) Detailed description of the accelerator components
6) Civil Engineering and Services
7) CLIC technologies demonstrated in CTF3
8) Construction and Operational Scenarios
9) Energy Scanning
10) Detailed value estimate



# CDR schedule



## CLIC

### Volume 1:

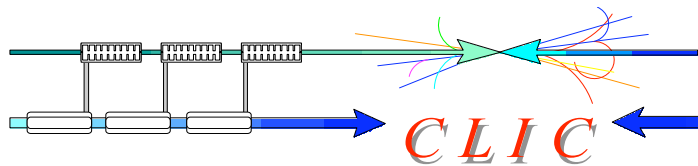
deadline for contributions:	tbd
preliminary draft (without cost) ready	tbd
draft volume 1 (without cost) ready	tbd
volume 1 (with cost) ready	end April 2011

### Volume 2:

information to the authors	late May 2010
deadline for contributions	end September 2010
draft (without detailed cost) ready	early December 2010
volume 2 (with detailed cost) ready	end April 2011 (depending on CTF3 results)

### Volume 3:

volume 3 ready	end April 2011
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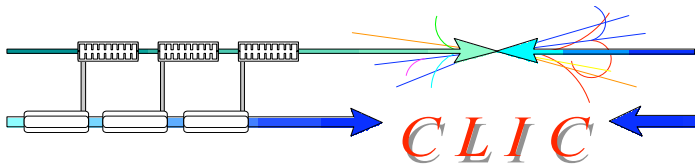
# Chapter 2.1 Injectors



*as proposed initially by the editor*

## 2 Accelerator Physics description of the Main Beam complex

- 2.1 Injectors . . . . .
- 2.1.1 Overview . . . . .
- 2.1.2 Beam parameters . . . . .
- 2.1.3 System descriptions . . . . .
- 2.1.3.1  $e^-$  source and linac . . . . .
- 2.1.3.2  $e^+$  source and linacs . . . . .
- 2.1.3.3 Options for polarized  $e^+$  beams . . . . .
- 2.1.3.4 Preservation of polarization up to intersection point . . . . .
- 2.1.4 Accelerator physics issues . . . . .
- 2.1.4.1  $e^-$  polarization . . . . .
- 2.1.5 Component specifications . . . . .



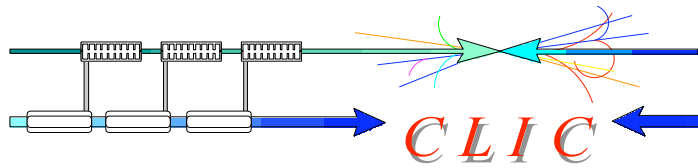
# Chapter 5.1 Sources



*as proposed initially by the editor*

## 5 Technical description of the accelerator components

5.1	Sources . . . . .	
5.1.1	Overview . . . . .	
5.1.2	Technical description . . . . .	
5.1.2.1	$e^-$ source and linac . . . . .	
5.1.2.2	$e^+$ source and linacs . . . . .	
5.1.2.3	positron polarization . . . . .	
5.1.2.4	spin rotators . . . . .	
5.1.3	Technical issues . . . . .	
5.1.4	Component inventory . . . . .	
5.1.4.1	Table . . . . .	
5.1.5	Cost considerations . . . . .	
5.1.6	Outlook for Technical Design Report phase . . . . .	



## Summary



- 1) This is a first draft as proposed initially by the CDR Editor
- 2) We have freedom to rearrange the chapters where necessary
- 3) You are warmly welcome to contribute to any chapter of the CDR
- 4) For those who are willing to participate, please let me know to which part of the CDR, you would like to contribute.