

Laser Accelerator for Radiobiological Applications (LARA)

Conceptual Design Report

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Abstract

Lead author: KL

1 Introduction

Lead author: KL

2 Motivation

⁵ **Lead author: SG, JY, KL**

3 Accelerator facility

3.1 Overview

Lead author: JPa, KL

3.2 Laser-driven proton and ion source

¹⁰ **Lead author: OE**

3.3 Proton and ion capture

Lead author: JPo

3.4 Beam transport and delivery to the in-vitro end station

Lead author: JPa, AK

15 **3.5 Post-acceleration and beam delivering to in-vivo end station**

Lead author: JPa, KL

3.6 Staging considerations

Lead author: KL

4 Biological end stations

20 **4.1 In-vitro end station**

Lead author: SG, HTL

4.2 In-vivo end station

Lead author: SG, HTL

5 Conclusions

25 **Lead author:** KL