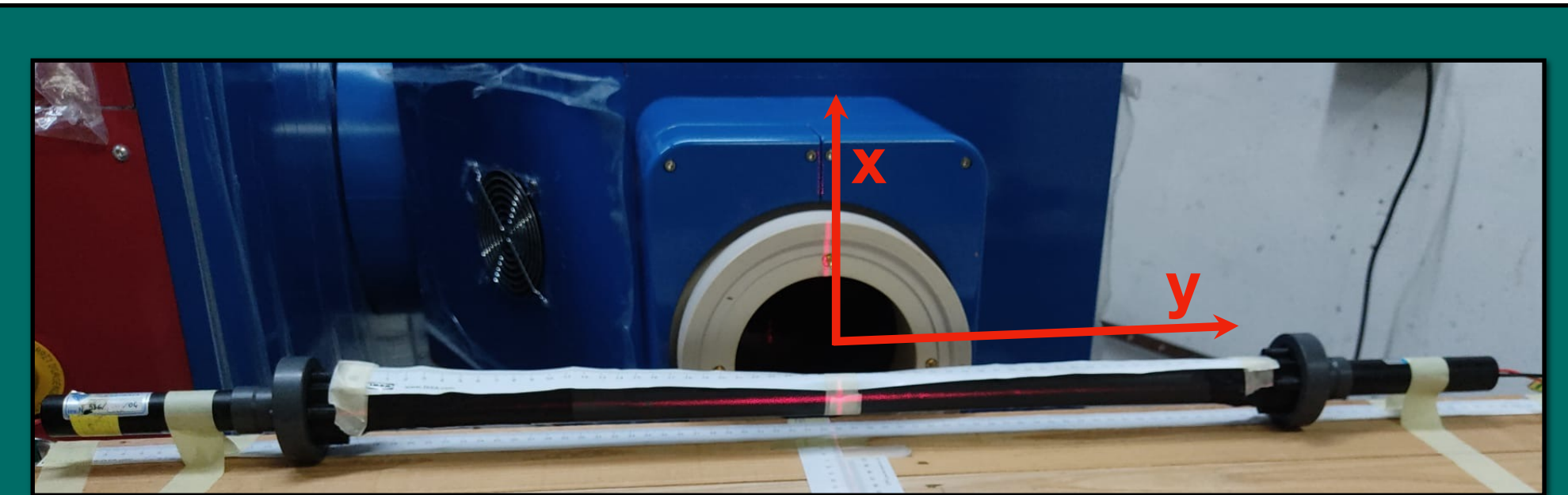


Beam Monitor with Air Fluorescence

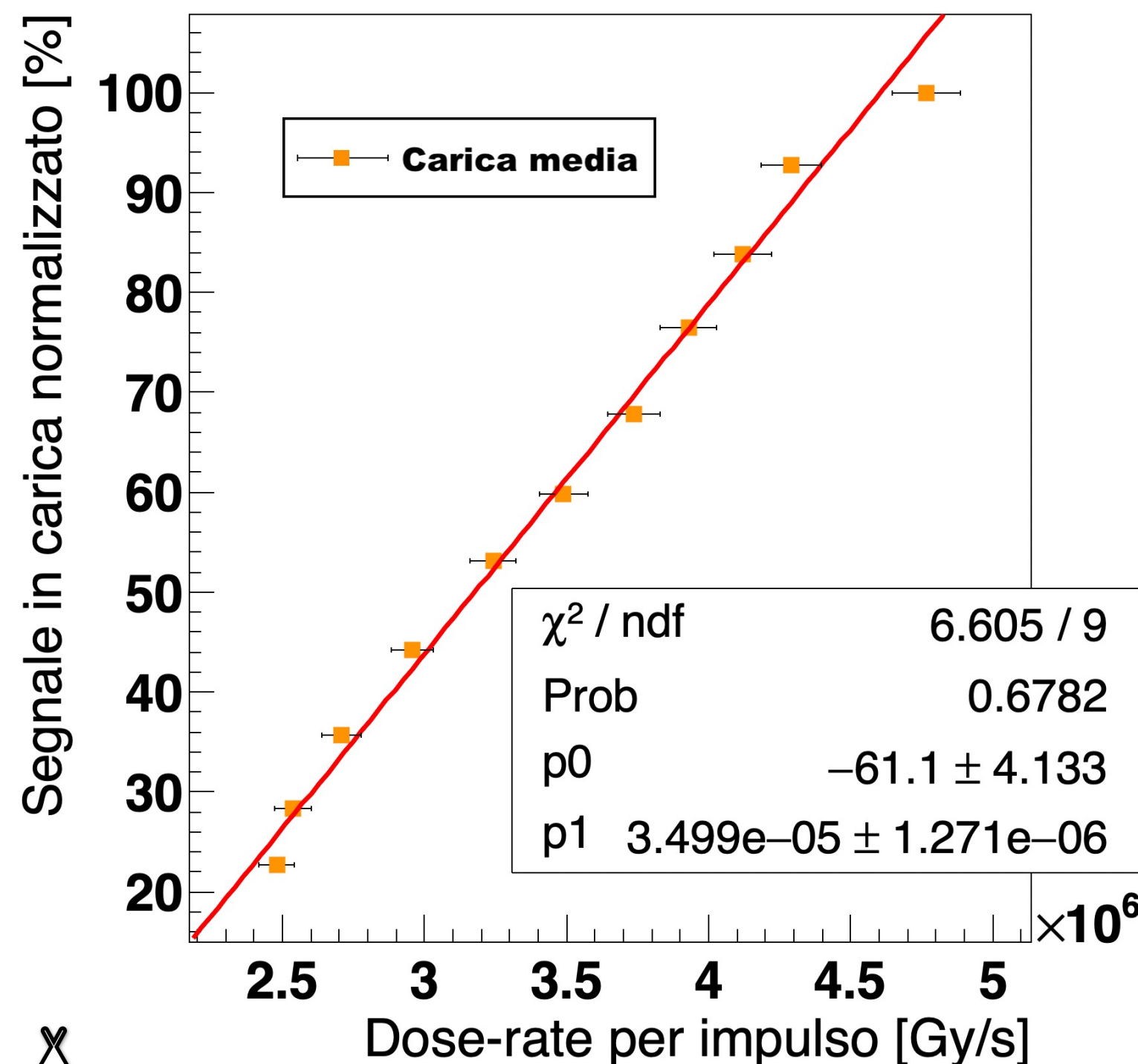
Preliminary measurements have been performed at SIT with LIAC and E-Flash.

Exploiting Fluorescence for beam monitoring purposes do not imply any beam degradation. During this first year we:

- ✓ Built several prototypes, changing shapes and readout systems;
- ✓ Tested the prototype as function of beam position (x, y) in order to study the backgrounds;
- ✓ Characterised of the detector proof of principle response as a function of beam intensity (current). The results are promising;



Up to now the detector shows the expected linear response.. Still more tests are needed



- ✓ A new test is planned at PISA electron beam for October/November 2022 (thanks!) in order to better characterise the detector performances and highlight critical aspects;
- ✓ An optimised geometry and readout system is under development:
 - A MC simulation with FLUKA of the new design has been developed.. it is an ongoing job (next meeting results!)
 - Part of the readout system is under acquisition
 - An optimised design will be completed at the beginning of 2023.