

# Development Plan

# Tasks

## Cryogenics

Liquid argon and xenon condenser and circulation system.

## Photodetector

SiPM sensitive to xenon scintillation. Integrate with frontend electronics.

Can we make Si substrate with ASIC and bond SiPM on top?

## Electronics

Frontend cold electronics, ASIC (amplifier, digitizer, steering module)

DAQ (FPGA)

## Image reconstruction

Better image reconstruction algorithm, faster process.

# Development Plan

In Cagliari, we have a funding (300k€) for one and a half year more.

Two possible sites (so far): Cagliari, Italy and Houston, USA

- INFN Cagliari & Unica: Prototype
- Houston: Prototype
- Astrocent: Image reconstruction
- INFN Torino: ASIC
- FBK: SiPM (integration with ASIC?)
- CAEN: DAQ
- Princeton: Xe-doping
- Itelte: Overall Integration
- Paris: Xe-doping
- Riverside: ???

# Funding Plan

Currently, we have the funding for hardware in Cagliari. Human resources are provided through each local funding.

- University internal funding is possible and will be sought, one pathway is Houston which is starting program for drug discovery/development
- Applied for regional funding in Sardinia. The results will come in the end of May.
- US groups should form collaborative proposal for NSF, NIH, etc.

# Corporation

We need to have some kind of agreement, like Memorandum of Understanding?

Once we received the result of the regional funding of Sardinia, we will make an agreement.