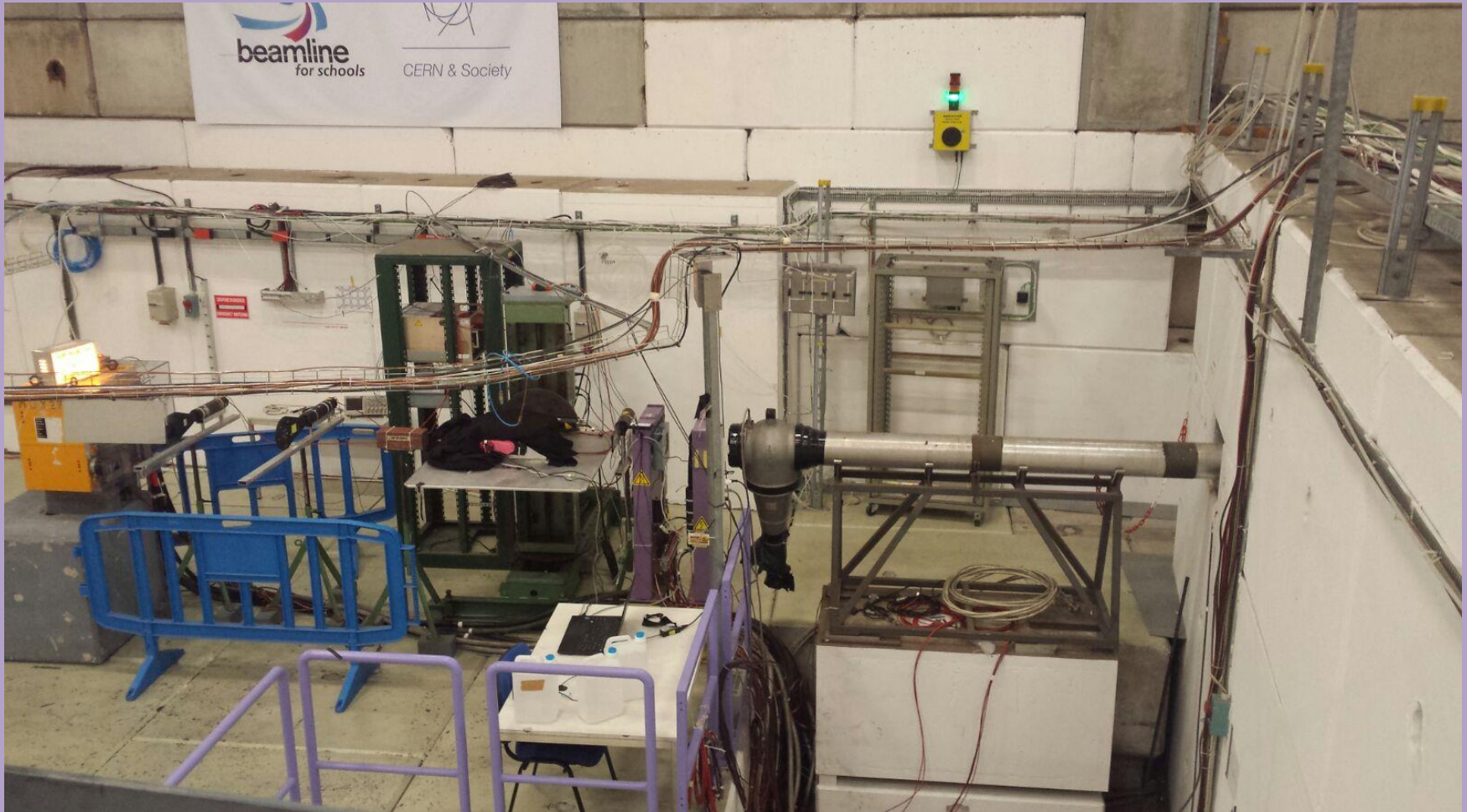
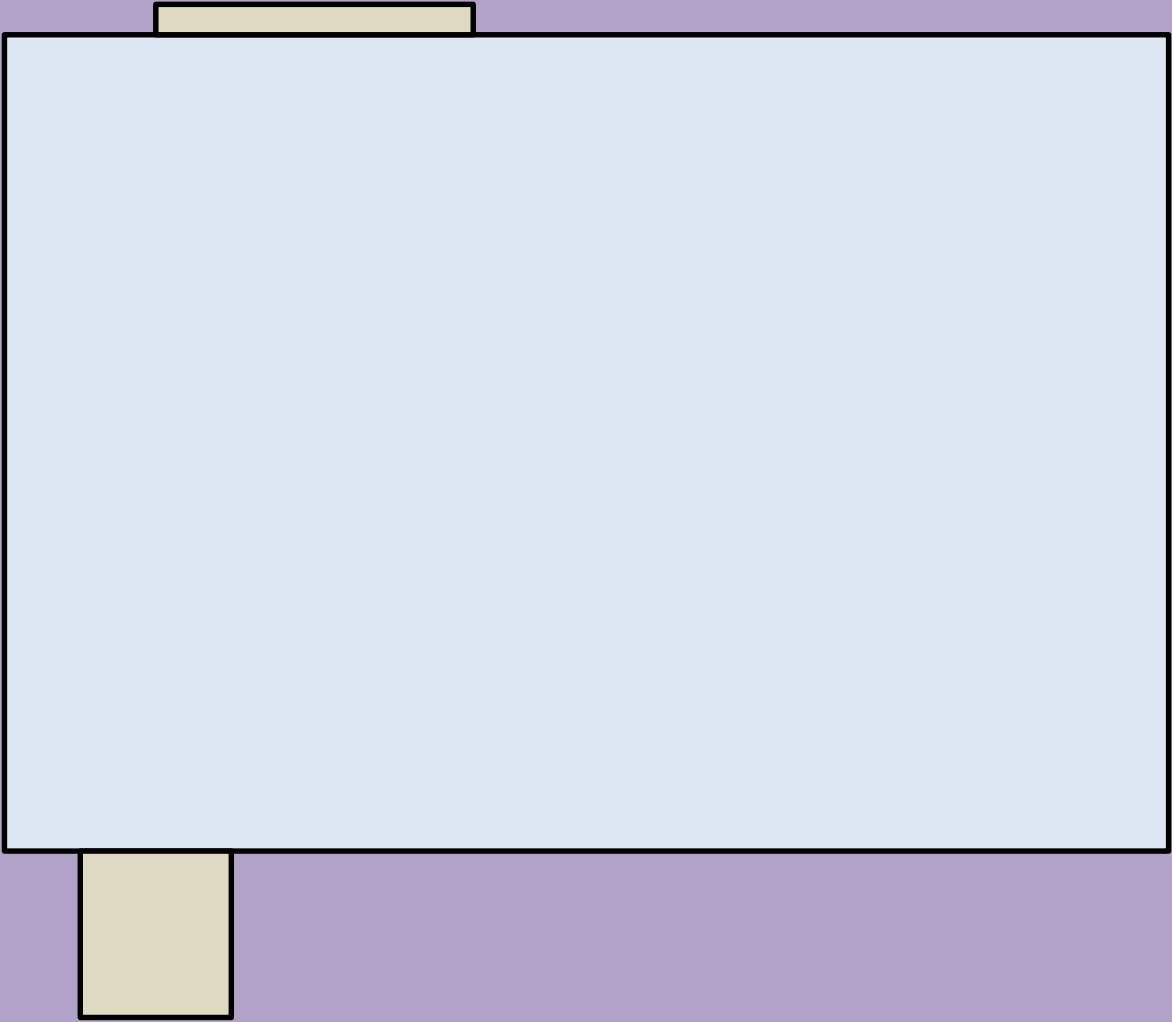


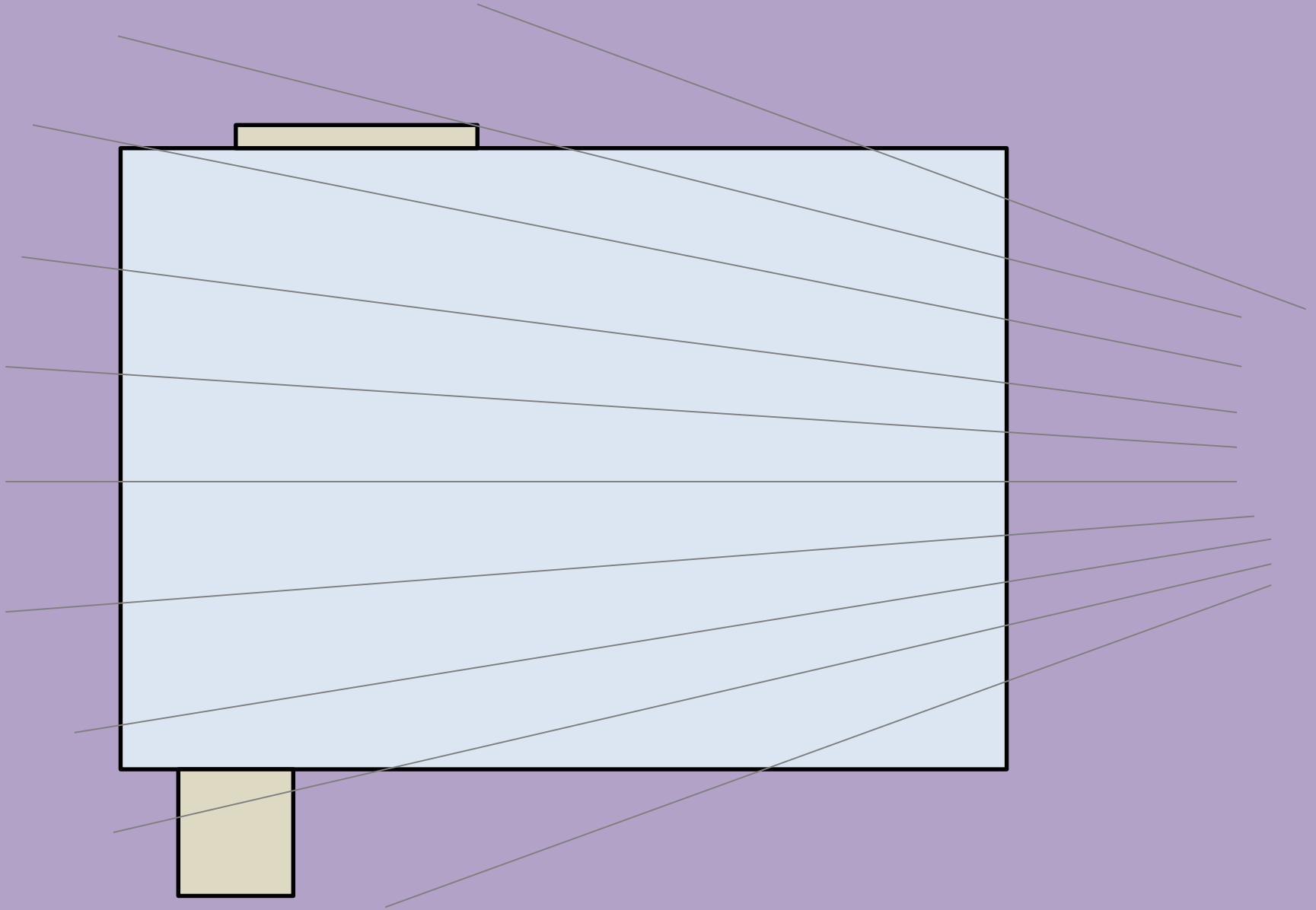
INTRODUCTION

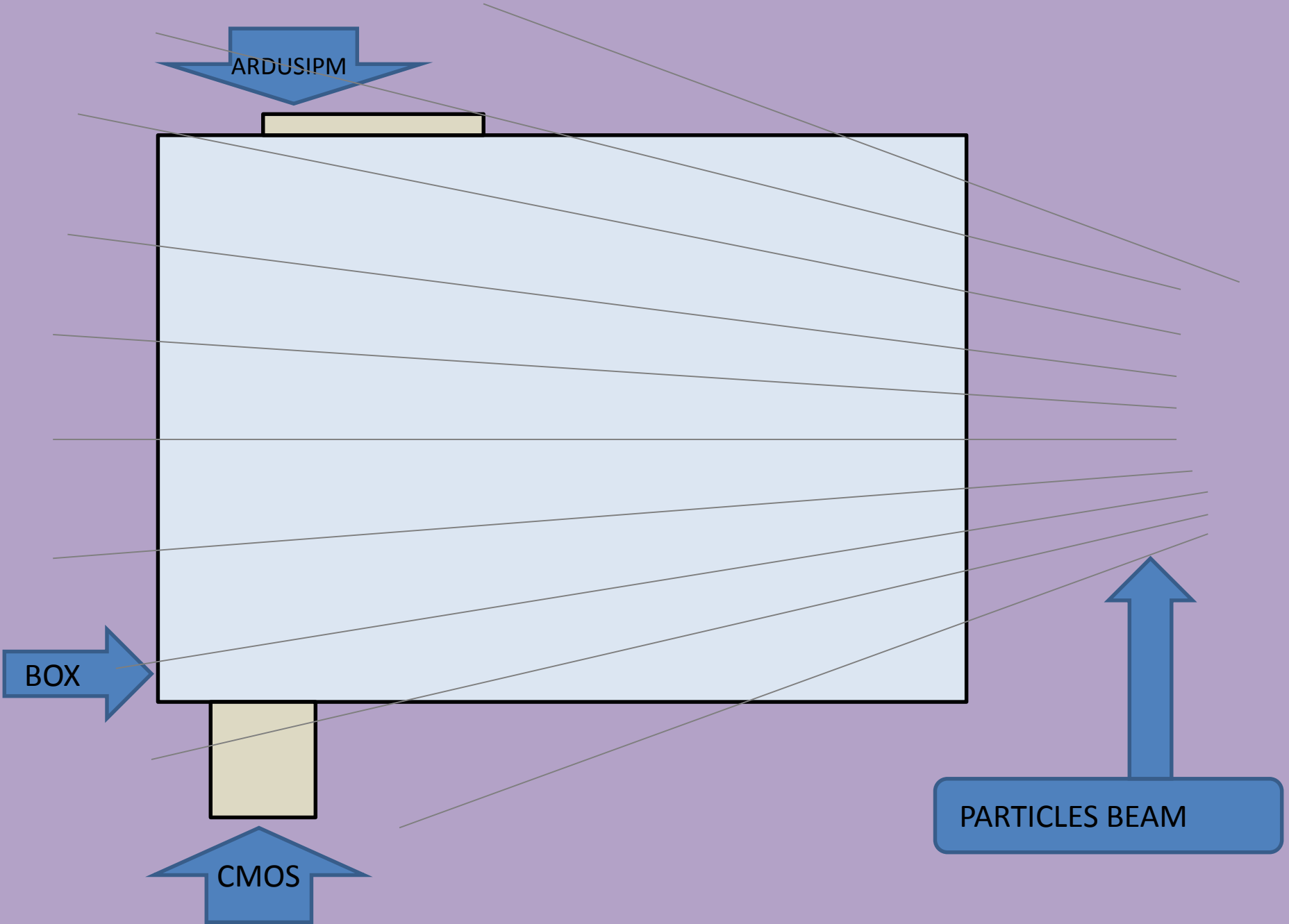
- Box in front of the beam
- Many tests with and without water and shutter
- Many amounts of particles
- Different types of beam
- 2 different sensors

Experimental setup

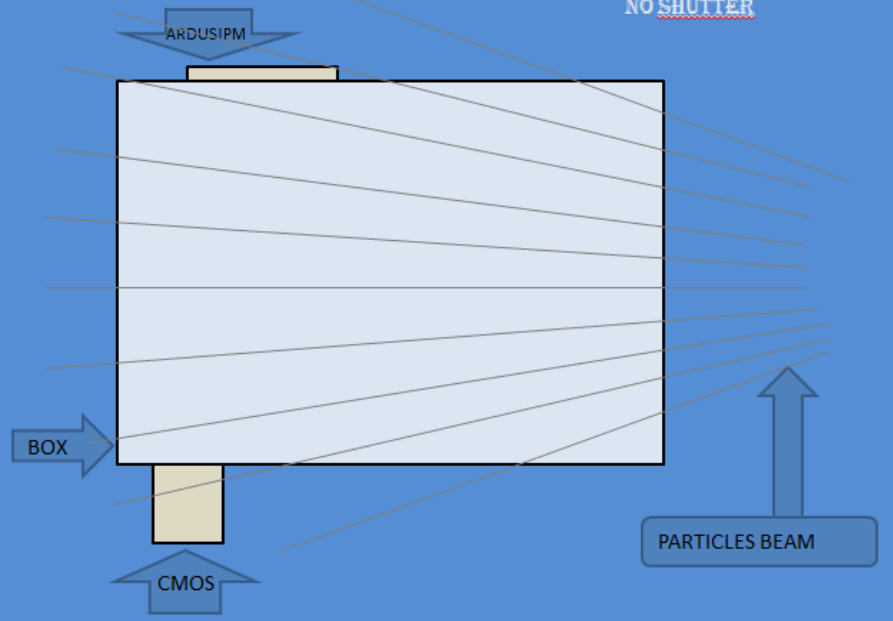




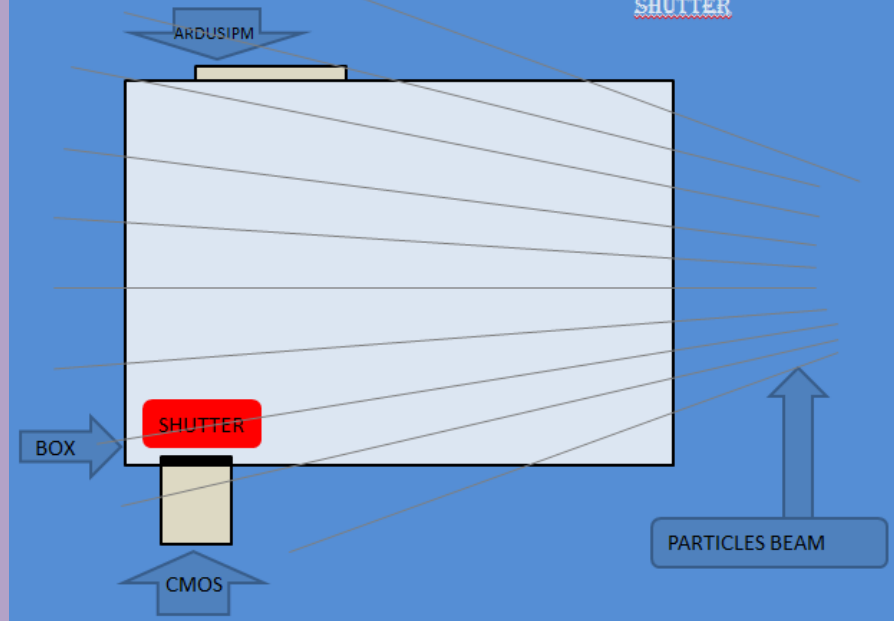




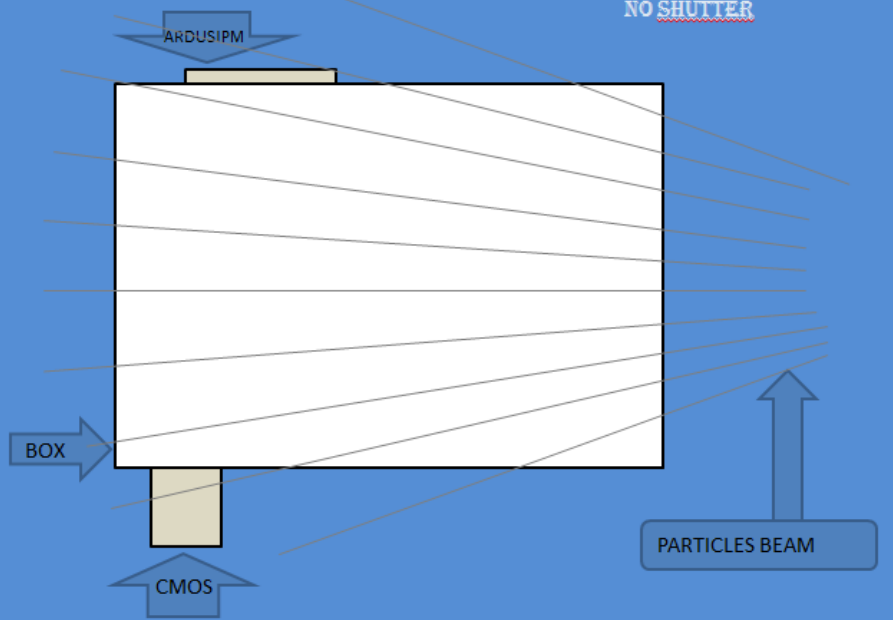
BEAM+WATER+
NO SHUTTER



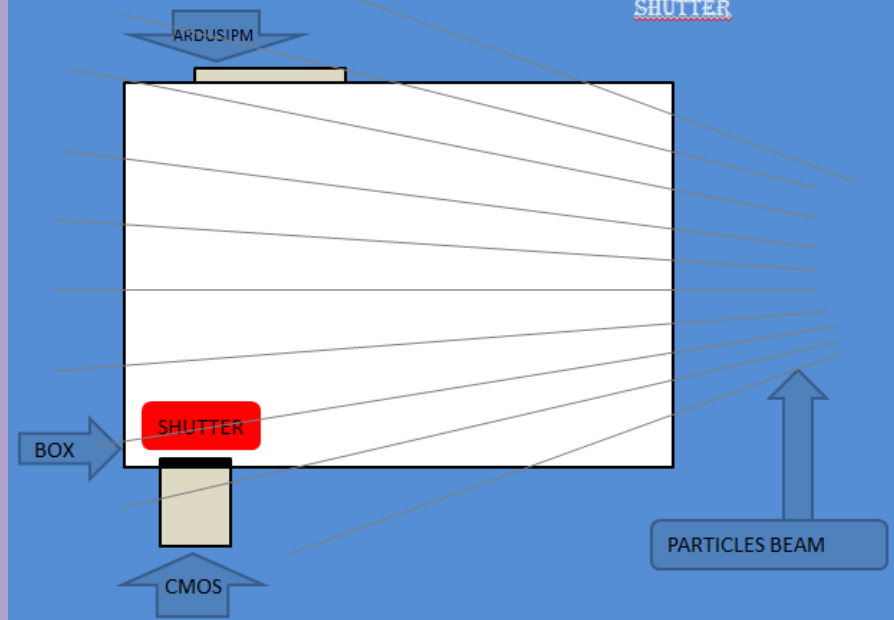
BEAM+WATER+
SHUTTER

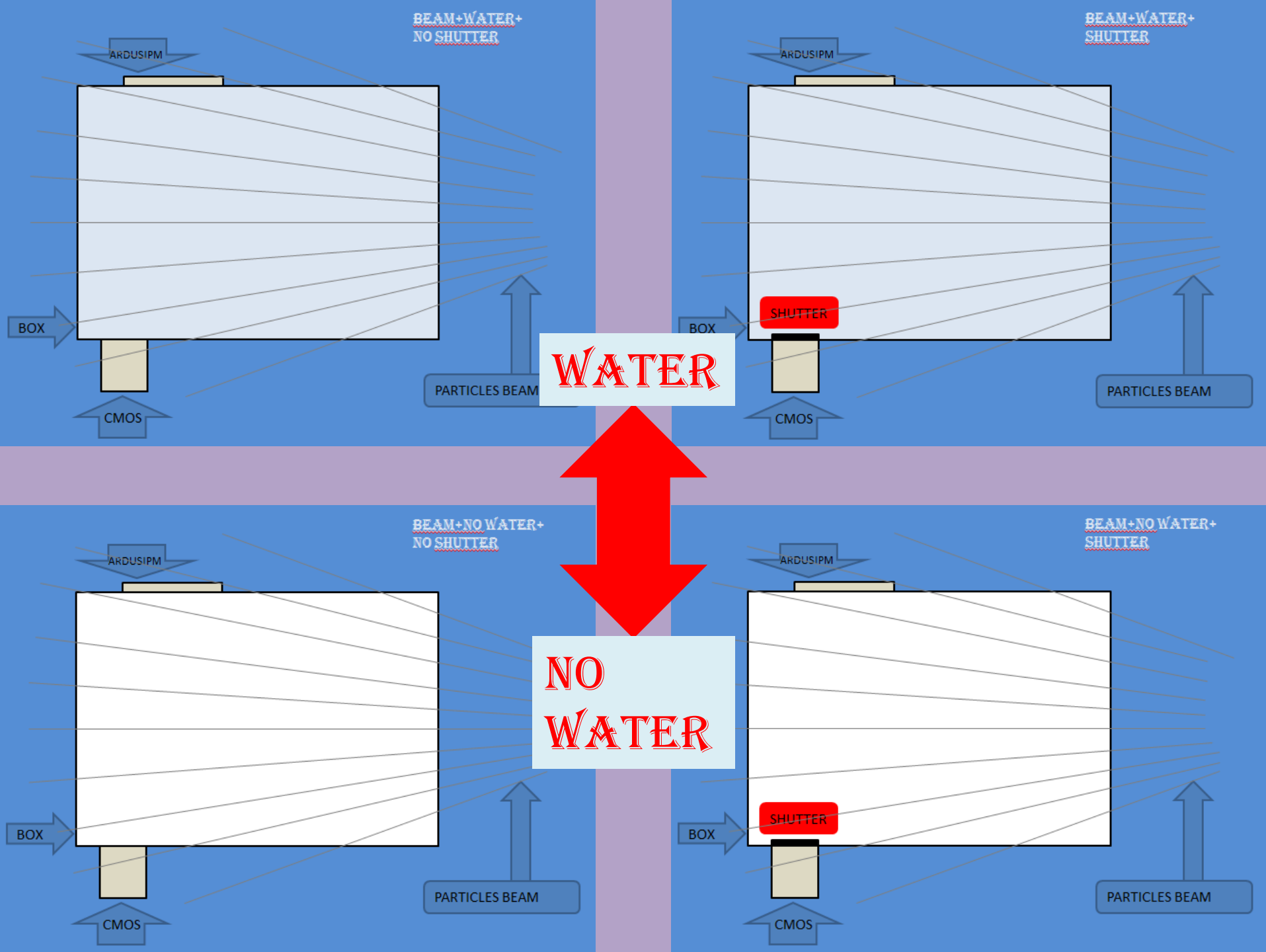


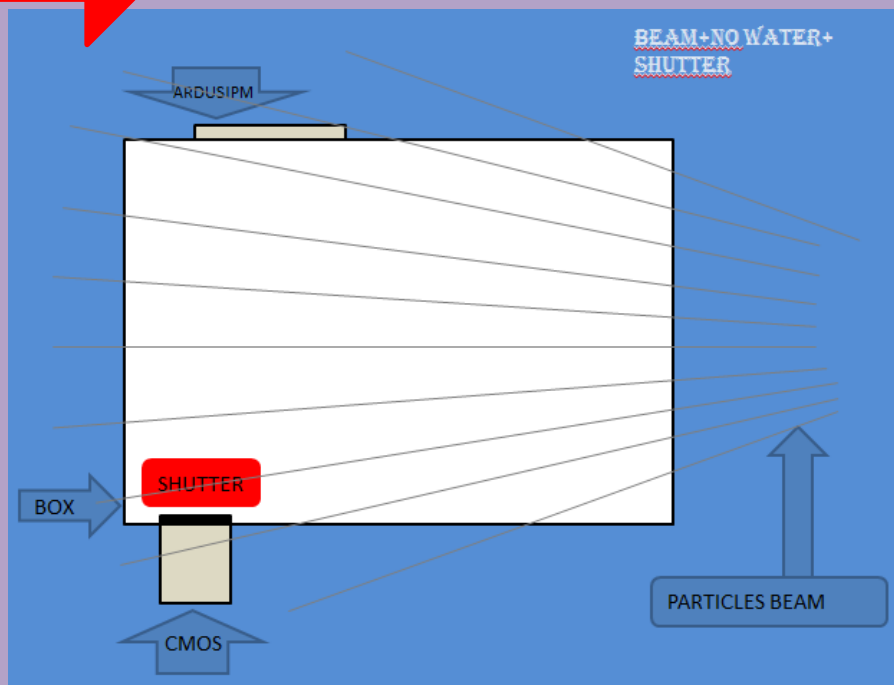
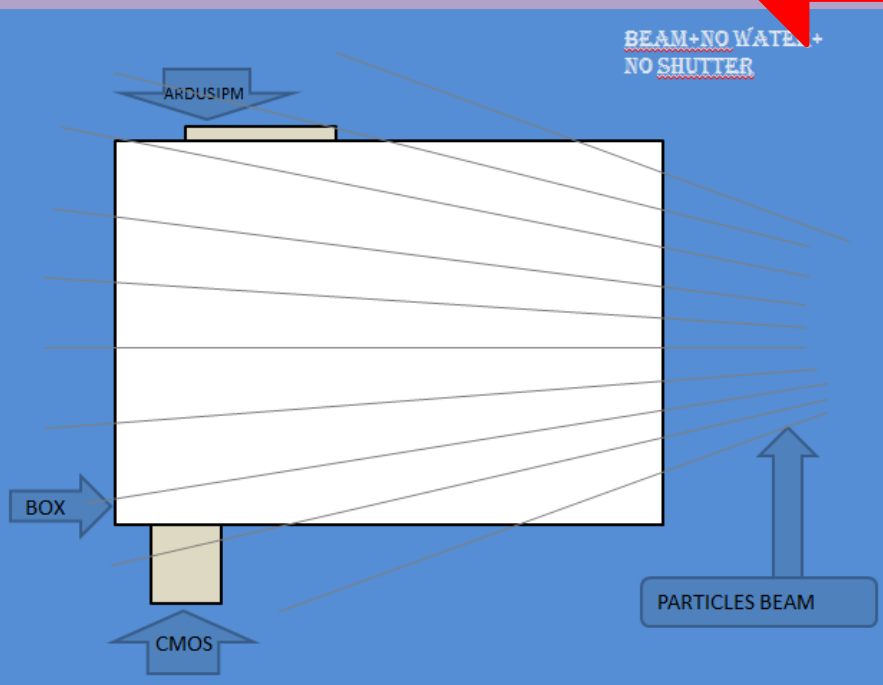
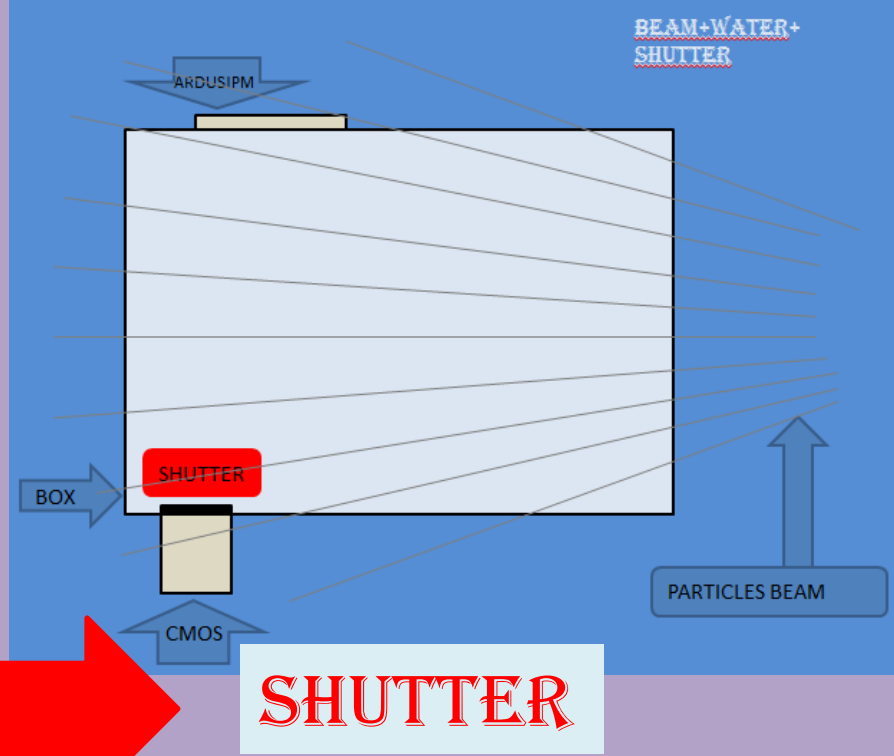
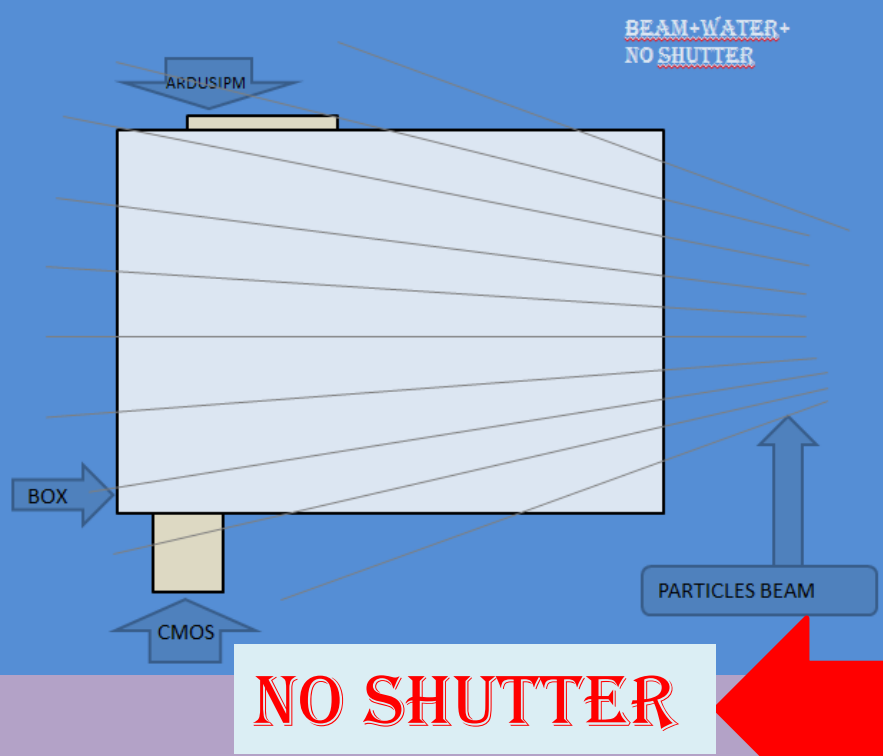
BEAM+NO WATER+
NO SHUTTER



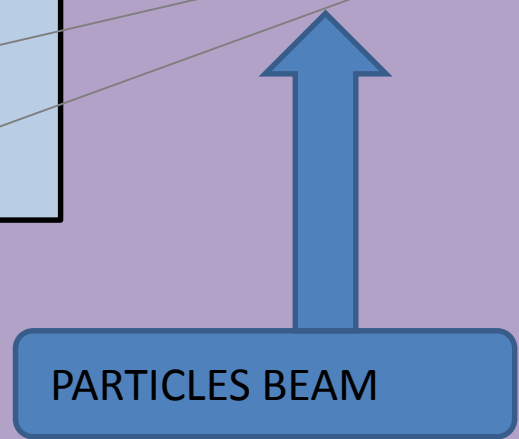
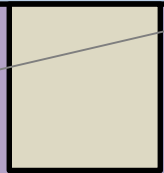
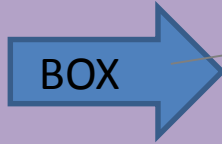
BEAM+NO WATER+
SHUTTER







BEAM+WATER+
NO SHUTTER



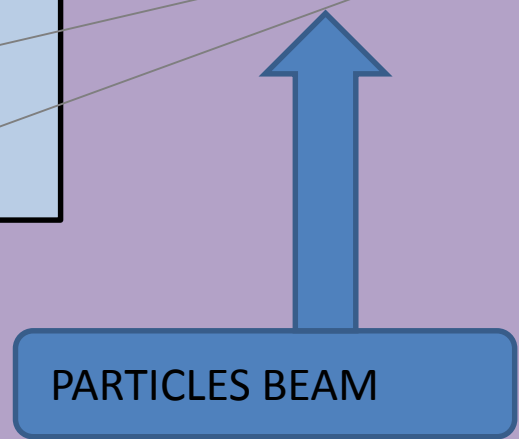
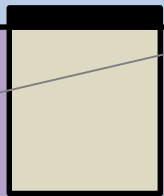
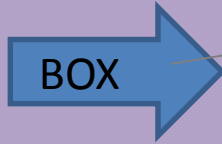
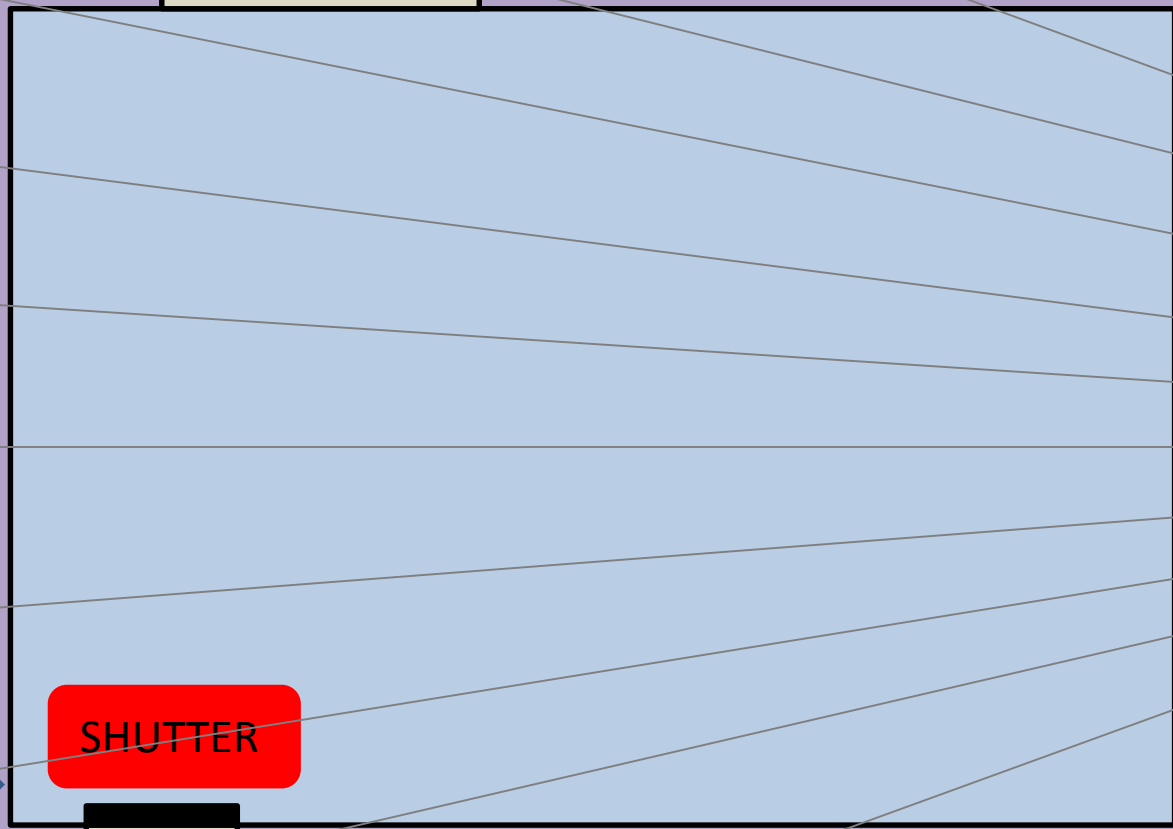
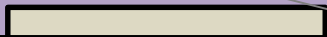
PREDICTIONS: BEAM+WATER+NO SHUTTER

Possible effects:

- The particles hit the 2 sensors
- Scintillation of the material
- Expecting cherenkov effect



BEAM+WATER+
SHUTTER

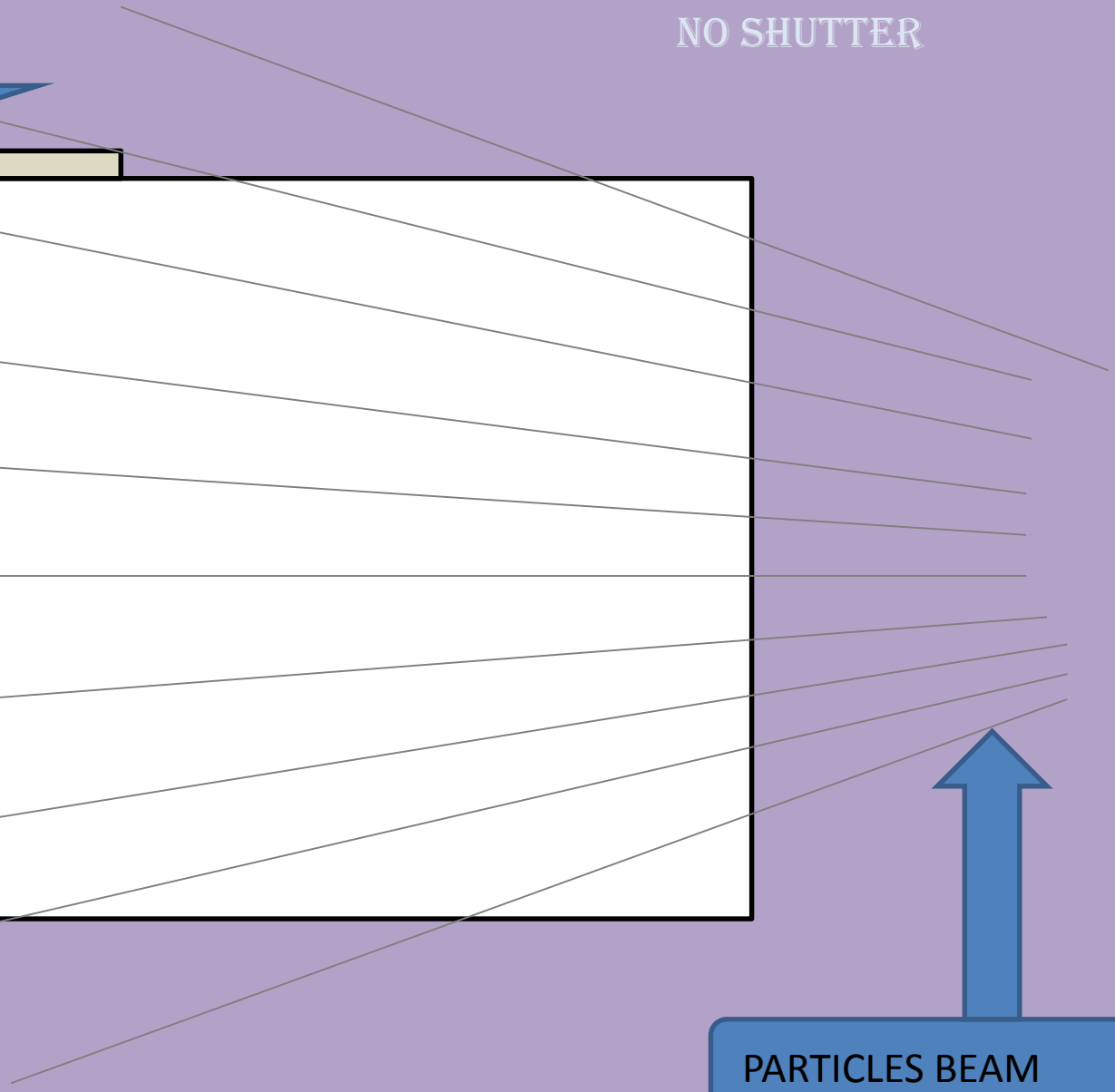
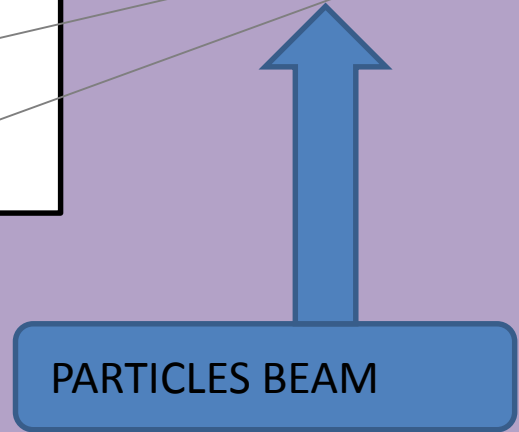
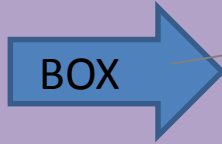
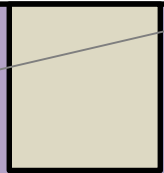
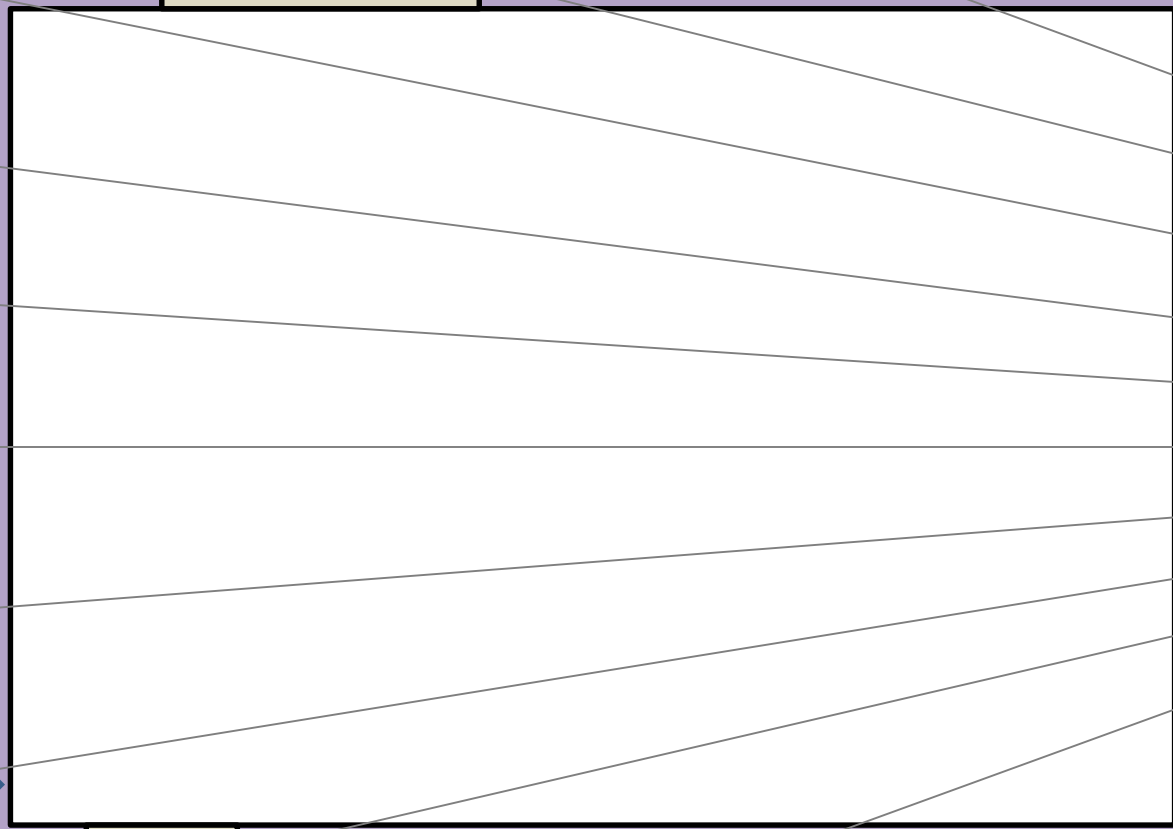
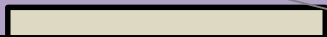


PREDICTIONS: BEAM+WATER+SHUTTER

Possible effects:

- The particles hit the 2 sensors 
- Expecting no scintillation because blocked by the shutter 
- Expecting cherenkov effect, but photons blocked by shutter 

BEAM+NO WATER+
NO SHUTTER



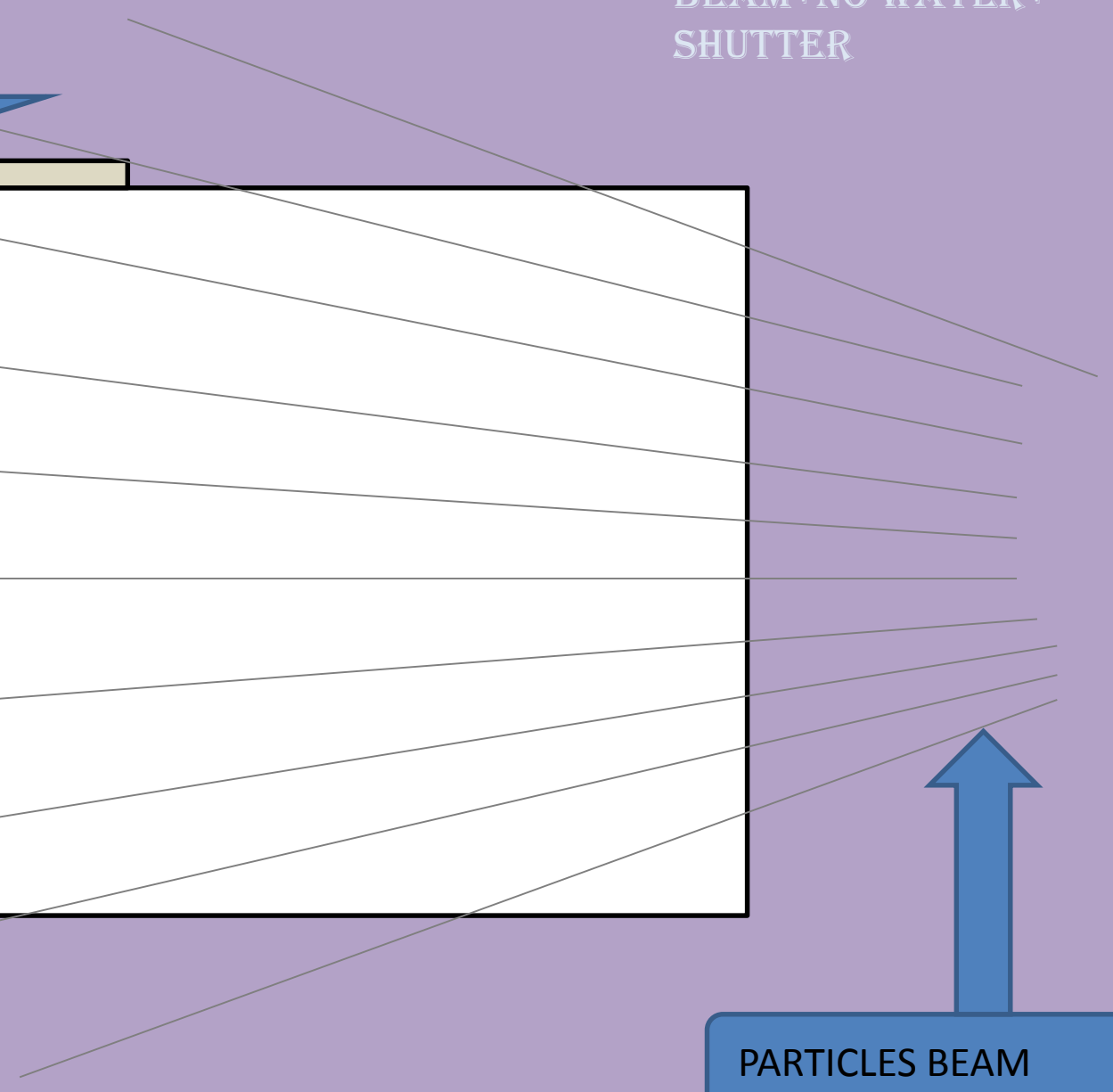
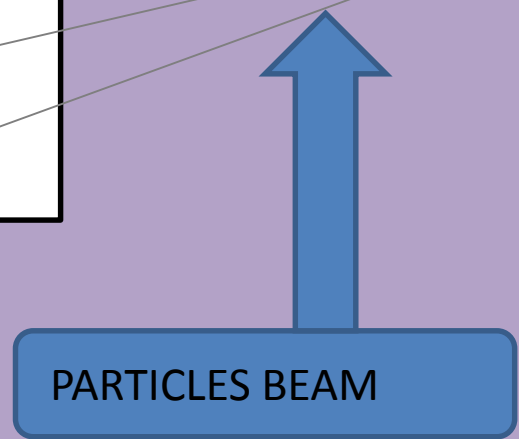
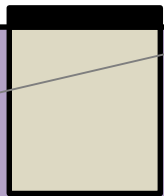
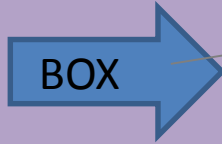
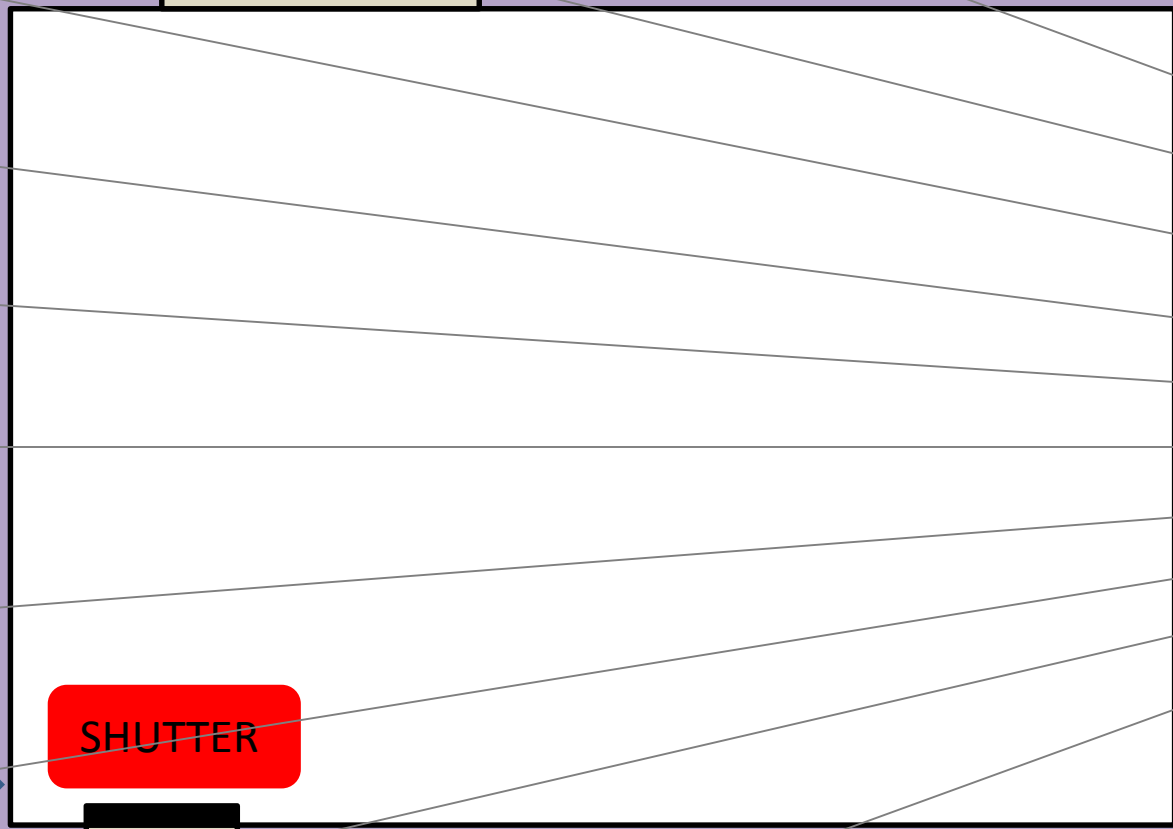
PREDICTIONS: BEAM+NO WATER+NO SHUTTER

Possible effects:

- The particles hit the 2 sensors
- Scintillation of the material
- Expecting no cherenkov effect






BEAM+NO WATER+
SHUTTER

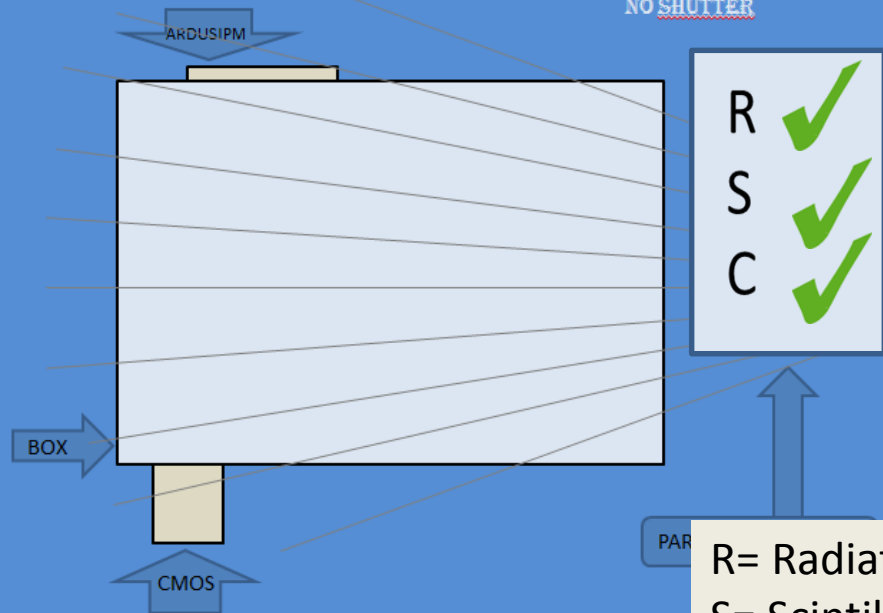


PREDICTIONS: BEAM+NO WATER+SHUTTER

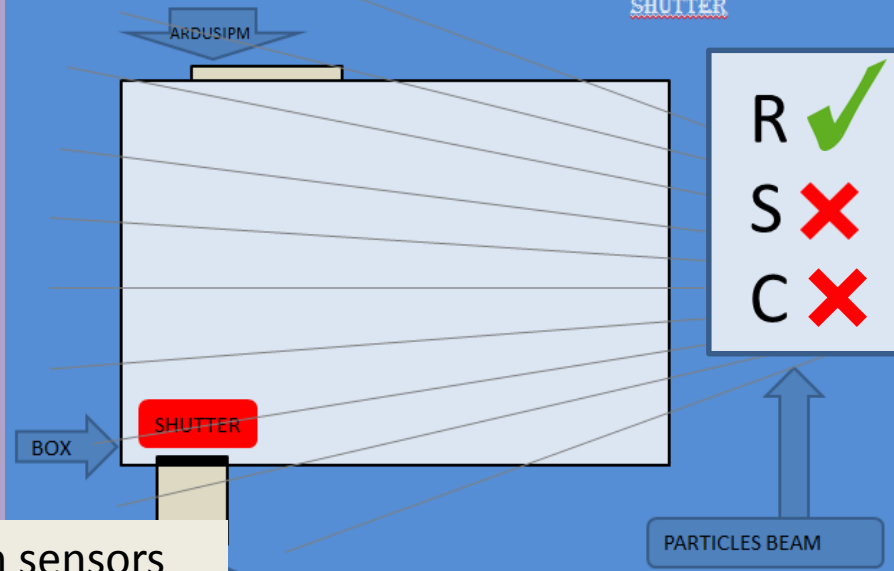
Possible effects:

- The particles hit the 2 sensors 
- Expecting no scintillation because blocked by the shutter 
- Expecting no cherenkov effect 

BEAM+WATER+
NO SHUTTER

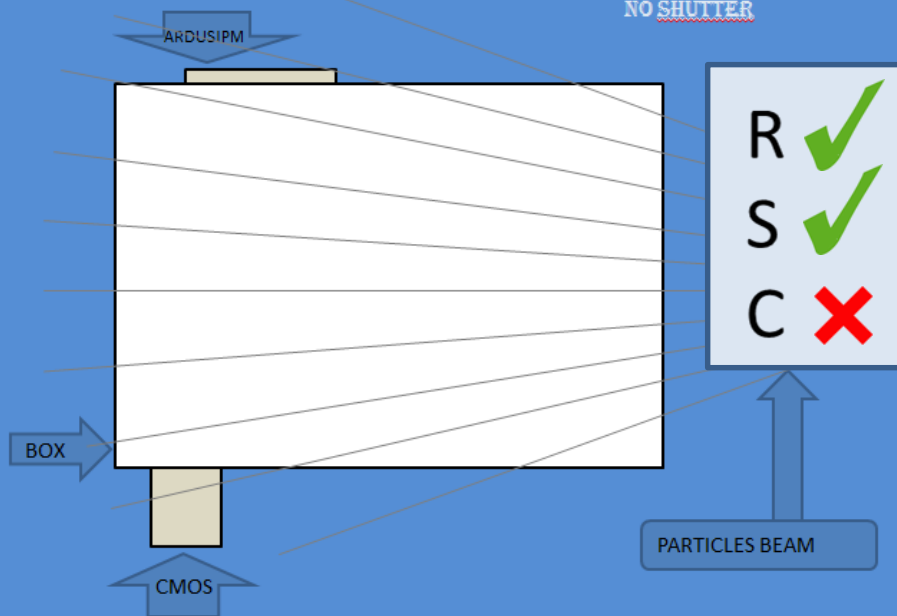


BEAM+WATER+
SHUTTER

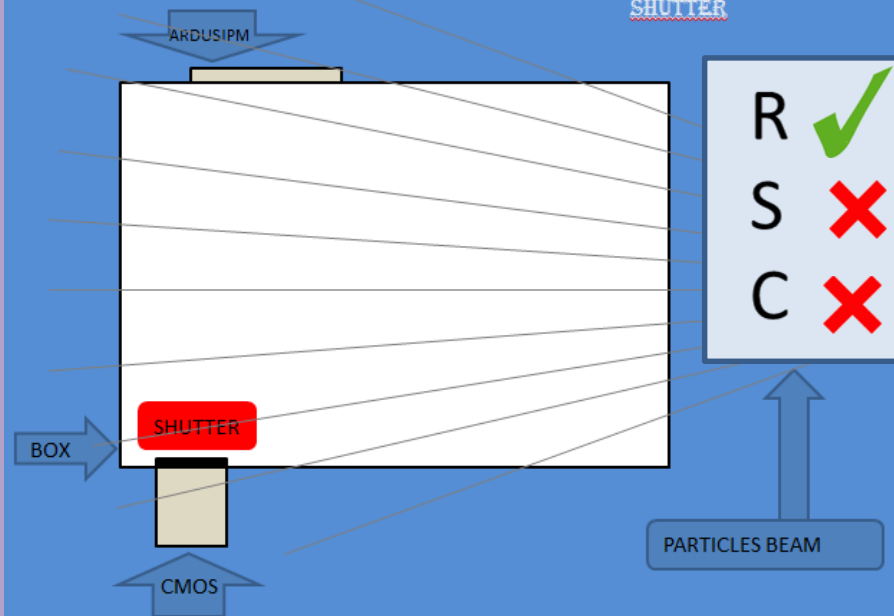


R= Radiation on sensors
S= Scintillation on the box
C= Cherenkov effect

BEAM+NO WATER+
NO SHUTTER

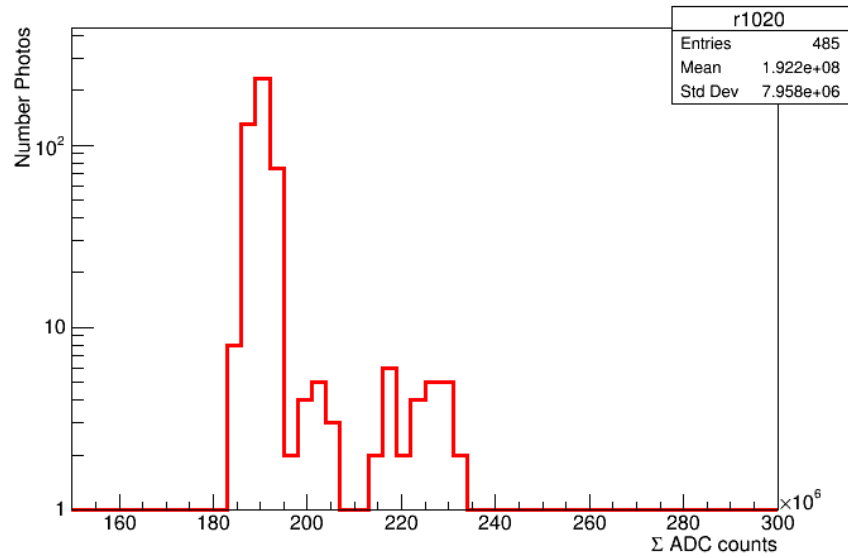


BEAM+NO WATER+
SHUTTER



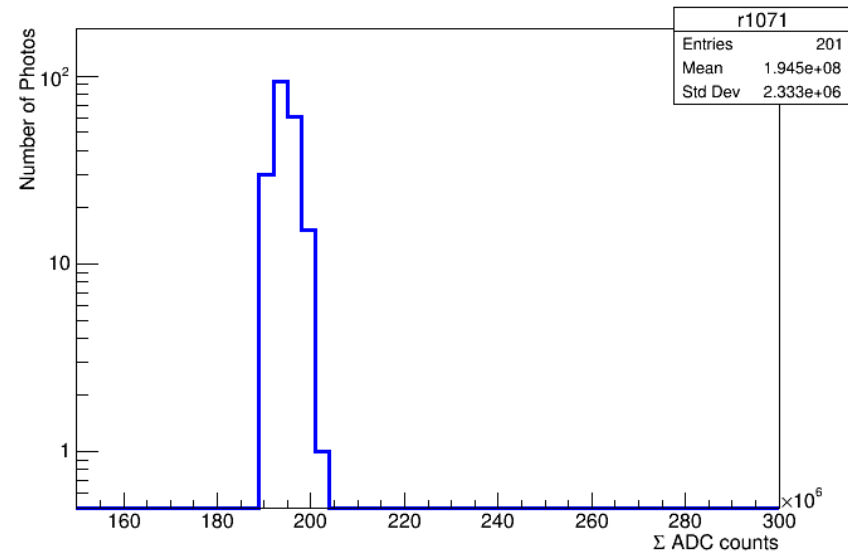
BEAM+WATER+
NO SHUTTER

TCO-ASA, Run 1020, Gain=200, EXP=1 sec, n part.=4.00e5, water, no shutter



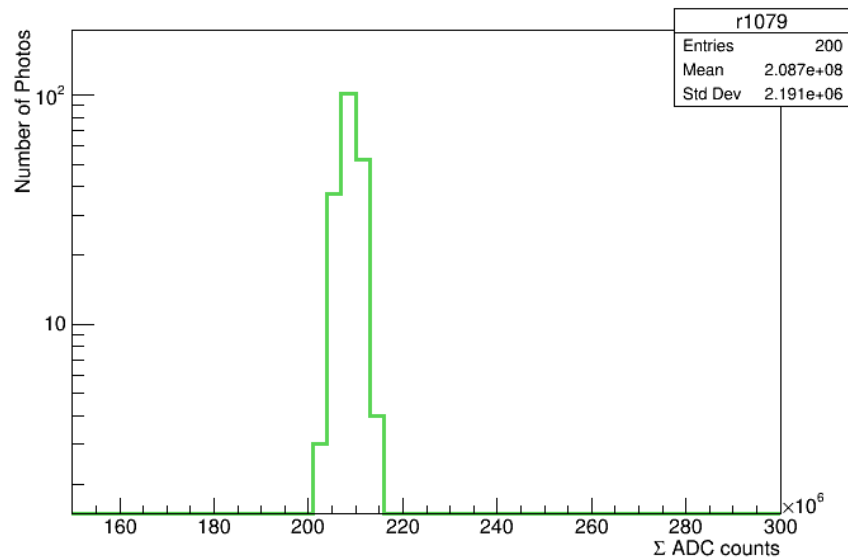
BEAM+WATER+
SHUTTER

TCO-ASA, Run 1071, Gain=200, EXP=1 sec, n part.=4.65e5, water, shutter



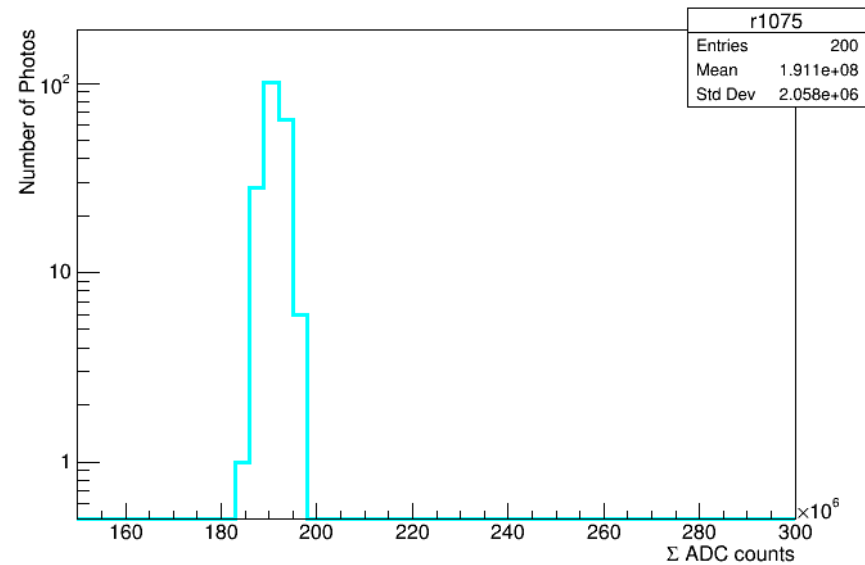
BEAM+NO WATER+
NO SHUTTER

TCO-ASA, Run 1079, Gain=200, EXP=1 sec, n part.=4.65e5, no water, no shutter



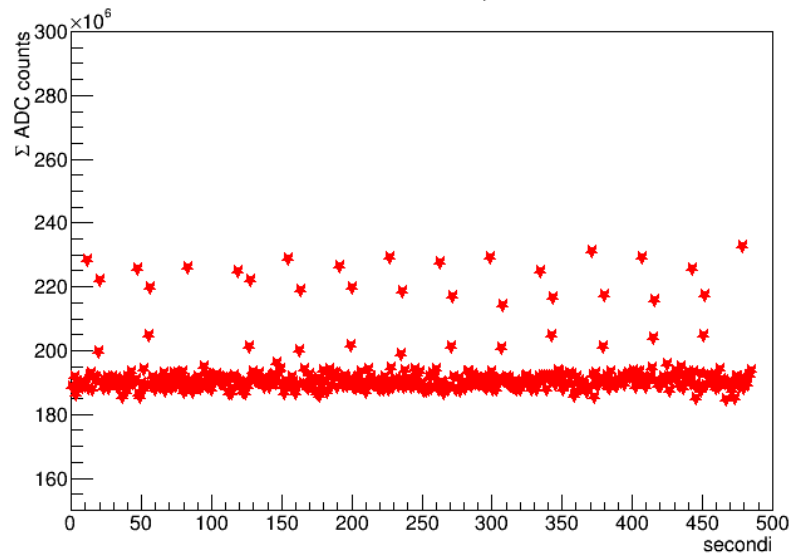
BEAM+NO WATER+
SHUTTER

TCO-ASA, Run 1075, Gain=200, EXP=1 sec, n part.=4.65e5, no water, shutter



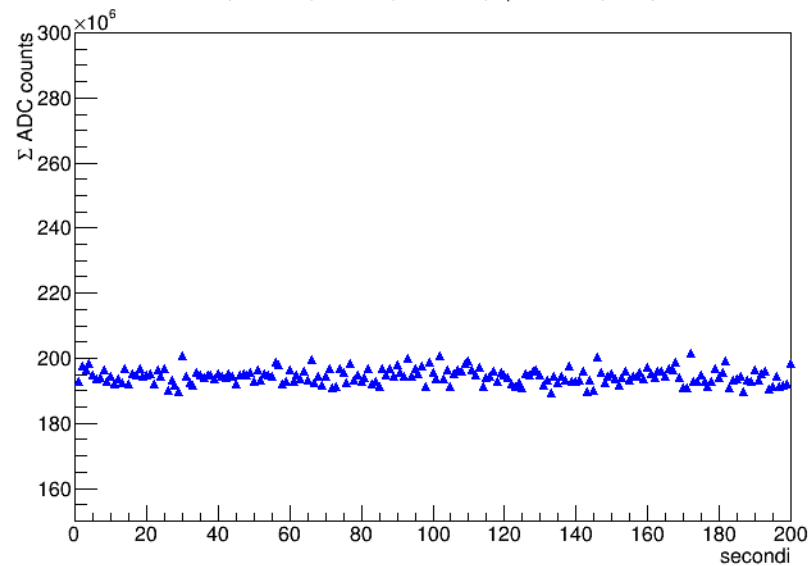
BEAM+WATER+
NO SHUTTER

TCO-ASA, Run 1020, Gain=200, EXP=1 sec, n part.=4.00e5, water, no shutter



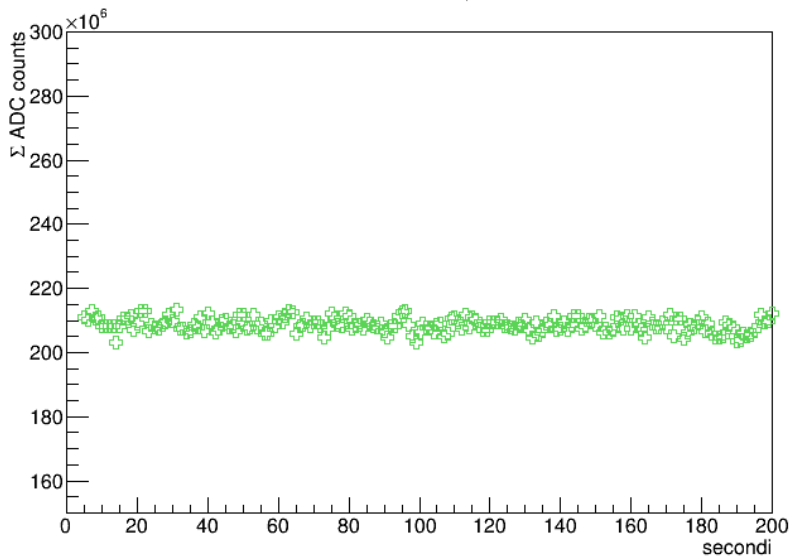
BEAM+WATER+
SHUTTER

TCO-ASA, Run 1071, Gain=200, EXP=1 sec, n part.=4.65e5, water, shutter



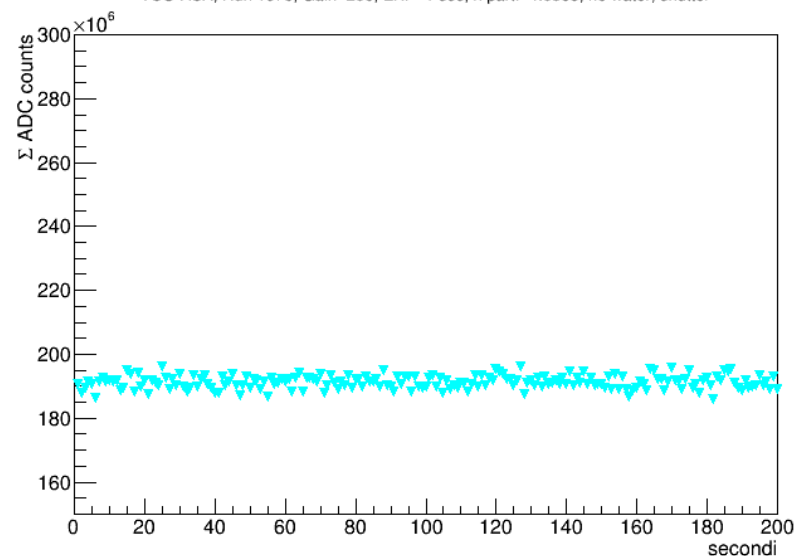
BEAM+NO WATER+
NO SHUTTER

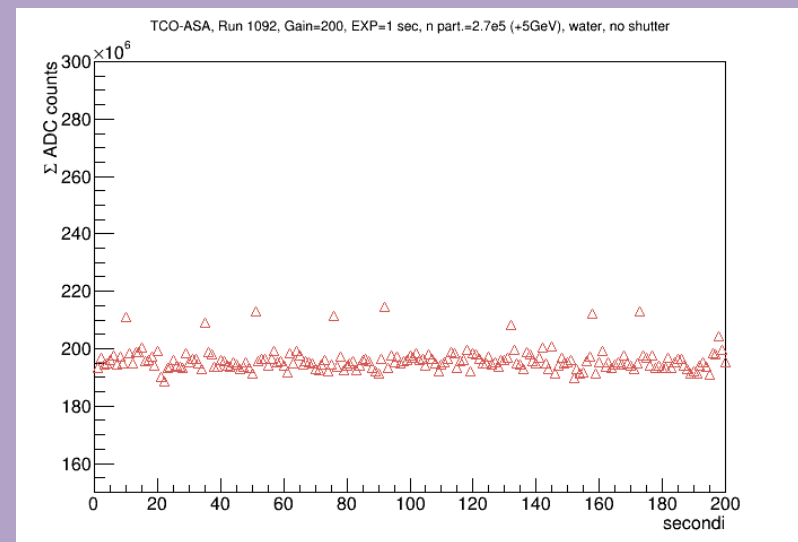
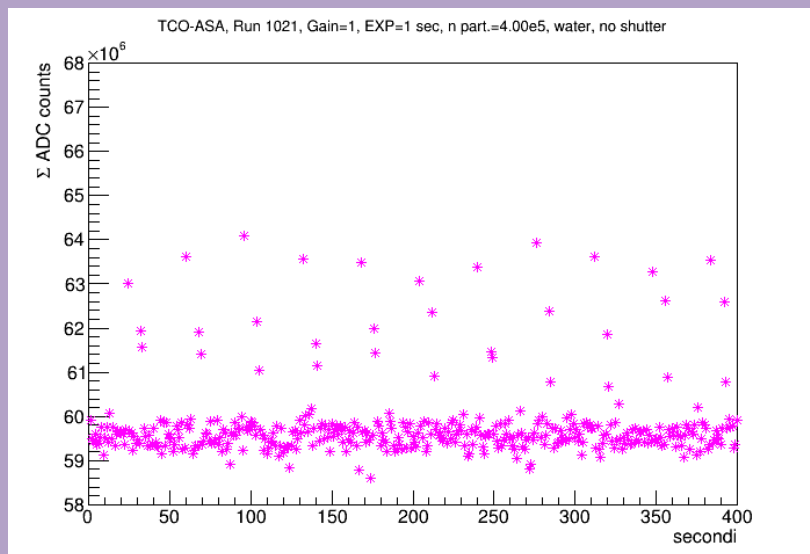
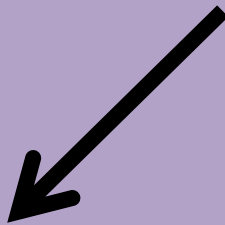
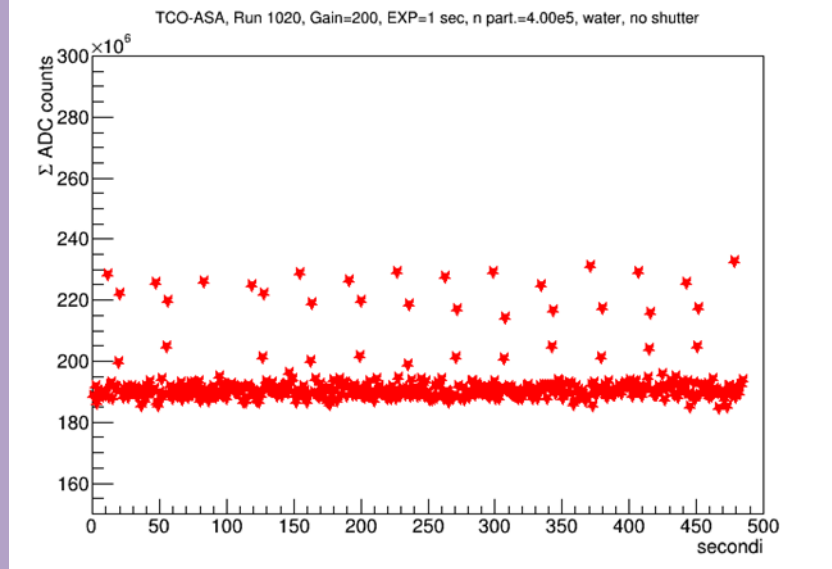
TCO-ASA, Run 1079, Gain=200, EXP=1 sec, n part.=4.65e5, no water, no shutter



BEAM+NO WATER+
SHUTTER

TCO-ASA, Run 1075, Gain=200, EXP=1 sec, n part.=4.65e5, no water, shutter

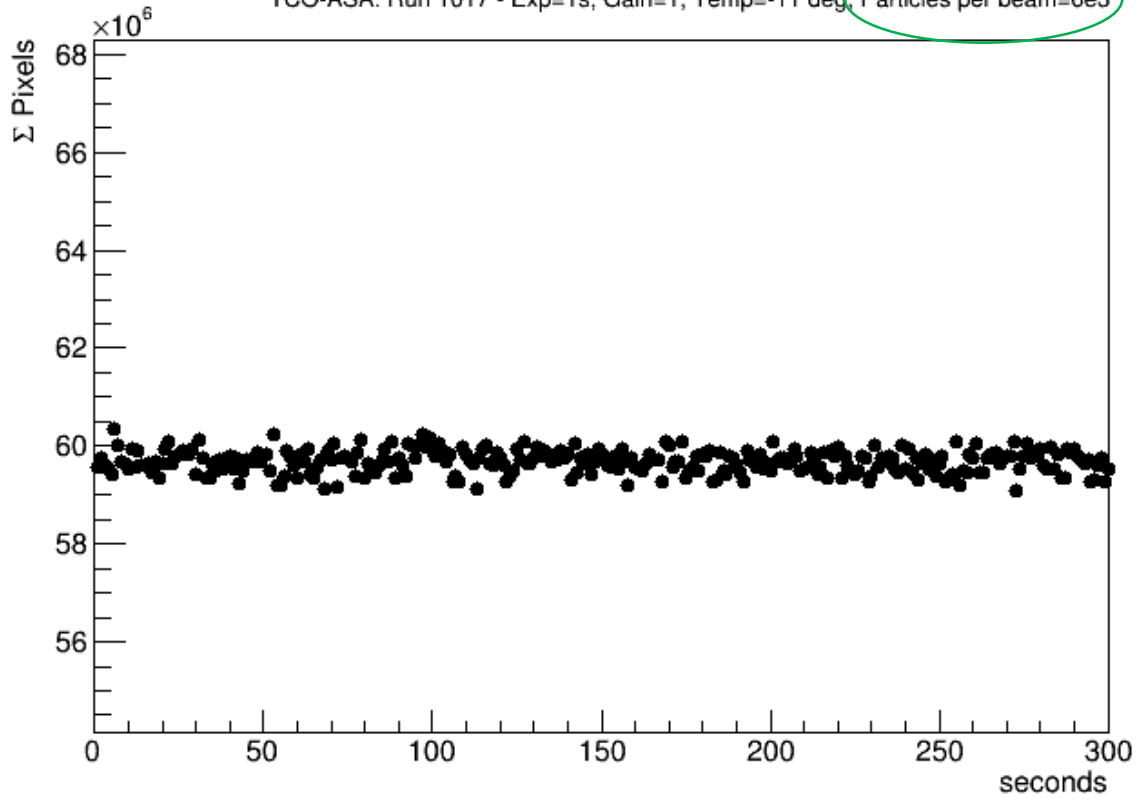




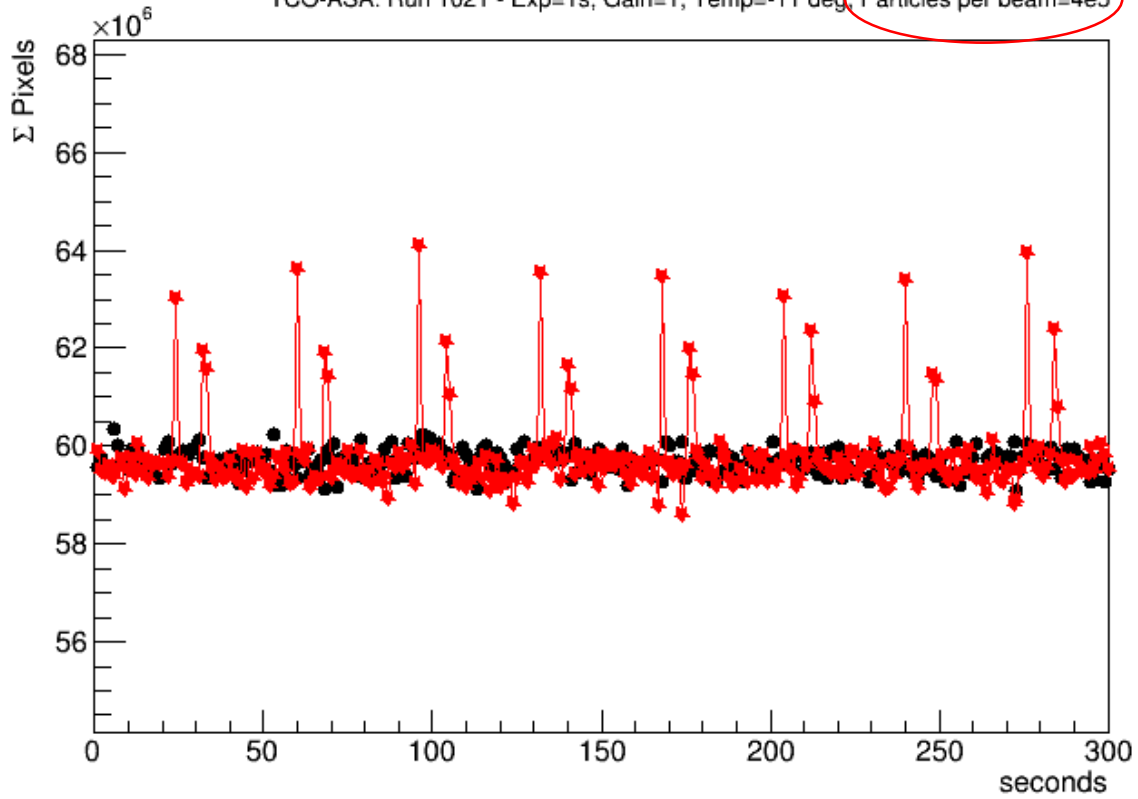
| | Gain | Particles | Configurations |
|--------------------------|------------|----------------------|--|
| Signal estimation | 1 | 5e ⁺⁰⁴ | No water Water +shutter Water + no shutter |
| | 1/5/50 | 27e ⁺⁰⁴ | No water Water +shutter Water + no shutter |
| | 1 | 8.4e ⁺⁰⁴ | Shutter Water + no shutter |
| | 1/5/50/200 | 46.5e ⁺⁰⁴ | No water Water +shutter Water + no shutter |

| | Particles | Energy | Gain |
|------------------|----------------------|---------|---------------------------------------|
| Scan Gain | 5e ⁺⁰⁴ | -10 Gev | 1,5,10,15,20,25,50 |
| | 8.4e ⁺⁰⁴ | +1 Gev | 1,50,200 |
| | 27e ⁺⁰⁴ | +5 Gev | 1,5,50,200 |
| | 40.0e ⁺⁰⁴ | +10 Gev | 1,5,10,15,20,25,50,75, 100,150,150 |
| | 46.5e ⁺⁰⁴ | +10 Gev | 1,5,50,200 |

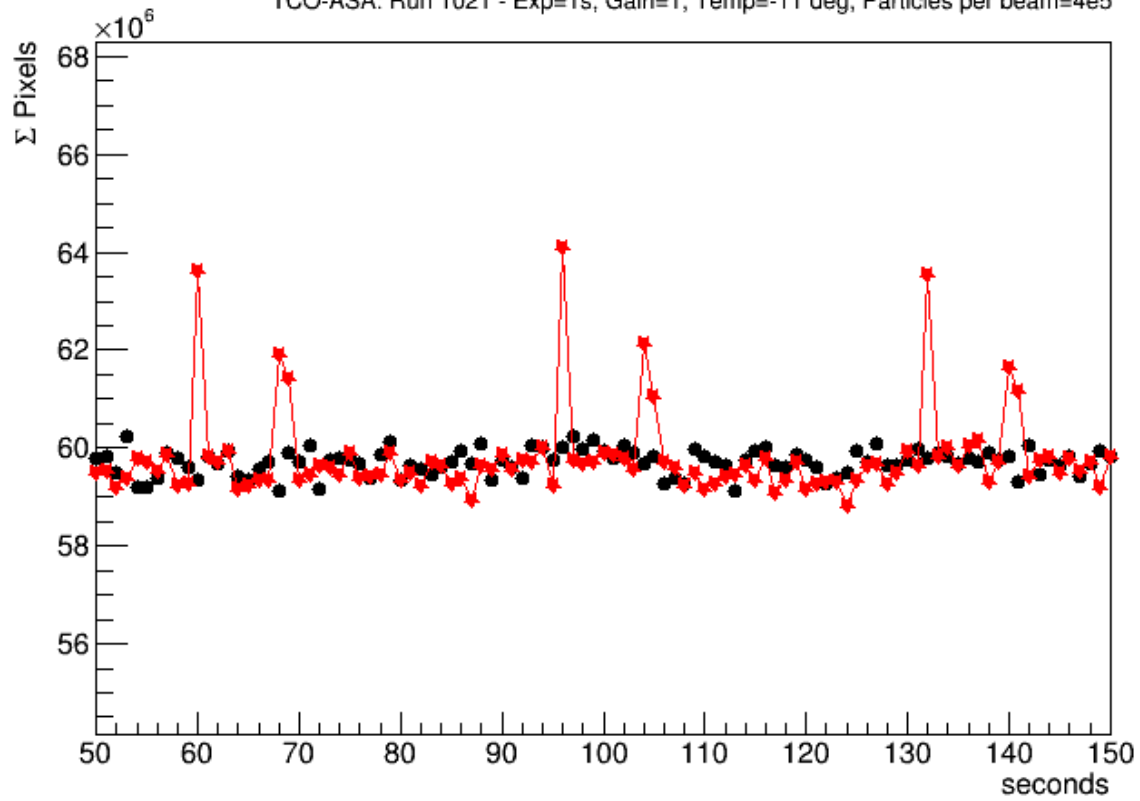
TCO-ASA: Run 1017 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=6e3



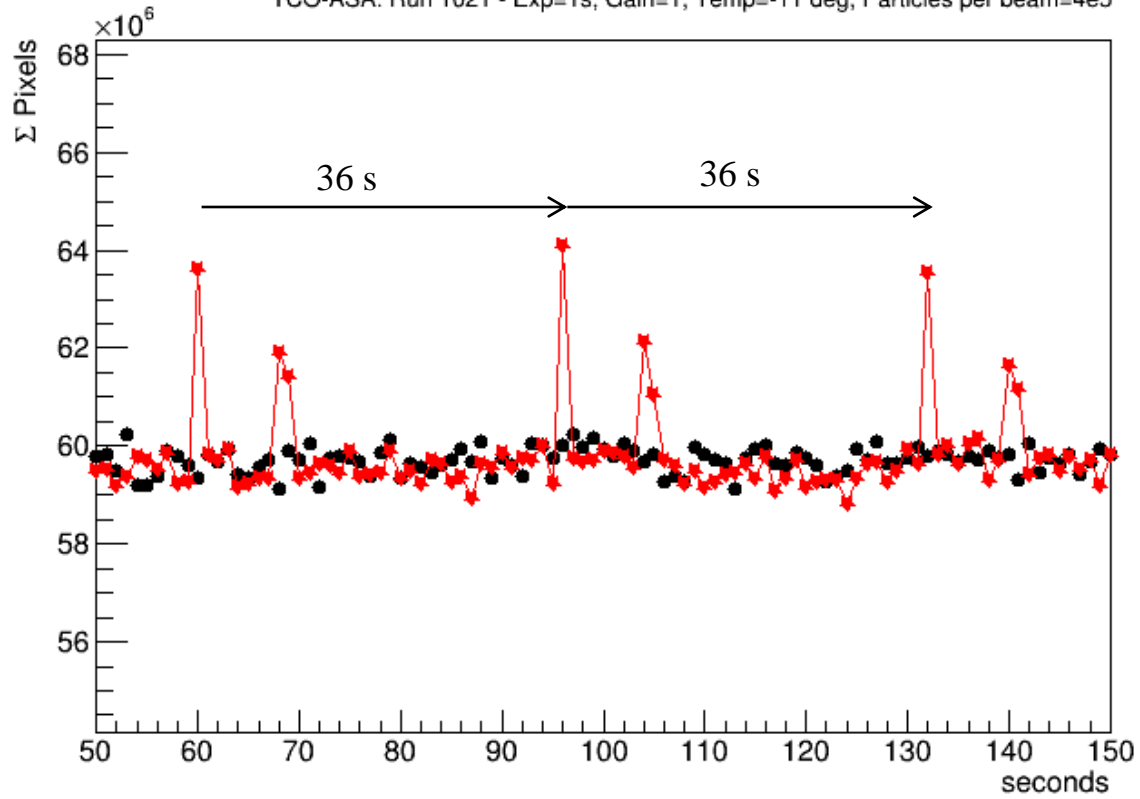
TCO-ASA: Run 1021 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=4e5



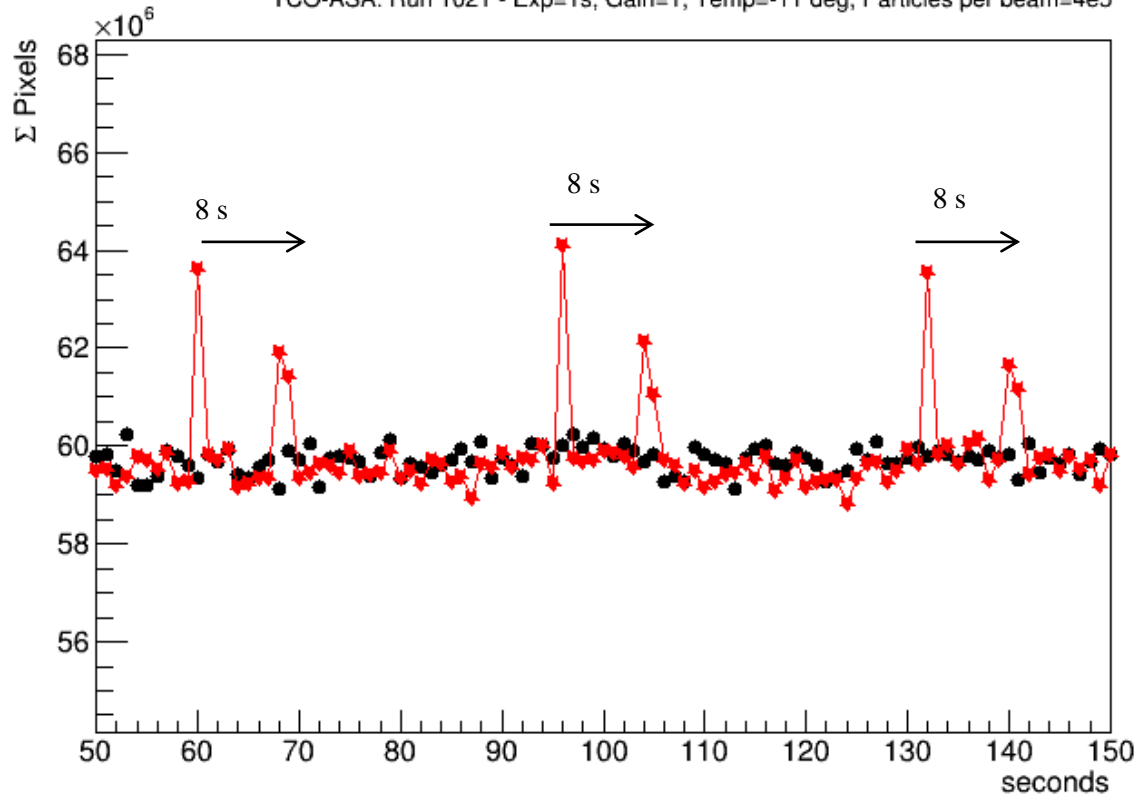
TCO-ASA: Run 1021 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=4e5



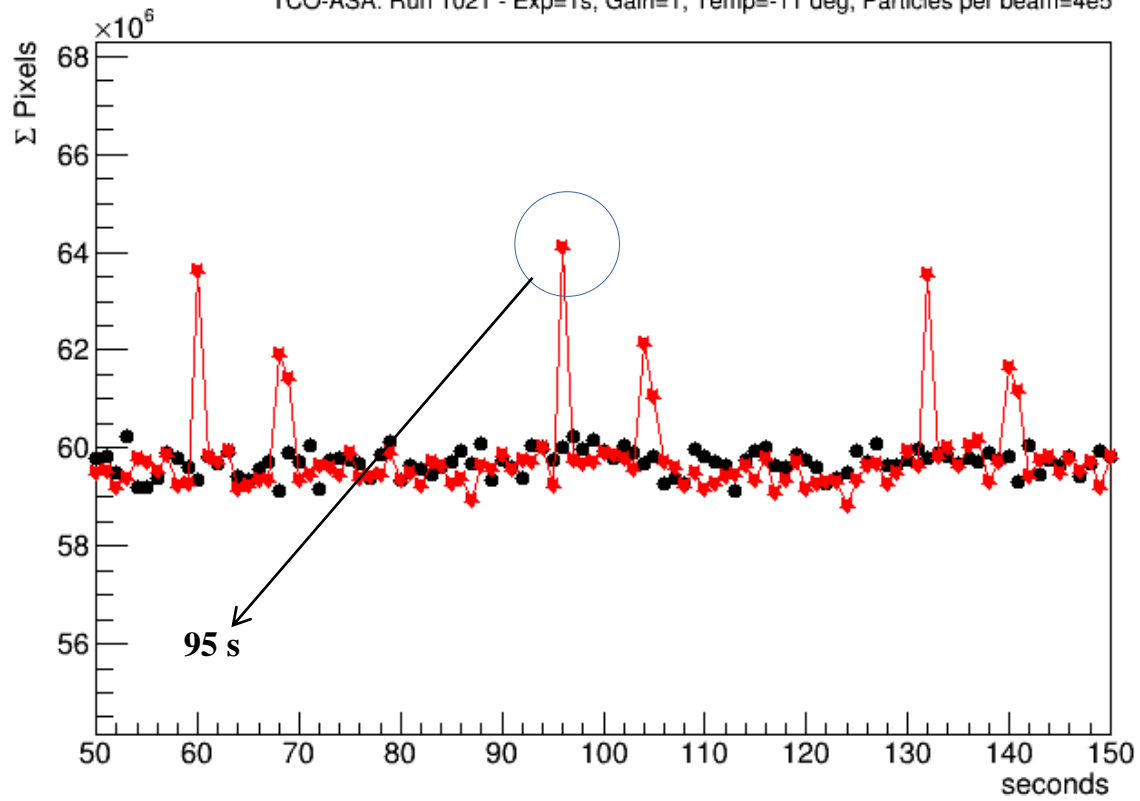
TCO-ASA: Run 1021 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=4e5



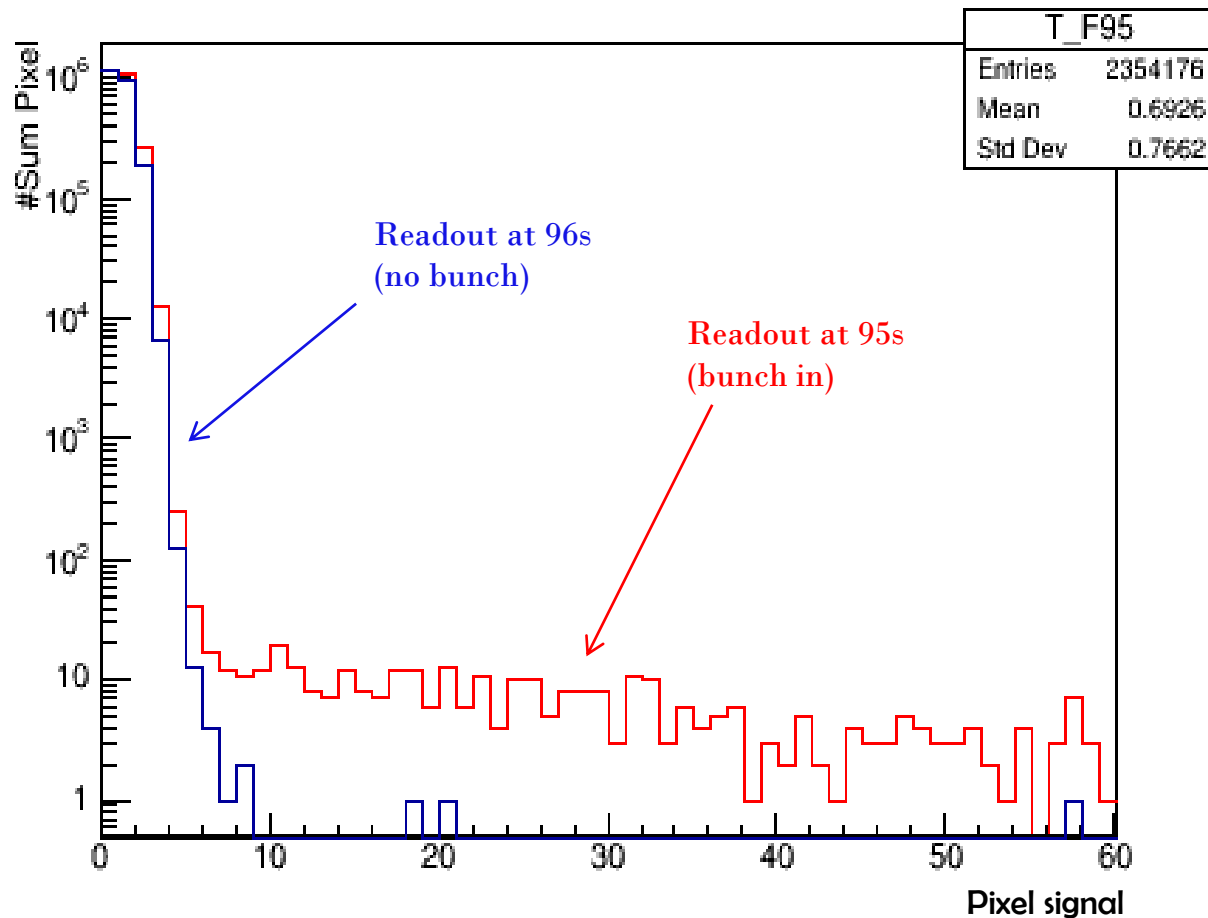
TCO-ASA: Run 1021 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=4e5



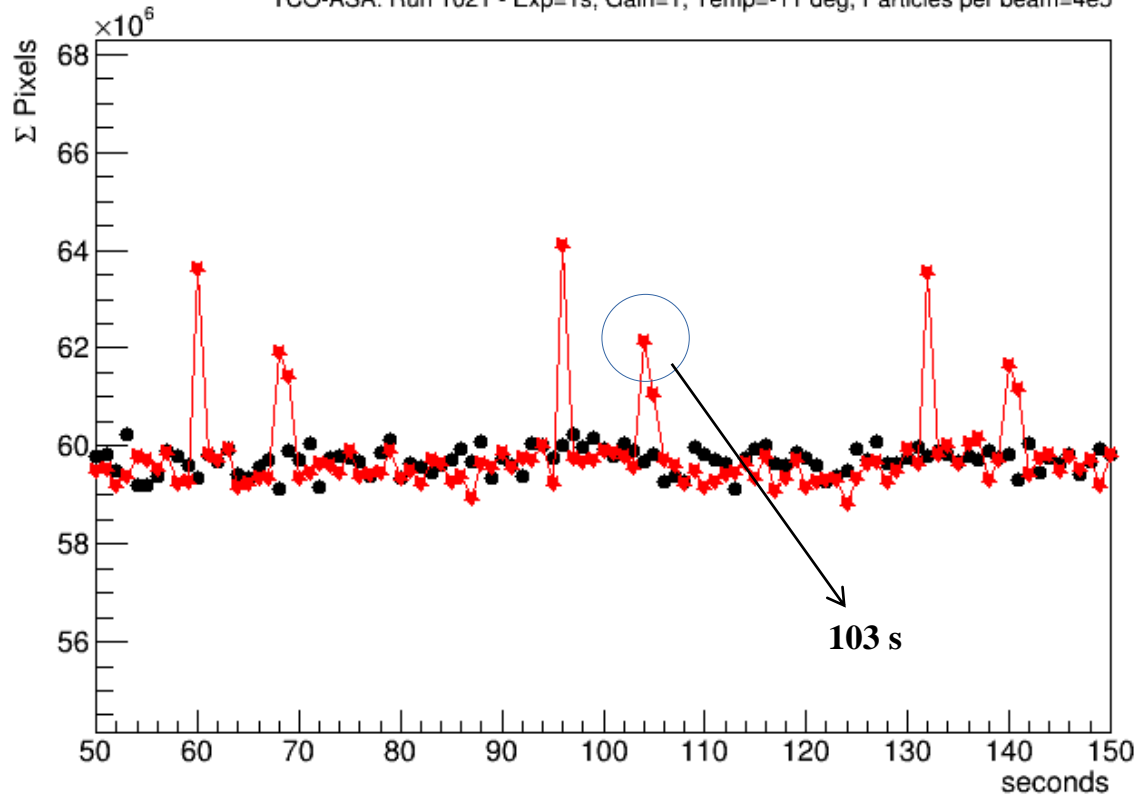
TCO-ASA: Run 1021 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=4e5



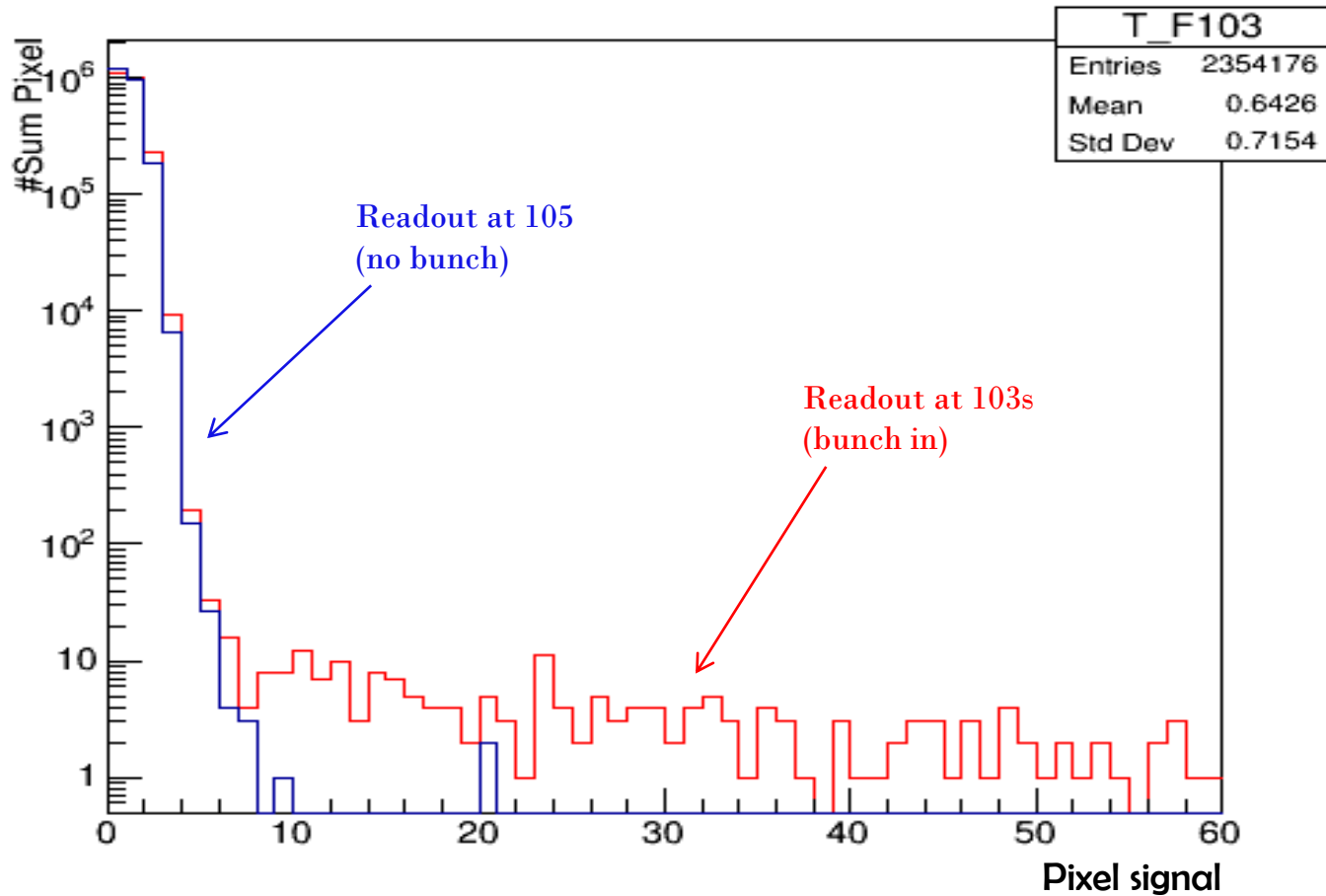
TCO-ASA: Run 1021

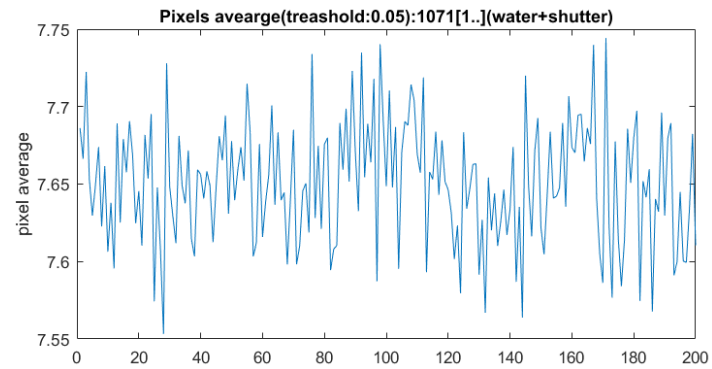
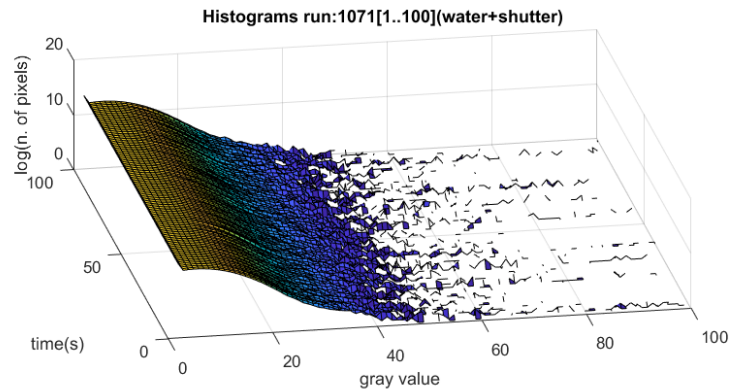
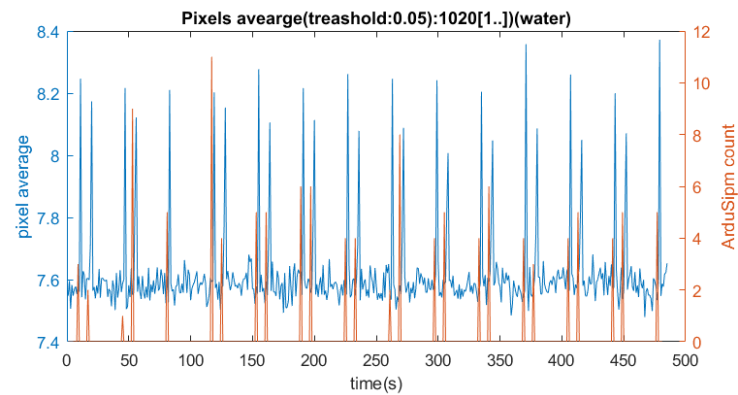
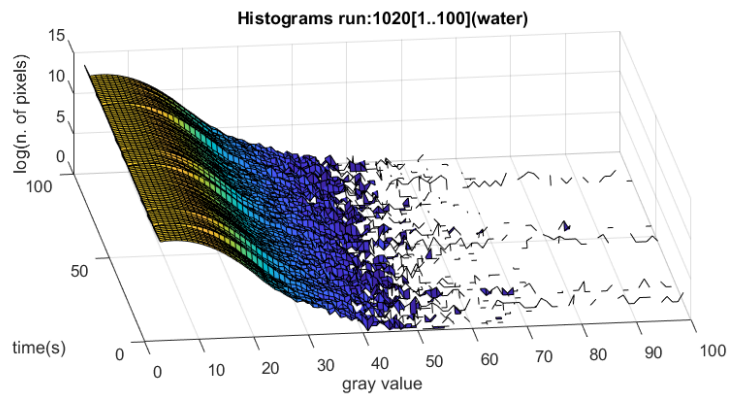


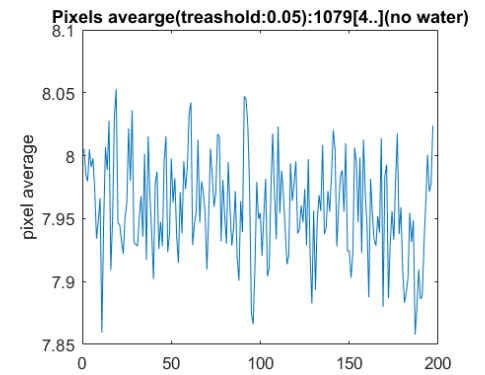
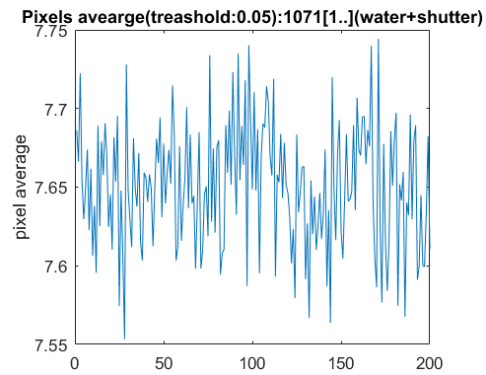
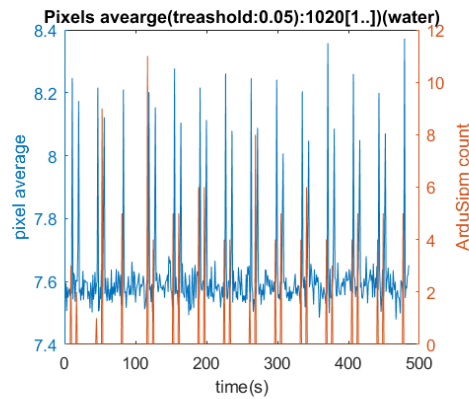
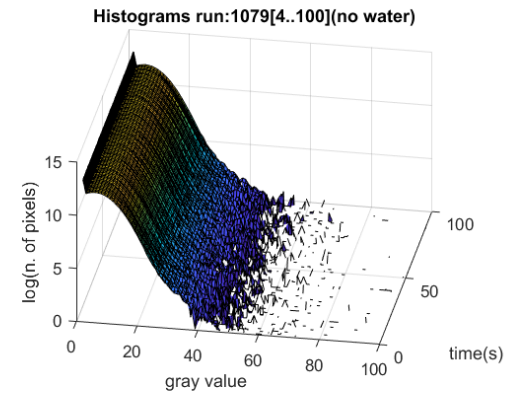
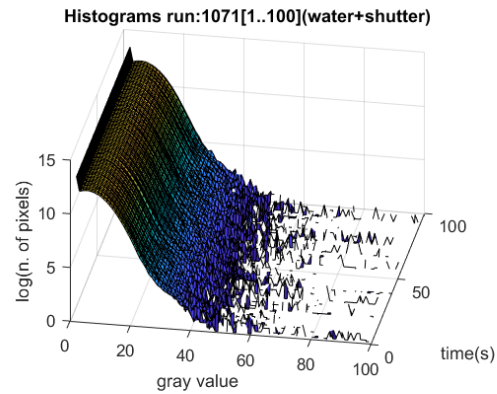
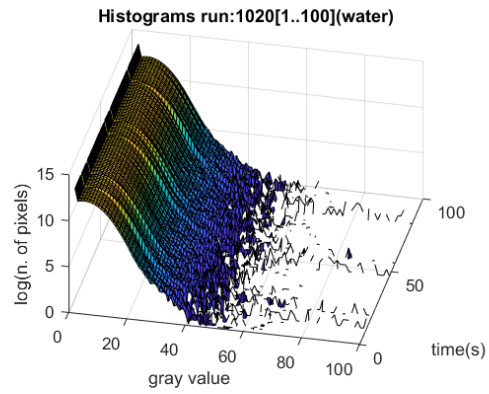
TCO-ASA: Run 1021 - Exp=1s, Gain=1, Temp=-11 deg, Particles per beam=4e5



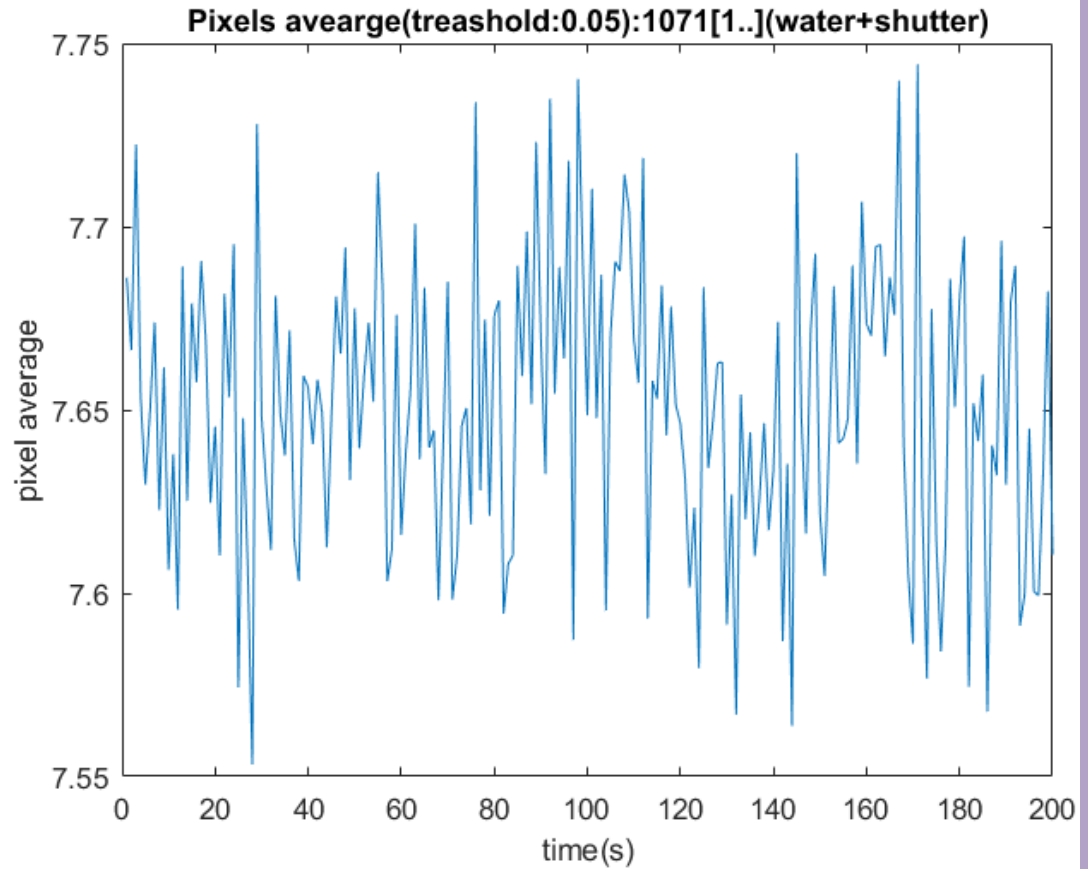
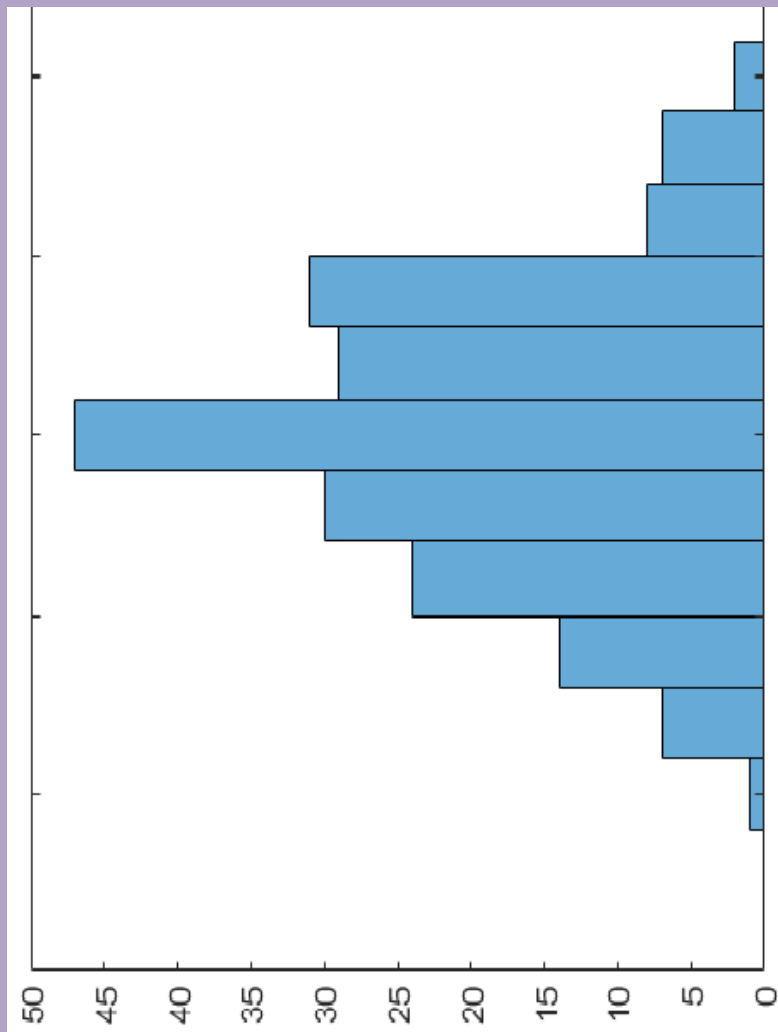
TCO-ASA: Run 1021



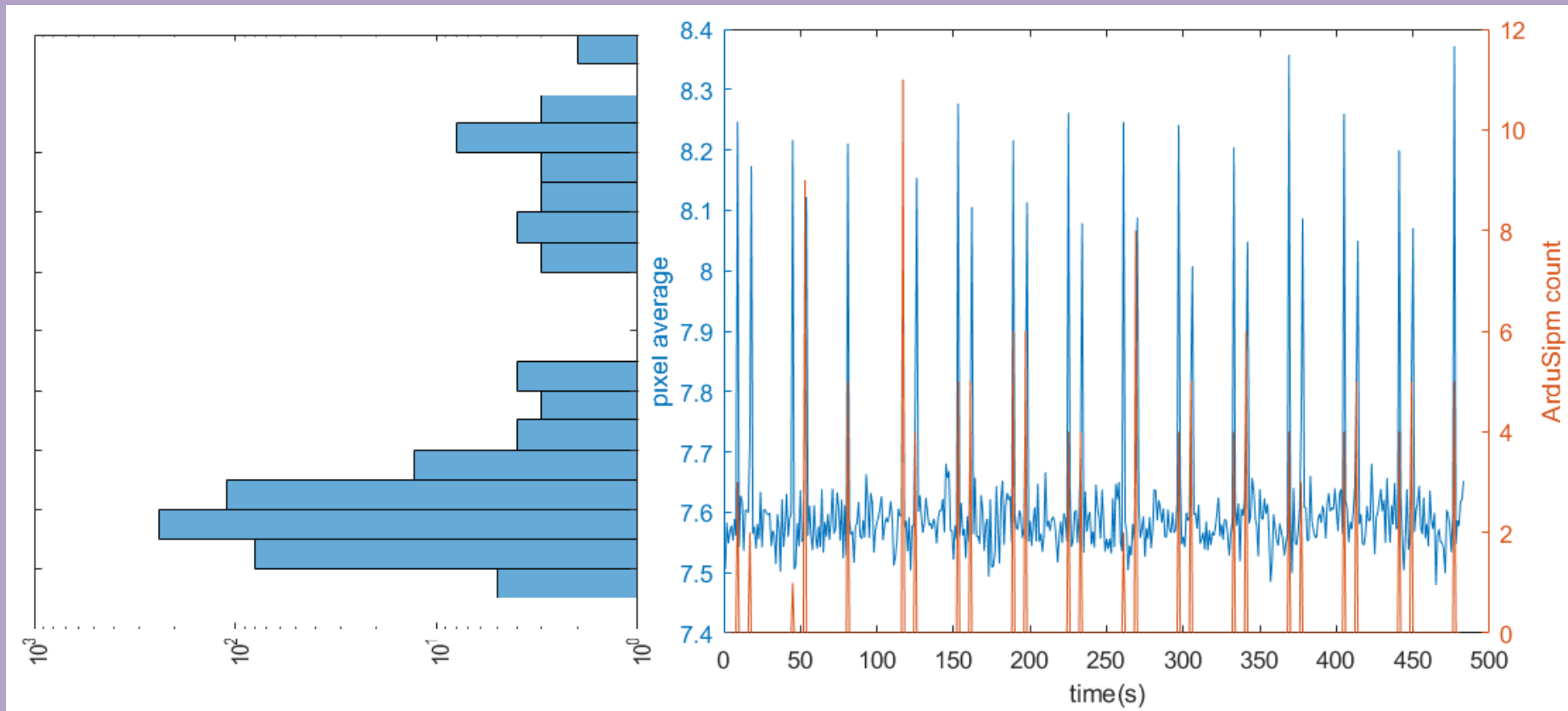




ZWO: WATER + SHUTTER

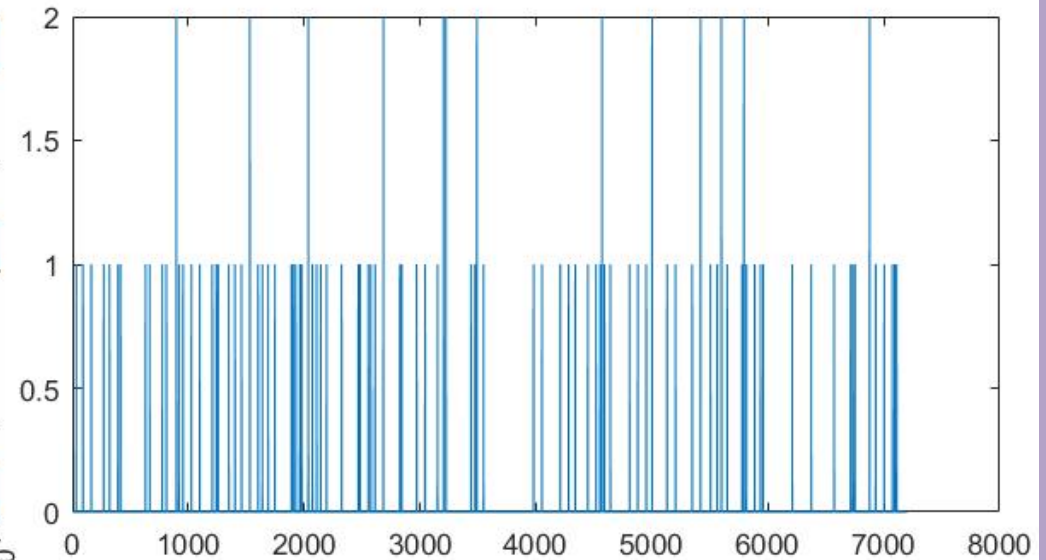
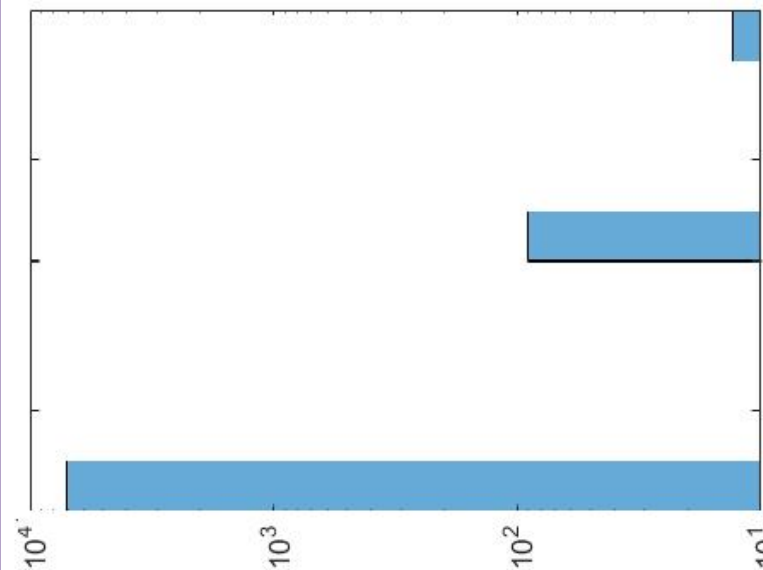
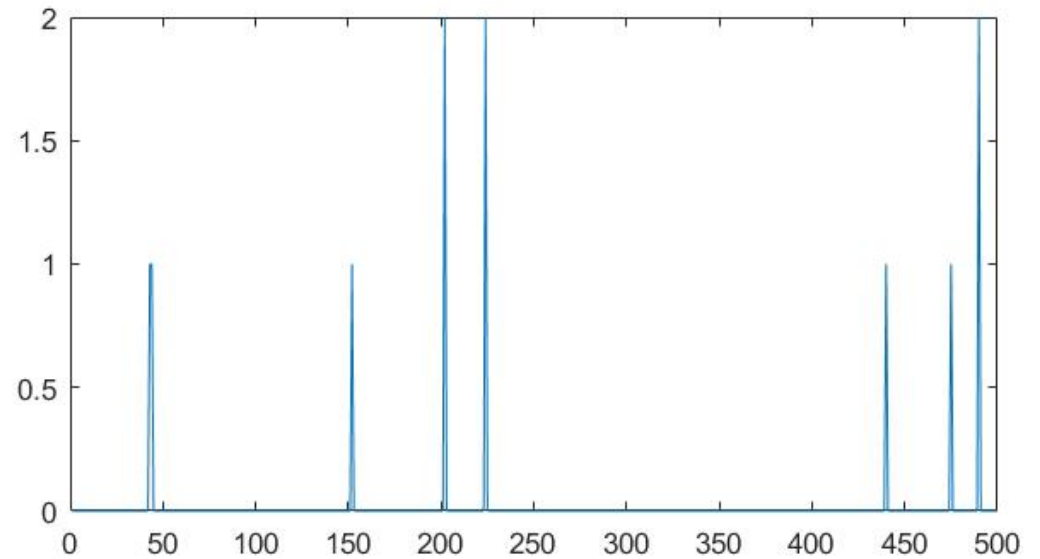


ZWO and ArduSipm:WATER

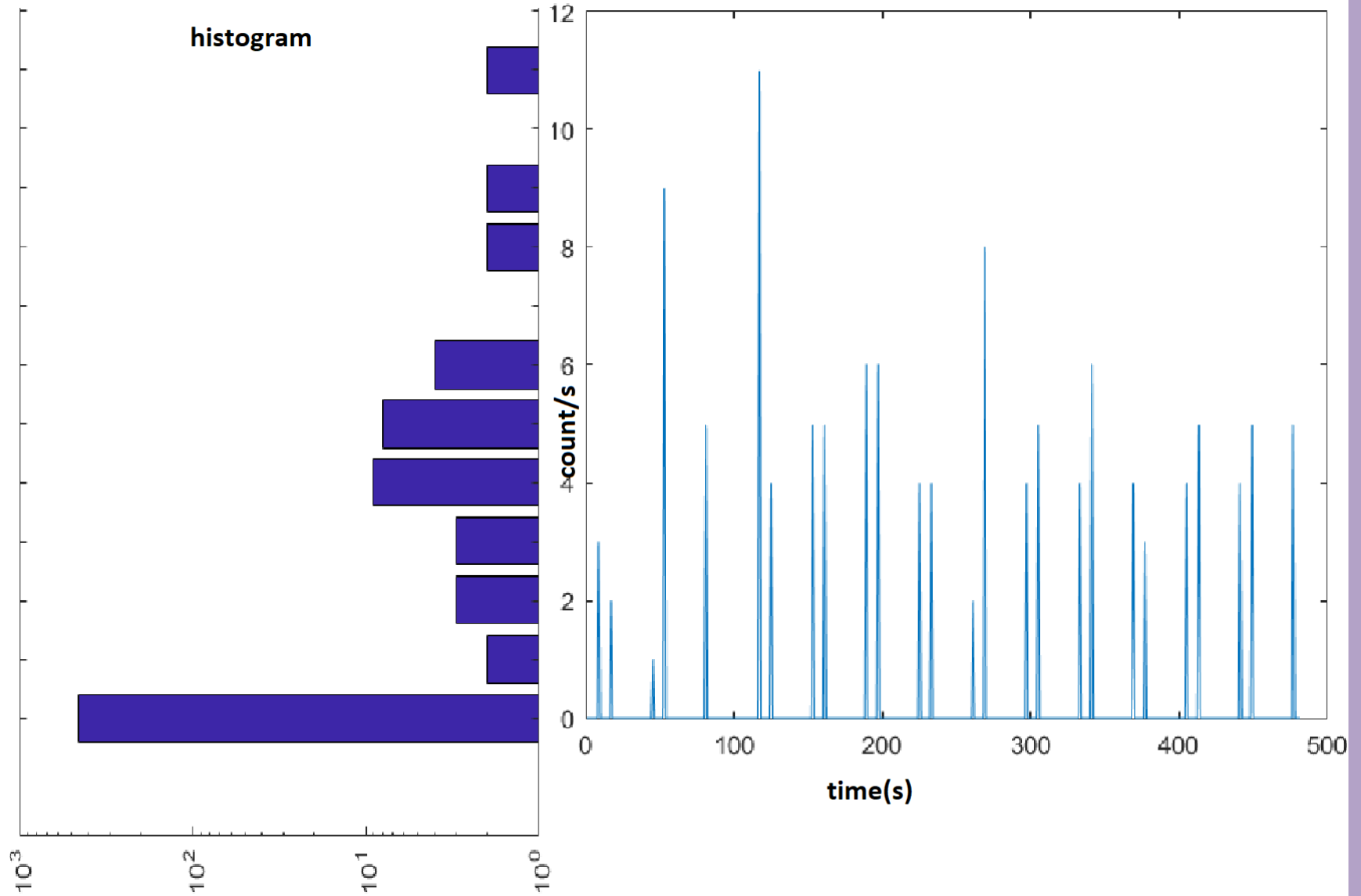


NO WATER

ArduSiPM



WITH WATER



"I am among those who think that science has great beauty. A scientist in his laboratory is not only a technician, he is also a child place before natural phenomenon, which impress him like a fairy tale." (Marie Curie)

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Aggiornamenti Live

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2017 – A beamline for schools

D- Experiments at school

E- A beamline for school 2016

F – Beam Test Facility

Laboratori Nazionali INFN

Frascati

VEDERE L' INVISIBILE

A – HOME PAGE



[Cherenkoscopy](#) [TCO-ASA](#) [Beamline for Schools](#)

1 OTTOBRE 2017

FINALMENTE TI ABBIAMO TROVATO!

MISSIONE: COMPLETATA

LUCE CHERENKOV NON SEI PIÙ UN MISTERO

RELAZIONE FINALE

Arriviamo alla conclusione di questo lungo viaggio che ci ha visto protagonisti qui al CERN, il più grande laboratorio di scienza delle particelle. Giorno per giorno, ora per ora, minuto per minuto, non

Articoli recenti

- BEAMLINE FOR SCHOOLS: STUDENTI DI FERMO CAMPIONI DEL MONDO
- Two new teams of high-school physicists selected to run experiments at CERN
- "La passione è il motore della ricerca"
- "Davanti al più grande acceleratore di particelle al mondo" – Sesta tappa
- "A spasso per Ginevra con un fisico dell'ONU" – Quinta tappa

"I am among those who think that science has great beauty. A scientist in his laboratory is not only a technician, he is also a child place before natural phenomenon, which impress him like a fairy tale." (Marie Curie)

A – HOME PAGE

B – CERN'S DAYS –

Aggiornamenti Live

C – Cherenkoscopy – CERN

2017 – A beamline for schools

D- Experiments at school

E- A beamline for school

2016

F – Beam Test Facility

Laboratori Nazionali INFN

Frascati

di svolgere lavori che l'uomo, a causa delle alte radiazioni, non potrebbe compiere. Alcune macchine sono state comprate ma quelle che sono costruite sono veramente efficienti.

Abbiamo poi avuto un po' di pausa, ovviamente per chi non aveva lo shift. Alle 18:30 c'è stato il collegamento con l'Università di Camerino per la "Notte dei Ricercatori", in cui abbiamo descritto cosa stiamo facendo qui e quali sono state le nostre emozioni nel saper di aver vinto questo concorso e poter intraprendere quest'avventura.

Gli shift sono finiti più tardi del solito (21:45) perchè avevamo la necessità di estrarre foto urgenti.

Siamo poi andati nel "Globo", poco distante dall'entrata del Cern, per prendere parte alla mostra della "Notte dei Ricercatori".

-The day began with the usual shifts. At 12:45 they were stopped (until the 15:00) because of the meeting with the VIPs.

First of all we illustrated some graphics to the experts to let them see where we have arrived, then we've got them inside the structure where the equipment we work with is. We have described our project as well as that of the Canadians, this has shown our degree of preparation, pointing out that we are not working alone but we are also sharing the job and cooperating with people who have another goal but that need us to reach it.

As soon as we concluded the meeting that saw us presenting our project to important people such as DR Fabiola Gianotti, the representative of INFN Umberto Dosselli and many other Italian representatives, we went back to the Counting Room.

The presence of many Italians points out how Italy's influence and affluence in Cern is great.

At around 15:30, we visited the Cern robotics department where machines are capable of carrying out work that man could not do due to high radiation. Some machines have been bought but those that are built are really efficient

• marzo 2016

Cerca qui...



Commenti recenti

Link

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- [Laboratori Nazionali INFN Frascati](#)
- [INFN](#)
- [CERN](#)

Calendario

| L | M | M | G | V | S | D |
|--------------|----|----|----|----|----|----|
| 25 | 26 | 27 | 28 | 29 | 30 | 1 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | 1 | 2 | 3 | 4 | 5 |
| ottobre 2017 | | | | | | |

Contacts

Maria Rita Felici

Il tuo nome (richiesto)



Facebook page header for Tco-beamline. Search bar contains "Tco-beamline". Navigation tabs: Pagina, Messaggi, Notifiche, Insights, Strumenti di pubblicazione, Impostazioni, Assistenza.



Tco-beamline
@liceotco

Home
Informazioni




Instagram profile for team.tcoasa. Search bar contains "Cerca". Profile picture shows a group of people.

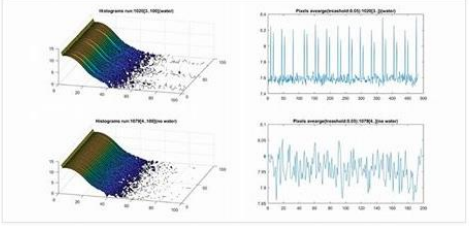
team.tcoasa Segui già

4 post 48 follower 6 profili seguiti

Tco-Asa



Facebook post from Tco-beamline. Post content: "Tco-beamline ha condiviso il post di Maria Rita Felici. Pubblicato da Maria Rita Felici [?] · Ieri alle 17:15 · €"



Maria Rita Felici
Ieri alle 17:15 · €

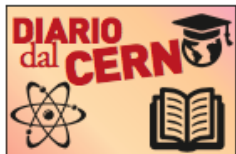
Ecco finalmente il risultato del nostro lavoro!! Grafici prodotti da Luca Ciucci
!!!!!! Paolo Calcinaro !! Fermo vince!!!

👤 persone raggiunte: persone raggiunte: 50 [Metti in evidenza il post](#)

👍 Mi piace 💬 Commenta ➦ Condividi

Tco-beamline ha pubblicato 10 foto.
Pubblicato da Letizia Manardi [?] · Ieri alle 12:54 · €

Universe of particles @ The Globe of Science and Innovation



GLI STUDENTI DEL LICEO SCIENTIFICO

Subito corsi e test

I nostri primi giorni a Ginevra

OTTO studenti del liceo Scientifico 'Calzecchi Onesti' sono a Ginevra per sperimentare il loro progetto di un rivelatore da utilizzare a fini medici, con il quale hanno vinto il concorso internazionale indetto dal Cern. Da oggi racconteranno la loro esperienza con un diario quotidiano sulle pagine del Carlino.

PARTENZA di notte, l'arrivo a Ginevra è stato per noi entusiasmante e denso di emozioni. Il mercoledì è stato il giorno in cui siamo stati forniti di materiale e di caschi per la sicurezza, per garantire le migliori condizioni di lavoro. Oggi, giovedì, è stato il primo vero giorno in cui siamo stati effettivamente messi alla prova. Sve-

PROGETTO SUL RILEVATORE
I ragazzi, insieme ai coetanei canadesi, hanno vinto il concorso e sperimenteranno le loro idee

glia alle 7.20, colazione alle 7.45 e ritrovo alle 8 nella sala conferenze (chiamata sala 160/1-009), per il corso sulla sicurezza, conclusosi alle 11. Ci siamo poi spostati nel «Technical Training Center» per completare tre test: Computer Security (sicurezza del pc), Safety at Cern (sicurezza al Cern), Radiation Protection (protezione dalle ra-

diazioni). Sono state occasioni molto importanti per capire come vanno le cose qui, vissute da noi rigorosamente in inglese, ci siamo veramente messi in discussione e abbiamo aperto la nostra mente a tutto quello che qui è veramente importante e significativo. Dopo pranzo abbiamo effettuato la prova pratica delle nozioni apprese al mattino, insieme ai canadesi, risultati vincitori insieme a noi. La giornata si è chiusa con un aperitivo alle 18 e la cena alle 20. Sono già giornate scandite da tanti impegni e tante situazioni appassionanti e stimolanti.

Davide Cartuccia e gli altri studenti del liceo 'Calzecchi Onesti'



Giorni di preparativi prima di entrare nel vivo della verifica e della sperimentazione del progetto

We've been in contact with two journalist and also with the major of our city.



GLI OTTO LICEALI

Giornate intense
Il nostro box ora è pronto per i test

PROSEGUONO le nostre giornate intense a Ginevra, sabato cominceremo presvegli già alle 8:00, alle 9:20 abbiamo visitato il centro di mantenimento dati e il 'Antimatter Factory' dove si crea e si studia l'antimateria. C'è stato anche un breve intervento in cui si è parlato della Prototempia e quindi, in termini di antimateria, dell'anti-prototempia. Abbiamo poi preso parte ad un laboratorio che ci ha spiegato il funzionamento del cosiddetto 'ciclo ad camere' e di come riesce a captare varie particelle. Siamo poi finalmente andati a ritirare le nostre scarpe anti-infortunio. Nel pomeriggio invece abbiamo approntato le prime modifiche al lavoro, e meglio, abbiamo riempito d'acqua e chiuso il nostro box, pronto per i test di domani e di tutta la prossima



re
locali
di contatti

che commercia le con es-

ENO Di Chiara, presi-
Azienda Speciale Fer-
nuove aggiunge che
parliamo di sinergia e di
mo riferimento proprio

rodotti che apparente-
hanno nessun legame
ra internazionale della
più importante al mon-
to, ma che in realtà sve-
to è un'idea che è sta-

The Italian Style



This is
illegal:
**sandals
with
socks.**

For example...



Wanted

**\$1.000.000
prize**

The Worst Criminal in the World

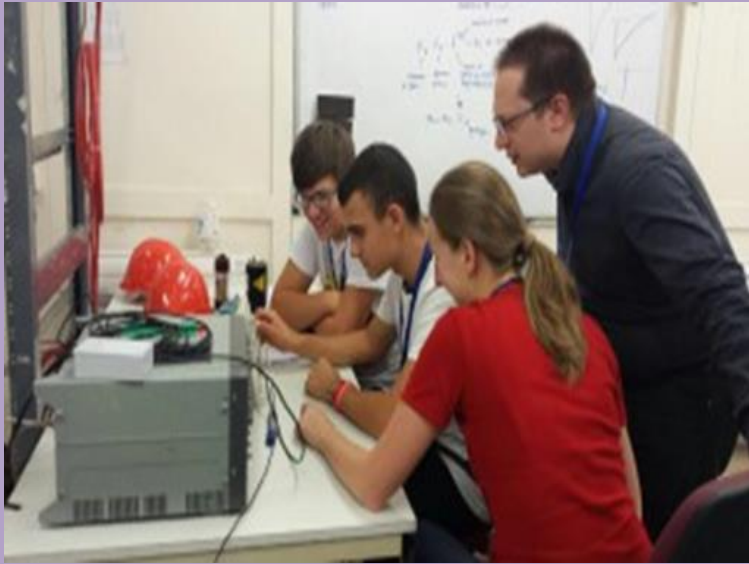


DANGER CROSSING SHEEP

Pasta in Restaurant 1 can be used just for this....



*And now it's the
time of the thanks...*







CERN CONTROL CENTRE

