RAY Protocol
CERN@school project

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1. Introduction

This is the protocol for the RAY Project, for use with the Jablotron Timepix MX10 Chip. This protocol is correct as of February 2017, and supersedes any previous protocols. This protocol contains information on how to record data for the project, and then how to upload the collected data to the appropriate analysis programs: TAPAS and ArcGIS.

2. Data Collection

Start up the computer, ensuring it has sufficient battery life or is charging.
Connect the MX10 Chip to the computer using the mini USB to USB lead.
Open the Pixelman software.
The Exp. count should be set to 180, the Exp. time should be 1800 seconds.
Make sure the chip is in a desired location and press start to begin the data collection.

Then save the data by selecting "file" in the top left corner and "save measurement" and ensure the data is saved in the "ASCII matrix – separate frames" or the "ASCII XYC" format.
Name the folder in the following fashion:
RAY_[QUALITIVE LOCATION/SCHOOL]_[TIME/DATE]_[INITIALS]
For example if Jacob Warren and Joe Watkins were to take data right now, the file name would be; RAY_SIMONLANGTON_1512-26-01-2015_JW-JW

2.5 Preparing Files for Upload

Locate the folder containing the frame data.
Select all files within the folder using 'CTRL' + 'A'.
Right click, and select 'Sent to' 'Compressed (zipped) folder'.
Name the file following the previous convention.

3. Uploading to TAPAS (Timepix Analysis Platform at School)

Go to www.starserver.thelangton.org.uk/analysis
Log in, using your school's username and password.
Go to the 'UPLOAD' page and fill in the Name box with the previously specified filename, and the Latitude and Longitude boxes with the latitude and longitude of the location of data collection.
Select 'RAY' as your project from the dropdown box.
Ignore the End Latitude and End Longitude.
Select the zipped folder containing the files, then press the 'Upload!' button.

4. Uploading to ArcGIS

Currently we do not have access to the ArcGIS software but soon all schools linked to IRIS (Institute for Research in Schools) will receive ArcGIS for free.

5. Contact

We are happy to answer any questions about the protocol or further aims of the project.

You can contact:
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