CREDO Detector
and other mobile applications

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Plan

1. Introduce
2. Features
3. Other applications
4. Development

Introduce

The application uses the smartphone camera to capture particles that fall through the camera lens. If everything go well we can see something like this:
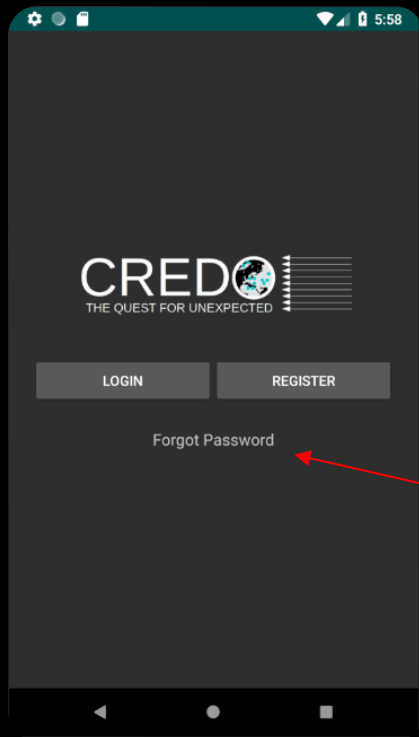
Introduce

We take picture only when that trace occurs, which tells us that probably the particle hit into our matrix.

Then we send this picture to the server where we can collect and analyze the data.
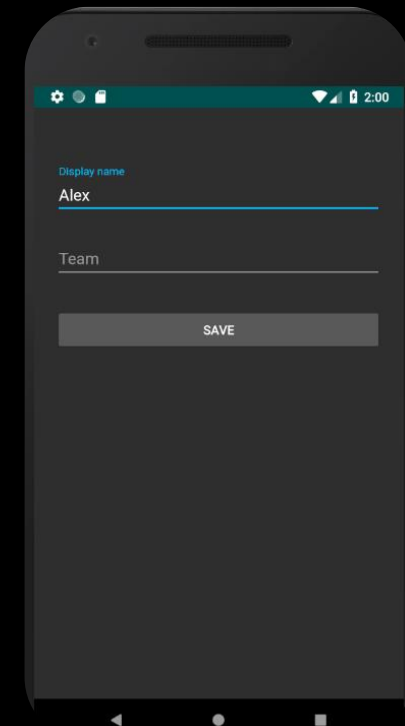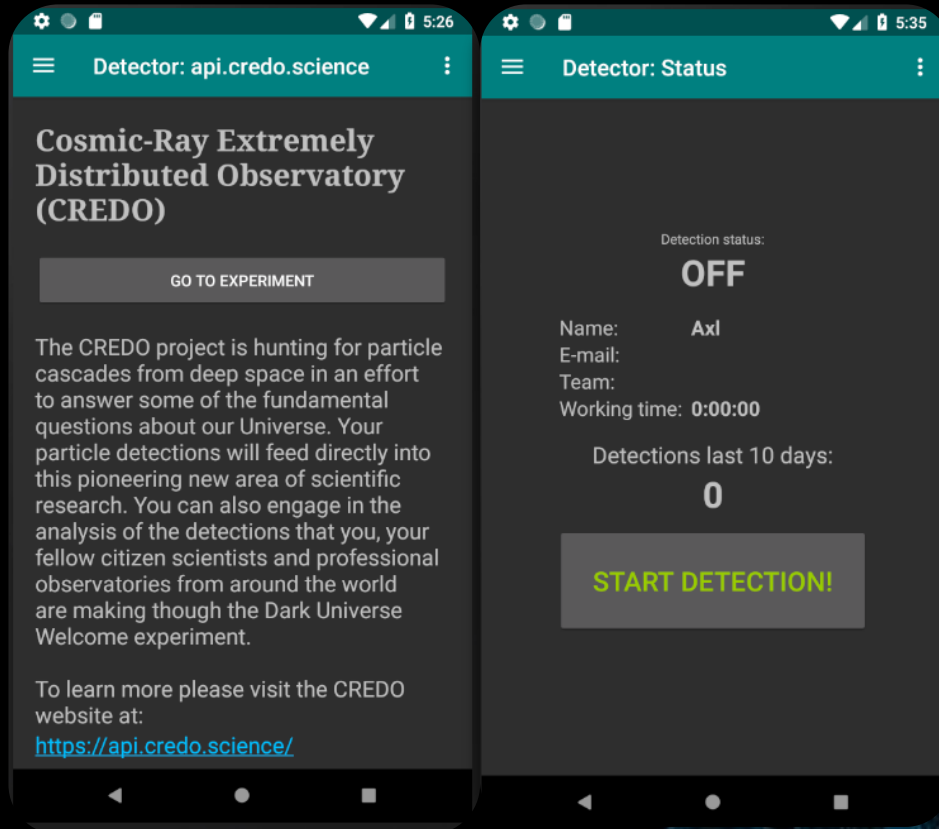
Login / Register

We need to register to use the app.

We can change our display name later in Menu.

Best friend button for most of us

Simple GUI

Even if you are not expert in IT or nuclear physics, you know how to launch app.
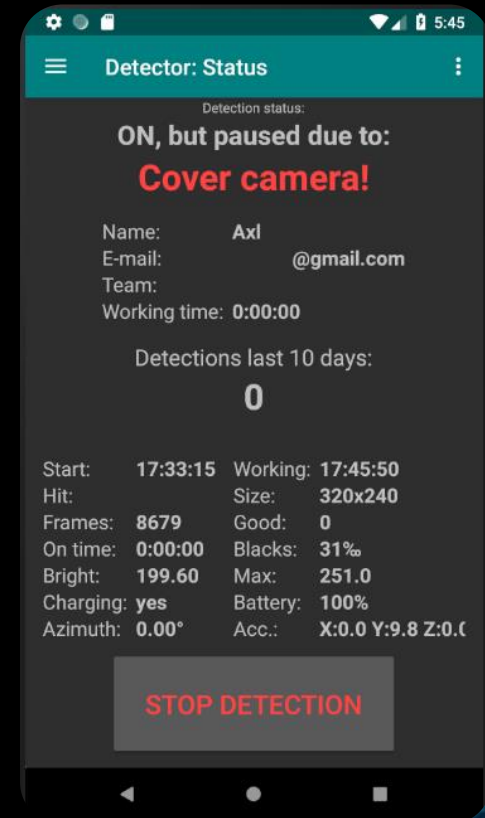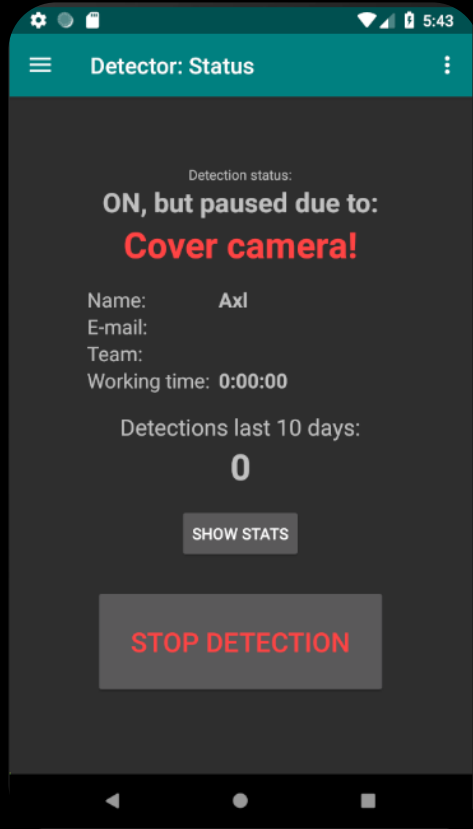
In this app we don't want to change easy thing into hard. A lot of data and information can be overwhelming for new users.
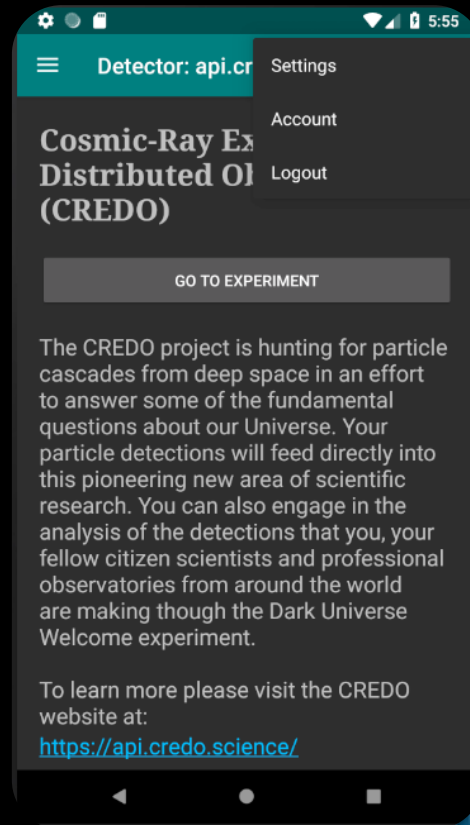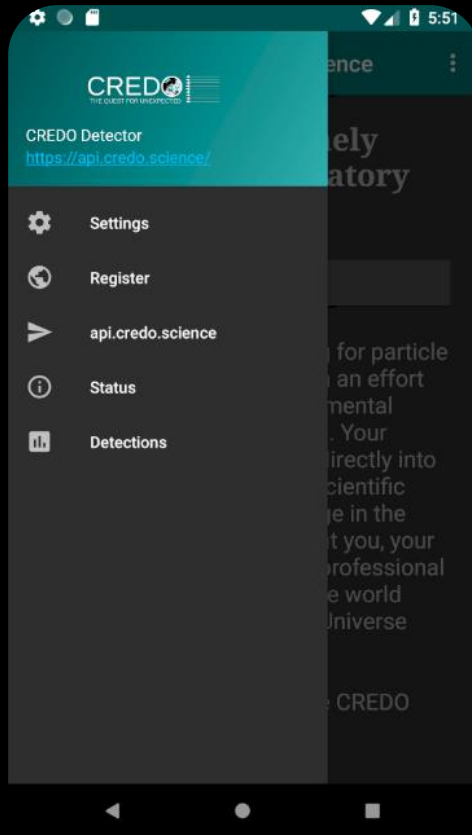
Clear information

If something go wrong, we will inform user about it with clear short information.

But… we have stats for nerd too

Just click "show stats" and app show parameters of work

Navigation

This is still a normal app, so we have things like sliding menu and settings.

Big things can look casual.
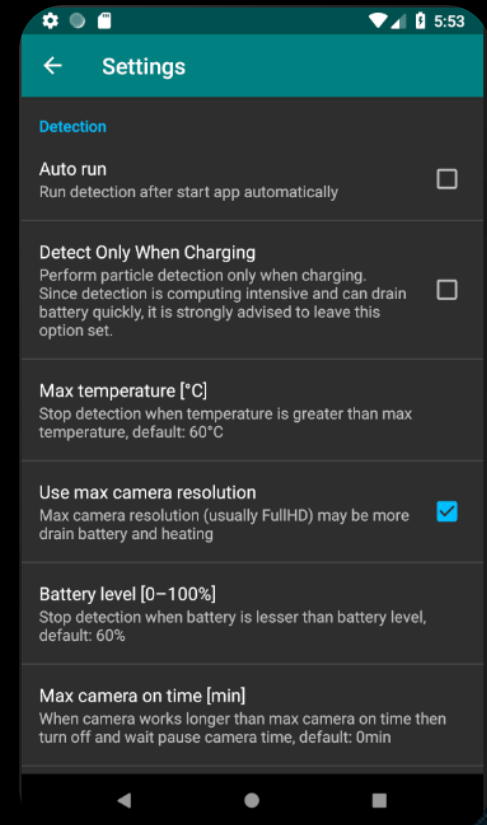
Does it make it difficult to use your smartphone?

Every action in smartphone generate heat, so detection will stop when temperature reach sp limit. Of course user can modify this in settings.

And if everything go great, temperature is perfect, user want use smartphone and … no battery?
Not in this app! Detection is going to work only if we have more than battery level limit we set in settings.

Does it make it difficult to use your smartphone?

App can work in the background and we have plenty of option to personalise when it should work:

- Auto start when the smartphone is charging
- Auto start after launching app
- Turn on/off detection after certain amount of time
- User can also manually start and stop
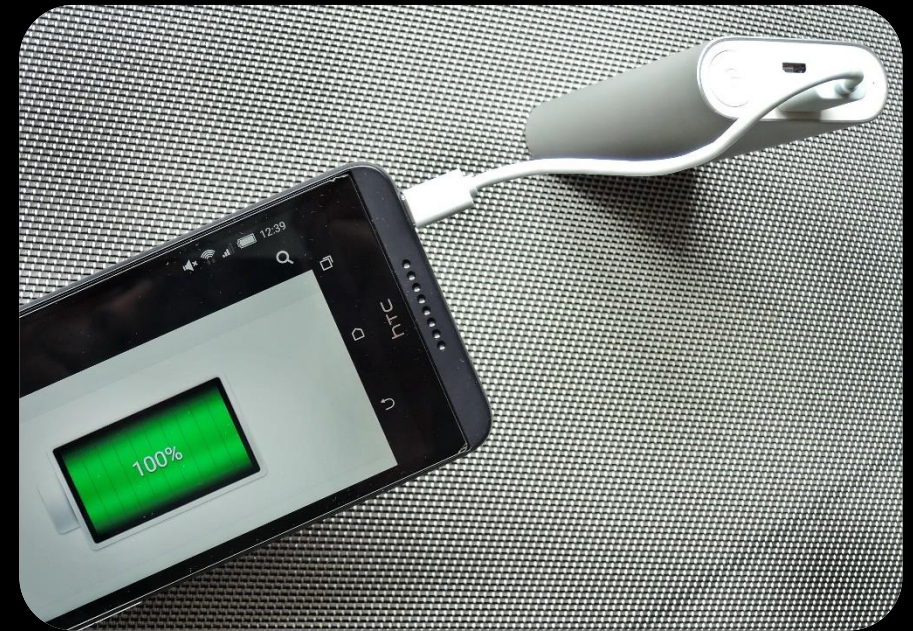
What if I have an old smartphone?

Our application can be run on android version 4.0 (Ice cream sandwich) or higher.
Today it means that almost **100%** of device can run it.

Android version

1.1
1.5   Cupcake
1.6   Donut
2.0   Eclair
2.0.1 Eclair
2.1   Eclair
2.2   Froyo
2.3-2.3.2   Gingerbread
2.3.3-2.3.7 Gingerbread
3.0   Honeycomb
3.1   Honeycomb
3.2   Honeycomb
4.0-4.0.2   Ice Cream Sandwich
4.0.3-4.0.4 Ice Cream Sandwich
4.1   Jelly Bean
4.2   Jelly Bean
4.3   Jelly Bean
4.4   KitKat
5.0   Lollipop
5.1   Lollipop
6.0   Marshmallow
7.0-7.1 Nougat
8.0-8.1 Oreo
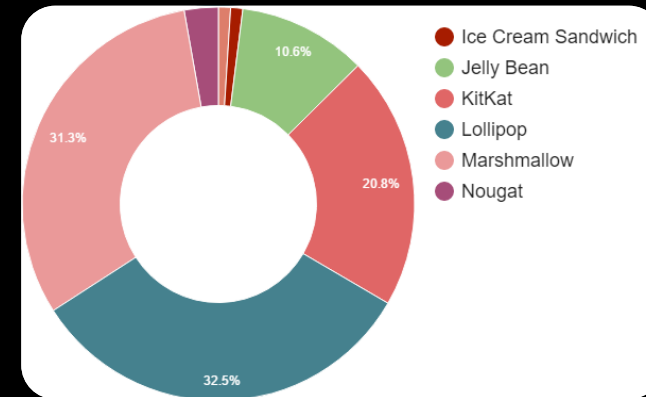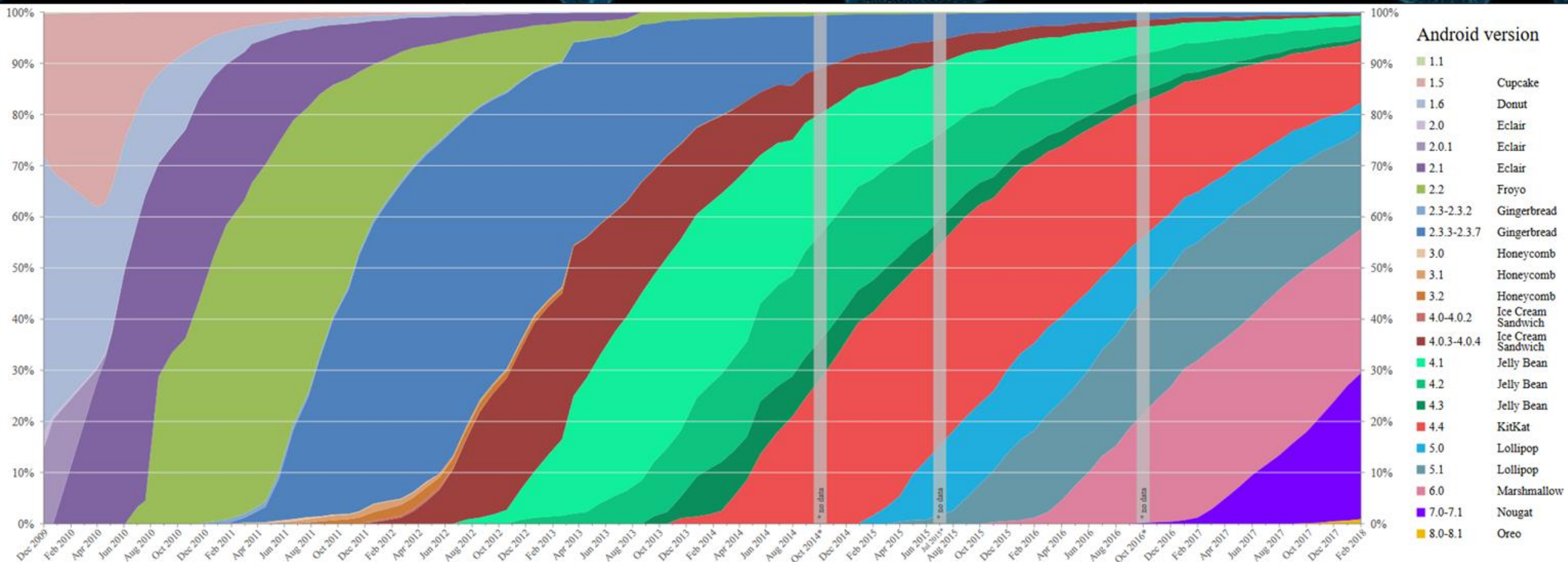
Internet cost, little space in memory…

Despite of the development of technology, there will always be someone who complain and search for cons.

For that reason we optimized our application. Now when hit occur, we cut only little fragment from photo. By this trick we decrease the amount of transferred data .
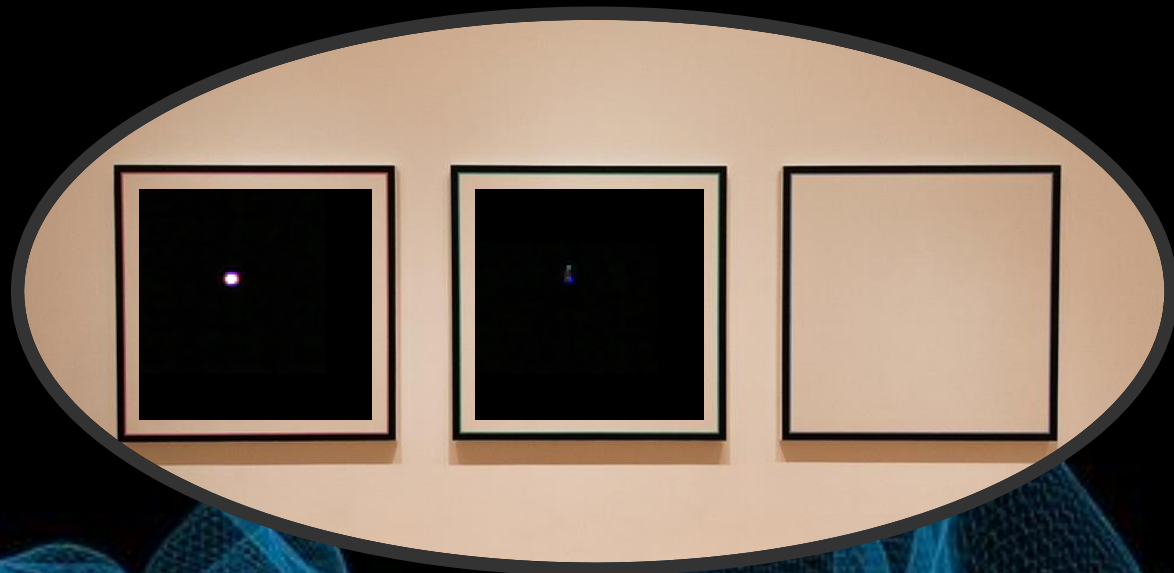
For more comfort of using application, we give options to choose the way of connecting to the server.

- WiFi + Cellular network
- WiFi only

False positive

We set restrictions for amount of light. If photo is too bright, we will not take it under consideration.

Gallery

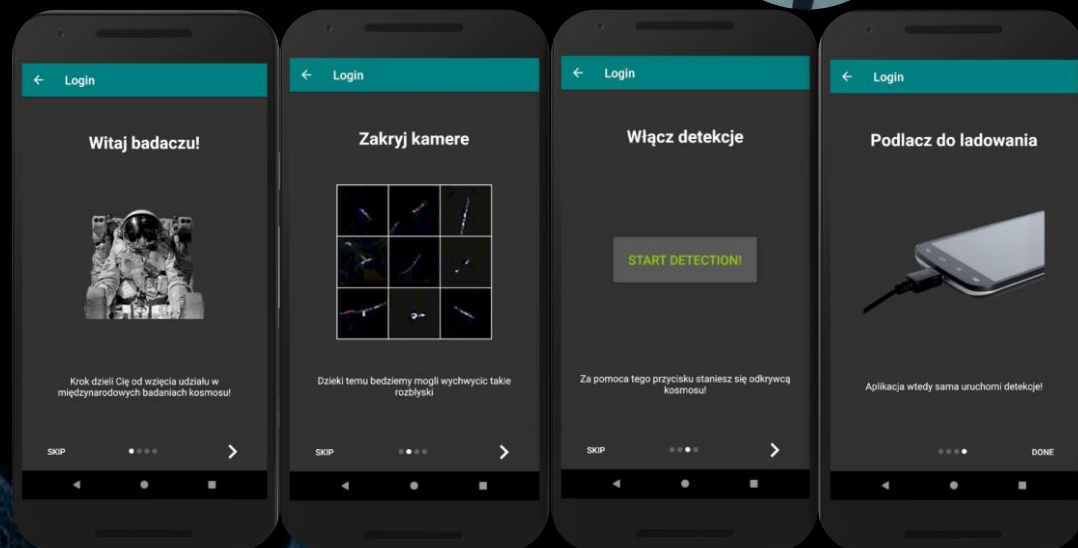Captured particles can be looked through in gallery.

Multiple language

Jesteśmy dostępni w kilku językach!
We are available in several language!
Nous sommes disponibles dans plusieurs langues!
Log.d("Credo","Android");

Beta team

Our team test every release so if
this version need a fix, we can do
this without interrupting all devices.

Other Applications

	CREDO (The Cosmic Ray Extremely Distributed Observatory)	DECO (Distributed Electronic Cosmic-ray Observatory)	CRAYFIS	Cosmic Ray App
System:	Android • Available on Google Play Store	Android • Beta (available only on site) iOS • In closed test	Android • Closed Beta, available only on site (now they don't accept new beta-testers) iOS • Coming soon for closed beta-testers	iOS • Available on Apple App Store
Detection:	Checks bright on camera preview, if it`s go above limit, we take pictures.	Record camera image every 1-2s and analyze it to determine bright pixels.	No available date	Takes long exposure pictures periodically ~2 per second.
Gallery	Gallery in app and on website	On website	No available date	On website
Others		To work properly you need two application DECO app and Deco the data logger.		

Team

After creating account, user can join in to the team.
On our page - api.credo.science – you can find the last caught particle and enjoy rankings.

Development

In the future for better encouragement of the users, we can make ranks and prize for some milestone. For example:

- Best person get title „Albert Einstein"
- Benefit in other app

Development

Many people stop using the phone at a particular time of a day and for most of us, the day is cyclical. We can use it to create more universal tool.
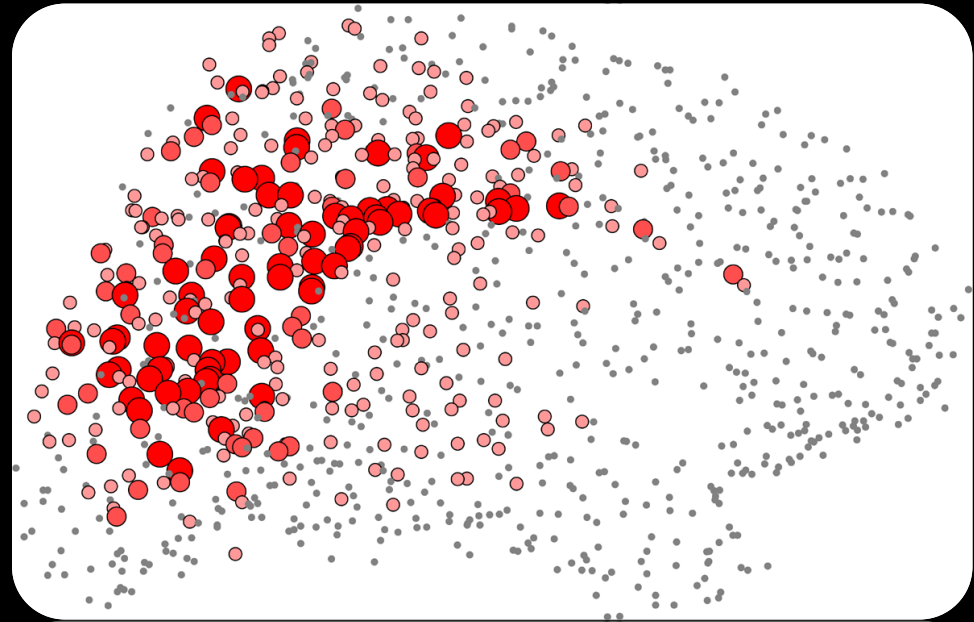

We want to add a new option to automate application.
- Scanning during inactivity
- Automatic scanning at a given time

Development

- 2/3D Map with the density of hits
- Skins for user
- Application for other mobile systems

We have many ideas about this project and a lot of it are waiting for the invention.

THANK YOU FOR YOUR ATTENTION