Experience of the Ukrainian scientific research center "Zond" in UAP studying



**Anomalous phenomena** are non-periodic, transient phenomena in the environment whose parameters or characteristics cannot be explained within the framework of prevailing scientific concepts.

**"Zond"** - is an organization under the Aerospace Society of Ukraine that has been engaged in the scientific study of anomalous phenomena in Ukraine since 2004.

#### **History:**

SRCAA "Zond" is the intellectual successor of the «Commission for the Study of Anomalous Phenomena in the Environment», that was established by order of the head of National Academy of Science in Ukraine B.Ye. Paton and acted at Technical-scientific society named after O.Popov from 1981 to 1991 under the leadership of Academician, Ph.D., G.S. Pysarenko.

Our paradigm is to study anomalous phenomena using scientific methods, and testing theories, trying to add some new to the scientific picture of the World.

#### Links:

https://faks.kpi.ua/index.php/uzond

www.zond.kiev.ua

https://www.facebook.com/groups/123830927700715/

+ our YouTube channel "Zond" and friendly networking projects









## Wide application of different devices and methods:

- Visual observation methods
- Technical measurements
- Biolocation
- Biodetectors
- Personnel themselves

#### **Instruments and equipment:**

- Thermal imagers, pyrometers
- Radiometers
- Microscopes
- Magnetometers, frequency meters
- Sensitive microphones
- Drilling equipment
- Geodetic equipment
- Night vision, binoculars
- Support equipment (walkie-talkies, false alarms...)
- Video and photo cameras, video recorders
- Rangefinders, lasers
- Metal detectors
- Special devices, software
- Own developments, monitoring systems
- Individual trackers of human physiological state
- Personal protective and survival equipment
- Laboratory equipment, mainframes...
- Drones, etc.

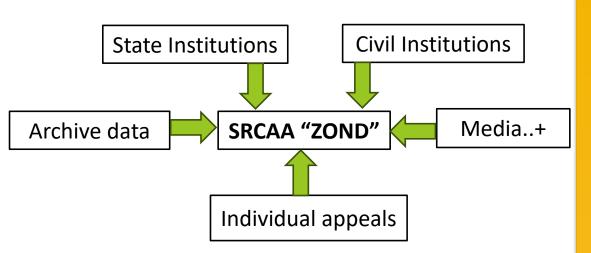


+ outsourcing of specialists and

laboratories!

#### **Sources of information:**





#### What do we get?

80..90% of reports about UFOs that we receive - as a result of analysis, turn out to be phenomena of a known nature:

- Auroras, halos, clouds...
- Anthropogenic objects, airplanes, helicopters, UAVs, flashlights...
- Satellites, Starlink, weather probes..
- Meteors, launches, balloons...







But we are working for the last 10..20% of UAPs!

#### The main results of the work of the SRCAA «Zond» for a 20 years of activity:

- More than 700 eyewitness reports reviewed
- 2. More than 60 expeditions and field studies have been carried out
- More than 10 books and more than 150 articles 3. published
- Participated in the creation of 4 films and about 4. 50 TV programs.
- 5. More than 300 meetings were held
- Organized/participated in dozens of scientific 6. conferences and seminars



A UFO in the form of three light sources in Podil, Kyiv, October 2006

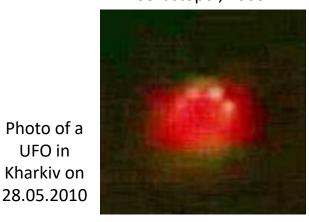


UFO, Rudyky village, Kyiv region, August 2006.





UAP, footage from a video film, Sevastopol, 2006.

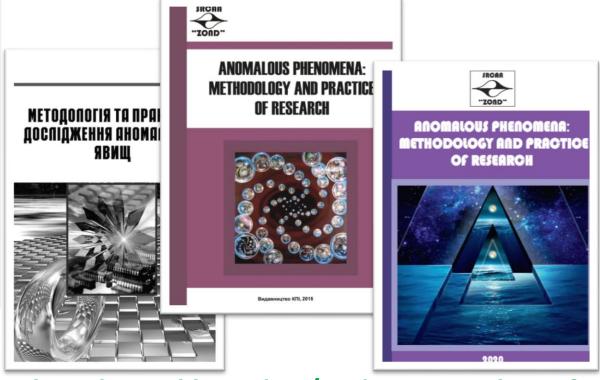


UFO in

# The main forms of activity of the SRCAA "Zond":

- 1. Theoretical research
- 2. Expeditions
- 3. Laboratory study
- 4. Modeling of phenomena, experiments
- 5. Design of devices
- 6. Trainings
- 7. Seminars, popularization events
- 8. Speeches in the media
- 9. Participation in movies, TV-programs etc
- 10. Publications of articles, books, issues..

Every 5 years, a issue of scientific articles is publishing by SRCAA "Zond", which contains articles reflecting the current state of study and understanding of the role of anomalous phenomena in shaping the picture of the World, the theory, methods, and practical aspects of anomalous phenomena research obtained as a result of the work of the SRCAA "Zond", as well as on the basis of leading foreign experience.



You are welcome to the editorial board or/and as an author of scientific articles for the new upcoming issue 2025!

#### The UAP research has two priority basic components:

#### 1) National security

UAPs and other objects may well be enemy aircrafts, missiles and UAVs.

Phenomena in themselves are potential objects of increased danger!

#### 2) Development of the new technologies

The technical characteristics demonstrated by UAP based on visual and instrumental observations often do not allow them to be identified with known phenomena and devices, and raise questions about the principle of its functioning and internal structure. Regardless of the source of the UAP, their registration and acquisition for research purposes is of considerable value for the study and synthesis of the new technologies, and the development of new security tools and programs.

This paradigm was announced by the SRCAA "Zond" at its establishment in 2004.





A UFO photographed in Berdiansk on July 3, 2006, was moving in an upward spiral trajectory.

Photo of a UFO, Kyiv, August 2006. Several objects merged into a single ball in front of witnesses.

## Our scientific methodology for the UAP identification process:

A methodology has been developed and an uncertainty-based identification system has been implemented.

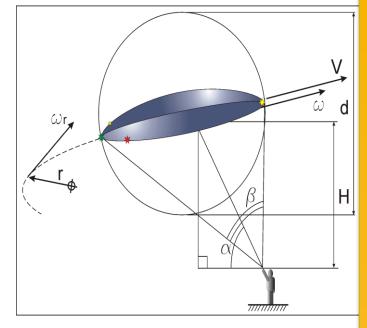
Abnormality factors are manifestations of a phenomenon whose characteristics do not belong to the array of manifestations of phenomenahypotheses of a known nature.

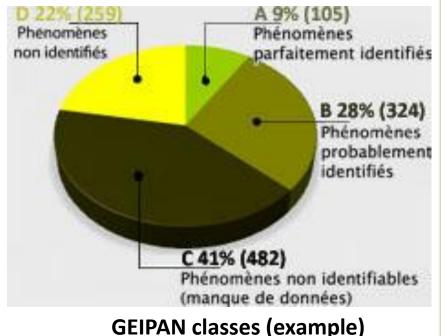
The non-identifiability of the aerospace phenomenon takes on a value from 0 (completely identifiable phenomenon) to 1 (completely non-identifiable).

$$U_K = 1 - \frac{S_N'}{\max(A_K'; G_N')}$$

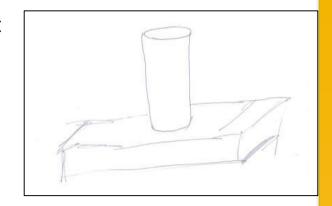
The measure of the amount of information of the K-th report on the registration of an UAP is the Shannon information from an exponential source, exclusively positively additive, taken with a positive sign

$$I_K = U_K \ln \left\langle A_K' \right\rangle^{S_u'}$$



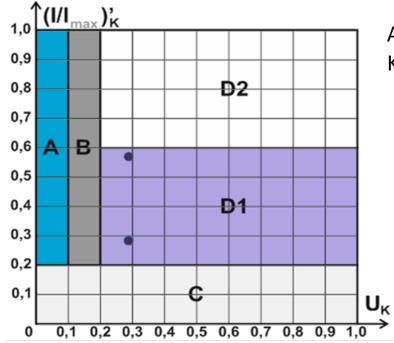


Based on the developed methodology, a specialized expert system was created in 2003-2020 to identify phenomena based on 9 quantitative characteristics: <a href="height, diameter">height, diameter</a> and angular size, angular and linear velocity, minimum radius and angular speed of turn, maximum hover time, and maximum brightness.





An example of a UAP filmed near Kryvyi Rih in 2012



Identification diagram with the points corresponding to the hypotheses with the highest applicability for the object under consideration.

**Conclusion: Category D1** 



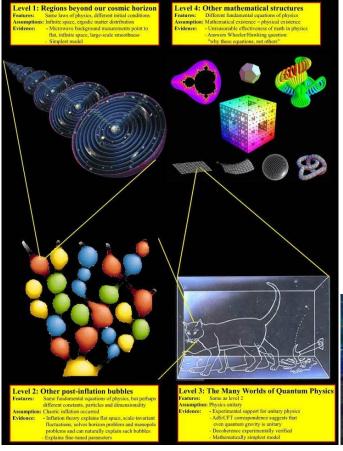
Footage from an eyewitness video





#### **Developing model of the quantum nature of UAP**

Manifestations of the interaction of different worlds according to Multiverse theories: adjacent worlds in contact without starships





#### **Everettics:**

- the coexistence of branching worlds?
- the interaction of consciousnesses?
- other humanities?



Cultural influence: from myths

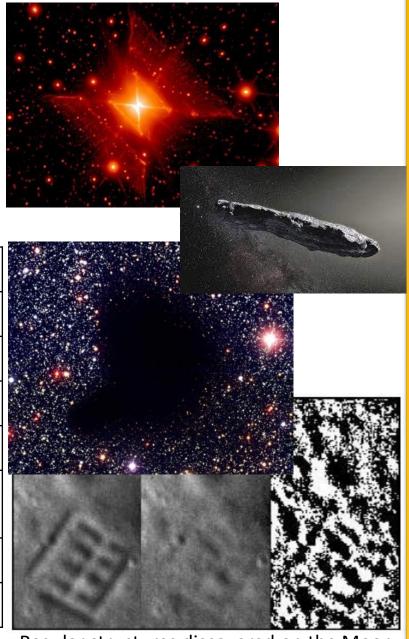
to reality





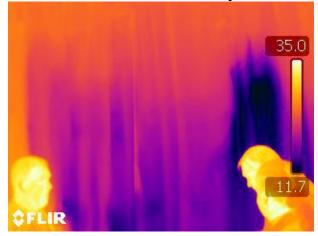
The Kardashov-Kaku-Kauts model for the development of civilizations in the universe is improved. An extended classification based on **creation** and **consciousness** is proposed. The space future is defined as the overarching goal of human development. It is assumed that the civilizations of the past could not perish but achieve this goal.

Тур	The level of consciousness	Example of creation result
е		
0	Awareness of responsibility	Sustainable development of
	for civilization	civilization, continental structures
1	Awareness of responsibility	Sustainable development of the
	for the planet	planet, near planetary structures
2 (1)	Awareness of responsibility	Sustainable system development,
	for the star system	astroengineering facilities
3 (2)	Awareness of responsibility	Transitions within galaxies,
	for the galaxy	creation of stars and planets
4 (3)	Awareness of responsibility	Transitions between galaxies,
	for the galactic space around	creation of galaxies
	us	
5/5	Awareness of responsibility	Changing constants, transitions
б (4)	for the Universe	between universes, etc.
6	Ultraconsciousness,	Creation of Universes, Modified
	Harmonious Universe	Omega Point



Regular structures discovered on the Moon by SAAM project (Archipov 1997)

Instrumental methods of UP research were improved, many methods and techniques were introduced for the first time, and considerable attention was paid to safety.



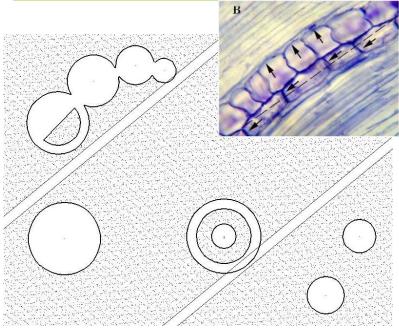
Thermography of the 2010 poltergeist in Obolon, Kyiv



My My Marine

Photo of a ghost and bursts of white noise in Pidhirtsi Castle 2011





## What is SRCAA "Zond" doing now?

After the outbreak of the war between russia and Ukraine in 2014, the activities of the SRCAA "Zond" were significantly reformatted, scientific ties with russia were terminated, recognition, protection, security, etc. projects were prioritized, specialized manuals were published and so on.



Field expeditions are characterized by complex activities that involve a thorough study of the area!

Now the military danger has been added to the abnormal danger!

The experience of expeditions to anomalous zones helps during combat operations and vice versa, but the nature of the danger is different!

A scene from the movie "Annihilation"







When russia's full-scale invasion began in February 2022, a lot changed:

- Some members of the SRCAA"Zond" volunteered for theArmed Forces of Ukraine
- 2) Martial law imposes restrictions and prohibitions on forms of research, movement, use of devices, drones, etc.
- 3) Meetings are still held in Kyiv and Kharkiv, live and online (we set up online meetings during Covid)
- 4) Most of the country's territory remains mined or dangerous, and large-scale battles, airalarms are taking place
- 5) The staff of the SRCAA "Zond" conducts open seminars and trainings.



## The situation with UFOs during the russian war against Ukraine in 2022-2024



## Ukraine has several of its own "roswells" every day :)



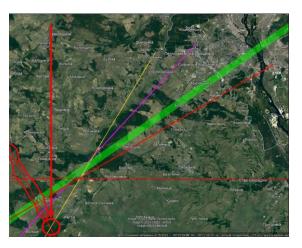






## A new challenge and new opportunities:

- Many phenomena in the sky of military origin
- Other UAPs
- Rapid development and application of aircraft types
- Ukrainian aerospace has become probably the most observed in the world
- There is no centralized system for collecting and analyzing UAPs, nor is there access for civilian organizations
- We are continuing our research
- Conducting trainings
- Improving and developing equipment



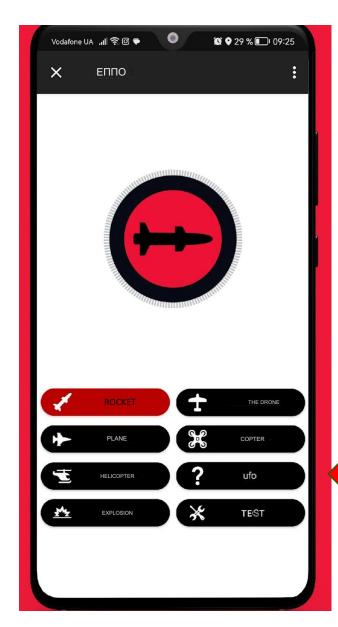


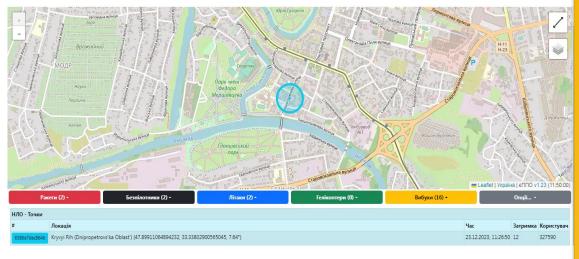




# New possibilities of data collection and procesing

## «ЄППО» system and app ("Civil Air Defense")





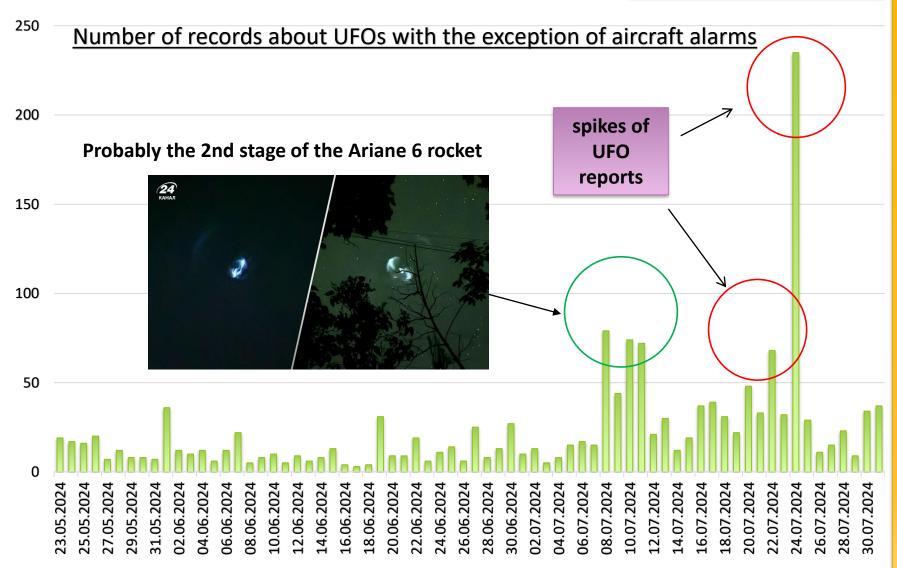
- Every citizen in Ukraine can install an application
- The program is protected from fakes
- The application works in real-time
- The message so far contains only the exact time and exact location of the observation
- A large number of messages allows you to make assumptions about the localization of UFOs and build their trajectories
- An example of successful civil-military cooperation

# New possibilities of data collection and procesing

«ЄППО» system and app ("Civil Air Defense")

The average value is 27.11 messages/day

#### **Latest results:**



## **New source: UAP military observations**

UAP Video taken by the Armed Forces of Ukraine on February 24, 2024





Diametric size 26.5...35.8 m. Height ~105 m.

The main factors of abnormality are:

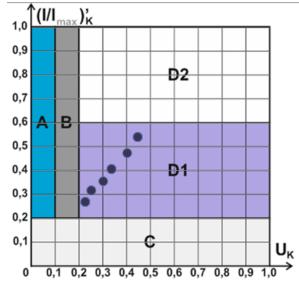
- Hanging in one place relative to visual landmarks during the entire observation
- 2. Asymmetric, slightly curved smoky surface of the object without visible details, uniform color
- 3. Visible absence of a mover, inversion traces.

## **New source: UAP military observations**

UAP Video taken by the Armed Forces of Ukraine on MARCH 28, 2024



Diametrical size, 2-3 m. Velocity 76..110 m/s.





The main factors of abnormality are:

- Line flight of objects
- Closeness of objects to each other
- Spherical or disc constant shape of objects.

Missiles launch to compare

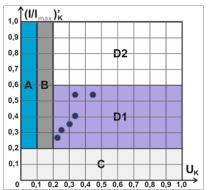


## **New source: UAP military observations**

#### Military UAP Video on early 2024







Diameter size of one ball: 0.25... 1.26 m, velocity up to 37 m/s

#### The main factors of abnormality are:

- V-shape of objects
- Closeness of objects to each other
- Spherical constant shape of objects
- High speed and coordination



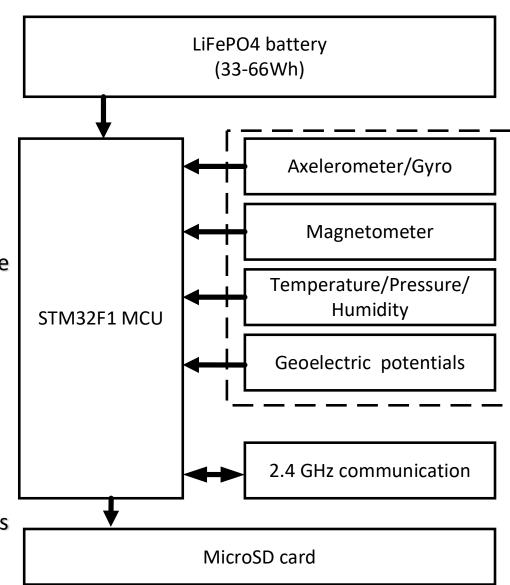
## Our development of the devices for anomalous zones monitoring

Measurements are taken twice a second:

- Temperature (2 sensors)
- Pressure
- Humidity
- Magnetic field
- Gravitational field (acceleration)
- Geoelectric potentials

Data is recorded on a microSD card. The autonomy of the device is up to 2 months.

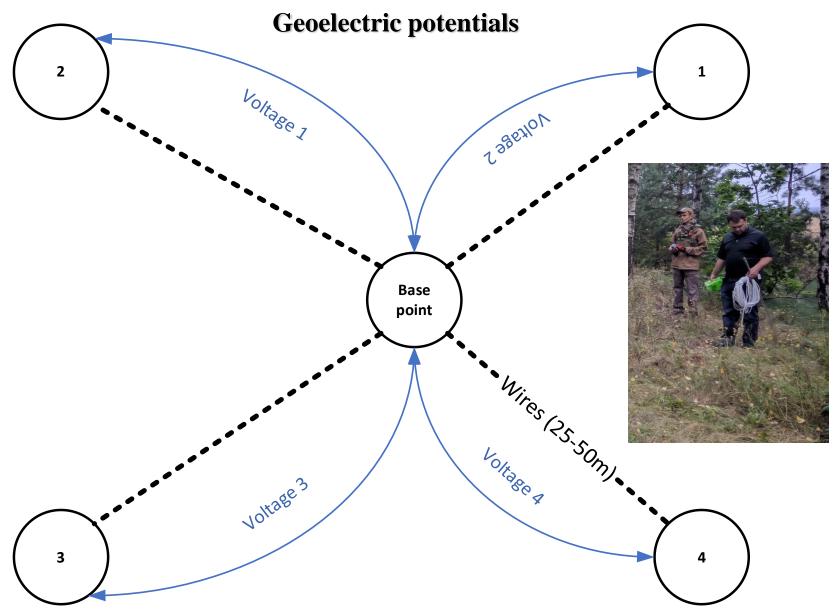
The further version of device will be equipped with a solar panel, camera, 4G modem, and GPS receiver. In addition to monitoring geophysical anomalies, this will allow it to be used for covert surveillance of enemy actions with automatic recording and photo/video transmission.



## Our development of the devices for anomalous zones monitoring

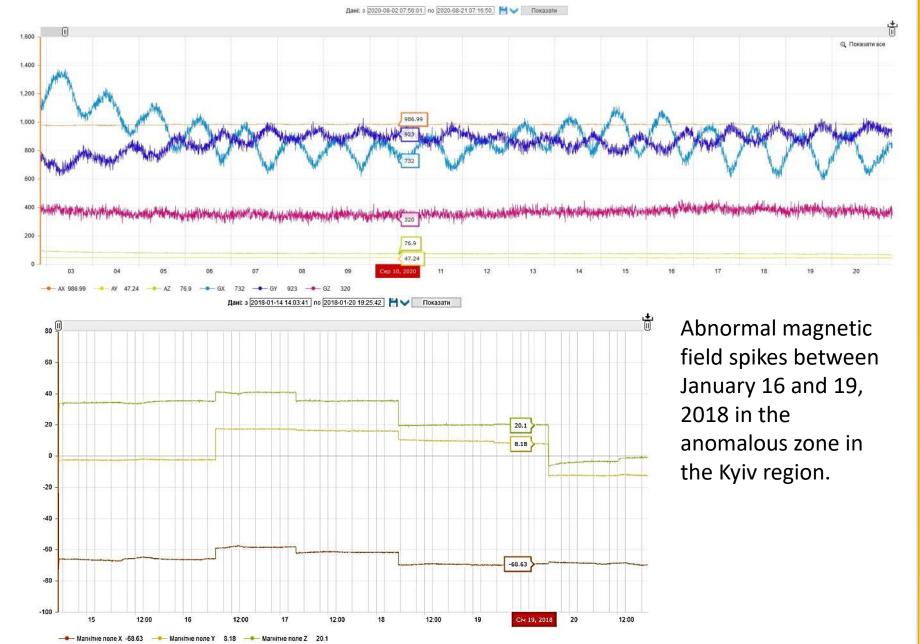


## Our development of the devices for anomalous zones monitoring

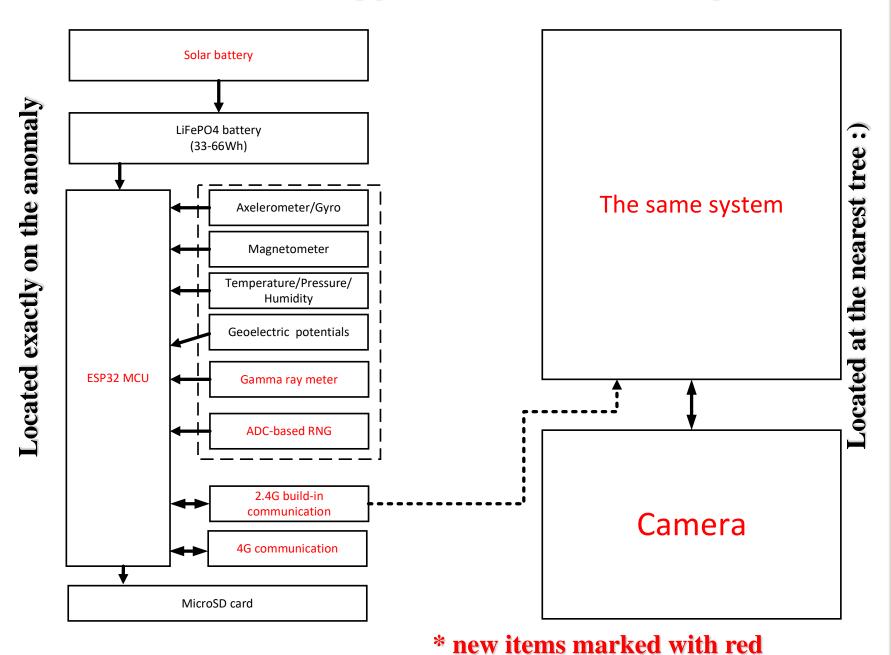


We used 6mm meter pins and a screwdriver to screw/unscrew them into the ground.

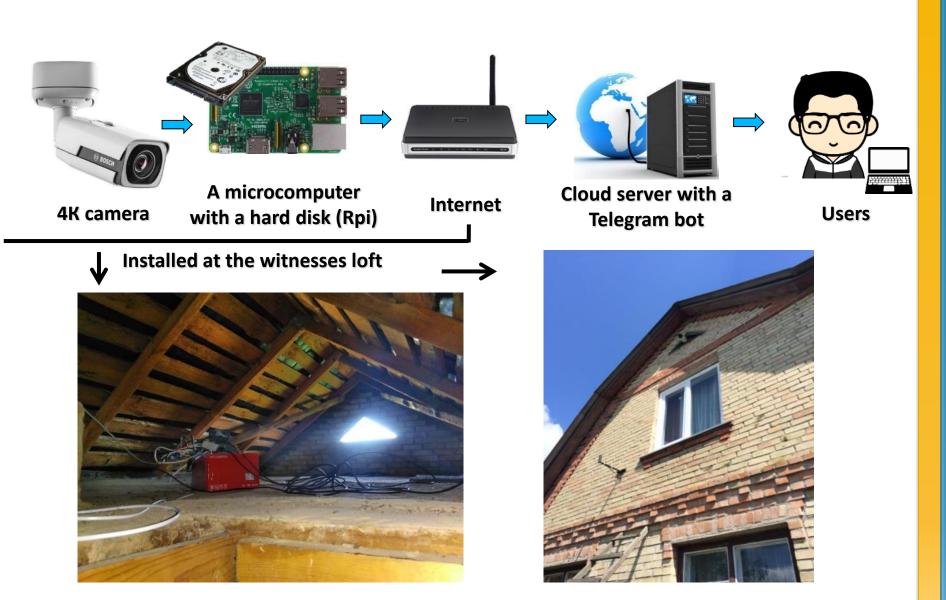
## Overview of some of the data obtained (magnetometer, accelerometer, gyroscope)



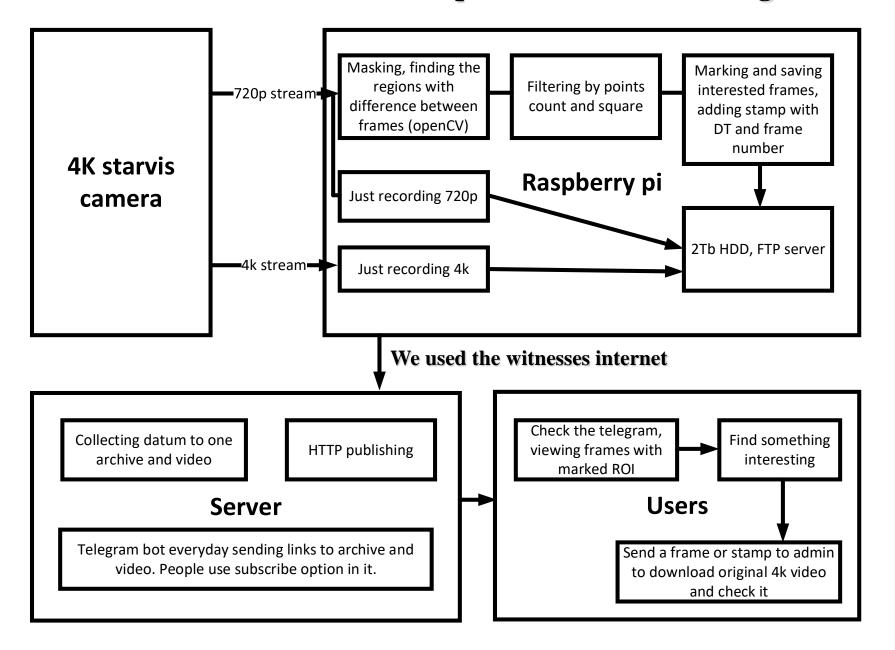
## Devices for monitoring geoanomalous zones. Further plans



# The structure of the complex for UAP observing



## The structure of the complex for UAP observing



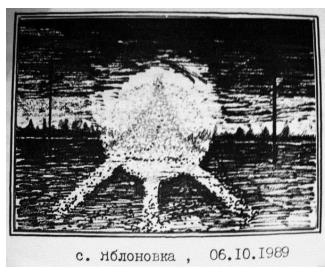
# **Software description**

We use two streams from camera: original 4k stream and secondary 720p one. RPi writes both streams to HDD but analyzes with OpenCV only the 720p stream. This schema was selected to perform near to real-time analyze on tiny hardware.

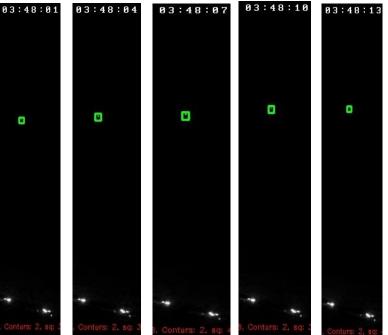
When RPi founds moving object with the square more than some constant, it draws green border and stores the screenshot with video file info, timestamp and sends it to the server. Once a day server sends these screenshots to subscribed users for further manual analyze via the Telegram bot. To keep connection RPi uses VPN-connection to our server. To avoid SD card damage OverlayFS is used.



# The results of the UAP tracking algorithm



Drawing by a UAP eyewitness in the field, zone Yablunivka, 06.10.1989

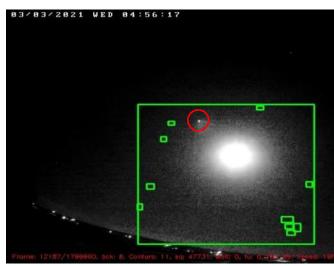


**UAP** 16.03.2020

Filmed aerospace phenomenon 12/19/2020, 5:04 pm



It was only a flying chinese lantern:)



UAP nearby the Moon view 03.03.2021

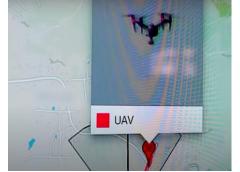
## **Areas of possible international cooperation:**

- Exchange of information
- Unification of research methods, exchange of experience and data
- Joint development of methods and devices
- Organization of experiments
- Writing materials, articles, etc.

#### **Perspectives of UAP monitoring:**

- Deployment at all levels
- Connecting to a global network
- Data processing and storage centers
- Public access
- Effective identification algorithms
- Rapid response systems









An example of one of the implemented global monitoring systems in the world, which can be connected to UAP and anomalous zones registration monitoring complexes.

Thank you for your attention!



Together to a more knowledgeable, sustainable, and secure world!

WWW.ZOND.KIEV.UA

