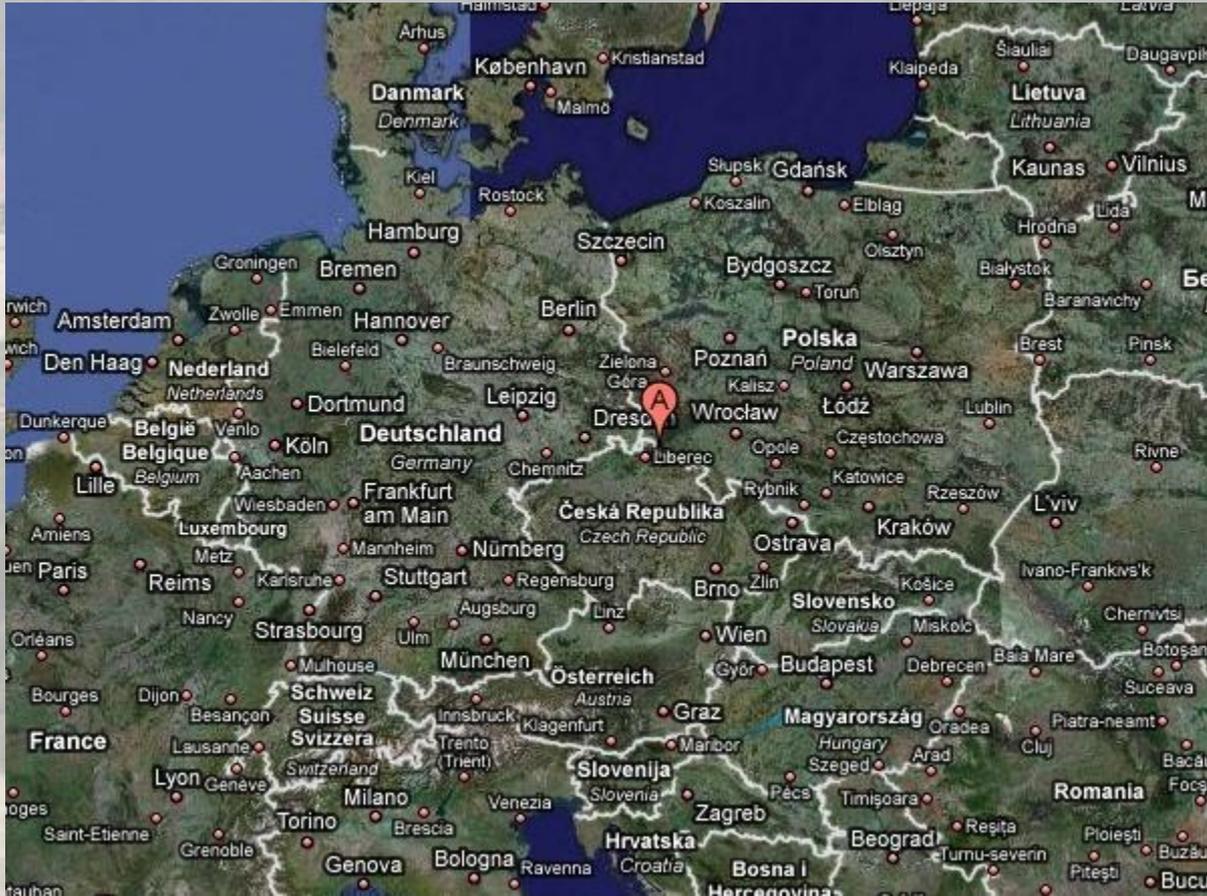


**With astronomy into a forest**



# The Ižera Mountains



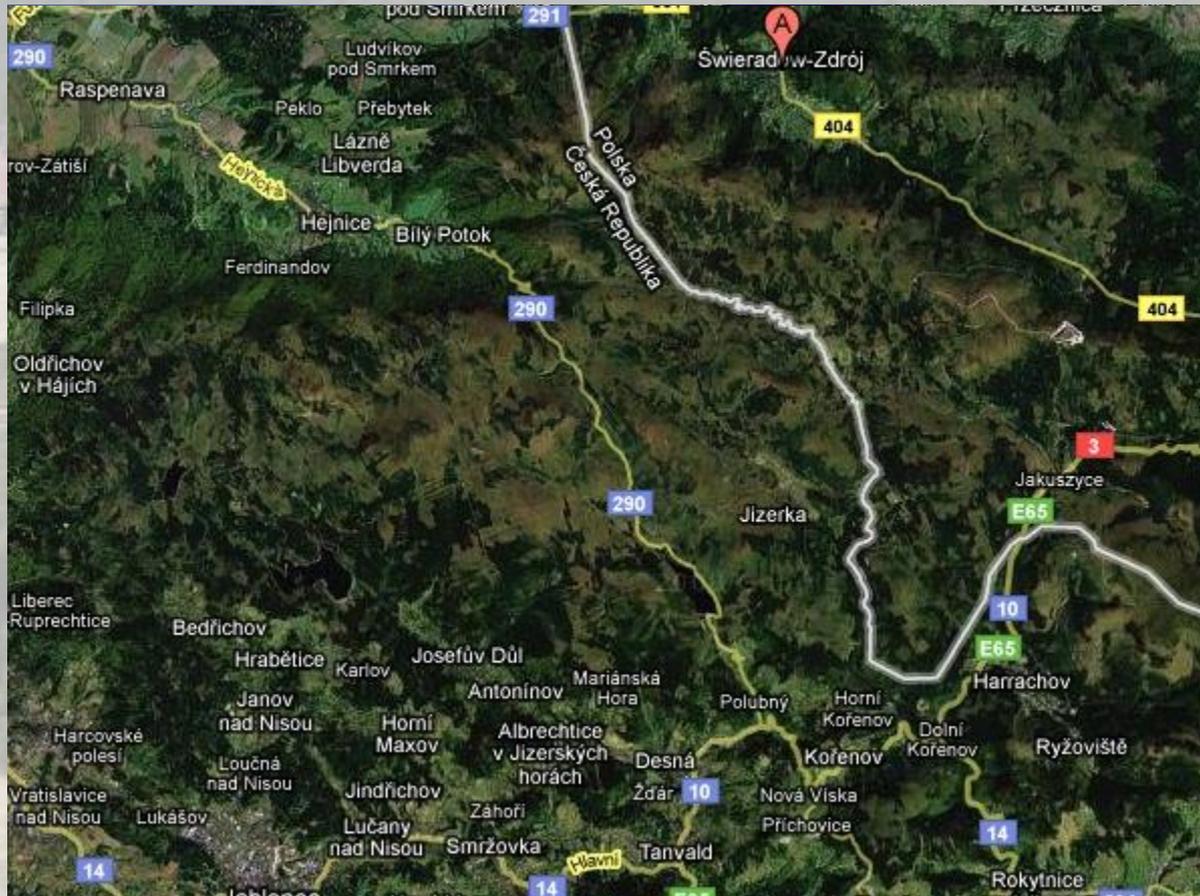
In the middle of Europe

# The Iżera Mountains



approx. 100 km from Wrocław

# The Ižera Mountains

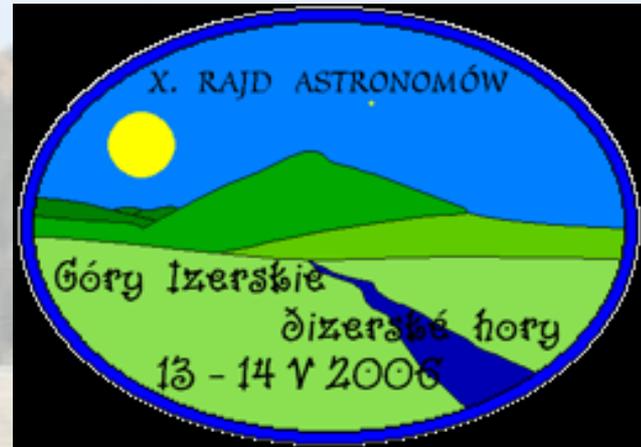
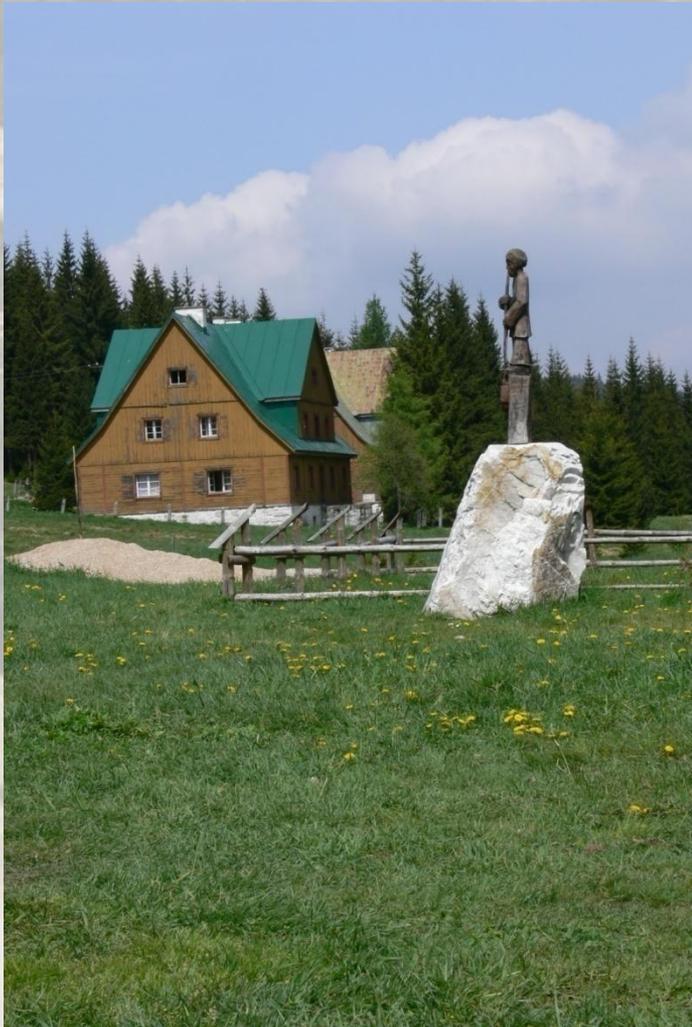


Ižera Mountains, Ižera Valley

# The Izera Mountains and astronomers

13-14 X 2001 – first Astromer's hike

13-14 V 2006 – 10th (the Izera Mountains)



# The Ižera Mountains and astronomers



**Tourists' Station „Orle”**

# The Izera Mountains and astronomers

22-24 IX 2006 – first OSA (all-Poland Astronomical Meeting) – Zieleniec  
2nd and 3rd edition – the Izera Mountains



# The idea

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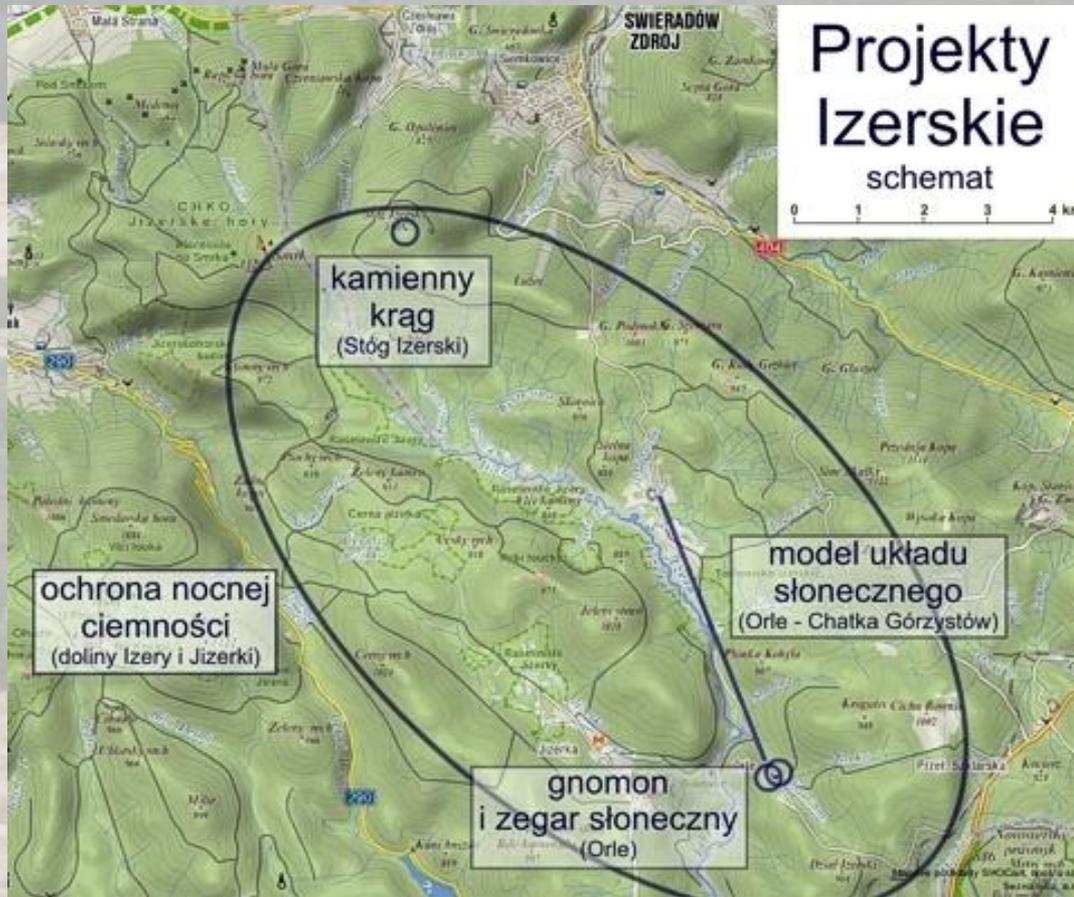


**2nd edition of OSA – long evening with beer – the idea of School Workshop on Astronomy (SWA) was born**



**One month later – 1st edition of SWA – long evening with beer – the idea of Ižera Projects was born**

# The Izera Projects: overview



## Primary goals:

- Darkness conservation area – Izera Mountains
- gnomon and sundial – tourist station ORLE
- scaled model of the Solar System
- stone circle – Stóg Izerski summit

## Independent activities

- School Workshop on Astronomy (SWA, three editions) - XVII LO, Astronomical Institute
- all-Poland Astronomical Meeting (OSA, three editions) – teleskopy.net, PTMA Gliwice, Astronomical Institute

# Scaled model of the Solar System



5th Nov 2007

From Orle Station to Chatka Górzystów

Scale 1:1000000000

approx . length 4.5 km

planets from 0.5 cm to 14 cm

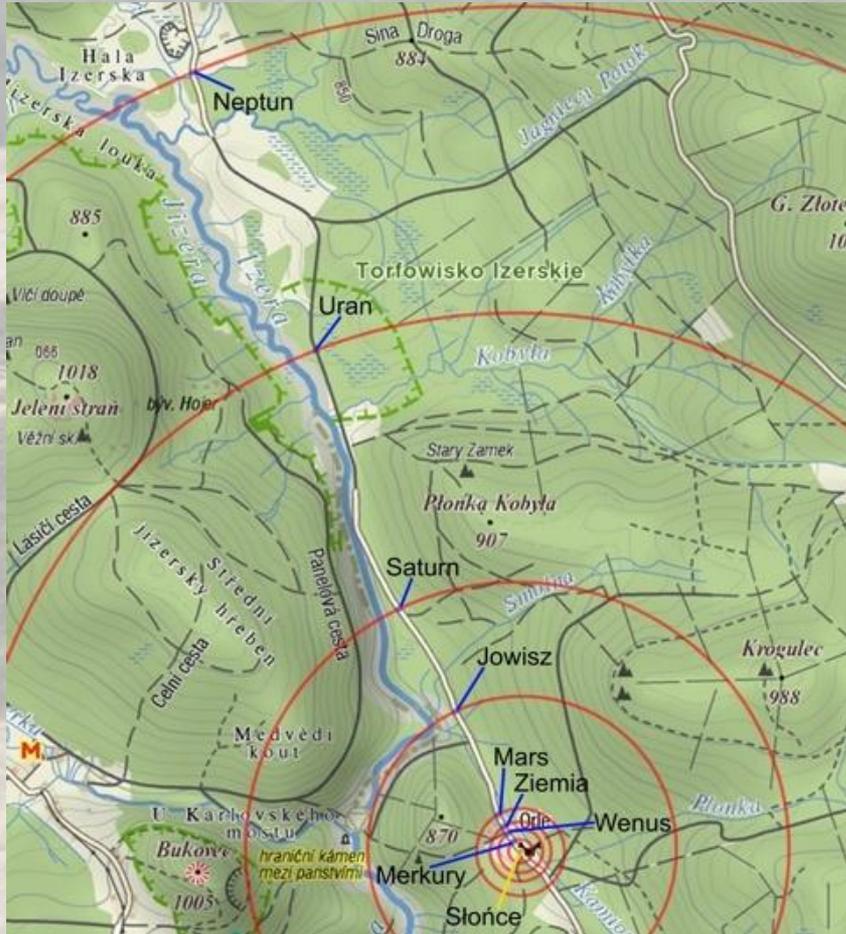


# Scaled model of the Solar System

View from Neptune



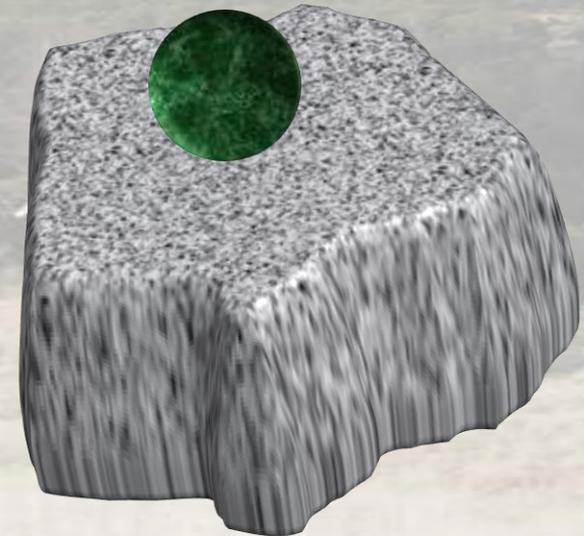
View from Mercury



# Scaled model of the Solar System

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8 stone pillars/irregular stones  
balls representing planets in scale  
balls will have a colour representing a colour of a planet



Uranus – made of copper (green patina)

# Scaled model of the Solar System

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Stone selection

Szklarska Poręba Promotion Bureau



# Stone circle



Panorama view of the Stóg Izerski summit



8 pillars (approx. 2 m high)  
20 meters in diameter

inside - the analemmatic sundial  
(the dial will be made of flat stones  
lying on the ground)

Analemmatic sundial

# Stone circle

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**7 stones will be placed using a crane**

**The last one we will put with our hands...**



# Stone circle



**The thickness of a soil is 20 cm only**

**It is too low for proper mount the stones (1.5 – 2 tons)**

**For this reason stones will have shapes resembling cones (for stability)**



**2nd SWA – thickness measurements**

# Gnomon and sundial



**the Gnomon:**

**stone pillar  
(2 - 2.5 m) – from  
Strzegom quarry**

**paths of the shadow  
for different seasons  
will be marked**

# Gnomon and sundial

Visualisation of the sundial



A model is ready we are waiting for final (made of granite) version of dials

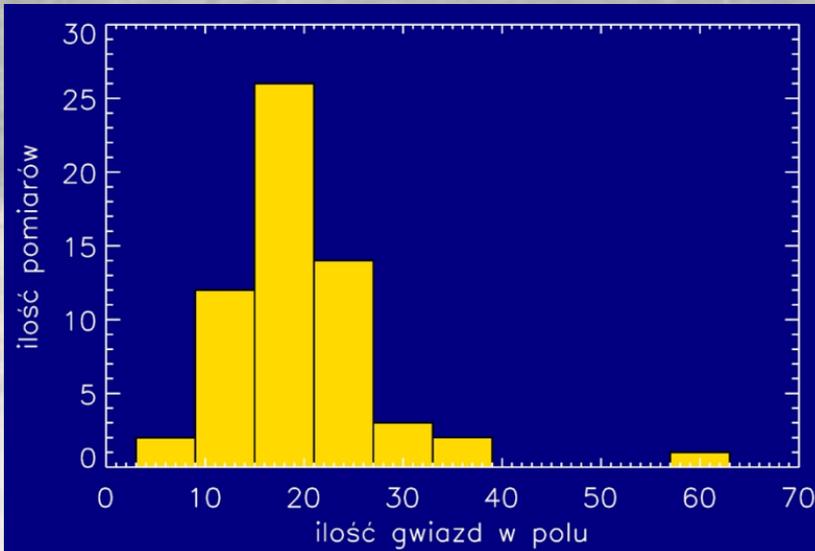
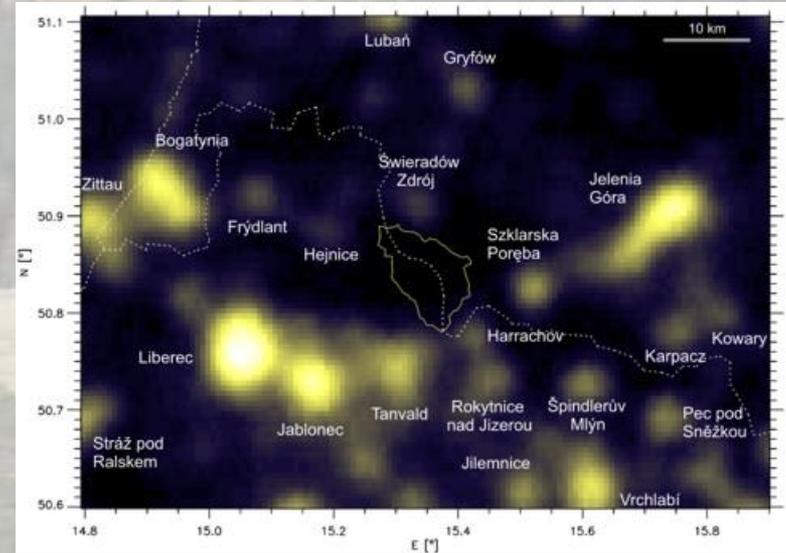
the Sundial:

vertical, granite dials, iron hands

due to the orientation of the building two sundials have to be placed on the neighbouring walls



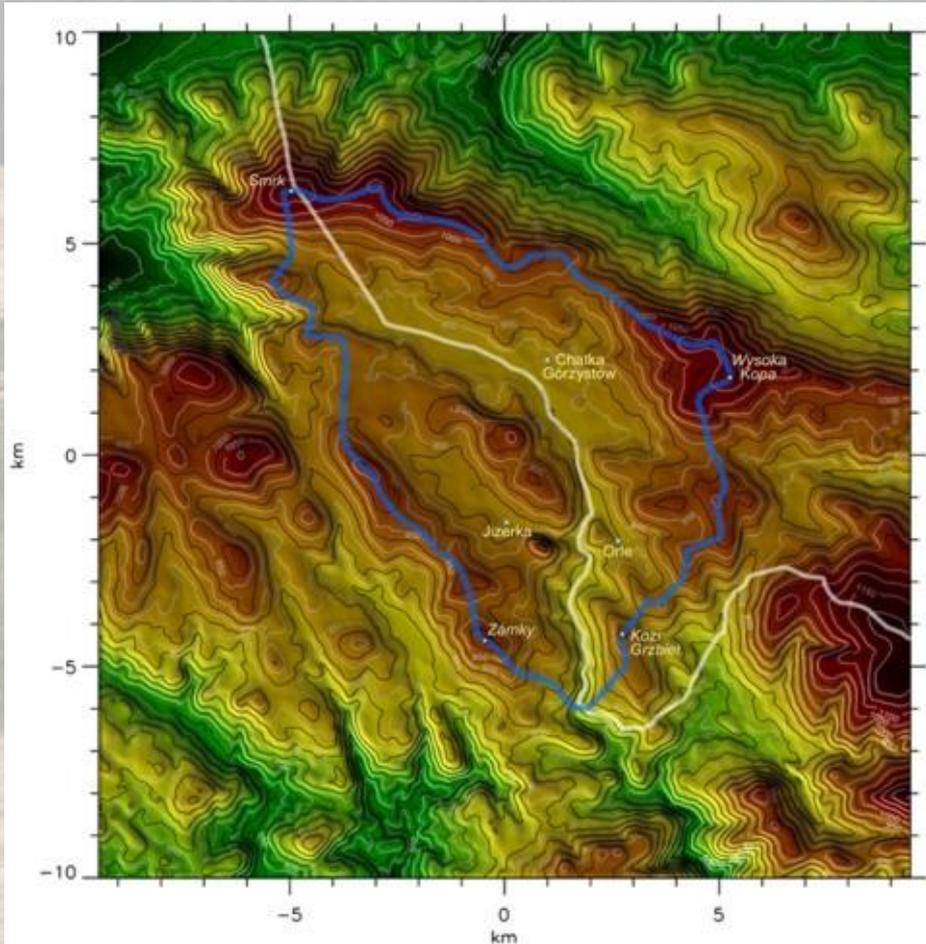
# Darkness conservation area



**A sky in the Iżera Mountains is 40 times darker than in Wrocław**

**approx. 800 stars (measurements made by pupils from 17th Secondary School in Wrocław)**

# Darkness conservation area



70 km<sup>2</sup> covering the central part of Izera Mountains

the first (or second) in Europe

Polish-Czech collaboration

march 21st – Świeradów Zdrój, meeting with local authorities

# People



**Sylwek Kołomański**



**Tomek Mrozek**



**Grzesiek Żakowicz**



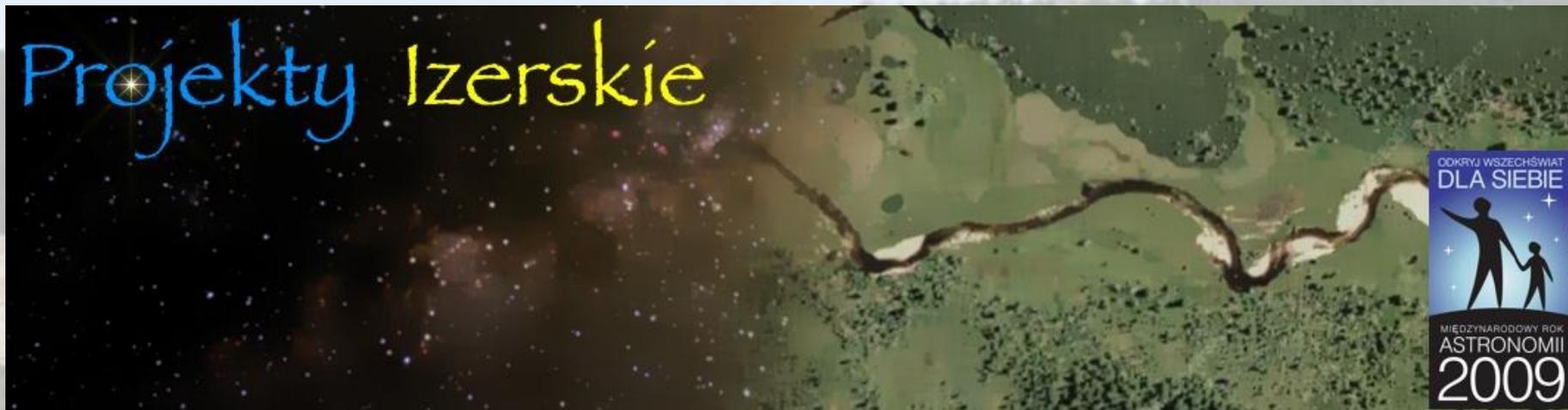
**Zbyszek Kamiński**



**Stach Kornafel**

**Barbara Cader-Sroka  
Tomek Czarnecki  
Paweł Preś  
Michał Tomczak**

# Future



- English version of Izera Projects webpage
- The sundial in Orle (first half of 2009)
- The gnomon and educational track (2009)
- Darkness preservation area (march 2009)
- Stone circle (summer solstice 2010)