



THE COORDINATING COMMITTEE MEETING OF THE STRUVE GEODETIC ARC  
7-8 September, Tallinn, Estonia



**Arunas Buga**  
**Institute of Geodesy, VGTU**

# **Updates of Struve GA commemoration through collectables**



**RESOLUTIONS**  
**of the Second**  
**Coordinating Committee Meeting**  
**THE STRUVE GEODETIC ARC**  
**in Haparanda, Sweden, August 14 – 16,**  
**2006**

**Resolution No. 3**

The Delegates of the countries of the Arc *noting* the idea of the delegation from Lithuania to publish stamps dedicated to the Struve Geodetic Arc as the World Heritage,  
*encourage* all the Struve Arc countries to work to get a stamp published in each Struve country.

## F. G. W. Struve on stamps



USSR stamp devoted for  
Pulkovo observatory  
reconstruction

First stamp depicting Struve was issued in USSR, 1954. Soviet postal administration commemorated Pulkovo observatory after the reconstruction on 26 July 1954. Designer A. Zavyalov. printing – litography. Perforation 12 ¼. Size : 42 x 30 mm. Stamps printed in sheets 6 x 12. Printing run : 1 500 000 stamps.



USSR stamp commemorating Struve death centenary

Designer: S. Sokolov, printing: offset.  
Perforation: 12 ¼ and 12. Stamp: 26 x 37 mm. Stamp printed in sheets 10 x 5.  
Printing run 3 000 000 stamps.



USSR stamp commemorating Pulkovo observatory 150 years

Designer: J. Kosorukov, paper chalk.  
Perforation: 11 1/2  
Stamp: 40 x 28 mm  
Stamp printed in sheets 10x5  
Printing run 3 100 000 stamps.

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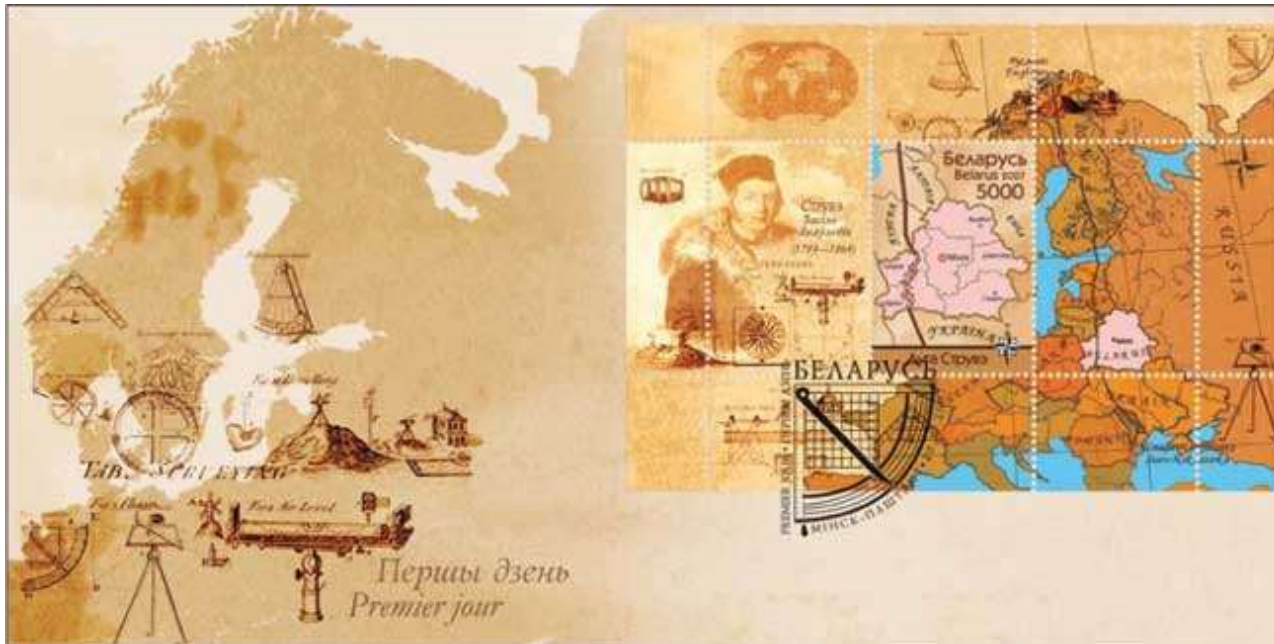


Estonian commemorative cancellation in the  
occassion of Struve bicentenary in 1993



Souvenir Sheet was issued on 20th September 2007. Designer of souvenir sheet Oksana Novoselova. Paper chalky, printing process offset. Perforation combined  $14\frac{1}{4} : 14$ . Size of a stamp 28 x 40 mm. Size of the souvenir sheet: 112 x 80 mm. Face value 5000 Roubles. Printing run: 15,000

Postal administration of Belarus following recommendations of Struve Geodetic Arc Coordinating Committee Meeting in Haparanda, Sweden 2006 was first to issue postage stamp to commemorate Struve Geodetic Arc. It was a souvenir sheet



Belarus FDC and FD cancellation.

FD cancellation was in Minsk central PO



Postal administration of Moldova was second to follow. Postal administration of Moldova has issued pre-stamped card on 1st September 2008 .

Prestamped card is devoted to 160th birth anniversary of Georg Wilhelm von Struve.

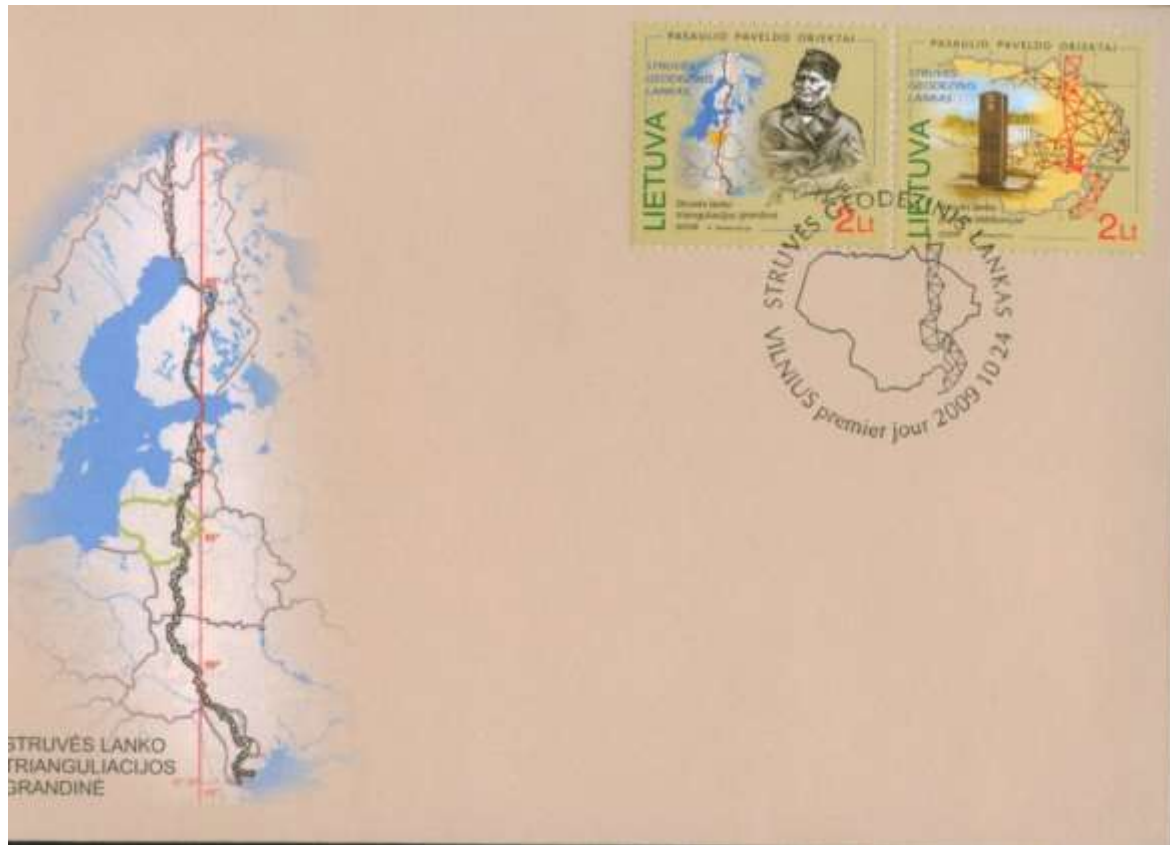
Designers of pre-stamped card are Oleg and Alina Cojocar. Paper ordinary. Printing process offset. Size of card 162 x 114 mm. 50000 cards were printed.

The imprinted stamp of 1,20 Lei is showing geodetic monument at Rudy point. Cancelled by first day cancellation on 1st September 2008 at Soroca Post Office





Lithuanian postal administration was third to follow. Two stamps in set of "The World Heritage Objects. The Struve Geodetic Arc" were issued on 24th October 2009 Designer of stamps is H. Ratkevicius. Paper chalky, printing process offset. Perforation 14. Size of a stamps 34,50 x 30 mm. Every stamps face value 2 Litas. Stamps are printed in Miniature Sheets (135 x 108 mm) 3 x 3 stamps. There is a plenty of additional information and pictures on the margins of miniature sheets. 297,000 of every stamp were printed



Lithuanian first day cover



Tarta (Tartu) universitēti profesors Friedrichs Gēorgs Vīlhelms Struve (1791-1864) sarakstījis metodiķus, kā mērīt zemes izmērus. In order to triangulate (triangulation) ground in 258 triangles, cartographer created special marks. To ground value, it garbi buvo pavadinta Struve geodezijos lanka.

Struve geodezijos lankos uždarytas 1816-1852 m. yra vienas iš didžiausių ir reikalingiausių bandymų išmėti ir matuoti Žemės dydį ir formą. Trianguliacijos grandinė eina per kelias valstybių teritorijas - nuo šiaurės Europos miesto Hansasbereno, esančio Norvegijos šlaituose, iki Izmaito - Ukrainos pietuose, yra įvairūs jūros, Lankos kerta Norvegiją, Švediją, Suomiją, Rusijos Federaciją, Latviją, Lietuvą, Baltarusiją, Ukrainą ir Moldovą. Didesnis žemės lankos apimtis yra pasaulio pirmasis laisvų ribotųjų trianguliacijos tinklas, tęsiantis ir šiuo laikotarpiu per 2822 km ilgio grandinę.

Lietuvos teritorijoje yra palygti trys iš atskaitomųjų taškų, kurie sudarė geodezijos lankos punktų, vienas Rokiškio (Gizytinų k.) ir du Vilniaus rajono (Palapėškio ir Melkonių k.).

Nuo 2005 m. Struve geodezijos lankos grandinė į UNESCO Pasaulio paveldo sąrašą, Struve geodezijos lankos yra pirmoji tarptautinė sistema kurti tarptautinio Pasaulio paveldo sąrašą, pristatyta dvidešimties valstybių.

2006 m. birželio 16 d. geodezijos paviljone Melkonių pramoniniame visuomenės



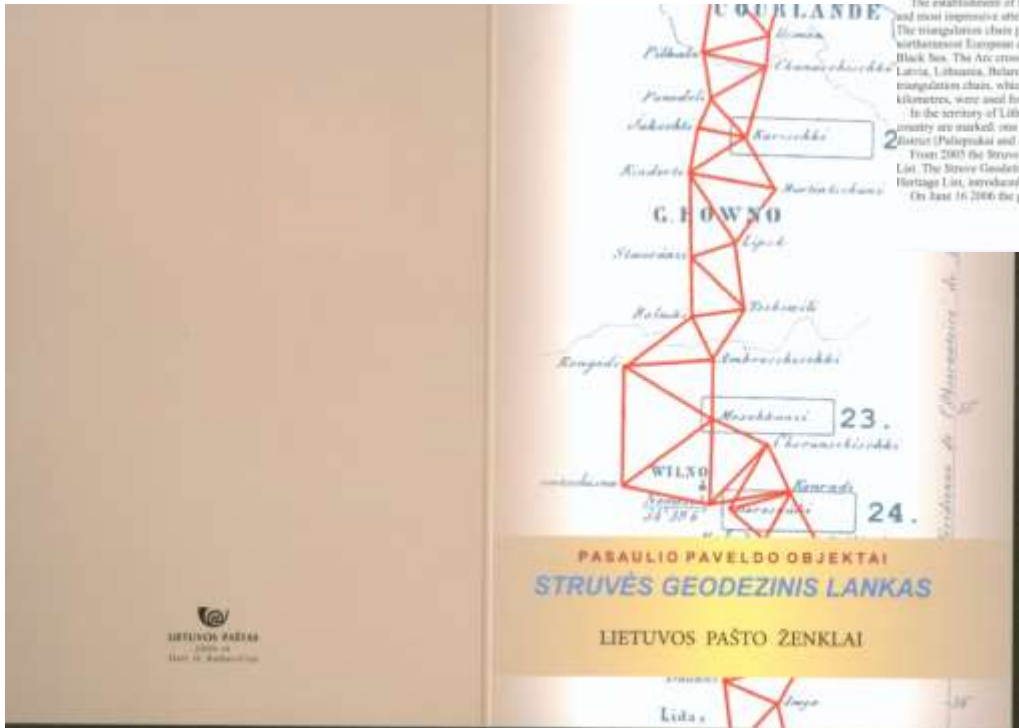
Friedrich Georg Wilhelm von Struve (1791-1864), the professor of University of Tartu in Estonia developed methodology for measuring the size and shape of the earth. He composed a triangulation chain of 258 triangles with special markings formed on top. This chain was later named Struve Geodetic Arc in honor of the professor.

The establishment of Struve Geodetic Arc in 1816-1852 is one of the greatest and most impressive attempts to determine the exact size and shape of the earth. The triangulation chain passed through territories of ten countries - from the northernmost European city Hansasbergen in Norway to Izmaito in Ukraine at the Black Sea. The Arc crosses Norway, Sweden, Finland, Russian Federation, Estonia, Latvia, Lithuania, Belarus, Ukraine and Moldova. The fragments of this triangulation chain, which extended through the mentioned countries 2822 kilometres, were used for the calculation of the size of meridians.

In the territory of Lithuania 3 points of Geodetic Arc out of 19 present in the country are marked: one in Rokiškis district (Gizytinų village) and two in Vilnius district (Palapėškio and Melkonių villages).

From 2005 the Struve Geodetic Arc was inscribed in UNESCO World Heritage List. The Struve Geodetic Arc is the first trans-national nomination in the World Heritage List, introduced by ten states.

On June 16, 2006 the geodesic post in Melkonių was introduced to the public.



Lithuanian first day sheet.  
Cover and inside.



National Bank of the Republic of Belarus commemorated Struve Geodetic Arc by issuing 2 commemorative coins.

Copper–Nickel Denomination: 1 ruble Weight of coin: 15.5 g Quality: "proof–like"

Square shaped, size: 29.0 x 29.0 mm

Mintage: 5000 pcs.

Design: O.Novosiolova;



Second coin is silver coin of the same design but denomination of 20 roubles.

Silver, Alloy standard of silver: 925

Denomination: 20 roubles; Weight of coin: 33.62 g Fine silver content: 31.1 g

Quality: "proof". Square shaped, size: 36.0 x 36.0 mm

Mintage: 5000 pcs

Introduced on: December 29, 2006

Both coins minted by "Lithuanian Mint", Vilnius, Lithuania



National Bank of Moldova  
introduced silver comm.  
coin in June 15, 2009.  
Face value: 50 lei  
Quality: proof  
Silver, fineness: 925/1000  
Weight: 16.5 grams  
Diameter: 30 mm  
Edge: plain  
Mintage: 500





Latvian Post has issued a souvenir sheet of 2 stamps devoted to Struve Geodetic Arc on May 5th, 2011.

Paper: chalky

Printing process: offset

Perforation: frame 13 1/2

Size of a stamp: 30 x 37.50 mm.

Size of the Souvenir Sheet: 118 x 74 mm.

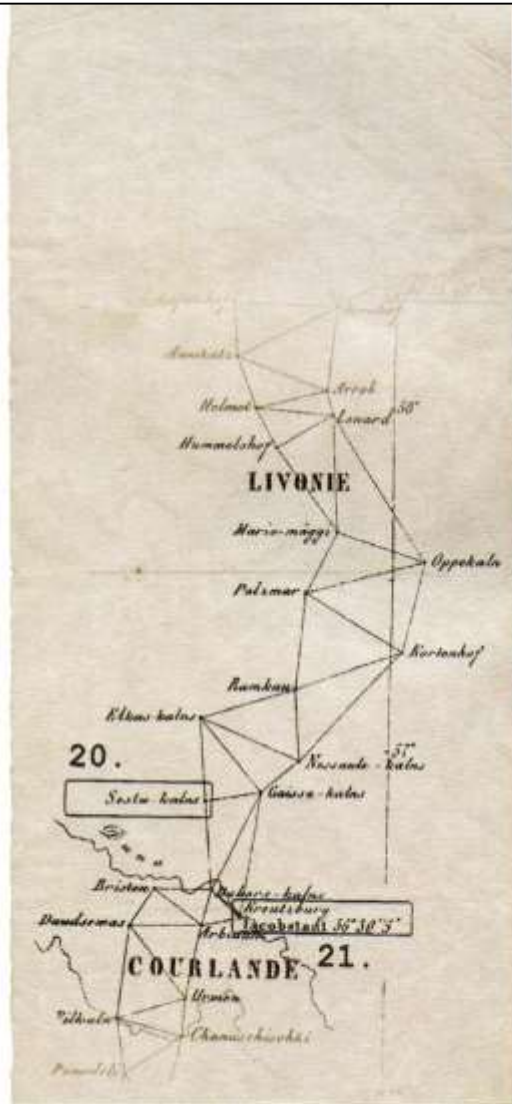
Face value of souvenir sheet 0.90 Lat.

Designer Arta Ozola Jaunaraja

Printed Baltijas Banknote,  
Edition 70,000



STRŪVES ĢEODEZISKAIS LOKS LATVIJĀ



PDA

Arūnas Buga  
Saulēterio al.11  
SRK-11, 704 room  
LT-10223 Vilnius





Estonian Post has issued a souvenir sheet of 2 stamps devoted to Struve Geodetic Arc on May 6th, 2011.

Paper: chalky

Printing process: offset

Perforation: comb 14 : 13 3/4

Size of a stamp: 33 x 27.50 mm.

Size of the Souvenir Sheet:  
67,50 x 82,50 mm.

Face value of souvenir sheet  
1.16 Euro.

Designer: Jaan Saar

Perforation: 14 : 13 3/4

Printing house: AS Vaba Maa

Quantity issued: 40,000





Estonian Post has also commemorated a „Bicentenary of Old Tartu Observatory by issuing a pre-stamped post card on December 22, 2010.



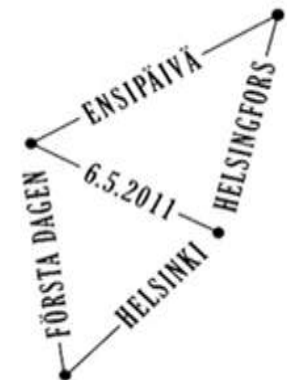
UNESCO maailma kultuuripärandisse kuuluv Struve geodeetilise kaare baasjoone mõõtmine





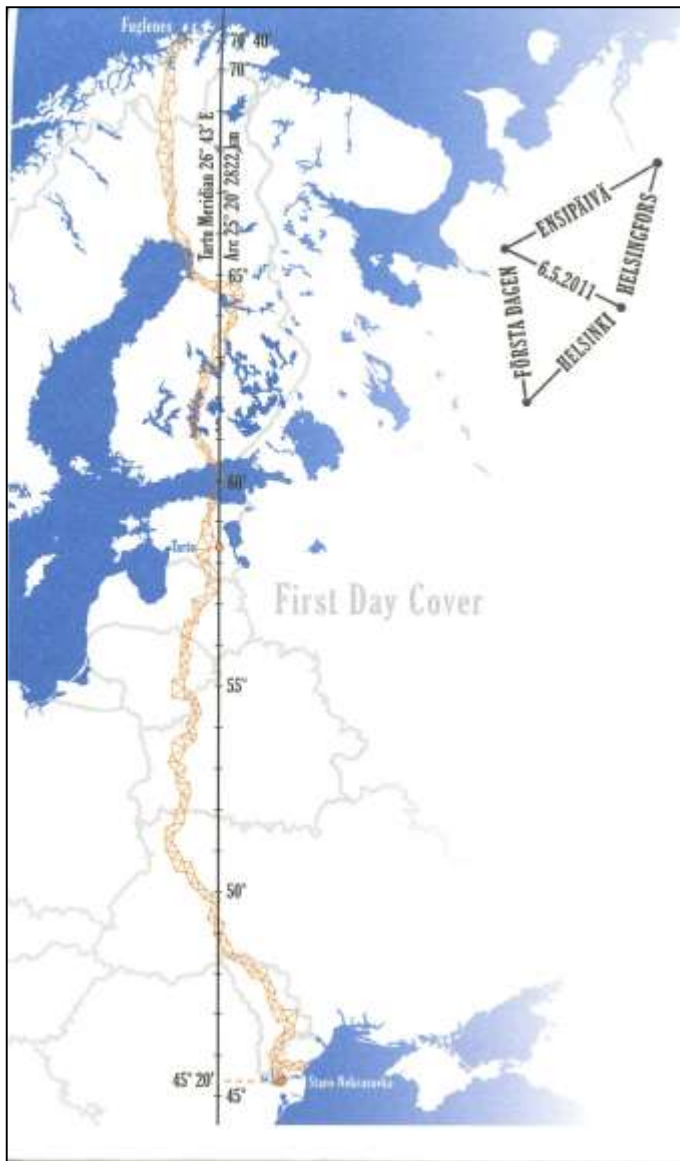
Finnish post has issued a souvenir sheet of 2 stamps devoted to Struve Geodetic Arc on May 6th, 2011. The round stamp has a Finland formed stamp within - when it is taken off, there stays another stamp left, with the hole in the middle. On the sheet there is information of the six points which are situated in Finland. Designers: Lakaniemi, Ari; Rumpu, Susanna

Printing office: Joh. Enschedé & Zonen. Perforation: S (Slit of Gestanst). Dimensions: 105 x 85 mm sheet (Stamp: 42 mm in diameter and 20 x 38 mm). Face value of souvenir sheet: two second class stamps. Printing: Offset. Gum: Self-adhesive. Print run: 300,000





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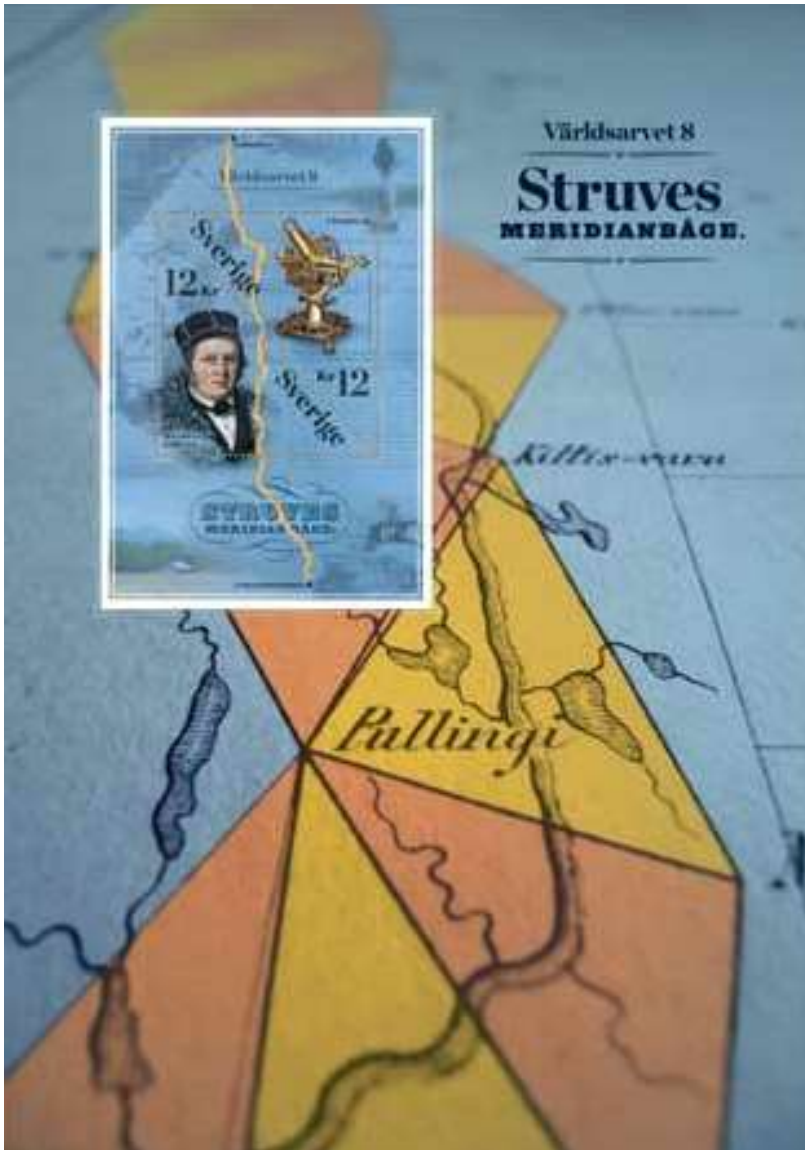
ARUNAS BOGA  
Inst. of Geodesy, Vilnius Gediminas  
Saulėtekio al. 11 T4  
LT-10223 Vilnius - 40  
LITHUANIA



Världsarvet 8  
**Struves**  
**MERIDIANBÄGE.**  
Förstadagsbrev First Day Cover



Swedish FDC devoted to Struve GA



Swedish First Day Sheet

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Font Chronicle.

Survey triangulation between points stretching from North Cape to the Black Sea.

Triangle map. An illustration from Struve's report about the survey, "Arc du méridien ..." published 1857–1860.

Portrait of Struve based on a painting by Christian Albrecht Jensen, a Danish artist from the 1800s.

Focusing scale.

Photograph of the Jupukka Mountain in Pajala Municipality, Lapland. One of the four Swedish points is located here.

The issue's logotype is based on decorations and fonts found on maps and in books and scientific reports from the middle of the 19th century.

The monument at the end point of Struve's geodetic arc in the Norwegian city of Hammerfest.

Introduction to astronomer Daniel Georg Lindhagen's speech in 1862 on the shape of the Earth, held at the Royal Swedish Academy of Sciences.

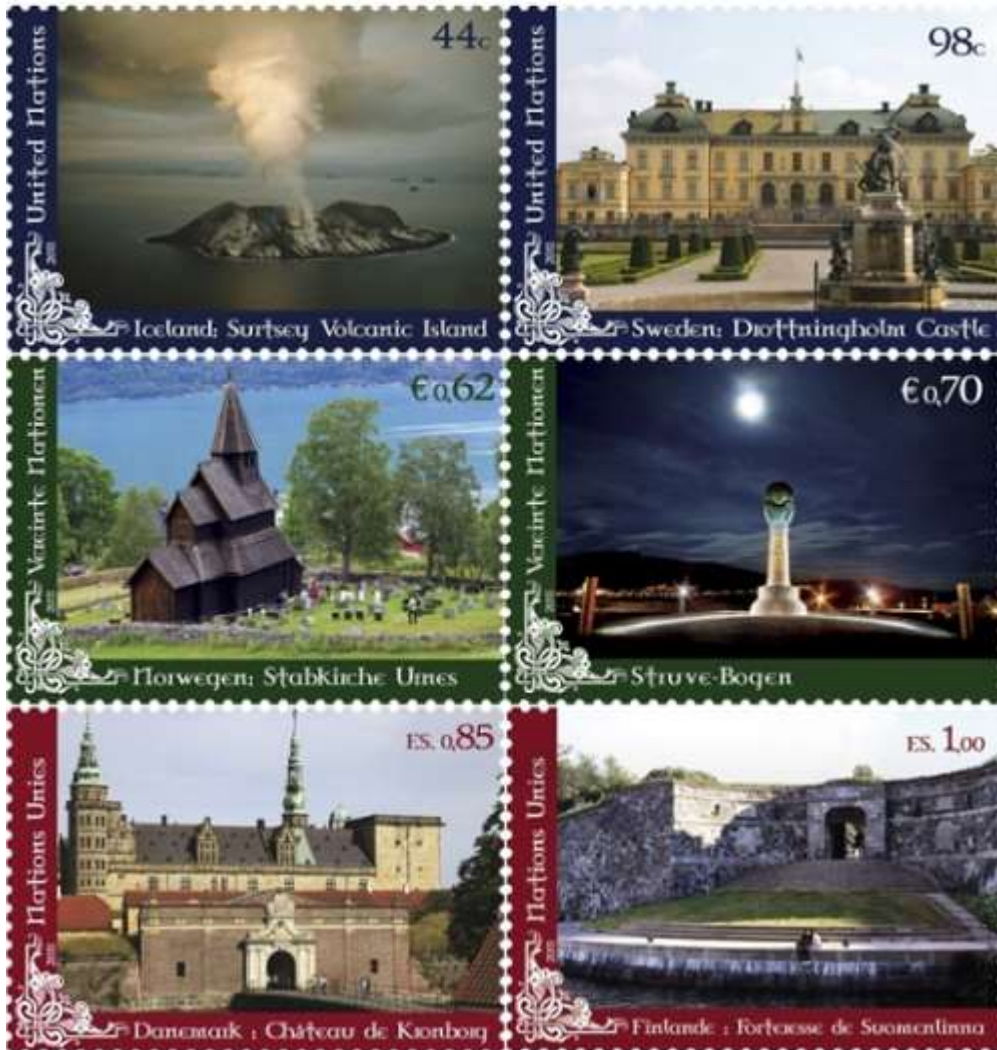
Astronomer Haqvin Selander's theodolite that was used to measure the angles in Tornedalen. The instrument is today located in the Astronomy House in Lund. A theodolite is a set of binoculars with a hairline on two axes, which means it can be rotated both horizontally and vertically.

A list of the points from Struve's report about the survey, "Arc du méridien ..." published 1857–1860.

Observatory in Tartu, Estonia, during Struve's lifetime. The building was finished in 1810 and the first point in the arc was established here.







On May 5th, 2011 the United Nations Organization has issued a stamp with Struve Geodetic Arc monument in Hammerfest.

Printing: The stamps were printed in offset by Joh. Enschedé Stamps Security Printers B.V. (Netherlands).

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Quantity: 160,000 stamps  
(8,000 sheets)  
Designer: The designs were adapted as stamps by Rorie Katz (United Nations).



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Norwegian personal stamps. These could be ordered through Posten Norge internet shop, client can use his/her image.





# RESOLUTIONS

## of the Fifth Coordinating Committee Meeting of THE STRUVE GEODETIC ARC in Oshmyany, Belarus, 3-5 July 2012

### Resolution No. 6

The Delegates of the countries of the Arc  
*recognised* good value in promoting Struve Geodetic Arc to  
wide public through producing  
collectables and *encouraging* all State Parties to look for  
new ways of initiating new attractive  
collectables to be produced.



## Struve GA commemoration in Lithuania, 2015

### Bank of Lithuania

Coin dedicated to the Struve Geodetic Arc (UNESCO World Heritage)

Denomination 20 euro

Silver Ag 925

Diameter 38.61 mm, Weight 28.28 g

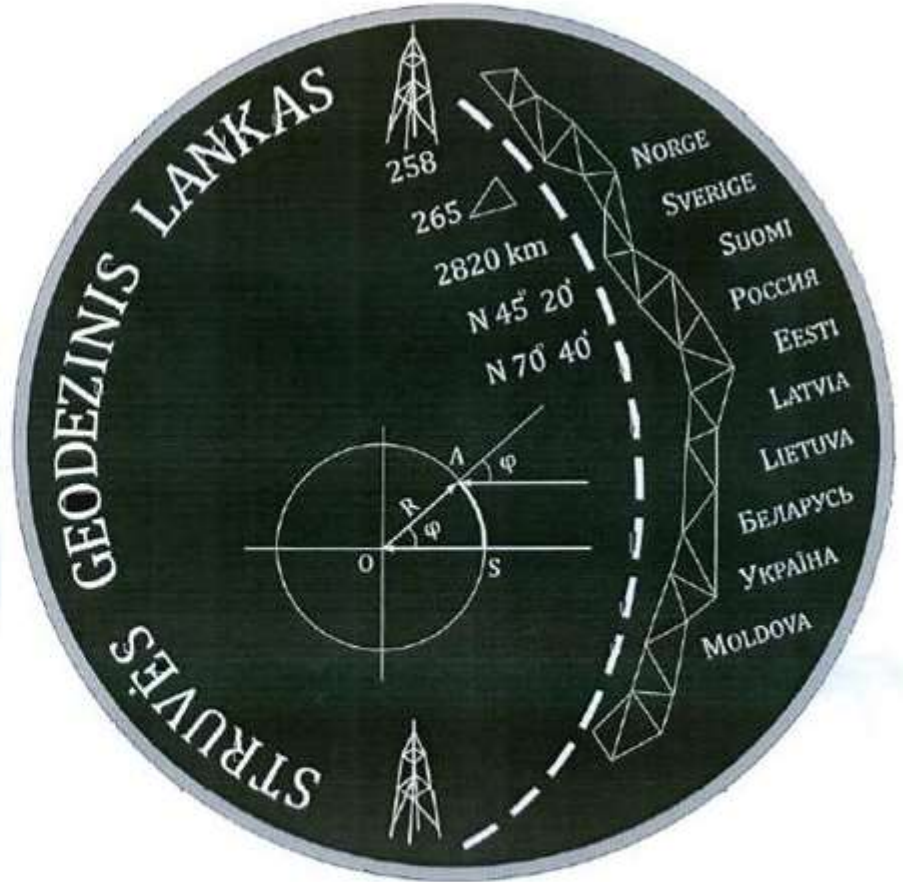
Quality *proof*

Mintage 3,000 pieces

To be issued in the second quarter of 2015



Project



GIREIŠIAI N55°54' 09" E25°26'12" \* MEŠKONYS N54°55'51" E25°19'00" \* PALIEPIUKAI N54°38'04" E25°25'45" \*

G I R E I Š I A I \* M E Š K O N Y S \* P A L I E P I U K A I \*

# Coin dedicated to the Struve Geodetic Arc (UNESCO World Heritage)



Denomination 20 euro  
Silver Ag 925  
Diameter 38.61 mm, Weight 28.28 g  
Quality *proof*  
Mintage 3,000 pieces  
Issued on 11 May 2015

Price per piece:  
Boxed – 65.00 EUR  
Without box – 60.00 EUR





## Non circulating issue



© SG

### Obverse

UNESCO logo and a tower of Struve Geodetic Arc.

In year 2005, the Struve Geodetic Arc was added to the UNESCO World Heritage List. Astronomer and geodesist Friedrich Georg Wilhelm Struve measured the arc with aim to determine the size and shape of the Earth. Measurements stretching from the Arctic Ocean to the shores of the Black Sea were made from 1816 till 1855. Today 34 authentic points of The Struve Geodetic Arc are located in ten countries and one of them also in Jēkabpils City. It was measured and established in 1826.

*Lettering:* STRŪVES MERIDIĀNA LOKA PUNKTS "JĒKABPILS" - UZMĒRĪTS 1826.G.

### Reverse

Contour of Latvia

*Lettering:* LATVIAN HERITAGE. COLLECTORS COIN

### Edge

Milled edge

### Features

Country	* Tokens * (Latvia)	<input type="checkbox"/>
Year	2012	
Diameter	31 mm	
Thickness	2.25 mm	
Shape	Round	
Orientation	Medal alignment	↑↑
Demonetized	yes	

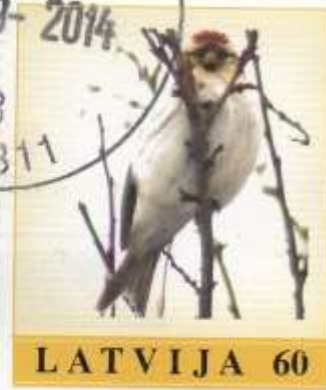


## Latvian token devoted to SGA, Mauquoy Token Company





VAIVA BUGAITE  
A/D 2431  
LT-09017 VILNIUS-51  
LIETUVA



**R** LATVIJAS PASTS  
RR 42550 348 6 LV



S PILS



Struve GA bicentenary was commemorated on February 11, 2016 in Republic of Moldova. A postal souvenir sheet was issued (printing quantity 50 000).



First day cover (400 pieces) was produced as well.  
 Design by Oleg Cojocari



# Postcard commemorating Estonian SGA point and Simuna-Võivere baseline



# Postaly used card



F.G.W. Struve (1793-1864)



**PRIORITAIRE  
PAR AVION**



Struve geodeetiline kaar, mis ulatub Põhja-Jäämerest Musta mereni, mõõdeti aastatel 1816–1855 ja seda kasutati Maa kuuju ja mõõtmete määramiseks ning topograafiliste kaartide koostamiseks.

Simuna-Võivere baasijoon mõõdeti 1827. aasta sügisel F. G. W. Struve juhendamisel. Struve kaar kanti UNESCO maailmapärandi nimekirja 2005. aastal.

The Struve Arc, which stretches from the Arctic Ocean to the Black Sea, was measured from 1816–1855 and has been used to determine the size and shape of the Earth and to draw accurate topographical maps. The Simuna-Võivere baseline was measured in 1827 by F. G. W. Struve. The Arc has been inscribed on the UNESCO World Heritage List in 2005.

23.11.2015

DANUT IVANESCU

6-dul Republicii 1976l.

5 C 1 ap 33

100392 Ploiesti ROMANIA





In 2016 Moldova Post issued postal card depicting Moldova Struve Geodetic Arc point in Rudy.

Quantity issued 1000 pieces.



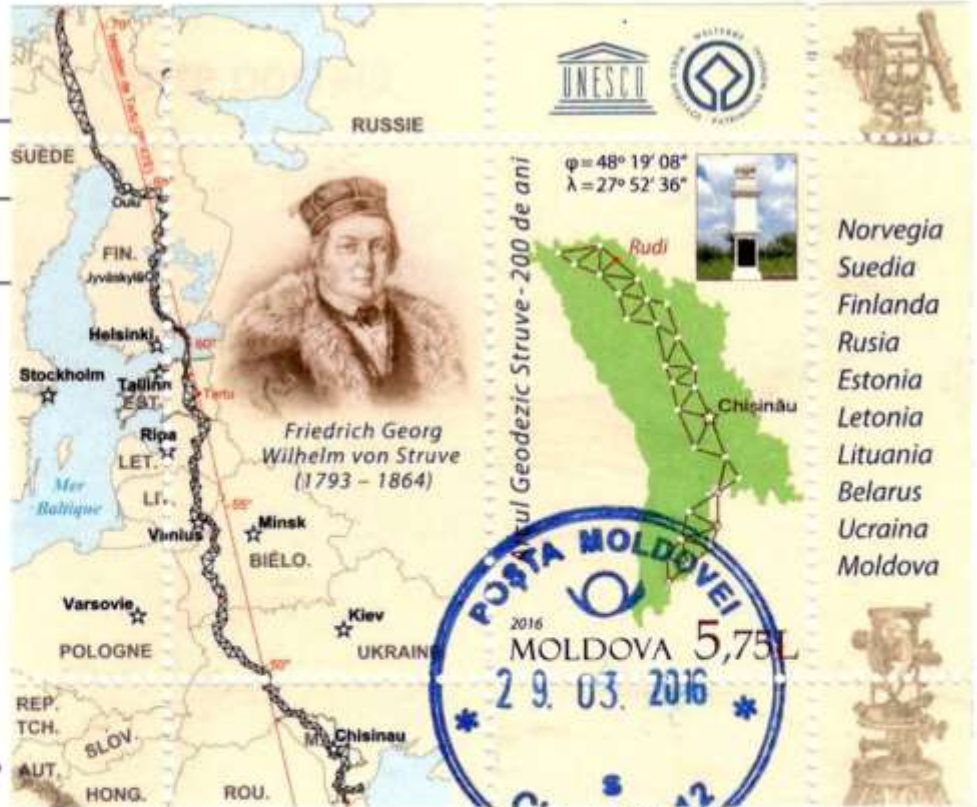
Expedito



Mihnea Răducu

2015

Chişinău



Norvegia  
Suedia  
Finlanda  
Rusia  
Estonia  
Letonia  
Lituania  
Belarus  
Ucraina  
Moldova

Martie 2016

Singurul UNESCO

in Moldova:-)

Salutari,

Mihnea

Arcul Geodezic Struve

Punctul Geodezic Rudi, s. Rudi, r-nul Soroca

Destinatar IANUŞ IVĂNESCU

BD REPUBLICII 197

BL 5 C1, Ap 33, PLOIESTI

PH 100392 ROMANIA

National Bank of Ukraine, 7 June 2016, Ukrainian Mint, Kyjiv,  
Minted 30000, nickel silver 16.54g, 35 mm. Retail 38UAH=1,30 EUR





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**Thank you for your kind  
attention!**