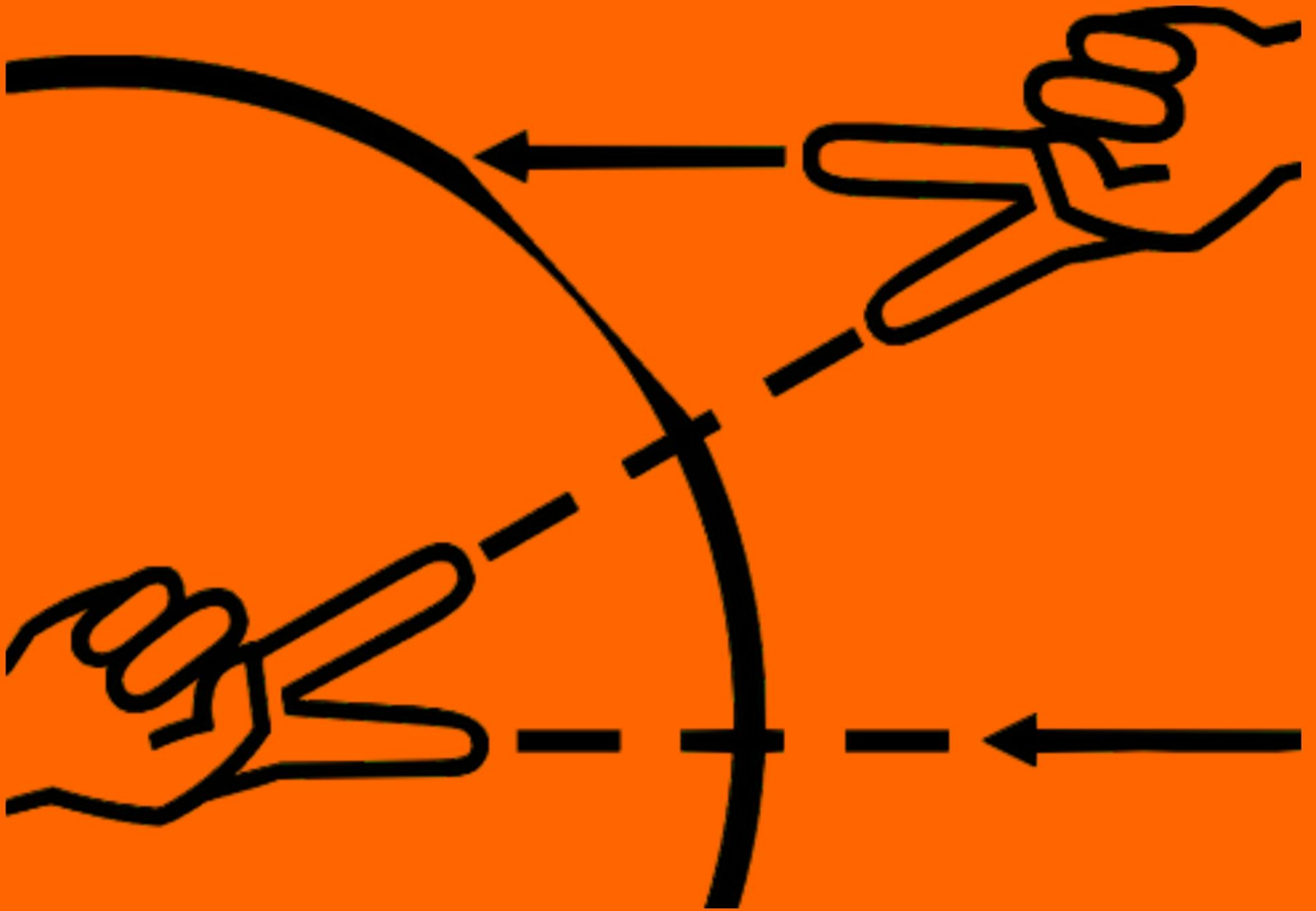


Eratoosthenes



November 2016

3^{Continents}

7^{Countries}

14^{Schools}

30^{Measures}

BRAZIL (1)
Rio de Janeiro

CHINA (1)
Shenzhen

CROATIA (2)
Brštanovo, Neoric

FRANCE (1)
Lafrancaise

GREECE (6)
Aigio, Athens-Agion-Anargyron, Ioannina,
Ilion, Petroupoli, Piraeus

ITALY (2)
Marina di Carrara, Merlara

ROMANIA (1)
Busteni

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726
	Aigio	Greece	1st High School of Aigio	38.252	22.079
	Brštanovo	Croatia	Osnovna škola kneza Branimira	43.658	16.415
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535
	Ilion	Greece	11th JuniorHigh School of Ilion	38.033	23.697
	Ioannina	Greece	Experimental College	39.666	20.845
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237
	Marina di Carrara	Italy	M Buonarroti primary school	44.045	10.031
	Merlara	Italy	Lower Secondary School "Dante Alighieri"	45.163	11.446
	Neoric	Croatia	OŠ Neorić - Sutina	43.686	16.520
	Petroupoli	Greece	4o Junior High School	38.036	23.674
	Piraeus	Greece	2nd Junior High School of Korydallos	37.977	23.655
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317
	Shenzhen	China	荔園小學南校區 Liyuan Primary School	22.549	114.092

Aigio, Greece

November 2016



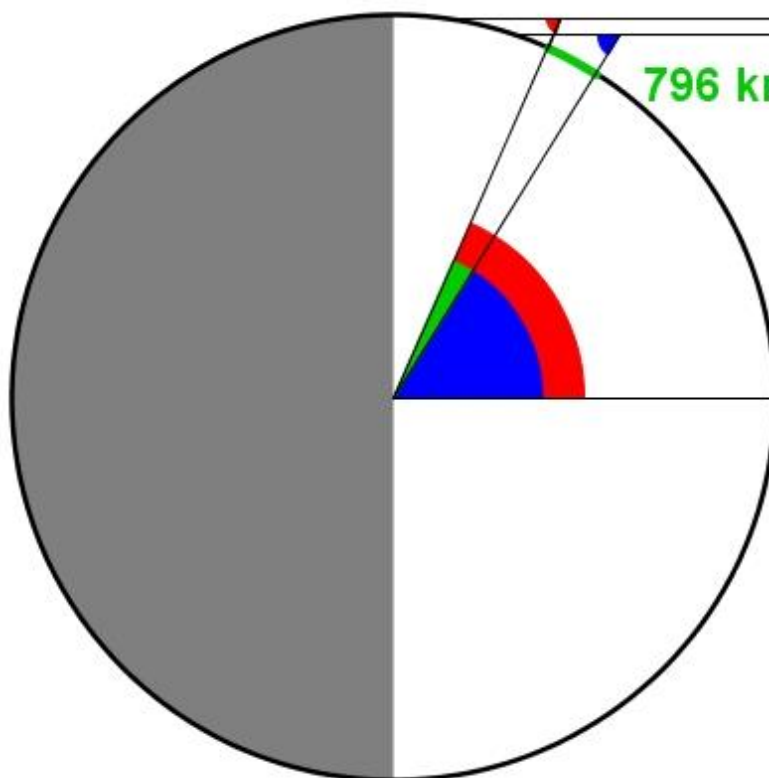
Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Aigio	Greece	1st High School of Aigio	38.252	22.079

Date	Gnomon	Shadow	Angle
24 November	50 cm	80 cm	58°

24 November 2016 (Busteni-ROMANIA) Latitude: 45.416°

24 November 2016 (Aigio-GREECE) Latitude: 38.252°

66.1° Busteni



$$\text{circumference} = \frac{360^\circ \times 796 \text{ km}}{66.1^\circ - 58^\circ} = 35378 \text{ km}$$



Athens-A, Greece

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Athens	Greece	Experimental College Agion Anargyron	38.027	23.726

Date	Gnomon	Shadow	Angle
18 November	247 cm	380 cm	57°
24 November	49 cm	79 cm	58.2°

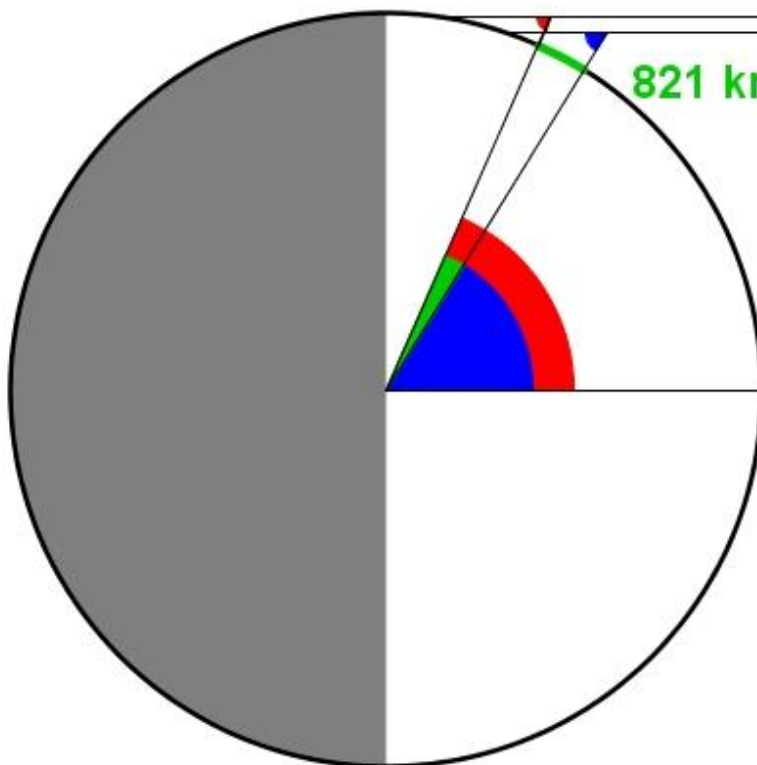
24 November 2016 (Busteni-ROMANIA) Latitude: 45.416°

24 November 2016 (Athens-GREECE) Latitude: 38.027°

66.1° Busteni

821 km

58.2° Athens



$$\text{circumference} = \frac{360^\circ \times 821 \text{ km}}{66.1^\circ - 58.2^\circ} = 37413 \text{ km}$$



Brštanovo, Croatia

November 2016

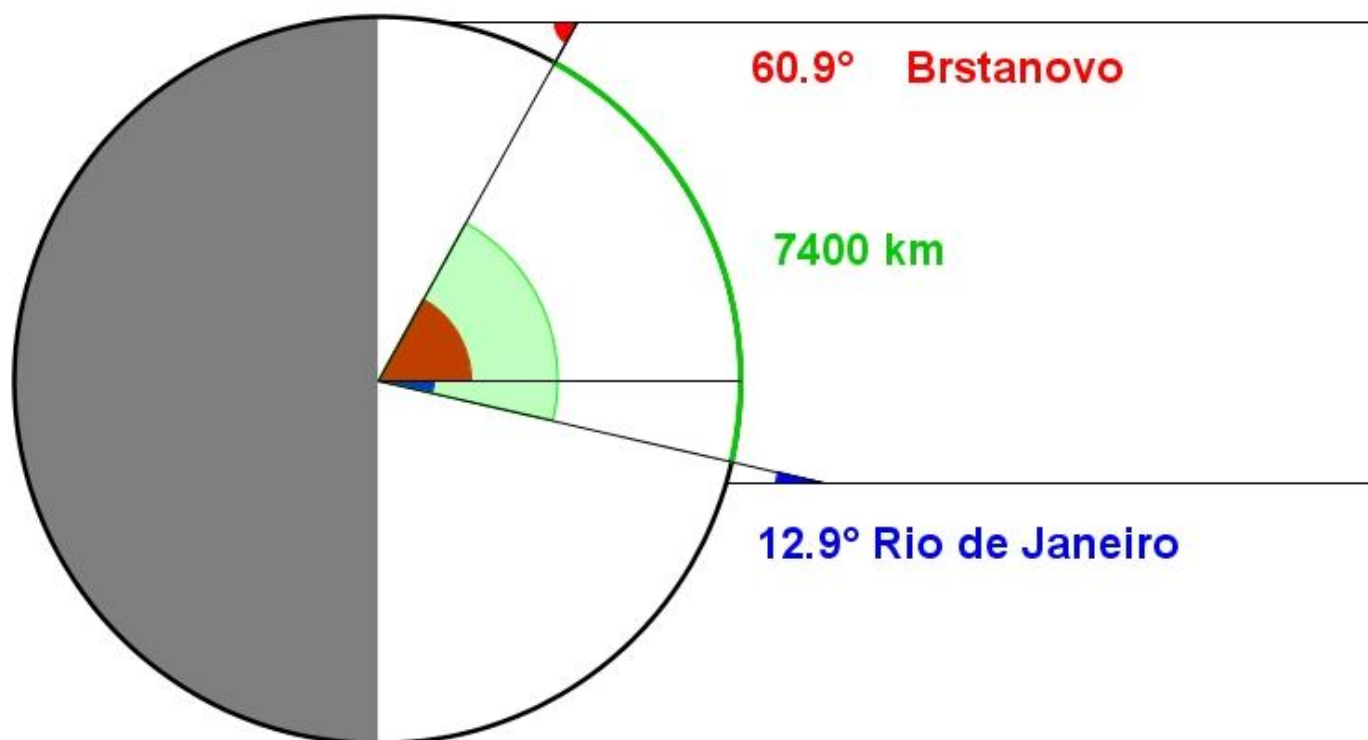


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Brštanovo	Croatia	Osnovna škola kneza Branimira	43.658	16.415

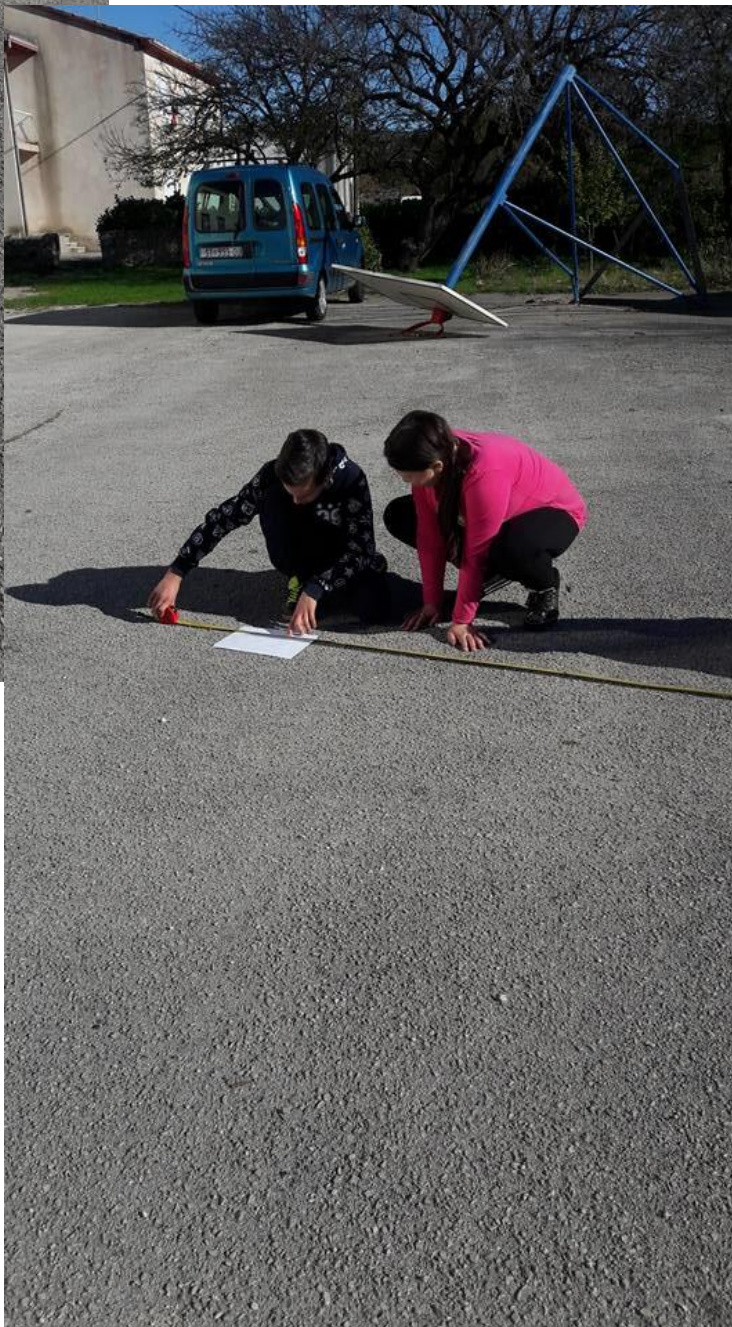
Date	Gnomon	Shadow	Angle
09 November	100 cm	179.7 cm	60.9°

09 November 2016 (Brstanovo-CROATIA) Latitude: 43.658 °

09 November 2016 (Rio de Janeiro-BRAZIL) Latitude: -22.95 °



$$\text{circumference} = \frac{360^\circ \times 7400 \text{ km}}{60.9^\circ + 12.9^\circ} = 36098 \text{ km}$$



Busteni, Romania

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Busteni	Romania	Colegiul Ion Kalinderu	45.416	25.535

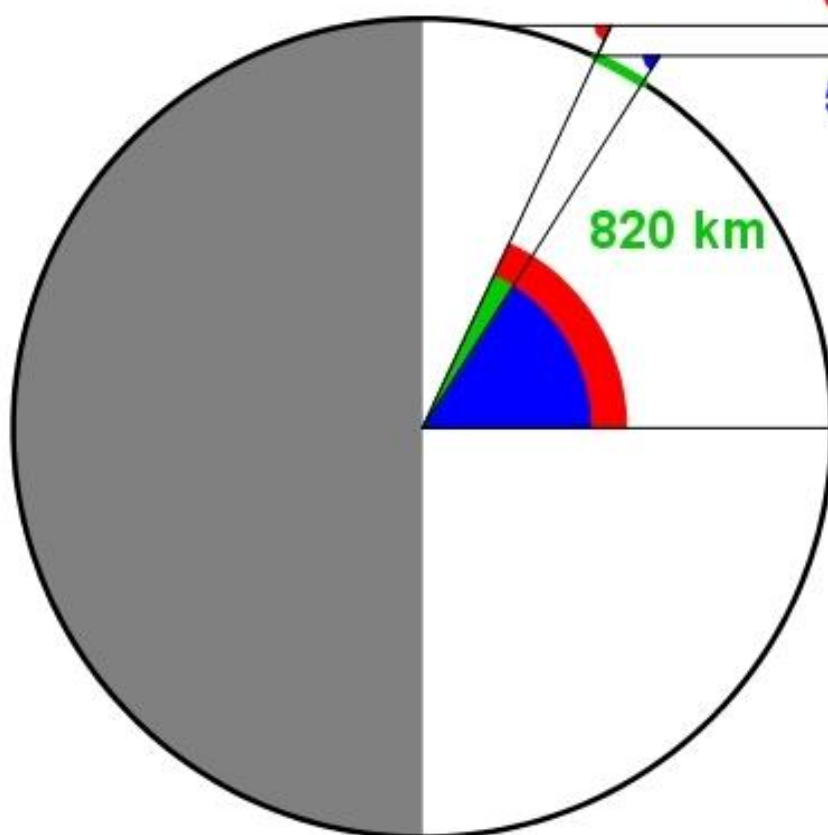
Date	Gnomon	Shadow	Angle
05 November	14.7 cm	27 cm	61.4°
07 November	53 cm	100 cm	62.1°
11 November	53 cm	105 cm	63.2°
17 November	38 cm	80.6 cm	64.8°
18 November	15 cm	32 cm	64.9°
24 November	70.8 cm	160 cm	66.1°

18 November 2016 (Busteni-ROMANIA 45.416)

18 November 2016 (Ilion-GREECE 37.977)

64.9° Busteni

57.5° Ilion



$$\text{circumference} = \frac{360^\circ \times 820 \text{ km}}{64.9^\circ - 57.5^\circ} = 39892 \text{ km}$$



Ilion, Greece

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Ilion	Greece	11th JuniorHigh School of Ilion	38.033	23.697

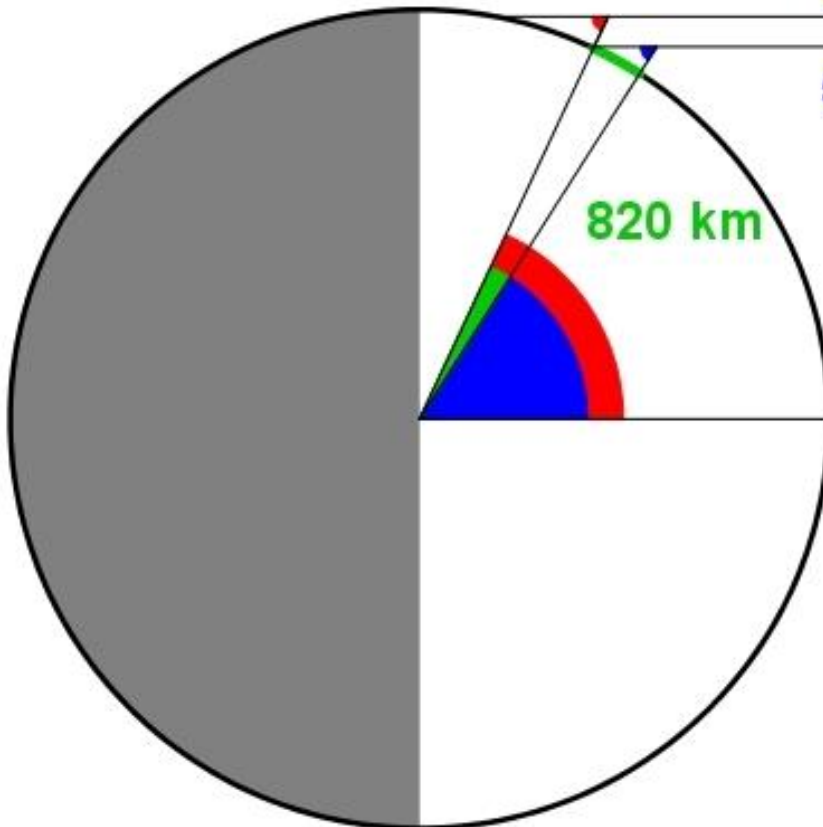
Date	Gnomon	Shadow	Angle
18 November	18.8 cm	29.5 cm	57.5°

18 November 2016 (Busteni-ROMANIA 45.416)

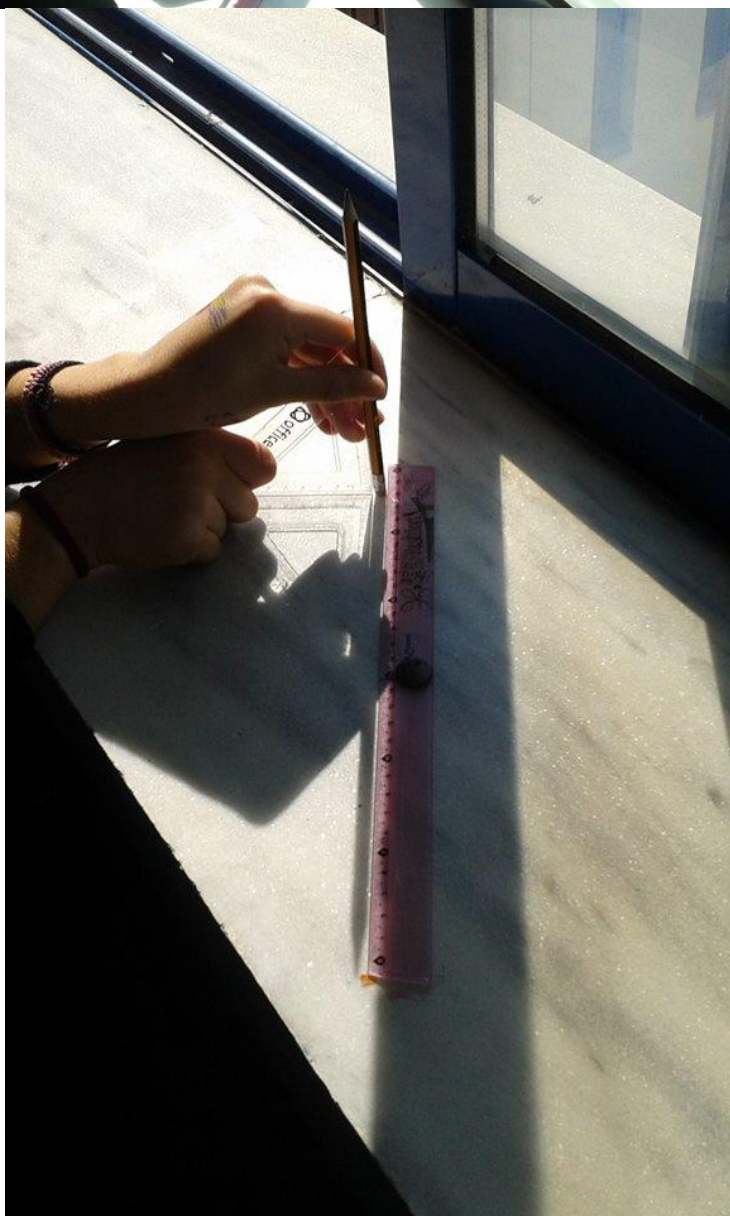
18 November 2016 (Ilion-GREECE 37.977)

64.9° Busteni

57.5° Ilion



$$\text{circumference} = \frac{360^\circ \times 820 \text{ km}}{64.9^\circ - 57.5^\circ} = 39892 \text{ km}$$



Ioannina, Greece

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Ioannina	Greece	Experimental College	39.666	20.845

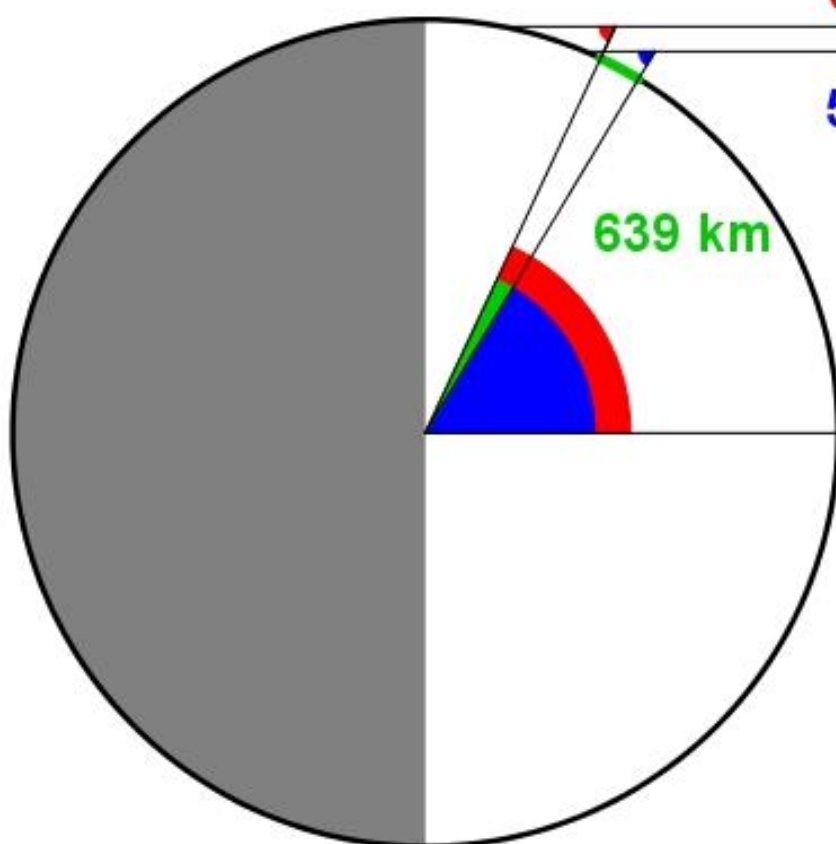
Date	Gnomon	Shadow	Angle
18 November	100 cm	165.5 cm	58.9°

18 November 2016 (Busteni-ROMANIA 45.416)

18 November 2016 (Ioannina-GREECE 39.667)

64.9° Busteni

58.9° Ioannina



$$\text{circumference} = \frac{360^\circ \times 639 \text{ km}}{64.9^\circ - 58.9^\circ} = 38340 \text{ km}$$



Lafrançaise, France

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Lafrançaise	France	Collège Antonin Perbosc	44.127	1.237

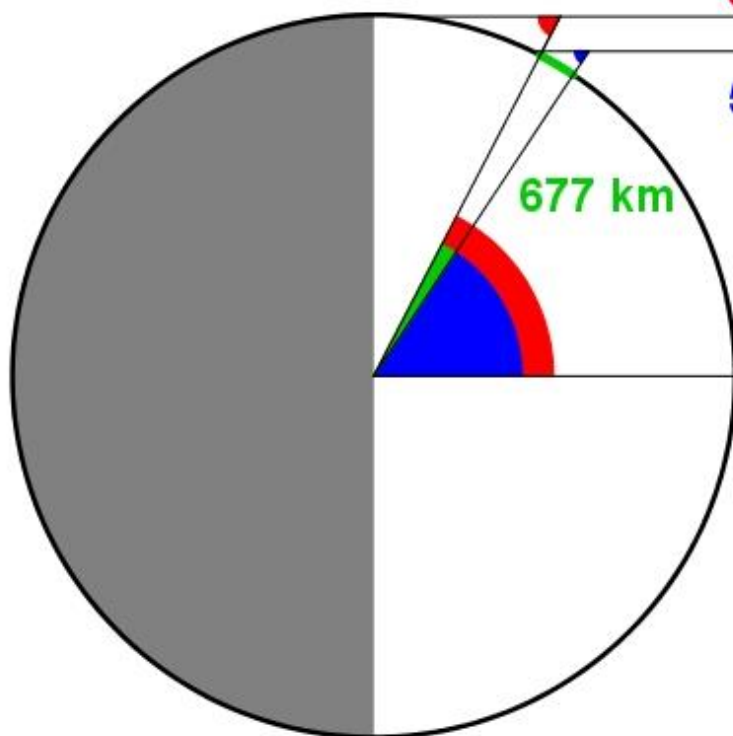
Date	Gnomon	Shadow	Angle
04 November	100 cm	171 cm	59.7°
07 November	100 cm	179 cm	60.8°
08 November	100 cm	181 cm	61.1°
14 November	100 cm	193 cm	62.6°
15 November	100 cm	195 cm	62.9°

14 November 2016 (Lafrançaise-FRANCE 44.127)

14 November 2016 (Petroupoli-GREECE 38.036)

62.6° Lafrançaise

56.5° Petroupoli



$$\text{circumference} = \frac{360^\circ \times 677 \text{ km}}{62.6^\circ - 56.5^\circ} = 39954 \text{ km}$$



Marina di Carrara, Italy

November 2016

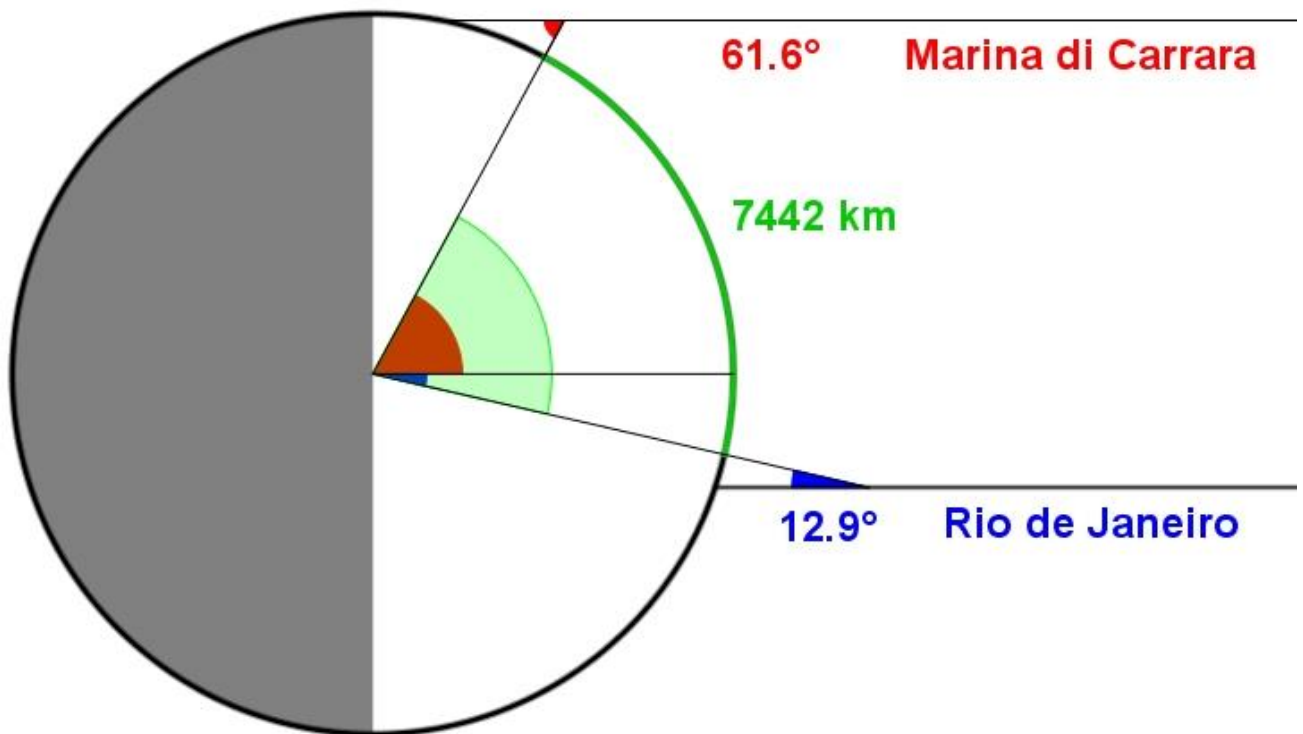


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Marina di Carrara	Italy	M Buonarroti primary school	44.045	10.031

Date	Gnomon	Shadow	Angle
09 November	100 cm	185 cm	61.6°

09 November 2016 (Marina di Carrara-ITALY) Latitude: 44.033

09 November 2016 (Rio de Janeiro-BRAZIL) Latitude: -22.95



$$\text{circumference} = \frac{360^\circ \times 7442 \text{ km}}{61.6^\circ + 12.9^\circ} = 35961 \text{ km}$$



Merlara, Italy

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Merlara	Italy	Lower Secondary School "Dante Alighieri"	45.163	11.446

Date	Gnomon	Shadow	Angle
29 November	100 cm	235 cm	66.9°



Neoric, Croatia

November 2016

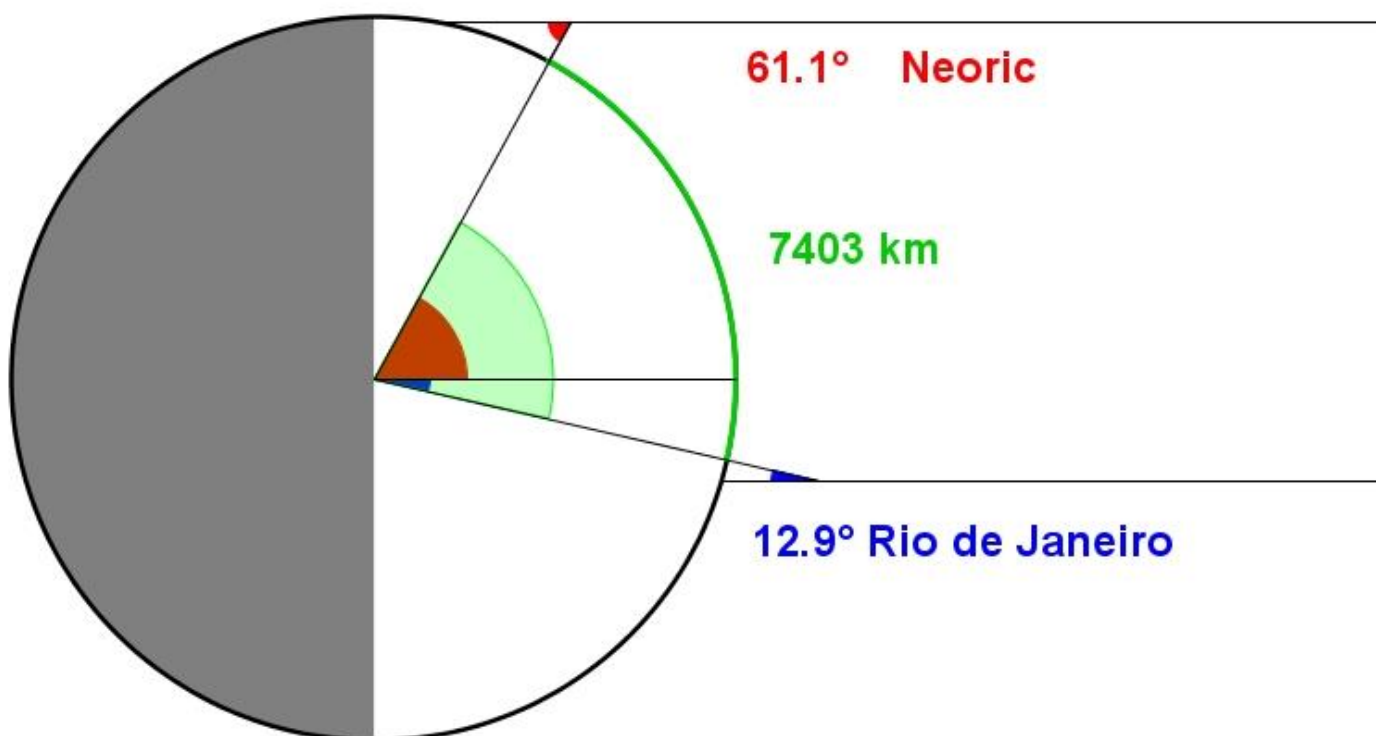


Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Neoric	Croatia	OŠ Neorić - Sutina	43.686	16.520

Date	Gnomon	Shadow	Angle
09 November	100 cm	181 cm	61.1°

09 November 2016 (Neoric-CROATIA) Latitude: 43.686 °

09 November 2016 (Rio de Janeiro-BRAZIL) Latitude: -22.95 °



$$\text{circumference} = \frac{360^\circ \times 7403 \text{ km}}{61.1^\circ + 12.9^\circ} = 36015 \text{ km}$$



Petroupoli, Greece

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Petroupoli	Greece	4o Junior High School	38.036	23.674

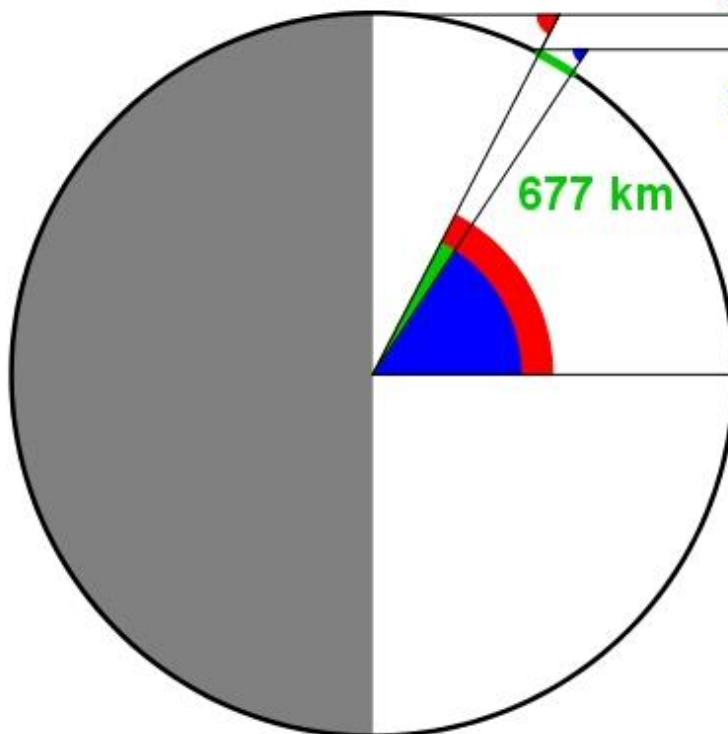
Date	Gnomon	Shadow	Angle
03 November	52.3 cm	70 cm	53.2°
08 November	52.3 cm	74 cm	54.7°
14 November	52.3 cm	79 cm	56.5°

14 November 2016 (Lafrançaise-FRANCE 44.127)

14 November 2016 (Petroupoli-GREECE 38.036)

62.6° Lafrançaise

56.5° Petroupoli



$$\text{circumference} = \frac{360^\circ \times 677 \text{ km}}{62.6^\circ - 56.5^\circ} = 39954 \text{ km}$$



Piraeus, Greece

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Piraeus	Greece	2nd Junior High School of Korydallos	37.977	23.655

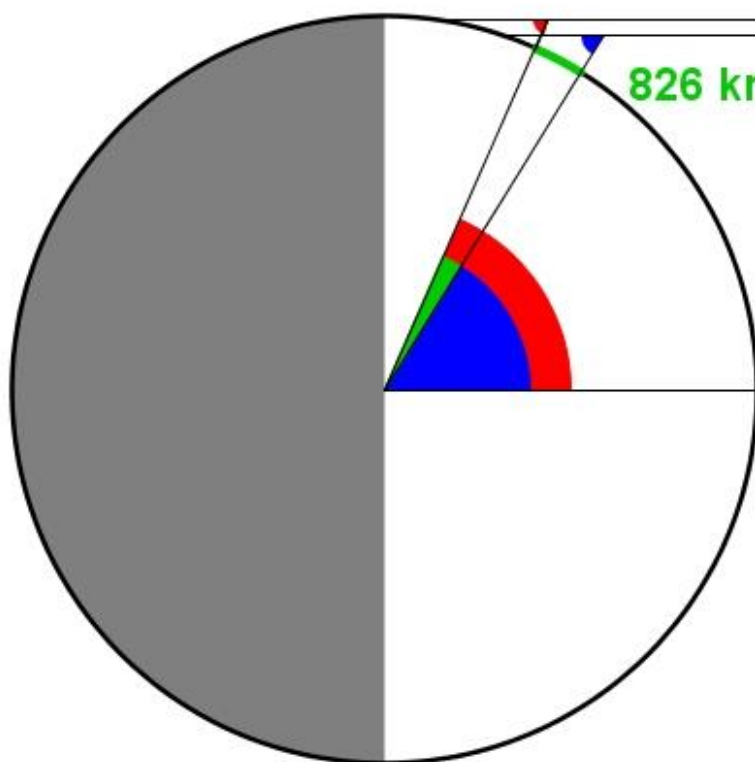
Date	Gnomon	Shadow	Angle
01 November	100 cm	127 cm	51.8°
11 November	100 cm	145.8 cm	55.6°
18 November	100 cm	142 cm	54.8°
24 November	100 cm	162 cm	58.3°

24 November 2016 (Busteni-ROMANIA) Latitude: 45.416°

24 November 2016 (Piraeus-GREECE) Latitude: 37.977°

66.1° Busteni

826 km 58.3° Piraeus



$$\text{circumference} = \frac{360^\circ \times 826 \text{ km}}{66.1^\circ - 58.3^\circ} = 38123 \text{ km}$$



Rio de Janeiro CENOM, Brazil

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Rio de Janeiro	Brazil	Centro Educacional Nosso Mundo	-22.890	-43.317

Date	Gnomon	Shadow	Angle
09 November	70 cm	-16 cm	-12.9°
10 November	70 cm	-16 cm	-12.9°
16 November	70 cm	-14 cm	-11.3°

09 November 2016 (Brstanovo-CROATIA) Latitude: 43.658 °

09 November 2016 (Rio de Janeiro-BRAZIL) Latitude: -22.95 °



$$\text{circumference} = \frac{360^\circ \times 7400 \text{ km}}{60.9^\circ + 12.9^\circ} = 36098 \text{ km}$$



Shenzhen, China

November 2016



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Shenzhen	China	荔園小學南校區 Liyuan Primary School	22.549	114.092

Date	Gnomon	Shadow	Angle
07 November	50 cm	41.3 cm	49.6°

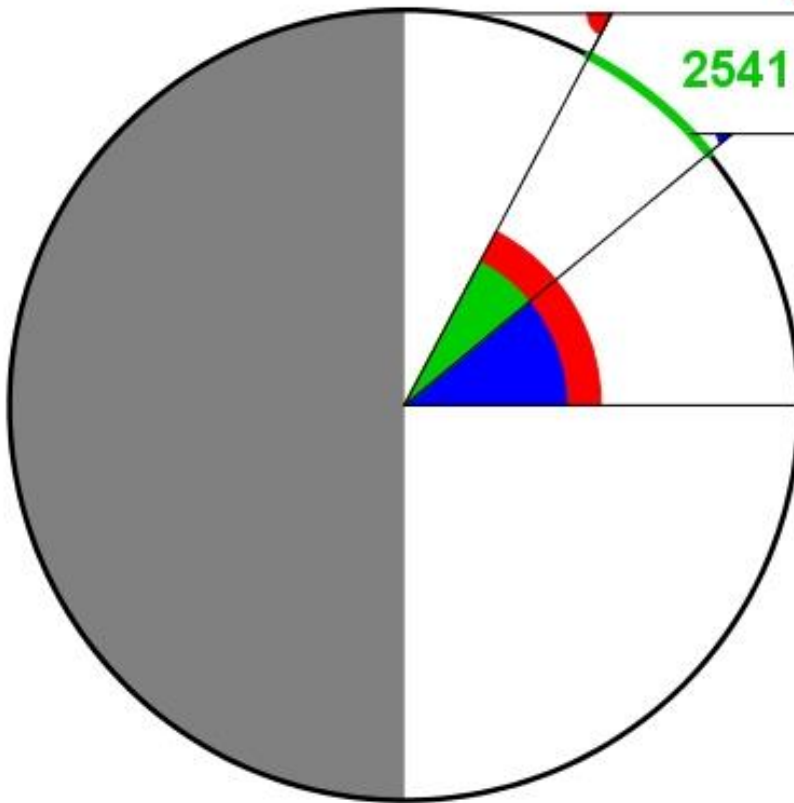
07 November 2016 (Busteni-ROMANIA 45.416)

07 November 2016 (Shenzhen-CHINA 22.549)

62.1° Busteni

2541 km

39.6° Shenzhen



$$\text{circumference} = \frac{360^\circ \times 2541 \text{ km}}{62.1^\circ - 39.6^\circ} = 40656 \text{ km}$$



