Bayamón, Puerto Rico

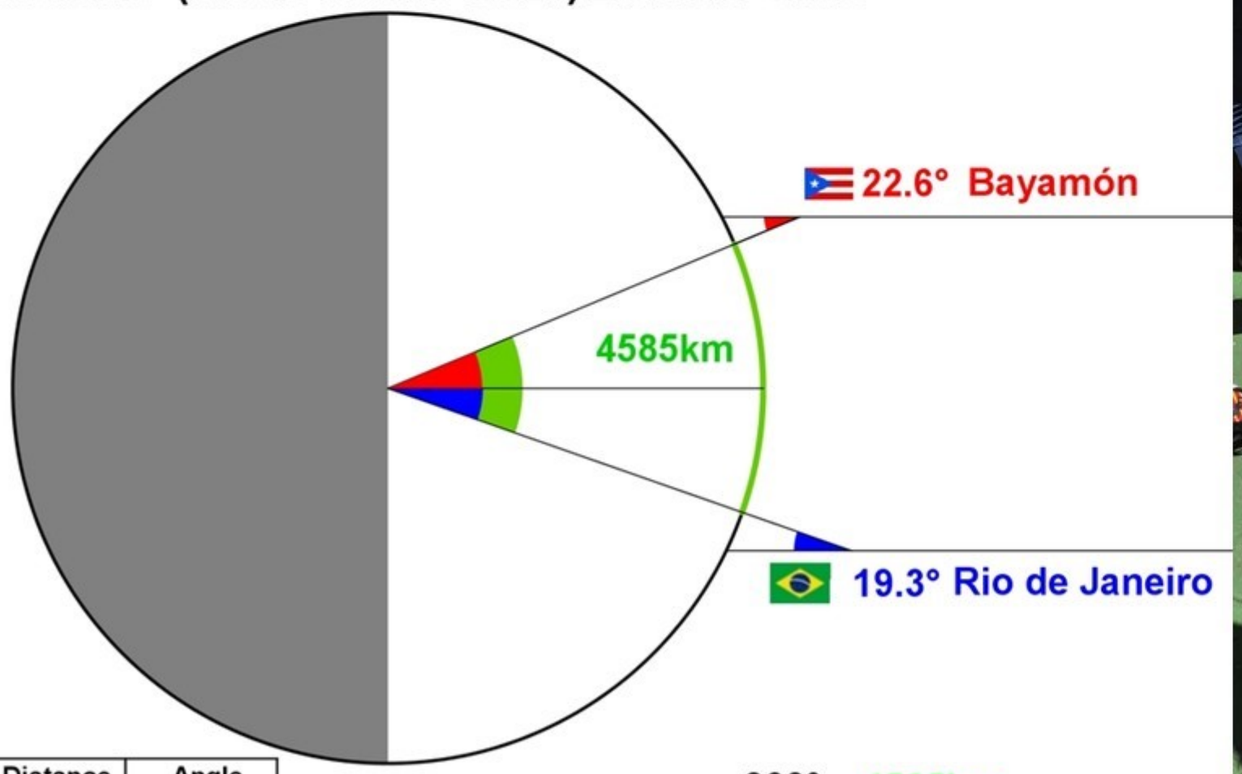
March

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bayamón	Puerto Rico	AECM Carribean University	18.383	-66.168

Date	Gnomon	Shadow	Angle
13 March 2020	60.0cm	25.0cm	22.6°

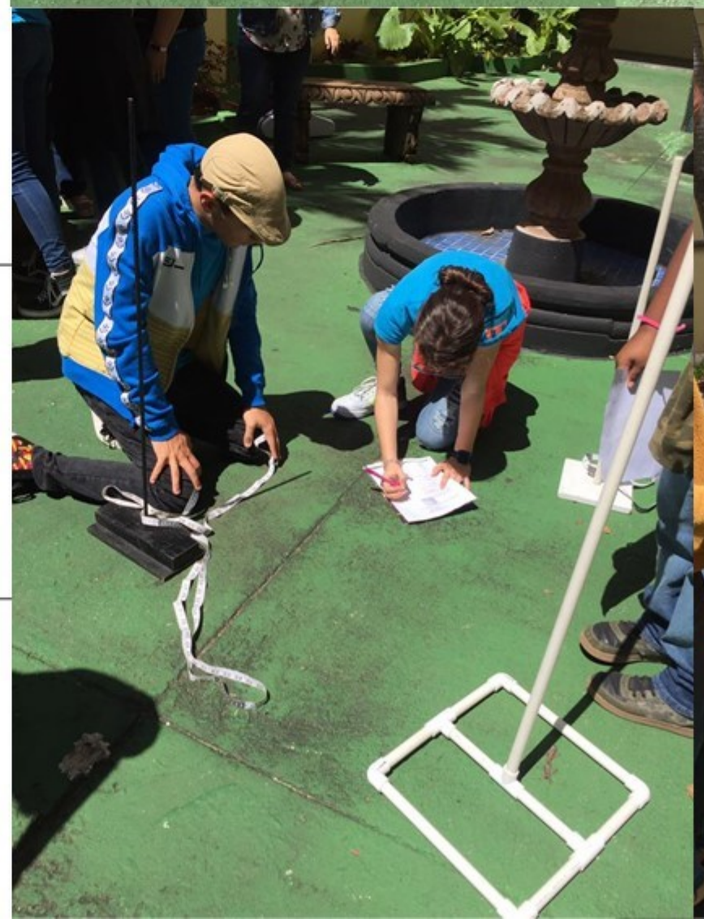
13/03/2020 (Bayamón-Puerto Rico) Latitude: 18.383°

13/03/2020 (Rio de Janeiro-Brazil) Latitude: -22.89°



Distance	Angle
circumference	360°
4585km	22.6°+19.3°

$$\text{circumference} = \frac{360° \times 4585\text{km}}{22.6° + 19.3°} = 39394\ \text{km}$$



Bayamón, Puerto Rico

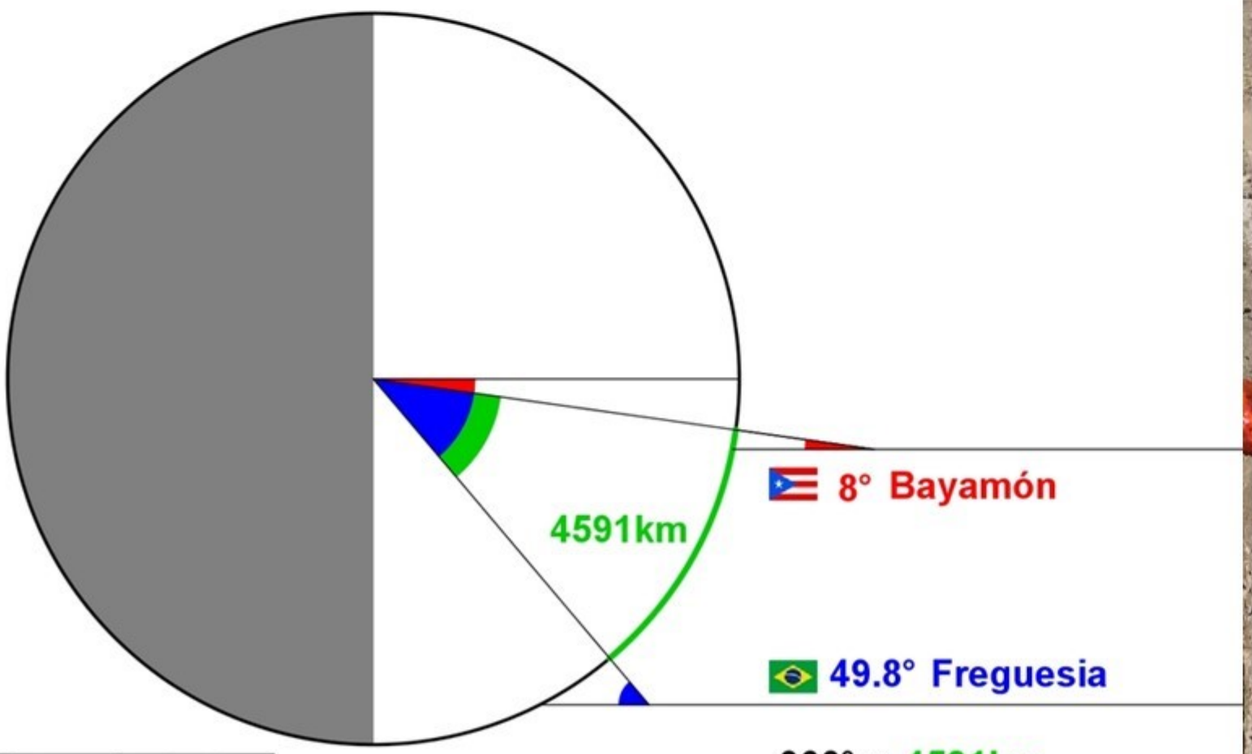
June

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bayamón	Puerto Rico	AECM Carribean University	18.383	-66.168

Date	Gnomon	Shadow	Angle
20 June 2020	25cm	-3.5cm	-8°

20/06/2020 (Bayamón-Puerto Rico) Latitude: 18.383°

20/06/2020 (Freguesia-Brazil) Latitude: -22.943°

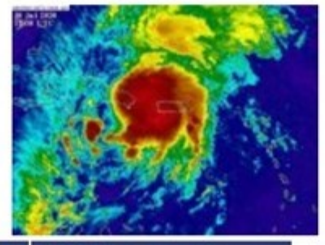


Distance	Angle
circumference	360°
4591km	49.8° - 8°

$$\text{circumference} = \frac{360° \times 4591\text{km}}{49.8° - 8°} = 39540\ \text{km}$$

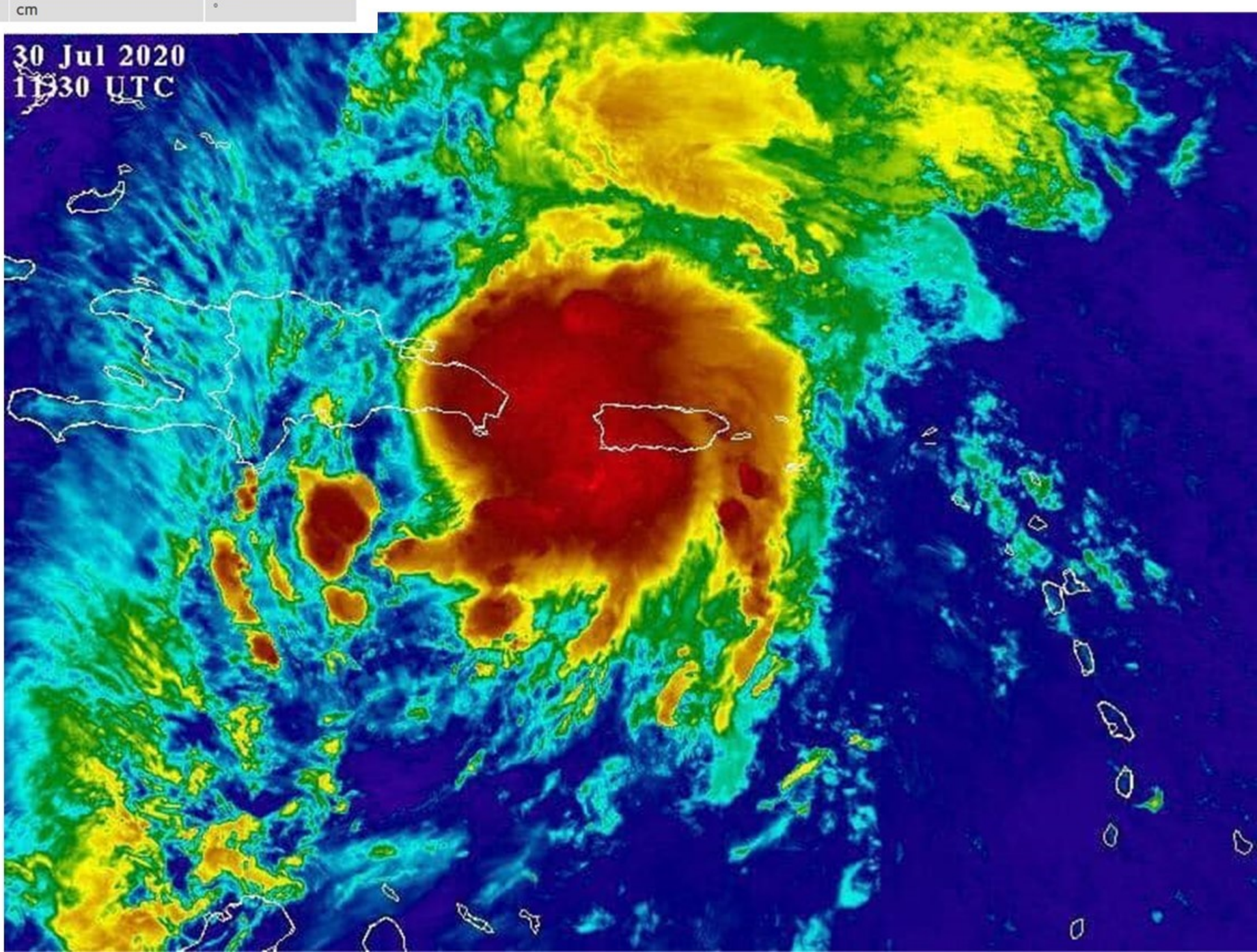
Bayamón, Puerto Rico

July



Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bayamón	Puerto Rico	Gloria María Isidro Villamizar	18.383	-66.168

Date	Gnomon	Shadow	Angle
30 July 2020	cm	cm	°



Bayamón, Puerto Rico

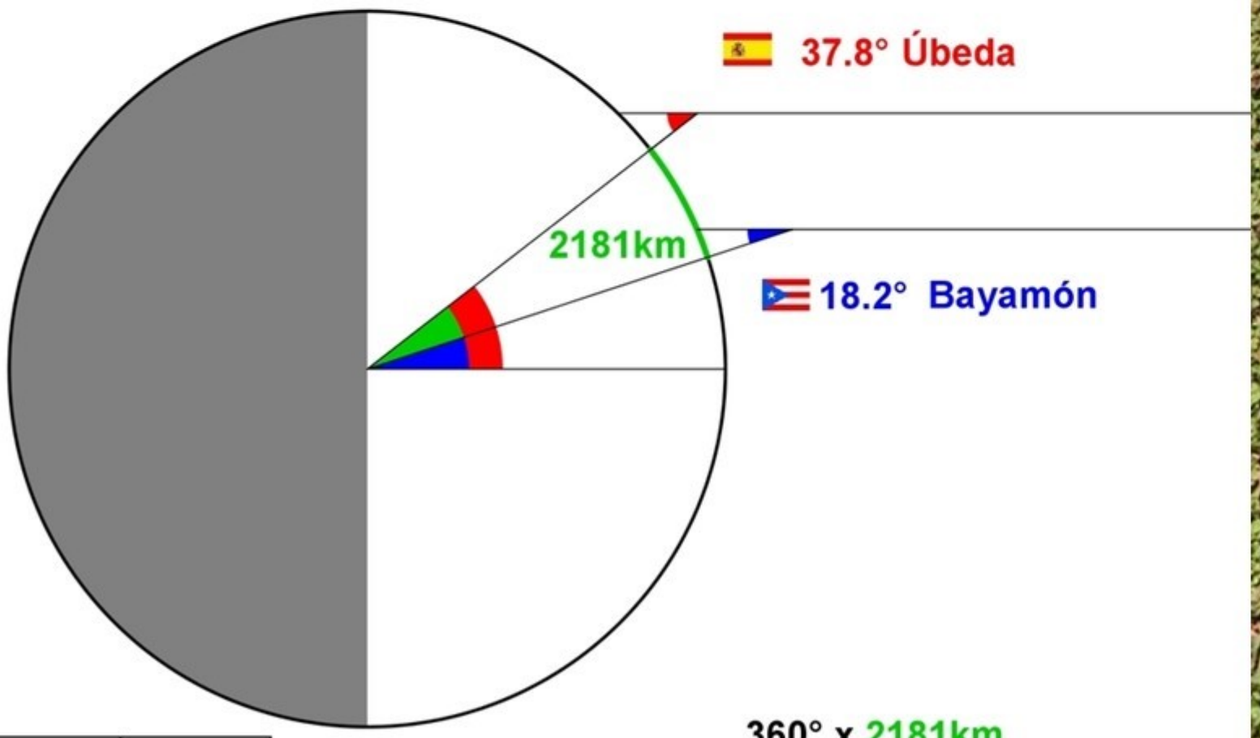
September

Flag	City	Country	School	Latitude (°) +N/-S	Longitude (°) +E/-W
	Bayamón	Puerto Rico	AECM Carribean University	18.383	-66.168

Date	Gnomon	Shadow	Angle
09 September 2020	25.0cm	4.0cm	9.1°
11 September 2020	25.0cm	7.5cm	16.7°
18 September 2020	25.0cm	7.8cm	17.3°
21 September 2020	50.0cm	18.2cm	20.0°
22 September 2020	25.0cm	8.2cm	18.2°

22/09/2020 (Úbeda-Spain) Latitude: 38.017°

22/09/2020 (Bayamón-Puerto Rico) Latitude: 18.383°



Distance	Angle
circumference	360°
2181km	37.8° - 18.2°

$$\text{circumference} = \frac{360° \times 2181\text{km}}{37.8° - 18.2°} = 40059\ \text{km}$$