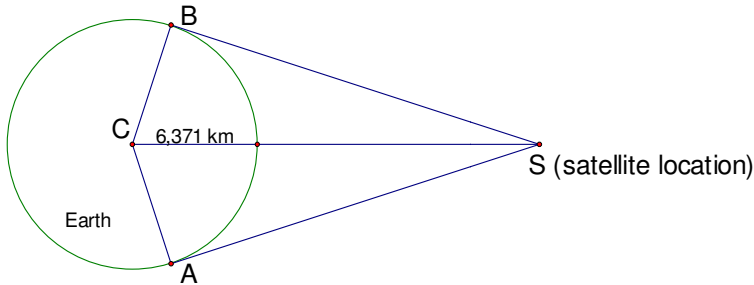


Exploring Satellites

Every minute of every day, satellites orbit around the earth sending images and information back home. In this activity we will investigate the location and view of some of NASA's satellites.



NASA has several satellites orbiting the earth including the Hubble Telescope, the Chandra X-Ray Observatory, and several National Oceanic and Atmospheric Administration (NOAA) satellites.


For each satellite below, find out

- a. What is the measure of the arc of the great circle (such as the equator) that the telescope can measure?
- b. What is the measure of the viewing angle of the satellite ($\angle BSA$ in the diagram).
- c. How many kilometers of the great circle can the telescope measure?


1. The Hubble Telescope is 563km above the earth.

26 May 2010 05:06 UTC			Current Hubble Location
Latitude	Longitude	Altitude	
(Degrees)	(Degrees)	(Kilometers)	
-18.4	-79.2	563.6	
Find out much more about Hubble Space Telescope at the HubbleSite .			
Join the Science@NASA e-mail updates list			Updates once per minute

2. The Chandra X-Ray Observatory is 132,054 km above the earth

26 May 2010 05:14 UTC			Current Chandra Location
Latitude (Degrees)	Longitude (Degrees)	Altitude (Kilometers)	
66.7	171.9	132054.0	
<p>Science@NASA Update</p> <p>Not Found</p> <p>The requested URL /proxycheck/realtime/trackernews.asp was not found on this server.</p>			
Join the Science@NASA e-mail updates list			Updates once per minute

3. NASA Global Hydrology and Climate Satellite: NOAA 16 is at 826.6 km

26 May 2010 05:15 UTC			Current NOAA 16 Location
Latitude (Degrees)	Longitude (Degrees)	Altitude (Kilometers)	
69.5	46.2	858.6	
<p>Get your NOAA Satellite Imagery from NASA's Global Hydrology and Climate Center</p>			
Join the Science@NASA e-mail updates list			Updates once per minute

Links:

NASA satellite image site: <http://www.ghcc.msfc.nasa.gov/GOES/>

NASA satellite tracking: <http://science.nasa.gov/realtime/>