

# TREE RINGS: LIVING RECORDS OF CLIMATE

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## TREE RING ANALYSIS WORKSHEET

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

### Part 1: Tree Ring Analysis

1. Tree ring location: \_\_\_\_\_
2. Tree ring location: \_\_\_\_\_
3. Number of dark rings (age of tree): \_\_\_\_\_
4. Year tree was planted (subtract age from year harvested): \_\_\_\_\_

Select one ring that seems to reflect below-average precipitation for the growing season, based on its width. Determine the corresponding year by counting the rings, starting with the youngest ring, which is closest to the bark. List the year you have selected: \_\_\_\_\_

### Part 2: Computer Analysis

(from MY NASA DATA website: <https://mynasadata.larc.nasa.gov/las/getUI.do>)

1. Navigate to the website above. Your browser should automatically open a box titled "Datasets." If not, select "Choose Dataset" in the upper left-hand corner of the screen to open that box. Then select "Atmosphere," then "Precipitation," and then "Monthly Precipitation (GPCP)."
2. From the menu on the left side of the screen, select "Time Series" from the LINE PLOTS options. Then click the box next to "Update Plot" at the top of the screen above the map.
3. Change the time range to suit your tree sample. Note that the records in the database begin in 1979. Use the "Zoom In" button to zoom in on North America, then onto your tree's city, or enter the latitude and longitude for the selected location in the compass box.
4. Click "Save As." A "Download Data" box will appear. Change the format to "ASCII" and click "OK." A new window should appear with all the data. You can calculate the average daily precipitation for an entire year by adding the monthly data points and dividing by the number of months (12).
5. Find the average precipitation (in millimeters per day) for the year you have selected from MY NASA DATA, and enter the information below.

Year: \_\_\_\_\_ Precipitation: \_\_\_\_\_

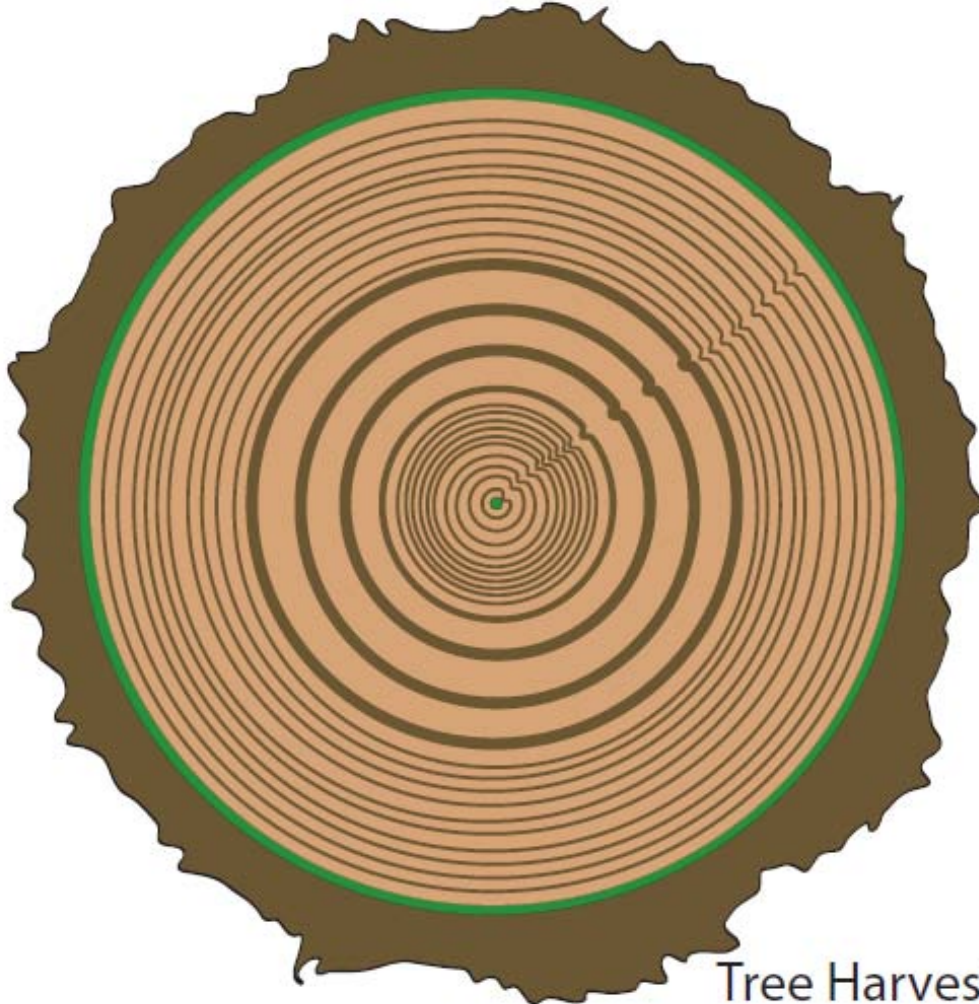
6. Compare your result with the average precipitation rates listed on your sample handout. Was the year you selected actually drier than normal, at least during the growing season?

Yes: \_\_\_\_\_ No: \_\_\_\_\_ (explain)

7. What other factors might influence tree growth, besides total precipitation? Which factors do you think are most important? Where could you find data to confirm this?

# TREE RINGS: LIVING RECORDS OF CLIMATE

Jackson, MS



Tree Harvested  
February 2006

Jackson, Mississippi

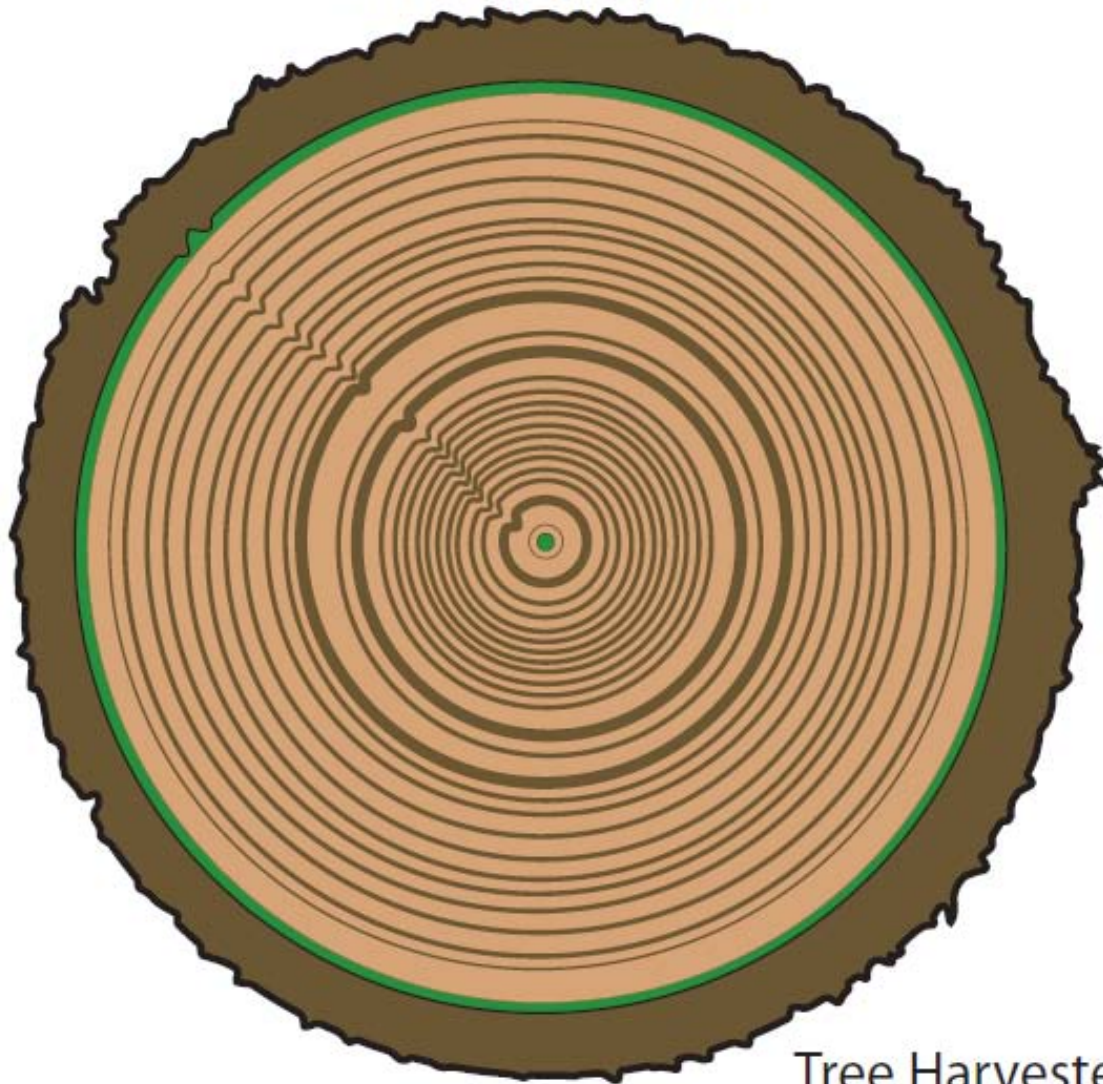
[https://mynasadata.larc.nasa.gov/docs/Jackson\\_Tree\\_Ring.pdf](https://mynasadata.larc.nasa.gov/docs/Jackson_Tree_Ring.pdf)

Approximate coordinates: 32°N, 90°W

Average daily precipitation in Jackson, MS, 1979–2007: 3.73 mm/day

# TREE RINGS: LIVING RECORDS OF CLIMATE

Columbia, MO



Tree Harvested  
December 2005

Columbia, Missouri

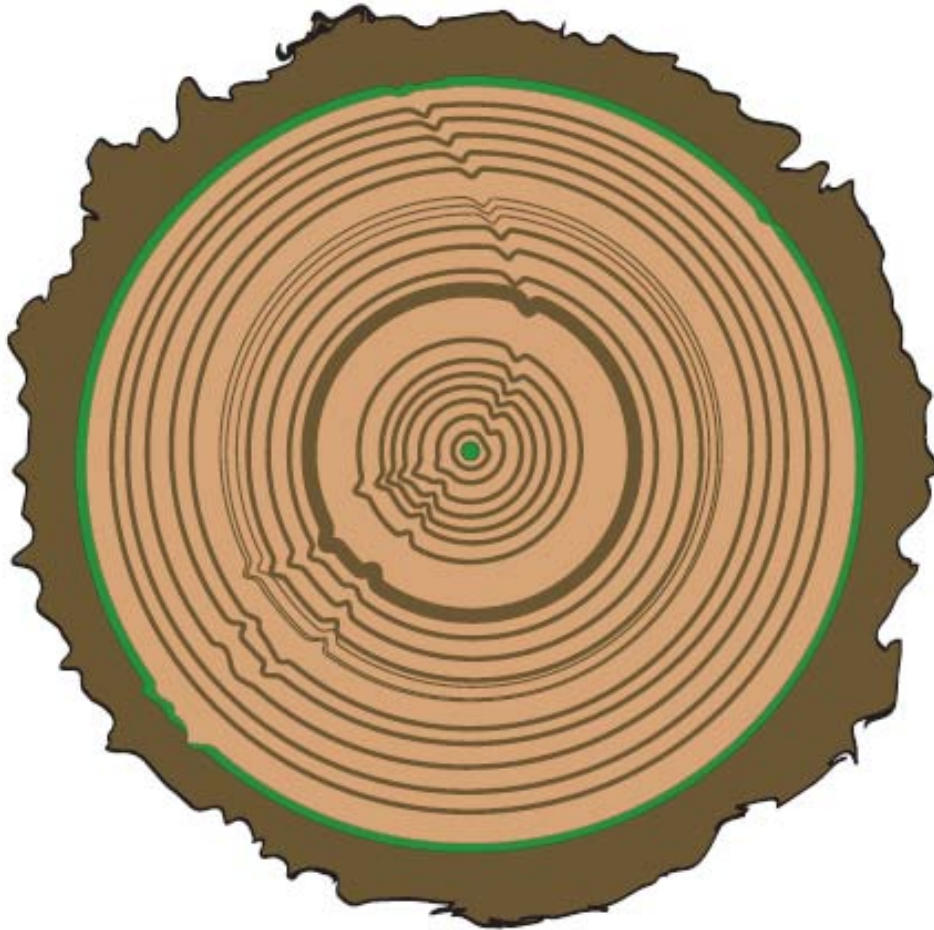
[https://mynasadata.larc.nasa.gov/docs/Columbia\\_Tree\\_Ring.pdf](https://mynasadata.larc.nasa.gov/docs/Columbia_Tree_Ring.pdf)

Approximate coordinates: 39°N, 92°W

Average daily precipitation in Columbia, MO, 1979–2007: 3.0 mm/day

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## Boston, MA



Tree Harvested  
Fall 2000

Boston, Massachusetts

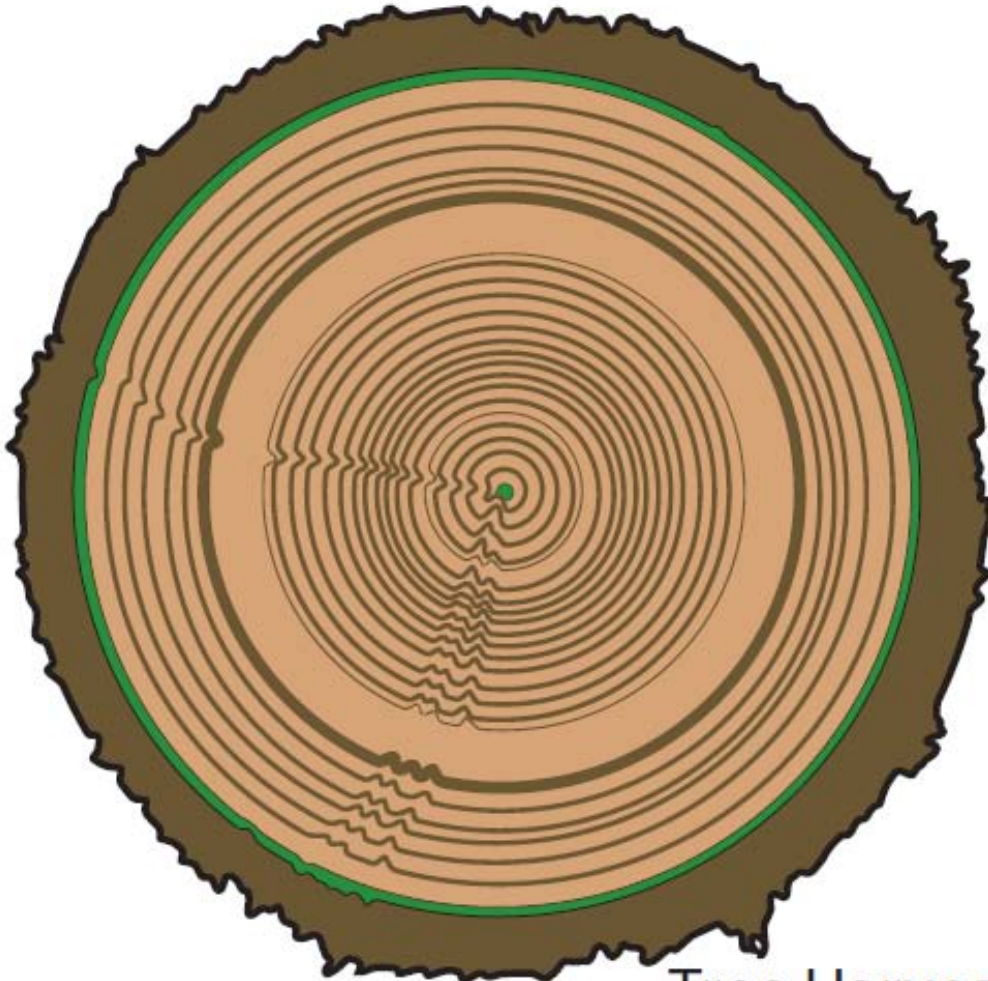
[https://mydasdata.larc.nasa.gov/docs/Boston\\_Tree\\_Ring.pdf](https://mydasdata.larc.nasa.gov/docs/Boston_Tree_Ring.pdf)

Approximate coordinates: 42°N, 71°W

Average daily precipitation in Boston, MA, 1979–2007: 3.76 mm/day

# TREE RINGS: LIVING RECORDS OF CLIMATE

Seattle, WA



Tree Harvested  
September 2003

Seattle, Washington

[https://mydasdata.larc.nasa.gov/docs/Seattle\\_Tree\\_Ring.pdf](https://mydasdata.larc.nasa.gov/docs/Seattle_Tree_Ring.pdf)

Approximate coordinates: 47°N, 122°W

Average daily precipitation in Seattle, WA, 1979–2007: 3.5 mm/day