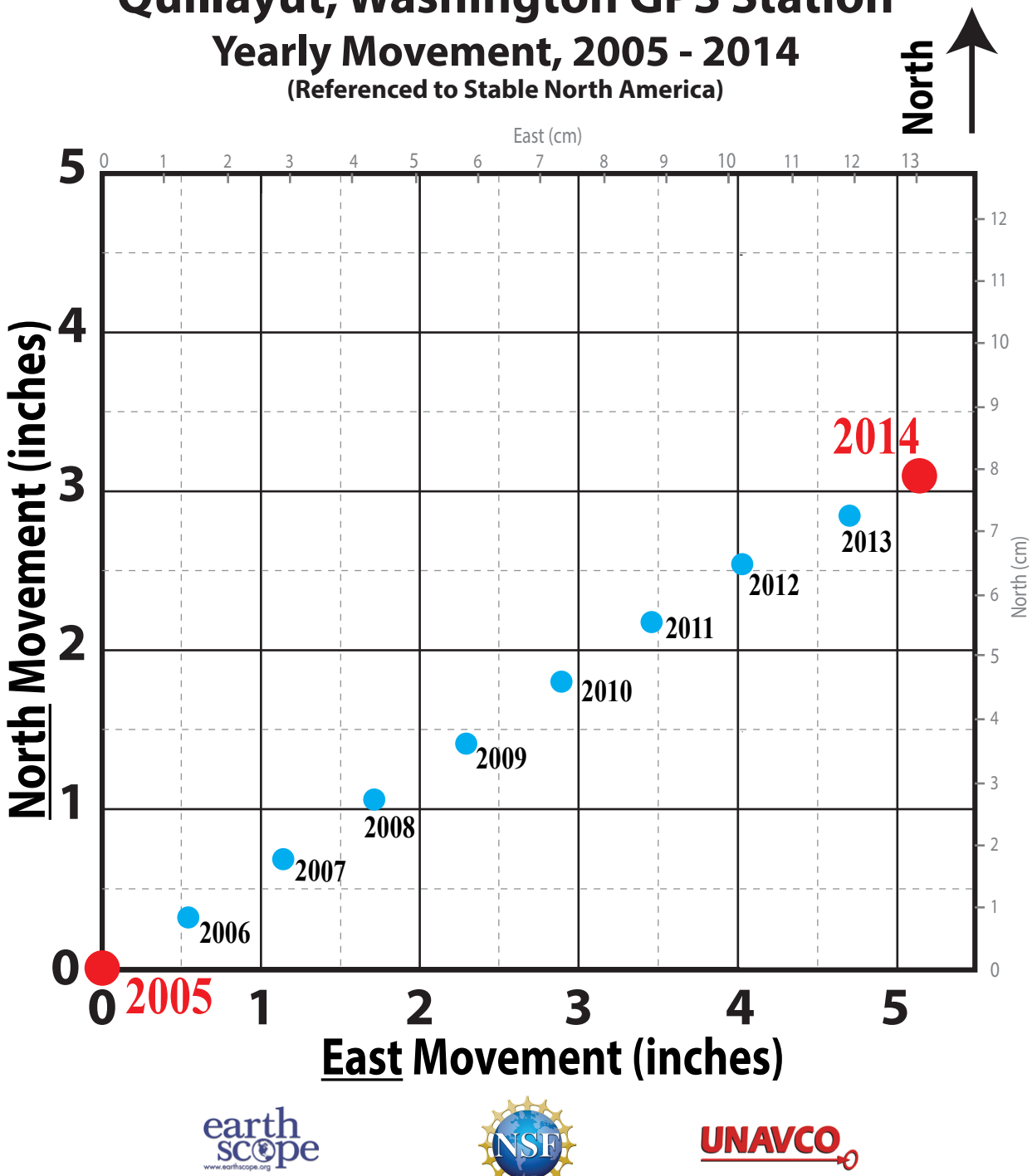
Quillayut, Washington GPS Station

Yearly Movement, 2005 - 2014

(Referenced to Stable North America)



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The dots on this card show motion of the Quillayut GPS station over the past nine years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Quillayut region toward the northeast.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Quillayut region moved since the year 2004? At what rate (inches per year) is the region moving? At that rate, how far has the region moved since the year 1700?

2. Why is the region moving toward the northeast?

3. The last big earthquake in the Pacific Northwest occurred in the year 1700. What will happen to the Quillayut region when the next big earthquake occurs?

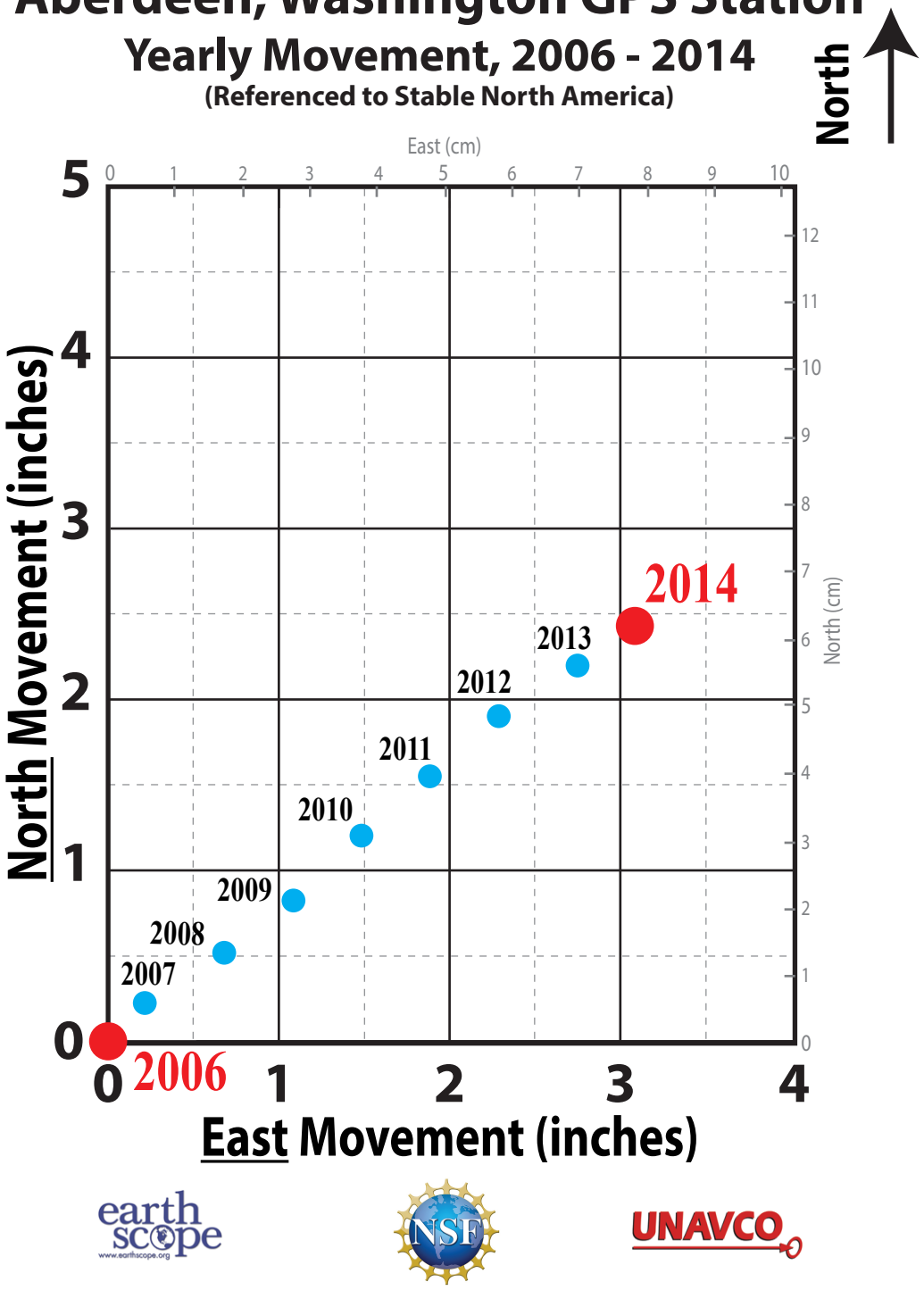
Station P401 from the EarthScope Plate Boundary Observatory (http://pbo.unavco.org). GPS time series data provided by UNAVCO (http://www.unavco.org). Data as of June 14, 2014.

Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (http://ceetep.oregonstate.edu). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (http://www.earthscope.org) to Oregon State University, the University of Portland, and Central Washington University.

Aberdeen, Washington GPS Station

Yearly Movement, 2006 - 2014

(Referenced to Stable North America)



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The dots on this card show motion of the Aberdeen GPS station over the past nine years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Aberdeen region toward the northeast.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Aberdeen region moved since the year 2004? At what rate (inches per year) is the region moving? At that rate, how far has the region moved since the year 1700?

2. Why is the region moving toward the northeast?

3. The last big earthquake in the Pacific Northwest occurred in the year 1700. What will happen to the Aberdeen region when the next big earthquake occurs?

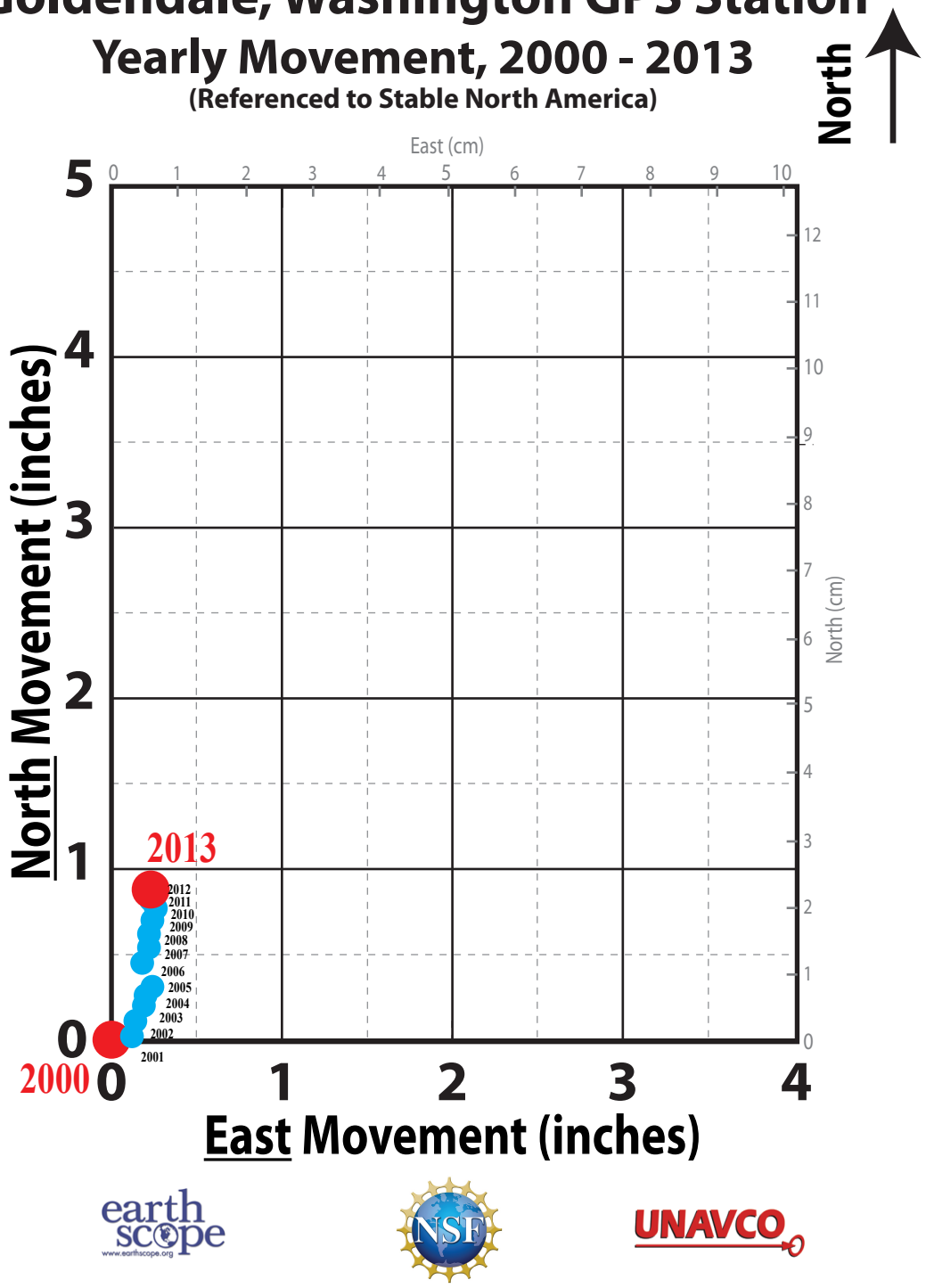
Station P398 from the EarthScope Plate Boundary Observatory (**http://pbo.unavco.org**). GPS time series data provided by UNAVCO (**http://www.unavco.org**). Data as of June 14, 2014.

Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (**http://ceetep.oregonstate.edu**). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (**http://www.earthscope.org**) to Oregon State University, the University of Portland, and Central Washington University.

Goldendale, Washington GPS Station

Yearly Movement, 2000 - 2013

(Referenced to Stable North America)



The dots on this card show the motion of the Goldendale GPS station over the past 13 years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Goldendale region to the north.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Goldendale region moved since the year 2000? At what rate (inches per year) is the region moving?

2. How does this motion compare to the movement shown by GPS stations along the Oregon and Washington coast?

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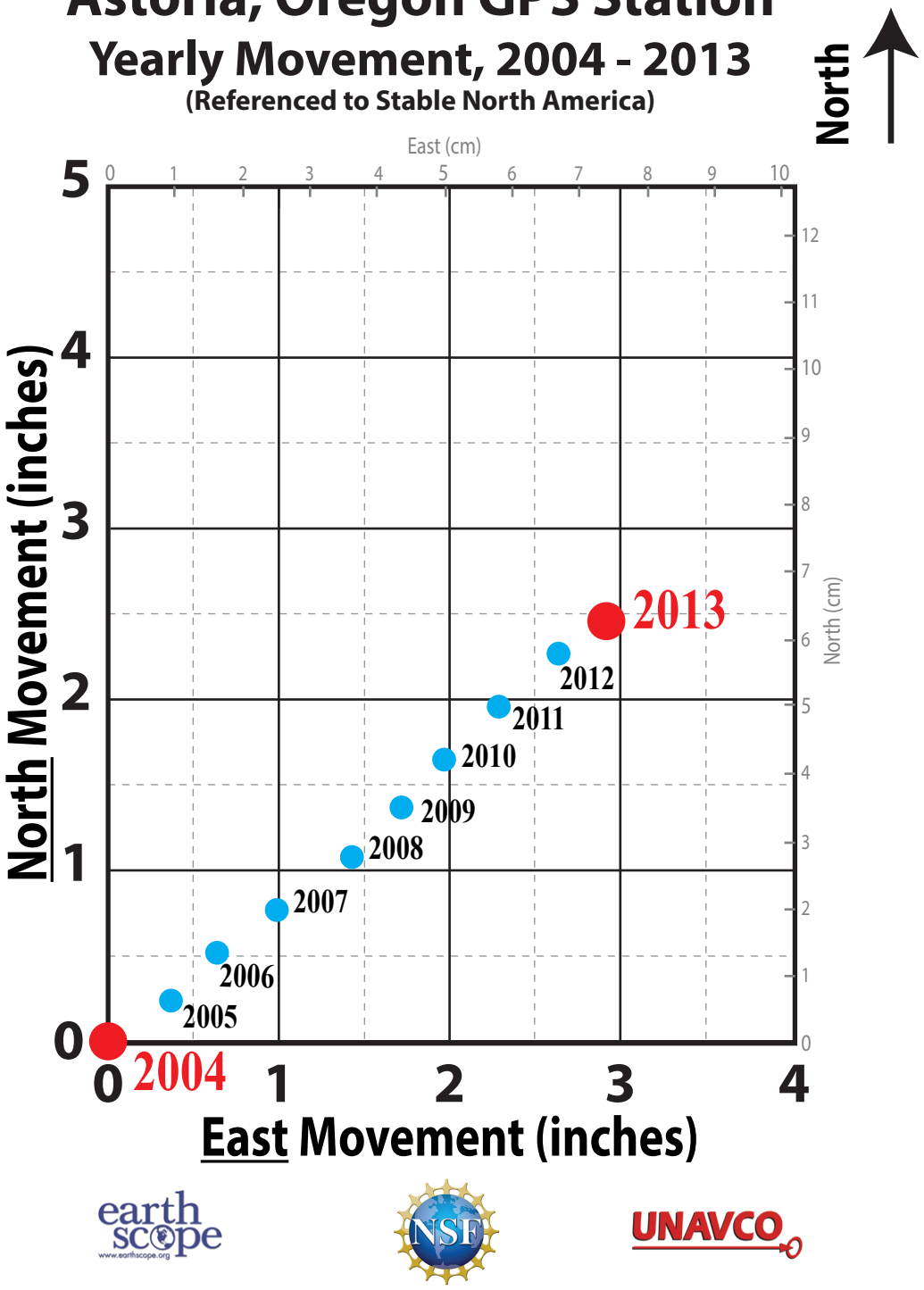
Station GOBS from the EarthScope Plate Boundary Observatory (**http://pbo.unavco.org**). GPS time series data provided by the Pacific Northwest Geodetic Array (**http://www.geodesy.org**). Data as of March 19, 2013.

Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (**http://ceetep.oregonstate.edu**). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (**http://www.earthscope.org**) to Oregon State University, the University of Portland, and Central Washington University.

Astoria, Oregon GPS Station

Yearly Movement, 2004 - 2013

(Referenced to Stable North America)



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The dots on this card show the motion of the Astoria GPS station over the past nine years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Astoria region toward the northeast.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Astoria region moved since the year 2004? At what rate (inches per year) is the region moving? At that rate, how far has the region moved since the year 1700?

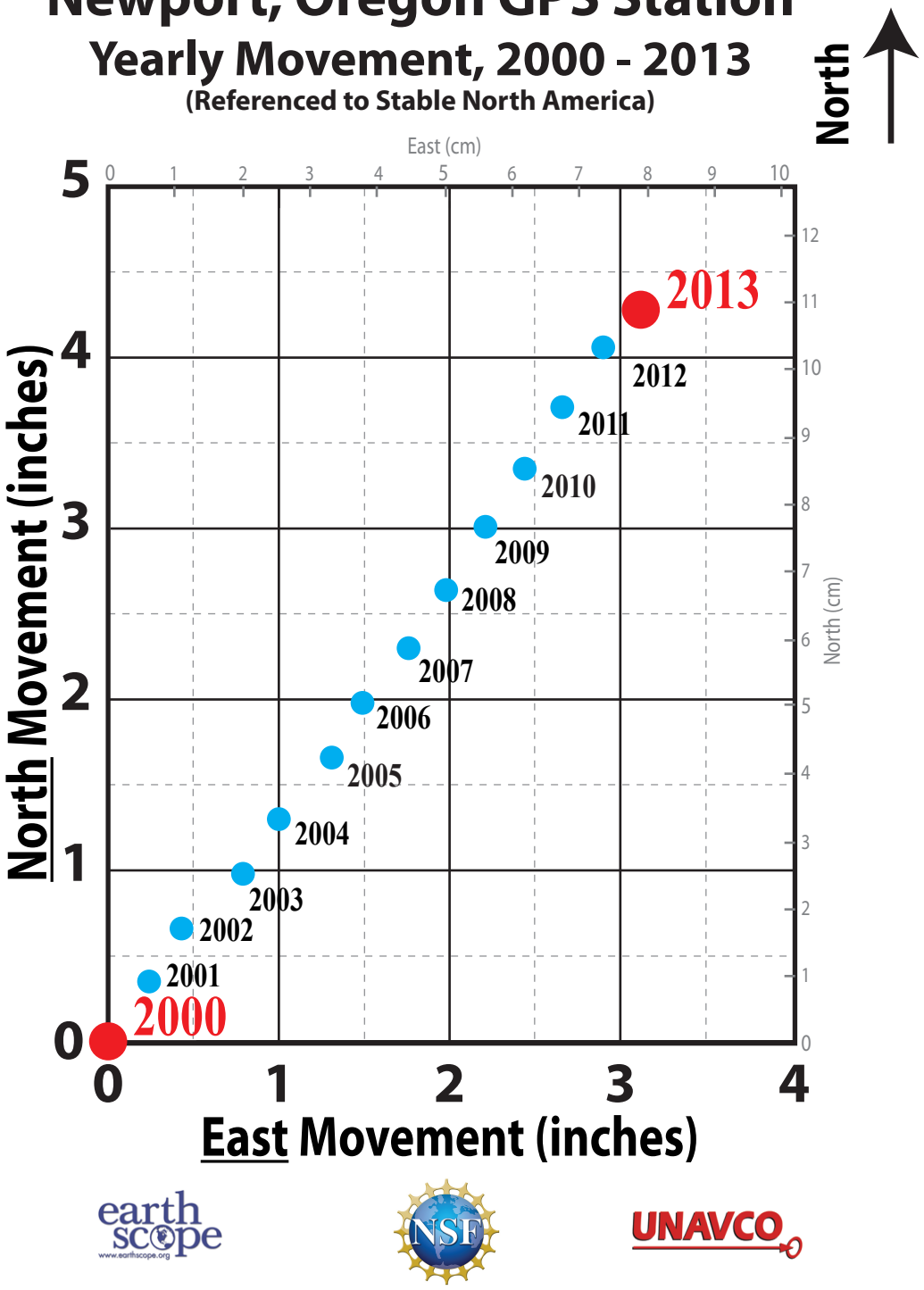
2. Why is the region moving toward the northeast?

3. The last big earthquake in the Pacific Northwest occurred in the year 1700. What will happen to the Astoria region when the next big earthquake occurs?

Station TPW2 from the EarthScope Plate Boundary Observatory (**http://pbo.unavco.org**). GPS time series data provided by UNAVCO (**http://www.unavco.org**). Data as of August 29, 2013.

Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (**http://ceetep.oregonstate.edu**). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (**http://www.earthscope.org**) to Oregon State University, the University of Portland, and Central Washington University.

Newport, Oregon GPS Station
Yearly Movement, 2000 - 2013
(Referenced to Stable North America)



earth scope www.earthscope.org

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The dots on this card show the motion of the Newport GPS station over the past 13 years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Newport region toward the northeast.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Newport region moved since the year 2000? At what rate (inches per year) is the region moving? At that rate, how far has the region moved since the year 1700?

2. Why is the region moving toward the northeast?

3. The last big earthquake in the Pacific Northwest occurred in the year 1700. What will happen to the Newport region when the next big earthquake occurs?

Station NEWP and P367 from the EarthScope Plate Boundary Observatory (**http://pbo.unavco.org**). GPS time series data provided by the Pacific Northwest Geodetic Array (**http://www.geodesy.org**). Data as of March 19, 2013.

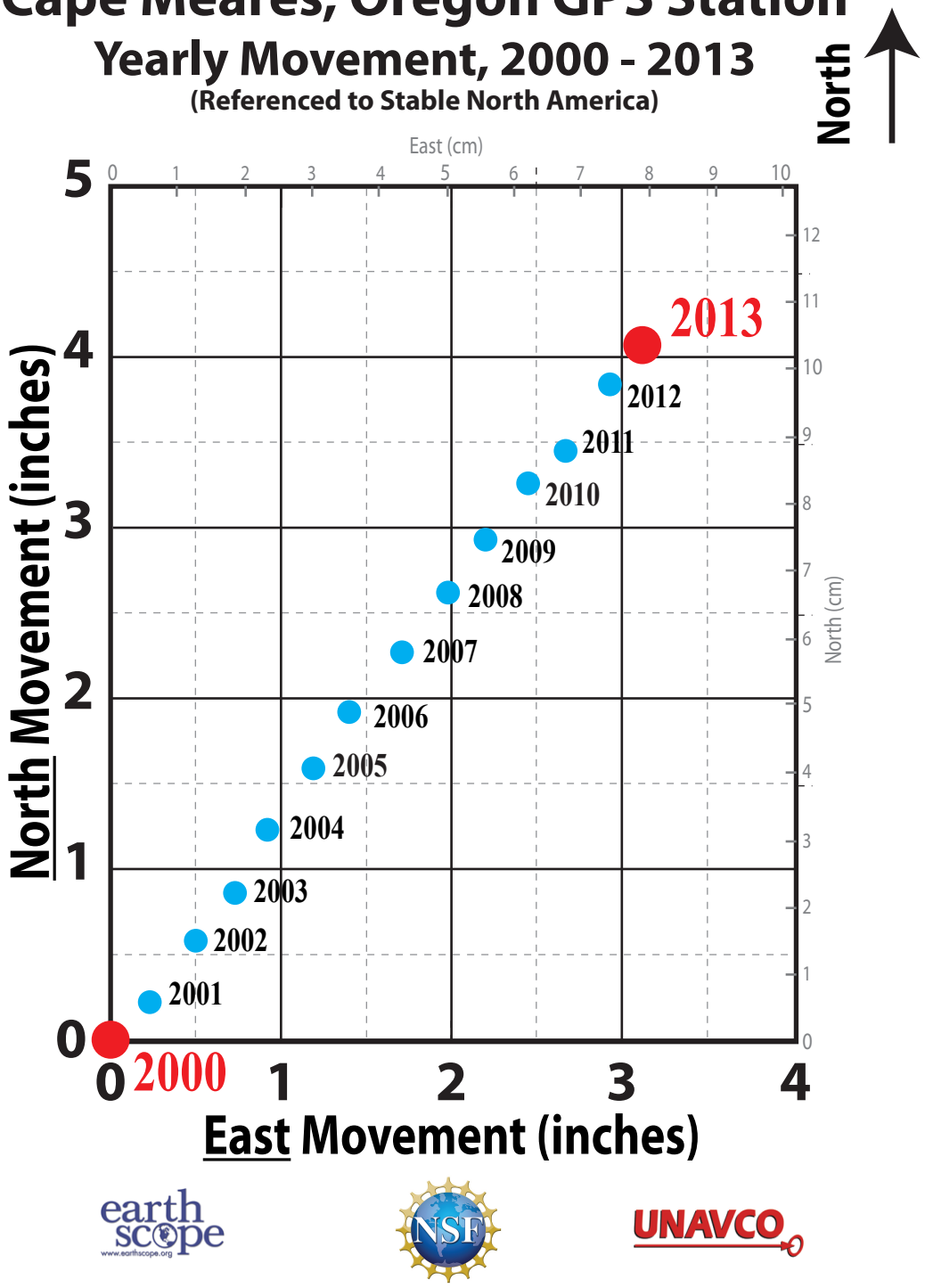
Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (**http://ceetep.oregonstate.edu**). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (**http://www.earthscope.org**) to Oregon State University, the University of Portland, and Central Washington University.

Newport GPS Station

Cape Meares, Oregon GPS Station

Yearly Movement, 2000 - 2013

(Referenced to Stable North America)



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The dots on this card show the motion of the Cape Meares GPS station over the past 13 years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Cape Meares region toward the northeast.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Cape Meares region moved since the year 2000? At what rate (inches per year) is the region moving? At that rate, how far has the region moved since the year 1700?

2. Why is the region moving toward the northeast?

3. The last big earthquake in the Pacific Northwest occurred in the year 1700. What will happen to the Cape Meares region when the next big earthquake occurs?

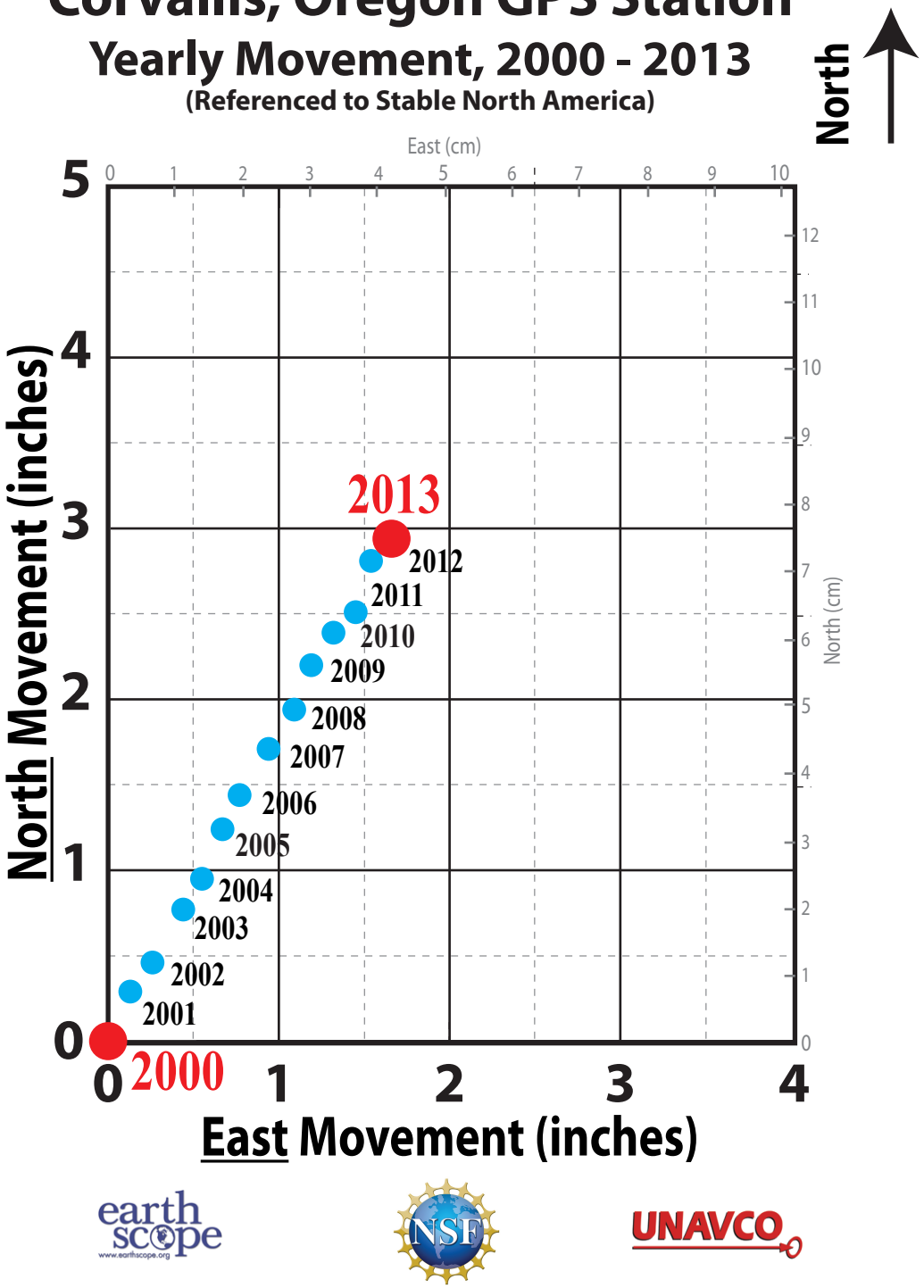
Station CHZZ from the EarthScope Plate Boundary Observatory (http://pbo.unavco.org). GPS time series data provided by the Pacific Northwest Geodetic Array (http://www.geodesy.org). Data as of March 19, 2013.

Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (http://ceetep.oregonstate.edu). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (http://www.earthscope.org) to Oregon State University, the University of Portland, and Central Washington University.

Corvallis, Oregon GPS Station

Yearly Movement, 2000 - 2013

(Referenced to Stable North America)



The dots on this card show the motion of the Corvallis GPS station over the past 13 years. Because the station is anchored into hard rock beneath the soil, the dots represent the year-to-year movement of the Corvallis region toward the northeast.

Orient this graph toward the north, tape it to the floor, and think about the questions below.

1. How far has the Corvallis region moved since the year 2000? At what rate (inches per year) is the region moving? At that rate, how far has the region moved since the year 1700?

2. Why is the region moving toward the northeast?

3. The last big earthquake in the Pacific Northwest occurred in the year 1700. What will happen to the Corvallis region when the next big earthquake occurs?

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Station CORV from the EarthScope Plate Boundary Observatory (**http://pbo.unavco.org**). GPS time series data provided by the Pacific Northwest Geodetic Array (**http://www.geodesy.org**). Data as of March 19, 2013.

Card developed by the Cascadia EarthScope Earthquake and Tsunami Education Program (**http://ceetep.oregonstate.edu**). CEETEP is sponsored by a grant from the EarthScope Program of the National Science Foundation (**http://www.earthscope.org**) to Oregon State University, the University of Portland, and Central Washington University.