

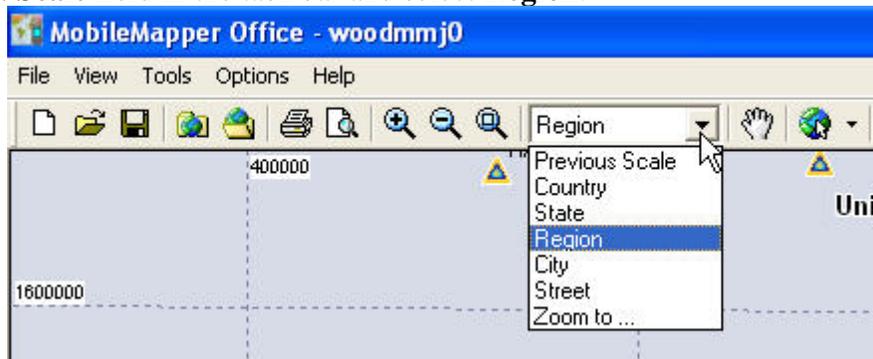
Post-Processing with MobileMapper Office and NGS CORS data

23 January 2007

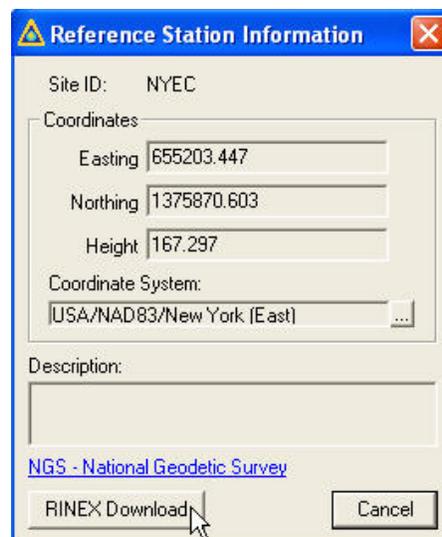
1. Just below the MobileMapper Office (MMO) Map Display Area, you will see the Differential Correction window. Click the Show CORS icon on the task bar.



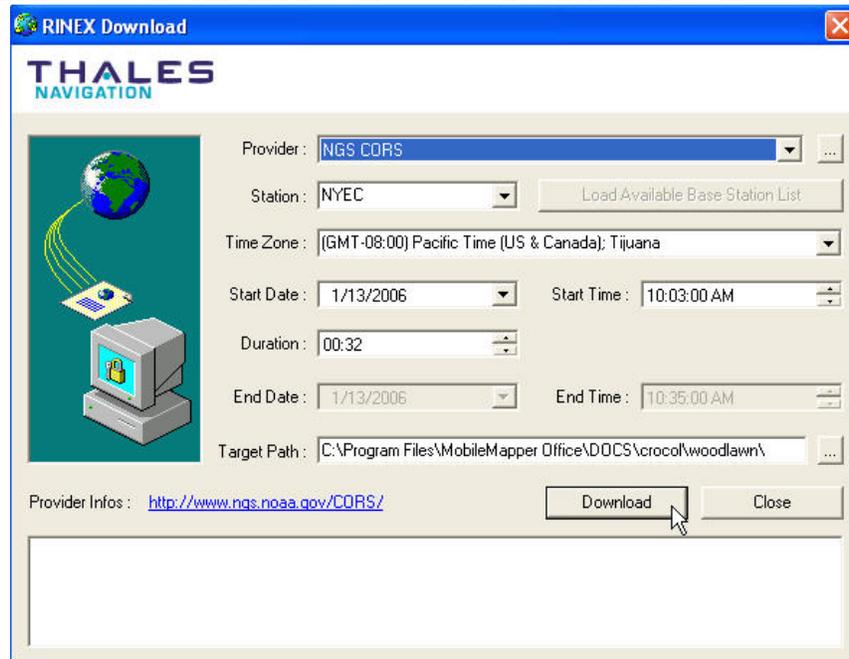
2. Zoom out until you see the closest CORS sites (identified on the Map Display Areas as triangles labeled with the sites' four-character IDs). You can click the zoom-out tool on the main task bar or, if your mouse has a roll button, you can roll it forward to zoom out. The fastest way to zoom out far enough is to click the down arrow next to the **Set Scale** field in the task bar and select **Region**.



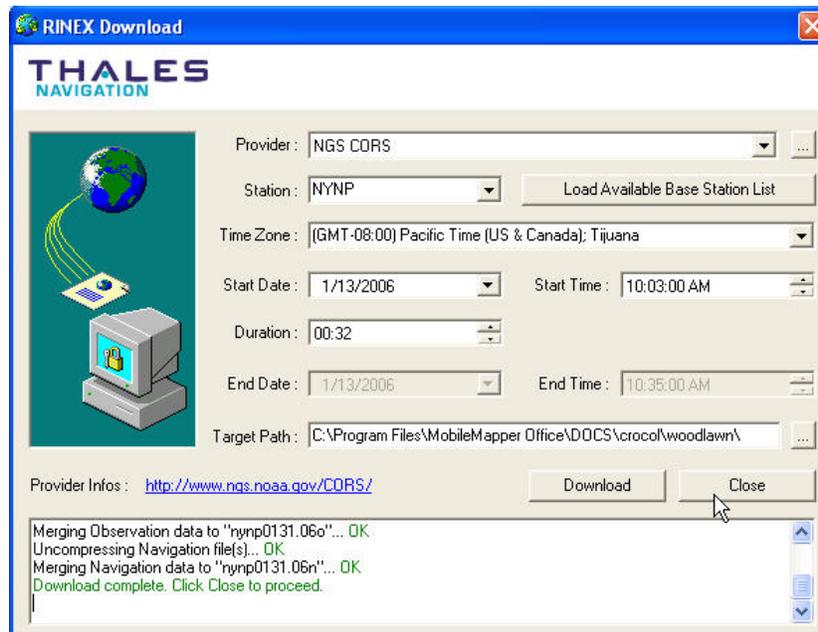
3. Double-click on a close CORS station in the Map Display Area. This brings up the Reference Station Information screen for the selected CORS site. Click the RINEX Download button.



- You will now see the RINEX Download screen. Click the Download button.



- When you click the Download button, MobileMapper Office opens your default browser, goes to the NGS CORS download ftp site and downloads the files that overlap your rover data in time. If you see an error message saying “File not found” or “No raw data available for this date,” this means the CORS site you selected was not operational while you were recording your rover data. Click **OK** on the error message, click **Close** on the RINEX Download screen and double-click on another CORS station on the Map Display Area. After you found a CORS site that recorded data at the same time, the RINEX Download screen will prompt you to close the window.



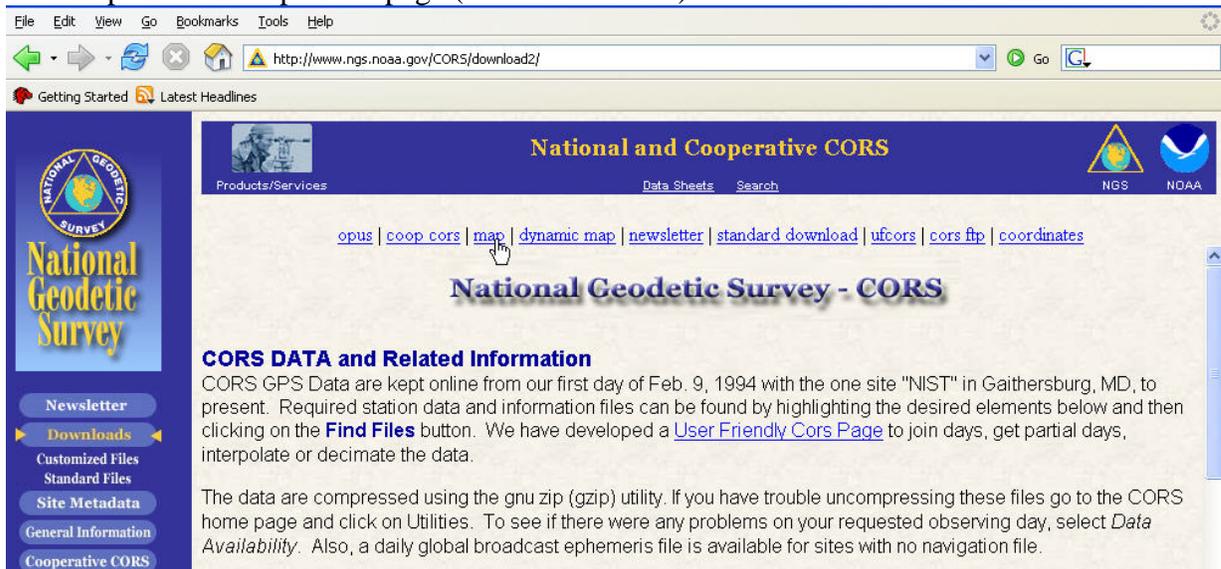
- MMO will now display the **Reference Station Information** window for the CORS site from which you downloaded data. This window shows the coordinates of the reference receiver’s antenna in the selected state plane coordinates system. However, if this is the *first* time you have downloaded data from the NGS CORS station, you will see the following warning message superimposed over the **Reference Station Information** window:



Note: When you download RINEX data from an NGS CORS site the reference station coordinates contained in the file’s header are typically *estimations* that can introduce a few meters of error to your rover data. To avoid introducing this error MobileMapper Office rejects the header’s coordinates and instead computes more accurate coordinates by averaging the data contained in the downloaded file. While this removes some of the error, you should always enter the official coordinates from the NGS CORS site into MobileMapper Office. When you type in the correct coordinates, MMO writes them to a file (c:/Program Files/MobileMapper Office/refsites.ini) so it can automatically use the same coordinates the next time you download data from the same CORS site.

Click **OK** on the warning message and proceed to Step 7 to input the correct coordinates.

- To check the accuracy of the NGS CORS receiver’s coordinates, go to <http://www.ngs.noaa.gov/CORS/download2/> and click on the hyperlink labeled “map” near the top of the page (see cursor below).



10. Click the map symbol next to the CORS site from which you just downloaded RINEX data, e.g., NYNP. This brings up the site's general description page (see below). Highlight the **Coordinates** option on the far left and click **Submit**. If you do not see a **Submit** button, double-click the **Coordinates** field.



SUNY-New Paltz
New Paltz, NY

NYNP

- Coordinates
- Data Availability
- Data Sheet
- Logfile
- Map/SatelliteView
- Notices
- Photo
- RINEX2 Data
- Time Series (60-day)
- Time Series (longterm)

submit

Regional Map

Main Map

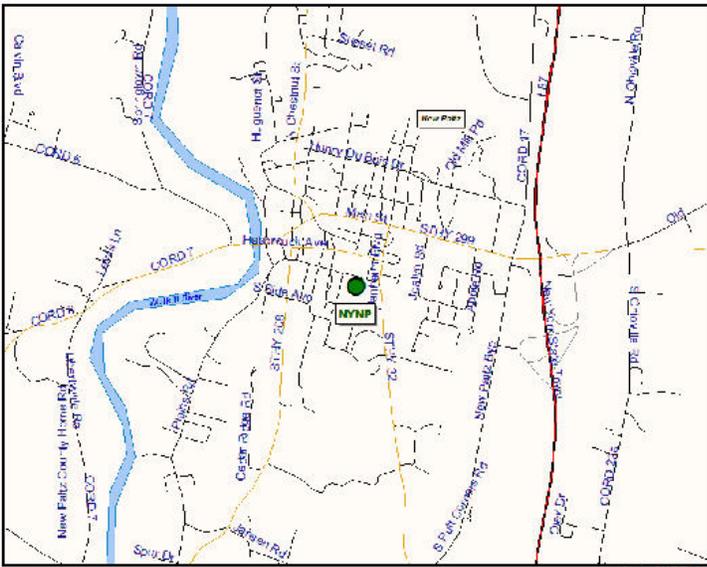
CORS Home

Enter SiteID

Site operated by:
State University of New York

National Geodetic Survey - CORS

National Cooperative



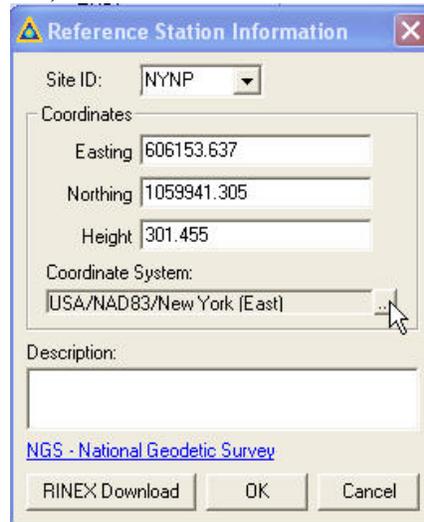
Craig 8/27/2004

11. On the CORS site's **Coordinates** page, locate the ITRF00 coordinates as shown below.

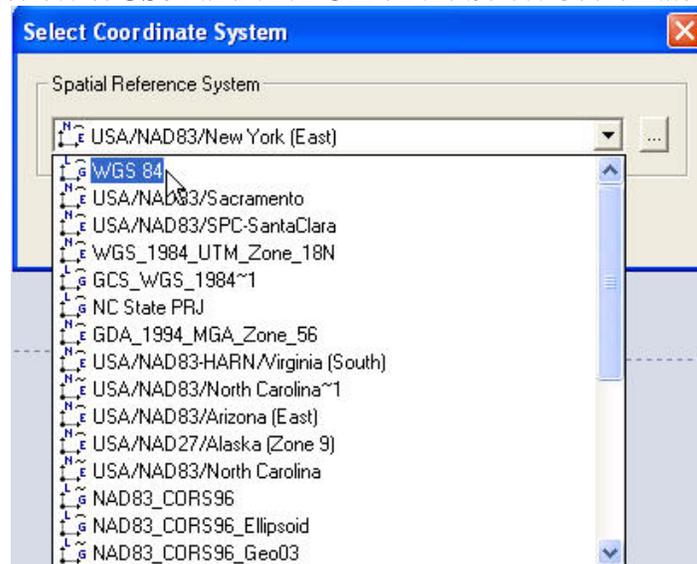
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ITRF00 POSITION (EPOCH 1997.0)
Computed in September 2004 using 34 days of data.
X = 1307155.187 m      latitude   = 41 44 32.88308 N
Y = -4583399.220 m   longitude  = 074 04 55.92094 W
Z = 4224357.843 m    ellipsoid height = 81.278 m
  
```

12. ITRF00 coordinates match WGS84 coordinates within a centimeter and you can enter these coordinates into MMO's Reference Station Information window. But first you must make sure you have selected WGS84 as the coordinate system in MMO. Go back to the Reference Station Information window displayed by MobileMapper Office. If the **Coordinate System** field displays **WGS 84**, go to **Step 14**. If the **Coordinate System** field displays any other system, click the **three dots** button to the right of the field (see below).

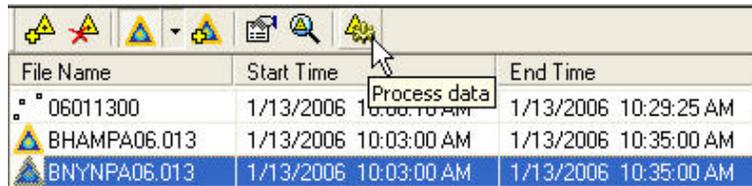


13. This action displays MMO's **Select Coordinate System** screen (see below). Click the down arrow, select **WGS84** and click **OK** on the Select Coordinate System window.



14. MMO's Reference Station Information window will still be displayed. Copy the ITRF00 latitude and longitude and the ellipsoid height (in meters) into it and click **OK**. MMO will automatically switch back to your original coordinate system. In the example above, this is USA/NAD83/New York (East). MMO will also automatically reset the units of height to what you were using.

15. Highlight the CORS site's data on the Differential Correction window and click the **Process Data** icon



File Name	Start Time	End Time
06011300	1/13/2006 10:00:00 AM	1/13/2006 10:29:25 AM
BHAMP06.013	1/13/2006 10:03:00 AM	1/13/2006 10:35:00 AM
BNYNPA06.013	1/13/2006 10:03:00 AM	1/13/2006 10:35:00 AM

Note: MMO saves all CORS site coordinates in a file (c:/Program Files/MobileMapper Office/refsites.ini) that may be deleted when you upgrade to a new version of MMO (depending on which version of MMO you are upgrading from). To prevent the loss of this file, please copy this file to a temporary folder and copy it back after the upgrade is complete. The instructions for upgrading to a new version of MMO include a reminder to do this. You may find the latest version of MMO at ftp.magellangps.com in the /Mobile Mapping/MM Office/Software/ folder.