

## WSRN RINEX DOWNLOADS – GUEST USERS June 27<sup>th</sup>, 2007

The WSRN primarily provides for real-time services, but also logs static data for each station and keeps them as long as possible (considering space limitations). A long term plan is being worked out with an academic institution to keep files for many years accessible via FTP, this will likely happen in 2008.

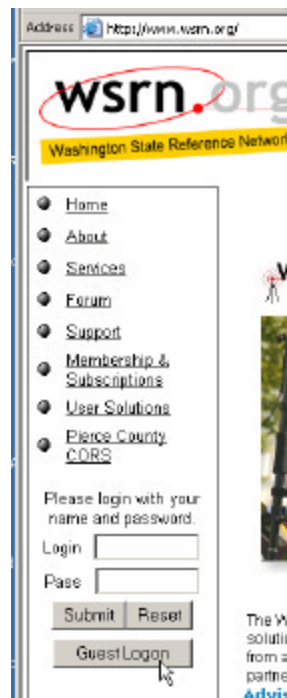
In the interim, the user has a number of options listed below. We highly recommend that the user download the files they need the day after their field work it is a good habit and the best option in light of our current storage limitations.

Rinex files are made available to all through the “Guest Login” button on the website. Registered WSRN participants have a few more download options, and Virtual Rinex (see later options).

### Option One – Downloading Hourly Files

Hourly, 1-second files are kept for each station, but only for three days (for older data you must use the Rinex Shop or other apps, see other options below).

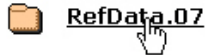
1. Go to the WSRN website at : [www.wsrn.org](http://www.wsrn.org)



2. Click the “Guest Login” button (you do not have to enter a login and password)
3. Click on the “Logged Data Option”:



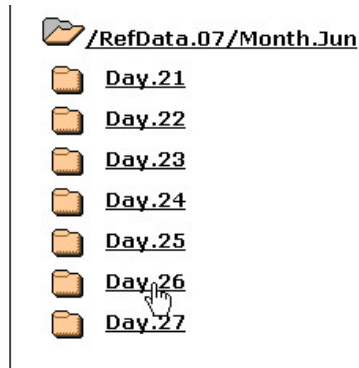
4. Click on the Year:



5. Click on the Month:



6. Click on the Day:



Note: you may see a few older out-of-sequence days on the list; ignore those, they are there for another unrelated purpose. You are only concerned with the last 3-4 days data....

7. Scroll down the list. You are looking for the station name four-letter prefix. In this example it is KOOT (for station Kootenai at the Coeur D' Alene Airport (if the station names seem confusing, consult the "Map" option on the "Guest User" main page. The four-letter designations are registered with an outfit called SOPAC and sometimes we do not have much of a choice for names. The Rinex file naming convention works like this:

Station/Julian date/Hour/Extension

e.g. KOOT117G.07o = Kootenai station, June 26<sup>th</sup>, 8:00am, observations

Note there are "a" files for most stations (almanac) and "n" (navigation)

The hours are based on Local time (i.e. "A" = 12:00am-1:00am, "B" = 1:00am-2:00am, etc.



8. Right Click on each file to save to your local drive. Unfortunately you have to do these one at a time.

### Option One – Rinex Shop

Also available via a "Guest User" session, this application can do a custom time-period for a station (e.g. 8:30am-4:50am) and decimate to a lower rate (e.g. 5-second, 15-second, 30-second), plus you can add other stations and time-periods to the same order to download as one zip file later.

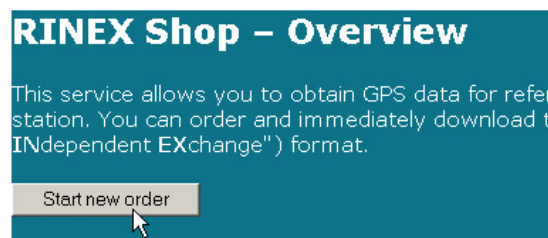
Rinex Shop taps into a backup set of 60 days worth of data stored on another server.

Note: this app can run a little funky sometimes, and if an order is very large, it may choke altogether, so please do not order more than 12hrs data for any given station at 1-sec in one order.

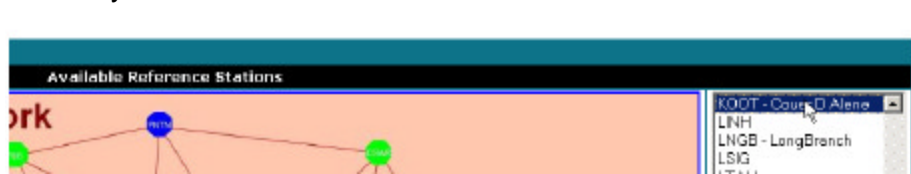
1. Click Rinex Shop from the main Guest menu:



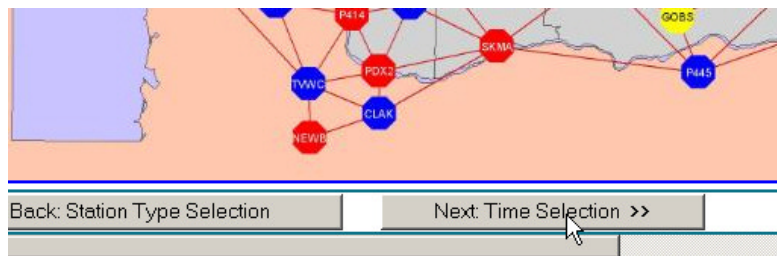
2. Click to "Start New Order":



- Click on the words “Continuously Operating Reference Station (CORS)” to start an order of Rinex data. Ignore the Virtual option, it is cool data, but that is another instruction...
- You will see a great big map (large so you can read the station ID's). Scroll to the far right; there is a station list. Highlight the station you want by clicking its name once. Only choose one station at this time.



- Scroll down to the bottom of the page and to the far left to find the “Next – Time Selection” button:



- Fill in the “Observation Period” form (note if you pick the current date and an ending time that is in the future it will get very confused). Pick the start time, length, and interval you would like to decimate to (e.g. 5-sec, 10-sec, 15-sec...note nothing below 1-sec, 0.5 sec or 0.1sec are special order in advance). NOTE: GPS TIME! This means Greenwich Mean Time (i.e. out local time in the summer is GMT-7 and in winter it is GMT-8). Be sure to click the “Broadcast Ephemeris” box if you want any almanac or navigation files (that is a bit misleading isn't it).

You have selected the following reference station(s):

*KOOT - Cover D Alene*

Please enter your desired observation period:

Observation Period			
Date:	26	June	2007
Start time:	8	h 30	m 0
Duration:	2	h 30	m
Interval:	15	s	
Time system:	GPS [GPS time = Local time - xx hour(s) (summer time)] [GPS time = Local time - yy hour(s) (winter time)]		
	<input checked="" type="checkbox"/> Include Broadcast ephemeris		

Then click “Next: Add to Order”...

- You will see a summary of your order:

### RINEX Shop – Your current Order

The following RINEX data files are currently in your order. You may add further data files, remove files, or proceed with delivery options and data generation.

Station	Start Time	End Time	Duration (min.)	Interval (sec.)	Epochs	Eph.	Action
KOOT - Couer D Alene	06/26/07 08:30 AM	11:00 AM	150	15	600	yes	Choose action...
<b>Total:</b>			<b>150</b>		<b>600</b>		

[Back to Overview](#)
[Cancel order](#)
[Add more stations](#)
[Next Delivery Options >>](#)

You could click the “Add more Stations” if you want to do so, but then click “Next Delivery Options”...

- DO NOT CHOOSE EMAIL OPTIONS. They will not work due to some email size restrictions. Even email notification will not work. You are going to go back to the site later and pick up your files (more about that later). Unless you are specifically dealing with Compact Rinex (not likely) just pick the plain old RINEX options, then choose “Next Generate Data”.

### RINEX Shop – Delivery Options

You can choose to either download the generated RINEX files or to send them to you by e-mail. In the latter case you don't have to wait until the files are generated, which may take some time, depending on the amount of requested data.

**Download** the data  
 Notify me by e-mail when the data is generated

or

**Send** me the data by e-mail  
 One single e-mail containing all files  
 Multiple e-mails, one for each file

Choose the file format (all files will be packed into a single ZIP archive):

**File format:**

Compact RINEX (Hatanaka)  
 RINEX

[Back: Current Order](#)
[Next: Generate Data >>](#)

- The data will start to generate. Once you see the little yellow status bar start sliding across the screen, GET OUT OF THE BROWSER (I'll explain)...

### RINEX Shop – Data Generation

Your requested RINEX files are being generated. Please wait...

Processing Status	
Files generated:	0 / 1
Current file progress:	<div style="width: 13.0%; background-color: yellow;">13.0 %</div>
Total progress:	<div style="width: 13.0%; background-color: yellow;">13.0 %</div>

Note that you don't have to remain on this page for the entire file generation process. You can go back to the overview or any other page and return later to download the data.

[Back: Overview](#)
[Cancel order](#)

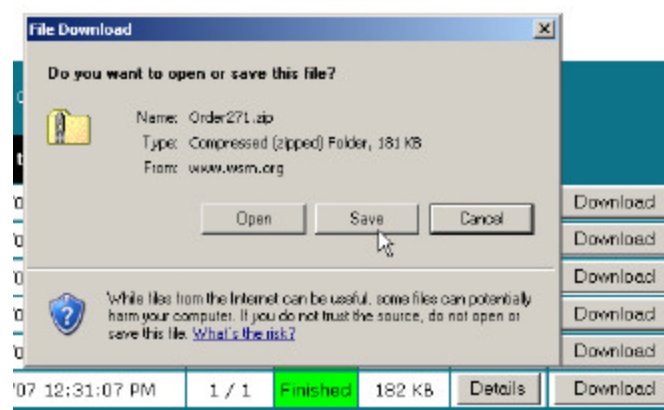
10. You need to exit the browser. If you sit and watch the progress bar go all the way across you may end up with a corrupt zip file (this is really weird, but it sometimes happens). It is best to just place the order and go back to the website later (e.g. 15 minutes later) to pick up the file. You will have noted the time you placed your order so you can pick it up off a list (by time/date) later.
11. Go back into the website though the “Guest” button. Choose “Rinex Shop” again. The first thing you will see is a list of recent orders. Choose yours (designated by the time it was ordered) and pick DOWNLOAD ONLY. Sending by email will not work. If you are having trouble determining which one is yours, then you could pick “Details:” to see if it is yours.

Start new order

The following orders were not yet downloaded:

No.	Request time (local time)	Files created	Status	File size			
260	06/27/07 07:51:42 AM	1 / 2	Finished	659 KB	Details	Download	Send by e-mail
264	06/27/07 09:49:43 AM	1 / 1	Finished	922 KB	Details	Download	Send by e-mail
267	06/27/07 10:13:17 AM	1 / 1	Finished	690 KB	Details	Download	Send by e-mail
268	06/27/07 10:14:51 AM	1 / 1	Finished	765 KB	Details	Download	Send by e-mail
269	06/27/07 10:16:27 AM	1 / 1	Finished	879 KB	Details	Download	Send by e-mail
271	06/27/07 12:31:07 PM	1 / 1	Finished	182 KB	Details	Download	Send by e-mail

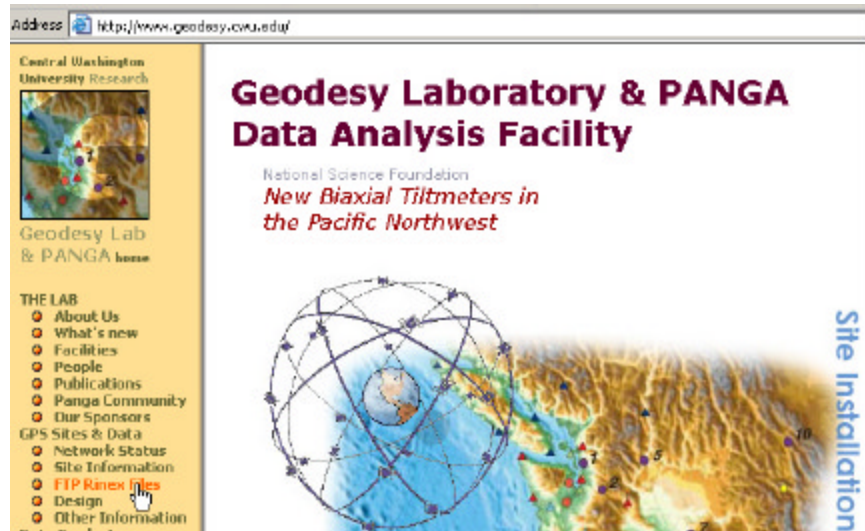
12. When you click on “Download” you will be given an option to open the zip or save the zip. Choose “Save” (as some folks have limitations on opening zips over the web). Save to a local drive then unzip/open later.



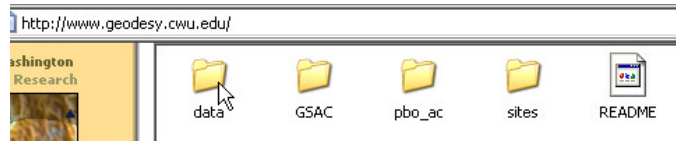
## Option Two – Downloading files from PANGA

The Pacific Northwest geodetic Array (PANGA) is the scientific research group studying plate tectonics and is run by the Geodesy Lab at central Washington University. PANGA collaborated on many of the CORS in our state and uses data from many of the other

WSRN CORS. They keep data for nearly every station (though much of it decimated) for long periods of time. It is handy to download files from their FTP site.



1. Go to their site in your web browser: <http://www.geodesy.cwu.edu/>
2. Click on the “FTP Rinex Files” option on the left hand side.
3. Click on the “data” folder:



4. The “Incoming” folder has data listed by site name and are observations files only (but you could use nav files for the same time period for other nearby sites). There are lots of other options listed by year and Julian day (and there may not be data for all stations in those options and there may be file types you are unfamiliar with) but this is a great resource for files just the same.

**NOTE: The best practice is to download the files you need the day you do your fieldwork or within a day or so. Simplest solution.** If you are in the boonies and can't download, arrange to have someone download them for you while you are gone. Get creative. Until we have long term storage established we are not giving you any guarantee that we will have every file you desire.

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