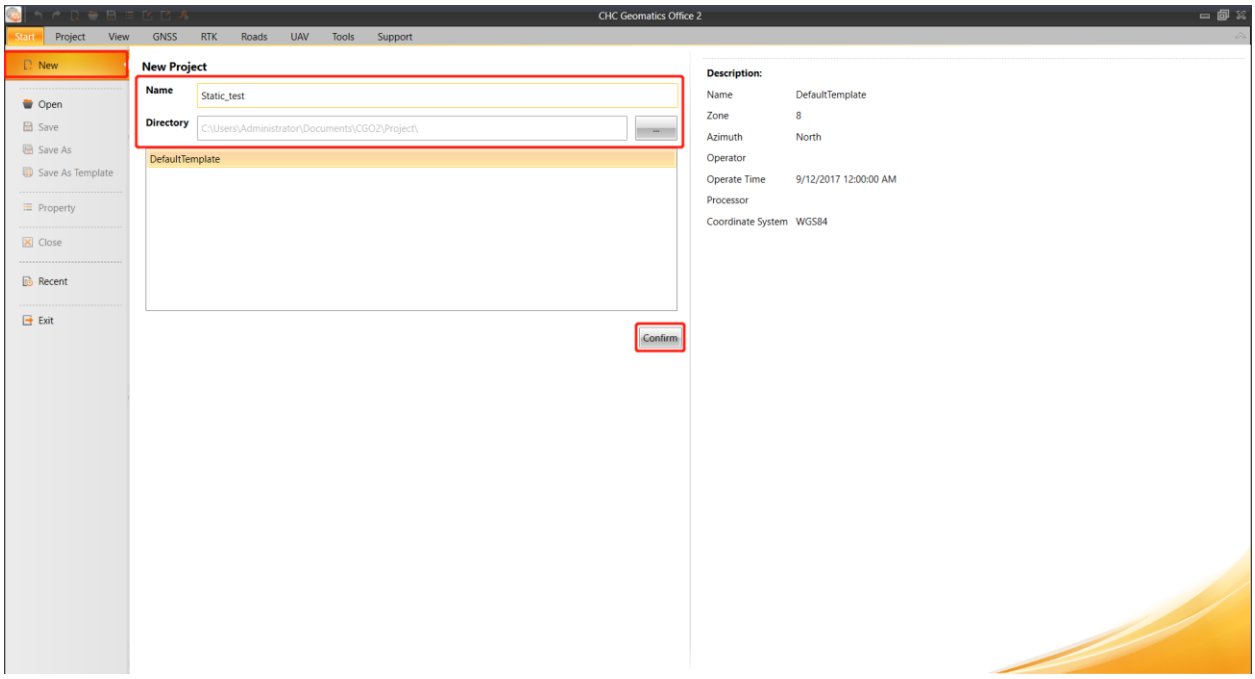
How to process static data in CGO2?

This Quick Guide will show you how to process static data using CGO2 software.

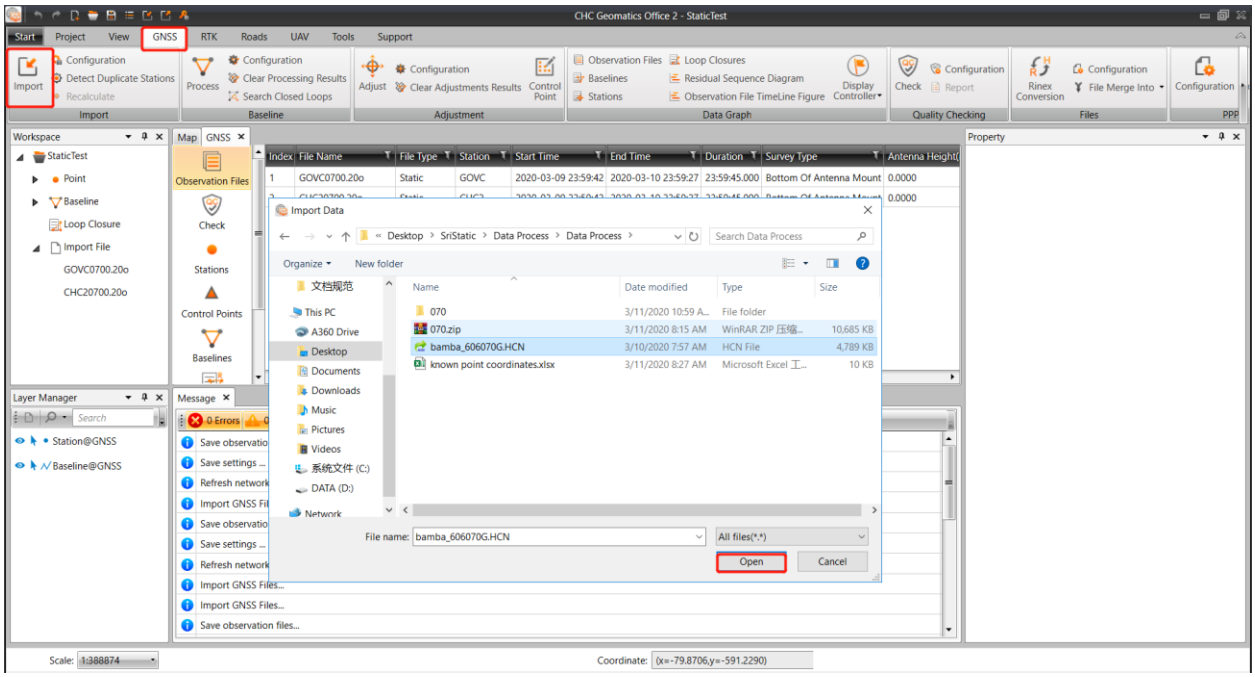
1. Create new project:

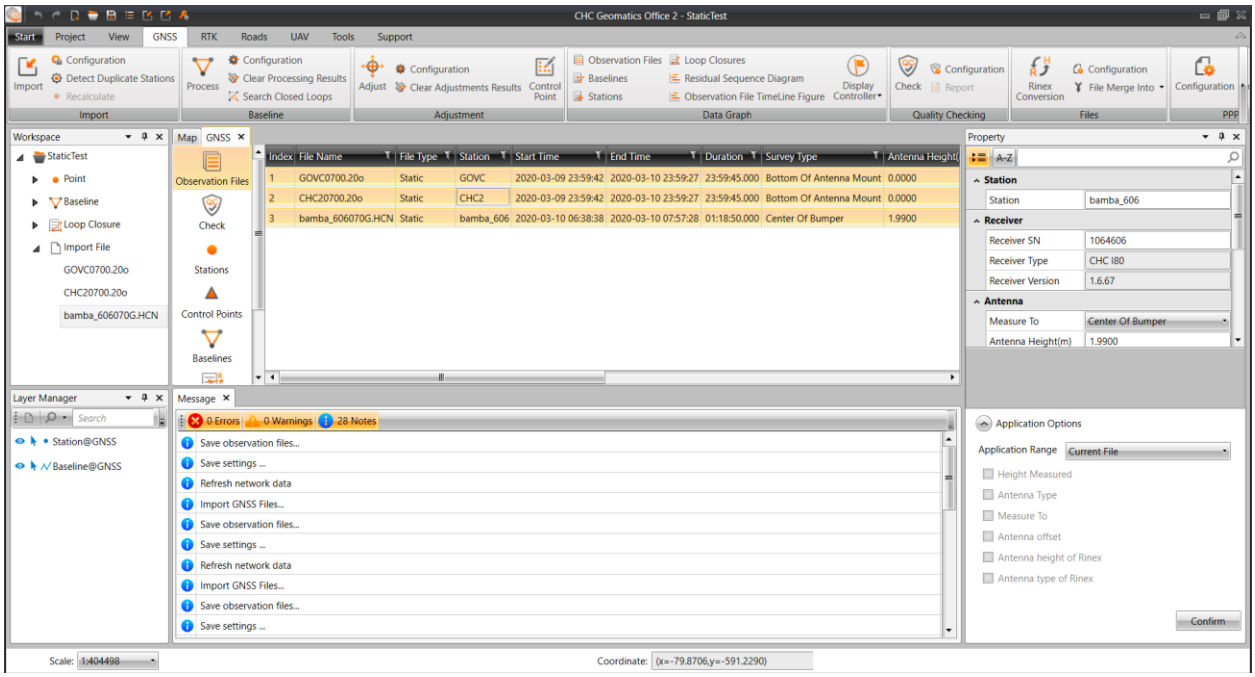
Open CGO2 software and create a new project by click “**New**”. You can also choose previous created project by click “**Open**” or “**Recent**”.



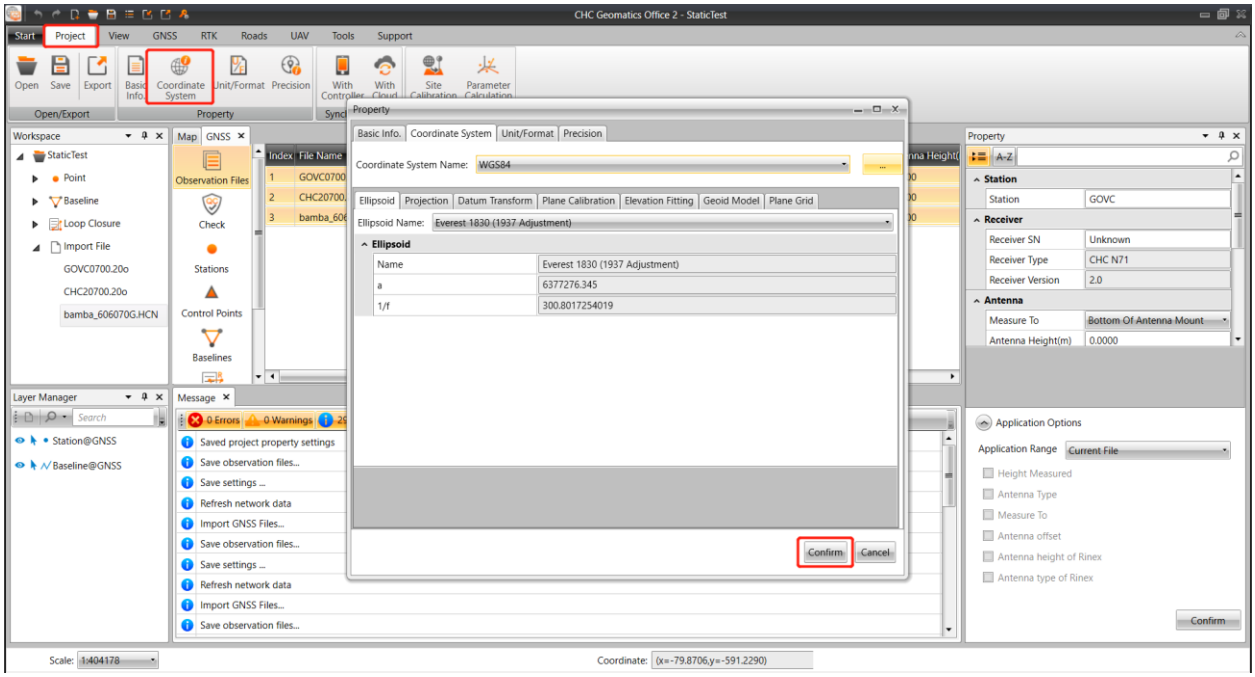
2. Import static data:

Go to “**GNSS**” module, click “**Import**” button to import all static data.



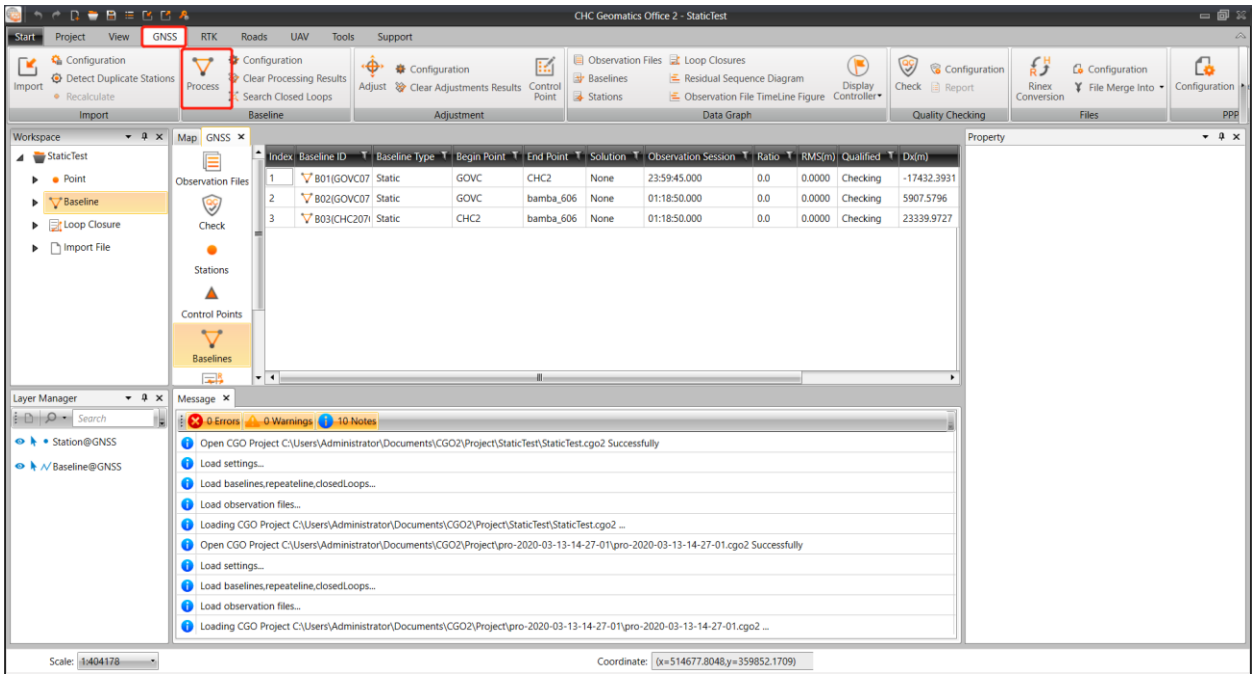


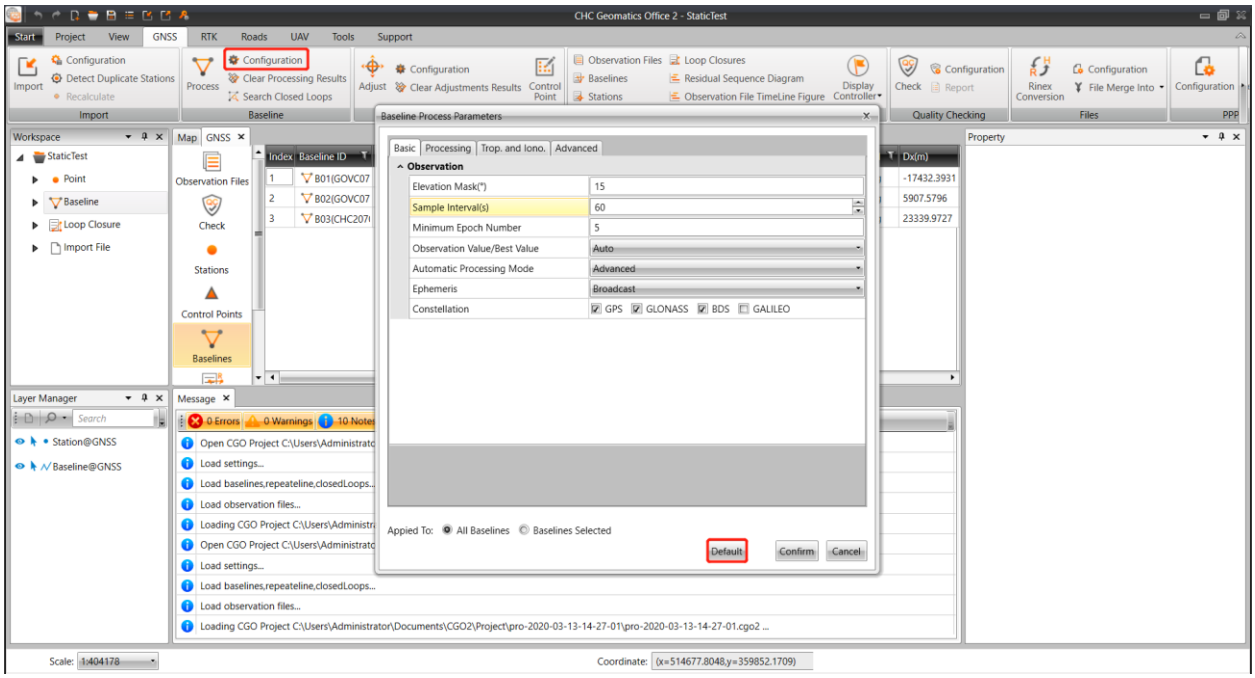
After data imported, we need to set the coordinate system of data. Go to "**Project**" module, choose correct Ellipsoid, Projection etc, and click "**Confirm**" finally.



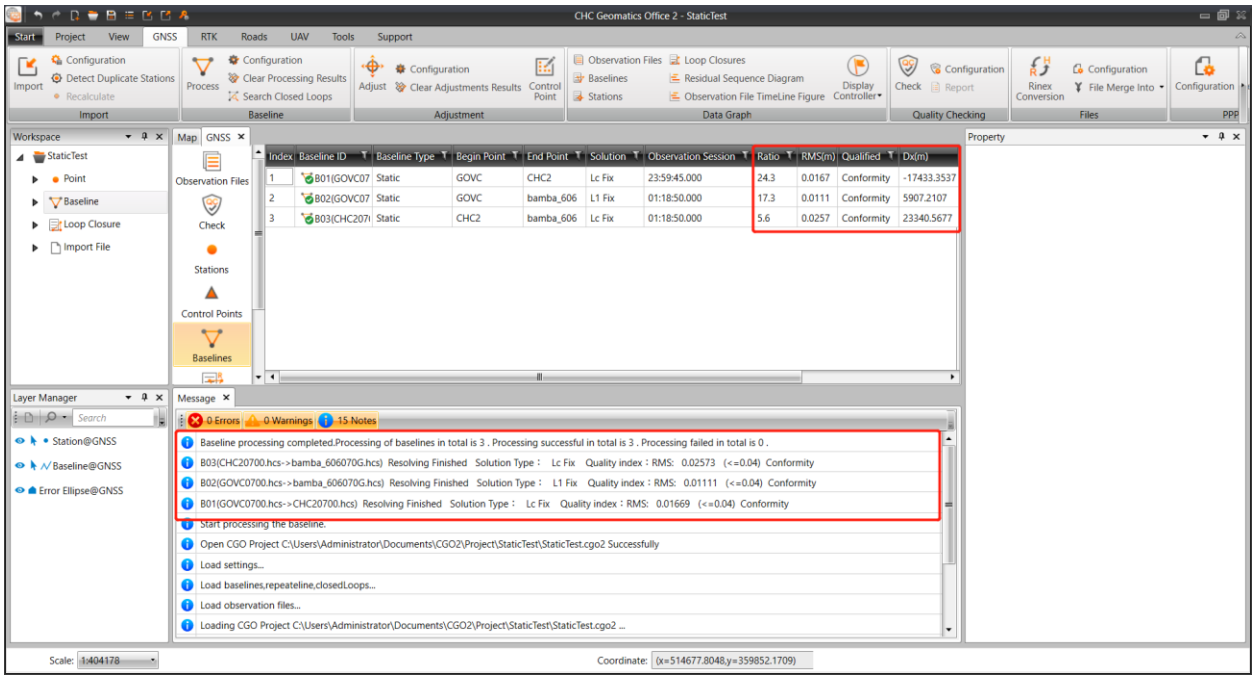
3. Process baseline

After all above settings complete, back to "**GNSS**" module and click "**Process**" to process baseline. You can also configure settings of baseline process by click "**Configuration**". In configuration, you can change elevation mask, sample interval etc. Normally, you can keep all settings by default.

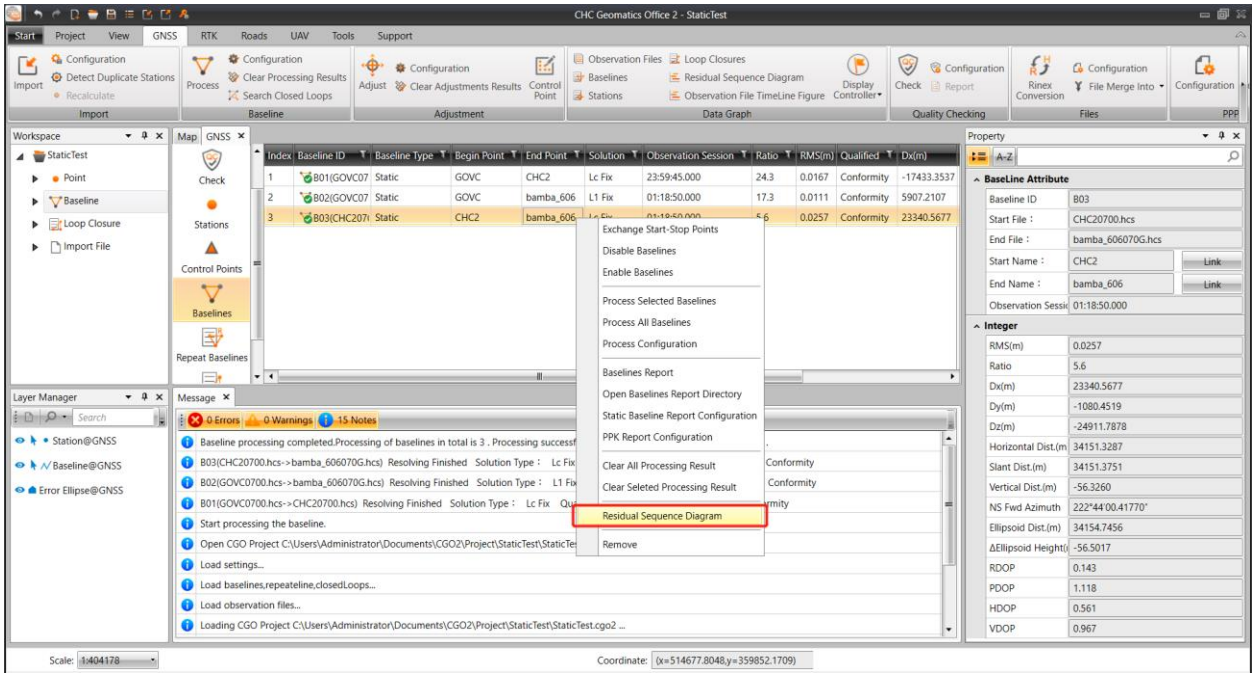




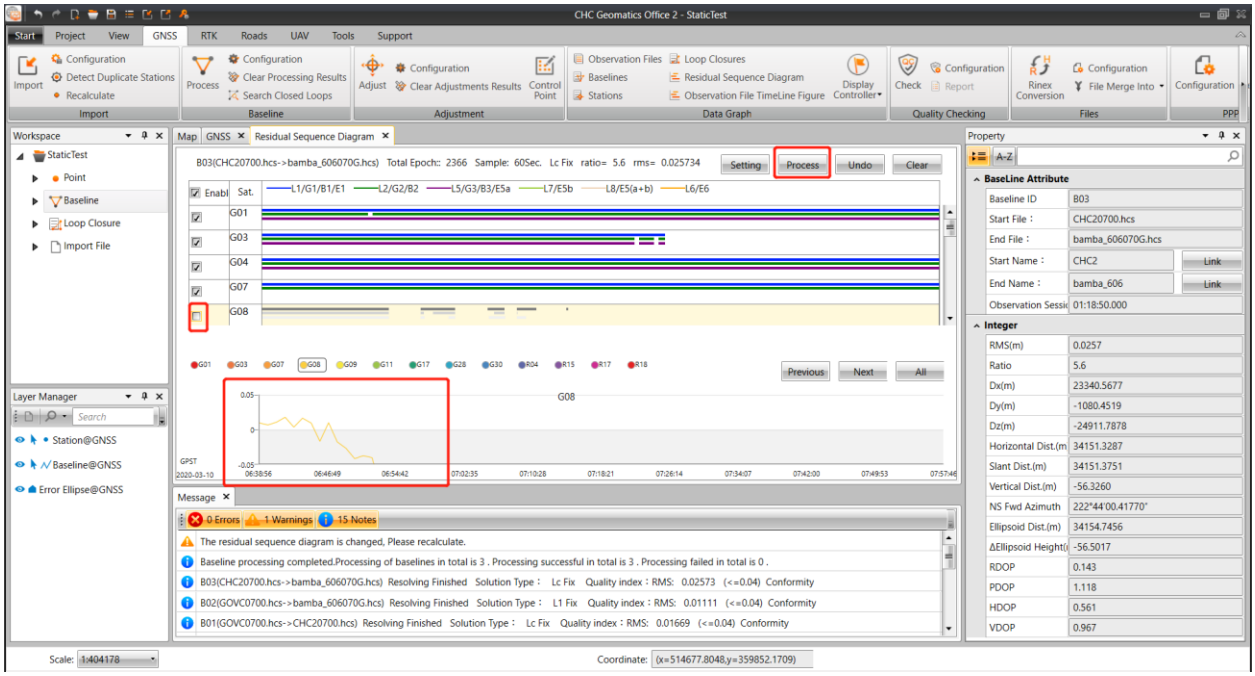
After process finished, you can see each baseline result in software: If data quality is good, the baseline will show conformity (RMS<0.04); If data quality is not good, the baseline will show unconformity (RMS>0.04). The smaller the RMS value, the better the baseline quality.



If one baseline's RMS is high or exceed limitation (unconformity), you can choose this baseline and right click choose "**Residual Sequence Diagram**" to modify.

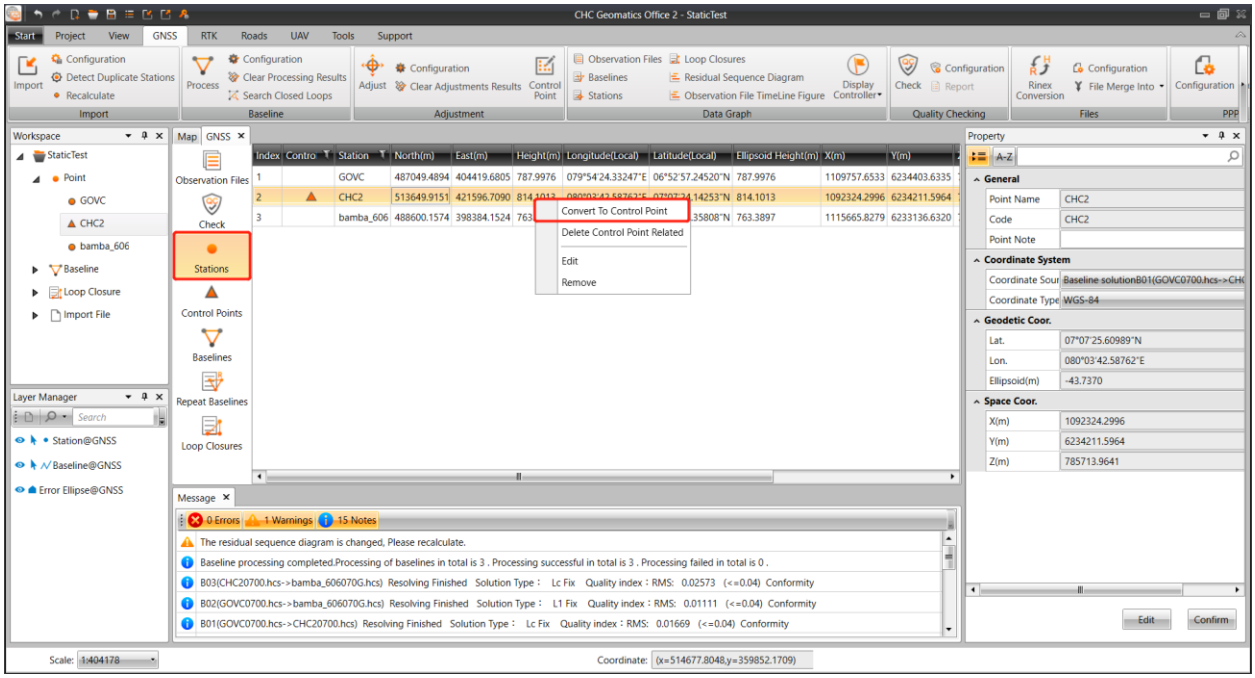


In this diagram, you can find how many satellites were used for this baseline process and what's the quality of satellite data. Normally, smoother the diagram line, better satellite data quality. If you find one satellite line is highly fluctuating or even not complete (only a little part), which means this satellite is not good for processing, you can unstick it and process this baseline again without this satellite (or delete the empty part). You can check the RMS value, if it's smaller, which means unstick this baseline is a right choice. Check all satellites and modify those unsuitable satellites until the RMS value is minimum. More detailed info about this part can follow this video: https://chcnavigation.jianguoyun.com/p/DSomJWUQutyuBhiLvfUC

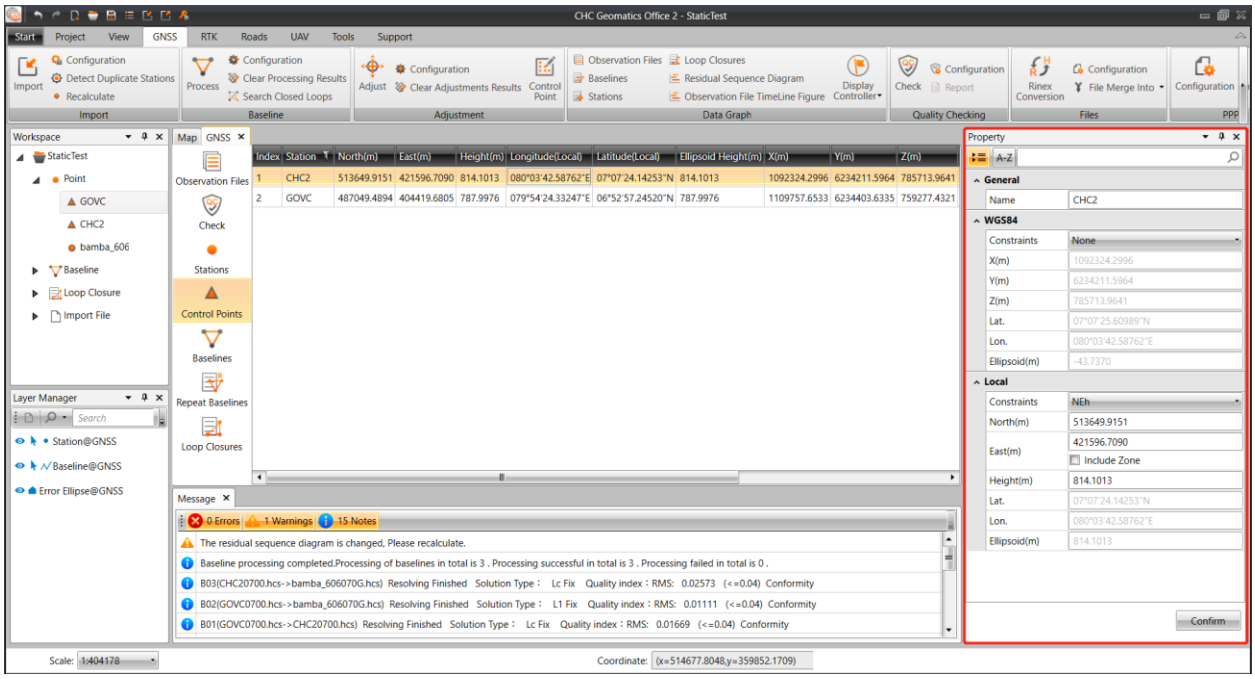


4. Add control point

When all baselines are conformity, then we need to add control point for later adjust. Choose "**Station**", select corresponding point, and right click choose "**Convert To Control Point**", then you can find these points in "**Control Points**".

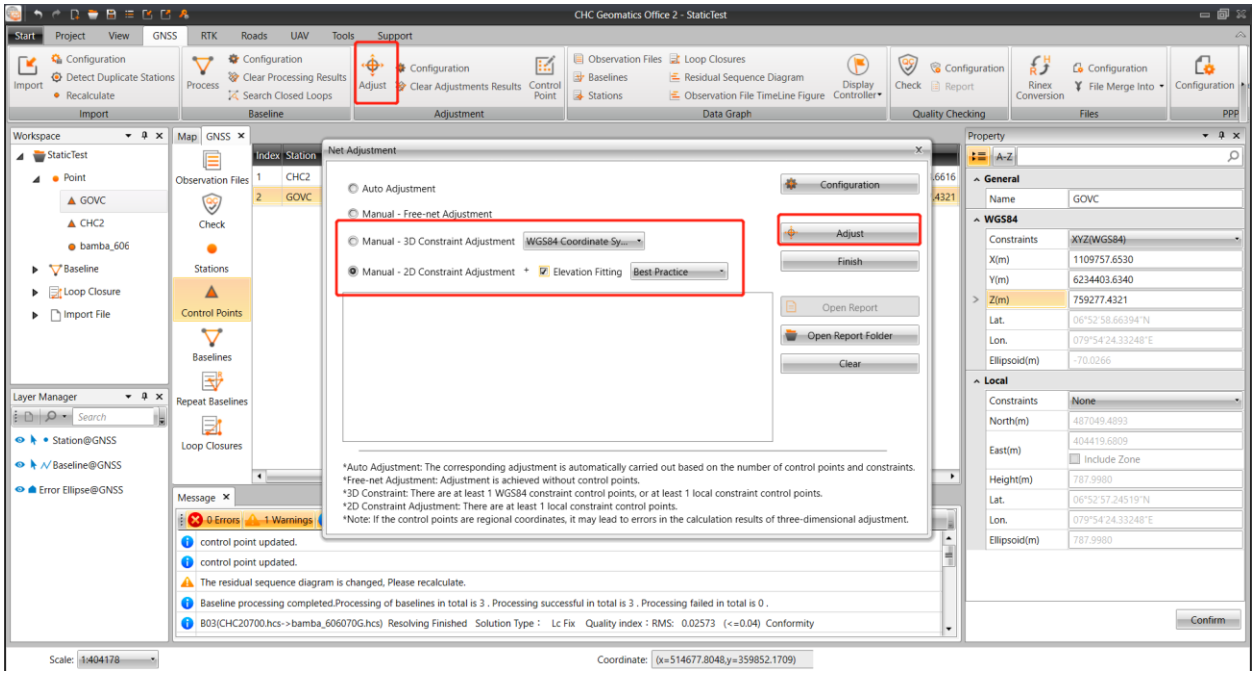


In "**Control Points**", click one point and the property will be shown in right side. You can manually modify the coordinate and height here depends on the control point type (NEh or XYZ). After changed, click confirm.

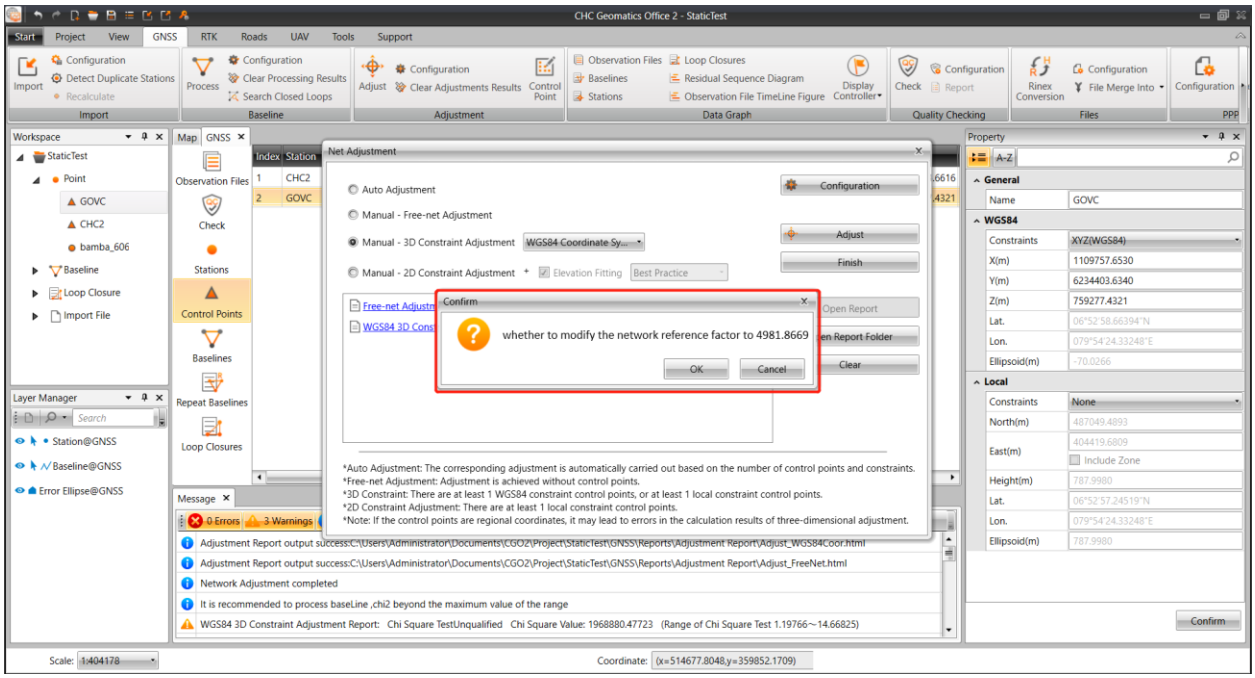


5. Adjust

After all control points are converted, click "**Adjust**" to do final adjustment. Generally, we can use last two adjust algorithms (depends on your GCP type).



After proper adjust algorithm is chosen, click "**Adjust**" and the CGO2 will automatically pop-up a window which ask you to correct network reference factor, click "**Ok**". The output report will be shown as html format. You can find its location by click "**Open Report Folder**".



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