

## SGU1 Position Notes

Date: 29 December 2024

SGU1 cannot be changed for any reason. The local community has resisted any adjustments for 20 years!

SGU2 was deployed to be available when SGU1 inevitably dies. SGU1 is currently 19 years old. The antenna mount pierces the membrane roof deck, which SGU1 predates. When it dies, we will abandon the current mount.

This is an NGS CORS station. NGS has these coordinates:

```
| NAD_83 (2011) POSITION (EPOCH 2010.0) |
| Transformed from ITRF2014 (epoch 2010.0) position in Aug 2019. |
| X = -2036611.877 m latitude = 37 06 47.48130 N |
| Y = -4668218.383 m longitude = 113 34 13.02325 W |
| Z = 3827958.199 m ellipsoid height = 895.565 m |
```

The NGS has this for the L1 Phase Center:

```
| NAD_83 (2011) POSITION (EPOCH 2010.0) |
| Transformed from ITRF2014 (epoch 2010.0) position in Aug 2019. |
| X = -2036611.907 m latitude = 37 06 47.48133 N |
| Y = -4668218.448 m longitude = 113 34 13.02328 W |
| Z = 3827958.255 m ellipsoid height = 895.655 m |
```

This is what is in the receiver:

Base	
Dynamic <input type="radio"/> Static <input checked="" type="radio"/>	Latitude <input n"="" type="text" value="37°06'47.48170"/>
Moving Position <input type="checkbox"/>	Longitude <input type="text" value="113°34'13.02341" w"=""/>
Station ID <input type="text" value="23"/>	Ellipsoid Height <input type="text" value="895.579 m"/>
<input type="button" value="Get Current Position"/>	
Antenna	
Reference Position <input type="text" value="Antenna Reference Point"/>	Receiver Antenna <input type="text" value="ASH701945E_M"/>
Measurement Type <input type="text" value="Vertical Height"/>	
Antenna Height <input type="text" value="0.000 m"/>	
Virtual Antenna <input type="text" value="Off"/>	

This is the broadcast position:

### Base Position:

Lat: 37° 6' 47.48171" N  
Lon: 113° 34' 13.02342" W  
Hgt: 895.689 [m]  
ID: 23  
Name: RTCM0023  
Age: 0.52