

GPS+BD+GLONASS Antenna

FEATURES

- Build-in embedded GNSS+BD+GLONASS patch antenna, low power consumption
- Effectively meeting the needs of users with the characteristics of high gain miniaturization, high sensitivity, multi-system, compatibility, and high reliability
- Easy to fixation with two types of mounting methods for selection: magnetic installation; and 3M double-sided tape installation
- Using anti-ultraviolet PC material and ultrasonic technology and can be sun-proof, and high-temperature resistant.
- Cables and connectors customization supported.

APPLICATIONS

- Can be used with a variety of satellite navigation receivers
- Geodetic surveying and mapping
- Channel surveying and mapping
- Precision agriculture and marine surveying



PRODUCTS

Part No.	Weight	Dimensions (L x W x H)	cable	Connector	Color
M02-0300120R0A		50.8*50.8*17.3mm	Φ 2.8*5000mm	SMA MALE	Black

MyAntenna RF Technology Co., Ltd

ADD: No.RM 405, R3-A Building, Shenzhen High-Tech Park, Nanshan, Shenzhen, P.R. China.

TEL: +86-0755-86503881 FAX: +86-0755-27801677 E-mail: nfc@myantenna.com

Electrical Characteristics

Antenna		
1	Antenna model	3540A (35mm*35mm*4mm)
2	Frequency Range	BD:1561±2MHz
		GPS:1575.42MHz±2MHz
		GLONASS:1602 MHz±5MHz
3	V.S.W.R	2.0 MAX
4	Band With@10dB	BD: 5MHz
		GPS : 5MHz MIN
		GLONASS : 10MHz MIN
5	Passive Gain	BD : 5.0 dB typ@70*70mm ground plane
		GPS : 5.0 dB typ@70*70mm ground plane
		GLONASS : 5.0 dB typ@70*70mm ground plane
6	Active gain	BD :18±3dB typ@5000mm RG174
		GPS :17±3dB typ@5000mm RG174
		GLONASS :18±3dB typ@5000mm RG174
7	LNA Gain	BD :18±3dB typ@5000mm RG174
		GPS :18±3dB typ@5000mm RG174
		GLONASS :18±3dB typ@5000mm RG174
8	Impedence	50 Ω
9	Polarization	RHCP
10	DC voltage	3.3±0.3V
11	DC current	12±2mA(@3.0V)

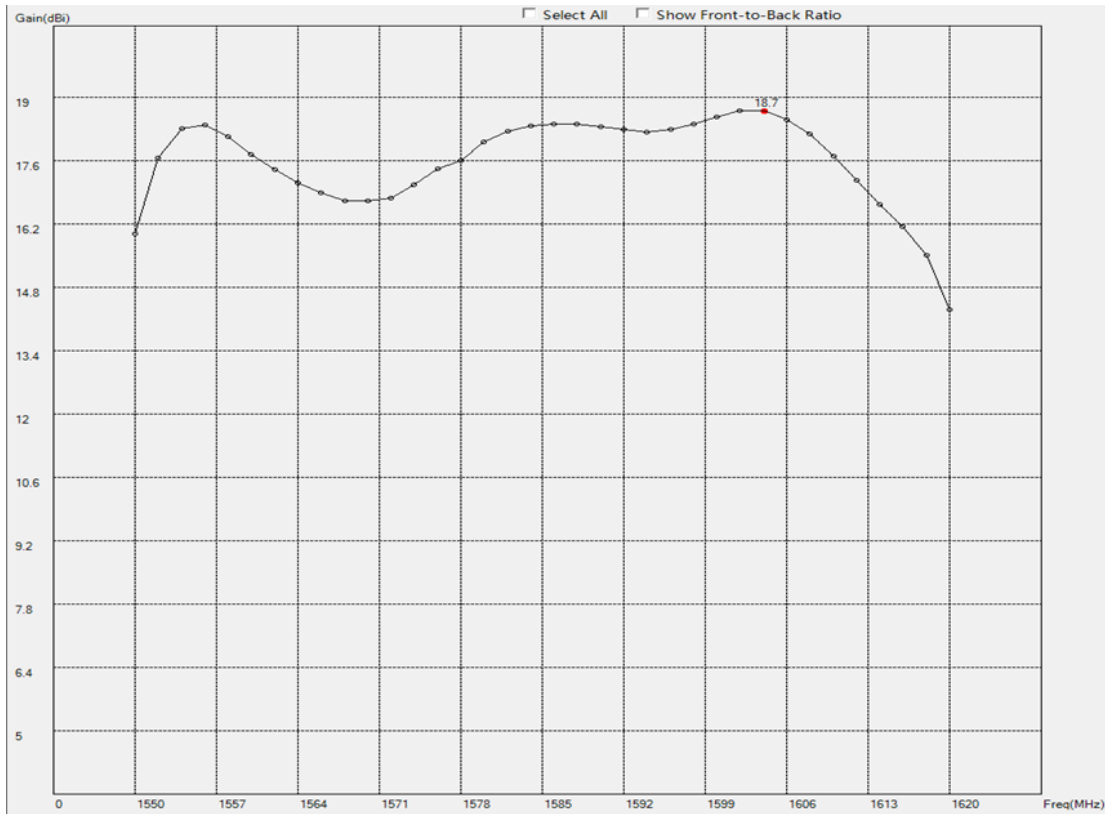
Material

No	Part Name	SPEC
1	Antenna	Dielectric Ceramics
2	Shielding	Tinplate
3	PCB	FR4
4	Sheathing	ABS (black)
		50.8mm×50.8mm×17.3mm
5	RF Cable	RG174(pure copper 96 braided single shield 96*0.1 tinned copper)
		L=5000mm
6	RF Connector	SMA MALE
7	Magnet	Nd2FeB magnet
8	Double-sided tape	3M

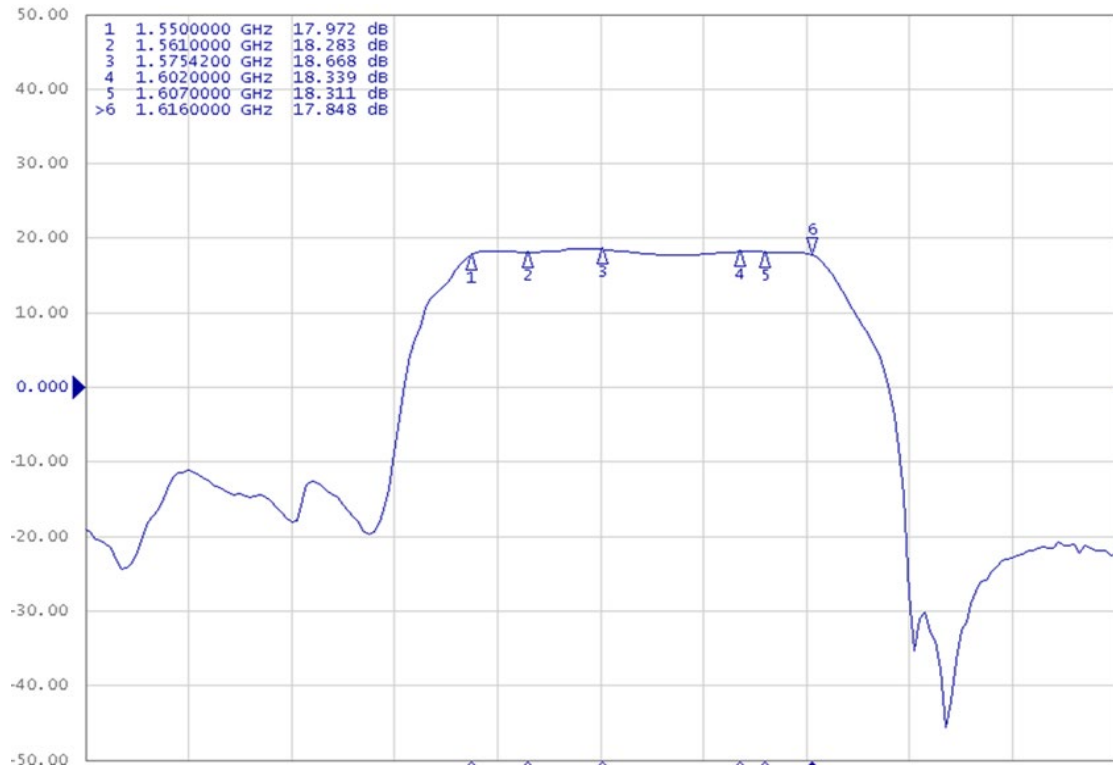
Environment Condition

1	Working Temp	-40°C~+85°C, 10%~95% RH														
2	Storage Temp	-55°C~+100°C, 10%~95% RH														
3	Vibration	<table border="1"> <tr> <td colspan="2">Wave Form: Random Vibration</td> </tr> <tr> <td colspan="2">Test Time: 30min/Axis</td> </tr> <tr> <td colspan="2">Direction: X, Y, Z Axis</td> </tr> <tr> <td colspan="2">PSD Break Points for 9.8 RMS (m/s²)</td> </tr> <tr> <td>Frequency (Hz)</td> <td>Acceleration (m/s²)²/Hz</td> </tr> <tr> <td>50</td> <td>0.38416</td> </tr> <tr> <td>300</td> <td>0.38416</td> </tr> </table>	Wave Form: Random Vibration		Test Time: 30min/Axis		Direction: X, Y, Z Axis		PSD Break Points for 9.8 RMS (m/s ²)		Frequency (Hz)	Acceleration (m/s ²) ² /Hz	50	0.38416	300	0.38416
Wave Form: Random Vibration																
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PSD Break Points for 9.8 RMS (m/s ²)																
Frequency (Hz)	Acceleration (m/s ²) ² /Hz															
50	0.38416															
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4	Waterproof	IP66														

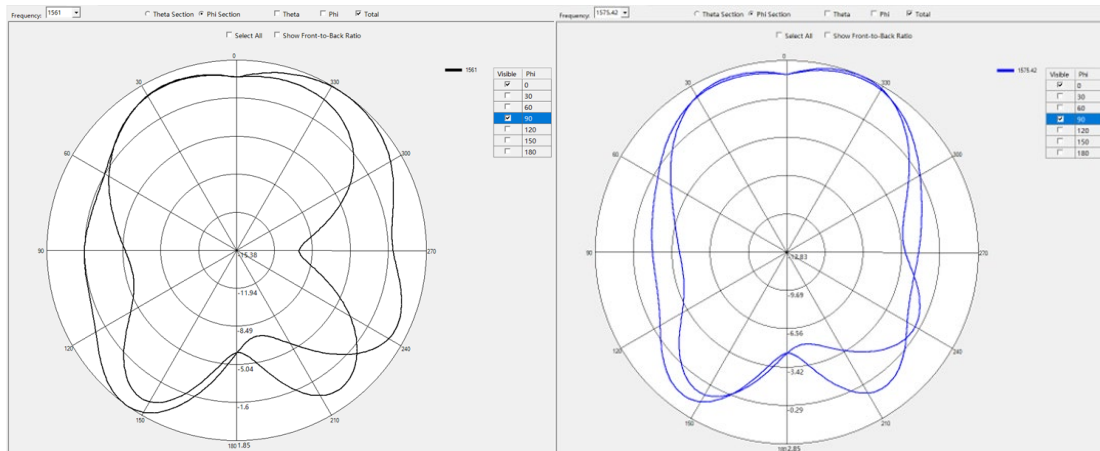
Active Gain (5m 174 coaxial cable)



LNA Gain (5m 174 coaxial cable)



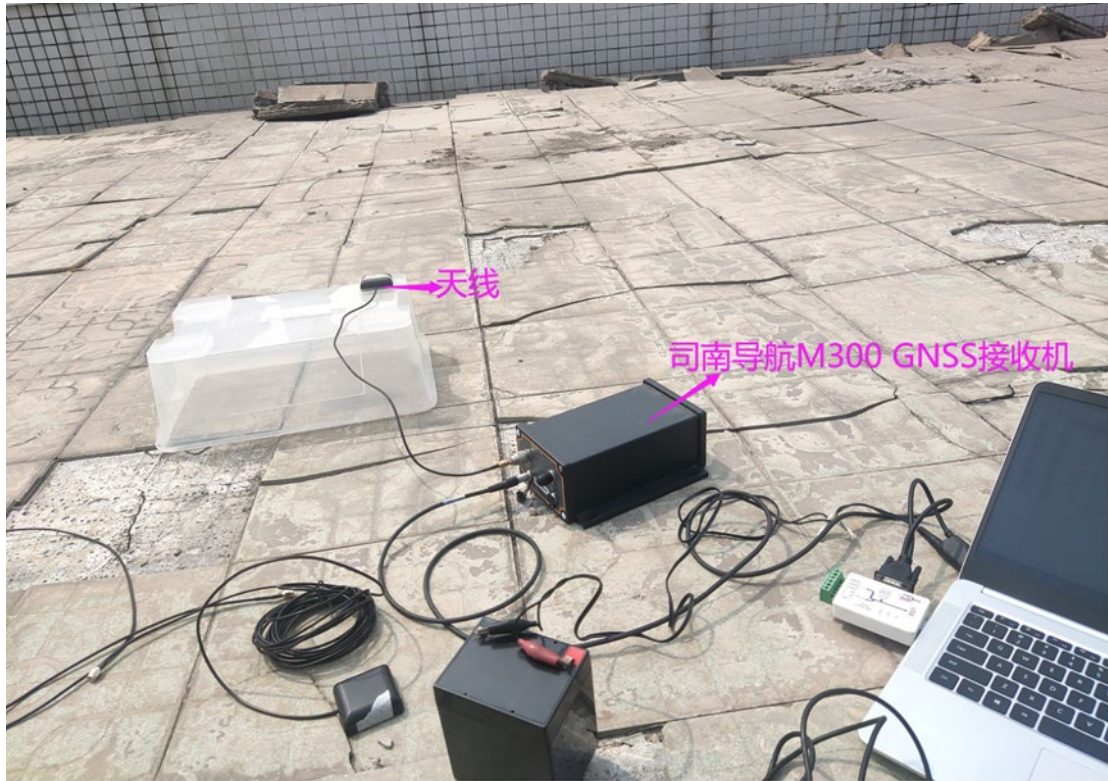
Antenna Pattern



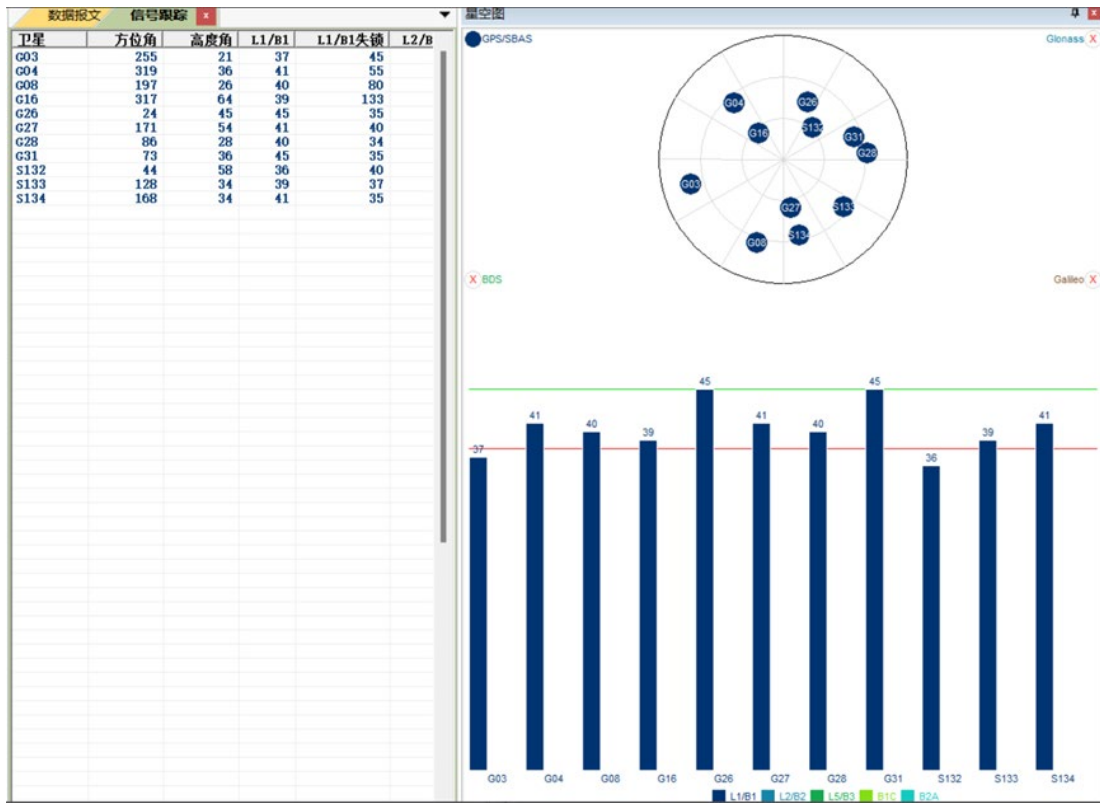
1561MHz	XZ	YZ
Gain	1.85dBi	1.02dBi

1575MHz	XZ	YZ
Gain	2.85dBi	2.8dBi

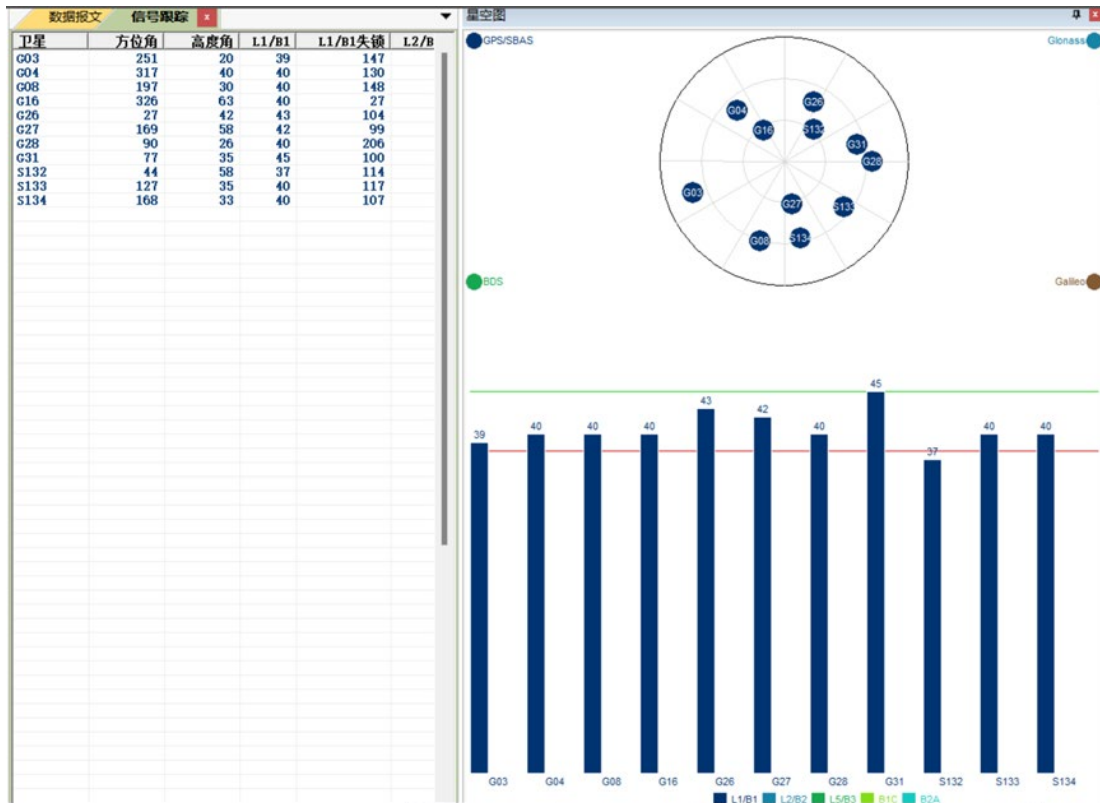
Actual test Environment And Conditions



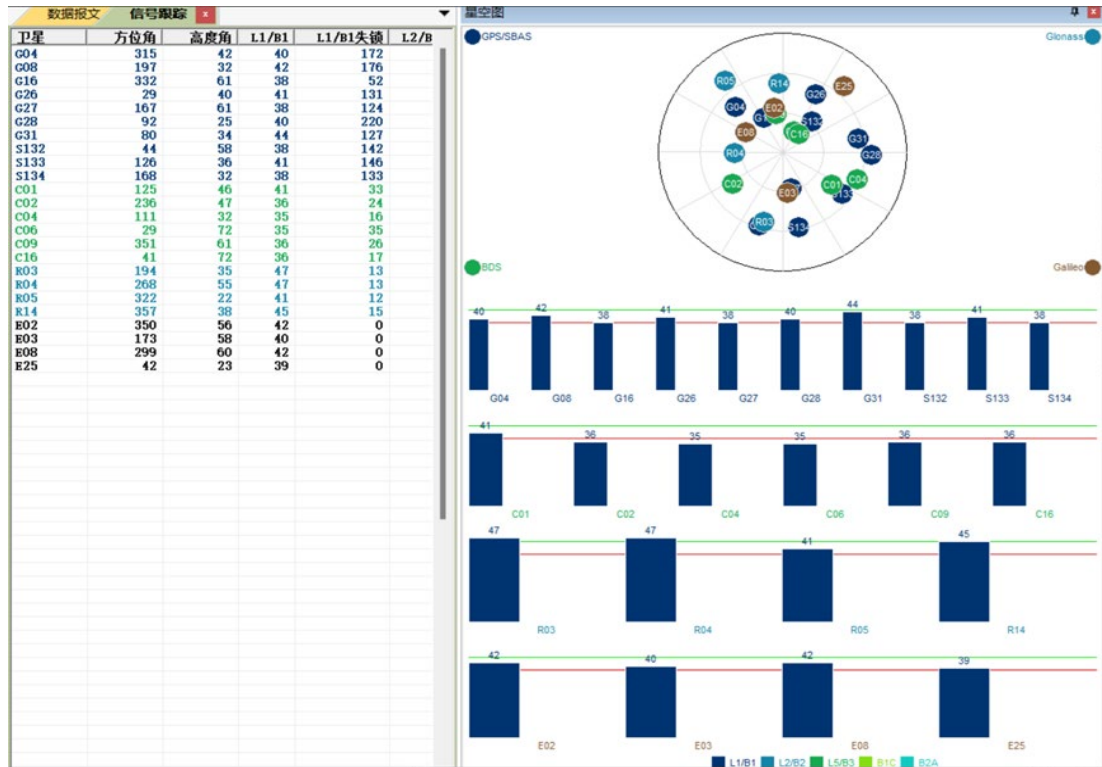
Data from the 9:24 a.m. test on March 17, 2023



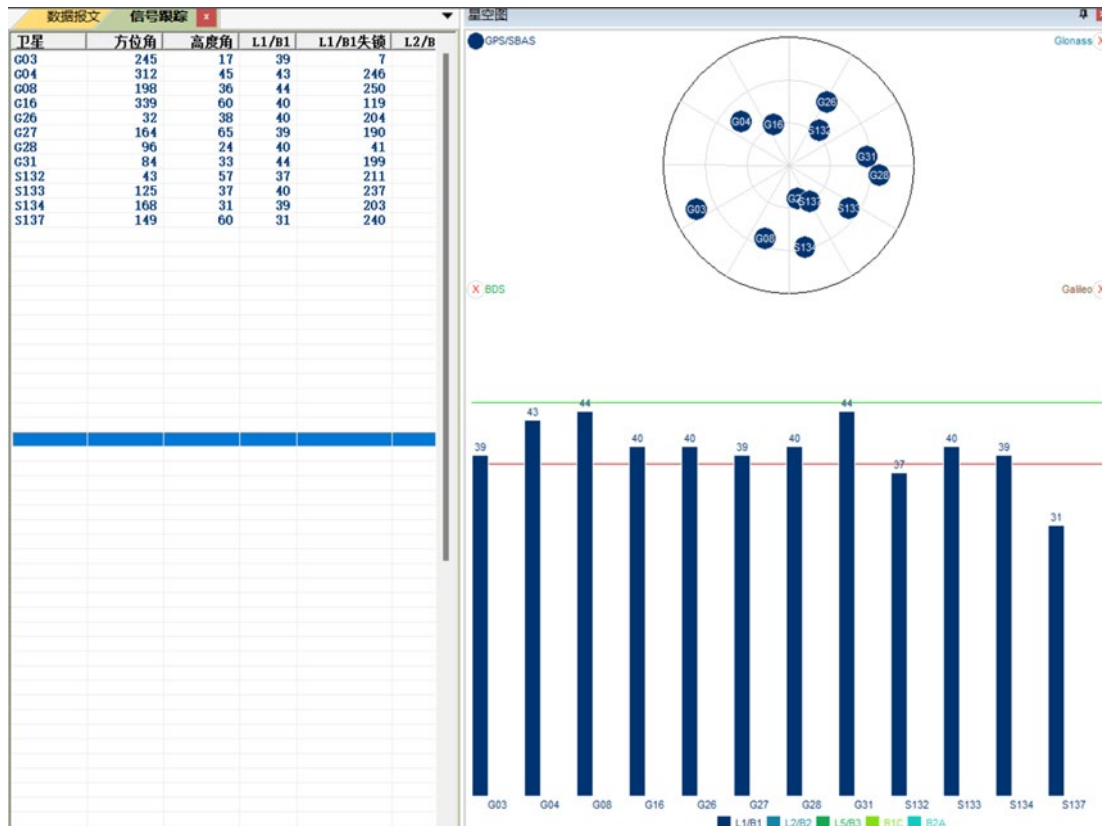
Data from the 9:32 a.m. test on March 17, 2023



Data from the 9:38 a.m. test on March 17, 2023



Data from the 9:46 a.m. test on March 17, 2023



HOUSING CONFIGURATIONS

