

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for  
**SES Americom, Inc.**  
**SOUTH MTN, CA**  
**KA272**  
**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147  
September 16, 2021

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## 1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

## 2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses are considered on the interfering paths, sufficient blockage exists to negate harmful interference from occurring with the proposed transmit-receive earth station.

### Company

Go Creative Wireless  
Skyriver Communications  
Southern California Gas Company  
Southern California Regional Rail Auth.  
Los Angeles SMSA Ltd. Partnership  
Ventura, County of

No other carriers reported potential interference cases.

### 3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 08/15/2021.

#### Company

ABC Holding Company Inc.  
AT&T Mobility Spectrum LLC - Southern CA  
Air Sites 2000 LLC  
BNS Electronics, Inc.  
California Internet Solutions, Inc.  
California Internet, L.P  
California Resources Corporation  
California, State of  
Catalina Broadband Solutions, LLC  
Cellco Partnership - N CA/NV  
Cellco Partnership - Southern California  
City of Los Angeles Dept Water & Power  
City of Montebello  
City of West Covina  
Coachella Valley Water District  
Coast Community College District  
Conterra Ultra Broadband, LLC  
DM Ventures, Inc. dba Warp2Biz  
Exxon Communications Company  
Fox Television Stations, LLC  
Fresno MSA Limited Partnership  
Frontier California Inc.  
GTE Mobilnet of Santa Barbara LTD Ptsh  
Glendale City California  
Go Creative Wireless  
Imperial Irrigation District  
Kern, County of  
LDM Engineering  
Los Angeles City Info Technology Agency  
Los Angeles County Dept of Public Works  
Los Angeles County FCC Licensing Section  
Los Angeles County Metro Transit Auth  
Los Angeles Regional Interoperable Comm  
Los Angeles SMSA Ltd. Partnership  
Los Angeles Unified School District  
MHO Networks  
Metropolitan Water Dist of So California  
New Cingular Wireless PCS - Los Angeles  
New Cingular Wireless PCS, LLC - S/E CAL  
Northrop Grumman Systems Corp.

Olympic Wireless, LLC  
One Ring Networks, Inc.  
Orange, County of, CA  
Pacific Bell Tel Com dba AT&T California  
Pacific Gas and Electric Company  
Pacific Lightwave Inc  
Port of Los Angeles  
Public Media Group of Southern Californi  
RNN National, LLC  
Regents of the University of California  
Rincon Broadband  
Riverside, County of  
San Bernardino County of California  
Santa Barbara Cellular Systems, Ltd.  
Santa Barbara, County of  
Santa Monica Community College District  
Skyriver Communications  
Southern California Edison Company  
Southern California Gas Company  
Southern California Regional Rail Auth.  
Spectrum Link, Inc.  
Sunburst Church of Self Realization  
T-Mobile License LLC  
TV Microwaves Company  
Towerstream Corp.  
Tribune Media Company  
Union Pacific Railroad Company  
Ventura, County of  
Venture Technologies Group, LLC  
Wiline Spectrum Holdings LLC

## **4. EARTH STATION COORDINATION DATA**

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

Date: 09/16/2021  
Job Number: 210815COMSGE02

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### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign KA272  
Licensee Code P3210  
Licensee Name SES Americom, Inc.

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### Site Information SOUTH MTN, CA

Venue Name  
Latitude (NAD 83) 34° 19' 31.0" N  
Longitude (NAD 83) 118° 59' 44.4" W  
Climate Zone A  
Rain Zone 4  
Ground Elevation (AMSL) 311.5 m / 1022.0 ft

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### Link Information

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Analog and Digital  
Satellite Arc 47.5° W to 188° West Longitude  
Azimuth Range 100.7° to 257.8°  
Corresponding Elevation Angles 6.6° / 8.6°  
Antenna Centerline (AGL) 13.72 m / 45.0 ft

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### Antenna Information

	Receive - FCC32	Transmit - FCC32
Manufacturer	CPI	CPI
Model	9.0KX	9.0KX
Gain / Diameter	50.0 dBi / 9.0 m	53.6 dBi / 9.0 m
3-dB / 15-dB Beamwidth	0.55° / 1.20°	0.40° / 0.80°
Max Available RF Power (dBW/4 kHz) (dBW/MHz)		0.5 24.5
Maximum EIRP (dBW/4 kHz) (dBW/MHz)		54.1 78.1
Interference Objectives:	Long Term -156.0 dBW/MHz 20% Short Term -146.0 dBW/MHz 0.01%	-154.0 dBW/4 kHz 20% -131.0 dBW/4 kHz 0.0025%

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### Frequency Information

	Receive 4.0 GHz	Transmit 6.1 GHz
Emission / Frequency Range (MHz)	N0N - 72M0G7W / 3700.0 - 4200.0	N0N - 72M0G7W / 5925.0 - 6424.0
Max Great Circle Coordination Distance	570.8 km / 354.6 mi	357.2 km / 221.9 mi
Precipitation Scatter Contour Radius	416.0 km / 258.4 mi	126.7 km / 78.7 mi



# COMSEARCH

## Earth Station Data Sheet

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### Coordination Values

### SOUTH MTN, CA

Licensee Name SES Americom, Inc.  
Latitude (NAD 83) 34° 19' 31.0" N  
Longitude (NAD 83) 118° 59' 44.4" W  
Ground Elevation (AMSL) 311.5 m / 1022.0 ft  
Antenna Centerline (AGL) 13.72 m / 45.0 ft  
Antenna Model CPI 9 meter  
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%  
Max Available RF Power 0.5 (dBW/4 kHz)

Azimuth (°)	Receive 4.0 GHz		Transmit 6.1 GHz			
	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	14.95	100.57	-10.00	100.00	-10.00	100.00
5	13.57	95.65	-10.00	100.00	-10.00	100.00
10	12.88	90.69	-10.00	100.00	-10.00	100.00
15	12.31	85.71	-10.00	100.00	-10.00	100.00
20	11.39	80.72	-10.00	100.00	-10.00	100.00
25	11.35	75.74	-10.00	100.00	-10.00	100.00
30	8.65	70.70	-10.00	100.00	-10.00	100.00
35	8.69	65.71	-10.00	100.00	-10.00	100.00
40	7.13	60.69	-10.00	112.97	-10.00	100.00
45	7.09	55.69	-10.00	113.39	-10.00	100.00
50	7.52	50.70	-10.00	108.79	-10.00	100.00
55	7.91	45.71	-9.50	106.75	-9.50	100.00
60	9.01	40.75	-8.25	101.91	-8.25	100.00
65	11.26	35.96	-6.89	100.00	-6.89	100.00
70	11.46	31.04	-5.30	100.00	-5.30	100.00
75	10.96	26.04	-3.39	106.94	-3.39	100.00
80	10.38	21.03	-1.07	121.05	-1.07	100.00
85	8.84	15.85	2.00	147.55	2.00	100.00
90	9.01	10.96	6.00	171.80	6.00	100.00
95	9.98	6.64	11.45	195.50	11.45	100.00
100	8.31	1.60	26.93	570.80	26.93	357.21
105	6.97	3.22	19.31	289.43	19.31	142.91
110	6.20	7.66	9.90	227.67	9.90	113.45
115	4.76	12.47	4.60	212.62	4.60	107.72
120	3.70	17.01	1.23	211.65	1.23	110.74
125	3.55	20.91	-1.01	205.26	-1.01	104.75
130	4.24	24.15	-2.57	183.96	-2.57	100.00
135	5.23	27.01	-3.79	159.71	-3.79	100.00
140	4.96	30.55	-5.13	156.11	-5.13	100.00
145	4.09	34.33	-6.39	164.23	-6.39	100.00
150	3.22	37.89	-7.46	179.29	-7.46	100.00
155	2.73	40.90	-8.29	186.13	-8.29	100.00
160	4.12	41.96	-8.57	152.59	-8.57	100.00
165	4.67	43.21	-8.89	142.78	-8.89	100.00
170	2.71	46.33	-9.65	180.09	-9.65	100.00
175	0.32	49.49	-10.00	270.66	-10.00	170.43
180	0.00	50.11	-10.00	285.28	-10.00	183.06
185	0.00	49.80	-10.00	285.28	-10.00	183.06

# COMSEARCH

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### Coordination Values

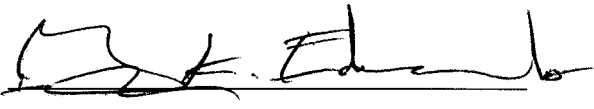
### SOUTH MTN, CA

Licensee Name SES Americom, Inc.  
Latitude (NAD 83) 34° 19' 31.0" N  
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Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%  
Max Available RF Power 0.5 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	48.89	-10.00	285.28	-10.00	183.06
195	0.25	47.20	-9.85	280.26	-9.85	178.60
200	1.63	44.09	-9.11	206.09	-9.11	113.86
205	2.34	41.21	-8.37	194.44	-8.37	100.34
210	3.14	37.95	-7.48	181.02	-7.48	100.00
215	3.32	34.89	-6.57	181.76	-6.57	100.00
220	3.31	31.72	-5.53	187.27	-5.53	100.00
225	1.07	29.81	-4.86	246.76	-4.86	141.95
230	1.31	26.05	-3.39	247.10	-3.39	140.76
235	2.26	21.72	-1.42	229.38	-1.42	127.05
240	3.36	17.22	1.10	218.31	1.10	116.39
245	4.47	12.65	4.45	216.37	4.45	110.99
250	5.20	8.28	9.06	235.55	9.06	119.99
255	5.50	4.18	16.48	289.40	16.48	146.72
260	6.96	2.76	20.96	442.54	20.96	257.10
265	6.81	7.43	10.22	221.11	10.22	108.14
270	6.10	12.47	4.61	199.00	4.61	100.00
275	6.68	17.32	1.04	170.07	1.04	100.00
280	8.43	22.21	-1.67	134.51	-1.67	100.00
285	11.05	27.31	-3.91	104.14	-3.91	100.00
290	10.57	32.27	-5.72	100.00	-5.72	100.00
295	11.77	37.33	-7.30	100.00	-7.30	100.00
300	11.26	42.28	-8.65	100.00	-8.65	100.00
305	11.55	47.28	-9.87	100.00	-9.87	100.00
310	11.96	52.29	-10.00	100.00	-10.00	100.00
315	12.56	57.30	-10.00	100.00	-10.00	100.00
320	13.02	62.30	-10.00	100.00	-10.00	100.00
325	13.36	67.30	-10.00	100.00	-10.00	100.00
330	13.76	72.29	-10.00	100.00	-10.00	100.00
335	14.04	77.27	-10.00	100.00	-10.00	100.00
340	14.19	82.25	-10.00	100.00	-10.00	100.00
345	14.38	87.23	-10.00	100.00	-10.00	100.00
350	15.94	92.20	-10.00	100.00	-10.00	100.00
355	16.27	97.15	-10.00	100.00	-10.00	100.00

## 5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 

Gary K. Edwards  
Senior Manager  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, VA 20147

DATED: September 16, 2021