

| City | Old EIRPs | Old EIRPs + 2.7 | 4/20 Turbo 8PSK 2/3 EIRPs | Delta (4/21 EIRPs - 4/20 EIRPs) | 4/21 Turbo 8PSK 2/3 EIRPs | Delta (8PSK 2/3 - Old EIRPs) | Turbo 8PSK 3/4 EIRPs | Delta (8PSK 3/4 - Old EIRPs) |
|----------------|-----------|-----------------|---------------------------|---------------------------------|---------------------------|------------------------------|----------------------|------------------------------|
| HONOLULU HI | 50.00 | 52.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| TAMPA FL | 54.00 | 56.70 | 58.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| ST PETERSBUR | 54.00 | 56.70 | 58.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SARASOTA FL | 54.00 | 56.70 | 58.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| CHARLESTON S | 54.00 | 56.70 | 58.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| NEW ORLEANS | 54.00 | 56.70 | 57.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| HOUSTON TX | 53.00 | 55.70 | 56.70 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SAN ANTONIO T | 50.00 | 52.70 | 51.60 | #REF! | #REF! | #REF! | #REF! | #REF! |
| ATLANTA GA | 54.00 | 56.70 | 55.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| NASHVILLE TN | 54.00 | 56.70 | 55.70 | #REF! | #REF! | #REF! | #REF! | #REF! |
| EL PASO TX | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| LAS CRUCES N | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SHREVEPORT L | 52.00 | 54.70 | 54.40 | #REF! | #REF! | #REF! | #REF! | #REF! |
| PHOENIX AZ | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| PRESCOTT AZ | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| OKLAHOMA CIT | 49.50 | 52.20 | 52.20 | #REF! | #REF! | #REF! | #REF! | #REF! |
| LOS ANGELES C | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| WASHINGTON D | 54.00 | 56.70 | 55.30 | #REF! | #REF! | #REF! | #REF! | #REF! |
| HAGERSTOWN | 54.00 | 56.70 | 55.30 | #REF! | #REF! | #REF! | #REF! | #REF! |
| ST LOUIS MO | 50.50 | 53.20 | 53.20 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SAN FRANCISCO | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| OAKLAND CA | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SAN JOSE CA | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| DENVER CO | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SALT LAKE CITY | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| CLEVELAND OH | 51.10 | 53.80 | 54.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| AKRON OH | 51.10 | 53.80 | 54.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| CANTON OH | 51.10 | 53.80 | 54.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| CHICAGO IL | 51.50 | 54.20 | 53.90 | #REF! | #REF! | #REF! | #REF! | #REF! |
| BOISE ID | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MARQUETTE IA | 50.80 | 53.50 | 53.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MARQUETTE IL | 51.50 | 54.20 | 53.60 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MARQUETTE KS | 49.00 | 51.70 | 51.10 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MARQUETTE MI | 50.50 | 53.20 | 53.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MARQUETTE NE | 49.00 | 51.70 | 51.30 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MARQUETTE W | 50.50 | 53.20 | 52.40 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MINNEAPOLIS M | 50.00 | 52.70 | 52.10 | #REF! | #REF! | #REF! | #REF! | #REF! |
| ST PAUL MN | 50.00 | 52.70 | 52.10 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SEATTLE WA | 49.00 | 51.70 | 50.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| TACOMA WA | 49.00 | 51.70 | 50.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| PORTLAND OR | 49.00 | 51.70 | 50.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| GREAT FALLS M | 54.00 | 56.70 | 55.30 | #REF! | #REF! | #REF! | #REF! | #REF! |
| GREAT FALLS N | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| GREAT FALLS S | 54.00 | 56.70 | 56.70 | #REF! | #REF! | #REF! | #REF! | #REF! |
| GREAT FALLS V | 54.00 | 56.70 | 55.30 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MINOT ND | 49.40 | 52.10 | 51.90 | #REF! | #REF! | #REF! | #REF! | #REF! |
| BISMARCK ND | 49.40 | 52.10 | 51.80 | #REF! | #REF! | #REF! | #REF! | #REF! |
| DICKINSON ND | 49.40 | 52.10 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| MIAMI FL | 54.00 | 56.70 | 58.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| ANCHORAGE A | 49.00 | 51.70 | 51.70 | #REF! | #REF! | #REF! | #REF! | #REF! |
| CORPUS CHRIS | 51.00 | 53.70 | 51.60 | #REF! | #REF! | #REF! | #REF! | #REF! |
| LUBBOCK TX | 49.00 | 51.70 | 50.40 | #REF! | #REF! | #REF! | #REF! | #REF! |
| BAKERSFIELD C | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| INDIANAPOLIS I | 53.00 | 55.70 | 55.30 | #REF! | #REF! | #REF! | #REF! | #REF! |
| TOPEKA KS | 49.00 | 51.70 | 52.50 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SIOUX FALLS S | 49.00 | 51.70 | 51.60 | #REF! | #REF! | #REF! | #REF! | #REF! |
| EUGENE OR | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| IDAHO FALLS ID | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| FARGO ND | 49.00 | 51.70 | 52.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| SPOKANE WA | 48.00 | 50.70 | 50.00 | #REF! | #REF! | #REF! | #REF! | #REF! |
| | | | # decreased: | 0.00 | Average: | #REF! | Average: | #REF! |

Green: lower than old EIRPs + 2.7 dB
Red: higher

BSS @129W

| | Eb/No | datarate | | | EIRP values? |
|------------------|--------------|-----------------|---------|-----------------|---------------------|
| DVB S2 QPSK 1/4 | 0.75 | 9804.86 | #DIV/0! | | n/a |
| DVB S2 QPSK 1/3 | 0.59 | 13128.96 | #DIV/0! | | n/a |
| DVB S2 QPSK 2/5 | 0.73 | 15788.24 | #DIV/0! | | n/a |
| Turbo QPSK 1/2 | 1.7 | 18974.44 | #DIV/0! | updated 3/23 | Old EIRPs |
| DVB S2 QPSK 3/5 | 1.48 | 23766.08 | #DIV/0! | | n/a |
| Turbo QPSK 2/3 | 2.7 | #REF! | #REF! | updated 3/23 | Old EIRPs |
| Turbo QPSK 3/4 | 3.1 | #REF! | #REF! | updated 3/23 | Old EIRPs |
| DVB S2 QPSK 4/5 | 2.67 | #REF! | #REF! | | n/a |
| Turbo QPSK 5/6 | 3.7 | #REF! | #REF! | updated 4/18 u: | 4/19 EIRPs |
| Turbo QPSK 7/8 | 4.2 | #REF! | #REF! | updated 4/19 u: | 4/19 EIRPs |
| DVB S2 QPSK 9/10 | 3.89 | #REF! | #REF! | | n/a |
| Turbo 8PSK 2/3 | 4.4 | #REF! | #REF! | updated 4/18 u: | 4/19 EIRPs |
| Turbo 8PSK 3/4 | 4.9 | #REF! | #REF! | updated 4/18 u: | 4/19 EIRPs |
| Turbo 8PSK 5/6 | 6.4 | #REF! | #REF! | updated 4/18 u: | 4/19 EIRPs |
| Turbo 8PSK 8/9 | 6.7 | #REF! | #REF! | updated 4/18 u: | n/a |

| | | |
|----------------------------------|-----|----|
| Earth Station G/T degrade by: | 0.5 | dB |
|----------------------------------|-----|----|

| | | |
|----------------------|----------|------|
| DATA RATE | 18974.44 | kbps |
| NUMBER OF PHASES | 4 | |
| LDPC | 1 / 2 | |
| SPECTRAL EFFICIENCY | 0.948722 | |
| REQUIRED Eb/No | 1.70 | dB |
| IF BANDWIDTH | 20000.0 | kHz |
| C/N REQUIRED | 1.47 | dB |
| Faded System Margin | 0.3 | dB |
| Antenna Efficiency | 63.00% | |
| Spacing Factor | 1.2 | |
| Required Bandwidth | 24.000 | MHz |
| Allocated Bandwidth | 24.000 | MHz |
| Transponder SCPC IBO | 0.0 | dB |
| Transponder SCPC OBO | 0.0 | dB |
| Carrier IBO | 0.00 | dB |
| Carrier OBO | 0.00 | dB |

sat #REF!
xpdr #REF!
loc #REF!

| | | |
|------------------------|--------|---------------|
| UPLINK SITE | #NAME? | #NAME? |
| UPLINK SFDR | | #NAME? dBW/m2 |
| ATTENUATOR | | 10.0 dB |
| UPLINK G/T | | #NAME? dB/K |
| UPLINK FREQ | | #REF! MHz |
| DOWNLINK FREQ | | #REF! MHz |
| UPLINK EIRP | | #NAME? dBW |
| Uncompensated U/L Fade | | 0.0 dB |
| UPLINK C/N | | #NAME? dB |

| | |
|------------------------|------|
| Adjacent satellite C/I | 15 |
| Spot beam C/I | 15.0 |

| | |
|-------------------------|----------|
| Transponder Bandwidth | 24.0 MHz |
| Required Bandwidth | 100.00 % |
| Allocated Bandwidth | 100.00 % |
| Carrier Allocated Power | 100.00 % |

| RECEIVE SITE | 0.45 | ANT DIA (m) | ES Tsys (K) | ANT G/T (dB/K) | Assumed C/I (dB) | MINIMUM C/N DOWN (dB) | XPDR SAT EIRP (dBW) | CXR EIRP (dBW) | CLEAR-SKY DOWNLINK C/N (dB) | MARGIN TO MIN C/Ndn (dB) |
|--------------|------|-------------|-------------|----------------|------------------|-----------------------|---------------------|----------------|-----------------------------|--------------------------|
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.00 | 50.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.60 | 52.60 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.60 | 52.60 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.60 | 52.60 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 53.80 | 53.80 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 51.50 | 51.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 51.00 | 51.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.00 | 50.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.60 | 52.60 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.50 | 52.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.00 | 52.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 49.50 | 49.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.50 | 52.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 52.50 | 52.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.00 | 50.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 51.50 | 51.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 51.50 | 51.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 51.50 | 51.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 51.00 | 51.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.50 | 50.50 | #NAME? | #NAME? | # |

| | | | | | | | | | | |
|--------|------|-------|------|------|--------|-------|-------|--------|--------|---|
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.50 | 50.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.50 | 48.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.00 | 50.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.50 | 48.50 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 50.00 | 50.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 49.10 | 49.10 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 49.10 | 49.10 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.00 | 48.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.30 | 48.30 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.30 | 48.30 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.90 | 48.90 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.90 | 48.90 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 48.90 | 48.90 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 53.00 | 53.00 | #NAME? | #NAME? | # |
| #NAME? | 0.45 | 110.0 | 13.6 | 12.0 | #NAME? | 49.00 | 49.00 | #NAME? | #NAME? | # |

