

S1. GENERAL INFORMATION Complete for all satellite applications.

| | | | | | |
|--|---------------------------------------|---|--|--|--|
| a. Space Station or Satellite Network Name: NSS-703 | | e. Estimated Date of Placement into Service: 10/9/1994 | | i. Will the space station(s) operate on a Common Carrier Basis: N | |
| b. Construction Commencement Date: | | f. Estimated Lifetime of Satellite(s): 20 Years | | j. Number of transponders offered on a common carrier basis: 0 | |
| c. Construction Completion Date: | | g. Total Number of Transponders: 36 | | k. Total Common Carrier Transponder Bandwidth: 0 MHz | |
| d1. Est Launch Date Begin: 10/9/1994 | d2. Est Launch Date End: 10/9/1994 | h. Total Transponder Bandwidth (no. transponders x Bandwidth) 2580 MHz | | i. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO | |

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper
Also indicate the nature of service(s) for each frequency band.

| Frequency Band Limits | | | | e. T/R Mode | f. Nature of Service(s): List all that apply to this band |
|-----------------------|-----------------|-----------------------|-----------------|-------------|---|
| Lower Frequency (.Hz) | | Upper Frequency (.Hz) | | | |
| a. Numeric | b. Unit (K/M/G) | c. Numeric | d. Unit (K/M/G) | | |
| 3700 | M | 4200 | M | T | Fixed Satellite Service |
| 5925 | M | 6425 | M | R | Fixed Satellite Service |
| 10950 | M | 11200 | M | T | Fixed Satellite Service |
| 11450 | M | 11700 | M | T | Fixed Satellite Service |
| 11700 | M | 11950 | M | T | Fixed Satellite Service |
| 12500 | M | 12750 | M | T | Fixed Satellite Service |
| 14000 | M | 14500 | M | R | Fixed Satellite Service |

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

| | | | | | | | |
|--|-------------|--|-------------|--|--|---|--|
| a. Nominal Orbital Longitude (Degrees E/W): 47.05 W | | b. Alternate Orbital Longitude (Degrees E/W): | | c. Reason for orbital location selection: To provide fixed satellite services in C-band and Ku-band to users located in various countries in ITU Regions 1 and 2. | | | |
| Longitudinal Tolerance or E/W Station-Keeping: | | f. Inclination Excursion or N/S Station-Keeping Tolerance: | | | | Range of orbital are in which adequate service can be provided (Optional): <u> Degrees </u> <u> E/W </u> | |
| d. Toward West: | 0.1 Degrees | e. Toward East: | 0.1 Degrees | | | g. Westernmost: h. Easternmost: | |
| i. Reason for service are selection (Optional): | | | | | | | |

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S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4b. Total Number of Orbital Planes in Network or System:

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

| (e) Orbital Plane No. | (f) No. of Satellites in Plane | (g) Inclination Angle (degrees) | (h) Orbital Period (Seconds) | (i) Apogee (km) | (j) Perigee (km) | (k) Right Ascension of the Ascending Node (Deg.) | (l) Argument of Perigee (Degrees) | Active Service Arc Range (Degrees) | | |
|-----------------------|--------------------------------|---------------------------------|------------------------------|-----------------|------------------|--|-----------------------------------|------------------------------------|---------------|-----------|
| | | | | | | | | (m) Begin Angle | (n) End Angle | (o) Other |
| | | | | | | | | | | |

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

| (a) Orbital Plane No. | (b) Satellite Number | (c) Initial Phase Angle (Degrees) |
|-----------------------|----------------------|-----------------------------------|
| | | |

NO NGSO DATA FILED

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S6. SERVICE AREA CHARACTERISTICS for each service area provide:

| (a) Service Area ID | (b) Type of Associated Station (Earth or Space) | (c) Service Area Diagram File Name (GXT File) | (d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram. |
|---------------------|---|---|---|
| GLB | S | | Global |
| EH | S | | Europe and Africa |
| NEZ | S | | Europe and Northern Africa |
| SEZ | S | | Southern Africa |
| WH | S | | North and South America |
| NWZ | S | | North America, and Northwestern region of South America |
| SWZ | S | | Southern half of South America |
| CSA | S | | South America and parts of Caribbean |
| CSB | S | | South America and parts of Caribbean |
| KS1 | S | | North Atlantic Ocean |
| KS2 | S | | Eastern region of CONUS, Caribbean, and parts of mid-Atlantic ocean |
| KS3 | S | | Brazil |

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S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

| (a) Beam ID | (b) T/R Mode | Isotropic Antenna Gain | | (e) Pointing Error (Degrees) | (f) Rotational Error (Degrees) | (g) Min. Cross- Polar Iso- lation (dB) | (h) Polar- ization Switch- able? (Y/N) | (i) Polarization Alignment Rel. Equatorial Plane (Degrees) | (j) Service Area ID | Transmit | | | Receive | | | Input Attenuator (dB) | |
|-------------------|--------------------|---------------------------|-------------------|---------------------------------------|---|---|--|---|------------------------|--------------------------------|--------------------------------------|------------------------------|------------------------------------|---------------------------------------|--|-----------------------|------------------|
| | | (c) Peak (dBi) | (d) Edge (dBi) | | | | | | | (k) Input Losses (dB) | (l) Effective Output Power (W) | (m) Max. EIRP (dBW) | (n) System Noise Temp (k) | (o) G/T Max. Gain Pt. (dB/K) | (p) Min. Saturation Flux Density (dBW/m2) | (q) Max. Value | (r) Step Size |
| | | | | | | | | | | | | | | | | | |
| GAU | R | 20.31 | 17.31 | 0.19 | 0.34 | 35 | N | | GLB | | | | 562 | -7.19 | -91 | 14 | 1 |
| GBU | R | 20.31 | 17.31 | 0.19 | 0.34 | 35 | N | | GLB | | | | 589 | -7.39 | -91 | 14 | 1 |
| EHU | R | 23.53 | 17.53 | 0.19 | 0.34 | 27 | N | | EH | | | | 513 | -3.57 | -90 | 14 | 1 |
| NEZ | R | 27.91 | 21.91 | 0.19 | 0.34 | 27 | N | | NEZ | | | | 501 | 0.91 | -94 | 14 | 1 |
| SEZ | R | 25.93 | 19.93 | 0.19 | 0.34 | 27 | N | | SEZ | | | | 525 | -1.27 | -92 | 14 | 1 |
| WHU | R | 25.9 | 19.9 | 0.19 | 0.34 | 27 | N | | WH | | | | 525 | -1.3 | -92 | 14 | 1 |
| NWZ | R | 26.74 | 18.74 | 0.19 | 0.34 | 27 | N | | NWZ | | | | 513 | -0.36 | -93 | 14 | 1 |
| SWZ | R | 28.04 | 20.04 | 0.19 | 0.34 | 27 | N | | SWZ | | | | 501 | 1.04 | -95 | 14 | 1 |
| CSA | R | 30.3 | 24.3 | 0.19 | 0.34 | 27 | N | | CSA | | | | 575 | 2.7 | -96 | 14 | 1 |
| CSB | R | 30.28 | 24.28 | 0.19 | 0.34 | 27 | N | | CSB | | | | 575 | 2.68 | -96 | 14 | 1 |
| KS1U | R | 36.95 | 29.95 | 0.19 | 0.34 | 17 | Y | 90 | KS1 | | | | 644 | 8.86 | -94 | 14 | 1 |
| KS2U | R | 34.9 | 26.9 | 0.19 | 0.34 | 17 | Y | 0 | KS2 | | | | 676 | 6.6 | -92 | 14 | 1 |
| KS3U | R | 37.85 | 30.85 | 0.19 | 0.34 | 17 | Y | 90 | KS3 | | | | 708 | 9.35 | -95 | 14 | 1 |
| GAD | T | 20.4 | 17.4 | 0.19 | 0.34 | 35 | N | | GLA | 1.7 | 21.9 | 33.8 | | | | | |
| GBD | T | 20.4 | 17.4 | 0.19 | 0.34 | 35 | N | | GLB | 1.7 | 23.4 | 34.1 | | | | | |
| EHD | T | 24.13 | 18.13 | 0.19 | 0.34 | 27 | N | | EH | 1.7 | 21.9 | 37.5 | | | | | |
| NEZ | T | 28.43 | 22.43 | 0.19 | 0.34 | 27 | N | | NEZ | 1.7 | 6.6 | 36.6 | | | | | |
| SEZ | T | 26.72 | 20.72 | 0.19 | 0.34 | 27 | N | | SEZ | 1.7 | 11.7 | 37.4 | | | | | |
| WHD | T | 27 | 21 | 0.19 | 0.34 | 27 | N | | WH | 1.7 | 16.6 | 39.2 | | | | | |
| NWZ | T | 28.53 | 20.53 | 0.19 | 0.34 | 27 | N | | NWZ | 1.7 | 11.7 | 39.2 | | | | | |
| SWZ | T | 30.75 | 22.75 | 0.19 | 0.34 | 27 | N | | SWZ | 1.7 | 6.8 | 39 | | | | | |
| CSA | T | 28.1 | 22.1 | 0.19 | 0.34 | 27 | N | | CSA | 1.7 | 11 | 38.5 | | | | | |
| CSB | T | 28.1 | 22.1 | 0.19 | 0.34 | 27 | N | | CSB | 1.7 | 11.5 | 38.7 | | | | | |
| KS1D | T | 35.9 | 28.9 | 0.19 | 0.34 | 17 | Y | 0 | KS1 | 1.7 | 36.3 | 51.5 | | | | | |
| KS2D | T | 34.41 | 26.41 | 0.19 | 0.34 | 17 | Y | 90 | KS2 | 1.7 | 24 | 48.2 | | | | | |
| KS3D | T | 36.56 | 29.56 | 0.19 | 0.34 | 17 | Y | 0 | KS3 | 1.7 | 28.4 | 51.1 | | | | | |
| CMD | R | 8.3 | 5.7 | 0.19 | 0.34 | 27 | N | | GLB | | | | 4786 | -28.5 | -90 | | |
| TLM | T | 16.5 | 13.9 | 0.19 | 0.34 | 27 | N | | GLB | 3 | 0.15 | 8.2 | | | | | |
| BNC | T | 10.7 | 8.1 | 0.19 | 0.34 | 27 | N | | GLB | 3 | 1.2 | 11.5 | | | | | |

| | | | | | | | | | | | | | | | | | |
|------|---|------|------|------|------|----|---|----|-----|---|------|-----|--|--|--|--|--|
| BNK1 | T | 16.7 | 14.1 | 0.19 | 0.34 | 17 | N | | GLB | 3 | 0.13 | 8 | | | | | |
| BNK2 | T | 16.7 | 14.1 | 0.19 | 0.34 | 17 | N | | GLB | 3 | 1.35 | 18 | | | | | |
| BNK3 | T | 36.2 | 29.2 | 0.19 | 0.34 | 17 | Y | 0 | KS1 | 3 | 0.02 | 18 | | | | | |
| BNK4 | T | 34.5 | 26.5 | 0.19 | 0.34 | 17 | Y | 90 | KS2 | 3 | 0.02 | 18 | | | | | |
| BNK5 | T | 32.7 | 25.7 | 0.19 | 0.34 | 17 | Y | 0 | KS3 | 3 | 0.03 | 18 | | | | | |
| TLM | T | -5.3 | -6.3 | 0.19 | 0.34 | 27 | N | | GLB | 3 | 0.25 | 0.7 | | | | | |

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S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:
Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

| (a) Beam ID | (b) T/R Mode | (c) Co-or Cross Polar Mode ("C" or" X") | (d) GSO Ref. Orbital Longitude (Deg. E/W) | (e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit) | (f) GSO Antenna Gain Contour Data (GXT File) | Max. Power Flux Density (dBW/M2/Hz) | | | | |
|-------------------|--------------------|---|---|---|--|--|------------|------------|------------|------------|
| | | | | | | At Angle of Arrival above horizontal (for emission with highest PFD) | | | | |
| | | | | | | (g) 5 Deg | (h) 10 Deg | (i) 15 Deg | (j) 20 Deg | (k) 25 Deg |
| GAU | R | C | -47.05 | | GAU.gxt | | | | | |
| GBU | R | C | -47.05 | | GBU.gxt | | | | | |
| EHU | R | C | -47.05 | | EHU.gxt | | | | | |
| NEZ | R | C | -47.05 | | NEZU.gxt | | | | | |
| SEZ | R | C | -47.05 | | SEZU.gxt | | | | | |
| WHU | R | C | -47.05 | | WHU.gxt | | | | | |
| NWZ | R | C | -47.05 | | NWZU.gxt | | | | | |
| SWZ | R | C | -47.05 | | SWZU.gxt | | | | | |
| CSA | R | C | -47.05 | | CSAU.gxt | | | | | |
| CSB | R | C | -47.05 | | CSBU.gxt | | | | | |
| KS1U | R | C | -47.05 | | KS1U.gxt | | | | | |
| KS2U | R | C | -47.05 | | KS2U.gxt | | | | | |
| KS3U | R | C | -47.05 | | KS3U.gxt | | | | | |
| GAD | T | C | -47.05 | | GAD.gxt | -159.1 | -158.9 | -158.5 | -158.3 | -158 |
| GBD | T | C | -47.05 | | GBD.gxt | -159 | -158.8 | -158.5 | -158.2 | -158 |
| EHD | T | C | -47.05 | | EHD.gxt | -156.2 | -155.6 | -154.9 | -154.1 | -153.9 |
| NEZ | T | C | -47.05 | | NEZD.gxt | -154 | -153.8 | -153.5 | -153.4 | -153.3 |
| SEZ | T | C | -47.05 | | SEZD.gxt | -154.2 | -154 | -153.8 | -153.5 | -153.3 |
| WHD | T | C | -47.05 | | WHD.gxt | -154.4 | -154.3 | -154.1 | -154 | -153.3 |
| NWZ | T | C | -47.05 | | NWZD.gxt | -159.4 | -158.7 | -157.6 | -156.2 | -155 |
| SWZ | T | C | -47.05 | | SWZD.gxt | -160.8 | -160.2 | -159.4 | -158.3 | -156.8 |
| CSA | T | C | -47.05 | | CSAD.gxt | -162.9 | -162.5 | -161.8 | -160.7 | -159.6 |
| CSB | T | C | -47.05 | | CSBD.gxt | -162.1 | -161.6 | -161 | -160.1 | -159.2 |
| KS1D | T | C | -47.05 | | KS1D.gxt | -154.1 | -153.4 | -152.3 | -150.9 | -149.2 |
| KS2D | T | C | -47.05 | | KS2D.gxt | -166.4 | -165.8 | -164.8 | -161.7 | -159.6 |
| KS3D | T | C | -47.05 | | KS3D.gxt | -177.5 | -179.1 | -177.9 | -176.1 | -174.2 |
| CMD | R | C | -47.05 | | CMD.GXT | | | | | |
| TLM | T | C | -47.05 | | TLMO.GXT | -173.1 | -173 | -172.8 | -172.7 | -172.6 |

| | | | | | | | | | | |
|------|---|---|--------|--|----------|--------|--------|--------|--------|--------|
| BNC | T | C | -47.05 | | BNC.GXT | -159.5 | -159.4 | -159.2 | -159.1 | -159.3 |
| BNK1 | T | C | -47.05 | | BNK1.GXT | -163.3 | -163.2 | -163 | -162.9 | -162.8 |
| BNK2 | T | C | -47.05 | | BNK2.GXT | -151.1 | -151 | -150.8 | -150.7 | -152.8 |
| BNK3 | T | C | -47.05 | | BNK3.GXT | -151.2 | -151.1 | -150.9 | -150.8 | -152.8 |
| BNK4 | T | C | -47.05 | | BNK4.GXT | -153 | -152.9 | -152.7 | -152.6 | -152.8 |
| BNK5 | T | C | -47.05 | | BNK5.GXT | -151.5 | -151.4 | -151.2 | -151.1 | -152.8 |
| TLM | T | C | -47.05 | | TLMB.GXT | -180.6 | -180.5 | -180.3 | -180.2 | -180.1 |

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S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

| (a) Channel No. | (B) Assigned Bandwidth (kHz) | (c) T/R Mode | (d) Center Frequency (MHz) | (e) Polarization (H, V, L, R) | (f) TTC or Comm Channel (T or C) |
|-----------------|------------------------------|--------------|----------------------------|-------------------------------|----------------------------------|
| CSAUA | 36000 | R | 6280 | L | C |
| CSAUB | 36000 | R | 6320 | L | C |
| CSAUC | 36000 | R | 6360 | L | C |
| CSAUD | 41000 | R | 6402.5 | L | C |
| CSBUA | 36000 | R | 6280 | R | C |
| CSBUB | 36000 | R | 6320 | R | C |
| CSBUC | 36000 | R | 6360 | R | C |
| CSBUD | 41000 | R | 6402.5 | R | C |
| EHUA | 77000 | R | 5967.5 | L | C |
| EHUB | 72000 | R | 6050 | L | C |
| EHUC | 34000 | R | 6111 | L | C |
| EHUD | 34000 | R | 6149 | L | C |
| EHUE | 72000 | R | 6220 | L | C |
| EHUF | 36000 | R | 6280 | L | C |
| GAUA | 36000 | R | 6280 | L | C |
| GAUB | 36000 | R | 6320 | L | C |
| GAUC | 36000 | R | 6360 | L | C |
| GAUD | 41000 | R | 6402.5 | L | C |
| GBUA | 36000 | R | 6280 | R | C |
| GBUB | 36000 | R | 6320 | R | C |
| GBUC | 36000 | R | 6360 | R | C |
| GBUD | 41000 | R | 6402.5 | R | C |
| NEZUA | 77000 | R | 5967.5 | R | C |
| NEZUB | 72000 | R | 6050 | R | C |
| NEZUC | 34000 | R | 6111 | R | C |
| NEZUD | 34000 | R | 6149 | R | C |
| NEZUE | 72000 | R | 6220 | R | C |
| NEZUF | 36000 | R | 6280 | R | C |
| NWZUA | 77000 | R | 5967.5 | R | C |
| NWZUB | 72000 | R | 6050 | R | C |

| (a) Transponder ID | (b) Transponder Gain (dB) | Receive Band | | Transmit Band | |
|--------------------|---------------------------|-----------------|-------------|-----------------|-------------|
| | | (c) Channel No. | (d) Beam ID | (e) Channel No. | (f) Beam ID |
| 1 | 115.2 | CSAUA | CSAU | CSADA | CSAD |
| 2 | 118.2 | CSAUA | CSAU | EHDF | EHD |
| 3 | 118.2 | CSAUA | CSAU | GADA | GAD |
| 4 | 115.3 | CSAUB | CSAU | CSADB | CSAD |
| 5 | 118.3 | CSAUB | CSAU | GADB | GAD |
| 6 | 115.3 | CSAUC | CSAU | CSADC | CSAD |
| 7 | 118.3 | CSAUC | CSAU | GADC | GAD |
| 8 | 115.4 | CSAUD | CSAU | CSADD | CSAD |
| 9 | 118.4 | CSAUD | CSAU | GADD | GAD |
| 10 | 115.4 | CSBUA | CSBU | CSBDA | CSBD |
| 11 | 118.5 | CSBUA | CSBU | GBDA | GBD |
| 12 | 117 | CSBUA | CSBU | WHDF | WHD |
| 13 | 115.5 | CSBUB | CSBU | CSBDB | CSBD |
| 14 | 118.6 | CSBUB | CSBU | GBDB | GBD |
| 15 | 115.5 | CSBUC | CSBU | CSBDC | CSBD |
| 16 | 118.6 | CSBUC | CSBU | GBDC | GBD |
| 17 | 115.6 | CSBUD | CSBU | CSBDD | CSBD |
| 18 | 118.7 | CSBUD | CSBU | GBDD | GBD |
| 19 | 118.5 | EHUA | EHU | EHDA | EHD |
| 20 | 120.7 | EHUA | EHU | KS1DA | KS1D |
| 21 | 120.7 | EHUA | EHU | KS1DH | KS1D |
| 22 | 120.7 | EHUA | EHU | KS1DL | KS1D |
| 23 | 118.9 | EHUA | EHU | KS2DA | KS2D |
| 24 | 118.9 | EHUA | EHU | KS2DH | KS2D |
| 25 | 118.9 | EHUA | EHU | KS2DL | KS2D |
| 26 | 119.6 | EHUA | EHU | KS3DA | KS3D |
| 27 | 119.6 | EHUA | EHU | KS3DH | KS3D |
| 28 | 119.6 | EHUA | EHU | KS3DL | KS3D |
| 29 | 113.3 | EHUA | EHU | NEZDA | NEZD |
| 30 | 115.8 | EHUA | EHU | NWZDA | NWZD |

| | | | | | |
|-------|--------|---|---------|---|---|
| NWZUC | 34000 | R | 6111 | R | C |
| NWZUD | 34000 | R | 6149 | R | C |
| NWZUE | 72000 | R | 6220 | R | C |
| NWZUF | 36000 | R | 6280 | R | C |
| SEZUA | 77000 | R | 5967.5 | R | C |
| SEZUB | 72000 | R | 6050 | R | C |
| SEZUC | 34000 | R | 6111 | R | C |
| SEZUD | 34000 | R | 6149 | R | C |
| SEZUE | 72000 | R | 6220 | R | C |
| SEZUF | 36000 | R | 6280 | R | C |
| SWZUA | 77000 | R | 5967.5 | R | C |
| SWZUB | 72000 | R | 6050 | R | C |
| SWZUC | 34000 | R | 6111 | R | C |
| SWZUD | 34000 | R | 6149 | R | C |
| SWZUE | 72000 | R | 6220 | R | C |
| SWZUF | 36000 | R | 6280 | R | C |
| WHUA | 77000 | R | 5967.5 | L | C |
| WHUB | 72000 | R | 6050 | L | C |
| WHUC | 34000 | R | 6111 | L | C |
| WHUD | 34000 | R | 6149 | L | C |
| WHUE | 72000 | R | 6220 | L | C |
| WHUF | 36000 | R | 6280 | L | C |
| KS1UA | 77000 | R | 14042.5 | H | C |
| KS1UB | 72000 | R | 14125 | H | C |
| KS1UC | 34000 | R | 14186 | H | C |
| KS1UD | 34000 | R | 14224 | H | C |
| KS1UE | 72000 | R | 14295 | H | C |
| KS1UF | 112000 | R | 14314 | H | C |
| KS1UG | 112000 | R | 14438 | H | C |
| KS2UA | 77000 | R | 14042.5 | V | C |
| KS2UB | 72000 | R | 14125 | V | C |
| KS2UC | 34000 | R | 14186 | V | C |
| KS2UD | 34000 | R | 14224 | V | C |
| KS2UE | 72000 | R | 14295 | V | C |
| KS2UF | 112000 | R | 14314 | V | C |
| KS2UG | 112000 | R | 14438 | V | C |
| KS3UA | 77000 | R | 14042.5 | H | C |
| KS3UB | 72000 | R | 14125 | H | C |
| KS3UC | 34000 | R | 14186 | H | C |

| | | | | | |
|----|-------|------|-----|-------|------|
| 31 | 115.8 | EHUA | EHU | SEZDA | SEZD |
| 32 | 113.4 | EHUA | EHU | SWZDA | SWZD |
| 33 | 117.3 | EHUA | EHU | WHDA | WHD |
| 34 | 118.7 | EHUB | EHU | EHDB | EHD |
| 35 | 120.9 | EHUB | EHU | KS1DB | KS1D |
| 36 | 120.9 | EHUB | EHU | KS1DI | KS1D |
| 37 | 120.9 | EHUB | EHU | KS1DM | KS1D |
| 38 | 119.1 | EHUB | EHU | KS2DB | KS2D |
| 39 | 119.1 | EHUB | EHU | KS2DI | KS2D |
| 40 | 119.1 | EHUB | EHU | KS2DM | KS2D |
| 41 | 119.8 | EHUB | EHU | KS3DB | KS3D |
| 42 | 119.8 | EHUB | EHU | KS3DI | KS3D |
| 43 | 119.8 | EHUB | EHU | KS3DM | KS3D |
| 44 | 113.5 | EHUB | EHU | NEZDB | NEZD |
| 45 | 116 | EHUB | EHU | NWZDB | NWZD |
| 46 | 116 | EHUB | EHU | SEZDB | SEZD |
| 47 | 113.6 | EHUB | EHU | SWZDB | SWZD |
| 48 | 117.5 | EHUB | EHU | WHDB | WHD |
| 49 | 118.7 | EHUC | EHU | EHDC | EHD |
| 50 | 120.9 | EHUC | EHU | KS1DC | KS1D |
| 51 | 120.9 | EHUC | EHU | KS1DJ | KS1D |
| 52 | 120.9 | EHUC | EHU | KS1DN | KS1D |
| 53 | 119.1 | EHUC | EHU | KS2DC | KS2D |
| 54 | 119.1 | EHUC | EHU | KS2DJ | KS2D |
| 55 | 119.1 | EHUC | EHU | KS2DN | KS2D |
| 56 | 119.8 | EHUC | EHU | KS3DC | KS3D |
| 57 | 119.8 | EHUC | EHU | KS3DJ | KS3D |
| 58 | 119.8 | EHUC | EHU | KS3DN | KS3D |
| 59 | 113.5 | EHUC | EHU | NEZDC | NEZD |
| 60 | 116 | EHUC | EHU | NWZDC | NWZD |
| 61 | 116 | EHUC | EHU | SEZDC | SEZD |
| 62 | 113.6 | EHUC | EHU | SWZDC | SWZD |
| 63 | 117.5 | EHUC | EHU | WHDC | WHD |
| 64 | 118.8 | EHUD | EHU | EHDD | EHD |
| 65 | 121 | EHUD | EHU | KS1DD | KS1D |
| 66 | 121 | EHUD | EHU | KS1DK | KS1D |
| 67 | 121 | EHUD | EHU | KS1DP | KS1D |
| 68 | 119.2 | EHUD | EHU | KS2DD | KS2D |
| 69 | 119.2 | EHUD | EHU | KS2DK | KS2D |

| | | | | | |
|-------|--------|---|--------|---|---|
| KS3UD | 34000 | R | 14224 | H | C |
| KS3UE | 72000 | R | 14295 | H | C |
| KS3UF | 112000 | R | 14314 | H | C |
| KS3UG | 112000 | R | 14438 | H | C |
| CSADA | 36000 | T | 4055 | R | C |
| CSADB | 36000 | T | 4095 | R | C |
| CSADC | 36000 | T | 4135 | R | C |
| CSADD | 41000 | T | 4177.5 | R | C |
| CSBDA | 36000 | T | 4055 | L | C |
| CSBDB | 36000 | T | 4095 | L | C |
| CSBDC | 36000 | T | 4135 | L | C |
| CSBDD | 41000 | T | 4177.5 | L | C |
| EHDA | 77000 | T | 3742.5 | R | C |
| EHDB | 72000 | T | 3825 | R | C |
| EHDC | 34000 | T | 3886 | R | C |
| EHDD | 34000 | T | 3924 | R | C |
| EHDE | 72000 | T | 3995 | R | C |
| EHDF | 36000 | T | 4055 | R | C |
| GADA | 36000 | T | 4055 | R | C |
| GADB | 36000 | T | 4095 | R | C |
| GADC | 36000 | T | 4135 | R | C |
| GADD | 41000 | T | 4177.5 | R | C |
| GBDA | 36000 | T | 4055 | L | C |
| GBDB | 36000 | T | 4095 | L | C |
| GBDC | 36000 | T | 4135 | L | C |
| GBDD | 41000 | T | 4177.5 | L | C |
| NEZDA | 77000 | T | 3742.5 | L | C |
| NEZDB | 72000 | T | 3825 | L | C |
| NEZDC | 34000 | T | 3886 | L | C |
| NEZDD | 34000 | T | 3924 | L | C |
| NEZDE | 72000 | T | 3995 | L | C |
| NEZDF | 36000 | T | 4055 | L | C |
| NWZDA | 77000 | T | 3742.5 | L | C |
| NWZDB | 72000 | T | 3825 | L | C |
| NWZDC | 34000 | T | 3886 | L | C |
| NWZDD | 34000 | T | 3924 | L | C |
| NWZDE | 72000 | T | 3995 | L | C |
| NWZDF | 36000 | T | 4055 | L | C |
| SEZDA | 77000 | T | 3742.5 | L | C |

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|-----|-------|------|-----|-------|------|
| 70 | 119.2 | EHUD | EHU | KS2DP | KS2D |
| 71 | 119.9 | EHUD | EHU | KS3DD | KS3D |
| 72 | 119.9 | EHUD | EHU | KS3DK | KS3D |
| 73 | 119.9 | EHUD | EHU | KS3DP | KS3D |
| 74 | 113.6 | EHUD | EHU | NEZDD | NEZD |
| 75 | 116.1 | EHUD | EHU | NWZDD | NWZD |
| 76 | 116.1 | EHUD | EHU | SEZDD | SEZD |
| 77 | 113.7 | EHUD | EHU | SWZDD | SWZD |
| 78 | 117.6 | EHUD | EHU | WHDD | WHD |
| 79 | 118.9 | EHUE | EHU | EHDE | EHD |
| 80 | 121.1 | EHUE | EHU | KS1DE | KS1D |
| 81 | 121.1 | EHUE | EHU | KS1DE | KS1D |
| 82 | 121.1 | EHUE | EHU | KS1DE | KS1D |
| 83 | 119.3 | EHUE | EHU | KS2DE | KS2D |
| 84 | 119.3 | EHUE | EHU | KS2DE | KS2D |
| 85 | 119.3 | EHUE | EHU | KS2DE | KS2D |
| 86 | 120 | EHUE | EHU | KS3DE | KS3D |
| 87 | 120 | EHUE | EHU | KS3DE | KS3D |
| 88 | 120 | EHUE | EHU | KS3DE | KS3D |
| 89 | 113.7 | EHUE | EHU | NEZDE | NEZD |
| 90 | 116.2 | EHUE | EHU | NWZDE | NWZD |
| 91 | 116.2 | EHUE | EHU | SEZDE | SEZD |
| 92 | 113.8 | EHUE | EHU | SWZDE | SWZD |
| 93 | 117.7 | EHUE | EHU | WHDE | WHD |
| 94 | 116 | EHUF | EHU | CSADA | CSAD |
| 95 | 119 | EHUF | EHU | EHDF | EHD |
| 96 | 119 | EHUF | EHU | GADA | GAD |
| 97 | 113.8 | EHUF | EHU | NEZDF | NEZD |
| 98 | 116.3 | EHUF | EHU | NWZDF | NWZD |
| 99 | 116.3 | EHUF | EHU | SEZDF | SEZD |
| 100 | 113.9 | EHUF | EHU | SWZDF | SWZD |
| 101 | 117.8 | EHUF | EHU | WHDF | WHD |
| 102 | 120.2 | GAUA | GAU | CSADA | CSAD |
| 103 | 123.2 | GAUA | GAU | EHDF | EHD |
| 104 | 123.2 | GAUA | GAU | GADA | GAD |
| 105 | 120.3 | GAUB | GAU | CSADB | CSAD |
| 106 | 123.3 | GAUB | GAU | GADB | GAD |
| 107 | 120.3 | GAUC | GAU | CSADC | CSAD |
| 108 | 123.3 | GAUC | GAU | GADC | GAD |

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|-------|--------|---|---------|---|---|
| SEZDB | 72000 | T | 3825 | L | C |
| SEZDC | 34000 | T | 3886 | L | C |
| SEZDD | 34000 | T | 3924 | L | C |
| SEZDE | 72000 | T | 3995 | L | C |
| SEZDF | 36000 | T | 4055 | L | C |
| SWZDA | 77000 | T | 3742.5 | L | C |
| SWZDB | 72000 | T | 3825 | L | C |
| SWZDC | 34000 | T | 3886 | L | C |
| SWZDD | 34000 | T | 3924 | L | C |
| SWZDE | 72000 | T | 3995 | L | C |
| SWZDF | 36000 | T | 4055 | L | C |
| WHDA | 77000 | T | 3742.5 | R | C |
| WHDB | 72000 | T | 3825 | R | C |
| WHDC | 34000 | T | 3886 | R | C |
| WHDD | 34000 | T | 3924 | R | C |
| WHDE | 72000 | T | 3995 | R | C |
| WHDF | 36000 | T | 4055 | R | C |
| KS1DA | 77000 | T | 10992.5 | V | C |
| KS1DB | 72000 | T | 11075 | V | C |
| KS1DC | 34000 | T | 11136 | V | C |
| KS1DD | 34000 | T | 11174 | V | C |
| KS1DE | 72000 | T | 11495 | V | C |
| KS1DF | 112000 | T | 11514 | V | C |
| KS1DG | 112000 | T | 11638 | V | C |
| KS1DH | 77000 | T | 11747.5 | V | C |
| KS1DI | 72000 | T | 11830 | V | C |
| KS1DJ | 34000 | T | 11891 | V | C |
| KS1DK | 34000 | T | 11929 | V | C |
| KS1DL | 77000 | T | 12547.5 | V | C |
| KS1DM | 72000 | T | 12630 | V | C |
| KS1DN | 34000 | T | 12691 | V | C |
| KS1DP | 34000 | T | 12729 | V | C |
| KS2DA | 77000 | T | 10992.5 | H | C |
| KS2DB | 72000 | T | 11075 | H | C |
| KS2DC | 34000 | T | 11136 | H | C |
| KS2DD | 34000 | T | 11174 | H | C |
| KS2DE | 72000 | T | 11495 | H | C |
| KS2DF | 112000 | T | 11514 | H | C |
| KS2DG | 112000 | T | 11638 | H | C |

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|-----|-------|-------|------|-------|------|
| 109 | 120.4 | GAUD | GAU | CSADD | CSAD |
| 110 | 123.4 | GAUD | GAU | GADD | GAD |
| 111 | 120.4 | GBUA | GBU | CSBDA | CSBD |
| 112 | 123.5 | GBUA | GBU | GBDA | GBD |
| 113 | 122 | GBUA | GBU | WHDF | WHD |
| 114 | 120.5 | GBUB | GBU | CSBDB | CSBD |
| 115 | 123.6 | GBUB | GBU | GBDB | GBD |
| 116 | 120.5 | GBUC | GBU | CSBDC | CSBD |
| 117 | 123.6 | GBUC | GBU | GBDC | GBD |
| 118 | 120.6 | GBUD | GBU | CSBDD | CSBD |
| 119 | 123.7 | GBUD | GBU | GBDD | GBD |
| 120 | 116.5 | KS1UA | KS1U | EHDA | EHD |
| 121 | 118.7 | KS1UA | KS1U | KS1DA | KS1D |
| 122 | 118.7 | KS1UA | KS1U | KS1DH | KS1D |
| 123 | 118.7 | KS1UA | KS1U | KS1DL | KS1D |
| 124 | 116.9 | KS1UA | KS1U | KS2DA | KS2D |
| 125 | 116.9 | KS1UA | KS1U | KS2DH | KS2D |
| 126 | 116.9 | KS1UA | KS1U | KS2DL | KS2D |
| 127 | 117.6 | KS1UA | KS1U | KS3DA | KS3D |
| 128 | 117.6 | KS1UA | KS1U | KS3DH | KS3D |
| 129 | 117.6 | KS1UA | KS1U | KS3DL | KS3D |
| 130 | 111.3 | KS1UA | KS1U | NEZDA | NEZD |
| 131 | 113.8 | KS1UA | KS1U | NWZDA | NWZD |
| 132 | 113.8 | KS1UA | KS1U | SEZDA | SEZD |
| 133 | 111.4 | KS1UA | KS1U | SWZDA | SWZD |
| 134 | 115.3 | KS1UA | KS1U | WHDA | WHD |
| 135 | 116.6 | KS1UB | KS1U | EHDB | EHD |
| 136 | 118.8 | KS1UB | KS1U | KS1DB | KS1D |
| 137 | 118.8 | KS1UB | KS1U | KS1DI | KS1D |
| 138 | 118.8 | KS1UB | KS1U | KS1DM | KS1D |
| 139 | 117 | KS1UB | KS1U | KS2DB | KS2D |
| 140 | 117 | KS1UB | KS1U | KS2DI | KS2D |
| 141 | 117 | KS1UB | KS1U | KS2DM | KS2D |
| 142 | 117.7 | KS1UB | KS1U | KS3DB | KS3D |
| 143 | 117.7 | KS1UB | KS1U | KS3DI | KS3D |
| 144 | 117.7 | KS1UB | KS1U | KS3DM | KS3D |
| 145 | 111.4 | KS1UB | KS1U | NEZDB | NEZD |
| 146 | 113.9 | KS1UB | KS1U | NWZDB | NWZD |
| 147 | 113.9 | KS1UB | KS1U | SEZDB | SEZD |

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|-------|--------|---|---------|---|---|
| KS2DH | 77000 | T | 11747.5 | H | C |
| KS2DI | 72000 | T | 11830 | H | C |
| KS2DJ | 34000 | T | 11891 | H | C |
| KS2DK | 34000 | T | 11929 | H | C |
| KS2DL | 77000 | T | 12547.5 | H | C |
| KS2DM | 72000 | T | 12630 | H | C |
| KS2DN | 34000 | T | 12691 | H | C |
| KS2DP | 34000 | T | 12729 | H | C |
| KS3DA | 77000 | T | 10992.5 | V | C |
| KS3DB | 72000 | T | 11075 | V | C |
| KS3DC | 34000 | T | 11136 | V | C |
| KS3DD | 34000 | T | 11174 | V | C |
| KS3DE | 72000 | T | 11495 | V | C |
| KS3DF | 112000 | T | 11514 | V | C |
| KS3DG | 112000 | T | 11638 | V | C |
| KS3DH | 77000 | T | 11747.5 | V | C |
| KS3DI | 72000 | T | 11830 | V | C |
| KS3DJ | 34000 | T | 11891 | V | C |
| KS3DK | 34000 | T | 11929 | V | C |
| KS3DL | 77000 | T | 12547.5 | V | C |
| KS3DM | 72000 | T | 12630 | V | C |
| KS3DN | 34000 | T | 12691 | V | C |
| KS3DP | 34000 | T | 12729 | V | C |
| CMD1 | 1000 | R | 6173.7 | L | T |
| CMD2 | 1000 | R | 6176.3 | L | T |
| TM1 | 500 | T | 3947.5 | R | T |
| TM2 | 500 | T | 3948 | R | T |
| TM3 | 500 | T | 3952.5 | R | T |
| TM4 | 500 | T | 3952 | R | T |
| BC1 | 25 | T | 3950 | V | T |
| BK1 | 25 | T | 11198 | R | T |
| BK2 | 25 | T | 11452 | R | T |
| BK3 | 25 | T | 11701 | V | T |
| BK4 | 25 | T | 11701 | H | T |
| BK5 | 25 | T | 11701 | V | T |
| BK6 | 25 | T | 12501 | V | T |
| BK7 | 25 | T | 12501 | H | T |
| BK8 | 25 | T | 12501 | V | T |

| | | | | | |
|-----|-------|-------|------|-------|------|
| 148 | 111.5 | KS1UB | KS1U | SWZDB | SWZD |
| 149 | 115.4 | KS1UB | KS1U | WHDB | WHD |
| 150 | 116.6 | KS1UC | KS1U | EHDC | EHD |
| 151 | 118.8 | KS1UC | KS1U | KS1DC | KS1D |
| 152 | 118.8 | KS1UC | KS1U | KS1DJ | KS1D |
| 153 | 118.8 | KS1UC | KS1U | KS1DN | KS1D |
| 154 | 117 | KS1UC | KS1U | KS2DC | KS2D |
| 155 | 117 | KS1UC | KS1U | KS2DJ | KS2D |
| 156 | 117 | KS1UC | KS1U | KS2DN | KS2D |
| 157 | 117.7 | KS1UC | KS1U | KS3DC | KS3D |
| 158 | 117.7 | KS1UC | KS1U | KS3DJ | KS3D |
| 159 | 117.7 | KS1UC | KS1U | KS3DN | KS3D |
| 160 | 111.4 | KS1UC | KS1U | NEZDC | NEZD |
| 161 | 113.9 | KS1UC | KS1U | NWZDC | NWZD |
| 162 | 113.9 | KS1UC | KS1U | SEZDC | SEZD |
| 163 | 111.5 | KS1UC | KS1U | SWZDC | SWZD |
| 164 | 115.4 | KS1UC | KS1U | WHDC | WHD |
| 165 | 116.7 | KS1UD | KS1U | EHDD | EHD |
| 166 | 118.9 | KS1UD | KS1U | KS1DD | KS1D |
| 167 | 118.9 | KS1UD | KS1U | KS1DK | KS1D |
| 168 | 118.9 | KS1UD | KS1U | KS1DP | KS1D |
| 169 | 117.1 | KS1UD | KS1U | KS2DD | KS2D |
| 170 | 117.1 | KS1UD | KS1U | KS2DK | KS2D |
| 171 | 117.1 | KS1UD | KS1U | KS2DP | KS2D |
| 172 | 117.8 | KS1UD | KS1U | KS3DD | KS3D |
| 173 | 117.8 | KS1UD | KS1U | KS3DK | KS3D |
| 174 | 117.8 | KS1UD | KS1U | KS3DP | KS3D |
| 175 | 111.5 | KS1UD | KS1U | NEZDD | NEZD |
| 176 | 114 | KS1UD | KS1U | NWZDD | NWZD |
| 177 | 114 | KS1UD | KS1U | SEZDD | SEZD |
| 178 | 111.6 | KS1UD | KS1U | SWZDD | SWZD |
| 179 | 115.5 | KS1UD | KS1U | WHDD | WHD |
| 180 | 116.7 | KS1UE | KS1U | EHDE | EHD |
| 181 | 111.5 | KS1UE | KS1U | NEZDE | NEZD |
| 182 | 114 | KS1UE | KS1U | NWZDE | NWZD |
| 183 | 114 | KS1UE | KS1U | SEZDE | SEZD |
| 184 | 111.6 | KS1UE | KS1U | SWZDE | SWZD |
| 185 | 115.5 | KS1UE | KS1U | WHDE | WHD |
| 186 | 118.9 | KS1UF | KS1U | KS1DF | KS1D |

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|-----|-------|-------|------|-------|------|
| 187 | 117.1 | KS1UF | KS1U | KS2DF | KS2D |
| 188 | 117.8 | KS1UF | KS1U | KS3DF | KS3D |
| 189 | 119 | KS1UG | KS1U | KS1DG | KS1D |
| 190 | 117.2 | KS1UG | KS1U | KS2DG | KS2D |
| 191 | 117.9 | KS1UG | KS1U | KS3DG | KS3D |
| 192 | 118.5 | KS2UA | KS2U | EHDA | EHD |
| 193 | 120.7 | KS2UA | KS2U | KS1DA | KS1D |
| 194 | 120.7 | KS2UA | KS2U | KS1DH | KS1D |
| 195 | 120.7 | KS2UA | KS2U | KS1DL | KS1D |
| 196 | 118.9 | KS2UA | KS2U | KS2DA | KS2D |
| 197 | 118.9 | KS2UA | KS2U | KS2DH | KS2D |
| 198 | 118.9 | KS2UA | KS2U | KS2DL | KS2D |
| 199 | 119.6 | KS2UA | KS2U | KS3DA | KS3D |
| 200 | 119.6 | KS2UA | KS2U | KS3DH | KS3D |
| 201 | 119.6 | KS2UA | KS2U | KS3DL | KS3D |
| 202 | 113.3 | KS2UA | KS2U | NEZDA | NEZD |
| 203 | 115.8 | KS2UA | KS2U | NWZDA | NWZD |
| 204 | 115.8 | KS2UA | KS2U | SEZDA | SEZD |
| 205 | 113.4 | KS2UA | KS2U | SWZDA | SWZD |
| 206 | 117.3 | KS2UA | KS2U | WHDA | WHD |
| 207 | 118.5 | KS2UB | KS2U | EHDB | EHD |
| 208 | 120.7 | KS2UB | KS2U | KS1DB | KS1D |
| 209 | 120.7 | KS2UB | KS2U | KS1DI | KS1D |
| 210 | 120.7 | KS2UB | KS2U | KS1DM | KS1D |
| 211 | 118.9 | KS2UB | KS2U | KS2DB | KS2D |
| 212 | 118.9 | KS2UB | KS2U | KS2DI | KS2D |
| 213 | 118.9 | KS2UB | KS2U | KS2DM | KS2D |
| 214 | 119.6 | KS2UB | KS2U | KS3DB | KS3D |
| 215 | 119.6 | KS2UB | KS2U | KS3DI | KS3D |
| 216 | 119.6 | KS2UB | KS2U | KS3DM | KS3D |
| 217 | 113.3 | KS2UB | KS2U | NEZDB | NEZD |
| 218 | 115.8 | KS2UB | KS2U | NWZDB | NWZD |
| 219 | 115.8 | KS2UB | KS2U | SEZDB | SEZD |
| 220 | 113.4 | KS2UB | KS2U | SWZDB | SWZD |
| 221 | 117.3 | KS2UB | KS2U | WHDB | WHD |
| 222 | 118.6 | KS2UC | KS2U | EHDC | EHD |
| 223 | 120.8 | KS2UC | KS2U | KS1DC | KS1D |
| 224 | 120.8 | KS2UC | KS2U | KS1DJ | KS1D |
| 225 | 120.8 | KS2UC | KS2U | KS1DN | KS1D |

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|-----|-------|-------|------|-------|------|
| 226 | 119 | KS2UC | KS2U | KS2DC | KS2D |
| 227 | 119 | KS2UC | KS2U | KS2DJ | KS2D |
| 228 | 119 | KS2UC | KS2U | KS2DN | KS2D |
| 229 | 119.7 | KS2UC | KS2U | KS3DC | KS3D |
| 230 | 119.7 | KS2UC | KS2U | KS3DJ | KS3D |
| 231 | 119.7 | KS2UC | KS2U | KS3DN | KS3D |
| 232 | 113.4 | KS2UC | KS2U | NEZDC | NEZD |
| 233 | 115.9 | KS2UC | KS2U | NWZDC | NWZD |
| 234 | 115.9 | KS2UC | KS2U | SEZDC | SEZD |
| 235 | 113.5 | KS2UC | KS2U | SWZDC | SWZD |
| 236 | 117.4 | KS2UC | KS2U | WHDC | WHD |
| 237 | 118.6 | KS2UD | KS2U | EHDD | EHD |
| 238 | 120.8 | KS2UD | KS2U | KS1DD | KS1D |
| 239 | 120.8 | KS2UD | KS2U | KS1DK | KS1D |
| 240 | 120.8 | KS2UD | KS2U | KS1DP | KS1D |
| 241 | 119 | KS2UD | KS2U | KS2DD | KS2D |
| 242 | 119 | KS2UD | KS2U | KS2DK | KS2D |
| 243 | 119 | KS2UD | KS2U | KS2DP | KS2D |
| 244 | 119.7 | KS2UD | KS2U | KS3DD | KS3D |
| 245 | 119.7 | KS2UD | KS2U | KS3DK | KS3D |
| 246 | 119.7 | KS2UD | KS2U | KS3DP | KS3D |
| 247 | 113.4 | KS2UD | KS2U | NEZDD | NEZD |
| 248 | 115.9 | KS2UD | KS2U | NWZDD | NWZD |
| 249 | 115.9 | KS2UD | KS2U | SEZDD | SEZD |
| 250 | 113.5 | KS2UD | KS2U | SWZDD | SWZD |
| 251 | 117.4 | KS2UD | KS2U | WHDD | WHD |
| 252 | 118.7 | KS2UE | KS2U | EHDE | EHD |
| 253 | 113.5 | KS2UE | KS2U | NEZDE | NEZD |
| 254 | 116 | KS2UE | KS2U | NWZDE | NWZD |
| 255 | 116 | KS2UE | KS2U | SEZDE | SEZD |
| 256 | 113.6 | KS2UE | KS2U | SWZDE | SWZD |
| 257 | 117.5 | KS2UE | KS2U | WHDE | WHD |
| 258 | 120.9 | KS2UF | KS2U | KS1DF | KS1D |
| 259 | 119.1 | KS2UF | KS2U | KS2DF | KS2D |
| 260 | 119.8 | KS2UF | KS2U | KS3DF | KS3D |
| 261 | 120.9 | KS2UG | KS2U | KS1DG | KS1D |
| 262 | 119.1 | KS2UG | KS2U | KS2DG | KS2D |
| 263 | 119.8 | KS2UG | KS2U | KS3DG | KS3D |
| 264 | 116.6 | KS3UA | KS3U | EHDA | EHD |

| | | | | | |
|-----|-------|-------|------|-------|------|
| 265 | 118.8 | KS3UA | KS3U | KS1DA | KS1D |
| 266 | 118.8 | KS3UA | KS3U | KS1DH | KS1D |
| 267 | 118.8 | KS3UA | KS3U | KS1DL | KS1D |
| 268 | 117 | KS3UA | KS3U | KS2DA | KS2D |
| 269 | 117 | KS3UA | KS3U | KS2DH | KS2D |
| 270 | 117 | KS3UA | KS3U | KS2DL | KS2D |
| 271 | 117.7 | KS3UA | KS3U | KS3DA | KS3D |
| 272 | 117.7 | KS3UA | KS3U | KS3DH | KS3D |
| 273 | 117.7 | KS3UA | KS3U | KS3DL | KS3D |
| 274 | 111.4 | KS3UA | KS3U | NEZDA | NEZD |
| 275 | 113.9 | KS3UA | KS3U | NWZDA | NWZD |
| 276 | 113.9 | KS3UA | KS3U | SEZDA | SEZD |
| 277 | 111.5 | KS3UA | KS3U | SWZDA | SWZD |
| 278 | 115.4 | KS3UA | KS3U | WHDA | WHD |
| 279 | 116.7 | KS3UB | KS3U | EHDB | EHD |
| 280 | 118.9 | KS3UB | KS3U | KS1DB | KS1D |
| 281 | 118.9 | KS3UB | KS3U | KS1DI | KS1D |
| 282 | 118.9 | KS3UB | KS3U | KS1DM | KS1D |
| 283 | 117.1 | KS3UB | KS3U | KS2DB | KS2D |
| 284 | 117.1 | KS3UB | KS3U | KS2DI | KS2D |
| 285 | 117.1 | KS3UB | KS3U | KS2DM | KS2D |
| 286 | 117.8 | KS3UB | KS3U | KS3DB | KS3D |
| 287 | 117.8 | KS3UB | KS3U | KS3DI | KS3D |
| 288 | 117.8 | KS3UB | KS3U | KS3DM | KS3D |
| 289 | 111.5 | KS3UB | KS3U | NEZDB | NEZD |
| 290 | 114 | KS3UB | KS3U | NWZDB | NWZD |
| 291 | 114 | KS3UB | KS3U | SEZDB | SEZD |
| 292 | 111.6 | KS3UB | KS3U | SWZDB | SWZD |
| 293 | 115.5 | KS3UB | KS3U | WHDB | WHD |
| 294 | 116.7 | KS3UC | KS3U | EHDC | EHD |
| 295 | 118.9 | KS3UC | KS3U | KS1DC | KS1D |
| 296 | 118.9 | KS3UC | KS3U | KS1DJ | KS1D |
| 297 | 118.9 | KS3UC | KS3U | KS1DN | KS1D |
| 298 | 117.1 | KS3UC | KS3U | KS2DC | KS2D |
| 299 | 117.1 | KS3UC | KS3U | KS2DJ | KS2D |
| 300 | 117.1 | KS3UC | KS3U | KS2DN | KS2D |
| 301 | 117.8 | KS3UC | KS3U | KS3DC | KS3D |
| 302 | 117.8 | KS3UC | KS3U | KS3DJ | KS3D |
| 303 | 117.8 | KS3UC | KS3U | KS3DN | KS3D |

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|-----|-------|-------|------|-------|------|
| 304 | 111.5 | KS3UC | KS3U | NEZDC | NEZD |
| 305 | 114 | KS3UC | KS3U | NWZDC | NWZD |
| 306 | 114 | KS3UC | KS3U | SEZDC | SEZD |
| 307 | 111.6 | KS3UC | KS3U | SWZDC | SWZD |
| 308 | 115.5 | KS3UC | KS3U | WHDC | WHD |
| 309 | 116.8 | KS3UD | KS3U | EHDD | EHD |
| 310 | 119 | KS3UD | KS3U | KS1DD | KS1D |
| 311 | 119 | KS3UD | KS3U | KS1DK | KS1D |
| 312 | 119 | KS3UD | KS3U | KS1DP | KS1D |
| 313 | 117.2 | KS3UD | KS3U | KS2DD | KS2D |
| 314 | 117.2 | KS3UD | KS3U | KS2DK | KS2D |
| 315 | 117.2 | KS3UD | KS3U | KS2DP | KS2D |
| 316 | 117.9 | KS3UD | KS3U | KS3DD | KS3D |
| 317 | 117.9 | KS3UD | KS3U | KS3DK | KS3D |
| 318 | 117.9 | KS3UD | KS3U | KS3DP | KS3D |
| 319 | 111.6 | KS3UD | KS3U | NEZDD | NEZD |
| 320 | 114.1 | KS3UD | KS3U | NWZDD | NWZD |
| 321 | 114.1 | KS3UD | KS3U | SEZDD | SEZD |
| 322 | 111.7 | KS3UD | KS3U | SWZDD | SWZD |
| 323 | 115.6 | KS3UD | KS3U | WHDD | WHD |
| 324 | 116.8 | KS3UE | KS3U | EHDE | EHD |
| 325 | 111.6 | KS3UE | KS3U | NEZDE | NEZD |
| 326 | 114.1 | KS3UE | KS3U | NWZDE | NWZD |
| 327 | 114.1 | KS3UE | KS3U | SEZDE | SEZD |
| 328 | 111.7 | KS3UE | KS3U | SWZDE | SWZD |
| 329 | 115.6 | KS3UE | KS3U | WHDE | WHD |
| 330 | 119 | KS3UF | KS3U | KS1DF | KS1D |
| 331 | 117.2 | KS3UF | KS3U | KS2DF | KS2D |
| 332 | 117.9 | KS3UF | KS3U | KS3DF | KS3D |
| 333 | 119.1 | KS3UG | KS3U | KS1DG | KS1D |
| 334 | 117.3 | KS3UG | KS3U | KS2DG | KS2D |
| 335 | 118 | KS3UG | KS3U | KS3DG | KS3D |
| 336 | 118.2 | NEZUA | NEZU | EHDA | EHD |
| 337 | 120.4 | NEZUA | NEZU | KS1DA | KS1D |
| 338 | 120.4 | NEZUA | NEZU | KS1DH | KS1D |
| 339 | 120.4 | NEZUA | NEZU | KS1DL | KS1D |
| 340 | 118.6 | NEZUA | NEZU | KS2DA | KS2D |
| 341 | 118.6 | NEZUA | NEZU | KS2DH | KS2D |
| 342 | 118.6 | NEZUA | NEZU | KS2DL | KS2D |

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|-----|-------|-------|------|-------|------|
| 343 | 119.3 | NEZUA | NEZU | KS3DA | KS3D |
| 344 | 119.3 | NEZUA | NEZU | KS3DH | KS3D |
| 345 | 119.3 | NEZUA | NEZU | KS3DL | KS3D |
| 346 | 113 | NEZUA | NEZU | NEZDA | NEZD |
| 347 | 115.5 | NEZUA | NEZU | NWZDA | NWZD |
| 348 | 115.5 | NEZUA | NEZU | SEZDA | SEZD |
| 349 | 113.1 | NEZUA | NEZU | SWZDA | SWZD |
| 350 | 117 | NEZUA | NEZU | WHDA | WHD |
| 351 | 118.3 | NEZUB | NEZU | EHDB | EHD |
| 352 | 120.5 | NEZUB | NEZU | KS1DB | KS1D |
| 353 | 120.5 | NEZUB | NEZU | KS1DI | KS1D |
| 354 | 120.5 | NEZUB | NEZU | KS1DM | KS1D |
| 355 | 118.7 | NEZUB | NEZU | KS2DB | KS2D |
| 356 | 118.7 | NEZUB | NEZU | KS2DI | KS2D |
| 357 | 118.7 | NEZUB | NEZU | KS2DM | KS2D |
| 358 | 119.4 | NEZUB | NEZU | KS3DB | KS3D |
| 359 | 119.4 | NEZUB | NEZU | KS3DI | KS3D |
| 360 | 119.4 | NEZUB | NEZU | KS3DM | KS3D |
| 361 | 113.1 | NEZUB | NEZU | NEZDB | NEZD |
| 362 | 115.6 | NEZUB | NEZU | NWZDB | NWZD |
| 363 | 115.6 | NEZUB | NEZU | SEZDB | SEZD |
| 364 | 113.2 | NEZUB | NEZU | SWZDB | SWZD |
| 365 | 117.1 | NEZUB | NEZU | WHDB | WHD |
| 366 | 118.4 | NEZUC | NEZU | EHDC | EHD |
| 367 | 120.6 | NEZUC | NEZU | KS1DC | KS1D |
| 368 | 120.6 | NEZUC | NEZU | KS1DJ | KS1D |
| 369 | 120.6 | NEZUC | NEZU | KS1DN | KS1D |
| 370 | 118.8 | NEZUC | NEZU | KS2DC | KS2D |
| 371 | 118.8 | NEZUC | NEZU | KS2DJ | KS2D |
| 372 | 118.8 | NEZUC | NEZU | KS2DN | KS2D |
| 373 | 119.5 | NEZUC | NEZU | KS3DC | KS3D |
| 374 | 119.5 | NEZUC | NEZU | KS3DJ | KS3D |
| 375 | 119.5 | NEZUC | NEZU | KS3DN | KS3D |
| 376 | 113.2 | NEZUC | NEZU | NEZDC | NEZD |
| 377 | 115.7 | NEZUC | NEZU | NWZDC | NWZD |
| 378 | 115.7 | NEZUC | NEZU | SEZDC | SEZD |
| 379 | 113.3 | NEZUC | NEZU | SWZDC | SWZD |
| 380 | 117.2 | NEZUC | NEZU | WHDC | WHD |
| 381 | 118.4 | NEZUD | NEZU | EHDD | EHD |

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|-----|-------|-------|------|-------|------|
| 382 | 120.6 | NEZUD | NEZU | KS1DD | KS1D |
| 383 | 120.6 | NEZUD | NEZU | KS1DK | KS1D |
| 384 | 120.6 | NEZUD | NEZU | KS1DP | KS1D |
| 385 | 118.8 | NEZUD | NEZU | KS2DD | KS2D |
| 386 | 118.8 | NEZUD | NEZU | KS2DK | KS2D |
| 387 | 118.8 | NEZUD | NEZU | KS2DP | KS2D |
| 388 | 119.5 | NEZUD | NEZU | KS3DD | KS3D |
| 389 | 119.5 | NEZUD | NEZU | KS3DK | KS3D |
| 390 | 119.5 | NEZUD | NEZU | KS3DP | KS3D |
| 391 | 113.2 | NEZUD | NEZU | NEZDD | NEZD |
| 392 | 115.7 | NEZUD | NEZU | NWZDD | NWZD |
| 393 | 115.7 | NEZUD | NEZU | SEZDD | SEZD |
| 394 | 113.3 | NEZUD | NEZU | SWZDD | SWZD |
| 395 | 117.2 | NEZUD | NEZU | WHDD | WHD |
| 396 | 118.5 | NEZUE | NEZU | EHDE | EHD |
| 397 | 120.7 | NEZUE | NEZU | KS1DE | KS1D |
| 398 | 120.7 | NEZUE | NEZU | KS1DE | KS1D |
| 399 | 120.7 | NEZUE | NEZU | KS1DE | KS1D |
| 400 | 118.9 | NEZUE | NEZU | KS2DE | KS2D |
| 401 | 118.9 | NEZUE | NEZU | KS2DE | KS2D |
| 402 | 118.9 | NEZUE | NEZU | KS2DE | KS2D |
| 403 | 119.6 | NEZUE | NEZU | KS3DE | KS3D |
| 404 | 119.6 | NEZUE | NEZU | KS3DE | KS3D |
| 405 | 119.6 | NEZUE | NEZU | KS3DE | KS3D |
| 406 | 113.3 | NEZUE | NEZU | NEZDE | NEZD |
| 407 | 115.8 | NEZUE | NEZU | NWZDE | NWZD |
| 408 | 115.8 | NEZUE | NEZU | SEZDE | SEZD |
| 409 | 113.4 | NEZUE | NEZU | SWZDE | SWZD |
| 410 | 117.3 | NEZUE | NEZU | WHDE | WHD |
| 411 | 118.6 | NEZUF | NEZU | EHDF | EHD |
| 412 | 113.4 | NEZUF | NEZU | NEZDF | NEZD |
| 413 | 115.9 | NEZUF | NEZU | NWZDF | NWZD |
| 414 | 115.9 | NEZUF | NEZU | SEZDF | SEZD |
| 415 | 113.5 | NEZUF | NEZU | SWZDF | SWZD |
| 416 | 117.4 | NEZUF | NEZU | WHDF | WHD |
| 417 | 118.3 | NWZUA | NWZU | EHDA | EHD |
| 418 | 120.5 | NWZUA | NWZU | KS1DA | KS1D |
| 419 | 120.5 | NWZUA | NWZU | KS1DH | KS1D |
| 420 | 120.5 | NWZUA | NWZU | KS1DL | KS1D |

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|-----|-------|-------|------|-------|------|
| 421 | 118.7 | NWZUA | NWZU | KS2DA | KS2D |
| 422 | 118.7 | NWZUA | NWZU | KS2DH | KS2D |
| 423 | 118.7 | NWZUA | NWZU | KS2DL | KS2D |
| 424 | 119.4 | NWZUA | NWZU | KS3DA | KS3D |
| 425 | 119.4 | NWZUA | NWZU | KS3DH | KS3D |
| 426 | 119.4 | NWZUA | NWZU | KS3DL | KS3D |
| 427 | 113.1 | NWZUA | NWZU | NEZDA | NEZD |
| 428 | 115.6 | NWZUA | NWZU | NWZDA | NWZD |
| 429 | 115.6 | NWZUA | NWZU | SEZDA | SEZD |
| 430 | 113.2 | NWZUA | NWZU | SWZDA | SWZD |
| 431 | 117.1 | NWZUA | NWZU | WHDA | WHD |
| 432 | 118.4 | NWZUB | NWZU | EHDB | EHD |
| 433 | 120.6 | NWZUB | NWZU | KS1DB | KS1D |
| 434 | 120.6 | NWZUB | NWZU | KS1DI | KS1D |
| 435 | 120.6 | NWZUB | NWZU | KS1DM | KS1D |
| 436 | 118.8 | NWZUB | NWZU | KS2DB | KS2D |
| 437 | 118.8 | NWZUB | NWZU | KS2DI | KS2D |
| 438 | 118.8 | NWZUB | NWZU | KS2DM | KS2D |
| 439 | 119.5 | NWZUB | NWZU | KS3DB | KS3D |
| 440 | 119.5 | NWZUB | NWZU | KS3DI | KS3D |
| 441 | 119.5 | NWZUB | NWZU | KS3DM | KS3D |
| 442 | 113.2 | NWZUB | NWZU | NEZDB | NEZD |
| 443 | 115.7 | NWZUB | NWZU | NWZDB | NWZD |
| 444 | 115.7 | NWZUB | NWZU | SEZDB | SEZD |
| 445 | 113.3 | NWZUB | NWZU | SWZDB | SWZD |
| 446 | 117.2 | NWZUB | NWZU | WHDB | WHD |
| 447 | 118.5 | NWZUC | NWZU | EHDC | EHD |
| 448 | 120.7 | NWZUC | NWZU | KS1DC | KS1D |
| 449 | 120.7 | NWZUC | NWZU | KS1DJ | KS1D |
| 450 | 120.7 | NWZUC | NWZU | KS1DN | KS1D |
| 451 | 118.9 | NWZUC | NWZU | KS2DC | KS2D |
| 452 | 118.9 | NWZUC | NWZU | KS2DJ | KS2D |
| 453 | 118.9 | NWZUC | NWZU | KS2DN | KS2D |
| 454 | 119.6 | NWZUC | NWZU | KS3DC | KS3D |
| 455 | 119.6 | NWZUC | NWZU | KS3DJ | KS3D |
| 456 | 119.6 | NWZUC | NWZU | KS3DN | KS3D |
| 457 | 113.3 | NWZUC | NWZU | NEZDC | NEZD |
| 458 | 115.8 | NWZUC | NWZU | NWZDC | NWZD |
| 459 | 115.8 | NWZUC | NWZU | SEZDC | SEZD |

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|-----|-------|-------|------|-------|------|
| 460 | 113.4 | NWZUC | NWZU | SWZDC | SWZD |
| 461 | 117.3 | NWZUC | NWZU | WHDC | WHD |
| 462 | 118.6 | NWZUD | NWZU | EHDD | EHD |
| 463 | 120.8 | NWZUD | NWZU | KS1DD | KS1D |
| 464 | 120.8 | NWZUD | NWZU | KS1DK | KS1D |
| 465 | 120.8 | NWZUD | NWZU | KS1DP | KS1D |
| 466 | 119 | NWZUD | NWZU | KS2DD | KS2D |
| 467 | 119 | NWZUD | NWZU | KS2DK | KS2D |
| 468 | 119 | NWZUD | NWZU | KS2DP | KS2D |
| 469 | 119.7 | NWZUD | NWZU | KS3DD | KS3D |
| 470 | 119.7 | NWZUD | NWZU | KS3DK | KS3D |
| 471 | 119.7 | NWZUD | NWZU | KS3DP | KS3D |
| 472 | 113.4 | NWZUD | NWZU | NEZDD | NEZD |
| 473 | 115.9 | NWZUD | NWZU | NWZDD | NWZD |
| 474 | 115.9 | NWZUD | NWZU | SEZDD | SEZD |
| 475 | 113.5 | NWZUD | NWZU | SWZDD | SWZD |
| 476 | 117.4 | NWZUD | NWZU | WHDD | WHD |
| 477 | 118.7 | NWZUE | NWZU | EHDE | EHD |
| 478 | 120.9 | NWZUE | NWZU | KS1DE | KS1D |
| 479 | 120.9 | NWZUE | NWZU | KS1DE | KS1D |
| 480 | 120.9 | NWZUE | NWZU | KS1DE | KS1D |
| 481 | 119.1 | NWZUE | NWZU | KS2DE | KS2D |
| 482 | 119.1 | NWZUE | NWZU | KS2DE | KS2D |
| 483 | 119.1 | NWZUE | NWZU | KS2DE | KS2D |
| 484 | 119.8 | NWZUE | NWZU | KS3DE | KS3D |
| 485 | 119.8 | NWZUE | NWZU | KS3DE | KS3D |
| 486 | 119.8 | NWZUE | NWZU | KS3DE | KS3D |
| 487 | 113.5 | NWZUE | NWZU | NEZDE | NEZD |
| 488 | 116 | NWZUE | NWZU | NWZDE | NWZD |
| 489 | 116 | NWZUE | NWZU | SEZDE | SEZD |
| 490 | 113.6 | NWZUE | NWZU | SWZDE | SWZD |
| 491 | 117.5 | NWZUE | NWZU | WHDE | WHD |
| 492 | 118.8 | NWZUF | NWZU | EHDF | EHD |
| 493 | 113.6 | NWZUF | NWZU | NEZDF | NEZD |
| 494 | 116.1 | NWZUF | NWZU | NWZDF | NWZD |
| 495 | 116.1 | NWZUF | NWZU | SEZDF | SEZD |
| 496 | 113.7 | NWZUF | NWZU | SWZDF | SWZD |
| 497 | 117.6 | NWZUF | NWZU | WHDF | WHD |
| 498 | 118.1 | SEZUA | SEZU | EHDA | EHD |

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|-----|-------|-------|------|-------|------|
| 499 | 120.3 | SEZUA | SEZU | KS1DA | KS1D |
| 500 | 120.3 | SEZUA | SEZU | KS1DH | KS1D |
| 501 | 120.3 | SEZUA | SEZU | KS1DL | KS1D |
| 502 | 118.5 | SEZUA | SEZU | KS2DA | KS2D |
| 503 | 118.5 | SEZUA | SEZU | KS2DH | KS2D |
| 504 | 118.5 | SEZUA | SEZU | KS2DL | KS2D |
| 505 | 119.2 | SEZUA | SEZU | KS3DA | KS3D |
| 506 | 119.2 | SEZUA | SEZU | KS3DH | KS3D |
| 507 | 119.2 | SEZUA | SEZU | KS3DL | KS3D |
| 508 | 112.9 | SEZUA | SEZU | NEZDA | NEZD |
| 509 | 115.4 | SEZUA | SEZU | NWZDA | NWZD |
| 510 | 115.4 | SEZUA | SEZU | SEZDA | SEZD |
| 511 | 113 | SEZUA | SEZU | SWZDA | SWZD |
| 512 | 116.9 | SEZUA | SEZU | WHDA | WHD |
| 513 | 118.3 | SEZUB | SEZU | EHDB | EHD |
| 514 | 120.5 | SEZUB | SEZU | KS1DB | KS1D |
| 515 | 120.5 | SEZUB | SEZU | KS1DI | KS1D |
| 516 | 120.5 | SEZUB | SEZU | KS1DM | KS1D |
| 517 | 118.7 | SEZUB | SEZU | KS2DB | KS2D |
| 518 | 118.7 | SEZUB | SEZU | KS2DI | KS2D |
| 519 | 118.7 | SEZUB | SEZU | KS2DM | KS2D |
| 520 | 119.4 | SEZUB | SEZU | KS3DB | KS3D |
| 521 | 119.4 | SEZUB | SEZU | KS3DI | KS3D |
| 522 | 119.4 | SEZUB | SEZU | KS3DM | KS3D |
| 523 | 113.1 | SEZUB | SEZU | NEZDB | NEZD |
| 524 | 115.6 | SEZUB | SEZU | NWZDB | NWZD |
| 525 | 115.6 | SEZUB | SEZU | SEZDB | SEZD |
| 526 | 113.2 | SEZUB | SEZU | SWZDB | SWZD |
| 527 | 117.1 | SEZUB | SEZU | WHDB | WHD |
| 528 | 118.3 | SEZUC | SEZU | EHDC | EHD |
| 529 | 120.5 | SEZUC | SEZU | KS1DC | KS1D |
| 530 | 120.5 | SEZUC | SEZU | KS1DJ | KS1D |
| 531 | 120.5 | SEZUC | SEZU | KS1DN | KS1D |
| 532 | 118.7 | SEZUC | SEZU | KS2DC | KS2D |
| 533 | 118.7 | SEZUC | SEZU | KS2DJ | KS2D |
| 534 | 118.7 | SEZUC | SEZU | KS2DN | KS2D |
| 535 | 119.4 | SEZUC | SEZU | KS3DC | KS3D |
| 536 | 119.4 | SEZUC | SEZU | KS3DJ | KS3D |
| 537 | 119.4 | SEZUC | SEZU | KS3DN | KS3D |

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|-----|-------|-------|------|-------|------|
| 538 | 113.1 | SEZUC | SEZU | NEZDC | NEZD |
| 539 | 115.6 | SEZUC | SEZU | NWZDC | NWZD |
| 540 | 115.6 | SEZUC | SEZU | SEZDC | SEZD |
| 541 | 113.2 | SEZUC | SEZU | SWZDC | SWZD |
| 542 | 117.1 | SEZUC | SEZU | WHDC | WHD |
| 543 | 118.4 | SEZUD | SEZU | EHDD | EHD |
| 544 | 120.6 | SEZUD | SEZU | KS1DD | KS1D |
| 545 | 120.6 | SEZUD | SEZU | KS1DK | KS1D |
| 546 | 120.6 | SEZUD | SEZU | KS1DP | KS1D |
| 547 | 118.8 | SEZUD | SEZU | KS2DD | KS2D |
| 548 | 118.8 | SEZUD | SEZU | KS2DK | KS2D |
| 549 | 118.8 | SEZUD | SEZU | KS2DP | KS2D |
| 550 | 119.5 | SEZUD | SEZU | KS3DD | KS3D |
| 551 | 119.5 | SEZUD | SEZU | KS3DK | KS3D |
| 552 | 119.5 | SEZUD | SEZU | KS3DP | KS3D |
| 553 | 113.2 | SEZUD | SEZU | NEZDD | NEZD |
| 554 | 115.7 | SEZUD | SEZU | NWZDD | NWZD |
| 555 | 115.7 | SEZUD | SEZU | SEZDD | SEZD |
| 556 | 113.3 | SEZUD | SEZU | SWZDD | SWZD |
| 557 | 117.2 | SEZUD | SEZU | WHDD | WHD |
| 558 | 118.5 | SEZUE | SEZU | EHDE | EHD |
| 559 | 120.7 | SEZUE | SEZU | KS1DE | KS1D |
| 560 | 120.7 | SEZUE | SEZU | KS1DE | KS1D |
| 561 | 120.7 | SEZUE | SEZU | KS1DE | KS1D |
| 562 | 118.9 | SEZUE | SEZU | KS2DE | KS2D |
| 563 | 118.9 | SEZUE | SEZU | KS2DE | KS2D |
| 564 | 118.9 | SEZUE | SEZU | KS2DE | KS2D |
| 565 | 119.6 | SEZUE | SEZU | KS3DE | KS3D |
| 566 | 119.6 | SEZUE | SEZU | KS3DE | KS3D |
| 567 | 119.6 | SEZUE | SEZU | KS3DE | KS3D |
| 568 | 113.3 | SEZUE | SEZU | NEZDE | NEZD |
| 569 | 115.8 | SEZUE | SEZU | NWZDE | NWZD |
| 570 | 115.8 | SEZUE | SEZU | SEZDE | SEZD |
| 571 | 113.4 | SEZUE | SEZU | SWZDE | SWZD |
| 572 | 117.3 | SEZUE | SEZU | WHDE | WHD |
| 573 | 118.6 | SEZUF | SEZU | EHDF | EHD |
| 574 | 113.4 | SEZUF | SEZU | NEZDF | NEZD |
| 575 | 115.9 | SEZUF | SEZU | NWZDF | NWZD |
| 576 | 115.9 | SEZUF | SEZU | SEZDF | SEZD |

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|-----|-------|-------|------|-------|------|
| 577 | 113.5 | SEZUF | SEZU | SWZDF | SWZD |
| 578 | 117.4 | SEZUF | SEZU | WHDF | WHD |
| 579 | 119 | SWZUA | SWZU | EHDA | EHD |
| 580 | 121.2 | SWZUA | SWZU | KS1DA | KS1D |
| 581 | 121.2 | SWZUA | SWZU | KS1DH | KS1D |
| 582 | 121.2 | SWZUA | SWZU | KS1DL | KS1D |
| 583 | 119.4 | SWZUA | SWZU | KS2DA | KS2D |
| 584 | 119.4 | SWZUA | SWZU | KS2DH | KS2D |
| 585 | 119.4 | SWZUA | SWZU | KS2DL | KS2D |
| 586 | 120.1 | SWZUA | SWZU | KS3DA | KS3D |
| 587 | 120.1 | SWZUA | SWZU | KS3DH | KS3D |
| 588 | 120.1 | SWZUA | SWZU | KS3DL | KS3D |
| 589 | 113.8 | SWZUA | SWZU | NEZDA | NEZD |
| 590 | 116.3 | SWZUA | SWZU | NWZDA | NWZD |
| 591 | 116.3 | SWZUA | SWZU | SEZDA | SEZD |
| 592 | 113.9 | SWZUA | SWZU | SWZDA | SWZD |
| 593 | 117.8 | SWZUA | SWZU | WHDA | WHD |
| 594 | 119.1 | SWZUB | SWZU | EHDB | EHD |
| 595 | 121.3 | SWZUB | SWZU | KS1DB | KS1D |
| 596 | 121.3 | SWZUB | SWZU | KS1DI | KS1D |
| 597 | 121.3 | SWZUB | SWZU | KS1DM | KS1D |
| 598 | 119.5 | SWZUB | SWZU | KS2DB | KS2D |
| 599 | 119.5 | SWZUB | SWZU | KS2DI | KS2D |
| 600 | 119.5 | SWZUB | SWZU | KS2DM | KS2D |
| 601 | 120.2 | SWZUB | SWZU | KS3DB | KS3D |
| 602 | 120.2 | SWZUB | SWZU | KS3DI | KS3D |
| 603 | 120.2 | SWZUB | SWZU | KS3DM | KS3D |
| 604 | 113.9 | SWZUB | SWZU | NEZDB | NEZD |
| 605 | 116.4 | SWZUB | SWZU | NWZDB | NWZD |
| 606 | 116.4 | SWZUB | SWZU | SEZDB | SEZD |
| 607 | 114 | SWZUB | SWZU | SWZDB | SWZD |
| 608 | 117.9 | SWZUB | SWZU | WHDB | WHD |
| 609 | 119.2 | SWZUC | SWZU | EHDC | EHD |
| 610 | 121.4 | SWZUC | SWZU | KS1DC | KS1D |
| 611 | 121.4 | SWZUC | SWZU | KS1DJ | KS1D |
| 612 | 121.4 | SWZUC | SWZU | KS1DN | KS1D |
| 613 | 119.6 | SWZUC | SWZU | KS2DC | KS2D |
| 614 | 119.6 | SWZUC | SWZU | KS2DJ | KS2D |
| 615 | 119.6 | SWZUC | SWZU | KS2DN | KS2D |

| | | | | | |
|-----|-------|-------|------|-------|------|
| 616 | 120.3 | SWZUC | SWZU | KS3DC | KS3D |
| 617 | 120.3 | SWZUC | SWZU | KS3DJ | KS3D |
| 618 | 120.3 | SWZUC | SWZU | KS3DN | KS3D |
| 619 | 114 | SWZUC | SWZU | NEZDC | NEZD |
| 620 | 116.5 | SWZUC | SWZU | NWZDC | NWZD |
| 621 | 116.5 | SWZUC | SWZU | SEZDC | SEZD |
| 622 | 114.1 | SWZUC | SWZU | SWZDC | SWZD |
| 623 | 118 | SWZUC | SWZU | WHDC | WHD |
| 624 | 119.3 | SWZUD | SWZU | EHDD | EHD |
| 625 | 121.5 | SWZUD | SWZU | KS1DD | KS1D |
| 626 | 121.5 | SWZUD | SWZU | KS1DK | KS1D |
| 627 | 121.5 | SWZUD | SWZU | KS1DP | KS1D |
| 628 | 119.7 | SWZUD | SWZU | KS2DD | KS2D |
| 629 | 119.7 | SWZUD | SWZU | KS2DK | KS2D |
| 630 | 119.7 | SWZUD | SWZU | KS2DP | KS2D |
| 631 | 120.4 | SWZUD | SWZU | KS3DD | KS3D |
| 632 | 120.4 | SWZUD | SWZU | KS3DK | KS3D |
| 633 | 120.4 | SWZUD | SWZU | KS3DP | KS3D |
| 634 | 114.1 | SWZUD | SWZU | NEZDD | NEZD |
| 635 | 116.6 | SWZUD | SWZU | NWZDD | NWZD |
| 636 | 116.6 | SWZUD | SWZU | SEZDD | SEZD |
| 637 | 114.2 | SWZUD | SWZU | SWZDD | SWZD |
| 638 | 118.1 | SWZUD | SWZU | WHDD | WHD |
| 639 | 119.4 | SWZUE | SWZU | EHDE | EHD |
| 640 | 121.6 | SWZUE | SWZU | KS1DE | KS1D |
| 641 | 121.6 | SWZUE | SWZU | KS1DE | KS1D |
| 642 | 121.6 | SWZUE | SWZU | KS1DE | KS1D |
| 643 | 119.8 | SWZUE | SWZU | KS2DE | KS2D |
| 644 | 119.8 | SWZUE | SWZU | KS2DE | KS2D |
| 645 | 119.8 | SWZUE | SWZU | KS2DE | KS2D |
| 646 | 120.5 | SWZUE | SWZU | KS3DE | KS3D |
| 647 | 120.5 | SWZUE | SWZU | KS3DE | KS3D |
| 648 | 120.5 | SWZUE | SWZU | KS3DE | KS3D |
| 649 | 114.2 | SWZUE | SWZU | NEZDE | NEZD |
| 650 | 116.7 | SWZUE | SWZU | NWZDE | NWZD |
| 651 | 116.7 | SWZUE | SWZU | SEZDE | SEZD |
| 652 | 114.3 | SWZUE | SWZU | SWZDE | SWZD |
| 653 | 118.2 | SWZUE | SWZU | WHDE | WHD |
| 654 | 119.5 | SWZUF | SWZU | EHDF | EHD |

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|-----|-------|-------|------|-------|------|
| 655 | 114.3 | SWZUF | SWZU | NEZDF | NEZD |
| 656 | 116.8 | SWZUF | SWZU | NWZDF | NWZD |
| 657 | 116.8 | SWZUF | SWZU | SEZDF | SEZD |
| 658 | 114.4 | SWZUF | SWZU | SWZDF | SWZD |
| 659 | 118.3 | SWZUF | SWZU | WHDF | WHD |
| 660 | 118.2 | WHUA | WHU | EHDA | EHD |
| 661 | 120.4 | WHUA | WHU | KS1DA | KS1D |
| 662 | 120.4 | WHUA | WHU | KS1DH | KS1D |
| 663 | 120.4 | WHUA | WHU | KS1DL | KS1D |
| 664 | 118.6 | WHUA | WHU | KS2DA | KS2D |
| 665 | 118.6 | WHUA | WHU | KS2DH | KS2D |
| 666 | 118.6 | WHUA | WHU | KS2DL | KS2D |
| 667 | 119.3 | WHUA | WHU | KS3DA | KS3D |
| 668 | 119.3 | WHUA | WHU | KS3DH | KS3D |
| 669 | 119.3 | WHUA | WHU | KS3DL | KS3D |
| 670 | 113 | WHUA | WHU | NEZDA | NEZD |
| 671 | 115.5 | WHUA | WHU | NWZDA | NWZD |
| 672 | 115.5 | WHUA | WHU | SEZDA | SEZD |
| 673 | 113.1 | WHUA | WHU | SWZDA | SWZD |
| 674 | 117 | WHUA | WHU | WHDA | WHD |
| 675 | 118.3 | WHUB | WHU | EHDB | EHD |
| 676 | 120.5 | WHUB | WHU | KS1DB | KS1D |
| 677 | 120.5 | WHUB | WHU | KS1DI | KS1D |
| 678 | 120.5 | WHUB | WHU | KS1DM | KS1D |
| 679 | 118.7 | WHUB | WHU | KS2DB | KS2D |
| 680 | 118.7 | WHUB | WHU | KS2DI | KS2D |
| 681 | 118.7 | WHUB | WHU | KS2DM | KS2D |
| 682 | 119.4 | WHUB | WHU | KS3DB | KS3D |
| 683 | 119.4 | WHUB | WHU | KS3DI | KS3D |
| 684 | 119.4 | WHUB | WHU | KS3DM | KS3D |
| 685 | 113.1 | WHUB | WHU | NEZDB | NEZD |
| 686 | 115.6 | WHUB | WHU | NWZDB | NWZD |
| 687 | 115.6 | WHUB | WHU | SEZDB | SEZD |
| 688 | 113.2 | WHUB | WHU | SWZDB | SWZD |
| 689 | 117.1 | WHUB | WHU | WHDB | WHD |
| 690 | 118.4 | WHUC | WHU | EHDC | EHD |
| 691 | 120.6 | WHUC | WHU | KS1DC | KS1D |
| 692 | 120.6 | WHUC | WHU | KS1DJ | KS1D |
| 693 | 120.6 | WHUC | WHU | KS1DN | KS1D |

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|-----|-------|------|-----|-------|------|
| 694 | 118.8 | WHUC | WHU | KS2DC | KS2D |
| 695 | 118.8 | WHUC | WHU | KS2DJ | KS2D |
| 696 | 118.8 | WHUC | WHU | KS2DN | KS2D |
| 697 | 119.5 | WHUC | WHU | KS3DC | KS3D |
| 698 | 119.5 | WHUC | WHU | KS3DJ | KS3D |
| 699 | 119.5 | WHUC | WHU | KS3DN | KS3D |
| 700 | 113.2 | WHUC | WHU | NEZDC | NEZD |
| 701 | 115.7 | WHUC | WHU | NWZDC | NWZD |
| 702 | 115.7 | WHUC | WHU | SEZDC | SEZD |
| 703 | 113.3 | WHUC | WHU | SWZDC | SWZD |
| 704 | 117.2 | WHUC | WHU | WHDC | WHD |
| 705 | 118.4 | WHUD | WHU | EHDD | EHD |
| 706 | 120.6 | WHUD | WHU | KS1DD | KS1D |
| 707 | 120.6 | WHUD | WHU | KS1DK | KS1D |
| 708 | 120.6 | WHUD | WHU | KS1DP | KS1D |
| 709 | 118.8 | WHUD | WHU | KS2DD | KS2D |
| 710 | 118.8 | WHUD | WHU | KS2DK | KS2D |
| 711 | 118.8 | WHUD | WHU | KS2DP | KS2D |
| 712 | 119.5 | WHUD | WHU | KS3DD | KS3D |
| 713 | 119.5 | WHUD | WHU | KS3DK | KS3D |
| 714 | 119.5 | WHUD | WHU | KS3DP | KS3D |
| 715 | 113.2 | WHUD | WHU | NEZDD | NEZD |
| 716 | 115.7 | WHUD | WHU | NWZDD | NWZD |
| 717 | 115.7 | WHUD | WHU | SEZDD | SEZD |
| 718 | 113.3 | WHUD | WHU | SWZDD | SWZD |
| 719 | 117.2 | WHUD | WHU | WHDD | WHD |
| 720 | 118.5 | WHUE | WHU | EHDE | EHD |
| 721 | 120.7 | WHUE | WHU | KS1DE | KS1D |
| 722 | 120.7 | WHUE | WHU | KS1DE | KS1D |
| 723 | 120.7 | WHUE | WHU | KS1DE | KS1D |
| 724 | 118.9 | WHUE | WHU | KS2DE | KS2D |
| 725 | 118.9 | WHUE | WHU | KS2DE | KS2D |
| 726 | 118.9 | WHUE | WHU | KS2DE | KS2D |
| 727 | 119.6 | WHUE | WHU | KS3DE | KS3D |
| 728 | 119.6 | WHUE | WHU | KS3DE | KS3D |
| 729 | 119.6 | WHUE | WHU | KS3DE | KS3D |
| 730 | 113.3 | WHUE | WHU | NEZDE | NEZD |
| 731 | 115.8 | WHUE | WHU | NWZDE | NWZD |
| 732 | 115.8 | WHUE | WHU | SEZDE | SEZD |

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|-----|-------|------|-----|-------|------|
| 733 | 113.4 | WHUE | WHU | SWZDE | SWZD |
| 734 | 117.3 | WHUE | WHU | WHDE | WHD |
| 735 | 115.8 | WHUF | WHU | CSBDA | CSBD |
| 736 | 118.6 | WHUF | WHU | EHDF | EHD |
| 737 | 118.9 | WHUF | WHU | GBDA | GBD |
| 738 | 113.4 | WHUF | WHU | NEZDF | NEZD |
| 739 | 115.9 | WHUF | WHU | NWZDF | NWZD |
| 740 | 115.9 | WHUF | WHU | SEZDF | SEZD |
| 741 | 113.5 | WHUF | WHU | SWZDF | SWZD |
| 742 | 117.4 | WHUF | WHU | WHDF | WHD |
| 743 | | CMD1 | CMD | | |
| 744 | | CMD2 | CMD | | |
| 745 | | | | TM1 | TLMO |
| 746 | | | | TM2 | TLMO |
| 747 | | | | TM3 | TLMO |
| 748 | | | | TM4 | TLMO |
| 749 | | | | TM1 | TLMB |
| 750 | | | | TM2 | TLMB |
| 751 | | | | TM3 | TLMB |
| 752 | | | | TM4 | TLMB |
| 753 | | | | BC1 | BNC |
| 754 | | | | BK1 | BNK1 |
| 755 | | | | BK2 | BNK2 |
| 756 | | | | BK3 | BNK3 |
| 757 | | | | BK4 | BNK4 |
| 758 | | | | BK5 | BNK5 |
| 759 | | | | BK6 | BNK3 |
| 760 | | | | BK7 | BNK4 |
| 761 | | | | BK8 | BNK5 |

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

| (a) Digital Mod. ID | (b) Emission Designator | (c) Assigned Bandwidth (kHz) | (d) No. of Phases | (e) Uncoded Data Rate (kbps) | (f) FEC Error Correction Coding Rate | (g) CDMA Processing Gain (dB) | (h) Total C/N Performance Objective (dB) | (i) Single Entry C/I Objective (dB) |
|---------------------|-------------------------|------------------------------|-------------------|------------------------------|--------------------------------------|-------------------------------|--|-------------------------------------|
| D1 | 346KG7W | 346 | 4 | 256 | 0.5 | | 6 | 18.2 |
| D2 | 461KG7W | 461 | 4 | 512 | 0.75 | | 9.3 | 21.5 |
| D3 | 1M84G7W | 1840 | 4 | 2048 | 0.75 | | 9.3 | 21.5 |
| D4 | 8M25G7W | 8250 | 4 | 8448 | 0.692 | | 6.9 | 19.1 |
| D5 | 36M0G7W | 36000 | 4 | 41470 | 0.692 | | 6.9 | 19.1 |
| D6 | 72M0G7W | 72000 | 4 | 155000 | 0.816 | | 12.7 | 24.9 |

FEDERAL COMMUNICATIONS COMMISSION
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FCC Form 312 - Schedule S: (Technical and Operational Description)

S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

| (a) Analog Mod. ID | (b) Emission Designator | (c) Assigned Bandwidth (kHz) | (d) Signal Type | (e) Channels per Carrier | Multi-channel Telephony | | | | (j) Video Standard NTSC, PAL, etc. | (k) Video Noise- Weighting (dB) | (l) Video and SCPC/FM Modulation Index | (m) SCPC/FM Compander, Preemphasis, and Noise Weighting (dB) | (n) Total C/N Performance Objective (dB) | (o) Single Entry C/I Objective (dB) |
|--------------------------|----------------------------|---------------------------------------|--------------------|--------------------------------|---|---------------------------------------|------------------------------------|--------------------------------|---|--|--|--|---|--|
| | | | | | (f) Ave. Companded Talker Level (dBm0) | (g) Bottom Baseband Freq. (MHz) | (h) Top Baseband Freq. (MHz) | (i) RMS Modulation Index | | | | | | |
| A1 | 36M0F3F | 36000 | TV/FM | 1 | | | | | PAL | 13.2 | 1.5 | | 10 | 22.2 |
| TCM | 800KF9D | 800 | | 1 | | | | | | | | | 10 | 22.2 |
| TM | 300KF9D | 300 | | 1 | | | | | | | | | 3 | 15.4 |
| BC | 25K0N0N | 25 | | 1 | | | | | | | | | 3 | 15.4 |
| BK | 25K0N0N | 25 | | 1 | | | | | | | | | 3 | 15.4 |

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S13. TYPICAL EMISSIONS For each planned type of emission provide:

| Associated Transponder ID Range (a) Start (b) End | | Modulation ID | | (e) Carriers per Transponder | (f) Carrier Spacing (kHz) | (g) Noise Budget Reference (Table No.) | (h) Energy Dispersal Bandwidth (kHz) | Receive Band (Assoc. Transmit Stn) | | | Transmit Band (This Space Station) | | | |
|--|-----|-------------------------|------------------------|------------------------------|---------------------------|--|--------------------------------------|---|-------------------------------------|----------|------------------------------------|----------|---|--------------------------------|
| | | (c) Digital (Table S11) | (d) Analog (Table S12) | | | | | (i) Assoc. Stn. Max. Antenna Gain (dBi) | Assoc. Station Transmit Power (dBW) | | EIRP (dBW) | | (n) Max. Power Flux Density (dBW/m2/Hz) | (o) Assoc. Stn Rec. G/T (dB/K) |
| | | | | | | | | | (j) Min. | (k) Max. | (l) Min. | (m) Max. | | |
| 1 | 742 | D1 | | 87 | 346 | G_G.xls | | 51.6 | -2 | 1 | 8.4 | 11.4 | -168.8 | 24 |
| 1 | 742 | D2 | | 50 | 461 | G_G.xls | | 47.5 | 4.6 | 7.6 | 10.8 | 13.8 | -167.6 | 27.1 |
| 1 | 742 | D3 | | 6 | 1840 | G_G.xls | | 55.3 | 6.1 | 9.1 | 20.2 | 23.2 | -164.3 | 22.6 |
| 1 | 742 | D4 | | 3 | 8250 | G_G.xls | | 51.6 | 12.7 | 15.7 | 23.1 | 26.1 | -167.9 | 24 |
| 1 | 742 | D5 | | 1 | | G_G.xls | | 56.7 | 21 | 24 | 30.8 | 33.8 | -167.1 | 22.6 |
| 1 | 742 | | A1 | 1 | | G_G.xls | | 56.8 | 18.8 | 21.8 | 30.4 | 33.4 | -155.7 | 27.1 |
| 1 | 742 | D1 | | 87 | 346 | H_G.xls | | 47.5 | 2 | 5 | 8.5 | 11.5 | -168.7 | 24 |
| 1 | 742 | D2 | | 48 | 461 | H_G.xls | | 51.6 | 0.4 | 3.4 | 11.1 | 14.1 | -167.3 | 27 |
| 1 | 742 | D3 | | 7 | 1840 | H_G.xls | | 55.3 | 5.3 | 8.3 | 19.6 | 22.6 | -164.9 | 24 |
| 1 | 742 | D4 | | 3 | 8250 | H_G.xls | | 47.5 | 16.8 | 19.8 | 23.3 | 26.3 | -167.7 | 24 |
| 1 | 742 | D5 | | 1 | | H_G.xls | | 56.8 | 22.1 | 25.1 | 30.9 | 33.9 | -167 | 22.6 |
| 1 | 742 | | A1 | 1 | | H_G.xls | | 56.3 | 14.8 | 17.8 | 30.9 | 33.9 | -155.2 | 27.1 |
| 1 | 742 | D1 | | 87 | 346 | G_H.xls | | 47.5 | -0.8 | 2.2 | 12.2 | 15.2 | -165 | 22.5 |
| 1 | 742 | D2 | | 11 | 461 | G_H.xls | | 55.3 | 0.4 | 3.4 | 21.3 | 24.3 | -163.2 | 24 |
| 1 | 742 | D3 | | 3 | 1840 | G_H.xls | | 47.5 | 13.9 | 16.9 | 27 | 30 | -164 | 22.5 |
| 1 | 742 | D4 | | 1 | | G_H.xls | | 56.8 | 17.2 | 20.2 | 34.6 | 37.6 | -163.3 | 22.5 |
| 1 | 742 | | A1 | 1 | | G_H.xls | | 56.8 | 18.8 | 21.8 | 34.2 | 37.2 | -151.9 | 24 |
| 1 | 742 | D1 | | 107 | 346 | H_H.xls | | 47.2 | -0.6 | 2.4 | 11 | 14 | -166.2 | 22.6 |
| 1 | 742 | D2 | | 59 | 461 | H_H.xls | | 51.3 | -2.1 | 0.9 | 13.6 | 16.6 | -164.8 | 24 |
| 1 | 742 | D3 | | 15 | 1840 | H_H.xls | | 55 | 0.2 | 3.2 | 19.6 | 22.6 | -164.9 | 24 |
| 1 | 742 | D4 | | 4 | 8250 | H_H.xls | | 47.2 | 13.2 | 16.2 | 24.8 | 27.8 | -166.2 | 22.5 |
| 1 | 742 | D6 | | 1 | | H_H.xls | | 56.4 | 21.5 | 24.5 | 34.3 | 37.3 | -166.8 | 27 |
| 1 | 742 | | A1 | 2 | 36000 | H_H.xls | | 56.3 | 13.8 | 16.8 | 33.3 | 36.3 | -152.8 | 24 |
| 1 | 742 | D1 | | 138 | 346 | Z_H.xls | | 47.3 | -2.1 | 0.9 | 10.6 | 13.6 | -166.6 | 22.5 |
| 1 | 742 | D2 | | 83 | 461 | Z_H.xls | | 51.4 | -4.1 | -1.1 | 12.8 | 15.8 | -165.6 | 24 |
| 1 | 742 | D3 | | 21 | 1840 | Z_H.xls | | 55.1 | -1.7 | 1.3 | 18.8 | 21.8 | -165.7 | 24 |
| 1 | 742 | D4 | | 5 | 8250 | Z_H.xls | | 47.3 | 12 | 15 | 24.7 | 27.7 | -166.3 | 22.5 |
| 1 | 742 | D6 | | 1 | | Z_H.xls | | 56.6 | 21.7 | 24.7 | 35 | 38 | -166.1 | 26.1 |
| 1 | 742 | | A1 | 2 | 36000 | Z_H.xls | | 56.6 | 14.6 | 17.6 | 32.8 | 35.8 | -153.3 | 24 |

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|---|-----|----|----|-----|-------|-------------|--|------|------|------|------|------|--------|------|
| 1 | 742 | D1 | | 69 | 346 | KSPOT_H.xls | | 49.6 | -5 | 0 | 10.6 | 15.6 | -164.6 | 22.6 |
| 1 | 742 | D2 | | 48 | 461 | KSPOT_H.xls | | 49.1 | -3 | 2 | 12.2 | 17.2 | -164.2 | 26.1 |
| 1 | 742 | D3 | | 11 | 1840 | KSPOT_H.xls | | 52.9 | -0.2 | 4.8 | 18.7 | 23.7 | -163.8 | 26.1 |
| 1 | 742 | D4 | | 3 | 8250 | KSPOT_H.xls | | 49.1 | 9.3 | 14.3 | 24.4 | 29.4 | -164.6 | 24 |
| 1 | 742 | D6 | | 1 | | KSPOT_H.xls | | 56.5 | 19.1 | 24.1 | 32 | 37 | -167.1 | 30.2 |
| 1 | 742 | | A1 | 2 | 36000 | KSPOT_H.xls | | 56.5 | 10.9 | 15.9 | 28.4 | 33.4 | -155.7 | 30.2 |
| 1 | 742 | D1 | | 162 | 346 | H_Z.xls | | 47.3 | -1.5 | 1.5 | 9.8 | 12.8 | -167.4 | 22.5 |
| 1 | 742 | D2 | | 76 | 461 | H_Z.xls | | 51.4 | -2.2 | 0.8 | 13.1 | 16.1 | -165.3 | 24 |
| 1 | 742 | D3 | | 18 | 1840 | H_Z.xls | | 55.1 | 0.3 | 3.3 | 19.4 | 22.4 | -165.1 | 24 |
| 1 | 742 | D4 | | 5 | 8250 | H_Z.xls | | 47.3 | 13.3 | 16.3 | 24.6 | 27.6 | -166.4 | 22.5 |
| 1 | 742 | D6 | | 1 | | H_Z.xls | | 56.6 | 23.3 | 26.3 | 34.9 | 37.9 | -166.2 | 27.3 |
| 1 | 742 | | A1 | 2 | 36000 | H_Z.xls | | 56.6 | 15.6 | 18.6 | 33.6 | 36.6 | -152.5 | 24 |
| 1 | 742 | D1 | | 151 | 346 | Z_Z.xls | | 47.3 | -2.2 | 0.8 | 9.2 | 12.2 | -168 | 22.5 |
| 1 | 742 | D2 | | 78 | 461 | Z_Z.xls | | 51.4 | -3.4 | -0.4 | 12.1 | 15.1 | -166.3 | 24 |
| 1 | 742 | D3 | | 18 | 1840 | Z_Z.xls | | 55.1 | -0.8 | 2.2 | 18.4 | 21.4 | -166.1 | 24 |
| 1 | 742 | D4 | | 5 | 8250 | Z_Z.xls | | 47.3 | 12.6 | 15.6 | 23.9 | 26.9 | -167.1 | 22.5 |
| 1 | 742 | D6 | | 1 | | Z_Z.xls | | 56.6 | 19.4 | 22.4 | 34 | 37 | -167.1 | 27.3 |
| 1 | 742 | | A1 | 2 | 36000 | Z_Z.xls | | 56.6 | 11.2 | 14.2 | 33.6 | 36.6 | -152.5 | 24 |
| 1 | 742 | D1 | | 52 | 346 | KSPOT_Z.xls | | 49.5 | -6.3 | -0.3 | 10.8 | 16.8 | -163.4 | 22.6 |
| 1 | 742 | D2 | | 7 | 461 | KSPOT_Z.xls | | 49.1 | -4.1 | 1.9 | 12.6 | 18.6 | -162.8 | 26.1 |
| 1 | 742 | D3 | | 9 | 1840 | KSPOT_Z.xls | | 52.8 | -1.8 | 4.2 | 18.7 | 24.7 | -162.8 | 26.1 |
| 1 | 742 | D4 | | 2 | 8250 | KSPOT_Z.xls | | 46.5 | 10.2 | 16.2 | 24.3 | 30.3 | -163.7 | 24 |
| 1 | 742 | D6 | | 1 | | KSPOT_Z.xls | | 54.5 | 18.6 | 24.6 | 31 | 37 | -167.1 | 30.2 |
| 1 | 742 | | A1 | 2 | 36000 | KSPOT_Z.xls | | 56.5 | 8.3 | 14.3 | 28.8 | 34.8 | -154.3 | 30.2 |
| 1 | 742 | D1 | | 129 | 346 | H_KSPOT.xls | | 45.8 | 0 | 5 | 20.9 | 25.9 | -154.3 | 26 |
| 1 | 742 | D2 | | 85 | 461 | H_KSPOT.xls | | 47.3 | 0.2 | 5.2 | 22.7 | 27.7 | -153.7 | 29.7 |
| 1 | 742 | D3 | | 21 | 1840 | H_KSPOT.xls | | 47.3 | 6.2 | 11.2 | 28.7 | 33.7 | -153.8 | 29.7 |
| 1 | 742 | D4 | | 5 | 8250 | H_KSPOT.xls | | 53.4 | 6.8 | 11.8 | 35.3 | 40.3 | -153.7 | 26 |
| 1 | 742 | D6 | | 1 | | H_KSPOT.xls | | 53.4 | 23.5 | 28.5 | 45 | 50 | -154.1 | 31.4 |
| 1 | 742 | | A1 | 2 | 36000 | H_KSPOT.xls | | 53.4 | 15.6 | 20.6 | 36.2 | 41.2 | -147.9 | 32.6 |
| 1 | 742 | D1 | | 145 | 346 | Z_KSPOT.xls | | 45.8 | -1.9 | 3.1 | 20.2 | 25.2 | -155 | 26 |
| 1 | 742 | D2 | | 98 | 461 | Z_KSPOT.xls | | 47.2 | -1.6 | 3.4 | 21.9 | 26.9 | -154.5 | 29.7 |
| 1 | 742 | D3 | | 25 | 1840 | Z_KSPOT.xls | | 47.3 | 4.4 | 9.4 | 27.9 | 32.9 | -154.6 | 29.7 |
| 1 | 742 | D4 | | 5 | 8250 | Z_KSPOT.xls | | 53.4 | 5.3 | 10.3 | 34.9 | 39.9 | -154.1 | 26 |
| 1 | 742 | D6 | | 1 | | Z_KSPOT.xls | | 53.2 | 22.5 | 27.5 | 44.8 | 49.8 | -154.3 | 31.4 |
| 1 | 742 | | A1 | 2 | 36000 | Z_KSPOT.xls | | 53.2 | 11.4 | 16.4 | 36.2 | 41.2 | -147.9 | 32.6 |
| 1 | 742 | D1 | | 174 | 346 | KSPOT_KSPO | | 54.5 | -3 | 1 | 22.5 | 26.5 | -153.7 | 23.3 |
| 1 | 742 | D2 | | 98 | 461 | KSPOT_KSPO | | 52.8 | 1.2 | 5.2 | 25 | 29 | -152.4 | 25.8 |
| 1 | 742 | D3 | | 24 | 1840 | KSPOT_KSPO | | 62.4 | -2.3 | 1.7 | 31.1 | 35.1 | -152.4 | 25.8 |

| | | | | | | | | | | | | | | |
|-----|-----|----|-----|----|-------|----------------|--|------|------|------|------|------|--------|------|
| 1 | 742 | D4 | | 9 | 8250 | KSPOT_KSPO | | 54.5 | 9.7 | 13.7 | 35.2 | 39.2 | -154.8 | 25.8 |
| 1 | 742 | D6 | | 1 | | KSPOT_KSPO | | 62.4 | 16.5 | 20.5 | 47.9 | 51.9 | -152.2 | 29.6 |
| 1 | 742 | | A1 | 2 | 36000 | KSPOT_KSPO | | 63.9 | 10.5 | 14.5 | 37.1 | 41.1 | -148 | 30.5 |
| 1 | 742 | D1 | | 87 | 346 | G_CSPOT.xls | | 47.5 | -1.8 | 2.2 | 12.2 | 16.2 | -164 | 22.5 |
| 1 | 742 | D2 | | 11 | 461 | G_CSPOT.xls | | 55.3 | -0.6 | 3.4 | 21.3 | 25.3 | -162.2 | 24 |
| 1 | 742 | D3 | | 3 | 1840 | G_CSPOT.xls | | 47.5 | 12.9 | 16.9 | 27 | 31 | -163 | 22.5 |
| 1 | 742 | D4 | | 1 | | G_CSPOT.xls | | 56.8 | 16.2 | 20.2 | 34.6 | 38.6 | -162.3 | 22.5 |
| 1 | 742 | | A1 | 1 | | G_CSPOT.xls | | 56.8 | 17.8 | 21.8 | 34.2 | 38.2 | -150.9 | 24 |
| 1 | 742 | D1 | | 91 | 346 | CSPOT_H.xls | | 47.2 | -1.6 | 2.4 | 11 | 15 | -165.2 | 22.6 |
| 1 | 742 | D2 | | 50 | 461 | CSPOT_H.xls | | 51.3 | -3.1 | 0.9 | 13.6 | 17.6 | -163.8 | 24 |
| 1 | 742 | D3 | | 13 | 1840 | CSPOT_H.xls | | 55 | -0.8 | 3.2 | 19.6 | 23.6 | -163.9 | 24 |
| 1 | 742 | D4 | | 4 | 8250 | CSPOT_H.xls | | 47.2 | 12.2 | 16.2 | 24.8 | 28.8 | -165.2 | 22.5 |
| 1 | 742 | D5 | | 1 | | CSPOT_H.xls | | 56.8 | 16.2 | 20.2 | 33.6 | 37.6 | -163.3 | 22.5 |
| 1 | 742 | | A1 | 1 | | CSPOT_H.xls | | 56.3 | 12.8 | 16.8 | 33.3 | 37.3 | -151.8 | 24 |
| 1 | 742 | D1 | | 91 | 346 | H_CSPOT.xls | | 47.2 | -2.6 | 2.4 | 11 | 16 | -164.2 | 22.6 |
| 1 | 742 | D2 | | 50 | 461 | H_CSPOT.xls | | 51.3 | -4.1 | 0.9 | 13.6 | 18.6 | -162.8 | 24 |
| 1 | 742 | D3 | | 13 | 1840 | H_CSPOT.xls | | 55 | -1.8 | 3.2 | 19.6 | 24.6 | -162.9 | 24 |
| 1 | 742 | D4 | | 4 | 8250 | H_CSPOT.xls | | 47.2 | 11.2 | 16.2 | 24.8 | 29.8 | -164.2 | 22.5 |
| 1 | 742 | D5 | | 1 | | H_CSPOT.xls | | 56.8 | 15.2 | 20.2 | 33.6 | 38.6 | -162.3 | 22.5 |
| 1 | 742 | | A1 | 1 | | H_CSPOT.xls | | 56.3 | 11.8 | 16.8 | 33.3 | 38.3 | -150.8 | 24 |
| 1 | 742 | D1 | | 87 | 346 | CSPOT_G.xls | | 47.5 | 2 | 5 | 8.5 | 11.5 | -168.7 | 24 |
| 1 | 742 | D2 | | 48 | 461 | CSPOT_G.xls | | 51.6 | 0.4 | 3.4 | 11.1 | 14.1 | -167.3 | 27 |
| 1 | 742 | D3 | | 7 | 1840 | CSPOT_G.xls | | 55.3 | 5.3 | 8.3 | 19.6 | 22.6 | -164.9 | 24 |
| 1 | 742 | D4 | | 3 | 8250 | CSPOT_G.xls | | 47.5 | 16.8 | 19.8 | 23.3 | 26.3 | -167.7 | 24 |
| 1 | 742 | D5 | | 1 | | CSPOT_G.xls | | 56.8 | 22.1 | 25.1 | 30.9 | 33.9 | -167 | 22.6 |
| 1 | 742 | | A1 | 1 | | CSPOT_G.xls | | 56.3 | 14.8 | 17.8 | 30.9 | 33.9 | -155.2 | 27.1 |
| 1 | 742 | D1 | | 87 | 346 | CSPOT_CSPO | | 47.5 | -1.8 | 2.2 | 12.2 | 16.2 | -164 | 22.5 |
| 1 | 742 | D2 | | 11 | 461 | CSPOT_CSPO | | 55.3 | -0.6 | 3.4 | 21.3 | 25.3 | -162.2 | 24 |
| 1 | 742 | D3 | | 3 | 1840 | CSPOT_CSPO | | 47.5 | 12.9 | 16.9 | 27 | 31 | -163 | 22.5 |
| 1 | 742 | D4 | | 1 | | CSPOT_CSPO | | 56.8 | 16.2 | 20.2 | 34.6 | 38.6 | -162.3 | 22.5 |
| 1 | 742 | | A1 | 1 | | CSPOT_CSPO | | 56.8 | 17.8 | 21.8 | 34.2 | 38.2 | -150.9 | 24 |
| 743 | 744 | | TCM | 1 | | TTC_budgets.xl | | 55.8 | 13.7 | 19.7 | | | | |
| 745 | 752 | | TM | 1 | | TTC_budgets.xl | | | | | -0.3 | 8.2 | -171.9 | 32.6 |
| 753 | 753 | | BC | 1 | | TTC_budgets.xl | | | | | 4 | 11.5 | -158.6 | 27.1 |
| 754 | 761 | | BK | 1 | | TTC_budgets.xl | | | | | 12 | 18 | -152.1 | 29.4 |

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): #Error

Remote Control (TT C) Location(s):

| | | | |
|---|---------------|--|-----------------|
| S14a: Street Address: L-6815 Château de Betzdorf | | | |
| S14b. City: Betzdorf | S14c. County: | S14d. State/Country | S14e. Zip Code: |
| S14f. Telephone Number: +352 710 725 8253 | | S14g. Call Sign of Control Station (if appropriate): | |

Remote Control (TT C) Location(s):

| | | | |
|--|--------------------------|---|--------------------------|
| S14a: Street Address: 2323 Grimville Road | | | |
| S14b. City: Mouint Airy | S14c. County: Carroll | S14d. State/Country MD | S14e. Zip Code: 21771 |
| S14f. Telephone Number: +1 410 970 7501 | | S14g. Call Sign of Control Station (if appropriate): E070181 | |

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

Page 11:
Characteristics and
Certifications

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

| | | |
|---|-----------------------------------|---|
| S15a. Mass of spacecraft without fuel (kg): 1457.7 | Spacecraft Dimensions (meters) | Probability of Survival to End of Life (0.0 - 1.0) |
| S15b. Mass of fuel and disposables at launch (kg): 2200.7 | | |
| S15c. Mass of spacecraft and fuel at launch (kg): 3658.4 | S15f. Length (m): 21.84 | S15i. Payload: |
| S15d. Mass of fuel, in orbit, at beginning of life (kg): 476 | S15g. Width (m): 7.95 | S15j. Bus: |
| S15e. Deployed Area of Solar Array (square meters): 37.4 | S15h. Height (m): 4.77 | S15k. Total: |

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

| Spacecraft Subsystem | Electrical Power (Watts) At Beginning of Life | | Electrical Power (Watts) At End of Life | |
|---------------------------------|---|-------------|---|-------------|
| | At Equinox | At Solstice | At Equinox | At Solstice |
| Payload (Watts): | (a): 2693 | (f): 2693 | (k): 2693 | (p): 2693 |
| Bus (Watts): | (b): 1136 | (g): 795 | (l): 1136 | (q): 795 |
| Total (Watts): | (c): 3829 | (h): 3488 | (m): 3829 | (r): 3488 |
| Solar Array (Watts): | (d): 4780 | (i): 4213 | (n): 3963 | (s): 3480 |
| Depth of Battery Discharge (%): | (e) 67.4 % | (j) 67.4 % | (o) 70 % | (t) 70 % |

S17. CERTIFICATIONS:

| | | | |
|--|---|-----------------------------|---|
| a. Are the power flux density limits of § 25.208 met? | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |
| b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met? | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input checked="" type="checkbox"/> N/A |
| c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met? | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> N/A |

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.