

## GEN 2. TABLES AND CODES

### GEN 2.1 MEASURING SYSTEM, AIRCRAFT MARKINGS, HOLIDAYS

#### ☛ GEN 2.1.1 Units of measurement

The table of units of measurement show below will be used by aeronautical stations within MONTEVIDEO FIR for air and ground operations.

| <i>For measurement of</i>   | <i>Units used</i>                            |
|---|--|
| Distance used in navigation, position reporting, etc. – generally in excess of 2 nautical miles | Kilometres; Nautical Miles and tenths        |
| Relatively short distances such as those relating to aerodromes (e.g. runway lengths)           | Metres                                       |
| Altitudes, elevations and heights   | Metres; Feet                                 |
| Horizontal speed including wind speed   | Kilometres/Hour; Knots                       |
| Vertical speed  | Metres/Second; Feet per minute               |
| Wind direction for landing and taking off   | Degrees Magnetic                             |
| Wind direction except for landing and taking off  | Degrees True                                 |
| Visibility including runway visual range  | Kilometres or metres                         |
| Altimeter setting   | Hectopascals                                 |
| Temperature   | Degrees Celsius                              |
| Weight  | Metric tones or Kilogrammes                  |
| Time  | Hours and minutes, beginning at midnight UTC |

#### ☛ GEN 2.1.2 Temporal reference system

##### **General**

Co-ordinated Universal Time (UTC) is used by air navigation services and in publications issued by the Aeronautical Information Service. Reporting of time is expressed to the nearest minute, e.g. 12:40:35 is reported as 1241.

☛  
Local time in Uruguay is UTC less 3 (UTC – 3).

### ☛ GEN 2.1.3 Horizontal reference system

#### 3.1 *Name/designation of datum*

All published geographical coordinates indicating latitude and longitude are expressed in terms of the World Geodetic System – 1984 (WGS-84) geodetic reference datum.

#### ☛ 3.2 *Parameters of the Projection*

☛ Projection is expressed in term of Lambert Conic Conformal.

#### ☛ 3.3 *Ellipsoid*

☛ An ellipsoid is expressed in terms of the World Geodetic System — 1984 (WGS-84) ellipsoid.

#### ☛ 3.4 *Datum*

☛ The World Geodetic System — 1984 (WGS-84) is used.

#### ☛ 3.5 *Area of application*

The area of application for the published geographical coordinates coincides with the area of responsibility of the Aeronautical Information Service, i.e. the entire territory of Uruguay as well as the airspace over the high seas encompassed by the MONTEVIDEO Flight Information Region in accordance with the regional air navigation agreement.

#### ☛ 3.6 *Use of an asterisk to identify published geographical coordinates*

An asterisk (\*) will be used to identify those published geographical coordinates which have been transformed into WGS-84 coordinates but whose accuracy of original field work does not meet the requirements in Annex 11, Chapter 2 and Annex 14, Volumes I and II, Chapter 2. Specifications for determination and reporting of WGS-84 coordinates are given in Annex 11, Chapter 2 and in Annex 14, Volumes I and II, Chapter 2.

### ☛ GEN 2.1.4 Vertical reference system

#### ☛ 4.1 *Name/designation of datum*

☛ The vertical reference system corresponds to mean sea level (MSL).

✎ 4.2 *Geoid model*

- ✎ The geoid model used is the Earth Gravitational Model 1996 — (EGM-96)

## ✎ GEN 2.1.5 Aircraft nationality and registration marks

The nationality mark for aircraft registered in Uruguay is the letter CX. The nationality mark is followed by a hyphen and a registration mark consisting of 3 letters, e.g. CX-AAA.

## ✎ GEN 2.1.6 Public holidays

| <i>Name</i>                        | <i>Date/Day</i>                            |
|------------------------------------|--|
| New Year's Day                     | 01 JAN                                     |
| Children Day                       | 06 JAN *                                   |
| Carnival                           | 40 days before Easter (Monday and Tuesday) |
| Easter                             | (From Monday to Friday)                    |
| Disembarkation of the 33 Orientals | 19 APR                                     |
| Labour Day                         | 01 MAY                                     |
| Las Piedras Battle                 | 18 MAY                                     |
| Artigas birthday                   | 19 JUN                                     |
| Constitution day                   | 18 JUL *                                   |
| Independence day                   | 25 AUG                                     |
| America's day                      | 12 OCT                                     |
| All Soul's day                     | 02 NOV                                     |
| Christmas Eve                      | 25 DEC                                     |

*Note: The public holidays are not labor days, but for private companies the ones marked by asterisk (\*) are optional.*

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## GEN 2.2 ABBREVIATIONS USED IN AIS PUBLICATIONS

|        |   |         |  |
|--------|---|---------|--|
| A      |   | ADS-C+  | Automatic dependent surveillance - contract  |
| A      | Amber   | ADSU    | Automatic dependent surveillance unit  |
| AAA    | <i>(or AAB, AAC, ... etc., in sequence) Amended meteorological message (message type designator)</i>  | ADVS    | Advisory service   |
| A/A    | Air-to-air  | ADZ     | Advise   |
| AAD    | Assigned altitude deviation   | AES     | Aircraft earth station   |
| AAIM   | Aircraft autonomous integrity monitoring  | AFIL    | Flight plan filed in the air   |
| AAL    | Above aerodrome level   | AFIS    | Aerodrome flight information service   |
| ☛AAR   | Air to air refuelling   | AFM     | Yes <i>or</i> affirm <i>or</i> affirmative <i>or</i> that is correct   |
| ABI    | Advance boundary information  | AFS     | Aeronautical fixed service   |
| ABC    | Abbreviations and codes   | AFT ... | After . . . ( <i>time or place</i> )   |
| ABM    | Abeam   | AFTN+   | Aeronáuticas Aeronautical fixed telecommunication network  |
| ABN    | Aerodrome beacon  | A/G     | Air-to-ground  |
| ABT    | About   | AGA     | Aerodromes, air routes and ground aids   |
| ABV... | Above ...   | AGL     | Above ground level   |
| AC     | Alto cumulus  | AGMC    | Aerodrome Ground Movement Chart  |
| ACARS† | <i>(to be pronounced "AY-CARS")</i> Aircraft communication addressing and reporting system  | AGN     | Again  |
| ACAS†  | Airborne collision avoidance system   | AIC     | Aeronautical information circular  |
| ACC+   | Area control centre <i>or</i> area control  | AIDC    | Air traffic services interfacility data Communications   |
| ACCID  | Notification of an aircraft accident  | ☛AIM    | Aeronautical information management  |
| ACFT   | Aircraft  | AIP     | Aeronautical information publication   |
| ACK    | Acknowledge   | AIRAC   | Aeronáutica Aeronautical information regulation and control  |
| ACL    | Altimeter check location  | AIREP†  | Air-report   |
| ACN    | Aircraft classification number  | AIRMET† | Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations |
| ACP    | Acceptance ( <i>message type designator</i> )   | AIS     | Aeronautical information services  |
| ACPT   | Accept <i>or</i> accepted   | ALA     | Lighting area  |
| ACT    | Active <i>or</i> activated <i>or</i> activity   | ALERFA† | Alert phase  |
| AD     | Aerodrome   | ALR     | Alerting ( <i>message type designator</i> )  |
| ADA    | Advisory area   | ALRS    | Alerting service   |
| ADC    | Aerodrome chart   | ALS     | Approach lighting system   |
| ADDN   | Addition <i>or</i> additional   | ALT     | Altitude   |
| ADF+   | Automatic direction-finding equipment   | ALTN    | Alternate <i>o</i> alternanting ( <i>light alternates in colour</i> )  |
| ADIZ†  | <i>(to be pronounced "AY-DIZ")</i> Air defence identification zone  | ALTN    | Alternate ( <i>aerodrome</i> )   |
| ADJ    | Adjacent  | AMA     | Area minimum altitude  |
| ADO    | Aerodrome office ( <i>specify service</i> )   | AMD     | Amend <i>or</i> amended ( <i>used to indicate amended meteorological message; message type designator</i> )    |
| ADR    | Advisory route  | AMDT    | Amendment ( <i>AIP Amendment</i> )   |
| ADS*   | The address ( <i>when this abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI ADS</i> ) ( <i>to be used in AFS as a procedure signal</i> ) | AMS     | Aeronautical mobile service  |
| ADS-B+ | Automatic dependent surveillance - broadcast  | AMSL    | Above mean sea level   |
|        |   | AMSS    | Aeronautical mobile satellite service  |

|         |  |            |   |
|---------|--|------------|---|
| ANC...  | Aeronautical chart - 1:500.000 <i>(followed by name/title)</i>   | ASPH       | Asphalt   |
| ANCS... | Aeronautical navigation chart — small scale <i>(followed by name/title and scale)</i>  | AT...      | At <i>(followed by time at which weather change is forecast to occur)</i>                     |
| ANS     | Answer   | ATA+       | Actual time of arrival  |
| AOC ... | Aerodrome obstacle chart <i>(followed by type and name/title)</i>  | ATC+       | Air traffic control <i>(in general)</i>   |
| ☛AO     | Aircraft operator  | ATCSMAC... | Air traffic control surveillance minimum altitude chart <i>(followed by name/title)</i>       |
| AP      | Airport  | ATD+       | Actual time of departure  |
| APAPI † | <i>(to be pronounced "AY-PAPI")</i> Abbreviated precision approach path indicator  | ATFM       | Air traffic flow management   |
| APC     | Aircraft parking/docking chart   | ATIS†      | Automatic terminal information service  |
| APCH    | Approach   | ATM        | Air traffic management  |
| APDC... | Aircraft parking/docking chart <i>(followed by name/title)</i>   | ATN        | Aeronautical telecommunication network  |
| APN     | Apron  | ATP ...    | At... <i>(time or place)</i>  |
| APP     | Approach control office <i>or</i> approach control <i>or</i> approach control service  | ATS        | Air traffic services  |
| APR     | April  | ATTN       | Attention   |
| APRX    | Approximate <i>o</i> approximately   | AT-VASIS†  | <i>(to be pronounced "AY-TEE-VASIS")</i> Abbreviated T visual approach slope indicator system |
| APSG    | After passing  | ATZ        | Aerodrome traffic zone  |
| ☛APU    | Auxiliary power unit   | AUG        | August  |
| ☛APV    | Approach procedure with vertical guidance  | AUTH       | Authorized <i>or</i> authorization  |
| ARC     | Area chart <i>(followed by the area represented)</i>   | ☛AUTO      | Automatic   |
| ARFOR   | Area forecast <i>(aeronautic meteorologic key)</i>   | AUW        | All up weight   |
| ARNG    | Arrange  | AUX        | Auxiliary   |
| ARO     | Air traffic services reporting office  | AVBL       | Available <i>or</i> availability  |
| ARP     | Aerodrome reference point  | AVG        | Average   |
| ARP     | Air-report <i>(message type designator)</i>  | AVGAS†     | Aviation gasoline   |
| ARQ     | Automatic error correction   | ☛AWOS      | Automated Weather Observation System  |
| ARR     | Arrival <i>(message type designator)</i>   | AWTA       | Advise at what time able  |
| ARR     | Arrive <i>or</i> arrival   | AWY        | Airway  |
| ARS     | Special air-report <i>(message type designator)</i>  | AZM        | Azimuth   |
| ARST    | Arresting <i>(specify (part of) aircraft arresting equipment)</i>  | <b>B</b>   |   |
| AS      | Altostratus  | B          | Blue  |
| ☛ASAP   | As soon as possible  | BA         | Braking action  |
| ASC     | Ascend to <i>or</i> ascending to   | BARO-VNAV† | <i>(to be pronounced "BAA-RO-VEENAV")</i> Barometric vertical navigation                      |
| ASDA    | Accelerate-stop distance available   | BASE†      | Cloud base  |
| ASE     | Allimetry system error   | BCFG       | Fog patches   |
| ASHTAM  | Special series NOTAM notifying, by means of a specific format, change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to Aircraft operations | BCN        | Beacon <i>(aeronautical ground light)</i>   |
|         |  | BCST       | Broadcast   |
|         |  | BDRY       | Boundary  |
|         |  | BECMG      | Becoming  |
|         |  | BFR        | Before  |
|         |  | BKN        | Broken  |
|         |  | BL...      | Blowing <i>(followed by DU = dust, SA = sand or SN = snow)</i>                                |
|         |  | BLDG       | Building  |
|         |  | BLO        | Por debajo de nubes   |
|         |  | BLW ...    | Below ...   |

|          |  |           |  |
|----------|--|-----------|--|
| BOMB     | Bombing  | ☛         |  |
| BR       | Mist   | CIV       | Civil  |
| BRF      | Short ( <i>used to indicate the type of approach desired or required</i> )   | CK        | Check  |
| BRG      | Bearing  | CL        | Centre line  |
| BRKG     | Braking  | CLA       | Clear type of ice formation  |
| BS       | Commercial broadcasting station  | CLBR      | Calibration  |
| BTL      | Between layers   | CLD       | Cloud  |
| BTN      | Between  | CLG       | Calling  |
| BUFR     | Binary universal form for the representation of meteorological data  | CLIMB-OUT | Climb-out area   |
|          |  | CLR       | Clear(s) or cleared to . . . or clearance  |
|          |  | CLRД      | Runway(s) cleared ( <i>used in METAR/SPECI</i> )   |
| <b>C</b> |  | CLSD      | Close or closed or closing   |
| ... C    | Centre (preceded by runway designation number to identify a parallel runway)   | CM        | Centimetre   |
| C        | Degrees Celsius ( <i>Centigrade</i> )  | CMB       | Climb to or climbing to  |
| CA       | Course to an altitude  | CMPL      | Completion or completed or complete  |
| ☛CAA     | Civil Aviation Authority or Civil Aviation Administration  | CNL       | Cancel or cancelled  |
| CAT      | Category   | CNL       | Flight plan cancellation ( <i>message type designator</i> )  |
| CAT      | Clear air turbulence   | CNS       | Communications, navigation and surveillance  |
| CAVOK†   | ( <i>to be pronounced "KAV-OH-KAY"</i> ) Visibility, cloud and present weather better than prescribed values or conditions   | COLD      | Long Distance Operational Control  |
|          |  | COM       | Communications   |
| CB+      | ( <i>to be pronounced "CEE BEE"</i> ) Cumulonimbus   | CONC      | Concrete   |
| CC       | Cirrocumulus   | COND      | Condition  |
| CCA      | ( <i>or CCB, CCC . . . etc., in sequence</i> ) Corrected meteorological message ( <i>message type designator</i> )   | CONS      | Continuous   |
| ☛CCO     | Continuous climb operations  | CONST     | Construction or constructed  |
| CD       | Candela  | CONT      | Continue(s) or continued   |
| CDN      | Coordination ( <i>message type designator</i> )  | COOR      | Coordinate or coordination   |
| ☛CDO     | Continuous descent operations  | COORD     | Coordinates  |
| ☛CDR     | Conditional route  | COP       | Change-over point  |
| CF       | Change frequency to . . .  | COR       | Correct or correction or corrected ( <i>used to indicate corrected meteorological message; message type designator</i> ) |
| CF       | Course to a fix  | COT       | At the coast   |
| CFM*     | Confirm or I confirm ( <i>to be used in AFS as a procedure signal</i> )  | COV       | Cover or covered or covering   |
| CGL      | Circling guidance light(s)   | CPDLC+    | Controller-pilot data link communications  |
| CH       | Channel  | CPL       | Current flight plan ( <i>message type designator</i> )   |
| CH#      | This is a channel-continuity-check of transmission to permit comparison of your record of channelsequence numbers of messages received on the channel ( <i>to be used in AFS as a procedure signal</i> ) | CRC       | Cyclic redundancy check  |
| CHEM     | Chemical   | CRM       | Collision risk model   |
| CHG      | Modification ( <i>message type designator</i> )  | ☛CRP      | Compulsory reporting point   |
| CI       | Cirrus   | CRZ       | Cruise   |
| CIDIN†   | Common ICAO data interchange network   | CS        | Call sign  |
|          |  | CS        | Cirrostratus   |
|          |  | CTA       | Control area   |
|          |  | CTAM      | Climb to and maintain  |
|          |  | CTC       | Contact  |
|          |  | CTL       | Control  |
|          |  | CTN       | Caution  |
|          |  | CTR       | Control zone   |
|          |  | CU        | Cumulus  |
|          |  | CUF       | Cumuliform   |
|          |  | CUST      | Customs  |

|           |   |          |  |
|-----------|---|----------|--|
| CVR       | Cockpit voice recorder  | DR       | Dead reckoning   |
| CW        | Continuous wave   | DR ...   | Low drifting ( <i>followed by DU = dust, SA = sand or SN = snow</i> )                      |
| CWY       | Clearway  | DRG      | During   |
| <b>D</b>  |   | DS       | Duststorm  |
| D         | Downward ( <i>tendency in RVR during previous 10 minutes</i> )  | DSB      | Double sideband  |
| D...      | Danger area ( <i>followed by identification</i> )   | DTAM     | Descend to and maintain  |
| DA        | Decision altitude   | DTG      | Date-time group  |
| D-ATIS†   | ( <i>to be pronounced "DEE-ATIS"</i> ) Data link automatic terminal information service                                 | DTHR     | Displaced runway threshold   |
| DCD       | Double channel duplex   | DTRT     | Deteriorate or deteriorating   |
| DCKG      | Docking   | DTW      | Dual tandem wheels   |
| DCP       | Datum crossing point  | DU       | Dust   |
| DCPC      | Direct controller-pilot communications  | DUC      | Dense upper cloud  |
| DCS       | Double channel simplex  | DUPE#    | This is a duplicate message ( <i>to be used in AFS as a procedure signal</i> )             |
| DCT       | Direct ( <i>in relation to flight plan clearances and type of approach</i> )  | DUR      | Duration   |
| DE*       | From ( <i>used to precede the call sign of the calling station</i> ) ( <i>to be used in AFS as a procedure signal</i> ) | D-VOLMET | Data link VOLMET   |
| DEC       | December  | DVOR     | Doppler VOR  |
| DEG       | Degrees   | DW       | Dual wheels  |
| DEP       | Depart or departure   | DZ       | Drizzle  |
| DEP       | Departure ( <i>message type designator</i> )  | <b>E</b> |  |
| DEPO      | Deposition  | E        | East or eastern longitude  |
| DER       | Departure end of the runway   | EAT      | Expected approach time   |
| DES       | Descend to or descending to   | EB       | Eastbound  |
| DEST      | Destination   | EDA      | Elevation differential area  |
| DETRESFA† | Distress phase  | EDTO     | Extended diversion time operations   |
| DEV       | Deviation or deviating  | EC       | En-Route chart   |
| DF        | Direct to a fix   | EEE#     | Error ( <i>to be used in AFS as a procedure signal</i> )                                   |
| DF        | Direction finding   | EET      | Estimated elapsed time   |
| DFDR      | Digital flight data recorder  | EFC      | Expect further clearance   |
| DFTI      | Distance from touchdown indicator   | EFIS†    | ( <i>to be pronounced "EE-FIS"</i> ) Electronic flight instrument system                   |
| DH        | Decision height   | EGNOST†  | ( <i>to be pronounced "EGG-NOS"</i> ) European geostationary navigation overlay service    |
| DIF       | Diffuse   | EHF      | Extremely high frequency [30 000 to 300 000 MHz]   |
| DINACIA   | Dirección Nacional de Aviación Civil e Infraestructura Aeronáutica (Civil Aviation Authority)                           | ELBA†    | Emergency location beacon — aircraft   |
| DIST      | Distance  | ELEV     | Elevation  |
| DIV       | Divert or diverting   | ELR      | Extra long range   |
| DLA       | Delay or delayed  | ELT      | Emergency locator transmitter  |
| DLA       | Delay ( <i>message type designator</i> )  | EM       | Emission   |
| DLIC      | Data link initiation capability   | EMBD     | Embedded in a layer ( <i>to indicate cumulonimbus embedded in layers of other clouds</i> ) |
| DLY       | Daily   | EMERG    | Emergency  |
| DME+      | Distance measuring equipment  | END      | Stop-end ( <i>related to RVR</i> )   |
| DNG       | Danger or dangerous   | ENE      | East-north-east  |
| DOF       | Date of flight  | ENG      | Engine   |
| DOM       | Domestic  | ENR      | En route   |
| DP        | Dew point temperature   |          |  |
| DPT       | Depth   |          |  |
| DPTAL     | Departamental (political-administrative division)   |          |  |



|           |  |          |   |
|-----------|--|----------|---|
| ENRC...   | Enroute chart ( <i>followed by name/title</i> )  | FLUC     | Fluctuating or fluctuation or fluctuated  |
| EOBT      | Estimated off-block time   | FLW      | Follow(s) or following  |
| EQPT      | Equipment  | FLY      | Fly or flying   |
| ☛         |  | FM       | Course from a fix to manual termination<br>( <i>used in navigation database coding</i> )              |
| ESE       | East-south-east  | FM       | From  |
| EST       | Estimate or estimated or estimation ( <i>message type designator</i> )   | FM...    | From ( <i>followed by time weather change is forecast to begin</i> )                                  |
| ETA*+     | Estimated time of arrival or estimating arrival  | FMC      | Flight management computer  |
| ETD+      | Estimated time of departure or estimating departure  | FMS+     | Flight management system  |
| ETO       | Estimated time over significant point  | FMU      | Flow management unit  |
| EUR RODEX | European regional OPMET data exchange  | FNA      | Final approach  |
| EV        | Every  | FPAP     | Flight path alignment point   |
| EVS       | Enhanced vision system   | ☛FPL     | Flight plan   |
| EXC       | Except   | FPM      | Feet per minute   |
| EXER      | Exercises or exercising or to exercise   | FPR      | Flight plan route   |
| EXP       | Expect or expected or expecting  | FR       | Fuel remaining  |
| ☛EXTD     | Extend or extending or Extended  | FREQ     | Frequency   |
| <b>F</b>  |  | FRI      | Friday  |
| F         | Fixed  | FRNG     | Firing  |
| FA        | Course from a fix to an altitude   | FRONT†   | Front ( <i>relating to weather</i> )  |
| FAC       | Facilities   | FROST†   | Frost ( <i>used in aerodrome warnings</i> )   |
| FAF       | Final approach fix   | FRQ      | Frequent  |
| FAL       | Facilitation of international air transport  | FSL      | Full stop landing   |
| FAP       | Final approach point   | FSS      | Flight service station  |
| FAS       | Final approach segment   | FST      | First   |
| FATO      | Final approach and take-off area   | FT       | Feet ( <i>dimensional unit</i> )  |
| FAX       | Facsimile transmission   | FTE      | Flight technical error  |
| FBL       | Light ( <i>used to indicate the intensity of weather phenomena, interference or static reports, e.g. FBL RA = light rain</i> ) | FTP      | Fictitious threshold point  |
| FC        | Funnel cloud ( <i>tornado or water spout</i> )   | FTT      | Flight technical tolerance  |
| FCST      | Forecast   | FU       | Smoke   |
| FCT       | Friction coefficient   | FZ       | Freezing  |
| FDPS      | Flight data processing system  | FZDZ     | Freezing drizzle  |
| FEB       | February   | FZFG     | Freezing fog  |
| FEW       | Few  | FZRA     | Freezing rain   |
| FG        | Fog  | <b>G</b> |   |
| FIC       | Flight information centre  | G        | Green   |
| FIR+      | Flight information region  | G...     | Variations from the mean wind Speedy<br>(gusts) ( <i>followed by figures in METAR/SPECI and TAF</i> ) |
| FIS       | Flight information service   | GA       | Go ahead, resume sending ( <i>to be used in AFS as a procedure signal</i> )                           |
| FISA      | Automated flight information service   | ☛GA      | General aviation  |
| FIZ       | Flight information zone  | G/A      | Ground-to-air   |
| FL        | Flight level   | G/A/G    | Ground-to-air and air-to-ground   |
| FLD       | Field  |          |   |
| FLG       | Flashing   |          |   |
| FLR       | Flares   |          |   |
| FLT       | Flight   |          |   |
| FLTCK     | Flight check   |          |   |

|          |  |         |  |
|----------|--|---------|--|
| GAGAN†   | GPS and geostationary earth orbit augmented navigation   | HBN     | Hazard beacon  |
| GAIN     | Airspeed or headwind gain  | HDF     | High frequency direction-finding station   |
| GAMET    | Area forecast for low-level flights  | HDG     | Heading  |
| GARP     | GBAS azimuth reference point   | HEL     | Helicopter   |
| GBAS†    | <i>(to be pronounced "GEE-BAS")</i> Ground-based augmentation system   | HF+     | High frequency [3 000 a 30 000 kHz]  |
| GCA+     | Ground controlled approach system <i>or</i> ground controlled approach   | HF      | Holding/racetrack to a fix   |
| GEN      | General  | HGT     | Height <i>or</i> height above  |
| GEO      | Geographic <i>or</i> true  | HJ      | Sunrise to sunset  |
| GES      | Ground earth station   | HLDG    | Holding  |
| GLD      | Glider   | ☛HLS    | Helicopter landing site  |
| GLONASS† | <i>(to be pronounced "GLO-NAS")</i> Global orbiting navigation satellite system                                      | HM      | Holding/racetrack to a manual termination  |
| GLS†     | GBAS landing system  | HN      | Sunset to sunrise  |
| GMC ...  | Ground movement chart <i>(followed by name/title)</i>  | HO      | Service available to meet operational requirements   |
| GND      | Ground   | HOL     | Holiday  |
| GNDCK    | Ground check   | HOSP    | Hospital aircraft  |
| GNSS+    | Global navigation satellite system   | HPA     | Hectopascal  |
| ☛GOV     | Government   | ☛HLP    | Heliport   |
| GP       | Glide path   | HR      | Hours  |
| GPA      | Glide path angle   | HS      | Service available during hours of scheduled operations                                       |
| GPIP     | Glide path intercept point   | HUD     | Head-up display  |
| GPS+     | Global positioning system  | ☛HUM    | Humanitarian   |
| ☛GPU     | Ground power unit  | HURCN   | Hurricane  |
| GPWS+    | Ground proximity warning system  | HVDF    | High and very high frequency direction-finding stations <i>(at the same location)</i>        |
| GR       | Hail   | HVY     | Heavy  |
| GRAS†    | <i>(to be pronounced "GRASS")</i> Groundbased regional augmentation system   | HVY     | Heavy <i>(used to indicate the intensity of weather phenomena, e.g. HVY RA = heavy rain)</i> |
| GRASS    | Grass landing area   | HX      | No specific working hours  |
| GRIB     | Processed meteorological data in the form of grid point values expressed in binary form <i>(meteorological code)</i> | HYR     | Higher   |
| GRVL     | Gravel   | HZ      | Haze   |
| GS       | Ground speed   | HZ      | Hertz <i>(cycle per second)</i>  |
| GS       | Small hail and/or snow pellets   | I       |  |
| GUND     | Geoid undulation   | IAC ... | Instrument approach chart <i>(followed by name/title)</i>                                    |
| H        |  | IAF     | Initial approach fix   |
| H        | High pressure area or the centre of high pressure  | IAO     | In and out of clouds   |
| ☛H...    | Significant wave height <i>(followed by figures in METAR/SPEC)</i>   | IAP     | Instrument approach procedure  |
| H24      | Continuous day and night service   | IAR     | Intersection of air routes   |
| HA       | Holding/racetrack to an altitude   | IAS     | Indicated airspeed   |
| HAPI     | Helicopter approach path indicator   | IBN     | Identification beacon  |
|          |  | ☛       |  |
|          |  | ☛ICAO   | International Civil Aviation Organization  |

|          |   |        |  |
|----------|---|--------|--|
| ICE      | Icing   | KMH    | Kilometres per hour  |
| ID       | Identifier <i>or</i> identify   | KPA    | Kilopascal   |
| IDENT†   | Identification  | KT     | Knots  |
| IF       | Intermediate approach fix   | KW     | Kilowatts  |
| IFF      | Identification friend/foe   |        |  |
| IFR+     | Instrument flight rules   | L      |  |
| IGA      | International general aviation  | ...L   | Left ( <i>preceded by runway designation number to identify a parallel runway</i> )          |
| ILS+     | Instrument landing system   | L      | Locator ( <i>see LM, LO</i> )  |
| IM       | Inner marker  | L      | Low pressure area <i>or</i> the centre of low pressure                                       |
| IMC+     | Instrument meteorological conditions  | L      | Litre  |
| IMG      | Immigration   | LAM    | Logical acknowledgement ( <i>message type designator</i> )                                   |
| IMI*     | Interrogation sign (question mark) ( <i>to be used in AFS as a procedure signal</i> ) | LAN    | Inland   |
| IMPR     | Improve <i>or</i> improving   | LAR    | Latin american regulations   |
| IMT      | Immediate <i>or</i> immediately   | LAT    | Latitude   |
| INA      | Initial approach  | LCA    | Local <i>or</i> locally <i>or</i> location <i>or</i> located                                 |
| INBD     | Inbound   | LDA    | Landing distance available   |
| INC      | In cloud  | LDAH   | Landing distance available, helicopter   |
| INCORP   | Incorporated  | LDG    | Landing  |
| INCERFA† | Uncertainty phase   | LDI    | Landing direction indicator  |
| INFO†    | Information   | LEN    | Length   |
| INOP     | Inoperative   | LF     | Low frequency [30 to 300 kHz]  |
| INP      | If not possible   | LGT    | Light <i>or</i> lighting   |
| INPR     | In progress   | LGTD   | Lighted  |
| INS      | Inertial navigation system  | LIH    | Light intensity high   |
| INSTL    | Install <i>or</i> installed <i>or</i> installation                                    | LIL    | Light intensity low  |
| INSTR    | Instrument  | LIM    | Light intensity medium   |
| INT      | Intersection  | LINE   | Line ( <i>used in SIGMET</i> )   |
| INTL     | International   | LLZ    | Locator, middle  |
| INTRG    | Interrogator  | LM     | Radiofaro de localización, intermedio  |
| INTRP    | Interrupt <i>or</i> interruption <i>or</i> interrupted                                | LMT    | Local mean time  |
| INTSF    | Intensify <i>or</i> intensifying  | LNAV†  | ( <i>to be pronounced "EL-NAV"</i> ) Lateral navigation                                      |
| INTST    | Intensity   | LNG    | Long ( <i>used to indicate the type of approach desired or required</i> )                    |
| IR       | Ice on runway   | LO     | Locator, outer   |
| IRS      | Inertial reference system   | LOC    | Localizer  |
| IRU      | Inertial reference unit   | LONG   | Longitude  |
| ISA      | International standard atmosphere   | LORAN† | LORAN ( <i>long range air navigation system</i> )  |
| ISB      | Independent sideband  | LOSS   | Airspeed <i>or</i> headwind loss   |
| ISOL     | Isolated  | LPV    | Localizer performance with vertical guidance   |
| <b>J</b> |   | LR     | The last message received by me was . . . ( <i>to be used in AFS as a procedure signal</i> ) |
| JAN      | January   | LRG    | Long range   |
| JTST     | Jet stream  |        |  |
| JUL      | July  |        |  |
| JUN      | June  |        |  |
| <b>K</b> |   |        |  |
| KG       | Kilograms   |        |  |
| KHZ      | Kilohertz   |        |  |
| KIAS     | Knots indicated airspeed  |        |  |
| KM       | Kilometres  |        |  |

|            |  |       |   |
|------------|--|-------|---|
| LS         | The last message sent by me was . . . or Last message was . . . <i>(to be used in AFS as a procedure signal)</i> | MF    | Medium frequency [300 to 3 000 kHz]   |
| ☛LTA       | Lower control area   | ☛MHA  | Minimum holding altitude  |
| LTD        | Limited  | MHDF  | Medium and high frequency direction-finding stations <i>(at the same location)</i>  |
| LTP        | Landing threshold point  | MHVDF | Medium, high and very high frequency direction-finding stations <i>(at the same location)</i>                                     |
| ☛          |  | MHZ   | Megahertz   |
| LV         | Light and variable <i>(relating to wind)</i>   | MID   | Mid-point (related to RVR)  |
| LVE        | Leave or leaving   | MIFG  | Shallow fog   |
| LVL        | Level  | MIL   | Military  |
| LVP        | Low visibility procedures  | MIN*  | Minutes   |
| LYR        | Layer or layered   | MIS   | Missing . . . <i>(transmission identification)</i> <i>(to be used in AFS as a procedure signal)</i>                               |
| <b>M</b>   |  | MKR   | Marker radio beacon   |
| . . . M    | Metres <i>(preceded by figures)</i>  | MLS+  | Microwave landing system  |
| M . . .    | Mach number <i>(followed by figures)</i>   | MM    | Middle marker   |
| M . . .    | Minimum value of runway visual range <i>(followed by figures in METAR/SPECI)</i>                                 | MNM   | Minimum   |
| MAA        | Maximum authorized altitude  | MNPS  | Minimum navigation performance specifications   |
| MAG        | Magnetic   | MNT   | Monitor or monitoring or monitored  |
| MAHF       | Missed approach holding fix  | MNTN  | Maintain  |
| MAINT      | Maintenance  | MOA   | Military operating area   |
| MALSR      | Medium-intensity Approach Lighting System with Runway Alignment Indicator Lights                                 | MOC   | Minimum obstacle clearance <i>(required)</i>  |
| MAP        | Aeronautical maps and charts   | MOCA  | Minimum obstacle clearance altitude   |
| MAPT       | Missed approach point  | MOD   | Moderate <i>(used to indicate the intensity of weather phenomena, interference or static reports, e.g. MODRA = moderate rain)</i> |
| MAR        | At sea   |       |   |
| MAR        | March  | MON   | Above mountains   |
| ☛          |  | MON   | Monday  |
| MATF       | Missed approach turning fix  | MOPSt | Minimum operational performance standards   |
| ☛MATZ      | Military aerodrome traffic zone  | MOV   | Move or moving or movement  |
| MAX        | Maximum  | MPS   | Metres per second   |
| MAY        | May  | MRA   | Minimum reception altitude  |
| MBST       | Microburst   | MRG   | Medium range  |
| MCA        | Minimum crossing altitude  | MRP   | ATS/MET reporting point   |
| ☛MCTR      | Military control zone  | MS    | Minus   |
| MCW        | Modulated continuous wave  | MSA   | Minimum sector altitude   |
| MDA        | Minimum descent altitude   | MSAS† | <i>(to be pronounced "EM-SAS")</i><br>Multifunctional transport satellite (MTSAT)<br>satellite-based augmentation system          |
| MDF        | Medium frequency direction-finding station   | MSAW  | Minimum safe altitude warning   |
| MDH        | Minimum descent height   | MSG   | Message   |
| MEA        | Minimum en-route altitude  | MSL   | Mean sea level  |
| ☛MEDEVAC   | Medical evacuation flight  |       |   |
| MEHT       | Minimum eye height over threshold <i>(for visual approach slope indicator systems)</i>                           |       |   |
| MET†       | Meteorological or meteorology  |       |   |
| METAR†     | Aerodrome routine meteorological report <i>(in meteorological code)</i>  |       |   |
| MET REPORT | Local routine meteorological report <i>(in abbreviated plain language)</i>                                       |       |   |

|          |  |          |  |
|----------|--|----------|--|
| MSR#     | Message . . . ( <i>transmission identification</i> ) has been misrouted ( <i>to be used in AFS as a procedure signal</i> ) | NOTAM†   | A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations |
| MSSR     | Monopulse secondary surveillance radar   |          |  |
| MT       | Mountain   |          |  |
| ☛MTOM    | Maximum take-off mass  | ☛NOTAMC  | Cancelling NOTAM   |
| MTU      | Metric units   | ☛NOTAMN  | New NOTAM  |
| MTW      | Mountain waves   | ☛NOTAMR  | Replacing NOTAM  |
| MVDF     | Medium and very high frequency direction-finding stations ( <i>at the same location</i> )                                  | NOV      | November   |
| MWO      | Meteorological watch office  | NOZ      | Normal operating zone  |
| MX       | Mixed type of ice formation ( <i>white and clear</i> )   | NPA      | Non-precision approach   |
| <b>N</b> |  | NR       | Number   |
| N        | No distinct tendency ( <i>in RVR during previous 10 minutes</i> )  | NRH      | No reply heard   |
| N        | North <i>or</i> northern latitude  | NS       | Nimbostratus   |
| NADP     | Noise abatement departure procedure  | NSC      | Nil significant cloud  |
| NASC†    | National AIS system centre   | NSE      | Navigation system error  |
| NAT      | North Atlantic   | NSW      | Nil significant weather  |
| NAV      | Navigation   | NTL      | National   |
| ☛NAVAID  | Navigation aid   | NTZ+     | No transgression zone  |
| NB       | Northbound   | NW       | North-west   |
| NBFR     | Not before   | NWB      | North-westbound  |
| NC       | No change  | NXT      | Next   |
| NCD      | No cloud detected ( <i>used in automated METAR/SPECI</i> )   | <b>O</b> |  |
| NDB+     | Non-directional radio beacon   | OAC      | Oceanic area control centre  |
| NDV      | No directional variations available ( <i>used in automated METAR/SPECI</i> )   | OAS      | Obstacle assessment surface  |
| NE       | North-east   | OAS      | Organization of American States  |
| NEB      | North-eastbound  | OBS      | Observe <i>or</i> observed <i>or</i> observation   |
| NEG      | No <i>or</i> negative <i>or</i> permission not granted <i>or</i> that is not correct                                       | OBSC     | Obscure <i>or</i> obscured <i>or</i> obscuring   |
| NGT      | Night  | OBST     | Obstacle   |
| NIL*†    | None <i>or</i> I have nothing to send to you   | OCA      | Obstacle clearance altitude  |
| NM       | Nautical miles   | OCA      | Oceanic control area   |
| NML      | Normal   | OCC      | Occulting (light)  |
| NN       | No name, unnamed   | OCH      | Obstacle clearance height  |
| NNE      | North-north-east   | OCNL     | Occasional or occasionally   |
| NNW      | North-north-west   | OCS      | Obstacle clearance surface   |
| NO       | No (negative) ( <i>to be used in AFS as a procedure signal</i> )   | OCT      | October  |
| NOF      | International NOTAM office   | OFZ      | Obstacle free zone   |
| ☛NONSTD  | Non-standard   | OGN      | Originate ( <i>to be used in AFS as a procedure signal</i> )   |
| NOSIG†   | No significant change ( <i>used in trend-type landing forecasts</i> )  | OHD      | Overhead   |
|          |  | OIS      | Obstacle identification surface  |
|          |  | OK*      | We agree <i>or</i> It is correct ( <i>to be used in AFS as a procedure signal</i> )  |
|          |  | OLDI†    | On-line data interchange   |
|          |  | OM       | Outer marker   |

|          |  |          |  |
|----------|--|----------|--|
| OPA      | Opaque, white type of ice formation  | PO       | Dust/sand whirls ( <i>dust devils</i> )  |
| OPC      | Control indicated is operational control   | POB      | Persons on board   |
| OPMET†   | Operational meteorological ( <i>information</i> )  | POSS     | Possible   |
| OPN      | Open <i>or</i> opening <i>or</i> opened  | PPI      | Plan position indicator  |
| OPR      | Operator <i>or</i> operate <i>or</i> operative <i>or</i> operating <i>or</i> operational                 | PPR      | Prior permission required  |
| OPST     | Operations   | PPSN     | Present position   |
| O/R      | On request   | PRFG     | Aerodrome partially covered by fog   |
| ORD      | Order  | PRI      | Primary  |
| OSV      | Ocean station vessel   | PRKG     | Parking  |
| OTP      | On top   | PROB†    | Probability  |
| OTS      | Organized track system   | PROC     | Procedure  |
| OUBD     | Outbound   | ☛PROP    | Propeller  |
| OVC      | Overcast   | PROV     | Provisional  |
| <b>P</b> |  | PRP      | Point-in-space reference point   |
| P...     | Maximum value of wind speed or runway visual range ( <i>followed by figures in METAR/SPECI and TAF</i> ) | PS       | Plus   |
| P...     | Prohibited area ( <i>followed by identification</i> )  | PSG      | Passing  |
| PA       | Precision approach   | PSN      | Position   |
| PALS     | Precision approach lighting system ( <i>specify category</i> )   | PSP      | Pierced steel plank  |
| PANS     | Procedures for air navigation services   | PSR+     | Primary surveillance radar   |
| PAPI†    | Precision approach path indicator  | PSYS     | Pressure system(s)   |
| PAR+     | Precision approach radar   | PTN      | Procedure turn   |
| PARL     | Parallel   | PTS      | Polar track structure  |
| PATC ... | Precision approach terrain chart ( <i>followed by name/title</i> )                                       | PWR      | Power  |
| PAX      | Passenger(s)   | <b>Q</b> |  |
| ☛PBC     | Performance-based communication  | QDL      | Do you intend to ask me for a series of bearings? <i>or</i> I intend to ask you for a series of bearings ( <i>to be used in radiotelegraphy as a Q Code</i> )            |
| PBN      | Performance-based navigation   | QDM+     | Magnetic heading ( <i>zero wind</i> )  |
| ☛PBS     | Performance-based surveillance   | QDR      | Magnetic bearing   |
| PCD      | Proceed <i>or</i> proceeding   | QFE+     | Atmospheric pressure at aerodrome elevation ( <i>or at runway threshold</i> )  |
| PCL      | Pilot-controlled lighting  | QFU      | Magnetic orientation of runway   |
| PCN      | Pavement classification Lumber   | QGE      | What is my distance to your station? <i>or</i> Your distance to my station is ( <i>distance figures and units</i> ) ( <i>to be used in radiotelegraphy as a Q Code</i> ) |
| ☛PCT     | Per cent   | QJH      | Shall I run my test tape/a test sentence? <i>or</i> Run your test tape/a test sentence ( <i>to be used in AFS as a Q Code</i> )  |
| PDC+     | Pre-departure clearance  | QNH+     | Altimeter sub-scale setting to obtain elevation when on the ground   |
| PDG      | Procedure design gradient  | QSP      | Will you relay to . . . free of charge? <i>or</i> I will relay to . . . free of charge ( <i>to be used in AFS as a Q Code</i> )  |
| PER      | Performance  | QTA      | Shall I cancel telegram number . . . ? <i>or</i> Cancel telegram number . . . ( <i>to be used in AFS as a Q Code</i> )   |
| PERM     | Permanent  | QTE      | True bearing   |
| PIB      | Pre-flight information bulletin  |          |  |
| PJE      | Parachute jumping exercise   |          |  |
| PL       | Ice pellets  |          |  |
| PLA      | Practice low approach  |          |  |
| ☛        |  |          |  |
| PLVL     | Present level  |          |  |
| PN       | Prior notice required  |          |  |
| PNR      | Point of no return   |          |  |

|       |   |         |  |
|-------|---|---------|--|
| QTF   | Will you give me the position of my station according to the bearings taken by the D/F stations which you control? <i>or</i> The position of your station according to the bearings taken by the D/F stations that I control is . . . latitude . . . longitude <i>(or other indication of position)</i> , class . . . at . . . hours <i>(to be used in radiotelegraphy as a Q Code)</i> | ☛RDOACT | Radioactive  |
| QUAD  | Quadrant  | RDH     | Reference datum height   |
| QUJ   | Will you indicate the TRUE track to reach you? <i>or</i> The TRUE track to reach me is . . . degrees at . . . hours <i>(to be used in radiotelegraphy as a Q Code)</i>  | RDL     | Radial   |
| R     |   | RDO     | Radio  |
| ...R  | Right <i>(preceded by runway designation number to identify a parallel runway)</i>  | RE      | Recent <i>(used to qualify weather phenomena, e.g. RERA = recent rain)</i> |
| R     | Rate of turn  | REC     | Receive or receiver  |
| R     | Red   | REDDIG  | Red de Comunicaciones Digitales (Digital Network)                          |
| R...  | Restricted area <i>(followed by identification)</i>   | REDL    | Runway edge light(s)   |
| R...  | Runway <i>(followed by figures in METAR/SPECI)</i>  | REF     | Reference to . . . or refer to . . .                                       |
| R*    | Received <i>(acknowledgement of receipt) (to be used in AFS as a procedure signal)</i>  | REG     | Registration   |
| ☛R... | Radial from VOR <i>(followed by three figures)</i>  | RENL    | Runway end light(s)  |
| RA    | Rain  | REP     | Report <i>or</i> reporting <i>or</i> reporting point                       |
| RA    | Resolution advisory   | REQ     | Request <i>or</i> requested  |
| RAC   | Rules of the air and air traffic services   | RERTE   | Re-route   |
| RAFAC | Regional area forecast centre   | RESA    | Runway end safety area   |
| RAG   | Runway arresting gear   | RF      | Constant radius arc to a fix   |
| RAG   | Ragged  | ☛RFFS   | Rescue and fire fighting services  |
| RAI   | Runway alignment indicator  | RG      | Range <i>(lights)</i>  |
| RAIM† | Receiver autonomous integrity monitoring  | RHC     | Right-hand circuit   |
| RASC† | Regional AIS system centre  | RIF     | Reclearance in flight  |
| RASS  | Remote altimeter setting source   | RIME†   | Rime <i>(used in aerodrome warnings)</i>                                   |
| RAU   | Reglamento Aeronáutico Uruguayo (Uruguayan Air Regulation)  | ☛       |  |
| RB    | Rescue boat   | RL      | Report leaving   |
| RCA   | Reach cruising altitude   | RLA     | Relay to   |
| RCC   | Rescue coordination centre  | RLCE    | Request level change en route  |
| RCF   | Radiocommunication failure <i>(message type designator)</i>   | RLLS    | Runway lead-in lighting system   |
| RCH   | Reach <i>or</i> reaching  | RLNA    | Request level not available  |
| RCL   | Runway centre line  | RMK     | Remark   |
| RCLL  | Runway centre line light(s)   | RNAV†   | <i>(to be pronounced "AR-NAV")</i> Area navigation                         |
| RCLR  | Recleared   | RNG     | Radio range  |
| RCP+  | Required communication performance  | RNP+    | Required navigation performance  |
|       |   | ROBEX†  | Regional OPMET bulletin Exchange <i>(scheme)</i>                           |
|       |   | ROC     | Rate of climb  |
|       |   | ROD     | Rate of descent  |
|       |   | RON     | Receiving only   |
|       |   | RPDS    | Reference path data selector   |
|       |   | RPI+    | Radar position indicator   |
|       |   | RPL     | Repetitive flight plan   |
|       |   | RPLC    | Replace <i>or</i> replaced   |
|       |   | RPS     | Radar position symbol  |
|       |   | RPT*    | Repeat <i>or</i> I repeat <i>(to be used in AFS as a procedure signal)</i> |
|       |   | RO*     | Request <i>(to be used in AFS as a procedure signal)</i>                   |
|       |   | RQMNTS  | Requirements   |
|       |   | RQP     | Request flight plan <i>(message type designator)</i>                       |

|            |  |          |  |
|------------|--|----------|--|
| RQS        | Request supplementary flight plan ( <i>message type designator</i> )   | SBAS†    | ( <i>to be pronounced "ESS-BAS"</i> ) Satellite-based augmentation system  |
| RR         | Report reaching  | SC       | Stratocumulus  |
| RRA        | ( <i>or RRB, RRC . . . etc., in sequence</i> ) Delayed meteorological message ( <i>message type designator</i> )                                 | SCT      | Scattered  |
| RSC        | Rescue sub-centre  | SD       | Standard deviation   |
| RSCD       | Runway surface condition   | SDBY     | Stand by   |
| ☛RSP+      | Required surveillance performance  | SDF      | Step down fix  |
| RSP        | Responder beacon   | SE       | South-east   |
| RSR        | En-route surveillance radar  | SEA      | Sea ( <i>used in connection with sea-surface temperature and state of the sea</i> )  |
| RSS        | Root sum square  | SEB      | South-eastbound  |
| RTD        | Delayed ( <i>used to indicate delayed meteorological message; message type designator</i> )  | SEC      | Seconds  |
| RTE        | Route  | SECN     | Section  |
| RTF        | Radiotelephone   | SECT     | Sector   |
| RTG        | Radiotelegraph   | SELCAL†  | Selective calling system   |
| RTIL       | Runway threshold identification lights   | SEP      | September  |
| RTHL       | Runway threshold light(s)  | SER      | Service or servicing or served   |
| RTN        | Return or returned or returning  | SEV      | Severe ( <i>used e.g. to qualify icing and turbulence reports</i> )  |
| RTODAH     | Rejected take-off distance available, helicopter   | SFC      | Surface  |
| RTS        | Return to service  | SG       | Snow grains  |
| RTT        | Radioteletypewriter  | SGL      | Signal   |
| RTZL       | Runway touchdown zone light(s)   | SH...    | Shower ( <i>followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof, e.g. SHRASN = showers of rain and snow</i> ) |
| RUT        | Standard regional route transmitting frequencies   | SHF      | Super high frequency [3 000 to 30 000 MHz]   |
| RV         | Rescue Wessel  | SI       | International system of units  |
| ☛RVA       | Radar vectoring area   | SID†     | Standard instrument departure  |
| RVR+       | Runway visual range  | SIF      | Selective identification feature   |
| RVSM+      | Reduced vertical separation minimum (300 m (1 000 ft)) between FL 290 and FL 410   | SIG      | Significant  |
| RWY        | Runway   | ☛SIGMET† | Information concerning en-route weather and other phenomena in the atmosphere that may affect the safety of aircraft operations  |
| <b>S</b>   |  | SIMUL    | Simultaneous <i>or</i> simultaneously  |
| S          | South <i>or</i> southern latitude  | SIWL     | Single isolated wheel load   |
| S...       | State of the sea ( <i>followed by figures in METAR/SPECI</i> )   | SKC      | Sky clear  |
| SA         | Sand   | SKED     | Schedule or scheduled  |
| SALS       | Simple approach lighting system  | SLP      | Speed limiting point   |
| SAN        | Sanitary   | SLW      | Slow   |
| ☛          |  | SMC      | Surface movement control   |
| SAR        | Search and rescue  | SMR      | Surface movement radar   |
| SARPS      | Standards and Recommended Practices [ICAO]   | SN       | Snow   |
| SAT        | Saturday   | SNOCLO   | Aerodrome closed due to snow ( <i>used in METAR/SPECI</i> )  |
| ☛SATCOM†   | Satellite communication (used only when referring generally to both voice and data satellite communication or only data satellite communication) |          |  |
| ☛SATVOICE† | Satellite voice communication  |          |  |
| SB         | Southbound   |          |  |



|          |  |          |   |
|----------|--|----------|---|
| SNOWTAM† | Special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format | T        |   |
| SOC      | Start of climb   | T        | Temperature   |
| SPECI†   | Aerodrome special meteorological report ( <i>in meteorological code</i> )  | ...T     | True ( <i>preceded by a bearing to indicate reference to True North</i> )                                       |
| SPECIAL† | Local special meteorological report ( <i>in abbreviated plain language</i> )   | TA       | Traffic advisory  |
| SPI      | Special position indicator   | TA       | Transition altitude   |
| SPL      | Supplementary flight plan ( <i>message type designator</i> )   | TAA      | Terminal arrival altitude   |
| SPOC     | SAR point of contact   | TACAN†   | UHF tactical air navigation aid   |
| SPOT†    | Spot wind  | TAF†     | Aerodrome forecast ( <i>in meteorological code</i> )  |
| SQ       | Squall   | TA/H     | Turn at an altitude/height  |
| SQL      | Squall line  | TAIL†    | Tail wind   |
| SR       | Sunrise  | TAR      | Terminal area surveillance radar  |
| SRA      | Surveillance radar approach  | TAS      | True airspeed   |
| SRE      | Surveillance radar element of precision approach radar system  | TAX      | Taxiing <i>or</i> taxi  |
| SRG      | Short range  | TC       | Tropical cyclone  |
| SRR      | Search and rescue region   | TCAC     | Tropical cyclone advisory centre  |
| SRY      | Secondary  | TCAS RA† | ( <i>to be pronounced "TEE-CAS-AR-AY"</i> )<br>Traffic alert and collision avoidance system resolution advisory |
| SS       | Sandstorm  | TCH      | Threshold crossing height   |
| SS       | Sunset   | TCU      | Towering cumulus  |
| SSB      | Single sideband  | TDO      | Tornado   |
| SSE      | South-south-east   | TDZ      | Touchdown zone  |
| SSR+     | Secondary surveillance radar   | TECR     | Technical reason  |
| SST      | Supersonic transport   | TEL      | Telephone   |
| SSW      | South-south-west   | TEMPO†   | Temporary <i>or</i> temporarily   |
| ST       | Stratus  | TF       | Track to fix  |
| STA      | Straight-in approach   | TFC      | Traffic   |
| STAR†    | Standard instrument arrival  | TGL      | Touch-and-go landing  |
| STD      | Standard   | TGS      | Taxiing guidance system   |
| STF      | Stratiform   | THR      | Threshold   |
| STN      | Station  | THRU     | Through   |
| STNR     | Stationary   | THU      | Thursday  |
| STOL     | Short take-off and landing   | TIBA     | Traffic information broadcast by aircraft   |
| STS      | Status   | TILT     | Until   |
| STWL     | Stopway light(s)   | TIP      | Until past . . . ( <i>place</i> )   |
| SUBJ     | Subject to   | TKOF     | Take-off  |
| SUN      | Sunday   | TL...    | Till ( <i>followed by time by which weather change is forecast to end</i> )                                     |
| SUP      | Supplement ( <i>AIP Supplement</i> )   | TLOF     | Touchdown and lift-off area   |
| SUPPS    | Regional supplementary procedures  | TMA+     | Terminal control area   |
| ☛SVC     | Service (message type only)  | TN...    | Minimum temperature ( <i>followed by figures in TAF</i> )   |
| SVCBL    | Serviceable  | TNA      | Turn altitude   |
| SW       | South-west   | TNH      | Turn height   |
| SWB      | South-westbound  | TO ...   | To . . . ( <i>place</i> )   |
| SWY      | Stopway  | TOC      | Top of climb  |
|          |  | TODA     | Take-off distance available   |

|           |   |          |   |
|-----------|---|----------|---|
| TODAH     | Take-off distance available, helicopter   | UAC      | Upper area control centre   |
| TOP†      | Cloud top   | UAR      | Upper air route   |
| TORA      | Take-off run available  | UAS      | Unmanned aircraft system  |
| TOX       | Toxic   | UDF      | Ultra high frequency direction-finding station  |
| TP        | Turning point   | UFN      | Until further notice  |
| TR        | Track   | UHDT     | Unable higher due traffic   |
| TRA       | Temporary reserved airspace   | UHF+     | Ultra high frequency [300 to 3 000 MHz]   |
| TRANS     | Transmits <i>or</i> transmitter   | UIC      | Upper information centre  |
| TREND     | Trend forecast  | UIR+     | Upper flight information region   |
| TRL       | Transition level  | ◀ULM     | Ultra light motorized aircraft  |
| ◀TRG      | Training  | ULR      | Ultra long range  |
| TROP      | Tropopause  | UN       | United Nations  |
| TS        | Thunderstorm ( <i>in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome</i> )   | UNA      | Unable  |
| TS...     | Thunderstorm ( <i>followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof, e.g. TSRASN = thunderstorm with rain and snow</i> ) | UNAP     | Unable to approve   |
| TSUNAMI†  | Tsunami ( <i>used in aerodrome warnings</i> )   | UNL      | Unlimited   |
| TT        | Teletypewriter  | UNREL    | Unreliable  |
| TUE       | Tuesday   | UP       | Unidentified precipitation ( <i>used in automated METAR/SPECI</i> )   |
| TURB      | Turbulence  | U/S      | Unserviceable   |
| T-VASIS†  | ( <i>to be pronounced "TEE-VASIS"</i> ) T visual approach slope indicator system  | UTA      | Upper control area  |
| TVOR      | Terminal VOR  | UTC+     | Coordinated Universal Time  |
| TWIL FROM | Beginning of civil morning twilight   | <b>V</b> |   |
| TWIL TO   | End of civil evening twilight   | ...V...  | Variations from the mean wind direction ( <i>preceded and followed by figures in METAR/SPECI, e.g. 350V070</i> )  |
| TWR       | Aerodrome control tower <i>or</i> aerodrome control   | VA       | Heading to an altitude  |
| TWY       | Taxiway   | VA       | Volcanic ash  |
| ◀         |   | VAAC     | Volcanic ash advisory centre  |
| TX ...    | Maximum temperature ( <i>followed by figures in TAF</i> )   | VAC ...  | Visual approach chart ( <i>followed by name/title</i> )   |
| ◀TXL      | Taxilane  | VAL      | In valleys  |
| TXT*      | Text ( <i>when the abbreviation is used to request a repetition, the question mark (IMI) precedes the abbreviation, e.g. IMI TXT</i> ) ( <i>to be used in AFS as a procedure signal</i> )         | VAN      | Runway control van  |
| TYP       | Type of aircraft  | VAR      | Magnetic variation  |
| TYPH      | Typhoon   | VAR      | Visual-aural radio range  |
| <b>U</b>  |   | VASIS    | Visual approach slope indicator systems   |
| U         | Upward ( <i>tendency in RVR during previous 10 minutes</i> )  | VC ...   | Vicinity of the aerodrome ( <i>followed by FG = fog, FC = funnel cloud, SH = shower, PO = dust/sand whirls, BLDU = blowing dust, BLSA = blowing sand, BLSN = blowing snow, DS = duststorm, SS = sandstorm, TS = thunderstorm or VA = volcanic ash, e.g. VCFG = vicinity fog</i> ) |
| UA        | Unmanned aircraft   | VCY      | Vicinity  |
| UAB ...   | Until advised by ...  | VDF      | Very high frequency direction-finding station   |
|           |   | VER      | Vertical  |
|           |   | VFR+     | Visual flight rules   |
|           |   | VHF+     | Very high frequency [30 to 300 MHz]   |
|           |   | VI       | Heading to an intercept   |

|          |   |        |  |
|----------|---|--------|--|
| VIP+     | Very important person   | WILCO† | Will comply  |
| VIS      | Visibility  | WIND   | Wind   |
| VLF      | Very low frequency [3 to 30 kHz]  | WIP    | Work in progress   |
| VLR      | Very long range   | WKN    | Weaken or weakening  |
| VM       | Heading to a manual termination   | WNW    | West-north-west  |
| VMC+     | Visual meteorological conditions  | WO     | Without  |
| VNAV†    | <i>(to be pronounced "VEE-NAV")</i> Vertical navigation                     | WPT    | Way-point  |
| ☛VOL     | Volume (followed by I, II...)   | WRNG   | Warning  |
| VOLMET†  | Meteorological information for aircraft in flight                           | WS     | Wind shear   |
| VOR+     | VHF omnidirectional radio range   | WSPD   | Wind speed   |
| VORTACT  | VOR and TACAN combination   | WSW    | West-south-west  |
| VOT      | VOR airborne equipment test facility  | WT     | Weight   |
| VPA      | Vertical path angle   | WTSPT  | Waterspout   |
| VPT      | Visual manoeuvre with prescribed track                                      | WWW    | Worldwide web  |
| VRB      | Variable  | WX     | Weather  |
| VSA      | By visual reference to the ground   | ☛WXR   | Weather radar  |
| VSP      | Vertical speed  |        |  |
| VTF      | Vector to final   | X      |  |
| VTOL     | Vertical take-off and landing   |        |  |
| VV ...   | Vertical visibility <i>(followed by figures in METAR/SPECI and TAF)</i>     | X      | Cross  |
|          |   | XBAR   | Crossbar <i>(of approach lighting system)</i>                      |
| <b>W</b> |   | XNG    | Crossing   |
|          |   | XS     | Atmospherics   |
| W        | West or western longitude   | Y      |  |
| W        | White   |        |  |
| W...     | Sea-surface temperature (followed by figures in METAR/SPECI)                | Y      | Yellow   |
| WAAS†    | Wide area augmentation system   | Y CZ   | Yellow caution zone (runway lighting)                              |
| WAC ...  | World Aeronautical Chart — ICAO 1:1 000 000 <i>(followed by name/title)</i> | YES*   | Yes (affirmative) <i>(to be used in AFS as a procedure signal)</i> |
| WAF C    | World area forecast centre  | YR     | Your   |
| WB       | Westbound   | Z      |  |
| WBAR     | Wing bar lights   |        |  |
| WDI      | Wind direction indicator  | Z      | Coordinated Universal Time <i>(in meteorological messages)</i>     |
| WDSPR    | Widespread  |        |  |
| WED      | Wednesday   |        |  |
| WEF      | With effect from or effective from  |        |  |
| WGS-84   | World Geodetic System — 1984  |        |  |
| WI       | Within  |        |  |
| WID      | Width or wide   |        |  |
| WIE      | With immediate effect or effective immediately                              |        |  |

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

+ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.


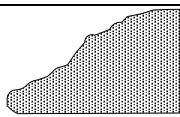


\* Signal is also available for use in communicating with stations of the maritime mobile service.

# Signal for use in the teletypewriter service only.

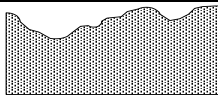
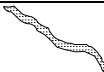


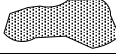
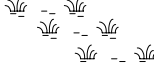
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GEN 2.3 CHART SYMBOLS



1. Topography

|                                       |   |
|---------------------------------------|---|
| Contours                              |   |
| Sand area                             |   |
| Elevation, Highest elevation on chart |  |
|                                       |  |

2. Hidrography





|                                   |   |
|-----------------------------------|---|
| Shore line                        |     |
| Large river (perennial)           |    |
| Small river (perennial)           |    |
| Rivers and stream (non-perennial) |   |
| Lakes (perennial)                 |  |
| Rice field                        |   |

3. Vegetation




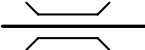
|                       |   |
|-----------------------|---|
| Trees                 |  |
| Vegetation in general |  |

#### 4. Constructions


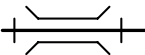
##### 4.1 *Built-up areas*

|                    |   |
|--------------------|---|
| Large urbanization |  |
| City               |  |
| Town               |  |
| Buildings          |  |

##### 4.2 *Highways and roads*












|                |   |
|----------------|---|
| Main highway   |  |
| Secondary road |  |
| Road           |  |
| Bridge on road |  |

##### 4.3 *Railroads*



|                    |   |
|--------------------|---|
| Railroad           |    |
| Bridge on railroad |  |

## 5. Aerodromes







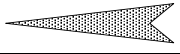


### 5.1 *Charts other than approach charts*

|  |   |
|--|---|
| Civil (land)   |  |
| Civil (water)  |  |
| Joint civil and military (land)  |  |
| Joint civil and military (water)   |  |
| Military (land)  |  |
| Military (water)   |  |
| Emergency aerodrome or aerodrome with no facilities                          |  |
| Abandoned or closed aerodrome  |  |
| Sheltered anchorage  |  |
| Aerodrome. Used on charts on which aerodrome classification is not required. |  |
| Heliport   |  |

### 5.2 *Approach charts*

|   |  |
|---|--|
| Aerodrome on which the procedure is based   |  |
| Aerodromes affecting the traffic pattern on the aerodrome on which the procedure is based |  |

### 6. Radio navigation aids

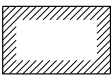


|  |           |   |
|--|-----------|---|
| Basic radio navigation aid symbol                      |           |  |
| Non-directional radio beacon (NDB)                     |           |  |
| VHF omnidirectional radio range (VOR)                  |           |  |
| Distance measuring equipment                           |           |  |
| Collocated VOR and DME radio navigation aids (VOR/DME) |           |  |
| Instrument landing system (ILS)                        | Plan view |   |
|  | Profile   |   |
| Radio marker beacon                                    |           |  |
| Compass rose   |           |  |











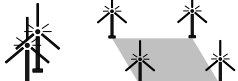
7. Air traffic services

|                                 |                           |   |                   |                   |   |                    |
|---------------------------------|---------------------------|---|-------------------|-------------------|---|--------------------|
| Flight information región (FIR) |                           |   |                   |                   |   |                    |
| Aerodrome traffic zone          |                           |   |                   |                   |   |                    |
| Control area                    |                           |   |                   |                   |   |                    |
| Airway                          |                           |   |                   |                   |   |                    |
| RNAV                            |                           |   |                   |                   |   |                    |
| Control zone                    |                           |   |                   |                   |   |                    |
| Scale-break (on ATS routes)     |                           |   |                   |                   |   |                    |
|                                 | ✎ Conventional Navigation |   | ✎ Area Navigation |                   |   |                    |
|                                 | On request fly-by         | Compulsory fly-by   | On request fly-by | Compulsory fly-by | On request flyover  | Compulsory flyover |
| VFR reporting point             |                           |   |                   |                   |   |                    |
| Intersection INT                |                           |   |                   |                   |   |                    |
| VOR                             |                           |   |                   |                   |   |                    |
| VOR/DME                         |                           |   |                   |                   |   |                    |
| NDB                             |                           |   |                   |                   |   |                    |
| Waypoint WPT                    | ✎ Not used                | ✎ Not used  |                   |                   |   |                    |
| ATS/MET reporting point (MRP)   |                           |   |                   | Compulsory        |   |                    |
|                                 |                           |   |                   | On request        |   |                    |
| Final approach fix (FAF)        |                           |   |                   |                   |   |                    |
| Altitudes/flight levels         |                           | Altitude/flight level "window"  |                   |                   | $\frac{\text{FL 245}}{900}$   |                    |
|                                 |                           | "At or above" altitude/flight level   |                   |                   | $\frac{\text{FL 245}}{\quad}$   |                    |
|                                 |                           | "At or below" altitude/flight level   |                   |                   | $\frac{\quad}{900}$   |                    |
|                                 |                           | "Mandatory" altitude/flight level   |                   |                   | $\frac{\text{FL 245}}{\quad}$   |                    |
| Airspace clasification          |                           | Between "GND" and 600 M: class "G";<br>between 600 M and FL 195: class "C";<br>between FL 195 and FL 245: class "A" |                   |                   |   |                    |
|                                 |                           |   |                   |                   | $\frac{\text{FL 245}}{\text{A}}$<br>$\frac{\text{FL 195}}{\text{C}}$<br>$\frac{600 \text{ M}}{\text{G}}$<br>GND |                    |



### 8. Airspace restrictions

|  |   |
|--|---|
| Restricted airspace (prohibited, restricted or danger areas) |  |
| Common boundary of two areas                                 |  |
| ☛ Air defence identification zone (ADIZ)                     |  |

















### 9. Obstacles

|   |   |
|---|---|
| Obstacle  |    |
| Lighted obstacle  |    |
| Group obstacles   |    |
| Lighted group obstacles                                       |    |
| Exceptionally high obstacle (higher than 300 M above terrain) |    |
| Exceptionally high obstacle - lighted                         |    |
|   | <p>Elevation of top </p> <p>Height above specified datum</p> |
| Wind turbine – unlighted and lighted                          |   |
| Wind turbines – minor Group and Group in major area, lighted. |   |





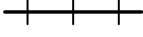



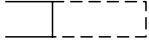

### 10. Visual aids

|                           |   |
|---------------------------|---|
| Marine light              |  |
| Aeronautical ground light |  |

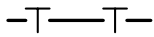
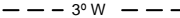
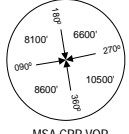
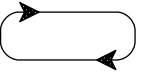

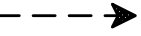



11. Aerodrome charts

|  |   |
|--|---|
| Hard surface runway                        |    |
| Unpaved runway                             |    |
| Stopway                                    |    |
| Taxiways and parking areas                 |    |
| Aerodrome reference point (ARP)            |    |
| Helicopter alighting area on an aerodrome  |    |
| VOR check-point                            |    |
| Runway visual range (RVR) observation site |    |
| Point light                                |    |
|  |    |
| Obstacle light                             |    |
| Wind direction indicator (lighted)         |    |
| Wind direction indicator (unlighted)       |   |
| Landing direction indicator (lighted)      |  |
| Landing direction indicator (unlighted)    |  |
| Runway-holding                             |  |

12. Symbols for aerodrome obstacle charts – Type A, B and C

|                                     |  |   |
|-------------------------------------|--|---|
| Tree or shrub                       |   |  |
| Pole, tower, spire, antenna, etc.   |   |   |
| Building or large structure         |   |   |
| Railroad                            |   |   |
| Transmission line or overhead cable |   |   |
| Terrain penetrating obstacle plane  |   |  |
| Stopway (SWY)                       |  |   |
| Clearway (CWY)                      |  |   |

13. Various

|  |  |
|--|--|
| Transmission line or overhead cable  |                      |
| Isogonal   |                      |
| Minimum sector altitude (MSA)  |  <p>MSA CRR VOR</p> |
| Holding pattern  |                    |
| Direct approach  |                    |
| Missed approach track  |                    |
| Runway   |                    |
| Radio navigation aid (type of aid and its use in the procedure to be annotated on top of the symbol) |                   |
| Radio marker beacon (type of beacon to be annotated on top of the symbol)                            |                   |
| DME fix  |                   |

## GEN 2.4 LOCATION INDICATORS

The location indicators marked with an asterisk (\*) cannot be used in the address component of AFS messages

| 1. ENCODE                                      |                  | 2. DECODE        |  |
|--|------------------|------------------|--|
| <i>Location</i>                                | <i>Indicator</i> | <i>Indicator</i> | <i>Location</i>                                |
| ANCHORENA / Ad                                 | SUAN *           | SUAA             | MONTEVIDEO / Ad Ángel S. Adami                 |
| ARTIGAS / Intl                                 | SUAG             | SUAG             | ARTIGAS / Intl                                 |
| BELLA UNION / Ad                               | SUBU *           | SUAN *           | ANCHORENA / Ad                                 |
| BOISO LANZA / Ad                               | SUBL             | SUAY *           | TERMAS DEL ARAPEY / Ad                         |
| CANELONES / Ad                                 | SUCN *           | SUBL             | BOISO LANZA / Ad                               |
| CARDONA / Ad                                   | SUCD *           | SUBU *           | BELLA UNIÓN / Ad                               |
| CARMELO / Intl                                 | SUCM *           | SUCA             | COLONIA / Intl "Laguna de los Patos"           |
| CHALKLING / Ad                                 | SUPC *           | SUCD *           | CARDONA / Ad                                   |
| CHUY / Ad                                      | SUCH *           | SUCH *           | CHUY / Ad                                      |
| COLONIA / Intl "Laguna de los Patos"           | SUCA             | SUCL *           | LA CALERA - MINAS / Ad                         |
| DOLORES / Ad                                   | SUDL *           | SUCM *           | CARMELO / Intl                                 |
| DURAZNO / Santa Bernardina Intl de Alternativa | SUDU             | SUCN *           | CANELONES / Ad                                 |
| EDIFICIO LIBERTAD / Heli                       | SUEL *           | SUDL *           | DOLORES / Ad                                   |
| EL MIRADOR - ESTANCIA / Ad                     | SUEM *           | SUDU             | DURAZNO / Santa Bernardina Intl de Alternativa |
| E.T.A. / Heli                                  | SUET *           | SUDR *           | SARANDI GRANDE / Ad Dos Robles                 |
| FLORIDA / Ad                                   | SUFL *           | SUEL *           | EDIFICIO LIBERTAD / Heli                       |
| FRAY BENTOS / Ad                               | SUFB *           | SUEM *           | EL MIRADOR - ESTANCIA / Ad                     |
| FRIGORÍFICO TACUAREMBÓ / Ad                    | SUFT *           | SUEO             | MONTEVIDEO / ACC                               |
| GENERAL ARTIGAS - E.M.A. / Ad                  | SUGA             | SUEO             | MONTEVIDEO / FIR                               |
| GUICHÓN / Ad                                   | SUGN *           | SUET *           | E.T.A / Heli                                   |

| 1. ENCODE  |                  | 2. DECODE        |   |
|--|------------------|------------------|---|
| <i>Location</i>  | <i>Indicator</i> | <i>Indicator</i> | <i>Location</i>   |
| JOSE PEDRO VARELA / Ad                                       | SUJP *           | SUFB *           | FRAY BENTOS / Ad  |
| JUAN LACAZE / Ad   | SUJL *           | SUFL *           | FLORIDA / Ad  |
| LA CALERA - ESTANCIA / Ad                                    | SULC *           | SUFT *           | FRIGORÍFICO TACUAREMBÓ / Ad                                 |
| LA CALERA - MINAS / Ad                                       | SUCL *           | SUGA             | GENERAL ARTIGAS - E.M.A. / Ad                               |
| •  | •                | SUGN *           | GUICHÓN / Ad  |
| LA PALOMA - ROCHA / Ad                                       | SULP *           | SUJL *           | JUAN LACAZE / Ad  |
| LASCANO / Ad   | SULA *           | SUJP *           | JOSÉ PEDRO VARELA / Ad                                      |
| MALDONADO / Intl C/C Carlos A.<br>Curbelo "Laguna del Sauce" | SULS             | SULA *           | LASCANO / Ad  |
| MELO / Intl de Cerro Largo                                   | SUMO             | SULC *           | LA CALERA - ESTANCIA / Ad                                   |
| MERCEDES / Dptal Ricardo Detomasi                            | SUME *           | •                | •   |
| MINAS / Ad   | SUMI *           | SULP *           | LA PALOMA - ROCHA / Ad                                      |
| MONTEVIDEO / Intl Carrasco -<br>"Gral. Cesáreo L. Berisso"   | SUMU             | SULS             | MALDONADO / Intl C/C Carlos A<br>Curbelo "Laguna del Sauce" |
| MONTEVIDEO / ACC   | SUEO             | SUME *           | MERCEDES / Dptal Ricardo Detomasi                           |
| MONTEVIDEO / Ángel S. Adami                                  | SUAA             | SUMI *           | MINAS / Ad  |
| MONTEVIDEO / FIR   | SUEO             | SUMO             | MELO / Intl de Cerro Largo                                  |
| NUEVA MEHLEM - ESTANCIA / Ad                                 | SUNM *           | SUMU             | MONTEVIDEO / Intl Carrasco -<br>"Gral. Cesáreo L. Berisso"  |
| OMBÚES DE LAVALLE / Ad                                       | SUOL *           | SUNM *           | NUEVA MEHLEM - ESTANCIA / Ad                                |
| PASO DE LOS TOROS / Ad                                       | SUPT *           | SUOL *           | OMBÚES DE LAVALLE / Ad                                      |
| PAYSANDÚ / Intl Tydeo Larre Borges                           | SUPU             | SUPC *           | CHALKLING / Ad  |
| PROGRESO / Ad  | SUPR *           | SUPE             | PUNTA DEL ESTE / Dptal "El Jagüel"                          |
| PUNTA DEL ESTE / Dptal "El Jagüel"                           | SUPE             | SUPR *           | PROGRESO / Ad   |
| RESIDENCIA SUÁREZ / Heli                                     | SURS *           | SUPT *           | PASO DE LOS TOROS / Ad                                      |
|  |                  | SUPU             | PAYSANDÚ / Intl Tydeo Larre Borges                          |

| 1. ENCODE  |                  | 2. DECODE        |  |
|--|------------------|------------------|--|
| <i>Location</i>  | <i>Indicator</i> | <i>Indicator</i> | <i>Location</i>  |
| RIO BRANCO / Ad  | SURB *           | SURB *           | RÍO BRANCO / Ad  |
| RIVERA / Intl Presidente General (Piloto Aviador Militar) don Oscar D. Gestido | SURV             | SURO *           | ROCHA / Ad   |
| ROCHA / Ad   | SURO *           | SURS *           | RESIDENCIA SUÁREZ / Heli   |
| SALTO / Intl Nueva Hespérides  | SUSO             | SURV             | RIVERA / Intl Presidente General (Piloto Aviador Militar) don Oscar D. Gestido |
| SAN GREGORIO / Ad  | SUSG *           | SUSG *           | SAN GREGORIO / Ad  |
| SAN JOSÉ / Ad  | SUSJ *           | SUSJ *           | SAN JOSÉ / Ad  |
| SARANDI DEL YÍ / Ad  | SUYI *           | SUSO             | SALTO / Intl Nueva Hespérides  |
| ☛ SARANDI GRANDE / Ad Dos Robles   | SUDR *           | SUTB             | TACUAREMBÓ / Ad  |
| TACUAREMBÓ / Ad  | SUTB             | SUTD *           | TRINIDAD / Ad  |
| TERMAS DEL ARAPEY / Ad   | SUAY *           | SUTG *           | TOMÁS GOMENSORO / Ad   |
| TOMÁS GOMENSORO / Ad   | SUTG *           | SUTR *           | TREINTA Y TRES / Ad  |
| TREINTA Y TRES / Ad  | SUTR *           | SUVE *           | VERGARA / Ad   |
| TRINIDAD / Ad  | SUTD *           | SUVO *           | VICHADERO / Ad   |
| VERGARA / Ad   | SUVE *           | SUYI *           | SARANDÍ DEL YÍ / Ad  |
| VICHADERO / Ad   | SUVO *           | SUYN *           | YOUNG / Ad   |
| YOUNG / Ad   | SUYN *           |                  |  |

Note: Heli = Heliport.

### RECEIVER INDICATORS AND DESIGNATORS OF OFFICIAL ENTITIES EN AERONAUTICAL SERVICES

According to AN2/16 1-87/47 attached of ICAO

1.- AERONAUTICAL AUTHORITIES AND SERVICES - Montevideo

SUMUYAYX Civil Aviation General Director of DGAC  
 SUMUYGYX General Director of Aviation Infrastructure of DGIA  
 SUMUYJYX Air Circulation Director (DGIA)  
 SUMUYHYX Airport Director (DGIA)

- ☛SUMUYIYX Carrasco Intl Airport Director (DGIA)
- ☛SUMUYKYX Administration and Finance Director (DGIA)
- ☛SUMUYQYX Electronic Director (DGIA)
- ☛SUMUYTYX Air Telecommunications Director
- VSUMUYNYX NOTAM Office - Uruguay
- ☛SUMUYEYX Air Traffic Division
- ☛SUMUYCYX Search and Rescue Coordinating Centre - SAR
- ☛SUMUYUYX South Region (DGIA)
- ☛SUMUYRYX North Region (DGIA)
- ☛SUMUYMYX Meteorological Office, Carrasco Intl Airport (DGMU)
- ☛SUMUZRZX Montevideo Area Control Centre - General
- ☛SUMUZOZX Montevideo Area Control Centre - referred to IFR flights
- ☛SUMUZFZX Montevideo Area Control Centre - referred to VFR flights
- ☛SUMUZZBX Repetitive Flight plans Centre - Montevideo

## 2.- AERONAUTICAL AUTHORITIES AND SERVICES - Generic

- ☛ (1) YAY Civil aviation authority
- ☛ (1) YBY Meteorological Telecommunication Network of Operations in Europe
- ☛ (1) YCY Search and Rescue Coordinating Centre (RCC)
- ☛ (1) YDY Administrative Authority of Aerodrome
- ☛ (1) YFY Aeronautical Fix Station
- ☛ (1) YGD Corporación Centroamericana de Servicios de Navegación Aérea (COCESNA)
- ☛ (1) YLY Authority responsible for investigating aviation accidents
- ☛ (1) YMY Meteorological Office
- ☛ (1) YNY International NOTAM Office
- ☛ (1) YOY Aeronautical Information dependencies
- ☛ (1) YSY Aeronautical Moving Station (AMS)
- ☛ (1) YTY Telecommunications Service
- ☛ (1) YWY Military Operations in Flight Control Center
- ☛ (1) YXY Military Services or Organizations \*
- ☛ (1) YYY Agency which is not exclusively assigned an ICAO designator \*
- ☛ (1) ZYZ Data Bank
  
- ☛ (1) ZAZ Approach Control Office
- ☛ (1) ZBZ Repetitive Flight Plans Office
- ☛ (1) ZDZ Air Traffic Flow regulator dependency
- ☛ (1) ZEZ Flight information data base
- ☛ (1) ZFZ Centre in charge of a Flight Information Region or a Superior Flight Information Region (either an ACC or FIC) when the message is relevant to a VFR flight (see ZQZ)
  
- ☛ (1) ZGZ Air Traffic Control (in general)
- ☛ (1) ZIZ Flight Information Centre (FIC)
- ☛ (1) ZOZ Oceanic Air Traffic Control
- ☛ (1) ZPZ Air Traffic Flow notification dependency
- ☛ (1) ZQZ Centre in charge of a Flight Information Region or a Superior Flight Information Region (either an ACC or FIC) when the message is relevant to a IFR flight (see ZFZ)
  
- ☛ (1) ZRZ Area Control Centre



- ☛ (1) ZSZ SARSAT Centre
- ☛ (1) ZTZ Aerodrome Control Tower
- ☛ (1) ZUZ Superior Area Control Centre
- ☛ (1) ZYZ Aerodrome Security Services
- ☛ (1) ZZZ Aircraft in flight \*\*

- ☛\* Must be placed at the beginning of the message text the name of the Agency, Service, or government agency
- ☛\*\* Must be placed at the beginning of the message text, the identification of the flight

(1) Place in the four-letter location indicator for the recipient / originator of the message here (see GEN 2.4-1 GEN 2.4-3)

#### GENERAL NOTE

The destination indicator contains the location indicator of the destination locations, followed immediately by the ICAO three-letter designator identifying the department or agency of destination

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GEN 2.5 LIST OF RADIO NAVIGATION AIDS

| ID   | Station name | Aid     | Purpose | Station name | Aid     | ID   | Purpose |
|------|--------------|---------|---------|--------------|---------|------|---------|
| AR   | Carrasco     | L       | A       | Adami        | NDB     | ASI  | A       |
| ASI  | Adami        | NDB     | A       | Carrasco     | ILS     | ICAR | A       |
| CA   | Carrasco     | L       | A       | Carrasco     | ILS     | IMVD | A       |
| CRR  | Carrasco     | VOR/DME | AE      | Carrasco     | L       | AR   | A       |
| DUR  | Durazno      | VOR/DME | AE      | Carrasco     | L       | CA   | A       |
| IDUR | Durazno      | ILS     | A       | Carrasco     | VOR/DME | CRR  | AE      |
| ICAR | Carrasco     | ILS     | A       | Curbelo      | VOR/DME | LDS  | AE      |
| IMVD | Carrasco     | ILS     | A       | Durazno      | ILS     | IDUR | A       |
| LDS  | Curbelo      | VOR/DME | AE      | Durazno      | VOR/DME | DUR  | AE      |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |
|      |              |         |         |              |         |      |         |

Purpose.....: A = Aerodrome  
E = En-route

**GEN 2.5-1 LIST OF LOCATION INDICATORS ASSOCIATED WITH EACH AERODROME/HELIPORT**

| 1. ENCODE |                           | 2. DECODE                 |           |
|-----------|---------------------------|---------------------------|-----------|
| <i>ID</i> | <i>Location Indicator</i> | <i>Location Indicator</i> | <i>ID</i> |
| AN        | SUAN                      | SUAA                      | ASI       |
| ASI       | SUAA                      | SUAG                      | AT        |
| AT        | SUAG                      | SUAN                      | AN        |
| AY        | SUAY                      | SUAY                      | AY        |
| BL        | SUBL                      | SUBL                      | BL        |
| BU        | SUBU                      | SUBU                      | BU        |
| CD        | SUCD                      | SUCA                      | COL       |
| CH        | SUCH                      | SUCD                      | CD        |
| CL        | SUCL                      | SUCH                      | CH        |
| CM        | SUCM                      | SUCL                      | CL        |
| CN        | SUCN                      | SUCM                      | CM        |
| COL       | SUCA                      | SUCN                      | CN        |
| ☛CR       | ☛SUCR                     | ☛SUCR                     | ☛CR       |
| CRR       | SUMU                      | SUDL                      | DL        |
| DL        | SUDL                      | SUDR                      | DR        |
| DUR       | SUDU                      | SUDU                      | DUR       |
| DR        | SUDR                      | SUEL                      | EL        |
| EL        | SUEL                      | SUEM                      | EM        |
| EM        | SUEM                      | SUET                      | ET        |
| ET        | SUET                      | SUFB                      | FB        |
| FB        | SUFB                      | SUFL                      | FL        |
| FL        | SUFL                      | SUFT                      | FT        |
| FT        | SUFT                      | SUGA                      | GA        |
| GA        | SUGA                      | SUGN                      | GN        |
| GN        | SUGN                      | SUJL                      | JL        |
| JL        | SUJL                      | SUJP                      | JP        |
| JP        | SUJP                      | SULA                      | LA        |
| LA        | SULA                      | SULC                      | LC        |
| LC        | SULC                      | ☛                         | ☛         |
| LDS       | SULS                      | SULP                      | LP        |
| ☛         | ☛                         | SULS                      | LDS       |
| LP        | SULP                      | SUME                      | ME        |
| ME        | SUME                      | SUMI                      | MI        |
| MI        | SUMI                      | SUMO                      | MLO       |
| MLO       | SUMO                      | SUMU                      | CRR       |
| ☛NH       | ☛SUNH                     | ☛SUNH                     | ☛NH       |
| NM        | SUNM                      | SUNM                      | NM        |
| OL        | SUOL                      | SUOL                      | OL        |
| PC        | SUPC                      | SUPC                      | PC        |
| PE        | SUPE                      | SUPE                      | PE        |
| PN        | SUPU                      | SUPR                      | PR        |
| PR        | SUPR                      | SUPT                      | PT        |
| PT        | SUPT                      | SUPU                      | PN        |
| RB        | SURB                      | SURB                      | RB        |

| 1. ENCODE |                           | 2. DECODE                 |           |
|-----------|---------------------------|---------------------------|-----------|
| <i>ID</i> | <i>Location Indicator</i> | <i>Location Indicator</i> | <i>ID</i> |
| RO        | SURO                      | SURO                      | RO        |
| RS        | SURS                      | SURS                      | RS        |
| RVA       | SURV                      | SURV                      | RVA       |
| SG        | SUSG                      | SUSG                      | SG        |
| SJ        | SUSJ                      | SUSJ                      | SJ        |
| STO       | SUSO                      | SUSO                      | STO       |
| TD        | SUTD                      | SUTB                      | TMB       |
| TG        | SUTG                      | SUTD                      | TD        |
| TMB       | SUTB                      | SUTG                      | TG        |
| TR        | SUTR                      | SUTR                      | TR        |
| VE        | SUVE                      | SUVE                      | VE        |
| VO        | SUVO                      | SUVO                      | VO        |
| YI        | SUYI                      | SUYI                      | YI        |
| YN        | SUYN                      | SUYN                      | YN        |

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GEN 2.6 CONVERSION TABLES

| NM to KM<br>1 NM = 1.852 KM |           | KM to NM<br>1 KM = 0.54 NM |           | FT to M<br>1 FT = 0.3048 M |           | M to FT<br>1 M = 3.281 FT |           |
|-----------------------------|-----------|----------------------------|-----------|----------------------------|-----------|---------------------------|-----------|
| <i>NM</i>                   | <i>KM</i> | <i>KM</i>                  | <i>NM</i> | <i>FT</i>                  | <i>M</i>  | <i>M</i>                  | <i>FT</i> |
| 0,1                         | 0,185     | 0,1                        | 0,05      | 1                          | 0,305     | 1                         | 3,28      |
| 0,2                         | 0,370     | 0,2                        | 0,11      | 2                          | 0,610     | 2                         | 6,56      |
| 0,3                         | 0,556     | 0,3                        | 0,16      | 3                          | 0,914     | 3                         | 9,84      |
| 0,4                         | 0,741     | 0,4                        | 0,22      | 4                          | 1,219     | 4                         | 13,12     |
| 0,5                         | 0,926     | 0,5                        | 0,27      | 5                          | 1,524     | 5                         | 16,40     |
| 0,6                         | 1,111     | 0,6                        | 0,32      | 6                          | 1,829     | 6                         | 19,69     |
| 0,7                         | 1,296     | 0,7                        | 0,38      | 7                          | 2,134     | 7                         | 22,97     |
| 0,8                         | 1,482     | 0,8                        | 0,43      | 8                          | 2,438     | 8                         | 26,25     |
| 0,9                         | 1,667     | 0,9                        | 0,49      | 9                          | 2,743     | 9                         | 29,53     |
| 1                           | 1,852     | 1                          | 0,54      | 10                         | 3,048     | 10                        | 32,81     |
| 2                           | 3,704     | 2                          | 1,08      | 20                         | 6,096     | 20                        | 65,62     |
| 3                           | 5,556     | 3                          | 1,62      | 30                         | 9,144     | 30                        | 98,43     |
| 4                           | 7,408     | 4                          | 2,16      | 40                         | 12,192    | 40                        | 131,23    |
| 5                           | 9,260     | 5                          | 2,70      | 50                         | 15,240    | 50                        | 164,04    |
| 6                           | 11,112    | 6                          | 3,24      | 60                         | 18,288    | 60                        | 196,85    |
| 7                           | 12,964    | 7                          | 3,78      | 70                         | 21,336    | 70                        | 229,66    |
| 8                           | 14,816    | 8                          | 4,32      | 80                         | 24,384    | 80                        | 262,47    |
| 9                           | 16,668    | 9                          | 4,86      | 90                         | 27,432    | 90                        | 295,28    |
| 10                          | 18,520    | 10                         | 5,40      | 100                        | 30,480    | 100                       | 328,08    |
| 20                          | 37,040    | 20                         | 10,80     | 200                        | 60,960    | 200                       | 656,17    |
| 30                          | 55,560    | 30                         | 16,20     | 300                        | 91,440    | 300                       | 984,25    |
| 40                          | 74,080    | 40                         | 21,60     | 400                        | 121,920   | 400                       | 1 312,34  |
| 50                          | 92,600    | 50                         | 27,00     | 500                        | 152,400   | 500                       | 1 640,42  |
| 60                          | 111,120   | 60                         | 32,40     | 600                        | 182,880   | 600                       | 1 968,50  |
| 70                          | 129,640   | 70                         | 37,80     | 700                        | 213,360   | 700                       | 2 296,59  |
| 80                          | 148,160   | 80                         | 43,20     | 800                        | 243,840   | 800                       | 2 624,67  |
| 90                          | 166,680   | 90                         | 48,60     | 900                        | 274,320   | 900                       | 2 952,76  |
| 100                         | 185,200   | 100                        | 54,00     | 1 000                      | 304,800   | 1 000                     | 3 280,84  |
| 200                         | 370,400   | 200                        | 107,99    | 2 000                      | 609,600   | 2 000                     | 6 561,68  |
| 300                         | 555,600   | 300                        | 161,99    | 3 000                      | 914,400   | 3 000                     | 9 842,52  |
| 400                         | 740,800   | 400                        | 215,98    | 4 000                      | 1 219,200 | 4 000                     | 13 123,36 |
| 500                         | 926,000   | 500                        | 269,98    | 5 000                      | 1 524,000 | 5 000                     | 16 404,20 |
|                             |           |                            |           | 6 000                      | 1 828,800 |                           |           |
|                             |           |                            |           | 7 000                      | 2 133,600 |                           |           |
|                             |           |                            |           | 8 000                      | 2 438,400 |                           |           |
|                             |           |                            |           | 9 000                      | 2 743,200 |                           |           |
|                             |           |                            |           | 10 000                     | 3 048,000 |                           |           |

From decimal minutes of an arc to seconds of an arc

| <i>MIN</i> | <i>SEC</i> | <i>MIN</i> | <i>SEC</i> | <i>MIN</i> | <i>SEC</i> | <i>MIN</i> | <i>SEC</i> |
|------------|------------|------------|------------|------------|------------|------------|------------|
| 0,01       | 0,6        | 0,26       | 15,6       | 0,51       | 30,6       | 0,76       | 45,6       |
| 0,02       | 1,2        | 0,27       | 16,2       | 0,52       | 31,2       | 0,77       | 46,2       |
| 0,03       | 1,8        | 0,28       | 16,8       | 0,53       | 31,8       | 0,78       | 46,8       |
| 0,04       | 2,4        | 0,29       | 17,4       | 0,54       | 32,4       | 0,79       | 47,4       |
| 0,05       | 3,0        | 0,30       | 18,0       | 0,55       | 33,0       | 0,80       | 48,0       |
| 0,06       | 3,6        | 0,31       | 18,6       | 0,56       | 33,6       | 0,81       | 48,6       |
| 0,07       | 4,2        | 0,32       | 19,2       | 0,57       | 34,2       | 0,82       | 49,2       |
| 0,08       | 4,8        | 0,33       | 19,8       | 0,58       | 34,8       | 0,83       | 49,8       |
| 0,09       | 5,4        | 0,34       | 20,4       | 0,59       | 35,4       | 0,84       | 50,4       |
| 0,10       | 6,0        | 0,35       | 21,0       | 0,60       | 36,0       | 0,85       | 51,0       |
| 0,11       | 6,6        | 0,36       | 21,6       | 0,61       | 36,6       | 0,86       | 51,6       |
| 0,12       | 7,2        | 0,37       | 22,2       | 0,62       | 37,2       | 0,87       | 52,2       |
| 0,13       | 7,8        | 0,38       | 22,8       | 0,63       | 37,8       | 0,88       | 52,8       |
| 0,14       | 8,4        | 0,39       | 23,4       | 0,64       | 38,4       | 0,89       | 53,4       |
| 0,15       | 9,0        | 0,40       | 24,0       | 0,65       | 39,0       | 0,90       | 54,0       |
| 0,16       | 9,6        | 0,41       | 24,6       | 0,66       | 39,6       | 0,91       | 54,6       |
| 0,17       | 10,2       | 0,42       | 25,2       | 0,67       | 40,2       | 0,92       | 55,2       |
| 0,18       | 10,8       | 0,43       | 25,8       | 0,68       | 40,8       | 0,93       | 55,8       |
| 0,19       | 11,4       | 0,44       | 26,4       | 0,69       | 41,4       | 0,94       | 56,4       |
| 0,20       | 12,0       | 0,45       | 27,0       | 0,70       | 42,0       | 0,95       | 57,0       |
| 0,21       | 12,6       | 0,46       | 27,6       | 0,71       | 42,6       | 0,96       | 57,6       |
| 0,22       | 13,2       | 0,47       | 28,2       | 0,72       | 43,2       | 0,97       | 58,2       |
| 0,23       | 13,8       | 0,48       | 28,8       | 0,73       | 43,8       | 0,98       | 58,8       |
| 0,24       | 14,4       | 0,49       | 29,4       | 0,74       | 44,4       | 0,99       | 59,4       |
| 0,25       | 15,0       | 0,50       | 30,0       | 0,75       | 45,0       |            |            |

From seconds of an arc to decimal minutes of an arc

| <i>SEC</i> | <i>MIN</i> | <i>SEC</i> | <i>MIN</i> | <i>SEC</i> | <i>MIN</i> | <i>SEC</i> | <i>MIN</i> |
|------------|------------|------------|------------|------------|------------|------------|------------|
| 1          | 0,02       | 16         | 0,27       | 31         | 0,52       | 46         | 0,77       |
| 2          | 0,03       | 17         | 0,28       | 32         | 0,53       | 47         | 0,78       |
| 3          | 0,05       | 18         | 0,30       | 33         | 0,55       | 48         | 0,80       |
| 4          | 0,07       | 19         | 0,32       | 34         | 0,57       | 49         | 0,82       |
| 5          | 0,08       | 20         | 0,33       | 35         | 0,58       | 50         | 0,83       |
| 6          | 0,10       | 21         | 0,35       | 36         | 0,60       | 51         | 0,85       |
| 7          | 0,12       | 22         | 0,37       | 37         | 0,62       | 52         | 0,87       |
| 8          | 0,13       | 23         | 0,38       | 38         | 0,63       | 53         | 0,88       |
| 9          | 0,15       | 24         | 0,40       | 39         | 0,65       | 54         | 0,90       |
| 10         | 0,17       | 25         | 0,42       | 40         | 0,67       | 55         | 0,92       |
| 11         | 0,18       | 26         | 0,43       | 41         | 0,68       | 56         | 0,93       |
| 12         | 0,20       | 27         | 0,45       | 42         | 0,70       | 57         | 0,95       |
| 13         | 0,22       | 28         | 0,47       | 43         | 0,72       | 58         | 0,97       |
| 14         | 0,23       | 29         | 0,48       | 44         | 0,73       | 59         | 0,98       |
| 15         | 0,25       | 30         | 0,50       | 45         | 0,75       |            |            |



## GEN 2.7 SUNRISE/SUNSET TABLES

1. The tables on the following pages have been prepared by the Dirección de Meteorología Aeronáutica of Uruguay and are reproduced here with their permission. The tables include the values of Sunrise and sunset for all the country.

1.1 The tables indicate the time for beginning of civil morning twilight (TWIL FROM), sunrise (SR) sunset (SS), and end of civil evening twilight (TWIL TO) for the years from 2024 to 2028.

1.2 The times indicated for the beginning of civil morning twilight and end of civil evening twilight are calculated for an altitude of the Sun 6° below the horizon, as commonly used. The hours are expressed in UTC.

1.3 The tables are calculated for the year 2024, which is used as an “average year” for the years from 2024 to 2028. In this period, the times on an arbitrary date and place will deviate less than 2 minutes from the times on the same date and place in the “average year”

### 2. Alphabetical index

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| Montevideo/Uruguay<br>350000S/0561500W | GEN 2.7-2   |                 |             |

3. Sunrise-Sunset tables

3.1

| MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO | MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO |
|--------------|--------------|------|------|------------|--------------|--------------|------|------|------------|
| JAN 1        | 0805         | 0834 | 2302 | 2332       | FEB 15       | 0852         | 0918 | 2240 | 2306       |
| - 2          | 0806         | 0835 | 2302 | 2332       | - 16         | 0853         | 0919 | 2238 | 2305       |
| - 3          | 0807         | 0836 | 2302 | 2332       | - 17         | 0854         | 0920 | 2237 | 2304       |
| - 4          | 0807         | 0837 | 2303 | 2332       | - 18         | 0855         | 0921 | 2236 | 2303       |
| - 5          | 0808         | 0838 | 2303 | 2332       | - 19         | 0856         | 0922 | 2235 | 2301       |
| - 6          | 0809         | 0838 | 2303 | 2332       | - 20         | 0857         | 0923 | 2234 | 2300       |
| - 7          | 0810         | 0839 | 2303 | 2332       | - 21         | 0858         | 0924 | 2233 | 2259       |
| - 8          | 0811         | 0840 | 2303 | 2332       | - 22         | 0859         | 0925 | 2232 | 2258       |
| - 9          | 0812         | 0841 | 2303 | 2332       | - 23         | 0900         | 0926 | 2230 | 2256       |
| - 10         | 0813         | 0842 | 2302 | 2332       | - 24         | 0901         | 0927 | 2229 | 2255       |
| - 11         | 0814         | 0843 | 2302 | 2331       | - 25         | 0902         | 0928 | 2228 | 2254       |
| - 12         | 0815         | 0844 | 2302 | 2331       | - 26         | 0903         | 0929 | 2227 | 2253       |
| - 13         | 0816         | 0845 | 2302 | 2331       | - 27         | 0904         | 0930 | 2225 | 2251       |
| - 14         | 0817         | 0846 | 2302 | 2331       | - 28         | 0905         | 0931 | 2224 | 2250       |
| - 15         | 0818         | 0847 | 2302 | 2330       | - 29         | 0906         | 0932 | 2223 | 2249       |
| - 16         | 0819         | 0848 | 2301 | 2330       |              |              |      |      |            |
| - 17         | 0820         | 0849 | 2301 | 2330       | MAR 1        | 0907         | 0933 | 2222 | 2247       |
| - 18         | 0821         | 0850 | 2301 | 2329       | - 2          | 0908         | 0933 | 2220 | 2246       |
| - 19         | 0822         | 0851 | 2300 | 2329       | - 3          | 0909         | 0934 | 2219 | 2245       |
| - 20         | 0823         | 0852 | 2300 | 2328       | - 4          | 0910         | 0935 | 2218 | 2243       |
| - 21         | 0824         | 0853 | 2259 | 2328       | - 5          | 0910         | 0936 | 2216 | 2242       |
| - 22         | 0825         | 0854 | 2259 | 2327       | - 6          | 0911         | 0937 | 2215 | 2241       |
| - 23         | 0827         | 0855 | 2258 | 2327       | - 7          | 0912         | 0938 | 2214 | 2239       |
| - 24         | 0828         | 0856 | 2258 | 2326       | - 8          | 0913         | 0939 | 2212 | 2238       |
| - 25         | 0829         | 0857 | 2257 | 2325       | - 9          | 0914         | 0940 | 2211 | 2236       |
| - 26         | 0830         | 0858 | 2257 | 2325       | - 10         | 0915         | 0940 | 2210 | 2235       |
| - 27         | 0831         | 0859 | 2256 | 2324       | - 11         | 0916         | 0941 | 2208 | 2234       |
| - 28         | 0832         | 0900 | 2255 | 2323       | - 12         | 0917         | 0942 | 2207 | 2232       |
| - 29         | 0833         | 0901 | 2255 | 2323       | - 13         | 0918         | 0943 | 2205 | 2231       |
| - 30         | 0834         | 0902 | 2254 | 2322       | - 14         | 0918         | 0944 | 2204 | 2229       |
| - 31         | 0835         | 0903 | 2253 | 2321       | - 15         | 0919         | 0945 | 2203 | 2228       |
|              |              |      |      |            | - 16         | 0920         | 0945 | 2201 | 2227       |
| FEB 1        | 0837         | 0904 | 2252 | 2320       | - 17         | 0921         | 0946 | 2208 | 2225       |
| - 2          | 0838         | 0905 | 2252 | 2319       | - 18         | 0922         | 0947 | 2258 | 2224       |
| - 3          | 0839         | 0906 | 2251 | 2318       | - 19         | 0923         | 0948 | 2157 | 2222       |
| - 4          | 0840         | 0907 | 2250 | 2317       | - 20         | 0923         | 0949 | 2156 | 2221       |
| - 5          | 0841         | 0908 | 2249 | 2317       | - 21         | 0924         | 0949 | 2154 | 2220       |
| - 6          | 0842         | 0909 | 2248 | 2316       | - 22         | 0925         | 0950 | 2153 | 2218       |
| - 7          | 0843         | 0910 | 2248 | 2315       | - 23         | 0926         | 0951 | 2151 | 2217       |
| - 8          | 0844         | 0911 | 2247 | 2314       | - 24         | 0927         | 0952 | 2150 | 2215       |
| - 9          | 0845         | 0912 | 2246 | 2313       | - 25         | 0927         | 0953 | 2149 | 2214       |
| - 10         | 0847         | 0913 | 2245 | 2312       | - 26         | 0928         | 0953 | 2147 | 2212       |
| - 11         | 0848         | 0914 | 2244 | 2311       | - 27         | 0929         | 0954 | 2146 | 2211       |
| - 12         | 0849         | 0915 | 2243 | 2309       | - 28         | 0930         | 0955 | 2144 | 2210       |
| - 13         | 0850         | 0916 | 2242 | 2308       | - 29         | 0931         | 0956 | 2143 | 2208       |
| - 14         | 0851         | 0917 | 2241 | 2307       | - 30         | 0931         | 0957 | 2142 | 2207       |

| MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO | MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO |
|--------------|--------------|------|------|------------|--------------|--------------|------|------|------------|
| MAR 31       | 0932         | 0957 | 2140 | 2206       | MAY 17       | 1007         | 1034 | 2048 | 2115       |
| APR 1        | 0933         | 0958 | 2139 | 2204       | - 18         | 1008         | 1035 | 2048 | 2115       |
| - 2          | 0934         | 0959 | 2138 | 2203       | - 19         | 1009         | 1036 | 2047 | 2114       |
| - 3          | 0934         | 1000 | 2136 | 2201       | - 20         | 1009         | 1037 | 2046 | 2114       |
| - 4          | 0935         | 1001 | 2135 | 2200       | - 21         | 1010         | 1037 | 2046 | 2113       |
| - 5          | 0936         | 1001 | 2133 | 2159       | - 22         | 1011         | 1038 | 2045 | 2113       |
| - 6          | 0937         | 1002 | 2132 | 2157       | - 23         | 1011         | 1039 | 2045 | 2112       |
| - 7          | 0938         | 1003 | 2131 | 2156       | - 24         | 1012         | 1039 | 2044 | 2112       |
| - 8          | 0938         | 1004 | 2129 | 2155       | - 25         | 1013         | 1040 | 2044 | 2111       |
| - 9          | 0939         | 1005 | 2128 | 2154       | - 26         | 1013         | 1041 | 2043 | 2111       |
| - 10         | 0940         | 1005 | 2127 | 2152       | - 27         | 1014         | 1041 | 2043 | 2110       |
| - 11         | 0941         | 1006 | 2125 | 2151       | - 28         | 1014         | 1042 | 2042 | 2110       |
| - 12         | 0941         | 1007 | 2124 | 2150       | - 29         | 1015         | 1043 | 2042 | 2110       |
| - 13         | 0942         | 1008 | 2123 | 2148       | - 30         | 1016         | 1043 | 2042 | 2109       |
| - 14         | 0943         | 1008 | 2122 | 2147       | - 31         | 1016         | 1044 | 2041 | 2109       |
| - 15         | 0944         | 1009 | 2120 | 2146       | JUN 1        | 1017         | 1045 | 2041 | 2109       |
| - 16         | 0944         | 1010 | 2119 | 2145       | - 2          | 1017         | 1045 | 2041 | 2109       |
| - 17         | 0945         | 1011 | 2118 | 2144       | - 3          | 1018         | 1046 | 2041 | 2108       |
| - 18         | 0946         | 1012 | 2117 | 2142       | - 4          | 1018         | 1046 | 2040 | 2108       |
| - 19         | 0947         | 1012 | 2115 | 2141       | - 5          | 1019         | 1047 | 2040 | 2108       |
| - 20         | 0947         | 1013 | 2114 | 2140       | - 6          | 1019         | 1047 | 2040 | 2108       |
| - 21         | 0948         | 1014 | 2113 | 2139       | - 7          | 1020         | 1048 | 2040 | 2108       |
| - 22         | 0949         | 1015 | 2112 | 2138       | - 8          | 1020         | 1048 | 2040 | 2108       |
| - 23         | 0950         | 1016 | 2111 | 2137       | - 9          | 1021         | 1049 | 2040 | 2108       |
| - 24         | 0950         | 1016 | 2109 | 2135       | - 10         | 1021         | 1049 | 2040 | 2108       |
| - 25         | 0951         | 1017 | 2108 | 2134       | - 11         | 1022         | 1050 | 2040 | 2108       |
| - 26         | 0952         | 1018 | 2107 | 2133       | - 12         | 1022         | 1050 | 2040 | 2108       |
| - 27         | 0953         | 1019 | 2106 | 2132       | - 13         | 1022         | 1051 | 2040 | 2108       |
| - 28         | 0953         | 1020 | 2105 | 2131       | - 14         | 1023         | 1051 | 2040 | 2108       |
| - 29         | 0954         | 1020 | 2104 | 2130       | - 15         | 1023         | 1051 | 2040 | 2108       |
| - 30         | 0955         | 1021 | 2103 | 2129       | - 16         | 1023         | 1052 | 2040 | 2108       |
| MAY 1        | 0956         | 1022 | 2102 | 2128       | - 17         | 1024         | 1052 | 2040 | 2108       |
| - 2          | 0956         | 1023 | 2101 | 2127       | - 18         | 1024         | 1052 | 2040 | 2108       |
| - 3          | 0957         | 1024 | 2100 | 2126       | - 19         | 1024         | 1052 | 2040 | 2109       |
| - 4          | 0958         | 1024 | 2059 | 2125       | - 20         | 1024         | 1053 | 2041 | 2109       |
| - 5          | 0959         | 1025 | 2058 | 2124       | - 21         | 1025         | 1053 | 2041 | 2109       |
| - 6          | 0959         | 1026 | 2057 | 2124       | - 22         | 1025         | 1053 | 2041 | 2109       |
| - 7          | 1000         | 1027 | 2056 | 2123       | - 23         | 1025         | 1053 | 2041 | 2110       |
| - 8          | 1001         | 1028 | 2055 | 2122       | - 24         | 1025         | 1053 | 2042 | 2110       |
| - 9          | 1002         | 1028 | 2054 | 2121       | - 25         | 1025         | 1053 | 2042 | 2110       |
| - 10         | 1002         | 1029 | 2054 | 2120       | - 26         | 1025         | 1054 | 2042 | 2110       |
| - 11         | 1003         | 1030 | 2053 | 2120       | - 27         | 1025         | 1054 | 2043 | 2111       |
| - 12         | 1004         | 1031 | 2052 | 2119       | - 28         | 1026         | 1054 | 2043 | 2111       |
| - 13         | 1004         | 1031 | 2051 | 2118       | - 29         | 1026         | 1054 | 2043 | 2111       |
| - 14         | 1005         | 1032 | 2050 | 2117       | - 30         | 1026         | 1054 | 2044 | 2112       |
| - 15         | 1006         | 1033 | 2050 | 2117       | JUL 1        | 1026         | 1054 | 2044 | 2112       |
| - 16         | 1007         | 1034 | 2049 | 2116       | - 2          | 1025         | 1054 | 2045 | 2113       |

| MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO | MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO |
|--------------|--------------|------|------|------------|--------------|--------------|------|------|------------|
| JUL 3        | 1025         | 1053 | 2045 | 2113       | AUG 20       | 0953         | 1019 | 2118 | 2144       |
| - 4          | 1025         | 1053 | 2046 | 2114       | - 21         | 0952         | 1017 | 2118 | 2144       |
| - 5          | 1025         | 1053 | 2046 | 2114       | - 22         | 0950         | 1016 | 2119 | 2145       |
| - 6          | 1025         | 1053 | 2047 | 2115       | - 23         | 0949         | 1015 | 2120 | 2146       |
| - 7          | 1025         | 1053 | 2047 | 2115       | - 24         | 0948         | 1014 | 2121 | 2146       |
| - 8          | 1025         | 1052 | 2048 | 2116       | - 25         | 0947         | 1012 | 2121 | 2147       |
| - 9          | 1024         | 1052 | 2048 | 2116       | - 26         | 0945         | 1011 | 2122 | 2148       |
| - 10         | 1024         | 1052 | 2049 | 2117       | - 27         | 0944         | 1010 | 2123 | 2148       |
| - 11         | 1024         | 1052 | 2049 | 2117       | - 28         | 0943         | 1008 | 2124 | 2149       |
| - 12         | 1024         | 1051 | 2050 | 2118       | - 29         | 0942         | 1007 | 2124 | 2150       |
| - 13         | 1023         | 1051 | 2051 | 2118       | - 30         | 0940         | 1006 | 2125 | 2150       |
| - 14         | 1023         | 1050 | 2051 | 2119       | - 31         | 0930         | 1004 | 2126 | 2151       |
| - 15         | 1022         | 1050 | 2052 | 2119       |              |              |      |      |            |
| - 16         | 1022         | 1050 | 2053 | 2120       | SEP 1        | 0938         | 1003 | 2126 | 2152       |
| - 17         | 1022         | 1049 | 2053 | 2121       | - 2          | 0936         | 1002 | 2127 | 2153       |
| - 18         | 1021         | 1049 | 2054 | 2121       | - 3          | 0935         | 1000 | 2128 | 2153       |
| - 19         | 1021         | 1048 | 2054 | 2122       | - 4          | 0934         | 0959 | 2129 | 2154       |
| - 20         | 1020         | 1047 | 2055 | 2123       | - 5          | 0932         | 0958 | 2129 | 2155       |
| - 21         | 1020         | 1047 | 2056 | 2123       | - 6          | 0931         | 0956 | 2130 | 2155       |
| - 22         | 1019         | 1046 | 2057 | 2124       | - 7          | 0929         | 0955 | 2131 | 2156       |
| - 23         | 1018         | 1046 | 2057 | 2124       | - 8          | 0928         | 0953 | 2131 | 2157       |
| - 24         | 1018         | 1045 | 2058 | 2125       | - 9          | 0927         | 0952 | 2132 | 2157       |
| - 25         | 1017         | 1044 | 2059 | 2126       | - 10         | 0925         | 0950 | 2133 | 2158       |
| - 26         | 1016         | 1044 | 2059 | 2126       | - 11         | 0924         | 0949 | 2134 | 2159       |
| - 27         | 1016         | 1043 | 2100 | 2127       | - 12         | 0922         | 0948 | 2134 | 2200       |
| - 28         | 1015         | 1042 | 2100 | 2128       | - 13         | 0921         | 0946 | 2135 | 2200       |
| - 29         | 1014         | 1041 | 2101 | 2128       | - 14         | 0928         | 0945 | 2136 | 2201       |
| - 30         | 1014         | 1040 | 2102 | 2129       | - 15         | 0918         | 0944 | 2136 | 2202       |
| - 31         | 1013         | 1040 | 2103 | 2130       | - 16         | 0917         | 0942 | 2137 | 2202       |
|              |              |      |      |            | - 17         | 0915         | 0940 | 2138 | 2203       |
| AUG 1        | 1012         | 1039 | 2104 | 2130       | - 18         | 0914         | 0939 | 2139 | 2204       |
| - 2          | 1011         | 1038 | 2104 | 2131       | - 19         | 0912         | 0938 | 2139 | 2205       |
| - 3          | 1010         | 1037 | 2105 | 2132       | - 20         | 0911         | 0936 | 2140 | 2205       |
| - 4          | 1009         | 1036 | 2106 | 2132       | - 21         | 0909         | 0935 | 2141 | 2206       |
| - 5          | 1009         | 1035 | 2107 | 2133       | - 22         | 0908         | 0933 | 2142 | 2207       |
| - 6          | 1008         | 1034 | 2107 | 2134       | - 23         | 0907         | 0932 | 2142 | 2208       |
| - 7          | 1007         | 1033 | 2108 | 2135       | - 24         | 0905         | 0930 | 2143 | 2208       |
| - 8          | 1006         | 1032 | 2109 | 2135       | - 25         | 0902         | 0929 | 2144 | 2209       |
| - 9          | 1005         | 1031 | 2110 | 2136       | - 26         | 0903         | 0927 | 2145 | 2210       |
| - 10         | 1004         | 1030 | 2110 | 2137       | - 27         | 0901         | 0926 | 2145 | 2211       |
| - 11         | 1003         | 1029 | 2111 | 2137       | - 28         | 0859         | 0925 | 2146 | 2211       |
| - 12         | 1002         | 1028 | 2112 | 2138       | - 29         | 0858         | 0923 | 2147 | 2212       |
| - 13         | 1001         | 1027 | 2113 | 2139       | - 30         | 0856         | 0922 | 2148 | 2213       |
| - 14         | 1000         | 1026 | 2113 | 2139       |              |              |      |      |            |
| - 15         | 0958         | 1025 | 2114 | 2140       | OCT 1        | 0855         | 0920 | 2148 | 2214       |
| - 16         | 0957         | 1023 | 2115 | 2141       | - 2          | 0854         | 0919 | 2149 | 2215       |
| - 17         | 0956         | 1022 | 2115 | 2141       | - 3          | 0852         | 0918 | 2150 | 2215       |
| - 18         | 0955         | 1021 | 2116 | 2142       | - 4          | 0851         | 0916 | 2150 | 2216       |
| - 19         | 0954         | 1020 | 2117 | 2143       | - 5          | 0849         | 0915 | 2151 | 2217       |

| MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO | MONTH<br>DAY | TWIL<br>FROM | SR   | SS   | TWIL<br>TO |
|--------------|--------------|------|------|------------|--------------|--------------|------|------|------------|
| OCT 6        | 0848         | 0913 | 2152 | 2218       | NOV 23       | 0758         | 0826 | 2237 | 2305       |
| - 7          | 0846         | 0912 | 2153 | 2219       | - 24         | 0757         | 0826 | 2238 | 2306       |
| - 8          | 0845         | 0911 | 2154 | 2220       | - 25         | 0757         | 0825 | 2239 | 2307       |
| - 9          | 0844         | 0909 | 2155 | 2220       | - 26         | 0756         | 0825 | 2240 | 2308       |
| - 10         | 0842         | 0908 | 2156 | 2221       | - 27         | 0756         | 0825 | 2241 | 2309       |
| - 11         | 0841         | 0907 | 2156 | 2222       | - 28         | 0756         | 0825 | 2242 | 2310       |
| - 12         | 0840         | 0905 | 2157 | 2223       | - 29         | 0755         | 0824 | 2242 | 2311       |
| - 13         | 0838         | 0904 | 2158 | 2224       | - 30         | 0755         | 0824 | 2243 | 2312       |
| - 14         | 0837         | 0903 | 2159 | 2225       | DEC 1        | 0755         | 0824 | 2244 | 2313       |
| - 15         | 0835         | 0901 | 2200 | 2226       | - 2          | 0755         | 0824 | 2245 | 2314       |
| - 16         | 0834         | 0900 | 2201 | 2227       | - 3          | 0755         | 0824 | 2246 | 2315       |
| - 17         | 0833         | 0859 | 2201 | 2228       | - 4          | 0755         | 0824 | 2247 | 2316       |
| - 18         | 0832         | 0858 | 2202 | 2228       | - 5          | 0754         | 0824 | 2248 | 2317       |
| - 19         | 0830         | 0856 | 2203 | 2229       | - 6          | 0754         | 0824 | 2249 | 2318       |
| - 20         | 0829         | 0855 | 2204 | 2230       | - 7          | 0754         | 0824 | 2249 | 2319       |
| - 21         | 0828         | 0854 | 2205 | 2231       | - 8          | 0754         | 0824 | 2250 | 2320       |
| - 22         | 0826         | 0853 | 2206 | 2232       | - 9          | 0755         | 0824 | 2251 | 2320       |
| - 23         | 0825         | 0852 | 2207 | 2233       | - 10         | 0755         | 0824 | 2252 | 2321       |
| - 24         | 0824         | 0850 | 2208 | 2234       | - 11         | 0755         | 0824 | 2252 | 2322       |
| - 25         | 0823         | 0849 | 2209 | 2235       | - 12         | 0755         | 0825 | 2253 | 2323       |
| - 26         | 0822         | 0848 | 2210 | 2236       | - 13         | 0755         | 0825 | 2254 | 2324       |
| - 27         | 0820         | 0847 | 2210 | 2237       | - 14         | 0755         | 0825 | 2255 | 2324       |
| - 28         | 0819         | 0846 | 2211 | 2238       | - 15         | 0756         | 0825 | 2255 | 2325       |
| - 29         | 0818         | 0845 | 2212 | 2239       | - 16         | 0756         | 0826 | 2256 | 2326       |
| - 30         | 0817         | 0844 | 2213 | 2240       | - 17         | 0756         | 0826 | 2256 | 2326       |
| - 31         | 0816         | 0843 | 2214 | 2241       | - 18         | 0757         | 0827 | 2257 | 2327       |
| NOV 1        | 0815         | 0842 | 2215 | 2242       | - 19         | 0757         | 0827 | 2258 | 2327       |
| - 2          | 0814         | 0841 | 2216 | 2243       | - 20         | 0758         | 0827 | 2258 | 2328       |
| - 3          | 0813         | 0840 | 2217 | 2244       | - 21         | 0758         | 0828 | 2259 | 2328       |
| - 4          | 0812         | 0839 | 2218 | 2245       | - 22         | 0759         | 0828 | 2259 | 2329       |
| - 5          | 0811         | 0838 | 2219 | 2246       | - 23         | 0759         | 0829 | 2300 | 2329       |
| - 6          | 0810         | 0837 | 2220 | 2247       | - 24         | 0800         | 0830 | 2300 | 2330       |
| - 7          | 0809         | 0836 | 2221 | 2248       | - 25         | 0800         | 0830 | 2300 | 2330       |
| - 8          | 0808         | 0835 | 2222 | 2249       | - 26         | 0801         | 0831 | 2301 | 2330       |
| - 9          | 0807         | 0835 | 2223 | 2251       | - 27         | 0802         | 0831 | 2301 | 2331       |
| - 10         | 0806         | 0834 | 2224 | 2252       | - 28         | 0802         | 0832 | 2301 | 2331       |
| - 11         | 0805         | 0833 | 2225 | 2253       | - 29         | 0803         | 0833 | 2302 | 2331       |
| - 12         | 0805         | 0832 | 2226 | 2254       | - 30         | 0804         | 0834 | 2302 | 2331       |
| - 13         | 0804         | 0832 | 2227 | 2255       | - 31         | 0805         | 0834 | 2302 | 2332       |
| - 14         | 0803         | 0831 | 2228 | 2256       |              |              |      |      |            |
| - 15         | 0802         | 0830 | 2229 | 2257       |              |              |      |      |            |
| - 16         | 0802         | 0830 | 2230 | 2258       |              |              |      |      |            |
| - 17         | 0801         | 0839 | 2231 | 2259       |              |              |      |      |            |
| - 18         | 0800         | 0829 | 2232 | 2300       |              |              |      |      |            |
| - 19         | 0800         | 0828 | 2233 | 2301       |              |              |      |      |            |
| - 20         | 0759         | 0828 | 2234 | 2302       |              |              |      |      |            |
| - 21         | 0759         | 0827 | 2235 | 2303       |              |              |      |      |            |
| - 22         | 0758         | 0827 | 2236 | 2304       |              |              |      |      |            |

**INTENTIONALLY  
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