ASCII FORMAT for NCDC/ESRL ISPD Data Transfer v1.0
(All fields are to be right justified, unless otherwise noted)

Field 1, Pos: 1-13, Len: 13
Observation (Station) ID
Missing: 9999999999999
This field is designated for an identifier that represents a fixed station for land data. It represents a marine
call sign or other marine identifier when present.
(NOTE: THIS FIELD IS TO BE LEFT JUSTIFIED)

Field 2, Pos: 14-15, Len: 2
Observation ID Type
Missing: 99
This field shows the type of station ID in Field 1.

01	WMO
02	WBAN
03	Air Force
04	COOP
05	Call Signs
06	Unknown or other – IDs assigned by source, which have the appearance of above
07	Ship, Ocean Station Vessel (OSV), or ice station call sign
08	Generic ID (e.g., SHIP, BUOY, RIGG, PLAT)
09	WMO 5-digit buoy number
10	Other buoy number (e.g., Argos or national buoy number)
11	Coastal-Marine Automated Network (C-MAN) ID (US NDBC operated)
12	Station name or number
13	Oceanographic platform/cruise number
14	Fishing vessel pseudo-ID
15	National ship number
16	Composite information from early ship data
32	Air Force – WBAN
33	Source Station ID – WMO

Field 3, Pos: 16-18, Len: 3
NCEP Observation Type Code
Missing: 999
This field is designated for NCEP observation type code.

120	Radiosonde Observation Data
132	Dropsonde Observation
180	Marine Observation Data
181	Station Observation Data
183	Station Observation only reporting sea level pressure
193	Digitized Mean Sea Level Pressure Bogus

Field 4, Pos: 19-22, Len: 4
Year
Missing: 9999
Year (GMT) of the observation record

Field 5, Pos: 23-24, Len: 2
Month
Missing: 99
Month (GMT) of the observation record

Field 6, Pos: 25-26, Len: 2

Day

Missing: 99

Day (GMT) of the observation record

Field 7, Pos: 27-28, Len: 2

Hour

Missing: 99

Hour (GMT) of the observation record

Field 8, Pos: 29-30, Len: 2

Minute

Missing: 99

Minute (GMT) of the observation record

Field 9, Pos: 31-37, Len: 7

Unique Observation Number Code

Missing: 9999999

A unique number assigned to each observation at the same observation time (year, month, day, hour, minute). Combing with Year, month, day, hour, minute forms a unique ID of each observation. E.g., the second observation in the Data Bank for February 2 1895 1201 GMT has field 9 = 0000002, and a unique observation code of 18950202120100000002.

Note: this value is assigned by ISPD. Sources providing data in this format should set the value to missing.

Field 10, Pos: 38-40, Len: 3

Time Code

Missing: 999

3-digit code describing how the time was determined

001 From source

005 Converted to GMT using time zones

006 Time may be 2100 or 1900 Central European Time (Swiss)

007 Converted to GMT using longitude

Field 11, Pos: 41-46, Len: 6

Latitude

Missing: 999.99

Latitude coordinate of a geophysical observation (-90.00 to 90.00)

Field 12, Pos: 47-52, Len: 6

Longitude

Missing: 999.99

The longitude coordinate of a geophysical observation (000.00 – 359.99)

Field 13, Pos: 53-56, Len: 4

Elevation

Missing: 9999

The elevation of a geophysical observation in meters relative to Mean Sea Level

Field 14, Pos: 57-63, Len: 7

Observed Sea Level Pressure

Missing: 9999.99

The atmospheric sea level pressure observation (hectopascals)

Note: all corrections for gravity and temperature have been applied.

Field 15, Pos: 64-64, Len: 1

Quality Flag for Observed Sea Level Pressure

0 Use this value
1 Don't use this value
9 Not evaluated
M Missing

*For ISD values, choice was made based on element quality flag:

ISPD Summary	Original Value	Meaning
0	0	Passed gross limits checks
0	1	Passed all quality control checks
1	2	Suspect
1	3	Erroneous
0	4	Passed gross limits check, from TD3280 or NCDC ASOS/AWOS
0	5	Passed all quality control checks, from TD3280 or NCDC ASOS/AWOS
1	6	Suspect, from TD3280 or NCDC ASOS/AWOS
1	7	Erroneous, from TD3280 or NCDC ASOS/AWOS
0	9	Passed gross limits check if element is present

*For Russian data, two tests were performed using the Flag 1 (Data Measurement Flag) and Flag 3
(Confidence level/status flag). If the Flag 1 test passed, Flag 3 was then evaluated:

Flag 1: Data measurement flag

ISPD Summary	Original Value	Meaning
0	Blank	Measured value
1	D	Derived value
1	U	Suspect

Flag 3: Confidence level/status flag

ISPD Summary	Original Value	Meaning
0	0	Observed value has passed all original system checks
0	Blank	Unknown
1	B	Value failed QC checks
0	C	Scale corrected
1	D	Derived value
0	E	Edited value passed all original checks
0	H	Homologous value, rigorously tested
1	I	Interpolated value, not verified
1	M	Missing value
0	N	Not tested but within observed climatological boundaries
1	Q	Questionable (actually wrong)
0	R	Record breaking value
1	S	Suspect value (outside climatological boundaries, not verified)
0	T	Tested value, manually checked but not perfectly homologous
1	U	Value suspect

Field 16, Pos: 65-71, Len: 7

Observed Surface Pressure

Missing: 9999.99

The atmospheric surface pressure observation at the indicated elevation (hectopascals)

Note: all corrections for gravity and temperature have been applied.

Field 17, Pos: 72-72, Len: 1

Quality Flag for Observed Surface Pressure

Missing: M

0 Use this value

1 Don't use this value

9 Not evaluated

(See tables for Field 15)

------- ORIGINAL DATA SECTION ------

Field 18, Pos: 73-81, Len: 9

Original Observed Sea Level Pressure

Missing: 999999999

The original atmospheric sea level pressure in original units indicated in field 19.

Field 19, Pos: 82-89, Len: 8

Units of Original Observed Sea Level Pressure

Missing: 99999999

Units of original observed sea level pressure. UDUNITS compliant.

Field 20, Pos: 90-98, Len: 9

Original Observed Surface Pressure

Missing: 999999999

The original atmospheric surface pressure in original units indicated in field 21.

Field 21, Pos: 99-106, Len: 8

Units of Original Observed Surface Pressure

Missing: 99999999

Units of original observed surface level pressure. UDUNITS compliant.

Field 22, Pos: 107-108, Len: 2

Pressure Instrument Identifier

Missing: 99

This field shows a type of instrument used for a given observation from source record or station library table.

(Reserved for future use)

Field 23, Pos: 109-116, Len: 8

Original Latitude

Missing: 99999999

The original latitude coordinate of a geophysical observation from the source data

Field 24, Pos: 117-124, Len: 8

Original Longitude

Missing: 99999999

The original longitude coordinate of a geophysical observation from the source data

Field 25, Pos: 125-130, Len: 6

Original Elevation

Missing: 999999

The original elevation above mean sea level reported from the source data

Field 26, Pos: 131-138, Len: 8

Units of Original Elevation

Missing: 99999999

The units of the original elevation. UDUNITS Compliant.

------- ADJUSTMENTS SECTION ------

Field 27, Pos: 139-139, Len: 1

Gravity Correction Made by Source

Missing: 9

0 No

1 Yes

Field 28, Pos: 140-169, Len: 30

Description of Gravity Correction Made By Source

Missing: 999999999999999999999999999999

Description of the method used for the gravity correction made by source

Field 29, Pos 170-170, Len: 1

Gravity Correction Made by ISPD

Missing: 9

0 No

1 Yes

Field 30, Pos: 171-200, Len: 30

Description of Gravity Correction Made By ISPD

Missing: 999999999999999999999999999999

Description of the method used for the gravity correction made by ISPD

Field 31, Pos: 201-206, Len: 6

Observed Temperature of Attached Thermometer in K

Missing: 999999

Observed temperature of the attached thermometer in K.

Field 32, Pos: 207-215, Len: 9

Original Temperature of Attached Thermometer

Missing: 999999999

The original temperature of the attached thermometer in the original units

Field 33, Pos: 216-223, Len: 8

Units of the Original Temperature of Attached Thermometer

Missing: 99999999

The units of the original temperature of the attached thermometer. UDUNITS Compliant

Field 34, Pos: 224-224, Len: 1

Temperature Correction Made by Source

Missing: 9

0 No

1 Yes

Field 35, Pos: 225-254, Len: 30

Description of Temperature Correction Made By Source

Missing: 99999999999999999999999999999

Description of the method used for the temperature correction made by source

Field 36, Pos 255-255, Len: 1

Temperature Correction Made by ISPD

Missing: 9

0 No

1 Yes

Field 37, Pos: 256-285, Len: 30

Description of Temperature Correction Made By ISPD

Missing: 99999999999999999999999999999

Description of the method used for the temperature correction made by ISPD

Field 38, Pos: 286-286, Len: 1

Homogenization Correction Made by Source

Missing: 9

0 No

1 Yes

Field 39, Pos: 287-316, Len: 30

Description of Homogenization Correction Made By Source

Missing: 99999999999999999999999999999

Description of the method used for the homogenization correction made by source

Field 40, Pos 317-317, Len: 1

Homogenization Correction Made by ISPD

Missing: 9

0 No

1 Yes

Field 41, Pos: 318-347, Len: 30

Description of Homogenization Correction Made By ISPD

Missing: 99999999999999999999999999999

Description of the method used for the homogenization correction made by ISPD

-------- SOURCE ARCHIVE TRACKING SECTION ------

Field 42, Pos: 348-353, Len: 6

International Surface Pressure Data Bank Collection ID

Missing: 999999

ISPD ID	Name	Description	PERIOD	NCDC Ref	NCAR Ref	Subdirectory in ISPD	Contact
001000	Federal Climate Complex Integrated Surface Data	Global Land Surface Observations	1901-2008	3505	ds463.3	Isd2ispd	Neal.Lott@noaa.gov
001002	CDMP SAO/1001 Forms	US Land Surface Observations	1928-1948			cdmp1001	Neal.Lott@noaa.gov
001003	Russian Empire Stations	Russian Land Surface Observations	1849-2000	td9290c		Ispd1_1/russia	Pasha.Groisman@noaa.gov
001004	Air Weather Service TD13	Global Land Surface Observations	1901-1973	td13	ds467.0	Ispd1_1/td13	worley@ucar.edu
001005	Hadley Center	individual stations from Hadley Center	1833 - present			Hadley Hadley_centre	rob.allan@metoffice.gov.uk mark.rodwell@ecwmf.int Gibraltar
001006	CDMP-International collection	Chile, Mexico, Uruguay	1800s - 1980			Chile Mexico uruguay	Tom.Ross@noaa.gov
001007	READER Antarctic & Southern Hemisphere	20 stations via British Antarctic Survey	1947-2007			AntarcSH	www.antarctica.ac.uk
001011	KNMI	KNMI stations	1911-2006			knmi	Theo.Brandsma@knmi.nl
001012	US Army Signal Service and other 19th Century Voluntary Obs	CDMP digitized station data	1841-1893			forts	Karen Andsager andsager@sws.uiuc.edu
002000	NCEP-NCAR BUFR Archive	Global Observations	1948-2003	6148_99	ds090.0	ncep_ncar_bufr	Robert.Kistler@noaa.gov worley@ucar.edu
002001	NCEP Operational BUFR Archive	Global Observations	1928-1948, 2003-2005	6148_99	ds090.0	ncep_operational_bufr	Jack.Woolen@noaa.gov
003002	WASA Stations Observations Sea Level Pressure	Northern Europe, Greenland	1871-1996	9941_99		Ispd1_1/wasa	Torben Schmith ts@dmi.dk
003004	Environment Canada Pressure Observations	Canadian Stations	1842-2004			canada ispd1_1/canadian	Xiaolan.Wang@ec.gc.ca
003005	West African Synoptic observations digitized by MeteoFrance	11 West African countries' Land Surface stations	1850-1980			Ispd1_1/west_africa	Tom.Peterson@noaa.gov
003006	The Australian Bureau of Meteorology Station Pressure Dataset	50 Australian Land stations	1900-1956			Ispd1_1/australia	David Jone D.Jones@bom.gov.au
003007	Northern Italian Pressure Observations	1 Northern Italian station	1878-1940			italy	maurizio.maugeri@unimi.it

ISPD ID	Name	Description	PERIOD	NCDC Ref	NCAR Ref	Subdirectory in ISPD	Contact
003008	Hourly Surface Observations for Brazilian Stations	10 Brazilian stations	1951-1980		ds486.0	Ispd1_1/brazil	dattore@ucar.edu
003009	Spanish Hourly Pressure Observations from EMULATE	4 Hourly Spanish Land Stations	1850-2003			spanish Ispd1_1/spanish	manola.brunet@urv.net
003010	German climate observations	DWD web archive	1876-2000			Germany	www.dwd.de
003011	ZAMG Austrian station observations	9 EMULATE Austrian Stations	1872-2002			Austria	rob.allan@metoffice.gov.uk
003012	Meteoswiss station collection	11 EMULATE Swiss stations	1900-1973			Switzerland	rob.allan@metoffice.gov.uk
003013	South African Weather Service Meteorological collection	South African Weather Service Stations	1850-2003			SouthAfrica	andries.kruger@weathersa.co.za
003014	National Norwegian meteorological database	22 Norwegian stations	1863-2007			Norway	oyvind.nordli@met.no
003015	Croatian Meteorological and Hydrological Service land stations	4 Croatian stations	1858-2005			croatia	Lidija Srnec srnec@cirus.dhz.hr
003016	Signatures of environmental change in the observations of the Geophysical Institutes	3 Portuguese SIGN stations	1860-2006			Portuguese	Maria Antónia Valente mavalente@fc.ul.pt Ricardo Trigo rmtrigo@fc.ul.pt
004000	Hong Kong Hourly Pressure Observations	Hong Kong Observatory	1885-1939			Ispd1_1/hong_kong	H Y Mok hymok@hko.gov.hk
004001	Jakarta/Batavia Pressure Observations	Dutch Royal Observatory	1866-1944	9963_99	ds490.0	batavia_djarkata	spangler@ucar.edu
004002	William Hutchinson air pressure from Liverpool	Proudman Ocean. Laboratory stations	1768-1793			liverpool	Philip Woodworth plw@pol.ac.uk
004003	Jersey, Channel Island Pressure Obs	6 Jersey, Channel Island stations	1864-1913			jersey	Frank Le Blancq leblancq.f@jerseymet.gov.je
004004	CMDP-USNO	US Naval Observatory at Washington	1841-1913			Naval_Obs	tom.ross@noaa.gov
005000-005999	Antarctic Expeditions	11 expedition bases	1899-1941			antarctic_expeditions	rob.allan@metoffice.gov.uk
006000-006999	reserved for Arctic Expeditions						
010000-019999	NCAR upper air stations		1943-1998			ncar_ua	Joey Comeaux joey@ucar.edu

Field 43, Pos: 354-354, Len: 1

Source Flag for Land Station Data

Missing: 9

For ISD Observations (ISPD ID 1000), this code corresponds to the Geophysical Point Observation Data

Source Flag (positions 28-28 of ISD record):

1	DATSAV3 observation, candidate for merge with TD3280 (not yet merged, failed element checks)
2	TD3280 observation, candidate for merge with DATSAV3 (not yet merged, failed element checks)
3	DATSAV3/TD3280 merged observation
4	DATSAV3 observation
5	TD3280 observation
6	ASOS/AWOS observation from NCDC
7	ASOS/AWOS observation merged with DATSAV3
A	DATSAV3/TD3240 merged observation, candidate for merge with TD3280 (not yet merged, failed element checks)
B	TD3280/TD3240 merged observation, candidate for merge with DATSAV3 (not yet merged, failed element checks)
C	DATSAV3/TD3280/TD3240 merged observation
D	DATSAV3/TD3240 merged observation
E	TD3280/TD3240 merged observation
9	Missing

Field 44, Pos: 355-359, Len: 5

Report Type Code

Missing: 99999

For ISD Observations (ISPD ID 1000), this code corresponds to the Geophysical Report Type Code

(positions 42-46 of ISD record):

FM-12	SYNOP Report of surface observation form a fixed land station
FM-13	SHIP Report of surface observation from a sea station
FM-14	SYNOP MOBIL Report of surface observation from a mobile land station
FM-15	METAR Aviation routine weather report
FM-16	SPECI Aviation selected special weather report
FM-18	BUOY Report of a buoy observation
SAO	Airways report (includes record specials)
AOSP	Airways special report (excluding record specials)
AERO	Aerological report
AUTO	Report from an automatic station
SY-AE	Synoptic and aero merged report
SY-SA	Synoptic and airways merged report
SY-MT	Synoptic and METAR merged report
SY-AU	Synoptic and auto merged report
SA-AU	Airways and auto merged report
S-S-A	Synoptic, airways, and auto merged report
BOGUS	Bogus report
SMARS	Supplementary airways station report

SOD	Summary of day report from U.S. ASOS or AWOS station
KL	Positions XX-XX from source 003010 report

Field 45, Pos: 360-364, Len: 5

Quality Control Indicators for Sea Level Pressure Value (Field 18)

Missing: 99999

For ISD observations (ISPD ID 1000), this code corresponds to ISD data quality flag

For Russian Empire observations (ISPD 1003) this code corresponds to 4-character 9290c flags.

Field 46, Pos: 365-369, Len: 5

Quality Control Indicators for Surface Level Pressure Value (Field 20)

Missing: 99999

For ISD observations (ISPD ID 1000), this code corresponds to ISD data quality flag

For Russian Empire observations (ISPD 1003) this code corresponds to 4-character 9290c flags.

For DWD observations this code corresponds to the DWD QC indicator.

Field 47, Pos: 370-399, Len: 30

Name of Ships or Stations

Missing: 999999999999999999999999999999

Name of Ships or Stations from source record or station library table

Field 48, Pos: 400-402, Len: 3

Name of Station Library

Missing: 999

000	From Source
001	Joey Comeaux Library
002	TD-13 library
003	NCEP Library 1
004	NCEP Library 2
005	NCDC Global Station List
006	For a given month, with observations that vary in location, the positions of all the month's observations were set to the mode of all of the monthly varying observation locations
010	EMULATE