



DEPARTMENT OF THE NAVY  
COMMANDER  
NAVAL METEOROLOGY AND OCEANOGRAPHY COMMAND  
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STENNIS SPACE CENTER, MS 39529-5005

NAVMETOC COMINST 3142.1A  
N3  
17 JUL 1996

NAVMETOC COM INSTRUCTION 3142.1A

From: Commander, Naval Meteorology and Oceanography Command

Subj: PROCEDURES GOVERNING PILOT WEATHER REPORTS (PIREPS)

Ref: (a) FMH-12

Encl: (1) Instructions Governing Pilot Weather Reports  
(2) NMOC Form 3140/10 (Rev. 7/96)

- Purpose. To publish and amplify procedures governing reporting and encoding Pilot Weather Reports (PIREPS) as directed in reference (a). This instruction has been completely revised and should be reviewed in its entirety.
- Cancel. NAVOCEANCOMINST 3142.1
- Action. Naval Meteorology and Oceanography Command activities and Marine Corps Weather Activities shall prepare and issue the PIREPS in accordance with enclosures (1) and (2) of this instruction.
- Effective Date. This instruction is effective upon receipt.
- Concurrence. This instruction has the concurrence of the Commandant of the Marine Corps. Marine Corps weather activities shall take such actions prescribed in this instruction which are not contradictory to the specifically expressed policies of the Commandant of the Marine Corps.



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6. Reports and Forms. The report Control Symbol NAVMETOC COM 3142-1 is assigned to the reporting requirements of this directive. Pilot Weather Reports (PIREPS) require the use of form NMOC 3140/10 (Rev. 7/96) which will be available December 1996 through the Navy Supply System using stock number 0108-LF-113-4700.



**CRAIG A. PETERSON**  
Acting

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**INSTRUCTIONS GOVERNING PILOT WEATHER REPORTS**

1. General. Pilot Weather Reports (PIREPS) are a valuable source of information not available from surface-based observations.

a. Scope. This enclosure contains instructions for manual encoding and dissemination of PIREPS in a standard format to facilitate processing, transmission, storage and retrieval of in-flight weather phenomena. To ensure consistent understanding, standard METAR meteorological contractions shall be used in the reporting of in-flight weather. Although some elements in a PIREP are optional, the disseminated report shall be in accordance with the guidelines of this instruction.

b. Responsibility. The Committee for Aviation Services (CAS), Office of the Federal Coordinator for Meteorological Services and Supporting Research (OFCM), retains cognizant responsibility for federal maintenance of the PIREPS code. Any recommended changes to PIREP reporting practices should be forwarded to COMNAVMETOCOM (N312) for subsequent submission to CAS.

2. Definitions. Throughout this enclosure, the following definitions apply:

"shall" indicates a practice is mandatory.

"should" indicates a practice is recommended.

"may" indicates a practice is optional.

3. Encoding Pilot Reports. Appropriate data received from a pilot shall be placed in a standard format for dissemination. Each report shall:

a. Identify the type of report and each element in the report by a Text Element Indicator (TEI).

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b. Include, as a minimum, entries for message type, location, time, flight level, type of aircraft, and at least one other element.

c. Describe location with reference to a VHF NAVAID identifier or a four character, usually letters, airport identifier.

d. Use standard contractions and aircraft designators, listed and four-letter location identifiers.

e. Omit TEIs for unreported or unknown elements other than those in paragraph b above. If one of the required TEIs is unknown, enter "UNKN" for that element.

4. Pilot Weather Report Format. Place data received from a pilot in the following format:

UUA\_or UA\_/OV\_(location)/TM\_(time)/FL(flight level)/TP\_(type of aircraft)/SK\_(sky cover)/WX\_(weather)/TA\_(temperature)/WV\_(winds)/TB\_(turbulence)/IC\_(icing)/RM\_(remarks)

Note that each TEI is preceded by a solidus (/) and, except for flight level, followed by a space. The underline "\_" is used for illustration purposes only to indicate a required space. In the individual TEI sections which follow, the information enclosed in parentheses ( ) depict the format of entries.

a. Message Type (UUA or UA). Indicates that an urgent (UUA) or routine (UA) pilot report follows. "UUA" shall be used whenever any of the following are reported:

(1) Hail (GR or GS).

(2) Low Level Wind Shear (WS - within 2,000 feet of surface).

(3) Severe icing.

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(4) Severe or extreme turbulence, including Clear Air Turbulence (CAT).

(5) Tornado or waterspout (+FC), or funnel cloud (FC).

(6) Volcanic Eruption and/or Ash (VA).

(7) Any condition that in the judgment of the person entering the PIREPS would present a hazard to flight.

b. Location (/OV). After the TEI, describe the point at which, or the line along which, the reported phenomenon or phenomena occurred by reference to a VHF NAVAID(s) or an airport using the four-letter location identifier. (Note: some weather systems may drop the leading character "K", "P", or "H" on the location identifier and display only the last three letters.) If appropriate, the identifier is followed by the radial bearing and distance from the NAVAID. Using three-digits each, indicate the magnetic bearing direction in degrees followed by the distance in nautical miles.

FORMAT:

/OV\_LOC/AIRPORT or NAVAID(RRRDDD) (-AIRPORT or NAVAID(RRRDDD))

LOC/AIRPORT or NAVAID is the four-letter location identifier for the airport or the VHF NAVAID. RRR and DDD are the magnetic bearing and distance from the location, respectively. Notice the lack of a space between location and RRRDDD and also before and after the hyphen when two locations are reported. Contractions, such as DURGC, or statements, such as AT TOP OF CLIMB, shall not be used in this field but may be added in remarks (/RM).

Examples:

<u>Pilot Reports Location as:</u>	<u>Encode:</u>
Over Kennedy Airport, NY	/OV_KJFK

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Departing New River, NC /OV\_KNCA

Along route from St. Louis /OV\_KSTL-KMKC  
to Kansas City, MO.

30 miles east of Mayport to /OV\_KNRB090030-KMKC045015  
15 miles northeast of Kansas  
City VORTAC

c. Time (/TM). Enter the UTC time, GGgg, in hours and minutes, as given by the pilot, when the reported phenomenon or phenomena occurred or was encountered.

FORMAT: /TM\_GGgg

d. Flight Level (/FL). The aircraft's altitude (flight level), HHH, shall be entered in hundreds of feet above mean sea level (MSL) when the phenomenon or phenomena was first encountered, or if the altitude is unknown, enter UNKN. If an aircraft was climbing or descending, enter the appropriate contraction (DURGC or DURGD) in the remarks section. If the condition was encountered within a layer, enter the altitude range of the layer within the appropriate phenomenon TEI, (i.e., HHH-HHH). (Note: There is no space between the "FL" TEI and the altitude.)

FORMAT: /FLHHH(-HHH)

e. Type of Aircraft (/TP). If the type of aircraft is unknown, enter UNKN; otherwise enter the aircraft type designator, i.e., B737, F4, etc. The proper coding of this TEI is critical for the accurate interpretation and utilization of PIREPS, in particular those associated with icing and turbulence.

FORMAT: /TP\_AAAA or /TP\_UNKN

FAA Order 7340.1, enclosure (5), "Civil/Military Aircraft Type Designators," is a good reference as it provides all recognized aircraft designators for use in PIREPS as agreed to between the

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FAA and ICAO. The type designators are limited to four alphanumeric characters.

f. Sky Cover (/SK). PIREPS may include the sky cover TEI. Enter the sky condition (cloud cover amount) followed by the height of bases and tops, separated by a hyphen, as reported by the pilot. For each layer, use the cloud cover contractions SKC, FEW, SCT, BKN, or OVC and enter the heights of clouds in hundreds of feet above mean sea level (MSL) in three-digits. If cloud cover amounts range between two values, separate the contractions with a hyphen and no spaces (e.g., BKN-OVC). Indicate unknown heights by using UNKN. If the pilot reports he/she is in clouds, enter OVC. When more than one layer is reported, separate layers by a solidus (/). (Note: there are no spaces between heights and cloud cover contractions.)

FORMAT:

$/SK_{N_s N_s N_s} (-N_s N_s N_s) h_b h_b h_b - h_t h_t h_t / N_s N_s N_s (-N_s N_s N_s) h_b h_b h_b - h_t h_t h_t$  etc.)

$N_s N_s N_s$  is the three letter contraction for the amount of cloud cover,  $h_b h_b h_b$  is the height of the base of a layer of clouds in hundreds of feet, and  $h_t h_t h_t$  is the height of the top of the layer in hundreds of feet. Thus, the code form for cloud amount, base, and top becomes  $N_s N_s N_s h_b h_b h_b - h_t h_t h_t$ .

Examples: /SK\_OVC110  
/SK\_OVC065-UNKN  
/SK\_SCT-BKN050-100  
/SK\_BKN-OVC025-060/BKN120-150/SKC  
/SK\_OVC015-035/OVC230  
/SK\_FEW030-060  
/SK\_SKC

g. Weather (/WX). PIREPS may include flight visibility and/or flight weather in this TEI.

(1) Flight Visibility (FV) - If reported by the pilot, flight visibility will be the first entry in the /WX field. It

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shall be entered as FV followed immediately (no space) by the two-digit visibility value rounded, if necessary, to the nearest whole statute mile. When a flight visibility value is reported, append "SM" to the value (e.g., FV03SM). FV99SM will be used to enter a report of unrestricted flight visibility.

(2) Weather - Enter one or more of the listed weather types using the appropriate METAR contraction as listed in table 1-1. If more than one form of precipitation is combined in the report, the dominate type shall be reported first. The proximity qualifier VC, vicinity, may be used in combination only with the following abbreviations: TS, FG, FC, +FC, SH, PO, BLDU, BLSA, BLSN, SS, and DS. Intensity may be indicated with all precipitation types except ice crystals and hail, including those associated with thunderstorm (TS) and those of a showery nature (SH). Tornadoes and waterspouts shall be coded as (+FC). No intensity shall be ascribed to the obscurations of blowing dust (BLDU), blowing sand (BLSA), and blowing snow (BLSN). Only moderate or heavy intensity shall be ascribed to sandstorms (SS) and duststorms (DS).

When FC is entered in the "/WX" weather TEI, FUNNEL CLOUD shall be spelled out in the "/RM" remarks TEI. When +FC is entered in the "/WX" weather TEI, TORNADO or WATERSPOUT shall be spelled out in the "/RM" remarks TEI.

If the size of hail (GR) is known, enter the size using 1/4 inch increments in the "/RM" remarks TEI.

Weather layers (i.e., fog, haze, smoke or dust) shall be entered with the base and/or top of the layer, if reported, encoded in the same manner as cloud cover in the /SK field (e.g., FU002-030). If more than one type of weather is reported, the types shall be reported in the following order: (1) Tornado, Funnel Cloud, or Waterspout, (2) Thunderstorm with or without associated precipitation, (3) Weather phenomena in order of decreasing predominance, i.e., most dominate first. Separate groups shall be used for each type of weather or thunderstorm, and no more

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Significant Weather and Obstructions to Vision<sup>1</sup>

QUALIFIER		WEATHER PHENOMENON		
INTENSITY OR PROXIMITY 1	DESCRIPTOR 2	PRECIPITATION 3	OBSCURATION 4	OTHER 5
- Light	<b>MI</b> Shallow	<b>DZ</b> Drizzle	<b>BR</b> Mist	<b>PO</b> Well-Developed Dust/Sand Whirls
Moderate <sup>2</sup>	<b>PR</b> Partial	<b>RA</b> Rain	<b>FG</b> Fog	
+ Heavy	<b>BC</b> Patches	<b>SN</b> Snow	<b>FU</b> Smoke	<b>SQ</b> Squalls
<b>VC</b> In the Vicinity	<b>DR</b> Low Drifting	<b>SG</b> Snow Grains	<b>VA</b> Volcanic Ash	<b>FC</b> Funnel Cloud, Tornado, Waterspout
	<b>BL</b> Blowing	<b>IC</b> Ice Crystals	<b>DU</b> Widespread Dust	
	<b>SH</b> Showers(s)	<b>PE</b> Ice Pellets	<b>SA</b> Sand	<b>SS</b> Sandstorm
	<b>TS</b> Thunderstorm	<b>GR</b> Hail	<b>HZ</b> Haze	<b>DS</b> Duststorm
	<b>FZ</b> Freezing	<b>GS</b> Small Hail and/or Snow Pellets	<b>PY</b> Spray	

1. The /WX groups shall be constructed by considering columns 1 to 5 in the above table in sequence, i.e.: intensity, descriptor, then weather phenomenon.  
 2. No symbol is required to denote moderate intensity.

Table 1-1

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than three groups shall be included in one PIREP. Coding present weather and the use of qualifiers/descriptors are based on *Federal Meteorological Handbook 1 (FMH-1)* for METAR and NAVMETOCCOMINST 3141.2.

FORMAT: /WX\_(FVvvSM\_)ww(\_ww)(\_ww)

"vv" is the two-digit flight visibility value in statute miles, and "ww" is the variable length encoded flight weather.

Examples: /WX\_FV02SM\_BRHZ000-080 - If known, /RM\_BR TOP 009  
/WX\_FV00SM\_+TSRA\_GR - If known, /RM\_GR 3/4  
/WX\_FV99SM  
/WX\_FV02SM\_VA330  
/WX\_+FC - Mandatory, /RM\_TORNADO  
/WX\_BCFG VC W

h. Temperature (/TA). If temperature is reported, it shall be outside air temperature, using two digits, in whole degrees Celsius. Subzero temperatures shall be prefixed with an "M"; for example, a temperature of -2°C shall be coded as /TA\_M02.

FORMAT: /TA\_(M)T'T'.

"T'T'" is the two-digit temperature value in whole degrees Celsius.

Examples: /TA\_04  
/TA\_M13

i. Wind Direction and Speed (/WV). If reported, wind direction from which the wind is blowing shall be coded in tens of degrees using three figures. Directions of less than 100 degrees shall be preceded by a zero. For example, wind from the east at 94° true shall be coded as 090. The wind speed shall be entered as a two or three digit group immediately following the wind direction. The speed shall be coded in whole knots using the hundreds digit (if not zero) and the tens and units digits.

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The wind group always ends with "KT" to indicate wind speeds are reported in knots. Wind speeds of less than 10 knots shall be coded with a leading zero. For example eight knots would be coded as 08KT.

FORMAT: /WV\_dddff(f)KT\_

Example: /WV 26080KT (Winds from 260°T at 80 knots)  
/WV\_020120KT (Winds from 020°T at 120 knots)

j. Turbulence (/TB). If reported, intensity, type, and altitude of turbulence shall be entered as follows:

(1) Intensity. This is the first element reported after the space following the TEI. The reportable intensities are LGT, MOD, SEV, and EXTRM. HVY is not a reportable intensity. A range or variations in intensity shall be entered as two values separated by a hyphen (e.g., MOD-SEV). If turbulence was forecast at any level, but none was encountered, enter NEG in the this field (e.g., /TB\_NEG).

(2) Type. Optional, leave blank or enter either CAT or CHOP, if reported by the pilot. "CAT" is Clear Air Turbulence. This type of turbulence is encountered in air where no clouds are present and is commonly applied to high-level turbulence associated with wind-shear, often in the vicinity of the jet stream. CAT intensity may be light, moderate, severe, or extreme. "CHOP" turbulence causes rapid and somewhat rhythmic jolts or bumpiness without appreciable changes in altitude or attitude and may be indicated as either light or moderate.

(3) Altitude. Enter the reported turbulence altitude only if it differs from the value reported in /FL, or is reported as a layer with defined or undefined boundaries. When entering a layer use a hyphen between height values. Undefined lower and higher boundary limits are entered as BLO or ABV. Use a solidus to separate two or more layers of turbulence.

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FORMAT: /TB\_III(-III) (\_CAT or CHOP\_) (h<sub>b</sub>h<sub>b</sub>h<sub>b</sub>-h<sub>t</sub>h<sub>t</sub>h<sub>t</sub>)/III(-III) etc.

"III" is the intensity of the turbulence and CAT or CHOP are the only two entries for type of turbulence permitted. h<sub>b</sub>h<sub>b</sub>h<sub>b</sub> is the base of the turbulence layer, if defined, or BLO or ABV, if undefined; and h<sub>t</sub>h<sub>t</sub>h<sub>t</sub> is the top of a defined layer or the boundary of an undefined layer.

Examples: /TB\_EXTRM\_350  
/TB\_MOD-SEV\_BLO\_080  
/TB\_LGT\_035  
/TB\_LGT-MOD\_CHOP\_310-350  
/TB\_NEG  
/TB\_MOD\_CAT\_ABV\_280/NEG\_220-280

k. Icing (/IC). If reports of icing are received, enter these reports using the same format used to report turbulence; i.e., intensity, type, and altitude(s) of icing conditions.

(1) Intensity. Enter TRACE, LGT, MOD, SEV, or ranges covering two values separated by a hyphen. HVY is not a reportable intensity. If icing was forecast at any level, but none was encountered, enter NEG.

(2) Type. Enter the reported icing types as: RIME, CLR, or MX.

(a) RIME - Rough, milky, opaque ice formed by the instantaneous freezing of small supercooled water droplets. Can be the most hazardous form of icing as it quickly disrupts the airfoil surfaces.

(b) CLR - Glossy, clear, or translucent ice formed by the relatively slow freezing of large supercooled water droplets.

(c) MX - A combination of rime and clear icing.

(3) Altitude. Enter the reported icing altitude only if it differs from the value reported in /FL, or is reported as a

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layer with defined or undefined boundaries. When entering a layer use a hyphen between height values. Undefined lower and higher boundary limits are entered as BLO or ABV. Use a solidus to separate two or more layers of icing.

FORMAT: /IC\_III(-III)\_(type)\_(h<sub>b</sub>h<sub>b</sub>h<sub>b</sub>-h<sub>t</sub>h<sub>t</sub>h<sub>t</sub>)/III(-III)\_etc.

"III" is the intensity of the icing; type is one of the three listed icing types; h<sub>b</sub>h<sub>b</sub>h<sub>b</sub> is the base of the icing layer, if defined, or BLO or ABV, if undefined; and h<sub>t</sub>h<sub>t</sub>h<sub>t</sub> is the top of a defined layer or the boundary of an undefined layer.

Examples: /IC\_TRACE\_RIME  
/IC\_LGT-MOD\_RIME\_085  
/IC\_MOD\_MX\_035-070  
/IC\_LGT\_CLR\_015-045/SEV\_CLR\_ABV 075  
/IC\_NEG

1. Remarks (/RM). Data or phenomena following this TEI are considered significant; however, they do not fit in any previously reported TEI, or they further define entries in other TEIs. The following phenomena may be reported when encountered by pilots. Enter heights only if they differ from /FL.

(1) Low Level Wind Shear. Low Level Wind Shear is defined as rapid air speed fluctuations within 2,000 feet of the earth's surface. When ever this is reported include it as the first element in remarks. WS may be reported as +, -, or +/-, depending on the effect of the forward flight speed of the reporting aircraft. If the location of the WS event is different from the /OV or /FL fields, then include appropriate location information in the remarks. For example, /RM\_WS\_-15KT\_001-006\_DURGC\_KNRB decodes as Low Level Wind Shear from 100 to 600 feet causing a decrease in forward air speed of 15 knots during climb out of Mayport.

(2) Tornadic Activity. Enter the appropriate term, TORNADO, FUNNEL CLOUD, or WATERSPOUT, followed by the direction of movement if known.

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(3) Thunderstorm. Enter aerial coverage descriptions (ISOL, FEW, SCTD, NMRS), or if storms are reported in a line, enter description (LN, SCTD LN, BKN LN, SLD LN) if known. Follow the aerial coverage description with the contraction TS, the location and movement of storms, and type of lightning if known.

(4) Lightning. Enter frequency (OCNL, FRQ, CONS), followed by type, i.e., LTGIC, LTGCC, LTGCG, LTGCA or combinations, as reported by the pilot.

(5) Electric Discharge. Enter DISCHARGE, followed by altitude.

(6) Cloud Reports. Heights of bases and tops encountered shall be reported in /SK. This remarks section is used for clouds that can be seen but were not encountered during flight, such as: CS W, OVC BLO, SCT-BKN ABV, CB E MOV NE, etc.

(7) Language and Terminology. Some information may be reported by the pilot in nonstandard terminology; e.g., very rough, bumpy. If specified phraseology is not adequate, use plain language to enter a description of the phenomena as clearly as possible. Appropriate remarks made by the pilot which do not fit in any TEI may also be included in remarks section. Some remarks that fall into this category are DURGC, DURGD, RCA, TOP, TOC, or CONTRAILS.

(8) Volcanic Eruption. Volcanic Eruption shall be indicated in the remarks section of a urgent PIREP. (Volcanic ash alone is considered weather phenomena and is included in TEI /WX.) A report of volcanic activity shall include as much information as possible, such as the name of the mountain, time of observed eruption (if different from /TM entry), location, and any ash cloud observed with the direction of the ash cloud movement.

(9) Identification. For additional identification of the source of the PIREPS, the aircraft ID, call sign, or registration

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number may be added to the remarks. The facility encoding the PIREPS may also be included in the remarks.

5. Entries on Forms. PIREPS received by USN and USMC weather activities shall be recorded on the upper portion of NMOC Form 3140/10 (Rev 7/96) and formatted for transmission using the lower portion of the same form. Enclosure (2) should be reproduced locally until the form is stocked in the Navy Supply System, tentatively December 1996.

6. Handling of PIREPS. USN and USMC weather activities shall ensure maximum use of PIREPS information and facilitate their inclusion into additional environmental products when possible. Forecasters shall monitor all PIREPS received, and maintain cognizance of PIREPS hazardous flight conditions for which subsequent flight weather briefings may be influenced. Local procedures shall be established to:

a. Maintain a log book in which all completed PIREPS shall be filed. These records shall be maintained locally for a minimum of one year.

b. Display pertinent PIREPS information on local area surface charts, or electronic media.

c. Include PIREPS information as supplemental data in flight weather briefings whenever appropriate.

7. Dissemination. PIREPS may be sent individually or as part of a collective/bulletin. All pilot reports should be given local and longline dissemination as a PIREP, except:

a. When two or more reports have substantially the same information, disseminate only the most recent. A remark may be included to indicate numerous reports of the same phenomena were received, e.g., MULTIPLE RPTS.

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b. Reports of sky condition which have been incorporated into a METAR or SPECI observation, unless deemed appropriate by person entering report.

c. Pilot reports may be sent individually or as part of a collective/bulletin.

7. Examples:

a. Clear-air Turbulence. A Boeing 757-200 pilot reports severe clear-air turbulence between 35,000 and 39,000 feet over Toledo at 1700 EST:

UUA/OV\_KTOL/TM\_2200/FLUNKN/TP\_B757/TB\_SEV\_CAT\_350-390

b. Duststorms or Sandstorms. At 0750 UTC, a pilot reports a duststorm 35 miles northeast of Fort Worth, TX flying at 4,000 feet with a visibility of 3/4 of a mile:

UA/OV\_KNFW045035/TM\_0750/FL040/TP\_UNKN/WX\_FV01SM\_DS

c. Electric Discharge. A pilot flying a Lockheed Orion between Richmond, Virginia, and Washington, DC, reports that at 2120Z the aircraft experienced an electrical discharge 20 miles south of Washington at an altitude of 5,000 feet:

UA/OV\_KDCA180020/TM\_2120/FL050/TP\_P3/RM\_DISCHARGE

d. Smoke Layer. At 1500Z, a pilot of a Dehavilland 7 reports that there is a smoke layer from 2,000 to 6,500 feet over the field at Pittsburgh:

UA/OV\_KPIT/TM\_1500/FLUNKN/TP\_DH7/WX\_FU020-065

e. Hail. The pilot of a Fairchild F27 reports moderate hail 10 miles south of Omaha, Nebraska, at 2217 UTC, at an altitude of 3,500 feet:

UUA/OV\_KOMA180010/TM\_2217/FL035/TP\_FA27/WX\_GR

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f. Icing. The pilot of a Tomcat reports that at 1500Z moderate rime icing was encountered 5 to 20 miles north of Whidbey Island, at 2,000 feet:

UA/OV\_KNUW360005-360020/TM\_1500/FL020/TP\_F14/IC\_MOD\_RIME

g. Cloud Cover. The pilot of a Hornet reports broken clouds between 3,600 feet and 6,600 feet, 6 miles SE of Honolulu at 1900Z. At 7,000 feet the pilot is between layers with an overcast deck above.

UA/OV\_PHNL135006/TM\_1900/FL070/TP\_F18/SK\_BKN036-066  
/UNKN\_OVC\_ABV

h. Thunderstorm. A pilot reports a broken line of thunderstorms 45 miles NW of Dodge City in a north-south direction at 2224Z. CB cloud bases are at 3,000 feet with the layer tops at 15,000 feet and the CB tops at 42,000 feet. Occasional cloud to cloud and cloud to ground lightning is observed. Type of aircraft is an SH60.

UA/OV\_KDDC315045/TM\_2224/FLUNKN/TP\_SH60/SK\_BKN030-150  
/WX\_TSRA/RM\_LN\_TS\_N-S\_OCNL\_LTGCCCG\_CB\_TOPS\_320

i. Tornado. A pilot 35 miles north of Champaign, Illinois reports a tornado moving east northeast at 1714Z. The parent cloud layer is broken with bases at 3,000 feet. Funnel is observed to be making intermittent contact with the ground.

UUA/OV\_KCMI360035/TM\_1714/FLUNKN/TP\_UNKN/SK\_BKN030  
/WX\_+FC/RM\_TORNADO\_MOV\_ENE\_INTER CTC\_W\_GND

j. Turbulence (not clear air). The pilot of a Convair 580 flying at 10,000 feet through Donner Summit Pass reports to Reno, Nevada, that light turbulence is being encountered at 1050Z.

UA/OV\_KRNO250035/TM\_1050/FL100/TP\_CV58/TB\_LGT/RM\_DONNER\_  
SUMMIT\_PASS

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k. Wind. At 0845Z the pilot of a OV1 Mohawk has encountered an 82-knot wind 30 miles west of Bismark at 6,000 feet MSL, wind direction 80 degrees true.

UA/OV\_KBIS270030/TM\_0845/FL060/TP\_OV1/WV\_080082KT

l. Volcanic Eruption and/or Ash. At 2010Z, a pilot of a McDonnell Douglas DC10 at 37,000 feet and 75 miles Southwest of Anchorage reports an eruption 40 miles south at Mt. Augustine at 2008Z. The pilot reports an ash cloud moving south-southeast.

UUA/OV\_PANC240075/TM\_2010/FL370/TP\_DC10/WX\_VA/RM\_VOLCANIC\_ ERUPTION\_2008Z\_MT\_AUGUSTINE\_ASH\_40SM\_S\_PANC\_MOV\_SSE

Enclosure (1)

GLOSSARY OF TERMS, ABBREVIATIONS AND ACRONYMS

-	Light intensity, except when associated with wind shear
+	Heavy intensity, except when associated with wind shear
/	(Solidus) Separator between TEIs, cloud layers, layers of turbulence, or layers of icing
ABV	Above
AC*	Alto cumulus Cloud
ACC	Alto cumulus Castellanus Cloud
ACFT MSHP	Aircraft Mishap
ACSL	Standing Lenticular Alto cumulus Castellanus Cloud
B	Began
BC	Patches (descriptor used with FG)
BKN*	Broken
BL*	Blowing (descriptor used with DU, SA, or SS)
BLO*	Below
BR*	Mist
CA	Cloud to Air (lightning)
CAS	Committee for Aviation Services
CAT*	Clear Air Turbulence, usually high-level associated with Jet Stream wind shear
CB*	Cumulonimbus Cloud
CBMAM	Cumulonimbus Mammatus Cloud
CC*	Cirrocumulus Cloud(s), or Cloud to Cloud (lightning)
CHOP	Turbulence type characterized by rapid, rhythmic jolts
CLR*	Clear (Icing) a type of glossy, clear, or translucent ice
CLR*	Clear (Sky Condition) reported by an automated sensor to indicate no clouds
CONTRAILS	Ice vapor trails created by high-flying aircraft
CONS*	Continuous
CS*	Cirrostratus Clouds

\* Indicates abbreviations recognized by ICAO.

Enclosure (1)

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CTC*	Contact
DR*	Low Drifting (descriptor used with DU, SA, or SN)
DS*	Duststorm
DSNT	Distant
DU	Widespread Dust
DURGC	During Climb
DURGD	During Descent
DZ*	Drizzle
E*	East
EMBD	Embedded
ENE	East Northeast
ENRT*	Enroute
ESE*	East Southeast
EST*	Estimated
EXTRM	Extreme (Used to modify turbulence)
FAA	Federal Aviation Administration
FC	Funnel Cloud
+FC	Tornado or Waterspout
FEW*	Few
FG*	Fog
FRQ	Frequent
FT*	Feet
FU*	Smoke
FV	Flight Visibility
FZ*	Freezing
G	Gusts
GND*	Ground
GR*	Hail, 1/4" or greater in diameter
GS*	Hail, less than 1/4" in diameter
HLSTO	Hailstone(s)
HVY*	Heavy (Used in Remarks to modify precipitation)
IC*	Ice Crystals, or In Cloud (lightning)
ICAO*	International Civil Aviation Organization
INCRG	Increasing
INTER*	Intermittent
ISOL*	Isolated (Used to describe weather phenomena in Remarks of a PIREP)

\* Indicates abbreviations recognized by ICAO.

Enclosure (1)

KT*	Knot
LGT*	Light (Used to modify turbulence or icing)
LLWS	Low Level Wind Shear
LN	Line (Used to describe thunderstorm formations in Remarks of a PIREPS)
LTG	Lightning
LTGCA	Lightning Cloud to Air
LTGCC	Lightning Cloud to Cloud
LTGCG	Lightning Cloud to Ground
LTGIC	Lightning in Cloud
LWR	Lower
LYR	Layer
M*	Indicates sub-zero temperatures
MI*	Shallow (descriptor used with FG)
METAR*	Aviation Routine Weather Report
MOD*	Moderate (Used to modify turbulence or icing)
MOV*	Moving
MSL*	Mean Sea Level
MT*	Mountain
MX*	Mixed - A type of Icing characterized as a combination of clear and rime ice.
N*	North
NAVAID	An electronic navigation aid facility (limited to VOR or VORTAC for PIREPS)
NE*	Northeast
NMRS	Numerous (Used to describe weather phenomena in Remarks of a PIREPS)
OCNL*	Occasional
OFCM	Office of the Federal Coordinator for Meteorological Services and Supporting Research
OVC*	Overcast
OVR	Over
PCPN	Precipitation
PE*	Ice Pellets
PIREPS	Pilot Weather Reports
PK WND	Peak Wind
PO*	Well developed Dust/Sand Whirls

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Enclosure (1)

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PR*	Partial (descriptor used with FG)
PY*	Spray
RA*	Rain
RCA*	Reach Cruising Altitude
RIME	Type of Icing characterized by a rough, milky, opaque appearance
RY	Runway
S*	South
SA*	Sand
SCSL	Standing Lenticular Stratocumulus Cloud
SCT*	Scattered (Used to describe cloud cover)
SE*	Southeast
SEV*	Severe (Used to modify turbulence or icing)
SFC*	Surface
SG*	Snow Grains
SH*	Shower(s)
SKC*	Sky Clear
SLD	Solid (Used to describe weather phenomena in Remarks of a PIREPS)
SM	Statute Mile
SN*	Snow
SPECI*	Aviation Weather Special Report
SQ*	Squall
SS*	Sandstorm
STN*	Station
SW*	Southwest
TACAN*	UHF (Ultra High Frequency - 300 to 3,000 Mhz) Tactical Air Navigation Aid
TCU*	Towering Cumulus Cloud
TEI	Text Element Indicator
TOC*	Top of Climb
TOP*	Top of Clouds
TS*	Thunderstorm
UA	Text Element Indicator for a routine PIREPS
UUA	Text Element Indicator for an urgent PIREPS
UNKN	Unknown
UP	Unknown precipitation

\* Indicates abbreviations recognized by ICAO.

Enclosure (1)

UTC*	Coordinated Universal Time
VA*	Volcanic Ash
VC*	Vicinity
VHF*	Very High Frequency (30 to 300 MHz)
VIS*	Visibility
VOR*	VHF Omni-directional Radio Range
VORTAC*	VOR and TACAN Combination
VRB*	Variable
W*	West
WND*	Wind
WMO	World Meteorological Organization
WS	Wind Shear
Z	Zulu Time (UTC)

\* Indicates abbreviations recognized by ICAO.

Enclosure (1)

NAVMETOCOM Report 3142-1

<b>PIREP</b>			1. DATE/TIME PIREP RECEIVED (Z)		
2. LOCATION AND/OR EXTENT OF PHENOMENA			3. TIME OBSERVED (Z)		
4. PHENOMENA AND ALTITUDE					
5. AIRCRAFT TYPE					
Legend: → = SPACE * CAT/CHOP OR BLANK ** ONLY IF DIFFERENT FROM FL					
(U) UA→/OV		/TM→		/FL /TP→	
MSG TYPE	LOCATION OF PHENOMENA - 4 LTR ID, RADIAL/DISTANCE	TIME (Z)	FLT LVL	TYPE ACFT	
/SK→		/WX→		/TA→	
SKY CONDITIONS - AMOUNT/BASE/TOPS		FLIGHT VISIBILITY AND/OR WEATHER CONDITIONS		TEMPERATURE °C	
/WV→		/TB→		/IC→	
WIND (DIR/SPD)	TURBULENCE INTENSITY TYPE* ALTITUDE**	ICING INTENSITY TYPE	ALTITUDE**		
/RM→					
REMARKS PLAIN TEXT WITH APPROPRIATE ABBREVIATIONS (MOST HAZARDOUS ELEMENT FIRST)					
6. EVALUATION FOR DISSEMINATION (MARK "A" OR "B", AND "C" AS APPROPRIATE)				INITIALS	
A. LOCAL DISSEMINATION	B. LONGLINE DISSEMINATION	C. FOR USE IN SURFACE OBSERVATION		FCSTR	OBSRV
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

<b>PIREP</b>			1. DATE/TIME PIREP RECEIVED (Z)		
2. LOCATION AND/OR EXTENT OF PHENOMENA			3. TIME OBSERVED (Z)		
4. PHENOMENA AND ALTITUDE					
5. AIRCRAFT TYPE					
Legend: → = SPACE * CAT/CHOP OR BLANK ** ONLY IF DIFFERENT FROM FL					
(U) UA→/OV		/TM→		/FL /TP→	
MSG TYPE	LOCATION OF PHENOMENA - 4 LTR ID, RADIAL/DISTANCE	TIME (Z)	FLT LVL	TYPE ACFT	
/SK→		/WX→		/TA→	
SKY CONDITIONS - AMOUNT/BASE/TOPS		FLIGHT VISIBILITY AND/OR WEATHER CONDITIONS		TEMPERATURE °C	
/WV→		/TB→		/IC→	
WIND (DIR/SPD)	TURBULENCE INTENSITY TYPE* ALTITUDE**	ICING INTENSITY TYPE	ALTITUDE**		
/RM→					
REMARKS PLAIN TEXT WITH APPROPRIATE ABBREVIATIONS (MOST HAZARDOUS ELEMENT FIRST)					
6. EVALUATION FOR DISSEMINATION (MARK "A" OR "B", AND "C" AS APPROPRIATE)				INITIALS	
A. LOCAL DISSEMINATION	B. LONGLINE DISSEMINATION	C. FOR USE IN SURFACE OBSERVATION		FCSTR	OBSRV
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			