

NOTE : -

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SATELLITE PICTURES ARE IN ENVELOPE
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TECHNICAL NOTES') IN LIGHT TABLE DRAWER.



PACIFIC REGION TECHNICAL NOTES

81-031
December 30, 1981

AN ALTERNATE FORECAST PROCEDURE

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INTRODUCTION

At the present time, the main forecast products originating from the Aviation desk are the FT (Aviation Terminal Forecasts), and the FA (Aviation Area Forecasts). While the value of the FT's is significant, the benefit of the FA is very much open to question.

The advent of high resolution satellite images has clearly shown that the atmospheric weather patterns and their evolution are much too complex to neatly describe in a coded work form.

AN ALTERNATIVE

A much more effective procedure could be as follows. The main weather elements including those depicted on the current Cloud Analysis Charts (figure 1) and those mentioned in PRTN 81-030, are analysed at the main synoptic hours (To). The basis for the analysis will be the satellite images. Based on the analysis and using trends from animated loops, computer prognoses, experience, etc., the same weather elements are forecast every six hours out to 18 hours. The prognosis will be similar to the current 12 hour Cloud Prognosis Chart. (figure 2)

FORECAST PROCEDURE

The above function will be done by the Satellite Meteorologist. The charts are then passed to the Special, Public and Airways Forecasters. The Public and the Special Forecaster will use these charts for preparing the first day Public and Special Forecasts respectively. The Airways Forecaster will use these charts for composing the Terminal Forecasts. (figure 3) In addition, the Airways Forecaster will produce Route Forecasts for the more travelled Aviation Routes. These Route Forecasts will be valid at the same time as the respective prognosis charts. (figure 4)

All these products are then disseminated to the W04's to support their briefing functions. A flowchart of the proposed procedure is shown in figure 5.

COMMENTS

A dedicated Public Forecaster will be needed for the above procedure. Also needed will be a dedicated Operations Technician to support the Satellite Meteorologist.

This procedure has the advantage of allowing more supervision and providing direct guidance to the Public, Special and Airways Forecasters. These forecast duties can then be undertaken by less experienced meteorologists or more experienced Presentation Technicians while still allowing an improvement in service.

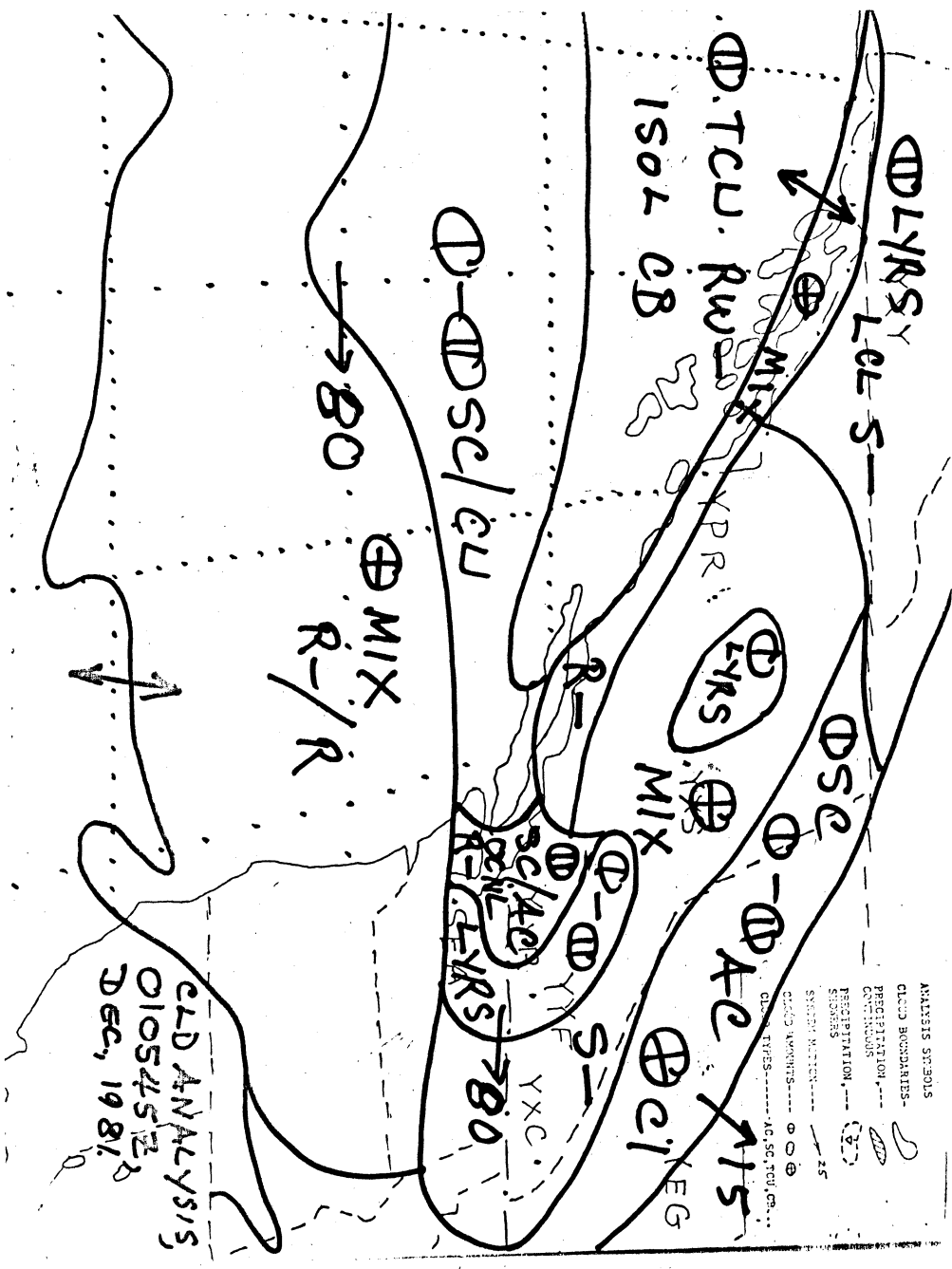


FIGURE 1.
CLOUD ANALYSIS

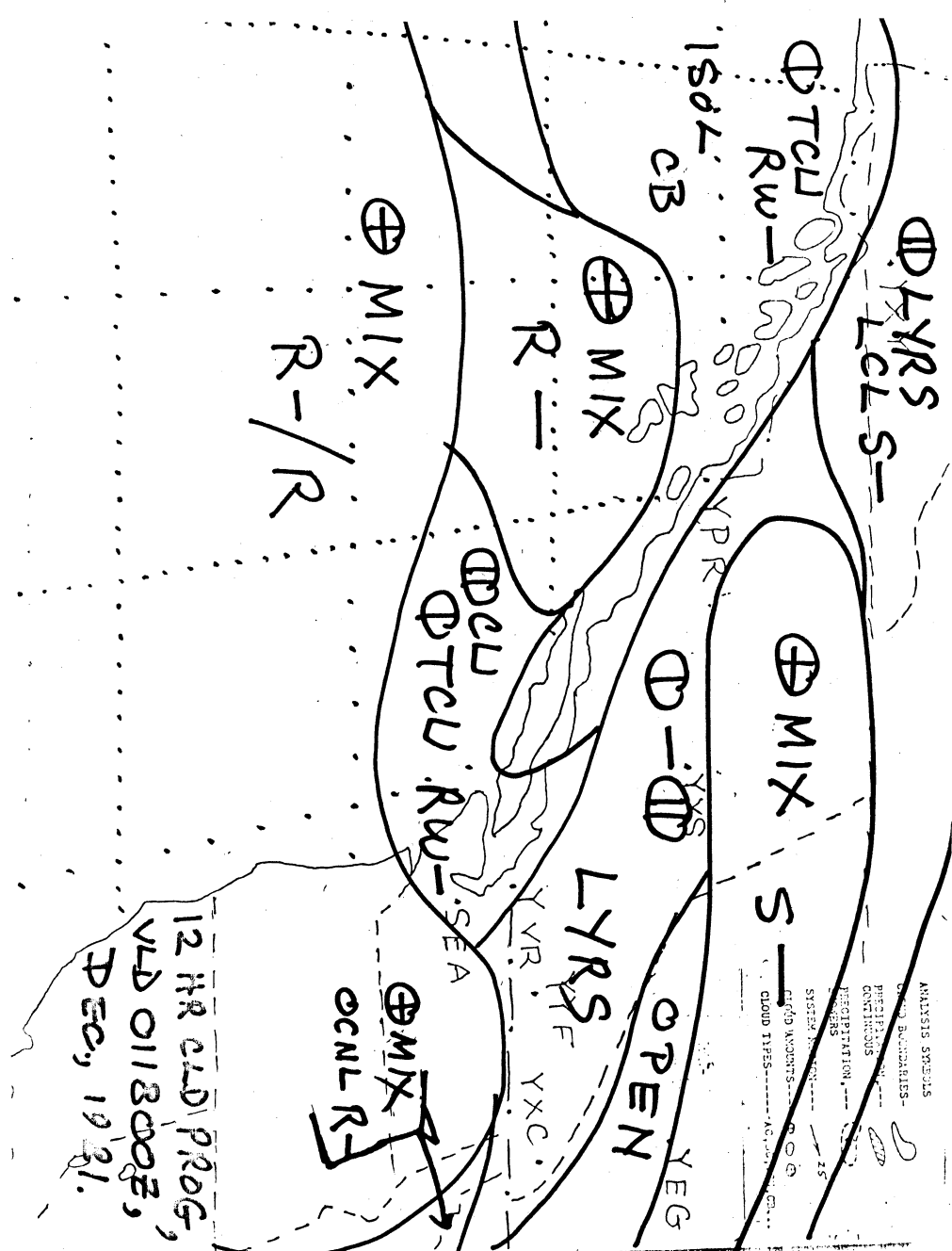


FIGURE 2.

12HR CLOUD PROGNOSIS

T₀ (Main synoptic
hour)

SATELLITE ANALYSIS T ₀ + 0HRS	CODED ROUTE ANALYSIS
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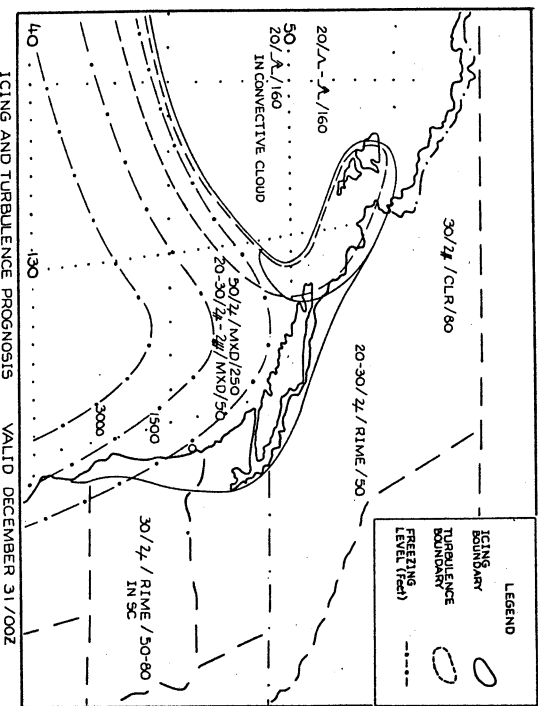
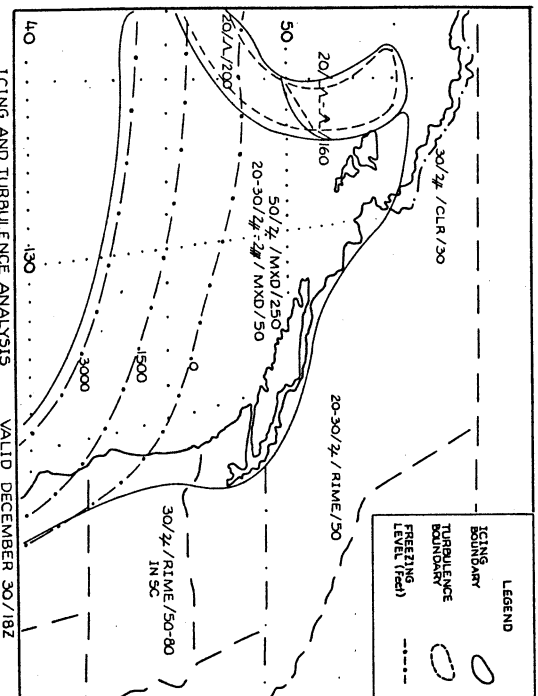
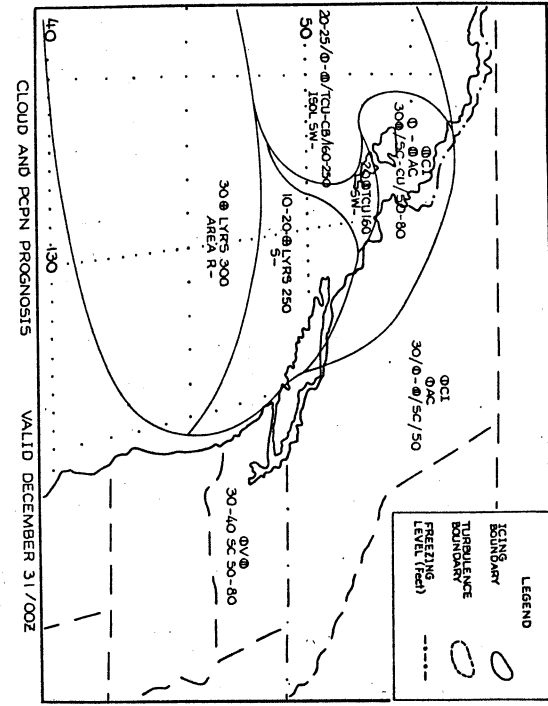
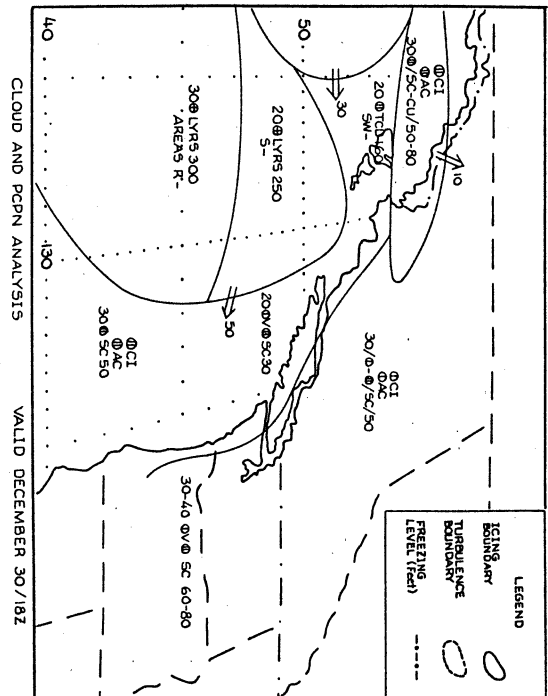
SATELLITE PROGNOSIS T ₀ + 6HRS	CODED ROUTE FORECASTS
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SATELLITE PROGNOSIS T ₀ + 12HRS	CODED ROUTE FORECASTS
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SATELLITE PROGNOSIS T ₀ + 18HRS	CODED ROUTE FORECASTS
--	--------------------------

FIGURE 3.

RECOMMENDED ALTERNATE PWC PRODUCTS TO
REPLACE THE AVIATION AREA FORECASTS



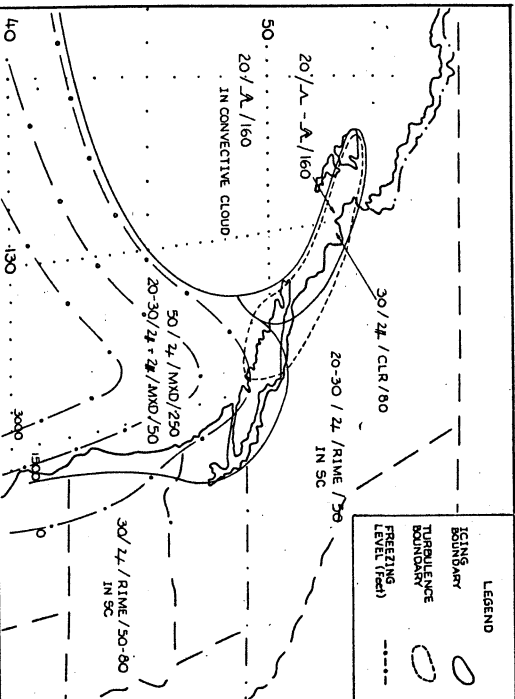
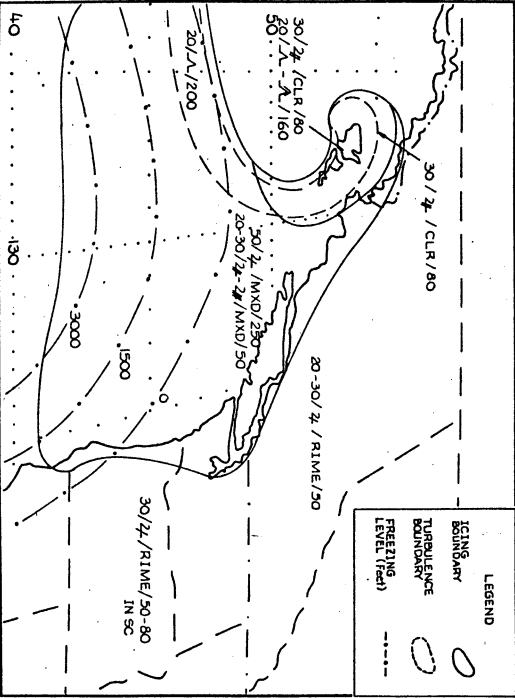
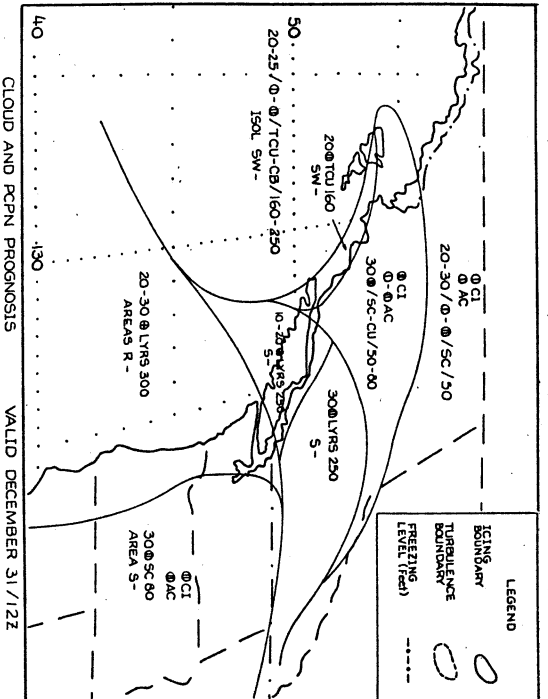
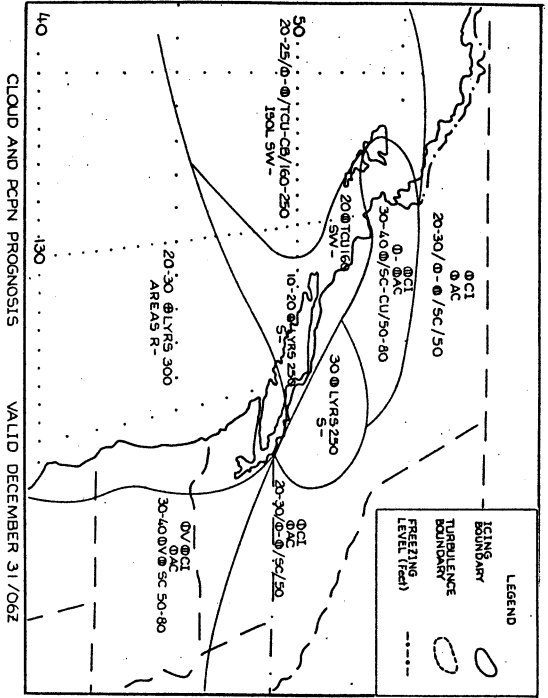
MOUNTAIN PASSES
 ALBERNI PASS
 100V@ST/5C
 ALTA LAKE PASS
 50V@ST/5C OCNL C5XV4F

COQUIHALLA
 0-50V@ST/5C OCNL C0XV2F
 etc.

MOUNTAIN PASSES
 ALBERNI PASS
 5-10@35- OCNL C0X3V4-5-
 ALTA LAKE PASS
 50V@ST/5C OCNL C5XV4F

COQUIHALLA
 0-50V@ST/5C OCNL C0XV2F
 etc.

FIGURE 4a



MOUNTAIN PASSES
ALBERNI PASS
CIX3/1/5- VRBL CZX/1/5
ALTA LAKE PASS
5-10@ST/SC OCNL 5-10@35-

COQUITHALLA
O-50@ST/SC OCNL CIX/1/2
etc.

MOUNTAIN PASSES
ALBERNI PASS
CIX3/1/5- VRBL CZX/1/5
ALTA LAKE PASS
5-10@ST/SC OCNL 5-10@35-

COQUITHALLA
CSX/1/2- VRBL COXOSF
etc.

FIGURE 4b

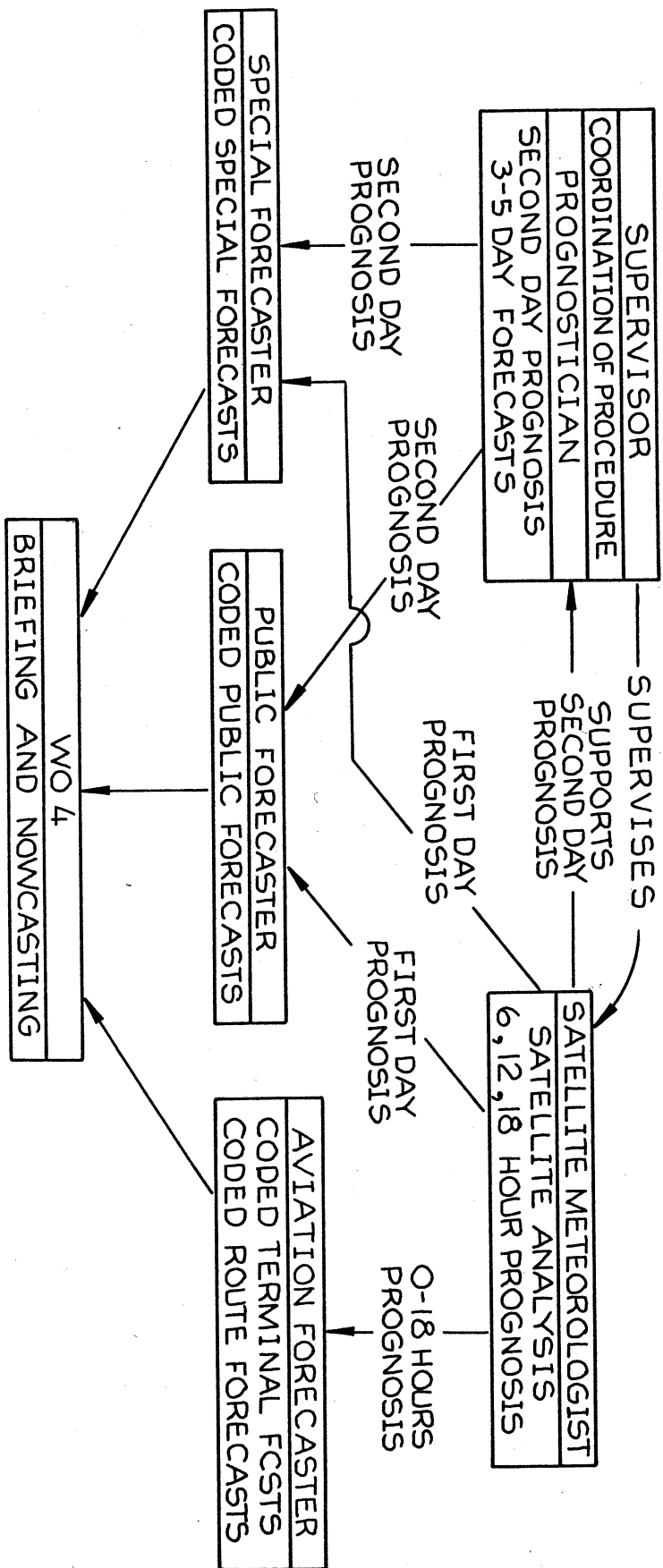


FIGURE 5
PROPOSED PWC PROGNOSIS AND FORECAST PROCEDURE

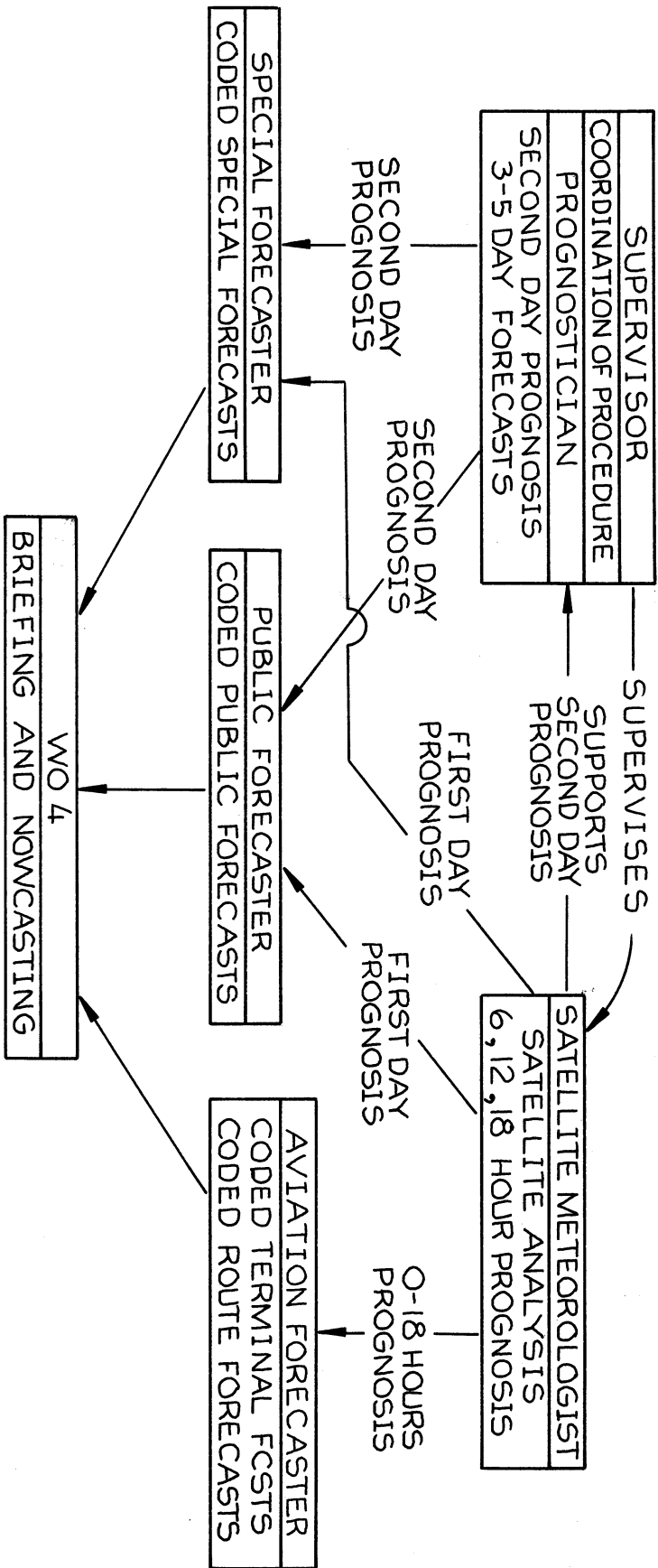


FIGURE 5
 PROPOSED PWC PROGNOSIS AND FORECAST PROCEDURE

ANALYSIS SYMBOLS

BOUNDARIES -

PRECIPITATION -

CONTINUOUS

PRECIPITATION -

SPORADIC

SYSTEM POSITION

CLOUD AMOUNTS

CLOUD TYPES

LYRS
LCL S-

DTCL
RW-

150L
CB

MIX

R-

MIX

R-/R

DTCL

DTCL RW-

MIX

MIX S-

LYRS

OPEN

SEA

MIX

OCNL R

12 HR CLD PROG,
VLD 011800Z,
DEC, 1981.

T₀ (Main synoptic hour)

SATELLITE ANALYSIS T ₀ + 0HRS	CODED ROUTE ANALYSIS
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SATELLITE PROGNOSIS T ₀ + 6HRS	CODED ROUTE FORECASTS
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SATELLITE PROGNOSIS T ₀ + 12HRS	CODED ROUTE FORECASTS
---	--------------------------

SATELLITE PROGNOSIS T ₀ + 18HRS	CODED ROUTE FORECASTS
---	--------------------------

FIGURE 3.

RECOMMENDED ALTERNATE PWC PRODUCTS TO
REPLACE THE AVIATION AREA FORECASTS

DLYRS

LOC 5

DL TCU RW

ISOL CB

D-DSc/cu

BO

MIX R-/R

DSc

DLYRS

MIX

D-DAc

MIS

NEG

Sc/cu

DLYRS

BO

YXC

CLD ANALYSIS,
010545Z
DEC, 1981

- ANALYSIS SYMBOLS
- CLOUD BOUNDARIES-
 - PRECIPITATION, ---
 - CONTINUOUS
- PRECIPITATION, ---
 - SHOWERS
- SYSTEM MOTION: ---
- CLOUD AMOUNTS: ---
- CLOUD TYPES: --- AC, SC, TCU, CR...

LEGEND

ICING
BOUNDARY 

TURBULENCE
BOUNDARY 

FREEZING
LEVEL (Feet) 