

U.S. DEPT. COMM. / NOAA / OAO - DATA SECTION WORK FORM NO. 1 OAO WF 1 FILE

|                      |                    |                          |
|----------------------|--------------------|--------------------------|
| FLT ID: 990626I      | FM: KMCF           | TO: KBNA                 |
| FLT NO: 99-033       | BLK IN: 2250Z      | ATA: 2243Z               |
| ETD: 1530Z           | BLK OUT: 1839Z     | RTD: 1552Z               |
| ETE: 2230Z           | BLK TIME: 7.11 7.2 | FLT TIME: 6.49 6.8       |
| SPONSOR ORG: NOAA/AL | PROGRAM: AESOP     | PURPOSE: FERRY TO... BNA |

OAO PERSONNEL

|                             |                          |
|-----------------------------|--------------------------|
| AC TAGGART, B ✓             | SYS ENG LYNCH, T ✓       |
| CP OMARA, T ✓               | DATA SYS HORN BROOK, C ✓ |
| NAV NEWMAN, C / RATHBUN, DV | RADAR                    |
| FE BAST, G ✓                | DT/ODW                   |
| RADIO ROGERS, M ✓           | CLD PHYS                 |
| FD CZYZYK, S ✓              | DOPPLER                  |

PARTICIPATING SCIENTIST/VISITORS/OAO

| LAST, FIRST NAME          | ACTIVITY ON A/C | AFFILIATION  |
|---------------------------|-----------------|--------------|
| HUBLER, G ✓               |                 | NOAA-AL/LAES |
| RYERSON, T / GOLDAN, PV   |                 | NOAA-AL      |
| HOLLOWAY, J / DISSLY, R ✓ |                 | NOAA-AL/LAES |
| SUPER, D ✓                |                 | " "          |
| DONNELLY, S ✓             |                 | NCAR - ACD   |
| PARRISH, D ✓              |                 | NOAA-AL      |
| BROCK, C ✓                |                 | U of Denver  |
| FLOCKE, F ✓               |                 | NCAR         |

PROPOSED/ACTUAL MISSION/REMARKS (RECCO, FIXES, STORM, PENET, NHOP #)

BAL OWI 215030Z

POWER CRASH T-2 MIN BEFORE BLOCK IN

U.S. DEPT. COMM./NOAA/OAO - DATA SECTION WORK FORM NO.2 OROWF2

FLT ID: 990626I

TIME OFF: 1552Z

TIME ON: 2243Z

|          | A/C T/O | WX STN | A/C LAND | WX STN |
|----------|---------|--------|----------|--------|
| PRESSURE | 1017.6  | 30.09  | 987.8    | 29.88  |

NO DATA DISPOSITION/DATE/QUALITY

|                     |   |  |
|---------------------|---|--|
| 1/SEC FLT LVL TAPES | 2 |  |
| FAST FLT LVL TAPES  |   |  |
| RADAR TAPES         | 1 |  |
| DOPPLER TAPES       |   |  |
| ODW CASSETTES       |   |  |
| HARD COPIES         |   |  |
|                     |   |  |
|                     |   |  |
|                     |   |  |
|                     |   |  |
| AXDT                |   |  |
| AXCP                |   |  |
| ODW                 |   |  |
|                     |   |  |
|                     |   |  |

PHOTOGRAPHY

|      | FWD | LS | RS | VERT |
|------|-----|----|----|------|
| ON   |     |    |    |      |
| OFF  |     |    |    |      |
| RATE |     |    |    |      |

REMARKS



## NOAA • AOC • SED Flight Performance Log

Aircraft : N43RF

Project : Ozone '99

Mission : Ferry → BNASED Crew: Lynch, Hornbrook, RogersFlight ID : 99 0626 JPre-Flight: 12:00Take-Off: 15:52Landing: 2244

| System                     |                                           | Pre-Flight           | In-Flight              | Post-Flight |                             |             |
|----------------------------|-------------------------------------------|----------------------|------------------------|-------------|-----------------------------|-------------|
| N<br>A<br>V                | INE #1                                    | Aligned to: <u>0</u> | <u>✓ TL</u>            |             | <u>-12.1</u>                | <u>-0.4</u> |
|                            | INE #2                                    | Aligned to: <u>0</u> | <u>✓ TL</u>            | <u>(5)</u>  | <u>-1.5</u>                 | <u>-1.2</u> |
|                            | GPS                                       |                      | <u>✓ TL</u>            |             |                             | <u>1</u>    |
| R<br>A<br>D<br>A<br>R      | Nose                                      |                      | <u>✓ TL</u>            |             | Lat                         | Long        |
|                            | L/F                                       | R/T SN: <u>103</u>   | <u>✓ TL</u>            |             |                             | GS          |
|                            | MARS Data System                          |                      | Clean DAT? <u>✓</u>    |             | Mod Switch Off? <u>✓ TL</u> |             |
| T<br>E<br>M<br>P           | Cal High                                  | Cal Low              |                        |             | # DATs:                     | <u>1</u>    |
|                            | Temp #1                                   | <u>30.3</u>          | <u>-30.6</u>           | <u>✓ TL</u> | Cal High                    | Cal Low     |
|                            | Temp #2                                   |                      |                        | <u>✓ TL</u> |                             |             |
| P<br>R<br>E<br>S<br>S      | Dewpoint #1                               |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Dewpoint #2 (AOC)                         |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Attack Angle (AP/DAP)                     |                      | <u>✓ TL</u>            |             |                             |             |
| F<br>L<br>T<br>L<br>V<br>L | Slip Angle (BP/DBP)                       |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Differential (PQ1/PQ2/PQ3/PQ4)            |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Absolute (PS1/PS2)                        |                      | <u>✓ TL</u>            |             |                             |             |
| M<br>I<br>S<br>C           | Radome Transducers                        |                      | <u>Plugs? ✓ TL</u>     |             |                             |             |
|                            | Cabin Transducer (Station 5)              |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Apn-159 SN: <u>5071-01</u>                |                      | <u>✓ TL</u>            |             | Off? :                      | <u>✓ TL</u> |
| U<br>S<br>E<br>R           | Apn-232 SN: <u>1699</u>                   |                      | <u>✓ TL</u>            |             | Off? :                      | <u>✓ TL</u> |
|                            | J&W Liquid Water                          |                      | <u>0</u>               |             |                             |             |
|                            | Lyman Alpha Hygrometer                    |                      | <u>Plugs? ✓ TL</u>     |             | Plugs? :                    |             |
| U<br>S<br>E<br>R           | Down PRT-5 (SST)                          |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Side PRT-5 (CO <sub>2</sub> )             |                      | <u>✓ TL</u>            |             |                             |             |
|                            | RAMS Data System                          |                      | Clean DAT? <u>✓ TL</u> |             | # DATs:                     | <u>2</u>    |
| U<br>S<br>E<br>R           | F/D Laptop                                |                      | <u>✓ TL</u>            |             | Off? :                      | <u>✓</u>    |
|                            | C.I. Printer                              |                      | <u>✓ TL</u>            |             |                             |             |
|                            | ASDL                                      |                      | <u>NU</u>              |             | Off? :                      | <u>✓ TL</u> |
| U<br>S<br>E<br>R           | Epply Radiometers (PSP / PIR)             |                      | <u>✓ TL</u>            |             |                             |             |
|                            | Exterior Walk Around                      |                      |                        |             |                             |             |
|                            | Video                                     | <u>N O R D</u>       | <u>✓ TL</u>            |             | Lens Covers? :              | <u>✓</u>    |
| U<br>S<br>E<br>R           | AVAPS                                     |                      | <u>HL</u>              |             | # Tapes :                   | <u>—</u>    |
|                            | GPS Digital Dropsondes (GD <sup>2</sup> ) |                      | # On Board : <u>—</u>  | # Dropped : | # Good :                    | <u>—</u>    |
|                            | FCU                                       | <u>A B C</u>         | <u>✓ TL</u>            |             | UPS Off? :                  |             |
| U<br>S<br>E<br>R           | Wing Pods - Bolts & Covers                |                      | <u>✓</u>               |             | Accelerometers              |             |
|                            | Zenith SAFS Radiometer                    | <u>on</u>            | Secure? <u>✓</u>       |             | #1 (2 G):                   | <u>8190</u> |
|                            | Pump Bay Temp Sensor                      |                      | <u>✓ TL</u>            |             | #2 (2.5 G):                 | <u>6086</u> |
| U<br>S<br>E<br>R           | Window Inlet Covers                       |                      | Removed? <u>✓</u>      |             | #3 (3 G):                   | <u>5967</u> |
|                            | CO & NO Alarm Operational                 |                      | Test? <u>✓ TL</u>      |             | #4 (3.5 G):                 | <u>2892</u> |
|                            | CO & NO Gas PSI Check                     |                      | Start PSI: <u>400</u>  |             | End PSI:                    | <u>370</u>  |
| U<br>S<br>E<br>R           | All Gas Cylinders Secure                  |                      | Mounting? <u>✓</u>     |             | Valve Closed?               |             |

Gas Cylinders located in:

- (3) C1/C2 Cabinet
- (1) B3 Cabinet
- (3) Bookcase Sidewall
- (3) Station C3X
- (1) Station 2 Sidewall
- (3) Station 3
- (5) Aft Bottle Rack
- (3) Station 6
- (2) Station 7 Sidewall

104-200

[illegible]



NOAA • AOC • SED  
N43RF DATA STATION LOG

Project : Ozone '99

Mission : Ferry → BNA

Flight ID : 990626T

Operators : Lynch

Take Off : 15:52

Landing : 22:44

|                                   |                              |                                                  |
|-----------------------------------|------------------------------|--------------------------------------------------|
| RAMS DAT 1 On (8/9): <u>15:36</u> | RAMS DAT 1 Off: <u>22:53</u> | Data : <u>Slow</u> <u>Fast</u> AVAPS             |
| RAMS DAT 2 On [8/9]: <u>15:37</u> | RAMS DAT 2 Off: <u>22:53</u> | Data : <u>Slow</u> <u>Fast</u> AVAPS             |
| RAMS DAT 3 On [8/9]:              | RAMS DAT 3 Off:              | Data : Slow Fast AVAPS                           |
| Printer On: <u>15:36</u>          | Printer Off: <u>22:53</u>    |                                                  |
| MARS DAT 1 On [8/9]: <u>15:58</u> | MARS DAT 1 Off: <u>22:46</u> | CPU Selected : <u>A</u> B                        |
| MARS DAT 2 On [8/9]:              | MARS DAT 2 Off:              | VCR's Used : <u>N</u> <u>L</u> <u>R</u> <u>D</u> |
| MARS DAT 3 On [8/9]:              | MARS DAT 3 Off:              | VCR Mode : VHS / <u>S-VHS</u> 2 / 12 <u>6</u>    |
| PMS DAT 1 On:                     | PMS DAT 1 Off:               |                                                  |
| PMS DAT 2 On:                     | PMS DAT 2 Off:               | Tapes Given To                                   |
| PMS DAT 3 On:                     | PMS DAT 3 Off:               | RAMS :                                           |
| VCR Tape 1 On: <u>15:36</u>       | VCR Tape 1 Off: <u>22:53</u> | MARS :                                           |
| VCR Tape 2 On:                    | VCR Tape 2 Off:              | PMS :                                            |
| VCR Tape 3 On:                    | VCR Tape 3 Off:              | VCR :                                            |

**CARCAH Tasking**

Mission Number :                     

Storm Name :                     

**Data Station Operator Notes**

2253     Lost all scientific power when power off  
transferred to APU

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DATE : 6/26/99  
TO : Chief, AOC Flight Operations  
FROM : Pilot/Flight Director, Aircraft N43RF ON \_\_\_\_\_ BLOCKTIME  
OFF \_\_\_\_\_  
SUBJECT: Hazardous Duty

PURPOSE OF FLIGHT: FERRY MISSION TO NASHVILLE

Hazardous Duty Pay is required for flight made on 6/26/99  
(DATE)

Request based on HAZARDOUS MATERIALS ON BOARD

Personnel on board authorized Hazard Pay:

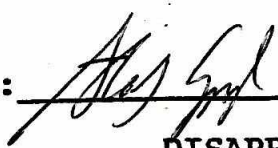
C2927K, S

HORN BROOK, C

LYNCH, T

BAST, G

ROGERS, M

PILOT/FLIGHT DIRECTOR: 

APPROVED: \_\_\_\_\_

DISAPPROVED: \_\_\_\_\_

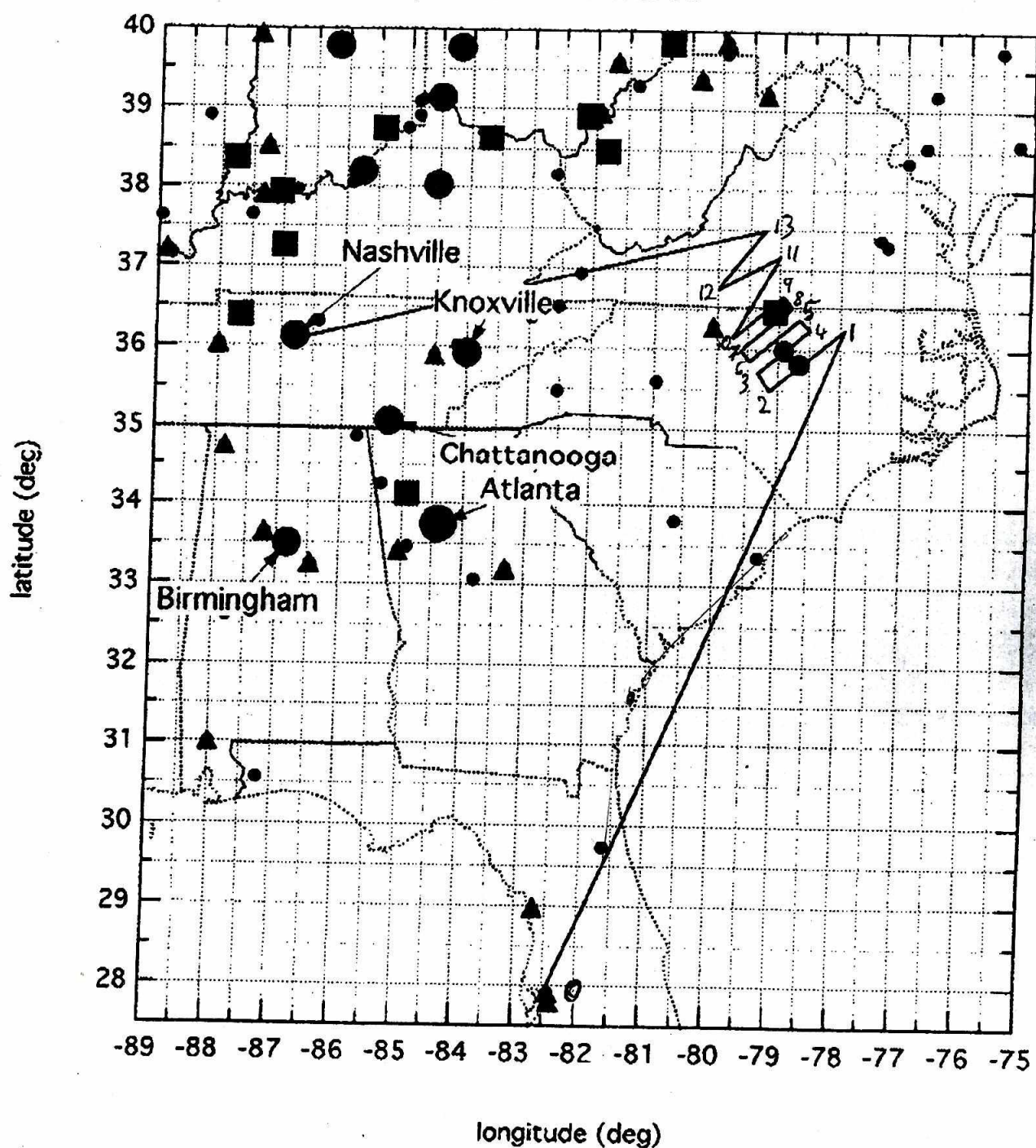
CHIEF, AOC FLIGHT OPERATIONS: \_\_\_\_\_



[illegible]



# WP3 Transit Flight and urban Plume Study planned for 6/26/99





# Crew for transit flight

ex 1 ~~Hildner~~

2 ~~Ryerson~~

ex 2 ~~Dissy~~

3 ~~Floche~~

5 ~~Brock~~

5 ~~Goldan~~

7 ~~Parrish~~

7 ~~Holloway~~

6 ~~Donnelly~~

6 ~~Sueper~~

# Science Crewlist Test flight

- X ① Tom Ryerson NOAA - AL
- X ② Greg Huey NOAA / CIRES & GIT
- X ③ Frank Flocke NCAR - ACD
- X ④ Bill Kustu NOAA - AL / Paul Golden
- X ⑤ David Parrish NOAA - AL
- X ⑥ John Holloway NOAA - AL / CIRES
- X ⑦ Rich Dissly NOAA - AL / CIRES
- X ⑧ Donna Sueper "
- ✓ ⑨ God Hübler "
- ⑩ ~~Chad Brock~~ X ANDREW WEINHEIMER NCAR ACD University of Denver (?)
- X ⑪ Steve Donnelly NCAR - ACD / not transit



vol MITCH MOUNTAIN HELL VOL ANGLVHL

**EMERGENCY MESSAGE**

**- WE HAVE \_\_\_\_\_ ENDURANCE REMAINING**

**EMERGENCY MESSAGE**

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

|                                            |           |          |          |         |
|--------------------------------------------|-----------|----------|----------|---------|
| UHF/VOICE                                  | VHF/VOICE | MF/VOICE | HF/CW    | MF/CW   |
| 243.0                                      | 121.5     | 2182 KHZ | 8364 KHZ | 500 KHZ |
| MAYDAY, MAYDAY, MAYDAY                     |           |          |          |         |
| THIS IS NOAA _____, NOAA _____, NOAA _____ |           |          |          |         |
| - POSITION _____ N / S                     |           |          |          |         |
| - HEADING _____ E / W AT _____ Z           |           |          |          |         |
| - AT _____ KTS TRUE/INDICATED              |           |          |          |         |
| - FLIGHT LEVEL OR ALTITUDE _____           |           |          |          |         |
| - WE ARE A P-3 AIRCRAFT WITH _____         |           |          |          |         |
| - NATURE OF EMERGENCY _____                |           |          |          |         |
| - ASSISTANCE DESIRED _____                 |           |          |          |         |
| - PILOT INTENTIONS _____                   |           |          |          |         |
| - WE HAVE _____                            |           |          |          |         |
| - ENDURANCE REMAINING _____                |           |          |          |         |

[illegible]



NOAA FORM 56-49  
(2-95)

MISSION PREFLIGHT LOG

DESTINATION  
NASHVILLE

MISSION  
ORONE (AESOP)

NAVIGATOR  
LT NEWMAN

AIRCRAFT COMMANDER  
CCOL TRACACT

FLIGHT DIRECTOR  
STAN CZYZYK

SCHEDULED / ACTUAL TAKEOFF Z

DATE OF TAKEOFF  
1100L '1351 Z 26 JUN 99

| WP | LAT/LON                | RTE | MH | VAR<br>+E--> | TH | DR<br>+R--> | TRK | GS  | WD | WS | ALT | TAS | LEG / TOT<br>DIST | LEG / TOT<br>TIME | PROP<br>ETA | ETA  | ATA | REMARKS |
|----|------------------------|-----|----|--------------|----|-------------|-----|-----|----|----|-----|-----|-------------------|-------------------|-------------|------|-----|---------|
| 0  | 36 15 N<br>77 56 W     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 1  | 35 30 N<br>79 09 W     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 2  | 35 43 N<br>79 21 W 205 |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 3  | 36 15 N<br>78 30 W     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 4  | 36 23 N<br>78 40 W     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 5  | 35 52 N<br>79 29 W     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 6  | 36 N<br>79 37 W        |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 7  | 36 32 N<br>78 48 W     |     |    |              |    |             |     | 215 |    |    |     |     | 11<br>11          | 403<br>403        |             | 1944 |     |         |
| 8  | 36 09 N<br>79 45 W     |     |    |              |    |             |     |     |    |    |     |     | 50<br>61          | 414<br>417        | 1947        | 2001 |     |         |
| 9  | 37 10 N<br>79 00 W     |     |    |              |    |             |     |     |    |    |     |     | 71<br>132         | 434<br>437        | 2021        | 2033 |     |         |
| 10 | 36 45 N<br>80 00 W     |     |    |              |    |             |     |     |    |    |     |     | 58<br>244         | 417<br>409        | 2036        | 2048 |     |         |
| 11 | 36 08 N<br>86 41 W     |     |    |              |    |             |     |     |    |    |     |     | 367<br>611        | 1425<br>2434      | 2218        |      |     |         |
| 12 | 35 54.3<br>83 53.7     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 13 | 35 46.9<br>84 58.7     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 14 | 36 08.2<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 15 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 16 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 17 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 18 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 19 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 20 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 21 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 22 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 23 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 24 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 25 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 26 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 27 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 28 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 29 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 30 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 31 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 32 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 33 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 34 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 35 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |
| 36 | 36 09.9<br>86 41.1     |     |    |              |    |             |     |     |    |    |     |     |                   |                   |             |      |     |         |

| INS PERFORMANCE    |             |
|--------------------|-------------|
| INS 1              | INS 2       |
| BEGIN ALIGN TIME   | 1316Z →     |
| ALIGN STATUS (0-5) | ∅ ∅         |
| END NAV TIME       | 2245Z 2245Z |
| START NAV TIME     | 1535Z 1535Z |
| DELTA T            | 741∅ 741∅   |

| TERMINAL ERRORS |                  |
|-----------------|------------------|
|                 | INS 1      INS 2 |
| DELTA LAT       | 42.1      7.5    |
| DELTA LON       | -4      -1.2     |
| RGS             | 1      1         |
| RADIAL ERROR    | 2      1         |

[illegible]