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1. FOLLOWING ARE [REDACTED] REQUIREMENTS FOR PATIO CALIBRATION OBSERVATIONS FOR S/I CAMERA. THESE ARE INTENDED TO UTILIZE AS MUCH AS POSSIBLE THE EQUIPMENT AND PROCEDURES CURRENTLY USED IN THE PATIO ROUTINE. DEPARTURES FROM THIS ROUTINE AS OUTLINED BELOW ARE NECESSARY TO PROVIDE THE INTERIOR ORIENTATION CONSTANTS CUSTOMARILY FURNISHED WITH THE LENS CALIBRATION REPORT.

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2. AUXILIARY EQUIPMENT:

A. TIME RECORDER WITH A PERMANENT RECORD, IF AVAILABLE, OR A PRECISION TIME PIECE. (DIFFERENTIAL REFRACTION REQUIREMENTS IMPOSE AN ABSOLUTE TIME ACCURACY OF LESS THAN 10 SEC TIME, THEREFORE PLUS OR MINUS 1 SECOND LEAST READINGS MORE THAN SATISFY THIS REQUIREMENT.)

- B. 2.5, 5, 10, 15 MC RECEIVER.
- C. REMOTE EXPOSURE CONTROL.
- D. VACUUM PUMP AND ACCESSORIES.
- E. HYGRO-THERMOPGRAPH.
- F. BAROMETER.

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3. FILM:

IN ORDER TO REALIZE THE MAXIMUM STELLAR RECORD FOR CALIBRATION PURPOSES IT IS RECOMMENDED THAT THE OPERATIONAL TYPE EMULSION BE REPLACED WITH EK TRI-X OR AN EQUIVALENT.

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GROUP 1
Excluded from automatic
downgrading and
declassification

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- A. STELLAR, APPROX. 15 FEET, 35 MM ROLL, TRI-X OR EQUIVALENT.
- B. TERESTRIAL, APPROX. 30 FEET, 70 MM ROLL, TRI-X OR EQUIVALENT.

4. SPECIAL PROVISIONS:

A. FIDUCIALS: PROVISION SHALL BE MADE FOR ADJUSTING FIDUCIAL ILLIMINATION ON BOTH FORMATS IN ORDER TO ACHIEVE AN OPTIMUM FIDUCIAL EXPOSURE FOR FASTER EMULSIONS. IF THE FIDUCIAL SYSTEM CONSISTS OF A BACKGROUND LIGHT IMPRESSED RESEAU THIS CONSIDERATION IS OBIATED.

B. BAFFLING: BAFFLING FOR SOLAR FLARE AND EARTH REFLECTION SHALL BE OPERATIONALLY MOUNTED FOR THE TEST.

C. LENS APERTURES SHALL BE SET AT OPERATIONAL LEVELS FOR THE TEST.

D. SHUTTER SPEEDS SHALL BE SET FOR EQUAL AND CONCURRENT TIMES FOR BOTH CAMERAS AND SHALL BE AUTOMATICALLY CONTROLLED BY A REMOTE EXPOSURE CONTROL. THE PULSE RANGE SHALL BE TAKEN BETWEEN 1 AND 60 SECONDS. SHUTTER CONTROL INTERROGATION SHALL BE MANUALLY CONTROLLED BY THE OPERATOR-OBSERVER.

5. OBSERVING CONDITIONS:

A. CLOUD OR HAZE COVER SHALL NOT BE SUFFICIENTLY PREVALENT TO CONTINUALLY HAZARD AN OBSCURATION OF ANY PART OF EITHER FORMAT. EXPOSURES KNOWN TO HAVE BEEN PARTLY OBSCURED SHOULD BE REPEATED UNTIL A MINIMUM REQUIRED NUMBER OF CLOUD FREE EXPOSURES HAVE BEEN OBTAINED.

B. ATMOSPHERIC CLARITY SHALL BE SUCH THAT FIFTH MAGNITUDE

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STARS ARE VISABLE TO THE UNAIDED EYE.

C. PHOTOGRAPHY SHALL BE SUSPENDED FOR TIMES WHEN THE MOON APPARENTLY APPROACHES WITHIN 15 DEGREES OF EITHER FORMAT.

6. RECORD:

- A. INSTRUMENT SERIAL NUMBER.
- B. DATE OF TEST.
- C. WWV REFERENCED TIME ENTRIES ON TIMER OUTPUT.
- D. CYCLE NUMBER AND CORRESPONDING TIME REGISTRATION OF EACH EXPOSURE.
- E. CHRONOLOGICAL HISTORY OF THE TEST ACCORDING TO SCHEDULE.
- F. BAROMETER, HOURLY RECORDINGS (Ø INCHES .Ø1) HG.
- G. TEMPERATURE (Ø DEGREES.5), AND HUMIDITY.
- H. ESTIMATED CLOUD COVER AND GENERAL VISIBILITY.
- I. MALFUNCTIONS AND UNUSUAL OCCURANCES.
- J. GEOGRAPHIC POSITION OF THE OBSERVATION PLATFORM (PLUS OR MINUS 1 MIN. LATITUDE, PLUS OR MINUS 1 MIN. LONGITUDE)

7. PROCEDURE:

A. INTERIOR ORIENTATION: THE INSTRUMENT SHALL HAVE THE PROVISION FOR ALTERNATELY ORIENTING THE CAMERAS SUCH THAT:

(1) THE TERRAIN CAMERA IS DIRECTED TOWARD THE ZENITH AND LEVELED TO APPROXIMATELY ONE MINUTE OF ARC.

(2) THE STELLAR CAMERA IS SIMILARLY ORIENTED AND LEVELED.

B. ABOUT TEN CYCLES SHALL BE EXPOSED FOR EACH CAMERA AT THE

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ZENITH POSITION. IT WILL BE NECESSARY TO DETERMINE THE OPTIMUM EXPOSURE TIMES FROM THE FIRST PATIO CALIBRATION. IT IS ESTIMATED THAT USING THE OPERATIONAL EMULSION THAT A MAXIMUM OF TEN SECONDS WILL BE ACCEPTABLE FROM THE STANDPOINT OF IMAGE MOTION. TRI-X OR AN EQUIVALENT MAY REQUIRE TEN SECONDS OR LESS DEPENDING UPON THE AMOUNT OF BACKGROUND FOGGING.

C. RELATIVE ORIENTATION: THE INSTRUMENT SHALL HAVE A PROVISION SUCH THAT THE PLANE DEFINED BY THE CAMERA OPTICAL AXES MAY BE ORIENTED GENERALLY ALONG THE MERIDIAN WITH THE STELLAR CAMERA AXIS ELEVATED APPROXIMATELY 25 DEGREES ABOVE THE SOUTH HORIZON.

D. APPROXIMATELY TEN CYCLES OF SIMULTANEOUS EXPOSUREES SHALL BE MADE IN THE CONFIGURATION RELATIVE ORIENTATION WITH SYNCHRONIZED OPENING AND CLOSING OF THE TWO CAMERA SHUTTERS.

E. AN IDENTIFYING EXPOSURE OF 30 SECONDS DURATION SHALL BE MADE AT THE BEGINNING AND END OF EACH SEQUENCE (E.G., 10 STELLAR ZENITH EXPOSURES).

F. FOUR CYCLES SHALL BE RUN BETWEEN EACH MAJOR EVENT (I. E., BETWEEN IDENTIFYING TRAIL EXPOSURES) WITH LENSES COVERED IN ORDER TO PERMIT A NON-DESTRUCTIVE FILM CUT.

8. SINCE [] CURRENTLY HAS A CONTRACT WITH [] FOR THE MEASUREMENT OF STELLAR IMAGES FROM THE M, L AND J PROGRAMS FOR THE PURPOSE OF PROVIDING [] WITH ATTITUDE INFORMATION, IT IS [] DESIRE THAT PATIO STELLAR OBSERVATION EXPOSURES BE FORWARDED DIRECTLY TO [] WHETHER THEY ARE ACCOMPLISHED AT EITHER

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[REDACTED] SECURITY PROCEDURES HAVE BEEN ARRANGED FOR RECEIPT AND HANDLING OF SUCH MATERIAL BY HEADQUARTERS SECURITY. [REDACTED] IS PREPARED TO PROCESS SUCH EXPOSURE MATERIAL IF NECESSARY, BUT THE OPTION AS TO PROCESSING RESPONSIBILITY IS OPEN. IN ORDER FOR [REDACTED] TO MEET THE TIME REQUIREMENT IMPOSED BY [REDACTED] WHICH WAS DICTATED BY [REDACTED] TECHNICAL DATA DISSEMINATION REQUIREMENTS, PATIO STELLAR OBSERVATIONS EXPOSURE SHOULD BE FORWARDED TO [REDACTED] AS SOON AS THEY HAVE BEEN ACCOMPLISHED. UNIMPORTANT WHETHER PATIO STELLAR OBSERVATION EXPOSURE ARE MADE BEFORE OR AFTER HATS TEST. INFORMATION SHOULD BE IN [REDACTED] HANDS PRIOR TO INTENDED LAUNCH DATE FOR S/I CAMERA CONCERNED.

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