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INDUSTRIAL STEAM GENERATION BY NON-IMAGING FOCUSING

FINAL REPORT

FEBRUARY, 1979

PREPARED BY:

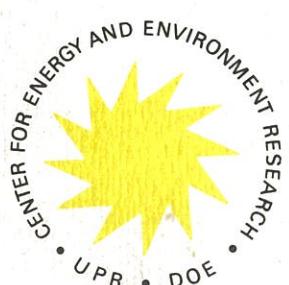
U. ORTABAŞI

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A. M. LOPEZ

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CENTER FOR ENERGY AND ENVIRONMENT RESEARCH
UNIVERSITY OF PUERTO RICO — U.S. DEPARTMENT OF ENERGY

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1. Introduction

An innovative solar collector for industrial steam generation has been designed, developed and built by CEER with cooperation and funding from the University of Chicago and Bacardi Corporation. The collector is a linearly segmented compound parabolic concentrator (CPC) with a cylindrical evacuated tube as the receiver. As part of the project, a solar radiation measuring station was installed on the premises of the Bacardi Rum Distillation Plant in Cataño, Puerto Rico.

This report emphasizes that portion of the project carried out after the First Progress Report of August, 1978. We refer the reader to that report for details of the initial phases of the project. In general, that report dealt with the general design ideas and the preliminary analytical studies of these ideas. Some work with an experimental model was also included. This report covers mainly the final design and construction of the collector.

The main design elements that are incorporated in this collector are now summarized. First, it is a CPC collector with a concentration ratio of 5.25. This means it can make use of diffuse as well as direct sunlight. This also means it does not require continuous or even daily tracking of the sun's position. Second, it has an evacuated tubular receiver of a new design. This receiver is expected to perform better than other receivers for high temperature collectors. Third, the CPC mirror surface is segmented and encapsulated in glass tubes. The tubes provide

lightweight, low cost structural support as well as protection for the mirror surface.

II. Design and Fabrication of Collector Components

The major system components of the linearly segmented compound parabolic collector under consideration are shown in schematic form in Figs. 1, 2, and 3 which show the evacuated tubular receiver, the segmented encapsulated mirrors and the collector frame. Dimensions given in these drawings were original design and some were changed in the final design.

A. Evacuated Tubular Receiver

Fig. 4 shows the schematic of the single wall evacuated receiver tube designed specifically for this project. A detailed description of this receiver was given in the First Progress Report.

One of the three receiver tubes received from the manufacturer was tested under stagnation conditions and one sun radiation density. The temperature inside the copper tubing was found to be 240°C attesting to the excellent heat absorption and retention qualities of this receiver design.

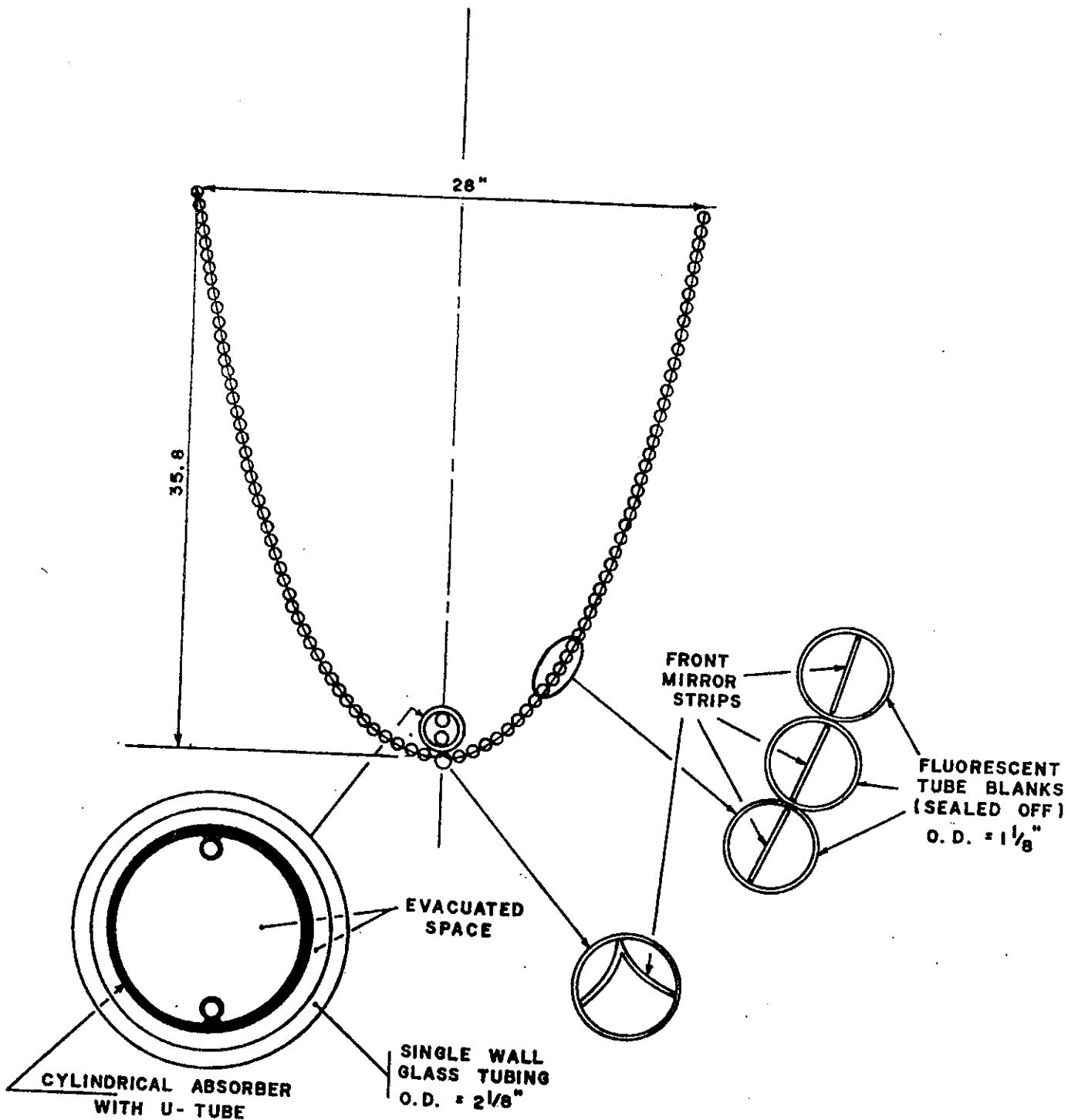
B. Segmented Mirror

A major part of our effort since August has gone into developing and building the segmented mirror. Figure 5 illustrates the final design of the mirror units.

Plexiglas plastic (1/8" thick) was chosen as the material for the mirror substrate. Major considerations in this decision were ease of handling, cutting, and machining, and

FIGURE -1-

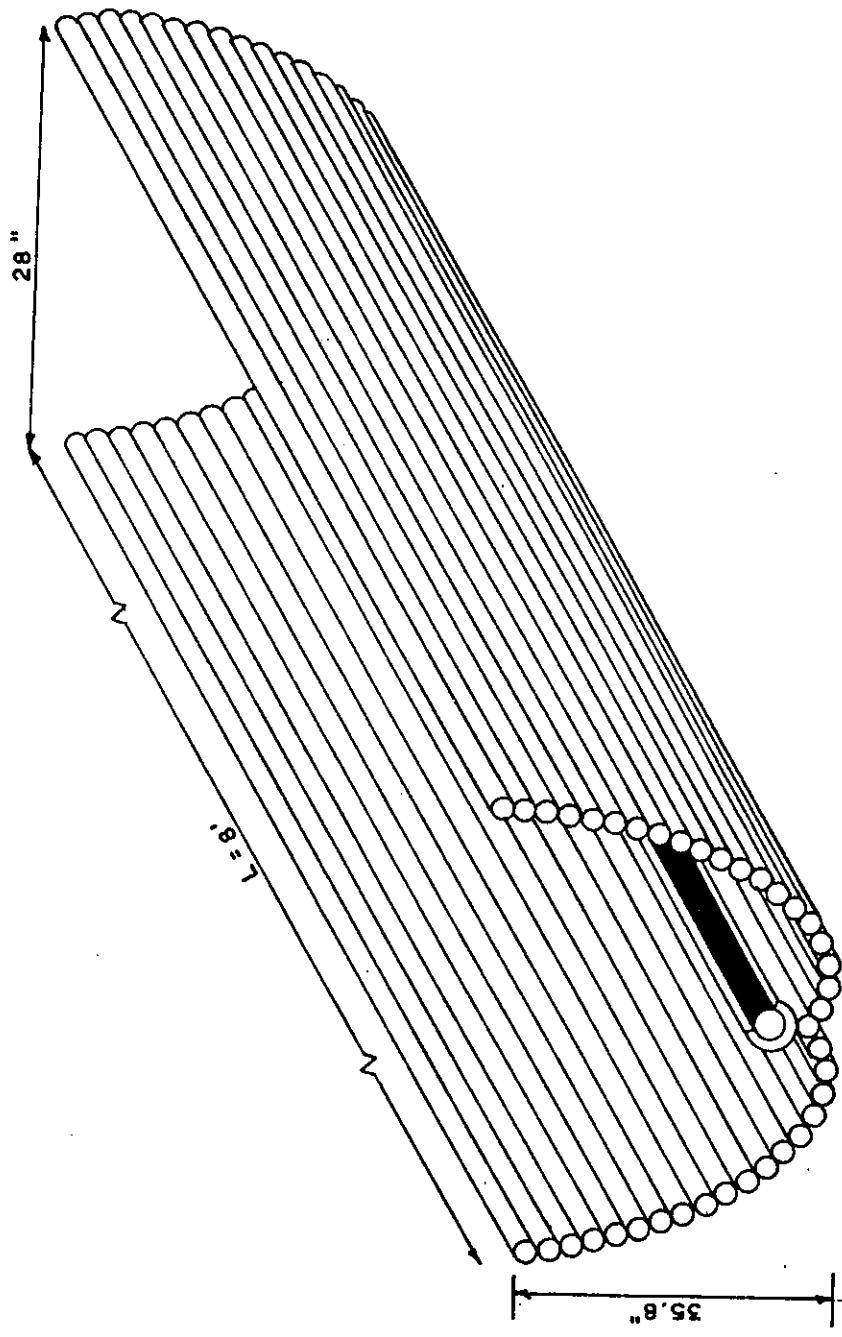
UNIVERSITY OF PUERTO RICO / CEER
FACETED CPC COLLECTOR (EFF. CR \approx 5)
(SUPPORT FRAME FOR TUBES NOT SHOWN)



DRAWING
NOT TO SCALE

FIGURE -2-

PHYSICAL DIMENSIONS OF THE PROTOTYPE CONCENTRATOR SYSTEM



NOT TO SCALE

FIGURE -3-
DUAL AXIS COLLECTOR FRAME

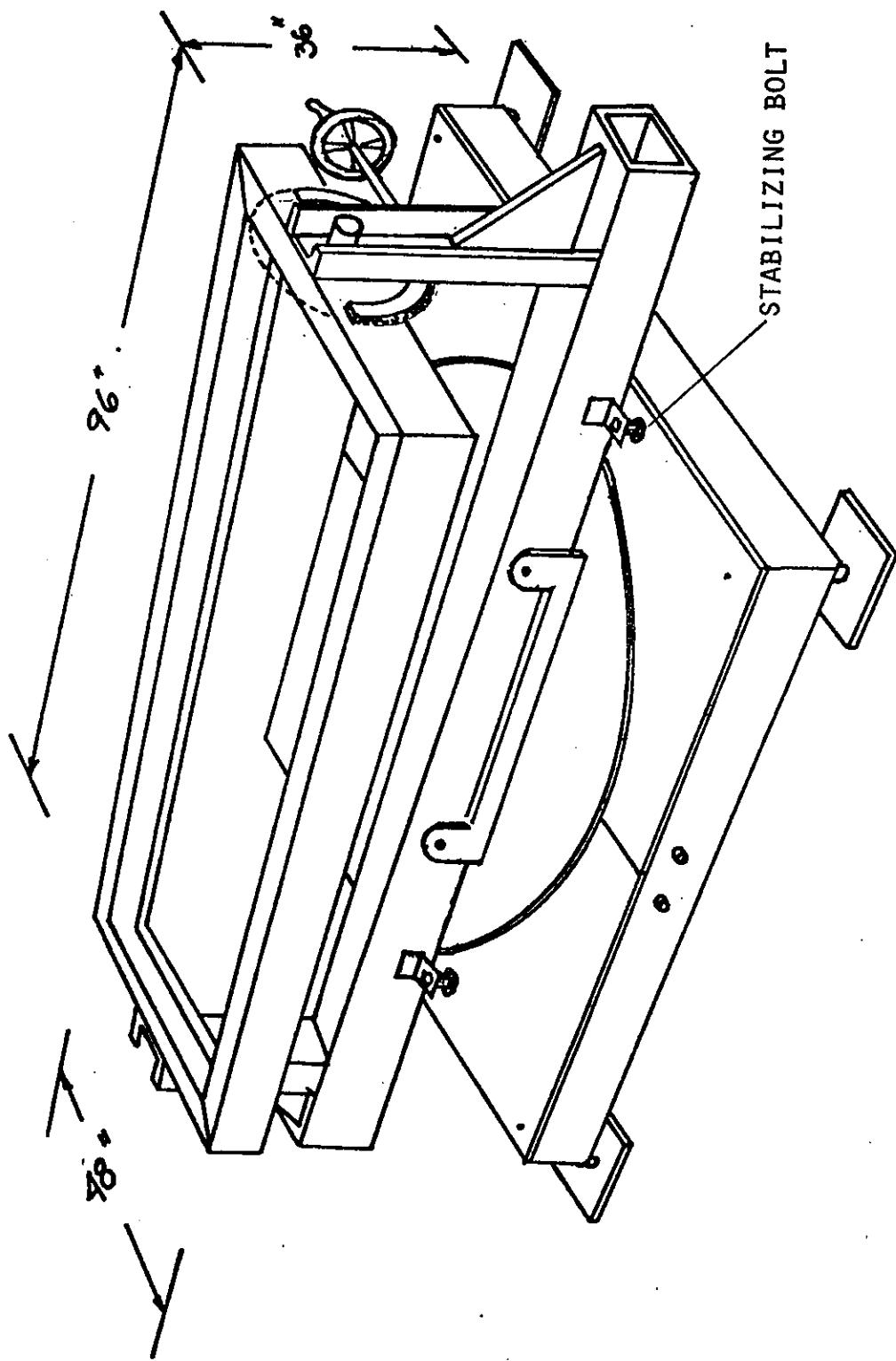


FIGURE -4-
**EVACUATED RECEIVER TUBE TO BE UTILIZED WITH THE LINEAR SEGMENTED
 COMPOUND PARABOLIC CONCENTRATOR**

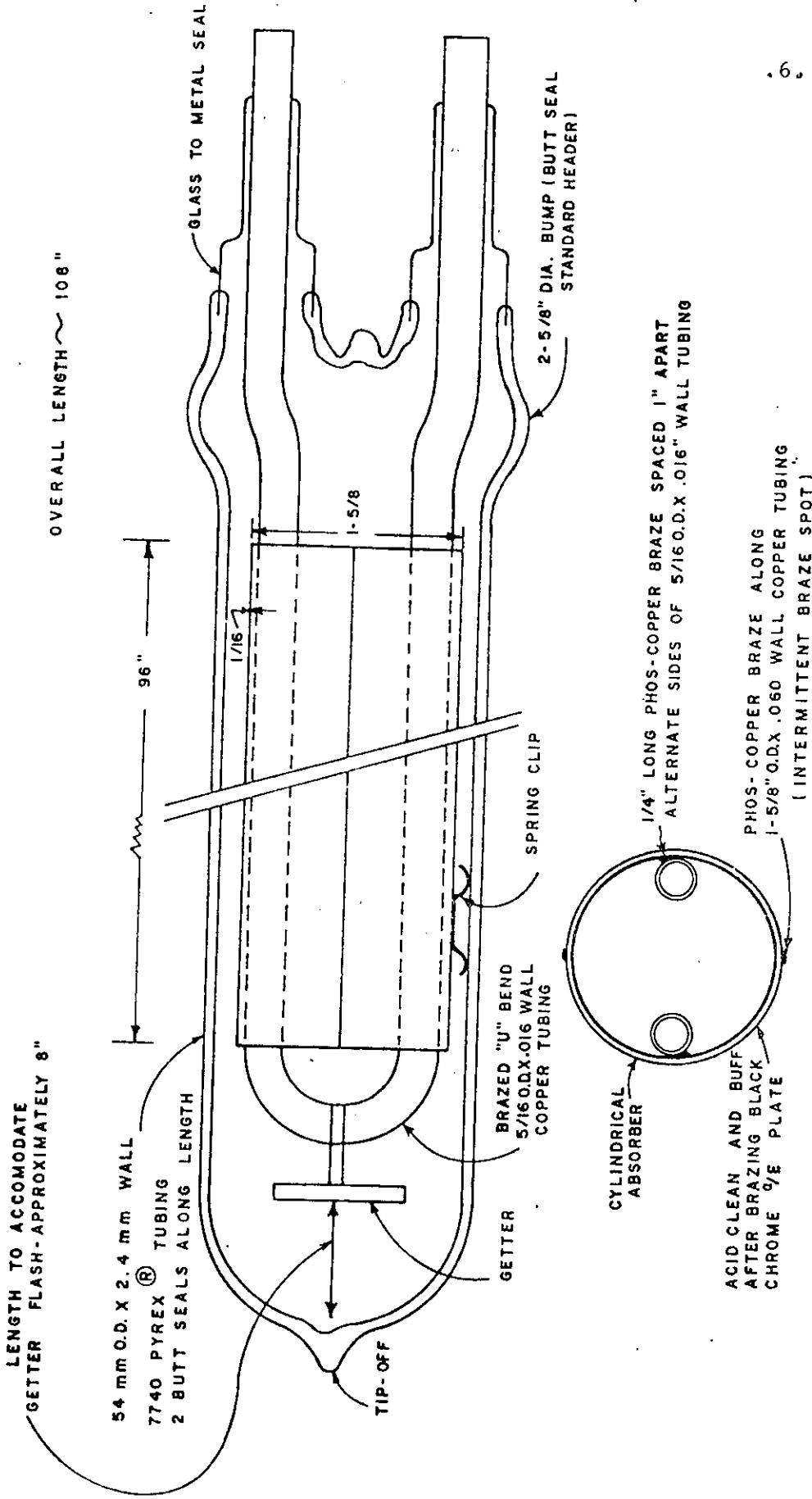
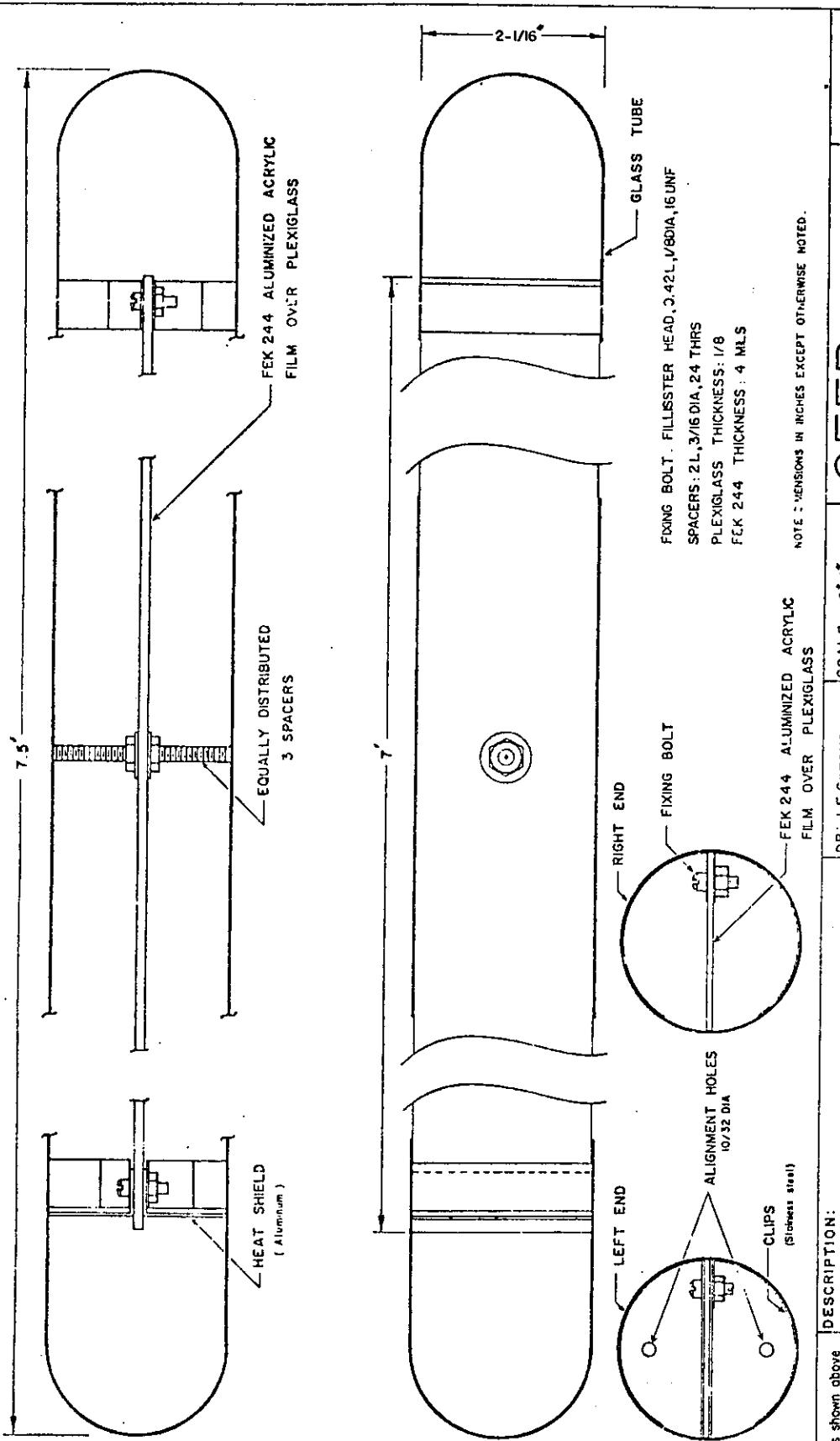


FIGURE -5-



DESCRIPTION:	DR: J. F. Gutierrez	SCALE: 2:1	CEER — CENTER FOR	DWG NO:
ENCAPSULATED MIRROR SEGMENT	CK: —	DATE: February 1979	ENERGY AND ENVIRONMENT RESEARCH	
PART NO: —	TCR: —	APP: —		
PCS/UNIT: 38				

smoothness of surface. The plexiglas was cut into strips 7' long and 1 15/16" wide.

Finding a suitable reflective film and a method of bonding to the plexiglas was a major problem. Much effort was spent in trying to bond 200 Dun-Chrome® DL-50 metallized polyester film (Dunmore Corp., Newtown, Penn.) to the plexiglas with unsatisfactory results. Many different types of bonding agents were tried. Finally we learned of a new product manufactured by the 3M Company. This is their "Scotchcal" Brand Film FEK-244, a 0.004" thick aluminum-on-acrylic film with 86% spectral reflectance. This film has pressure-sensitive adhesive backing and satisfactory results were obtained in applying it to the plexiglas substrate.

The encapsulation tubes are fluorescent tube blanks obtained from Corning Glass Works (Fig. 6). These have an outside diameter of 2.08" and a wall thickness of 0.035". We estimate the diameter tolerance to be \pm 0.01".

The mirror segments are held inside the glass tubes by spring clips at the ends. In order to prevent undue sagging of the mirror, it was found necessary to attach three screw spacers at equal intervals along its length. A metal heat shield was also attached to prevent damage to the mirror when the glass tube was being closed off.

After attaching clips, spacers and shields to the mirror, the assembly was inserted inside a glass tube (Fig. 7). The mirror was then checked to determine whether there was any twist

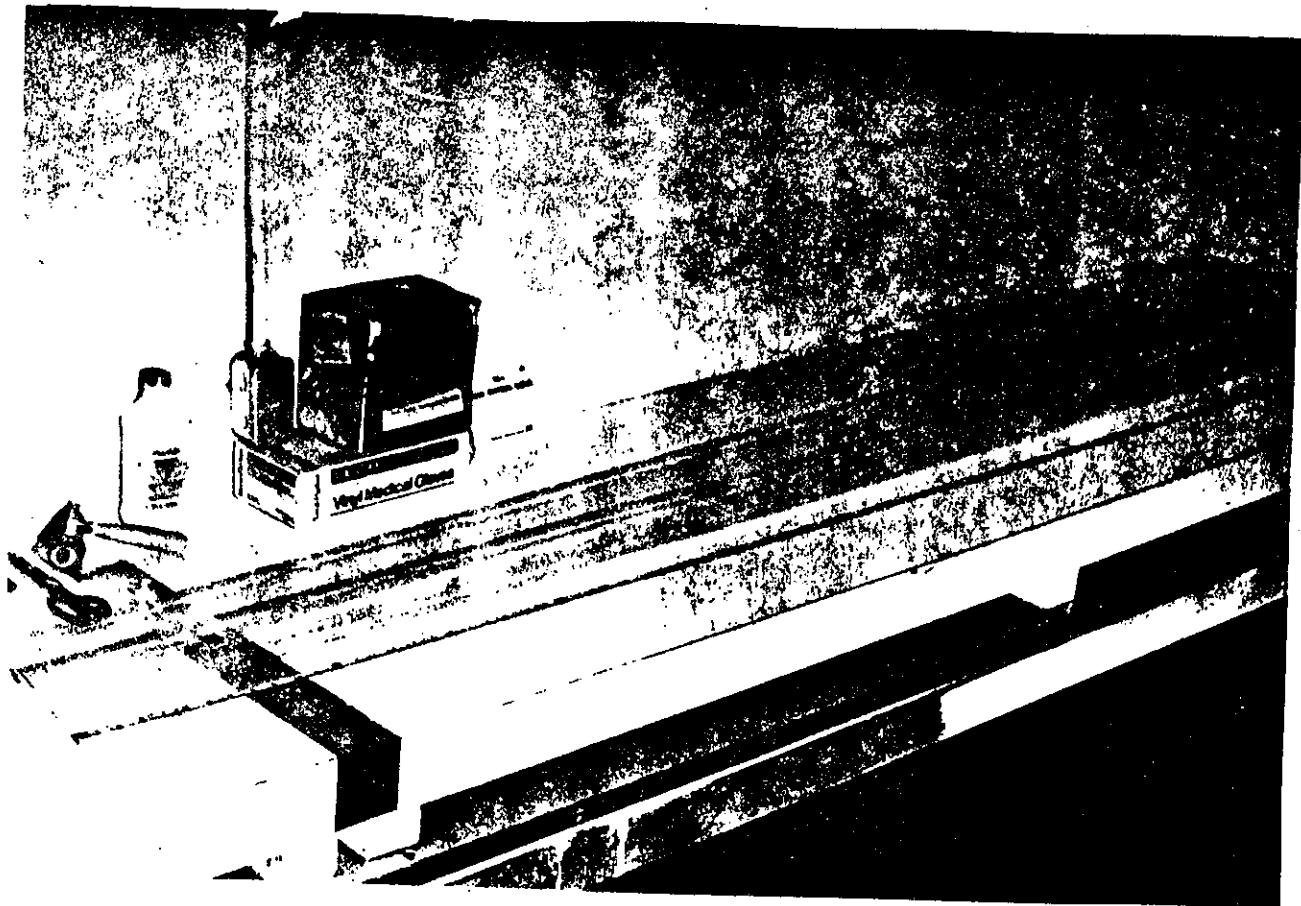


FIG. 6 FLUORESCENT TUBE BLANKS FROM CORNING GLASS WORKS.

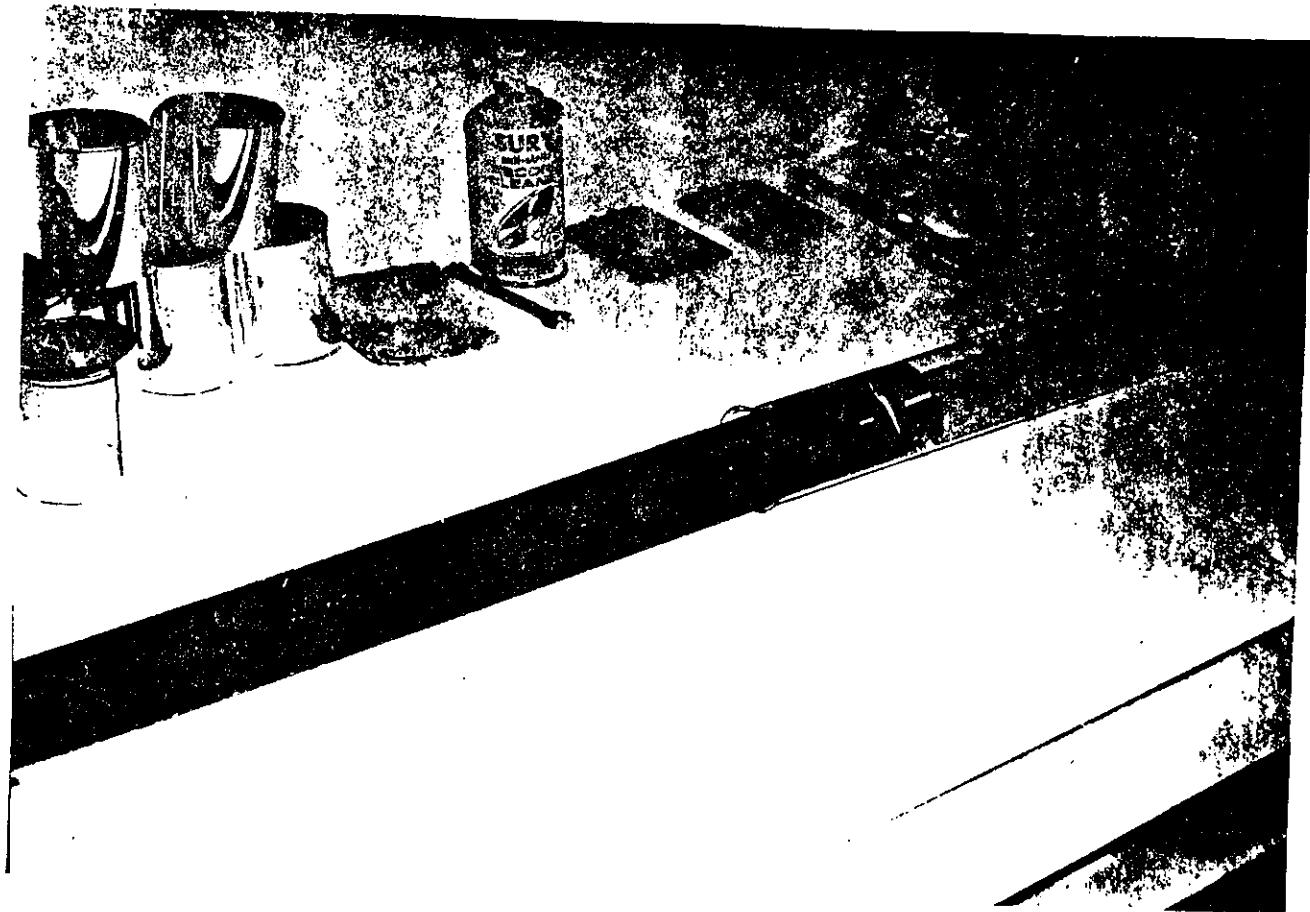


FIG. 7 INSERTION OF MIRROR ASSEMBLY INTO GLASS TUBE.

of one end with respect to the other. This was done by looking at the reflection of a laser beam from the mirror at different points along its length (Fig. 8). Since one end of the mirror was accessible and since the spacers were not attached to the tubes, any large twists could be removed. The largest allowable amount of twist of one part of the mirror with respect to another was 1°.

Originally it had been planned to close off the glass tubes after they had been evacuated at an elevated temperature and filled with a dry gas. The idea was to eliminate as much moisture as possible from the inside of the tubes. An oven was built and it was determined that the mirrors could withstand 100°C without apparent damage. However, when the tubes were evacuated to a pressure of 500 microns of Hg. at 100°C, immediate damage to the adhesive bond resulted. Evacuation alone did not appear to damage the bond and several tubes were made using this procedure. After being connected to a vacuum pump for 30 minutes, they were filled with dry nitrogen at a pressure of ~ 1 atm.. Damage to the adhesive bond of these mirrors did not become apparent until they had been exposed to sunlight for 2 or 3 weeks. Finally it was decided to abandon the evacuation procedure. Tubes were closed off in an air conditioned room. A room dehumidifier brought the relative humidity down to 50% at 75°C which corresponds to a ratio of moisture to dry air of 1.0% by weight.

Another important problem encountered in the construction of the tubes was the frequent breakage and cracking

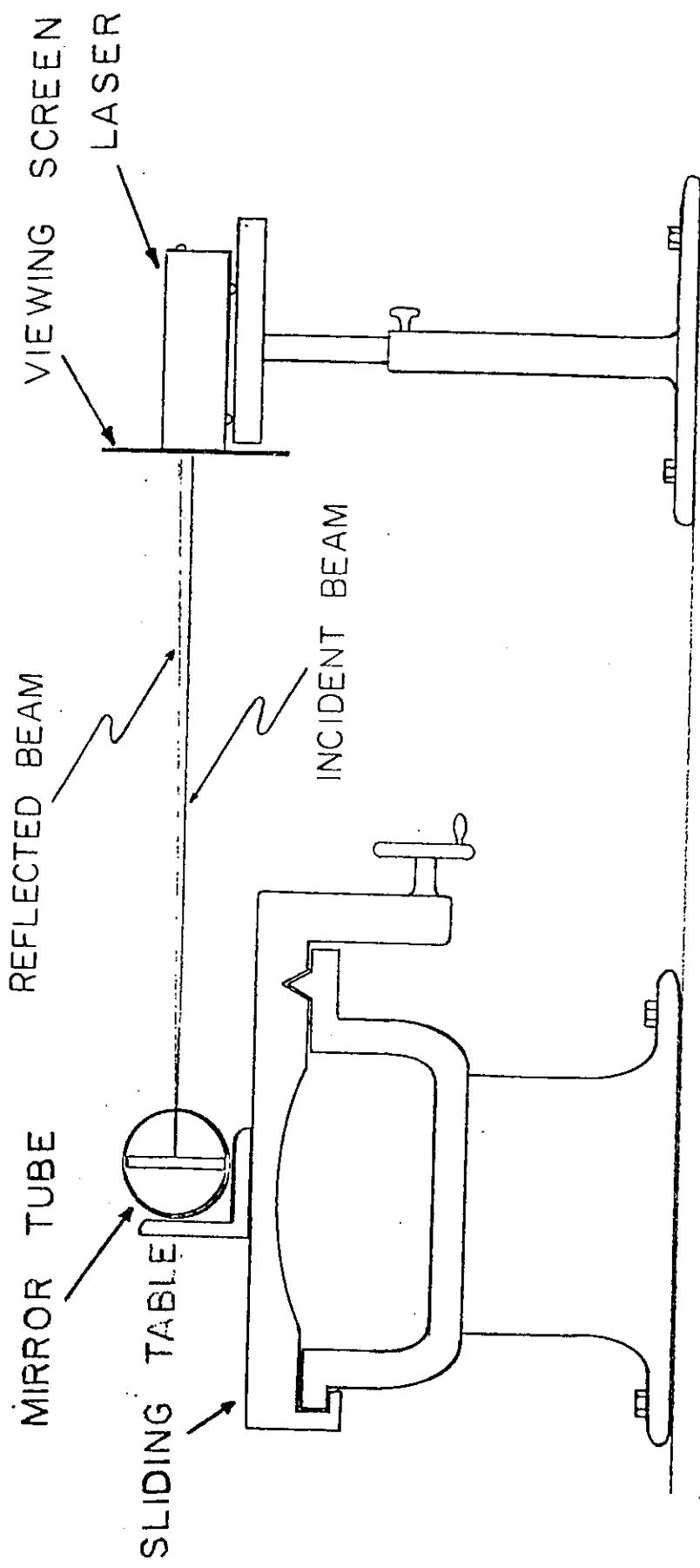


FIG. 8 SCHEMATIC OF THE METHOD FOR MEASURING TWISTS IN MIRROR SURFACE, THE SLIDING TABLE MOVES THE MIRROR TUBE ALONG ITS LENGTH (I.E., PERPENDICULAR TO THE VIEW SHOWN). ANY CHANGE IN THE POSITION OF THE REFLECTED BEAM AS THE SLIDING TABLE MOVES IS AN INDICATION OF TWIST,

of the glass at stress points where it had been worked. Since the temperature of the mirrors could not be raised, it was not possible to do oven annealing to relieve these stresses. This problem was alleviated considerably when the evacuation procedure was abandoned. It seems that a large part of the problem was due to differences between the nitrogen pressure inside and atmospheric pressure outside. This resulted in uneven tips which eventually cracked.

C. Collector Frame

Figs 3 and 9 show the collector frame including the tube wells which actually hold the glass tubes.

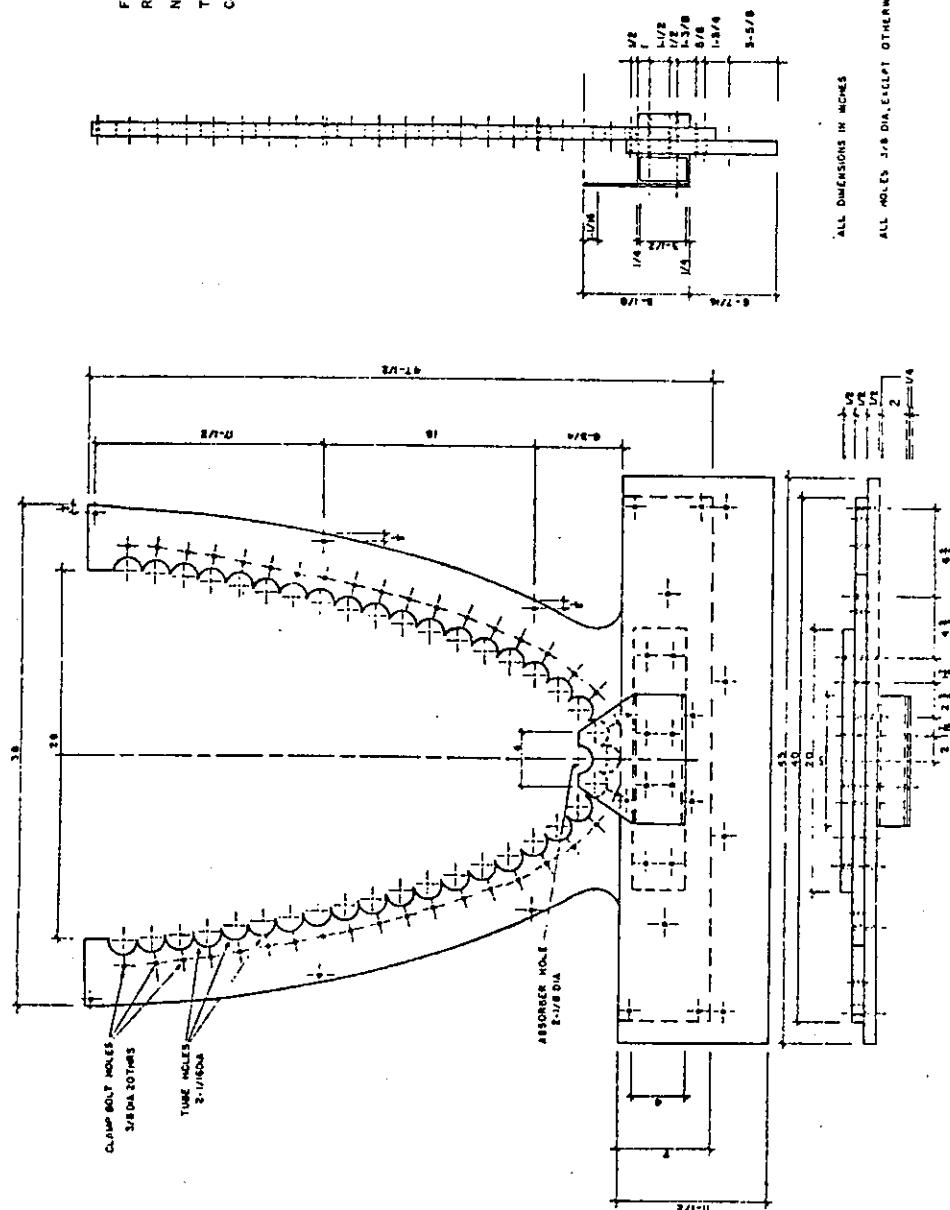
The basic dual axis tracking frame design developed by the University of Chicago was altered in some important ways. The main beam of the frame which in the Chicago design was an I-beam was found to be too unstable to torsional forces such as would be exerted on it by the collector weight when tilted. The I-beam was replaced by a rectangular cross section hollow beam which also allowed a simpler design for fixing the beam to the circular platform.

Four bolts were added to the sides of the main beam. These prevent movement of the circular platform (and thus of the collector) after it has been set at a particular position.

In order to measure the collector's tilt angle, two bubble level with protractor assemblies were installed at each end of the collector frame. These permit angle measurements with an accuracy of $\sim 1/4^\circ$.

FIGURE - 9 -

FOR THE POSITIONS OF THE TUBE HOLES
REFER TO THE REPORT
NOTE: THE POSITION OF BOTTOM TUBE HOLE
THE STRAIGHT LINE DISTANCE BETWEEN THE
CENTERS ARE 2-7/64 INCHES.



MATL:	Aluminum	DESCRIPTION:	525 X FACETED CPC SUPPORT FRAME FOR TUBES	DR. L.M.Özökçay	SCALE: —	CEER CENTER FOR ENERGY AND ENVIRONMENT RESEARCH	DWG NO:
PART NO	—			CK —	DATE: February 1979		
PCS/UNIT:	2			TCR: —	APP: —		

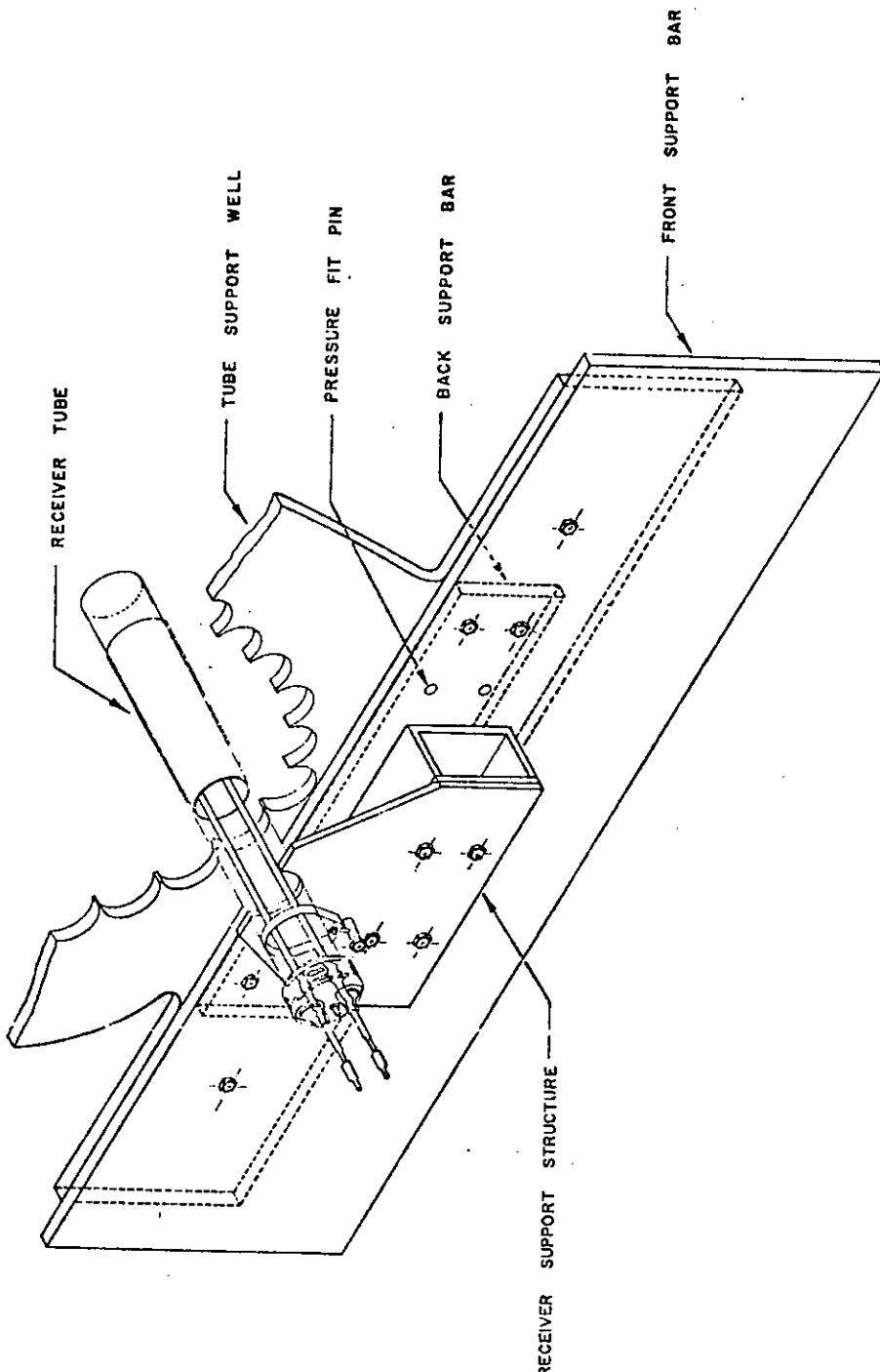
Major efforts on the collector frame went into designing and building the tube wells which are shown in detail in Fig. 9.

A computer program was developed to calculate the theoretical shape of the reflector surface (See First Progress Report, Appendix A). Using the results from the program, the tube wells were precisely machined. Four identical pieces (each was one-half a well) were machined simultaneously by stacking them. The raw material for the wells were four pieces of 1/2" aluminum, 20" wide and 48" long. The circular holes that hold the tubes have a diameter of 2.09". The straight line distance between circles is 2.11" to allow for the metal bands that grip the tubes. After the tube holes had been machined, excess material was removed to make the structure lighter. The tube holes thus became open semicircles.

Fig. 10 is a depiction of the support bar and the structure which holds the receiver tube. These can also be seen in Fig. 9. Two halves of a well were held together by precisely machined pressure fit pins and by screws and nuts which joined them to the support bar. The pressure fit pins assured alignment to a high degree of precision. The receiver tube is supported by a structure that allows space for the mirror tubes that are close to the receiver.

The mirror tube wells are fastened to cross support members of the frame. Six aluminum tubes join the tube wells to each other. These add much rigidity to the structure

FIGURE -10-



MATERIAL: As shown above	DESCRIPTION:	DR: J.F. Gamarrta	SCALE: 1:2"	CEER — CENTER FOR
PART NO: —	RECEIVER SUPPORT STRUCTURE	CK: —	DATE: February 1979	ENERGY AND ENVIRONMENT RESEARCH
PCS / UNIT : —		TCR: —	APP: —	DWG NO: —

and very little weight.

The structure for fastening the glass tubes to the wells is shown in Fig. 11. It consists of a stainless steel band which is pulled tight by a screw which runs through a bolt fastened to the frame. The bands are placed so that bands from neighboring tubes do not touch thus reducing the distance between mirror segments.

III. Analytical Studies of Collector Orientation

One of the main advantages of a CPC design is the possibility of doing away with continuous tracking of the sun thus reducing complexity and cost. This is because a CPC can collect radiation incident over an extended range of angles as is shown in Fig. 12. Our CPC design is an ideal $6.30 \times$ concentrator truncated to $5.25X$. The theoretical half acceptance angle (θ_c) of the ideal concentrator is 9° . An actual device never has a perfect theoretical shape due to random deviations of its surface from the "ideal" surface. This changes its acceptance characteristics (see Fig. 12) but this change can be approximated as a reduction in the acceptance angle.

The idea, then, is to orient the collector so that the radiation is incident at an angle less than or equal to the acceptance angle. Yet we want to do this with a minimum amount of tracking. The optimum collection to tracking ratio is achieved by orienting the long axis of the collector along the east-west direction. The angle of interest is then the projected incidence angle on the plane defined by the zenith and the

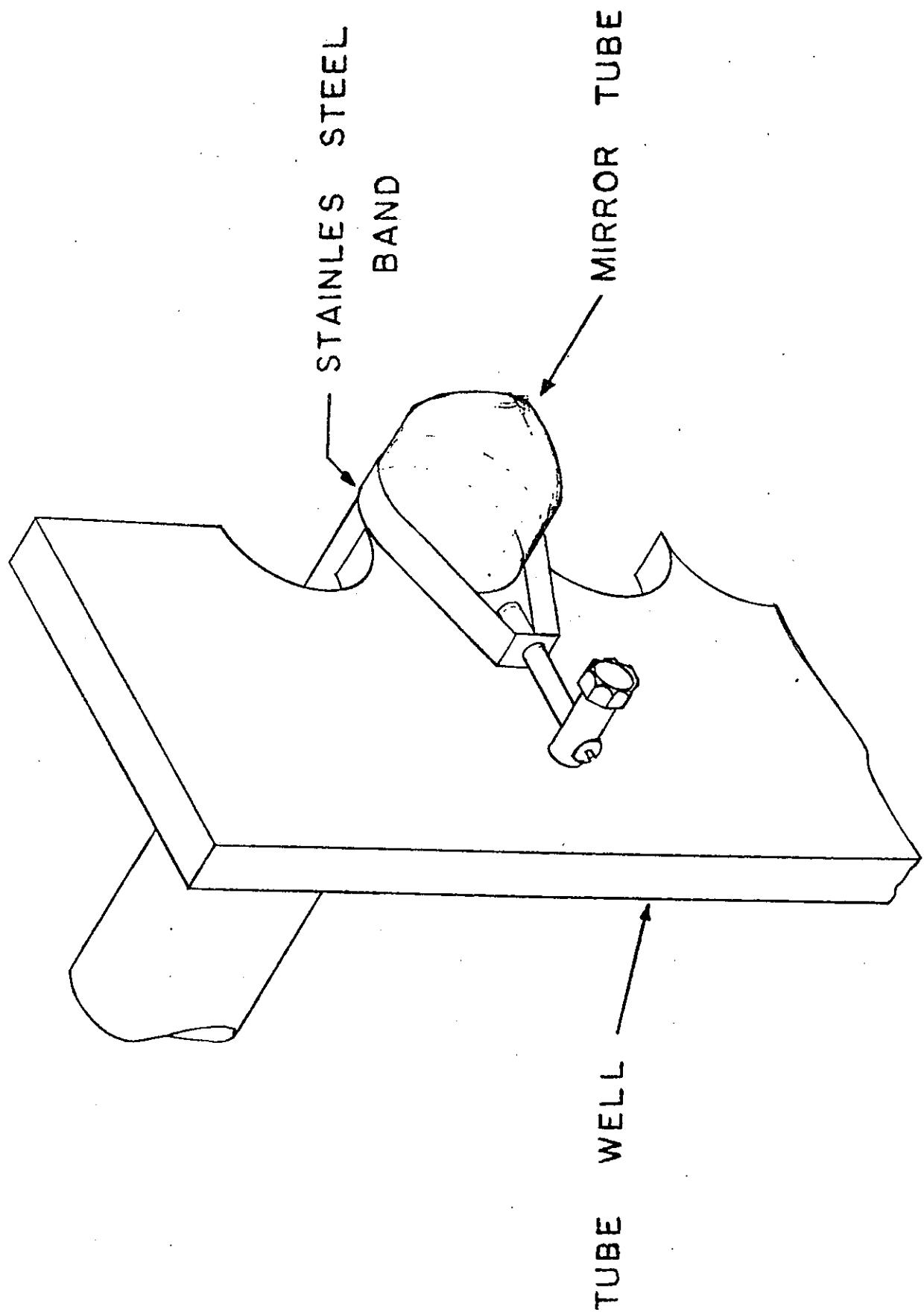


FIG. 11 ATTACHMENT OF MIRROR TUBES TO TUBE WELL.

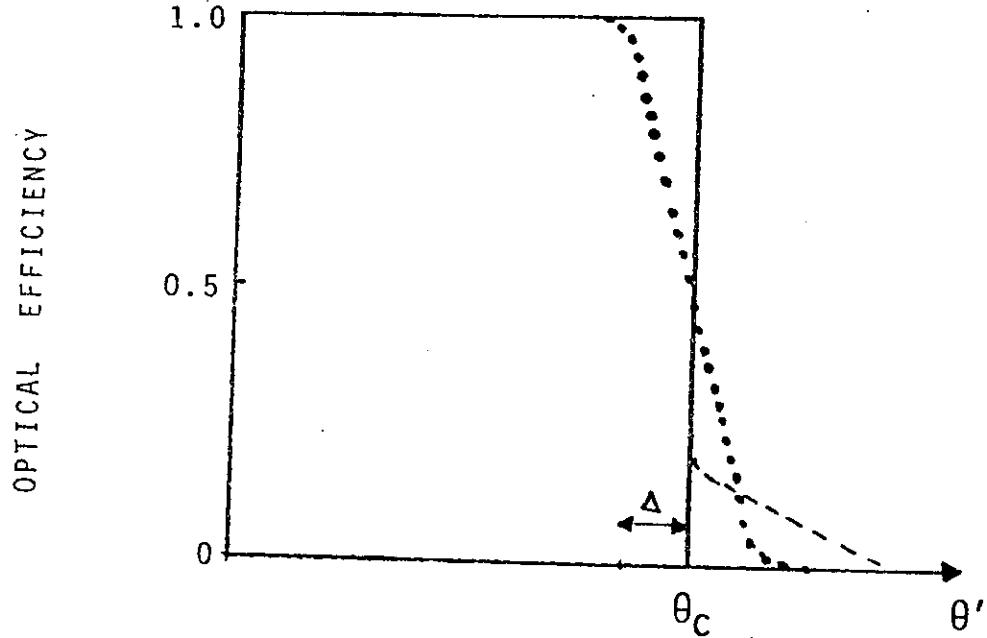


Fig. 12 Fraction of the radiation incident on the aperture of a CPC at angle θ' which reaches absorber. All curves refer to a concentrator in two dimensions with acceptance half angle θ_c , assuming perfect reflectivity.

- untruncated ideal concentrator
- - - - - truncated ideal concentrator
- · · · · untruncated concentrator with average surface error Δ .

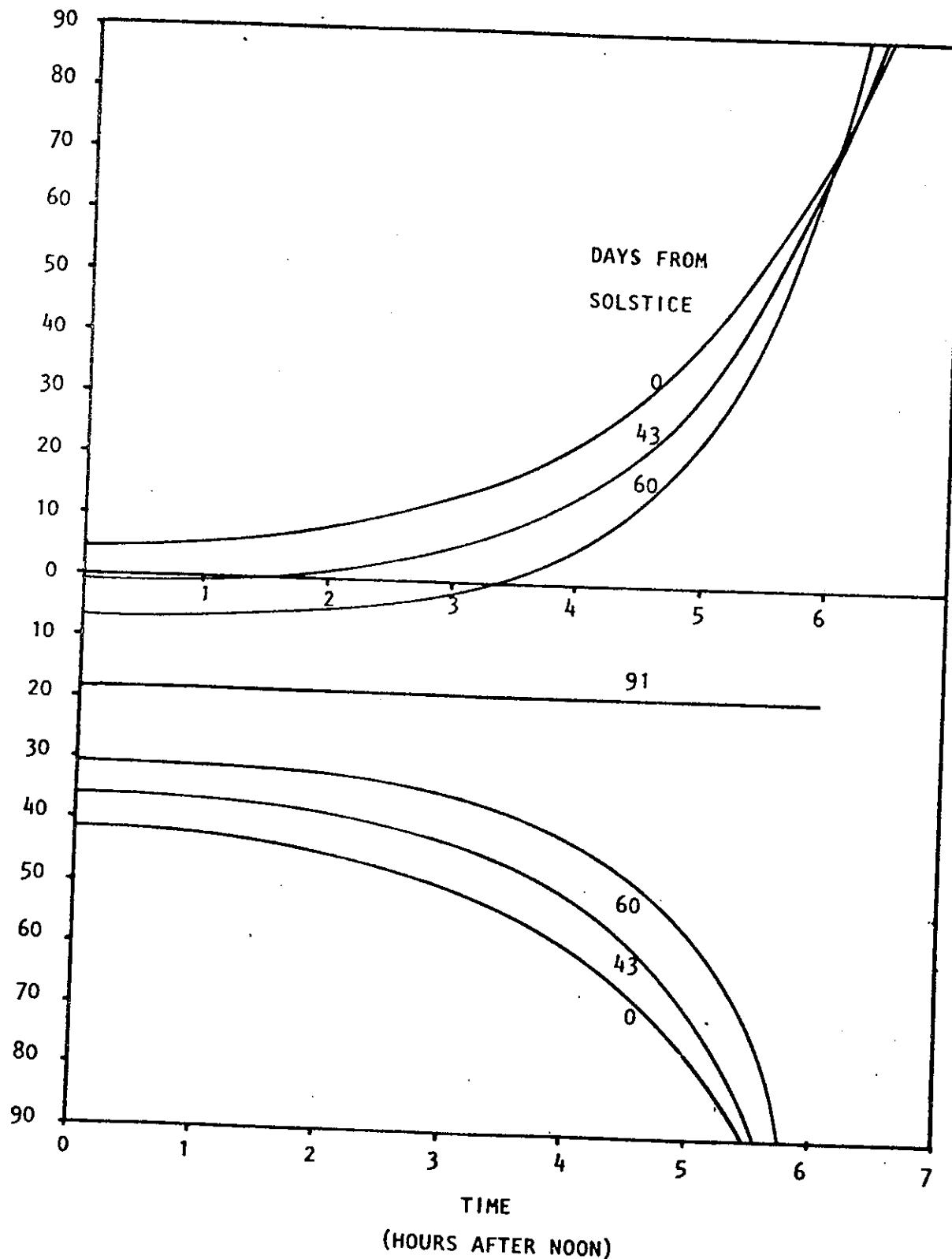
north-south direction. This angle (θ_{sp} , measured from the zenith) can be calculated for a particular day and hour by the following formula

$$\tan(\theta_{sp} + \alpha) = \tan \delta / \cos \omega$$

where α is the latitude, δ is the declination and ω is the angular time from noon ($\omega = 2\pi t/24$, t in hours). Fig. 13 is the graph of θ_{sp} for different days during the year and for Puerto Rico's latitude.

A scheme for orienting the collector can be derived from this graph. One first chooses a half acceptance angle (θ_c) and a minimum daily collection time (e.g. 7 hours/day). Starting at the summer solstice, one determines the value of θ_{sp} at the extremes of the minimum collection time (time=3.5). Call this angle θ_e . Before and after the solstice the collector would be oriented at an angle $\theta_e - \theta_c$. For this configuration, the collector would have a high optical efficiency at any hour of the day that $\theta_e - 2\theta_c < \theta_{sp} < \theta_e$. For several days after the solstice this condition will hold more than 7 hours a day. But there comes a day when it will hold for less than the required 7 hours because it will not hold in the period around noon time. On this day, the collector orientation should be changed. Suppose that the value of θ_{sp} at the extremes of the minimum collection time on this day is θ'_e . The collector is then pointed at an angle $\theta'_e - \theta_c$. This procedure for determining the collector orientation and the dates for changing it is repeated until a full year is mapped out. The result is a chart such as the one

FIG. 13
PROJECTED
SOLAR ELEVATION
(FOR LATITUDE 18.5)



shown in Table 1. For a half acceptance angle of 9° and a minimum required collection time of 7 hrs./day the collector has to be reoriented only 10 times a year.

IV. Insolation Measurements

Solar radiation has been recorded at the Bacardí plant in Cataño since July, 1978. Diffuse as well as total insolation have been recorded. Details of the measuring process were given in the First Progress Report.

Results of the computer analysis of data for the months of July, August and September are given in Appendix A. Data for the months of October, November and December shows certain irregularities which are not understood at present. These months are not included in the Appendix.

V. Conclusion

The completion of construction of an innovative experimental solar collector designed for industrial steam generation is the main achievement of our work this year. In addition, much analytical study of the design has been made and a solar radiation measuring program has been implemented at the proposed industrial site. The analytical studies indicate the possibility of a high efficiency to cost ratio for this collector. Figures 14, 15, 16 and 17 are views of the finished Bacardí solar collector.

TABLE 1

$$\theta_c = 9^\circ$$

*START DATE	*END DATE	TILT S=south N=north	LENGTH OF PERIOD	DECLINATION AT END OF PERIOD
Jan. 30	Feb. 24	37°S	25 days	-10°
Feb. 24	Mar. 22	25.0°S	26 days	0
Mar. 22	Apr. 17	11°S	26 days	10°
Apr. 17	May 12	1°S	25 days	18°
May 12	Jul. 31	11°N	80 days	18°
Jul. 31	Aug. 26	1°N	26 days	10°
Aug. 26	Sep. 20	11°S	25 days	0
Sep. 20	Oct. 16	25°S	26 days	-10°
Oct. 16	Nov. 11	37°S	26 days	-18°
Nov. 11	Jan. 30	45°S	80 days	-18°

No. of adjustments/year = 10

*In a leap year, add one day to dates after Feb. 28.

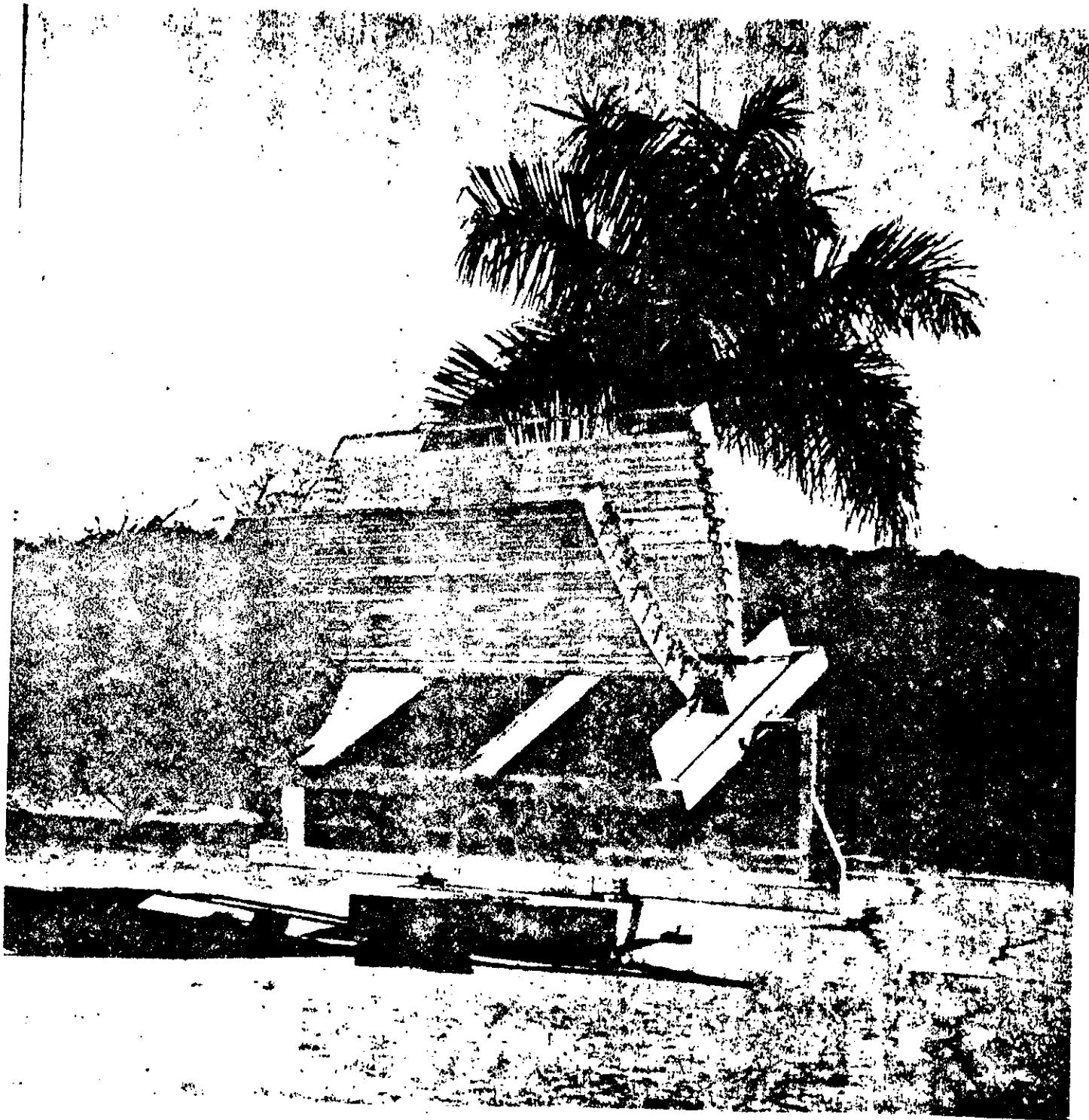


FIG. 14 COMPLETED BACARDÍ COLLECTOR

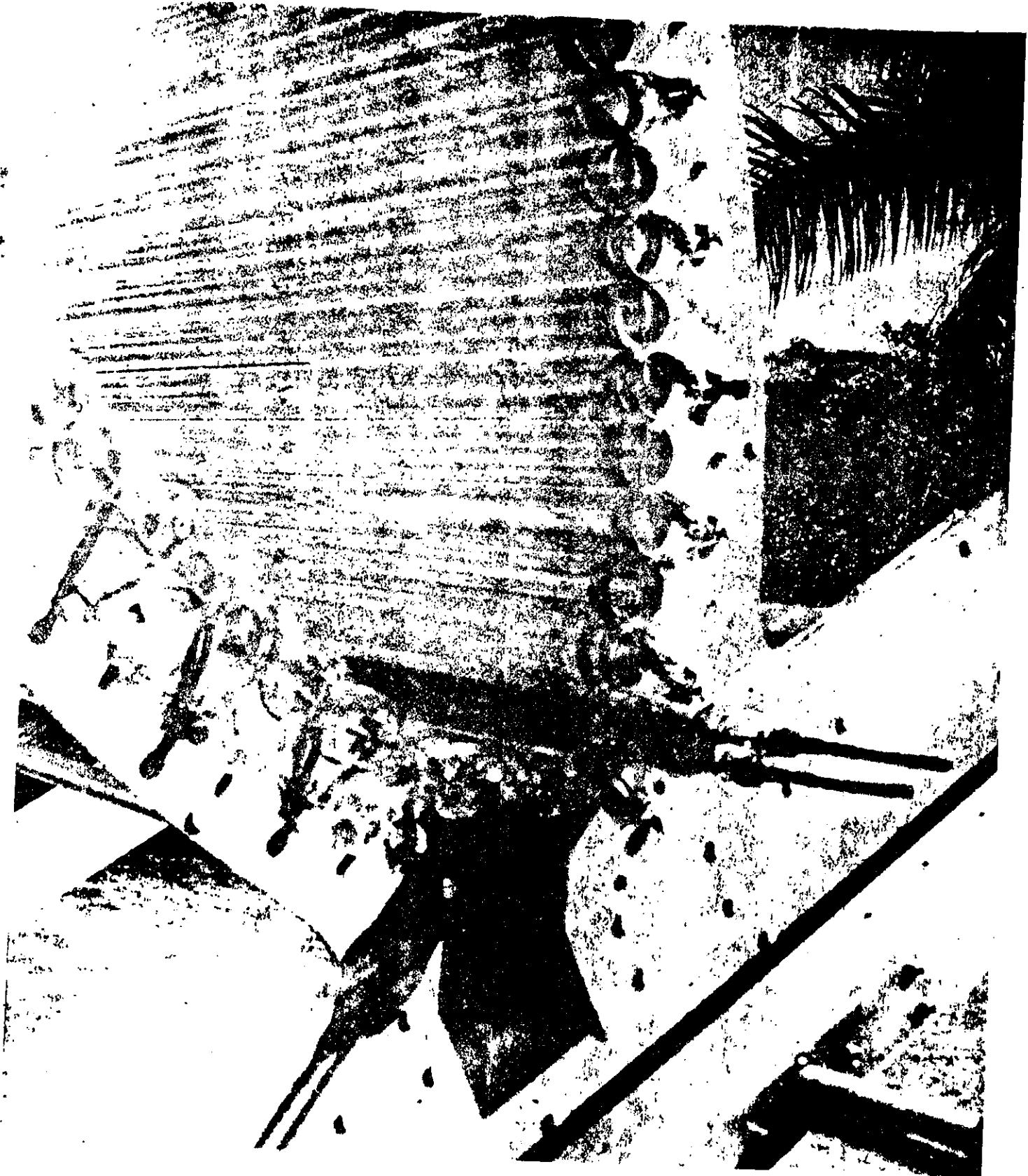


FIG. 15 COMPLETED BACARDÍ COLLECTOR. CLOSE-UP VIEW
OF ONE TUBE WELL AND RELATED SUPPORT
STRUCTURE.

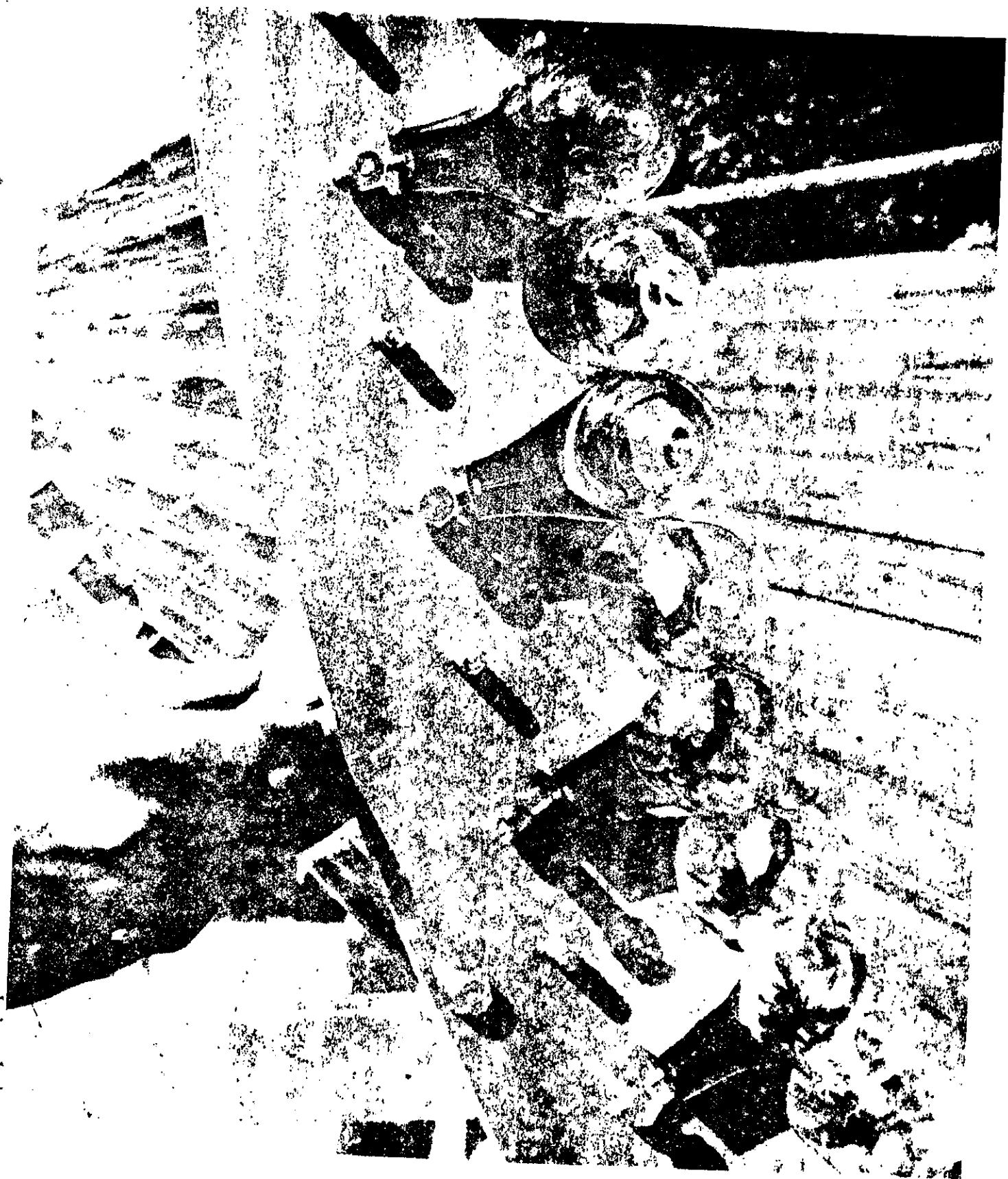


FIG. 16 COMPLETED BACARDÍ COLLECTOR. CLOSE-UP VIEW
OF ATTACHMENT OF MIRROR TUBES TO TUBE WELL.

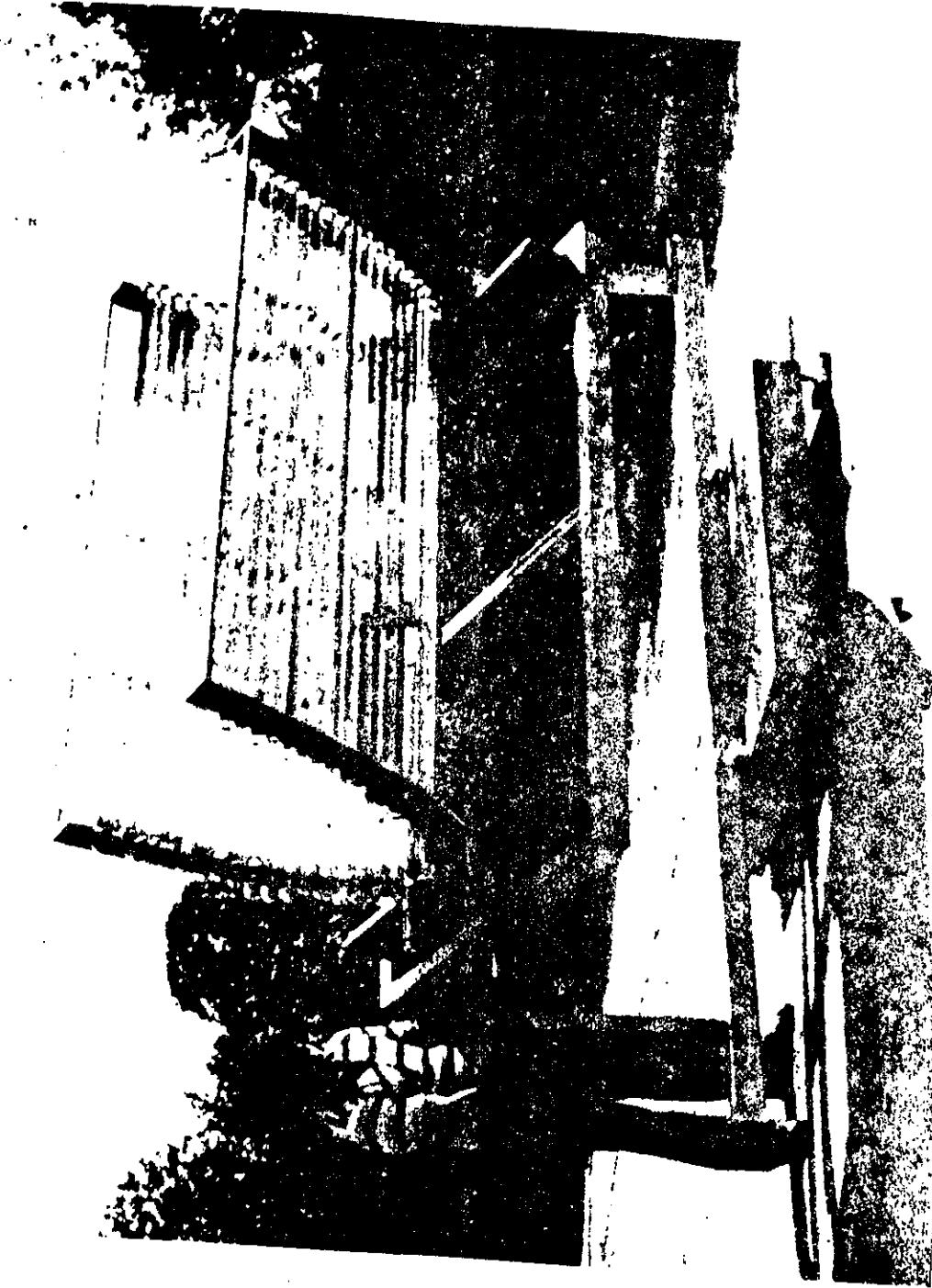


FIG. 17 COMPLETED BACARDÍ COLLECTOR. COLLECTOR
TILT IS ADJUSTED MANUALLY.

APPENDIX A

STANT USER SOUERSTROM [246546,246311] JOHN FORGE STANTON DATE 2011-07-19 14:22:24 ONLINE SYSTEMS AND SECURITY STANTON

START USER Sintactum 17:00:00

SIAM J. DISCRETE MATH.

STADT LIESEN SCHULE

Outfit: Jul 1976

MATERIALS & METHODS DATA

LUCILLE RUGGIO, LIA

TOTAL INSULATION IN FT₂/FT₂C
| DAY | 6-7 | 7-8 | 8-9 | 9-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 | 18-19 | 19-20 | 20-21 | 21-22 | 22-23 | 23-24 | 24-25 | 25-26 | 26-27 | 27-28 | 28-29 | 29-30 | 30-31 | 31-32 | 32-33 | 33-34 | 34-35 | 35-36 | 36-37 | 37-38 | 38-39 | 39-40 | 40-41 | 41-42 | 42-43 | 43-44 | 44-45 | 45-46 | 46-47 | 47-48 | 48-49 | 49-50 | 50-51 | 51-52 | 52-53 | 53-54 | 54-55 | 55-56 | 56-57 | 57-58 | 58-59 | 59-60 | 60-61 | 61-62 | 62-63 | 63-64 | 64-65 | 65-66 | 66-67 | 67-68 | 68-69 | 69-70 | 70-71 | 71-72 | 72-73 | 73-74 | 74-75 | 75-76 | 76-77 | 77-78 | 78-79 | 79-80 | 80-81 | 81-82 | 82-83 | 83-84 | 84-85 | 85-86 | 86-87 | 87-88 | 88-89 | 89-90 | 90-91 | 91-92 | 92-93 | 93-94 | 94-95 | 95-96 | 96-97 | 97-98 | 98-99 | 99-100 | 100-101 | 101-102 | 102-103 | 103-104 | 104-105 | 105-106 | 106-107 | 107-108 | 108-109 | 109-110 | 110-111 | 111-112 | 112-113 | 113-114 | 114-115 | 115-116 | 116-117 | 117-118 | 118-119 | 119-120 | 120-121 | 121-122 | 122-123 | 123-124 | 124-125 | 125-126 | 126-127 | 127-128 | 128-129 | 129-130 | 130-131 | 131-132 | 132-133 | 133-134 | 134-135 | 135-136 | 136-137 | 137-138 | 138-139 | 139-140 | 140-141 | 141-142 | 142-143 | 143-144 | 144-145 | 145-146 | 146-147 | 147-148 | 148-149 | 149-150 | 150-151 | 151-152 | 152-153 | 153-154 | 154-155 | 155-156 | 156-157 | 157-158 | 158-159 | 159-160 | 160-161 | 161-162 | 162-163 | 163-164 | 164-165 | 165-166 | 166-167 | 167-168 | 168-169 | 169-170 | 170-171 | 171-172 | 172-173 | 173-174 | 174-175 | 175-176 | 176-177 | 177-178 | 178-179 | 179-180 | 180-181 | 181-182 | 182-183 | 183-184 | 184-185 | 185-186 | 186-187 | 187-188 | 188-189 | 189-190 | 190-191 | 191-192 | 192-193 | 193-194 | 194-195 | 195-196 | 196-197 | 197-198 | 198-199 | 199-200 | 200-201 | 201-202 | 202-203 | 203-204 | 204-205 | 205-206 | 206-207 | 207-208 | 208-209 | 209-210 | 210-211 | 211-212 | 212-213 | 213-214 | 214-215 | 215-216 | 216-217 | 217-218 | 218-219 | 219-220 | 220-221 | 221-222 | 222-223 | 223-224 | 224-225 | 225-226 | 226-227 | 227-228 | 228-229 | 229-230 | 230-231 | 231-232 | 232-233 | 233-234 | 234-235 | 235-236 | 236-237 | 237-238 | 238-239 | 239-240 | 240-241 | 241-242 | 242-243 | 243-244 | 244-245 | 245-246 | 246-247 | 247-248 | 248-249 | 249-250 | 250-251 | 251-252 | 252-253 | 253-254 | 254-255 | 255-256 | 256-257 | 257-258 | 258-259 | 259-260 | 260-261 | 261-262 | 262-263 | 263-264 | 264-265 | 265-266 | 266-267 | 267-268 | 268-269 | 269-270 | 270-271 | 271-272 | 272-273 | 273-274 | 274-275 | 275-276 | 276-277 | 277-278 | 278-279 | 279-280 | 280-281 | 281-282 | 282-283 | 283-284 | 284-285 | 285-286 | 286-287 | 287-288 | 288-289 | 289-290 | 290-291 | 291-292 | 292-293 | 293-294 | 294-295 | 295-296 | 296-297 | 297-298 | 298-299 | 299-300 | 300-301 | 301-302 | 302-303 | 303-304 | 304-305 | 305-306 | 306-307 | 307-308 | 308-309 | 309-310 | 310-311 | 311-312 | 312-313 | 313-314 | 314-315 | 315-316 | 316-317 | 317-318 | 318-319 | 319-320 | 320-321 | 321-322 | 322-323 | 323-324 | 324-325 | 325-326 | 326-327 | 327-328 | 328-329 | 329-330 | 330-331 | 331-332 | 332-333 | 333-334 | 334-335 | 335-336 | 336-337 | 337-338 | 338-339 | 339-340 | 340-341 | 341-342 | 342-343 | 343-344 | 344-345 | 345-346 | 346-347 | 347-348 | 348-349 | 349-350 | 350-351 | 351-352 | 352-353 | 353-354 | 354-355 | 355-356 | 356-357 | 357-358 | 358-359 | 359-360 | 360-361 | 361-362 | 362-363 | 363-364 | 364-365 | 365-366 | 366-367 | 367-368 | 368-369 | 369-370 | 370-371 | 371-372 | 372-373 | 373-374 | 374-375 | 375-376 | 376-377 | 377-378 | 378-379 | 379-380 | 380-381 | 381-382 | 382-383 | 383-384 | 384-385 | 385-386 | 386-387 | 387-388 | 388-389 | 389-390 | 390-391 | 391-392 | 392-393 | 393-394 | 394-395 | 395-396 | 396-397 | 397-398 | 398-399 | 399-400 | 400-401 | 401-402 | 402-403 | 403-404 | 404-405 | 405-406 | 406-407 | 407-408 | 408-409 | 409-410 | 410-411 | 411-412 | 412-413 | 413-414 | 414-415 | 415-416 | 416-417 | 417-418 | 418-419 | 419-420 | 420-421 | 421-422 | 422-423 | 423-424 | 424-425 | 425-426 | 426-427 | 427-428 | 428-429 | 429-430 | 430-431 | 431-432 | 432-433 | 433-434 | 434-435 | 435-436 | 436-437 | 437-438 | 438-439 | 439-440 | 440-441 | 441-442 | 442-443 | 443-444 | 444-445 | 445-446 | 446-447 | 447-448 | 448-449 | 449-450 | 450-451 | 451-452 | 452-453 | 453-454 | 454-455 | 455-456 | 456-457 | 457-458 | 458-459 | 459-460 | 460-461 | 461-462 | 462-463 | 463-464 | 464-465 | 465-466 | 466-467 | 467-468 | 468-469 | 469-470 | 470-471 | 471-472 | 472-473 | 473-474 | 474-475 | 475-476 | 476-477 | 477-478 | 478-479 | 479-480 | 480-481 | 481-482 | 482-483 | 483-484 | 484-485 | 485-486 | 486-487 | 487-488 | 488-489 | 489-490 | 490-491 | 491-492 | 492-493 | 493-494 | 494-495 | 495-496 | 496-497 | 497-498 | 498-499 | 499-500 | 500-501 | 501-502 | 502-503 | 503-504 | 504-505 | 505-506 | 506-507 | 507-508 | 508-509 | 509-510 | 510-511 | 511-512 | 512-513 | 513-514 | 514-515 | 515-516 | 516-517 | 517-518 | 518-519 | 519-520 | 520-521 | 521-522 | 522-523 | 523-524 | 524-525 | 525-526 | 526-527 | 527-528 | 528-529 | 529-530 | 530-531 | 531-532 | 532-533 | 533-534 | 534-535 | 535-536 | 536-537 | 537-538 | 538-539 | 539-540 | 540-541 | 541-542 | 542-543 | 543-544 | 544-545 | 545-546 | 546-547 | 547-548 | 548-549 | 549-550 | 550-551 | 551-552 | 552-553 | 553-554 | 554-555 | 555-556 | 556-557 | 557-558 | 558-559 | 559-560 | 560-561 | 561-562 | 562-563 | 563-564 | 564-565 | 565-566 | 566-567 | 567-568 | 568-569 | 569-570 | 570-571 | 571-572 | 572-573 | 573-574 | 574-575 | 575-576 | 576-577 | 577-578 | 578-579 | 579-580 | 580-581 | 581-582 | 582-583 | 583-584 | 584-585 | 585-586 | 586-587 | 587-588 | 588-589 | 589-590 | 590-591 | 591-592 | 592-593 | 593-594 | 594-595 | 595-596 | 596-597 | 597-598 | 598-599 | 599-600 | 600-601 | 601-602 | 602-603 | 603-604 | 604-605 | 605-606 | 606-607 | 607-608 | 608-609 | 609-610 | 610-611 | 611-612 | 612-613 | 613-614 | 614-615 | 615-616 | 616-617 | 617-618 | 618-619 | 619-620 | 620-621 | 621-622 | 622-623 | 623-624 | 624-625 | 625-626 | 626-627 | 627-628 | 628-629 | 629-630 | 630-631 | 631-632 | 632-633 | 633-634 | 634-635 | 635-636 | 636-637 | 637-638 | 638-639 | 639-640 | 640-641 | 641-642 | 642-643 | 643-644 | 644-645 | 645-646 | 646-647 | 647-648 | 648-649 | 649-650 | 650-651 | 651-652 | 652-653 | 653-654 | 654-655 | 655-656 | 656-657 | 657-658 | 658-659 | 659-660 | 660-661 | 661-662 | 662-663 | 663-664 | 664-665 | 665-666 | 666-667 | 667-668 | 668-669 | 669-670 | 670-671 | 671-672 | 672-673 | 673-674 | 674-675 | 675-676 | 676-677 | 677-678 | 678-679 | 679-680 | 680-681 | 681-682 | 682-683 | 683-684 | 684-685 | 685-686 | 686-687 | 687-688 | 688-689 | 689-690 | 690-691 | 691-692 | 692-693 | 693-694 | 694-695 | 695-696 | 696-697 | 697-698 | 698-699 | 699-700 | 700-701 | 701-702 | 702-703 | 703-704 | 704-705 | 705-706 | 706-707 | 707-708 | 708-709 | 709-710 | 710-711 | 711-712 | 712-713 | 713-714 | 714-715 | 715-716 | 716-717 | 717-718 | 718-719 | 719-720 | 720-721 | 721-722 | 722-723 | 723-724 | 724-725 | 725-726 | 726-727 | 727-728 | 728-729 | 729-730 | 730-731 | 731-732 | 732-733 | 733-734 | 734-735 | 735-736 | 736-737 | 737-738 | 738-739 | 739-740 | 740-741 | 741-742 | 742-743 | 743-744 | 744-745 | 745-746 | 746-747 | 747-748 | 748-749 | 749-750 | 750-751 | 751-752 | 752-753 | 753-754 | 754-755 | 755-756 | 756-757 | 757-758 | 758-759 | 759-760 | 760-761 | 761-762 | 762-763 | 763-764 | 764-765 | 765-766 | 766-767 | 767-768 | 768-769 | 769-770 | 770-771 | 771-772 | 772-773 | 773-774 | 774-775 | 775-776 | 776-777 | 777-778 | 778-779 | 779-780 | 780-781 | 781-782 | 782-783 | 783-784 | 784-785 | 785-786 | 786-787 | 787-788 | 788-789 | 789-790 | 790-791 | 791-792 | 792-793 | 793-794 | 794-795 | 795-796 | 796-797 | 797-798 | 798-799 | 799-800 | 800-801 | 801-802 | 802-803 | 803-804 | 804-805 | 805-806 | 806-807 | 807-808 | 808-809 | 809-810 | 810-811 | 811-812 | 812-813 | 813-814 | 814-815 | 815-816 | 816-817 | 817-818 | 818-819 | 819-820 | 820-821 | 821-822 | 822-823 | 823-824 | 824-825 | 825-826 | 826-827 | 827-828 | 828-829 | 829-830 | 830-831 | 831-832 | 832-833 | 833-834 | 834-835 | 835-836 | 836-837 | 837-838 | 838-839 | 839-840 | 840-841 | 841-842 | 842-843 | 843-844 | 844-845 | 845-846 | 846-847 | 847-848 | 848-849 | 849-850 | 850-851 | 851-852 | 852-853 | 853-854 | 854-855 | 855-856 | 856-857 | 857-858 | 858-859 | 859-860 | 860-861 | 861-862 | 862-863 | 863-864 | 864-865 | 865-866 | 866-867 | 867-868 | 868-869 | 869-870 | 870-871 | 871-872 | 872-873 | 873-874 | 874-875 | 875-876 | 876-877 | 877-878 | 878-879 | 879-880 | 880-881 | 881-882 | 882-883 | 883-884 | 884-885 | 885-886 | 886-887 | 887-888 | 888-889 | 889-890 | 890-891 | 891-892 | 892-893 | 893-894 | 894-895 | 895-896 | 896-897 | 897-898 | 898-899 | 899-900 | 900-901 | 901-902 | 902-903 | 903-904 | 904-905 | 905-906 | 906-907 | 907-908 | 908-909 | 909-910 | 910-911 | 911-912 | 912-913 | 913-914 | 914-915 | 915-916 | 916-917 | 917-918 | 918-919 | 919-920 | 920-921 | 921-922 | 922-923 | 923-924 | 924-925 | 925-926 | 926-927 | 927-928 | 928-929 | 929-930 | 930-931 | 931-932 | 932-933 | 933-934 | 934-935 | 935-936 | 936-937 | 937-938 | 938-939 | 939-940 | 940-941 | 941-942 | 942-943 | 943-944 | 944-945 | 945-946 | 946-947 | 947-948 | 948-949 | 949-950 | 950-951 | 951-952 | 952-953 | 953-954 |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 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MONTHLY TOTAL SOLAR INSOLATION IN BTU/Ft²*2 VS. HOUR

MONTH: JUL 1978

	6.00	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00
350.00									
341.03									
332.05									
323.08									
314.10									
305.13									
296.15									
287.18									
278.21									
269.23									
260.26									
251.28									
242.31									
233.33									
224.36									
215.38									
206.41									
197.44									
188.46									
179.49									
170.51									
161.54									
152.56									
143.59									
134.62									
125.64									
116.67									
107.77									
98.72									
89.74									
80.77									
71.79									
62.82									
53.85									
44.87									
35.90									
26.92									
17.95									
8.97									
0.00									

	6.00	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00
(+)	MAXIMUM VALUE	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00
(M)	MEAN VALUE								
(-)	MINIMUM VALUE								

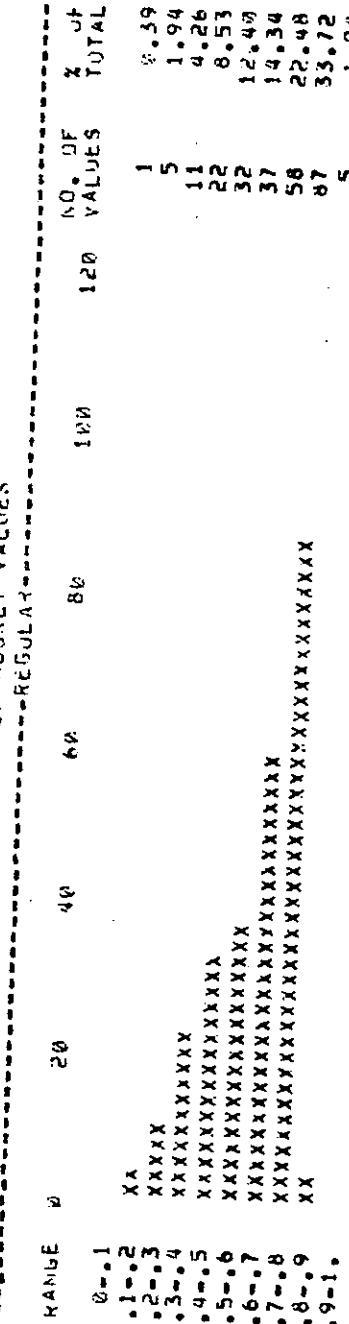
LOCATION: BACARI, CATANO
LAT STD TIME 15.00 18.00 21.00 24.00

(+) MAXIMUM VALUE (M) MEAN VALUE (-) MINIMUM VALUE

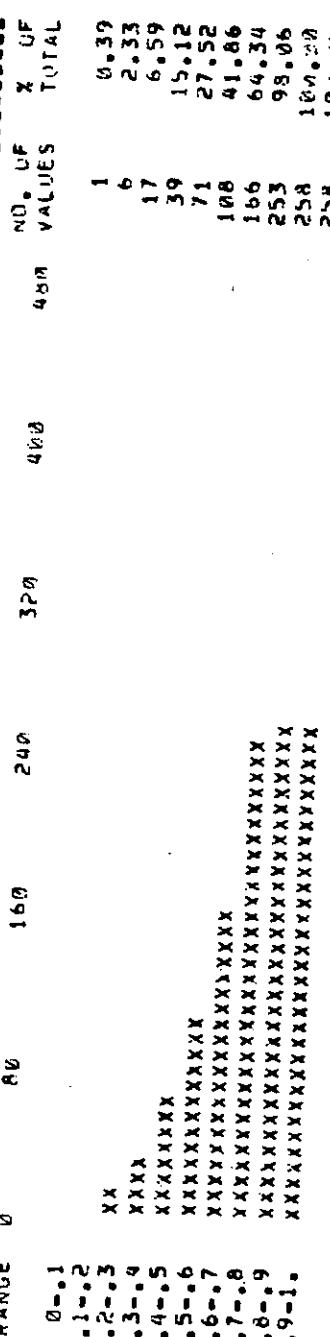
0.00

FREQUENCY CHARTS FOR TOTAL / EXTRAORDINARY RAINFALL I-SULATION
MONTH: JUL 1978

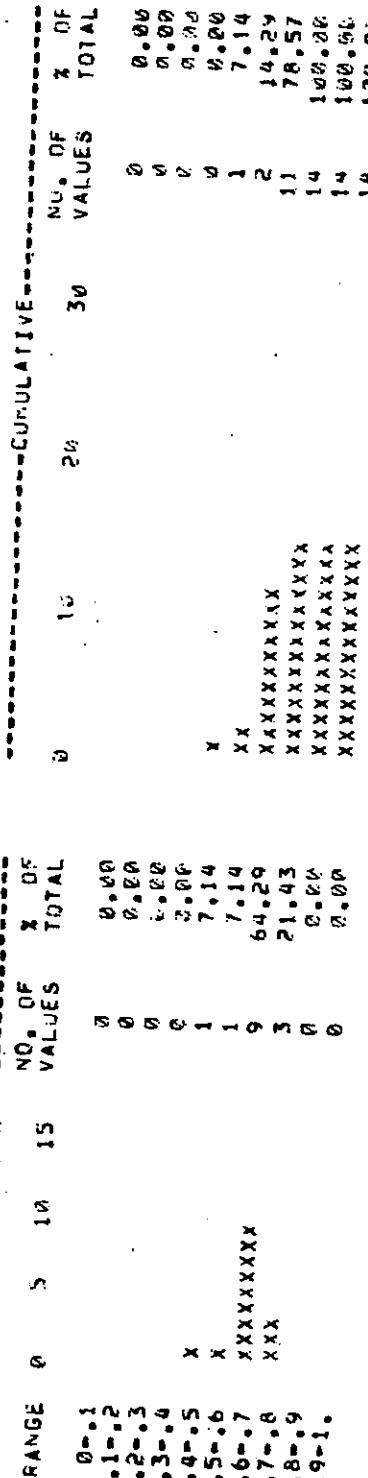
BASED ON DAILY VALUES LOCATED: BACANU, CAYAQUIL



CUMULATIVE



CUMULATIVE



MON-FRI: JUL 1976

DAILY STATEMENT DATA

LOCATION: MAGALI, CAIRNS

DIFFUSE INSULATION I, OTU/T**2

DAY	6-7	7-8	8-9	9-10	10-11	11-12	12-13	1-2	2-3	3-4	4-5	5-6	6-7	TOTAL
1	24.48	59.76	55.29	60.48	63.84	76.44	115.52	138.12	113.42	116.88	106.60	39.04	37.20	1019.2
2	27.60	41.16	41.28	58.94	67.92	52.44	67.44	50.04	46.92	77.16	57.72	27.64	37.20	1019.2
3	29.88	67.82	102.72	97.82	*****	72.48	179.28	161.40	92.04	52.76	96.24	65.54	60.36	1019.2
4	*****	77.64	96.02	99.00	132.00	113.04	128.72	119.28	110.08	111.06	81.72	87.06	33.36	1019.2
5	37.84	78.36	69.12	87.48	81.96	125.74	125.04	*****	*****	*****	*****	*****	*****	1019.2
6	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
7	12.62	49.68	60.64	91.32	116.16	112.32	102.24	71.40	55.56	59.16	51.68	14.88	14.88	1019.2
8	48.20	52.32	85.92	140.76	144.48	150.48	155.88	173.16	139.68	35.88	18.60	12.24	12.24	1019.2
9	15.12	45.62	53.92	77.52	87.60	79.32	105.90	95.64	68.92	61.96	17.40	*****	*****	1019.2
10	15.24	53.40	46.68	75.20	56.20	68.04	56.76	62.15	53.24	56.76	57.24	21.00	21.00	1019.2
11	*****	44.40	42.60	46.44	48.12	141.24	160.92	98.88	64.68	70.32	46.20	*****	*****	1019.2
12	32.76	46.92	68.40	48.92	97.06	92.40	119.44	163.44	96.24	*****	*****	*****	*****	1019.2
13	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
14	16.32	41.28	86.88	65.52	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
15	19.56	51.60	75.24	66.64	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
16	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
17	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
18	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
19	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
20	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
21	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
22	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
23	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
24	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	1019.2
25	10.80	56.28	85.92	72.60	94.44	88.20	68.04	55.16	63.56	67.56	60.12	47.52	14.32	1019.2
26	33.24	39.84	58.44	84.48	94.60	78.84	65.52	54.32	78.00	66.84	54.64	51.36	76.17	1019.2
27	7.92	38.04	84.60	84.36	96.36	91.92	85.40	79.68	65.04	67.84	72.24	45.36	20.52	821.3
28	10.68	53.16	85.08	113.16	143.40	162.84	93.96	116.76	91.68	64.24	76.48	46.92	16.56	1019.2
29	22.32	47.74	81.12	95.40	102.12	100.20	112.92	169.26	146.56	109.92	76.12	56.64	17.40	1019.2
30	11.52	49.20	79.08	102.36	96.12	102.12	91.60	109.32	78.84	75.72	73.56	45.72	53.48	948.6
31	8.04	45.48	72.60	122.16	132.68	135.24	111.72	92.28	71.28	48.36	59.16	34.32	17.28	948.6

MEAN
STD D
MIN
MAX

16.13 47.48 75.26 91.88 102.20 184.48 93.06 95.73 83.52 78.80 72.59 47.57 22.14 930.8
9.36 6.27 12.18 20.57 24.63 29.46 19.80 27.17 18.61 23.83 16.55 6.94 8.36 58.6
7.92 58.04 55.20 60.48 63.84 76.44 65.52 64.32 63.36 48.36 54.60 34.32 15.36 647.6
33.24 56.28 85.92 122.16 143.40 162.84 116.52 158.12 113.40 106.88 106.88 59.04 37.20 1291.6

MONTHLY DIFFUSE INSULATION IN ATLAS/PIKES VS. PER

MONTH: JUL 1978

4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00 22.00 23.00 24.00

350.00
341.03
332.95
323.08
314.10
305.13
296.15
287.16
278.21
269.23
260.26
251.28
242.31
233.33
224.36
215.30
206.41
197.44
186.46
179.49
170.51
161.54
152.56
143.59
134.62
125.64
116.67
107.69
98.72
89.74
80.77
71.79
62.82
53.85
44.87
35.90
26.92
17.95
8.97
0.00

350.00

341.03

332.95

323.08

314.10

305.13

296.15

287.16

278.21

269.23

260.26

251.28

242.31

233.33

224.36

215.30

206.41

197.44

186.46

179.49

170.51

161.54

152.56

143.59

134.62

125.64

116.67

107.69

96.72

89.74

80.77

71.79

62.82

53.85

44.87

35.90

26.92

17.95

8.97

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LOCATION: RACARUI, CATANDUVA, SP
ATL STD TIME (M) MEAN VALUE (+) MAXIMUM VALUE (-) MINIMUM VALUE

MONTHLY DIFFUSE INSOLATION IN 310/F1*2 VS. HOUR

MONTH: JUL 1976
 6.00 3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00
 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

	LOCATION: RACARUI, CAYAM	TIME: 16.00	15.00	14.00	13.00	12.00	11.00	10.00	9.00	8.00	7.00	6.00	5.00	4.00	3.00	2.00	1.00	0.00
350.00																		
341.03																		
332.05																		
323.06																		
314.14																		
305.13																		
296.15																		
287.16																		
278.21																		
269.23																		
262.26																		
251.26																		
242.31																		
233.33																		
224.36																		
215.38																		
206.41																		
197.44																		
188.46																		
179.49																		
170.51																		
161.54																		
152.56																		
143.59																		
134.62																		
125.64																		
116.67																		
107.69																		
96.72																		
89.74																		
80.77																		
71.79																		
62.82																		
53.85																		
44.87																		
35.90																		
26.92																		
17.95																		
8.97																		
0.00																		

(S) MEAN VALUE PLUS OR MINUS STD D (M) MEAN VALUE
 1.00 3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00
 2.00 4.00 6.00 8.00 10.00 12.00 14.00 16.00 18.00

MONTH: JUL 1974

MILITARY WEATHER DATA

LOCATION: BACARDI, LAFAYETTE

DIFFUSE / TOTAL INSULATION

DAY	HOUR												MEAN STD D MIN MAX
	6-7 (A) (B)	7-8 (C)	8-9 (D)	9-10 (E)	10-11 (F)	11-12 (G)	12-13 (H)	1-2 (I)	2-3 (J)	3-4 (K)	4-5 (L)	5-6 (M)	6-7 (N)
1	0.877	0.551	0.361	0.280	0.239	0.254	0.374	0.544	0.464	0.526	0.568	0.621	0.568
2	0.819	0.353	0.234	0.308	0.237	0.170	0.197	0.172	0.200	0.172	0.438	0.522	0.453
3	0.734	0.675	0.656	0.524	0.486	0.344	0.732	0.755	0.926	0.672	0.548	0.692	0.522
4	***	0.805	0.567	0.486	0.483	0.355	0.339	0.386	0.465	0.506	0.543	0.646	0.466
5	0.734	0.745	0.376	0.402	0.334	0.395	0.675	0.675	0.675	0.675	0.675	0.675	0.675
6	***	***	***	***	***	***	***	***	***	***	***	***	***
7	0.977	0.797	0.455	0.712	0.565	0.741	0.354	0.266	0.354	0.455	1.102	1.096	1.048
8	1.914	1.104	1.086	0.963	0.663	0.809	0.790	0.635	0.635	0.980	1.169	1.155	1.177
9	2.752	0.598	0.549	0.363	0.327	0.270	0.357	0.318	0.318	0.563	1.163	1.170	1.170
10	0.833	0.638	0.320	0.330	0.210	0.226	0.178	0.212	0.212	0.274	0.361	0.361	0.354
11	***	0.535	0.263	0.201	0.170	0.519	0.569	0.361	0.361	0.442	0.464	0.610	0.610
12	1.040	0.611	0.550	0.677	0.355	0.313	0.414	0.408	0.368	0.408	0.628	0.686	0.686
13	***	***	***	***	***	***	***	***	***	***	***	***	***
14	0.877	0.911	0.512	0.290	0.154	0.172	0.168	0.210	0.204	0.493	0.617	1.168	1.168
15	0.798	0.603	0.580	0.503	0.503	0.503	0.503	0.503	0.503	0.503	0.503	0.503	0.503
16	***	***	***	***	***	***	***	***	***	***	***	***	***
17	***	***	***	***	***	***	***	***	***	***	***	***	***
18	***	***	***	***	***	***	***	***	***	***	***	***	***
19	***	***	***	***	***	***	***	***	***	***	***	***	***
20	***	***	***	***	***	***	***	***	***	***	***	***	***
21	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***
23	***	***	***	***	***	***	***	***	***	***	***	***	***
24	***	***	***	***	***	***	***	***	***	***	***	***	***
25	0.837	0.630	0.640	0.465	0.350	0.299	0.220	0.215	0.236	0.304	0.413	0.635	0.615
26	0.969	0.572	0.471	0.746	0.364	0.256	0.209	0.213	0.282	0.310	0.374	0.616	0.356
27	0.800	0.755	0.562	0.390	0.347	0.306	0.265	0.238	0.243	0.269	0.553	0.898	0.347
28	0.791	0.936	0.732	0.628	0.608	0.557	0.312	0.388	0.351	0.410	0.681	0.597	0.349
29	0.872	0.784	0.590	0.471	0.397	0.345	0.371	0.380	0.421	0.526	0.596	0.898	0.501
30	0.841	0.772	0.661	0.479	0.364	0.337	0.320	0.456	0.503	0.562	0.541	0.638	0.463
31	0.522	0.699	0.551	0.689	0.555	0.737	0.590	0.514	0.259	0.222	0.368	0.450	0.426
MEAN	0.805	0.764	0.661	0.553	0.426	0.405	0.296	0.315	0.249	0.347	0.474	0.637	0.433
STD D	0.136	0.112	0.055	0.134	0.108	0.175	0.070	0.097	0.066	0.099	0.136	0.412	0.412
MIN	0.522	0.572	0.471	0.390	0.347	0.256	0.219	0.213	0.236	0.222	0.368	0.665	0.665
MAX	0.969	0.936	0.732	0.746	0.678	0.737	0.390	0.458	0.421	0.596	0.690	1.154	0.501

FREQUENCY CHARTS FOR DIFFUSIF / TITANIC LESOOLATI

ט'ז נסלה ר' יונה

HASER & HOUZEY VINTAGE LOCAL LINE: BAKER, CALIF.

THERE ARE 22 VALUES ABOVE 1.0 (8.73%)

卷之三

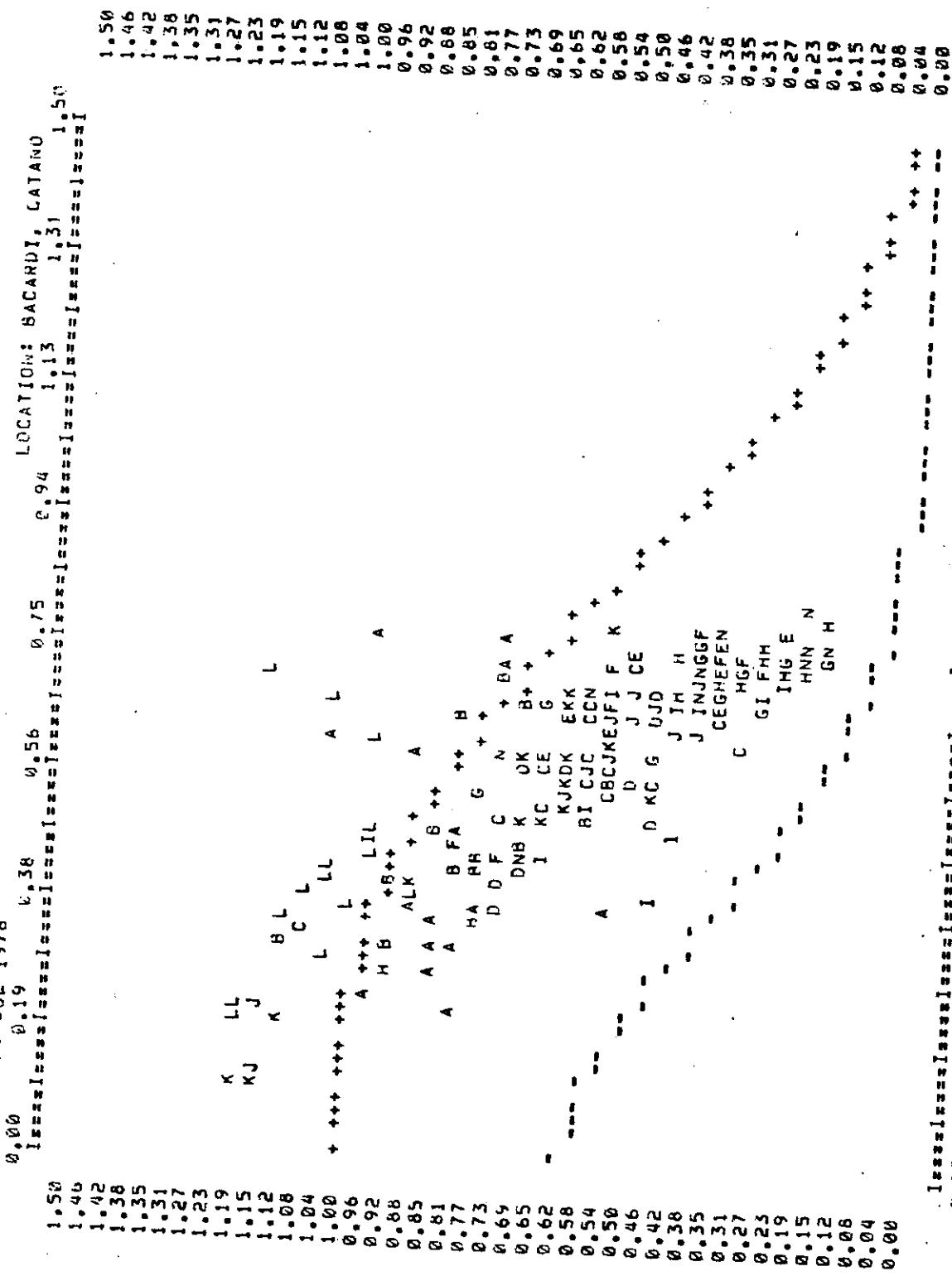
		VALUES	TOTAL
		0	0.00
		9	3.93
		39	17.03
		44	36.68
		197	46.72
		140	61.14
		166	72.49
		184	86.35
		149	56.94
		249	91.87

卷之三

VALUES	TOTAL	0	10	20	30	% OF VALUES	% OF TOTAL
0	0.00	0	0	0	0	0	0
1	0.00	0	0	0	0	0	0
2	0.00	0	0	0	0	0	0
3	0.00	0	0	0	0	0	0
4	0.00	0	0	0	0	0	0
5	0.00	0	0	0	0	0	0
6	0.00	0	0	0	0	0	0
7	0.00	0	0	0	0	0	0
8	0.00	0	0	0	0	0	0
9	0.00	0	0	0	0	0	0
10	0.00	0	0	0	0	0	0
11	0.00	0	0	0	0	0	0
12	0.00	0	0	0	0	0	0
13	0.00	0	0	0	0	0	0
14	0.29	0	0	0	0	0	0
15	0.29	0	0	0	0	0	0
16	0.86	0	0	0	0	0	0
17	0.86	0	0	0	0	0	0
18	0.86	0	0	0	0	0	0
19	0.86	0	0	0	0	0	0
20	0.86	0	0	0	0	0	0
21	0.86	0	0	0	0	0	0
22	0.86	0	0	0	0	0	0
23	0.86	0	0	0	0	0	0
24	0.86	0	0	0	0	0	0
25	0.86	0	0	0	0	0	0
26	0.86	0	0	0	0	0	0
27	0.86	0	0	0	0	0	0
28	0.86	0	0	0	0	0	0
29	0.86	0	0	0	0	0	0
30	0.86	0	0	0	0	0	0
31	0.86	0	0	0	0	0	0
32	0.86	0	0	0	0	0	0
33	0.86	0	0	0	0	0	0
34	0.86	0	0	0	0	0	0
35	0.86	0	0	0	0	0	0
36	0.86	0	0	0	0	0	0
37	0.86	0	0	0	0	0	0
38	0.86	0	0	0	0	0	0
39	0.86	0	0	0	0	0	0
40	0.86	0	0	0	0	0	0
41	0.86	0	0	0	0	0	0
42	0.86	0	0	0	0	0	0
43	0.86	0	0	0	0	0	0
44	0.86	0	0	0	0	0	0
45	0.86	0	0	0	0	0	0
46	0.86	0	0	0	0	0	0
47	0.86	0	0	0	0	0	0
48	0.86	0	0	0	0	0	0
49	0.86	0	0	0	0	0	0
50	0.86	0	0	0	0	0	0
51	0.86	0	0	0	0	0	0
52	0.86	0	0	0	0	0	0
53	0.86	0	0	0	0	0	0
54	0.86	0	0	0	0	0	0
55	0.86	0	0	0	0	0	0
56	0.86	0	0	0	0	0	0
57	0.86	0	0	0	0	0	0
58	0.86	0	0	0	0	0	0
59	0.86	0	0	0	0	0	0
60	0.86	0	0	0	0	0	0
61	0.86	0	0	0	0	0	0
62	0.86	0	0	0	0	0	0
63	0.86	0	0	0	0	0	0
64	0.86	0	0	0	0	0	0
65	0.86	0	0	0	0	0	0
66	0.86	0	0	0	0	0	0
67	0.86	0	0	0	0	0	0
68	0.86	0	0	0	0	0	0
69	0.86	0	0	0	0	0	0
70	0.86	0	0	0	0	0	0
71	0.86	0	0	0	0	0	0
72	0.86	0	0	0	0	0	0
73	0.86	0	0	0	0	0	0
74	0.86	0	0	0	0	0	0
75	0.86	0	0	0	0	0	0
76	0.86	0	0	0	0	0	0
77	0.86	0	0	0	0	0	0
78	0.86	0	0	0	0	0	0
79	0.86	0	0	0	0	0	0
80	0.86	0	0	0	0	0	0
81	0.86	0	0	0	0	0	0
82	0.86	0	0	0	0	0	0
83	0.86	0	0	0	0	0	0
84	0.86	0	0	0	0	0	0
85	0.86	0	0	0	0	0	0
86	0.86	0	0	0	0	0	0
87	0.86	0	0	0	0	0	0
88	0.86	0	0	0	0	0	0
89	0.86	0	0	0	0	0	0
90	0.86	0	0	0	0	0	0
91	0.86	0	0	0	0	0	0
92	0.86	0	0	0	0	0	0
93	0.86	0	0	0	0	0	0
94	0.86	0	0	0	0	0	0
95	0.86	0	0	0	0	0	0
96	0.86	0	0	0	0	0	0
97	0.86	0	0	0	0	0	0
98	0.86	0	0	0	0	0	0
99	0.86	0	0	0	0	0	0
100	0.86	0	0	0	0	0	0

TOTAL / EXTRATERRESTRIAL INSULATION (HORIZONTAL AXIS)
VS. DIFFUSE / TOTAL INSULATION (VERTICAL AXIS)

MONTH: JUL 1978



FOR LETTER CODES SEE TOTAL / EXTRATERRESTRIAL INSULATION TABLE
(+) MAXIMUM VALUE CURVE POINTS (-) MINIMUM VALUE CURVE POINTS

KT: TOTAL / EXTRATERRESTRIAL *** 145 VALUES ABOVE 1.5 *** 145 VALUES WITHOUT DATA
KD: DIFFUSE / TOTAL *** 175 VALUES ABOVE 1.5 *** 174 VALUES WITHOUT DATA

START USER SUDERSTROM K [240302,242312] JO5 FOR10 SEG. 3117 DATE 20-13-19 14:20:16 MONITOR SYSTEM FROM S7000 SITE *STOP*

START USER SUDERSTROM X [240537J,240312] J06 FOR17 SEQ. 51167 DATE 26-FEB-79 14:20:12 NO. 1104 SYSTEM RUN 5471 4/14/E *START*

STARTS 100% 00:00:00
TODAY'S DATE: 5/16/07 TIME: 14:26:00 QUALITY: STABLE : HIGH Quality @/njk *START*

START* USER# SODEKSTROM ~ [2440302, 246312] JOB# FNRJ# SEQ. 31117 DATE 26-FEB-79 14:20:15 MONITOR SYSTEM FROM SODEKSTROM STATION

MONTH: AUG 1978

MONTHLY WEATHER DATA

LOCATION: DURHAM, CALIFORNIA

TOTAL INSOLATION IN BTU/HOUR*2

DAY	6-7	7-8	8-9	9-10	10-11	11-12	12-13	HOUR	1-2	2-3	3-4	4-5	5-6	6-7	TOTAL	
1	16.10	58.10	68.40	116.80	161.10	246.50	207.80	104.50	99.60	68.00	63.30	47.20	21.40	1301.0		
2	19.70	69.80	120.60	210.80	267.30	302.00	317.40	301.70	278.10	219.40	114.40	33.10	20.40	2249.7		
3	6.20	23.40	64.50	127.70	228.50	277.40	208.20	161.00	155.30	98.50	61.20	46.20	34.10	1490.2		
4	11.10	57.40	113.10	143.30	141.50	194.10	213.30	231.20	242.50	181.80	147.70	42.60	12.50	1731.9		
5	14.40	70.10	149.90	188.10	272.80	268.00	305.20	259.40	273.90	224.50	139.00	60.40	15.00	2259.5		
6	26.70	72.20	155.30	226.60	266.40	315.50	322.80	367.50	294.10	216.40	155.60	90.50	15.10	2468.7		
7	18.80	86.50	103.40	205.40	251.80	73.40	164.20	52.00	24.00	48.10	72.10	51.10	11.00	1101.0		
8	29.40	80.30	162.50	152.50	285.30	309.70	322.20	52.00	24.00	48.10	72.10	51.10	14.20	2268.3		
9	19.60	74.70	159.90	192.30	273.30	328.80	378.80	187.20	12.50	76.50	71.60	14.20				
10	**	**	**	**	**	**	**	**	**	**	**	**	**	**		
11	14.60	65.80	126.00	228.00	257.30	301.00	316.20	306.10	276.40	216.80	154.10	149.10	77.20	12.00		
12	23.60	66.90	97.10	214.00	272.80	304.70	319.80	314.40	274.40	279.10	216.50	155.80	66.50	15.90	2332.8	
13	14.60	73.30	136.60	219.70	266.60	310.90	309.90	321.50	274.90	222.50	155.80	66.50	14.30	2369.5		
14	9.70	44.50	56.40	102.40	224.50	173.00	143.00	125.50	88.30	55.50	32.00	156.50	93.10	13.20	2406.2	
15	13.90	61.60	87.20	181.70	250.40	290.40	307.80	299.90	251.40	242.90	121.60	61.60	4.70	1090.3		
16	12.70	43.70	37.60	64.90	32.90	12.80	9.10	20.00	29.70	32.60	27.60	26.20	4.00	2124.6		
17	17.70	25.30	48.50	93.40	106.50	126.60	127.10	126.50	126.50	126.50	121.60	121.60	4.00	329.9		
18	17.60	72.90	124.70	133.00	181.10	229.00	243.80	157.30	74.30	47.60	41.50	34.80	16.50			
19	12.70	89.40	142.50	156.30	225.80	261.40	125.20	164.80	192.50	200.50	126.40	45.80	6.40	1356.3		
20	6.60	69.26	135.70	129.50	275.60	299.50	307.70	347.70	279.10	213.30	115.10	45.20	6.40	1770.2		
21	10.60	71.10	110.40	127.10	149.30	175.40	290.70	302.40	264.60	247.70	121.50	45.20	11.10	2209.3		
22	14.00	68.80	138.30	203.50	147.40	75.80	214.80	114.30	91.60	166.30	121.50	45.30	7.40	2236.1		
23	**	66.80	138.40	154.70	262.60	281.70	269.80	231.80	255.50	194.30	106.00	36.90	9.00	2255.7		
24	22.20	60.50	132.70	264.00	267.50	306.70	310.30	293.10	255.30	195.90	132.20	57.60	6.10	2213.6		
25	14.40	70.50	137.00	14.10	217.10	275.50	306.70	314.50	302.90	265.00	203.00	169.40	4.20	1465.3		
26	21.50	53.80	126.00	221.40	275.30	304.10	311.20	296.30	259.00	202.00	146.00	50.80	5.50	2116.8		
27	15.20	68.60	151.00	92.90	158.10	146.50	171.30	163.60	173.20	184.10	112.00	52.50	5.90	2211.7		
28	13.20	67.20	140.40	177.00	211.50	297.80	306.00	286.50	247.70	191.20	122.00	50.80	3.10	1642.2		
29	12.80	66.90	148.20	205.10	264.20	296.50	305.40	289.10	251.50	195.10	126.70	52.50	3.10	2235.4		
30	13.30	68.90	148.90	217.70	268.20	303.00	315.40	158.90	41.30	49.60	35.10	18.80	3.90			
31	15.30	74.70	150.00	219.10	272.80	295.60	319.60	300.20	262.30	181.10	109.70	31.10				

MEAN
STD D
MIN
MAX

64.44	66.35	121.51	174.56	239.85	250.66	255.42	239.12	200.32	162.27	103.68	49.17	10.42	1871.7		
5.14	13.86	32.02	47.07	60.21	85.81	85.07	52.89	91.25	67.51	41.50	22.73	6.50	213.3		
8.00	23.40	37.60	64.90	32.90	16.80	9.10	20.00	24.00	32.30	24.70	8.50	2.00	299.2		
29.40	89.40	162.50	226.66	285.30	319.50	322.60	323.70	294.10	224.30	156.50	93.10	30.10	30.10	2557.3	

MONTHLY TOTAL SOLAR INSULATION IN BTU/FT² VS. HLR

MONTH: AUG 1978

0.00 3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00
 350.00
 341.03
 332.05
 323.08
 314.10
 305.13
 296.15
 287.18
 278.21
 269.23
 260.26
 251.28
 242.31
 233.33
 224.36
 215.38
 206.41
 197.44
 188.46
 179.49
 170.51
 161.54
 152.56
 143.59
 134.62
 125.64
 116.67
 107.69
 98.72
 89.74
 71.79
 62.62
 53.65
 44.67
 35.60
 26.92
 17.95
 6.97
 0.00

LOCATION: BACARDI, CAYANO								
S	S	S	M	M	S	M	S	S
350.00	341.03	332.05	323.08	314.10	305.13	296.15	287.18	278.21
S	S	S	S	S	S	S	S	S
260.26	251.28	242.31	233.33	224.36	215.38	206.41	197.44	188.46
M	M	M	M	M	M	M	M	M
179.49	170.51	161.54	152.56	143.59	134.62	125.64	116.67	107.69
S	S	S	S	S	S	S	S	S
116.67	107.69	98.72	89.74	80.77	71.79	62.62	53.65	44.67
H	S	S	S	S	S	S	S	S
6.97	0.00	15.00	18.00	21.00	24.00			
(S) MEAN VALUE PLUS OR MINUS STD D	(M) MEAN VALUE							

MONTH: AUG 1978

MONTHLY WEATHER DATA

LOCATION: BACARDI, CATAÑO
TOTAL / EXTRATERRESTRIAL INSULATION

DAY	HOUR												DAILY VALUE
	6-7 (A)	7-8 (B)	8-9 (C)	9-10 (D)	10-11 (E)	11-12 (F)	12-1 (G)	1-2 (H)	2-3 (I)	3-4 (J)	4-5 (K)	5-6 (L)	
1	0.435	0.420	0.387	0.362	0.441	0.613	0.501	0.260	0.274	0.223	0.279	0.346	0.537
2	0.478	0.506	0.528	0.589	0.732	0.751	0.748	0.751	0.742	0.721	0.461	0.244	0.386
3	0.196	0.170	0.283	0.416	0.626	0.689	0.502	0.401	0.427	0.324	0.271	0.342	0.520
4	0.274	0.418	0.496	0.469	0.387	0.482	0.514	0.575	0.666	0.596	0.655	0.316	0.666
5	0.359	0.511	0.658	0.615	0.747	0.715	0.735	0.646	0.753	0.739	0.613	0.329	0.443
6	0.673	0.528	0.682	0.741	0.729	0.793	0.778	0.765	0.809	0.713	0.450	0.402	0.515
7	0.478	0.633	0.454	0.672	0.689	0.182	0.251	0.129	0.066	0.159	0.321	0.692	0.673
8	0.755	0.589	0.714	0.499	0.781	0.769	0.776	0.806	0.715	0.596	0.384	0.412	0.735
9	0.508	0.549	0.703	0.629	0.748	0.766	0.451	0.180	0.180	0.180	0.342	0.306	0.326
10	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	0.402
11	0.370	0.485	0.555	0.680	0.704	0.747	0.761	0.762	0.751	0.716	0.669	0.669	0.671
12	0.630	0.494	0.428	0.700	0.740	0.756	0.770	0.783	0.770	0.738	0.693	0.608	0.372
13	0.393	0.543	0.602	0.719	0.734	0.771	0.724	0.801	0.758	0.702	0.666	0.480	0.698
14	0.264	0.330	0.257	0.335	0.614	0.429	0.346	0.313	0.244	0.185	0.148	0.441	0.710
15	0.382	0.686	0.385	0.594	0.684	0.720	0.741	0.747	0.695	0.676	0.553	0.216	0.152
16	0.352	0.325	0.167	0.212	0.290	0.098	0.027	0.022	0.050	0.082	0.206	0.319	0.636
17	0.495	0.189	0.214	0.306	0.291	0.314	0.306	0.315	0.131	0.108	0.067	0.095	0.294
18	0.497	0.549	0.551	0.435	0.495	0.568	0.587	0.392	0.286	0.159	0.278	0.368	0.368
19	0.362	0.670	0.630	0.512	0.617	0.646	0.302	0.461	0.534	0.216	0.199	0.230	0.489
20	0.593	0.519	0.608	0.424	0.753	0.743	0.741	0.768	0.774	0.717	0.531	0.371	0.534
21	0.308	0.535	0.488	0.416	0.408	0.435	0.701	0.756	0.735	0.369	0.423	0.423	0.668
22	0.411	0.518	0.612	0.666	0.403	0.186	0.518	0.286	0.255	0.561	0.375	0.308	0.427
23	*****	0.504	0.578	0.507	0.718	0.699	0.649	0.580	0.711	0.656	0.497	0.308	0.377
24	0.665	0.458	0.579	0.668	0.731	0.746	0.749	0.734	0.712	0.663	0.619	0.485	0.660
25	0.436	0.534	0.577	0.712	0.753	0.761	0.769	0.759	0.740	0.689	0.326	0.323	0.687
26	0.657	0.409	0.559	0.726	0.753	0.755	0.751	0.743	0.724	0.687	0.555	0.194	0.675
27	0.469	0.522	0.671	0.385	0.433	0.364	0.414	0.411	0.485	0.627	0.531	0.386	0.202
28	0.412	0.513	0.624	0.581	0.579	0.740	0.740	0.720	0.694	0.653	0.581	0.443	0.454
29	0.404	0.512	0.624	0.673	0.723	0.737	0.739	0.727	0.706	0.668	0.462	0.306	0.646
30	0.424	0.526	0.664	0.715	0.735	0.753	0.763	0.400	0.116	0.168	0.167	0.167	0.505
31	0.509	0.580	0.672	0.722	0.749	0.736	0.774	0.737	0.621	0.526	0.212	0.212	0.688
MEAN	0.457	0.495	0.537	0.572	0.622	0.616	0.575	0.555	0.543	0.475	0.391	0.334	0.564
STD D	0.137	0.104	0.142	0.154	0.165	0.213	0.205	0.232	0.226	0.189	0.175	0.149	0.162
MIN	0.196	0.170	0.098	0.212	0.090	0.027	0.022	0.050	0.066	0.106	0.113	0.067	0.095
MAX	0.755	0.670	0.714	0.781	0.793	0.778	0.806	0.809	0.739	0.707	0.724	0.779	0.735

FREQUENCY CHARTS FOR TOTAL / EXTRATERRESTRIAL INSULATION

MONTGOMERY AUGUST 1976

LOCATIONS: HACCIOLI, CATANO
BASED ON INJURIOUS VEHICLES

-CUMULATIVE-

RANGE	0	90	180	240	324	420
0-1	x					
1-2	xxxx					
2-3	xxxxxx					
3-4	xxxxxxxx					
4-5	xxxxxxxx					
5-6	xxxxxxxx					
6-7	xxxxxxxx					
7-8	xxxxxxxx					
8-9	xxxxxxxx					
9-10	xxxxxxxx					

BASED ON DAILY VALUES

REGULAR						CUMULATIVE					
RANGE	0	5	10	15	NO. OF VALUES	0	10	20	30	NO. OF VALUES	% OF TOTAL
0..1	X				1	3.85	X			1	3.85
.1..2					0	0.00	X			1	3.85
.2..3					0	0.00	X			1	3.85
.3..4		X			3	11.54	X			4	15.38
.4..5		X			4	15.38	XXXXXX			6	30.77
.5..6		X			3	11.54	XXXXXX			11	42.31
.6..7		X			12	46.15	XXXXXXXX			23	86.46
.7..8		X			3	11.54	XXXXXXXX			26	100.00
.8..9					0	0.00	XXXXXXXX			26	100.00
.9..1.					0	0.00	XXXXXXXX			26	100.00

MONITOR AUGUST 1978

INTRODUCTION

L'ASTHME HUCAILLE (CONTINU)

DIFFUSE INSOLATION IN THE TROPICS

DAY	HJD LR												TOTAL	
	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	5-n	6-7
1	42.83	63.01	87.68	105.63	178.23	116.28	43.65	96.61	12.24	61.71	49.13	14.48	*****	*****
2	42.83	57.23	66.19	66.43	68.97	65.70	62.68	62.67	60.14	53.54	34.61	23.47	665.7	665.7
3	2.66	22.63	53.60	78.41	101.52	132.13	166.74	147.74	138.34	124.06	103.64	47.92	26.02	1765.4
4	6.95	53.84	95.71	130.80	139.01	174.08	185.06	194.57	163.63	109.75	100.47	44.16	16.77	1411.9
5	11.62	34.65	67.68	85.06	89.06	99.46	85.55	166.60	90.27	62.04	64.73	42.95	17.16	577.3
6	25.05	47.79	75.87	62.88	65.10	73.57	63.89	72.96	75.02	35.57	39.69	44.29	13.19	714.9
7	11.74	32.85	32.79	48.52	57.60	52.86	102.49	56.06	25.07	49.51	84.34	45.86	59.17	59.17
8	24.68	54.00	53.36	88.57	52.03	51.42	43.18	60.02	54.69	98.61	72.96	44.29	13.19	714.9
9	14.88	24.44	57.96	98.37	62.92	52.15	56.14	74.17	25.07	49.51	84.34	45.86	59.17	59.17
10	12.10	37.75	52.03	56.51	62.19	55.37	51.67	49.13	47.79	48.04	47.55	36.11	13.91	572.1
11	24.08	57.05	54.53	50.34	45.74	44.89	45.80	42.90	39.81	34.24	32.67	32.43	12.22	493.1
12	6.78	17.54	43.26	39.81	46.05	72.84	56.94	41.62	31.82	33.64	26.01	39.78	13.67	456.4
13	6.23	28.92	37.51	59.41	89.54	113.98	107.45	169.02	89.90	53.48	33.52	25.07	17.16	577.3
14	10.89	54.21	79.58	92.93	79.35	79.38	69.82	67.76	76.84	66.91	67.76	22.99	11.49	786.5
15	12.95	34.73	35.82	63.77	34.73	11.25	9.56	19.24	30.85	31.46	26.26	9.07	2.66	322.3
16	20.93	21.99	44.77	87.24	105.15	120.03	120.43	118.34	39.76	41.02	35.45	25.07	17.16	577.3
17	11.62	27.35	37.99	70.91	110.35	121.24	159.36	144.23	84.09	48.68	48.26	26.74	17.16	577.3
18	9.68	37.63	29.16	57.23	83.01	78.04	50.74	83.49	85.39	64.25	71.27	31.94	7.38	689.1
19	14.64	24.32	35.33	67.15	53.60	51.67	52.39	53.82	51.67	40.90	49.85	44.65	12.95	549.9
20	5.01	37.51	41.14	104.42	112.77	153.19	164.88	92.93	128.38	128.38	128.38	128.38	128.38	128.38
21	10.77	36.30	54.69	91.60	111.68	64.37	125.11	99.46	79.15	88.57	73.57	38.48	6.53	679.7
22	37.51	35.57	57.35	94.56	93.29	91.96	96.32	101.03	94.26	81.67	58.44	58.44	9.32	879.7
23	21.30	32.79	52.15	58.20	46.86	59.77	60.14	59.17	55.93	57.21	43.54	28.07	6.45	568.2
24	8.11	20.93	36.74	44.29	38.72	35.03	34.36	31.74	29.52	32.91	43.92	39.61	7.06	404.0
25	14.64	27.47	50.74	47.79	47.79	46.83	50.82	46.44	44.77	38.11	31.25	18.63	3.51	468.4
26	8.47	25.84	50.09	91.35	115.55	132.74	148.10	134.79	131.28	104.79	63.26	33.48	4.04	1642.5
27	9.68	34.36	52.03	69.45	73.14	71.87	76.11	77.20	74.66	65.14	51.67	32.19	6.05	700.1
28	6.95	52.91	53.84	65.34	67.64	70.06	71.13	69.89	61.35	54.21	47.07	29.77	6.41	637.7
29	8.71	27.10	49.25	54.93	54.45	54.21	59.77	54.57	40.41	49.73	35.33	18.75	3.03	510.9
30	6.78	15.37	21.30	25.29	50.94	51.91	37.27	34.97	30.98	38.48	36.60	16.75	4.01	374.7

MEAN
STD D
MIN
MAX

13.16	32.80	52.58	66.81	72.15	73.67	75.20	74.66	69.81	59.76	51.13	32.66	14.18	686.8
7.79	14.27	16.72	23.32	27.76	35.89	44.17	42.15	36.76	25.55	18.41	10.22	6.29	96.1
2.66	15.37	21.39	25.29	34.73	11.25	9.56	19.24	29.52	31.45	26.01	9.01	2.65	236.1
37.51	95.71	130.82	139.15	174.48	185.80	164.57	163.83	129.75	100.37	47.92	26.42	1460.5	

MONTHLY DIFFUSE INSULATION IN HOU/FT² VS. RADIATION

MONTH: AUG 1978	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00	LOCATION: KALAKOPI, GATANG
350.00									350.00
341.03									341.03
332.05									332.05
323.08									323.08
314.10									314.10
305.13									305.13
296.15									296.15
287.18									287.18
278.21									278.21
269.23									269.23
260.26									260.26
251.28									251.28
242.31									242.31
233.33									233.33
224.36									224.36
215.38									215.38
206.41									206.41
197.44									197.44
188.46									188.46
179.49									179.49
170.51									170.51
161.54									161.54
152.56									152.56
143.59									143.59
134.62									134.62
125.64									125.64
116.67									116.67
107.72									107.72
98.74									98.74
89.74									89.74
80.77									80.77
71.79									71.79
62.82									62.82
53.85									53.85
44.87									44.87
35.90									35.90
26.92									26.92
17.95									17.95
8.97									8.97
0.00									0.00

Legend:
 0.00 3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00
 ATL STD TIME (M) MEAN VALUE (+) MAXIMUM VALUE (-) MINIMUM VALUE

MONTHLY DIFFUSE INSULATION IN MJU/FT**2 15. AUG

Month: AUG 1978	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00
350.00								
341.03								
332.05								
323.08								
314.10								
305.13								
296.15								
287.18								
278.21								
269.23								
260.26								
251.26								
242.31								
233.33								
224.36								
215.38								
206.41								
197.44								
188.46								
179.49								
170.51								
161.54								
152.56								
143.59								
134.62								
125.64								
116.67								
107.69								
98.72								
69.74								
60.77								
71.79								
62.82								
53.85								
44.87								
35.90								
26.92								
17.95								
8.97								
0.00								

1.000 3.000 5.000 9.000 12.000 15.000 18.000 21.000 24.000
 (S) MEAN VALUE PLUS OR MINUS STD (M) MEAN VALUE

MONTH: AUG 1976

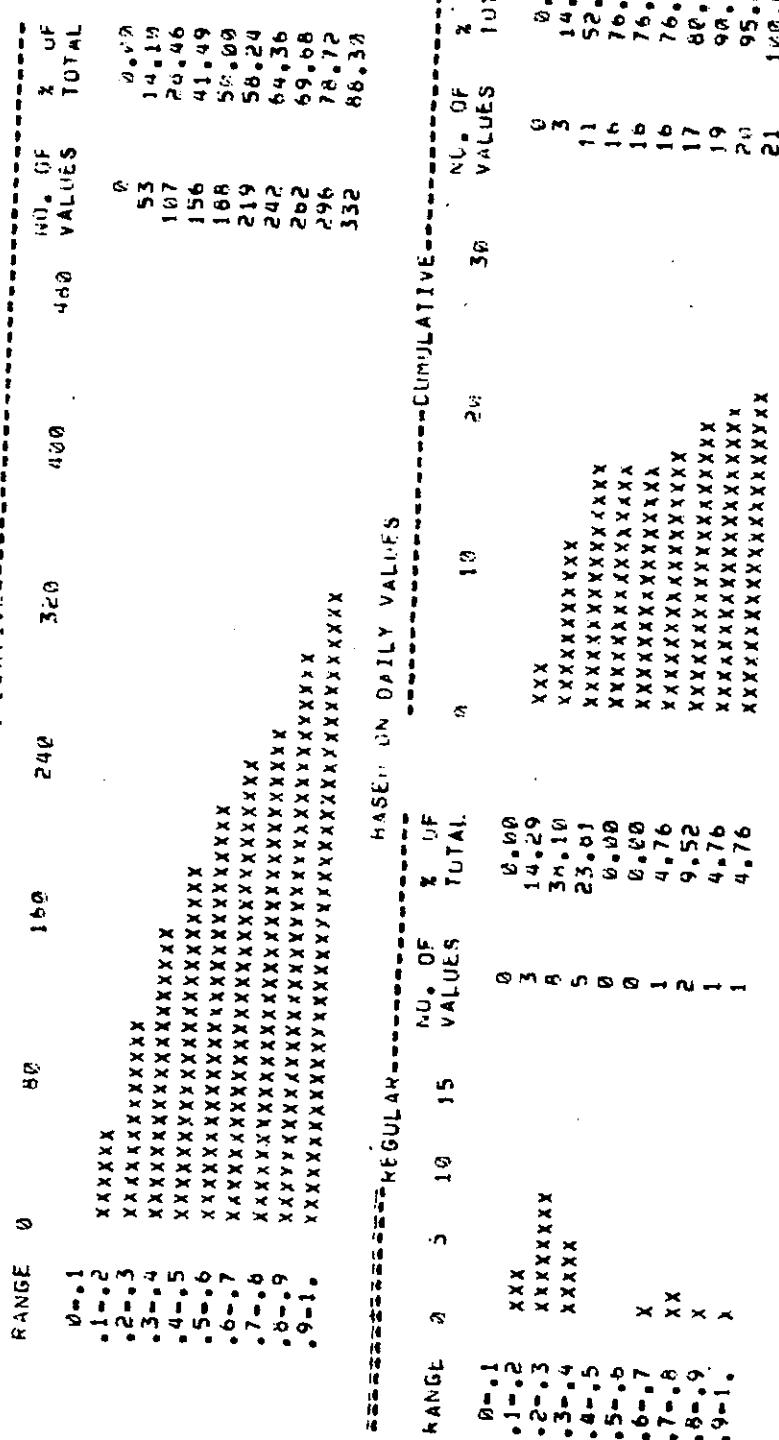
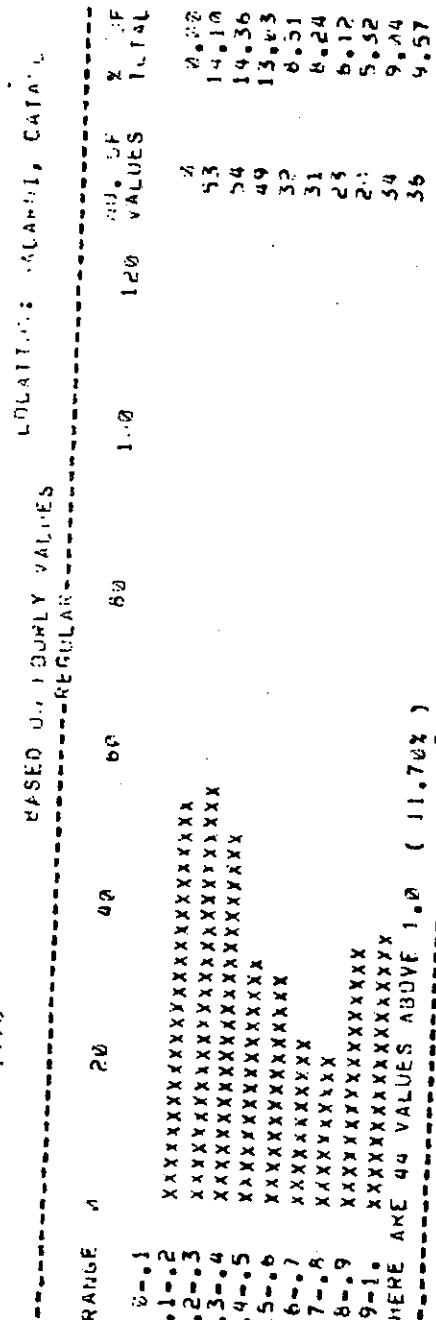
MONTHLY MEANEN DATA

DIFFUSE / TOTAL ILLUMIN.

L. CATT H48 MACAU, CHINA

DAY	HO:19						HO:20						HO:21						HO:22						HO:23						HO:24						HO:25						HO:26						HO:27						HO:28						HO:29						HO:30						HO:31						HO:32						HO:33						HO:34						HO:35						HO:36						HO:37						HO:38						HO:39						HO:40						HO:41						HO:42						HO:43						HO:44						HO:45						HO:46						HO:47						HO:48						HO:49						HO:50						HO:51						HO:52						HO:53						HO:54						HO:55						HO:56						HO:57						HO:58						HO:59						HO:60						HO:61						HO:62						HO:63						HO:64						HO:65						HO:66						HO:67						HO:68						HO:69						HO:70						HO:71						HO:72						HO:73						HO:74						HO:75						HO:76						HO:77						HO:78						HO:79						HO:80						HO:81						HO:82						HO:83						HO:84						HO:85						HO:86						HO:87						HO:88						HO:89						HO:90						HO:91						HO:92						HO:93						HO:94						HO:95						HO:96						HO:97						HO:98						HO:99						HO:100						HO:101						HO:102						HO:103						HO:104						HO:105						HO:106						HO:107						HO:108						HO:109						HO:110						HO:111						HO:112						HO:113						HO:114						HO:115						HO:116						HO:117						HO:118						HO:119						HO:120						HO:121						HO:122						HO:123						HO:124						HO:125						HO:126						HO:127						HO:128						HO:129						HO:130						HO:131						HO:132						HO:133						HO:134						HO:135						HO:136						HO:137						HO:138						HO:139						HO:140						HO:141						HO:142						HO:143						HO:144						HO:145						HO:146						HO:147						HO:148						HO:149						HO:150						HO:151						HO:152						HO:153						HO:154						HO:155						HO:156						HO:157						HO:158						HO:159						HO:160						HO:161						HO:162						HO:163						HO:164						HO:165						HO:166						HO:167						HO:168						HO:169						HO:170						HO:171						HO:172						HO:173						HO:174						HO:175						HO:176						HO:177						HO:178						HO:179						HO:180						HO:181						HO:182						HO:183						HO:184						HO:185						HO:186						HO:187						HO:188						HO:189						HO:190						HO:191						HO:192						HO:193						HO:194						HO:195						HO:196						HO:197						HO:198						HO:199						HO:200						HO:201						HO:202						HO:203						HO:204						HO:205						HO:206						HO:207						HO:208						HO:209						HO:210						HO:211						HO:212						HO:213						HO:214						HO:215						HO:216						HO:217						HO:218						HO:219						HO:220						HO:221						HO:222						HO:223						HO:224						HO:225						HO:226						HO:227						HO:228						HO:229						HO:230						HO:231						HO:232						HO:233						HO:234						HO:235						HO:236						HO:237						HO:238						HO:239						HO:240						HO:241						HO:242						HO:243						HO:244						HO:245						HO:246						HO:247						HO:248						HO:249						HO:250						HO:251						HO:252						HO:253						HO:254						HO:255						HO:256						HO:257						HO:258						HO:259						HO:260						HO:261						HO:262						HO:263						HO:264						HO:265						HO:266						HO:267						HO:268						HO:269						HO:270						HO:271						HO:272						HO:273						HO:274						HO:275						HO:276						HO:277						HO:278						HO:279						HO:280						HO:281						HO:282						HO:283						HO:284						HO:285						HO:286						HO:287						HO:288						HO:289						HO:290						HO:291						HO:292						HO:293						HO:294						HO:295						HO:296						HO:297						HO:298						HO:299						HO:300						HO:301						HO:302						HO:303						HO:304						HO:305						HO:306						HO:307						HO:308						HO:309						HO:310						HO:311						HO:312						HO:313						HO:314						HO:315						HO:316						HO:317						HO:318						HO:319						HO:320						HO:321						HO:322						HO:323						HO:324						HO:325						HO:326						HO:327						HO:328						HO:329						HO:330						HO:331						HO:332						HO:333						HO:334						HO:335						HO:336						HO:337						HO:338						HO:339						HO:340						HO:341						HO:342						HO:343						HO:344						HO:345						HO:346						HO:347						HO:348						HO:349						HO:350						HO:351						HO:352						HO:353						HO:354						HO:355						HO:356						HO:357						HO:358						HO:359						HO:360						HO:361						HO:362						HO:363						HO:364						HO:365						HO:366						HO:367						HO:368						HO:369						HO:370						HO:371						HO:372						HO:373						HO:374						HO:375						HO:376						HO:377						HO:378						HO:379						HO:380						HO:381						HO:382						HO:383						HO:384						HO:385						HO:386						HO:387						HO:388						HO:389						HO:390						HO:391						HO:392						HO:393						HO:394						HO:395						HO:396						HO:397						HO:398						HO:399						HO:400						HO:401						HO:402						HO:403						HO:404						HO:405						HO:406						HO:407						HO:408						HO:409						HO:410						HO:411						HO:412						HO:413						HO:414						HO:415						HO:416						HO:417						HO:418						HO:419						HO:420						HO:421						HO:422						HO:423						HO:424						HO:425						HO:426						HO:427						HO:428						HO:429						HO:430						HO:431						HO:432						HO:433						HO:434						HO:435						HO:436						HO:437						HO:438						HO:439						HO:440						HO:441						HO:442						HO:443						HO:444						HO:445						HO:446						HO:447						HO:448						HO:449						HO:450						HO:451						HO:452						HO:453						HO:454						HO:455						HO:456						HO:457						HO:458						HO:459						HO:460						HO:461						HO:462						HO:463						HO:464						HO:465						HO:466						HO:467						HO:468						HO:469						HO:470						HO:471						HO:472						HO:473						HO:474						HO:475						HO:476						HO:477						HO:478						HO:479						HO:480						HO:481						HO:482						HO:483						HO:484						HO:485						HO:486						HO:487						HO:488						HO:489						HO:490						HO:491						HO:492						HO:493						HO:494						HO:495						HO:496						HO:497						HO:498						HO:499						HO:500						HO:501						HO:502						HO:503						HO:504						HO:505						HO:506						HO:507						HO:508						HO:509						HO:510						HO:511						HO:512						HO:513						HO:514						HO:515						HO:516						HO:517						HO:518						HO:519						HO:520						HO:521						HO:522						HO:523						HO:524						HO:525						HO:526						HO:527						HO:528						HO:529						HO:530						HO:531						HO:532						HO:533						HO:534						HO:535						HO:536						HO:537						HO:538						HO:539						HO:540						HO:541						HO:542						HO:543						HO:544						HO:545						HO:546						HO:547						HO:548						HO:549						HO:550						HO:551						HO:552						HO:553						HO:554						HO:555						HO:556						HO:557						HO:558						HO:559						HO:560						HO:561						HO:562						HO:563						HO:564						HO:565						HO:566						HO:567						HO:568						HO:569						HO:570						HO:571						HO:572						HO:573						HO:574						HO:575						HO:576						HO:577						HO:578						HO:579						HO:580						HO:581						HO:582						HO:583						HO:584						HO:585						HO:586						HO:587						HO:588						HO:589						HO:590						HO:591						HO:592						HO:593						HO:594						HO:595						HO:596						HO:597						HO:598						HO:599						HO:600						HO:601						HO:602						HO:603						HO:604						HO:605						HO:606						HO:607						HO:608						HO:609						HO:610						HO:611						HO:612						HO:613						HO:614						HO:615						HO:616						HO:617						HO:618						HO:619						HO:620						HO:621						HO:622						HO:623						HO:624						HO:625						HO:626						HO:627						HO:628						HO:629						HO:630						HO:631						HO:632						HO:633						HO:634						HO:635						HO:636						HO:637						HO:638						HO:639						HO:640						HO:641						HO:642						HO:643						HO:644						HO:645						HO:646						HO:647						HO:648						HO:649						HO:650						HO:651						HO:652						HO:653						HO:654						HO:655						HO:656						HO:657						HO:658						HO:659						HO:660						HO:661						HO:662						HO:663						HO:664						HO:665						HO:666						HO:667						HO:668						HO:669						HO:670						HO:671						HO:672						HO:673						HO:674						HO:675						HO:676						HO:677						HO:678						HO:679						HO:680						HO:681						HO:682						HO:683						HO:684						HO:685						HO:686						HO:687						HO:688						HO:689						HO:690						HO:691						HO:692						HO:693						HO:694						HO:695						HO:696						HO:697						HO:698						HO:699						HO:700						HO:701						HO:702						HO:703						HO:704						HO:705						HO:706						HO:707						HO:708						HO:709						HO:710						HO:711						HO:712						HO:713						HO:714						HO:715						HO:716						HO:717						HO:718						HO:719						HO:720						HO:721						HO:722						HO:723						HO:724						HO:725						HO:726						HO:727						HO:728						HO:729						HO:730						HO:731						HO:732						HO:733						HO:734						HO:735						HO:736						HO:737						HO:738						HO:739						HO:740						HO:741						HO:742						HO:743						HO:744						HO:745						HO:746						HO:747						HO:748						HO:749						HO:750						HO:751						HO:752						HO:753						HO:754						HO:755						HO:756						HO:757						HO:758						HO:759						HO:760						HO:761						HO:762						HO:763						HO:764						HO:765						HO:766						HO:767						HO:768						HO:769						HO:770						HO:771						HO:772						HO:773						HO:774						HO:775						HO:776						HO:777						HO:778						HO:779						HO:780						HO:781						HO:782						HO:783						HO:784						HO:785						HO:786						HO:787						HO:788						HO:789						HO:790						HO:791						HO:792						HO:793						HO:794						HO:795						HO:796						HO:797						HO:798						HO:799						HO:800						HO:801						HO:802						HO:803						HO:804						HO:805						HO:806						HO:807						HO:808						HO:809						HO:810						HO:811						HO:812						HO:813						HO:814						HO:815						HO:816						HO:817						HO:818						HO:819						HO:820						HO:821						HO:822						HO:823						HO:824						HO:825						HO:826						HO:827						HO:828						HO:829						HO:830						HO:831						HO:832						HO:833						HO:834						HO:835						HO:836						HO:837						HO:838						HO:839						HO:840						HO:841						HO:842						HO:843						HO:844						HO:845						HO:846						HO:847						HO:848						HO:849						HO:850						HO:851						HO:852						HO:853						HO:854						HO:855						HO:856						HO:857						HO:858						HO:859						HO:860						HO:861						HO:862						HO:863						HO:864						HO:865						HO:866						HO:867						HO:868						HO:869						HO:870						HO:871						HO:872						HO:873						HO:874						HO:875						HO:876						HO:877						HO:878						HO:879						HO:880						HO:881						HO:882						HO:883						HO:884					

POINT: AUG 1978
FREQUENCY CHARTS FOR DIFFUSIF / TET IN SALT



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MONTHLY STATEMENT UATA

LITERATURE AND CULTURE

TOTAL INSULARITY INDEX

MEAN STD D MIN MAX

MONTHLY TOTAL SOLAR INSOLATION IN BTU/FT²/DAY /S. MGR

MONTH: SEP 1978

	0.00	3.00	6.00	9.00	12.00	15.00	18.00	21.00	24.00
<i>LACARLINO: RACARLINO, CABA, AR</i>									
350.00									
341.03									
332.05									
323.08									
314.10									
305.13									
296.15									
287.18									
278.21									
269.23									
260.26									
251.28									
242.31									
233.33	H								
224.36	H								
215.38	H								
206.41	H								
197.44	H								
188.46	H								
179.49	H								
170.51	H								
161.54	H								
152.56	H								
143.59	H								
134.62	H								
125.64	H								
116.67	H								
107.69	H								
98.72	H								
89.74	H								
80.77	H								
71.79	H								
62.82	H								
53.85	H								
44.87	H								
35.96	H								
26.92	H								
17.95	H								
8.97	H								
0.00	H								

0.00 3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00
 (+) MAXIMUM VALUE (M) MEAN VALUE (-) MINIMUM VALUE

0.00

0.00

PERIODIC CHARTS FOR PUPILS / T. H. SMALL

BASED ON THE KIY VARIETY
LICAIHUA: MACAU, CATA.

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RANGE 2
V = 1

24 47 61 67 172 123 100 100

1-2
2-3
3-4
4-5
5-6
6-7

THESE ARE 40 VALUES ABOVE THE MEAN

ANSE	ϑ	b_C	$16C$	24P
1	-1			
2	-2	xxx		
3	-3	xxxx		
4	-4	xxxxx		
5	-5	xxxxx	x	
6	-6	xxxxx	xxxx	
7	-7	xxxxx	xxxx	x
8	-8	xxxxx	xxxx	xx
9	-9	xxxxx	xxxx	xx
10	-10	xxxxx	xxxx	xx

DAILY VARIATIONS IN BASEL

RANGE	0	5	10	15	20	25	30	CUMULATIVE				% OF TOTAL
								NO. OF VALUES	% UF	TOTAL	NU. OF VALUES	
0-1	1	2	XX					0	0.00			
1-2	2	2	XX					40	0.02	XX		
2-3	2	2	XX					40	0.02	XXXX		
3-4	0	0	XX					40	0.02	XXXX		
4-5	0	0	X					40	0.02	XXXX		
5-6	1	1	XX					20	0.01	XXXXX		
6-7	5	5	XX					20	0.01	XXXXX		
7-8	5	5	XX					20	0.01	XXXXX		
8-9	0	0	XX					20	0.01	XXXXX		
9-10	0	0	XX					20	0.01	XXXXX		
10-11	0	0	XX					20	0.01	XXXXX		
11-12	0	0	XX					20	0.01	XXXXX		
12-13	0	0	XX					20	0.01	XXXXX		
13-14	0	0	XX					20	0.01	XXXXX		
14-15	0	0	XX					20	0.01	XXXXX		
15-16	0	0	XX					20	0.01	XXXXX		
16-17	0	0	XX					20	0.01	XXXXX		
17-18	0	0	XX					20	0.01	XXXXX		
18-19	0	0	XX					20	0.01	XXXXX		
19-20	0	0	XX					20	0.01	XXXXX		
20-21	0	0	XX					20	0.01	XXXXX		
21-22	0	0	XX					20	0.01	XXXXX		
22-23	0	0	XX					20	0.01	XXXXX		
23-24	0	0	XX					20	0.01	XXXXX		
24-25	0	0	XX					20	0.01	XXXXX		
25-26	0	0	XX					20	0.01	XXXXX		
26-27	0	0	XX					20	0.01	XXXXX		
27-28	0	0	XX					20	0.01	XXXXX		
28-29	0	0	XX					20	0.01	XXXXX		
29-30	0	0	XX					20	0.01	XXXXX		
30-31	0	0	XX					20	0.01	XXXXX		
31-32	0	0	XX					20	0.01	XXXXX		
32-33	0	0	XX					20	0.01	XXXXX		
33-34	0	0	XX					20	0.01	XXXXX		
34-35	0	0	XX					20	0.01	XXXXX		
35-36	0	0	XX					20	0.01	XXXXX		
36-37	0	0	XX					20	0.01	XXXXX		
37-38	0	0	XX					20	0.01	XXXXX		
38-39	0	0	XX					20	0.01	XXXXX		
39-40	0	0	XX					20	0.01	XXXXX		
40-41	0	0	XX					20	0.01	XXXXX		
41-42	0	0	XX					20	0.01	XXXXX		
42-43	0	0	XX					20	0.01	XXXXX		
43-44	0	0	XX					20	0.01	XXXXX		
44-45	0	0	XX					20	0.01	XXXXX		
45-46	0	0	XX					20	0.01	XXXXX		
46-47	0	0	XX					20	0.01	XXXXX		
47-48	0	0	XX					20	0.01	XXXXX		
48-49	0	0	XX					20	0.01	XXXXX		
49-50	0	0	XX					20	0.01	XXXXX		
50-51	0	0	XX					20	0.01	XXXXX		
51-52	0	0	XX					20	0.01	XXXXX		
52-53	0	0	XX					20	0.01	XXXXX		
53-54	0	0	XX					20	0.01	XXXXX		
54-55	0	0	XX					20	0.01	XXXXX		
55-56	0	0	XX					20	0.01	XXXXX		
56-57	0	0	XX					20	0.01	XXXXX		
57-58	0	0	XX					20	0.01	XXXXX		
58-59	0	0	XX					20	0.01	XXXXX		
59-60	0	0	XX					20	0.01	XXXXX		
60-61	0	0	XX					20	0.01	XXXXX		
61-62	0	0	XX					20	0.01	XXXXX		
62-63	0	0	XX					20	0.01	XXXXX		
63-64	0	0	XX					20	0.01	XXXXX		
64-65	0	0	XX					20	0.01	XXXXX		
65-66	0	0	XX					20	0.01	XXXXX		
66-67	0	0	XX					20	0.01	XXXXX		
67-68	0	0	XX					20	0.01	XXXXX		
68-69	0	0	XX					20	0.01	XXXXX		
69-70	0	0	XX					20	0.01	XXXXX		
70-71	0	0	XX					20	0.01	XXXXX		
71-72	0	0	XX					20	0.01	XXXXX		
72-73	0	0	XX					20	0.01	XXXXX		
73-74	0	0	XX					20	0.01	XXXXX		
74-75	0	0	XX					20	0.01	XXXXX		
75-76	0	0	XX					20	0.01	XXXXX		
76-77	0	0	XX					20	0.01	XXXXX		
77-78	0	0	XX					20	0.01	XXXXX		
78-79	0	0	XX					20	0.01	XXXXX		
79-80	0	0	XX					20	0.01	XXXXX		
80-81	0	0	XX					20	0.01	XXXXX		
81-82	0	0	XX					20	0.01	XXXXX		
82-83	0	0	XX					20	0.01	XXXXX		
83-84	0	0	XX					20	0.01	XXXXX		
84-85	0	0	XX					20	0.01	XXXXX		
85-86	0	0	XX					20	0.01	XXXXX		
86-87	0	0	XX					20	0.01	XXXXX		
87-88	0	0	XX					20	0.01	XXXXX		
88-89	0	0	XX					20	0.01	XXXXX		
89-90	0	0	XX					20	0.01	XXXXX		
90-91	0	0	XX					20	0.01	XXXXX		
91-92	0	0	XX					20	0.01	XXXXX		
92-93	0	0	XX					20	0.01	XXXXX		
93-94	0	0	XX					20	0.01	XXXXX		
94-95	0	0	XX					20	0.01	XXXXX		
95-96	0	0	XX					20	0.01	XXXXX		
96-97	0	0	XX					20	0.01	XXXXX		
97-98	0	0	XX					20	0.01	XXXXX		
98-99	0	0	XX					20	0.01	XXXXX		
99-100	0	0	XX					20	0.01	XXXXX		

MONTH: SEP 1978		ATL/FL**2 VS. HNJ	
0.00	3.00	6.00	9.00
350.00	3.00	6.00	9.00
341.03			12.00
332.05			15.00
323.08			19.00
314.10			21.00
305.13	S	S	24.00
296.15			
287.18	S	S	
278.21			
269.23	M	M	
260.26			
251.28	S	S	
242.31			
233.33	H	H	
224.36			
215.38	S	S	
206.41			
197.44	S	S	
188.46	M	M	
179.49			
170.51	S	S	
161.54			
152.56	S	S	
143.59	M	M	
134.62			
125.64	S	S	
116.67			
107.69	S	S	
98.72	M	M	
89.74			
80.77	S	S	
71.79			
62.82	S	S	
53.85	M	M	
44.87			
35.90	S	S	
26.92			
17.95	S	S	
6.97	M	M	
0.00			
<hr/>			
0.00	3.00	6.00	9.00
			12.00
			15.00
			18.00
			21.00
			24.00
<hr/>			
(S) MEAN VALUE PLUS OR MINUS STD D		(M) MEAN VALUE	
		0.00	

MONTH: SEP 1978

MONTHLY PRENTICE DATA

LOCATION: JACAKUL, CATANIA
TOTAL / EXTRATEKRSITIAL INSOLATION

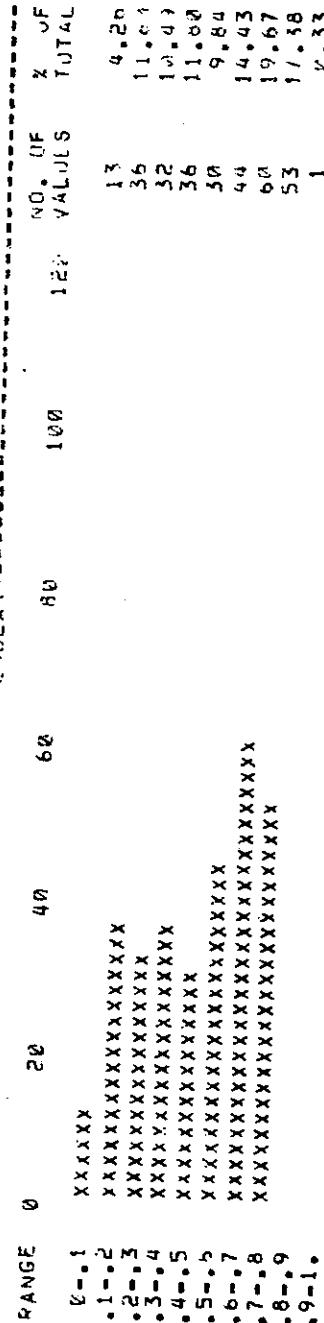
DAY	HOUR (CODE)						(L)	(U)	DAILY VALUE
	(A)	(B)	(C)	(D)	(E)	(F)			
1	0.173	0.527	0.643	0.514	0.779	0.743	0.716	0.758	0.528
2	0.450	0.557	0.441	0.378	0.536	0.194	0.076	0.425	0.221
3	0.494	0.558	0.441	0.378	0.536	0.194	0.076	0.425	0.221
4	0.494	0.558	0.441	0.378	0.536	0.194	0.076	0.425	0.221
5	0.363	0.224	0.496	0.636	0.171	0.549	0.755	0.282	0.221
6	0.891	0.538	0.681	0.694	0.720	0.746	0.739	0.738	0.738
7	0.444	0.564	0.655	0.706	0.723	0.753	0.754	0.754	0.754
8	0.479	0.572	0.665	0.711	0.735	0.753	0.753	0.753	0.753
9	0.538	0.606	0.601	0.690	0.690	0.690	0.690	0.690	0.690
10	0.443	0.425	0.526	0.675	0.501	0.639	0.595	0.595	0.595
11	0.237	0.317	0.263	0.611	0.757	0.504	0.761	0.726	0.726
12	0.487	0.544	0.707	0.684	0.543	0.155	0.499	0.309	0.309
13	0.513	0.581	0.670	0.704	0.705	0.366	0.173	0.423	0.349
14	0.226	0.370	0.687	0.421	0.636	0.688	0.269	0.638	0.382
15	0.739	0.739	0.739	0.739	0.739	0.739	0.739	0.739	0.739
16	0.461	0.463	0.536	0.615	0.783	0.719	0.581	0.734	0.573
17	0.381	0.495	0.634	0.677	0.681	0.247	0.145	0.124	0.327
18	0.111	0.216	0.241	0.590	0.740	0.672	0.112	0.279	0.044
19	0.276	0.460	0.615	0.646	0.625	0.508	0.330	0.396	0.055
20	0.360	0.483	0.430	0.635	0.635	0.138	0.165	0.604	0.213
21	0.136	0.162	0.340	0.643	0.704	0.658	0.674	0.609	0.055
22	0.329	0.549	0.617	0.569	0.620	0.692	0.747	0.737	0.292
23	0.523	0.485	0.591	0.691	0.672	0.742	0.772	0.695	0.272
24	0.494	0.573	0.582	0.645	0.738	0.710	0.644	0.717	0.186
25	0.111	0.216	0.241	0.171	0.171	0.155	0.155	0.155	0.155
26	0.466	0.568	0.634	0.153	0.189	0.257	0.256	0.245	0.394
27	0.206	0.297	0.297	0.141	0.141	0.141	0.141	0.141	0.268
28	0.055	0.164	0.241	0.241	0.241	0.241	0.241	0.241	0.526
29	0.606	0.707	0.711	0.783	0.777	0.755	0.761	0.758	0.164
30	0.492	0.573	0.582	0.645	0.738	0.710	0.644	0.717	0.642
MEAN	0.412	0.472	0.568	0.646	0.692	0.496	0.466	0.426	0.394
STD D	0.180	0.123	0.141	0.076	0.153	0.189	0.257	0.256	0.297
MIN	0.111	0.216	0.241	0.421	0.171	0.155	0.094	0.046	0.164
MAX	0.891	0.606	0.707	0.711	0.783	0.777	0.755	0.761	0.642

FREQUENCY CHARTS FÜR TOTAL / EXTRATEFESI AL INSULATI

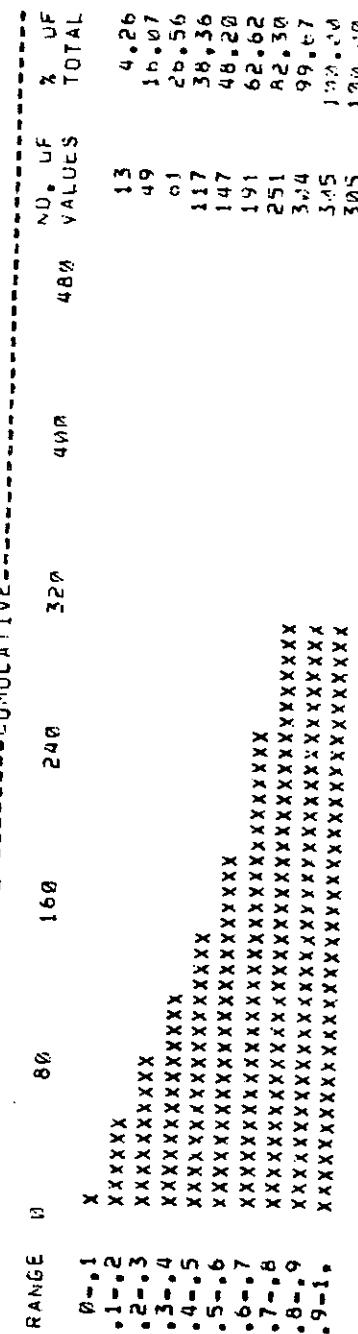
1100 TRI 8 SEP 1978

LOCATION: BACAMORI, CELAÚN

BASED ON MULTIVARIATE STATISTICS

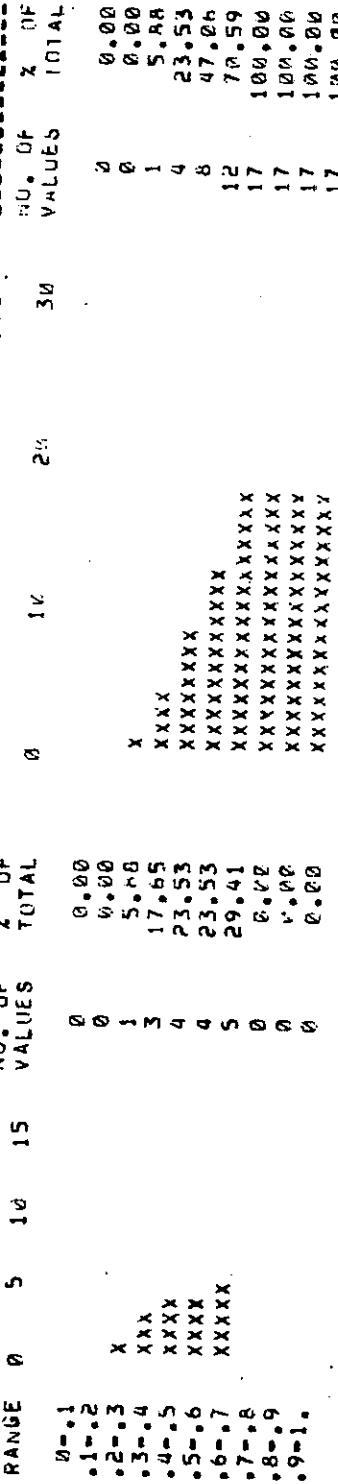


CHIMIATRIST



BASED ON DAILY VALUES

CURRICULATIVE



DATUM: SEP 1970

MONTHLY WEATHER DATA

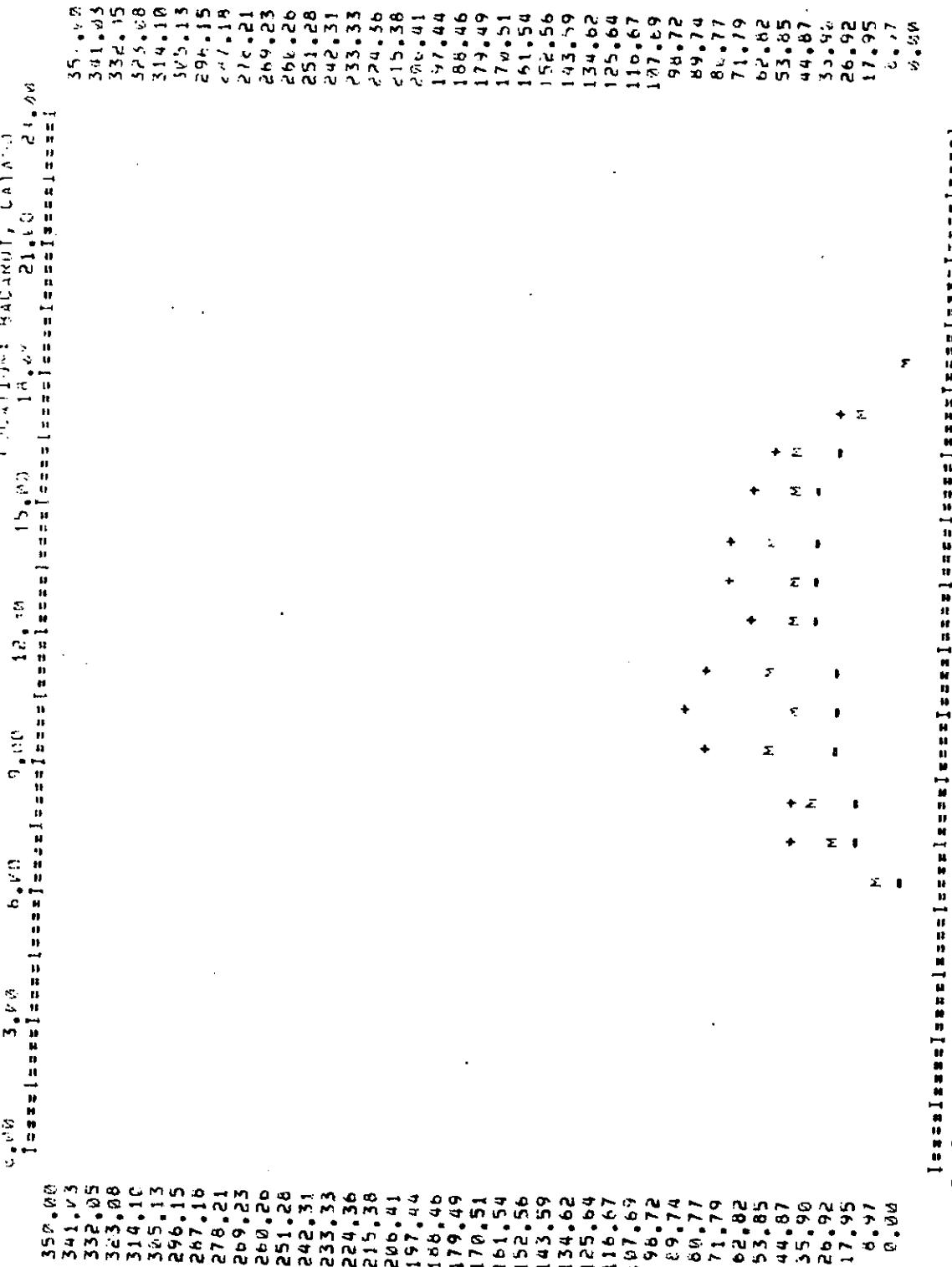
LOCATION: BACARI, LATAKIA

DIFFUSE INSOLATION IN ETU/HIT*2

DAY	HOUR						ETU/HIT*2						TOTAL	
	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	
1	3.78	21.47	32.33	56.49	45.51	45.75	62.34	55.94	41.65	46.83	38.42	26.47	3.29	461.0
2	6.59	19.40	40.02	65.15	57.34	61.24	33.18	63.81	123.34	55.15	*****	*****	*****	*****
3	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
4	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
5	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
7	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
8	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
9	6.10	16.59	25.30	26.84	35.14	38.84	38.92	41.85	46.85	43.07	54.78	1.71	*****	*****
10	5.49	16.35	22.06	27.45	27.33	30.38	32.45	34.53	37.45	61.15	57.10	1.34	392.5	*****
11	5.73	16.71	43.31	67.22	48.68	84.79	51.61	67.47	74.42	38.55	25.74	1.95	369.2	*****
12	5.49	16.96	34.16	74.66	84.42	83.81	37.94	34.65	94.31	92.64	55.59	2.58	547.3	*****
13	*****	22.20	39.77	54.66	61.76	53.31	56.49	55.27	50.67	52.54	47.46	1.35	*****	*****
14	7.08	34.40	54.66	75.27	95.16	103.58	115.41	96.36	81.13	79.79	36.60	23.55	*****	*****
15	8.91	45.38	42.94	78.08	86.86	60.02	56.39	57.46	47.21	42.82	33.31	18.42	580.1	*****
16	4.76	36.48	43.43	84.42	82.72	63.81	50.39	*****	50.14	51.61	52.22	32.33	*****	*****
17	5.73	15.98	47.46	60.88	58.44	61.12	82.47	52.34	43.31	30.74	23.79	12.32	*****	*****
18	6.95	22.22	35.26	55.14	66.12	60.02	58.44	63.94	79.79	67.71	44.65	25.86	*****	*****
19	4.76	31.84	72.71	74.54	119.32	113.46	101.14	88.57	63.81	62.46	79.30	23.91	*****	*****
20	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
21	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
22	9.27	32.70	44.53	62.22	72.59	68.63	65.52	53.56	114.93	64.26	40.75	8.68	40.75	*****
23	6.59	24.52	36.55	49.29	63.26	61.24	62.95	55.87	*****	12.93	10.13	*****	*****	*****
24	2.32	22.08	47.09	62.46	59.24	66.12	49.94	130.78	94.67	62.10	39.15	14.79	*****	*****
25	5.73	32.45	59.51	93.45	69.17	127.61	131.52	117.12	56.25	17.93	21.47	9.39	*****	*****
26	6.59	32.45	73.08	66.00	54.41	67.93	123.95	116.02	78.81	70.15	62.22	*****	*****	*****
27	2.81	18.18	58.68	68.45	91.26	113.34	112.36	83.08	122.85	69.42	*****	*****	*****	*****
28	9.52	56.97	31.72	63.32	67.95	56.97	*****	*****	*****	*****	*****	*****	*****	*****
29	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
30	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
MEAN	6.00	23.39	32.79	51.22	48.70	51.95	48.26	47.46	49.56	46.29	41.97	20.13	2.39	470.0
STD D	1.85	12.53	10.23	23.26	22.95	21.33	12.51	14.41	14.46	8.29	13.61	3.81	0.76	51.2
MIN	3.78	16.35	22.08	26.84	27.33	32.38	32.45	34.53	37.45	38.55	25.74	16.47	313.3	698.6
MAX	8.91	45.36	43.31	78.08	86.86	84.74	62.34	67.47	74.42	60.15	57.10	26.47	3.29	*****

MONTHLY REFUSE LEVELS FOR RIVER MUR

MONTH: SEP 1976



Legend:
 (+) MAXIMUM VALUE
 (M) MEAN VALUE
 (-) MINIMUM VALUE

ATL STD LINE 21.00 24.00 26.92 17.95 6.97 0.04

MONTHLY DIFFUSE INSULATION 131

2025 RELEASE UNDER E.O. 14176

DATE	TIME	LOCATION	TEMP.	HUM.	WIND	RHUM.
12.00	3.00	6.00	9.00	12.00	15.00	18.00
12.00	4.00	7.00	10.00	13.00	16.00	19.00
12.00	5.00	8.00	11.00	14.00	17.00	20.00
12.00	6.00	9.00	12.00	15.00	18.00	21.00
12.00	7.00	10.00	13.00	16.00	19.00	22.00
12.00	8.00	11.00	14.00	17.00	20.00	23.00
12.00	9.00	12.00	15.00	18.00	21.00	24.00
12.00	10.00	13.00	16.00	19.00	22.00	25.00
12.00	11.00	14.00	17.00	20.00	23.00	26.00
12.00	12.00	15.00	18.00	21.00	24.00	27.00
12.00	13.00	16.00	19.00	22.00	25.00	28.00
12.00	14.00	17.00	20.00	23.00	26.00	29.00
12.00	15.00	18.00	21.00	24.00	27.00	30.00
12.00	16.00	19.00	22.00	25.00	28.00	31.00
12.00	17.00	20.00	23.00	26.00	29.00	32.00
12.00	18.00	21.00	24.00	27.00	30.00	33.00
12.00	19.00	22.00	25.00	28.00	31.00	34.00
12.00	20.00	23.00	26.00	29.00	32.00	35.00
12.00	21.00	24.00	27.00	30.00	33.00	36.00
12.00	22.00	25.00	28.00	31.00	34.00	37.00
12.00	23.00	26.00	29.00	32.00	35.00	38.00
12.00	24.00	27.00	30.00	33.00	36.00	39.00
12.00	25.00	28.00	31.00	34.00	37.00	40.00
12.00	26.00	29.00	32.00	35.00	38.00	41.00
12.00	27.00	30.00	33.00	36.00	39.00	42.00
12.00	28.00	31.00	34.00	37.00	40.00	43.00
12.00	29.00	32.00	35.00	38.00	41.00	44.00
12.00	30.00	33.00	36.00	39.00	42.00	45.00
12.00	31.00	34.00	37.00	40.00	43.00	46.00
12.00	32.00	35.00	38.00	41.00	44.00	47.00
12.00	33.00	36.00	39.00	42.00	45.00	48.00
12.00	34.00	37.00	40.00	43.00	46.00	49.00
12.00	35.00	38.00	41.00	44.00	47.00	50.00
12.00	36.00	39.00	42.00	45.00	48.00	51.00
12.00	37.00	40.00	43.00	46.00	49.00	52.00
12.00	38.00	41.00	44.00	47.00	50.00	53.00
12.00	39.00	42.00	45.00	48.00	51.00	54.00
12.00	40.00	43.00	46.00	49.00	52.00	55.00
12.00	41.00	44.00	47.00	50.00	53.00	56.00
12.00	42.00	45.00	48.00	51.00	54.00	57.00
12.00	43.00	46.00	49.00	52.00	55.00	58.00
12.00	44.00	47.00	50.00	53.00	56.00	59.00
12.00	45.00	48.00	51.00	54.00	57.00	60.00
12.00	46.00	49.00	52.00	55.00	58.00	61.00
12.00	47.00	50.00	53.00	56.00	59.00	62.00
12.00	48.00	51.00	54.00	57.00	60.00	63.00
12.00	49.00	52.00	55.00	58.00	61.00	64.00
12.00	50.00	53.00	56.00	59.00	62.00	65.00
12.00	51.00	54.00	57.00	60.00	63.00	66.00
12.00	52.00	55.00	58.00	61.00	64.00	67.00
12.00	53.00	56.00	59.00	62.00	65.00	68.00
12.00	54.00	57.00	60.00	63.00	66.00	69.00
12.00	55.00	58.00	61.00	64.00	67.00	70.00
12.00	56.00	59.00	62.00	65.00	68.00	71.00
12.00	57.00	58.00	61.00	64.00	67.00	72.00
12.00	58.00	59.00	62.00	65.00	68.00	73.00
12.00	59.00	58.00	61.00	64.00	67.00	74.00
12.00	60.00	59.00	62.00	65.00	68.00	75.00
12.00	61.00	58.00	61.00	64.00	67.00	76.00
12.00	62.00	59.00	62.00	65.00	68.00	77.00
12.00	63.00	58.00	61.00	64.00	67.00	78.00
12.00	64.00	59.00	62.00	65.00	68.00	79.00
12.00	65.00	58.00	61.00	64.00	67.00	80.00
12.00	66.00	59.00	62.00	65.00	68.00	81.00
12.00	67.00	58.00	61.00	64.00	67.00	82.00
12.00	68.00	59.00	62.00	65.00	68.00	83.00
12.00	69.00	58.00	61.00	64.00	67.00	84.00
12.00	70.00	59.00	62.00	65.00	68.00	85.00
12.00	71.00	58.00	61.00	64.00	67.00	86.00
12.00	72.00	59.00	62.00	65.00	68.00	87.00
12.00	73.00	58.00	61.00	64.00	67.00	88.00
12.00	74.00	59.00	62.00	65.00	68.00	89.00
12.00	75.00	58.00	61.00	64.00	67.00	90.00
12.00	76.00	59.00	62.00	65.00	68.00	91.00
12.00	77.00	58.00	61.00	64.00	67.00	92.00
12.00	78.00	59.00	62.00	65.00	68.00	93.00
12.00	79.00	58.00	61.00	64.00	67.00	94.00
12.00	80.00	59.00	62.00	65.00	68.00	95.00
12.00	81.00	58.00	61.00	64.00	67.00	96.00
12.00	82.00	59.00	62.00	65.00	68.00	97.00
12.00	83.00	58.00	61.00	64.00	67.00	98.00
12.00	84.00	59.00	62.00	65.00	68.00	99.00
12.00	85.00	58.00	61.00	64.00	67.00	100.00

0.00 3.00 0.00 9.00 12.00 15.00 18.00 21.00 24.00

DATE: Sep 1975

CONTINUOUS DATA

LOCATION: MACAU, LATA 1

DIFFUSE / TOTAL I.SOLAR.

DAY	HOUR						CODE	1-2 (F)	1-2 (G)	1-3 (H)	3-4 (I)	4-5 (J)	5-6 (K)	5-7 (L)	WALIT VALUE
	6-7 (A)	6-8 (B)	6-9 (C)	6-10 (D)	11-11 (E)	11-12 (F)									
1	0.727	0.316	0.225	0.362	0.160	0.147	0.203	0.127	0.156	0.224	0.355	0.434	0.224	0.204	
2	0.468	0.270	0.406	0.568	0.293	0.786	1.057	0.919	0.818	1.018					
3															
4															
5															
6															
7															
8															
9	0.462	0.228	0.159	0.125	0.134	0.129	0.126	0.145	0.190	0.229	0.483	1.011	1.244	0.186	
10	0.387	0.222	0.149	0.127	0.102	0.101	0.105	0.124	0.151	0.354	0.590	1.124	1.220	0.175	
11	0.393	0.235	0.479	0.348	0.785	0.387	0.167	0.613	0.943	1.435	0.975	0.960	1.220	0.443	
12	0.513	0.587	0.280	0.443	0.352	0.311	0.986	0.994	0.906	0.917	0.928	1.627			
13	*	*	0.320	0.261	0.264	0.233	0.182	0.186	0.194	0.206	0.208	0.375	0.551		
14	0.544	0.628	0.465	0.368	0.524	0.403	0.477	0.437	0.753	0.634	1.076	1.076	1.076		
15	0.567	0.581	0.320	0.373	0.489	0.202	0.184	0.195	0.190	0.227	0.312	0.542	1.067	0.271	
16	0.690	0.894	0.741	0.456	0.302	0.319	0.206	0.198	0.198	0.776	2.559	0.679			
17	0.427	0.229	0.301	0.294	0.298	0.992	0.499	0.213	0.182	0.163	0.206	0.415			
18	0.470	0.296	0.236	0.259	0.260	0.414	0.837	0.516	0.575	0.557	0.451	2.781			
19	0.732	0.672	0.476	0.586	0.518	0.417	0.867	0.362	0.788	0.474	0.703	1.161			
20	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
22	0.713	0.553	0.374	0.336	0.250	0.207	0.361	0.146	0.585	0.971	1.084	1.069	1.056		
23	0.616	0.589	0.274	0.242	0.258	0.631	1.027	1.027	1.027	1.125	1.094	1.043			
24	0.748	0.006	0.862	0.352	0.212	0.251	1.021	1.047	0.971	1.127	1.145	1.167			
25	0.745	0.556	0.371	0.482	0.399	0.642	1.071	0.514	1.030	1.172	1.142	1.116			
26	0.665	0.531	0.769	0.547	1.106	1.250	0.604	0.525	0.602	0.842	0.884				
27	0.758	0.587	0.782	0.459	0.363	0.441	0.421	0.348	0.598	0.851					
28	1.069	0.535	0.234	0.372	0.307	0.211	*	*	*	*	*	*	*		
29	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

MEAN	0.507	0.316	0.266	0.267	0.334	0.193	0.157	0.241	0.326	0.420	0.543	0.631	1.269	0.256
STD D	0.143	0.153	0.137	0.129	0.296	0.114	0.041	0.211	0.345	0.205	0.351	0.321	0.024	0.112
MIN	0.387	0.222	0.149	0.125	0.102	0.101	0.105	0.120	0.151	0.224	0.312	0.430	0.167	0.175
MAX	0.727	0.581	0.478	0.373	0.785	0.387	0.613	0.943	0.936	0.975	1.120	1.224	0.443	

TOTAL / EXTRATERRESTRIAL INSULATION (VERTICAL AXIS)
VS. DIFFUSE / TOTAL INSULATION (VERTICAL AXIS)

YEAR: SEP 1976

0.00 0.19 0.38 0.56 0.75 0.94 1.13 1.31 1.50
1.50 1.42 1.35 1.31 1.27 1.23 1.19 1.15 1.12 1.08 1.04 1.00 0.96 0.92 0.89 0.85 0.81 0.77 0.73 0.69 0.65 0.62 0.58 0.54 0.50 0.46 0.42 0.38 0.35 0.31 0.27 0.23 0.19 0.15 0.12 0.06 0.04 0.02

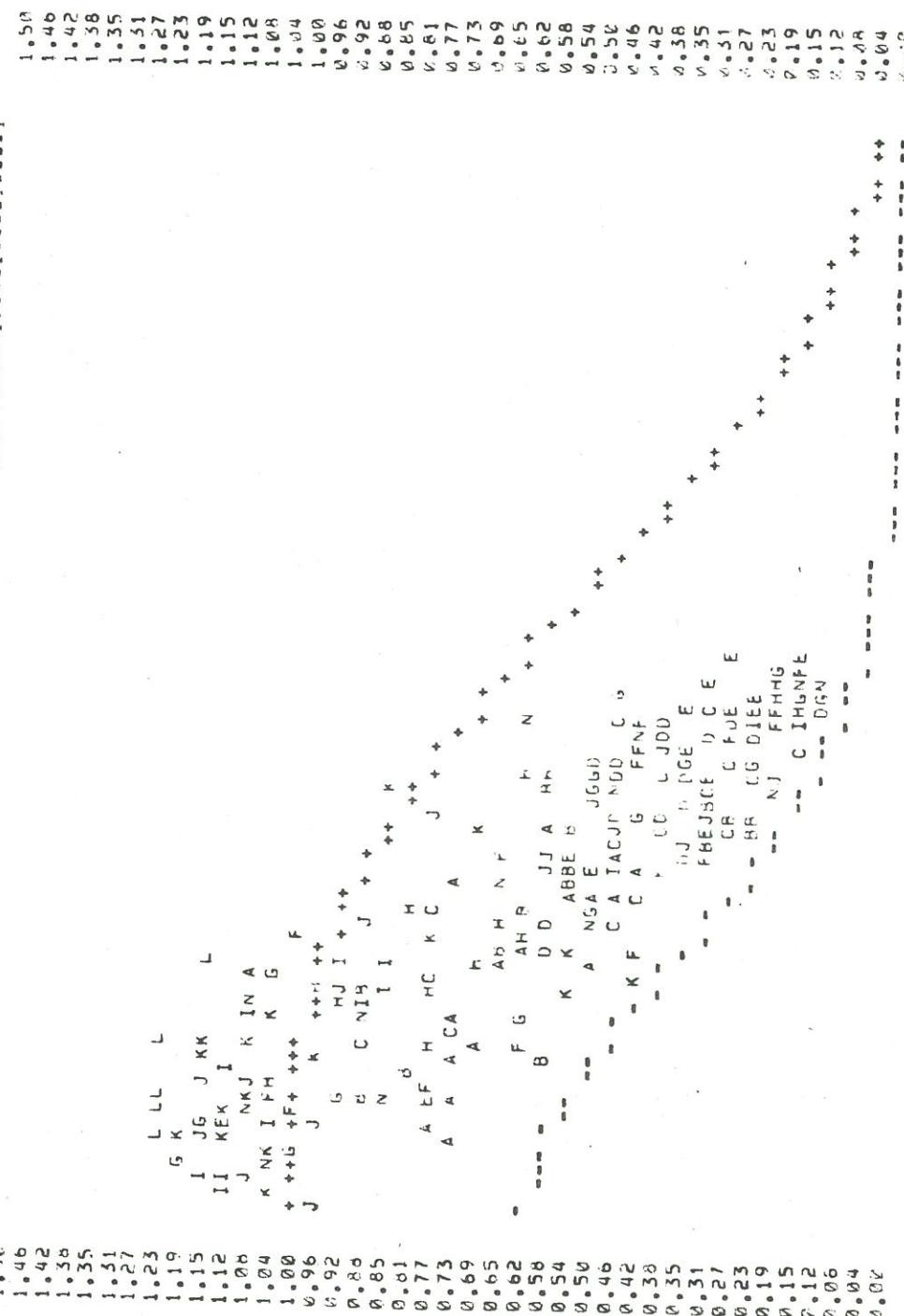


FIGURE 9.00 0.19 0.38 0.56 0.75 0.94 1.13 1.31 1.50
FOR LETTER CURVES SEE TOTAL / EXTRATERRESTRIAL INSULATION TABLE
(+) MAXIMUM VALUE CURVE POINTS (-) MINIMUM VALUE CURVE POINTS

KT: TOTAL / EXTRATERRESTRIAL *** 98 VALUES ABOVE 1.5 *** 98 VALUES WITHOUT DATA
KD: DIFFUSE / TOTAL *** 149 VALUES ABOVE 1.5 *** 149 VALUES WITHOUT DATA