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PROGRAM (RSOPRNT)

Job Order 52-379

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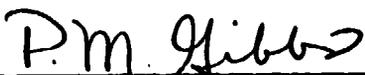
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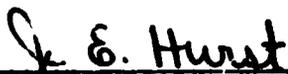
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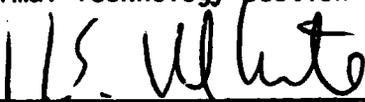
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16. Abstract <p>This document provides a user's guide for the RSOPRNT, a TRASYS Master Restart Output Tape (RSO) reader. Background information and sample runstreams, as well as, references, input requirements and options, are included.</p> <p style="text-align: center;"><b>PRECEDING PAGE BLANK NOT FILMED</b></p>					
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## 1. INTRODUCTION

The RSO - Tape Print Program (RSOPRNT) is a thirteen routine program designed to read a TRASYS Master Restart Tape, and write the most commonly used types of data. This publication offers instruction for RSOPRNT's implementation. User type knowledge of the TRASYS program is assumed. For additional background information on TRASYS usage consult the references 1 and 2.

## 2. DISCUSSION

During TRASYS II processor execution, each restartable processor segment writes, to a tape or file, a pseudo-file containing the data necessary to restart an interrupted job with minimal repeated calculations. RSOPRNT reads the data and outputs the pseudo-file(s) specified by the user.

The two types of runstreams under which TRASYS II can be run, Original and Mitre, create two types of Master Restart Tapes, Original and Mitre. The Original Restart Tape has two files. The first file contains pre-processor information and the second file contains processor information. The Mitre Restart Tape has nine files, the first eight with pre-processor data and the ninth with processor data. RSOPRNT outputs only the processor data.

### 3. INPUT

Tape or Mass Storage file must be assigned to unit 1.

Tape: @ASG, T 1., device, tape number  
M.S. file: @ASG, option (A, T or c) file name.  
@USE 1., file name.

#### 3.1 DATA DECK

This deck contains only integer information. Example runstreams are shown in Figure 1. The input can be in any column.

#### CARD

- 1 The first card must contain an integer, 2 or 9, indicating the number of files on tape.  
2 for Original Runstream generation of tape  
9 for Mitre Runstream generation of tape
- 2 The second card must contain an integer constant, say N, such that  $1 \leq N \leq 7$ , indicating the number of pseudo-files to be written.
- 3 The third card must have N integer values, in ascending order, separated by commas and/or blanks. These N values indicate the desired pseudo-file(s) corresponding number

- |    |  |                 |
|----|--|-----------------|
| 1  | - Correspondence   | Data            |
| 2  | - Properties   | Data            |
| 3* | - Form-Factors   | Data            |
| 4* | - Gray Bodies  | Data (Solar)    |
| 5* | - Gray Bodies  | Data (Infrared) |
| 6  | - Direct Incident Flux                                   | Data (DICAL)    |
| 7  | - Absorbed Heating Rate                                  | Data (AQCAL)    |
| 8  | - All of the above                                       | Data            |
| *  | - Data values listed have been multiplied by nodal area. |                 |

Figure 1. Example Runstreams

1. Deck set up for Mitre Tape

	▽RUN		
	▽QUAL ES3-L40006		
	▽ASG,A *TRASIN.		
	▽ASG,T 1.,8C,X12345	(Seven track tape)	
	▽XQT *TRASIN.RSOPRNT		
DATA DECK	{	9	nine files
		1	one option
		8	all pseudo-files
		▽PMD,ELP	
	▽FIN		

2. Deck set up for Original Tape

	▽RUN	
	▽QUAL ES3-L40006	
	▽ASG,A *TRASIN.	
	▽ASG,T 1.,8C,X20282	
	▽XQT *TRASIN.RSOPRNT	
	2	two files
	2	two options
	1,2	correspondence, properties
	▽PMD,ELP	
	▽FIN	

3. Deck set up for Mass Storage File

	▽RUN	
	▽ASG,T 1.,8C,X01610	
	▽ASG,T FILE.	
	▽COPY,G 1.,FILE.	
	▽FREE 1.	
	▽USE 1., FILE.	
	▽QUAL ES3-L40006	
	▽ASG,A *TRASIN.	
	▽XQT *TRASIN.RSOPRNT	
	2	two files
	3	three options
	2,4,6	properties, gray bodies, DICAL
	▽PMD,ELP	
	▽FIN	

#### 4. Output

The logical record number, date and time of TRASYS run are printed in the heading of each pseudo-file. Node identification numbers are printed above corresponding data.

#### 5. Program Termination and Error Procedure

Negative or real values in Data Deck cause fatal errors. If an error occurs while reading the tape, the present record is skipped and reading resumes. Normal program termination occurs when an end of file marker is encountered.

#### 6. Conclusion

This program has been successfully tested. RSOPRNT gives TRASYS users data generated by TRASYS without having to make another costly TRASYS run.

## 7. REFERENCES

1. Thermal Radiation Analysis System User's Manual, Martin Marietta, June 1979.
2. Thermal Radiation Analysis System Programmers Manual, Martin Marietta, June 1979.