

MISSISSIPPI STATE UNIVERSITY



INSTITUTE FOR ENVIRONMENTAL STUDIES

P.O. Drawer GH
Mississippi State, Mississippi 39762
Phone: (601) 325-4325

December 5, 1973

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in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."*

*E7.4-10.112
CR-136/08*

NASA Scientific and Technical Information
Facility
P. O. Box 33
College Park, Maryland 20740

ATTENTION: (Earth Resources)

Gentlemen:

This letter constitutes the fifth Type I progress report as required by Article II of the NASA contract document NAS5-21881.

- (a) This report concerns ERTS-A proposal NASA control no. SR-097 having the title: Application of ERTS-A Data to Agricultural Practices in the Mississippi Delta Region.
- (b) The principal investigator is:

Dr. C. W. Bouchillon
Principal Investigator - UN 023
Mississippi State University
Drawer GH
Mississippi State, MS 39762
- (c) At this time there are no unusual problems impeding the progress of the investigation.
- (d) During this reporting period ending November 30, 1973, no significant progress has been made due to the fact that we will receive the data in January 1974.

A project status review was given to NASA Goddard in October, 1973 at their request.

Incoming data has been continuously cataloged and a cursory analysis of the data quality made. A summary is given below and attached to the end of this report is a set of data log sheets and an analysis of the received data.

E74-10112 APPLICATION OF ERTS-A DATA
TO AGRICULTURAL PRACTICES IN THE
MISSISSIPPI DELTA REGION Progress
Report, period ending 30 (Mississippi
State Univ.) 10 p HC \$3.00 CSCI 02C

G3/13 Unclas
00112

N74-13039

To date we have received data from a total of 17 cycles out of the 24 cycles that have been made and on which we could have received data. The total number of cycles for which data reduction would have been feasible is 12. On a "By county" basis the number of cycles for which a particular county could have been processed (that is more than 80% coverage) is listed below for the Delta.

County number	→	1	2	3	4	5	6
# of cycles of 80% coverage	→	12	11	12	7	10	10

There have been very few system failures. By and large the data that has not been received or reduced has been due to cloud coverage.

- (e) No significant results have been obtained during this period.
- (f) No papers or publications have been released during this period.
- (g) No recommendations are offered at this time.
- (h) There are no changes in standing order forms.
- (i) There are no descriptor forms for this period.
- (j) All digital data for this project is obtained through ERL-NASA/MTF. There are no request forms filed specifically for this project.
- (k) There is no other information to report at this time.

Sincerely,



C. W. Bouchillon
Director

CWB/mjr

Enclosures

DELTA DATA LOG

DATE RECEIVED	ERTS-1 FRAME ID	FRAME DATE	70mm 4567	9.5in 4567	SHIPMENT COMP PART	COMPLETES SHIPMENT OF	ANALYSIS PLOT ANAL
25 Oct 72	1052-16061	13 Sept 72	1111	1111*	√*		
	1052-16064	13 Sept 72	1111	1111*			
	1052-16070	13 Sept 72	1111	1111*			
1 Nov 72	1071-16120	2 Oct 72	1111		✓		
	1071-16122	2 Oct 72	1111				
	1071-16125	2 Oct 72	1111				
8 Nov 72	1070-16061	1 Oct 72		2222	✓		
	1070-16064	1 Oct 72		2222			
	1070-16070	1 Oct 72		2222			
14 Nov 72	1035-16121	27 Aug 72	1111	2222	✓		
	1035-16124	27 Aug 72	1111	2222			
19 Dec 72	1071-16120	2 Oct 72		2222	✓	1 Nov 72	
	1071-16122	2 Oct 72		2222			
	1071-16125	2 Oct 72		2222			
15 Jan 73	1070-16061	1 Oct 72	1111		✓	8 Nov 72	
	1070-16064	1 Oct 72	1111				
	1070-16070	1 Oct 72	1111				
26 Jan 73	1070-16061	1 Oct 72	1111		✓	Duplicate Shipment	
	1070-16064	1 Oct 72	1111				
	1070-16070	1 Oct 72	1111				
13 Feb 73	1178-16065	17 Jan 73	1111	2222	✓		
	1178-16072	17 Jan 73	1111	2222			
27 Feb 73	1161-16123	31 Dec 72	1111	2222	✓		
	1161-16130	31 Dec 72	1111	2222			

* - Invoice was incorrectly marked

DATE RECEIVED	ERTS-1 DATA FRAME ID	DATE	70mm 4567	9.5 in 4567	SHIPMENT COMP PART	COMPLETES SHIPMENT OF	ANALYSIS PLOT ANAL
4 Apr 73	1215-16130	23 Feb 73	1111		✓		
	1215-16132	23 Feb 73	1111				
9 Apr 73	1214-16071	22 Feb 73	1111		✓		
9 Apr 73	1215-16130	23 Feb 73		2222	✓	4 Apr 73	
	1215-16132	23 Feb 73		2222			
1 May 73	1214-16071	22 Feb 73		2222	✓	9 Apr 73	
14 May 73	1232-16072	12 Mar 73	1111	2222	✓		
	1232-16075	12 Mar 73	1111	2222			
	1232-16081	12 Mar 73	1111	2222			
23 May 73	1251-16131	31 Mar 73	1111	2222	✓		
	1251-16133	31 Mar 73	1110	2222			
	1251-16140	31 Mar 73	1110	2202			
11 June 73	1286-16071	5 May 73		2222	✓		
	1286-16074	5 May 73		2222			
	1286-16080	5 May 73		2222			
12 June 73	1285-16022	4 May 73	1111	2222	✓		
13 June 73	1286-16071	5 May 73	1111		✓	11 June 73	
	1286-16074	5 May 73	1111				
	1286-16080	5 May 73	1111				
20 June 73	1269-16140	18 Apr 73		2222	✓		
3 July 73	1269-16140	18 Apr 73	1111		✓	20 June 73	
3 July 73	1305-16125	24 May 73	1111		✓		
3 July 73	1305-16125	24 May 73	1111		✓		
	1305-16131	24 May 73	1111				

DATE RECEIVED	ERTS-1 DATA		70mm	9.5in	SHIPMENT		COMPLETES	ANALYSIS	
	FRAME ID	DATE	4567	4567	COMP	PART	SHIPMENT OF	PLOT	ANAL
12 July 73	1305-16125	24 May 73		2222		✓	3 July 73		
	1305-16131	24 May 73		2222					
18 July 73	1322-16065	10 June 73	1111	2222		✓			
	1322-16072	10 June 73	1111	2222					
	1322-16074	10 June 73	1111	2222					
26 July 73	1339-16014	27 June 73		2222		✓			
1 Aug 73	1339-16014	27 June 73	1111			✓	26 July 73		
6 Aug 73	1340-16064	28 June 73	1111			✓	N.C.		
	1340-16070	28 June 73	1101*						
	1340-16073	28 June 73	1121*						
	1341-16131	29 June 73	1111						
20 Aug 73	1358-16072	16 July 73	1110			✓	N.C.		
31 Aug 73	1376-16061	3 Aug 73	1111			✓			
	1376-16064	3 Aug 73	1111						
	1376-16070	3 Aug 73	1111						
10 Sept 73	1358-16072	16 July 73		2222		✓	Δ20 Aug 73		
10 Sept 73	1377-16120	4 Aug 73	1111			✓			
	1377-16122	4 Aug 73	1111						
12 Sept 73	1377-16120	4 Aug 73		2222		✓	10 Sept 73		
	1377-16122	4 Aug 73		2222					

* - Invoice was incorrectly marked
N.C. - Partial shipment has not been completed
Δ - Additional data which does not complete order

DATE RECEIVED	ERTS-1 DATA		70mm 4567	9.5in 4567	SHIPMENT		COMPLETES SHIPMENT OF	ANALYSIS	
	FRAME ID	DATE			COMP	PART		PLOT	ANAL
12 Sept 73	1376-16061	3 Aug 73		2222		✓	31 Aug 73		
	1376-16064	3 Aug 73		2222					
	1376-16070	3 Aug 73		2222					
17 Sept 73	1340-16064	28 June 73		2222		✓	6 Aug 73		
	1340-16070	28 June 73		2222					
	1340-16073	28 June 73		2222					
	1341-16131	29 June 73		2222					
19 Sept 73	1358-16072	16 July 73	0001			✓*	20 Aug 73		
28 Sept 73	1394-16060	21 Aug 73		2222		✓			
	1394-16062	21 Aug 73		2222					
	1394-16065	21 Aug 73		2222					
	1395-16114	22 Aug 73		2222					
	1395-16120	22 Aug 73		2202					
	1395-16123	22 Aug 73		2202					
2 Oct 73	1393-16010	20 Aug 73	1111			✓			
4 Oct 73	1375-16012	2 Aug 73	1111			✓			
5 Oct 73	1393-16010	20 Aug 73		2222		✓	2 Oct 73		
11 Oct 73	1375-16012	2 Aug 73		2222		✓	5 Oct 73		
15 Oct 73	1394-16060	21 Aug 73	1111			✓*	28 Sept 73		
	1394-16062	21 Aug 73	1111						
	1394-16065	21 Aug 73	1111						
	1395-16114	22 Aug 73	1111						
	1395-16120	22 Aug 73	1111						
	1395-16123	22 Aug 73	1111						

* - Adds to, but does not complete

DATE RECEIVED	ERTS-1 DATA FRAME ID	DATE	70mm 4567	9.5in 4567	SHIPMENT COMP PART	COMPLETES SHIPMENT OF	ANALYSIS PLOT ANAL
29 Oct 73	1395-16120 1395-16123	22 Aug 73 22 Aug 73		0020 0020	✓	28 Sept 73	
2 Nov 73	1431-16114	27 Sept 73	1111		✓		
21 Nov 73	1449-16102	15 Oct 73	1111	2222	✓		

ANALYSIS OF RECEIVED DATA, DELTA STUDY

	FRAME ID	SITE COVERAGE BY COUNTY							SITE CL COV	DATA QUAL 4567	COMMENTS	DATA RATING
		1	2	3	4	5	6	ALL				
Cycle II	{1035-16121	100%	99%	100%	46%	68%	41%	79%	0%	4434	Data Drops in 6	3
	1035-16124	0%	0%	0%	0%	55%	84%	15%	15%	4444	Cloudy	3
Cycle III	{1052-16061	26%	25%	0%	0%	0%	0%	11%	0%	4424	Data Drops in 6	3
	1052-16064	59%	93%	86%	100%	100%	99%	89%	0%	4424	Data Drops in 6	3
	1052-16070	0%	0%	0%	0%	0%	5%	1%	0%	4424	Data Drops in 6	3
Cycle IV	{1070-16061	8%	6%	0%	0%	0%	0%	3%	0%	4444		4
	1070-16064	56%	100%	73%	100%	100%	91%	86%	0%	4444		4
	1070-16070	0%	0%	0%	0%	5%	43%	6%	0%	4444		4
	{1071-16120	43%	25%	0%	0%	0%	0%	15%	0%	4444		4
	1071-16122	91%	100%	100%	68%	100%	100%	93%	0%	4444		4
	1071-16125	0%	0%	0%	0%	0%	1%	0%	0%	4444		4
Cycle IX	{1161-16123	70%	44%	0%	0%	0%	0%	26%	0%	4444		4
	1161-16130	56%	69%	100%	27%	97%	98%	71%	0%	4444		4
Cycle X	{1178-16065	63%	100%	68%	81%	10%	0%	63%	100%	4444	Light Clouds Over	2
	1178-16072	0%	0%	38%	60%	100%	99%	39%	100%	4444	Entire Frames	1
Cycle XII	{1214-16071	33%	19%	0%	0%	0%	0%	11%	100%	4444	Light Cloud Cover	1
	1215-16130	61%	34%	0%	0%	0%	0%	21%	0%	4444		4
	1215-16132	66%	34%	97%	1%	46%	80%	52%	5%	4444		3
Cycle XIII	{1232-16072	24%	13%	0%	0%	0%	0%	8%	0%	4444		4
	1232-16075	97%	100%	100%	100%	100%	97%	99%	5%	4444	Slightly Cloudy	3
	1232-16081	0%	0%	0%	0%		30%	4%	0%	4444	Slightly Cloudy	3

COUNTIES: 1 - Bolivar; 2 - Sunflower; 3 - Washington; 4 - Humphreys; 5 - Sharkey; 6 - Issaquena

RATINGS: 1 - Useless; 2 - Somewhat Useful; 3 - Acceptable; 4 - Excellent

ANALYSIS OF RECEIVED DATA, DELTA STUDY

	FRAME ID	SITE COVERAGE BY COUNTY							SITE CL COV	DATA QUAL 4567	COMMENTS	DATA RATING
		1	2	3	4	5	6	ALL				
Cycle XIV	1251-16131	51%	16%	0%	0%	0%	0%	15%	0%	4444		4
	1251-16133	75%	9%	91%	0%	0%	68%	42%	0%	4444		4
	1251-16140	0%	0%	0%	0%	0%	0%	0%	NA	44?4	No Camera 6 Data	?
Cycle XV	1269-16140	0%	0%	0%	0%	0%	0%	0%	NA	4444		2
Cycle XVI	1285-16022	0%	0%	0%	0%	0%	0%	0%	NA	4444		4
	1286-16071	15%	6%	0%	0%	0%	0%	4%	0%	4444		4
	1286-16074	100%	100%	100%	100%	100%	94%	98%	0%	4444		4
	1286-16080	0%	0%	0%	0%	18%	49%	9%	0%	4444		4
Cycle XVII	1305-16125	51%	11%	0%	0%	0%	0%	37%	0%	4444		4
	1305-16131	73%	2%	86%	0%	1%	61%	46%	1%	4444		4
Cycle XVIII	1322-16065	15%	6%	0%	0%	0%	0%	4%	40%	4444	Cloudy	2
	1322-16072	100%	100%	100%	100%	100%	94%	98%	30%	4444		2
	1322-16074	0%	0%	0%	0%	5%	43%	6%	0%	4434	Data Drops in 6	3
Cycle XIX	1339-16014	0%	0%	0%	5%	0%	0%		100%	4444	Light clouds over	1
	1340-16064	25%	10%	0%	0%	0%	0%		0%	4444		4
	1340-16070	95%	100%	100%	100%	100%	100%		1%	4444		4
	1340-16073	0%	0%	0%	0%	0%	10%		5%	4444	Spotty clouds	3
	1341-16131	0%	0%	0%	0%	0%	0%	0%	NA	4444	Light cloud cover	2
Cycle XX	1358-16072	0%	0%	0%	0%	0%	20%		95%	4444	Heavy cloud cover	1
Cycle XXI	1375-16012	0%	0%	0%	0%	0%	0%	0%	NA	4444	Heavy cloud cover	1
	1376-16061	25%	10%	0%	0%	0%	0%		5%	4444	Scattered clouds	3
	1376-16064	97%	100%	100%	100%	100%	100%	100%	5%	4444	Scattered clouds	3
	1376-16070	15%	0%	0%	0%	0%	0%	4%	10%	4444	Scattered clouds	2
	1377-16120	65%	25%	0%	0%	0%	0%	21%	0%	4444	Spotty clouds	3
	1377-16122	60%	40%	95%	0%	35%	85%	40%	20%	4444	Light clouds	3

ANALYSIS OF RECEIVED DATA, DELTA STUDY

FRAME ID	SITE COVERAGE BY COUNTY							SITE CL COV	DATA QUAL 4567	COMMENTS	DATA RATING	
	1	2	3	4	5	6	ALL					
Cycle XXII	1393-16010	0%	0%	0%	0%	0%	0%	0%	NA	4444	4	
	1394-16060	30%	15%	0%	0%	0%	0%	15%	0%	4444	4	
	1394-16062	95%	100%	100%	100%	100%	100%	98%	0%	4444	4	
	1394-16065	10%	0%	0%	0%	0%	0%	2%	0%	4444	4	
	1395-16114	70%	35%	0%	0%	0%	0%	20%	0%	4444	4	
	1395-16120	50%	20%	0%	95%	30%	80%	37%	0%	4444	4	
	1395-16123	0%	0%	0%	0%	0%	0%	0%	NA	4444	4	
Cycle XXIV	{1431-16114	No Positive Transparencies Received Yet										

	1449-16102	50%	30%	0%	0%	0%	0%		100%	4444	Light cloud cover	2

15 Oct 73

Complete as of 30 Nov 73