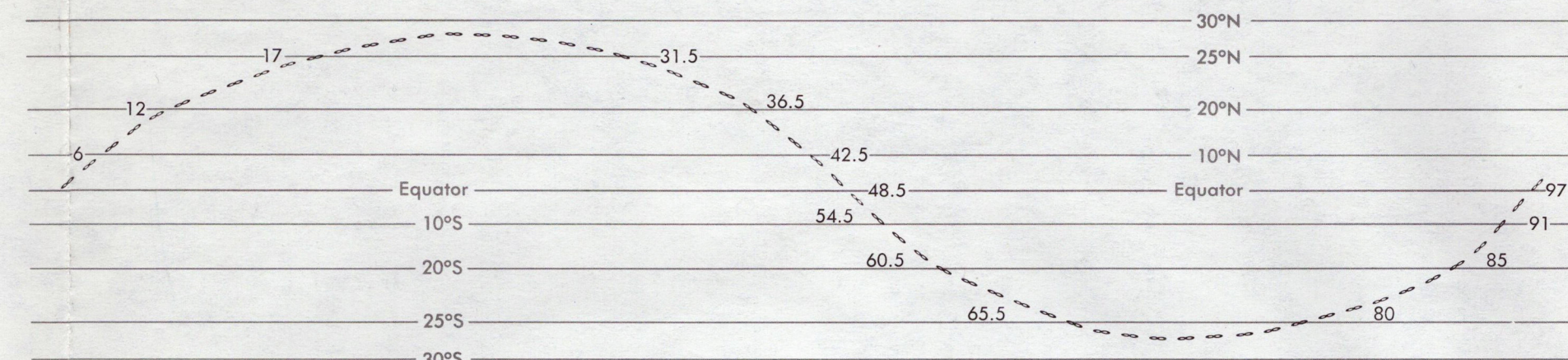


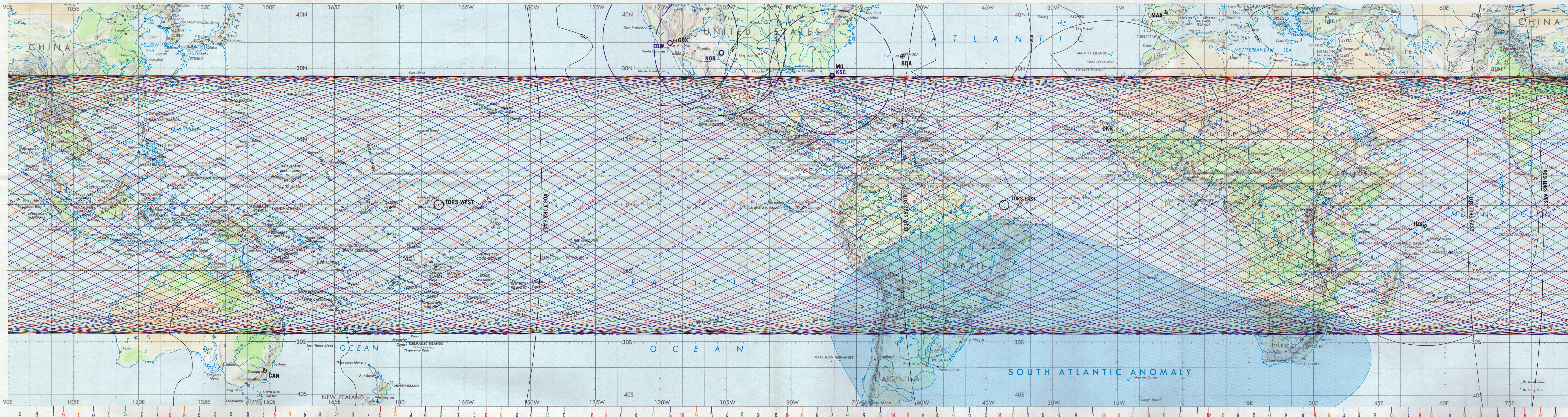
MISSION ELAPSED TIME

Mission Elapsed Time (MET) can be interpolated for any point on the groundtrack using the following ascending node table and graph. The table lists the approximate longitude and the MET at the start of each orbit. The graph, which consists of projection latitude lines and an orbit groundtrack, contains the additional cumulative time (in minutes) from the start to finish of a 97-minute orbit period at each point that the groundtrack crosses, 0, 10, 20, and 25-degree latitude lines.

M.E.T.					M.E.T.					M.E.T.					M.E.T.					M.E.T.					M.E.T.					M.E.T.				
ORBIT	LONG.	DAY	HRS.	MINS.	ORBIT	LONG.	DAY	HRS.	MINS.	ORBIT	LONG.	DAY	HRS.	MINS.	ORBIT	LONG.	DAY	HRS.	MINS.	ORBIT	LONG.	DAY	HRS.	MINS.	ORBIT	LONG.	DAY	HRS.	MINS.	ORBIT	LONG.	DAY	HRS.	MINS.
1	175W	0	23	50	16	175W	0	23	50	31	175E	2	0	14	46	165E	3	0	14	61	154E	4	0	25	91	134E	6	0	47	104	149E	6	23	21
2	171E	1	1	26	17	161E	1	1	26	32	150E	2	1	39	47	140E	3	1	51	62	130E	4	2	02	77	120E	5	2	13	92	109E	6	2	24
3	146E	0	2	03	18	136E	1	3	03	48	126E	2	3	15	63	115E	3	3	28	63	105E	4	3	39	78	95E	5	3	49	93	85E	6	4	00
4	122E	0	4	29	19	111E	1	4	40	54	101E	2	4	52	64	90E	3	4	20	64	80E	4	4	15	79	70E	5	4	26	94	60E	6	5	37
5	97E	0	6	05	20	87E	1	6	17	59	76E	2	6	29	65	66E	3	6	41	50	56E	4	6	52	80	46E	5	6	03	95	35E	6	7	14
6	72E	0	7	42	21	62E	1	7	54	36	41E	2	7	06	66	31E	3	7	18	51	21E	4	7	29	81	21E	5	7	40	96	11E	6	8	50
7	48E	0	9	18	22	37E	1	9	31	37	27E	2	9	43	52	16E	3	9	55	52	16E	4	9	05	82	4W	5	9	16	97	14W	6	10	27
8	23E	0	10	55	23	13E	1	11	07	53	13E	2	11	19	68	8W	3	11	31	68	28W	4	11	42	93	28W	5	11	53	98	39W	6	12	04
9	2W	0	12	32	24	12W	1	12	44	54	12W	2	12	56	69	43W	3	12	08	54	43W	4	12	19	84	53W	5	12	30	99	63W	6	13	41
10	26W	0	14	09	25	37W	1	14	21	40	47W	2	14	33	70	68W	3	14	45	70	68W	4	14	56	85	78W	5	14	06	100	88W	6	15	17
11	51W	0	15	46	26	62W	1	15	58	41	72W	2	15	10	57	92W	3	15	22	71	92W	4	15	32	86	103W	5	15	43	101	113W	6	16	54
12	76W	0	17	22	27	86W	1	17	35	42	97W	2	17	47	58	107W	3	17	58	72	117W	4	17	09	87	127W	5	17	20	102	137W	6	17	31
13	100W	0	18	59	28	111W	1	18	44	58	121W	2	18	56	73	142W	3	18	08	73	142W	4	18	19	88	152W	5	18	30	103	162W	6	19	41
14	125W	0	20	36	29	136W	1	20	48	44	146W	2	20	00	59	166W	3	20	12	74	166W	4	20	23	89	177W	5	20	33	104	173E	6	21	44
15	150W	0	22	13	30	160W	1	22	25	45	171W	2	22	37	60	179E	3	22	48	75	169E	4	22	59	90	159E	5	22	10	105	149E	6	23	21



ORBIT PERIOD - 97 MINUTES
28.5° INCLINATION



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NOTE: The representation of boundaries
is not necessarily authoritative.

LEGEND
International boundary
Capital cities
Other cities
South Atlantic Anomaly for 300 n.m. altitude
Airfields
Crossrange limits for 750 n.m.

TRACKING AND DATA RELAY SATELLITE SYSTEM (TDRS)
AOS, LOS
Sub-orbital point

MERCATOR PROJECTION
SCALE 1:40,000,000 AT THE EQUATOR

SUNRISE TERMINATOR POSITIONS
ARE FOR A MARCH 26, 1990
1344 GMT LAUNCH

SPACEFLIGHT TRACKING AND DATA NETWORK (STDN)
Antenna location symbols and call letters
Tracking limits (330 n.m. altitude)

GROUNDTRACK DATA
STS 31 CYCLE 2

Orbits 1 through 15 are shown by numerals corresponding
to the orbit depicted.
Orbits 16 through 30
Orbits 31 through 45
Orbits 46 through 60
Orbits 61 through 75
Orbits 76 through 90
Orbits 91 through 105

STS 31

MISSION CHART

EDITION 2

APRIL 1990