

STS-97/ISS 4A			SpaceCalc Shuttle Mission Planner					
Eastern Time		DD	HH	MM	STS-97 Flight Plan: Updated 12/03/00			
I	S	11/30/00	10:06	PM	00	00	00	STS-97 launch from pad 39B
S	T	11/30/00	10:15	PM	00	00	09	Main engine cutoff
S	S	11/30/00	10:50	PM	00	00	44	OMS-2 orbit circularization burn
		11/30/00	11:31	PM	00	01	25	Payload bay door opening
		12/01/00	12:36	AM	00	02	30	GIRA installation
		12/01/00	12:36	AM	00	02	30	OCA setup
		12/01/00	12:56	AM	00	02	50	Color printer setup
		12/01/00	01:06	AM	00	03	00	ISS: Crew wakeup
		12/01/00	01:46	AM	00	03	40	ISS: Breakfast
		12/01/00	01:49	AM	00	03	43	NC-1 rendezvous rocket firing
		12/01/00	01:56	AM	00	03	50	Group B computer powerdown
		12/01/00	03:06	AM	00	05	00	STS crew sleep period begins
		12/01/00	03:11	AM	00	05	05	ISS: Daily planning conference
		12/01/00	03:26	AM	00	05	20	ISS: CKB2-Test-Installation
		12/01/00	05:06	AM	00	07	00	ISS: Morning exercise sessions begin
		12/01/00	07:06	AM	00	09	00	ISS: Lunch
		12/01/00	10:56	AM	00	12	50	ISS: Afternoon exercise sessions begin
<b>MET 0/13:00 through 1/10:00 updated 12/01/00</b>								
		12/01/00	11:06	AM	00	13	00	STS crew wakeup
		12/01/00	11:56	AM	00	13	50	ISS: 4A preparations
		12/01/00	12:36	PM	00	14	30	Ergometer setup
		12/01/00	01:26	PM	00	15	20	ISS: Afternoon planning session
		12/01/00	01:36	PM	00	15	30	PGSC network configuration
		12/01/00	01:41	PM	00	15	35	NC-2 rendezvous rocket firing

12/01/00	01:41 PM	00	15	35	RMS (shuttle robot arm) power up
12/01/00	01:56 PM	00	15	50	RMS checkout
12/01/00	02:21 PM	00	16	15	Airlock preparation
12/01/00	02:36 PM	00	16	30	ISS: Dinner
12/01/00	02:41 PM	00	16	35	RMS payload bay survey
12/01/00	03:11 PM	00	17	05	Water bag delivery system setup
12/01/00	03:11 PM	00	17	05	APCU (assembly power conversion unit) activation; provides station power
12/01/00	03:21 PM	00	17	15	Orbiter interface unit activation
12/01/00	03:31 PM	00	17	25	Spacesuits 1 and 3 checkout
12/01/00	03:41 PM	00	17	35	Rendezvous computers set up
12/01/00	04:36 PM	00	18	30	ISS: Crew sleep period begins
12/01/00	05:06 PM	00	19	00	Crew meals begin
12/01/00	06:06 PM	00	20	00	Spacesuit swap (3 for 2)
12/01/00	06:26 PM	00	20	20	Canadian Space Vision System setup
12/01/00	06:26 PM	00	20	20	Rendezvous tools checkout
12/01/00	06:36 PM	00	20	30	Spacesuit 2 checkout
12/01/00	06:41 PM	00	20	35	OSVS checkout
12/01/00	07:41 PM	00	21	35	RMS powerdown
12/01/00	07:46 PM	00	21	40	SAFER jetpack checkout
12/01/00	07:56 PM	00	21	50	10.2 psi cabin depressurization
12/01/00	08:46 PM	00	22	40	Centerline camera mount
12/01/00	08:51 PM	00	22	45	Spacewalk No. 1 tools configured
12/01/00	10:25 PM	01	00	19	NC-3 rendezvous rocket firing
12/01/00	10:26 PM	01	00	20	Rendezvous tagup
12/02/00	01:06 AM	01	03	00	STS crew sleep begins (7 hours)
12/02/00	01:06 AM	01	03	00	ISS: Crew wakeup
12/02/00	01:46 AM	01	03	40	ISS: Breakfast
12/02/00	02:41 AM	01	04	35	ISS: Daily planning conference
12/02/00	03:06 AM	01	05	00	ISS: Morning work
12/02/00	05:06 AM	01	07	00	ISS: Morning exercise sessions begin
12/02/00	07:06 AM	01	09	00	ISS: Lunch

**MET 1 / 10:00 through 2 / 10:30 updated 12/02/00**

12/02/00	08:06 AM	01	10	00	STS crew wakeup
12/02/00	09:26 AM	01	11	20	Group B computer powerup
12/02/00	09:31 AM	01	11	25	Middeck preparation
12/02/00	09:36 AM	01	11	30	Begin rendezvous timeline
12/02/00	09:36 AM	01	11	30	Logistics transfer preparations
12/02/00	10:06 AM	01	12	00	ISS: Pressure equalization
12/02/00	10:21 AM	01	12	15	VHF radio setup
12/02/00	10:59 AM	01	12	53	NC-4 rendezvous rocket firing
12/02/00	10:21 AM	01	12	15	ISS: Afternoon exercise sessions begin
12/02/00	12:21 PM	01	14	15	Mission control 'go' for TI burn
12/02/00	12:33 PM	01	14	27	TI rendezvous rocket firing
12/02/00	01:31 PM	01	15	25	Begin final approach timeline
12/02/00	02:03 PM	01	15	57	Shuttle on plus r-bar
12/02/00	01:51 PM	01	15	45	ISS: Dinner
12/02/00	02:59 PM	01	16	53	Endeavour docks with space station
12/02/00	03:08 PM	01	17	02	Hard docking confirmed
12/02/00	03:16 PM	01	17	10	Leak checks begin
12/02/00	03:36 PM	01	17	30	RMS powerup
12/02/00	03:41 PM	01	17	35	Orbiter docking system volume prep
12/02/00	03:51 PM	01	17	45	Group B computer powerdown
12/02/00	03:51 PM	01	17	45	Robot arm to P6 pre-grapple position
12/02/00	04:16 PM	01	18	10	Laptop computer reconfiguration
12/02/00	04:36 PM	01	18	30	ISS: Crew sleep period begins
12/02/00	04:46 PM	01	18	40	Orbiter docking system vestibule/PMA pressurization
12/02/00	04:51 PM	01	18	45	RMS maneuvers P6 solar arrays to overnight park position
12/02/00	05:21 PM	01	19	15	P6 array in park position
12/02/00	05:31 PM	01	19	25	Early PMA-3 ingress
12/02/00	07:11 PM	01	21	05	Ground strap installation
12/02/00	07:16 PM	01	21	10	Logistics transfer operations begin
12/02/00	08:21 PM	01	22	15	Spacewalk briefing

12/02/00	09:21 PM	01	23	15	Spacesuit installation
12/03/00	12:36 AM	02	02	30	STS crew sleep begins
12/03/00	01:06 AM	02	03	00	ISS: Crew wakeup
12/03/00	04:06 AM	02	06	00	ISS: 4A timeline review
12/03/00	06:06 AM	02	08	00	ISS: ISS USOS early ingress and transfer operations
12/03/00	07:41 AM	02	09	35	ISS: ISS USOS egress
<b>2/10:30 through 3/10:30 updated 12/03/00</b>					
12/03/00	08:36 AM	02	10	30	STS crew wakeup
12/03/00	10:21 AM	02	12	15	OSVS powerup
12/03/00	10:36 AM	02	12	30	Spacewalk preparations begin
12/03/00	11:21 AM	02	13	15	RMS moves P6 array to pre-mate position
12/03/00	12:16 PM	02	14	10	Spacewalkers begin oxygen pre-breathe
12/03/00	01:06 PM	02	15	00	EVA-1: Airlock depressurization
12/03/00	01:31 PM	02	15	25	EVA-1: Airlock egress
12/03/00	01:36 PM	02	15	30	EVA-1: Sortie setup
12/03/00	02:06 PM	02	16	00	EVA-1: P6 installation work begins
12/03/00	02:16 PM	02	16	10	RMS supports EVA P6 installation
12/03/00	02:36 PM	02	16	30	ISS: Dinner
12/03/00	03:36 PM	02	17	30	RMS ungrapples P6 array
12/03/00	03:36 PM	02	17	30	EVA-1 (Noriega): Connect Z1 to P6 utilities
12/03/00	03:36 PM	02	17	30	EVA-1 (Tanner): Release starboard solar array blanket box (SABB) restraint
12/03/00	04:26 PM	02	18	20	P6 PVCU activation
12/03/00	04:36 PM	02	18	30	ISS: Crew sleep period begins
12/03/00	04:36 PM	02	18	30	EVA-1 (Tanner): Release port SABB restraint
12/03/00	04:51 PM	02	18	45	EVA-1 (Noriega): Release starboard beta gimbal restraint
12/03/00	05:31 PM	02	19	25	EVA-1 (Noriega): Rotate P6 integrated electronics assembly keel pin
12/03/00	05:41 PM	02	19	35	EVA-1 (Tanner): Release port beta gimbal restraint
12/03/00	05:51 PM	02	19	45	EVA-1 (Noriega): Unstow starboard blanket box
12/03/00	06:11 PM	02	20	05	2B BGA activation and solar array deploy
12/03/00	06:16 PM	02	20	10	EVA-1 (Noriega): Release P6 radiator cinch and winch

12/03/00	06:21 PM	02	20	15	EVA-1 (Tanner): Unstow port blanket box
12/03/00	06:41 PM	02	20	35	EVA-1 P6 photo documentation
12/03/00	07:06 PM	02	21	00	EVA-1: Sortie cleanup
12/03/00	07:11 PM	02	21	05	4B BGA activation and solar array deploy
12/03/00	08:11 PM	02	22	05	EVA-1: Airlock ingress
12/03/00	08:16 PM	02	22	10	EVA-1: Airlock repressurization
12/03/00	08:41 PM	02	22	35	Post spacewalk suit servicing
12/03/00	09:06 PM	02	23	00	Shuttle maneuvers ISS to XPOP orientation
12/03/00	09:26 PM	02	23	20	RMS powerdown
12/03/00	09:36 PM	02	23	30	Photo voltaic radiator deploy
12/04/00	12:36 AM	03	02	30	STS crew sleep begins
12/04/00	01:06 AM	03	03	00	ISS: Crew wakeup
12/04/00	08:36 AM	03	10	30	STS crew wakeup
<b>3/13:30 through End of Mission reflects pre-flight planning</b>					
12/04/00	11:36 AM	03	13	30	SAFER jetpack checkout
12/04/00	12:16 PM	03	14	10	Middeck preparation
12/04/00	12:36 PM	03	14	30	ISS: PAO event
12/04/00	12:36 PM	03	14	30	Spacewalk tools configured
12/04/00	01:36 PM	03	15	30	Floating point potential unit checkout
12/04/00	02:21 PM	03	16	15	STS crew PAO opportunity
12/04/00	03:26 PM	03	17	20	STS crew off duty time begins
12/04/00	04:06 PM	03	18	00	STS crew meals begin
12/04/00	04:36 PM	03	18	30	ISS: Crew sleep period begins
12/04/00	08:51 PM	03	22	45	Spacewalk briefing
12/05/00	12:06 AM	04	02	00	STS crew sleep begins
12/05/00	01:06 AM	04	03	00	ISS: Crew wakeup
12/05/00	08:06 AM	04	10	00	STS crew wakeup
12/05/00	10:06 AM	04	12	00	Spacewalk preparation
12/05/00	11:46 AM	04	13	40	Spacewalkers begin oxygen pre-breathe

12/05/00	12:06 PM	04	14	00	RMS powerup
12/05/00	12:31 PM	04	14	25	EVA-2: Airlock depressurization
12/05/00	12:56 PM	04	14	50	EVA-2: Airlock egress
12/05/00	01:06 PM	04	15	00	EVA-2: Sortie setup
12/05/00	01:21 PM	04	15	15	Z1 truss patch panel reconfiguration
12/05/00	01:31 PM	04	15	25	ISS: Node 1/Z1 patch panel reconfiguration
12/05/00	01:51 PM	04	15	45	EVA-2: S-band antenna array (SASA) relocation
12/05/00	03:01 PM	04	16	55	EVA-2 (Tanner): Attach Z1 to P6 QD
12/05/00	03:01 PM	04	16	55	EVA-2 (Noriega): Z1 patch panel reconfiguration
12/05/00	03:06 PM	04	17	00	EVA-2: PMA-2 relocation preparations
12/05/00	04:36 PM	04	18	30	ISS: Crew sleep period begins
12/05/00	05:11 PM	04	19	05	EVA-2 (Noriega): Release aft radiator CIN WINC
12/05/00	05:11 PM	04	19	05	EVA-2 (Tanner): EPS jumper stow
12/05/00	05:36 PM	04	19	30	EVA-2 (Tanner): H-jumper installation
12/05/00	05:51 PM	04	19	45	EVA-2: ISS 5A preparation tasks
12/05/00	06:21 PM	04	20	15	EVA-2 Sortie cleanup
12/05/00	07:06 PM	04	21	00	EVA-2: Airlock ingress
12/05/00	07:06 PM	04	21	00	RMS powerdown
12/05/00	07:11 PM	04	21	05	EVA-2 Airlock repressurization
12/05/00	07:36 PM	04	21	30	Spacesuit servicing
12/05/00	08:36 PM	04	22	30	Early PMA-3 ingress
12/05/00	11:36 PM	05	01	30	STS crew sleep begins
12/06/00	01:06 AM	05	03	00	ISS: Crew wakeup
12/06/00	03:41 AM	05	05	35	ISS: Node ingress
12/06/00	07:36 AM	05	09	30	STS crew wakeup
12/06/00	10:36 AM	05	12	30	ISS: Ingress tagup
12/06/00	10:36 AM	05	12	30	SAFER checkout
12/06/00	11:16 AM	05	13	10	Airlock prepared for spacewalk
12/06/00	11:36 AM	05	13	30	Spacewalk tools configured
12/06/00	01:06 PM	05	15	00	PAO event
12/06/00	01:36 PM	05	15	30	Floating point potential unit setup
12/06/00	01:36 PM	05	15	30	ISS: Space station pressure equalization

	12/06/00	03:06 PM	05	17	00	Crew meal
	12/06/00	04:06 PM	05	18	00	RMS powerup
	12/06/00	04:06 PM	05	18	00	Crew off duty time begins
	12/06/00	04:36 PM	05	18	30	EETCS deploy
	12/06/00	04:36 PM	05	18	30	ISS: Crew sleep period begins
	12/06/00	05:06 PM	05	19	00	RMS powerdown
	12/06/00	07:06 PM	05	21	00	Spacewalk briefing and review
	12/06/00	11:06 PM	06	01	00	STS crew sleep period begins
	12/07/00	01:06 AM	06	03	00	ISS: Crew wakeup
	12/07/00	05:06 AM	06	07	00	ISS: IMAX operations
	12/07/00	06:36 AM	06	08	30	ISS: Node IWIS setup
	12/07/00	07:06 AM	06	09	00	STS crew wakeup
	12/07/00	07:06 AM	06	09	00	ISS: Node ingress
	12/07/00	07:31 AM	06	09	25	ISS: PMA-3 ingress
	12/07/00	08:36 AM	06	10	30	ISS: Logistics transfers begin
	12/07/00	08:41 AM	06	10	35	ISS: IWIS activation and checkout
	12/07/00	09:06 AM	06	11	00	ISS: Node 1 patch panel reconfiguration
	12/07/00	09:06 AM	06	11	00	Node 1 patch panel reconfiguration
	12/07/00	09:06 AM	06	11	00	EVA-3: Preparations begin
	12/07/00	10:46 AM	06	12	40	Spacewalkers begin oxygen pre-breathe
	12/07/00	11:31 AM	06	13	25	EVA-3: Airlock depressurization
	12/07/00	11:51 AM	06	13	45	EVA-3: Airlock egress
	12/07/00	12:06 PM	06	14	00	EVA-3: Sortie setup
	12/07/00	12:36 PM	06	14	30	EVA-3: Install floating point potential unit
	12/07/00	01:06 PM	06	15	00	ISS: CBCS installation, setup and checkout
	12/07/00	01:06 PM	06	15	00	EVA-3: Install FPP antenna
	12/07/00	02:21 PM	06	16	15	ISS: ECS reconfiguration
	12/07/00	02:21 PM	06	16	15	EVA-3: Sortie cleanup
	12/07/00	03:06 PM	06	17	00	EVA-3 Airlock ingress
	12/07/00	03:06 PM	06	17	00	RMS powerdown
	12/07/00	03:11 PM	06	17	05	EVA-3: Airlock repressurization
	12/07/00	03:36 PM	06	17	30	Spacesuit reconfiguration

	12/07/00	03:36 PM	06	17	30	Cabin pressure reset to 14.7 psi
	12/07/00	04:36 PM	06	18	30	ISS: Crew sleep period begins
	12/07/00	11:06 PM	07	01	00	STS crew sleep period begins
	12/08/00	03:06 AM	07	05	00	ISS: Crew wakeup
	12/08/00	05:06 AM	07	07	00	ISS: IMAX operations
	12/08/00	07:06 AM	07	09	00	STS crew wakeup
	12/08/00	09:06 AM	07	11	00	Joint ISS/STS PMA-3 ingress
	12/08/00	09:36 AM	07	11	30	Joint safety briefing
	12/08/00	10:06 AM	07	12	00	Acoustic dosimeter measurements
	12/08/00	10:21 AM	07	12	15	DTO 261 test No. 1
	12/08/00	10:36 AM	07	12	30	FPP node setup and checkout
	12/08/00	11:31 AM	07	13	25	ISS/STS joint transfer operations
	12/08/00	12:46 PM	07	14	40	DTO 261 test No. 2
	12/08/00	01:36 PM	07	15	30	CMG tagup
	12/08/00	01:36 PM	07	15	30	Node 1 forward CBCS checkout
	12/08/00	02:36 PM	07	16	30	IWIS setup
	12/08/00	04:11 PM	07	18	05	Joint crew photo
	12/08/00	04:31 PM	07	18	25	Joint crew news conference
	12/08/00	05:16 PM	07	19	10	Joint crew meal
	12/08/00	07:06 PM	07	21	00	ISS: Crew sleep period begins
	12/08/00	07:51 PM	07	21	45	15.0 psi pressure boost
	12/08/00	08:21 PM	07	22	15	Undocking tagup
	12/08/00	11:06 PM	08	01	00	STS crew sleep period begins
	12/09/00	03:36 AM	08	05	30	ISS: Crew wakeup
	12/09/00	07:06 AM	08	09	00	STS crew wakeup
	12/09/00	09:06 AM	08	11	00	Transfer operations resume
	12/09/00	10:51 AM	08	12	45	Hatch closure; PMA-3 egress
	12/09/00	11:21 AM	08	13	15	ODS vestibule leak check; spacesuit installation
	12/09/00	12:06 PM	08	14	00	Centerline camera mounting
	12/09/00	12:16 PM	08	14	10	Rendezvous computer setup
	12/09/00	12:21 PM	08	14	15	Maneuver to undocking attitude

	12/09/00	12:46 PM	08	14	40	Group B computer powerup
	12/09/00	12:56 PM	08	14	50	Undocking timeline begins
	12/09/00	02:17 PM	08	16	11	Endeavour undocks from space station
	12/09/00	02:26 PM	08	16	20	Begin station fly around
	12/09/00	03:11 PM	08	17	05	ISS: PAO event
	12/09/00	03:21 PM	08	17	15	Final separation rocket firing
	12/09/00	04:06 PM	08	18	00	STS PAO event
	12/09/00	04:31 PM	08	18	25	GPS ops test
	12/09/00	04:36 PM	08	18	30	ISS: Crew sleep period begins
	12/09/00	05:51 PM	08	19	45	Crew meal
	12/09/00	06:51 PM	08	20	45	Crew off duty time begins
	12/09/00	11:06 PM	09	01	00	STS crew sleep period begins
	12/10/00	04:06 AM	09	06	00	ISS: Crew wakeup
	12/10/00	07:06 AM	09	09	00	STS crew wakeup
	12/10/00	11:06 AM	09	13	00	Flight control system checkout
	12/10/00	12:16 PM	09	14	10	Reaction control system hot fire
	12/10/00	02:06 PM	09	16	00	Crew photo
	12/10/00	02:36 PM	09	16	30	Crew meal
	12/10/00	03:36 PM	09	17	30	PAO event
	12/10/00	03:56 PM	09	17	50	PILOT landing simulator practice
	12/10/00	04:26 PM	09	18	20	Deorbit crew briefing
	12/10/00	04:56 PM	09	18	50	Cabin stow begins
	12/10/00	07:06 PM	09	21	00	ISS: Crew sleep period begins
	12/10/00	11:06 PM	10	01	00	Crew sleep period begins
	12/11/00	04:06 AM	10	06	00	ISS: Crew wakeup
	12/11/00	08:06 AM	10	10	00	Crew wakeup
	12/11/00	11:41 AM	10	13	35	Group B powerup
	12/11/00	11:56 AM	10	13	50	Inertial measurement unit alignment
	12/11/00	12:21 PM	10	14	15	OCA stow
	12/11/00	12:31 PM	10	14	25	GIRA stow
	12/11/00	02:19 PM	10	16	13	Deorbit timeline begins

	12/11/00 05:16 PM	10	19	10	Deorbit ignition
	12/11/00 06:19 PM	10	20	13	Landing
<b>Compiled by William Harwood for Spaceflight Now</b>					