

STS-104/ISS-7A			SpaceCalc Shuttle Mission Planner			
Eastern Time			DD	HH	MM	STS-104 Master Flight Plan: Updated 06/29/01
I	S	07/12/01 05:04 AM	00	00	00	STS-104 launch from pad 39B
S	T	07/12/01 05:13 AM	00	00	09	Main engine cutoff
S	S	07/12/01 05:42 AM	00	00	38	OMS-2 (127 X 85)
		07/12/01 07:34 AM	00	02	30	PGSC computer network setup
		07/12/01 08:09 AM	00	03	05	GIRA installation
		07/12/01 08:41 AM	00	03	37	NC-1 rendezvous rocket firing
		07/12/01 09:04 AM	00	04	00	Group B computer powerdown
		07/12/01 10:04 AM	00	05	00	STS crew sleep begins
		07/12/01 06:04 PM	00	13	00	STS crew wakeup
		07/12/01 08:04 PM	00	15	00	Airlock preparation
		07/12/01 08:09 PM	00	15	05	FRED setup
		07/12/01 08:34 PM	00	15	30	Ergometer setup
		07/12/01 08:38 PM	00	15	34	NC-2 rendezvous rocket firing
		07/12/01 09:04 PM	00	16	00	Spacesuit checkout (1,2)
		07/12/01 09:19 PM	00	16	15	Robot arm (RMS) powerup
		07/12/01 09:34 PM	00	16	30	RMS checkout
		07/12/01 11:19 PM	00	18	15	RMS payload bay survey
		07/12/01 11:49 PM	00	18	45	RMS powerdown
		07/12/01 11:49 PM	00	18	45	STS crew meals begin
		07/13/01 01:24 AM	00	20	20	OSVS powerup
		07/13/01 01:34 AM	00	20	30	OSVS checkout
		07/13/01 02:12 AM	00	21	08	NPC rendezvous rocket firing
		07/13/01 02:59 AM	00	21	55	Rendezvous computer setup
		07/13/01 03:29 AM	00	22	25	Orbiter docking system ring extension
		07/13/01 03:49 AM	00	22	45	Rendezvous tools checkout
		07/13/01 06:13 AM	01	01	09	NC-3 rendezvous rocket firing

07/13/01	09:04 AM	01	04	00	STS crew sleep begins
07/13/01	04:34 PM	01	11	30	STS crew wakeup
07/13/01	05:49 PM	01	12	45	Group B computer powerup
07/13/01	05:49 PM	01	12	45	VHF ship-to-ship radio setup
07/13/01	06:04 PM	01	13	00	Rendezvous timeline begins
07/13/01	06:04 PM	01	13	00	EVA tools setup
07/13/01	06:16 PM	01	13	12	NH rendezvous rocket firing
07/13/01	06:59 PM	01	13	55	NC-4 rendezvous rocket firing
07/13/01	07:04 PM	01	14	00	ISS: Daily planning conference
07/13/01	08:32 PM	01	15	28	TI rendezvous rocket firing
07/13/01	08:49 PM	01	15	45	OSVS powerup
07/13/01	10:50 PM	01	17	46	Shuttle-station docking
07/13/01	11:04 PM	01	18	00	ISS: Meal
07/13/01	11:14 PM	01	18	10	Shuttle-station harddock confirmed
07/13/01	11:29 PM	01	18	25	Hatch leak checks
07/14/01	12:09 AM	01	19	05	Group B computer powerdown
07/14/01	12:29 AM	01	19	25	ODS prepped for ingress
07/14/01	12:54 AM	01	19	50	Hatch opening
07/14/01	01:14 AM	01	20	10	Handshake; welcoming ceremony
07/14/01	01:29 AM	01	20	25	STS-ISS safety briefing
07/14/01	01:44 AM	01	20	40	EVA-1 procedures review
07/14/01	02:44 AM	01	21	40	Middeck equipment transfers
07/14/01	02:44 AM	01	21	40	SAFER transfer; spacesuit transfer
07/14/01	03:14 AM	01	22	10	EVA tools setup
07/14/01	03:14 AM	01	22	10	Airlock installation dry run
07/14/01	04:54 AM	01	23	50	Airlock dry run complete
07/14/01	05:34 AM	02	00	30	ISS hatches closed
07/14/01	05:39 AM	02	00	35	ISS: Stowage operations
07/14/01	06:04 AM	02	01	00	10.2 cabin depressurization
07/14/01	07:04 AM	02	02	00	ISS: Daily planning conference
07/14/01	09:04 AM	02	04	00	STS/ISS crew sleep begins
07/14/01	05:04 PM	02	12	00	STS/ISS crew wakeup

07/14/01	06:34 PM	02	13	30	ISS: Daily planning conference
07/14/01	07:04 PM	02	14	00	EVA-1: Begin preparations
07/14/01	08:04 PM	02	15	00	OSVS powerup
07/14/01	08:14 PM	02	15	10	RMS powerup
07/14/01	08:34 PM	02	15	30	EVA-1: Begin purge and pre-breathe
07/14/01	09:59 PM	02	16	55	EVA-1: Airlock depressurization
07/14/01	10:09 PM	02	17	05	EVA-1: Airlock egress
07/14/01	10:24 PM	02	17	20	EVA-1: Sortie setup
07/14/01	10:54 PM	02	17	50	EVA-1: PCBm cover removal
07/14/01	11:29 PM	02	18	25	EVA-1: LTA jumper removal
07/14/01	11:59 PM	02	18	55	EVA-1: Cleanup
07/15/01	12:39 AM	02	19	35	EVA-1: Airlock ingress; watch ISS airlock unberth
07/15/01	01:19 AM	02	20	15	RMS: Begin airlock installation
07/15/01	02:04 AM	02	21	00	EVA-1: Airlock egress
07/15/01	02:14 AM	02	21	10	EVA-1: Starboard CBMdebris inspection
07/15/01	02:49 AM	02	21	45	EVA-1: Move to airlock install position
07/15/01	03:34 AM	02	22	30	EVA-1: EV1 mates airlock/N1 jumper
07/15/01	03:34 AM	02	22	30	RMS powerdown
07/15/01	03:49 AM	02	22	45	EVA-1: EV2 does worksite setup
07/15/01	03:59 AM	02	22	55	OSVS powerdown
07/15/01	04:19 AM	02	23	15	EVA-1: Worksite cleanup
07/15/01	05:04 AM	03	00	00	ISS: Vestibule pressurization
07/15/01	05:04 AM	03	00	00	EVA-1: Airlock ingress
07/15/01	05:19 AM	03	00	15	EVA-1: Airlock repressurization
07/15/01	05:49 AM	03	00	45	14.7 cabin repressurization
07/15/01	05:54 AM	03	00	50	ISS: Vestibule outfitting
07/15/01	08:59 AM	03	03	55	ISS: Daily planning conference
07/15/01	09:04 AM	03	04	00	STS crew sleep begins
07/15/01	10:04 AM	03	05	00	ISS: Crew sleep begins
07/15/01	05:04 PM	03	12	00	STS crew wakeup
07/15/01	06:04 PM	03	13	00	ISS: Wakeup
07/15/01	07:34 PM	03	14	30	ISS: Daily planning conference

07/15/01	08:04 PM	03	15	00	Vestibule outfitting
07/15/01	08:14 PM	03	15	10	IMAX setup
07/15/01	08:34 PM	03	15	30	Transfer operations
07/15/01	09:10 PM	03	16	06	Reboost No. 1
07/15/01	11:24 PM	03	18	20	PAO event (CDR, PLT, MS1, MS3)
07/15/01	11:44 PM	03	18	40	Crew meals begin
07/16/01	01:04 AM	03	20	00	Oxygen/nitrogen airlock outfitting
07/16/01	02:19 AM	03	21	15	Oxygen system purge
07/16/01	03:54 AM	03	22	50	Spacesuit servicing
07/16/01	05:04 AM	04	00	00	Nitrogen system purge
07/16/01	05:34 AM	04	00	30	PCP duct work
07/16/01	09:04 AM	04	04	00	STS/ISS crew sleep begins
07/16/01	05:04 PM	04	12	00	STS/ISS crew wakeup
07/16/01	06:34 PM	04	13	30	ISS: Daily planning conference
07/16/01	07:34 PM	04	14	30	EVA equipment preparation
07/16/01	07:34 PM	04	14	30	ISS: Pressure relief valve configuration
07/16/01	08:04 PM	04	15	00	ISS: Intermodule ventilation duct installation
07/16/01	08:34 PM	04	15	30	Middeck preparation
07/16/01	08:49 PM	04	15	45	ISS: Relocate IV hatch
07/16/01	09:04 PM	04	16	00	SAFER unstow
07/16/01	09:24 PM	04	16	20	SAFER checkout
07/16/01	10:04 PM	04	17	00	Servicing and cooling umbilical installation
07/16/01	10:04 PM	04	17	00	Spacewalk hardware checkout
07/16/01	10:54 PM	04	17	50	Power supply assembly installation
07/17/01	12:19 AM	04	19	15	Crew meals begin
07/17/01	12:34 AM	04	19	30	Comm activation and checkout
07/17/01	01:34 AM	04	20	30	PAO event (CDR, PLT, ISS-CDR)
07/17/01	02:24 AM	04	21	20	STS/ISS EVA prep dry run
07/17/01	04:04 AM	04	23	00	EVA-2: Procedures review
07/17/01	05:44 AM	05	00	40	Interim ISS egress
07/17/01	06:14 AM	05	01	10	10.2 psi cabin depressurization

07/17/01	07:19 AM	05	02	15	ISS: Daily planning conference
07/17/01	09:04 AM	05	04	00	STS/ISS crew sleep begins
07/17/01	05:04 PM	05	12	00	STS/ISS wakeup
07/17/01	06:34 PM	05	13	30	ISS: Daily planning conference
07/17/01	07:14 PM	05	14	10	OSVS powerup
07/17/01	07:34 PM	05	14	30	ISS: Airlock closeout/replace
07/17/01	08:29 PM	05	15	25	RMS powerup
07/17/01	08:34 PM	05	15	30	EVA-2: Preparations begin
07/17/01	09:04 PM	05	16	00	ISS: IMAX setup
07/17/01	09:59 PM	05	16	55	EVA-2: Airlock depressurization begins
07/17/01	10:09 PM	05	17	05	EVA-2: Airlock egress
07/17/01	10:24 PM	05	17	20	EVA-2: EV2 sortie setup
07/17/01	10:34 PM	05	17	30	EVA-2: EV1 oxygen/nitrogen tank ORU-1 (ONTO) install
07/17/01	10:54 PM	05	17	50	EVA-2: EV2 ONTO-1 install
07/17/01	11:44 PM	05	18	40	EVA-2: EV1 ONTO-4 install
07/18/01	12:14 AM	05	19	10	ISS: SSRMS handoff position and ungrapple
07/18/01	12:44 AM	05	19	40	EVA-2: EV2 ONTO-4 install
07/18/01	01:24 AM	05	20	20	EVA-2: EV1 does FRGF and trunnion cover installation
07/18/01	01:34 AM	05	20	30	ISS: SSRMS ops
07/18/01	02:54 AM	05	21	50	EVA-2: Sortie cleanup
07/18/01	03:24 AM	05	22	20	EVA-2: Airlock ingress
07/18/01	03:44 AM	05	22	40	EVA-2: Airlock repressurization
07/18/01	03:44 AM	05	22	40	14.7 cabin repressurization
07/18/01	04:19 AM	05	23	15	ISS: Oxygen recharge compressor installation
07/18/01	04:27 AM	05	23	23	Reboost No. 2
07/18/01	05:04 AM	06	00	00	Spacesuit servicing
07/18/01	06:49 AM	06	01	45	ISS: Daily planning conference
07/18/01	09:04 AM	06	04	00	STS/ISS crew sleep begins
07/18/01	05:04 PM	06	12	00	STS/ISS crew wakeup
07/18/01	06:34 PM	06	13	30	ISS: Daily planning conference
07/18/01	07:09 PM	06	14	05	EVA equipment transfers
07/18/01	07:49 PM	06	14	45	Spacesuit preparation

07/18/01	08:04 PM	06	15	00	SAFER transfer
07/18/01	08:19 PM	06	15	15	Spacesuit transfer
07/18/01	09:04 PM	06	16	00	SAFER checkout
07/18/01	09:20 PM	06	16	16	ISS: Off duty time begins
07/18/01	09:29 PM	06	16	25	EVA tools configured
07/18/01	10:04 PM	06	17	00	E-LK prep
07/18/01	10:29 PM	06	17	25	Crew news conference
07/18/01	11:34 PM	06	18	30	Spacesuit-to-airlock interface check
07/19/01	12:04 AM	06	19	00	EVA-3: Procedures review
07/19/01	01:04 AM	06	20	00	Joint meal
07/19/01	02:04 AM	06	21	00	Joint crew photo
07/19/01	03:19 AM	06	22	15	STS crew off duty time begins
07/19/01	03:30 AM	06	22	26	Reboost No. 3
07/19/01	06:49 AM	07	01	45	ISS: Daily planning conference
07/19/01	09:04 AM	07	04	00	STS/ISS crew sleep begins
07/19/01	05:04 PM	07	12	00	STS/ISS wakeup
07/19/01	07:04 PM	07	14	00	EVA-3: Preparations begin
07/19/01	08:14 PM	07	15	10	10.2 cabin depressurization
07/19/01	09:44 PM	07	16	40	OSVS powerup
07/19/01	09:54 PM	07	16	50	RMS powerup
07/19/01	09:54 PM	07	16	50	EVA-3: Spacesuit purge
07/19/01	10:09 PM	07	17	05	EVA-3: Prebreathe
07/19/01	11:09 PM	07	18	05	ISS: SSMRS grapples ONTO-2
07/19/01	11:09 PM	07	18	05	EVA-3: Airlock depressurization
07/19/01	11:39 PM	07	18	35	EVA-3: Airlock egress
07/19/01	11:49 PM	07	18	45	EVA-3: Sortie setup
07/20/01	12:24 AM	07	19	20	EVA-3: ONTO-2 installation
07/20/01	12:29 AM	07	19	25	ISS: Handoff position and ungrapple
07/20/01	01:09 AM	07	20	05	ISS: ONTO-3 grapple
07/20/01	01:24 AM	07	20	20	ISS: ONTO-2 activation
07/20/01	01:34 AM	07	20	30	EVA-3: EV1 moves to ONTO-3 installation

07/20/01	01:59 AM	07	20	55	ISS: Handoff positoin and ungrapple
07/20/01	02:34 AM	07	21	30	EVA-3: EV2 moves to ONTO-3 installation
07/20/01	02:44 AM	07	21	40	EVA-3: Airlock ingress
07/20/01	02:54 AM	07	21	50	ISS: ONTO-3 activation
07/20/01	03:29 AM	07	22	25	EVA-3: EV1 does lab cable stow
07/20/01	03:34 AM	07	22	30	EVA-3: EV2 does FRGF cover installation
07/20/01	03:44 AM	07	22	40	RMS powerdown
07/20/01	03:54 AM	07	22	50	OSVS powerdown
07/20/01	04:14 AM	07	23	10	EVA-3: Sortie cleanup
07/20/01	05:04 AM	08	00	00	EVA-3: Airlock repressurization
07/20/01	05:14 AM	08	00	10	Spacesuit servicing
07/20/01	07:34 AM	08	02	30	ISS: Daily planning conference
07/20/01	09:04 AM	08	04	00	STS/ISS crew sleep begins
07/20/01	05:04 PM	08	12	00	STS/ISS crew wakeup
07/20/01	06:34 PM	08	13	30	ISS: Daily planning conference
07/20/01	07:14 PM	08	14	10	Rendezvous computer setup
07/20/01	07:44 PM	08	14	40	Rendezvous tools checkout
07/20/01	08:04 PM	08	15	00	EVA equipment transfers
07/20/01	09:29 PM	08	16	25	Farewell ceremony
07/20/01	09:49 PM	08	16	45	Hatches closed
07/20/01	10:09 PM	08	17	05	Centerline camera installation
07/20/01	10:14 PM	08	17	10	Group B computer powerup
07/20/01	10:29 PM	08	17	25	ODS leak checks
07/20/01	10:39 PM	08	17	35	Crew meals
07/20/01	11:39 PM	08	18	35	ISS: PMA-2 in departure configuration
07/20/01	11:39 PM	08	18	35	Begin undocking timeline
07/21/01	12:15 AM	08	19	11	Undocking
07/21/01	12:39 AM	08	19	35	Begin flyaround
07/21/01	01:24 AM	08	20	20	Centerline camera removal
07/21/01	02:09 AM	08	21	05	Group B computer powerdown
07/21/01	02:09 AM	08	21	05	STS crew off duty time begins
07/21/01	04:09 AM	08	23	05	ISS: Daily planning conference

07/21/01	04:44 AM	08	23	40	PAO event (STS crew)
07/21/01	05:20 AM	09	00	16	Orbit adjustment rocket firing
07/21/01	08:34 AM	09	03	30	STS crew sleep begins
07/21/01	04:34 PM	09	11	30	Crew wakeup
07/21/01	07:34 PM	09	14	30	Flight control system checkout
07/21/01	07:44 PM	09	14	40	Cabin stow begins
07/21/01	08:44 PM	09	15	40	RCS hotfire test
07/21/01	10:44 PM	09	17	40	PILOT operations
07/21/01	11:44 PM	09	18	40	Crew meal
07/22/01	01:24 AM	09	20	20	Crew deorbit briefing
07/22/01	03:54 AM	09	22	50	L-1 communications check
07/22/01	04:34 AM	09	23	30	Crew off duty time begins
07/22/01	08:34 AM	10	03	30	STS crew wakeup
07/22/01	04:34 PM	10	11	30	STS crew sleep begins
07/22/01	06:29 PM	10	13	25	Group B computer powerup
07/22/01	07:09 PM	10	14	05	Inertial measurement unit alignment
07/22/01	07:44 PM	10	14	40	Deorb it prep timeline begins
07/22/01	11:58 PM	10	18	54	Deorbit ignition
07/23/01	01:00 AM	10	19	56	Landing

Compiled by William Harwood