

**§ 1213.109 News releases concerning international activities.**

(a) Releases of information involving NASA activities, views, programs, or projects involving another country or an international organization require prior coordination and approval by the Headquarters offices of External Relations and Public Affairs.

(b) NASA Centers and Headquarters offices will report all visits proposed by representatives of foreign news media to the Public Affairs Officer of the Office of External Relations for appropriate handling consistent with all NASA policies and procedures.

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### Subpart 1214.1—General Provisions Regarding Space Shuttle Flights of Payloads for Non-U.S. Government, Reimbursable Customers

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SOURCE: 57 FR 4545, Feb. 6, 1992, unless otherwise noted.

### § 1214.100 Scope.

This subpart 1214.1 sets forth general provisions regarding flight of Space Shuttle cargo bay payloads for non-U.S. government, reimbursable customers. It does not apply to Small Self-Contained Payloads flown under the provision of subpart 1214.9 or payloads flown on a space-available basis on NASA-provided Hitchhiker carriers.

### § 1214.101 Eligibility for flight of a non-U.S. government reimbursable payload on the Space Shuttle.

To be eligible for flight on the Space Shuttle, non-U.S. government, reimbursable payloads must meet criteria for use of the Shuttle established by U.S. law and public policy. The NASA Administrator will determine and/or certify the compliance of the payload with these criteria. To qualify for flight on the Space Shuttle, non-U.S. government, reimbursable payloads must require the unique capabilities of the Shuttle, or be important for either national security or foreign policy purposes.

### § 1214.102 Definitions.

(a) *Customer*. Any non-U.S. government person or entity who, by virtue of a contract or other arrangement with NASA, arranges for or otherwise provides payloads to be flown on the Shuttle on a reimbursable basis.

(b) *Dedicated flight*. A shuttle flight flown for a single customer.

(c) *Dedicated flight price*. The price established by NASA for a dedicated flight that provides the standard services listed in § 1214.115 for 1 day of single-shift, on-orbit mission operations.

(d) *Jettison*. To physically separate all or a portion of a payload from the Shuttle after liftoff of the Shuttle without the intent of fulfilling the payload operations requirements agreed to by NASA and the customer.

(e) *Launch agreement*. The primary document between NASA and the non-U.S. government, reimbursable customer, containing the detailed terms, conditions, requirements and constraints under which NASA commits to provide launch services.

(f) *Marginal cost.* Solely for the purposes of determining the cost of a re-flight launch, marginal cost is defined as the cost to the U.S. Government, as determined by NASA's normal accounting procedures, associated with the addition or reduction of one flight in a given U.S. government fiscal year.

(g) *Non-U.S. government reimbursable customers* are:

(1) All non-U.S. Government persons or entities paying NASA for Shuttle services under this subpart 1214.1; or

(2) U.S. Government agencies obtaining reimbursable Shuttle services for those persons or entities cited in paragraph (g)(1) of this section; e.g., the Department of Defense under a Foreign Military sales case.

(h) *Optional services.* Those non-standard services provided at the customer's request and with the concurrence of NASA. The price for optional services is not included in the standard flight price.

(i) *Payload integration documentation.* Documentation developed to reflect NASA/customer agreements on payload requirements, payload/Shuttle interfaces, and ground and flight implementation of the mission. Includes the Payload Integration Plan, its Annexes and all related documentation.

(j) *Payload length.* The maximum length of the payload in the Space Shuttle cargo bay at any time during launch, landing, operations, deployment, servicing or retrieval. It includes any clearance length necessary for items such as dynamic envelope considerations, deployment, retrieval, servicing and use of the remote manipulator system.

(k) *Payload weight.* The maximum weight of the payload in the Space Shuttle cargo bay, including the weight of the payload itself and a pro rata share of the weight of any special equipment or materials needed for the mission.

(l) *Scheduled launch date.* NASA's official then-best-estimate of the data of launch. This will be the date of record for all scheduling and reimbursement procedures.

(m) *Shared flight.* A flight that may be shared by more than one customer.

(n) *Shuttle standard flight price.* The price for Shuttle standard services provided to the customer.

(o) *Standard launch.* A launch meeting all the launch and orbit criteria defined in §1214.117.

(p) *Standard services.* Those services which are generally made available for all customers, which for Space Shuttle are generically defined in NASA document NSTS 07700, Volume XIV, and which are included in the standard flight price. If the payload uses only a portion of the standard services, the standard flight price will not be affected.

#### § 1214.103 Reimbursement for standard services.

(a) *Establishment of price.* NASA will establish, and update as appropriate, the standard flight price under this §1214.1.

(b) *Advance pricing.* NASA normally will agree to a standard flight price no later than 3 years in advance of launch.

(c) *Price stability.* The standard flight price will be fixed, subject to the terms of the launch agreement, and subject to escalation pursuant to §1214.103(d), and will be the price set by NASA as of the time of signing a launch agreement.

(d) *Escalation of payments.* With the exception of payments for earnest money, all payments will be escalated according to the U.S. Bureau of Labor Statistics Index, "Private Business Sector, All Persons: Productivity, Hourly Compensation, Unit Labor Cost and Prices Seasonally Adjusted" table, "Compensation, Per Hour," column published in the U.S. Department of Labor, Bureau of Labor Statistics, news release entitled "Productivity and Costs."

(e) *Independence of pricing and manifesting.* The standard flight price for a shared flight payload as computed from 1214.103(g) will be independent from the actual payload manifest for a specific shared flight.

(f) *Allocation of services.* (1) Customers contracting for a dedicated flight are eligible for the full standard services, as defined in §1214.115, available on the flight.

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(2) Customers contracting for a standard shared flight meeting the criteria of §1214.117 are eligible for a portion of the standard services, as defined in §1214.115, available on the flight. The basis of apportionment will be determined by NASA and will be a function of the payload load factor.

(g) *Computation of prices.* (1) The Shuttle standard flight price for a dedicated flight is the dedicated flight price as defined in §1214.102(c).

(2) The Shuttle standard flight price for a standard shared flight is the product of the payload's charge factor and the dedicated flight price as defined in §1214.102(c).

(3) The computed charge factor for a payload is defined as:

$$\frac{\text{Load Factor}}{0.75}$$

If the computed charge factor exceeds 1.0, the charge factor will be 1.0. If the computed charge factor is less than 0.067, the charge factor will be 0.067.

(4) The load factor is defined as the maximum of:

$$\frac{\text{Payload length, m}}{18.29 \text{ m}} \text{ or } \frac{\text{Payload weight, kg}}{\text{Shuttle lift capability, kg}}$$

where:

(i) Payload length is as defined in §1214.102(j);

(ii) Payload weight is as defined in §1214.102(k);

(iii) For those payloads for which NASA has reviewed and accepted a NASA Form 1628 (Request for Flight Assignment) and received earnest money (if required) prior to (insert date of publication in FEDERAL REGISTER), the Shuttle lift capability for a shared flight, standard launch will be 29,478 kg. For all other payloads, the lift capability for a shared flight, standard launch will be 21,542 kg.

(h) *Payment schedule—(1) Earnest money.* Earnest money in the amount of \$100,000 per payload will be paid to NASA by the customer. The earnest money will be paid at the time of submission of a NASA Form 1628, and will be applied to the first payment made by the customer toward the standard flight price, or will be retained by NASA unless NASA determines that the payload does not meet the eligibility criteria referenced in §1214.101.

(2) *Payment schedule for standard services.* (i) Payment for standard services will be made in accordance with the following schedule:

Number of months before launch flight is scheduled	Percent of price due							Total
	At time of scheduling	Months prior to scheduled launch date						
		33	24	18	12	6	3	
33 or more .....	10	10	15	25	25	15	100	
24-32 .....	11	10	15	25	25	15	101	
18-23 .....	23	.....	15	25	25	15	103	
12-17 .....	42	.....	.....	25	25	15	107	
6-11* .....	73	.....	.....	.....	25	15	113	
3-5* .....	107	.....	.....	.....	.....	15	122	
Less than 3* .....	122	.....	.....	.....	.....	.....	122	

\*Additional charges pursuant to § 1214.103(h)(2)(ii) also may apply.

(ii) Unless otherwise agreed to by NASA, for purposes of the payment schedule of §1214.103(h)(2)(i), the percent of price due at the time of scheduling will be the cumulative amount due at the time of:

(A) NASA's initial commitment to the schedule of a newly scheduled payload;

(B) A customer's requested rescheduling of a payload such that it will be launched at an earlier date; or

(C) Rescheduling of a payload postponed at the request of the customer or caused by the customer.

(iii) If the time from a customer's request for initial scheduling or rescheduling of a payload is less than 1 year from the launch date being requested,

and NASA can accommodate the request, NASA may also charge the customer any estimated additional cost of providing standard services on such a shortened schedule.

(iv) Normally no charges for standard services will be made after the flight, except for a final adjustment for escalation.

(i) *Late payment fees.* Customers who do not meet the payment schedule defined in §1214.103(h) will be subject to a late payment fee established by NASA in the launch agreement.

**§ 1214.104 Reimbursement for optional services.**

(a) *Pricing basis.* To the extent practical, optional services will be provided on a fixed-price or fixed-rate basis. If this is not practical, the price will be on a governmental cost basis; i.e., the actual cost or in certain cases the estimated actual costs.

(b) *Escalation of payments.* All payments for optional services subject to escalation will be escalated in accordance with the provisions of §1214.103(d).

(c) *Schedules of payments.* NASA will establish payment schedules for optional services and will incorporate those schedules in the launch agreement at the time a particular optional service is agreed to between the customer and NASA.

(d) *Late payment fees.* Customers who do not make payments by the due dates defined by NASA will be subject to a late payment fee established by NASA in the launch agreement.

**§ 1214.105 Apportionment and/or assignment of services.**

(a) Subject to NASA approval, a customer may apportion and/or assign Shuttle services to third parties within the payload. No apportionment and/or assignment of Shuttle services may take place outside the payload.

(b) Integration of apportioned/assigned payload elements within the payload is the responsibility of the customer. Any NASA assistance in such integration will be provided as an optional service.

(c) Customers intending to apportion and/or assign services will so designate at the time the launch agreement is signed.

**§ 1214.106 Minor delays.**

NASA will attempt to accommodate customer requested minor launch delays. Such delays will normally be requested just prior to launch. Except for potential optional service charges, delays up to 72 hours can normally be accommodated at no charge. This 72-hour period is shared by all customers on a particular flight. The basis of proration will be established in the launch agreement. Delays beyond 72 hours will require NASA's approval and will result in an additional charge as established in the launch agreement.

**§ 1214.107 Postponement.**

(a) Provisions of this paragraph apply to postponements requested or caused by the customer.

(b) A customer postponing the flight of a payload will pay a postponement fee to NASA. The fee will be computed as a percentage of the customer's Shuttle standard flight price and will be based on the table below.

Months before scheduled launch date when postponement occurs	Postponement fee, percent of standard flight price	
	Dedicated flights	Shared flights
More than 33 .....	0	0
18 or more but less than or equal to 33		
—1st postponement .....	0	0
—2nd and subsequent .....	5	5
17 or more but less than 18 .....	6	9
16 or more but less than 17 .....	7	13
15 or more but less than 16 .....	8	17
14 or more but less than 15 .....	10	20
13 or more but less than 14 .....	11	24
12 or more but less than 13 .....	12	28
11 or more but less than 12 .....	13	32
10 or more but less than 11 .....	14	36
9 or more but less than 10 .....	15	40
8 or more but less than 9 .....	17	43
7 or more but less than 8 .....	18	47
6 or more but less than 7 .....	19	51
Less than 6 .....	20	55

(c) If at any point, a customer postponement results in a launch date more than 12 months later than the original scheduled launch date, the standard flight price for the customer's payload may be adjusted by NASA to reflect any new standard flight price applicable at the time of the postponed launch, if such new price is higher than the originally contracted price.

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(d) The payment schedule for postponed flights will be as defined in §1214.103(h)(2).

(e) Customers postponing the flight of a payload may also be subject to new or additional charges for optional services.

**§ 1214.108 Termination.**

(a) Customers terminating the launch of a payload will pay a termination fee for standard services to NASA.

(1) The termination fee for dedicated flights will be computed as a percentage of the Shuttle standard flight price and will be based on the table below.

Months before scheduled launch date when termination occurs	Termination fee, percent of Shuttle standard flight price
18 or more .....	10
17 or more but less than 18 .....	11
16 or more but less than 17 .....	12
15 or more but less than 16 .....	13
14 or more but less than 15 .....	15
13 or more but less than 14 .....	16
12 or more but less than 13 .....	17
11 or more but less than 12 .....	18
10 or more but less than 11 .....	19
9 or more but less than 10 .....	20
8 or more but less than 9 .....	22
7 or more but less than 8 .....	23
6 or more but less than 7 .....	24
Less than 6 .....	25

(2) The termination fee for shared flights will be the sum of all payments previously paid or due for the standard flight price, as defined in §1214.103(h)(2), at the time of termination.

(b) NASA may establish, in the launch agreement, certain conditions under which the customer may terminate a payload launch with reduced termination fees if NASA delays the launch of the customer's payload for an extended period.

(c) Customers terminating the flight of a payload may also be subject to new or additional charges for optional services.

**§ 1214.109 Scheduling.**

(a) *Establishment of a launch date.* (1) NASA will assign a tentative launch date for a payload only after NASA's receipt, review and acceptance of a customer-submitted NASA Form 1628 requesting flight assignment and NASA's receipt of the customer's earnest money.

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(2) NASA's confirmation of a particular launch date will be at the time a launch services agreement is signed, normally not later than 36 months prior to the desired launch date.

(b) *NASA changes to launch date.* NASA will attempt to maintain the customer's launch date as long as the customer's obligations, as established by NASA, are met. However, NASA may revise the launch date under those circumstances contained in the launch agreement. If practical, NASA launch date changes will be in consultation with the customer; however, NASA reserves the unilateral right to make decisions with regard to launch schedules.

(c) *Payload delivery.* NASA, in consultation with the customer, will establish a date for payload delivery to the launch site.

(d) *Reflight scheduling.* NASA will attempt to schedule a payload reflight at the earliest opportunity, but normally no earlier than 14 months after a determination is made that a customer is entitled to, and in fact requests a reflight.

**§ 1214.110 Reflight.**

(a) NASA will provide a reflight of a customer's payload under conditions defined in the launch agreement. The standard flight price for reflights will be based on NASA's marginal cost as defined in §1214.102(f). Reflights only apply to dedicated flights and those shared-flight payloads that can be accommodated on a standard launch as defined in §1214.117.

(b) Reflights as defined in this §1214.110 apply only to the same payload involved in the launch that necessitated the reflight, or to an essentially identical payload with essentially identical integration and flight operations requirements.

**§ 1214.111 Rendezvous services.**

(a) A rendezvous mission involves the rendezvous of the Space Shuttle orbiter with an orbiting spacecraft for one or more of the following purposes:

(1) Retrieval and return to Earth of the orbiting spacecraft (or part thereof), including a spacecraft deployed earlier on the same Space Shuttle flight.

(2) Exchange of a spacecraft (or part thereof) delivered to orbit on a particular Space Shuttle mission for an already orbiting spacecraft (or part thereof) and return of already orbiting spacecraft to Earth.

(3) Revisit of an orbiting spacecraft for purposes such as resupply, repair, reboost or inspection.

(b) Mission operational requirements and associated optional service charges and conditions for both dedicated and shared flight rendezvous services will be negotiated on a case-by-case basis.

**§ 1214.112 Patent, data and information matters.**

(a) *Patent and data rights.* NASA will not acquire rights to inventions, patents or proprietary data which may be used in, or arise from, activities for which a customer has reimbursed NASA under the policies set forth herein. However, in certain instances in which the NASA Administrator has determined that activities may have a significant impact on the public health, safety or welfare, NASA may obtain assurances from the customer that the results will be made available to the public on terms and conditions reasonable under the circumstances.

(b) *Information.* All customers will be required to furnish NASA with sufficient information to ensure Shuttle safety and NASA's and the U.S. Government's continued compliance with law, published policy and the U.S. Government's obligations.

**§ 1214.113 Allocation of risk.**

The U.S. Government will assume no risk for damages to the customer resulting from certain activities conducted under the launch agreement or to third parties resulting from launch related activities or on-orbit operations. The customer will be required to agree to be bound by a cross-waiver of liability among the customer, other customers, related entities and NASA for all activities under the launch agreement. The customer will also be required to purchase third-party liability insurance covering launch and on-orbit operations in an amount deemed appropriate by NASA.

**§ 1214.114 Provision of services.**

NASA will provide, solely at its discretion, services to the extent consistent with U.S. obligations, law, policy and capability.

**§ 1214.115 Standard services.**

Standard services for the Space Shuttle are generically defined in NASA document NSTS 07700, Volume XIV. The standard services to be provided for a specific payload will be agreed to between NASA and the customer in the launch agreement and associated payload integration documentation. Typical standard services include the following for each customer.

(a) A standard launch that meets the criteria established in §1214.117.

(b) Transportation of the customer's payload in the orbiter cargo bay in a location selected by NASA.

(c) One day of single-shift, on-orbit mission operations.

(d) A five-person flight crew: commander, pilot and three mission specialists.

(e) Orbiter flight planning services.

(f) One day of transmission of payload data to compatible receiving stations via an Independent Payload Data Stream. (Subject to availability, NASA may make excess orbiter instrumentation downlink capability available to payloads at no additional charge.)

(g) Deployment of a free flyer, provided the payload meets all the conditions stated in §1214.118.

(h) NASA support of selected payload design reviews.

(i) Prelaunch payload installation, verification and orbiter compatibility testing.

(j) NASA payload safety reviews.

**§ 1214.116 Typical optional services.**

Typical optional services that may be provided by NASA include the following, and will be further defined and limited in payload integration documentation agreed upon by NASA and the customer.

(a) Use of Extended Duration Orbiter (EDO) capability or other mission kits to extend basic orbiter capability.

(b) Extravehicular activity (EVA) services.

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(c) Transportation to orbit of all or a part of the customer's payload in other than the orbiter cargo bay.

(d) Unique payload/orbiter integration and test.

(e) Payload mission planning services, other than for launch, deployment and entry phases.

(f) Additional time on orbit.

(g) Payload data processing.

(h) Flight of payload specialists.

(i) Transmission of payload data via an Independent Payload Data Stream during additional time on orbit.

(j) Transmission of payload data via a Direct Data Stream.

### § 1214.117 Launch and orbit parameters for a standard launch.

To qualify for the standard flight price, all payloads must meet the following launch criteria:

(a) For dedicated flights:

(1) Launch from Kennedy Space Center (KSC) into the customer's choice of two standard mission orbits: 160 NM circular orbit, 28.5° inclination (nominal), or 160 NM circular orbit, 57° inclination (nominal).

(2) Launch on a date selected by NASA within the scheduling constraints specified in the launch agreement.

(3) Launch at a time, selected by NASA, from a launch window of not less than 1 hour (a more restrictive launch window may be provided as an optional service).

(b) For shared flights from KSC to the standard mission orbit of 160 NM circular orbit, 28.5° inclination (nominal):

(1) Launch on a date selected by NASA within the scheduling constraints specified in the launch agreement.

(2) Launch at any time of day, selected by NASA.

### § 1214.118 Special criteria for deployable payloads.

To qualify for the standard flight price, deployable payloads must meet certain criteria in terms of time of day of launch, and other factors. These criteria will be specified in the launch agreement and associated payload integration documentation.

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### § 1214.119 Spacelab payloads.

(a) *Special provisions.* This § 1214.119 establishes the special provisions for Spacelab services provided to Space Shuttle customers. Where designated, provisions of this § 1214.119 supersede those of other portions of this document. The following five types of Spacelab flights are available to accommodate payload requirements:

(1) Dedicated-Shuttle Spacelab flight (Ref. § 1214.119(d)(3)).

(2) Dedicated-pallet flight (Ref. § 1214.119(d)(4)).

(3) Dedicated-FMDM/MPRESS (flexible multiplexer-demultiplexer/multipurpose experiment support structure) flight (Ref. § 1214.119(d)(4)).

(4) Complete-pallet flight (Ref. § 1214.119(d)(5)).

(5) Shared-element flight (Ref. § 1214.119(d)(6)).

(b) *Definitions*—(1) *Spacelab elements.* Pallets (3-meter segments), pressurized modules (long or short), and the FMDM/MPRESS (1-meter cross-bay structure), all as maintained in the NASA-approved Spacelab configuration.

(2) *Spacelab standard flight price.* The price for standard services provided to Spacelab customers. If a customer elects not to use a portion of the standard services, the Spacelab standard flight price will not be affected. The Spacelab standard flight price is a pro rata share of:

(i) The dedicated flight price as defined in § 1214.102(c);

(ii) The standard price for use of the selected Spacelab elements; and

(iii) For complete-pallet and shared-element flights:

(A) The price for 6 extra days on orbit; and

(B) The price for 7 days of second-shift operation.

(c) *Mandatory use of dedicated-Shuttle Spacelab flight.* (1) The customer will be required to fly under the provisions of § 1214.119(d)(3), if the customer requires exclusive use of any of the following:

(i) Pressurized module (long or short).

(ii) Three pallets in the "1+1+1" configuration.

(iii) Four pallets in the "2+2" configuration.



(2) In the cases cited in paragraph (1)(i) of this section, if the customer requests, NASA will attempt to find compatible sharees to fly with the customer's payload. If NASA is successful, the customer's Shuttle standard flight price will be the greater of:

(i) The dedicated flight price less reimbursements from sharees actually flown; or

(ii) The computed Shuttle shared-flight price for the customer's Spacelab payload.

(d) *Reimbursement for standard services.* (1) Customers will reimburse NASA an amount equal to the Spacelab standard flight price computed according to the following provisions:

(2) *Earnest money.* For those customers required to pay earnest money in accordance with §1214.103(h)(1), the total earnest money payment per payload for Spacelab payloads (including Shuttle services) will be either \$150,000 or 10 percent of the customer's estimated Spacelab standard flight price, whichever is less.

(3) *Dedicated-Shuttle Spacelab flight.* (i) A dedicated-Shuttle Spacelab flight is a Shuttle flight flown for a single customer who is entitled to select the Spacelab elements used on the flight.

(ii) In addition to the standard services listed in §1214.119(j), the following standard services are provided to customers of dedicated-Shuttle Spacelab flights and form the basis for the Spacelab standard flight price:

(A) Use of the full standard services of the Shuttle and the Spacelab elements selected.

(B) One day of one-shift on-orbit operations.

(C) Standard mission destinations consistent with launch criteria as defined in §1214.117.

(D) The available payload operations time of two NASA-furnished mission specialists.

(iii) Customers contracting for a dedicated-Shuttle Spacelab flight will reimburse NASA for standard services an amount that is the sum of:

(A) The dedicated flight price as defined in §1214.102(c); and

(B) The price for the use of all Spacelab elements used (including all necessary mission-independent Spacelab equipment).

(4) *Dedicated 3-meter pallets and dedicated FMDM/MPRESS.* (i) A dedicated pallet (or a dedicated FMDM/MPRESS) is one that is flown for a single customer and includes all Spacelab hardware necessary to permit it to be flown on any shared flight as an autonomous payload (e.g., a dedicated 3-meter pallet may either be supplied with its own exclusive igloo or be flown without an igloo, if it requires only standard Shuttle services).

(ii) In addition to a pro rata share of the standard services listed in §1214.119(j), the following standard services are provided to customers of dedicated pallets (or dedicated FMDM/MPRESS) and form the basis for establishing the Spacelab standard flight price:

(A) A pro rata share of the standard services listed in §1214.115, where the basis for proration is the customer's Shuttle load factor as defined in §1214.119(1)(4)(i) for dedicated pallets and in §1214.119(1)(5)(ii) for a dedicated FMDM/MPRESS.

(B) The exclusive services of the pallet (or FMDM/MPRESS) and all Spacelab hardware provided to support the pallet (or FMDM/MPRESS).

(C) One day of one-shift on-orbit operations.

(D) Launch on a shared standard Shuttle flight as defined in §1214.117.

(E) A pro rata share of the on-orbit payload operations time of two NASA-furnished mission specialists, where the basis of proration will be the customer's Shuttle load factor.

(iii) Customers contracting for a dedicated-pallet (or FMDM/MPRESS) flight will reimburse NASA for standard services an amount that is the sum of:

(A) The product of the customer's Shuttle charge factor and the dedicated flight price as defined in §1214.102(c); and

(B) The price for the use of the pallet (or FMDM/MPRESS) selected (including all necessary mission-independent Spacelab equipment).

(5) *Complete pallet.* (i) A complete Spacelab pallet is one that is flown for a single customer, but flies with other Spacelab elements on a NASA or NASA-designated Spacelab flight and shares the common standard Spacelab

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services (e.g., shares an igloo with other pallets).

(ii) In addition to a pro rata share of the standard services listed in § 1214.119(j), the following standard services are provided to customers of complete pallets and form the basis for the Spacelab standard flight price:

(A) The pallet's pro rata share of standard services listed in § 1214.115, where the basis of proration will be the customer's Shuttle load factor as defined in § 1214.119(1)(6)(i).

(B) A pro rata share of 7 days of two-shift on-orbit operations, where the basis of proration will be the customer's Shuttle load factor.

(C) Mission destination selected by NASA in consultation with the customer.

(D) Assignment, with the customer's concurrence, to a Spacelab flight designated by NASA.

(E) Launch date established by NASA.

(F) A pro rata share of the on-orbit payload operations time of two NASA-furnished mission specialists and two payload specialists, where the basis of proration will be the customer's Shuttle load factor.

(G) Use of the entire volume above a pallet.

(iii) Customers contracting for complete-pallet flights will reimburse NASA for standard services an amount which is the sum of:

(A) The product of the customer's Shuttle charge factor and the sum of:

(1) The dedicated flight price as defined in § 1214.102(c).

(2) The charge for 6 extra days of one-shift on-orbit operations.

(3) The standard price for additional services required to support a second shift of on-orbit operations for 7 days.

(B) The price for the use of a complete pallet, including all necessary mission-independent Spacelab equipment.

(6) *Shared element.* (i) A shared element is a Spacelab pallet, FMDM/MPRESS, or module that:

(A) May be shared by two or more customers on a NASA-designated Spacelab flight; and

(B) Shares common standard services with other Spacelab elements on the same flight.

(ii) In addition to a pro rata share of the standard services listed in § 1214.119(j), the following standard services are provided to customers of shared elements and form the basis for the Spacelab standard flight price:

(A) For shared pallets, a pro rata share of the standard services provided by a pallet. The basis of proration will be the customer's Spacelab load fraction as defined in § 1214.119(1)(7)(i)(A).

(B) For shared modules, a pro rata share of the standard services provided by a long module flown on a dedicated-Shuttle Spacelab flight. The basis of proration will be the customer's Spacelab load fraction as defined in § 1214.119(1)(7)(i)(B). The type of pressurized module actually used to meet a customer's requirement for a shared module will be determined by NASA subsequent to launch agreement negotiations.

(C) A pro rata share of the element's share of standard services listed in § 1214.115, where the basis for proration will be the customer's Spacelab load fraction.

(D) A pro rata share of 7 days of two-shift on-orbit operations, where the basis of proration will be the customer's Shuttle load factor as defined in § 1214.119(1)(7)(i).

(E) Mission destination selected by NASA in consultation with the customer.

(F) Assignment, with the customer's concurrence, to a Spacelab flight designated by NASA.

(G) Launch date established by NASA.

(H) A pro rata share of the on-orbit operations time of two NASA-furnished mission specialists, where the basis of proration will be the customer's Shuttle load factor.

(iii) Customers contracting for shared-element flights will reimburse NASA for Standard services an amount that is the sum of:

(A) The product of the customer's Shuttle charge factor and the sum of:

(1) The dedicated flight price as defined in § 1214.102(c);

(2) The charge for 6 extra days of one-shift on-orbit operations; and

(3) The standard price for additional services required to support a second shift of on-orbit operations for 7 days.

(B) The product of the customer's element charge factor and the price for the use of the Spacelab element being used, including all necessary mission-independent Spacelab equipment.

(e) *Minor delays.* The minor delay provisions of §1214.106 will apply only to those Spacelab payloads whose Shuttle load factor is equal to or greater than 0.05.

(f) *Postponement and termination.* (1) A customer may postpone the flight of a Spacelab payload one time with no additional charge if postponement occurs more than 18 months before the scheduled launch date.

(2) Postponement or termination fees for Spacelab payloads will consist of the sum of:

(i) A fee for postponement or termination of the Shuttle launch.

(ii) A fee for use of the Spacelab elements.

(3) For Shuttle launch postponement and termination fee customers will be governed by the provisions of §1214.107 or §1214.108, as appropriate.

(4) The postponement and termination fees for use of the Spacelab elements are computed as a percentage of the customer's price for use of the Spacelab elements and will be based on the table below. When postponement or termination occurs less than 18 months before launch, the fees will be computed by linear interpolation using the points provided.

Months before scheduled launch date when postponement or termination occurs	Fee for use of Spacelab element(s), percent of price for use of element(s)	
	Postponement	Termination
Dedicated Flights, Dedicated Elements, and Dedicated FMDM/MPES		
18 or more .....	5	10
12 .....	14	20
3 .....	60	85
0 .....	75	100
Complete Pallets and Shared Elements		
18 or more .....	5	10
12 .....	18	80
9 .....	32	95
8 or less .....	95	100

(5) At the time of signing of the launch agreement, NASA will define a payload removal cutoff date (relative

to the launch date) for each Spacelab payload to be flown on a shared flight. A customer may still postpone or terminate a flight after the payload's cutoff date; however, NASA will not be required to remove the payload before flight.

(6) Customers postponing or terminating the flight of a payload may also be subject to new or additional charges for optional services associated with Shuttle or Spacelab support provided by NASA.

(g) *Spacelab reflight.* (1) For Spacelab payloads, the provisions of §1214.110 apply.

(h) *Premature termination of Spacelab flights.* If a dedicated-Shuttle Spacelab flight, a dedicated-pallet flight or dedicated-FMDM/MPES flight is prematurely terminated, NASA will refund the optional services charges for planned, but unused, extra days on orbit. If a complete-pallet or shared-element flight is prematurely terminated, NASA will refund a pro rata share of the charges for planned, but unused, extra days on orbit to customers whose payload operations are, in NASA's judgment, adversely affected by such premature termination. The basis for proration will be the customer's Shuttle load factor.

(i) *Integration of payloads.* (1) The customer will bear the cost of the following typical Spacelab-payload mission management functions:

(i) Performing analytical design of the mission.

(ii) Generating mission requirements and their documentation in the Payload Integration Plan (PIP).

(iii) Providing mission-unique training and payload specialists (if appropriate).

(iv) Physically integrating experiments into racks and/or onto pallets.

(v) Providing payload-unique software for use during ground processing, on orbit or in POCC operations.

(vi) Providing operation support.

(vii) Ensuring the mission is safe.

(2) All physical integration (and de-integration) of payloads into racks and/or onto pallets will normally be performed at KSC by NASA. When the customer provides Spacelab elements, these physical integration activities

may be done by the customer at a location chosen by the customer.

(3) Except for the restrictions noted in paragraph (i)(2) of this section, and the implementation of paragraph (i)(1)(vii), customers contracting for dedicated-Shuttle and dedicated-pallet flights may perform the Spacelab-payload mission management functions defined in paragraph (i)(1) of this section. NASA will assist customers in the performance of these functions, if requested. Charges for this service will be based on estimated actual costs, or actual costs where appropriate, and will be in addition to the price for standard services.

(4) For complete pallets or shared elements, NASA will normally perform the Spacelab-payload mission management functions listed in paragraph (i)(1) of this section. Charges for this service will be based on estimated actual costs, or actual costs where appropriate, and will be in addition to the price for standard services.

(5) Integration of payload entities mentioned in paragraphs (i)(2) through (i)(4) of this section with NASA-furnished Spacelab support systems and with the Shuttle will be performed by NASA as a standard service for all payloads flown on customer-furnished Spacelab elements. Customers will be available to participate as required by NASA in these levels of integration. Customer equipment will be operated only to the extent necessary for interface verification. Customers requiring additional payload operation after delivery of the payload to NASA will negotiate such operation as an optional service.

(j) *Common standard services for Spacelab payloads.* The following standard services are common to all Spacelab flights:

(1) Use of Shuttle<sup>1</sup> and Spacelab hardware.

(2) Spacelab interface analysis.

(3) A five-person NASA flight crew consisting of commander, pilot and three mission specialists.

(4) Accommodations for a five-person flight crew.

<sup>1</sup>Typical standard Shuttle services repeated for clarity.

(5) Prelaunch integration and interface verification of preassembled racks and pallets (Levels III, II and I for NASA-furnished Spacelab hardware; Level I only for customer-furnished Spacelab hardware).

(6) Shuttle<sup>1</sup> and Spacelab flight planning.

(7) Payload electrical power.

(8) Payload environmental control.

(9) On-board data acquisition and processing services.

(10) One day of transmission of payload data to compatible receiving stations via an Independent Payload Data Stream. (Subject to availability NASA may make excess orbiter instrumentation downlink capability available to payloads at no additional charge.)<sup>1</sup>

(11) Use of NASA-furnished standard payload monitoring and control facilities.

(12) Voice communications between on-orbit flight personnel operating the customer's payload and a NASA-designated payload monitoring and control facility.

(13) NASA payload safety review.<sup>1</sup>

(14) NASA support of payload design reviews.<sup>1</sup>

(k) *Typical optional services for Spacelab payloads.* The following are typical optional Spacelab services.

(1) Use of special payload support equipment, e.g., instrument pointing system.

(2) Nonstandard mission destination.

(3) Additional time on orbit.

(4) Mission-independent training, use of, and accommodations for all flight personnel in excess of five.

(5) Mission-dependent training of all NASA-furnished personnel and backups.

(6) Analytical and/or hands-on integration (and de-integration) of the customer's payload into racks and/or onto pallets.

(7) Unique integration or testing requirements.

(8) Additional resources beyond the customer's pro rata share.

(9) Additional experiment time or crew time beyond the customer's pro rata share.

(10) Special access to and/or operation of payloads.

(11) Customer-unique requirements for: software development for the Command and Data Management Subsystem (CDMS) onboard computer, configuration of the Payload Operations Control Center (POCC) and/or CDMS used during KSC ground processing.

(12) Extravehicular Activity (EVA) services.

(13) Payload flight planning services.

(14) Transmission of Spacelab data contained in the Shuttle OI telemetry link to a location other than a NASA-designated monitoring and control facility.

(15) Transmission of payload data via an Independent Payload Data Stream during additional time on orbit.

(16) Transmission of payload data via a Direct Data Stream.

(17) Level III/II integration of customer-furnished Spacelab hardware.

(1) *Computation of sharing and pricing parameters*—(1) *General.* (i) Computational procedures as contained in the following subparagraphs will be applied as indicated. The procedure for computing Shuttle load factor, charge factor and flight price for Spacelab payloads replaces the procedure contained in §1214.103.

(ii) Shuttle charge factors as derived herein apply to payloads meeting the launch and orbit criteria established in §1214.117. Customers will reimburse NASA an optional services fee for flights to nonstandard destinations.

(iii) The customer's total Shuttle charge factor will be the sum of the Shuttle charge factors for the customer's individual (dedicated, complete or shared) elements, with the limitation that the customer's Shuttle charge factor will not exceed 1.0.

(iv) Customers contracting for pallet-only payloads are entitled to locate minimal controls as agreed to by

NASA in a pressurized area to be designated by NASA. There is no additional charge for this service.

(v) NASA will, at its discretion, adjust, up or down, the load factors and load fractions calculated according to the procedures defined in this section. Adjustments will be made for special space or weight requirements, which include, but not limited to:

(A) Sight clearances, orientation or placement limits.

(B) Clearances for movable payloads.

(C) Unusual access clearance requirements.

(D) Clearances extending beyond the bounds of the normal element envelope.

(E) Extraordinary shapes.

The adjusted values will be used as the basis for computing charge factors and prorating services.

(2) *Definitions used in computations.* (i)  $L_c$ =Chargeable payload length, m. The total length in the cargo bay occupied by the customer's experiment and the Spacelab element(s) used to carry it.

(ii)  $W_c$ =The weight, kg, of the customer's payload and the customer's pro rata share of the weight of NASA mission-peculiar equipment carried to meet the customer's needs.

(3) *Dedicated-Shuttle Spacelab flight (1-day mission).* The total reimbursement is as defined in §1214.119(d)(3)(iii).

(4) *Dedicated-pallet flight (1-day mission).* (i) The Shuttle load factors, charge factors and nominal payload capacities for dedicated-pallet flights are shown in the table below. Subject to other Shuttle Spacelab structural limits, customers are entitled to use the payload weight capability of the pallets as indicated in the table. Payload weights in excess of those shown are subject to NASA approval and may entail optional services charges.

No. of Pallets	Load Factor		Charge Factor		Nominal Payload Capacity, Kg	
	With Igloo	FMDM Configuration	With Igloo	FMDM Configuration	With Igloo	FMDM Configuration
1 .....	0.228	0.189	0.305	0.252	2,325	2,950
2 .....	0.392	NA	0.523	NA	4,470	NA
3-pallet train* .....	0.556	NA	0.742	NA	4,435	NA
2+1 config. ....	0.594	NA	0.792	NA	7,750	NA

\*Three pallets requiring the "1+1+1" configuration will be flown on a dedicated-flight basis [See § 1214.119(c)(1)].

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(ii) *Total reimbursement.* The customer's total reimbursement is as defined in § 1214.119(d)(4)(iii).

(5) *Dedicated FMDM/MPES flight (1-day mission)*—(i) *Shuttle charge factor.* The Shuttle charge factor for dedicated FMDM/MPES flights is defined as:

Shuttle Load Factor

$$0.75$$

(ii) *Shuttle load factor.* (A) The Shuttle load factor is defined as the maximum of:

$$\frac{L_c}{18.29 \text{ m}}$$

or

$$\frac{W_c + 767}{21,542 \text{ kg}}$$

(B) The minimum value of  $L_c$  is based on the element length, plus clearances, and is 1.18 m.

(iii) *Total reimbursement.* The customer's total reimbursement is as defined in § 1214.119(d)(4)(iii).

(6) *Complete pallets (7-day mission).* (i) The Shuttle load factor and charge factor for a complete pallet are 0.198 and 0.228, respectively, and its payload weight capability is 2,583 kg. Subject to other Shuttle or Spacelab structural limits, customers are entitled to use this payload weight capability. Payload weight in excess of 2,583 kg is sub-

ject to NASA approval and may entail optional service charges.

(ii) *Total reimbursement.* The customer's total reimbursement is as defined in § 1214.119(d)(5)(iii).

(7) *Shared elements (7-day mission)*—(i) *Spacelab load fractions and Shuttle load factors*—(A) *Pallet.* Spacelab load fraction is the greater of:

$$\frac{W_c}{2,583 \text{ kg}}$$

or

$$\frac{\text{Payload volume, m}^3}{15 \text{ m}^3}$$

Shuttle load factor is the greater of:

$$\frac{\text{Payload volume, m}^3}{76 \text{ m}^3}$$

or

$$\frac{W_c}{4,319 \text{ kg}}$$

(B) *Pressurized module.* Spacelab load fraction and Shuttle load factor are identical and are the greater of:

$$\frac{W_c}{13,045 \text{ kg}}$$

or

$$\frac{2 \times (\text{Experiment volume}) + \text{Storage volume, m}^3}{40 \text{ m}^3}$$

(ii) *Shuttle charge factors and element charge factors for pressurized modules.* Shuttle charge factors and element charge factors are identical and are defined as follows:

If the Spacelab load fraction (and Shuttle load factor) is:	The element charge factor and Shuttle charge factor will be:
Less than 0.00435 .....	0.005
0.00435 to 0.87 .....	Spacelab load fraction divided by 0.87
Greater than 0.87 .....	1.0

(iii) *Element charge factors for shared pallets.*

If the Spacelab load fraction is:	The element charge factor will be:
Less than 0.0189 .....	0.0218
0.0189 to 0.87 .....	Spacelab load fraction divided by 0.87
Greater than 0.87 .....	1.0

(iv) *Shuttle charge factors for shared pallets.*

If the Shuttle load factor is:	The Shuttle charge factor will be:
Less than 0.00375 .....	0.005
0.00375 to 0.75 .....	Shuttle load factor divided by 0.75
Greater than 0.75 .....	1.0

### Subpart 1214.2—Reimbursement for Shuttle Services Provided to Civil U.S. Government Users and Foreign Users Who Have Made Substantial Investment in the STS Program

SOURCE: 42 FR 8631, Feb. 11, 1977, unless otherwise noted.

(v) *Total reimbursement.* (A) The customer's total reimbursement is as defined in §1214.119(d)(6)(iii).

(B) If a customer contracts for portions of more than one element, the charges for the use of the elements will apply individually to each element used.

(vi) *Pressurized module experiment volume.* Experiment volume in the pressurized module is defined to be the sum of the customer's payload volume in racks and in the center aisle.

(A) Rack volume is defined relative to basic Air Transportation Rack (ATR) configurations. The customer's rack volume will be defined as the volume of one or more rectangular parallelepipeds (rectangular-sided boxes) which totally enclose the cuss payload. Width dimensions will be either 45.1 or 94.0 centimeters. Height dimensions will be integral multiples of 4.45 centimeters. Depth dimensions will be 61.2 or 40.2 centimeters.

(B) Center aisle space volume is defined as the volume of a rectangular parallelepiped which totally encloses the customer's payload. No edge of the parallelepiped will be less than 30 centimeters in length.

(vii) *Pressurized module storage volume.* Storage volume in the pressurized module is defined as the volume of one or more rectangular parallelepipeds enclosing the customer's stowed payload. No edge of the parallelepiped(s) will be less than 30 centimeters in length.

(viii) *Pallet payload volume.* Volume of the customer's pallet-mounted payload is defined as the volume of a rectangular parallelepiped enclosing the pallet payload and customer-dictated mounting hardware. No edge of the parallelepiped will be less than 30 centimeters in length.

#### § 1214.200 Scope.

This subpart 1214.2 sets forth:

- (a) The policy on reimbursement for Shuttle services which are provided by NASA to users (as defined in §1214.201) under launch services agreements, and
- (b) Responsibilities for putting such policy into effect and carrying it out.

#### § 1214.201 Definition.

For the purpose of this subpart, the term *users* means:

- (a) For all civil U.S. Government agencies who request Shuttle services from NASA, and
- (b) Foreign users who have made substantial investment in the STS program, i.e., European Space Agency (ESA), ESA member or observer nations participating in Spacelab development, and Canada, when conducting experimental science or experimental applications missions with no near-term commercial implications.

#### § 1214.202 Reimbursement policy.

(a) *Features of policy.* (1) All users will be charged on a fixed price basis; there will be no post-flight charges, except for prespecified optional services.

(2) The price will be based on estimated costs.

(3) The price will be held constant for flights in the first three years of Space Transportation System (STS) operations.

(4) Payments shall be escalated according to the Bureau of Labor Statistics Index for Compensation per hour, Total Private.

(5) Subsequent to the first three years, the price will be adjusted annually to insure that total operating costs are recovered over a twelve-year period.

(6) Pricing incentives are designed to maximize the proper utilization of the STS.

(b) *Dedicated flight reimbursements.* (1) For the purposes of this policy, a dedicated flight is one sold to a single user.

(2) The policy is established for two distinct phases of Shuttle operations. The first phase is through the third full fiscal year of Shuttle operations and the second phase consists of nine full fiscal years subsequent to the first phase.

(i) For a dedicated Shuttle flight during the first phase, NASA shall be reimbursed in an amount which is a pro-rata share of forecast additive costs averaged over the first phase of three years; however, the price shall not be less than a pro-rata share of forecast total operating costs averaged over both the first and second phases of the twelve year Shuttle operation period.

(ii) For a dedicated Shuttle flight during the second phase, NASA shall be reimbursed a pro-rata share of forecast total operating costs over both phases to insure that total operating costs are recovered over the twelve year period.

(iii) The definition of the costs are specified in this subpart are set forth in appendix A to this subpart.

(iv) Subject to NASA approval, a dedicated flight user may apportion and assign STS services to other STS users provided they satisfy STS user requirements. The price of integrating additional payloads will be negotiated.

(v) A summary of standard Shuttle services included in the flight price is set forth in appendix B to subpart 1214.1.

(vi) The prices of optional Shuttle services are being developed and shall be set forth in the Shuttle Price Book which is being developed. A summary of the optional services is set forth in appendix C to subpart 1214.1.

(vii) For the user with an experimental, new use of space or first time use of space of great public value, the reimbursement to NASA for the dedicated, standard Shuttle flight in either the first or second phase shall be a pro-rata share of the average twelve year additive costs as estimated at the time of negotiations. Programs which qualify for this price will be determined by an STS Exceptional Program Selection Process. In all cases, the Administrator will be the selection official.

(viii) For dedicated flight users, NASA and the user will identify a desired launch date within a period of ninety days three years prior to flight. One year prior to the flight, a firm launch and payload delivery date will be identified by NASA. The firm launch date will be within the first sixty days of the original ninety day period. Launch will occur on the firmly scheduled launch date or within a period of thirty days thereafter. The payload must be ready to launch for the duration of that period.

(c) *Shared flight reimbursements.* (1) The price of a shared Shuttle flight will be a fraction of the dedicated Shuttle flight price. The fraction will be based on the length and weight of the payload and the mission destination at the time of contract negotiations. The formula for computing the fraction is set forth in appendix D to subpart 1214.1.

(2) For shared flight users, NASA and the user will identify a desired launch date three years prior to flight. Launch will occur within a period of ninety days, beginning on the desired launch date. One year prior to flight, a payload delivery date and a firm launch date will be coordinated among the shared flight users. This firm launch date will be within the first thirty days of the original ninety day period. The launch will occur on the firmly scheduled launch date or within a period of sixty days thereafter. The payloads must be ready to launch for the duration of that period.

(3) A 20 percent discount on the standard flight price will be given to shared flight users who will fly on a space-available (standby) basis. NASA will provide launch services within a prenegotiated period of one year. Shared flight payloads must be flight deliverable to the launch site on the first day of the one year period and sustain that condition until delivery to the launch site. The user will be notified sixty days prior to the firmly scheduled launch date which has been established by NASA. At that time, NASA will also establish a payload delivery date. The payload must be available at the launch site on the assigned delivery date and ready to launch for a



period of sixty days after the firmly scheduled launch date.

(d) *Small self-contained payloads.* Packages under 200 pounds and smaller than five cubic feet which require no Shuttle services (power, deployment, etc.), and are for R&D purposes, will be flown on a space-available basis during both phases of Shuttle operation. The price for this service will be negotiated based on size and weight, but will not exceed \$10,000 in 1975 dollars. A minimum charge of \$3,000 in 1975 dollars will be made. If Shuttle services are required, the price will be individually negotiated. Reimbursement to NASA will be made at the time the package is scheduled for flight.

(e) *Options.* (1) In order to allow the user greater flexibility in selecting a launch date, the user may purchase a "floating launch date" option. At the time of contract execution, the user will begin to make payments according to a 33 month reimbursement schedule for this launching. At any time during Phase 1 or 2, the user may exercise this option by informing NASA of his desired launch date for this option which will then be negotiated by NASA and the user. This launch date must be at least 33 months after the date of the first reimbursement payment. If the desired launch date is within one year of the date of declaration, the short term call-up option and associated fee will apply. If the desired launch is to occur in a year for which a new price per flight is in effect, the user will pay the new price. The fee for this option is 10 percent of the user's flight price in effect at the time of contract execution and is payable at that time. This fee will not be applied to the price of the user's flight.

(2) Options must be exercised for a flight by the end of the second phase of operations or the option fee will be retained by NASA.

(f) *Fixed price period and escalation.* (1) The price will remain constant for flights during the first phase of Shuttle operations. For flights during the second phase, the price will be adjusted on a yearly basis, if necessary, to assure recovery of total operating costs over a twelve-year period. These adjusted prices will be applicable only to agree-

ments executed after the adjustment is made.

(2) Shuttle services for both phases will be contracted on a fixed price basis. The payments in the contract will be escalated to the time of the payment using the Bureau of Labor Statistics Index for Compensation per hour, Total Private.

(g) *Earnest money.* Earnest money shall be paid to NASA prior to NASA's accepting a launch reservation. The earnest money required shall be \$100,000 per payload; however, if the payload is a small self-contained payload, the earnest money shall be \$500.00 per payload. The earnest money shall be applied to the first payment for each payload made by the customer, or shall be retained by NASA if a launch services agreement is not signed.

(h) *Reimbursement schedule.* (1) Reimbursement shall be made in accordance with the reimbursement schedule contained in this subsection. No charges shall be made after the flight, except as negotiated in the contract for prespecified extra services. Those users who contract for Shuttle services less than three years before the desired launch date will be accommodated and will pay on an accelerated basis according to the reimbursement schedule.

(2) *Standby payloads.* (i) Before the establishment of a firmly scheduled launch date, the number of months before launch will be computed assuming a launch date at the mid-point of the designated one-year period.

(ii) Once the firmly scheduled launch date is established, the user shall reimburse NASA to make his payments current according to the reimbursement schedule.

(3) *Reimbursement schedule.*

[Percent of price]

Number of months before launch flight is scheduled	Months prior to scheduled launch date					
	33	27	21	15	9	3
33 months or more .....	10	10	17	17	23	23
27 to 32 months .....	...	21	17	17	23	23
21 to 26 months .....	...	...	40	17	23	23
15 to 20 months .....	...	...	...	61	23	23
9 to 14 months .....	...	...	...	...	90	23
3 to 8 months .....	...	...	...	...	...	.....

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This schedule holds unless there are offsetting advantages to the U.S. Government of an accelerated launch schedule.

(4) Contracts for Shuttle services made one year or less before a flight and up to three months before a flight will be made on a space-available basis unless short term call-up option is elected.

(i) *Short term call-up option.* (1) For flights contracted on year or less before launch, but not less than three months before launch, short term call-up will be provided to dedicated flight users at the dedicated flight prices according to the reimbursement schedule.

(2) For dedicated flight users requiring short term call-up flights less than three months before launch, NASA will provide STS launch services on a space-available basis. NASA shall be reimbursed the dedicated flight price according to the reimbursement schedule plus short term call-up additional costs. The additional costs will be based on estimated costs to be incurred.

(3) For shared flights contracted one year or less before launch, but more than six months before launch, users may elect the short term call-up option. The user shall reimburse NASA the standard shared flight price according to the reimbursement schedule plus a load factor-recovery fee. The load factor-recovery fee is half the difference between a dedicated flight price and the user's shared flight price or the difference between a dedicated flight price and the total adjusted reimbursements from all shared users, whichever is less.

(4) For shared flights contracted six months or less before launch, but more than three months before launch, users may elect the short term call-up option. The user shall reimburse NASA the standard share flight price according to the reimbursement schedule plus a load factor-recovery fee which is the difference between a dedicated flight price and the total adjusted reimbursement from all shared flight users.

(5) Shared flights contracted three months or less before launch will be flown on a space-available basis. NASA shall be reimbursed the shared flight

price according to the reimbursement schedule plus short term call-up additional costs. These additional charges will be based on estimated costs to be incurred.

(6) For the purposes of this paragraph, *adjusted reimbursements* is defined to be reimbursements assuming all shared users are among those defined in §1214.201.

(7) The load factor-recovery fee will never be less than zero.

(8) The load factor-recovery fee is payable upon receipt of NASA's billing therefor.

(j) *Accelerated launches.* For users who reschedule a launch so that it occurs earlier than the planned launch, the user will pay on an accelerated reimbursement schedule. The user will reimburse NASA to make his payments current on the new accelerated reimbursement schedule. If the time from notification of acceleration is less than one year from the new launch date, short term call-up reimbursements will also apply.

(k) *Postponements*—(1) *Non-standby payloads.* (i) A user can postpone a flight of his payload one time with no additional charge if postponement occurs more than one year before launch. For subsequent postponed flights more than one year before launch, the user shall reimburse NASA a postponement fee of 5 percent of the user's flight price. For postponements one year or less before launch, the user shall reimburse NASA 5 percent of the user's flight price plus an occupancy fee according to the occupancy fee schedule in appendix B.

(ii) If the postponement of a flight causes the payload to be launched in a year for which a different price per flight has been established, the new price shall apply if it is higher than the originally contracted price.

(2) *Standby payloads.* (i) For flights postponed more than six months prior to the beginning of the negotiated one-year period, NASA shall renegotiate a new one-year period during which launch will occur. No additional fee will be imposed.

(ii) For flights postponed six months or less prior to the beginning of the negotiated one-year period, the user shall reimburse NASA 5 percent of the user's

flight price plus an occupancy fee according to the occupancy fee schedule set forth in appendix B.

(3) Postponement fees are payable upon receipt of NASA's billing therefor.

(4) Flights postponed will henceforth be treated as newly scheduled launches according to the reimbursement schedule. The number of months prior to launch will be taken as the total number or months between the date postponement is elected and the new launch date. Short term call-up options and associated fees shall apply.

(5) Minor delays (up to three days) caused by the users will not constitute a postponement. No fee will be charged for a minor delay.

(1) *Cancellations*—(1) *Non-standby payloads*. Users who cancel a flight more than one year before launch shall reimburse NASA 10 percent of the user's flight price. For a cancelled flight one year or less before launch, the user shall reimburse NASA 10 percent of the user's flight price plus an occupancy fee as set forth in appendix B.

(2) *Standby payloads*. (i) Users who cancel a flight more than six months prior to the beginning of the negotiated one-year period shall reimburse NASA 10 percent of the user's flight price.

(ii) For a flight cancelled six months or less prior to the beginning of the negotiated one-year period, the user shall reimburse NASA 10 percent of the user's flight price plus an occupancy fee as set forth in appendix B.

(3) Cancellation fees are payable upon receipt of NASA's billing therefor.

[42 FR 8631, Feb. 11, 1977, as amended at 49 FR 17736, Apr. 25, 1984]

#### § 1214.203 Optional reflight guarantee.

(a) If reflight insurance is purchased from NASA, NASA guarantees one reflight of:

(1) The launch and development of a free flying payload into a Shuttle compatible mission orbit if, through no fault of the user, the first launch and deployment attempt is unsuccessful and if the payload returns safely to earth or a second payload is provided by the user.

(2) The launch of an attached payload into its mission orbit if the first launch attempt is unsuccessful through no fault of the user, and if the payload returns safely to earth or a second payload is provided by the user.

(3) A launch of a Shuttle into a payload mission orbit for the purpose of retrieving a payload if the first retrieval attempt is unsuccessful through no fault of the user. This guarantee only applies if the payload is in a safe retrievable condition as determined by NASA.

(b) Reflight insurance is not applicable to payloads or upper stages placed into orbits other than the Shuttle mission orbit.

#### § 1214.204 Patent and data rights.

(a) When accommodating missions under this subpart, i.e., experimental science or experimental applications missions for ESA, ESA member states or Canada with no near-term commercial implications, NASA will obtain for U.S. Governmental purposes rights to inventions, patents and data resulting from such missions, subject to the user's retention of the rights to first publication of the data for a specified period of time.

(b) The user will be required to furnish NASA with sufficient information to verify peaceful purposes and to insure Shuttle safety and NASA's and the U.S. Government's continued compliance with law and the Government's obligations.

#### § 1214.205 Revisit and/or retrieval services.

These services will be priced on the basis of estimated costs. If a special dedicated Shuttle flight is required, the full dedicated price will be charged. If the user's retrieval requirement is such that it can be accomplished on a scheduled Shuttle flight, he will only pay for added mission planning, unique hardware or software, time on orbit, and other extra costs incurred by the revisit.

#### § 1214.206 Damage to payload.

The price does not include a contingency or premium for damage that may be caused to a payload through the fault of the U.S. Government or its

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contractors. The U.S. Government, therefore, will assume no risk for damage or loss to the user's payload. The users will assume that risk or obtain insurance protecting themselves against that risk.

### § 1214.207 Responsibilities.

(a) *Headquarters officials.* (1) The NASA Comptroller, in coordination with the Associate Administrator for Space Flight will:

(i) Prescribe guidelines, procedures, and other instructions which are necessary for estimating costs and setting prices and publishing them in the NASA Issuance System, and

(ii) Review and arrange for the billing of users.

(2) The Associate Administrator for Space Flight will arrange for:

(i) Developing estimates for costs and establishing prices in sufficient detail to reveal their basis and rationale.

(ii) Obtaining approval of the NASA Comptroller of such estimates and related information prior to the execution of any agreement, and

(iii) Reviewing of final billings to users prior to submission to the NASA Comptroller.

(b) *Field installation officials.* The Directors of Field Installations responsible for the STS operations will:

(1) Maintain and/or establish agency systems which are needed to identify costs in the manner prescribed by the NASA Comptroller,

(2) Compile financial records, reports, and related information, and

(3) Provide assistance to other NASA officials concerned with costs and related information.

### APPENDIX A TO SUBPART 1214.2 OF PART 1214—COSTS FOR WHICH NASA SHALL BE REIMBURSED

*Total Operating Costs.* Total Operating Costs include all direct and indirect costs, excluding costs of composing the use charge. Such costs include direct program charges for manpower, expended hardware, refurbishment of hardware, spares, propellants, provisions, consumables and launch and recovery services. They also include a charge for program support, center overhead and contract administration.

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### APPENDIX B TO SUBPART 1214.2 OF PART 1214—OCCUPANCY FEE SCHEDULE

For a postponed or cancelled dedicated flight, the occupancy fee will be zero.

For a postponed or cancelled shared flight, the occupancy fee will be computed according to the computation instructions set forth below. If the computation results in an occupancy fee which is less than zero, the occupancy fee will be reset to zero.

For a postponed or cancelled shared flight one year or less, but more than six months before launch, the user shall reimburse NASA an occupancy fee of half the user's flight price less any adjusted reimbursements from other users who contract for the same flight subsequent to the postponement or cancellation date.

For a postponed or cancelled shared flight six months or less before launch, the user shall reimburse NASA an occupancy fee of 90% of the user's flight price less any adjusted reimbursements from other users who contract for the same flight subsequent to the postponement or cancellation date.

For a given shared flight, if the occupancy fee so computed would result in total adjusted reimbursements (exclusive of the 5% (10%) postponement (cancellation) fee) in excess of the price of a dedicated flight, the occupancy fee will be reduced in order to recover the price of a dedicated flight.

In the event that, as a result of the postponement or cancellation, the Shuttle is not launched at all for the intended flight, the occupancy fee will be zero.

For purposes of this attachment, *adjusted reimbursements* is defined to be reimbursements assuming all users are among those defined in § 1214.201.

### Subpart 1214.3—Payload Specialists for Space Transportation System (STS) Missions

SOURCE: 54 FR 48587, Nov. 24, 1989, unless otherwise noted.

#### § 1214.300 Scope.

(a) This revision of subpart 1214.3 redefines the title of payload specialist and sets forth NASA's policy on and process for the determination of need, selection, and utilization of payload specialists and additional mission specialists to be assigned to a Space Transportation System (STS) flight in addition to the standard NASA flight crew.

(b) This subpart does not apply to the selection of crew for the Space Station Freedom. It is recognized that the

Space Station has unique requirements regarding its crew and that a separate, specifically tailored policy will need to be developed in the future.

**§ 1214.301 Definitions.**

(a) *Payload specialists.* Individuals other than NASA astronauts (commanders, pilots, and mission specialists), whose presence is required on board the Space Shuttle to perform specialized functions with respect to operation of one or more payloads or other essential mission activities.

(b) *NASA or NASA-related payload.* A specific complement of instruments, space equipment, and support hardware, developed by a NASA Program Office or by another party with which NASA has a shared interest, and carried into space to accomplish a mission or discrete activity in space.

(c) *Mission.* The performance of a coherent set of investigations or operations in space to achieve program goals. A single mission might require more than one flight or more than one mission might be accomplished on a single flight.

(d) *Mission manager.* The official responsible for the implementation of the payload portion of an STS flight(s).

(e) *Mission specialist.* A career NASA astronaut trained and skilled in the operation of STS systems related to payload operations and thoroughly familiar with the operational requirements and objectives of the payloads with which the mission specialist will fly. The mission specialist, when designated for a flight, will participate in the planning of the mission and will be responsible for the coordination of overall payload/STS interaction. The mission specialist will direct the allocation of STS and crew resources to the accomplishment of the combined payload objectives during the payload operations phase of the flight in accordance with the approved flight plan.

(f) *Investigator Working Group (IWG).* A group composed of the Principal Investigators, or their representatives, whose primary purpose is facilitating or coordinating the development and execution of the operational plans of an approved NASA program or reporting the progress thereof.

(g) *Payload sponsor.* For NASA and NASA-related payloads the payload sponsor is the Associate Administrator of the sponsoring Program Office whose responsibilities are most closely related to the particular scientific or engineering discipline associated with a payload. For all other payloads, the payload sponsor is identified by the Associate Administrator who contracts with the agency or organization, whether foreign or domestic, private-sector or governmental, to fly a payload on the STS.

(h) *Unique requirements.* The need for a highly specialized or unusual technical or professional background or the need for instrument operations requiring a highly specialized or unusual background that is not likely to be found in the group of mission specialists or cannot be attained in a reasonable training period.

**§ 1214.302 Background.**

(a) The Space Transportation System (STS) has been developed to expand the Nation's capabilities to utilize the unique environment of space. It provides opportunity for individuals other than career astronauts to participate as onboard members of the flight crew under specified conditions. The purpose of such participation by these individuals is to ensure the achievement of the payload or mission-related objectives.

(b) The STS will provide these additional crew members with a habitable working environment and support services in such a way as to require a minimum of dedicated space flight training, allowing them to concentrate their efforts on the accomplishment of their scientific, technical, or mission objectives.

**§ 1214.303 Policy.**

(a) *General.* (1) The Challenger accident marked a major change in the U.S. outlook and policies with respect to the flight of other than NASA astronauts. NASA and interested external parties, domestic and international, must re-examine previous understandings, expectations, and commitments regarding flight opportunities in light of the new policies now being enunciated.

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(2) NASA policies and their implementation recognize that:

(i) Every flight of the Shuttle involves risks;

(ii) Flight opportunities will now generally be limited to professional NASA astronauts and payload specialists essential for mission requirements; and

(iii) Top priority must be given to:

(A) Establishing, proving, and maintaining the reliability and safety of the Shuttle system;

(B) Timely and efficient reduction of the backlog of high priority scientific and national security missions; and maximum utilization of the Shuttle capacity for primary and secondary payloads that require transportation to or from orbit by the Space Shuttle.

(3) All Shuttle flights will be planned with a minimum NASA crew of five astronauts (commander, pilot, and three mission specialists). When payload or other mission requirements define a need and operational constraints permit, the crew size can be increased to a maximum of seven. Any such additional crew members must be identified at least 12 months before flight and be available for crew integration at 6 months.

(4) NASA policy and terminology are revised to recognize two categories of persons other than NASA astronauts, each of which requires separate policy treatment. They are:

(i) *Payload specialists*, redefined to refer to persons other than NASA astronauts (commanders, pilots, and mission specialists), whose presence is required onboard the Space Shuttle to perform specialized functions with respect to operation of one or more payloads or other essential mission activities.

(ii) *Space flight participants*, defined to refer to persons whose presence onboard the Space Shuttle is *not* required for operation of payloads or for other essential mission activities, but is determined by the Administrator of NASA to contribute to other approved NASA objectives or to be in the national interest.

(b) *Payload specialists*. Payload specialists may be added to Shuttle crews when more than the minimum crew size of five is needed and unique re-

quirements are involved. In the case of foreign-sponsored missions and payloads, the need and requirements for payload specialists will be negotiated and mutually agreed between the foreign sponsors and NASA. The selection process for additional crew members to meet approved requirements will first give consideration to qualified NASA mission specialists. When payload specialists are required, they will be nominated by the appropriate NASA, foreign, or other designated payload sponsor. In the case of NASA or NASA-related payloads, the nominations will be based on the recommendations of the appropriate Investigator Working Group (IWG).

(c) *Space flight participants*. NASA remains committed to the long-term goal of providing space flight opportunities for persons outside the professional categories of NASA astronauts and payload specialists when this contributes to approved NASA objectives or is determined to be in the national interest. However, NASA is devoting its attention to proving the Shuttle system's capability for safe, reliable operation and to reducing the backlog of high priority missions. Accordingly, flight opportunities for space flight participants are not available at this time. NASA will assess Shuttle operations and mission and payload requirements on an annual basis to determine when it can begin to allocate and assign space flight opportunities for future space flight participants, consistent with safety and mission considerations. When NASA determines that a flight opportunity is available for a space flight participant, first priority will be given to a "teacher in space," in fulfillment of space education plans.

### § 1214.304 Process.

(a) *Determining the need for additional crew members*. The payload sponsor will be responsible for recommending the number of additional crew members and for establishing the technical or scientific need, the selection criteria, uniqueness of qualifications, the proposed training, and other requirements for the additional crew members. The

payload sponsor's requirements for additional crew members, their qualifications, and the proposed duration for training will be reviewed with and concurred in by the Associate Administrator for Space Flight.

(b) *Selection of additional crew members for NASA and NASA-related payloads.* After the requirement for additional crew members has been established, the IWG will be tasked by the payload sponsor to commence the selection process. The IWG review process will include the participation of a senior astronaut from the Flight Crew Operations Directorate at the Johnson Space Center who will provide operational and applicant suitability criteria.

(1) Prior to the payload sponsor's recommendation for additional crew members and at his/her direction, the IWG will have studied the requirements of the selected investigations, the number, qualifications, training requirements and other requirements of payload specialists, and backups necessary to support the payload objectives, and made recommendations to the payload sponsor.

(2) Members of the mission specialist cadre will be considered first. The payload mission manager, on behalf of the IWG, will convey the selection criteria for the proposed additional crew members to the Chief, Astronaut Office. The IWG, the mission manager, and the Astronaut Office will coordinate the review of the proposed candidates and the mission manager will forward recommendations to the payload sponsor. Recommendations from the payload sponsor will be submitted to the Associate Administrator for Space Flight for approval.

(3) If mission specialists meeting the requirements cannot be provided because of the uniqueness of requirements or impracticability of the resultant training obligation, or if backup payload specialists are required, the IWG may then solicit candidate payload specialists from outside the career astronaut corps. The solicitation will require, as a minimum, that a summary of professional qualifications be submitted to the IWG. In addition, a medical history, and the results of the physical examination described

in paragraph (b)(3)(iii) of this section will be required. The IWG will be responsible for:

(i) Establishing professional and operational criteria for payload specialists for specific payloads. The criteria will include willingness on the part of the candidate to accept the applicable provisions of § 1214.306 and satisfactory completion of a background investigation conducted to NASA's standards, as determined by the Director, NASA Security Office.

(ii) Evaluating all candidates using the criteria established.

(iii) Determining which candidate payload specialists, who meet the NASA Class III Space Flight Medical Selection Standards, are deemed best professionally qualified. (The preselection phases of the medical examination will be conducted at Johnson Space Center by certified examiners approved by the Director, Life Sciences Division, NASA Headquarters).

(iv) Submitting its recommendations for payload specialists through the mission manager to the payload sponsor who in turn will determine final recommendations which will be reviewed with and concurred in by the Associate Administrator for Space Flight.

(4) The payload sponsor and the Associate Administrator for Space Flight will advise the Administrator of the payload specialist selections.

(c) *Selection of additional crew members for foreign payloads.* The need and requirements for payload specialists will be negotiated and mutually agreed to between the foreign sponsor and NASA. This negotiating process will include the participation of a senior astronaut from the Flight Crew Operations Directorate at the Johnson Space Center who will provide operational and applicant suitability criteria. After agreement is reached, the payload sponsor will initiate the selection process. Subject to the negotiated agreement, subsequent steps in the process will be similar to those described in § 1214.304(b) modified as follows:

(1) The IWG functions will be performed by a selection committee or other procedure designated by the payload sponsor.

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(2) The payload sponsor will designate an individual to perform the mission manager functions.

(3) The committee or procedure in paragraph (c)(1) of this section and the person named in paragraph (c)(2) of this section will be established during the negotiations between the foreign sponsor and NASA, consistent with the specific circumstances.

(4) The payload sponsor will also be responsible for submission to NASA by an appropriate authority of written assurance that an inquiry has been made into the recommended payload specialist's background and suitability on the basis of standards similar to those applied to NASA payload specialist candidates and a statement by the selected candidate asserting a willingness to accept the applicable provisions of §1214.306. These written assurances must be received and accepted by NASA before selection and before any NASA training can begin.

(d) *Selection of additional crew members for other payloads.* After the request for additional crew members is approved, the payload sponsor will commence the selection process. The payload sponsor review process will include the participation of a senior astronaut from the Flight Crew Operations Directorate at the Johnson Space Center who will provide operational and applicant suitability criteria.

(1) The payload sponsor will first consider members of the mission specialist cadre. A representative of the payload sponsor selection committee will convey the selection criteria for the proposed payload specialists to the Chief, Astronaut Office, and coordinate on the recommendations for mission specialists to satisfy the requirements. The recommendations will be submitted to the Associate Administrator for Space Flight for approval who will then advise the Administrator of the selections.

(2) If mission specialists meeting the requirements cannot be provided because of the uniqueness of qualifications or impracticability of the resultant training obligation, the payload sponsor selection committee, with concurrence from the payload sponsor and the Associate Administrator for Space Flight, may then consider other can-

didate payload specialists. The payload sponsor will be responsible for:

(i) Establishing professional and operational criteria for payload specialists for specific payloads. The criteria will include willingness on the part of the candidate to accept the applicable provisions of §1214.306 and satisfactory completion of a background investigation conducted to NASA's standards, as determined by the Director, NASA Security Office.

(ii) Evaluating all candidates using the criteria established.

(iii) Determining which candidate payload specialists, who meet the NASA Class III Space Flight Medical Selection Standards, are deemed best professionally qualified. (The preselection phases of the medical examination will be conducted at the Johnson Space Center by certified examiners approved by the Director, Life Sciences Division, NASA Headquarters).

(iv) Submitting its recommendations for payload specialist selection to the Associate Administrator for Space Flight for approval.

(e) *Preflight activities for additional crew members.* Mission specialists serving as additional crew for the payload, once selected, will be primarily responsible to the mission manager who, together with the IWG (or comparable body designated by the payload sponsor) and the Director, Flight Crew Operations, will determine the integrated training and work schedules as appropriate to the areas of responsibilities outlined in the following paragraphs.

(1) The IWG for NASA and NASA-related payloads or the Payload Sponsor for all other payloads is responsible for defining the training necessary for payload elements within its cognizance. The mission manager is responsible for the total integrated payload training and will assist the IWG as necessary in carrying out the defined training activities.

(2) The Director, Flight Crew Operations, is responsible for establishing the training requirements for payload specialists on Orbiter, Spacelab, and STS-provided payload support systems as appropriate. In order to enhance the



crew integration process, the additional crew members (payload specialists and additional mission specialists) will be based at the Johnson Space Center 6 months prior to flight, unless otherwise agreed between the payload sponsor and the Director, Flight Crew Operations, Johnson Space Center.

(3) The payload specialists must be certified for flight by the Director, Flight Crew Operations, upon satisfactory completion of all required training and demonstrated performance of assigned tasks. Certification of the payload specialist's readiness for flight will be made to the payload mission manager and will include an assessment by the crew commander of the payload specialist's suitability for space flight.

(4) The mission manager is responsible for verifying to the payload sponsor that all crew members are properly trained for in-flight payload operations.

(i) The medical program for payload specialists will be continued during the preflight period in accordance with the NASA Class III Space Flight Medical Selection Standards.

(ii) If, during the preflight period, the number of additional crew members is reduced to fewer than that agreed to, or an additional crew member does not meet the certification requirements, the necessary reprocessing may be initiated to provide replacements consistent with the above described selection process and the STS training requirements.

(f) *Designation of primary and backup payload specialists (when required).* At an appropriate time designated by the mission manager (not later than 9 months prior to flight), the IWG for NASA and NASA-related payloads or payload sponsor for all other payloads will recommend which payload specialists should be designated as prime and which as backup. However, in cases where mission specialists have been selected for the payload specialist position(s), they will be considered as primary at the time of selection. The recommendations will be forwarded by the mission manager to the Program Office which will review the recommendations and forward them to the Associate Administrator for Space Flight

for concurrence. The payload sponsor and the Associate Administrator for Space Flight will advise the Administrator of the selections.

(g) *Effective date.* The described selection process will apply to all STS missions for which selections have not been approved prior to December 31, 1988.

#### **§ 1214.305 Payload specialist responsibilities.**

(a) *Relationship with flight crew.* The crew commander has overall responsibility for crew integration and the safe and successful conduct of the mission. With respect to crew and vehicle safety, the commander has ultimate responsibility and authority for all assigned crew duties. The payload specialist is responsible to the authority of the commander and operates in compliance with mission rules and Payload Operation Control Center directives. Payload specialists are expected to operate as an integral part of the crew and will participate in crew activities as specified by the crew commander.

(b) *Operation of payload elements.* The payload specialist will be responsible for the operation of the assigned payload elements. Onboard decisions concerning assigned payload operations will be made by the payload specialist. A payload specialist may be designated to resolve conflicts between the payload elements and approve such deviation from the flight plan as may arise from equipment failures or STS factors. In the instance of STS factors, the mission specialist will present the available options for the payload-related decisions by the payload specialist.

(c) *Operation of STS equipment.* The payload specialist will be responsible for knowing how to operate certain Orbiter systems, such as hatches, food, and hygiene systems, and for proficiency in those normal and emergency procedures which are required for safe crew operations, including emergency egress and bail out. The responsibility for on-orbit management of Orbiter systems and attached payload support systems and for extravehicular activity and payload manipulation with the Remote Manipulator System will rest with the NASA

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flight crew. The NASA flight crew will operate Orbiter systems and standard payload support systems, such as Spacelab and Internal Upper Stage systems. With approval of the commander, payload specialists may operate payload support systems which have an extensive interface with the payload.

### § 1214.306 Payload specialist relationship with sponsoring institutions.

Specialists who are not U.S. Government employees must enter into a contractual or other arrangement establishing an obligatory relationship with an institution participating in the payload as designated by the payload sponsor prior to selection and before entering into training at a NASA installation or NASA-designated location. Payload specialists who are not otherwise U.S. Government employees will not become U.S. Government employees by virtue of being selected as a payload specialist. Except as specified in the following paragraphs of this section, NASA will not enter into any direct contractual or other arrangement with individual payload specialists. Any exception must be approved by the NASA Administrator.

(a) Payload specialists who are not citizens of the United States will be required to enter into an agreement with NASA in which they agree to accept and be governed by specified standards of conduct. Any such agreement will be signed on behalf of NASA by the NASA General Counsel or designee.

(b) Payload specialists who are citizens of the United States and who are not employees of the U.S. Government, will be required to enter into an agreement with NASA in which they agree to accept and be governed by specified standards of conduct. Any such agreement will be signed on behalf of NASA by the NASA General Counsel or designee.

(c) Payload specialists who are employed by a branch, department, or agency of the U.S. Government other than NASA may (pursuant to the exercise of judgment by the NASA General Counsel) be required to enter into an agreement with NASA to accept and be governed by specified standards of conduct. Any such agreement will be

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signed on behalf of NASA by the NASA General Counsel or designee.

### Subpart 1214.4—International Space Station Crew

AUTHORITY: 42 U.S.C. sections 2455, 2473, and 2475; 18 U.S.C. 799.

SOURCE: 65 FR 80303, Dec. 21, 2000, unless otherwise noted.

#### § 1214.400 Scope.

(a) This subpart sets forth policy and procedures with respect to International Space Station crewmembers provided by NASA for flight to the International Space Station.

(b) In order to provide for the safe operation, maintenance of order, and proper conduct of crew aboard the International Space Station, the January 29, 1998, Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station (hereinafter Agreement), which establishes and governs the International Space Station, requires the development and approval of a Code of Conduct for International Space Station crew. Pursuant to Article 11 of the Agreement, each International Space Station partner is obliged to ensure that crewmembers which it provides observe the Code of Conduct.

#### § 1214.401 Applicability.

This subpart applies to all persons provided by NASA for flight to the International Space Station, including U.S. Government employees, uniformed members of the Armed Services, U.S. citizens who are not employees of the U.S. Government, and foreign nationals.

#### § 1214.402 International Space Station crewmember responsibilities.

(a) All NASA-provided International Space Station crewmembers are subject to specified standards of conduct, including those prescribed in the Code of Conduct for the International Space

Station Crew, set forth as §1214.403. NASA-provided International Space Station crew members may be subject to additional standards and requirements, as determined by NASA, which will be made available to those NASA-provided crewmembers, as appropriate.

(1) NASA-provided International Space Station crewmembers who are not citizens of the United States will be required to enter into an agreement with NASA in which they agree to comply with specified standards of conduct, including those prescribed in the Code of Conduct for the International Space Station Crew (§1214.403). Any such agreement will be signed on behalf of NASA by the NASA General Counsel or designee.

(2) NASA-provided International Space Station crewmembers who are citizens of the United States but are not employees of the U.S. Government will be required to enter into an agreement with NASA in which they agree to comply with specified standards of conduct, including those prescribed in the Code of Conduct for the International Space Station Crew (§1214.403). Any such agreement will be signed on behalf of NASA by the NASA General Counsel or designee.

(3) NASA-provided International Space Station crewmembers who are employed by a branch, department, or agency of the U.S. Government may, as determined by the NASA General Counsel, be required to enter into an agreement with NASA to comply with specified standards of conduct, including those prescribed in the Code of Conduct for the International Space Station Crew (§1214.403). Any such agreement will be signed on behalf of NASA by the NASA General Counsel or designee.

(b) All NASA-provided personnel on board the International Space Station are additionally subject to the authority of the International Space Station Commander and shall comply with Commander's orders and directions.

**§1214.403 Code of Conduct for the International Space Station Crew.**

The Code of Conduct for the International Space Station Crew, which sets forth minimum standards for

NASA-provided International Space Station crewmembers, is as follows:

CODE OF CONDUCT FOR THE INTERNATIONAL SPACE STATION CREW

I. INTRODUCTION

A. Authority

This Code of Conduct for the International Space Station (ISS) crew, hereinafter referred to as Crew Code of Conduct (CCOC), is established pursuant to:

(1) Article 11 (Crew) of the intergovernmental Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station (the IGA) signed by the Partner States on January 29, 1998; and

(2) Article 11 (Space Station Crew) of the Memoranda of Understanding between, respectively, the National Aeronautics and Space Administration of the United States of America (NASA) and the Canadian Space Agency (CSA), NASA and the European Space Agency (ESA), NASA and the Government of Japan (GOJ), and NASA and the Russian Space Agency (RSA) Concerning Cooperation on the Civil International Space Station (the MOU's), which require, inter alia, that the crew Code of Conduct be developed by the partners.

B. Scope and Content

The partners have developed and approved this CCOC to: establish a clear chain of command on-orbit; establish a clear relationship between ground and on-orbit management; and establish a management hierarchy; set forth standards for work and activities in space, and, as appropriate, on the ground; establish responsibilities with respect to elements and equipment; set forth disciplinary regulations; establish physical and information security guidelines; and define the ISS Commander's authority and responsibility, on behalf of all the partners, to enforce safety procedures, physical and information security procedures and crew rescue procedures for the ISS. This CCOC and the disciplinary policy referred to in Section IV shall not limit the application of Article 22 of the IGA. This CCOC succeeds the NASA-RSA Interim Code of Conduct, which was developed pursuant to Article 11.2 of the MOU between NASA and RSA to cover early assembly prior to other partners' flight opportunities.

This CCOC sets forth the standards of conduct applicable to all ISS crewmembers during preflight, on-orbit, and post-flight activities, (including launch and return phases). ISS crewmembers are subject to additional

requirements, such as the ISS Flight Rules, the disciplinary policy, and requirements imposed by their Cooperating Agency or those relating to the Earth-to-Orbit Vehicle (ETOV) transporting an ISS crewmember. Each ISS crewmember has a right to know about such additional requirements. ISS crewmembers will also abide by the rules of the institution hosting the training, and by standards and requirements defined by the Multilateral Crew Operations Panel (MCOP), the Multilateral Space Medicine Board (MSMB) and the Multilateral Medical Operations Panel (MMOP). Each ISS crewmember will be informed by the Cooperating Agency providing him or her of the responsibilities of ISS crewmembers under the IGA, the MOU's and this CCOC. Further, each ISS crewmember will be educated by the Cooperating Agency providing him or her through the crew training curriculum and normal program operations as to ISS program rules, operational directives and management policies. Completion of postflight activities shall not affect an ISS crewmember's continuing obligations under Section V of this CCOC.

#### C. Definitions

For the purposes of the CCOC:

(1) "Cooperating Agency" means NASA, CSA, ESA, Rosaviakosmos (formerly RSA) and, in the case of Japan, the Science and Technology Agency of Japan (STA) and, as appropriate, the National Space Development Agency of Japan (NASDA), assisting agency to STA.

(2) "Crew Surgeon" means a Flight Surgeon assigned by the MMOP to any given expedition. He or she is the lead medical officer and carries primary responsibility for the health and well-being of the entire ISS crew.

(3) "Disciplinary policy" means the policy developed by the MCOP to address violations of the CCOC and impose disciplinary measures.

(4) "ETOV" means Earth-to-Orbit Vehicle travelling between Earth and the ISS.

(5) "Flight Director" means the Flight Director in control of the ISS.

(6) "Flight Rules" means the set of rules used by the Cooperating Agencies to govern flight operations.

(7) "ISS crewmembers" means any person approved for flight to the ISS, including both ISS expedition crew and visiting crew, beginning upon assignment to the crew for a specific and ending upon completion of the postflight activities related to the mission.

## II. GENERAL STANDARDS

### A. Responsibilities of ISS Crewmembers

ISS Crewmembers shall comply with the CCOC. Accordingly, during preflight, on-orbit, and postflight activities, they shall comply with the ISS Commander's orders, all Flight and ISS program Rules, oper-

ational directives, and management policies, as applicable. These include those related to safety, health, well-being, security, and other operational or management matters governing all aspects of ISS elements, equipment, payloads and facilities, and non-ISS facilities, to which they have access. All applicable rules, regulations, directives, and policies shall be made accessible to ISS crewmembers through appropriate means, coordinated by the MCOP.

### B. General Rules of Conduct

ISS Crewmembers' conduct shall be such as to maintain a harmonious and cohesive relationship among the ISS crewmembers and an appropriate level of mutual confidence and respect through an interactive, participative, and relationship-oriented approach which duly takes into account the international and multicultural nature of the crew and mission.

No ISS crewmember shall, by his or her conduct, act in a manner which results in or creates the appearance of: (1) Giving undue preferential treatment to any person or entity in the performance of ISS activities; and/or (2) adversely affecting the confidence of the public in the integrity of, or reflecting unfavorably in a public forum on, any ISS partner, partner state or Cooperating Agency.

ISS crewmembers shall protect and conserve all property to which they have access for ISS activities. No such property shall be altered or removed for any purpose other than those necessary for the performance of ISS duties. Before altering or removing any such property, ISS crewmembers shall first obtain authorization from the Flight Director, except as necessary to ensure the immediate safety of ISS crewmembers or ISS elements, equipment, or payloads.

### C. Use of Position

ISS crewmembers shall refrain from any use of the position of ISS crewmember that is motivated, or has the appearance of being motivated, by private gain, including financial gain, for himself or herself or other persons or entities. Performance of ISS duties shall not be considered to be motivated by private gain. Furthermore, no ISS crewmember shall use the position of ISS crewmember in any way to coerce, or give the appearance of coercing, another person to provide any financial benefit to himself or herself or other persons or entities.

### D. Mementos and Personal Effects

Each ISS crewmember may carry and store mementos, including flags, patches, insignia, and similar small items of minor value, on-board the ISS, for his or her private use, subject to the following:

(1) mementos are permitted as a courtesy, not an entitlement; as such they shall be considered as ballast as opposed to a payload or mission requirement and are subject to manifest limitations, on-orbit stowage allocations, and safety considerations;

(2) mementos may not be sold, transferred for sale, used or transferred for personal gain, or used or transferred for any commercial or fundraising purpose. Mementos which, by their nature, lend themselves to exploitation by the recipients, or which, in the opinion of the Cooperating Agency providing the ISS crewmember, engender questions as to good taste, will not be permitted.

An ISS crewmember's personal effects, such as a wristwatch, will not be considered mementos. Personal effects of any nature may be permitted, subject to constraints of mass/volume allowances for crew personal effects, approval of the ISS crewmember's Cooperating Agency, and approval of the transporting Cooperating Agency and considerations of safety and good taste.

If a Cooperating Agency carries and stores items onboard the ISS in connection with separate arrangements, these items will not be considered mementos of the ISS crewmembers.

### III. AUTHORITY AND RESPONSIBILITIES OF THE ISS COMMANDER, CHAIN OF COMMAND AND SUCCESSION ONORBIT; RELATIONSHIP BETWEEN GROUND AND ON-ORBIT MANAGEMENT

#### A. Authority and Responsibilities of the ISS Commander

The ISS Commander, as an ISS crewmember, is subject to the standards detailed elsewhere in this CCOC, in addition to the command-specific provisions set forth below:

The ISS Commander will seek to maintain a harmonious and cohesive relationship among the ISS crewmembers and an appropriate level of mutual confidence and respect through an interactive, participative, and relationship-oriented approach which duly takes into account the international and multicultural nature of the crew and mission.

For avoidance of doubt, nothing in this Section shall affect the ability of the MCOP to designate the national of any Partner State as an ISS Commander.

#### (1) During Preflight and Postflight Activities

The ISS Commander is the leader of the crew and is responsible for forming the individual ISS crewmembers into a single, integrated team. During preflight activities, the ISS Commander, to the extent of his or her authority, leads the ISS crewmembers through the training curriculum and mission-preparation activities and seeks to ensure that the ISS crewmembers are adequately prepared for the mission, acting as

the crew's representative to the ISS program's training, medical, operations, and utilization authorities. During postflight activities, the ISS Commander coordinates as necessary with these authorities to ensure that the ISS crewmembers complete the required postflight activities.

#### (2) During On-Orbit Operations

##### (a) General

The ISS Commander is responsible for and will, to the extent of his or her authority and the ISS on-orbit capabilities, accomplish the mission program implementation and ensure the safety of the ISS crewmembers and the protection of the ISS elements, equipment, or payloads.

##### (b) Main Responsibilities

The ISS Commander's main responsibilities are to: (1) Conduct operations in or on the ISS as directed by the Flight Director and in accordance with the Flight Rules, plans and procedures; (2) direct the activities of the ISS crewmembers as a single, integrated team to ensure the successful completion of the mission; (3) fully and accurately inform the Flight Director, in a timely manner, of the ISS vehicle configuration, status, commanding, and other operational activities on-board (including off-nominal or emergency situations); (4) enforce procedures for the physical and information security of operations and utilization data; (5) maintain order; (6) ensure crew safety, health and well-being including crew rescue and return; and (7) take all reasonable action necessary for the protection of the ISS elements, equipment, or payloads.

##### (c) Scope of Authority

During all phases of on-orbit activity, the ISS Commander, consistent with the authority of the Flight Director, shall have the authority to use any reasonable and necessary means to fulfill his or her responsibilities. This authority, which shall be exercised consistent with the provisions of Sections II and IV, extends to: (1) the ISS elements, equipment, and payloads; (2) the ISS crewmembers; (3) activities of any kind occurring in or on the ISS; and (4) data and personal effects in or on the ISS where necessary to protect the safety and well-being of the ISS crewmembers and the ISS elements, equipment, and payloads. Any matter outside the ISS Commander's authority shall be within the purview of the Flight Director.

Issues regarding the Commander's use of such authority shall be referred to the Flight Director as soon as practicable, who will refer the matter to appropriate authorities for further handling. Although other ISS crewmembers may have authority over and responsibility for certain ISS elements,

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equipment, payloads, or tasks, the ISS Commander remains ultimately responsible, and solely accountable, to the Flight Director for the successful completion of the activities and the mission.

### *B. Chain of Command and Succession On-orbit*

(1) The ISS Commander is the highest authority among the ISS crewmembers on-orbit. The MCOP will determine the order of succession among the ISS crewmembers in advance of flight, and the Flight Rules set forth the implementation of a change of command.

(2) Relationship of the ISS Commander to ETOV and Other Commanders

The Flight Rules define the authority of the ETOV Commander, the Rescue Vehicle Commander, and any other commanders, and set forth the relationship between their respective authorities and the authority of the ISS Commander.

### *C. Relationship Between the ISS Commander (On-Orbit Management) and the Flight Director (Ground Management)*

The Flight Director is responsible for directing the mission. A Flight Director will be in charge of directing real-time ISS operations at all time. The ISS Commander, working under the direction of the Flight Director and in accordance with the Flight Rules, is responsible for conducting on-orbit operations in the manner best suited to the effective implementation of the mission. The ISS Commander, acting on his or her own authority, is entitled to change the daily routine of the ISS crewmembers where necessary to address contingencies, perform urgent work associated with crew safety and the protection of the ISS elements, equipment or payloads, or conduct critical flight operations. Otherwise, the ISS Commander should implement the mission as directed by the Flight Director. Specific roles and responsibilities of the ISS Commander and the Flight Director are described in the Flight Rules. The Flight Rules outline decisions planned in advance of the mission and are designed to minimize the amount of real-time discussion required during mission operations.

## IV. DISCIPLINARY REGULATIONS

ISS crewmembers will be subject to the disciplinary policy developed and revised as necessary by the MCOP and approved by the Multilateral Coordination Board (MCB). The MCOP has developed an initial disciplinary policy which has been approved by the MCB. The disciplinary policy is designed to maintain order among the ISS crewmembers during preflight, on-orbit and postflight activities. The disciplinary policy is administrative in nature and is intended to address violations of the CCOC. Such violations may,

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inter alia, affect flight assignments as an ISS crewmember. The disciplinary policy does not limit a Cooperating Agency's right to apply relevant laws, regulations, policies, and procedures to the ISS crewmembers it provides, consistent with the IGA and the MOU's.

## V. PHYSICAL AND INFORMATION SECURITY GUIDELINES

The use of all equipment and goods to which ISS crewmembers have access shall be limited to the performance of ISS duties. Marked or otherwise identified as export controlled data and marked proprietary data obtained by an ISS crewmember in the course of ISS activities shall only be used in the performance of his or her ISS duties. With respect to data first generated on-board the ISS, the ISS crewmembers will be advised by the appropriate Cooperating Agency or by the data owner or provider through that Cooperating Agency as to the proprietary or export-controlled nature of the data and will be directed to mark and protect such data and to continue such protection for as long as the requirements for such protection remain in place. Additionally, ISS crewmembers shall act in a manner consistent with the provisions of the IGA and the MOU's regarding protection of operations data, utilization data, and the intellectual property of ISS users. They shall also comply with applicable ISS program rules, operational directives, and management policies designed to further such protections.

Personal information about ISS crewmembers, including all medical information, private family conference, or other private information, whether from verbal, written, or electronic sources, shall not be used or disclosed by other ISS crewmembers for any purpose, without the consent of the affected ISS crewmember, except as required for the immediate safety of ISS crewmembers or the protection of ISS elements, equipment, or payloads. In particular, all personal medical information, whether derived from medical monitoring, investigations, or medical contingency events, shall be treated as private medical information and shall be transmitted in a private and secure fashion in accordance with procedures to be set forth by the MMOP. Medical data which must be handled in this fashion includes, for example, biomedical telemetry, private medical communications, and medical investigation data. Nothing in this paragraph shall be interpreted to limit an ISS crewmember's access to all medical resources aboard the ISS, to ground-based medical support services, or to his or her own medical data during preflight, on-orbit, and postflight activities.

VI. PROTECTION OF HUMAN RESEARCH  
SUBJECTS

No research on human subjects shall be conducted which could, with reasonable foresight, be expected to jeopardize the life, health, physical integrity, or safety of the subject.

No research procedures shall be undertaken with any ISS crewmember as a human subject without: (1) written approval by the Human Research Multilateral Review Board (HRMRB) and (2) the full written and informed consent of the human subject. Each such approval and consent shall be obtained prior to the initiation of such research, and shall fully comply with the requirements of the HRMRB. The HRMRB is responsible for procedures for initiation of new experiments on-orbit when all consent requirements have been met, but the signature of the human subject cannot be obtained; explicit consent of the human subject will nonetheless be required in all such cases. Subjects volunteering for human research protocols may at their own discretion, and without providing a rationale, withdraw their consent for participation at any time, without prejudice, and without incurring disciplinary action. In addition, approval or consent for any research may be revoked at any time, including after the commencement of the research, by: the HRMRB, the Crew Surgeon, the Flight Director, or the ISS Commander, as appropriate, if the research would endanger the ISS Crew Member or otherwise threaten the mission success. A decision to revoke consent by the human subject or approval by the other entities listed above will be final.

**§ 1214.404 Violations.**

This subpart is a regulation within the meaning of 18 U.S.C. 799, and whoever willfully violates, attempts to violate, or conspires to violate any provision of this subpart or any order or direction issued under this subpart may be cited for violating title 18 of the U.S. Code and could be fined or imprisoned not more than 1 year, or both.

**Subpart 1214.5—Mission Critical Space System Personnel Reliability Program**

SOURCE: 55 FR 53289, Dec. 28, 1990, unless otherwise noted.

**§ 1214.500 Scope.**

This subpart 1214.5 establishes a program designed to ensure that personnel assigned to mission critical positions/

duties meet the screening requirements outlined in § 1214.504 of this part.

**§ 1214.501 Applicability.**

(a) This regulation applies to civil service and contractor personnel at NASA Headquarters and field installations who work in activities that are vital to the safety and success of mission critical space systems.

(b) The provisions of this regulation apply to all civil service and contractor personnel assigned to mission critical positions/duties with the exception of the personnel addressed in § 1214.501(c) of this part. This includes command and decision making personnel as well as technicians.

(c) This regulation does not include flight crew or payload specialists. They are covered by NASA Management Instruction (NMI) 33304 (14 CFR part 1214, subpart 1214.11), "NASA Astronaut Candidate Recruitment and Selection Program."

(d) This regulation applies to Space Station Freedom International Partners in that the certification requirements in § 1214.505(f) of this part apply to foreign personnel in mission critical positions/duties.

**§ 1214.502 Definitions.**

(a) *Mission Critical Space Systems.* The Space Shuttle and other critical space systems, including Space Station Freedom, designated Expendable Launch Vehicles (ELV's), designated payloads, Shuttle Carrier Aircraft and other designated resources that provide access to space. The Director of each NASA Installation will designate areas associated with these systems that are mission critical space systems areas.

(b) *Mission Critical Positions/Duties.* Positions/duties which, if performed in a faulty, negligent, or malicious manner, could jeopardize mission critical space systems and/or delay a mission. While this regulation establishes suitability screening requirements which, if met, will allow unescorted access to mission critical space areas, compliance with the requirements does not authorize unescorted access to classified areas by Personnel Reliability Program (PRP) personnel who do not have security clearances.

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(c) *Medical Authority.* A NASA civil service or contract physician/psychiatrist responsible for maintaining medical records, providing results of medical evaluations, and interpreting evaluations as they relate to reliable performance of mission-critical duties. The medical authority will coordinate evaluations with the investigatory authority.

(d) *Investigatory Authority.* A NASA civil service or contract individual responsible for reviewing court, law enforcement (Civil, DOD, NASA, other Federal), and other official records and NASA screening plans/procedures records to provide evaluations, recommendations, and guidance to NASA organizations, supervisors, and PRP adjudicators on issuing, denying, or revoking eligibility for mission critical positions/duties.

(e) *Certification.* The determination that an employee assigned to duties as described in §1214.505 of this part, is qualified to perform those duties, and that this employee has been found reliable in accordance with the adjudication guidelines set forth in Attachment B of NMI 8610.13.<sup>1</sup>

### § 1214.503 Policy.

(a) The Space Shuttle and the Space Station Freedom are included in the NASA National Resource Protection Program as delineated in NMI 8610.22, "National Resource Protection Program."<sup>2</sup> The Space Shuttle and the Space Station Freedom provide a capability to support a wide range of scientific applications and commercial, defense, and international uses. Since they will contribute significantly to ensuring a scientifically, technologically, and economically strong and secure nation, program reliability, operational and safety considerations require that stringent measures be taken to provide for the protection of the systems. In addition to the Space Shuttle and the Space Station Freedom, designated ELV's, designated payloads, Shuttle Carrier Aircraft and other designated resources which provide the same critical access to space

<sup>1</sup> Copies may be obtained from NASA Headquarters (Code NA-2), Washington, DC 20546.

<sup>2</sup> See footnote 1 to §1214.502(e).

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or the ability to accomplish critical objectives in space are considered to constitute valued national resources.

(b) Measures to ensure this protection are:

(1) Special physical security provisions as provided in NMI 8610.22.<sup>3</sup>

(2) Procedures to ensure that personnel assigned to mission critical positions/duties meet screening requirements, as set forth in §1214.504 of this part prior to unescorted access to areas where mission critical space systems are located.

### § 1214.504 Screening requirements.

(a) Only those persons who are certified under the PRP will have unescorted access to mission critical space systems areas, be assigned to, employed in, or retained in mission critical positions/duties. While this regulation provides for unescorted access to mission critical space systems areas, it does not preclude the need for escorting of PRP personnel who do not have security clearances in classified areas. The certification will be based on an evaluation of screening data which is to be undertaken by a trained evaluator using evaluation guidance and criteria contained in Federal Personnel Manual (FPM) chapter 731 and Attachment B (Adjudication Guidelines) of NMI 8610.13.<sup>4</sup> The need for impartial and consistent evaluation of data based on a set of standards is considered paramount to the successful implementation of this program.

(b) Determination of suitability for assignment to mission critical positions/duties will be made on the basis of the following criteria:

(1) Supervisory nomination (per requirements of §1214.505(c) of this part) and assurance of ability to perform mission critical duties as evidenced by performance during training and while on the job.

(2) Medical evaluation (for cause only) by NASA designated medical/psychiatric authority consistent with:

(i) The guidelines and requirements of the NASA Occupational Health Division as required to ensure adequate

<sup>3</sup> See footnote 1 to §1214.502(e).

<sup>4</sup> See footnote 1 to §1214.502(e).



health for competent and reliable performance; and

(ii) Information developed by testing, review and other screening regarding an individual's health, drug or alcohol abuse, or other factors which may reflect adversely on his or her cognizance, judgement, and ability to act reliably. Such information shall be considered "cause" within the meaning of this subsection.

(iii) All information obtained by medical or Employee Assistance Program evaluation is subject to federal and state statutes and regulations pertaining to the privacy and confidentiality of patient/client information.

(3) Evaluation by a NASA-designated investigatory authority including a review of the results of any National Agency Check (including a name check of the Federal Bureau of Investigation (FBI) fingerprint records) completed within the past 5 years. When the National Agency Check indicates that a more extensive investigation has been completed, the results of that investigation will also be reviewed.

(4) Local agency checks as appropriate.

(5) A review of the PRP candidate's personnel employment records.

(6) A review of the Inspector General case files.

(c) Information acquired during the screening process will be protected in a manner consistent with the provisions of the Privacy Act and other pertinent laws and regulations.

**§ 1214.505 Program implementation.**

(a) The Director of each NASA Installation will designate mission critical space systems areas.

(b) NASA installations will identify positions/duties subject to this regulation and will identify all civil service and contractor personnel assigned to these positions/duties. The number of persons so identified must be the absolute minimum necessary to meet operational requirements.

(c) Each NASA installation to which this regulation is applicable will establish:

(1) A suitability certification system including a designated certifying official to ensure that the screening requirements of this regulation are met.

Adjudication Guidelines (Attachment B of NMI 8610.13)<sup>5</sup> provides a baseline for each installation to consider in formulating a certification approach. The screening/evaluation plans and procedures formulated at each installation will be approved by Headquarters (Office of Safety and Mission Quality (Code Q) and appropriate Program Associate Administrators) before implementation.

(2) A management review process to validate the objectivity of individual suitability certification determinations and to ensure that reassignments or other personnel actions taken pursuant to this regulation are fair and in consonance with applicable personnel policies and procedures.

(3) An adequate training program for certifying officials, supervisors, adjudicators, and other installation personnel approved by Headquarters Code Q before implementation.

(4) Each NASA installation will maintain a roster of installation adjudicators. Directors of the Installations will approve appointment of adjudicators.

(d) Supervisors will:

(1) Review for reliability and nominate personnel whose duties require certification under the PRP.

(2) Certify that the PRP candidate holds current licenses, skill training certificates, and other documentation issued as required by applicable directives.

(3) Brief PRP candidates and rebrief PRP personnel on the needs and intent of the PRP.

(4) Monitor and continually evaluate personnel for steady reliable performance and notify the certifying official if changes occur which may compromise the safety and reliability of mission critical space systems.

(e) NASA Headquarters Office of Safety and Mission Quality (Code Q) will act as the Office of Primary Responsibility (OPR) for PRP policy and oversight (periodic review). The certification of Headquarters personnel will be carried out by the Office of Headquarters Operations (Code D) in accordance with § 1214.505 of this part.

<sup>5</sup> See footnote 1 to § 1214.502(e).

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(f) Foreign representatives requiring access to mission critical space systems or having the need to assume mission critical positions/duties (as defined in § 1214.502 of this part) pursuant to international agreements also require certification under this program. NASA will accept certifications from foreign agencies following review under the NASA Headquarters process (§ 1214.505(e) of this part), if a written agreement has been reached with the foreign sponsoring agency whereby NASA recognizes the foreign agency's process as equivalent to its own. Such agreements will be negotiated by the International Relations Division (Code XI) with the concurrence of the NASA Headquarters Office of Safety and Mission Quality (Code Q) and the Program Office responsible for the program to which such access is sought. The intent of the certification process is that foreign personnel are screened as thoroughly as are U.S. citizens who have access to mission critical space systems areas or who have the need to assume mission critical duties.

(g) NASA will accept certifications from other Federal agencies, departments, and offices following review under the NASA Headquarters process (Section 1214.505(e) of this part), if a written agreement has been reached whereby NASA recognizes that process as equivalent to its own. Such agreements will be negotiated by the NASA Headquarters Office of Safety and Mission Quality (Code Q) and the Program Office responsible for the program to which such access is sought. A security clearance to access classified material is not sufficient to meet the certification requirements of this regulation.

### Subpart 1214.6—Mementos Aboard Space Shuttle Flights

AUTHORITY: Pub. L. 85-568, 72 Stat. 426 (42 U.S.C. 2473(c)).

SOURCE: 56 FR 31074, July 9, 1991, unless otherwise noted.

#### § 1214.600 Scope.

This subpart establishes policy, procedures, and responsibilities for selecting, approving, packing, storing, and

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disposing of mementos carried on Space Shuttle flights.

#### § 1214.601 Definitions.

(a) *Mementos*. Flags, patches, insignia, medallions, minor graphics, and similar items of little commercial value, especially suited for display by the individuals or groups to whom they have been presented.

(b) *Official Flight Kit (OFK)*. A container, approximately 0.057 cubic meters (2 cubic feet) in size, reserved for carrying official mementos of NASA and other organizations aboard Space Shuttle flights. No personal items will be carried in the OFK.

(c) *Personal Preference Kit (PPK)*. A container, approximately 12.82 centimeters × 20.51 centimeters × 5.13 centimeters (5"×8"×2") in size, separately assigned to each individual accompanying a Space Shuttle flight for carrying personal mementos during the flight.

#### § 1214.602 Policy.

(a) *Premise*. Mementos are welcome aboard Space Shuttle flights. However, they are flown as a courtesy—not as an entitlement. The Associate Administrator for Space Flight is free to make exceptions to this accommodation without explanation. Moreover, mementos are ballast not payload. They can be reduced or eliminated (by the Deputy Director, Space Shuttle Program, Johnson Space Center) for weight, volume, or other technical reasons without reference to higher authority.

(b) *Constraints*. Mementos to be carried on Space Shuttle flights must be approved by the Associate Administrator for Space Flight and are stowed only in an OFK or a PPK. Mementos will not be carried within payload containers, including Get-Away Specials, or in any other container or locker aboard the Space Shuttle, other than within the designated OFK or PPK.

(c) *Economic Gain*. Items carried in an OFK or a PPK will not be sold, transferred for sale, used or transferred for personal gain, or used or transferred for any commercial or fund-raising purpose. Items such as philatelic materials and coins that, by their nature, lend themselves to exploitation by the

recipients, or create problems with respect to good taste; or that are large, bulky, or heavy items (in the context of the OFK's size, as indicated in § 1214.601(b) of this part) will not be approved for flight.

**§ 1214.603 Official Flight Kit (OFK).**

(a) *Purpose.* The OFK on a particular flight enables NASA, developers of NASA sponsored payloads, NASA's external payload customers, other Federal agencies, researchers, aerospace contractors, and counterpart institutions of friendly foreign countries to utilize mementos as awards and commendations or preserve them in museums or archives. The courtesy is also extended to other organizations outside the aerospace community, such as state and local governments, the academic community, and independent business entities. In the latter case, it is customary to fly only one item for the requesting organization to be used for display purposes.

(b) *Limitations.* In addition to § 1214.602(c) of this part, U.S. national flags will not be flown as mementos except by U.S. Government sponsors.

(c) *Approval of Contents.* At least 60 days prior to the launch of a Space Shuttle flight, an authorized representative of each organization desiring mementos to be carried on the flight in the OFK must submit a letter or request describing the item(s) to be flown and the intended purpose or distribution. Letters should be directed to the cognizant NASA office as follows:

(1) Space Shuttle customers/users of any nature, to the Director of Transportation Services, Code MC, NASA Headquarters, Washington, DC 20546.

(2) Foreign organizations/individuals, and Department of Defense organizations/individuals (both other than as a Space Shuttle customer) and other Federal agencies to the Associate Administrator of External Relations, Code X, NASA Headquarters, Washington, DC 20546. Upon receipt of all requests, the cognizant offices will review and forward data to the Associate Director, Code AC, Johnson Space Center, Houston, TX 77058.

(3) All others (aerospace companies, state and local governments, the academic community, and non-space-re-

lated businesses) may send requests directly to the Associate Director, Code AC, Johnson Space Center, Houston, TX 77058. In the event OFK requests, on a particular flight, exceed OFK capability, priority consideration may be given to those entities having payloads on that flight. The listing of the proposed OFK contents for each flight is prepared at the Johnson Space Center and forwarded to the Associate Administrator for Space Flight approximately 30 days prior to launch for approval.

**§ 1214.604 Personal Preference Kit (PPK).**

(a) *Purpose.* The PPK enables persons accompanying Space Shuttle flights to carry personal items for use as mementos. Only those individuals actually accompanying such flights (astronaut crew members, payload specialists, and space flight participants) may request authorization to carry personal items as mementos. These items must be carried in individually assigned PPK's.

(b) *Limitations.* The contents of a PPK must be limited to 20 separate items, with a total weight of 0.682 kilograms (1.5 pounds). Each item is allocated for a different recipient and distributed accordingly. The volume of a PPK must be contained in a 12.82 centimeters × 20.51 centimeters × 5.13 centimeters (5"×8"×2") bag provided by NASA. Increases in these limitations will be authorized only by the Associate Administrator for Space Flight.

(c) *Approval of Contents.* At least 60 days before the scheduled launch of a Space Shuttle flight, each person assigned to the flight who desires to carry items in a PPK must submit a proposed list of items and their recipients to the Associate Director, Johnson Space Center. The Associate Director will review the requests for compliance with this subpart and submit the crew members' PPK lists through supervisory channels to the Associate Administrator for Space Flight for approval. A signed copy of the Associate Administrator for Space Flight's approval will be returned to the Director, Johnson Space Center, for appropriate distribution.

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### § 1214.605 Preflight packing and storing.

(a) Items intended for inclusion in OFK's or PPK's must arrive at the Johnson Space Center, Code AC, at least 45 days prior to the flight on which they are scheduled in order for them to be listed on the cargo manifest, packaged, weighed, and stowed aboard the Orbiter. Items must arrive at the Johnson Space Center prior to the 45-day limit even if the Associate Administrator for Space Flight's approval is still pending. Items not approved by the Associate Administrator for Space Flight will be returned to the requesting individual/organization.

(b) The Associate Director, Johnson Space Center, is responsible for the following:

(1) Securing the items while awaiting the launch on which they are manifested.

(2) Packaging, weighing, and stowing the items according to the manifests approved by the Associate Administrator for Space Flight.

### § 1214.606 Postflight disposition.

The Associate Director, Johnson Space Center, will:

(a) Receive and inventory all items flown in the OFK and PPK's following each Shuttle flight.

(b) Return the contents of the PPK's to the persons who submitted them.

(c) Return all other flown items to the submitting organizations with an appropriate letter of certification.

(d) Retain and secure mementos flown by the Agency for future use.

### § 1214.607 Media and public inquiries.

(a) *Official Flight Kit.* Information on the contents of OFK's will be routinely released to the media and to the public upon their request, but only after the contents have been approved by the Associate Administrator for Space Flight.

(b) *Personal Preference Kit.* Information on the contents of PPK's will be routinely released to the media and to the public upon their request immediately following postflight inventory.

(c) *Responsibility for Release of Information.* The Director of Public Affairs, Johnson Space Center, is responsible for the prompt release of information on OFK and PPK contents.

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### § 1214.608 Safety requirements.

The contents of OFK's and PPK's must meet the requirements set forth in NASA Handbook 1700.7, "Safety Policy and Requirements for Payloads Using the Space Transportation System (STS)."

### § 1214.609 Loss or theft.

(a) *Responsibility.* The National Aeronautics and Space Administration will not be responsible for the loss or theft of, or damage to, items carried in OFK's or PPK's.

(b) *Report of Loss or Theft.* Any person who learns that an item contained in an OFK or a PPK is missing shall immediately report the loss to the Johnson Space Center Security Office and the NASA Inspector General.

### § 1214.610 Violations.

Any item carried in violation of the requirements of this subpart shall become the property of the U.S. Government, subject to applicable Federal laws and regulations, and the violator may be subject to disciplinary action, including being permanently prohibited from use of, or, if an individual, from flying aboard the Space Shuttle or any other manned spacecraft of the National Aeronautics and Space Administration.

## Subpart 1214.7—The Authority of the Space Shuttle Commander

AUTHORITY: Pub. L. 85-588, 72 Stat. 426 (42 U.S.C. 2473, 2455; 18 U.S.C. 799); Art. VIII, TIAS 6347 (18 U.S.T. 2410).

SOURCE: 45 FR 14845, Mar. 7, 1980, unless otherwise noted.

### § 1214.700 Scope.

This subpart establishes the authority of the Space Shuttle commander to enforce order and discipline during all flight phases of a Shuttle flight to take whatever action in his/her judgment is necessary for the protection, safety, and well-being of all personnel and on-board equipment, including the Space Shuttle elements and payloads. During the final launch countdown, following crew ingress, the Space Shuttle commander has the authority to enforce order and discipline among all on-

board personnel. During emergency situations prior to liftoff the Space Shuttle commander has the authority to take whatever action in his/her judgment is necessary for the protection or security, safety, and well-being of all personnel on board.

[56 FR 27899, June 18, 1991]

**§ 1214.701 Definitions.**

(a) *Space Shuttle Elements* consists of the Orbiter, an External Tank, two Solid Rocket Boosters, Spacelab, Upper Stage Boosters (Solid Spinning Upper Stage and Interim Upper Stages) and others as specified in NASA Management Instruction 8040.9.

(b) The *flight crew* consists of the commander, pilot, and mission specialist(s).

(c) A *flight* is the period from launch to landing of a Space Shuttle—a single round trip. (In the case of a forced landing the Space Shuttle commander's authority continues until a competent authority takes over the responsibility for the Orbiter and for the persons and property aboard.)

(d) The *flight-phases* consist of launch, in orbit, deorbit, entry, landing, and postlanding.

(e) A *payload* is a specific complement of instruments, space equipment, and support hardware/software carried into space to accomplish a scientific mission or discrete activity.

(f) *Personnel on board* refers to those astronauts or other persons actually in the Orbiter or Spacelab during any flight phase of a Space Shuttle flight (including any persons who may have transferred from another vehicle) and including any persons performing extravehicular activity associated with the mission.

[45 FR 14845, Mar. 7, 1980, as amended at 56 FR 27899, June 18, 1991]

**§ 1214.702 Authority and responsibility of the Space Shuttle commander.**

(a) During all flight phases of a Space Shuttle flight, the Space Shuttle commander shall have the absolute authority to take whatever action is in his/her discretion necessary to:

- (1) Enhance order and discipline,
- (2) Provide for the safety and well being of all personnel on board, and

(3) Provide for the protection of the Space Shuttle elements and any payload carried or serviced by the Space Shuttle.

The commander shall have authority throughout the flight to use any reasonable and necessary means, including the use of physical force, to achieve this end.

(b) The authority of the commander extends to any and all personnel on board the Orbiter including Federal officers and employees and all other persons whether or not they are U.S. nationals.

(c) The authority of the commander extends to all Space Shuttle elements, payloads, and activities originating with or defined to be a part of the Space Shuttle mission.

(d) The commander may, when he/she deems such action to be necessary for the safety of the Space Shuttle elements and personnel on board, subject any of the personnel on board to such restraint as the circumstances require until such time as delivery of such individual or individuals to the proper authorities is possible.

[45 FR 14845, Mar. 7, 1980, as amended at 56 FR 27900, June 18, 1991]

**§ 1214.703 Chain of command.**

(a) The *Commander* is a career NASA astronaut who has been designated to serve as commander on a particular flight, and who shall have the authority described in §1214.702 of this part. Under normal flight conditions (other than emergencies or when otherwise designated) the Space Shuttle commander is responsible to the Flight Director, Johnson Space Center, Houston, TX.

(b) The *pilot* is a career NASA astronaut who has been designated to serve as the pilot on a particular flight and is second in command of the flight. If the commander is unable to carry out the requirements of this subpart, then the pilot shall succeed to the duties and authority of the commander.

(c) Before each flight, the other flight crew members (Mission Specialists) will be designated by the Director of Flight Operations, Johnson Space Center, Houston, TX, in the order in which they will assume the authority of the commander under this subpart

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in the event that the commander and pilot are both not able to carry out their duties.

(d) The determinations, if any, that a crew member in the chain of command is not able to carry out his or her command duties and is, therefore, to be relieved of command, and that another crew member in the chain of command is to succeed to the authority of the commander, will be made by the Director of the Johnson Space Center.

[45 FR 14845, Mar. 7, 1980, as amended at 47 FR 3095, Jan. 22, 1982; 56 FR 27900, June 18, 1991]

### § 1214.704 Violations.

(a) All personnel on board a Space Shuttle flight are subject to the authority of the commander and shall conform to his/her orders and direction as authorized by this subpart.

(b) This regulation is a regulation within the meaning of 18 U.S.C. 799, and whoever willfully violates, attempts to violate, or conspires to violate any provision of this subpart or any order or direction issued under this subpart shall be fined not more than \$5,000 or imprisoned not more than 1 year, or both.

[45 FR 14845, Mar. 7, 1980, as amended at 56 FR 27900, June 18, 1991]

## Subpart 1214.8—Reimbursement for Spacelab Services

SOURCE: 50 FR 30809, July 30, 1985, unless otherwise noted.

### § 1214.800 Scope.

This subpart 1214.8 establishes the special reimbursement policy for Spacelab services provided to Space Transportation System (STS) customers governed by the provisions of subpart 1214.1 or subpart 1214.2. It applies to flights occurring in the second phase of STS operations (U.S. Government fiscal years 1986, 1987, and 1988). The following five types of Spacelab flights are available to accommodate payload requirements:

(a) Dedicated-Shuttle Spacelab flight [Ref. § 1214.804(e)].

(b) Dedicated-pallet flight [Ref. § 1214.804(f)].

(c) Dedicated-FMDM/MPES (flexible multiplexer-demultiplexer/multipurpose experiment support structure) flight [Ref. § 1214.804(f)].

(d) Complete-pallet flight [Ref. § 1214.804(g)].

(e) Shared-element flight [Ref. § 1214.804(h)].

### § 1214.801 Definitions.

(a) *Shuttle policy.* The appropriate subpart (1214.1 or 1214.2) governing use of the Shuttle. Determination of the appropriate subpart for each customer shall be made by reference to §§ 1214.101 and 1214.201.

(b) *Spacelab elements.* Pallets (3-meter segments), pressurized modules (long or short), and the FMDM/MPES (1-meter cross-bay structure), all as maintained in the NASA-approved Space lab configuration.

(c) *Standard flight price.* The price for standard Shuttle and standard Spacelab services provided. If a customer elects not to use a portion of the standard services, the standard flight price shall not be affected.

(d) *Shuttle load factor.* The parameter used to compute the customer's pro rata share of Shuttle services and used to compute the Shuttle charge factor. Means of computing this parameter are defined in § 1214.813.

(e) *Spacelab load fraction.* The parameter used to compute the customer's pro rata share of each element's services and used to compute the element charge factor. Means of computing this parameter are defined in § 1214.813.

(f) *Shuttle charge factor and element charge factor.* Parameters used in computation of the customer's flight price. Means of computing these parameters are defined in § 1214.813.

(g) *Dedicated flight price for Spacelab missions.* (1) The single-shift operation dedicated flight price for Spacelab missions is identical to the Shuttle dedicated flight price as defined in the Shuttle policy.

(2) The two-shift operation dedicated flight price for Spacelab missions is the sum of:

(i) The Shuttle dedicated flight price as defined in the Shuttle policy.

(ii) The standard price for additional services required to support a second shift of on-orbit operations.

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**§ 1214.802 Relationship to Shuttle policy.**

Except as specifically noted, the provisions of the Shuttle policy also apply to Spacelab payloads. Although some language in the Shuttle policy is Shuttle-specific, it is the intent of this subpart 1214.8 that the Shuttle policy be applied to Spacelab also, including the policy on patent and data rights. However, in the event of any inconsistencies in the policies, the Spacelab policy will govern with respect to Spacelab services.

**§ 1214.803 Reimbursement policy.**

(a) *Reimbursement basis.* (1) This policy is established for the second phase of STS operations (U.S. Government fiscal years 1986, 1987, and 1988).

(2) *Standard flight price.* During this phase, customers covered by subpart 1214.1 or subpart 1214.2 shall reimburse NASA for standard Spacelab services an amount which is a pro rata share of:

(i) The appropriate dedicated flight price for the customer's Spacelab mission.

(ii) The standard price for use of the selected Spacelab elements during the second phase of STS operations.

(3) The price shall be held constant for flights during this phase of STS operations.

(4) Reimbursement policies for subsequent phases of STS operations will be developed after NASA has obtained more operational experience.

(b) *Escalation.* Payments shall be escalated in accordance with the Shuttle policy.

(c) Customers shall reimburse NASA an amount which is the sum of the customer's standard flight price and the price for all optional services provided.

(d) *Earnest money.* For those customers required to pay earnest money by the Shuttle policy, the total earnest money payment per payload for Spacelab payloads (including Shuttle services) shall be the lesser of \$150,000 or 10% of the customer's estimated standard flight price. Earnest money will be applied to the first payment for standard services made for each payload by the customer or will be retained by NASA if a Launch Services Agreement is not signed.

**§ 1214.804 Services, pricing basis, and other considerations.**

(a) *Mandatory use of dedicated-Shuttle Spacelab flight.* (1) Customers shall be required to fly under the provisions of paragraph (e) of this section if the customer requires exclusive use of any of the following:

(i) Pressurized module (long or short).

(ii) Three pallets in the "1+1+1" configuration.

(iii) Four pallets in the "2+2" configuration.

(2) In the cases cited in paragraph (a)(1) of this section, if the customer requests, NASA will attempt to find compatible sharees to fly with the customer's payload. If NASA is successful, the customer's Shuttle standard flight price shall be the greater of:

(i) The appropriate dedicated flight price for the customer's Spacelab mission less adjusted reimbursements (as defined in the Shuttle policy) from sharees actually flown.

(ii) The computed shared-flight Spacelab flight price for the customer's payload.

(b) *Apportionment and assignment of services.* Subject to NASA approval, a customer contracting for a Spacelab flight shall be permitted to apportion and assign services under the provisions of the Shuttle policy.

(c) *Postponement and termination.* (1) A customer may postpone the flight of a Spacelab payload one time with no additional charge if postponement occurs more than 18 months before the scheduled launch date.

(2) Postponement or termination fees for Spacelab payloads shall consist of the sum of:

(i) A fee for Shuttle transportation.

(ii) A fee for use of the Spacelab elements.

(3) *Shuttle transportation fee.* Customers shall be governed by the provisions of the Shuttle policy with the following exception. When computing occupancy fees for shared-element payloads, the "adjusted reimbursements from other customers" shall be defined as the adjusted reimbursements from those customers who subsequently contract for the use of the element being shared.

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(4) *Spacelab use fee.* The postponement and termination fees for use of the Spacelab elements are computed as a percentage of the customer's price for use of the Spacelab elements and shall be based on the table below. When postponement or termination occurs less than 18 months before launch, the fees shall be computed by linear interpolation using the points provided.

Time when postponement or termination occurs, months before scheduled launch date	Fee for use of Spacelab element(s), percent of price for use of element(s)	
	Postponement	Termination
Dedicated Flights, Dedicated Elements, and Dedicated FMDM/MPES		
0 .....	75	100
3 .....	60	85
12 .....	14	20
18 .....	5	10
More than 18 .....	5	10
Complete Pallets and Shared Elements		
Less than 8 .....	95	100
8 .....	95	100
9 .....	32	95
12 .....	18	80
18 .....	5	10
More than 18 .....	5	10

(5) At the time of signing of the Launch Services Agreement, NASA shall define a payload removal cutoff date (relative to the launch date) for each Spacelab payload to be flown on a shared flight. A customer may still postpone or terminate a flight after the payload's cutoff date; however, NASA shall not be required to remove the payload before flight.

(d) *Minor delays.* The minor delay provisions of the Shuttle policy shall apply only to those Spacelab payloads whose Shuttle load factor is equal to or greater than 0.05.

(e) *Dedicated-Shuttle Spacelab flight.* (1) A dedicated-Shuttle Spacelab flight is a Shuttle flight sold to a single customer who is entitled to select the Spacelab elements used on the flight.

(2) In addition to the standard services listed in paragraph (i) of this section, the following standard services are provided to customers of dedicated-Shuttle Spacelab flights and form the basis for the standard flight price:

(i) Use of the full standard services of the Shuttle and the Spacelab elements selected.

(ii) One day of one-shift on-orbit operations.

(iii) Standard mission destinations as defined in the Shuttle policy.

(iv) Launch within a prenegotiated 90-day period in accordance with the dedicated flight scheduling provisions of the Shuttle policy.

(v) The available payload operations time of two NASA-furnished mission specialists.

(3) Customers contracting for a dedicated-Shuttle Spacelab flight shall reimburse NASA an amount which is the sum of:

(i) The one-shift operation dedicated flight price for a 1-day Spacelab mission.

(ii) The price for the use of all Spacelab elements used (including all necessary mission-independent Spacelab equipment).

(iii) The price for all optional services provided.

(f) *Dedicated 3-meter pallets and dedicated FMDM/MPES.* (1) A dedicated pallet (or a dedicated FMDM/MPES) is one which is sold to a single customer and which includes all Spacelab hardware necessary to permit it to be flown on any shared Shuttle flight as an autonomous payload (e.g., a dedicated 3-meter pallets may either be supplied with its own exclusive igloo or may fly without an igloo if it requires only standard Shuttle services).

(2) In addition to a pro rata share of the standard service listed in paragraph (i) of this section, the following standard services are provided to customers of dedicated pallets (or dedicated FMDM/MPES) and form the basis for establishing the standard flight price:

(i) A pro rata share of the Shuttle services normally provided, where the basis for proration is the customer's Shuttle load factor as defined in §1214.813(d)(1) for dedicated pallets and in §1214.813(e)(2) for dedicated FMDM/MPES.

(ii) The exclusive services of the pallet (or FMDM/MPES) and all Spacelab hardware provided to support the pallet (or FMDM/MPES).



(iii) One day of one-shift on-orbit operations.

(iv) Launch to the standard mission destination of 160 nmi, 28.5° as defined in the Shuttle policy.

(v) Launch within a prenegotiated 90-day period in accordance with the shared-flight scheduling provisions of the Shuttle policy.

(vi) A pro rata share of the on-orbit payload operations time of two NASA-furnished mission specialists, where the basis of proration shall be the customer's Shuttle load factor.

(3) Customers contracting for a dedicated pallet (or FMDM/MPRESS) flight shall reimburse NASA an amount which is the sum of:

(i) The product of the customer's Shuttle charge factor and the one-shift-operation dedicated flight price of a 1-day Spacelab mission.

(ii) The price for the use of the pallet (or FMDM/MPRESS) selected (including all necessary mission-independent Spacelab equipment).

(iii) The price for all optional services provided.

(g) *Complete pallet.* (1) A complete Spacelab pallet is one which is sold to a single customer but flies with other Spacelab elements on a NASA or NASA-designated Spacelab flight and shares the common standard Spacelab services, e.g., shares an igloo with other pallets.

(2) In addition to a pro rata share of the standard services listed in paragraph (i) of this section, the following standard services are provided to customers of complete pallets and form the basis for the standard flight price:

(i) The pallet's pro rata share of standard Shuttle services, where the basis of proration shall be the customer's Shuttle load factor as defined in §1214.813(f)(1).

(ii) A pro rata share of 7 days of two-shift on-orbit operations, where the basis of proration shall be the customer's Shuttle load factor.

(iii) Mission destination selected by NASA in consultation with the customer.

(iv) Assignment, with the customer's concurrence, to a Spacelab flight designated by NASA.

(v) Launch date established by NASA.

(vi) A pro rata share of the on-orbit payload operations time of two NASA-furnished mission specialists, where the basis of proration shall be the customer's Shuttle load factor.

(vii) Use of the entire volume above a pallet.

(3) Users contracting for complete pallet flights shall reimburse NASA an amount which is the sum of:

(i) The product of the customer's Shuttle charge factor and the two-shift-operation dedicated flight price of a 7-day Spacelab mission. The dedicated flight price for a 7-day complete-pallet mission is the sum of the dedicated flight price for a 1-day two-shift mission and the charge for 6 extra days of two-shift on-orbit operation.

(ii) The price for the use of a complete pallet, including all necessary mission-independent Spacelab equipment.

(iii) The price for all optional services provided.

(h) *Shared element.* (1) A shared element is a Spacelab pallet or module which:

(i) Is shared by two or more customers on a NASA-designated Spacelab flight.

(ii) Shares common standard Spacelab services with other Spacelab elements on the same flight.

(2) In addition to a pro rata share of the standard services listed in paragraph (i) of this section, the following standard services are provided to customers of shared elements and form the basis for the standard flight price:

(i) For shared pallets, a pro rata share of the standard services provided by a pallet. The basis of proration shall be the customer's Spacelab load fraction as defined in §1214.813(g)(1)(i).

(ii) For shared modules, a pro rata share of the standard services provided by a long module flown on a dedicated-Shuttle Spacelab flight. The basis of proration shall be the customer's Spacelab load fraction as defined in §1214.813(g)(1)(ii). The type of pressurized module actually used to meet a customer's requirement for a shared module shall be determined by NASA subsequent to contract negotiations.

(iii) A pro rata share of the element's share of standard Shuttle services,

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where the basis for proration shall be the customer's Spacelab load fraction.

(iv) A pro rata share of 7 days of two-shift on-orbit operations, where the basis of proration shall be the customer's Shuttle load factor as defined in §1214.813(g)(1).

(v) Mission destination selected by NASA in consultation with the customer.

(vi) Assignment, with the customer's concurrence, to a Spacelab flight designated by NASA.

(vii) Launch date established by NASA.

(viii) A pro rata share of the on-orbit operations time of two NASA-furnished mission specialists, where the basis of proration shall be the customer's Shuttle load factor.

(3) Customers contracting for shared-element flight shall reimburse NASA an amount which is the sum of:

(i) The product of the customer's Shuttle charge factor and the two-shift operation dedicated flight price of a 7-day Spacelab mission. The dedicated flight price for a 7-day shared-element mission is the sum of the dedicated flight price for a 1-day two-shift-mission and the charge for 6 extra days of two-shift on-orbit operations.

(ii) The product of the customer's element charge factor and the price for the use of the Spacelab element being used, including all necessary mission-independent Spacelab equipment.

(iii) The price for all optional services provided.

(i) *Common standard Spacelab services.* The following standard Spacelab services are common to all Spacelab flights:

(1) Use of Shuttle<sup>1</sup> and Spacelab hardware.

(2) Spacelab interface analysis.

(3) Kennedy Space Center (KSC) launch.<sup>1</sup>

(4) A five-person NASA flight crew consisting of commander, two pilots, and two mission specialists.

(5) Accommodations for a five-person flight crew.

(6) Prelaunch integration and inter-face verification of preassembled racks and pallets (Levels III, II, and I for

NASA-furnished Spacelab hardware; Level I only for customer-furnished Spacelab hardware).

(7) Shuttle<sup>1</sup> and Spacelab flight planning.

(8) Payload electrical power.

(9) Payload environmental control.

(10) On-board data acquisition and processing services.

(11) Transmission of data to a NASA-designed monitoring and control facility via the basic STS Operational Instrumentation (OI) telemetry system.

(12) Use of NASA-furnished standard payload monitoring and control facilities.

(13) Voice communications between personnel operating the customer's payload and a NASA-designated payload monitoring and control facility.

(14) NASA payload safety review.<sup>1</sup>

(15) NASA support of payload design reviews.<sup>1</sup>

(j) *Typical optional Spacelab services.* The following are typical optional Spacelab services:

(1) Use of special payload support equipment, e.g., instrument pointing system.

(2) Vandenberg Air Force Base (VAFB) launch.

(3) Nonstandard mission destination.

(4) Additional time on orbit.

(5) Mission-independent training, use of, and accommodations for all flight personnel in excess of five.

(6) Mission-dependent training of all NASA-furnished personnel and backups.

(7) Analytical and/or hands-on integration (and de-integration) of the customer's payload into racks and/or onto pallets.

(8) Unique integration or testing requirements.

(9) Additional resources beyond the customer's pro rata share.

(10) Additional experiment time or crew time beyond the customer's pro rata share.

(11) Special access to and/or operation of payloads.

(12) Customer unique requirements for; software development for the Command and Data Management Subsystem (CDMS) onboard computer, configuration of the Payload Operations Control Center (POCC), and/or CDMS utilized during KSC ground processing.

<sup>1</sup>Typical standard Shuttle services repeated for clarity.

(13) Extravehicular Activity (EVA) services.

(14) Payload flight planning services.

(15) Transmission of Spacelab data contained in the STS OI telemetry link to a location other than a NASA-designated monitoring and control facility.

(16) Transmission of Spacelab data not contained in the STS OI telemetry link.

(17) Level III and/or Level II integration of customer-furnished Spacelab hardware.

(k) *Options.* The provisions of §§ 1214.102(e) and 1214.202(e) do not apply to Spacelab payloads.

**§ 1214.805 Unforeseen customer delay.**

Should an unforeseen customer payload problem pose a threat of delay to the Shuttle launch schedule or critical off-line activities, NASA shall, if requested by the customer, make all reasonable efforts to prevent a delay, contingent on the availability of facilities, equipment, and personnel. In requesting NASA to make such special efforts, the customer shall agree to reimburse NASA the estimated additional cost incurred.

**§ 1214.806 Premature termination of Spacelab flights.**

If a dedicated-Shuttle Spacelab flight, a dedicated-pallet flight, or dedicated-FMDM/MPRESS flight is prematurely terminated, NASA shall refund the optional services charges for planned, but unused, extra days on orbit. If a complete-pallet or shared-element flight is prematurely terminated, NASA shall refund a pro rata share of the charges for planned, but unused, extra days on orbit to customers whose payload operations are, in NASA's judgment, adversely affected by such premature termination. The basis for proration shall be the customers' Shuttle load factor.

**§ 1214.807 Exceptional payloads.**

Customers whose payloads qualify under the NASA Exceptional Program Selection Process shall reimburse NASA for Spacelab and Shuttle services on the basis indicated in the Shuttle policy.

**§ 1214.808 Standby payloads.**

The standby payload provisions of the Shuttle policy do not apply to Spacelab flights.

**§ 1214.809 Short-term call-up and accelerated launch.**

The short-term call-up and accelerated launch provisions of the Shuttle policy normally are not offered to Spacelab customers. NASA will negotiate any such customer requirements on an individual basis.

**§ 1214.810 Integration of payloads.**

(a) The customer shall bear the cost of performing the following typical Spacelab-payload mission management functions:

(1) Analytical design of the mission.

(2) Generation of mission requirements and their documentation in the Payload Integration Plan (PIP).

(3) Provision of mission unique training and payload specialists (if appropriate).

(4) Physical integration of experiments into racks and/or onto pallets.

(5) Provision of payload unique software for use during ground processing, on orbit, or in POCC operations.

(6) Supporting operations.

(7) Assuring the mission is safe.

(b) All physical integration (and de-integration) of payloads into racks and/or onto pallets will normally be performed at KSC by NASA. When the customer provides Spacelab elements, these physical integration activities may be done by the customer at a location chosen by the customer.

(c) With the exception of the restrictions noted in paragraph (b) of this section, customers contracting for dedicated-Shuttle and dedicated-pallet flights may perform the Spacelab-payload mission management functions defined in paragraph (a) of this section. NASA will assist customers in the performance of these functions, if requested. Charges for this service will be based on estimated actual costs, or actual costs where appropriate, and will be in addition to the price for standard services.

(d) For complete pallets or shared elements, NASA will normally perform the Spacelab-payload mission management functions listed in paragraph (a)

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of this section. Charges for this service will be based on estimated actual costs, or actual costs where appropriate, and will be in addition to the price for standard services.

(e) Integration of payload entities mentioned in paragraphs (b)–(d) of this section with NAS-furnished Spacelab support systems and with the Shuttle shall be performed by NASA as a standard service for all payloads flown on customer-furnished Spacelab elements. Customers shall be available to participate as required by NASA in these levels of integration. Customer equipment shall be operated only to the extent necessary for interface verification. Customers requiring additional payload operation after delivery of the payload to NASA shall negotiate such operation as an optional service.

### § 1214.811 Reflight guarantee.

(a) During the second phase of STS operations, there is no additional reflight premium for those shared-flight Spacelab payloads which can be accommodated on a standard Shuttle launch to 160 nmi, 28.5° as defined in the Shuttle policy and all dedicated-flight Spacelab payloads.

(b) NASA and the customer may negotiate appropriate reflight provisions (e.g., scheduling, reflight premiums) for payloads not covered by paragraph (a) of this section. Otherwise, no reflight services shall be provided.

(c) Reflight guarantees, if provided, must cover the customer's entire payload.

(d) Payloads covered by reflight guarantees shall be entitled to a reflight with no charge for standard Spacelab and Shuttle services if both the following occur:

(1) Through no fault of the customer or defect in the customer's payload, Spacelab systems (i.e., data, power, and cooling) are not within nominal specifications, as measured by NASA at normal Spacelab monitoring points, at the time of first turn-on of the customer's payload, all as defined in the Launch Services Agreement.

(2) The customer's mission objective is not achieved solely as a direct result of the occurrence, at the time of first turn-on of the customer's payload, of

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events described in paragraph (d)(1) of this section.

(e) If more than one reflight is required, no additional reflight premium shall be charged.

(f) If a payload being reflown was not initially covered by a reflight guarantee, the reimbursements for the reflight shall be the same as for a newly-scheduled launch.

### § 1214.812 Payload specialists.

(a) The use of customer-furnished payload specialists shall be subject to the approval of the NASA Administrator or the Administrator's designee.

(b) Customers with payloads whose Shuttle load factor is equal to or greater than 0.5 are entitled to request that a customer-selected payload specialist be flown with the customer's payload. Dedicated-flight customers are entitled to request the flight of two customer-selected payload specialists.

(c) NASA may approve the flight of a customer-selected payload specialist with payloads whose Shuttle load factor is less than 0.5 if, in NASA's judgment, there is sufficient scientific need to warrant such a flight.

(d) The standard Spacelab flight price is based on operation of the customer's payload by two NASA-furnished mission specialists. Accommodations for, and mission-independent training of, any payload specialists and backups required for the customer's mission shall be provided as optional services and shall be paid for by the customer. The price for this service shall be the same for both customer-furnished and NASA-furnished payload specialists.

### § 1214.813 Computation of sharing and pricing parameters.

(a) *General.* (1) Computational procedures as contained in the following subparagraphs of this paragraph of this section shall be applied as indicated. The procedure for computing Shuttle load factor, charge factor, and flight price for Spacelab payloads replaces the procedure contained in the Shuttle policy.

(2) Shuttle charge factors as derived herein apply to the standard mission destination of 160 nmi altitude, 28.5° inclination. Customers shall reimburse

NASA an optional services fee for flights to nonstandard destinations.

(3) The customer's total Shuttle charge factor shall be the sum of the Shuttle charge factors for the customer's individual (dedicated, complete, or shared) elements, with the limitation that the customer's Shuttle charge factor shall not exceed 1.0.

(4) Customers contracting for pallet-only payloads are entitled to locate minimal controls as agreed to by NASA in a pressurized area to be designated by NASA. There is no additional charge for this service.

(5) NASA shall, at its discretion, adjust up or down the load factors and load fractions calculated according to the procedures defined in this section. Adjustments shall be made for special space or weight requirements which include, but are not limited to:

- (i) Sight clearances, orientation, or placement limits.
- (ii) Clearances for movable payloads.
- (iii) Unusual access clearance requirements.
- (iv) Clearances extending beyond the bounds of the normal element envelope.

(v) Extraordinary shapes.

The adjusted values shall be used as the basis for computing charge factors and prorating services.

(b) *Definitions used in computations—*

(1)  $L_C$ =Chargeable payload length, m. The total length in the cargo bay occupied by the customer's experiment and the Spacelab element(s) used to carry it.

(2)  $W_C$ =The weight of the customer's payload and the customer's pro rata share of the weight of NASA mission-peculiar equipment carried to meet the customer's needs, kg.

(c) *Dedicated-shuttle spacelab flight (1-day mission)*. The total reimbursement is as defined in §1214.804(e)(3).

(d) *Dedicated-pallet flight (1-day mission)*. (1) The Shuttle load factors and charge factors for dedicated-pallet flights are shown in table 1. Subject to other STS Spacelab structural limits, customers are entitled to utilize the payload weight capability of the pallets as indicated in table 1. Payload weights in excess of those shown are subject to NASA approval and may entail optional services charges.

TABLE 1—SHUTTLE LOAD FACTORS, CHARGE FACTORS, AND NOMINAL CAPACITIES FOR DEDICATED PALLETS

Number of pallets	Load factor		Charge factor		Nominal payload capacity, kg	
	With Igloo	FMDM configuration	With Igloo	FMDM configuration	With Igloo	FMDM configuration
1 .....	0.228	0.189	0.305	0.252	2,325	2,950
2 .....	0.392	NA	0.523	NA	4,470	NA
3-pallet train <sup>1</sup> .....	0.556	NA	0.742	NA	4,435	NA
2+1 configuration .....	0.594	NA	0.792	NA	7,750	NA

<sup>1</sup> Three pallets requiring the "1+1+1" configuration shall be flown on a dedicated flight basis [See § 1214.804(a)].

(2) *Total reimbursement*. The customer's total reimbursement is as defined in §1214.804(f)(3).

(e) *Dedicated FMDM/MPES flight (1-day mission)*—(1) *Shuttle charge factor*. The computed charge factor for dedicated FMDM/MPES flights is defined as:

$$\frac{\text{Shuttle Load Factor}}{0.75}$$

(2) *Shuttle load factor*. (i) The Shuttle load factor is defined as the maximum of:

$$\frac{L_C}{18.29} \text{ or } \frac{W_C + 767}{29,478}$$

(ii) The minimum value of  $L_C$  is based on the element length, plus clearances, and is 1.18 m.

(3) *Total reimbursement*. The customer's total reimbursement is as defined in §1214.804(f)(3).

(f) *Complete pallets (7-day mission)*. (1) The Shuttle load factor and charge factor for a complete pallet are 0.198 and 0.228, respectively, and its payload weight capability is 2,583 kg. Subject to

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other STS or Spacelab structural limits, customers are entitled to utilize this payload weight capability. Payload weight in excess of 2,583 kg is subject to NASA approval and may entail optional service charges.

(2) *Total reimbursement.* The customer's total reimbursement is as defined in § 1214.804(g)(3).

(g) *Shared elements (7-day mission)*—(1) *Spacelab load fractions and Shuttle load factors*—(i) *Pallet.* Spacelab load fraction is the greater of:

$$\frac{W_C}{2,583} \text{ or } \frac{\text{Payload volume, m}^3}{15}$$

Shuttle load factor is the greatest of:

$$\frac{W_C}{13,045} \text{ or } \frac{\text{Payload volume, m}^3}{76}$$

(ii) *Pressurized module.* Spacelab load fraction and Shuttle load factor are identical and are the greater of:

$$\frac{W_C}{4,319} \text{ or } \frac{2 \times (\text{Experiment volume}) + \text{Storage volume, m}^3}{40}$$

(2) *Shuttle charge factors and element charge factors for pressurized modules.* Shuttle charge factors and element charge factors are identical and are defined as follows:

If the Spacelab load fraction (and Shuttle load factor) is—	The element charge factor and Shuttle charge factor shall be—
Less than 0.00435 .....	.005.
0.00435 to 0.87 .....	Spacelab load fraction divided by 0.87.
Greater than 0.87 .....	1.0.

(3) *Element charge factors for shared pallets.*

If the Spacelab load fraction is—	The element charge factor shall be—
Less than 0.0189 .....	0.0218.
0.0189 to 0.87 .....	Spacelab load fraction divided by 0.87.
Greater than 0.87 .....	1.0.

(4) *Shuttle charge factors for shared pallets.*

If the Shuttle load factor is—	The Shuttle charge factor shall be—
Less than 0.00375 .....	0.005.
0.00375 to 0.75 .....	Shuttle load factor divided by 0.75.
Greater than 0.75 .....	1.0.

(5) *Total reimbursement.* (i) The customer's total reimbursement is as defined in § 1214.804(h)(3).

(ii) If a customer contracts for portions of more than one element, the charges for the use of the elements shall apply individually to each element used.

(6) Experiment volume in the pressurized module is defined to be the sum of the customer's payload volume in racks and in the center aisle.

(i) Rack volume is defined relative to basic Air Transportation Rack (ATR) configurations. The customer's rack volume shall be defined as the volume of one or more rectangular parallelepipeds (rectangular-sided box) which totally enclosed the customer's payload. Width dimensions shall be either 45.1 or 94.0 centimeters. Height dimensions shall be integral multiples of 4.45 centimeters. Depth dimensions shall be 61.2 or 40.2 centimeters.

(ii) Center aisle space volume is defined as the volume of a rectangular parallelepiped which totally encloses the customer's payload. No edge of the parallelepiped shall be less than 30 centimeters in length.

(7) Storage volume in the pressurized module is defined as the volume of one or more rectangular parallelepipeds enclosing the customer's stowed payload. No edge of the parallelepiped(s) shall be less than 30 centimeters in length.

(8) Volume of the customer's pallet-mounted payload is defined as the volume of a rectangular parallelepiped enclosing the pallet payload and customer-dictated mounting hardware. No edge of the parallelepiped shall be less than 30 centimeters in length.

**Subparts 1214.9–1214.10  
[Reserved]**

### Subpart 1214.11—NASA Astronaut Candidate Recruitment and Selection Program

SOURCE: 54 FR 37940, Sept. 14, 1989, unless otherwise noted.

#### § 1214.1100 Scope.

It is NASA policy to maintain an integrated Astronaut Corps. This subpart 1214.11 sets forth NASA procedures and assigns responsibilities for recruitment and selection of astronaut candidates. It applies to all pilot and mission specialist astronaut candidate selection activities conducted by the National Aeronautics and Space Administration.

#### § 1214.1101 Announcement.

(a) Astronaut candidate opportunities will be announced nationwide and publicized periodically unless specifically canceled by NASA.

(b) Civilian applicants may apply at any time.

(c) Military personnel on active duty must apply through and be nominated by the military service with which they are affiliated. Military nominees will not be part of the continuing pool of applicants. The military services will convene their internal selection boards and provide nominees to NASA. The military nominees will be evaluated by NASA and the military services will be notified promptly of those nominees who are finalists.

(d) The Assistant Administrator for Equal Opportunity Programs, NASA Headquarters, will provide assistance in the recruiting process.

[54 FR 37940, Sept. 14, 1989, as amended at 68 FR 19948, Apr. 23, 2003]

#### § 1214.1102 Evaluation of applications.

(a) All incoming applications will be reviewed to determine whether or not applicants meet basic qualifications. Those not meeting the basic qualification requirements will be so notified and will not be eligible for further consideration. Those meeting the basic qualification requirements will have their applications retained for review by a designated rating panel.

(b) A rating panel composed of discipline experts will review and rate

qualified applicants as “Qualified” or “Highly Qualified.”

(c) Efforts will be made to ensure that minorities and females are included among these discipline experts on the rating panel.

(d) The criteria for each level will be developed and will serve as the basis for the ratings. The evaluation will be based on the quality of the individual’s academic background and experience and the extent to which the individual’s academic achievements, experience, and special qualifications relate to the astronaut candidate position. Reference information on those rated “Highly Qualified” will normally be obtained. This evaluation process will be monitored to ensure adherence to applicable policy, laws, and regulations.

(e) Those rated “Highly Qualified” may be required to obtain a Class I or Class II physical. Only medically qualified applicants will be referred for final evaluation and possible interview and selection. Those who are not medically qualified will be so informed and will not be eligible for further consideration.

[54 FR 37940, Sept. 14, 1989, as amended at 68 FR 19948, Apr. 23, 2003]

#### § 1214.1103 Application cutoff date.

(a) The JSC Director, or designee, is responsible for identifying the need for additional astronaut candidates and for obtaining necessary approval to make selections.

(b) Once such approval has been obtained, a cutoff date for the acceptance of applications will be established. Applications received after the date of the request will be maintained and processed for the next selection.

[54 FR 37940, Sept. 14, 1989, as amended at 68 FR 19948, Apr. 23, 2003]

#### § 1214.1104 Evaluation and ranking of highly qualified candidates.

(a) A selection board consisting of discipline experts, and such other persons as appropriate, will further evaluate and rank the “Highly Qualified” applicants.

(b) Efforts will be made to assure that minorities and females are included on this board.

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(c) The “Highly Qualified” applicants who are determined to be the “Best Qualified” will be invited to the Johnson Space Center for an interview, orientation, and detailed medical evaluation.

(d) Background investigations will normally be initiated on those applicants rated “Best Qualified.”

[54 FR 37940, Sept. 14, 1989, as amended at 68 FR 19948, Apr. 23, 2003]

### § 1214.1105 Final ranking.

Final rankings will be based on a combination of the selection board’s initial evaluations and the results of the interview process. Veteran’s preference will be included in this final ranking in accordance with applicable regulations.

### § 1214.1106 Selection of astronaut candidates.

The selection board will recommend to the JSC Director its selection of candidates from among those finalists who are medically qualified. The number and names of candidates selected to be added to the corps will be approved, as required, by JSC/ NASA management and the Associate Administrator for Space Flight, prior to notifying the individuals or the public.

### § 1214.1107 Notification.

Selectees and the appropriate military services will be notified and the public informed. All unsuccessful qualified applicants will be notified of nonselection and given the opportunity to update their applications and indicate their desire to receive consideration for future selections.

## Subparts 1214.12–1214.16 [Reserved]

## Subpart 1214.17—Space Flight Participants

AUTHORITY: 42 U.S.C. 2473 and the National Aeronautics and Space Act of 1958, as amended.

SOURCE: 49 FR 17737, Apr. 25, 1984, unless otherwise noted.

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### § 1214.1700 Scope.

This subpart establishes NASA policy and selection procedures for accommodation of space flight participants aboard flights of the Space Shuttle.

[56 FR 47148, Sept. 18, 1991]

### § 1214.1701 Applicability.

This subpart applies to NASA Headquarters and field installations.

### § 1214.1702 Relation to other part 1214 material.

Except as specifically noted, all regulatory provisions of Space Shuttle policies also apply to space flight participants. In the event of any inconsistencies in the policies, the regulatory policies established for crew members will govern with respect to space flight participants.

### § 1214.1703 Definitions.

(a) *Space flight participants.* All persons whose presence aboard a Space Shuttle flight is authorized in accordance with this regulation.

(b) *Committee.* The Space Flight Participant Evaluation Committee, established in NASA Headquarters for the purpose of directing and administering the program for space flight participants. The Committee consists of the following NASA Headquarters officials: Associate Deputy Administrator (Chair), General Counsel, Associate Administrator for External Relations, Associate Administrator for Management, Associate Administrator for Space Flight, Associate Administrator for Public Affairs and Assistant Administrator for Equal Opportunity Programs.

[56 FR 47148, Sept. 18, 1991]

### § 1214.1704 Policy.

(a) NASA policy is to provide Space Shuttle flight opportunities to persons (individuals outside the professional categories of NASA astronauts and payload specialists) whose presence on-board the Space Shuttle is not required for operation of payloads or for other essential mission activities, but is determined by the Administrator of NASA to contribute to other approved



NASA objectives or to be in the national interest. However, flight opportunities for space flight participants will not be available in the near term. NASA will assess Shuttle operations and mission and payload requirements on an annual basis to determine when it can begin to allocate and assign space flight opportunities for future space flight participants, consistent with safety and mission considerations. When NASA determines that a flight opportunity is available for a space flight participant, first priority will be given to a "teacher in space," in fulfillment of space education plans.

(b) To be considered for selection as space flight participants, applicants must:

(1) Be free of medical conditions which would either impair the applicant's ability to participate in, or be aggravated by, space flight, as determined by NASA physicians.

(2) Be willing to undergo appropriate background investigation.

(3) Be willing to undergo necessary training.

(4) Meet additional requirements that may be stated in Announcements of Opportunity (AO) soliciting applications for particular spaceflights.

(c) Persons accepted as space flight participant candidates will enter into an agreement with NASA for the period of training, flight, debriefing, and post-flight activities. The agreements will cover such pertinent matters as, but not limited to, responsibilities and authorities of the respective parties, compensation where appropriate, insurance, and liability.

(d) Typically the selection of space flight participants will be based on their comparative abilities to fulfill the objectives and purposes stated in Announcement of Opportunities (AO's) covering one or more Space Shuttle missions in which their participation is desired. A NASA-designated outside review panel will evaluate the qualifications of applicants to select those who most appropriately meet those purposes of participant flight associated with the particular AO. NASA will retain the authority to make final selection of space flight participants for flight training and eventual flight from among those applicants rated most

highly in the review process. NASA will encourage the participation of a wide and diverse array of participants, including women and minorities.

[49 FR 17737, Apr. 25, 1984, as amended at 56 FR 47148, Sept. 18, 1991]

**§ 1214.1705 Selection of space flight participants.**

(a) The agency will publicly announce each space flight participant opportunity through appropriate means, including notice in the FEDERAL REGISTER and press releases. Each such Announcement of Opportunity will include a listing of basic qualification requirements to be met (including those of § 1214.1704(b)), a statement of the specific National Aeronautics and Space Act purposes to which this opportunity is directed, what information is required of applicants to demonstrate their ability to fulfill those purposes, the criteria on which applicants will be judged, and administrative information such as to whom applications should be directed, the opening and closing dates for applications, and any other information or matters determined to be pertinent to the program in general and/or the specific flight.

(b) All applications received in response to the AO will be screened to eliminate those applicants not meeting the basic qualification requirements.

(c) Remaining applications will be forwarded to the outside review panel established for the announcement in question and composed of members appropriate to the specific purposes stated in that announcement. The review panel will evaluate all the applications and recommend to NASA a list of those applicants who appear most likely to meet the purposes.

(d) NASA selection of applicants qualified to undergo necessary training and be certified for flight will be made by the Committee, based upon criteria that include:

(1) Recommendation of the outside review panel.

(2) Ability to undergo successfully the necessary period of training to ensure adaptation to flight experience and mission activities.

(3) Ability to pass medical and psychological examinations to minimize

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the possibility of hazard to persons or missions.

(4) Adaptability to living and working in space.

(5) Willingness to enter into an agreement with NASA covering pre-flight, flight, and post-flight activities, with individual rights and responsibilities set forth in that agreement.

(6) Satisfactory completion of a background investigation conducted to NASA's standards as adjudicated by the NASA Security Officer.

(e) The Committee will submit a list of those candidates suitable for selection to the NASA Administrator, who will select the requisite number to undergo the necessary training to prepare them for space flight.

(f) Those candidates who successfully complete the training will become qualified as space flight participants. Flight assignments will be made by the Administrator from this qualified group. NASA reserves the right to solicit additional space flight participant applications, if necessary.

(g) Authority to officially designate candidates for training, certify candidates as qualified space flight participants, and assign space flight participants to specific Space Shuttle flights is reserved to the Administrator.

### § 1214.1706 Program management.

The Associate Administrator for Space Flight is responsible for program management under the direction of the Committee chairperson.

### § 1214.1707 Media and public inquiries.

(a) The Associate Administrator for External Relations will respond to all inquiries directed to the agency concerning space flight participants and the process by which they are selected.

(b) The names of all applicants will be withheld from public release until the space flight participants are selected by the Administrator.

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### PART 1215—TRACKING AND DATA RELAY SATELLITE SYSTEM (TDRSS)

#### Subpart 1215.1—Use and Reimbursement Policy for Non-U.S. Government Users

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APPENDIX B TO PART 1215—FACTORS AFFECTING STANDARD CHARGES

APPENDIX C TO PART 1215—TYPICAL USER ACTIVITY TIMELINE

AUTHORITY: Sec. 203, Pub. L. 85-568, 72 Stat. 429, as amended; 42 U.S.C. 2473.

SOURCE: 48 FR 9845, Mar. 9, 1983, unless otherwise noted.

#### Subpart 1215.1—Use and Reimbursement Policy for Non-U.S. Government Users

##### § 1215.100 General.

The TDRSS represents a major investment by the U.S. Government with the primary goal of providing improved tracking and data acquisition services to spacecraft in low earth orbit or to mobile terrestrial users such as aircraft or balloons. It is the objective of NASA to operate as efficiently as possible with the TDRSS. This is to the mutual benefit of all users. Such user consideration will permit NASA and non-NASA service to be delivered without compromising the mission objectives of any individual user. To encourage users toward achieving efficient TDRSS usage, this reimbursement policy has been established to purposely