

**§ 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/MPSS (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.

**§ 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:

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(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.

(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/MPESS		
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 renegotiated 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/MPRESS.* (1) A dedicated pallet (or a dedicated FMDM/MPRESS) 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/MPRESS) 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/MPRESS.

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

(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, 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 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).

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

(8) Payload electrical power.

(9) Payload environmental control.

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

(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.

(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-des-

ignated 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.