

# MISSION TO MERCURY



**TECHNICAL DATA +  
BONUS MATERIAL**

# MERCURY TECH STUFF

## CREDITS

Written by Jason Morningstar

Edited by Steve Segedy

Cover Art by John Harper

For use with *Mission to Mercury* Playset, appearing in *The Fiasco Companion*.

## BOILERPLATE

This document is an accessory for the *Fiasco* role-playing game by Bully Pulpit Games.

*Mission to Mercury Technical Data + Bonus Material* is copyright 2011 by Jason Morningstar. *Fiasco* is copyright 2009 by Jason Morningstar. The cover art is copyright 2009 by John Harper. All rights are reserved.

For more information about *Fiasco* or to download other Playsets and materials, visit [www.bullypulpitgames.com](http://www.bullypulpitgames.com).

If you'd like to create your own Playset or other *Fiasco*-related content, we'd like to help. Write us at [info@bullypulpitgames.com](mailto:info@bullypulpitgames.com).



“When you play, play *hard*.” - Theodore Roosevelt

# THE SCORE

## SOME TIME IN THE FUTURE

With a tooth-and-nail struggle for domination and exploitation of Mars by the major powers, the international mission to Mercury is a big public relations effort. Surplus lunar equipment, proven over twenty years of hard service, is heavily modified for the task. The overall mission is named *Shuguang* (Dawn Light), it has a host of scientific objectives, but the real goal is political - to demonstrate that the people of Earth can work together in harmony. The fact that Mercury's south pole is better suited for robots than people is beside the point. Dawn Light must succeed!

## HOW TO USE THIS MATERIAL

Use this document as a touchstone for play—it lays out, in the very broadest terms, who is going to be on Mercury, what equipment is around, what the habitat is like, and what the various missions are. All of this is intended to provide a gritty, highly constrained backdrop for your session. None of it is intended to get in the way of the action.

So choose your character's name and nationality from those available, and choose primary and secondary mission roles. Review the stuff your guy is responsible for and use that as story-meat. Are you the reserve comms specialist? You'll be hanging out in Spindle Four, and some other jackass is boss of the radio. Are you the American? How do you feel about the fact that China got to send two taikonauts?

Have fun with it and make the mission your own! I am guessing that it won't go well for the Dawn Light team...

# MISSION CREW

## DL2 AND DL3 PERSONNEL

There are a total of 12 people in the expedition. When it comes time to choose characters, your choices are sharply limited. Choose from among the list below, after defining Relationships during the Setup.

- \* Brazil – Oliviera, Berta/Ramiro
- \* China 1 – Luo, Kelly/Ronald
- \* China 2 – Nangong, Jie/Zhaoguo
- \* Egypt – Allam, Jumana/Umar
- \* India – Tripathi, Lila/Rajan
- \* Indonesia – Malik, Indah/Abdul
- \* Japan – Kinoshita, Rin/Saburo
- \* Korea – Yang, Sun Hee/In Ho
- \* Nigeria – Akintola, Margaret/Bamidele
- \* Russia – Soboleva/Sobolev, Galina/Oleg
- \* United Kingdom – Adams, Iris/Howard
- \* United States – Rodriguez, Cathy/Brian

Extra characters must be pulled from the list as well - this is everybody on the planet.

# MISSION ROLES

Each character has both a primary and a secondary mission role.

## PRIMARY

- \* Mission Commander (CO)
- \* Executive Officer/Chief Science Officer (XO)
- \* Environmental Control/Life Support Engineer (ECLS)
- \* Chief Engineer (ENG)
- \* Command Pilot
- \* Reserve Pilot
- \* Astronomer
- \* Astrophysicist
- \* Inorganic chemist
- \* Medical/Safety Officer (MSO)
- \* Planetary geophysicist
- \* Structural geologist

## SECONDARY

- \* Analytical chemist
- \* Heliophysicist
- \* Mineralogist
- \* Artist/Journalist
- \* Comms specialist
- \* Geodesist (mapping and surveying)
- \* Medical technician
- \* Reserve comms specialist
- \* Surface Exploration Systems Engineer (SES)
- \* Astronomy Field Systems Engineer (FSE)
- \* Chemistry Field Systems Engineer (FSE)
- \* Geology Field Systems Engineer (FSE)

# MISSION OVERVIEW

## STAGING DAWN LIGHT

Dawn Light arrives at Mercury in three stages.

- \* **Stage DL-1:** Robot Team. Automated probes build the initial, human-habitable base.
- \* **Stage DL-2:** First Team, Four crew members. Arriving two years later. Their mission is to build out the base at Chao Meng-Fu crater. Includes Mission Commander and Command Pilot.
- \* **Stage DL-3:** Research Team. Eight additional crew members. Arriving six months later. Scientists with a scientific mission.

## FACILITIES + EQUIPMENT

### ...AT SHUGUANG BASE, CMF

The main station is located at 87.3S 132.4W, near the south pole. The floor of **Chao Meng-Fu crater** is 150 kilometers in diameter, and 40% of it is permanently shielded from the sun, with a resulting temperature in the -170C range. Volatile ices are abundant.

The base (known as **CMF**) consists of six five-meter long modules, each originally weighing 15 tons. Connected to a central hub, each “spindle” contains living and work space for a crew projected to range from four to twelve at any given time.

**The Hub** serves as an interface node with four modular connectors and an emergency airlock. It also features the base’s power substation.

**Spindle One** is regolith-insulated and buried beneath the planetary surface. It contains the **Hab-1** module, with accommodations for four crew members in nominal configuration and up to eight in an emergency. It also contains a hydroponic garden and **ECLS** (Environmental Control and Life Support) processing and recirculation equipment.

**Spindle Two** contains the operations and teleoperations suite, as well as the logistics module where all expedition supplies are cached. At the end of Spindle Two is the primary suitlock and dustlock. Surface excursion equipment is stored here.

**Spindle Three** is the regolith-insulated **Hab-2** module, which houses the same four or eight crew member layout as Hab-1 and also features a hydroponic garden.

**Spindle Four** is the science laboratory and communications module. The comms module contains all equipment for planetary and Mercury-Earth communication, as well as the **LMO satellite**. At the end of Spindle Four is the base's safe haven – a heavily shielded storm shelter. The shelter provides a work and recreation area and additional sleeping space when not in use.

**The garage** is free-standing and unpressurized, and all base vehicles are stored here. Adjacent to the garage is a hydrogen fuel depot. The normal compliment, between CMF and the Haystack outpost, is:

- \* Unpressurized rovers (2)
- \* CMF tractor robot (1)
- \* Mercury Mobile lab (MML) 9m<sup>3</sup> of pressurized volume, long duration surface exploration vehicle (1)
- \* Teleoperated utility robots (4)

## ...**AT MERCURY SPACEPORT, CMF**

The land/launch facility is one kilometer away, and consists of a leveled and graded site and guidance beacons.

Four regional hoppers and a pair of **MDE** (Mercury Descent Element) craft are parked here. Both are unpressurized; hoppers can carry two crew members on flights of up to 1000 kilometers, and MDE craft are capable of reaching orbit with six personnel on board. With **ISRU** (In-Situ Resource Utilization) replenishment of propellant, they are each rated for numerous trips. Until propellant production is on-line, they are escape craft.

## ...**AT CLIFFSIDE PHYSICAL PLANT, CMF**

The power station is two kilometers away, just beneath Chao Meng-Fu crater's lip and the **Peaks of Eternal Light** (a "Peak of Eternal Light" is a point on a body within the Solar System that is eternally bathed in sunlight due to both the bodies' rotation and the point's altitude). It consists of a massive solar array and power conversion equipment. Buried cabling connects it to the ISRU module and, further away, Land/Launch and Shuguang Base.

At the power station, the ISRU module is free-standing and unpressurized, with oxygen and hydrogen storage tanks clustered around it. ISRU equipment is designed to process volatile ice, using the reverse water gas shift reaction principle, into oxygen for both ECLS and propulsion needs. Mercury's high temperature aids this process, which requires an iron-chrome catalyst at 400C.

## ...AT HAYSTACK OUTPOST, HAYSTACK VALLIS, EQUATORIAL MERCURY

4.7N, 46.2W, situated near the equator in a valley composed of secondary craters.

The **Haystack Outpost** consists of a pre-fabricated research base designed for long-term habitation by four crew members. The entire outpost is designed to be heavily shielded and regolith-insulated.

A science lab, focusing on astrophysics and helioastronomy, shares a module with a logistics and communication equipment. A second module includes a cramped habitation section, ECLS machinery, and an airlock/dustlock.

Haystack is quite possibly the most awful place in the solar system.

## ...IN LOW MERCURY ORBIT

The **LMO** (Low Mercury Orbit) Communication and observation satellite facilitates planetary communication from a geostationary position over the southern tropic. LMO watches the sun for solar flare activity, and its sensors can be teleoperated to assist in the search for Vulcanoids and other near-sun objects.

**Mercury Excursion Vehicle One** is the command vessel that brought First Team to Mercury. It serves as a communication relay and backup but is otherwise dormant, awaiting the end of the mission and return to Earth.

**Mercury Excursion Vehicle Two** is the follow-up vessel that brought Research Team to Mercury. It will be the primary vessel for the 3200 Phaethon piggyback mission and brought the near-sun sensor array to Mercury. The piggyback mission depends in ISRU production to avoid being scrubbed.

Rare and mission-critical excursions to LMO are one of the only chances to get away from the rest of the crew.



# MISSIONS

## ROBOT TEAM

- \* 1-A. Chao Meng-Fu Base Construction Mission Phase One
- \* 1-B. Chao Meng-Fu Base Construction Mission Phase Two
- \* 1-C. Haystack Cache Pre-Placement

## FIRST TEAM

- \* 2-A. Chao Meng-Fu Base Construction Mission Phase Three (Habitation)
- \* 2-B. Chao Meng-Fu Base Construction Mission Phase Four (Peaks of Eternal Light)

## EXPEDITION GOALS

- \* 3-A. Volatile Ice Prospecting, Research and Utilization
- \* 3-B. Chao Meng-Fu Volatile Ice Research Phase One (Basic Research)
- \* 3-C. Chao Meng-Fu Volatile Ice Research Phase Two (Volatile Ice ISRU)
- \* 3-D. Chao Meng-Fu Volatile Ice Research Phase Three (He-3 ISRU)
- \* 4-A. Mercury Magnetic Field Research Project
- \* 5-A. Haystack Overland Mission/Volatile Ice Pathfinder Mission (Haystack/ Chao Meng-Fu)
- \* 5-B. Haystack Outpost Construction (Haystack)
- \* 5-C. Helioseismography Research (Haystack)
- \* 5-D. Vulcanoid Hunting Mission (Haystack)
- \* 6-A. Atmospheric Research (Haystack/ Chao Meng-Fu)
- \* 7-A. Mantle and Core Depth Ground-Penetrating radar Project (Haystack/ Chao Meng-Fu)
- \* 8-A. 3200 Phaethon near-sun sensor array piggyback (Haystack/ Chao Meng-Fu /orbit)

# DAWN LIGHT CREW RULES AND PROCEDURES

## Sec. 1214.400 Scope.

(a) This subpart sets forth policy and procedures with respect to Dawn Light crewmembers provided by ISA for flight to Mercury.

(b) In order to provide for the safe operation, maintenance of order, and proper conduct of crew aboard Dawn Light, the Agreement Among the Government of the People's Republic of China, 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, Nigeria, Brazil, Indonesia and India Concerning Cooperation on the Civil Dawn Light (hereinafter Agreement), which establishes and governs Dawn Light (DL), requires the development and approval of a Code of Conduct for Dawn Light crew. Pursuant to Article 11 of the Agreement, each Dawn Light partner is obliged to ensure that crewmembers which it provides observe the Code of Conduct.

## Sec. 1214.401 Applicability.

This subpart applies to all persons provided by ISA for flight to Mercury

## Sec. 1214.402 Dawn Light crewmember responsibilities.

(a) All ISA-provided Dawn Light crewmembers are subject to specified standards of conduct, including those prescribed in the Code of Conduct for Dawn Light Crew, set forth as Sec. 1214.403. ISA-provided Dawn Light crew members may be subject to additional standards and requirements, as determined by ISA, which will be made available to those ISA-provided crewmembers, as appropriate.

(b) All ISA-provided personnel on board Dawn Light are additionally subject to the authority of Dawn Light Commander and shall comply with Commander's orders and directions.

## Sec. 1214.403 Code of Conduct.

The Code of Conduct for Dawn Light Crew, which sets forth minimum standards for ISA-provided Dawn Light crewmembers, is as follows:

### Code of Conduct for Dawn Light Crew

#### I. Introduction

##### A. Authority

This Code of Conduct for Dawn Light (DL) crew, hereinafter referred to as Crew Code of Conduct (CCOC), is established pursuant to Agreement 1214.400 (1).

##### B. Scope and Content

The ISA partners have developed and approved this CCOC to: establish a clear chain of command on-mission and on-planet; establish a clear relationship between ground, remote site and MCC management; and establish a management hierarchy; set forth standards for work and activities in space and, as appropriate, on the surface of Mercury; establish responsibilities with respect to elements and equipment; set forth disciplinary regulations; establish physical and information security guidelines; and define the DL 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 Dawn Light. This CCOC and the disciplinary policy referred to in Section IV shall not limit the application of Article 22 of the Agreement. This CCOC succeeds the ISA-RSA Interim Code of Conduct, which was developed pursuant to Article 11.2 of the MOU between ISA and RSA to cover early assembly prior to other partners' flight opportunities.

This CCOC sets forth the standards of conduct applicable to all crewmembers during preflight, on-mission, and post-flight activities, (including launch and return phases). Crewmembers are subject to additional requirements, such as the Dawn Light Flight Rules, the disciplinary policy, and requirements imposed by their Cooperating Agency or those relating to the Vehicle transporting a crewmember. Each crewmember has a right to know about such additional requirements. 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 crewmember will be informed by the Cooperating Agency providing him or her of the responsibilities of crewmembers under the IGA, the MOU's and this CCOC. Further, each crewmember will be educated by the Cooperating Agency providing him or her through the crew training curriculum and normal program operations as to DL program rules, operational directives and management policies. Completion of postflight activities shall not affect a crewmember's continuing obligations under Section V of this CCOC.

##### C. Definitions

For the purposes of the CCOC:

(1) "Cooperating Agency" means ISA, CSA, ESA, WSC, Rosaviakosmos 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 Medical Safety officer (MSO) assigned by the MMOP. He or she is the lead medical officer and carries primary responsibility for the health and well-being of the entire DL 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 DL prior to Mercury departure phase. (5) "Flight Director" means the MCC Flight Director in control of the DL. (6) "Flight Rules" means the set of rules used by the Cooperating Agencies to govern flight operations. (7) "crewmembers" means any person approved for flight aboard DL, 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 crewmembers**

Crewmembers shall comply with the CCOC. Accordingly, during preflight, on-mission, and postflight activities, they shall comply with the DL Commander's orders, all Flight and DL program Rules, operational 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 DL elements, equipment, payloads and facilities, and non-DL facilities, to which they have access. All applicable rules, regulations, directives, and policies shall be made accessible to crewmembers through appropriate means, coordinated by the MCOP.

### **B. General Rules of Conduct**

Crewmembers' conduct shall be such as to maintain a harmonious and cohesive relationship among the 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 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 DL activities; and/or (2) adversely affecting the confidence of the public in the integrity of, or reflecting unfavorably in a public forum on, any DL partner, partner state or Cooperating Agency.

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

### **C. Use of Position**

Crewmembers shall refrain from any use of the position of 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 DL duties shall not be considered to be motivated by private gain. Furthermore, no crewmember shall use the position of 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 crewmember may carry and store mementos, including flags, patches, insignia, and similar small items of minor value 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, 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 crewmember, engender questions as to good taste, are not permitted.

An 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 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 DL spacecraft in connection with separate arrangements, these items will not be considered mementos of the crewmembers.

## **III. Authority and Responsibilities of the DL Commander, Chain of Command and Succession; Relationship Between Ground and On- Orbit Management**

### **A. Authority and Responsibilities of the DL Commander**

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

The DL Commander will seek to maintain a harmonious and cohesive relationship among the 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 DL Commander.

(1) During Preflight and Postflight Activities. The DL Commander is the leader of the crew and is responsible for forming the individual crewmembers into a single, integrated team. During preflight activities, the DL Commander, to the extent of his or her authority, leads the crewmembers through the training curriculum and mission-preparation activities and seeks to ensure that the crewmembers are adequately prepared for the mission, acting as the crew's representative to the DL program's training, medical, operations, and utilization authorities. During postflight activities, the DL Commander coordinates as necessary with these authorities to ensure that the crewmembers complete the required postflight activities. (2) During on-mission Operations:

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

(b) Main Responsibilities. The DL Commander's main responsibilities are to: (1) Conduct operations in or on the DL as directed by the Flight Director and in accordance with the Flight Rules, plans and procedures; (2) direct the activities of the 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 DL 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 DL elements, equipment, or payloads.

(c) Scope of Authority. During all phases of on-mission activity, the DL 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 DL elements, equipment, and payloads; (2) the crewmembers; (3) activities of any kind occurring in or on DL; and (4) data and personal effects in or on the DL where necessary to protect the safety and well-being of the crewmembers and the DL elements, equipment, and payloads. Any matter outside the DL 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 crewmembers may have authority over and responsibility for certain DL elements, equipment, payloads, or tasks, the DL 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-mission**

(1) The DL Commander is the highest authority among the crewmembers on-mission. The MCOP will determine the order of succession among the crewmembers in advance of flight, and the Flight Rules set forth the implementation of a change of command. (2) Relationship of the DL 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 DL Commander.

#### **C. Relationship Between the Commander (Mission Flight 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 DL operations at all time. The DL Commander, working under the direction of the Flight Director and in accordance with the Flight Rules, is responsible for conducting on-mission operations in the manner best suited to the effective implementation of the mission. The DL Commander, acting on his or her own authority, is entitled to change the daily routine of the crewmembers where necessary to address contingencies, perform urgent work associated with crew safety and the protection of the DL elements, equipment or payloads, or conduct critical flight operations. Otherwise, the DL Commander should implement the mission as directed by the Flight Director. Specific roles and responsibilities of the 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**

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 crewmembers during preflight, on-mission and postflight activities. The disciplinary policy is administrative in nature and is intended to address violations of the CCOC. Such violations may, inter alia, affect flight assignments as a crewmember. The disciplinary policy does not limit a Cooperating Agency's right to apply relevant laws, regulations, policies, and procedures to the 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 crewmembers have access shall be limited to the performance of duties. Marked or otherwise identified as export controlled data and marked proprietary data obtained by a crewmember in the course of DL activities shall only be used in the performance of his or her DL duties. With respect to data first generated on-board the DL, the 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, 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 DL users. They shall also comply with applicable DL program rules, operational directives, and management policies designed to further such protections.

Personal information about 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 crewmembers for any purpose, without the consent of the affected crewmember, except as required for the immediate safety of crewmembers or the protection of DL 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 a crewmember's access to all medical resources aboard the DL, to ground-based medical support services, or to his or her own medical data during preflight, on-mission, 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 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-mission 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 DL Commander, as appropriate, if the research would endanger the DL 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.

#### **Sec. 1214.404 Violations.**

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

IF YOU LIKE THIS...

**BUT IT  
MAKES  
NO  
SENSE...**



**VISIT US AT BULLY PULPIT GAMES!**

This document is a supplement for the *Mission to Mercury Fiasco* Playset, which can only be found in *The Fiasco Companion* from Bully Pulpit Games.

*The Fiasco Companion* includes in-depth discussion of common pitfalls and solid techniques for making your games excellent. Itching to write your own Playset or hack the rules? Advice for that—followed by worked examples—is in there.

If you're an old *Fiasco* hand ready to get weird, there are half a dozen new ways to shake up the basic game, including new Tilt and Aftermath tables and four new Playsets (including *Mission to Mercury!*).

The book also features interviews with an enthusiastic and growing cohort who are already taking the game into the classroom, the writer's room, and up on stage.

**WWW.BULLYPULPITGAMES.COM**