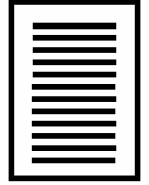Conflicts in space, between starships and spacecraft, is resolved using the Traveller Space Combat System.

Space Combat resolves conflict between the full range of spacecraft, starships, and small craft based on the weapons and defenses used, the decisions of the commanders involved, and some measure of chance. Combat is based on coarse variable scales which give a feeling of authenticity without slavish adherence to exact formulas. Distance is a coarse set of approximate ranges. Time is a coarse measure of passing time. Size is an approximation of the relative size of objects and targets.

Finally, the **Traveller Space Combat System (TSCS)** assumes that many shots and many attacks are taking place, but many attacks go wild and come to nothing: the misses are unimportant; the hits are what count. The system also assumes that there are lulls in the action which characters wait or think or catch their breath. The TSCS accomplishes all of these realistic elements without burdening the players with arbitrary or constraining rules.

THE ELEMENTS OF A FIGHT

Space Combat includes the following elements:

The Situation

The situation is an encounter. One or both sides have goals and the situation dictates that violence will be used to resolve the conflict.

The encounter is defined by:

The Participants. Participants are ships. Some are operated by, or commanded by, player-characters. The opposition consists of ships operated by non-player characters controlled by the referee.

The Ships Themselves. The specific ships are predefined starships or spacecraft created using the ACS Adventure Class Ship design system. Each ship requires a ShipSheet with the information necessary for resolving combat. The participants are defined along with the weapons, armor, and protection they are using or have available.

The Terrain. The situation defines the star system and its worlds as they apply to the encounter. It also defines local bases and local forces which may participate or interfere in the battle.

The Search

Starships are constantly searching with their sensors for possible threats of dangers. This search is routine and always in process. When the search sensors register unknown ships (or known hostile ships) the search converts to a potential battle.

The Battle

The ships attack, defend, move, and otherwise act to resolve the encounter in a series of Rounds.

In a Round, every ship has the opportunity to attack other ships, to defend against their attacks, and to move.

The Rounds continue until one side is defeated or has fled the battlefield.

The Aftermath

Once the fight is over, participants resolve the consequences of their actions: gathering the dead, helping the wounded, occupying the territory they have won, or fleeing the enemy to a place of safety.

SCALE

Space Combat is based on variable distance in Space Range Bands, variable time in Rounds, and approximate Size for Ships.

Distance Scale

Ranges in Space are tracked using Space Range Bands. Each Band is numbered and corresponds to a specific physical distance and to a benchmark object.

For example, Space Range Band 2 (S=2) represents a distance of approximately 50 kilometers. Its benchmark is a Starship perhaps 30 to 70 meters long.

Time Scale

Combat is in Rounds approximately 20 minutes long.
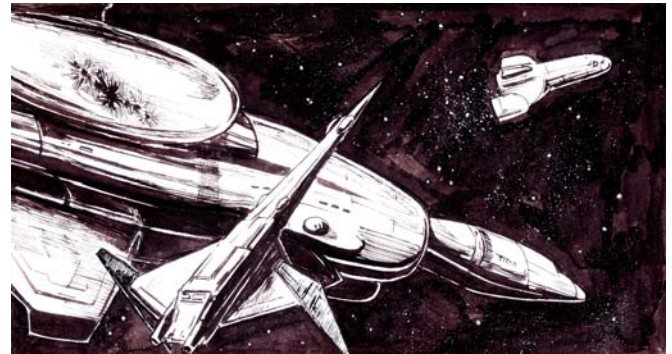
TYPES OF SHIPS

The **Traveller Space Combat System** resolves conflict between Adventure Class Ships: starships created using the ACS Design System.

Adventure Class Ships range in size from 100 tons to 2400 tons and operate singly or in small units (squadrons) of several ships each. The mix of available ships includes both starships and spacecraft, and both ships and small craft.

Battle Class Ships are larger than 2400 tons and are created using the BCS Design System. BCS ships operate in fleets and squadrons and include some small ships only where necessary.

How Search Works

AN OVERVIEW

Standard Operating Procedure SOP defines how a ship uses its Sensors. Sensors may detect enemy (or potentially enemy) ships. When one is detected, Alert Status changes and the Battle begins.

THE STATUS BOARD

No	Color	Name	Power	Status	Sensors	Network	Weapons
0	White	Off	External.	Inoperable	Off	External	Off
1	Grey	Preparing	Internal.	In 12 Hours	Off	External	Off
2	Blue	Ready	Internal	Operable	Passive	External	Off
3	Green	Operating	Internal	In Flight	Active	Internal	Auto Response.
4	Orange	Warning	Internal	Attack Possible	Passive	Internal	Auto Response.
5	Yellow	Alert	Internal	Attack Probable	Passive	Internal	Crewed and Ready
6	Red	Battle	Internal	Attack in Progress	Active	Internal	Crewed and Firing.
7	Maroon	Stalking	Internal	Attack Possible	Passive	Internal	Crewed.

PASSIVE SPACE SENSORS

	Space Sensors S=	TL	Mod	C+S
C	Communicator			
E	EMS			
G	Grav Sensor			
H	HoloVisor			
N	N-Detector			
Q	Stealth Mask			
R	Radar			
S	Scanner			
T	Scope			
V	Visor			
W	CommPlus			

ACTIVE SPACE SENSORS

	Space Sensors S=	TL	Mod	C+S
C	Communicator			
E	EMS			
J	Jammer			
R	Radar			
S	Scanner			
W	CommPlus			

PASSIVE WORLD SENSORS

	R=	TL	Mod	C+S
A	Activity Sensor			
C	Communicator			
D	Densitometer			
F	Field Sensor			
K	Analyzer/Sniffer			
L	Life Detector			
M	Mass Detector			
P	Proximeter			
W	CommPlus			
Y	Sound Sensors			

ACTIVE WORLD SENSORS

	R=	TL	Mod	C+S
B	Deep Radar			
C	Communicator			
W	CommPlus			

USING SENSORS

Alert. When there is something of possible interest, the Referee conveys to the players an Alert:

"Your [sensor] sees something about here [location].

Detection. Using the Sensor Task, the characters try to resolve what gave the alert (or they can ignore it). Success in the Sensor Task provides information about the alert.

Tracking. Once a sensor detects an object, it can track that object until some event causes the signal to be lost (it moves out of range; it is hidden by a world; it deliberately jams or hides its signal).

THE SENSOR TASK

		TL	Char	Skill	Mod
nD	**<**	**T**	**+C**	**+S**	**+M**
n = Range			Use: C4 C5	Use: Sensor	Active=+3 Benchmark
Uncertain (1D)					Mount

Active Sensors Maximum Range = S=7.

The Sensor Task determines the success of the effort.

Because the possible readings are unknown, the Referee administers the task in increments based on the dice used:

The Uncertain Die. The referee rolls the Uncertain Die secretly and notes its result. Players can assume the result is 3 (although it may be between 1 and 6). If this assumed 3 is less than T+C+S+M, he reveals anything detected at S=1 (for Space Sensors) or R=1 for (World Sensors).

The Second Die. The referee rolls the second Die and if the total is less than T+C+S+M, he reveals anything detected at S=1 (for Space Sensors) or R=1 for (World Sensors).

Additional Dice. This process allows checking at each available range without revealing to the players which ranges are important.

The Space Combat Round

AN OVERVIEW

Space Combat is resolved in Space Combat Rounds.

Each Round moves through five Phases of activity. This sequence repeats with each new Combat Round.

Combat Round = about 20 Minutes

Ship and small craft engage in combat. Some seem like seconds; some seem like hours. Some pass without anything happening; others are flurries of activity.

At the end of combat, count the number of Rounds and equate them generally to twenty-minute segments: (a ten Round fight probably took about 200 minutes or a little over three hours).

S M A R T

Situation - Launch - Attacks - Range Change- Target Effects

THE FIVE COMBAT ROUND PHASES

S	**SITUATION**	Attacker notes current Situation: detected Targets, Ranges, and available weapons.	Sensor Operations. New Contacts. Ship May Jump (Depart or Arrive). Boarders Breach Hull. Internal Defenses against Boarders.
M	**MISSILES**	Attacker launches Missiles.	Missiles Launched. AM Mode Defenses Fire. Resolve Missiles Scheduled to Impact This Round. Missiles Impact Armor.
A	**ATTACK**	Attacker fires non-missile weapons.	Resolve Weapons Attacks (including RINT). AB Mode Defenses. Absolute Mode Defenses. Attacks Impact Armor.
R	**RANGE CHANGE**	Ships may change Range.	Ship May Move Between Range Groups and Range Bands Ship Changes Thrust Ramming. Boarding Craft Contact Hull. Small Craft Dock. Deployables Return. Small Craft Launch. Deployables Launch. Pods Launch.
T	**TARGET EFFECTS**	Damage is determined for any successful attacks.	Determine Aimed and Actual Hit Location. Inflict Damage. Immediate Action Damage Control. Damage Severity = Hits / 2. Diagnosis Severity. Damage Control Operations

AM Mode. Anti-Missile Mode weapons (several types) defending against Missiles.
AB Mode. Anti-Beam Mode weapons (typically Sandcasters) defending against Beams.
Absolute Mode. Specific Defenses defending against very specific attacks (Meson Screen versus Meson Gun).

How Attacks Work

AN OVERVIEW

Each weapon fired against a target resolves the Space Weapon Task; then runs the Gauntlet of applicable defenses, and ultimately penetrates Armor. Failure at any step stops the attack. A successful attack then resolves damage.

STATUS

THE SPACE WEAPON TASK

		TL	Char	Skill	Mod
nD	$<$	T	$+C$	$+S$	$+M$

n =
Range
(S= or R=)

Use: C4 C5

Use: Wpn

+TSM
+Mount
- Agility

MODS

Mount= Mount Mod
Agility= PPlant Potential minus current Gs.

DEFENSE
ABSOLUTE MODE

T+C+S+M		T+C+S+M
Attacker		Defender
G	<	G
M-5N	<	N
Magnetics E	<	Q
Anti-Matter	<	R
all	<	T
all	<	U
Gravitics HTU	<	W

Attack fails of Attacker TCSM is equal or less than Defender TCSM.

DEFENSE
AB AM MODES

Attacker		Defender
1D	<	Mount
	<	1 = T1
	<	2 = T2 B1
	<	3 = T3
	<	4 = T4 B2
	<	5 = Bay
	<	6 = LBay
	<	7= Main
AFJKLPW	<	S
MNQRV	<	BFGJKL

Defender is a Weapon Mount. Defender rolls equal or less on 1D to stop the attack.

ARMOR

Attacker	Defender
1D x Hits	< Armor
	< Armor
	< Ceram
	< Organic
	< Dense
	< Polymer
	< Charged
	< SDense
	< Kinetic
	< LiteMetal
	< VliteMetal
	< HullMetal
	< Geneered
	< Hydrogen
	< Strange
	< Composite
	< Crystaliron

THE GAUNTLET

	Space Weapons	AB Mode	AM Mode	Absolute Mode	Armor	
A	Particle Accelerator	▣			▣	
B	Slug Thrower		▣			
C	CommCaster					
D	DataCaster					
E	Stasis					
F	Fusion Gun	▣			▣	
G	Meson Gun			▣		
H	Inducer					
J	Mining Laser	▣			▣	
K	Beam Laser	▣			▣	
L	Pulse Laser	▣			▣	
M	Missile		▣		▣	
	Missile-5N		▣	▣	▣	
N	KK Missile		▣		▣	
P	Plasma Gun	▣			▣	
Q	Ortillery				▣	
R	Rail Gun				▣	
S	SandCaster					
T	Jump Damper					
U	Tractor/Pressor					
V	Salvo Rack		▣		▣	
W	Disruptor	▣			▣	
X	Hybrid K-S-M	▣	▣		▣	
Y	Hybrid L-S-M	▣	▣		▣	
Z						
	Fighters		▣			
	Small Craft		▣			
	Ships	▣	▣	▣	▣	
	Boarders		▣		▣	
	Massive Explosion				▣	
	Missile-N			▣	▣	
	Blast				▣	
	Flash				▣	
	Rad			▣	▣	
	EMP				▣	
	Bang				▣	

SPACE RANGES

	S=			R=
B	**B**	Vlong	1000 m	5
Fighter	**1**	Distant	5 km	6
	2	Vdistant	50 km	7
Short	**3**	Orbit	500 km	8
	4	Far Orbit	5000 km	9
	5	Geo	50,000 km	10
Attack	**6**		1 ls	11
	7		2 ls	12
Long	**8**		8 ls	13
	9		16 ls	14
Deep Space	**10**		3 lm	15
	11		8 lm	16
	12		30 lm	17

SPECIAL SITUATIONS
Jammer.
Near Miss
Sitting Duck Mode
Special Destruction
Rad vs Organic

How Damage Works

AN OVERVIEW
A successful attack may inflict damage on the target ship.

Hit Location=
Flux (roll once for the Weapon).

Missile Target Mods=
Center of Mass= Min + Max Entry on HLT.
Center of Heat= Drives
Centr of Emissions= Sensors

Weapon Hits=
Number of Dice to be rolled (determined by Weapon Mount).

Damage=
Hit Dice roll minus Armor
Zero or less is No Effect

Final Damage=
Damage divided by 2 (round down)
Read on the Damage Severity Table

Immediate Action=
Possible Severity Reduction

Diagnosis=
Difficulty of Diagnosing the Damage
Determine after the Battle

CHECKLIST
1. Flux for Hit Location.\
    Note Mods for Targetting.
2. Note Number of Weapon Hits.
3. Roll Dice for Damage Points.
4. Subtract Armor and divide by 2.
5. Consult Damage Severity Table
    A. If the Hit Location has components, roll to apply the Damage to one of the components.
    B. Roll for Immediate Action.

7. After the Battle, determine Diagnosis Severity for each Damaged Component.

A Component can have multiple Damages: (for example, a Difficult, two Averages, and a Staggering). They do not add.

Deployed or Extended Objects
Extended Objects (usually for Sensors) are noted on the Hit Location Table at Locations +6 or -6.
Deployed Turrets or Barbettes (usually for Weapons) may be placed in any empty Location on the Hit Location Table (usually +9 or -9).
A **Cluster or Braced Cluster** configuration ship is designed with non-standard Hit Locations.

ARMOR LAYERS

1	
2	
3	
4	
5	
6	

HIT LOCATIONS

-9	
-8	
-7	
-6	
-5	Comms
-4	Cargo
-3	Sensors
-2	Defenses
-1	Life Support
0	Hull
+1	Power
+2	Drives
+3	Weapons
+4	Bridge
+5	Computer
+6	
+7	
+8	
+9	

DAMAGE SEVERITY
H/2   Repair Difficulty

1	Easy 1D	
2	Average 2D	
3	Difficult 3D	
4	Formidable 4D	
5	Staggering 5D	
6	Hopeless 6D	
7	Impossible 7D	
8	Beyond 8 D	
9	Destroyed	

Severity = Final Damage Applied = Hits/2.
Severity is the difficulty of repair task for this component.

IMMEDIATE ACTION DAMAGE CONTROL

Check Skill (2D)
Select and use any skill appropriate to the component.
Success converts the damage to Severity= Easy 1D and the component remains operable.
Automatic Failure on 12.

Not Possible for Damage above 6D.
Damage Severity is the difficulty of repair task for this component.

DIAGNOSIS SEVERITY
1D   Difficulty

1	Easy 1D	
2	Average 2D	
3	Difficult 3D	
4	Formidable 4D	
5	Staggering 5D	
6	Hopeless 6D	

Diagnosis Severity is the difficulty of diagnosing Damage Severity.
Defer rolling Diagnosis Severity until a repair attempt is contemplated.

How Movement Works

AN OVERVIEW

Ships can change Range Bands in the course of combat. Minor changes for advantage tale place at the end of the Combat Round. Major changes are more difficult.

They can change from one Band to an adjacent Range Band during the Movement Phase of a Combat Round, subject to limitations.

Space Ranges are divided into Groups and into Space Range Bands.

MINOR RANGE CHANGES

A ship at a Range within a Group can change to an adjacent Range band within that Group at the end of the Combat Round.

SPACE RANGES

	S=		R=
B	**B**	Vlong 1000 m	**5**
Fighter	**1**	Distant 5 km	**6**
Fighter	**2**	Vdistant 50 km	**7**
Short	**3**	Orbit 500 km	**8**
Short	**4**	Far Orbit 5000 km	**9**
Short	**5**	Geo 50,000 km	**10**
Attack	**6**	1 ls	**11**
Attack	**7**	2 ls	**12**
Long	**8**	8 ls	**13**
Long	**9**	16 ls	**14**
Deep Space	**10**	3 lm	**15**
Deep Space	**11**	8 lm	**16**
Deep Space	**12**	30 lm	**17**

Range is the Range from the Attacker to the Target.

Range may be different for each ship pair.

Bands B-1-2-3-4-5

A ship may change one Range Band per Round between Space Bands B-1-2-3-4-5.

SR to AR =

(10 – G) x 3 Rounds

AR to LR =

(14 – G) x 3 Rounds

LR to DS =

G Rounds

Deep Space

A ship in Deep Space cannot change Range Bands during the course of the battle.

Jump

A ship can escape a battle by Jumping (assuming it has Fuel and is beyond the 100 D Limit).

G= Current Acceleration in G's

Agility = Power Plant Potential minus Current used Gs.

The Nuances of Combat

AN OVERVIEW
There are many exceptions and special situations in Combat.

Attackers alternate in resolving weapons fire during a Round.

Missile Launches. Missiles must physically travel from the Attacker to the Target. Launches at greater than S=2 are resolved in the next Round.

Pre-Battle Missile Launches. Missile attacks from S=6 or greater must be specified before the Battle begins; the Missile attack arrives in Round = Launch Range.

Delayed Missile Attacks. A Missile attack (except KKM) may be launched with an impact delay (specified by the Attacker) of 1 to 6 Rounds.

Lurking Missiles. Missiles can be launched to Lurk in a Range Band, and they attack when a Target moves to S=2 or less.

Targetting
Standard Targetting uses the Hit Location table with Flux.

Missiles may use Targetting applied to the Hit Location Table.

Heat= The hottest location on the ship is the Drives. Use Mod= Drives.

Emissions= Use Mod= Sensors (if Active) or Comms (if Active). Otherwise, Mod=0.

Firing Weapons= Use Mod= Weapons. If successful, it attacks the last weapon fired.

Center Of Mass= Use Minimum plus Maximum occupied locations on the HLT.

AM Anti-Missile Mode. Any number of AM Mode Weapons may fire against incoming Missile Attacks, but each AM Mode weapon may fire only once in a Round.

An AM Mode weapon may not Attack.

Designation as AM Mode continues until changed.

AB Anti Beam Mode. Any number of AB Mode Weapons may fire against incoming Beam Attacks, but each AB Mode weapon may fire only once in a Round.

An AB Mode weapon may not attack.

Designation as AB Mode continues until changed.

Battery Fire
Weapons of the same type (different other values are allowed) can fire together as a Battery.

One Weapon is the Lead Weapon; if it hits, the other weapons hit. Total Hits is determined by Mounts.

Multi-Ship Battery Fire. Multiple ships with CommCasters can create a Multi-Ship Battery.

Slave Craft. Uncrewed Small Craft can be slaved to a Ship with a DataCaster.

Boarding. A craft with people can attempt to Board if at S=B.

Deployable Turrets are slaved to a parent ship through its DataCaster.

Extendable Sensors can be pushed out from a ship to Hit Locations +6 to +9 or -6 to -9.

DataCaster
A DataCaster which successfully attacks a target may inflict:

Overload. A successful DataCaster attack with Hit Location= Sensor or Comm inflicts Damage on the Sensor or Comm.

Virus Insertion. A successful attack with Hit Location other than Sensor or Comm introduces an Applet into the ship's network (1D= 1 = Virus; otherwise Applet).

A Virus attacks each connected Computer at the rate of one new computer per Turn.

An Applet is annoying but has no long-term effect.

Disruptors
Disruptors boil away armor. Disruptor hits do not penetrate Armor; they directly destroy it. One Disruptor Hit (no dice are rolled) destroys one point of Armor.

Disruptors disregard Hit Location; their effect applies to the overall Armor of the ship (and to all Protections).

When all Armor for a ship is destroyed, the ship is open to vacuum.

COLLISIONS
A collision inflicts Damage equal to:

$$D= Tons * Speed^2$$

Tons= Volume Tons of the **other** vehicle.

Speed. If the crash is head-on, use the sum of the two speeds. If the two vehicles are at angles to each other, use the greater speed. If the two vehicles are travelling in the same direction, use the difference between the two speeds.

Useful Tonnage Calculation. To convert Sophont Size (Human= 100) to tons (displacement Tons = 13.5 cubic meters), divide by 20,000.

For Successful Attacks:
If Hit Location is Defenses and a Defense was used against the attack, that Defense is the Hit Sublocation.

If Hit Location is Hull, Armor is reduced one layer.

If Final Damage is 9 or Greater (Destroyed), attack again with Half Hits at a newly rolled Hit Location.

Black and White Globes
An attack against a Black Globe (it operates in Absolute Mode) which fails imposes no effects. An attack which succeeds inflicts hits against the Black Globe.

The same applies to White Globes. However, successful DataCaster attacks proceed to inflict Virus and Applets.

Comments
A Weapon cannot be built with a Range beyond its Maximum on the Weapon Attacks Chart.

If a Jump Inducer destroys a Hit Location (or sublocation) then the adjacent Locations are also destroyed.

A Jump Inducer requires a Jump Drive in the ship.

A Jump Damper requires a Jump Drive in the ship.

A Destroyed Hull (Damage Severity = 9D +) destroys the ship.

Treat each Weapon in the Hybrid T3 as a T1.

A Massive Explosion (in addition to other effects) destroys one layer of Armor.

Beam Weapons shed 1D of Damage for each Range Band in Atmosphere.

ARMAGEDDON

In this hypothetical battle (or series of attacks) involving dozens of ships and almost every technology available, we can see how the various weapons and defenses work. Examples are shown alphabetically by Weapon Code.

For example purposes, some weapons and some defenses are simplified to the basic model; others include stage and other information.

We assume that weapons operators (and defense operators, if any) are Char=7 Skill=3.

We ignore Agility (which is a Mod in the T+C+S+M formula). Agility = Maximum Power Plant Potential minus current Maneuver Drive Gs.

Checklist

1. Required Values (for Attacking and Defending Weapons)
   A. T= Tech Level of Attacking Weapon
   B. C+S = Characteristic + Skill of Weapon Operator.
   C. M = Mod.
      Weapon Mount Mod (from Space Weapon Mounts)
      Agility.
   D. Mount.
2. Roll T+C+S+M to potentially HIT. Failure ends attack.
3. Defenses
   A. AB Mode. Check AB Mode Table (based on Mount).
   B. AM Mode. Check AM Mode Table (based on Mount).
   C. Absolute Mode. Compare T+C+S+M.
   D. Failure ends attack.
4. Armor Penetration
   A1. Non-Missiles. Determine Hits (based on Mount Size) and roll that number of Dice.
   A2. Missiles. Determine Hits (based on Missile Types and Effects Chart).
   B. Subtract Armor.
   C. Divide by 2 = Final Damage.
5. Hit Location.
   A. Determine Mods based on Targetting.
   B. Roll on Hit Location Table.
   C. If the Location has subcomponents, randomly determine which one takes damage.
   D. Apply Final Damage as a Damage Severity.
   E. Check Immediate Action.

6. Additional Damage.
   A. If the Hit Location (or sublocation) was Destroyed, attack a second location.
   B. Use Hits from 4A and divide by 2. Subtract Armor. Divide by 2.
   C. Reconsult Step 5.

Special Cases

DataCaster. Each Hit (Die) with a result of 1 becomes an inserted Virus in a Sensor on the Target.

CommCaster. Allows multiple ships to participate in Battery Fire.

A PARTICLE ACCELERATOR

Range	S=5
Attacker	A-11 AR B1 Particle Accelerator-11
Defender	X-9 Vd T3 Hybrid KSM -9
Armor	Armor-5

Attack and Defense. The A-11 attacks with Dice = S= Space Range and must roll T+C+S+M or less (the Space Weapon Task HAW). Its B1 Barbette provides no Mod, so Assets = 11 + 7 + 3 = 21.

It rolls 5D (= 25) and misses.

It rolls 5D again the next turn (=20) which is less than 21 and (potentially) hits.

The target has allocated its Sandcaster in Anti-Beam AB Mode. The Defense AB AM Modes Table shows that S can defend against AFJKLPW, so S (contained in the hybrid KSM) can defend against A. The single Sandcaster in the X-9 is treated as T1. The defender must roll 1 or less with 1D to stop the attack. He rolls 3 and fails.

Armor Penetration. The A-11 attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B1 = 3 hits). The attacker rolls 3D = 10 = Damage=10. The first 5 Damage are absorbed by the Armor-5. The ship receives Damage=5.

Hit Location and Damage. Hit Location = Flux = +4 – 4 = 0. The Damage impacts the Hull.

Final Damage = Damage/2 (round down) = 2. The Damage Severity Table shows the difficulty of repairing the hit is Average 2D.

The ship has a Damage Control person (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 5 and fails to fix the damage.

Result. The target receives Average 2D Hull Damage.

A PARTICLE ACCELERATOR

Range	R=8
Attacker	A-11 AR B1 Particle Accelerator-11
Defender	X-9 Vd T3 Hybrid KSM -9
Armor	Armor-5

The Defender is a ship on the world surface; the Attacker is in Orbit R=8. A Particle Accelerator in Atmosphere uses World Ranges (as opposed to Space Ranges in Space).

Attack and Defense. The A-11 attacks with Dice = R= Range and must roll T+C+S+M or less. Its B1 Barbette provides no Mod, so Assets = 11 + 7 + 3 = 21.

It rolls 8D (= 20) and potentially hits.

Sandcasters are ineffective in atmosphere, so the Target has no Anti-Beam defense.

Armor Penetration. The A-11 attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B1 = 3 hits).

Particle Accelerators in Atmosphere shed 1D per World Range (at R=8, it loses 8D hits) before hitting the target.

The attacker would roll 3D – 8D = less than 1D. The attack has no effect.

A PARTICLE ACCELERATOR

Range	R=8
Attacker	A-11 AR LBay Particle Accelerator-11
Defender	X-9 Vd T3 Hybrid KSM -9
Armor	Armor-5

The Defender is a ship on the world surface; the Attacker is in Orbit R=8. A Particle Accelerator in Atmosphere uses World Ranges (as opposed to Space Ranges in Space).

Attack and Defense. The A-11 attacks with Dice = R= Range and must roll T+C+S+M or less. Its LBay provides Mod+8, so Assets = 11 + 7 + 8 = 26.

It rolls 8D (= 24) and potentially hits.

Sandcasters are ineffective in atmosphere, so the Target has no Anti-Beam defense.

Armor Penetration. The A-11 attacks the ship's Armor-5. Hits are determined by the Weapon Mount (LBay = 20 hits).

Particle Accelerators in Atmosphere shed 1D per World Range (at R=8, it loses 8D hits) before hitting the target.

The attacker would roll 20D – 8D = 13D = Damage= 42. The first 5 Damage are absorbed by the Armor-5. The ship receives Damage=37.

Hit Location and Damage. Hit Location = Flux = +4 – 4 = 0. The Damage impacts the Hull.

Final Damage = Damage/2 (round down) = Final Damage=18. This value is more than 9; the Hull is destroyed.

Result. The target is destroyed.

B SLUG THROWER

Range	R=5
Attacker	B-10 Imp Vd T4 Slug Thrower-10
	Slug-2S-UG
Defender	
Armor	Polymer-5

Attack and Defense. The B-9 attacks with Dice = R= Range and must roll T+C+S+M or less. The Quad Turret provides no additional Mod, so Assets = 10 + 7+3 = 20.

It rolls 5D (=14) and (potentially) hits.

Although Slugs are technically Missiles, there is no AM Anti-Missile defense against Slugs (they are too small). (A target with T Black Globe or U White Globe would have a defense against Slugs).

The potential hit for a SlugThrower is determined by the weapon mount T+C+S+M. The actual effect against armor is determined by the Slugs.

Armor Penetration. The Size-2 Slug Warhead Missile attacks the armor with 1D; he rolls 6. The first 5 Damage are absorbed by the Polymer-5. The ship receives Damage= 1.

Hit Location and Damage. Hit Location Chart: Flux = +5 - 4 = +1. The Damage impacts the Power systems.

Final Damage = Damage / 2 (round down) = 0. The hit is little more than a scratch.

Result. The attack hit but inflicted no Damage.

D DATACASTER

Range	R=7
Attacker	D-12 Adv T3 DataCaster-12
Defender	J-8 Jammer-8
Armor	

The DataCaster is a special case.

-

Infection Mode

The Datacaster inserts a Virus which corrupts the internal software.

Attack and Defense. The D-12 attacks with Dice = R= Range and must roll T+C+S+M or less. The Triple Turret T3 provides Mod -1, so Assets = 12 + 7+3 -1 = 21.

BUT, the target has its J-8 Jammer-8 active. It applies a Mod (equal to Jammer T+C+S+M – Space Range = 8+7+3+0 – 2 = 16).

The revised Attacker T+C+S+M = 12 +7 +3 -1 – 16 = 5. He must roll 5 or less on 7D, which is not possible. The attack fails.

Some time later, the Defender's Jammer-8 is not operational. The Attacker tries again.

Attack and Defense. The D-12 attacks with Dice = R= Range and must roll T+C+S+M or less. The Triple Turret T3 provides Mod -1, so Assets = 12 + 7+3 -1 = 21. He rolls 7D = 19 and the attack proceeds.

Armor Penetration. The DataCaster ignores Armor. It proceeds to attack the Target. The Triple Turret T3 produces 3 Hits (this is one attack; three hits are inflicted on one location).

Hit Location and Damage. Hit Location = Flux = +4 – 2 = Drives. One drive is selected = Jump Drive. The DataCaster rolls 1D for each Hit = 1, 2, 3. One Virus and two Applets are inserted.

The Virus disables the Jump Drive. The two Applets drop out unable to do any additional damage.

In the Next Turn, the Virus will attack an adjacent Hit Location.

Confusion (Anti-Missile) Mode

The Datacaster confuses the missile and it detonates prematurely. The effect is (as in all AM Defenses) based on Mount.

D DATACASTER

Range	R=7
Attacker	D-12 Adv Main DataCaster-12
Defender	
Armor	

If this DataCaster successfully attacks, it inflicts 30 hits: probably 5 Virus and 25 Applets on a single Hit Location.

E STASIS PROJECTOR

Range	R=7
Attacker	E-19 Vd T1 Stasis-19
Defender	Q-14 Internal Mag Scrambler
Armor	Hullmetal-11

Attack and Defense. The E-19 attacks with Dice = R= Range and must roll T+C+S+M or less. Its Single Turret T1 has Mod -3, so Assets = 19 + 7 + 3 -3 = 26.

It rolls 7D (= 20) and (potentially) hits.

The target has allocated its Q-14 Mag Scrambler in Absolute Mode: the Q-14 Internal Mount provides Mod +1, so its Assets are T+C+S+M= 14+7+3 +1 = 25. The defense is less than the Attacker's 26 and the attack continues.

Armor Penetration. The E-19 now attacks the ship's Hullmetal-11. Actually, Stasis ignores Armor, so the Hullmetal-11 is ineffective.

Hits are determined by the Weapon Mount (Turret T1 = 1 hits). The attacker rolls 1D = 6 Damage. The ship receives Damage=6.

Hit Location and Damage. Hit Location = Flux = +6 – 4 = +2. The Damage impacts the Drives.

Final Damage = Damage/2 (round down) = 3. The Damage Severity Table shows the difficulty of repairing the hit is Formidable 3D.

The Drives compartment includes J-Drive and M-Drive. The damage is randomly allocated (1-2-3 = Jump; 4-5-6 = Maneuver) = 4 = Maneuver.

The ship has a Damage Control person (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 5 and fails to fix the damage.

Result. The target receives Formidable 3D Maneuver Drive Damage.

F FUSION GUN

Range	S=2 = R=7
Attacker	F-15 Adv G B2 Fusion Gun-15
Defender	S-14 Adv G B2 Sandcaster-14
Armor	Hullmetal-11

Attack and Defense. The F-15 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Dual Barbette B2 has Mod +2, so Assets = 15+7+3+2 = 27. It rolls 7D (=22) and (potentially) hits.

The target has allocated its S-14 Advanced Geo Range Dual Barbette Sandcaster-14 in Anti-Beam mode. Dual Barbette in AB Mode must roll 4 or less to stop the attack. The defender must roll 4 or less with 1D to stop the attack. He rolls 5 and the attack continues.

In the next Turn, the F-15 tries again. It rolls 7D (=32) and fails.

In the next turn, the F-15 tries a third time. It rolls 7D (=22) and potentially hits. The target again defends with its S-14, rolls 5 and this time fails to stop the attack.

Armor Penetration. The F-15 now attacks the ship's Hullmetal-11. Hits are determined by the Weapon Mount (Dual Barbette B2 = 5 Hits). The attacker rolls 5D = 17 Damage. The Hullmetal absorbs the first 11 Damage, so the ship receives Damage=6.

Hit Location and Damage. Hit Location = Flux = +3 − 5 = -2. The Damage impacts the Defenses.

Final Damage = Damage/2 (round down) = 6/2 = 3. The Damage Severity Table shows the difficulty of repairing the hit is Difficult 3D. Because a specific Defense was involved in the attack, it is the one receiving the Final Damage. The S-14 operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

Result. The S-14 is out of action with Difficult 3D Damage.

G MESON GUN

Range	S=11
Attacker	G-16 Imp DS Main Meson Gun-16
Defender	G-11 Internal Meson Screen-11
Armor	Hullmetal-11

Attack and Defense. The G-16 attacks with Dice = S= Space Range and must roll T+C+S+M or less. Its Main Mount has Mod +10, so Assets = 16 + 7 + 3 + 10 = 36. It rolls 11D (=40) and misses.

It shoots again, rolls 11D (=34) and potentially hits.

Firing from S=11, the attack is marked RINT Resolve In Next Turn. Play proceeds for other activity in the current turn.

In the next turn, the target has allocated its G-11 Internal Meson Screen in Absolute Mode: the G-11 internal mount provides Mod +1, so its assets are T+C+S+M= 11+7+3+1 = 22. The attacker Assets = 36 overwhelm the defenses, and the attack proceeds.

Armor Penetration. The G-16 now attacks the Hullmetal-11. Hits are determined by Weapon Mount (Main= 30 Hits). The attacker rolls 30D = 74 Damage. The first 11 are absorbed by the Hullmetal-11, so the ship receives Damage= 64.

Hit Location and Damage. Hit Location = Flux = +6 − 1 = +5. The damage impacts the Computer.

Final Damage = Damage/2 (round down) = 32. This result is off the chart: the Computer is destroyed.

Additional Effects. When a Component is Destroyed, the attack repeats (at half effect) at another Hit Location.

Inflict half Damage=74 (= Damage 37) minus Hullmetal-11 = Damage=26.

Hit Location = Flux = +5 − 4= +1 = Power Systems. The Damage=26 impacts the Power Plant. The result is off the chart and the Power Plant is destroyed.

Because that target location is destroyed, the damage is halved again and applied to yet another random location.

H JUMP INDUCER

Range	R=6
Attacker	H-13 Exp VI T1 Jump Inducer-13
Defender	
Armor	Hydrogen-13

Attack and Defense. The H-13 attacks with Dice = Range = R=6. Its Single Turret T1 has Mod - 3, so Assets = 13 + 7 + 3 -3 = 20. It rolls 6D (=19) and potentially hits.

Armor Penetration. There is no real defense against an H-13 (not even Armor). Hits are determined by the Weapon Mount (T1= 1 Hit). The attacker rolls 1D = 5, so the ship receives Damage=5.

Hit Location and Damage. Hit Location = +4 -1 = +3. The Damage impacts Weapons.

Final Damage = Damage/2 (round down) = 2. The Damage Severity Table shows the difficulty of repairing the hit is Average 2D. The target ship has six Weapons Mounts: assign each a number from 1 to 6 and roll 1D. The specific Weapon receives the Damage.

The weapon operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

One Weapon Installation receives Average 2D Damage.

H JUMP INDUCER

Range	R=7
Attacker	H-21 Adv Or Main Jump Inducer-21
Defender	
Armor	Hydrogen-13

Attack and Defense. The H-21 attacks with Dice = Range = R=7. Its Main Mount has Mod +10, so Assets = 21 + 7 + 3 +10 = 41. It rolls 7D (=35) and potentially hits.

Armor Penetration. There is no real defense against an H-21 (not even Armor). Hits are determined by the Weapon Mount (Main= 30 Hits). The attacker rolls 30D = 89, so the ship receives Damage=89.

Hit Location and Damage. Hit Location = +4 -4 = 0. The Damage impacts Hull.

Final Damage = Damage/2 (round down) = 44. The Hydrogen-13 absorbs 13, and the remaining damage 31 reach the ship. The Hull is damaged beyond repair.

J K L LASERS

Range	S=4 = R= 9
Attacker	J-8 T1 Mining Laser
	K-9 T2 Pulse Laser
	L-15 Adv G T4 Laser-15
Defender	S-14 Adv G B2 Sandcaster-14
Armor	LiteMetal-9

This engagement begins at S=4 = R=9, the J-8 and the K-9 cannot fire.

Attack and Defense. The L-15 attacks with Dice = Range= R=9. Its Quad Turret T4 has Mod 0, so Assets = 15 + 7 + 3 = 25. It rolls 9D (= 20) and potentially hits.

The target has its S-14 Dual Barbette B2 in Anti-Beam AB Mode must roll 4 or less to stop the attack. The defender must roll 4 or less with 1D to stop the attack. He rolls 2 and the attack fails.

The Attacker can move one Space Range Band per round between B-1-2-3-4. He moves closer to S=3.

The L-15 attacks (again) with dice equal to Range (now S=3 = R= 8). He must roll 25 or less on 8D (=31) and he misses.

The Attacker can move one Space Range Band per round between B-1-2-3-4. He moves closer to S=2 = R =7. Now, all three weapons J-8 K-9 L-15 can fire.

The J-8 attacks with dice equal to Range (now R=7) and must roll T+C+S+M or less. The Single Turret T1 has Mod -3, so Assets = 8+7+3 – 3 = 15. He rolls 7D (=21) and misses.

The K-9 attacks. T+C+S+M = 9 + 7 + 3 -2 = 17. He rolls 7D = 21 and potentially hits.

The target has its S-14 Dual Barbette B2 in Anti-Beam AB Mode. The defender must roll 4 or less to stop the shot. He rolls 3 and the attack fails.

The L-15 attacks with dice equal to Space Range (S=2 = R=7) and must roll T+C+S+M or less. The Quad Turret T4 has Mod = 0, so Assets = 15 + 7 + 3 = 25. He rolls 7D (=21) and potentially hits.

The defending AB turret has already fired; it cannot fire again in the current turn.

Armor Penetration. The L-16 now attacks the Litemetal-9. Hits are determined by Weapon Mount (Quad Turret T4 =4). The attacker rolls 4D = 13 Damage. The first 9 are absorbed by the Litemetal-9, so the ship receives Damage= 4.

Hit Location and Damage. Hit Location = +5 – 6 = -1. The damage impacts Life Support. Final Damage = Damage/2 (round down) = 2. Life Support has received an Average 2D damage.

The Engineer (Skill=Engineer-3) sees the hit and tries Immediate Action. Check Skill (2D) and rolls 3. He manages to slap a patch on the problem. It is reduced to Easy 1D and will have to be repaired later, but at least it's still functioning.

M MISSILE

Range	S=2
Attacker	M-10 Improved LR T3 Missile-10
	launches Missile-5X-HW
	launches Missile-5X-OG
	launches Missile-5X-SA
	launches Missile-5X-DL
Defender	L-15 Adv G T4 Laser-15
Armor	two layers of Vlitemetal-10

This engagement is relatively close; the missiles impact in the turn they are launched. The launcher will fire one every turn.

Attack and Defense. The Missile-5X-HW attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The Missile is HW HardWired, so its C+S = 5 (it disregards the C+S of the Launcher Operator). Assets = 10 + 5 +-1 = 14. It rolls 2D (=11) and potentially hits.

Attack and Defense. The Missile-5X-OG attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. Because the Missile is OG Operator Guided (which can be used at S=2 or less), C+S is taken from the Launcher Operator. Assets = 10 + 7 + 3 +-1 = 19. It rolls 2D (=11) and potentially hits.

Attack and Defense. The Missile-5X-SA attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The SA Self-Aware guidance system has its own C+S which is used instead of the Launcher Operator C+S. Assets = 10 + 7 + 3 +-1 = 19. It rolls 2D (=11) and potentially hits.

Attack and Defense. The Missile-5X-DL attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The DL DownLoad guidance system transfers the Operators C+S to the Missile Guidance system. Assets = 10 + 7 + 3 +-1 = 19. It rolls 2D (=11) and potentially hits.

The target has allocated its L-15 Adv G T4 Laser-15 in Anti-Missile AM Mode. The defender must roll 3 (on 1D) or stop the attack. He rolls 2. The attack fails.

The missile attacks the ship and its two layers of VliteMetal-10.
The Size-5 Explosive Warhead Missile attacks the armor with 5D; he rolls 16. The two layers of VliteMetal-10 absorb the Damage.

M MISSILE

Range	S=7
Attacker	M-10 Improved LR T3 Missile-10
	launches Missile-5X-HW
	launches Missile-5X-OG
	launches Missile-5E-SA
	launches Missile-5N-DL
Defender	L-15 Adv G T4 Laser-15
Armor	two layers of Vlitemetal-10

This ship is at Attack Range: far enough away that it can't just shoot missiles and expect them to hit right away.
The ship preplans its strategy: one shot every turn until the battle is over. The first shot will hit in Turn 7.

Jump ahead to Turn 7
Missile-5X-HW launches with Dice = Range = S=7 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1, Hard-Wired guidance provides C+S= 5, so Assets = 10+5 -1 = 14. It rolls 7D (= 13) and potentially hits. The target has allocated its L-15 Adv G T4 Laser-15 in Anti-Missile AM Mode. The attacker must roll 3 (on 1D) or less. He rolls 5. The attack fails.

Jump ahead to Turn 8
Someone made a planning mistake. Missile-5X-OG is Operator Guided; it cannot reach beyond S=2. Someone will be reprimanded after the battle.

Jump Ahead to Turn 9
The Missile-5X-SA launches with Dice = Range = S=7 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1, Self-Aware guidance provides C+S= 7+3, so Assets = 10+7+3 -1 = 19. It rolls 7D (= 18) and potentially hits.
The target's L-15 Adv G T4 Laser-15 is in Anti-Missile AM Mode. Defender must roll 3 (on 1D) or less. He rolls 5 and the attack continues.The missile attacks the ship and its two layers of VliteMetal-10. The Size-5 EMP Warhead Missile attacks armor with 5D = 22. Armor absorbs the first 20 points of Damage, so the ship receives Damage=2.
Hit Location and Damage. Hit Location = +5 – 6 = -1. The damage impacts Life Support. Final Damage = Damage/2 (round down) = 1. Life Support receives an Easy 1D damage.

Jump Ahead to Turn 10
Defender tries to stop the next missile: he rolls 5 and the attack continues. The missile attacks the ship and its two layers of VliteMetal-10. The Size-5 Nuke Warhead Missile impacts and creates a Massive Explosion: consult the Massive Explosion Table with Size + 1D = 5+ 3 = 8. The explosion inflicts a Vnear Miss with Blast=30 = 102 (2 layers of VliteMetal-10 absorb 20) Damage = 82. Final Damage = 41, which is off the chart: whatever it hits will be destroyed.
Hit Location and Damage. Consult the Hit Location Table: Flux = +1-3 = -2 = Defenses. The target has three defenses: assign each a number 1-2-3 and randomly determine which is Destroyed.
Additional Effects. When a Component is Destroyed, the attack repeats (at half effect) at another Hit Location.
Inflict half Damage=102 (= Damage 37) minus two layers of VliteMetal-10 = Damage=17.
Hit Location = Flux = +5 – 4= +1 = Power Systems. The Damage=17 impacts the Power Plant. The result is off the chart and the Power Plant is destroyed.

N KK MISSILE

Range	S=2, later S=7.
Attacker	N-14 Adv DS Bay KK Missile-14
	Missile-6K-OG
	Missile-6K-HW
Defender	
Armor	3 layers of LiteMetal-13

Attack and Defense. The N-11 attacks with Dice = Space Range and must roll T+ C+S+M or less. Its Bay provides Mod +5, so Assets = 14 + 7 + 3 + 5 = 29. It rolls 2D (= 10) and potentially hits.

The target has deployed no defenses against the KKM.

The missile attacks the ship and its three layers of LiteMetal-10.

The Size-6 KKM hits with Speed ^{2} = Space Range ^{2} = $2^2 = 4$. He rolls 4D = 16 which is absorbed by the Armor.

Later, the ship launches its KK Missile attack from S=7. It impacts in Turn +7.

The Attacker must roll T+C+S+M = 14+5+5 = 24 or less on 7D. He rolls 23 and potentially hits. There are no defenses, so the Missile directly attacks the ship.

The Size-6 KKM hits with Speed^2 = Space Range^2 = $7^2 = 49$. He rolls 49 Dice = 150. The first 39 are absorbed by Armor, but the remaining 111 cause Damage = 111/2 = Final Damage=55.

Hit Location Chart and Damage. Hit Location = +4 − 1 = +3. The damage impacts Weapons. The target has five weapons installations: assign each a number and randomly determine which one = 2 = Laser Turret. The Laser Turret is destroyed.

Additional Effects. When a Component is Destroyed, the attack repeats (at half effect) at another Hit Location.

Inflict half of Damage=150 (= Damage 75) minus three layers of LiteMetal-13 = Damage=36 = Final Damage= 18.

Hit Location = Flux = +5 − 4= +1 = Power Systems. The Damage=18 impacts the Power Plant. The result is still off the chart and the Power Plant is destroyed.

P PLASMA GUN

Range	R=2
Attacker	P-5 Exp VI B1 Plasma Gun-5
Defender	S-9 T1 Sandcaster-5
Armor	Armor-5

Attack and Defense. The P-5 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Barbette B1 has no Mod, so Assets = 5+7+3= 15. It rolls 2D (=10) and (potentially) hits.

The target has allocated its S-14 Advanced Geo Range Dual Barbette Sandcaster-14 in Anti-Beam mode. Dual Barbette in AB Mode must roll 4 or less to stop the attack. The defender must roll 4 or less with 1D to stop the attack. He rolls 5 and the attack continues.

In the next Turn, the P-5 tries again. It rolls 2D (=11) potentially hits. The target again defends with its S-14, rolls 5 and this time fails to stop the attack.

Armor Penetration. The P-5 now attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B1 = 3 Hits). The attacker rolls 3D = 14 Damage. The Armor-5 absorbs the first 5 Damage, so the ship receives Damage=9.

Hit Location and Damage. Hit Location = Flux = +3 − 5 = -2. The Damage impacts the Defenses.

Final Damage = Damage/2 (round down) = 9/2 = 4. The Damage Severity Table shows the difficulty of repairing the hit is Formidable 4D. Because a specific Defense was involved in the attack, it is the one receiving the Final Damage. The S-14 operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

Result. The S-14 is out of action with Difficult 3D Damage.

Q ORTILLERY

Range	R=9
Attacker	Q-15 Geo LBay Ortillery -15
Defender	L-10 Vd LBay Beam Laser-10
Armor	

The standard production Ortillery is designed for R=7, which is impractical in space combat; useful systems require R= 8 Orbit, R=9 Far Orbit, or R=10 Geosynchronous Orbit.

Attack and Defense. The Q-15 attacks with Dice = R= Range and must roll T+C+S+M or less. Its Large Bay LBay provides Mod +8, so Assets = 15+7+3 +8 = 33. It rolls 9D = 36 and misses.

The Q-15 attacks again in the next turn. It rolls 31 and potentially hits.

The surface target is defended by L-10 VDistant Range Large Bay Beam Lasers. It must roll 6 or less to stop the attack. The result is automatic; the attack fails.

The admiral rethinks his plans and tries again.

Q ORTILLERY

Range	R=9 = S=4
Attacker	Q-15 Geo LBay Ortillery -15
	Missile-5D-HW
Attacker	M-8 T3 Missile-8
	Missile-5X-HW
Defender	L-10 Vd LBay Beam Laser-10
Armor	

Attack and Defense. The Missile-5X-HW attacks with Dice = Range = S=4 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The Missile is HW HardWired, so its C+S = 5 (it disregards the C+S of the Launcher Operator). Assets = 10 + 5 +-1 = 14. It rolls 4D (=12) and potentially hits.

The surface target is defended by L-10 VDistant Range Large Bay Beam Lasers. It must roll 6 or less to stop the attack. The result is automatic; the attack fails.

Armor Penetration. The target is a Single Hex (= 1000 meters in diameter). There is no armor. The Deadfall Missile-5D-HW (the equivalent of a Size-5 Meteorite) creates a Massive Explosion.

Consult the Massive Explosion Table (Size – 1D = 5 -3 =) 2 = Hit. Blast= 40D (and other effects).

R RAIL GUN

Range	S=5
Attacker	R-13 LR Main Rail Gun-13
	Missile-6X-HW
Defender	F-14 Adv Vd B2 Fusion Gun-14
Armor	Hullmetal-11

Attack and Defense. The R-13 attacks with Dice = Space Range and must roll T+ C+S+M or less. Its Main Mount provides Mod +10, so Assets = 13 + 5 + 10 = 28. It rolls 5D (= 24) and potentially hits. It will be resolved in the next turn.

In the next turn, the target has deployed its F-14 Adv Vd B2 Fusion Gun-14 in Anti-Missile AM Mode. The defender must roll 4 or less (on 1D) to stop the attack. He rolls 2. The attack fails.

The attacker tries again. It rolls 5D (=16) and potentially hits. The defender rolls in the AM Mode; he must roll 4 or less (on 1D) to stop the attack. He rolls 6. The attack continues.

The Missile attacks the ship and its Hullmetal-11.

The Size-6 Explosive Warhead Missile attacks the armor with 6D; he rolls 30. Hullmetal-11 absorbs 11 and Damage= 19 = Final Damage= 9.

Hit Location and Damage. Hit Location = +4 – 4 = 0. The damage impacts Hull, which is Destroyed. The ship comes apart.

Additional Effects. Normally, when a Component is Destroyed, the attack repeats (at half effect) at another Hit Location. In this case, the Hull is destroyed; its surviving components are scattered.

S SANDCASTER

Range	
Attacker	S-9 T1 Sandcaster-9
Defender	
Armor	

Sandcasters are created and installed as Weapons, but they operate only in the Anti-Beam AB defensive mode.

T JUMP DAMPER

Range	R=8
Attacker	T-15 Orbit B1 Jump Damper-15
Defender	
Armor	

The Jump Damper creates a 100D Field with a radius equal to R=Range.

Operations. The target is at R=8 and preparing to Jump. The attacker activates the T-15 which creates a Jump Damping field with R=9. Because the target is within the field; it cannot Jump.

U TRACTOR/ PRESSOR

Range	R=7
Attacker	U-15 T1 Tractor/Pressor-15
Defender	W-17 Internal Grav Scrambler-17
Armor	Hullmetal-11

Attack and Defense. The U-15 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Single Turret T1 has Mod -3, so Assets = 15+7+3-3 = 22. It rolls 7D (=27) and misses.

In the next Turn, the U-15 fires again. It rolls 7D (=19) and potentially hits.

The target has allocated its W-17 Internal Grav Scrambler-17 in the Absolute Mode. Attacker T+C+S+M= 22 versus Defender T+C+S+M = 17+7+3+1 = 28. The attack is stopped.

Armor Penetration. The T-15 tries against a neighboring ship without a Grav Scrambler. After potentially hitting, it attacks the ship. Tractor/Pressor ignores Armor. The T1 Mount inflicts 1 Hit = 1D = 5. Damage =4.

Hit Location and Damage. Hit Location = Flux = +5 − 1 = +4. The Damage impacts the Bridge.

Final Damage = Damage/2 (round down) = 4/2 = 2. The Damage Severity Table shows the difficulty of repairing the hit is Average 2D. 4D. Because a specific Defense was The Bridge has several component Sensor Consoles: number each and randomly select one = Visor. The Visor receives Average 2D Damage.

One of the Bridge Crew tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 2 (he smacks the side of the Visor; its picture returns). It has an Easy 1D damage that will need to be repaired later.

V SALVO RACK

Range	S=2
Attacker	V-10 Bay Salvo Rack-10
	Missile-3X-OG
Defender	F-11 Ear Vd B2 Fusion Gun-11
Armor	3 layers Hullmetal-11

Attack and Defense. The V-10 attacks with Dice = Space Range and must roll T+ C+S+M or less. Its Bay Mount provides Mod +5, so Assets = 10 + 7+3 + 5 = 25. It rolls 2D (= 8) and potentially hits.

In the next turn, the target has deployed its F-11 Ear Vd B2 Fusion Gun-11 in Anti-Missile AM Mode. The defender must roll 4 or less (on 1D) to stop the attack. He rolls 6. The attack proceeds.

The Missile attacks the ship and its 3 layers of Hullmetal-11.

The Size-3 Explosive Warhead Missile attacks the armor with 3D; he rolls 14. The first layer of Hullmetal-11 absorbs 11 and the second layer of Hullmetal-11 absorbs the next 3. The ship is unaffected.

W DISRUPTOR

Range	R=7
Attacker	W-16 Early B2 Orbit Disruptor-16
Defender	S-9 T1 Sandcaster-9
	S-9 T1 Sandcaster-9
	S-9 T1 Sandcaster-9
Armor	Armor-6

Attack and Defense. The W-16 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Dual Barbette B2 has no Mod, so Assets = 16+7+3 = 26. It rolls 7D (=22) and potentially hits.

The target has allocated three S-9 T1 Sandcaster-9 in the Anti-Beam AB. The defender must roll 1 or less to stop the attack: he rolls 2, 5, and 1. The attack fails.

The W-16 fires again in the next turn. It rolls 7D (=24) and potentially hits.

The target has allocated three S-9 T1 Sandcaster-9 in the Anti-Beam AB. The defender must roll 1 or less to stop the attack: he rolls 2, 3, and 4. The attack proceeds.

Armor Penetration. The W-16 now attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B2 = 5D). Each D reduces armor by -1. 5D reduces ship from Armor-6 to Armor-1.

Hit Location and Damage. The Disruptor disregards Hit Location; it applies to the entire ship.

W DISRUPTOR

Range	R=7
Attacker	W-16 Early B2 Orbit Disruptor-16
Defender	T-16 Internal Black Globe-16
Armor	Armor-6

Attack and Defense. The W-16 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Dual Barbette B2 has no Mod, so Assets = 16+7+3 = 26. It rolls 7D (=22) and potentially hits.

The target has a T-16 Black Globe deployed (operating) and defending in Absolute Mode. Compare Attacker T+C+S+M = 16 + 7+3 + 0 = 26 versus Defender T+C+S+M = 16+7+3 + 0 = 26. The Attack fails if less than Defender; the values are equal so the Attack succeeds.

Hit Location And Damage. Disruptors ignore Hit Location and Black Globes ignore Hit Location. The W-16 now inflicts Hits against the T-16. Hits are determined by the Weapon Mount (Barbette B2 = 5D = 21. The T-16 receives and stores 21 Hits. When this value exceeds Hull Tonnage times Jump Potential, the T-16 and the Jump Drive would be destroyed.

1 Battery Fire

Range	R=6
Attacker	Lead P-10 T3 Plasma Gun-10
	P-10 T2 Ear Plasma Gun-10
	P-10 Distant T2 Plasma Gun-10
	P-10 T1 Plasma Gun-10
Defender	S-9 T3 Sandcaster-5
Armor	Hullmetal-11

Battery Fire allows various weapons of the same Type to fire together with greater effect. One weapon is selected as the Lead Weapon; the other weapons add to its effect if it hits and inflicts damage.

Attack and Defense. The Attacker has four P-10 Plasma Gun turrets of various sizes. The Lead P-10 T3 Plasma Gun-10 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Triple Turret T3 has Mod -1, so Assets = 10+7+3 -1 = 19. It rolls 6D (=17) and potentially hits.

The target has allocated its S-9 T3 Sandcaster-5 in Anti-Beam mode. Triple Turret T3 must roll 3 or less to stop the attack. It rolls 2 and the attack fails.

The Lead P-10 fires again in the next turn. This time, the S-9 fails to stop the attack.

Armor Penetration. The Lead P-10 now attacks the ship's Hullmetal-11. Because this is Battery Fire, the other Plasma Guns participate as well. The Hits are determined by the Weapon Mounts (T3 = 3 hits; T2 = 2 hits; T2 = 2 hits; T1 = 1 hit) = 8 Hits. The attacker rolls 8D = 28 Damage. The Hullmetal-11 absorbs the first 11; the ship receives Damage= 17.

Hit Location and Damage. Hit Location = Flux = +3 – 5 = -2. The Damage impacts the Defenses.

Final Damage = Damage/2 (round down) = 17/2 = 8. The Damage Severity Table shows the difficulty of repairing the hit is Beyond Impossible 8D. Because a specific Defense was involved in the attack, it is the one receiving the Final Damage. The S-9 operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

Result. The S-9 is out of action with Beyond Impossible 8D Damage.

2 Battery Fire with CommCaster

Range	R=6
Attacker	Lead P-10 T3 Plasma Gun-10
	P-9 T2 Ear Plasma Gun-10
	P-9 Distant T2 Plasma Gun-10
	C-8 T1 CommCaster-8
	P-10 T1 Plasma Gun-10
	P-10 T1 Plasma Gun-10
	P-10 T1 Plasma Gun-10
	P-10 T1 Plasma Gun-10
	C-8 T1 CommCaster-8
Defender	J-8 Jammer-8
Armor	Hullmetal-11

Battery Fire with CommCaster

Each ship equipped with a Commcaster can contribute its weapons to Battery Fire.

Each CommCaster must be within Range of all participating ships.

Each CommCaster must successfully roll T+C+S+M for the R= Range to the farthest participating CommCaster. Ships in the same Range Band are at R=5.

The strongest Defender Jammer is a negative Mod on each T+C+S+M.

Attack and Defense. Two ships in the same Range Band work together through their CommCasters for Battery Fire against a target at R=6.

Attacker One has three P-10 Plasma Gun turrets of various sizes. Attacker Two has four P-10 Plasma Gun T1 turrets.

The ships first initiate CommCaster communications. Attacker One is at R=5 from Attacker Two. The Defender Jammer-8 produces a negative Mod = T+C+S+M – Space range = 8+7+3+0 –1 = -17.

Attacker One must roll 10+7+3 – 17 = 3 or less on 6D. This is harder than it looks.

At some time later, the Jammer-8 is not functioning.

Attacker One must roll 10+7+3+0 = 20 or less on 6D. He rolls 18 and his Commcaster is operational.

Attacker Two does the same.

Battery Fire begins with the Lead P-10. It hits and the other Plasma Guns chime in.

Armor Penetration. The Lead P-10 now attacks the ship's Hullmetal-11. Because this is Battery Fire, the other Plasma Guns participate as well. The Hits are determined by the Weapon = 11 Hits. The attacker rolls 11D = 38 Damage. The Hullmetal-11 absorbs the first 11; the ship receives Damage= 27.

Hit Location and Damage. Hit Location = Flux = +3 – 3 = 0. The Damage impacts the Hull.

Final Damage = Damage/2 (round down) = 27/2 = 12. This result is off the chart: the Hull is Destroyed. The target ship is blown to pieces.