

Rendezvous with Rama

by
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Based on
Rendezvous with Rama
By
Arthur C Clarke

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EXT. SPACE

In a far distant solar system RAMA (Dark cylinder closed at both ends) begins its journey.

Rama accelerates through interstellar space between several solar systems and sling shots around the stars.

Directly ahead is a pale white star. Rama passes Neptune. As Rama approaches Jupiter the inner planets of the Solar System are visible as dots in the distance circling the Sun.

EXT. MARS COLONY - DAY

A small but growing human colony on Mars.

INT. SOLAR SURVEY OBSERVATORY, CORRIDOR - SAME TIME

The quiet is broken by a loud emergency alarm.

ALARM SYSTEM

Emergency! Emergency! To the
cabins! To the cabins! There is an
emergency in this area. Go to the
emergency cabins immediately!
Emergency! Emergency! To the...

Suddenly people come into the corridor and hurry to the
"Emergency Cabin" at the end.

ALARM SYSTEM (CONT'D)

This area is depressurizing!
Emergency!...

Bulkhead doors close the section off.

The Observatory door opens and MYRNA NORTON (thin boned, 12)
dawdles out followed by DR. CARLISLE PERERA (older, frail)
who moves as quickly as he can.

PERERA

Go Myrna, Go! Please just go!

Myrna is disgruntled but runs on ahead to the cabin.

ALARM SYSTEM

The cabin in this area must close
in ten seconds,... five seconds,
four, three...

Perera struggles into the small crowded room.

ALARM SYSTEM (CONT'D)
Two, one. Cabin closing!

The automated system closes and seals the door.

EXT. MARS ORBIT - SAME TIME

An asteroid streaks towards the planet.

Clamped onto the asteroid is the Solar Survey Spaceship ENDEAVOUR (large fuel tanks and rockets with a crew module the size of a single house on the front). Endeavour's main engines trust against the asteroid.

INT. ENDEAVOUR, BRIDGE - SAME TIME

Commander WILLIAM (BILL) NORTON (42) is shaken by turbulence.

NORTON
Solar Survey Base Mars. This is Endeavour. The parking orbit looks good to us. We are calculating ten seconds from now to shut down our engines.

SOLAR SURVEY BASE (O.S.)
We agree Endeavour.

NORTON
Joe, on the mark.

Navigations Specialist JOE CALVERT (handsome and a little geeky, 27) prepares to switch the engines off.

CALVERT
I have it.

Calvert turns off the engines and things settle down.

SOLAR SURVEY BASE (O.S.)
That's a nice job by you and your crew Commander Norton. The orbital construction companies are already bidding crazy money for the materials in that rock.

NORTON
Good. We got lucky in the Asteroid Belt finding this one.

SOLAR SURVEY BASE (O.S.)
Whenever you're ready you can
release the clamps and we will
bring you down. Enjoy the ride.
Welcome home.

EXT. MARS ORBIT - SAME TIME

Endeavour releases its gripping arms from the rig embedded in
the asteroid and blasts away.

INT. SOLAR SURVEY OBSERVATORY, EMERGENCY CABIN - SAME TIME

Myrna and Perera sit next to each other. Myrna is upset.

PERERA
I'm sorry I shouted Myrna but you
have to take these drills
seriously.

MYRNA
It's OK Doctor Perera. But they're
only ever drills and there are so
many of them.

PERERA
We're lucky they are drills. It
used to be for real, too many
times... I've lost people I care
about before and I don't want to
lose you.

MYRNA
You might be the only person who
would miss me.

PERERA
Now that's not true Myrna. Your
parents might be away but they
would miss you terribly.

ALARM SYSTEM
That concludes the safety drill for
scenario 28-04. The results report
will be on Media in a few hours
time. Thank you for your
participation.

The cabin door opens and they begin to leave.

PERERA

Please Myrna, take the alarms seriously and don't hesitate to act on them.

MYRNA

OK.

INT. ENDEAVOUR, BRIDGE - LATER

Having landed at the Mars Solar Survey Base the crew switch things off and unbuckle themselves. Near Norton is Executive Officer JERRY KIRCHOFF (abrupt tough guy with a heart, 48).

NORTON

Power down. Put everything away or take it with you... Maintenance are due to tear everything apart... yeah... and put it back together again during these three months.

KIRCHOFF

(quietly)

Three months... don't anyone hurry back.

NORTON

(to Kirchoff)

Yeah Jerry, I know Myrna would be happy with a long delay.

KIRCHOFF

This last trip must have been hard on her with her mother back on Earth.

NORTON

It's been a change for all of us. Without her it doesn't feel like a family anymore. There's only Myrna and me. You've got seven in your gang!

KIRCHOFF

Tell me about it! In three months I'll be so tired I'll sleep through the launch!

NORTON

From what I hear Myrna's been very busy with Child Center and working with Doctor Perera. Perhaps I'll just be in her way.

KIRCHOFF

I'm sure you'll find a way to spend
some time together.

INT. SOLAR SURVEY OBSERVATORY - LATER

Norton walks into the Observatory research lab where Perera
and Myrna are at monitors working.

PERERA

Object 31/431. Small. Not an impact
risk.

NORTON

Hi there.

MYRNA

(not excited to see dad)
Hi Dad. Just going to finish this
one off.

PERERA

Commander Norton, it's good to see
you. How did that iron source
asteroid look?

NORTON

It looked good for mining to me.
All the samples and data should be
arriving with you right after they
get them unloaded.

PERERA

Good, good... Myrna has been being
very helpful. There are many
research students who could learn
the proper techniques from her.
Isn't that right Myrna? Come on
now. I'll finish that. You go with
your Dad.

Myrna reluctantly breaks from her work. With little
enthusiasm she hugs her Dad. They begin to leave.

MYRNA

Oh no, wait. Doctor can we please
look at the strange one before I
go? Please.

PERERA

Strange, aren't they all strange? I told you there won't be anything there. I don't like going out of sequence.

Myrna pulls a disappointed face and stares at Perera.

PERERA (CONT'D)

OK... Commander do you have five minutes while we chase a computer phantom?

NORTON

(knowingly)

Yes as long as you promise not to send me to land on this ghost.

PERERA

(defensively)

Sometimes we lose them. I try not to recommend too many of those. Right. OK Myrna. Object 31/439.

MYRNA

I'm downloading the new data file.
(to Norton)
The first file suggested that it's forty kilometers across!

PERERA

There has not been one that big discovered in a hundred years.

NORTON

That's a big old thing to be hiding.

MYRNA

The scopes started scanning in the right place... The scan widened out... It widened again... It must have moved a long way.

PERERA

A ghost can move quite quickly.

MYRNA

They're picking it up!

PERERA

OK. We have it. Let's plot the or...bit. Well, I've never seen one of those before.

A Solar System display on the monitors plots the known orbit and slowly projects the expected course.

MYRNA

Doctor Perera, what does this mean?
Is it going straight at the Sun?

PERERA

No. It'll go very close to the Sun,
but it is going so fast it will
shoot straight out of the Solar
System.

MYRNA

Where did it come from?

PERERA

Interstellar space. The great void.

NORTON

This is its first and last visit to
the Solar System?

Perera nods.

NORTON (CONT'D)

We aren't harvesting minerals from
that!

PERERA

Very true. Myrna shall we calculate
the spin and shape? For
completeness.

MYRNA

OK. I'm requesting the light curve
data. Here it is...

On Myrna's monitor a chart appears with a flat line.

MYRNA (CONT'D)

Ur, it doesn't have a light curve.

NORTON

Of course it does! All asteroids
spin. As the surface moves the
light changes!

MYRNA

I know, but this one doesn't. Come
and look.

Norton and Perera look at Myrna's monitor. Norton is
bewildered and looks to the puzzled Perera for an answer.

PERERA

Very strange... I'll ask the Earth based group if they can use their equipment to look at this.

Perera shakes his head before walking off deep in thought.

NORTON

Come on Myrna. Let's get your stuff from Child Center and find our accommodation block unit.

INT. ACCOMMODATION UNIT - LATER

Norton and Myrna wheel bags into the small and impersonal temporary accommodation. They check out the rooms and equipment and begin to unpack their things.

NORTON

Have you been sending regular videograms to your mother?

MYRNA

I try... What about you?

NORTON

I contact her occasionally. She seems to be looking a bit better.

MYRNA

Yes she's been going outside! For walks!

NORTON

Being back on Earth has given her some strength.

Perera arrives.

MYRNA

Doctor Perera, did I leave something at work?

PERERA

No, No. I wanted to tell you that 31/439 is even stranger than we thought.

NORTON

(sarcastically)

Has it turned around and gone back the other way?

PERERA
(unimpressed)
You remember it had no light curve?

MYRNA
Yes.

PERERA
Well actually it does have a light curve. But it is a very small variation, very quick and regular.

MYRNA
How many hours does it take to spin around?

PERERA
Four minutes!

MYRNA
Four minutes!

NORTON
How could it hold together spinning at that speed?

MYRNA
Nothing that small could have enough gravity.

PERERA
No, actually that's not true. A collapsed star, like a neutron star or a black hole, would have more than enough gravity.

NORTON
That would rip apart the Solar System!

PERERA
Yes indeed, that is the good news. If it was a collapsed star orbits and environments would already be devastated. So it can't be one of those.

MYRNA
So how do we find out what it is?

PERERA

We are trying to persuade the Space Advisory Council to let us use the Farside Space Telescope to look at it. There is already quite a bit of interest. Media have picked it up as a curiosity.

NORTON

While you're twisting the arms of SAC members we will be checking out the new EarthSide Shopping Zone.

MYRNA

Great, great. Let's unpack later. Can we go now?

NORTON

I was thinking about in the morning.

MYRNA

Ohh, OK.

INT. EARTHSIDE RETAIL ZONE - NEXT MORNING

Busy, clean and nice, but compact. Capitalist garishness. Loud flashy advertising highlighting image above function.

Holographic machines mirror the customers but with different clothes on. They review current clothes before deciding what to show each customer. Norton is not paying much attention to the dull menswear he is shown wearing. Myrna is enthusiastic in looking at young women's fashions.

MYRNA

A group of the girls at school wear things like that all the time. Everyone says they look like they have spacesuits on!

NORTON

I wear a spacesuit a lot of the time.

MYRNA

Yes, but you have to. These girls never go outside. One day this other girl came in wearing the same thing, and they made fun because she looked so big in it. But she actually was going outside later that day! Here hold this.

Myrna passes her coat to Norton. Her holographic image no longer wears any coats.

NORTON

Have you been outside at all this last year?

MYRNA

Only once, when we collected rock samples with the Mountain field trip... That girl was only big because she is new here from Earth. She has got the thick bones and the big muscles...

Myrna looks thoughtfully at her own thin arm.

Norton moves and his holographic machine detects the girls' coat he is holding. It shows Norton wearing a series of girls' coats. Myrna notices it and laughs.

Norton looks around and sees himself in a crazy coat. He pulls a mock grumpy face and throws the coat at Myrna.

INT. EARTHSIDE RETAIL ZONE, BIOSPHERE - LATER

A Biosphere is the showpiece of the shopping zone.

MYRNA

Wow, it's the Biosphere. Let's go and look.

The domed biosphere contains large plants and a watery haze.

MYRNA (CONT'D)

Dad it's huge. Look at all this space.

NORTON

(less impressed)
For Mars this is quite something.

MYRNA

Look at this tree... and this flower... and all this green... Is all of Earth like this?

NORTON

... in some places... with an open sky, and the wind...

MYRNA

I'm sure it's more comfortable for
Mum. Look it's a lake!

Myrna runs to the edge of what is really a pond. Norton
doesn't correct her. Norton gets a call on his communicator.

NORTON

OK... I'm sorry Myrna. I've been
called in to Solar Survey. Are you
going to be alright to find your
way back from here?

MYRNA

Aww, OK Dad.

NORTON

We'll come back here soon. I'll see
you this evening.

INT. ACCOMMODATION UNIT - EVENING

Myrna is doing some work and listening to music. Norton and
Perera arrive looking troubled.

MYRNA

Hi there. Doctor did you get the
pictures you wanted?

PERERA

Have you not seen the news?

Myrna shakes her head.

PERERA (CONT'D)

The pictures are all over Media.

MYRNA

Why?

NORTON

You should look at them yourself.
"Control", "Music", "Off",
"Monitor", "Media", "Rama",
"Images".

The music stops and the monitor on the wall shows blurry
jumping pictures of Rama.

MYRNA

So... what.. is it?

NORTON

It seems to be some kind of alien space vessel, 50 kilometers long, and 20 kilometers across. It's been named Rama...

PERERA

A visitor from the stars.

MYRNA

Wow.

NORTON

Myrna, we've got some bad news. The United Planets want to rendezvous with Rama. There is only one ship in the Solar System that might be able to do it. Endeavour. It will be difficult but it looks like there is a way.

MYRNA

Are you going? When?

NORTON

Blast off is targeted for fourteen hours. If we don't go by then we won't make it.

Myrna is shocked and upset.

MYRNA

You've only just got back.

NORTON

That's one reason why we can make it. The ship is flight ready. The maintenance can wait. They're frantically fuelling, and loading her up.

MYRNA

So am I staying with Doctor Perera. Is that why you're here?

PERERA

Myrna, I'm sorry. I'm going as well.

Myrna is distraught.

MYRNA

You can't! I'll be alone! I don't want to spend all my time at Child Center.

PERERA

They don't know what they will find when they get to Rama. The only research equipment to hand is in the Observatory and I know best how to use it. They are going to put whatever they can onto Endeavour.

NORTON

We need the Doctor's expertise as well. We know about asteroids and rocks but Rama might not have any of them. We need biology, research... and perhaps diplomacy.

PERERA

I'm so sorry Myrna.

NORTON

We have got to get back to prepare.

PERERA

If there was anyone else...

NORTON

Myrna I know it's hard. But this is important. Otherwise we wouldn't go. Please come to the Base in the morning and we'll say goodbye then.

Perera and Norton leave. Myrna has an idea and calms down.

INT. SOLAR SURVEY BASE, OUTSIDE ENDEAVOUR - NEXT MORNING

Endeavour is being chaotically loaded and fuelled.

KIRCHOFF

We're going to have to clear this area soon. Get that last load on board! It's the last chance to say your good-byes everyone. I'm about to start throwing out non-essential people!

NORTON
 (to Kirchoff)
 Jerry, I've checked the fuel, air,
 water, and food myself. We have
 what we need to live.

KIRCHOFF
 With a launch program this chaotic
 it will be a miracle if we so much
 as get off the ground!

Kirchoff dashes across the pad to his wife and five children.

KIRCHOFF (CONT'D)
 Big hug everyone, big hug!

They have a big group hug.

Nearby Calvert is embarrassed by his parents.

CALVERT'S MOTHER
 Remember don't touch anything,
 don't look them in the eyes,
 they'll read your brain you know,
 and don't eat anything.

CALVERT'S FATHER
 The lad might get a little hungry
 if he doesn't eat anything!

CALVERT'S MOTHER
 Alien food of course!

CALVERT
 OK, OK. I've really got to go now.
 Urm. I'll urm see you when I get
 back. Bye then.

Life Support Specialist KARL MERCER (Ordinary looking,
 details oriented, 35) shakes hands with friends.

CALVERT (CONT'D)
 Karl, let's go.

Calvert and Mercer wave back to the friends and family as
 they walk to the ship.

Perera comes out of Endeavour and approaches Norton. Both
 look out searchingly across the pad.

NORTON
 Are you looking for your grandkids?

PERERA

No, no. They have all gone their various ways since their grandmother was killed... Is there still no sign of Myrna?

NORTON

I didn't think she would take it this badly.

PERERA

First her mother leaves her. Now we are doing the same.

Kirchoff is back near the ship.

KIRCHOFF

Bye! Love you all! Right. Come on crew. Let's get on board and do...

He pauses to look at the countdown at 40 minutes.

KIRCHOFF (CONT'D)

... some of the Launch Protocol.

They board. Norton lingers on the ramp.

INT. ENDEAVOUR, BRIDGE - LATER

Strapped into their seats with less than a minute to launch.

SOLAR SURVEY BASE (O.S.)

(informally to Norton)

No sign of her Commander. We'll look after her.

NORTON

Thanks.

SOLAR SURVEY BASE (O.S.)

(formally to everyone)

We are at T-minus 30 seconds. Looks good from here. Good luck Endeavour.

NORTON

(to the crew)

Let's do this right. Remember we're short handed for this part of the mission. So watch all the stations.

Engines start. Support towers fall away.

SOLAR SURVEY BASE (O.S.)
Engines ignited and 5, 4, 3, 2, 1.

Endeavour blasts off.

INT. ENDEAVOUR, BRIDGE - LATER

The crew are out of their launch suits.

CALVERT
Our trajectory is good. We are on
course for our rendezvous with
Calypso.

KIRCHOFF
Commander, the good Doctor is still
strapped into a launch seat back
there looking a bit green. I don't
know how he's getting on with space
travel!

NORTON
Yeah, thanks... You have the
bridge.

KIRCHOFF
OK.

NORTON
Karl, Joe, I think we'll need to
give the Doctor a hand to set up.

Norton is followed by Mercer and Calvert to the rear of the
bridge where Perera is strapped in gazing out of the window
at the Mars colony.

PERERA
The colony is so different from
when I arrived. People, good
people, used to sacrifice and
battle, every day, just to keep it
alive. We seemed to spend half our
lives in the emergency cabins. But
just look at it now. I didn't think
I'd ever leave.

NORTON
Doctor Perera, have you met Joe
Calvert and Karl Mercer?

PERERA
Yes Bill. We've done some work
together on life support equipment.

NORTON

Good. Shall we get you out of that seat? They'll help you set up some of your equipment.

PERERA

OK. It'll be quite a challenge. They threw out the mining equipment and threw in anything they could pick up from the Observatory. Hopefully we'll be able to get the basics into working condition before we get to Rama.

INT. ENDEAVOUR, LABORATORY - LATER

Things are secured to the walls, ceiling and floor, and some things float around. They have cleared a space and are setting up some of the basic tools from the Observatory.

CALVERT

You travel with a whole lot of stuff!

PERERA

Obviously we will have resources available to us from the rest of the Solar System. But there is only so much they can do for us remotely, and with a 10 to 20 minute communications delay.

Calvert and Mercer detach large cabinets from the wall and move them into position.

MERCER

We're still under orders to OK our every move with Base.

CALVERT

Media says the United Planets have already fallen out over Rama. Mercury's government was very unhappy about us going anywhere near it.

Bang, Bang... A banging begins from one of the loose cabinets. They notice it but don't pay it much attention.

MERCER

The Mercurians have all gone crazy. Media Mercury is reporting Rama as an intergalactic invasion ship!

PERERA

Maybe they are right.

MERCER

Media Mercury just spouts whatever their "Sun God" maniac of a dictator thinks will keep them all in thrall to him.

Bang. The loose cabinet explodes open with things flying out. The cabinet goes one way and hits the wall. Myrna and her bag fly out the other way and crash through some equipment.

CALVERT

What the...! Who the...!

PERERA

Myrna! What are you doing here?

Myrna is not prepared for zero gravity and tries to float over to Perera. She misses and floats comically across the room swimming and groping before hitting the other wall, grabbing a beam, and clutching tight to it.

CALVERT

(laughing)

We'd better fix you to the floor.

MYRNA

Sorry Doctor. I thought you might need an assistant.

INT. ENDEAVOUR, BRIDGE - MOMENTS LATER

Norton and Kirchoff monitor the approach of CALYPSO (A ship like Endeavour but newer and cleaner).

NORTON

Calypso. We're lined up for you to commence your docking approach.

Perera enters followed by Calvert with Myrna holding his arm.

PERERA

Commander I think you're in for a surprise.

Norton looks around, sees Myrna and jumps up angrily.

NORTON

Myrna! What are you doing here?

CALVERT
Smashing up the laboratory!

NORTON
We really don't need this! Don't
you know how dangerous this is
going to be? And the supplies! An
extra person!

Myrna is shocked and tearful at Norton's anger. The others
are uneasy. Kirchoff moves between Norton and Myrna.

KIRCHOFF
Bill. Shall we work it out later?

ERNST (O.S.)
Endeavour we are going to boost our
way towards you now.

Norton calms and slowly returns to his task.

NORTON
OK Calypso.

Myrna cries as Calvert and Perera lead her away. Myrna
briefly turns back, realizing they are docking with another
ship, frightened of being left behind.

MYRNA
(to Calvert and Perera)
We are meeting another ship?

CALVERT
Yeah. We need a boost from Calypso
to get us to Rama. Calypso has
picked up fuel from two other ships
so they can help us. This is the
big idea that makes it possible for
us to get there.

INT. ENDEAVOUR, REAR OF CENTRAL HUB - LATER

A hatch opens and on the other side the crew of Calypso
(Commander LAURA ERNST (Intelligent and caring, 39),
Executive Officer BORIS RODRIGO (Quiet and introspective,
41), Navigations Specialist JENNY PAK (Sarcastic, fit and
confident, 28), Communications Specialist RUBY BARNES
(Worried and matronly, 33)) is gathered with bags and storage
containers ready to come through.

NORTON
Welcome aboard everyone. We'll help
you with everything.
(MORE)

NORTON (CONT'D)

We're thinking about putting it all in the mess for the moment. So we can get underway as quickly as possible.

They come through and the crews meet each other. Pak carries one of the containers and refuses to hand it to Calvert when he offers to take it.

Ernst and Norton are together off to one side.

ERNST

Hi Bill. How have you been?

NORTON

Not bad Laura. How about you?

ERNST

I'm not sure I like this plan for getting to Rama. It's odd that we are going to use our new ship to boost your old one!

NORTON

That did come up in the planning. It was chaotic enough loading up Endeavour at Base. It didn't make sense to move all the stuff again.

ERNST

I know. You're going to owe me big after this!

NORTON

We left our Surgeon behind. Do you want your old job back?

INT. ENDEAVOUR, BRIDGE - LATER

Both crews are in Endeavour's bridge and the area to the rear of the bridge secured in seats. Myrna and Perera are in the area to the rear looking at monitors with some ability to see and hear towards the front. Pak is sitting next to them.

PAK

Are the Solar Survey relaxing their age criteria? Hi, I'm Jenny.

MYRNA

I'm Myrna. This is Doctor Perera. I'm Commander Norton's daughter.

PAK

Do you normally come on these missions?

PERERA

She's not supposed to be here. She is a stowaway.

PAK

The more the merrier.

MERCER

Commander... Norton the hatches are sealed. The gripping arms are all ready to go.

NORTON

Commander Ernst.

ERNST

Calypso. Main engine start.

Calypso is directly behind Endeavour with gripping arms connecting them. Calypso's main rear engines start.

The crews are pressured by acceleration and the ships shake.

MYRNA

So we're getting a push?

PAK

More than that.

NORTON

Is it looking OK?

CALVERT

Looks good from here.

Norton looks guiltily at Ernst who is not happy.

NORTON

Endeavour. Main engine start.

Endeavour's main rear engines start and blast directly onto Calypso. Calypso begins to smoke, burn and heat up.

They accelerate and shake. Monitors show what is happening outside. Sensors specific to Calypso display warnings.

MYRNA

What are we doing?

PAK

Toasting a very expensive booster
rocket.

MYRNA

Isn't it going to explode?

Perera looks at Pak to suggest not telling Myrna the truth.

PAK

Well, urm... they think it is going
to last at least two hours.

MYRNA

So when are we going to separate
from it?

Perera shoots Pak a really distressed look.

PAK

They're hoping for about two... and
a half hours.

PERERA

(Unconvincing)

But, they are monitoring some
sensors really closely and will be
able to tell when it is about to
happen, and detach.

INT. ENDEAVOUR, BRIDGE - 2 1/4 HOURS LATER

Sensors are critical. Everyone is stressed and tense.

ERNST

Bill. We can't keep going like
this!

NORTON

If we don't get enough out of
Calypso we won't have any fuel
reserves left to get away from
Rama.

Norton looks worriedly towards Myrna.

Bang. Endeavour jolts.

MERCER

She is beginning to go! That was
the side booster tank. It could
spread!

CALVERT
That's pushed us into a roll!

NORTON
Separate! Separate! Release the
grips!

Mercer pushes the controls.

EXT. ENDEAVOUR & CALYPSO - SAME TIME

Calypso is red and white hot. The two ships twist and roll attached to each other. The gripping arms detach with Calypso in front. The ships spin separately, alarmingly close to each other, before another side blast on Calypso pushes her a small distance away. Calypso explodes flinging a small amount of debris at Endeavour.

INT. ENDEAVOUR, BRIDGE - SAME TIME

The crew feels the explosions and impacts. Alarms and warnings sound.

NORTON
Can we stabilize the heading? We
need to stabilize the heading!

CALVERT
I'm trying!

Calvert fights the controls and uses side boosters. Endeavour stabilizes.

ERNST
Are we still going to Rama?

CALVERT
I'll have the main engines back on
soon.

Norton does some quick calculations.

NORTON
All of us are going to Rama.

Norton looks reassuringly around at everyone including Myrna.

INT. ENDEAVOUR, NORTON'S ROOM - LATER

Norton alone in his room watches the end of a videogram from the ADMIRAL of the Solar Survey.

ADMIRAL

... I appreciate that you are busy but it would help us a great deal if you could do some presentable Media. Bill, now that news of your mission is out, the attention is unbelievable. Every association, society, professional group - serious and crazy, wants to contact you. We are going to try to shield you from them. But it would help if you could give us something to work with. We are seeing some extreme views and rumors. You are being followed by all mankind. I know the responsibility is great and I'm happy that it fell to you - someone as professional as you.

As the videogram ends the door opens and Myrna enters clutching her stuff.

MYRNA

Hi Dad. I understand you have a spare cot in here.

Norton and Myrna stare tensely at each other.

NORTON

Yes I do. It's on that wall. You know you're going to have to stay out of everyone's way... and compose a great videogram to explain this to your mother.

MYRNA

Oh yeah...

INT. ENDEAVOUR, FITNESS ROOM - LATER

The fitness room contains ten exercise machines. Most are different but there are two stationary bikes and two treadmills. Mercer is on one of the treadmills, Barnes is on a stair climber, and Rodrigo is bench pressing.

BARNES

I'm really glad your one of these is working, ours has... had been broken for a month.

MERCER

Does Laura always make you follow extreme fitness regimes?

BARNES

It's not normally this bad. She obviously wants to get us in shape for whatever is ahead.

MERCER

On this regime I'll be in the best shape of my life!

BARNES

Yeah. Your muscles are not wasting away while she's in charge!

First Calvert then Pak come in to start exercising. Calvert checks a display showing his personal fitness regime.

CALVERT

Oh, what to do first?

He turns to a stationary bike just as Pak moves towards the same one.

PAK

You better take it. It looks like you need it more than I do!

CALVERT

No, no. I'll use this one.

Calvert takes the other bike. The machines have electrical resistance motors that generate electricity so the displays show "Electricity Generated".

Pak and Calvert start at the same time. Their pace is steady but as Calvert notices that Pak is slightly ahead he goes quicker. Pak sees what Calvert is doing and accelerates.

The others notice a race is breaking out and watch.

MERCER

Joe. I'm not sure that's a good idea.

CALVERT

We don't have to let these Calypso types have everything.

Calvert goes quicker. Pak smiles a little and responds.

RODRIGO

Jenny. I don't think this is proving much.

BARNES

I think it's proving quite a lot.

Calvert pushes on again but begins to look stressed. Pak lets Calvert catch her and move into the lead.

MERCER

Joe. I wasn't really talking about Calypso versus Endeavour. There's another problem.

Calvert is more determined than ever. Mercer looks at Barnes and Rodrigo and shakes his head as they smile knowingly back at him.

Calvert leads with Pak just behind. Calvert tires. Pak is calm. As Calvert struggles Pak suddenly puts on an extraordinary burst of acceleration. Going much quicker than either of them has gone before she flies past Calvert and quickly out into a huge and ever expanding lead.

Exhausted, Calvert slows down and looks on in astonishment as Pak keeps on going.

BARNES

I think what Karl was trying to tell you was that Jenny competed for Mars at the last Lunar Olympics.

CALVERT

Karl... you... couldn't have... er... just said that?

The other three laugh as Calvert talks. Pak keeps on going.

INT. ENDEAVOUR, BRIDGE - WEEKS LATER

Mercer has a camera. Calvert is in front of him holding some notes. Ernst and Norton are at their stations. Myrna plays a computer game to the rear of the bridge.

CALVERT

OK everyone. We're doing another broadcast to the Solar System.

Myrna turns off her game and calls up a picture of Rama and pretends to be doing a calculation. The others tidy themselves up. Norton is unimpressed but gets ready.

CALVERT (CONT'D)

As I go around I'm going to ask you some of the questions being asked by the public... Karl, go.

Mercer starts the camera.

CALVERT (CONT'D)

As you can see we are on the bridge of Endeavour and today we are going to try to answer some of your questions. The first one is for Commander Norton. "Commander, what do you think you'll say when you meet an alien?"

NORTON

Well Joe, I should point out that it is considered quite unlikely that we will meet any aliens on Rama. Based on her current orbit and velocity it is more than 200,000 years since Rama passed near any star, and that star is an irregular variable. That's a type of star not suited for life. So they did not start there!

CALVERT

Perhaps they are just sealed inside.

NORTON

Our experts are telling us nothing can stay fully sealed for that long. 10,000 years at most. So Rama is likely to be a ship that has exhausted its provisions. A derelict, drifting among the stars.

Ernst was not paying attention to the question and answer.

CALVERT

Surgeon-Commander Ernst, is Rama a tomb?

ERNST

It... is possible... that Rama is an alien version... of the Great Pyramids. Sent into space with all of the possessions of a Pharaoh. To ascend him into heaven...

The others are troubled by this idea. Myrna is especially frightened. She looks apprehensively at the picture on her monitor. Norton looks around hoping that Myrna didn't hear what was said. He realizes that she did and is annoyed.

In the awkward silence he waves Mercer to stop the camera.

NORTON

Joe! Are there no easy questions?
 Laura, if he asks you questions
 about curses and mummified aliens
 please avoid answering them!

Myrna is even more scared. Norton realizes he made it worse and goes over to Myrna.

NORTON (CONT'D)

Myrna, there's quite a few crazy
 ideas around. There's not much to
 be gained by worrying about them.
 We'll be careful when we get there.

Myrna is not very reassured. Ernst is sympathetic.

ERNST

Myrna, why don't you go with Joe
 and Karl to the laboratory and help
 Doctor Perera answer his questions?

Calvert sheepishly nods and leaves the bridge, followed by Mercer and Myrna.

Ernst and Norton are alone. Norton shakes his head.

NORTON

How can I protect her from this?

ERNST

Bill, I think she wants a dad more
 than she wants a commander.

NORTON

I was never a very good dad. I've
 missed a lot of time with her. I
 always thought her mother was
 better than I was. I didn't want to
 get in the way.

ERNST

What happened to Myrna's mother?

NORTON

She never adjusted to Mars colonial
 life.

(MORE)

NORTON (CONT'D)

It's a hard change and she held on as long as possible for Myrna's sake. She became a shell of her former self. I wasn't there for her either... When she got the respiratory disease I think she was actually happy! It gave her an excuse to go back to Earth. We all knew she wasn't coming back. She's pregnant now. Myrna will have a half-sister that most likely she'll never meet.

ERNST

Bill... Be her dad.

INT. ENDEAVOUR, LABORATORY - SAME TIME

Calvert and Mercer are preparing to film in the laboratory which is more set up than before.

Perera is working and reaches momentarily for a pain in his stomach. He shakes this off and is positive about the camera.

Myrna searches around the room, sees a small probe with its panel not attached, and starts screwing the panel onto the probe to look busy. Perera is puzzled but then figures out what she's doing.

PERERA

Joe, Karl. Are you ready for us?

CALVERT

Yes, thanks Doctor.

Calvert signals and Mercer starts filming.

CALVERT (CONT'D)

Doctor Perera, this is a good question for you. "What are we going to do when we get near Rama?"

PERERA

Aah yes, indeed, yes we are just getting ready for that.

Perera looks at Myrna, inviting her to contribute.

MYRNA

Yes we are. We're just getting these probes ready.

PERERA

We are going to hover about a thousand meters from one end of Rama and conduct some tests. We are going to fire four probes out along the sides of Rama. They will do sensory sweeps along the outside.

CALVERT

Take pictures...

PERERA

Well, yes. That and some other things.

CALVERT

Are we doing anything else?

PERERA

There is the anti-matter test.

CALVERT

The anti-matter test?

PERERA

Yes. You see if Rama is made of anti-matter, and we land Endeavour on it, it will look like the Solar System has two Suns. Briefly, as we are annihilated.

CALVERT

So... we're going to test that by landing on it?

PERERA

Oh no, no. No, we are going to blast some water at Rama from a safe distance, and watch to see if there is an explosion on contact.

CALVERT

Yes that does sound like a good idea. Myrna, there have been lots of questions for you. Millions I'm told. But let's just do a couple of them. "Since you are only twelve, why are you here?"

MYRNA

Well, Endeavour had to leave really quickly, and Doctor Perera needed an assistant with experience of the equipment...

(MORE)

MYRNA (CONT'D)

and the other students had all gone mountain climbing and weren't going to make it. So I guess I just sort of had to come.

CALVERT

So you're saying you were a particularly good fit into Doctor Perera's equipment.

MYRNA

Yes... that's sort of it.

CALVERT

"What is the most fun you can have on board Endeavour?"

MYRNA

Er, well, I guess... That would be looking out of the window. Here let me show you... Over this way.

Myrna moving awkwardly but getting better, goes to the window and Mercer follows.

MYRNA (CONT'D)

Look, do you see it?... Out there, that way... We are starting to get closer now and it just keeps getting bigger and bigger. Rama.

Mercer points the camera out of the window at Rama.

EXT. ENDEAVOUR, APPROACH TO RAMA - SAME TIME

Our viewpoint leaves Endeavour through the window and moves back along the side of Endeavour to show both ships.

Over several days, Endeavour approaches the back of Rama and closes in alongside. Pulling back from Endeavour, the immense scale of Rama is apparent as Endeavour is dwarfed.

Endeavour moves past and in front of Rama.

Four small streaks launch from Endeavour and go outwards around Rama.

In close-up, a cloud of mist from Endeavour wisps through space toward Rama. It goes in past the pill-box structures and lands on Rama, briefly forms a dew, and then slides away.

INT. ENDEAVOUR, BRIDGE - LATER

Everyone at their stations. Endeavour in very close to Rama.

SOLAR SURVEY BASE (O.S.)

We have the final OK. Endeavour,
you are cleared to land on Rama as
planned.

NORTON

Rama Base. Instructions received.
We are commencing our landing
procedure... OK Joe take us down,
well onto... the ship.

CALVERT

We're still matching the spin. I'm
targeting the center.

Calvert boosts Endeavour towards Rama. Myrna, Perera and Pak
sit as before to the rear of the bridge.

MYRNA

So we're going to land in the
middle of the circle... What
happens if we miss?

PAK

We're trying to miss. We are going
in at the middle but then we're
going to try and rest against one
of the pill-boxes.

PERERA

It's possible that gravity will
hold us to the surface anyway. The
probe calculations put Rama's
weight at about a trillion tons. It
might be enough.

PAK

And if we miss the pill-boxes and
gravity is not enough, we will be
on the universe's best carousel
ride... Until we get flung off the
side.

Myrna is nervous and Perera is bewildered by Pak's comment.

PERERA

(sarcastically)

Do we have to sit next to you for
these things?

Kirchoff has a display showing the distance to Rama.

KIRCHOFF

Ten meters to go. We are on course... Five meters, four, three, two, one...

They land softly. Out the windows the pill-boxes look distant and small. Initially the ship stays still.

KIRCHOFF (CONT'D)

We're moving! Look! We are definitely moving.

ERNST

I agree. We're going to need a pill-box.

At first they move slowly before gaining speed.

KIRCHOFF

We're getting quicker... and we're spinning... Start using the boosters to control it.

CALVERT

I think I have it.

They are headed towards a gap.

KIRCHOFF

We'll need to go forward for that one!

ERNST

Perhaps backwards for that one.

NORTON

Joe, pick one and hit it.

CALVERT

Will do.

Calvert waits patiently for the ship to rotate and boosts forward, correcting the spin and going sideways on towards the third pill box on the other side. They boost fully into line at the last moment.

CALVERT (CONT'D)

Brace for impact.

Everyone holds on tight for a big crash. The contact is barely noticeable. They look around to confirm if that was it. Calvert turns towards Norton and nods.

NORTON
Rama Base. Endeavour has landed.

INT. ENDEAVOUR, MESS - LATER

Norton, Ernst, Calvert, and Pak are eating. Myrna is at the window. Everything is quiet. They are on edge looking at unchanging instruments and the starkly geometric landscape.

Myrna is apprehensive. Calvert decides to try to help her.

CALVERT
I've heard a different suggestion
about what Rama is.

Some of them roll their eyes. Norton is skeptical.

CALVERT (CONT'D)
No. This one's not scary. It's
nice, it's nice!

NORTON
OK, let's hear it. At least there's
no camera here so you can't give
the whole Solar System nightmares.

ERNST
How many times do I have to
apologize for that?

CALVERT
Myrna, you know those cuddly two-by-
two animal stories about Noah's
Ark? Maybe Rama is a cosmic ark
full of cuddly animals it has
saved. That's nice, isn't it?

MYRNA
Joe. I'm twelve, not four! And what
happens to all the animals that are
not saved?

CALVERT
Oh yeah...

PAK
If we get in there and find lots of
pairs of alien animals Joe can be
first to try cuddling them!

The others laugh at Calvert and it breaks the tension.

INT. ENDEAVOUR, NORTON'S ROOM - LATER

Norton is trying to read an "EVA Equipment Report" but struggles to concentrate. Perera enters.

PERERA

Base confirms our calculations. We have three weeks here before it gets too hot. There are no vibrations, no electrical currents, no radioactivity...

NORTON

No welcoming committee.

INT. ENDEAVOUR, AIR LOCK & BRIDGE - 24 HOURS LATER

Norton and Mercer are standing in Endeavour's air lock wearing space suits. Kirchoff and the others are at monitors on the bridge.

KIRCHOFF

Commander, that's it. We've been here 24 hours. As instructed.

NORTON

Good. Are you getting the full array of telemetry?

KIRCHOFF

Confirmed.

NORTON

OK. Open the outer air lock door.

The door opens. Norton and Mercer boost towards the pill-box the ship is resting on. They inspect Endeavour for damage.

NORTON (CONT'D)

Endeavour looks good.

They turn to the pill-box. After a few meters Norton comes across an interruption in the smooth metallic wall. Six radial slots are recessed with six bars like the spokes of a wheel within them.

Norton is confused, then notices deeper recesses at the ends of the spokes. Instinctively, he puts his hands into two of them and pulls. The wheel slides smoothly out of the wall. Norton is shocked and freezes with embarrassment.

KIRCHOFF

OK Bill, let's not run that one past Base.

ERNST

They may know we're here now. Are we detecting any changes?

RODRIGO

No Commander. It is as before.

NORTON

200,000 years to become vacuum welded, and it's as smooth as silk.

MERCER

Well Skipper, are you going to turn it?

NORTON

We can't check everything with Base. What do you think Karl?

MERCER

It's a manual control for an air lock. It's a sensible precaution for any technology.

NORTON

And it would be fail-safe?

Mercer nods. Norton grips the wheel. It does not move.

NORTON (CONT'D)

Give me a hand.

They each get a grip and again it does not move.

MERCER

The other way?

There is no resistance and the wheel turns through a full circle. Half a meter away the wall opens slowly like a clamshell. They look in at a short corridor with another air lock visible in the darkness at the end.

INT. ENDEAVOUR, LABORATORY - 2 DAYS LATER

Perera, Myrna and Pak are at a large graphic map of the corridors and air locks explored so far.

PERERA

The seismic soundings showed the hull as being about half a kilometer thick. It should end about here.

Perera points close to the end of the graphic.

MYRNA

Also, there are three pill-boxes, three tunnels, with three air locks before the long central corridor. They're through two more at the other end. The third is going to be the last!

Perera and Pak silently nod their agreement.

INT. RAMA, LAST AIR LOCK - LATER

Ernst, Calvert, Norton and Mercer are inside the corridors.

NORTON

OK. Let's find out what's inside.

Mercer turns the final air lock control. The door opens to reveal total blackness.

Norton boosts himself forward attached to a safety rope carrying a camera. He floats across a platform and out into the open blackness. His light shines into the space and reveals nothing.

He realizes he is clutching his safety rope very hard. The rope reaches the end of its length and still he sees nothing. Unsettled, he turns around to look back at the entrance and scans his light across the wall.

He is hovering over a small crater in a much larger crater. All around there is a complex of geometrically precise terraces and ramps. About a hundred meters away are the exits of the other two air locks.

NORTON (CONT'D)

I'm sending out a flare. Here goes.

He ignites a flare. As he throws it, he tries to stop himself, realizing he is not sure what he might hit. Its small light spins away into the darkness.

Norton is exposed and vulnerable. He calms himself and suddenly remembers to close his eyes and point the camera.

The flare explodes with a bright flash. Norton slowly opens his eyes and finds himself at the base of a crater 16 kilometers across. The walls of the crater slope up around him until they merge into the solid wall going up on all sides. On the crater surface are three very long stairways stretching from the air locks to the wall.

Awed and disoriented, he shakes his head, and twists around to face along the cylinder. The impression is of standing on a very high hill looking out along a valley stretching into darkness.

Down on the surface below are possible highways, canals, and towns. The surface circles around so that the same thing is on the sky above.

At the limit of vision is a band of deeper darkness forming a complete circle ringing the interior.

NORTON (CONT'D)
A... Cylindrical Sea!

The flare gutters and dies and Norton is back in darkness.

INT. ENDEAVOUR, NORTON'S ROOM - NEXT DAY

Norton is sleeping peacefully in his bed. Myrna comes in.

MYRNA
Dad, Dad, wake up.

NORTON
(Worried)
What happened?

MYRNA
You've been asleep for ten hours!

NORTON
Oh, anything else?

MYRNA
The spotlights and cameras are making good progress with the mapping. They're using familiar names for everything - London, New York, Copernicus... The inside surface area is four thousand square kilometers!

NORTON
Yes, it's big all right!

MYRNA

The test descent team is waiting for an OK... and, oh yes, there is a message for you from Base.

Norton gets up and goes to his monitor. He briefly looks at Myrna, as he considers if he should play it, and plays it anyway. He listens while cleaning his teeth, etc.

ADMIRAL

Commander you are OK to descend the stairs. Media is following your every move. The Mercury representative has left the monitoring committee, so we should have less resistance to your progress. Mercury has gone quiet. Maybe they are not so troubled anymore. You are doing a great job. Good luck Bill.

INT. ENDEAVOUR, REAR OF THE BRIDGE - LATER

Norton and Myrna arrive. Rodrigo and Pak are on the monitoring stations.

On the monitors Ernst, Calvert and Mercer are in a spotlight steadily floating head first down one of the ladders.

NORTON

How are they doing?

RODRIGO

They're OK.

PAK

I think Mercer might have been skipping some of his fitness regime.

NORTON

Laura. How are you doing?

INT. RAMA, LADDERS - SAME TIME

Ernst is descending the ladder head first.

ERNST

Guys, I'm going to stop... Bill, this is not too difficult but the Coriolis force is gently pushing me away from the ladder.

(MORE)

ERNST (CONT'D)

You have to concentrate otherwise
you drift away from the ladder
sideways as Rama spins.

CALVERT

Is it just me or is the gravity
starting to drag us upwards?

MERCER

It is only a fraction of a gee.

CALVERT

That fraction of a gee is enough to
make me think I'm diving head first
down an eight-kilometer cliff!

ERNST

You're right. We should try going
feet first. Watch out, I'm going to
swing around.

Ernst swings around. She looks past her colleagues up to the
blinding distant spotlight. Then she looks down past her feet
and briefly reacts to vertigo.

ERNST (CONT'D)

Whoa... Take it steady you two...
and don't look down.

CALVERT

We're already looking down!

ERNST

You'll see what I mean. Come on. We
should be off the ladders and onto
the steps soon.

As Calvert and Mercer turn around Ernst lets go of the
ladder. Very slowly she begins to fall.

INT. RAMA, STAIRS & ENDEAVOUR, BRIDGE - LATER

The crew monitoring the mission has Perera with them.

PAK

There is something undignified
about this.

On the screens Ernst, Calvert and Mercer are descending the
stairway by sliding down the handrail.

MYRNA

It's difficult to walk down stairs
in low gravity.

PERERA

The stairs would only really be
useful for going up.

PAK

I can't believe the Ramans ever did
it that way.

PERERA

The stairs were probably only for
emergencies. Those slots were
probably for some kind of vehicle.

Ernst, Calvert and Mercer reach a platform.

ERNST

We have reached the two kilometer
platform as planned.

NORTON

I hope you enjoyed yourselves.
Climbing back up won't be quite so
easy!

MERCER

That's what we're here to check.

Mercer walks back and forwards jumping a little. Ernst gets
out some detection instruments. Calvert looks at the steps on
either side of the platform.

CALVERT

The steps are definitely getting
smaller as we go down. They are
changing size to allow for the
changing gravity.

MERCER

It's already a tenth of a gee here.
You really notice the difference.

ERNST

There is no change of temperature.
Still just below freezing... But...
the air-pressure is higher than at
the hub. Doctor Perera have you
detected anything that might be a
problem?

PERERA

No. It looks sterile to me.

The others are confused. Ernst works on her space suit.

PAK

Commander, Laura is overriding the safety systems of her space suit!

NORTON

Laura, what are you doing?

ERNST

I've checked the composition. At this altitude it's not ideal.

RODRIGO

What about the risk of contamination? Base is not going to like this.

PERERA

There does not appear to be any risk and we are not going near any other humans for a long time. So we will be well quarantined.

PAK

I don't want to be quarantined. Joe, Karl, can't you stop her?

Calvert and Mercer look at each other and shrug concerned agreement.

MERCER

This would be the first other world where we can work without breathing gear! Good luck.

Ernst stops work and brings her hand up to her visor.

ERNST

I'm going to take a sniff.

Ernst cracks open her mask tentatively and sniffs at the air very softly. She breathes a little, and takes a deeper breath. She closes her visor.

NORTON

Laura?

ERNST

Well it's kind of... stale and musty with a metallic tang...

(MORE)

ERNST (CONT'D)

and at this pressure you'd be dead pretty quickly. But further down I think we should be OK.

The others relax.

NORTON

OK. There's no point going any further till we're ready to go all the way. Let's find out how you do coming up. We'll be timing you. But take it easy.

INT. ENDEAVOUR, REAR OF CENTRAL HUB - LATER

Norton arrives to find Ernst in her space suit less the helmet and gloves finishing medical checks on Calvert and Mercer. They are out of their space suits wearing thermosuits. The last check is a muscle scan using a device placed against the back of their calves.

ERNST

It looks like you guys are OK. But no more skipping fitness requirements!

Mercer winces as he and Calvert head off to their quarters.

NORTON

So what are we really looking at?

Ernst begins to take off the remainder of her space suit.

ERNST

Going down will be easy. It looks as if we can slide most of the way on the bannister!

NORTON

Jerry is working on packaging things, and using sleds to get our stores and equipment down. By throwing them off the edge!

ERNST

Eight kilometers! That'll be quite a shot.

NORTON

We can either carry them down or collect them at the bottom.

Ernst finishes taking off her space suit. Still wearing a thermosuit she starts doing medical checks on herself.

ERNST

We're very lucky the air is breathable. We can probably leave our breathing gear behind at Level Three. Beyond that we obviously need food, water and thermosuits, and we're in business.

NORTON

And climbing back out again?

ERNST

Difficult to estimate. I'd say we should allow six hours, including some break time. Hopefully living in one half gees will build up some muscles and make us quicker.

NORTON

That leaves the darkness to worry about.

ERNST

We'll need a full set of searchlights at the hub. A little help?

Ernst wants to scan her calves but can't do it herself. Norton takes the device and puts it on Ernst's calf muscles.

NORTON

A light beam for each of us will help... So we can go camping down on the plain?

Ernst is briefly distracted by the physical contact with Norton. Norton senses it and is also self conscious.

ERNST

Yeah, er I'd better go clean up.

They linger briefly before moving apart.

INT. RAMA, CAMP ALPHA & HUB - TWO DAYS LATER

Norton and Calvert are at Camp Alpha at the base of the Alpha Stairs. The Camp is in disarray with the sleds just beginning to be unpacked.

Up at the hub Kirchoff prepares to send down a sled.

KIRCHOFF

Skipper I'm sending down package number five. It has a beacon, its spotlight has picked it up. Are you all OK to receive it?

NORTON

Yeah Jerry, Joe and I could use a workout. Try to aim this one somewhere near the Camp!

Kirchoff looks down at the distant camp lit by spotlights. He moves sideways along the hub platform and grips the sled. He judges the impact of Rama's spin.

KIRCHOFF

This looks about right. Skipper, it's on its way now.

He pushes the sled and it moves off slowly followed by a spotlight. The spotlights are a bank of lights mostly following beacons.

INT. RAMA, CAMP ALPHA & HUB - EIGHT MINUTES LATER

Norton and Calvert assemble some equipment. Ernst and Mercer are approaching the Camp under a spotlight dragging a sled.

Kirchoff at the hub looks down at the fast moving sled nearing the bottom.

KIRCHOFF

Commander, I think this one is looking good.

NORTON

OK. We see it.

CALVERT

It's coming right at us.

Calvert looks around at the darkness.

CALVERT (CONT'D)

Do you think the Ramans mind us throwing things down their walls?

NORTON

If they're bothered by anything it's probably our lousy aim!

CALVERT

We're going to score a few points with this shot. It's a shame it's the last one.

The sled bears down on them at over 70 miles an hour. They are unconcerned.

Kirchoff looks down and reaches for a control panel, pauses for a moment, and pushes a button. Nothing happens. He is flustered and pushes the button again much more urgently.

The sled throws out parachutes and drag brakes, slows down, and stops near the camp.

NORTON

Nice Jerry. Thanks. We have package five.

They continue assembling equipment. Ernst and Mercer arrive.

ERNST

Great. Do we really need to set up the tents?

CALVERT

Technically we might be indoors but I think I'm going to need some walls to sleep.

MERCER

I'm with you on that one.

NORTON

Did you see anything where you went?

ERNST

It was a half a kilometer just like this. Metallic, spotlessly clean and totally quiet.

NORTON

I'm thinking that tomorrow we will go and take a look at the buildings we're calling Paris and stop at the Straight Valley on the way.

CALVERT

I always wanted to see Paris!

The others nod agreement and continue assembling Camp Alpha.

INT. RAMA, STRAIGHT VALLEY - NEXT DAY

Norton, Calvert & Ernst walk across the oppressive dark plain of Rama under spotlights. Calvert is whistling a tune but stops when Norton looks at him. Norton gets a communication.

MYRNA (O.S.)
Dad, how is it going in there?

Norton is happy to hear Myrna.

NORTON
It's hard work walking so far in this gravity.

MYRNA (O.S.)
Why didn't we bring a car?

NORTON
They're not normally much use on asteroids! Are you looking after my ship?

MYRNA (O.S.)
Boris and Jerry are trying to avoid each other... I'm bored. Doctor Perera is working on weather calculations! I don't understand it.

NORTON
(looking around)
Weather?

At the edge of the spotlight is a break in the surface.

CALVERT
That's the edge of the irrigation channel.

Norton ends his communication.

ERNST
Why would an irrigation channel run ten kilometers from here straight towards the Sea, and stop short of it?

Norton uses a finger pad to move a spotlight out across the valley, along it a bit, and back the other way. The valley is 40 meters deep, 100 wide, with 60 degree sloping sides.

Norton targets the bottom of the valley which has a white, ice like appearance.

NORTON

I'm going to get a sample of that.

Norton goes down into the valley on a safety rope. He pauses before stepping onto the white surface tentatively. He doesn't slip at all. He rubs his hands across it.

NORTON (CONT'D)

It's not water.

Norton shines his light into the surface and it glows brightly but he can't see anything in it. He reaches for his geology hammer. He taps the surface once and it clunks. He hits it again harder with a louder clunk. He takes a swing and the noise is a crack that reverberates around the valley.

Ernst and Calvert are worried. Norton stops himself with the hammer raised above his head. He looks around as the noise fades. The surface is unbroken and the quiet returns.

CALVERT

(Quietly)

Let's not smash the Sistine Chapel.

Norton's heart is racing. He walks along the surface breathing heavily and struggling to settle himself down. The strangeness and stress of the situation has built up and he takes some time to get back under control.

ERNST

Bill, have you found something?

NORTON

No, there's nothing down here. Haul me up... We'll head straight to Paris.

INT. ENDEAVOUR, REAR OF THE BRIDGE - DAYS LATER

Myrna is recording commentary for Media. She displays pictures the first of which is a map of Rama. Rodrigo is in the background.

MYRNA

After investigating one of the Straight Valleys. Here. The explorers visited three of what we are calling towns. The first one we have pictures of is Paris. That's it from the Hub. Several hundred buildings with wide streets.

Myrna pauses her camera.

MYRNA (CONT'D)

Boris, do you have to float around like that? I'm trying to do Media.

RODRIGO

Why? Are there not enough anchor people in the Solar System?

MYRNA

My Dad asked me to. It saves them from having to do it. Anyway I don't have much else to do around here.

Myrna starts her camera again.

MYRNA (CONT'D)

These are the close up pictures. As you can see if Paris is a city, it is a strange one. No windows, no doors, all plain rectangular buildings.

Perera arrives troubled and pale.

MYRNA (CONT'D)

Oh look, here's Doctor Perera. Doctor what do you think these buildings are?

PERERA

(hurriedly)

I'd say storage facilities. The grooves that run along the ground into each structure might allow for moving heavy materials in and out.

Perera stops the camera.

PERERA (CONT'D)

I have to contact the Commander right now.

RODRIGO

I have the channel open...
Commander do you have a moment for Doctor Perera?

Norton comes on screen eating at Camp Alpha.

NORTON

Yes Doctor.

PERERA

I think there is a serious problem.
You're still cold inside Rama, yes?

NORTON

It's a bit nippy.

PERERA

We are inside the orbit of Venus
and getting closer to the Sun.

RODRIGO

Endeavour's cooling system is
already working quite hard.

PERERA

Yes. The inside of Rama is cold and
the outside is getting hot. That
heat must be working it's way
through the hull.

MYRNA

It might be nice if it warms up a
little.

PERERA

Yes but I think it will cause
something else. The rising hot air
will meet at the Hub and begin to
swirl. In one word, hurricane.

NORTON

Have you run this past Base?

PERERA

Yes, and they don't agree. Their
expert has an obsession with
weather patterns on Venus and a
brilliantly theoretical explanation
of why I'm wrong.

NORTON

Well Doctor you know I can't stop
the exploration without Base
agreeing.

PERERA

I know. But there is something you
can do. Just in case I'm right.

INT. RAMA, EDGE OF THE CYLINDRICAL SEA - NEXT DAY

Ernst, Calvert and Pak walk across the plain under a spotlight approaching the edge of the Sea.

CALVERT

Let's take it slow up to the edge.

PAK

(sarcastically)

Someone with your great flying coordination could dance along the edge of a fifty meter drop!

CALVERT

You're welcome to it.

ERNST

No messing around you two. Be careful.

The edge of the Sea cuts the ground off in front of them. The spotlights directly behind them cast vast shadows out across the frozen surface of the Sea.

PAK

(looking sideways and up)

You can see the curve from here.

ERNST

Let's take a look at New York.

Ernst uses the spotlight controls to move their beams away to the island in the sea, New York. Standing in the dark both Calvert and Pak unconsciously step back from the edge of the cliff.

New York is lit up revealing tall structures with a mechanical symmetry.

ERNST (CONT'D)

Let's see if we can find any docks, harbours... or ships.

The spotlights spring back onto them. They walk along the rim of the Sea.

CALVERT

Looks like we'll have to use the rope to get down.

PAK

What's that along there?

CALVERT
Some steps?

INT. ENDEAVOUR, LABORATORY - SAME TIME

Myrna approaches Perera.

MYRNA
Doctor I've been thinking about
what you said about Rama warming
from the outside.

PERERA
Yes.

MYRNA
Well I was thinking about the Sea.
It is probably melting from
underneath and when ice turns to
water it shrinks. So does that mean
that the top layer will collapse
downwards at some point?

Perera thinks briefly and suddenly is very concerned.

INT. RAMA, STEPS TO THE SEA & CAMP ALPHA - MOMENTS LATER

Ernst and Calvert are in the shadow at the bottom of the
steps using flashlights. Ernst puts a foot on the ice.

ERNST
Yes. This is definitely ice.

Ernst is initially tentative and then strides out across the
ice. Calvert looks a little uneasy but follows Ernst.

At Camp Alpha Norton hurries with his communicator.

NORTON
Laura, come in now. Laura, come in!
Joe, are you there! Joe!

He pauses to figure out who was with Ernst and Calvert.

NORTON (CONT'D)
Jenny! Come in. Anyone talk to me!

Pak hears this at the top of the steps.

PAK
Yes Commander, this is Jenny.

NORTON

Your group must not go on the ice.
Do you understand! You must not go
on the ice!

PAK

Ernst and Calvert are on the ice.
They're getting a sample.

Pak looks as Ernst gets out a geology hammer.

NORTON

The ice could collapse at any time.
Get them off the ice!

Ernst hammers on the ice. Pak runs down the stairs.

At Camp Alpha Norton is worried. Suddenly there is an
almighty rending crack sound, then a long-drawn-out series of
crystalline crashes like a million glass-houses being
demolished.

NORTON (CONT'D)

What is that? Where is that? Get
the lights to the Sea!

The spotlights move to the Sea but they can't see the Sea on
the side they are on. They move the beams all around the Sea.

The beams get to the top of the Sea up above them as vast
shards of ice break up and collapse. One huge piece rears
side ways on into the sky and crashes into the water. Norton
and the others at Camp stare at the spectacle with terrified
concern.

Standing on the ice as the noise continues Ernst has a piece
of ice in her hand.

CALVERT

What did you do?

PAK

Laura! Joe! Run! Run! Look!

Pak is near the bottom of the stairs pointing almost directly
up. Calvert and Ernst look up and realize they are in
trouble. The ice cracks around them. They run as the ice
behind them out in the middle of the sea collapses violently.

They make it to the steps just as the ice falls away. All of
them run up the steps with the water splashing behind them.

They dive over the top of the steps to safety and scramble
away from the edge ultimately lying on their backs.

Above them is the now widely lit up spectacle of a tumultuous circular sea. Sickeningly disoriented they quickly twist to look at the ground.

ERNST

This is Ernst we are all... OK.

Ernst looks at the sample of ice in her hand.

INT. RAMA, CAMP ALPHA & ENDEAVOUR, LABORATORY - NEXT DAY

Norton takes off his shoes and communicates with Perera who is in the Laboratory with Myrna.

PERERA

Commander I received the sample of the sea and we've done some tests on it. It is water but you wouldn't want to drink it, or swim in it.

NORTON

That's a shame. Joe was planning a pool party.

PERERA

It's a dilute organic soup containing traces of almost any carbon compound you'd care to name, as well as phosphates and nitrates, and dozens of metallic salts.

MYRNA

Yes and there's no life at all. Not even micro-organisms.

NORTON

Which rules out going fishing.

PERERA

Bill, the fact that the Sea has melted means that the wind could come at any time. I think it will pick up very quickly.

NORTON

We have what we need in place and we're all going there soon. If nothing happens I'll tell Base we're doing some tests!

PERERA

It's not a question of if. Move quickly.

(MORE)

PERERA (CONT'D)

As the air inside Rama heats it will rise towards the central axis. It will hold some of its spin speed on the way up. I'm calculating winds between two and three hundred kilometers an hour!

Kirchoff, Mercer and Pak walk in. Norton ends his communication.

NORTON

Jerry, how about the change of scenery?

KIRCHOFF

How about the change of gravity more like! All this walking is no mucking about.

NORTON

So what was London like?

PAK

As the pictures suggested...

MERCER

Yes a collection of cylinders linked together by pipes connected to what are obviously pumping stations. Everything is sealed up.

KIRCHOFF

Waiting for the day when we decide to blow or laser our way in.

NORTON

(looking around)

We're not doing that... until we have no alternatives.

Pak's hair flutters in the wind. They all feel the breeze and look at each other with concern.

INT. RAMA, STRAIGHT VALLEY - LATER

The crew inside Rama except Calvert are on the plain approaching the Straight Valley. The wind is ferociously strong. They struggle to hold to each other and keep moving.

NORTON

We are nearly there!

They fight their way forward and over the edge of the Straight Valley. They tumble down to the corner of the valley where Calvert is waiting for them in a secured tent.

CALVERT

I was starting to think you had all gone without me.

Inside they are sheltered but the wind continues to rattle and howl outside.

CALVERT (CONT'D)

Does anyone want a packet of tea?

The others look at him with relief.

PAK

So will this wind ever let up?

NORTON

Doctor Perera thinks it may last at most a day before some kind of equilibrium is established and everything settles down.

MERCER

Best get comfy then. Where's that packet of tea?

INT. ENDEAVOUR, BRIDGE - LATER

Rodrigo, Barnes, Perera and Myrna listen to a speech.

MERCURY'S DICTATOR (O.S.)

... so it is for the greater glory of Mercury and the survival of mankind that we have acted.

(Applause)

MYRNA

Why does Base want us to hear a speech from Mercury's dictator?

PERERA

Shush, we're about to find out.

MERCURY'S DICTATOR (O.S.)

... we must prevent Rama from carrying out its mission to manoeuvre into a Sun dominating orbit!

(Applause)

RODRIGO

We'd all be Sun worshippers living that close to it.

MERCURY'S DICTATOR (O.S.)

Raman technology clearly far exceeds ours and any encounter we have will lead to our destruction or our slavery! Mercury has responded to the threat and all future generations will thank us for it!

(Applause)

MYRNA

What kind of response?

MERCURY'S DICTATOR (O.S.)

A high energy nuclear device will arrive at Rama in the next few hours. We will give the crew of Endeavour twenty-four hours to get clear of Rama before we Mercurians become the saviours of all mankind!

(Applause and Cheering)

The broadcast stops.

MYRNA

Why are they doing that? What is there to be afraid of?

The others look at each other for an answer.

RODRIGO

Myrna, I've been to Mercury. It's a brutal, dangerous place for only the toughest people. They use nuclear weapons for mining because the Sun's radiation is so savage that some extra contamination doesn't matter. They live deep underground in a constant battle with their planet and with the Sun.

MYRNA

So why do people live there?

RODRIGO

Limitless solar energy gives them great rewards.

PERERA

But they pay a price. Their values are twisted. They fight first and usually don't bother to ask questions later.

BARNES

We have to try to warn the others.

INT. RAMA, STRAIGHT VALLEY, SHELTER - LATER

The wind continues but they are relaxing.

CALVERT

So where should we be looking for the Ramans?

MERCER

We need to get to New York.

KIRCHOFF

Back on Endeavour Ruby was telling me that she thinks we have what we need to build a boat.

PAK

You're not getting me out on that Sea! Anyway there is also the whole Southern End that we haven't been to.

CALVERT

To get there you have to sail over the Sea, and the cliff on the other side is not fifty meters with steps. It's a shear five hundred meters!

PAK

(quietly)

Sounds like we need to fly.

MERCER

Why a fifty meter cliff on one side, five hundred meters on the other?

Ernst and Norton are in the corner talking to each other.

ERNST

Myrna's missing her mother.

NORTON

Life in Space isn't for everyone.
She left us for wide open spaces.

ERNST

If you're born away from Earth like
me and Myrna you don't get that
choice. Exiled by gravity from our
origins.

NORTON

You don't want to go to Earth.

ERNST

OK, OK, no I don't... some of us
are at home in Space... Sometimes
it's difficult though. You stand on
the Moon. Earth's a hypnotic disk,
dazzling, and so close. Like you
could reach out and touch it.

Kirchoff rushes over holding his communicator.

KIRCHOFF

The wind has eased, the
communicators are getting signals
again.

RODRIGO (O.S.)

You must all leave Rama
immediately.

INT. RAMA, CAMP ALPHA - LATER

From Camp Alpha they are going onto the stairs at 20 metre
intervals. Norton and Ernst are last and take a final look at
the now chaotic camp as they leave.

ERNST

Crystal clean for longer than the
whole of human history...

NORTON

We do that most places we go.

INT. RAMA, LADDERS NEAR HUB - LATER

Kirchoff and Mercer have reached the hub. Pak, Calvert, Ernst
and Norton are climbing the ladders.

Norton is bored, tired, and counting rungs.

NORTON

12-46, 12-47, 12-48, 12-49, 12-50...

Norton is consumed by dazzling light. His eyes shocked closed, he misses his grip on the ladder, and floats blindly flailing his arms. He grabs the sidebar of the ladder and holds on tight.

Norton cannot open his eyes. He tries and tries again. Finally he can look at the dark gloves on his own hands.

NORTON (CONT'D)

Dawn...

He glances over his shoulder but is stunned and cannot look anymore. Panicing he grips tighter to the ladder. Slowly he steadies himself.

He moves behind the ladder to face outwards and attaches his safety clip.

He opens his eyes and sees an immense view. The Straight Valleys are gigantic strip-lights beaming blueish light at the opposite side of the world.

He can see the full length of Rama. The northern plain is in the foreground with towns and wide open spaces. The sea is in the middle with the island New York and the high Southern Cliff. The Southern continent looks like a patchwork but is difficult to make out. The far end is forty kilometers away, dominated by enormous spikes pointing right at them.

Norton remembers the others. The three he can see are each clinging to the ladder.

NORTON (CONT'D)

I'm here. Is everyone OK?

MERCER (O.S.)

I think I see everyone.

NORTON

Keep your eyes closed until you're sure you can take it.

Ahead Calvert catches up with Pak who is not moving.

CALVERT

Jenny, just stare at the wall and keep climbing. It's not far to the top.

Pak is comforted. She is annoyed with herself. She begins to climb slowly upwards.

Backing away from the climbers shows the cavernous enormity of the Northern end of Rama. A sweeping view of the Northern continent includes a glimpse of the shelter now sitting on one of the lights.

Back across the sea into New York and behind a Spider Biot (a small sphere with 3 eyes and 3 whiplike legs that moves by whirling around) as it emerges from the caverns and fixes it's long cold gaze on the crew.

EXT. SPACE, NEAR RAMA - LATER

A nuclear missile boosts to intercept Rama and as an impact looks imminent the missile adopts a parallel track and its boosters stop.

INT. ENDEAVOUR, BRIDGE - LATER

The disconsolate crew look at the missile.

PAK

I can't believe they're going to do it.

CALVERT

A whole world comes to visit us and we destroy it.

INT. ENDEAVOUR, BRIDGE - LATER

Ready for blast off, they finish the launch sequence.

NORTON

Joe, blast off in 5, 4, 3, 2, 1...

Calvert presses the button and the engines make noise. Emergency warnings activate.

CALVERT

I'm aborting the launch, abort the launch!

Calvert shuts down the engines. Norton is not very concerned. Ernst is worried and intervenes.

ERNST

Karl, what happened?

Mercer looks inattentively at a problem diagnosis display.

MERCER

I think the guidance system failed
when we started up the engines.

ERNST

The missile! We can't sit here!

NORTON

We're going to have to tell Mercury
we need another twenty-four hours,
and hope they give it to us.

INT. ENDEAVOUR, MESS - LATER

Mercer, Calvert, Ernst, Norton, Myrna and Perera are in the
mess. The mood is very down.

PERERA

How long can we maintain the
pretense that we are doing
something here?

NORTON

It'll be a little while yet. Base
is running diagnostics and the
Solar System's finest minds are
working on our "technical"
problems. Eventually one of them's
going to realize we pulled the plug
out on the guidance computer.

CALVERT

Mercury won't give us any more
chances after this. We're going to
have to go.

NORTON

The Admiral says the extra time has
done no good with the diplomacy.
Apparently Mercury's politicians
are very angry.

PERERA

It doesn't look like there is
anything for us to do. It'll do no
good sacrificing ourselves with
Rama.

INT. ENDEAVOUR, NORTON'S ROOM - LATER

Norton is depressed in his room when Rodrigo arrives.

NORTON
Boris, what's the problem?

RODRIGO
I think I can do something about
the missile but I'm not sure it's
right to try.

NORTON
What do you mean?

RODRIGO
To attempt what I have in mind
would risk all of our lives. I
can't ask anyone to do it if they
don't want to. I know I believe
Rama is special and is worth
saving.

NORTON
What's your plan? If it sounds
plausible we'll get the crew
together and let everyone decide
for themselves.

INT. ENDEAVOUR, MESS - 1 HOUR LATER

They are all gathered in the mess. The mood is thoughtful.
They listen intently to Norton and Rodrigo.

NORTON
Well you've all heard the plan. As
we said at the beginning the
decision is for each of us to make.
We won't do this unless we all
agree.

A long silence.

PERERA
The decision is easiest for me.
I've got the least to lose. The
chance is worth it. I agree.

KIRCHOFF
I agree as well. I could not look
my kids in the eye if I don't stand
for something.

ERNST

I agree.

BARNES

Yes.

MERCER

You can't always know what the outcome will be, but you have to do the right thing anyway.

CALVERT

I'm game.

PAK

Yeah.

It looks like all are in agreement and they relax. Myrna is staring out of the window at Rama, and Norton is staring at Myrna. The others notice they have not yet heard from Myrna and they all look at her.

Seeing Myrna under focus Norton speaks before she has to.

NORTON

I don't agree.

The others are surprised.

NORTON (CONT'D)

Myrna means too much to me. I have too much to lose.

Myrna looks around quickly with tears in her eyes.

KIRCHOFF

I guess that's it then. We'll prepare to leave.

MYRNA

No Dad. I won't let you do it. You can't make the decision for me. I choose to save Rama and I know you do too.

Norton smiles proudly at Myrna and nods.

INT. ENDEAVOUR, BRIDGE & SPACE, OUTSIDE ENDEAVOUR - LATER

Ready for blast off, they finish the launch sequence. Kirchoff is filming Norton and Calvert.

NORTON

Joe, blast off in 5, 4, 3, 2, 1...

Kirchoff stops filming. Barnes works at the communications panel. They don't blast off.

BARNES

The broadcast has gone.

NORTON

Good. Go Boris, and good luck.

Rodrigo is outside Endeavour on a space scooter. He boosts away from Rama towards the missile.

NORTON (CONT'D)

That broadcast might confuse them enough to get an extra few moments.

MERCER

Hopefully he's not going to need them.

Mercer starts a count down display from 10 minutes.

Two cameras on the missile detect Rodrigo and point at him.

Watching to the rear of the bridge with Pak and Perera, Myrna is worried.

MYRNA

The cameras have him already. It knows he's coming! They're going to see him and detonate it!

PERERA

Yes, the Mercurians will see him. But not for the five minutes it takes the pictures to get from here to Mercury.

PAK

Then hopefully they will dither for a minute or two, watching our launch broadcast and waiting for orders.

PERERA

Even if they don't it will be another five minutes before the detonation command comes back.

At the communications panel Barnes suddenly looks worried.

BARNES

Commander, we're getting a message from Mercury. I'm putting it on.

MERCURIAN (O.S.)

Commander Endeavour from Mercury Space Control. You have one hour from the receipt of this message to leave the vicinity of Rama. We suggest you proceed maximum acceleration along the spin axis. Please confirm.

CALVERT

If the missile has already received its command instructions Rodrigo won't be able to stop it!

PERERA

(to Myrna)

Our plan to cut the main and backup communications cables will do no good if it already has its commands.

Rodrigo turns his scooter around and boosts the other way to slow down.

Inside the counter is now at four minutes.

Rodrigo pulls along side the missile.

NORTON

Boris, we have a message from Mercury. But hopefully you're OK. Proceed as planned.

Rodrigo attaches the scooter and jumps onto the missile being tracked by its cameras. Briefly he contemplates waving but doesn't.

He works on the first cable and cuts it with 2 minutes left.

PAK

That's a relief. If it was booby-trapped that would probably have set it off.

MYRNA

Booby-trapped!

Rodrigo pulls himself along the missile and cuts the second cable with 42 seconds left.

CALVERT

That thing is getting no more
commands from Mercury now.

Just as Rodrigo relaxes the missile's boosters ignite.

RODRIGO

It's moving in!

PAK

They've already sent the order!

NORTON

What can we do? Anyone?

ERNST

There is no way he can disarm the
warhead.

MERCER

He's not going to be able to open
the booster rockets quick enough.

PERERA

The navigation. The navigation!
That navigation antenna is pointed
at Mercury. It's triangulating!

NORTON

OK. Boris unless you have something
better we're suggesting
disconnecting the navigation
antenna. In the middle there.

RODRIGO

OK.

Rodrigo fumbles with the much smaller wires using oversized cutters. He gets the wires in the cutters and slashes them. Moments later the antenna starts to drift aimlessly.

RODRIGO (CONT'D)

Now to make it forget where it was.

He uses his scooter on full boost to push the missile around. The missile's boosters come on narrowly missing Rodrigo and propelling it away from Rama.

The crew celebrate.

NORTON

That's great Boris. Now come on
back here. That thing's still going
to blow up in 50 minutes or so.

INT. ENDEAVOUR, BRIDGE - 50 MINUTES LATER

Rodrigo arrives and is greeted as a hero.

CALVERT

Nice one Boris. You keep working out like that you'll be competing against Pak at the Lunar Olympics!

NORTON

Well Boris, you've done your part. Now we get to see what Rama's going to do.

RODRIGO

We all did our part.

ERNST

Right. Everyone rest up, eat up, and get ready to go back into Rama.

MERCER

There it is!

Between Endeavour and the looming Sun the missile explodes.

INT. ENDEAVOUR, NORTON'S ROOM - NEXT MORNING

Norton is working. Myrna arrives followed by Perera.

MYRNA

Dad, I have something to ask.

NORTON

Yes.

MYRNA

Can I come with you... into Rama?

NORTON

We discussed this. There are no space suits for you on board.

MYRNA

One of Jenny's spare suits can be adjusted.

NORTON

Maybe, but we haven't got time to do it.

MYRNA

Well ur, Joe pointed out to Karl that if we had a problem with life support I'd need a suit, and while you were in Rama Jerry did the work... and Karl's checked it.

Norton is irritated with his conspiring crew.

NORTON

I'll talk to them about it... I guess you've come a long way.

MYRNA

Great!

Myrna hurries out past Perera who is pale and drawn.

PERERA

I have a similar request to make. Also Jerry suggested that if we all go into Rama we can shut down Endeavour and save fuel and supplies.

NORTON

Doctor. Are you sure?

PERERA

Bill, when we blasted off from Mars we knew I wasn't going home again.

Norton is uneasy but accepts the point.

INT. RAMA, HUB - LATER

Myrna, Pak, and Mercer exit the air lock. There is a vast tunnel of cloud all the way to the other end of Rama.

MYRNA

It's huge, and look. Clouds!

Myrna goes towards the edge and stares out. Mercer checks an instrument and is surprised.

MERCER

What? Jenny what oxygen reading are you getting?

PAK

Urm..., humm, that's 50% higher!

Mercer unlocks his suit and opens the visor.

MERCER

Well, isn't that convenient. Wow
it's a lot fresher, and warmer.

Pak and Myrna begin to open their suits.

MYRNA

Where did all this oxygen come
from?

INT. RAMA, LADDERS - LATER

Mercer, Myrna, and Pak descend the ladders. They enter the
dense clouds and Mercer stops. Myrna almost bumps into him.
Pak does bump into Myrna.

PAK

Whoa, sorry. We should spread out a
little.

MERCER

Listen! What's that noise?

INT. RAMA, STAIRS - LATER

Further down they emerge from the clouds into the Raman day.

The view is less stark and more atmospheric. The clouds over
the plain make it look like a broad valley.

MYRNA

A waterfall!

From a source in the clouds water falls in a curve.

PAK

Newton would never have figured out
gravity living here!

MERCER

Coriolis effect. Myrna, you'll
never see a class room demo better
than that.

MYRNA

And look at the Sea!

PAK

It's not the same color. It looks
sort of green!

MERCER

Photosynthetic life! That's where
the oxygen has come from!

MYRNA

What do you mean?

MERCER

Well, it's the same as on Earth.
Life that uses light for its energy
produces oxygen. Enough of it to
change the atmosphere. On Earth it
took three hundred and seventy five
million years to oxygenate the
atmosphere. Here it's taken two
days!

MYRNA

I wonder what it'll produce
tomorrow?

INT. RAMA, CAMP ALPHA - LATER

Mercer, Myrna and Pak are nearing the bottom of the stairs.
The others are surrounded by sleds containing the parts for
making a boat.

BARNES

This is what the boat plan looks
like... I've tried to keep it
stable and strong.

KIRCHOFF

Ruby, that looks good. We'll be on
our way to New York real soon.

Ernst looks at the clearly unwell Perera and pulls Norton
away from the others.

ERNST

Bill, the Doctor looks unwell.
Should I examine him?

NORTON

I think he has a good idea what's
wrong.

ERNST

How are we going to get him back up
the stairs?

NORTON

We'll cross that bridge when we
come to it.

Mercer comes off the stairs followed by a tearful Myrna.

NORTON (CONT'D)

Myrna, are you OK?

MYRNA

It's so... beautiful...

Myrna walks right through the camp and the others watch her. Walking out into the vast open space she spreads her arms and spins and jumps around. She begins to run.

Myrna runs as fast as she can for as far as she can and after 150 meters exhaustion stops her. She collapses onto her back and stares at the clouds.

INT. RAMA, STEPS TO THE CYLINDRICAL SEA - THREE DAYS LATER

A makeshift raft is nearly at the water being slowly lowered on a set of rigging by Ernst, Rodrigo and Pak. At the bottom are Barnes, Calvert and Norton.

CALVERT

Did we bring any bottles of
champagne?

BARNES

(to people at the top)
Slowly, slowly. She's almost there!

A bump on a line sets the boat swaying. It crunches against the cliff. Everyone winces but it is OK.

NORTON

I've got a packet of fruit punch
here.

Barnes is unimpressed and concentrates on the boat.

CALVERT

We don't have a name.

NORTON

I've got one. Endeavour is named
for one of Captain Cook's ships. So
we'll use the name of another of
his ships.

The boat is almost in the water.

NORTON (CONT'D)
I name this boat Resolution.

Norton explodes the fruit punch packet against the boat.

CALVERT
The ropes are slackening! She must
be floating!

BARNES
I'm going to need some volunteers
to go sailing.

Norton and Calvert look at the boat, the sea, and each other.

INT. RAMA, ON THE CYLINDRICAL SEA - NEXT MORNING

Barnes, Norton, Calvert and Mercer sail on Resolution. Norton
looks at the wall of water rising up and around the world.

NORTON
I'm not sure that I'm getting used
to this!

CALVERT
It's not really normal is it. It
feels like we're about to be rolled
by the biggest wave you ever saw.

MERCER
From both sides!

BARNES
Perhaps we shouldn't talk about it.

MERCER
You're right. It's more the water
that's getting to me. Simple single
cell life and poisonous organo-
metallic salts!

CALVERT
You're making me thirsty!

NORTON
Laura says it will kill you if you
swallow too much of it, and might
disintegrate you if you swim in it
for too long.

BARNES
Why are we talking about that!?

CALVERT

And just look at that Southern Cliff. We know what the Northern one is for, it can get very choppy down here! But five hundred meters?

MERCER

What kind of wave does that?

BARNES

What sort of idiots talk about these things when we're right out in the middle of it!?

NORTON

OK you guys. We're getting close now.

The immense looming outer walls of New York are ahead with its vast towering buildings.

NORTON (CONT'D)

If it is the capital city it certainly has the architecture for it.

MERCER

It'll take us a while to look around.

CALVERT

Maybe someone will give us the tour.

INT. RAMA, NEW YORK - MOMENTS LATER

Barnes stays with Resolution as Norton, Calvert and Mercer climb the steps.

MERCER

Is this a defensive wall?

CALVERT

We'll find out when we go over the top.

They tentatively step onto the ten meter thick wall and look at the city.

NORTON

It's looks more chemical plant than city. Let's have a look around.

They go down and wind their way through the city.

CALVERT

If this is a factory, where are the raw materials?

MERCER

Suppose it uses the Sea. It contains everything you'd need.

NORTON

Underground pipes to the Sea... But what do they make?

Norton puts his ear on a wall and shakes his head. He kneels down and puts his ear to the ground. When he looks up Calvert and Mercer are standing still looking past him.

NORTON (CONT'D)

If it's a machine it is a very... quiet... one.

Behind Norton is a Crab biot (low and flat, about two meters long and one wide with six legs and scissor like claws) with debris on it's back moving towards them.

CALVERT

Move slowly. Look behind you.

Norton looks around, stands up, and holds out his hands as the crab biot comes nearer.

NORTON

Hello. We come in peace.

The biot ignores Norton leaving him looking silly.

MERCER

Should we follow it?

CALVERT

"Hello. We come in peace"! You've had plenty of time to think about what you might say!

NORTON

I didn't see you give it a cuddle! Let's follow it.

The biot seems to be going to the edge of the city. Calvert looks over his shoulder.

CALVERT

I think we're being followed.

They stop and look back.

CALVERT (CONT'D)
Look. Over there!

Back along the street following them at a discreet distance is a Spider biot.

NORTON
That one's definitely looking at us.

They are contacted on their communicators.

ERNST (O.S.)
We are seeing some strange metallic robot creatures moving about on the plain. Everyone be careful. They don't appear to be a threat. Don't do anything aggressive.

INT. RAMA, CAMP ALPHA - THREE DAYS LATER

Mercer is filming Calvert.

CALVERT
We have now observed a wide variety of different "biots" working inside Rama. They appear to each have specific functions. We have given them names including "Spiders", "Bulldozers", "Cranes", "Crabs", and "Sharks"... We've not yet seen a "Shark" but there are clear signs of something in the Sea. Today I'm going to show you some of the biots in action. The first one is standing over there.

Calvert points at a Spider biot standing near by.

CALVERT (CONT'D)
That's a Spider biot. They seem to travel around just looking at things. We'll be back with one of those in a minute. Now with Jenny Pak's help I'm going to show you a scavenger Crab biot at work.

Pak waves at the camera, they pick up a broken sled, and carry it to a pile of other trash.

PAK

There it is approaching now. They appear to have understood that when we pile things here outside the camp, this is our trash.

Calvert and Pak back away. The Crab biot arrives, cuts up, and picks up the trash.

CALVERT

You can see they are good trash collectors. They pick it up, cut it up, take it to the Sea, and just throw it in... Up over that way. If Karl focuses on that light. Hopefully it's not too bright on the camera. You can see Window Cleaner biots at work.

Small dots are working their way along the light. Calvert, Mercer and Pak move to a tent in the camp.

CALVERT (CONT'D)

For the last part of our biot broadcast we are going to join Surgeon-Commander Ernst. Laura, can you tell us what we are looking at.

Ernst is ready to do an autopsy on a Spider biot.

ERNST

Unfortunately, this biot had an accident on one of the lower level stair platforms. This gives you a chance to take a close look at it before I do an autopsy.

Mercer sweeps the camera over the body.

CALVERT

So there you have it everyone. One of Rama's most intriguing mysteries. The biots!

Mercer stops filming. Ernst looks around at the array of medical cameras she will use.

ERNST

Now can I start the autopsy?

CALVERT

OK yes thanks.

Calvert, Mercer, and Pak leave the tent.

PAK

It's a great shame Doctor Perera's
not able to help with the autopsy.

A scream from behind them in the tent makes them run back the
other way. They find Ernst jumping around shaking her arm.

CALVERT

Laura. What happened?

ERNST

It gave me an electric shock!

INT. RAMA, CAMP ALPHA - LATER

Perera is in bed very weak and unwell. Ernst and Norton are
outside his tent.

ERNST

Bill. You should have told me.

NORTON

There was nothing you could've
done, and he didn't want the fuss.

ERNST

If he'd continued the molecular
treatments on Mars he could have
lived a year or more longer.

NORTON

Even those treatments reach their
limit. This was once in a lifetime.

Myrna arrives as the lights of Rama begin flashing.

NORTON (CONT'D)

There go the lights again.

MYRNA

Can I visit the Doctor?

ERNST

OK.

Myrna tentatively approaches Perera who stirs awake.

PERERA

Hello Myrna. What are the lights
doing out there?

MYRNA

They have begun a regular pattern of occasionally pulsing. We think it's a maintenance routine.

PERERA

That's odd...

MYRNA

Did Laura tell you about the autopsy?

PERERA

Briefly.

MYRNA

It's unbelievable! Organic but with metal in it. No mouth. No stomach. No gut. How does it eat?

PERERA

It doesn't.

MYRNA

And no air intakes. No lungs. No blood. No anything!

PERERA

Well it has muscles, three legs, three feelers, three eyes and a brain, and of course its battery.

MYRNA

Yes 80% of it is electrical power storage. I've never heard of anything like that!

PERERA

Actually you have. Electric Rays on Earth use electricity for defense. These creatures use it for energy. Apparently a Spider biot has one purpose. As an observation device.

MYRNA

How does a creature evolve like that?

Perera coughs and grimaces.

PERERA

They don't Myrna. Creatures like the ones we've seen on Rama have been designed, for specific jobs.

MYRNA

A biological robot crew!

PERERA

Yes... Myrna, you know that I'll be going away soon don't you? It has been a joy to experience this with you.

Myrna has avoided this subject and is emotional.

MYRNA

Doctor, you can't! No!

PERERA

Myrna... You've seen what draws both of your parents. You've experienced space, and a comfortable environment. Now do you see that even as your parents are drawn away from you, they both love you... Some day something wonderful will draw you away, but you'll still love those you leave behind... Myrna, I'm... going away... but I still love you.

Perera is exhausted and falls asleep. Myrna turns and sees Norton at the door and they hug each other.

INT. RAMA, CAMP ALPHA - LATER

The crew eats a meal. Ernst walks over holding a monitoring that updates her on Doctor Perera. She meets Norton away from the others.

NORTON

How's he doing?

ERNST

I don't think he'll wake up again... It's just a matter of time.

Norton and Ernst join the others who are mournful. Norton shakes his head and takes a few deep breaths.

NORTON

So, what else can we do here?

KIRCHOFF

We can enter some of the buildings.

MERCER

Yeah. I've thought about that and I think lasers are the first thing to try. Explosives are more likely to damage the interior.

KIRCHOFF

What about it Bill? Is it time to break our way in?

NORTON

Yes I think it probably is. We'll have to be careful, and watch the biots closely as we do it.

The lights pulse as before. Myrna is the only one who watches.

ERNST

It seems a shame that we can't go to the Southern Continent.

BARNES

We've taken a good look at the Southern Cliff and there's nothing to help you.

CALVERT

The scooters are useless with air resistance and gravity. Even with no gravity at the axis they don't have the range to get very far.

PAK

Well there is... Commanders can I talk to you.

Pak walks away followed by Norton and Ernst.

NORTON

Yes Jenny.

PAK

We do have something on board that might be able to fly along the axis.

ERNST

(Annoyed)

Jenny, are we transporting what I think we are transporting?

PAK
 Sorry. It was the only way to get
 Dragonfly to the Moon.

ERNST
 That must weigh 25 kilos!

PAK
 It's about 20.

NORTON
 What are we talking about?

PAK
 I competed in the Sky-bike event at
 the last Lunar Olympics. Flying
 acrobatically inside the Lunar
 Dome. But my partner and I were let
 down by our equipment.

NORTON
 I think I saw that on Media. A wing
 failure yes?

PAK
 (bitterly)
 Yes... A team of Martian engineers
 has worked in secret on a
 revolutionary design. It's
 incredible. We'll ride circles
 around the others.

NORTON
 So we have a Sky-bike on board
 Endeavour?

Ernst's monitor sounds an alarm and she looks at it.

NORTON (CONT'D)
 Is that what it sounds like?

ERNST
 No. It's saying the monitoring
 wires have been disconnected!

Ernst followed by the others hurries to Perera's tent.

A Crab biot cuts up the debris of the tent. Another biot is
 moving the motionless Perera onto its back. Two Spider biots
 stand close by.

KIRCHOFF
 They're taking him away as trash!
 We have to stop them!

Kirchoff, Calvert, Mercer and Barnes go in close around the biots. The biot with Perera moves one way and they block it. It moves another way and they block it again.

CALVERT

We just want the body, the body.

The biot stops moving and raises its claws. The Crab biot stops work on the tent and moves alongside. The Spider biots are agitated. Another Crab and a Crane biot approach and two more Spider biots arrive.

ERNST

Maybe they think he's an infection risk.

Kirchoff and Mercer draw their weapons. It is a stand off. The crew upset and angry, the biots dispassionate, not understanding and determined. Norton looks at Perera and steps in followed by Ernst.

NORTON

Jerry, Karl. Put your weapons away!

ERNST

We can't fight them. We have to let him go.

They slowly accept it and are pulled away. The biots carry on their work. The biot with Perera hurries off to the Sea.

INT. RAMA, HUB - THREE DAYS LATER

Ernst, Calvert, Pak, Rodrigo, and Barnes look at the newly assembled DRAGONFLY (An ultra thin delicate flying machine with two seats and peddles powering a propeller).

PAK

Look Joe, when we're out there don't touch the controls and just do what I tell you. This is going to be hard work but fortunately we can take our time by resting in the zero-gravity. Do you want me to help you climb on?

CALVERT

(joking)

Do I just grab this bit?

PAK

No!... I must be crazy letting you anywhere near this. You goon!

Calvert and Pak climb into their seats.

ERNST

Are you two ready to go? Stay in contact with us. Remember the oxygen is thin up here. Don't exhaust yourselves.

PAK

You ready Joe? Start pedalling slowly.

They pedal and Dragonfly moves off slowly. Pak tests things and makes minor moves and adjustments. Dragonfly rattles.

PAK (CONT'D)

Pedal a little harder.

CALVERT

Is it supposed to rattle like that?

They gain speed and Dragonfly rattles more.

PAK

(happy)

I think we're OK.

Pak makes Dragonfly loop, dive, and spiral downwards.

CALVERT

Whoa. What the... What are you doing?

ERNST

Where are you going? You can't go too low. The gravity will be too much!

Dragonfly levels out a little way down from the axis. The rattle is gone.

PAK

Dragonfly is designed for some gravity. She is more stable down here. We can go back up each time we need a rest.

CALVERT

OK. Can we discuss these things ahead of time?

Ernst communicates.

ERNST
Bill, come in.

NORTON (O.S.)
I'm here.

ERNST
They're away and it works! They're going to see if they can make it to the Southern End.

NORTON (O.S.)
That's great. Keep me posted. We think we have a way to heat up the laser torch. Our next attempt should be hot enough to get through.

INT. RAMA, LONDON - 3 HOURS LATER

Norton, Mercer, Kirchoff, and Myrna walk through "London" carrying equipment and looking around warily.

KIRCHOFF
The biots appear not to have noticed what we have in mind.

MERCER
They've seen us attempt it already. Maybe they just know we will fail.

NORTON
Hopefully they don't care.

MYRNA
Or they think we're Ramans and we can do whatever we like!

NORTON
There it is. The main central building. That's the one we decided on.

Myrna checks her watch and looks at the lights.

MYRNA
I'm thinking right about... now.

Moments later the lights begin their earlier pattern. Myrna counts the pattern and notes it.

MYRNA (CONT'D)
I wonder if...

KIRCHOFF
 (interrupting)
 This looks like a good spot, that track suggests this is an opening of some kind.

Kirchoff approaches the middle of a wall with a groove running into it.

MERCER
 I'll start down here. All of you turn your backs.

Mercer lowers a mask over his eyes, fires up the laser torch and starts to cut through the wall.

MERCER (CONT'D)
 It's working!

Norton and Kirchoff look around uneasily. Myrna is occupied with her notes and calculations.

INT. RAMA, HUB & AXIS - SAME TIME

Pak and Calvert on Dragonfly are at the axis of Rama above the Southern Continent. Calvert is tired. Dragonfly floats to a stand-still.

PAK
 Take a rest Joe. I'm going to get a good camera sweep.

Pak puts Dragonfly into a slow rotation and points a camera upwards holding it steady.

CALVERT
 What's the endurance record for Sky-biking?

PAK
 We've already beaten it. It was 2 hours, 25 minutes. We went past that 30 minutes ago. Of course no-one else ever got the chance to stop and rest in zero gravity.

CALVERT
 Make sure you mention it to your competitors.

PAK
 I'm sure it'll come up.

At the Hub Ernst is alone watching the camera images.

ERNST

Beautiful! This will keep the map-makers happy. Can you see anything not shown by the camera?

CALVERT

Not really. It's quite a view down there. The square pattern still looks like fields. But no two of them look exactly the same.

PAK

Which way are we going next?

Ernst reviews medical telemetry.

ERNST

Joe, you need to let Jenny do more of the work. But I think you'll be OK to take a look at the Horns.

Calvert grimaces and looks at the distant Horns sticking out of the Southern End of Rama. One immense central spike extends 5 kilometers along the axis and 6 smaller ones, half the size, are equally spaced around it.

INT. RAMA, LONDON - SAME TIME

Mercer completes the cutting and shuts off the laser torch but the metal in the middle of the hole is still there. The others turn and look at Mercer expectantly.

Mercer pushes the metal and it doesn't move. He hits it and it still doesn't move. He hits it hard with his shoulder and the metal falls in with a very loud echoing bang and Mercer nearly goes through the hole.

All of them flinch backwards expecting something to come out at them. Mercer is flustered. They all wait for Norton.

Norton looks through the hole from a distance and goes closer. He realizes he can't see anything and reaches for his flashlight. It shines through the hole and sparkles inside.

Norton ducks through into what looks like a Greek temple made of glass - row upon row of vertical crystalline columns about a metre wide. Hundreds of them stretching into the distance.

Norton walks to the nearest column as the others come through the hole. Norton shines his flashlight through a column and the light refracts in colors all around the temple.

MYRNA
It's so pretty.

MERCER
But what does it mean? Who needs a
forest of glass pillars?

Norton taps on a column and the noise is metallic.

KIRCHOFF
I could've sworn this pillar was
empty. Now there's something inside
it.

NORTON
Where? I can't see anything.

MYRNA
I can, here look! Oh, I've lost it.

NORTON
What is this?

Mercer is walking around one of the columns.

MERCER
As you go around the column objects
appear. As if they are actually
inside. But you move a little
further, and a different object
appears.

INT. RAMA, AXIS NEAR END OF BIG HORN & HUB - LATER

Pak and Calvert cautiously approach the spike of the Big
Horn. They move alongside it and stop.

ERNST
What can you see?

CALVERT
Just Big Horn. It's absolutely
smooth. No markings.

PAK
And the point's so sharp you could
use it as a needle.

CALVERT
I'm going to take a closer look.

Calvert unstraps himself and pushes off to the Horn. He
touches it, taps on it, and puts his microphone against it.

CALVERT (CONT'D)

It feels like solid glass. Are you detecting any sounds Laura?

ERNST

No. Nothing except the usual thermal noises... OK since you're there how about flying down to the end?

INT. RAMA, LONDON - TEMPLE OF GLASS - SAME TIME

They are spread out going through the temple taking pictures.

They see a confusing array of objects. Some are tools and utensils, others are unrecognizable, all apparently intended for a practical use.

KIRCHOFF

Holograms. It's like a museum.

MERCER

It's more like a catalogue. Having these things together might make sense to a Raman. Just like having books besides boots in the dictionary makes sense to us.

NORTON

I like that idea. A catalogue of life sized 3-D templates. Solid blueprints.

MYRNA

What for?

NORTON

Well, things don't exist until they are needed and then they're synthesized as required.

MYRNA

So if a Raman needs a hammer, he... she or it, enters a code and a hammer is manufactured from an image?

NORTON

Something like that.

KIRCHOFF

I feel like lasering into one of these to get at the objects. That's how real they look.

NORTON

You'd be like a monkey grabbing at a mirror reflection of a banana!

They move into a group of larger two meter wide pillars.

MERCER

Bill, Jerry, Myrna - come and look at this!

Inside a column is a set of Raman clothing. Two and a half meters tall with numerous pouches for tools and apparently three arms and three legs.

MYRNA

Raman clothes!

NORTON

Maybe. Look three arms and three legs. No wonder three is their magic number.

Myrna suddenly remembers something.

MYRNA

Oh no. I've got to get outside.

Myrna rushes through the hole and looks up at the lights.

MYRNA (CONT'D)

Any moment now...

The pattern begins but it is shorter. Myrna watches the first third of the display. Norton, Mercer and Kirchoff follow her outside and watch as she calculates.

MYRNA (CONT'D)

Dad, I think we have to get out of Rama.

NORTON

Why?

MYRNA

The lights flashing is not maintenance. It's a message, and we've been ignoring it!

(MORE)

MYRNA (CONT'D)

Each time they flash the pattern repeats three times and each third has three less flashes. 24, 21, 18, that was 15! It's a countdown!

NORTON

When will it reach zero?

MYRNA

If the pattern continues it'll reach zero in a little bit over nineteen hours.

NORTON

What happens then?

INT. RAMA, AXIS AMONG THE HORNS & HUB - SAME TIME

Pak and Calvert watch the light pattern finish from near the Big Horn close to the Southern End. They are dwarfed by the immense structures around them.

CALVERT

I can't shake the image of a sparrow flying around the roof of a cathedral.

PAK

Well, maybe this is a religious shrine.

CALVERT

Everything we've seen in Rama has been functional. Perhaps this is the engine.

PAK

If this is an engine how come there were no vents or nozzles on the outside.

CALVERT

This could be a "Space Drive". Propulsion by distorting the fabric of space and riding the wave.

PAK

Save me Laura! Joe has started talking theoretical physics!

Ernst at the hub listens but is hearing something else.

ERNST
 You guys, are you hearing anything unusual?

PAK
 No. What do you mean?

ERNST
 Quiet for a few seconds. I'll play it back to you.

Pak and Calvert go quiet for about ten seconds.

ERNST (CONT'D)
 Here it comes.

Over their communicators comes a deep throbbing pulse lasting for ten seconds that continues around them.

PAK
 What is that?

CALVERT
 The voice of Rama.

ERNST
 You may be in a strong magnetic field. Get out of there. It could be dangerous.

INT. RAMA, LONDON - SAME TIME

Huddled around Myrna's calculations.

MERCER
 The numbers look right. Rama's preparing for something.

MYRNA
 It's a warning. I'm sure it is! We shouldn't hesitate.

KIRCHOFF
 But we're still too far from the Sun for a perihelion manoeuvre.

NORTON
 Maybe we just don't understand it. I think we'd better get ready to leave anyway.

INT. RAMA, AXIS AMONG THE HORNS - MOMENTS LATER

Pak and Calvert try to get away from the Horns.

PAK

Laura are you there? Laura?

Both of them stop pedaling because they can feel something around them. Calvert itches his arm and notices that all the hairs on his arm are standing up.

He looks up at Pak and stops in horror seeing the loose bits of her long hair standing up.

CALVERT

Electricity! There's a charge building up around us. There's going to be a thunderstorm!

They pedal quickly. Lightening flashes between the Small Horns and thunder follows.

In front of them small bits of lightening dance around the end of the Big Horn. Calvert looks from the Big Horn to the Small ones and realizes they are directly between the ends.

CALVERT (CONT'D)

We have to get out of here!

An almighty crack as a bolt of lightening sears past them from a Small Horn to the Big Horn. Followed by another from a different Small Horn.

PAK

We have to dive. We have to dive!

They dive downwards accelerating away from the Horns through more bolts of lightening, some of which become arcs waving around over vast distances across the sky.

INT. RAMA, HUB & AXIS AMONG THE CLOUDS - MOMENTS LATER

At the hub Ernst watches with great concern. The electrical display builds up spectacularly at the far end of Rama. She tries to find Dragonfly.

ERNST

Pak, Calvert, come in!

PAK

We're here.

ERNST

I can't see you. Where are you?

PAK

We're in the clouds.

ERNST

That's too low. You won't be able to get back up!

PAK

We'll try to fly back over the Sea. But we are going down. We're going to crash.

Ernst gets a communication.

NORTON (O.S.)

Laura, we have to be ready to leave Rama. Call Jenny and Joe back.

ERNST

Bill, they're going down. They're at the far end and they're going down!

INT. RAMA, DRAGONFLY - MINUTES LATER

Pak fights the controls. Calvert is exhausted.

CALVERT

Jenny, what do we need to do?

PAK

As we get lower the wings will break up. As that happens we need to pedal real hard, and hopefully slow our fall.

CALVERT

We're not going to make the Sea are we?

PAK

No. We'll be well short of it.

Pak fights the descent as they spiral down. The wings break and fold. Dragonfly accelerates downwards.

The field below is spikes of glass, and then metallic spears. Pak swerves them towards a gap between the fields.

PAK (CONT'D)
Pedal Joe! Pedal!

They slow their descent but still crash down hard in the middle of the Southern Continent.

INT. ENDEAVOUR, BRIDGE - SAME TIME

Rodrigo and Barnes arrive on the dormant ship and activate its systems.

RODRIGO
We're OK now the life support is back up again. The engines are ready. Now we need a crew.

Barnes looks out of a window.

BARNES
What is that?

Rodrigo looks. Just visible at the outer edge of Rama is a vast lattice construction slowly expanding on all sides.

The lattice covers the rear outside end and all the way along the sides. Only the Northern end needs completing to form a full exterior shell. The outer sheen of the lattice is like a solar panel.

RODRIGO
It's being built all the way around.

BARNES
That'll crush us, or trap us!

RODRIGO
It's a heat shield! We have to get out of here before it's complete!

INT. RAMA, SOUTHERN CONTINENT - MOMENTS LATER

Calvert and Pak lie still in the wreckage of Dragonfly. They are conscious but exhausted.

CALVERT
Jenny, are you OK?

PAK
I think so? How about you?

CALVERT
Nice crash.

PAK
I thought so too.

CALVERT
Since we're here I guess we should
take a look around.

PAK
Especially since that Crab will
chop us up if we don't move soon.

A Crab biot approaches as they crawl out of the wreckage.

CALVERT
Better grab our things.

As the Crab starts work they grab their things and sit down
near by. Pak is upset watching Dragonfly being destroyed.

PAK
So much for my Olympic Gold medal.

CALVERT
It's a truly spectacular excuse. An
alien robot ate my bicycle!

They laugh. Calvert adjusts his communicator.

ERNST (O.S.)
... in. Joe, Jenny come in!

CALVERT
We're here. We're both beat up, but
we're OK.

ERNST (O.S.)
Thank goodness! I thought I'd lost
you.

INT. RAMA, LONDON - LATER

Norton is frustrated and troubled.

NORTON
I think we know what the countdown
is for. Boris is estimating that
the heat shield will complete in
about sixteen hours. Just when the
count hits zero.

KIRCHOFF

So how do we all get out of here by then?

MERCER

We have to rescue Joe and Jenny.

KIRCHOFF

What about the five hundred meter cliff?

INT. RAMA, SOUTHERN CONTINENT - LATER

Calvert and Pak walk between fields behind the Crab carrying Dragonfly in the direction of the Sea.

CALVERT

He's still going the way we have to go. I wonder if this is where he is going to stop?

PAK

I think the map called this one Copernicus, after the lunar crater.

They approach the edge of a pit half a kilometer wide. The Crab carries on past the pit. Half a kilometer down in the pit is a pool of leaden-green water. Three ramps cut into the sides of the pit helix all the way down into the water.

Ascending a ramp is a barely visible biot. Calvert watches it as Pak scans the other side of the pit. Pak glimpses a rapid moving indistinct whirlwind like creature. She considers telling Calvert but decides not to.

CALVERT

We should get some pictures and carry on.

INT. RAMA, LONDON - LATER

They discuss what to do.

MYRNA

I've figured it out and I'm sure it can work.

NORTON

OK so we have a plan for the cliff. This time we'll take your word for it on the numbers. What else do we need?

MERCER

Well, we have to cross the Sea...

NORTON

(Myrna and Kirchoff also)
Resolution!

KIRCHOFF

Do you think she will still be there?

NORTON

That's the only hope we have. Karl and I will go because we've been out before. Jerry, Myrna, go back to the Camp. Grab anything that looks essential, and make your way up the stairs.

MYRNA

OK Dad. Be careful.

NORTON

Myrna, I've never been more proud of anything than I am of you.

Norton and Myrna hug each other.

MERCER

Is it getting darker?

Mercer gets out a scientific instrument and holds it up.

MERCER (CONT'D)

It is! The lights are starting to go out!

INT. RAMA, SOUTHERN CONTINENT - LATER

Calvert and Pak walk towards the Sea but still have several kilometers to go.

PAK

I don't think they have a plan. Maybe they're just keeping us busy for the time that's left. We're stuck here.

CALVERT

If the Commander says he's going to meet us at the Sea's edge in three hours time, I believe he'll be there. We have to try something.

(MORE)

CALVERT (CONT'D)

I don't think we'd last long in here without supplies. Wow, look at that.

They pass a field covered in a jewel like cut glass. Other fields include dense columns of metal, hexagonal inlaid multi-colored tiles, a blank grey, a spongy quicksand surface, and one with three rows of fences but nothing except a hole on the inside.

PAK

I don't want to meet whatever they keep in there!

CALVERT

They all seem to be farm fields of extraordinary kinds.

Calvert notices something and walks away sideways.

PAK

Where are you going?

Pak follows and finds Calvert clambering into a dense mesh work of growing frames with plastic under them.

Growing through a hole in the plastic is a group of plants. The only life they have seen, each plant has a stunningly beautiful flower with leaves like butterflies' wings.

With difficulty Calvert gets through and reaches down to pick a flower. He climbs back off the field again.

CALVERT

For you.

Pak shows affection and moves in close.

PAK

You're a goon.

They kiss.

INT. RAMA, STEPS TO THE CYLINDRICAL SEA - LATER

Norton and Mercer approach the boat launch rigging.

MERCER

The rig is there. Now we need the boat to be on the end of it.

To their relief Resolution is hanging on the launch rigging.

NORTON

Let's lower it down a little, go down and cut the rope when we get on.

INT. RAMA, STEPS TO THE CYLINDRICAL SEA - MOMENTS LATER

Norton pulls Mercer onto Resolution which dangles six feet above the water.

MERCER

I think we should've lowered it down some more.

NORTON

You're right, but anyway.

They grip the boat and Norton hacks through the rope dropping them heavily into the water.

NORTON (CONT'D)

I don't suppose you were paying attention when Ruby was driving this thing?

MERCER

Not really.

NORTON

I'll have a go at it then.

Norton figures it out and pushes a lever. The boat goes the wrong way towards the cliff. He fumbles and gets some power in the other direction just in time to avoid crashing. They power off across the Sea.

INT. RAMA, HUB - LATER

Kirchoff and Myrna are tired as they come off the ladders and meet Ernst.

KIRCHOFF

Where are they?

ERNST

Jenny and Joe have reached the edge and they're coming around. Bill and Karl will reach the Southern Cliff soon.

INT. RAMA, SOUTHERN CLIFF - MOMENTS LATER

Calvert and Pak are walking along the cliff to where Resolution approaches across the Sea.

PAK

It doesn't look like they have any equipment.

CALVERT

No, but at least they're here.

Norton stops Resolution 50 meters from the cliff face. Norton and Mercer wave to Calvert and Pak and communicate.

NORTON

Glad to see you look OK.

CALVERT

It's good to see you guys too.

NORTON

Well urm, there's something about this plan that we need to tell you.

PAK

Oh no. You can't leave us here!

NORTON

No, no, it's not that. You'll be safe, but you'll need some nerve. We know you've got plenty of that. You see, urh, you're going to jump.

CALVERT

Jump! It's five hundred meters!

PAK

Have you gone mad!

NORTON

Five hundred meters yes, but at only half a gee.

CALVERT

So - have you ever fallen two hundred and fifty meters on Earth?

NORTON

It's all about terminal velocity.

PAK

Terminal's the right word for it!

NORTON

In this atmosphere at this gravity
the fastest you can fall from any
height is ninety miles an hour.

PAK

Ninety miles an hour!

NORTON

Oh and we think we can slow you
down a little.

CALVERT

How?

NORTON

Uhr well, you need to hold your
trousers above your heads.

Calvert and Pak look at each other in disbelief.

CALVERT

So we can look really stupid!

MERCER

It's the only parachute you've got,
it makes a difference to... Myrna's
numbers.

As he starts saying "Myrna", Norton tries to stop him.

PAK

Myrna's numbers! You want us to
jump off a five hundred meter cliff
based on the calculations of a
twelve year old!

NORTON

Look you guys, we're running out of
time. Rama is battening down and
building a heat shield. We have to
go now!

MERCER

Hold your trousers above your heads
for as long as you can on the way
down. Stay rigid and vertical. Take
a deep breath and hold your nose
and mouth on the way in. Try not to
swallow the water.

NORTON

Don't think about it. Just jump!

Calvert and Pak look at each other and then look over the edge. Pak starts to take her trousers off and Calvert follows suit. Staring into each others' eyes steels them to jump.

They don't look down again or pause. Both step purposefully to the edge and jump.

It takes 20 seconds to reach the water. They have time to look around and see the water approaching. Their trousers are minimal parachutes until they let go of them and pull their arms in. They spear feet first into the water at close to 90 miles an hour.

Norton goes full speed over to where they disappeared into the water and he and Mercer desperately search.

Under the slimy acidic water Calvert and Pak desperately swim up. Breaking the surface together they gulp air. Pak gags and chokes having swallowed some water.

Norton and Mercer pull Pak on board while Calvert floats with his eyes and mouth closed until they pull him up.

MERCER
(to Pak)
Throw up. Throw up!

They wipe them off and become concerned about Pak.

NORTON
Rinse with this.

Norton passes them both drinks.

Suddenly an alarm - loud, piercing and high pitch falling to a lower pitch goes off all around Rama repeating three times.

Norton reaches for his communicator.

NORTON (CONT'D)
Hub, what is that?

INT. RAMA, HUB - SAME TIME

Ernst, Myrna and Kirchoff listen to the alarm. At the other end of Rama there is a huge electrical display. On monitors biots all move quickly to the Sea.

ERNST
It's a signal. All the biots are
going to the Sea.

After the third alarm Rama starts shaking.

MYRNA
Is that a quake?

Ernst and Kirchoff look at each other in horror.

KIRCHOFF
Endeavour. Can you feel that?

INT. ENDEAVOUR, BRIDGE - SAME TIME

Rodrigo and Barnes are also feeling the shake.

RODRIGO
Yes we feel it. There it is.

An instrument shows them accelerating slowly.

RODRIGO (CONT'D)
We're accelerating! Rama is
accelerating!

INT. RAMA, ON THE CYLINDRICAL SEA - SAME TIME

Still close to the Southern Cliff they can't feel the shake
but hear the communication.

MERCER
Acceleration!

PAK
Space Drive!

CALVERT
Are we rising?

The Sea becomes turbulent and is pushed backwards by the
strengthening acceleration towards the Southern Cliff.

Biots come off the top of the cliff, fall down hard into the
water, and are chopped violently to pieces by huge Lobster
and Shark biots.

NORTON
We have to get out of here!

CALVERT
Now we know why they have a five
hundred meter cliff!

The Sea climbs much of the way up the cliff face with
Resolution rising with it.

High up the face of a truly immense wave at close to a 45 degree angle they sail down hill through the rough water. Biots smash down around them and they weave to avoid the Lobster and Shark biots.

They cling on tight as Resolution almost rolls and starts to break up. Reaching flatter but still sloped water clinging onto bits of Resolution they fight to hold it together.

Ahead of them biots are pouring off the Northern Cliff.

INT. RAMA, HUB - LATER

Myrna gazes out and through a gap in the cloud sees movement on the Gamma Stairs.

MYRNA

Who's that?

ERNST

Who's what?

The gap in the cloud closes.

MYRNA

I, I thought I saw, through the cloud, someone climbing the Gamma Stairs... It must have been a biot.

INT. RAMA, ON THE CYLINDRICAL SEA - LATER

Resolution is coming apart as they approach the shallow water near the Northern Cliff. Biots are strewn all over the Sea and keep coming off the cliff.

NORTON

We're almost there!

The side of Resolution gives way leaving Mercer dragging through the water holding on to a rope. The Sharks and Lobsters are gathered half in and half out of the shallow water dismantling the electrically charged biots in an orgy of destruction.

CALVERT

Hold on Karl! Hold on!

Full speed through the melee. Biots fall down from above and chop at them from below. They fight them off, duck and weave through them.

Norton targets the steps and without slowing down crashes onto them.

Norton, Calvert and Pak (helped by Calvert) jump onto the steps avoiding the claws of a lobster biot. Norton pulls the rope Mercer clings to. A biot cuts the rope.

NORTON

Karl!

Mercer ducks and fights as he swims for the steps. Resolution falls apart and falls away into the Sea. They battle off biots as they pull Mercer from the water.

Slipping and sliding up the wet steps they watch and move as biots from the cliff crash down around them.

CALVERT

Watch out!

A biot falls directly at them but it is a Spider biot so they deflect it away.

At the top of the steps a herd of biots is coming at them.

NORTON

Come on. Keep going!

Weaving around the biots they get away from the Sea.

INT. ENDEAVOUR, BRIDGE - LATER

Rodrigo and Barnes are concerned about the expanding heat shield that now stretches well out in front of Rama and forms a steadily closing circle.

INT. RAMA, HUB - LATER

Rama's lights are almost out. Ernst and Kirchoff reactivate the spotlights and target them at the group on the plain approaching the base of the stairs.

ERNST

(to her communicator)

You have to hurry. There's not much time left!

Myrna checks on the Gamma ladder and sees something close.

MYRNA

What's that!?

She turns a spotlight to the Gamma ladder. At a poor angle someone is coming quickly up the ladder.

MYRNA (CONT'D)

Look! Who is that?

KIRCHOFF

I see... a Raman?

The figure reaches the Hub and floats over towards them. It is Perera looking twenty years younger.

PERERA

Hello Myrna.

MYRNA

Doctor Perera. It's you! How, I, what? How are you?

PERERA

I've never felt better.

Ernst happily but suspiciously approaches Perera. She touches his face studying his new appearance.

ERNST

It's ... unbelievable.

PERERA

I'm glad you can all see me.

ERNST

Why?

PERERA

Since I woke up on the plain down there I've been wondering if I was a ghost!

KIRCHOFF

Wow. It must have been an Ambulance biot. I guess they have medical functions as well.

ERNST

You got here just in time. We have to wait for the others before we exit.

INT. RAMA, CAMP ALPHA - LATER

Already exhausted Calvert, Mercer, Norton and Pak are only able to pause for a moment going through Camp Alpha and starting to climb the immense stairway.

Pak is barely conscious and is being lead by Calvert but she keeps on walking.

INT. RAMA, HUB - HOURS LATER

Almost completely dark. Myrna wears her space suit and has the others' suits ready for them.

MYRNA
(to herself)
It's almost zero time.

INT. RAMA, LADDERS - SAME TIME

Norton, Mercer and Calvert struggle, shattered and unable to move. Pak is unconscious, very sick and being carried by Mercer.

CALVERT
I don't think we're going to make it. I can't move anymore.

NORTON
I think you're right. We're not going to make it in time.

They stop and clutch the ladder. Norton looks across the dim shadows of Rama at the towns and the Sea.

NORTON (CONT'D)
It was... beautiful.

They do not move.

Out of the darkness above Ernst appears followed by Kirchoff and Perera.

ERNST
Looks like you could use some help.

CALVERT
Too right! Am I ever glad to see...

He stops talking when he sees Perera.

NORTON

Well I...

Norton shakes his head and smiles.

PERERA

We have to move quickly.

Perera pulls Norton onto his back. Ernst helps Calvert and Kirchoff pulls both Mercer and Pak.

NORTON

(to Perera)

Who'd have believed that we'd need
you to carry us out!

INT. RAMA, HUB - LATER

They pause briefly to get their suits on. With only a glance back at the blackness they enter the air locks.

INT. ENDEAVOUR, REAR OF THE CENTRAL HUB - LATER

Norton staggers through the hatch and it is sealed.

NORTON

Go Boris, Go.

INT. ENDEAVOUR, BRIDGE - SAME TIME

Rodrigo and Barnes at the controls are joined by Ernst and Kirchoff. Rodrigo boosts Endeavour off from Rama.

In front of Endeavour the heat shield is almost complete with only a very thin path through the lattice still possible for an exit.

ERNST

Mind that bit!

RODRIGO

I have it.

The ship squeezes through narrow gaps as construction continues. They approach the outer hole but it looks like they will not make it in time.

ERNST

Fire the main engines!

Rodrigo points Endeavour and fires the main engines. They launch out at speed through the hole.

They are dazzled by the blinding size and light of the Sun.

ERNST (CONT'D)

Boost us out of this orbit. Use all the fuel.

Endeavour blasts out to the side of Rama and tucks into Rama's shadow moving steadily away.

BARNES

Rama is continuing to accelerate...
What's happening to the stars?

The stars streak and disappear.

RODRIGO

Our gyros are going crazy!

PERERA

We are in the wash of a Space Drive. The very space around us is being warped.

The stars begin to reappear and the gyros return to normal. Endeavour has moved some distance but is otherwise OK.

The crew are relieved but too exhausted to celebrate much and concerned about Pak.

INT. ENDEAVOUR, LABORATORY - DAYS LATER

Myrna and Perera pack up samples in the laboratory. Ernst sticks her head around the door.

ERNST

Have you two got a minute? I'd like to talk to you in the mess.

Myrna and Perera are puzzled but follow Ernst.

INT. ENDEAVOUR, MESS - SAME TIME

Entering the mess they are shocked to see everyone wearing formal uniforms.

NORTON

I have a message from the Admiral.
 "For Doctor Carlisle Perera and
 Myrna Norton I hereby waive all
 entrance requirements for
 qualification to Solar Survey
 Astronaut."

The others cheer and applaud.

ERNST

We have something for you.

Rodrigo and Kirchoff bring over two boxes. Myrna and Perera
 open them and see their own Solar Survey uniforms.

MYRNA

That's great. Thanks.

PERERA

This is an honor. And to think I
 never even liked space travel!

ERNST

It's our pleasure. We've been lucky
 to have you both with us.

They all congratulate and shake hands with Myrna and Perera.

INT. ENDEAVOUR, REAR OF THE BRIDGE - LATER

The crew except for Norton and Ernst are watching Rama going
 through the Corona of the Sun. Myrna and Perera wear their
 new uniforms.

MYRNA

Why go that close to the Sun?

MERCER

It looks like Rama could be sucking
 matter from the Sun. It's an
 amazing way to refuel.

CALVERT

And still accelerating at the same
 time.

Pak comes in still looking unwell but getting better.

CALVERT (CONT'D)

How are you?

PAK

I'm good.

Calvert and Pak gaze briefly at each other.

PERERA

Yes. At that speed Rama will blast out of the Solar System faster than anything we have ever seen.

MYRNA

I miss Rama.

PERERA

I think we'll all miss Rama for the rest of our lives.

Perera puts his hand on Myrna's shoulder.

INT. ENDEAVOUR, NORTON'S ROOM - SAME TIME

Norton and Ernst are together in his room. Myrna arrives.

MYRNA

We're still getting a constant stream of requests for interviews and comments.

NORTON

There's going to be plenty of time for that in the future. For the moment I'm going to concentrate on what matters to me.

MYRNA

What's that?

NORTON

Spending time with people I love... And making sure they catch up with the school work they have missed.

MYRNA

Aww Dad!

ERNST

We're going to be out here a long time before the refueling ship catches up with us. You'll be happy to have stuff to do.

Norton gazes thoughtfully out of the tinted window towards Rama and the Sun. Ernst and Myrna join him.

ERNST (CONT'D)

The mission went well Bill. What
are you thinking about?

NORTON

I've got a thought I can't get out
of my head.

MYRNA

What?

Norton looks out of the window at Rama.

NORTON (O.S.)

The Ramans do everything, in
threes.

THE END.