

## Ramophone, under a Pacific glow

the dark machine in the centre of the planetarium, to bring the estate into pulsing stelliferous Meaning, all in a soaring dome... She was a sensitive, dancing beneath a fastax tower

Dont u See... cant uzsee that this will be folded up and reopened in a new dimension...at a later time.... He drew out the magnetic tape recordings... for the year 1958... the cataclysm tales....

He'd been plotting the coordinates of nuclear tests...but there was also a hidden component...

Something that was not part of the visible world.... The optical hidden... Nietzsche, tattooed below his left nipple, reading:

*Freedom you all most like to bellow but I have unlearned belief in 'great events' whenever there is much bellowing and smoke about them. And believe me, friend Infernal-racket! The greatest events they are not our noisiest but our stillest hours. The world revolves, not around the inventors of new noises, but around the inventors of new values, it revolves inaudibly.*

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Ramophonez Shack

Vapor, hanging out the radio,

iz-that...Before he could say it, Ramophone flashed, bundling the two, down the hull of the Fordillius Mustang, outswerving, caressing, kissing the sidelets, sunlight breaking out in pacific jarlets on a single bigtoe on a wheel, in a cacophonous spin...high below the L.A. freeways, the ocean liner, Vorton Hound, dumped debris on a nudist garrison, dahling vwaaait vwait, the champagn-gargling, as one Senor Inundatio sank beneath the waves...

Night fell hard on the sycamore-paved trail up to the beat shack of Ramophone's place, a reprieve from the night. A 'for sensitives' sign lolled loose as rain broke out in a chorus with the breakers, salt in the air laced lightning...sprinting across, ocean sur-wave rippling in, for a lens, Chiarascuro wearing nothing but a fishnet lollyvest...eyes, the orbs of a cayman, out in the lagoon of lawn on a fullmoon cut by cumulus and coriolis.

Rain, fading, light, trellising, Tenn pops a lithium pill, open on the book detailing the whereabouts of Inertia: duòlì: inertia; momentum; guánliáng, 惯量N: inertia; *guānding* 惯性n.; inertia *guánxing* dīnglǜ 惯性定律, the law of inertia; *guanxing*, douse to restore consciousness; *guanxin* mǐnmó, to be concerned about the afflictions of the people; *guanxin shu*, the art of mind reading...

Mind reading? ESP, chuánjiǎo 船脚[-脚]; water, shipping freight; chuánjiǎo\* 传数[傳-], do missionary work; proselytize; transmit directives/ instructions...

She was a beautiful, oriental, woman... he met her in Chinatown...Hawaii

The Chinese connection.... an address in Guangdong.... Yazuki... triads....

On the Vorton, Claymore Snort cut the most lonely figure in the Pacific...

Telemetries, frequencies, one great bandwidth registering the flights of geese flocken, a low-drift by the ocean, zlooping out of radar Slamdinska LeMay plummeted, tapping deadfuel gauge... with Jupiternear poking out... the Observatory out over Santa Fe, dark sentinel... in the docks, Chinamen, Japs, Africans, Indians, Eurasians, Russians (disguised), moving thru...

The radio was playing [        ], pulling out on the freeway, sunlight breaking out in pacific jarlets, interferences growing gliding thruout of the [    ] tunnel out,

42,000 men, 242 ships, 156 airplanes, 4 television transmitters, 750 cameras, 5000 pressure gages, 25,000 radiation recorders, 204 goats, 200 pigs, 5000 rats and why transport Numbers 4 and 5 of the atomic bomb family thousands of miles across land and sea for two brief moments of majestic destruction

### **Ramophone and Explorer IV**

Ramophone pushed out past Caymanorb Lake in the lowlit haze, strikingup a match, fueldrums lay out across the beach... the swell boomed deep cavities into the Californian edges... in the shack, an inkwet manifesto lolled beside a limp Chiarascura rendezvousin with Rama, her eyelids shivering instep with a fan, electrical, dizzying, a steady Indonesian fan...

He litup a fueldrum, several hundred yards from the cliffedge, the silhouette of the shack silent, the wind rippling, turned the firelight ona sideways, blowing motion, deepswell...stars...broke out ina chorus ov low radiostatic... ramophonon stared out blinking, slumped ona sandcastle... the smoke rising nostrilz...noplacelse...Elsa...nice name for the night-codings... the brittle lost hippiefreak beatentrak... shacklivin... a squalid... planet... whirring about its axis, in sunbroken shadows... cayman orbs, Caymanorbs out deep... blinking... he blinks.. wy wuld u look at thaah- a message ov...

Fueldrum humming, pacific surf, calming, for miles, an empty canvas... water ripples into hiz feet...closing an opening... a modulation wave...

A California Zephyr train running thru a dream midskull...Mescalined neon Monterey in the late beatnik hours... chasing into the cries of the Canyon... a crashing high wave sortof Sonora, Ramaphone sits in the quiescence of owls, the stove glowing, a solitary lamp casting huge shadows out of the redwoods... caves... the phosphorescent glintings of shoreledge, the steady pound of waves... fog falling... when he gathers leaves... roasting coffee and potatoes... starless, damp cold... when the fog lifts... gale winds pull thru... one night there is a thunderstorm... booms off the edges of the canyon... light strafes and glints and he's buried, buried under, brandishing fogdark on his retinas... and screammin inhis sleep dream waking nightlight bitten... wave pounding...

pounding and tearing off hunks of the continent... on the edge... on the edge of this world...  
crowsh... the embers... glowing less and less... a crack... a break in the storm... pulling out now...  
into the interior... the thick smell of forest fires.... Is that DDT?...

Night raids... under dark clouds... searching for something... a paranoid delusion... a memory  
eked out on a spinning whirring light track... stroboscopic Mescaline... a room... a white room...  
leading corridors... outside the faint murmurings... children's laughter... a swing... nightfall...  
riding a greyhound...

Ramphone and Chiarascuro and the Jet Stream Kids... wire up in the night... under hammerings of  
cheap liquor, moonshined vials of spirit.. listen in on frequencies... dirty talk... in Fresno... police  
radio... frequencies no one should be listening in on... beatnik tendencies developing into a  
paranoid web... spilling out into the ocean... drifting debris... floating out onto Hawaii... they take  
automobiles out late... zlooping the steep San Fran streets... burying straight across the freeways  
into LA... Nevada... the desert air holds a momentary liberation from the oppressive fog-sated  
canyon.... She looks over at him... he looks over... sez.... phwoosh... a red streak in the sky...  
flying coordinates... out into the lakes... carved holoceneal... Mojave... green light  
intersection... she watches a black hobo... frequenter... getting in a scuffle... rows of tents... under  
a cold bright moon...

...

Outside Berkeley... Ramphone turns to her one night, with the radio turned down and the smoke  
filling the car, there's things happening in there Chiarascuro... touching her hair, spinning a lock in  
it... she has her head bent at a lean on his shoulder edge... her eyes bulging... Common gee Chiara  
Cayamana ur dragiin me in.. Im spinning u... croccrooll... she pokes his paranoid midriff.. the  
smoke near dragging them both down in thru the bonnet... into the back... there are things  
happening in there... her half-mexican grants them passage south... in the long days down Santa  
Cruz... into Guadalajara... past the streaking yellow Sonoran... nights... lit up by stars and the  
smells of barbeques... meat... juicy... reprieve from the fog...

bonfires... light the beaches... Oaxacan drinking bouts... fall into cold arms cradly together...the Bohemian Chinese painter... Lu Wen... takes them across Chinatown... into a restaurant... father's friend... dark lamps... room leading onto rooms... with attractive Shanghainese waitreesses... poems carved in Chinese script on the woodcuttings... Ram...the pekingese duck... all orders of sides... the redwoods... bleeding light storm... pilots drifting on in all over the airwaves...

Lu has a radio set up on the roof.. of his father's friends place.... Stacks of papers... smoke... a photograph... from a dirty magazine... they drift in and out of radio traffic... listening out on in...

In the wind storms... pulling out thru the canyon... the jets flying low onto the coast... sonic boom... muffled... drawn off to haunt someone else's nights... in the fog... the noise is condensed... it's like waking up in Korea... dynamite... screaming Koreans... chasing u down on sum god forsaken artillery unit....

Chiara loved Rama... the late night drives... the bonfires... hikes, fucking under dim lamplight... then sand... the whoosh of surf... the complications in Oaxaca... Mexico City... minimised,.. in his grasp,.. she met him at a bar... san fran steep... he was with Lu Wen... he had long dark hair and a thousand yard stare...she wore a floral dress... short above the knee for a Mexican...father... her mother and father met... working on a field in the years after the war... not the World... but the drug wars.. driving them north...

The chassis shuddering over bumps and swerves... the Bay Shoreline... bleeding out in blues and pinks and pastels into sonoric... sonorous sunset burst... her heart iz bursting in the radio.... Blue dusks... Frisco glittering rhymes and blues.... smokes... screaming hooting...laughing... lost in the flight... up and down... mushrooms... stirred into some potion... they drink and dream together... of flying out into the stars... that one...traacing a line across his chestnooo, that one... she pointin holdin his midriff... he smellin her hair... in the sand... the steady beat of the waves... blue dusks... falling into purples... the sun breaks open... into a hot sweaty naked scene... bodies strewn out hanging lolling outov hammocks... Ramophone and Chiara... Sonora.. and the other hippy crews...all up and down the Californian coastline...

When Rama got sick... after.. some trial at Berkeley... she thought nothing ovit... in his car... beside the bridge...its good money... foruz Chiara... wecan go off grid... live in the canyon all year... wiv the fog..we'll go to Oaxaca.. in her lilt... on the bridge... cars passed... lights blinking in the dusk... a liner was drifting upriver.... The steady noise of traffic... with the windows down... a cigarette in one hand black glasses... whatdo they even want you to do in there? I dontknow Chiara.. it'll just be a few days...

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night... instrument panel...nosedown, spiralling...sendzhim back, back to the war...aphrodisiacal blues greens... headblat... engine roaringthru thickening, cleaving clouds... breaks out into pure sunlight... sezhey a small fire down the beach... droolingonhis SETP badge...

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tinkering inside his newest hulking particle accelerator... asif he was in a lift back in Greece... Nazis asking for his name... tell them... Im not here... running out past the brush.... Into a curtain stray.... The toolbox flighting down an empty liftshaft...he is out... Herr... Greköring...

Two rooms up... overlooking the Berkeley campus... quads... brimming with students wearing too short... dresses... hippies carrying makeshift placards... shouting something... civil... radiation luminosity... Radiation luminosity... outward radiation... inward gravitational pull... feeding... Eddington limit... burping starz... quasars fed on so much that the radiation Getz trapped by a blanket of infalling gas and carries it in wivit... thenwhen itz spent... pressure support drops... the core collapses in without allowing it to flow outwards and resist gravity...

Great flowing riverz of light... in a fraction of a second... a bleed in the fabric... sterilizing worlds... habitable planets... a region of space from which nothing can escape u hear me...

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**Edwards, mojave**

I ain no robot...

Desert sun anglin, baking, cooking the dry lakebed mojavus... the machinists tents are flayed out in an array...his eyes adjust... blinded momentarilus coming there out from the sun into...

feedback... control... inertial navigation systems... accelerometers... spinning gyroscopes... radar... simulators... simulators in simulators... simulators in simulators on a simultator... I am poseetively stimulated gentomen... whats this... touching prodding... nerevously backing along with him... polite to a five star generall... visiting... control centers... comms channels... flight phases... and transcripts... telemetry... rules being drawn up over long Mojavan nights...

The cockpit of Slamdinskius... crying in his hammoc.... A great paranoid grid of intrigue... collecting on the saldry lakebed... grey suits fly in and out... in a constant clockwork... that keeps the radiotower busy... with burgers... fresh fries... salads... hiding under the sun... the grey men file reports, conduct classified meetings... run their fingers thru pages and pages of ink... dried out... in the heat...

Bleedin... crynig... in his hammock... procedures... testing... pushing buttons... weaving wires through tiny magnetic cores a thousand times.... There are drawings and test reports and weather logs and weather flying logs and logs for rain and logs for thunder and lightning and storms... driving the planes home... like the daysof pacific... fleet command... Philippines... razing rice paddy McPhoolus Johns...

The Beverley Hilton... a large electric banquet hall blinking in and out of camera flashes... light blinding the front row of faces... smiles contorted black suit... a fine coterie of wines.a banquet hall aglow with the maddest, finest navy pilots, airmen... naturally pulling in the beauties of LA... on husband finding duties... or some other intent unknown...a thorough cia vetting only falls so far in on the doors... flooding out into the damp street...wet with lustwarmed wine softened... into Cadillacs... driving out... with her tops off an his throttling it... like a wartorn jet... like the good pacific days... out over Taiwan and Guam and bleeding strafing bombs into Japan... Tokyo... ablaze.... Ur nipples...they're... ablaze... no really... stubbing outhiz cigar... cahooting... back in the blinking banquet hall... announcements are made... Hollywood gleam...Doolittle... Yeagar's ghost barfin... Hughes the aviators... Horner of the north african theatre... a Princeton man... a sea

of faces... caught in the clickenlight... rules..later will plot and point and name each coordinate... into a system...a paranoids system.. of the informasi on the fines pilots of the United Stotes... the a missing... a U-boat... off the coast of Guam...humming...

Microfiche film in bralets... photograph developing ona thin film... the web is on first to a Japanese merchant.. in Chinatown (dontask)...then on into a web of corporate intrigure...right thru to a conglomerate... there are rumours... rumours of new bombs... jets... and electronics... a circuit... built in one material... izit true... his eyes... orbs above Tokyo... Tokyo... that has been rebuilt... patched back together... wiv American goodwill... capital... the zekes... folded up and integrated into the us flight programs... the frequences are ahum wiv a new invention...

missilemen... proliferating missiles out their ass... it'z a ass spraying missile mayhem down there... out in the testing yardds... they fly up hundreds of yards... and boom back down into the ocean... spitting out greatconcentric waves...wakingup the sealife... theres Bomarc and Matador and Snar and Thor, Atlas, Titan, Navajo...

Airmen nerves... drinking at a bar... I Ain no robot... godam... nazi think he is... von in the blinking electric banquet... a systems man from the war days... the collective... the Leni Riefenstahl atlas aloft.... The concrete... manifestations... of the willl.... The spirit... of a nation... of the ghosts... the swinging Mittelwerk corpses in the early evening dusk...

Von was saying in hiz Germanicotexan tilt... the idiosyncrasies of the human being... immense speed... immense Fahrenheit on the nose....

### **Explorer IV vignette**

On the ground, doppler, intereferometers, phase modulation, amplitude modulation, optical... training out ona signal flighting the outer edges...



Explorer IV ripples thiz nervous quiet...scientists, holding open theireyes wiv magnetic tape whirring.... Hunstville, Alabama, CCMTC, Florida, Blossom Point, Mayrland, Fort Stewart, Georgia, Havana, Cuba, Antigua, Quito, Ecuador, Lima, Peru, Antofagasta, Chile, Santiago, Chile, San Diego, California, Woomera Australia, Fort Belvoir, Virginia, Goldstone, California, Aberneed Pvg Gd, Md, White Sands, New Mexico, Van Buren, Maine, Fort Monmouth, New Jersey, Temple City, California, Ibadan, Nigeria, Singapore, Malaya, Guam Island, Wake Island, Johannesburg, South Africa, Bonn Germany, Heidelberg Germany, Thule, Greenland, New Zealand, Fairbanks Alaska, Inoyakarn, California, Azores, Johnston Island, Sinop, Turkey, Berlin, Germany, Shemya, Alaska, Kaesel, Germany, Makebeleu, Hokkaido, Germany, Organ, New Mexico, Olifantafontein, South Africa, Woomera, Australia, San Fernando, Spain, Tokyo, Japan, Characato, Peru, Shiraz, Iran, Curacao, NW1, Jupiter Florida, Villa Deflores, Argentina, Halekala, Maui, Hawaii...

Raw optical data... raw doppler data... raw interferometer data... flowing ina vast paranoid circuitry while the world sleeps... the optical flowz ina pipe out into the lake of the Smithsonian Astrophysical Laboratory, where Curt Tain sits nervously, reading ephemeris readings, reducing optical ddata... doppler data... flowz out into the Army Ballistic Missile Agency... whoz reducing doppler data east and west out to Smithsonian and the Naval Research Laborators... where raw interferometer data is being cooked back to the astrophysical laborators... predictions flowing back to the tracking stations... ephemeris data... all flows into the nervous basement... of the Iowa Geophysical laboratory...at the State University of Iowa....

### **The Office Overlooking Berkeley Campus**

*The Schwarzschild surface  $r = 2m$  is not a singularity but acts as a perfect unidirectional membrane: causal influences can cross it but only in one direction.*

Radiation luminosity... outward radiation... inward gravitational pull... feeding... Eddington limit... burping starz... quasars fed on so much that the radiation Getz trapped by a blanket of infalling gas and carries it in wivit... thenwhen itz spent... pressure support drops... the core collapses in without allowing it to flow outwards and resist gravity...

Great flowing riverz of light... in a fraction of a second... a bleed in the fabric... sterilizing worlds... habitable planets... a region of space from which nothing can escape u hear me...

He'z tinkering inside his newest hulking particle accelerator... asif he was in a lift back in Greece... Nazis asking for his name... tell them... Im not here... running out past the brush.... Into a curtain stray.... The toolbox flighting down an empty liftshaft onto Herr... Greköring...

Tracing an arc...

### **That Episode About the Society of Experimental Test Pilots (SETP)**

Out in the heat of the Mojave... heat gathers in the wateringcan... systemsmen... in grey suits... the test pilots... wivhiz chest pumped out... theytryna make us dam night automatas... nodifferen from the Russki Soviets... I Ain no robot...

Quoting out sum long forlorn French passage... 'the machine, which at first blush seems a means of isolating man from the great problems of nature, actually plunges him more deeply into them. As for the peasant, so for the pilot, dawn and twilight become events of consequence. (Antoine de Saint-Exupe'ry, Wind, Sand and Stars)

Feedback, control, computing... inertial navigation systems, accelerometers, spinning gyroscopes, radar... simulations, control centers, communication channels...after sputnik... the pilotz should be paranoid... the robotz arre coming.... There was von Braun... the Chief Automata von Braun....

Phases of flight... transcripts... telemetry... the interface... the bleeding edge... ova hands-on flighting to a computer, rule-based future... the prizoned cockpit... Slamdinska...crying in his hammock... not from not traumatic reliving... but from the shackles... holding him..now...

A great paranoid collecting on the desert... grey suit managerialials... machinists... skunk workers... farmers...armymen and navymen.... reports... meetings... testing machines... developing procedures... practicing button pushing, weaving hair-like wirtes through tiny magnetic cores thousands of time.... Interoffice memos, engineering drawings, test reports.... logs....dry mission transcripts, technical briefs... abstractions...

The Society of Experimental Test Pilots (SETP)...

One large electric banquet hall squinting... hooting-tootin out past the dry desolation of Edwards Air Force base... south-blinking out of the Mojave... lakebeds... dried out remniferous stacks of reddened coyote dirt... the Beverly Hilton...is aglow... when they swing in... wheels rattling... over bumpers... girls are gathered, including one Chiarascuras cousin... Hollywood gleaming...

Doolittle, who gaveitto Tokyo, Slamdinska chasing hiz coordinates out in the maze of bodies... hearty loud rumbling yeagars... Hughes, the aviator.... flightsout all over the world war... slamdinska's glowing... Horner out over north africa... a graduate degree from Princeton... black tie....event... except the camera...a sea of faces turned out toward thecamera... the paranoidz... amonguz wuld take a ruler and plot each name each coordinate... system...

She knowz the photographer thiz night... she comes to take a microfiche film of the photo of the proceeding.... To gather names... companies...

Sell it on at some price to a conglomerate of Japanese sea merchants... Ramophone iz in the parcels game... he heard of thiz Society of Experimental Test Pilots... thru the radioset...

Ejection seats... escape capsules... pressure suits, goggles, helmets... a golden age... Bomarc, Matador, Snar, Thor, Atlas, Titan, Navajo... US airforce men were making missiles that flew lke airplanes but were rockets... with that dam modifier unmanned...

What if... von was sayin we could removeus the idiosyncrasies of the human being... his German tendency toward a more collective sense...his security clearance... theze men are too cockpit sure... in Germany... the system... this system that...

Then news broke out... sputnik... launched into orbit... from some dust-ice strewn debris field in deepest darkest Kazakhstan...

## **Red Moon**

Wassenaar... evening dusk... lights receding... the Hague glowing... climbing out over the Dutch coast.... White vaporm trail... 5000 Fahrenheit.... SS Grupenfuehrer Hans Kammler... cracking of a

whip... breaking the sound barrier... accelerating... outfalling its blast wave.... Ten miles below... coastline receding, black North Sea... twice the speed of sound.... gyroscope... gimballed spinning wheeled 2000 revolutions a minutes... pointed in the same direction no matter what.... accelerometers... reading the rockets rotations.... Reduce trim... a fin flicking outward.... The rudder twisting... angling... in.... infalling... proppellant burning off... fifteen miles up above dark black north sea.... Entering the upper atmospheres.... Liquid oxygen breathinout in the dying atmosphere.... Negative G compressing the nose and ribs... the skin itching from friction...17000 or f the 27000 pounds now lost...flying at a mile a second.... Then... sixty three seconds into its flight... the turbine cut.... Fuel tapering off from the combustion chamber... a projectile... camouflages in signal white...hanging as if suspended in... yet still rising... the inertia... driving it upward... 3500 miles an hour.... Twnty miles,, thirt miles... ten second pass... in-finality... apogee fifty two miles... brushing the edge... imperceptibly... the tail dips... hurtling at five times the speed of sound... altitude then velocity begins falling... stabilizer fins gripless... inersia listens... listens tentatively to this all... her father's boots by the door... the moon is glowing outside... past the treeline... there are buildings... chimneys....a foul air... from sewage father says... she knows there is a war... that he works with you... that will take u one day to the moon...

London glows its own early evening...rush hour tapering off... traffic blinking out... dinners serving up... lights of apartments... warm heaters... blackouts... no longer enforced.... Murrow is in hiz study... prapering an efewning broadcast....

Above the inkblack northsea... freefalling, plunging at 3400 feet a second.... Through thickening atmosphere, thins regaining traction... the nose cone glowing at 1100 degrades.... A bright streaking glowering hulk flight over Ipswich... trysts on the beach front in Southend on Sea... pivoting... a grayish green blur... no identifiable markings... the Vergeltungswaffen-2.... Hurtling in... blind on a ten mile raduis... east end... city., tower of London.... -in falling on Chiswick... redtile roofs and coblletone....the sonic boom was trailing it... it was... a silent streak... look mama... a star....

Slamming into Staveley road at Mach 3, gouging a crater thirty feet long and eight feet deep, impacting high explosivews... nitrate and amatol.... Walls of bedrooms collapsing inward... floors

imploding... dust brick splinter... shrapnel... furnitures hallways... a great noiseless vacuum... television with the sound off... a small mushroom cloud... a blast wave... collapsing lungs dying silently in her seat.... Then another.... Striking death from the stratosphere... a cold rain....

*Freedom you all most like to bellow but I have unlearned belief in 'great events' whenever there is much bellowing and smoke about them. And believe me, friend Infernal-racket! The greatest events they are not our noisiest but our stillest hours. The world revolves, not around the inventors of new noises, but around the inventors of new values, it revolves inaudibly.*

### **redstone**

Beneath the blue slate of Alabaman sky... Appalachian foothills...brown carpet... Tennessee river south... unsulating.... Hunstville Conferate battles and home to US Army Ballistic Missile Agency... humiliating infantry defeats in the Korean War...

Redstone Arsenal... metallurgical and chemical laboratories... static firing stands, strapping a rocket down to two twin towers, firing at full blast... supersonic wind tunnels.... The hangar...

Lightweight aluminum alloys, transistors, flight steering, rocketdyne engines...

### **tbilisi - the Kalevalan arc...**

Car horns blaring... over the mountain air of Tbilisi.... Orchards, ravines, sulfur springs... Stalin and Beria... Georgians... the chaotic landmass of Russia above... apparatchiks carrying soft slurry Georgian accents... Dideba Did Stalins, Long Live Stalin...Log Live Georgia...volatile Caucasus...risked inflaming the Kazaks Uzbeks, Tajiks, Tatars, Baits, Moldovans, western Ukrainians...Poles, Czechs, "Bulgarians, Romanians, Hungarians, and East German...the protest grew... paralysing... locomotive factory... a huge crowd descending on the radio and telegraph station in central Tbilisi... demanding to broadcast... tanks stood around...

a nest of foreign spies incited the Georgian uprising... THE KALEVALAN ARC...

The great Terror... an arrest... the rasp of the needle on the gramophone that kept churning its spent record while the men in black ransacked his apartment; the sound of the trolleybus bells ringing six

stories below; the hushed whimper of his three-year-old daughter, Natalia, as she clung to her terrified mother...the Kolyma mines... work at 4am... sixty below zero darkness... pickaxes, wheelbarrows... 1941, Korolev transferred to a special Sharaga minimum security technical prisons Beria had set up...

A multistage rocket... nose cones unable to withstand the heat generated during 24,000 feet per second atmospheric reentry...