

FUJIFILM

DIGITAL CAMERA



X-E2

SERVICE MANUAL

US/EG/EE/RU/ME/CH/JP-model



CAUTION

- USE THE DESIGNATED AFTER-SALES PARTS AND THE DESIGNATED LEAD-FREE SOLDER WHEN PERFORMING REPAIRS. BECAUSE THIS PRODUCT COMPLIES WITH RoHS LEAD-FREE. (Refer to page 3)



WARNING

- THE COMPONENTS IDENTIFIED WITH THE MARK "⚠" IN THE SCHEMATIC DIAGRAM AND THE PARTS LIST ARE CRITICAL FOR SAFETY.
- REPLACE THOSE COMPONENTS ONLY WITH THE COMPONENTS SPECIFIED IN THE SCHEMATIC DIAGRAM AND THE PARTS LIST.
- IF YOU USE PARTS NOT SPECIFIED, IT CAN RESULT IN A FIRE AND AN ELECTRICAL SHOCK.

Fujifilm Finepix Z1 Digital Camera Original Instruction Manual

L Towner



Fujifilm Finepix Z1 Digital Camera Original Instruction Manual:

This is likewise one of the factors by obtaining the soft documents of this **Fujifilm Finepix Z1 Digital Camera Original Instruction Manual** by online. You might not require more times to spend to go to the books establishment as well as search for them. In some cases, you likewise reach not discover the notice Fujifilm Finepix Z1 Digital Camera Original Instruction Manual that you are looking for. It will agreed squander the time.

However below, like you visit this web page, it will be appropriately unconditionally easy to acquire as capably as download guide Fujifilm Finepix Z1 Digital Camera Original Instruction Manual

It will not agree to many get older as we explain before. You can pull off it while behave something else at house and even in your workplace. thus easy! So, are you question? Just exercise just what we find the money for under as with ease as evaluation **Fujifilm Finepix Z1 Digital Camera Original Instruction Manual** what you considering to read!

<https://www.portal.goodeyes.com/public/scholarship/default.aspx/Contemplating%20The%20Colour%20Of%20A%20Concorde%20Contemplating%20The%20Colour%20Of%20A%20Concorde.pdf>

Table of Contents Fujifilm Finepix Z1 Digital Camera Original Instruction Manual

1. Understanding the eBook Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - The Rise of Digital Reading Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Advantages of eBooks Over Traditional Books
2. Identifying Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - User-Friendly Interface

4. Exploring eBook Recommendations from Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Personalized Recommendations
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual User Reviews and Ratings
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual and Bestseller Lists
5. Accessing Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Free and Paid eBooks
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Public Domain eBooks
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual eBook Subscription Services
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Budget-Friendly Options
6. Navigating Fujifilm Finepix Z1 Digital Camera Original Instruction Manual eBook Formats
 - ePub, PDF, MOBI, and More
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Compatibility with Devices
 - Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Highlighting and Note-Taking Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Interactive Elements Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
8. Staying Engaged with Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
9. Balancing eBooks and Physical Books Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Setting Reading Goals Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Carving Out Dedicated Reading Time

12. Sourcing Reliable Information of Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Fact-Checking eBook Content of Fujifilm Finepix Z1 Digital Camera Original Instruction Manual
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
 - Integration of Multimedia Elements
 - Interactive and Gamified eBooks

Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Introduction

Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Fujifilm Finepix Z1 Digital Camera Original Instruction Manual : This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Fujifilm Finepix Z1 Digital Camera Original Instruction Manual : Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Offers a diverse range of free eBooks across various genres. Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Fujifilm Finepix Z1 Digital Camera Original Instruction Manual, especially related to Fujifilm Finepix Z1 Digital Camera Original Instruction Manual, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Fujifilm Finepix Z1 Digital Camera Original Instruction Manual, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Fujifilm Finepix Z1 Digital Camera Original Instruction Manual books or magazines might include. Look for these in online stores or libraries. Remember that while Fujifilm Finepix Z1 Digital Camera Original Instruction Manual, sharing copyrighted material without permission is not legal. Always ensure

you're either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Fujifilm Finepix Z1 Digital Camera Original Instruction Manual eBooks for free, including popular titles. Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Fujifilm Finepix Z1 Digital Camera Original Instruction Manual full book, it can give you a taste of the author's writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Fujifilm Finepix Z1 Digital Camera Original Instruction Manual eBooks, including some popular titles.

FAQs About Fujifilm Finepix Z1 Digital Camera Original Instruction Manual Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook's credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Fujifilm Finepix Z1 Digital Camera Original Instruction Manual is one of the best books in our library for free trial. We provide a copy of Fujifilm Finepix Z1 Digital Camera Original Instruction Manual in digital format, so the resources that you find are reliable. There are also many eBooks of related with Fujifilm Finepix Z1 Digital Camera Original Instruction Manual. Where to download Fujifilm Finepix Z1 Digital Camera Original Instruction Manual online for free? Are you looking for Fujifilm Finepix Z1 Digital Camera Original Instruction Manual PDF? This is definitely going to save you time and cash in something you should think about.

Find Fujifilm Finepix Z1 Digital Camera Original Instruction Manual :

contemplating the colour of a concorde *contemplating the colour of a concorde*
consumer behaviour study guide

consultation liaison psychiatry in japan advances in psychosomatic medicine vol 23

consumer behavior 4th edition

consumenten gids tests camcorderspindakaaskinderfietsendiafilmswasmiddelen en wasautomaten

~~contradictory impulses canada and japan in the twentieth century~~

continental airlines 737 manual

contemporary feminist utopianism form and content v 1 approaching utopianism keele research paper

continuum mechanics franco m capaldi

contemporary christian romance prayerfully yours inspirational sweet clean second chance christian romance

contemporary gay romances

continuum mechanics solution manual torrent

contemporary european architects volume 1

~~contemplacion un camino-espiritual-espiritualidad~~

contemporary issues in california archaeology

Fujifilm Finepix Z1 Digital Camera Original Instruction Manual :

gallowgate calypso song and lyrics by matt mcginn spotify - Jan 26 2023

web matt mcginn song 2006

the gallowgate calypso youtube - May 30 2023

web provided to youtube by ingroovethe gallowgate calypso stramashmcginn of the caltonreleased on 1990 02 14composer

matt mcginnwriter stramashauto generat

gallowgate calypso youtube - Jun 30 2023

web provided to youtube by bmg rights management uk limitedgallowgate calypso matt mcginnborder lands the best of

scottish folk 1967 sanctuary records grou

gallowgate calypso matt mcginn last fm - Mar 28 2023

web mar 19 2017 watch the video for gallowgate calypso from matt mcginn s border lands the best of scottish folk for free

and see the artwork lyrics and similar artists

matt mcginn remembrance hootenanny doon the gallowgate - May 18 2022

web jan 14 2023 the saturday event the matt mcginn remembrance hootenanny is to honour the life of the late artist more

than 20 folk singers including the gallowgaitors

gallowgate calypso song and lyrics by matt mcginn spotify - Dec 25 2022

web listen to gallowgate calypso on spotify matt mcginn song 2003

[gallowgate calypso matt mcginn lyrics meaning videos](#) - Oct 23 2022

web lyrics meaning videos the dundee ghost the footba referee gallowgate calypso honesty is out of the fashion little ticks of time coorie doon the ballad

[gallowgate calypso matt mcginn youtube](#) - Oct 03 2023

web jan 23 2008 short but funny song about a typical night near glasgow cross

gallowgate calypso youtube - Apr 16 2022

web feb 18 2017 provided to youtube by transatlanticgallowgate calypso matt mcginnborder lands the best of scottish folk 1967 sanctuary records group ltd a

gallowgate calypso gavin paterson youtube - Apr 28 2023

web jan 14 2015 gavin paterson singing the matt mcginn song gallowgate calypso at the yes bar n glasgow

[gallowgate calypso by matt mcginn download or listen online](#) - Jun 18 2022

web gallowgate calypso matt mcginn 2 33 download promote get latest dj mixes more songs by matt mcginn gallowgate calypso 2 33 coorie doon 3 36 the red yo yo

[the gallowgate calypso song and lyrics by stramash spotify](#) - Sep 21 2022

web stramash song 1990

[gallowgate calypso youtube](#) - Aug 01 2023

web jul 21 2021 provided to youtube by bmg rights management uk limitedgallowgate calypso matt mcginnthe best of matt mcginn 1967 sanctuary records group ltd

the gallowgate calypso matt mcginn songwriter - Sep 02 2023

web gallowgate calypso by matt mcginn maggie nellie and mary ann lizzie willie and phil mccann get yer jaiket and don t be late murder polis in the gallowgate in

[gallowgate calypso the mccalmans lyrics meaning videos](#) - Aug 21 2022

web 01 gallowgate calypso 3 00 pt3m the mccalmans 02 jock stuart 03 a man s a man for a that 04 farewell tae the haven 05 a man s a man 06 johnnie cope 07 doon in

the gallowgate calypso stramash last fm - Nov 23 2022

web listen to the gallowgate calypso from stramash s mcginn of the calton for free and see the artwork lyrics and similar artists

[gallowgate calypso chords by matt mcginn](#) - Jul 20 2022

web there is no strumming pattern for this song yet create and get 5 iq chorus d g maggie nelly and mary anne a d lizzie

wullie and phil mccann d g get yer jaiket and dont be

gallowgate calypso song and lyrics by matt mcginn spotify - Feb 24 2023

web listen to gallowgate calypso on spotify matt mcginn song 1966 matt mcginn song 1966 listen to gallowgate calypso on spotify matt mcginn song 1966 sign up log

gallowgate calypso song and lyrics by matt mcginn spotify - Mar 16 2022

web listen to gallowgate calypso on spotify matt mcginn song 2001 matt mcginn song 2001 listen to gallowgate calypso on spotify matt mcginn song 2001 sign up log

utopie définition simple et facile du dictionnaire l internaute - Aug 15 2023

web sens 1 projet ou récit d un idéal imaginaire et illusoire synonyme chimère rêve fiction idéalisme contraire dystopie contre utopie Étymologie dérivé du grec topos lieu

nyna shanti nyna shanti - Dec 07 2022

web mon utopie nyna shanti 2 years ago 6 1 nyna shanti 5 12 report follow nyna shanti and others on soundcloud create a soundcloud account un album intemporel qui

mon utopie albert jacquard babelio - Jul 14 2023

web nov 5 2008 résumé j atteins l âge où proposer une utopie est un devoir l âge ou les époques à venir semblent toutes également éloignées qu elles appartiennent à des

mon utopie nouvelles études morales et sociales - Apr 30 2022

web provided to youtube by tunecoremon utopie nyna shantimon utopie 2017 fan prodreleased on 2017 05 24auto generated by youtube

mon utopie jacquard albert free download borrow and - Jun 13 2023

web mon utopie by jacquard albert publication date 2006 topics jacquard albert philosophy humanism utopias publisher paris stock collection inlibrary printdisabled

downloadable free pdfs mon utopie cyberlab sutd edu sg - Dec 27 2021

web nov 16 2023 compte rendu critique pour loisir société la transition récréative une utopie transmoderne by jean corneloup presses universitaires de rouen et du havre

mon utopie song and lyrics by nyna shanti spotify - Jul 02 2022

web mon utopie nouvelles études morales et sociales charles secrétan free download borrow and streaming internet archive book digitized by google from the library of the

mon utopie nouvelles études morales et sociales archive org - Aug 03 2022

web mon utopie l utopie nov 19 2022 relationale utopie aug 04 2021 einsamkeit idyll und utopie nov 26 2020 keller begreift

bekanntlich den menschen als wesen das sich nur

mon utopie youtube - Feb 26 2022

web mon utopie utopie jan 30 2022 key writings and projects from the group of architects sociologists and urbanists known as utopie when the imagination reaches and

pourquoi ne pas rendre tout gratuit et réaliser l utopie de - Nov 25 2021

web jul 20 2017 album name mon utopie genre french pop singer songwriter release date 2017 artwork not included size zip 166 mb tracklist 01 nyna shanti mon

l utopie wikipédia - Jan 08 2023

web utopie terme inventé par thomas more en 1516 à partir d un jeu de mot sur le grec ou ne pas et eu doux utilisés comme préfixe devant topos

définition philo de utopie philosophie magazine - Nov 06 2022

web listen to mon utopie songs online on jiosaavn english music album by nyna shanti 1 mon utopie nyna shanti 2 tant pis nyna shanti 3 je garde tout nyna shanti 4

mon utopie cyberlab sutd edu sg - Jun 01 2022

web hello sign in account lists returns orders cart

stream mon utopie by nyna shanti soundcloud - Oct 05 2022

web jan 25 2016 mon utopie gillette ou le problème économique turin ou le problème social la montagne de sainte geneviève ou le problème religieux la paix la

mon utopie albert jacquard livre de poche - Mar 10 2023

web aug 30 2006 16 25 l auteur albert jacquard polytechnicien et généticien de formation lutte par ses écrits et ses propos pour l édification d une société différente adulte et

compte rendu critique pour loisir société la transition - Oct 25 2021

mon utopie amazon sg books - Mar 30 2022

web aujourd'hui j ai envie de partager avec vous mon premier clip mon utopie si essentiel de continuer à rêver quand la réalité semble dure mon utopie si on s accordait une

mon utopie si on s accordait une parenthèse enchantée - Jan 28 2022

web 2 days ago la une le fil info commentaires partager accueil pourquoi les réponses à vos questions pourquoi ne pas rendre tout gratuit et réaliser l utopie de thomas more

mon utopie wikipédia - Oct 17 2023

mon utopie est un livre écrit par albert jacquard dans lequel il exprime sa vision d une organisation de la société tournée vers la singularité humaine la coopération et les différents droits universels à consolider planétairement ce livre est paru en août 2006 chez l éditeur stock dans cette société idéale les liens l éducation et les rapports entre humains sont des priorités l auteur prône la consolidation de différents droits afin qu ils deviennent inaliénables droits de l être humain

utopie wikipédia - May 12 2023

web utopie illustration de l utopie de thomas more l utopie mot forgé par l écrivain anglais thomas more titre de son livre l utopie du grec οὐ τόπος ou tópos en aucun lieu

définitions utopie dictionnaire de français larousse - Sep 16 2023

web 1 construction imaginaire et rigoureuse d une société qui constitue par rapport à celui qui la réalise un idéal ou un contre idéal 2 projet dont la réalisation est impossible

nyna shanti mon utopie youtube - Apr 11 2023

web aug 20 2018 clip réalisé par françois hanss scénario anthony souchet françois hanssdirection artistique anthony souchetchef opérateur thierry deschampmontage p

nyna shanti mon utopie 2017 music24bit cc - Sep 23 2021

mon utopie albert jacquard stock - Feb 09 2023

web l utopie écrit en latin et publié en 1516 est un ouvrage de l humaniste anglais thomas more ce livre séminal pour le genre littéraire utopique et la pensée utopiste est à

mon utopie songs download free online songs jiosaavn - Sep 04 2022

web listen to mon utopie on spotify nyna shanti song 2017 nyna shanti song 2017 listen to mon utopie on spotify nyna shanti song 2017 sign up log in home

how the universe got its spots diary of a finite time in a finite - May 12 2023

web 15 how the universe got its spots 162 16 the ultimate prediction 178 17 scars of creation 185 18 the shape of things to come 194 epilogue 199 index 201 preface to the 2023 edition ix contents acknowledgements vii consider this a kind of diary from my social exile as a roaming scientist an offering of little pieces of the little piece i have to

how the universe got its spots diary of a finite time in a finite - Aug 03 2022

web how the universe got its spots diary of a finite time in a finite space levin janna free download borrow and streaming internet archive

how the universe got its spots diary of a finite time in a finite - Dec 07 2022

web phoenix 2003 cosmic physics 240 pages 10 reviews reviews aren t verified but google checks for and removes fake

content when it is identified an original and personal quest to discover the size and shape of the universe by an exciting new voice in popular science writing

how the universe got its spots diary of a finite time in a finite - Dec 27 2021

web nov 13 2022 something went wrong view cart for details

how the universe got its spots diary of a finite time in a finite - Apr 11 2023

web jan 10 2023 levin advances the controversial idea that this map is edgeless but finite that the universe is huge but not unending a radical revelation that would provide the ultimate twist to the

how the universe got its spots diary of a finite time in a finite - Jan 08 2023

web janna levin anchor books 2003 cosmology 225 pages from a brilliant and charismatic physicist comes this remarkably lucid tour of the cosmos that mingles engaging personal memoir with a stimulating account of her pioneering investigations

how the universe got its spots diary of a finite time in a finite - Feb 09 2023

web levin advances the controversial idea that this map is edgeless but finite that the universe is huge but not unending a radical revelation that would provide the ultimate twist to the

how the universe got its spots diary of a finite time in a finite - Mar 10 2023

web how the universe got its spots diary of a finite time in a finite space on jstor journals and books journals and books janna levin with a new preface by the author copyright date 2023 published by princeton university press jstor org stable j

ctv2rr3hvw select all for endnote zotero mendeley for

how the universe got its spots diary of a finite time in a finite - Mar 30 2022

web in the book how the universe got its spots levin uses a diary letter style to explain contemporary theoretical physics in a way that is accessible to a layperson like me she weaves the science through stories from everyday life

how the universe got its spots diary of a finite time in a finite - Feb 26 2022

web how the universe got its spots diary of a finite time in a finite space levin ph d janna 9781400032723 amazon com au books books

how the universe got its spots princeton university press - Jul 14 2023

web jan 10 2023 in startling and beautiful prose janna levin's diary of unsent letters to her mother describes what we know about the shape and extent of the universe about its beginning and its end she grants the uninitiated access to the astounding findings of contemporary theoretical physics and makes tangible the contours of space and

how the universe got its spots diary of a finite time - Aug 15 2023

web jan 1 2002 in janna levin's book how the universe got its spots diary of a finite time in a finite space levin combines in the form of a diary personal day to day experiences as a young postdoctoral researcher with an exploration of the nature of

the ultimate topography of universe investigating in depth the implications of einstein s

how the universe got its spots diary of a finite time in a finite - Apr 30 2022

web buy how the universe got its spots diary of a finite time in a finite space reprint by levin ph d janna isbn 9781400032723

from amazon s book store everyday low prices and free delivery on eligible orders

how the universe got its spots diary of a finite time in a finite - Nov 06 2022

web how the universe got its spots looks at how science is coming up sharp against the mind boggling idea that the universe may be finite through a decade of observation and thought experiment we have started to chart out the universe in which we live just as we have mapped the oceans and continents of our planet

how the universe got its spots diary of a finite time in a finite - Jun 01 2022

web jan 1 2003 request pdf on jan 1 2003 janna levin published how the universe got its spots diary of a finite time in a finite space find read and cite all the research you need on researchgate

how the universe got its spots diary of a finite time in a finite - Sep 04 2022

web jan 10 2023 janna levin one of the bright young stars on the interface between topology the study of shapes and cosmology describes her efforts to look for the signatures of a finite universe and offers the reader a unique insight into her life and inner thoughts

how the universe got its spots princeton university press - Jun 13 2023

web jan 10 2023 how the universe got its spots diary of a finite time in a finite space janna levin mixing memoir and visionary science a leading astrophysicist s groundbreaking personal account of her life and ideas look inside

how the universe got its spots diary of a finite time in a finite - Oct 05 2022

web how the universe got its spots looks at how science is coming up sharp against the mind boggling idea that the universe may be finite such a revelation would provide the ultimate twist to the copernican revolution for we would find out exactly where we are in

how the universe got its spots c span org - Jan 28 2022

web ms levin talked about her book how the universe got its spots diary of a finite time and a finite space published by princeton university press the book discusses what is known about the

how the universe got its spots diary of a finite time in a finite - Jul 02 2022

web is the universe infinite or is it just really big does nature abhor infinity in startling and beautiful prose janna levin s diary of unsent letters to her mother describes what we know about the shape and extent of the universe about its beginning and its end