

## Pluto in Sagittarius

by Patricia White, Madalyn Hillis-Dineen and Ray White

When Pluto entered Sagittarius in 1995 for the first time since its discovery, astrologers were fortunate to have computer programs that make it easy to check what Pluto in Sagittarius has meant to the history of the world. Using *Solar Fire's* the advanced return option, we were able to generate a list of all the times since 1 A.D. when Pluto first entered and last left Sagittarius. We then cross-referenced them to the Grolier, Compton's, and Encarta encyclopedias and other internet sources, plus Bernard Grun's *Timetables of History*, to generate the timeline for Pluto in Sagittarius that you will find below.

Pluto is usually said to signify major change or developments, often through destruction and eventual rebirth. Sagittarius is associated with religion, philosophy, the law, education, publishing, politics, faith, idealism, and travel. As one might expect, the Pluto in Sagittarius periods do seem to be dominated by significant religious/ philosophical upheaval and exploration. For example, it is during these times that we find the appearance of Jesus as a public figure, the events leading up to Luther's posting his 95 Theses and setting off the Protestant Reformation, the founding of the Hasidic movement in Judaism, and many watershed moments in science, technology and political thought.

Among many parallels, one emerges that is of particular interest today. It was during Pluto-in-Sagittarius periods that Baghdad was founded in 765, sacked by the Mongols in 1258, and entered by U.S. troops in 2003. (Serendipitously, during the writing of this article we found the sunrise chart for the Mongol sack of Baghdad discussed by Ruth Sugerma in the current issue of *Considerations*. She also presents the chart of the Battle of Roncevalles in 778 -- which occurred at the very end of a Pluto passage through Sag. We were gratified to see that she was using *Solar Fire* to calculate the charts!)

### Types of Pluto-in-Sagittarius Transits

Not all Pluto in Sag transits are alike. Every time Pluto makes one round of the zodiac, Neptune makes almost exactly one-and-a-half trips around. This means that during one Pluto-in-Sag transit, Neptune starts in Capricorn and goes into Aquarius. Then, the next time Pluto is in Sag, Neptune starts in Cancer and goes into Leo. This regular alternation has been going on for thousands of years.

There's also something even more remarkable. Since 998 CE, Pluto's perihelion -- the closest it gets to the Sun during its 248-year orbital cycle -- has been in the tropical sign Scorpio (it moves forward about 3 degrees per Pluto cycle because of precession). Pluto has the most eccentric orbit of all the planets, such that as it approaches perihelion, Pluto comes closer to the Sun than Neptune does. For example, during the current Pluto cycle, Pluto reached perihelion on September 3, 1989 and was traveling inside of Neptune's orbit from January 21, 1979 until February 11, 1999. The closer a planet is to the Sun, the faster it travels. From the end of Libra through the beginning of Sagittarius, therefore, Pluto was traveling faster than Neptune.

This change in relative speed gives rise to something very strange. We all know that when they're viewed heliocentrically, planets don't go retrograde. Therefore, when a heliocentric aspect is over, it's *over*, and there are no triple passes. This is *usually* true -- but not, sometimes, with Neptune and Pluto.

Using *Solar Fire*, we calculated transiting Neptune-Pluto aspects over 6,000 years. To eliminate the unnecessary detail of retrograde passes, we did this heliocentrically. In certain Neptune-Pluto cycles -- but not in others -- we found that Neptune and Pluto formed the same heliocentric aspect three times in a row. First Neptune, traveling faster, aspected Pluto. Then Pluto, speeding up, caught up with Neptune and aspected it. Finally, Pluto returned to its habit of traveling more slowly than Neptune, and Neptune eventually caught up with it to make the final aspect in the series.

The timespan between the first and last of the three exact helio passes can be from 70 to 77 years. However, looked at geocentrically, the aspect can start coming in and out of a 5-degree orb 15 years before the first exact helio aspect and 11 years after the last one. This creates a period of about a hundred years when Neptune and Pluto are dancing together -- if not cheek to cheek all of the time, at least holding hands. This gives rise to protracted aspects like the Long Sextile that we are experiencing during this current Pluto-in-Sag pass.

### **Long Sextiles and Long Trines**

The current Long Sextile between Neptune and Pluto started coming within a 5-degree orb in the late 1930s, and it will not be finished doing so until about 2040. This is not an everyday, or even an every-millennium, occurrence. What we found when searching from 1001 BCE through 5000 CE is that there are only three Long Sextiles (arising from the triple helio aspects of 1465-1538, 1952-2029 and 2442-2518) and two Long Trines (arising from the triple helio aspects of 1710-1782 and 2199-2271). Nothing like this is detectable before or after. Since the Renaissance, we have been in a unique window in time, one that will fade away in the 26<sup>th</sup> century and not return for many millennia, if ever.

Long Sextiles and Long Trines are always the *waxing* sextile (which happens when Neptune is pulling away from the Neptune-Pluto conjunction) and the *waning* trine (which comes after the opposition, when Neptune is moving back toward the next conjunction). In his book *Horoscope for the New Millennium*, E. Alan Meece likens the Neptune-Pluto cycle to the lunar cycle, in which the waxing half denotes a youthful, rising energy, while the waning half, after the opposition, is older, more refined and reflective, a period of consolidation before the next cycle begins.

Meece points out how each Neptune-Pluto conjunction starts a new 493-year chapter, and about 100 years later the waxing sextile accompanies a golden age or renaissance of sorts, even when the sextile is of normal length. The waxing sextile is the vigorous, energetic period that comes before the crisis denoted by the first square. It always occurs in the Pluto-in-Sag periods that happen when Neptune is in Capricorn and Aquarius.

The first *Long* Sextile in recorded history followed the Neptune-Pluto conjunction of 1398-99 and lasted from roughly 1450 to 1550. It accompanied the extraordinary flowering now known as *the* Renaissance. The second Long Sextile followed the next conjunction, the one in 1891-92. It lasts from roughly 1937 to 2040 and is what we are going through now. The final Long Sextile will last from roughly 2427 to 2529.

In between the three Long Sextiles come two Long Trines when Neptune is in Cancer/Leo. The one that has already happened occurred from roughly 1695 to 1793, and coincided with the Enlightenment, the French and American Revolutions, and the beginnings of the Industrial Revolution. In Meece's words, the waning Neptune-Pluto trine comes after the opposition, when "a culture's ideals are most clearly and scientifically defined" and the civilization "attains its greatest

power and expression.” In the waning trinal phase that follows, “the beliefs and ideas of the new civilization are disseminated, distributed and institutionalized. . . . This is usually a happy, light or decadent period” that tends to be fairly “relaxed and peaceful but complacent” (page 49). This describes the 18<sup>th</sup> century quite well (with the exception, maybe, of the French Revolution!), and it’s possible that we can look forward to such a period of relatively peaceful consolidation in the next and final Long Trine of ca. 2185-2282.

### **Other Protracted Neptune-Pluto Aspects**

Curious about whether there have been other types of lingering Neptune-Pluto aspects, we did another search with *Solar Fire 5* for hard aspects and quintiles. Several millennia into the future, we found some Long Squares and Long Quintiles bracketing the Pluto perihelion. And in our whole multi-millennia search, we found one single Long Semisquare of Neptune and Pluto. This was exact heliocentrically in 41 BCE, 24 CE and 29 CE, the years leading up to the ministry and crucifixion of Jesus.

### **Long Sextiles Then and Now**

To get a sense of where we are today in the cycles of history, it may help to look at the previous Long Sextile for parallels with our own age.

The first Long Sextile started to come within orb ca. 1450, within a couple of years of the births of Columbus, Amerigo Vespucci and Leonardo da Vinci. Around that time, Florence rose to prominence under the Medici, and Milan under the Sforzas; the Vatican Library was founded; and Gutenberg printed the Bible, so that greater numbers of people could read it for themselves.

By 1550, when the 100-year Long Sextile was over, the world had changed vastly. Botticelli had painted the Birth of Venus, Leonardo the Mona Lisa, and Michelangelo the Sistine ceiling. America had been discovered, the world had been circumnavigated, and European factories, colonies and missions had been set up in remote lands. The Bible had been translated into the local languages, and Protestant sects had split off from the Church in most countries of Europe. Copernicus had proposed a heliocentric universe, the human body had been mapped by anatomists, botany and geology had become sciences, mathematicians had introduced logarithms and plus and minus symbols, and medicine and book publishing had become recognized professions. Humans had started using diving bells, watches, spectacles, indigo, rubber, spinning wheels, handkerchiefs, and Christmas trees, and they had envisioned flying machines and a Suez canal. Society had started the first mail services, orphanages, lunatic asylums, and pawnshops. The Turks had captured Constantinople and ended the East Roman (Byzantine) Empire, Spain had become a nation state, Russia had become an empire, and German merchants had become so rich and powerful that they lent money to emperors.

Nowadays we are living in the central one of the three Long Sextiles. Immersed in today’s news, we may see mainly the banal and the ugly aspects of our era, its seeming headlong rush toward global warming and a polluted earth, its laws and social institutions being eroded by new customs and ideas and by the threat of terrorism. In reaction to the changes in society, we see entrenched governments, religions and ideologies staging desperate and often vicious fights to retain supremacy. The Long Sextile reminds us that despite all this, we are indeed living through another Renaissance that in many ways parallels the last one. Since the late 1930s, we have gone beyond Earth to explore space, mapped the human genome, greatly extended the average human lifespan, and reached major turning points in our scientific understanding of the universe. But with all this

change, all this expansion and reaching for new heights, inevitably comes dislocation, reaction, and new problems created by the very innovations we have made.

Lest you think that the original Renaissance was all glory, at the same time it was witnessing challenges to Papal authority and the splitting off of Protestant sects. In reaction to this threatened erosion of old institutions came the Inquisition and the Counter-Reformation, with attendant burnings of books as well as humans. Jews were persecuted in Spain, Germany and Hungary. New empires arose, but were challenged by peasant revolts. Technological advances produced the handgun and more efficient warfare. Exploration and colonization produced the beginnings of the slave trade, the export of European diseases that brought down the Inca civilization, and the New World's export of syphilis to Europe. This was surely an amazing hundred years, but, like our own era, it was also a time of general upheaval, hard-to-assimilate change, sometimes vicious reaction, and threats that demanded a creative response.

### **Pluto in Sagittarius**

The symbolism of Sagittarius is very much in alignment with the expansive, exploratory energy of the waxing sextile. We have seen that the current passage of Pluto through Sag is not only during one of the Neptune-Pluto sextile periods, but through one of the rare Long Sextiles. In fact, by a few years, the current Long Sextile is the longest of the three that are known.

This is surely a rare period in history -- one that, despite the problems we face, is a time to cherish. During this particular Pluto-in-Sag sojourn, the way that we handle the challenges and upheavals in our belief systems is especially crucial, for it will determine how Pluto impacts our social structures when it enters Capricorn.

### **A Note about Accuracy**

Compared with the other planets, Pluto is tiny, and therefore easily influenced by the gravitational force of any body that happens to be passing near it. Also, since the first sighting of Pluto in 1930, astronomers have had a chance to observe Pluto's actual position for less than half of a complete orbital cycle. For these reasons, the positions given for Pluto in centuries remote from our own can only be the best guess of astronomers. There may well be unknown factors (like the gravitational pull of yet-to-be-discovered comets or Centaur-class asteroids) that need to be figured into the equations for Pluto to make them more accurate in eras before and after our own.

Because they are using different planetary equations, not all astrology software will agree exactly on the ancient positions of Pluto. The Jet Propulsion Lab ephemeris in use by some programs was designed for pinpoint astronomical observations in the Common Era. However the JPL figures don't exactly match some of the observations of ancient astrologers with regards to the known planets at the time or the predictions based on orbital calculations. The ephemerides used by *Solar Fire 5* and current Astrolabe programs attempt to correct for these discrepancies, but some of the ancient calculations may be off by a few weeks. There is a good discussion of this phenomenon in Chapter 1 of Neil F. Michelsen's book *Tables of Planetary Phenomena*.

### **References**

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Meece, E. Alan. *Horoscope for the New Millennium*. St. Paul: Llewellyn, 1996.

Michelsen, Neil F. *Tables of Planetary Phenomena*. 2<sup>nd</sup> ed. San Diego: ACS Publications, 1993.

*Solar Fire 5*

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## Events during Pluto's Transits of Sagittarius, 26 - 2003 CE

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### Dec 26 - Nov 42

*(Neptune enters Aquarius in 33-34. Long Neptune-Pluto semisquare exact heliocentrically in 41 BCE, 24 CE and 29 CE.)*

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- ca. 27 Jesus is baptized by John the Baptist and begins his public ministry.
- ca. 30 Pontius Pilate, Roman governor of Judea, orders the crucifixion of Jesus.
- 37 Caligula rules Rome (37-44).
- ca. 40 Christian church erected at Corinth.

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### Jan 272 - Nov 287

*(Neptune enters Leo in 277-79.)*

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- 272 Library in Alexandria burns.
- ca. 276 Mani, founder of the Manichean sect, is crucified in Persia.
- 284 Emperor Diocletian (reigns 284-305) bans alchemical books.
- 285 Confucianism is introduced into Japan through Korea.
- 285 Partition of the Roman Empire into East and Western divisions.

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### Dec 517 - Oct 533.

*(Neptune enters Aquarius in 524-25.)*

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- 517 Aryabhata (b. 476) compiles manual of astronomy in India.
- 520 (Some say 475 and some say 526). Zen Buddhism is brought to China by the Indian monk Bodhidharma. He traveled to the Shaolin Temple in China and became honored as the founder of kung fu.
- 522 The oldest known pagoda is erected at Honan, China.
- 523 The Roman scholar Boethius writes *On the Consolation of Philosophy* and is executed the following year.

- 526** Antioch, which, after Rome and Alexandria, is the third great city in the ancient world, is destroyed by an earthquake. Half its population is killed, and the church begun by Emperor Constantine is demolished.
- 529** Justinian (emperor 527-565) establishes a new legal code in the Byzantine empire, bans all non-Christian teachings, and closes the 1000-year-old School of Athens founded by Plato.
- St. Benedict founds the Benedictine order and builds an abbey at Monte Cassino in Italy. Monasticism begins its spread through Europe.
- 531** Constantinople destroyed by Nika Revolt, but is soon to be rebuilt.
- 532** Work begins in Constantinople on the church of Santa Sophia (completed 537).

### **Dec 763 - Nov 778**

*(Neptune enters Leo in 768-70.)*

- 763** The Caliph Al Mansur (754-775) moves the Abbasid Caliphate (the official successors of Mohammed) from Damascus and starts building Baghdad as the new capital. The city is planned by the Jewish mathematician and astrologer, Masha'allah, together with the Persian Ab-Naubakht. By the 1258, when the Mongols invade, the city has 10,000 streets and a population of nearly 2 million.
- 765** In Baghdad, the Karaite Jewish sect. is founded. This is an ascetic group that believes only in literal Biblical translations and not the Oral law. Its existence divides Judaism into two bitterly opposing camps.
- Tibetan army invades China.
- 765** Ismaili sect of Shi'ite Muslims founded in a dispute over religious succession.
- 766** Reign of Anti-Pope Constantine II (until 768).
- Ethelbert and Alcuin found a learning center at York.
- 770** Block printing develops in Japan; 1 million copies of a prayer paper are produced.
- 771** Charlemagne becomes the sole king of the Franks, converts Saxons to Christianity the following year.
- 775** Caliph Mahdi begins an Islamic Inquisition (to 785).
- 778** Charlemagne is defeated by the Basques in the Pyrenees at the Battle of Roncesvalles.

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**Dec 1009 - Nov 1024**

*(Neptune enters Aquarius in 1015-16.)*

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- 1009** Mohammedans sack Holy Sepulcher in Jerusalem.
- 1010** Persian poet Firdawsi completes the *Shah Namah* (Book of Kings).  
The *Tale of Genji*, the first novel, is published in Japan.
- 1012** Pope Benedict VII elected and then driven from Rome by Gregory VI.  
First persecution of heretics in Germany.
- 1013** The Danes conquer England; King Aethelred flees to Normandy.
- 1014** Henry II restores Pope Benedict VII to power .  
Benedict VII crowns Henry II Holy Roman Emperor .  
Vikings driven from Ireland in the Battle of Clontarf.
- 1015** Vikings abandon the Vinland settlement on the coast of North America.
- 1016** Olaf II regains Norway from the Danes and converts it to Christianity.
- 1017** Fatimid Caliph al-Hakim founds the Druze religion.
- 1018** Canute II rules and establishes Christianity in Denmark.
- 1019** Taoist religion given control of Jiangxi province in China.
- 1020** Jaroslav the Wise, Prince of Kiev, codifies Russian law, builds cities, schools and churches.
- 1022** Synod of Pavia insists on celibacy of higher clergy.
- 1024** Poland gains independence from Holy Roman Empire.

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**Dec 1255 - Oct 1270 O.S**

*(Neptune enters Leo in 1259-61.)*

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- 1257** The Sorbonne is founded as a theological college at the University of Paris.
- 1258** The Mongols sack Baghdad, destroying ancient artifacts and ending the Abbasid Caliphate.  
House of Commons established in England.



**1259** St. Thomas Aquinas becomes Papal philosopher.

**1260** Kublai Khan is proclaimed as the Mongol emperor.

The first organized self-flagellation movements among Christians appear in Italy.

Chartres Cathedral is consecrated.

First school of Mastersingers, in Mainz.

**1261** Michael VIII regains Constantinople (Istanbul) and reestablishes the Byzantine Empire.

Pope Urban consolidates Papal Power. (1261-4)

**1263** Norway gains control of Iceland.

Barons' War: English nobles revolt against royal power and disagree over the Magna Carta (1263-7).

Balliol College, Oxford, founded. Merton College founded the following year.

**1268** Papacy is vacant for three years (until 1271).

Eyeglasses make their appearance.

**1270** Louis IX dies fighting the last of the Crusades.

### **Jan 1502 - Oct 1516 (O.S.)**

*(Neptune enters Aquarius in 1506-7. Long Neptune-Pluto sextile exact heliocentrically in 1466, 1476 and 1538.)*

**1502** A peace treaty is established between Venice and the Ottoman Turks.

Shah Ismail founds the Safavid dynasty, and Shi'ism soon becomes the religion of Persia.

Columbus sails on his fourth and last voyage of discovery (to 1504).

Vasco da Gama founds Portuguese colony at Cochin, India.

Vespucci, on his second voyage, concludes that South America is not India.

University of Wittenberg founded. Professorships of Divinity founded at Oxford and Cambridge.

**1503** Copernicus receives doctorate in Canonical law and then completes his treatise on heliocentric astronomy (1503-10).

Juan Bermudez lands on the island of Bermuda, which is named for him.

Battle of Cerignola, in which Spanish defeat the French in Italy, is the first to be won with hand-held gunpowder weapons (arquebuses).

The Spanish crown approves *encomienda* (enforced slavery) in the American colonies.

Leonardo da Vinci begins work on the Mona Lisa.

Nostradamus born.

Zanzibar becomes a Portuguese colony.

Canterbury Cathedral is completed (begun 1070).

**1504** The watch is invented by Peter Heinlein.

University of Santiago de Compostela is established by Pope Julius II.

Venice sends ambassador to Sultan of Turkey proposing construction of a Suez canal.

Vienna-Brussels postal service extended to Madrid.

**1506** Construction of St. Peter's Basilica begins.

Johann Reuchlin publishes a Hebrew grammar and dictionary.

Foundation of University of Frankfurt an der Oder.

Augsburg merchant Jakob Fugger imports spices from East Indies by sea. Amasses great fortune, is knighted in 1508, and in 1509 lends Holy Roman Emperor Maximilian I 170,000 ducats to finance a war against Venice.

Machiavelli creates the Florentine Militia, the first national army in Italy, and serves French and German Emperors

**1507** First map of America published by Martin Waldseemüller, who proposed that the New World be named after Amerigo Vespucci.

Martin Luther ordained.

**1508** Michelangelo begins painting the ceiling of the Sistine Chapel in Rome.

**1509** Henry VIII becomes King of England.

John Calvin born.

Jews persecuted in Germany; Jewish books confiscated and destroyed.

Foundation of Brasenose College, Oxford, and St. John's College, Cambridge. Erasmus lectures at Cambridge.

An earthquake destroys Constantinople.

**1511** Pope Julius II organizes a Holy League against Louis XII of France.

**1512** First Christian church in the Americas erected in Santo Domingo.

5<sup>th</sup> Lateran Council pronounces doctrine of the immortality of the soul.

**1513** Balboa discovers the Pacific Ocean and claims it for Spain.

Machiavelli writes *The Prince*, a practical handbook for attaining political power. (Published posthumously in 1532.)

**1514** The Portuguese are the first Europeans to sail vessels into Chinese waters.

**1515** Lateran Council forbids book publishing without Church's permission.

**1516** Gallican Church in France absorbed by Pope Leo X.

Sir Thomas More's *Utopia*.

(And just as Pluto enters Capricorn, Martin Luther posts his 95 Theses, officially beginning the Protestant Reformation.)

## **Dec 1748 - Nov 1762**

(Neptune enters Leo in 1751-52. Long Neptune-Pluto trine exact heliocentrically in 1710, 1732, and 1782.)

**1748** French political philosopher Montesquieu writes *The Spirit of the Laws*.

Skeptic David Hume publishes *An Enquiry Concerning Human Understanding*.

Thomas Lowndes founds an Astronomy chair at Cambridge University.

J.S. Bach writes *The Art of the Fugue*.

First subscription library opens in Charleston, South Carolina.

Marie-Therese Geoffrin opens a salon for Parisian men of letters.

**1749** Father Junipero Serra sent to found missions in Mexico.

Sign language invented for deaf-mutes.

**1750** The Industrial Revolution begins (according to Compton's).

The Afshars are replaced by the Zand dynasty in Persia; Shiraz becomes the capital.

Baal Shem Tov founds the Jewish sect of Hasidism about this time.

American frontiersman Christopher Gist explores the Ohio River region, and the Conestoga wagon is developed in Pennsylvania.

The Neoclassical movement in art begins in Europe around this time.

The Universalist faith and the Shaker religious sect are founded in England.

The first playhouse opens in New York; puts on *The Beggar's Opera*.

Nicolas de Lacaille leads expedition to Cape of Good Hope to determine solar and lunar parallax.

Johann Tobias Mayer publishes map of the Moon.

**1751** Denis Diderot publishes his famous *Encyclopedie*.

Benjamin Franklin founds University of Pennsylvania.

China invades Tibet.

David Hume, "Enquiry concerning the Principles of Morals."

The power of the Portuguese Inquisition is curtailed by the government.

British calendar is altered by act of Parliament so that new year begins on January 1. Adopts Gregorian Calendar the following year, omitting September 3-13.

First English newspaper in Canada.

**1752** Benjamin Franklin invents the lightning conductor.

The Liberty Bell cracks.

**1753** The British Museum is founded in London.

**1754** French attacks against the English in Ohio lead to the last French and Indian War.

**1755** Adventurer and lover Casanova is arrested in Venice for witchcraft.

Lisbon earthquake kills 50,000.

**1756** The Seven Years' War begins with a Prussian attack on Austria.

Mozart born.

**1759** French poet and dramatist Voltaire publishes his philosophical novel *Candide*.

**1760** The Russians invade Prussia and burn Berlin.

George II dies and is succeeded as king of England by his grandson, George III.

**1762** Native American religious leader, the Delaware Prophet, is active in the Ohio Valley.

France cedes Louisiana to Spain to prevent British control of the region.

French philosopher Rousseau publishes *The Social Contract* and *Emile*.

Mozart, at age 6, performs at the Imperial court in Vienna.

The Russian Stephan Gottov explores the Kodiak Islands in Alaska.

### **Jan 17 1995 - Nov 26 2008**

*(Neptune enters Aquarius in 1998. Long Neptune-Pluto sextile exact heliocentrically on 11/11/1952, 8/28/1981, and 5/29/2029.)*

**1995** Murrah Federal Building in Oklahoma City is bombed on 2nd anniversary of the Waco Branch Davidian tragedy, killing 168 people, including many children.

Oslo Accords II signed, granting Gaza and various territories in the West Bank to Palestinian Authority.

Nobel Prize winner and Israeli Prime Minister Yitzhak Rabin is assassinated by an Israeli right-wing extremist.

Swiss astronomers Michel Mayor and Didier Queloz announce the first discovery of an extra-solar planet, found near the star 51 Pegasi. .

A sarin gas attack in the Tokyo subway system kills 12 and sickens more than 5,000 and is attributed to a bizarre religious cult, Aum Shinrikyo.

France explodes a nuclear device in the Pacific; wide protests ensue.

Pope John Paul II visits U.S.

“Million Man March” draws hundreds of thousands of black men to Washington.

FBI thwarts terrorist plots directed at New York landmarks.

The US government turns the internet over to private companies and domain names are no longer free.

The World Wide Web becomes the number one use of the internet.

The internet explosion begins in earnest as CompuServe, America Online, and Prodigy begin to offer internet access.

RealAudio, an audio streaming technology, allows internet users to hear sounds virtually at the same time they are produced.

The *Washington Post* and *New York Times* jointly publish the Unabomber's 35,000-word manifesto, "Industrial Society and Its Future," following the serial bomber's promise to stop his attacks. The document warns of the destructive influence of modern technology on society.

**1996** France announces an end to its atomic testing.

Britain alarmed by deadly mad cow disease.

UN tribunal charges war crimes by Bosnian Muslims and Croats.

Chechnya peace treaty signed.

Israel elects conservative Benjamin Netanyahu as Prime Minister.

China agrees to world ban on atomic testing.

Truck bomb kills 19 at U.S. military base in Saudi Arabia.

The U.S. fires Cruise missiles into Iraq after the country invades safe havens for the Kurds.

7-year-old Jessica Dubroff is killed while attempting to become the youngest person to fly across the U.S.

Taliban Muslim fundamentalists capture the Afghan capital, Kabul.

Kofi Annan named UN Secretary-General.

Prince Charles and Princess Diana are divorced.

Unabomber arrested.

A study dates the Chinese *Homo erectus* fossils collectively known as "Peking Man" to at least 400,000 years ago.

Archaeological finds at a 600,000-year old Israeli site suggest that human ancestors carried African cultural traditions to the Middle East in a series of population movements.

Researchers unveil the Hubble Deep Field, the most detailed view of a patch of sky ever taken. Analysis of the images spawns fresh insights into the birth and evolution of galaxies, as well as the fate of the cosmos.

Researchers report firm evidence that a black hole lies at the heart of our galaxy.

Myrrh, an ancient balm and one of the gifts given to the infant Jesus by the three astrologers, is shown to have pain-killing properties.

In a controversial report, scientists announced that a meteorite from Mars may contain fossils of primitive Martian bacteria.

The World Wide Web browser war, fought primarily between Netscape and Microsoft, rushes in a new spurt of software development.

**1997** In civil trial, O.J. Simpson found liable for deaths of Nicole Brown Simpson and Ron Goldman; ordered to pay \$33,500,000 compensation.

Timothy McVeigh convicted of Oklahoma City bombing.

In a 33-hour spacewalk, astronauts recalibrate the Hubble Telescope.

Space shuttle Atlantis docks with Russia's Mir space station twice in four months to drop off and pick up astronaut Michael Foale.

The Mars Sojourner becomes the first vehicle to navigate the surface of another planet.

Newt Gingrich becomes first Speaker of the House in U.S. history to be censured and fined for ethical misconduct.

President Clinton re-dedicates the renovated Library of Congress on its 100th anniversary.

The U.S. Supreme Court rules that Paula Jones can pursue her sexual harassment case against President Clinton while he is in office.

Beth Ann Hogan becomes the first female to attend the Virginia Military Institute.

Over 1,300 African-American employees share a \$115,000,000 race discrimination settlement from Texaco.

39 members of the Heaven's Gate cult commit mass suicide; they apparently believed they were going to meet a UFO hiding behind the Hale-Bopp comet.

Book distributor Baker & Taylor is accused of overcharging libraries and schools by hundreds of millions of dollars.

200,000 children are inoculated for hepatitis A after the disease is traced to frozen strawberries in the school lunch program.

Nearly a half-million Christian men rally at Promise Keeper's event in Washington.

3 are killed and 5 injured when a 14-year-old fires shots into a prayer group at a West Paducah, Kentucky, high school.

Mike Tyson is disqualified after biting off a piece of Evander Holyfield's ear while fighting him for the heavyweight boxing title.

Tiger Woods becomes the first non-white golfer to win the Masters tournament.

The Southern Baptist Convention votes to boycott all Disney products and media, including ABC-TV, which had broadcast the "coming out" episode of the sitcom *Ellen*.

Singer John Denver dies when his experimental plane crashes off the coast of Monterey, California.

The Hale-Bopp comet is visible.

Hong Kong is returned to China.

The Pathfinder space mission sends back images of Mars

Princess Diana and Dodi Al-Fayed die in a car crash along with their driver. The accident is blamed on the paparazzi. On the same day, Mother Teresa dies of a heart attack at the age of 87.

Scientists first clone sheep.

The tallest buildings in the world open in Kuala Lumpur.

**1998** A Republican-majority House of Representatives votes three articles of impeachment against President Bill Clinton for lying about sexual matters in a sworn deposition.

Republicans endorse Bob Livingston, a vocal critic of President Clinton's sexual misconduct, as Speaker of the House. Livingston withdraws when it is disclosed that he, too, has had an extramarital affair.

President Clinton settles Paula Jones' sexual harassment suit with \$850,000 and no apology or admission of guilt. Jones uses the money to start a psychic hotline.

At age 77, former astronaut John Glenn returns to space aboard the shuttle Discovery.

12 Americans are among nearly 500 killed in bombings of U.S. embassies in Kenya and Tanzania.

Microsoft chairman Bill Gates donates \$100,000,000 to help children in developing countries get basic immunization.

The U.S. finds itself in yet another standoff with dictator Saddam Hussein after Iraq bans American members of the United Nations weapons inspection team.



Chrysler Corporation is purchased by the owner of Mercedes-Benz for \$37,000,000,000.

Three white Texans are charged with the vehicular dragging death of African-American James Byrd, Jr.

Astronomers determine that a one-mile-diameter asteroid, which some had thought was on a collision course with Earth, would miss the planet by 600,000 miles.

Terry Nichols receives a life sentence for his part in Oklahoma City bombing.

15-year-old Kip Kinkel kills his parents, then opens fire on a Springfield, Oregon, school cafeteria, killing 1 and wounding 23.

The FDA approves the use of Viagra for the treatment of impotence.

CBS-TV is flooded with complaints after airing footage of assisted-suicide advocate Dr. Jack Kevorkian administering lethal drugs to a terminally ill patient.

Netscape releases the source code for its Netscape Navigator browser into the public domain.

Microsoft releases Windows 98. Months later, the government orders Microsoft to change its Java virtual machine to pass Sun's Java compatibility test.

Microsoft is taken to court for allegations of anti-trust violations.

India and Pakistan test nuclear weapons.

**1999** President Clinton's impeachment trial begins in the Senate on January 7th. He is acquitted on Lincoln's Birthday.

George W. Bush, the Republican frontrunner for the party's Presidential nomination in 2000, states that questions about whether or not he used cocaine in college were part of a political media game.

Technicians scramble to fix "Y2K bugs," problems that could render computers that use two-digit years unusable after December 31, 1999.

John F. Kennedy, Jr., his wife, and her sister are killed when the small plane he was piloting crashes off the coast of Martha's Vineyard, Massachusetts.

Dylan Klebold and Eric Harris kill 11 students, 2 faculty members and themselves at Columbine High School in Littleton, Colorado.

7 die when Larry Ashbrook tosses a bomb into a Fort Worth church, then shoots 14 people and himself.

Widespread protests erupt in the streets as the World Trade Organization meets in Seattle.

NATO troops attack Serbia

The Panama Canal is returned to Panama

Stardust mission explores a comet for the first time.

**2000** USS Cole is attacked in Yemen by Al Qaeda terrorists.

New Israeli Prime Minister Ariel Sharon tours al-Aqsa Temple, precipitating a new Intifada uprising.

Pope John Paul II apologizes for the violent history of the Catholic Church.

George W. Bush is elected U.S. President after losing the popular vote but winning the electoral vote. The election is further clouded by reports of voter irregularities in the State of Florida which are played out in the Florida State Courts and the U. S. Supreme Court.

China is granted permanent normal trade relations (PNTR).

A U.S. District Judge rules that Microsoft, the world's largest software company, is a monopoly and had competed illegally.

Napster, a leader in the digital media revolution, battles a legal challenge over cyberspace copyrights.

Illinois Governor George Ryan, once a death penalty supporter, announces that he has "grave concerns about our state's shameful record of convicting innocent people," and calls for a moratorium on executions.

China bans the posting and dissemination of "state secrets" on the internet, applying this term to any information that the government has not approved.

The half-century of antagonism between North and South Korea eases dramatically when South Korea's Kim Dae Jung meets with Kim Jong II, marking the first-ever meeting of the leaders of the two countries.

In a development that promises to revolutionize medicine, researchers from two competing teams complete a draft of the human genome, the master blueprint for the human body.

NEAR become first artificial satellite to circle an asteroid as it links up with Eros..

A 6-year-old boy shoots a classmate, also 6, at an elementary school in Mount Morris Township, Michigan.

The crew of the *Endeavor* finishes Earth mapping and returns to Earth after gathering radar images that will be used to create highly accurate three-dimensional maps.

**2001** Arab terrorists, allegedly linked to al-Qaeda, attack the World Trade Center and the Pentagon, killing several thousand people and bringing to a head the conflict between the Islamic and Western cultures.

U.S. declares war on terrorism.

Oklahoma City bomber Timothy McVeigh executed.

Repeated terrorism and suicide bombings of Jewish civilians cause Israeli politicians to declare an end to the Oslo Accords; Israel begins to target Palestinian leaders and destroy PLO bases on the West Bank.

Anthrax scare rivets the U.S., and several die as anthrax-laced letters are sent to various media and government officials.

U.S. and British forces launch a bombing campaign against the Taliban government and al-Qaeda terrorist camps in Afghanistan.

The Taliban regime in Afghanistan collapses after two months of bombing by American war planes and fighting by Northern Alliance ground troops.

NEAR spacecraft is the first to land on an asteroid (Eros).

In the U.S., passage of the Patriot Act tightens laws in the name of security and erodes civil liberties.

Scientists create the first genetically engineered primate, a rhesus monkey.

Two teams present the first analyses of the full human genome and estimate that it contains only about 30,000 genes.

President Bush abandons the Kyoto global warming treaty, angering European leaders.

President Bush agrees to permit limited research on human embryonic stem cells. Scientists learn how to transform those cells into insulin-secreting and heart cells.

Discovery of a trove of planets orbiting stars other than the sun suggests that astronomers have finally found a planetary system similar to our own.

The first transatlantic surgery takes place when physicians in New York electronically manipulate a robot in Strasbourg, France, to remove a woman's gall bladder.

Scientific and political controversy is ignited when a biotech firm claims to have created the first cloned human embryos.

**2002** The pedophile scandal in the Catholic Church escalates as a former priest is convicted of indecent assault and battery for fondling a young boy in 1991.

In Newton, Massachusetts, the Voice of the Faithful organization is founded in reaction to the Church's handling of the sex-abuse crisis. One of their goals is to foster structural change within the Church. By the end of the year, the group numbers over 30,000.

The increase in the popularity of alternative religions spills over into the mainstream with TV series like *Charmed* and *Buffy the Vampire Slayer*, and children's books like the Harry Potter series.

Hindu-Muslim clashes in western India claim almost 400.

Pope John Paul II calls the wave of pedophile cases "a dark shadow of suspicion" cast over all clergy.

In a speech following a suicide attack in a Haifa restaurant that killed 15, Israeli prime minister Ariel Sharon calls Yasir Arafat the enemy of the entire free world.

Fleeing Israeli incursion, more than 250 Palestinians hole up in the Church of the Nativity. Later worship services resume after a peaceful ending to the occupation.

The Pope summons cardinals to Rome to discuss the sex-abuse scandal.

The Temple Institute reports that a red heifer is born in Israel. This omen is considered an important part of preparations leading to rebuilding the future Third Temple in Jerusalem.

There are 13 shootings and 10 fatalities as the Washington, D.C., metropolitan area is terrorized for three weeks by a dual sniper team shooting from a car trunk. The elder sniper is found to be a recent convert to Islam.

Israeli prime minister Sharon accepts a U.S. peace plan that includes a Palestinian state in parts of the West Bank and Gaza Strip as long as Yasir Arafat is removed from power.

Calling the procedure unsafe, a panel of scientific experts opposes the cloning of babies, but it supports cloning for the treatment of disease.

Controversial genetic analysis concludes that *Homo sapiens* evolved beginning at least 600,000 years ago by leaving Africa in multiple waves, and then interbreeding with Neanderthals and other close relatives.

58 priests sign a letter asking Cardinal Bernard Law to resign as head of the Boston Archdiocese because of his poor handling of the sex-abuse crisis. Pope John Paul II accepts Cardinal Law's resignation.

Scientists show that stem cells derived from cloned mouse and cow embryos can cure some animal diseases and can create organs such as kidneys.

Researchers show that bone marrow from adults contains cells that can mature into many specialized types.

Scientists theorize that a catastrophic outpouring of water, in a volume four times that of Lake Tahoe, may have gushed from fissures near the equator on Mars as recently as 10 million years ago.

President George W. Bush calls for total ban on human cloning, and urges the Senate to pass legislation forbidding the procedure for both reproductive and research purposes.

A spokeswoman for Raëlians, a sect that believes that space travelers created humans by cloning, says group has created the first human clone, a 7-pound baby girl. President Bush, United Nations Secretary General Kofi Annan, and other leaders condemn the claim, which was never substantiated.

**2003** Mapping of the human genome is completed.

North Korea is reported to have restarted nuclear reactor.

The United States, with the help of Great Britain and Australia, attacks Iraq.

U.S. forces take control of Baghdad, but sporadic fighting continues throughout the capital. Massive looting begins throughout the country, and includes some Iraqi museum treasures dating back to antiquity.

As it re-enters the earth's atmosphere, the Space Shuttle Columbia explodes, killing the crew, including the first Israeli astronaut.

Astronomers confirm the Big Bang theory of the origin of the universe.

The World Health Organization calls the severe acute respiratory syndrome (SARS) virus a worldwide health threat.

The United States Supreme Court upholds affirmative action and affirms that race can be used in university admission decisions.

The Supreme Court strikes down Texas law banning consensual sex acts in private between adults of the same sex.

Anglicans elect the Rev. V. Gene Robinson as first openly gay bishop, offending conservative Episcopalians and threatening the breakup of the worldwide Anglican Communion.