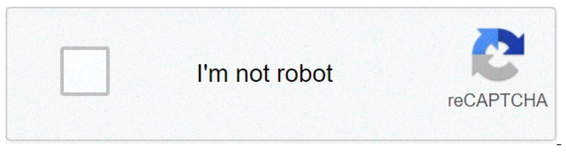

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Famous french astronomers

Who are the Black Astronomers & Astrophysicists? Beth A. Brown Arthur B.C. Walker Neil deGrasse Tyson From an article (in pdf) From Banneker to Best: Some Stellar Careers In Astronomy and Astrophysics, an article on Black Astronomers by Robert Fikes: Studying the alignment of nineteen megaliths near Kenya's Lake Turkana in the Rift Valley, a region inhabited by the ancient Cushites, archaeologists have concluded that, among other things, these basalt columns functioned as astronomical observation tools and that they were key to the plotting of the Borana Calendar circa 300 BC. This stellar-lunar calendar is still used today by the pastoral Borana people of southern Ethiopia and northern Kenya. And although acquisition of knowledge of the existence of the Sirius star-system by the Dogon people of Mali has been the topic of heated debate, pitting Afrocentric proponents against Eurocentric skeptics, the point that is usually overlooked is the vital importance of examining the heavens to pre-industrial societies from one end of the continent to the other who relied on the stars to determine seasonal cycles, timing of festivals and rituals, crop planting and harvesting, and mating intervals. Today (2002) only 16 of the 3,302 PhD physicists at US National Labs are black. In these web pages we profile those modern astronomers of the african diaspora. Posters and Exihibiton: African Americans in Space Science Who are the Black ASTRONOMERS & ASTROPHYSICISTS ? (click on links below for more) RECENT DEATHS . I dedicate this web site to two of my Physics teachers, Dr. Herman Branson and Dr. Julius Taylor. I wish to thank three major contributors of information to this web site, Robert Fikes, Jr. of San Diego University and Dr. Hakeem M. Oluseyi of Lawrence Berkeley National Laboratory, and Dr. Ronald E. Mickens of Atlanta University. . Further references: Carwell., Blacks in Science: Astrophysicist to Zoologist. (Hicksville, N.Y.: Exposition Press), 1977 Diop, The African Origin of Civilization: Myth or Reality, Lawrence Hill and Co., Westport. Presence Africaine, Paris, 1967. Mickens, The African American Presence in Physics,. Van Sertima, Blacks in Science, Transactions Books, 1983. p. 258-262. posters on African Americans in Math and Science REFERENCES More Black Physics Links VISITORS since opening 5/27/1997 Discoverer of 15 comets. Creator of a catalog of nebulous objects known today as the Messier Album or Messier Catalog. This catalog contains locations and detailed descriptions of 110 of the brightest deep sky objects in the universe. It has become a favorite among amateur astronomers throughout the world. Charles Messier, was a French Astronomer whose work on the discovery of comets led to the compilation of a catalog of deep sky objects known today as the Messier Catalogue of nebulae and star clusters. Messier was born in Lorraine, France on June 26, 1730. His father died when he was 11, and since he was the tenth of twelve children he had very little opportunity for education. He developed an interest in astronomy as a boy after he saw the brilliant six-tailed comet of 1744. He was eventually hired as a draftsman by Joseph-Nicholas de l'Isle, Astronomer to the French Navy. During this time, he learned to use astronomical instruments. He became a skilled observer, and was later promoted to clerk at the Marine Observatory at the Hotel de Cluny in Paris. The astronomer Edmund Halley had predicted that the comet of 1682 would return again in late 1758 or early 1759. Using charts that had incorrectly been prepared by de l'Isle, Messier began searching for the comet with a small reflector telescope. He eventually located the it on January 21, 1759, but de l'Isle initially refused to let Messier announce his discovery. From that time forward, Messier devoted his life to the search for comets. In the following years he discovered as many as 21 comets by 1798. While searching on August 28, 1758, Messier discovered a small nebulous (fuzzy) object in the constellation of Taurus. It is known today as the Crab Nebula, the remains of a supernova explosion. He decided to keep a listing of these objects so that they would not be mistaken for comets in the future. The Crab Nebula, also known now as M1, became the first entry in what would eventually become the most famous list of galaxies, nebulae and star clusters ever assembled. It is ironic that Messier became famous for this listing of "time-wasting objects to avoid when comet hunting" and not for the comets he was seeking. In 1759, Messier became the chief astronomer of the Marine Observatory. He was also elected to the Royal Society of London in 1764 as well as the Paris Academy of Sciences in 1770. King Louis XV gave Messier the nickname "Comet Ferret." During a seven-month period of searching for comets in 1764, Messier added 38 new objects to his list including M13 (the great globular cluster in Hercules), the Swan Nebula (M17) in Sagittarius and the Andromeda galaxy (M31). In January of the following year he logged M41, the open cluster southwest of Sirius. Messier determined the positions of the Orion Nebula (M42 and M43), the Beehive cluster (M44) and the Pleiades (M45) on March 4, 1769. Messier also began compiling reports of discoveries by other astronomers. In fact, only 17 of the 45 objects in the first installment of Messier's catalog published in 1774 were discovered by Messier himself. By 1780 the number of objects in his catalog had increased to 80. Messier made his last discovery in 1798. He continued to observe until he suffered a debilitating stroke. Two years later on April 12, 1817 he died at the age of 86. Today there are a total of 110 objects in the Messier catalog. Seven of these objects were added in the twentieth century. M110, the last entry, was added in 1967. These are among the brightest deep sky objects in the sky, which makes them favorite targets for amateur astronomers. In fact, The "Messier marathon" has become somewhat of a rite of passage for amateur astronomers around the world. The goal it to see how many of the 100 objects can be located and viewed in a single night. The Messier catalog is considered by many to contain the best deep sky objects visible in the northern hemisphere. Wikipedia list article The following are list of French astronomers, astrophysicists and other notable French people who have made contributions to the field of astronomy. They may have won major prizes or awards, developed or invented widely used techniques or technologies within astronomy, or are directors of major observatories or heads of space-based telescope projects. The list The following is a list of notable French astronomers. A Abba Mari ben Eligdor Jacques d'Allonville Marie Henri Andoyer Voituret Anthelme Pierre Antonini François Arago Henri Arnaut de Zwolle Jean Audouze Adrien Auzout B Benjamin Baillaud Jules Baillaud Jean Sylvain Bailly Paul Baize Fernand Baldet Odette Bancilhon Daniel Barbier Joseph-Émile Barbier Aurélien Barrau Maria A. Barucci Aymar de la Baume Pluvinel Michel Benoist Bernard of Verdun Guillaume Bigourdan Immanuel Bonfils Jean-Marc Bonnet-Bidaud Alphonse Borrelly Jean Bosler Joseph Bossert François Bouchet Alexis Bouvard Louis Boyer P. Briault Ismaël Bullialdus Johann Karl Burckhardt C Michel Cassé César-François Cassini de Thury Dominique, comte de Cassini Jacques Cassini Roger Cayrel Catherine Cesarsky Joseph Bernard de Chabert Jean Chacornac Merieme Chadid Daniel Chalonge Jean-Baptiste Chappe d'Auteroche Auguste Charlois Sébastien Charnoz Jean Chazy Olivier Chesneau Henri Chrétien Jean-Pierre Christin Alexis Clairaut Jérôme Eugène Coggia Françoise Combes Janine Connes Eugène Cosserat Pablo Cottenot André Couder Fernand Courty D Joseph Lepaute Dagelet Michel Ferdinand d'Albert d'Ailly Marie-Charles Damoiseau André-Louis Danjon Antoine Darquier de Pellepoix Jean Baptiste Joseph Delambre Charles-Eugène Delaunay Joseph-Nicolas Delisle Gabriel Delmotte Audrey C. Delsanti Jules Alfred Pierrot Deseilligny Henri-Alexandre Deslandres Audouin Dollfus Jean Dufay Jeanne Dumée Noël Duret E Ernest Esclangon F Louis Fabry Pierre Fatou Hervé Faye Charles Fehrenbach Louis Feuillée Agnès Fienga Oronce Finé Camille Flammarion Gabrielle Renaudot Flammarion Honoré Flaugergues Jean Focas Georges Fournier G Jean Baptiste Aimable Gaillot Jean-Félix Adolphe Gambart Pierre Gassendi Casimir Marie Gaudibert Gersonides Michel Giacobini Louis Godin François Gonnessiat H Maurice Hamy Michel Hénon Paul Henry and Prosper Henry Pierre Hérigone Gustave-Adolphe Hirn J Pierre Janssen René Jarry-Desloges Stéphane Javelle Edme-Sébastien Jeaurat Benjamin Jekhowsky Robert Jonckhère K Samuel Kansi Dorothea Klumpke L Philippe de La Hire Antoine Émile Henry Labeyrie Nicolas-Louis de Lacaille Joseph-Louis Lagrange Joanny-Philippe Lagrula Jérôme Lalande Marie-Jeanne de Lalande Michel Lefrançois de Lalande André Lallemand Félix Chemla Lamèch Pierre-Simon Laplace Jacques Laskar Marguerite Laugier Paul-Auguste-Ernest Laugier Joseph Jean Pierre Laurent Jean Le Fèvre Guillaume Le Gentil Pierre Charles Le Monnier Urbain Le Verrier Nicole-Reine Lepaute Edmond Modeste Lescarbault Emmanuel Liais Jean-Baptiste Lislet Geoffroy Maurice Loewy Jean-Pierre Luminet Bernard Lyot M Louis Maillard Jean-Jacques d'Ortous de Mairan Giacomo F. Maraldi Giovanni Domenico Maraldi Claude-Louis Mathieu Pierre Louis Maupertuis Alain Maury Victor Mauvais Pierre Méchain Jean-Claude Merlin Charles Messier François Mignard Gaston Millochau Henri Mineur Antonio Mizauld Théophile Moreux Jean-Baptiste Morin (mathematician) Ernest Mouchez N Charles Nordmann P André Patry Jean-Claude Pecker Nicolas-Claude Fabri de Peiresc Julien Peridier Henri Joseph Anastase Perrotin Frédéric Petit Pierre Petit (engineer) Jean Picard Louise du Pierry Alexandre Guy Pingré Christian Pollas Jean-Louis Pons Philippe Gustave le Doulcet, Comte de Pontécoulant Jean-Loup Puget Pierre Puiseux Q Ferdinand Quénisset R Georges Rayet Jean Richer Édouard Roche Pierre Rousseau Augustin Royer Lucien Rudaux S Nicolas Sarrabat Félix Savary Évry Schatzman Alexandre Schaumasse Alfred Schmitt Jean-François Séguier Achille Pierre Dionis du Séjour Édouard Stephan Frédéric Sy Pope Sylvester II T Agop Terzan Louis Thollon Félix Tisserand Étienne Léopold Trouvelot V Jacques Vallée Joseph Gaultier de la Vallette Benjamin Valz Gérard de Vaucouleurs Philippe Véron Pierre-Antoine Véron Yvon Villarceau W Charles Wolf References Astronomical Society of the Pacific: Women in Astronomy See also List of women astronomers List of Russian astronomers and astrophysicists Retrieved from " The first thing we should clarify in this biography is Giovanni Cassini's name. He was given the name Giovanni Domenico by his parents, Jacopo Cassini and Julia Crovesi, after his birth in Italy. However he also used the name Gian Domenico Cassini, and after he moved to France, he changed his name to the French version of Jean-Dominique Cassini. To add just one more comment to the question of his name, he was the first of the famous Cassini family of astronomers and as such is often known as Cassini I. We know little of his parents but certainly his father was a Tuscan. In fact Giovanni was brought up, not by his parents but by an uncle, a brother of his mother Julia Crovesi. After spending two years being educated at Vallebone, Cassini entered the Jesuit College at Genoa where he studied under Casselli. After this he studied at the abbey of San Fructuoso. Taton writes [1]:- He showed great intellectual curiosity and was especially interested in poetry, mathematics and astronomy. His first interest, however, was in astrology rather than astronomy. He read widely on this topic and soon was very knowledgeable, yet was convinced that there was no truth in astrological predictions. It was, rather strangely, his extensive knowledge of astrology that led to his first appointment. In 1644 the Marquis Cornelio Malvasia, who was a senator from Bologna with a great interest in astrology, invited Cassini to Bologna. He offered him a position in the Panzano Observatory which he was constructing at that time. From 1648 Cassini observed at the Panzano Observatory with instruments which he had purchased with financial resources from the Marquis Malvasia. This was an important time for Cassini who learnt much from the outstanding Jesuit scientists Giovanni Battista Riccioli and Francesco Maria Grimaldi (who later discovered diffraction). In 1650, Cassini became professor of mathematics and astronomy at the University of Bologna, filling the chair which had been vacant since the death of Cavalieri at the end of November 1647. This appointment came about through the support of the Marquis Malvasia whose important position in Bologna gave him considerable influence in naming Cavalieri's successor. Cassini observed a comet in 1652-3 and he published an account of his observations which he dedicated to the Duke of Modena. From the work we can see that at this time Cassini believed in an Earth centred solar system, with comets beyond Saturn but originating from the Earth. Observations would lead him to accept the model of the solar system proposed by Tycho Brahe and, in 1659, he presented an Earth centred system with the moon and sun orbiting the Earth and the other planets orbiting the sun. Later he came to accept a version of the Copernican model. One of Cassini's predecessor's as professor of mathematics and astronomy at Bologna had been Egnatio Danti who had been appointed in 1576. Danti had built a gnomon at the Church of San Petronio in Bologna, one of the largest Christian churches ever built. A small hole allowed the rays of the sun to enter the church. They formed a small image on a scale on the floor which allowed the position of the sun to be accurately determined. The church of San Petronio had mostly been built between 1445 and 1525, but work continued on extending it and not long before Cassini arrived in Bologna further building work had made Danti's gnomon unusable [1]:- In 1653, Cassini, wishing to employ such an instrument, sketched a plan for a new and larger [gnomon] but one which would be difficult to build. His calculations were precise; the construction succeeded perfectly; and its success made Cassini a brilliant reputation. He made many important observations with his new gnomon which he published in Specimen observationum Bononiensium ... (1656), a work he dedicated to Queen Christina of Sweden who was in exile in Italy at this time. His expertise, however, covered many areas other than astronomy. He was an expert in hydraulics and engineering and as such was consulted regarding the dispute of 1657 between Bologna and Ferrara on the course of the River Reno. The dispute was settled by Pope Alexander VII with advice from Cassini and for several years after this he was regularly consulted by the Papal Court as an expert on river management. He wrote treatises on this aspect of his work, in particular on the flooding of the river Po. He was also employed by the Pope in 1663 as superintendent of fortifications, then he travelled to Rome again in 1665 when he was named Superintendent of the waters of the ecclesiastical states. The Pope asked Cassini to take Holy Orders for he wished to see him permanently working for him. However, Cassini preferred to keep his post as professor of mathematics and astronomy at Bologna where he taught when not undertaking Papal duties. He continued with his research in astronomy, proposing a model for atmospheric refraction which turned out to be incorrect, making an intensive study of the sun, publishing tables in 1662, and continuing to search for comets. In 1664 he observed a comet which led him to propose a new theory that comets travelled in circular orbits around the sun with the centre of the orbit in the direction of the star Sirius. Beginning in 1664 Cassini was able to observe with new powerful telescopes made by the excellent lens maker Giuseppe Campani of Rome. With these instruments Cassini made a series of new discoveries. In July 1664 he measured the period of rotation of Jupiter on its axis, discovered the bands and spots on the planet, and saw that the planet was flattened at its poles. In 1666 he measured the period of rotation of Mars on its axis, getting a value within three minutes of the correct one, and observed surface features. He published detailed series of observations of the moons of Jupiter in 1668. Cassini discovered discrepancies in his data which at first he attributed to light having a finite speed:- ... light takes some time to come from the satellite to us; and it takes approximately ten or eleven minutes to traverse a distance equal to the semi-diameter of the Earth's orbit. However, Cassini was too traditional in his views to accept his own idea, and he soon rejected it and looked for other explanation for the discrepancy. It is rather ironical that it was Cassini's data that was used by Römer in calculating the speed of light seven years later. Cassini's brilliant discoveries gave him an international reputation and led to him being invited to Paris by Louis XIV in 1668. The construction of the Paris Observatory had just begun and Cassini was offered a generous salary, free accommodation, and a good travel allowance to oversee the project. The senate of Bologna and Pope Clement IX agreed to the trip which they believed would be a short one of at most two years. However Cassini was immediately involved in the work of the Académie des Sciences although at this stage he made little attempt to settle down and improve his French as he still fully intended a quick return to his duties in Italy. After he became head of the Paris Observatory in 1671, he soon changed his views on returning to Italy and became a French citizen two years later, changing his name to Jean-Dominique Cassini. In 1674 he married Geneviève de Laistre who was the daughter of the lieutenant general of the compté of Clermont. On their marriage Geneviève brought with her a dowry which included the Château de Thury in the Oise which became the Cassini summer residence for succeeding generations of the family. There were two sons from this marriage, the younger one Jacques Cassini being born in 1677 and eventually succeeding to his father's position as head of the Paris Observatory. At the Paris Observatory Cassini continued to make revolutionary discoveries, as he had done in Italy, using a telescope he had brought with him. He was the first to observe four of Saturn's moons: Iapetus (1671), Rhea (1672), Tethys (1684), and Dione (1684). He discovered the gap in the ring system of Saturn now known as the Cassini division in 1675. Impressively he correctly proposed that the rings were composed of large numbers of tiny satellites each orbiting the planet. He drew a large Chart of the Moon, which he presented to the Académie des Sciences in 1679. This remained the best that was available prior to the invention of photography for astronomical purposes. Cassini's tables of Jupiter's moons were used to determine longitudes by providing a universal time with which to compare the local time at various positions on the Earth. While French expeditions measured the longitudes of numerous places, Cassini remained in Paris coordinating their data and making his own measurements. In 1672 Jean Richer made measurements of Mars from Cayenne, French Guyana, while Jean Picard and Cassini made measurements in Paris. From their data the first accurate value of the solar parallax was found, giving the distance from the Earth to the sun. Another measurement made by Jean Richer, namely that a pendulum with a period of one second is shorter in Cayenne than Paris, led him to explain this by suggesting that the Earth was flattened at the poles. This supported theoretical proposals by Newton and Huygens, but Cassini did not accept Jean Richer's explanation. He sought another experiment to determine whether the Earth was a perfect sphere. In order to determine the shape of the Earth, Cassini proposed measuring an arc of the meridian from the north of France to the south. The project was begun in 1683 with Cassini making measurements from Paris towards the south, while Philippe de La Hire began making measurements north from Paris. The project was cancelled for financial reasons in 1684 when Cassini had reached Bourges, which is almost exactly in the centre of France. In 1695 Cassini travelled in Italy. He took his eighteen year old son Jacques Cassini with him and they made numerous geodesic observations, as well as returning to Bologna where they repaired the gnomon at the Church of San Petronio in Bologna which Cassini had designed nearly thirty years before. In 1700 the meridian project was revived and now, in addition to a number of other scientists, Cassini had his son Jacques to assist him. They made measurements of the meridian from Paris to Perpignan, which is 13 km west of the Mediterranean coast. He obtained results which wrongly suggested that the Earth was elongated at the poles. As someone who rejected Newton's theory of gravitation, this result was rather pleasing since Newton's theory led him to a theoretical proof that the Earth would be flattened at the poles. However, having observed the flattening of Jupiter at its poles, it is surprising that he should have been such a strong advocate of the elongation of the Earth. In 1680 he studied the Cassinian curve which is the locus of a point the product of whose distances from two fixed foci is constant. He worked on this as part of a study of the relative motions of the Earth and the sun and proposed this as the curve for planetary orbits rather than the ellipse as proposed by Kepler. The lemniscate of Jacob Bernoulli is a member of the Cassinian curves but this was not realised for 100 years. From around 1709 Jacques Cassini gradually took over his father's duties as head of the Paris Observatory. Cassini's health began to deteriorate, in particular his eyesight became poor so that by 1711 he was nearly completely blind. Fontenelle [4] says that Cassini's calm and gentle character, coming from a deeply religious belief, allowed him to bear nearly total blindness with good cheer. Taton gives this assessment of Cassini in [1]:- Judgements on Cassini's work vary greatly. While many historians, following Delambre, accuse him of having found his best ideas in the writings of his predecessors and of having oriented French astronomy in an authoritarian and retrograde direction, others insist on the importance of his work as observer and organiser of the research at the Observatory. Although Cassini's control did restrict the Observatory's studies and although he did fight against most of the new theories, his behaviour does not seem as uniformly tyrannical and baleful as Delambre described it. He was not a theoretician; he was, however, a gifted observer and his indisputable discoveries are sufficient to win him a high position among the astronomers of the pre-Newtonian generation.