ZEISS HISTORICA

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The Zeiss Historica Society of America is an educational, non-profit society dedicated to the study and exchange of information on the history of the Carl Zeiss optical company and affiliates, its people and products from 1846 to the present.

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ON THE COVERS

FRONT COVER: Zeiss 7x50 binoculars produced for submarine use by the German Navy around 1941. Pressure-proof housing of cast brass permitted use at depths as great as 200 meters (650 feet). "blc" marking is military procurement code for Zeiss-produced equipment.

BACK COVER: The Society welcomes the more than thirty new members who joined in 1993.

ILLUSTRATION SOURCES

Front cover and Zeiss binocular article, Carl Zeiss. • Annual meeting photos by Eugene Pohl and Carl Ian Schwartz. • Planetaria illustrations courtesy Joe Brown, Larry Gubas and Carl Zeiss Jena.

PRESIDENT'S LETTER

Clean money. Lots of it. That's what you see in Japan, and that's the key to being able to function there. The stories you have heard about the astronomical prices of everything are mostly true. What you might not have heard, but only guessed from what you have seen happening at the camera shows, is that a considerable portion of the nice classic equipment that comes to the surface in all the markets of the world heads over to Japan, and is on view at any given moment in the shops along the Ginza.

The reason is not hard to figure. That's where the best prices are. Ten years ago the yen was pegged at roughly 250 per dollar; today, the round number is 100 per. That means that 100,000, which in 1985 would buy a $400 camera in the American market, would today be worth $1000. It's easy to see why the prices have been going up, in dollar terms, since just for waking up and reading the newspaper, the Japanese collector has two and a half times more dollars to buy cameras (or anything else).

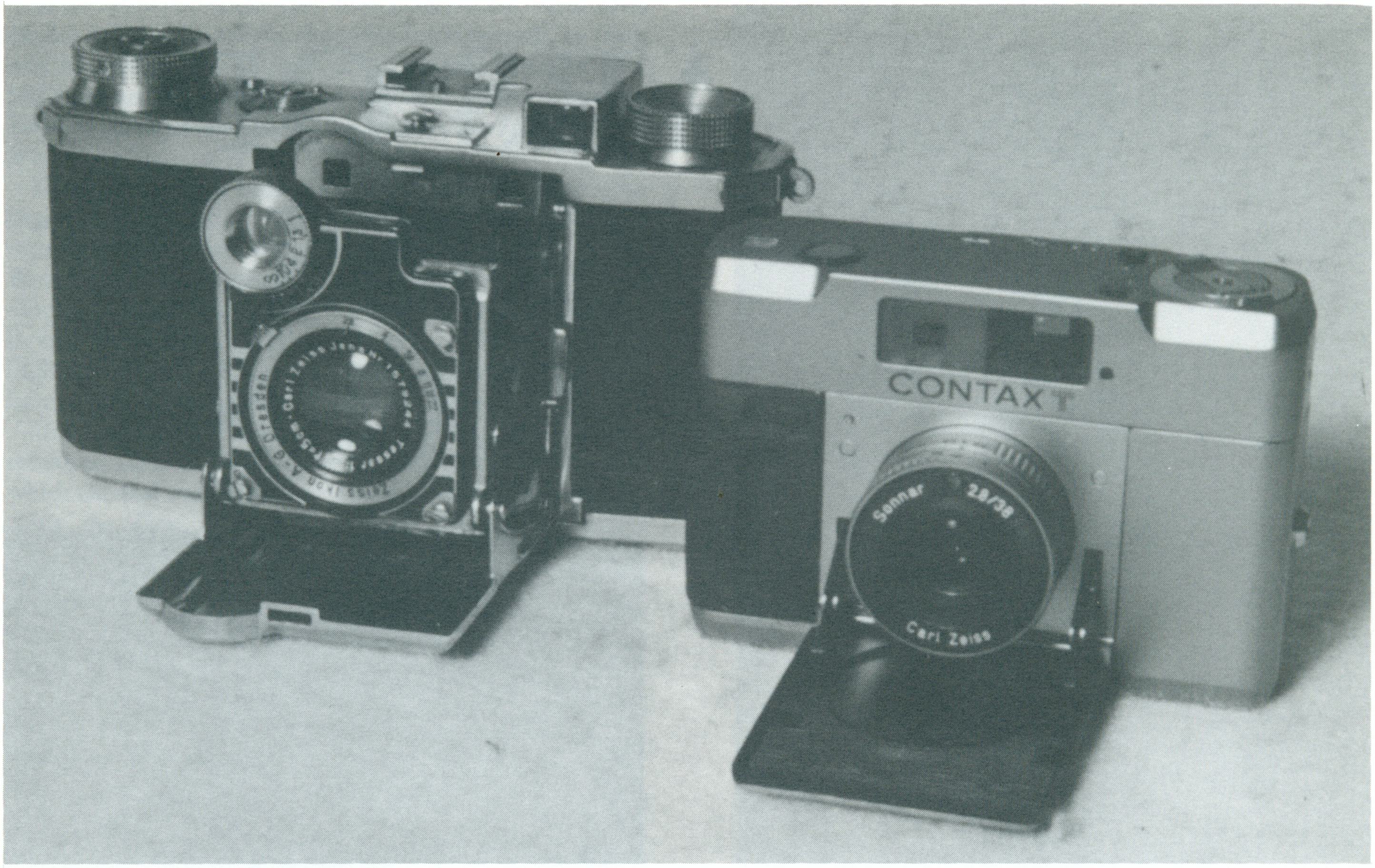
But far from indulging in Japan-bashing, (which is easy to do if you are competing with the Japanese for the pieces you need to advance your collection) I wish to pay tribute to the intensity and depth of knowledge of the Japanese collector. There must be dozens, if not hundreds, of camera shops in Tokyo whose primary function is selling collectible camera equipment.

By virtue of the intense competition for the collectors' yen, the people working at these shops are very good at their jobs. Over and above the "died and gone to heaven" feeling of walking into a shop that looks like somebody took McKeown's guide, highlighted the most desirable pieces, and then made them all appear in the display cases, it's also refreshing to be able to discuss matters with a courteous and knowledgeable employee. That just doesn't happen much anymore in the American or European markets except in rare, isolated cases, even in the major centers. None of this would exist, however, if there were not a large number of knowledgeable and exigent, not to mention well-heeled, people patronizing these shops.

This is also apparent in the wide variety of books and magazines available to the classic camera enthusiast. Of course the prices seem high when you put your right thumb over the last two digits of the yen price and figure dollars, but the variety and quality of these publications is amazing. No longer am I surprised that H-J Kuc's seminal work on the Contax has been translated into Japanese while we continue to wait for the English version.

My goal here is not to explain, but merely to report these phenomena, so I'll stop while I'm ahead. Suffice it to say that my trip to Japan was a success; the goal of publicizing ZHSA and increasing its membership was achieved, and I now know where to go to see and touch what used to be common in the camera shows in the USA. As an American, I hope we can re-establish some sort of balance between the current situation and that of a decade ago, but we enjoyed a similar situation for quite awhile when the dollar was pre-eminent and almighty. What goes around comes around...

Charlie Barringer



Zeiss Ikon's Super Nettel of late 1930s with offspring Contax T from Yashica in 1984.

UP TO DATE IN CAMERA CITY

Nicholas Grossman, Rockville, Maryland

Thanks to modern, electronically controlled everything, any exterior or interior resemblance of forbear to progeny is purely coincidental. One thing is clear. Their affiliation stems from the camera branch of the family: Zeiss Ikon's Super Nettel (late 1930s) with offspring Contax T (1984) from Yashica, and a Zeiss Ikon Nettax (also late 1930s) with its issue, Contax T2, introduced by Yashica in 1990.

Despite their differences, the elegant distinguished body of the elder and the sleek, shiny, unencumbered body of Ms. (or Mr.) Cool, the "youngsters" continue the elders' ideals: expert craftsmanship, precise contruction, and masterful optical refinements take first priority. That's tradition.

In Zeiss Ikon's catalog dated May 1935, the Super Nettel meant "...something even better than Nettel." (p.3) It was also "...the right sort of camera for those who find it impossible to take much care of their accessories, and sporting motorists, mountaineers, and pressman will all find it an ideal instrument" (p.5).

Today, engineering and technological advances embody yesterday's goals: a camera that fits easily into a pocket, is compact, lightweight, accurate and that still produces for the user effortless artistry. Each forbear and progeny proved top of the line at its time.

Indeed, everything's up to date in Camera City, with Carl Zeiss still good-looking on the lens. Have they gone about as far as they can go? Probably not. We shall see.

Contax T2 introduced by Yashica in 1990 with its forbear Zeiss Ikon Nettax of the late 1930s.

OTHER SOURCES

F	1992	Disassembly of Super Nettel I, pp.14,15.	Alvardo
S	1992	Nettax ad 1937 on back cover.	
S	1988	Prewar Zeiss Ikon, p.8.	Gubas
S	1985	Super Nettel and Contax ad on back cover.	
F	1982	Nettax ad on back cover.	

100 YEARS OF CARL ZEISS BINOCULARS

Man's desire to push back the limits of his natural vision has existed since time immemorial. Early experiments and discoveries in the field of optics brought mankind closer to achieving this goal. Initial reflections on the possibility of "using refracted light rays to bring distant objects closer" are found in material dating as far back as the 13th century.

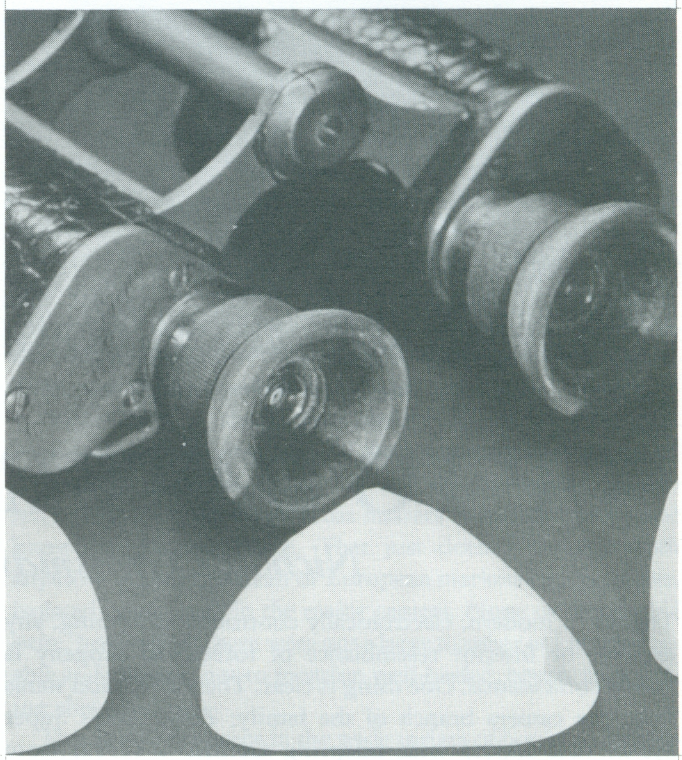
The first accurate description of a telescope was provided by Giambattista della Porta (1535-1615). But it was not until around 1600 that the first usable telescope was built in the Netherlands by Johann Lipperhey using two lenses, one attached to either end of a cardboard tube.

Galileo Galilei, the famous Italian natural scientist, heard about this invention and in 1610 produced telescopes of the same kind, but with improved performance, for use in his astronomical observations. This type of telescope was later to receive his name. The German scientists Johannes Kepler and Joseph Fraunhofer brought about further advances in the performance and image quality of telescopes.

In the middle of the 19th century, small binocular telescopes incorporating Galileo's principle were very common. As they were generally used in the open countryside and in the army, they were also known as "field glasses", a term which is still often used today. But despite numerous improvements, the performance limit of these telescopes was reached at a magnification of 5x. A further drawback was their very small field of view.

It was not until the Italian army officer Ignaz Porro utilized prisms for image erection that it became possible to improve the performance of the telescope while shortening its length at the same time. Nonetheless, the first monocular prism telescopes built by Porro had many shortcomings. A variety of designs produced by different optical workshops were to follow. These were also destined to failure due both to the inadequate quality of the glass available and to the lack of suitable manufacturing procedures to produce the prisms with the necessary precision.

Ernst Abbe, the ingenious partner of Carl Zeiss, placed the theory and computation of optical systems on a purely scientific basis. Thus, he paved the way for mass production of optical instruments with consistently high quality. Around 1870, he began his investigations into new designs for small hand telescopes. Quite independently of Porro, Abbe recognized the potential benefits of the prism-erecting system and had an experimental model of such a monocular telescope built in 1873. Fifteen years later, after Otto Schott had produced improved types of optical glass, Abbe resumed his investigations.



In 1894, prisms of new types of glass formed the basis of the superior image quality provided by the Zeiss binoculars.

As Abbe considered the possibility of viewing with both eyes to be a decisive advantage, he decided to develop a binocular prism telescope. His application for a patent was, however, rejected in view of Porro's existing design. Abbe's idea of increasing the distance between the objective lenses in order to improve the stereoscopic quality of the image was subsequently incorporated in the patent application. Effective on July 9, 1893, the German Imperial Patent Office awarded the firm of Carl Zeiss a patent (no. 77086) for a "binocular telescope with an increased objective distance".

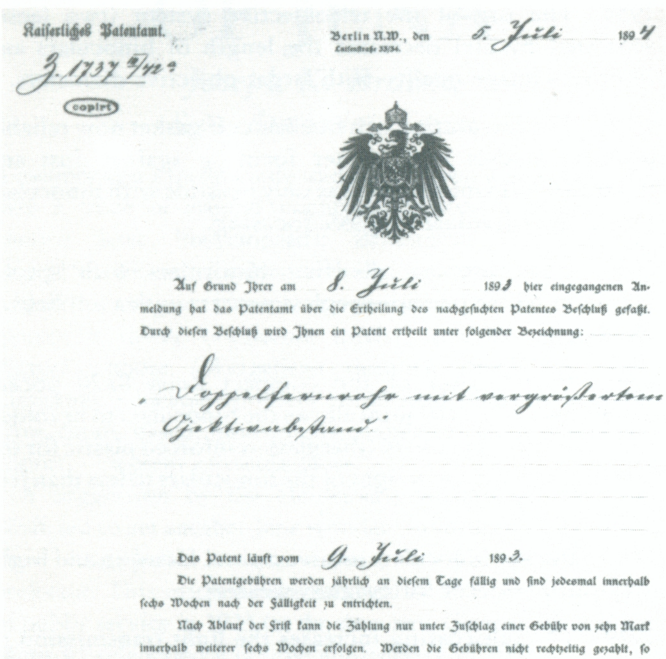
Abbe's invention, Schott's new types of optical glass and the precise methods of production at Zeiss allowed the mass production of a binocular prism telescope offering an image quality never attained before.

In the space of a single year, over 12,000 of the initial Zeiss models with 4x, 6x and 8x magnification were sold. In 1896, new binoculars were introduced with a larger field of view (40°) and an objective diameter of 25mm. In the same year, Zeiss supplied its first model for hunters, the 5x25 Hunting Binoculars.

Users now wanted binoculars which made the object even larger and brought it even closer. As early as 1910, Zeiss introduced binoculars with a magnification as great as 18x. Better detail recognition in fading light — even in the dimmest twilight conditions — was the next requirement to be met. In response, the Binoctar 7x50 — binoculars with a high light efficiency — were introduced in 1914. They were later to become the classic marine binoculars.

Users then wanted an image which showed more of the surrounding field. In 1917, Zeiss created wide-field eyepieces which allowed considerable enlargement of the field of view. After the First World War, three different binoculars featuring the new eyepieces were launched. With a magnification of 8x, they provided a field of view of 154 meters at 1000 meters, a feat never before achieved.

Despite the economic crisis in the twenties, development work continued. A reasonably-priced model, the monocular, mini-prism 8x21 Turmon, reflected the mood of the times. "Feather-weight" binoculars with housings made of light metal were introduced in 1933.



Kaiserliches Patentamt.

Berlin N.W., den 5. Juli 1894

Luisenstraße 33/34.

Z. 1737 V/IV.

copirt

Auf Grund Ihrer am 8. Juli 1893 hier eingegangenen Anmeldung hat das Patentamt über die Ertheilung des nachgesuchten Patentes Beschluß gefaßt. Durch diesen Beschluß wird Ihnen ein Patent ertheilt unter folgender Bezeichnung:

„Doppelfernrohr mit vergrößertem Objektivabstand"

Das Patent läuft vom 9. Juli 1893.

Die Patentgebühren werden jährlich an diesem Tage fällig und sind jedesmal innerhalb sechs Wochen nach der Fälligkeit zu entrichten.

Nach Ablauf der Frist kann die Zahlung nur unter Zuschlag einer Gebühr von zehn Mark innerhalb weiterer sechs Wochen erfolgen. Werden die Gebühren nicht rechtzeitig gezahlt, so erlischt das Patent.

Nach erfolgter Eintragung des Patentes in die Patentrolle wird Ihnen die Nummer desselben mitgetheilt und nach Fertigstellung des Drucks der Patentschrift eine Urkunde über das Patent übersandt werden.

Kaiserliches Patentamt.

Anmeldeabtheilung III.

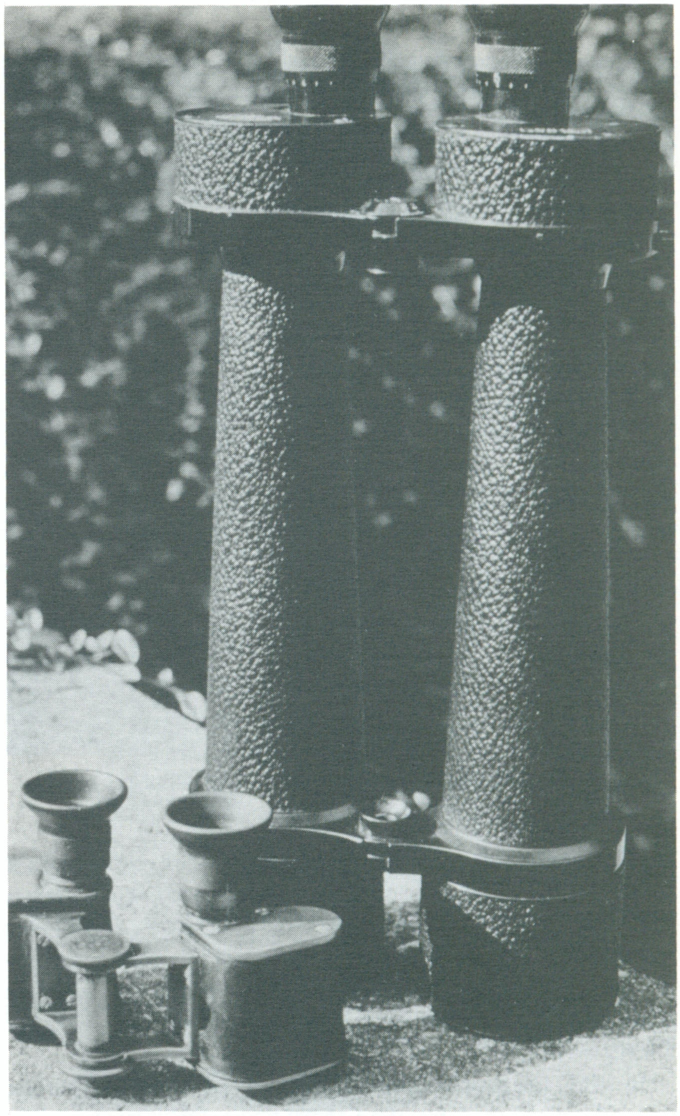
Stephan i.V.

An

die Firma Carl Zeiss

in Jena.

The German Imperial Patent Office awarded the firm Carl Zeiss patent no. 77086 for a "binocular telescope with an increased objective distance". Patent was in effect from 1893.



On the left, turn-of-the-century compact binoculars with 4x magnification. On the right, the Zeiss Delfort with 18x magnification introduced in 1919.

One of the most fundamental advances made in the field of optics in this century was the reduction of reflectivity on glass surfaces exposed to the air. This pioneering achievement was made by a member of the Zeiss staff, Alexander Smakula. On November 1, 1935, Zeiss was granted a patent for this process, but the military significance of the invention meant that it was not released for general use until 1940. Since then, all optical components of Zeiss binoculars have been provided with an anti-reflection coating. This increased their light transmission to over 80%, thus improving observation in poor light conditions.

During the Second World War, the production of binoculars at Zeiss was geared to military requirements. A number of special models were developed for the Army, Air Force, and Navy. These included 10x80 observation binoculars, shear-jointed telescopes and pressure-proof 7x50 binoculars for use on submarines.

The partition of Germany in 1945 and the expropriation of the Zeiss enterprises in Jena led to the transfer of the Carl Zeiss Foundation to Heidenheim, a town located in what was then the US zone. The managers, scientists and skilled workers brought by the Americans to Heidenheim began to set up new production sites. In 1954, the first Zeiss binoculars produced

The first binoculars manufactured in Oberkochen, a compact 8x30 model introduced in 1954.

in Oberkochen came on the market — a very compact 8x30 model with a newly computed optical system. Its image quality set totally new standards. In 1958 it was equipped with newly developed high-eye-point eyepieces for eyeglass-wearers. Also, models 7x50, 8x50 and 10x50 were so equipped. Today, all Zeiss binoculars feature these so-called B-eyepieces.

In 1964, the production of Zeiss binoculars was centralized in a subsidiary of Zeiss, the firm of Hensoldt in Wetzlar. The slim Dialyt binoculars with roof prisms introduced by Hensoldt in 1905 were incorporated in the Zeiss product range. This included a classic model, the 8x56 binoculars with high light-efficiency that have since become very popular for hunting and the observation of nature.

With its folding pocket binoculars — the first 8x20 model came on the market in 1969 — Zeiss started a trend which was later to dominate the world market. These binoculars can be combined with a Zeiss microscope base to form a stereo microscope, a unique example of a dual-purpose instrument.

A revolutionary new development emerged in 1990 with the Zeiss 20x60 S binoculars. These featured a mechanical image stabilization system for the suppression of hand tremor. For the first time, this permitted observation at a magnification of 20x without the use of a tripod or gyroscopic stabilizer. With these binoculars, the user can see a bird at a distance of 100 meters as if it were only 5 meters away with crystal-clear, razor-sharp detail.

This article is an edited and abridged version of one supplied by Zeiss in Oberkochen. As such, it does not cover binoculars produced in Jena after World War II. For more on that subject, see Nick Grossman's article, "Postwar Handheld Binoculars from Jena", Zeiss Historical Journal, Spring, 1993.

Much additional history about Zeiss binoculars is contained in Larry Gubas's article, "Zeiss Binoculars", Zeiss Historica Journal, Spring, 1990.

ZEISS BINOCULAR MILESTONES

1893 Starting on the 9th of July, Carl Zeiss is granted the patent for a "binocular telescope with increased objective separation".

1894 Carl Zeiss commences the series production of binocular prism telescopes which provide a level of image quality never known before.

1896 New models are introduced with a larger field of view (40°) and an objective diameter of 25mm, including 5x25 Hunting Binoculars.

1917 Introduction of wide-field eyepieces which increased the field of view.

1933 Corrosion-resistant light metal alloys are used for housings, replacing brass and zinc.

1935 The invention of the reflection-reducing T-coating (anti-reflection coating for glass-to-air surfaces) at Zeiss by Alexander Smakula.

1954 The use of the teleobjective system (two lenses separated by air) decreases the length of binoculars and improves image quality with larger objective diameters.

1956 The integration of a flexible cuff gasket now reliably protects models with center focusing against dust and humidity. Previously this was only possible with binoculars featuring individual eyepiece focusing.

1958 Zeiss supplies the first binoculars with special eyepieces which provide eyeglass wearers with a full field of view.

1969 Introduction of the compact Zeiss 8x20 pocket binoculars. A biaxial joint allows the binoculars to be folded to pocket size; the use of fiberglass-reinforced plastic for the housing reduces the weight of the binoculars to less than five ounces.

1974 Pocket binoculars receive central focusing and high-eyepoint eyepieces for eyeglass-wearers.

1979 T* multicoating increases the light transmission of Zeiss binoculars to over 90% and results in a further enhancement of image contrast.

1982 Zeiss introduces aspheric mirror objectives in the 30x60 Mirror Scope, shortening the overall length of the instrument and providing excellent image quality at high magnification.

1988 A special coating for the roof prisms — P-coating — eliminates phase shifts in the image erection process. This improves the resolution and contrast in roof prism models.

1990 The first binoculars with mechanical image stabilization, the Zeiss 20x60 S, are launched on the market. They allow hand-held use at a magnification of 20x without any impairment of image quality by hand tremor.

ZEISS PLANETARIA: AN ANNIVERSARY CELEBRATION

1993 marked the seventieth anniversary of the first Zeiss planetarium. Here, three authors pay tribute to various aspects of these revolutionary instruments.

ADDING TO THE WONDERS OF JENA

Joseph K. Brown,
San Antonio, Texas

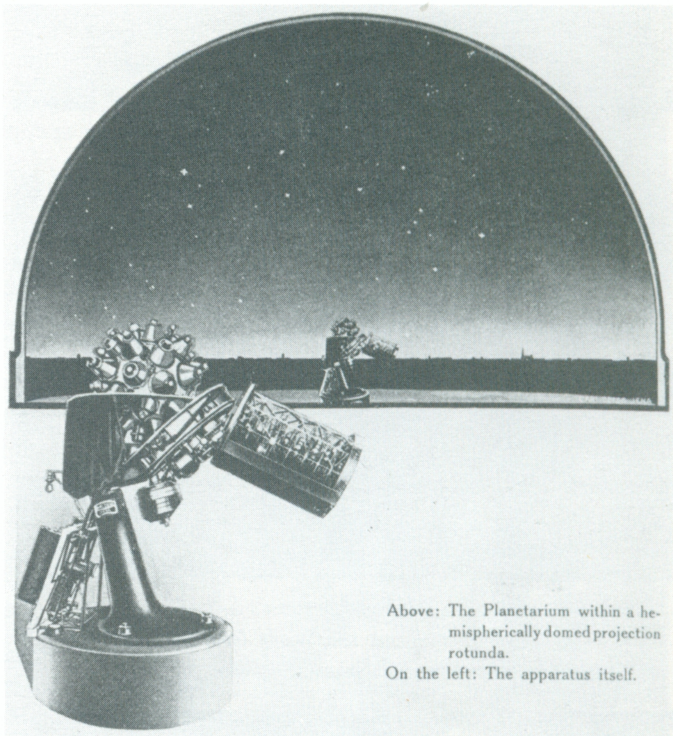
A century ago a travel guide told of the seven wonders of Jena, then a place of around twenty-six thousand people. (On historic Jena: Encyclopaedia Britannica, 11th ed. vol. 15,p.315). These wonders included an altar (ara), a head (caput), a dragon (draco), a mountain (mons), a bridge (pons), a tower (vulpecula turris), and the astronomer Weigel's house (Weigeliana domus), (razed in 1898). Classically educated travelers could read of them in Latin: "Ara, caput, draco, mons, pons, vulpecula turris, Weigeliana domus — septem miracula Jenae."

A suggestion by the Heidelberg astronomer, Dr. Max Wolf, led to yet another Jena wonder, an invention that was to grow into Jena's unique export, the Zeiss planetarium projector. This instrument conceived in 1913 and first placed in public service in 1923 (at the then new German Museum in Munich) celebrated a double anniversary in 1993.

Dr. Wolf's suggestion was to demonstrate the differences between the older Ptolemaic belief, which postulated the Earth as center of the Universe, with the modern Copernican theory of the sun as the center of our Universe.

This led to the use of moveable projected points of light onto a domed ceiling. The complex projector, which eventually assumed to itself the popular name of planetarium, originally referred to the room in which the starry demonstrations took place. Resembling a giant dumbbell constructed from an erector set, this projector became one of the instantly recognizable objects of twentieth century technology.

Development of the projector for Dr. Oskar von Miller of the German Museum in Munich began soon after the 1918 armistice of World War I. Years later with the results completed, the visiting director of the Observatory of Copenhagen, upon seeing the museum's star show, described the planetarium as yet another wonder from Jena.



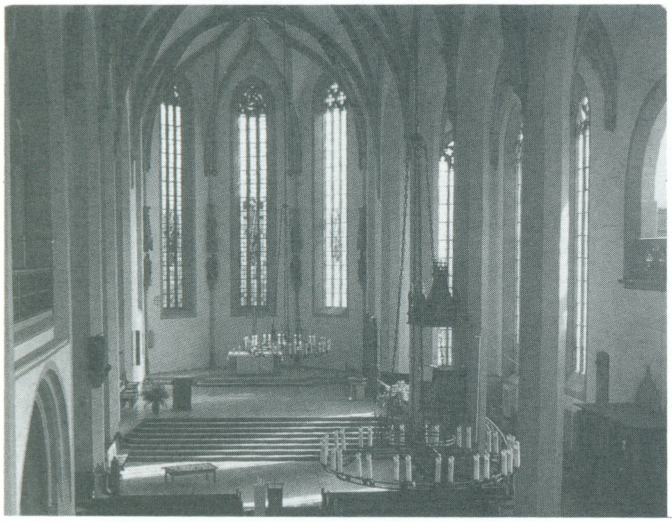
The 1926 Jena planetarium within a hemispherically domed projection rotunda. On the left: the apparatus itself.

From 1926-1948, the Zeiss planetaria enjoyed a kind of golden age, a period during which constant design refinements evolved. Zeiss now refers to this time of production and delivery to all parts of the world as the large planetarium of the first generation. Included in these upgradings was the development of supplementary projectors to demonstrate such phenomena as comets, meteors and eclipses.

With these additional capabilities, the planetarium assumed its classic shape: The spheres carried star projectors and a connecting cage housed solar, lunar and planetary projectors.

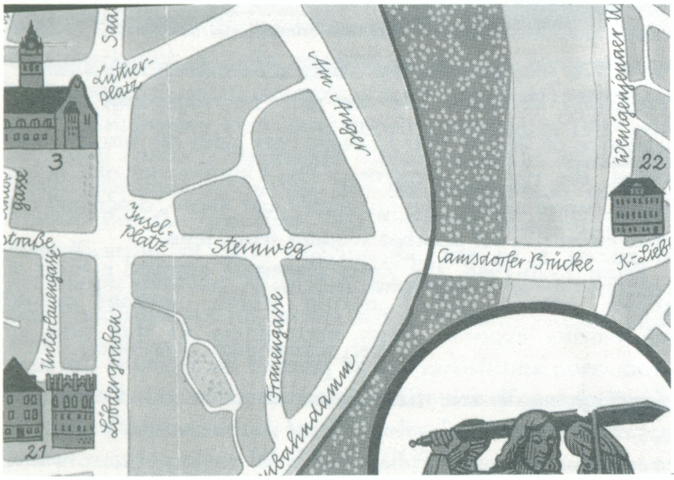
THE SEVEN WONDERS OF JENA

(To see the Draco, a seven-headed frightening animal — a dragon — made of animal bones, plaster of Paris, and wire, one must visit the Stadtmuseum located near the marketplace. The seventh wonder of Jena, Weigel's house was razed in 1898. Professor Erhard Weigel was an outstanding inventor and scientist at the University of Jena in the mid-seventeenth century).



Ara — the altar of St. Michael's church.

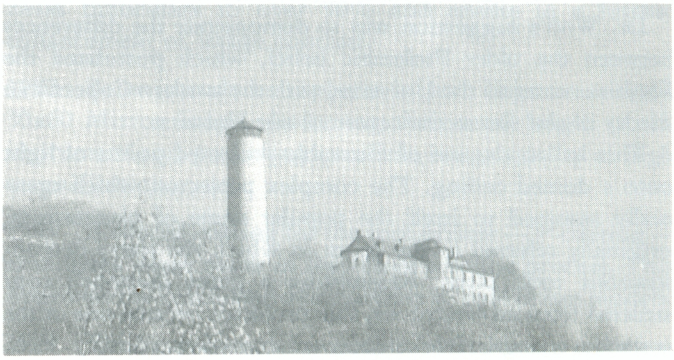
Mons — refers to the Jenzig, Jena's highest mountain (364m) 1194 feet above the Saale River. Variegated sandstone and limestone reveal its Ice Age heritage.



Pons — (in German, die Bruecke) is the Camsdorfer Bridge, one of several bridges that crosses the Saale. Camsdorfer is the oldest stone bridge in Jena, built in 1416 and continuously administered until 1912.

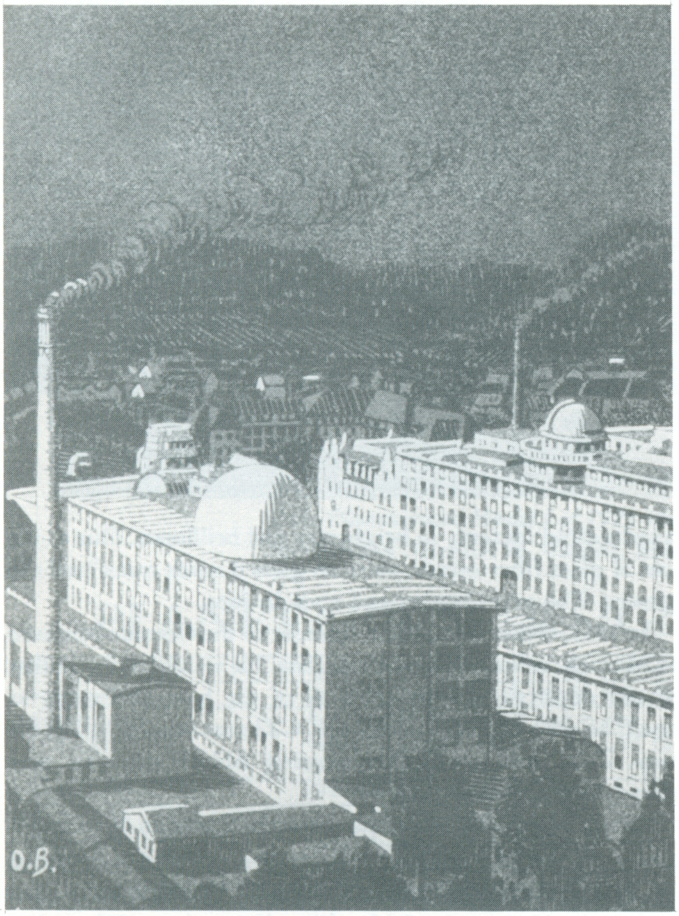
Caput — the head (der Kopf) of Hans of Jena.

Jena's Town Hall, built at the end of the fourteenth century was renovated in 1775, in the Baroque style. Caput now hangs above the clock on its tower.



Vulpecula Turris — der Fuchsturm — is the Fox Tower from where, since the town was established, a lookout was necessary to keep the farm animals for the folks.

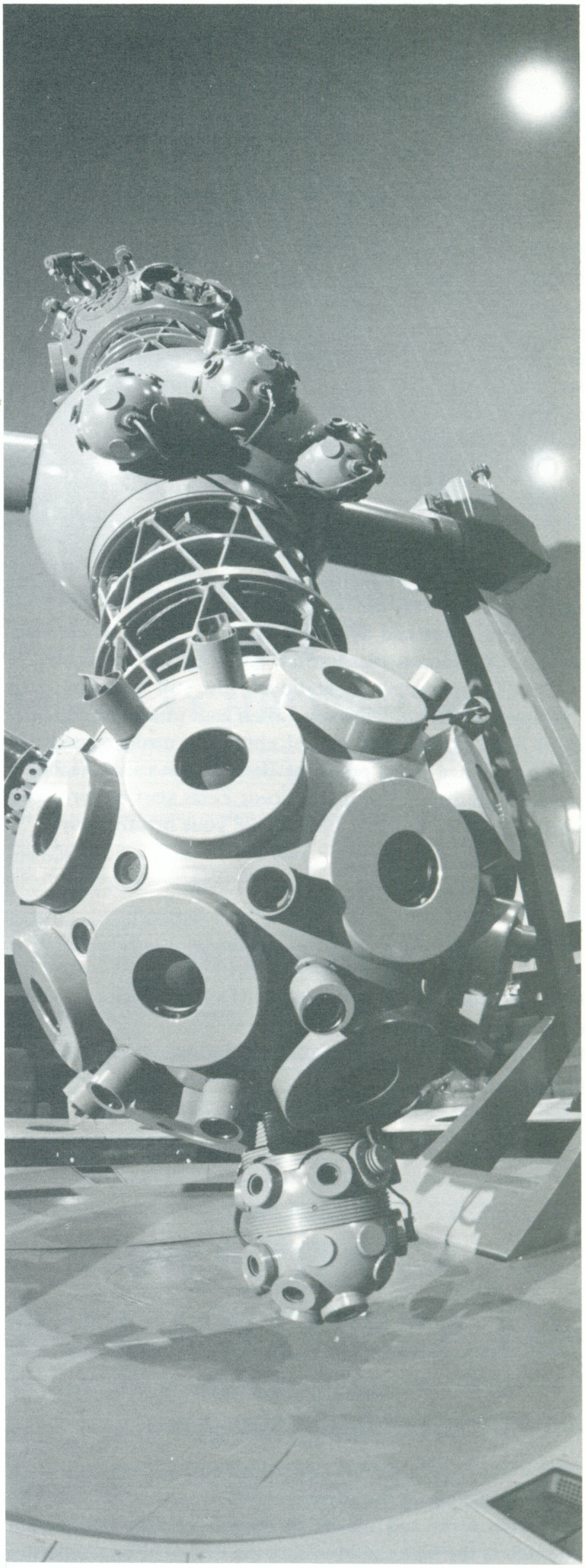
This basic arrangement is still current although structural simplification and a more modern look have been adopted. Additionally, many more effects are possible. The improved basic projector created a sensation at the Paris Exposition's Pavilion of Technology in 1937. (1987 Anniversary Edition of 1937 Expo.)



Carl Zeiss Jena, 1926 view of the factory. At far left is the dome for testing the first planetarium projector. The other dome tested telescopes.

By 1941, twenty-seven large planetaria carrying the Carl Zeiss Jena logo reached locations worldwide, including the United States and Japan. Smaller models in production since 1938 enabled museums and science centers of modest means to offer their patrons planetarium shows. According to Zeiss Jena, before World War II halted production, thirteen of these smaller units found ready markets. Interestingly, all of these smaller planetarium projectors became useful teaching tools in the arts of celestial navigation for navy, marine and airforce personnel. (Jena Review 3:86 and supplement JR 3:86.)

In the face of daunting obstacles after WWII, it is a tribute to the remarkable resilience and abilities of the Zeiss staff and workforce that production of the large planetarium projector could be contemplated as a factory project. Nevertheless, it was not only contemplated, it was redesigned, produced and delivered; the first one to the Volgograd planetarium in September 1954. This marked the beginning of continuous postwar design evolution culminating in the microprocessor-controlled Cosmorama of 1984. (Zeiss Review 3:86, Chronological table.)



Zeiss Cosmorama in the Space Sciences Centre in Edmonton, Alberta, reflects a fourth generation of the 1926 design.

As if this were not in itself a remarkable achievement, the Zeiss small planetarium of 1938 was reborn in 1954 as the model ZKP-1, which Jena claimed sales of 257 units placed in navigation training facilities and in schools. The ZKP-1 became the ZKP-2 Skymaster in 1976, designed for an 8m dome (26 feet) and fitted with punchcard programming capability. According to Zeiss, sales occurred at the rate of one every sixty days. (ZR Supplement op. cit. pp.22-23.)

During the sixties' burst of space consciousness, a new spaceflight planetarium, the Spacemaster, capable of adding illusionary space travel to the customary menu of astronomical events, was released. Evolved to direct entry programming with memory so that automatic replay of previously encoded sequences was possible, this planetarium lessened the need for skilled operators. One Spacemaster trained Russian cosmonauts at their Star Village (Moscow) center. (ZR Supp. op. cit. pp.14-16.)

The 1984 Cosmorama planetarium, a fourth generation progeny of the classic 1926 Zeiss Jena planetarium, reflects Jena's initiative to act as contractor, providing a total package for science centers and museums that include design, construction, instrumentation and installation. Such a turnkey project was the Margaret Zeidler Star Theatre at the Edmonton Space and Science Centre in Canada, where since 1984, a Cosmorama planetarium has been star performer.

This Cosmorama's operational life still includes daily multiple star shows. Moreover, their staff praises highly their Zeiss Jena product. A typical comment made recently by Edmonton star show producer Bart Adrian to the author is worth repeating: "The magnificent Zeiss starfield projected on the dome of our theater can take your breath away!"

OTHER SOURCES

Eder, History of Photography, (Dover reprint), p.402, mentions Max Wolf.

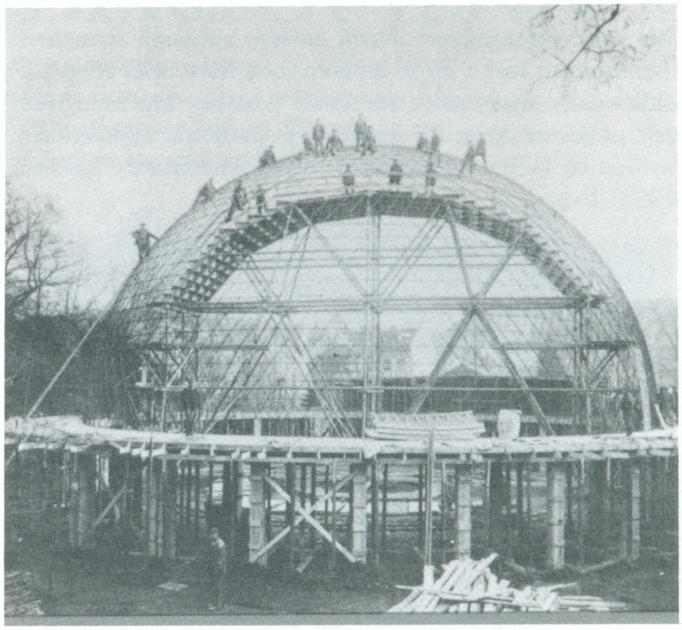
Edmonton Space and Science Foundation, Annual Report, pp.2-4.

Zeiss Historica Journal back covers: Spring 1993, Spring 1989.

STARS ON GLASS THREADS

Larry Gubas,
Randolph, New Jersey

Historians of planetarium and planetaria look back to 1913 as pivotal to bringing the heavens down to earth. By October 21, 1923, the ways and means to do this became tangible. In Munich at the German Museum, the first public presentation of a simulated sky show passed with flying colors. Seventy years later in 1993, planetarium technology reached an almost hundredfold increase in brightness and brilliance. Due to the use of glass fiber optics, stars on glass threads transfixed the viewer. The story begins and ends in Jena.



In 1925, the Zeiss Planetarium under construction reveals its skeletal unyielding frame of trusswork to support a large span.

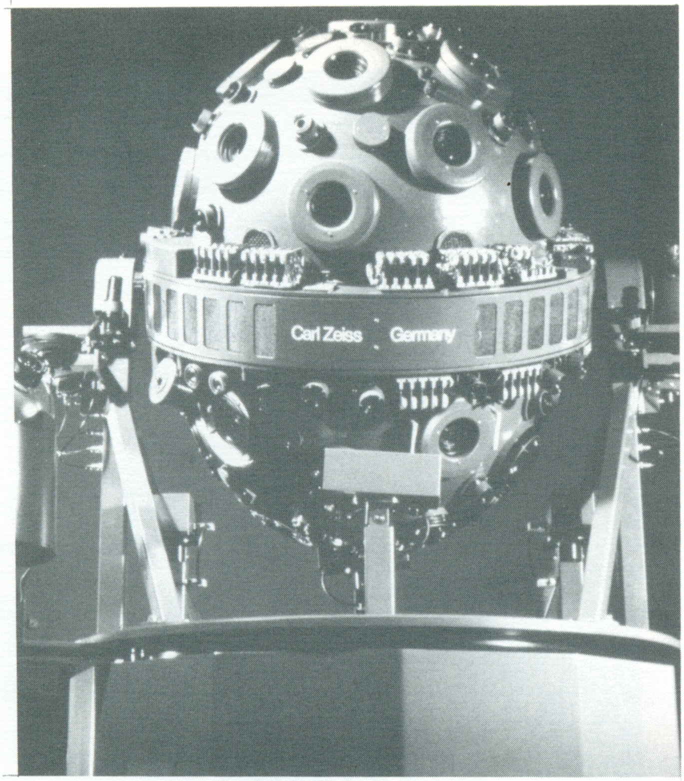
In 1913, Oskar von Miller, founder of the German Museum in Munich, contacted Carl Zeiss Jena. He wanted a device that would duplicate the phenomena of the heavens exactly as could be seen with the naked eye. CZJ sent von Miller on his way. Zeiss was too busy producing Abbe's scientific programs that served society.

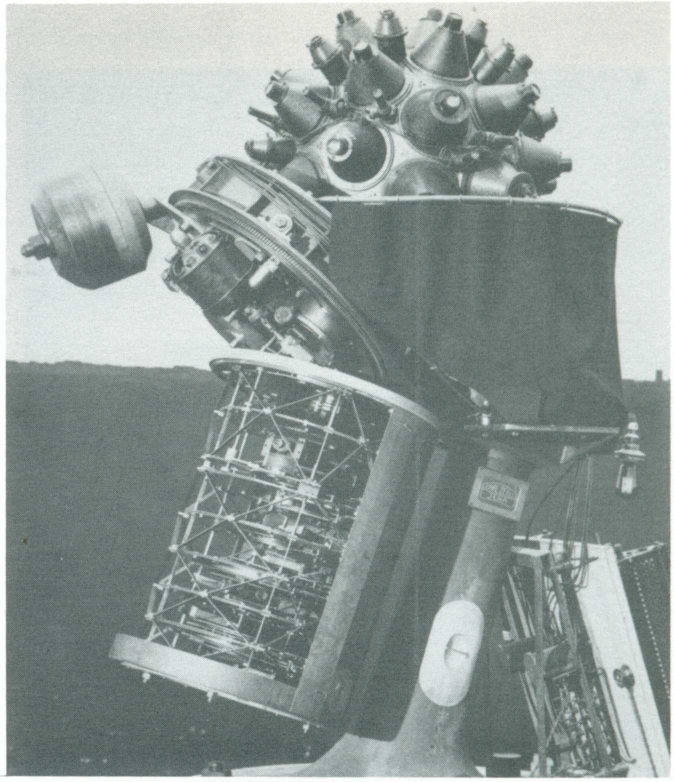
Zeiss's huge view telescopes could be found in Zermatt, in observatories in Neuchatel (Switzerland), Berlin-Babelsberg, La Plata, Hamburg, Zurich, Tubingen: "Telescopes of great lightgathering power and of medium size, such as are employed for searching the heavens for nebulae, comets and other faint objects, so-called comet finders...." (Felix Auerbach, The Zeiss Works and the Carl Zeiss Foundation in Jena, 5th ed., trans. by R. Kanthack, W. & G. Foyle, Ltd., London, 1923, p.74.)

By 1904, Carl Zeiss's scientific research and development department created a tool that would become the instrument which made possible the planetarium. It's name "stereocomparator", a further development of the stereoscopic method, brought a major contribution to astronomy. (Auerbach, Zeiss Works, pp.128-9.)

With this stereocomparator, not only was the ability to measure distances possible (as seen in a stereoscope), but also objects' dimensions, their length, height, and depth, became available. With these dimensions added, a simulation of the dynamic sky above became a grand illusion of actual reality in the planetarium. (On page 130, Auerbach refers to the stereocomparator capability. "In stellar astronomy the stereocomparator has again proved a source of tangible success, notably by the work of M. Wolf, of the observatory of Heidelberg, and no less as a means of detecting new planetoids, comets, and variable stars.")

Undaunted by the Zeiss refusal in 1913, Dr. von Miller



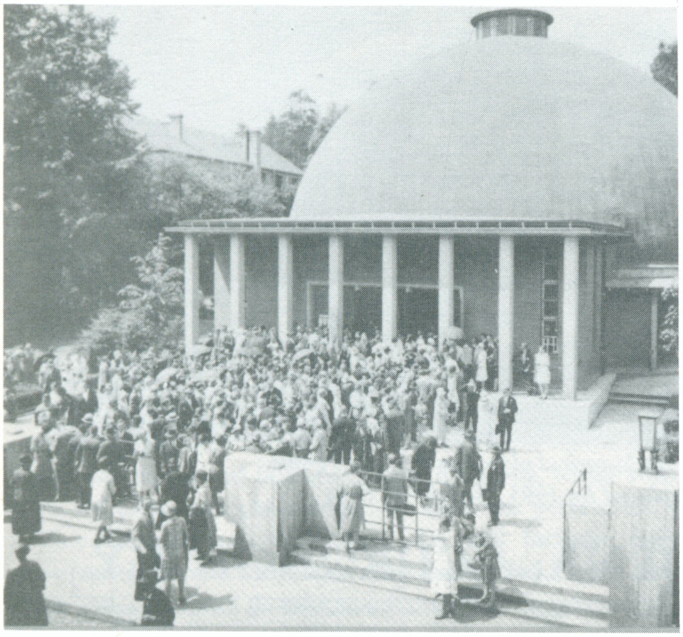


Zeiss Planetarium Model I of 1923 (right) is now an historical object on view at its home, the German Museum in Munich, having been replaced by 1993 Model VII (left).

PLANETARIUM DESIGN IN JENA: A CHRONOLOGY

1913	Suggestion by Prof. Dr MAX WOLF, Director of the Heidelberg Observatory, to create two planetaria for the German Museum in Munich
Autumn 1913	Dr OSKAR VON MILLER, founder of the German Museum, placed the order for building the planetaria
Autumn 1918	Beginning of development work in Jena
17 Oct 1922	Patent No 391036, class 42h, Group 23. Carl Zeiss Jena. Device for the projection of stars onto a spherical projection screen (protoplanetarium)
August 1923	First tests of the projection machine in a 16m dome specially built on top of a factory roof in Jena
21 Oct 1923	First public show presented with the projection planetarium in the German Museum, Munich
1924–1925	Shows presented under the manufacturer's roof-top dome
7 May 1925	Opening of the new museum building in Munich which housed the protoplanetarium
1924–1926	Development of the Universal Projection Planetarium (Large Planetarium of the 1st generation)
18 May 1926	Wuppertal: Opening of the first planetarium equipped with the Universal Projection Planetarium (destroyed in WW II)
From 1926	Delivery of planetaria to all parts of the world
18 July 1926	Opening of the Jena Planetarium, the world's oldest planetarium building still in operation
7 May 1927	International premiere of the planetarium: Opening of the Vienna Planetarium
28 Oct 1928	Opening of the Rome Planetarium, which has the world's oldest projection machine still in operation
From 1930	Development of various supplementary projectors for the Universal Projection Planetarium
1938	Beginning of development of the Small Planetarium
1943	Delivery of the first Small Planetaria
1948–1949	Redesigning of the Universal Projection Planetarium (Large Planetarium, 2nd generation)
Leipzig Spring Fair, 1954	Launching of the ZKP-1 Small Planetarium
19 Sept 1954	Opening of the Volgograd Planetarium (USSR)
1964–1966	Development of the SPACEMASTER "Spaceflight" Planetarium; first planetarium model to have automatic control as a standard feature (punched-tape control)
August 1967	Presentation of the SPACEMASTER before the participants of the XIIIth General Assembly of the IAU in Prague
1967–1975	Delivery of Large Planetaria of the 3rd generation
23 Oct 1970	Opening of the first spaceflight planetarium in Goiania (Brazil)
Leipzig Spring Fair, 1977	Launching of SPACEMASTER with direct programming feature (RFP-DP)
19 May 1977	Reopening of the Moscow Planetarium (first Large Planetarium with automatic control)
2 Dec 1977	Reopening of the Suhl Planetarium (first SKYMASTER ZKP-2 commissioned)
Since 1977	Kombinat VEB Carl Zeiss JENA offers comprehensive supplies and services for planetaria, including general contracts on turn-key projects
10 March 1981	Opening of the Tripoli Planetarium (Libya), the first turn-key project erected under general contractorship of Kombinat VEB Carl Zeiss JENA
Leipzig Spring Fair, 1982	Launching of SPACEMASTER with microcomputer control (RFP-DP 2)
1 Dec 1983	Opening of the Wolfsburg Planetarium (FRG) with the first microcomputer-controlled SPACEMASTER
Leipzig Spring Fair, 1984	Launching of the COSMORAMA, the fourth generation Large Planetarium
1 July 1984	Opening of the Edmonton Space Sciences Centre with the first COSMORAMA
1 Dec 1985	Reopening of the Jena Planetarium after its reconstruction
Autumn 1985	Beginning of development of a special planetarium for science centres (Universarium)
Leipzig Spring Fair, 1986	Launching of a SPACEMASTER featuring advanced operating convenience (RFP-DP 3)
Nov. 1986	International Symposium in Jena: "60 Years of Planetaria from Jena"

returned to Jena the following year. This time Dr. Walther Bauersfeld, a member of the Zeiss board of management and responsible for the entire production of the firm since 1908, adopted this special project and, "...postulated a design solution consisting of a projection mechanism and a spherical projection dome." A totally new invention, inextricably linked with the name Walther Bauersfeld, received the epithet "the wonder of Jena."



Crowds waiting for the next star show at the Jena Planetarium in 1930.

The first large planetaria featuring the subsequent Model II for domes with a diameter of approximately 20m (about 65 feet) were opened in 1926. These included the Zeiss Jena Planetarium, inaugurated on July 18, and currently the world's oldest functioning planetarium installation, although it has now been fitted with new technology. In the United States about that time, the Adler Planetarium in Chicago received the first Zeiss planetarium in the US.

After World War II, the planetarium business continued in the East and West by both Zeiss enterprises. The most recent models from Carl Zeiss feature several modes of operation, extending from manual operation to semiautomatic and fully automatic control. New on the market is the Zeiss Universarium which can be installed in either horizontal or tilted domes.

In a dome of 361 feet (110m)in diameter, the use of glass fiber optics with a low lamp power allowed a brilliant, true-to-nature reproduction of the stars, during a demonstration to experts in the Stockholm Globe Arena. This Model VII, the world's most modern, powerful planetarium projector, displays not only 9100 fixed stars, but also the Milky Way, 25 star clusters and nebulae, and the major bodies of our solar system.

On the dome of the star theater in the Forum of Technology of the German Museum in Munich, where Oskar von Miller's dream took shape from Dr. Walther Bauerfeld's design details and technical calculations totalling over 600 pages, the Universarium Model VII of 1993 is a joint project of Carl Zeiss in Jena and Oberkochen. Future planetarium projectors will be developed and produced exclusively in the Astronomical Instrument Department in Jena.

More than 500 Zeiss planetaria scattered all over the world testify to the success of the instruments. Sky watching has developed into a popular, multifaceted medium of communication, which erases the division of the world into nature and culture.

Editors note: Zeiss Historica, Spring 1983, carried an article by Larry Gubas on Zeiss Planetaria. Some of the information is quoted in this article and updated from a Carl Zeiss Jena news release of November 1993.

OTHER SOURCES

F	1990	Astronomical Catalog, p.18.	Grossman
F	1988	Zeiss by Mail, pp. 12, 13.	
S	1987	Restoring an Ansalvento, pp. 6, 7.	Gould

A MICROCOSMIC VIEW FROM EARTH

Marion Husid,
New York City

Nineteen hundred ninety-three seems to have caused a big stir among the Zeissniks, especially in the planetaria departments. Their excitement celebrates an idea of 1913, concretized by 1923, magnified by 1926, and commercialized from then onward. Simply put, the "idea of 1913" followed thousands of years of sky watching by sky watchers on our small planet. And it's safe to assume that even before written and sculptural evidence appeared, humans depended upon the natural rythms of sun, moon, and seasonal changes for their survival.

"Born in the region of the river Euphrates over 5000 years ago...the observations of celestial movement made by civilizations provided among other things appropriate timing for planting and harvesting. From the star worship of the Akkadians and Sumerians, the Babylonians developed an astrological system of five planets. The Chaldeans perfected and spread the science to Egypt, Greece, Rome and the East." We've been looking up forever.

By 1100 BC, constellations were described and named by the first sky observers, symbols for Sagittarius, Capricorn and Scorpio among the first. At the beginning of the Christian Era, the Romans added to the science, and as new planets were discovered, theory expanded to include a more sophisticated spectrum. Each culture from the Near to the Far East fixed its own version of the zodiac as repeated observations evolved into a search for order in the universe.

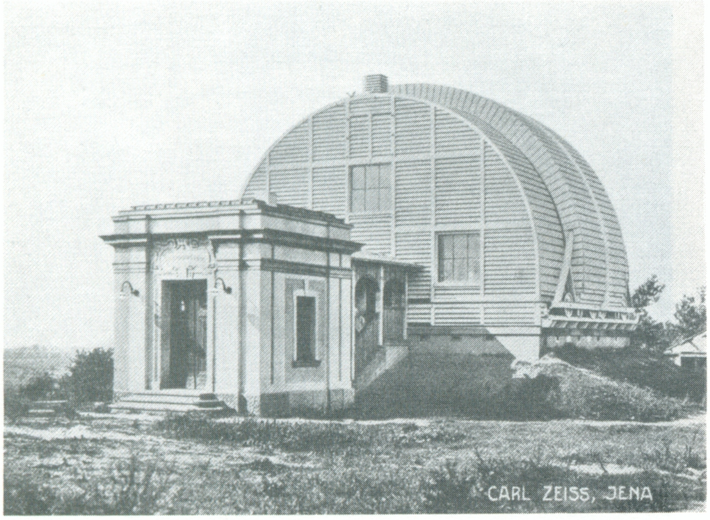
When Christianity began its rise, the logic of the skies became part of their culture. Hence, the twelve Apostles identified with the twelve zodiacal signs. Much of the art in monasteries, churches, cathedrals, and abbeys reflected this acceptance of the planetary system.

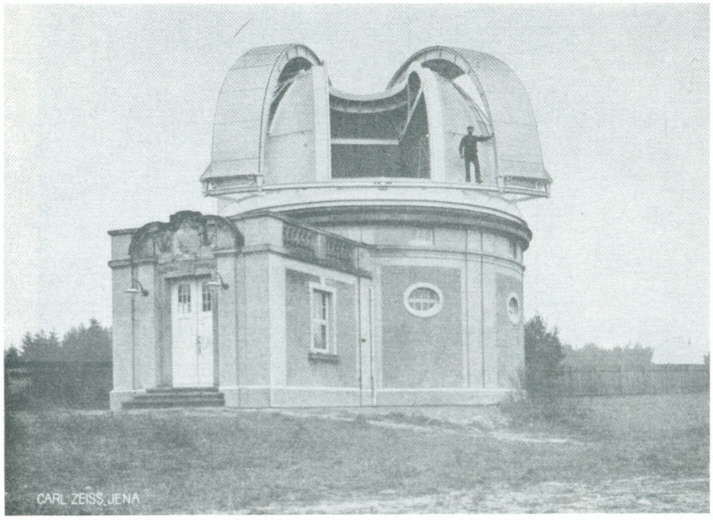
Frontispiece to the calendar from a psalter. Astronomer holds an astrolable crucial to calculations in astronomy. Circa 1200.

Pre-Copernican manuscript. The planets, the sun, and the moon travel golden pathways between the signs they rule.

A late 12th century Iranian bowl shows the sun surrounded by the moon and five visible planets.

Pegasus supports an astronomical globe of 1579.





For decades, huge Zeiss telescopes have searched the skies from these two buildings of the Hamburg Observatory at Bergedorf.

Indeed, Adam Smith's theory of supply and demand explains the evolution of astronomical globes, telescopes and later planetariums. These tools served nomads, seafarers, explorers, farmers, mountain climbers, scientists, and the curious as well. And let's hear it for the poets and writers who, inspired with celestial marvels, stimulated our imaginations in every culture and country throughout our planet Earth.

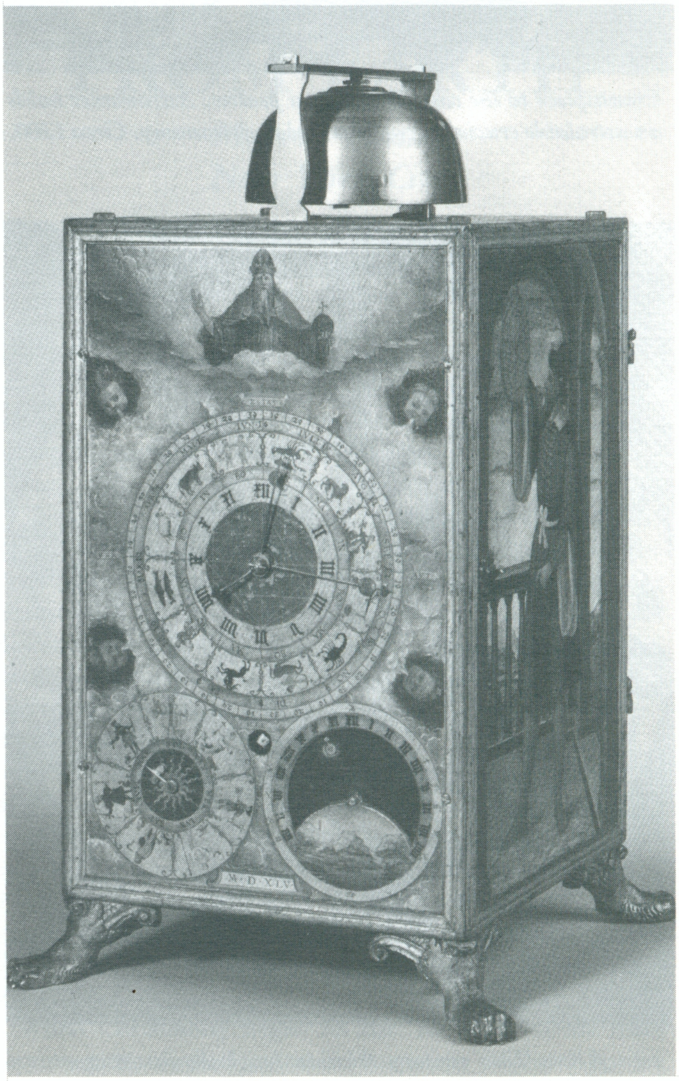
One might say that at the beginning of the twentieth century Carl Zeiss Jena occupied the right "space" at the right time. (Three of the 97 constellations are "wonders" of Jena and possibly a fourth: Ara, the Altar; Draco, the Dragon; Vulpecula, the Little Fox, and Telescopium, the Telescope.)

Already producing excellent geodetic equipment and measuring devices of all sorts, Carl Zeiss added to the history of celestial marvels. Their specially designed domical rooms (planetariums) to surround the newly created projectors served a vital societal need.

Indeed, Auerbach on page 84, in Zeiss Works, expressed a late 19th century ethic that the fortunate uplift the less fortunate. "And when we remember that millions of people in large towns hardly ever see the starry heavens at all, we cannot over estimate the ethical and educational value of this wonderful interpreter of Nature's mighty rule in space."

By mid-twentieth century, the human imagination manufactured devices for macroscopic views. Their education on the ground in simulated environments prepared them to walk on the moon. Thousands of galaxies beyond our Milky Way awaited discovery, where clues to the macrocosmos might emerge.

Had Carl Zeiss been commissioned the Hubble telescope it would have worked the first time.



Austrian clock of 1545 records astrological data and cupping days.

SOURCE

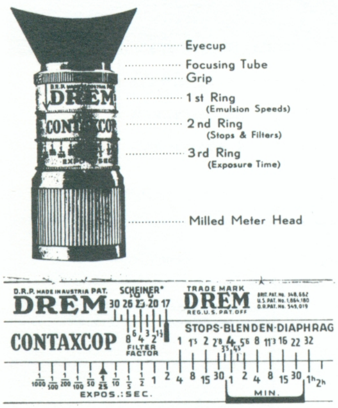
Rhoda Urman, "The Astrological Birthday Book," Harry N. Abrams, Inc., New York, 1982. An accurate chronological historical introduction and examples were very much appreciated.

A CONTAX-DEDICATED EXPOSURE METER

Maurice Zubatkin, Clifton, New Jersey

Most of us who collect cameras have seen Leica-dedicated exposure meters. Westons are seen more frequently because they're the only non-Leica-made official meters. Often they appear in Leica instruction books. Except for the Helios and the Contax III, however, no independently made exposure meter dedicated to the Contax has been discovered. Until now!

I've been fortunate to acquire a Contax-dedicated exposure meter made by Drem, an Austrian manufacturer of the pre-WWII period. This one is the so-called extinction type, or optical wedge meter. Drem made a Leicascop, a Cinemeter,



INSTRUCTION:

START: Set the large arrows on the first and second rings opposite each other.

FILM SPEED: Turn the second ring until the | of the red Filter scale is in alignment with the Film Speed figure on the first ring, which is marked in Scheiner degrees.

FILTER FACTORS: Turn the second ring until the proper filter factor (2×, 3× etc.) lines up with the first ring's Scheiner degree figure, which corresponds to the film in use.

CHECK ALWAYS whether the second ring is properly aligned with the film speed on the first ring. It is of greatest importance for correct results.

Hold the meter at the GRIP, while turning the Milled Meter Head. Do not hold at the scales.

SIGHTING: Place the eyecup to the eye, excluding extraneous light. (Remove eyeglasses.)

Focus sharply upon the figures 1 and 2 on the white and green fields, by gently drawing out and telescoping the focusing tube and eyecup.

MEASURING: Point to the scene and turn the milled meterhead very slowly to the left. Watch the figure 2 on the green field become dimmer, and **stop immediately when the figure 2 disappears.**

If the green field remains visible after the figure 2 disappeared, it is of no consequence: the definite measuring point is exclusively dependent upon the disappearance of the figure 2 itself.

READING: Take the meter from the eye immediately and find the scales set automatically: the stops on the second ring are aligned with the corresponding exposure time on the third ring.

If the exposure time marks point between two stopnumbers (half-parts), then set the index of your camera lens diaphragm exactly in the same manner.

ARTIFICIAL LIGHT: When working in artificial light avoid pointing the meter directly at the source of light.

EYE STRAIN: If the eyes are dazzled by brilliant light, they should be allowed to rest for some time before taking a reading.

Instructions for the Drem Contaxcop.

one for the Graflex, and also a Willometer, made especially for sale at the Willoughby camera stores.

These extinction meters work by viewing the last visible letter or number in a series that is graduated from light to dark. One notes the last visible character and applies it to a scale indicating the aperture and shutter speeds, with allowances for film speed, and often for a filter.

The Contascop shown here was made for the Contax I. The instructions are dated July 1933, with the top shutter speed at 1/1000, not the 1/1250 of the Contax II.

The top film speed of Scheiner 30 is equivalent to ASA 80, which was fast for 1933. Note the bold print of the 1/25 shutter speed, probably for the convenience of the owners of early Contax I models.

In my collection of exposure meters, I have nine versions of the Leica-dedicated meters, six of which are various models of the Weston, the only official meter that Leica recognized in print (before their own clip-on meter). Other electric meters are two by Sixtus and one by Bewi.

Additionally, I've found two extinction meters dedicated to the Leica. In a book on the Leica from 1930 appears a Dremoscope of the middle 1920s, unmarked specifically for the Leica. I believe other Leica meters made by various manufacturers were sold because references to them have been published. But so far, this is the only one I've seen or heard of for the Contax.

To finish off a roll of film, I've photographed other Zeiss Ikon exposure meters of various types in my collection, should any of my fellow enthusiasts care to see them.

Drem Contaxcop from Austria, 1933.

CONTAX — THE BIRTH OF THE NAME

Kurt Juettner, Offenbach am Main, Germany

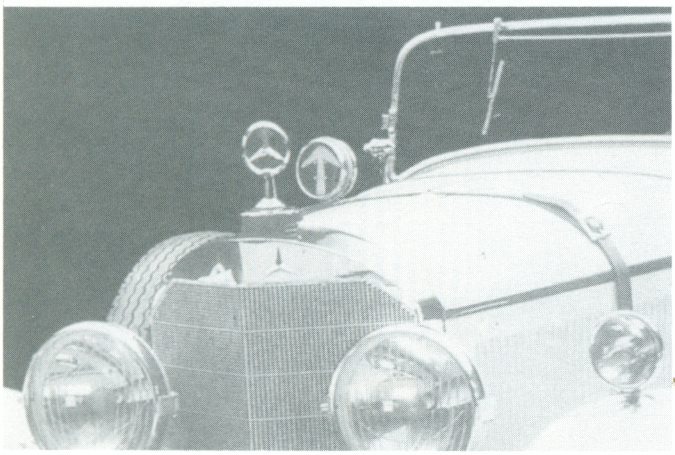
The year was 1924. Germany was in deep economic distress after the loss of World War I. Among the many industries affected were the German camera and automotive manufacturers.

But what had the automotive industry to do with the name Contax? More than we might imagine today. In Stuttgart lived a renowned technician and inventor, Dr. August Nagel. Nagel, born in 1882 in Pfrondorf near Tuebingen, was General Director and the driving technical force behind the firm of Contessa-Nettel in Stuttgart.

Nagel did not want to depend wholly on camera and camera accessory production in those difficult times. He searched for other products which could be produced in his factory using the facilities already in place. In short, he searched for a way to diversify.

In 1924 Nagel introduced one of the results of his search: an automobile directional signal carrying the trademark "Contax." (The trademark was later turned over to Zeiss Ikon as part of the absorption of Contessa-Nettel into Zeiss Ikon.)

The Contax was a simple device, consisting of a round black metal housing containing a rotating red arrow. When the car carrying it moved straight ahead, the red arrow pointed straight up. To signal a turn, the driver moved a switch with three contacts, and the arrow then pointed to the left or right. The Contax was available in both 6-volt and 12-volt versions. Among the German car manufacturers who adopted it were Daag, Daimler-Benz, Elite, Krupp, Opel, Presto, Simson Supra and Stoewer.



Contax directional signal on a 1926 Mercedes 600.

In 1928, after the creation of Zeiss Ikon, over 100,000 of the Contax signals were delivered to the automobile industry. But the device had several shortcomings. It was expensive, and the arrow could be seen from only one angle. In 1928/1929, it was gradually replaced by the electromagnetic blinker.

Auszug

aus der vom Deutschen Patentamt weitergeführten Gebrauchsmusterrolle des ehemaligen Reichspatentamts

Linke Seite der Gebrauchsmusterrolle:

Laufende Nr.	Klasse	Bezeichnung des angemeldeten Gebrauchsmusters. Name und Wohnsitz des Anmelders. Name und Wohnsitz des Vertreters des ausländischen Anmelders. Beanspruchte Unions- u. Ausstellungspriorität: Land, Ort, Zeit. Zeit der Anmeldung. Aktenzeichen	Zeit der Eintragung
978297	63c	Fahrtrichtungsanzeiger für Automobile o.dgl. Zeiß=Ikon A.=G., Dresden, Schandauerstr. 76. ~~Dr. August Nagel, Stuttgart, Dillmannstr. 15~~	27. 1. 27

Rechte Seite der Gebrauchsmusterrolle:

Schutzdauer verlängert. Gebühr gezahlt am	Gelöscht infolge	Bemerkungen
6.8.28	Durch Zeitablauf erloschen.	Umgeschrieben auf Grund der Verfügung vom 7.6.28.

Excerpt from the trademark register of the German patent office shows transfer of the Contax trademark from Contessa-Nettel to Zeiss Ikon on January 27, 1927.

Another name familiar to Zeiss collectors also had its beginnings in the world of automobile accessories. The Contameter (later a close-up device for cameras) was originally the Zeiss Ikon name for a gasoline meter much like a fuel gauge.

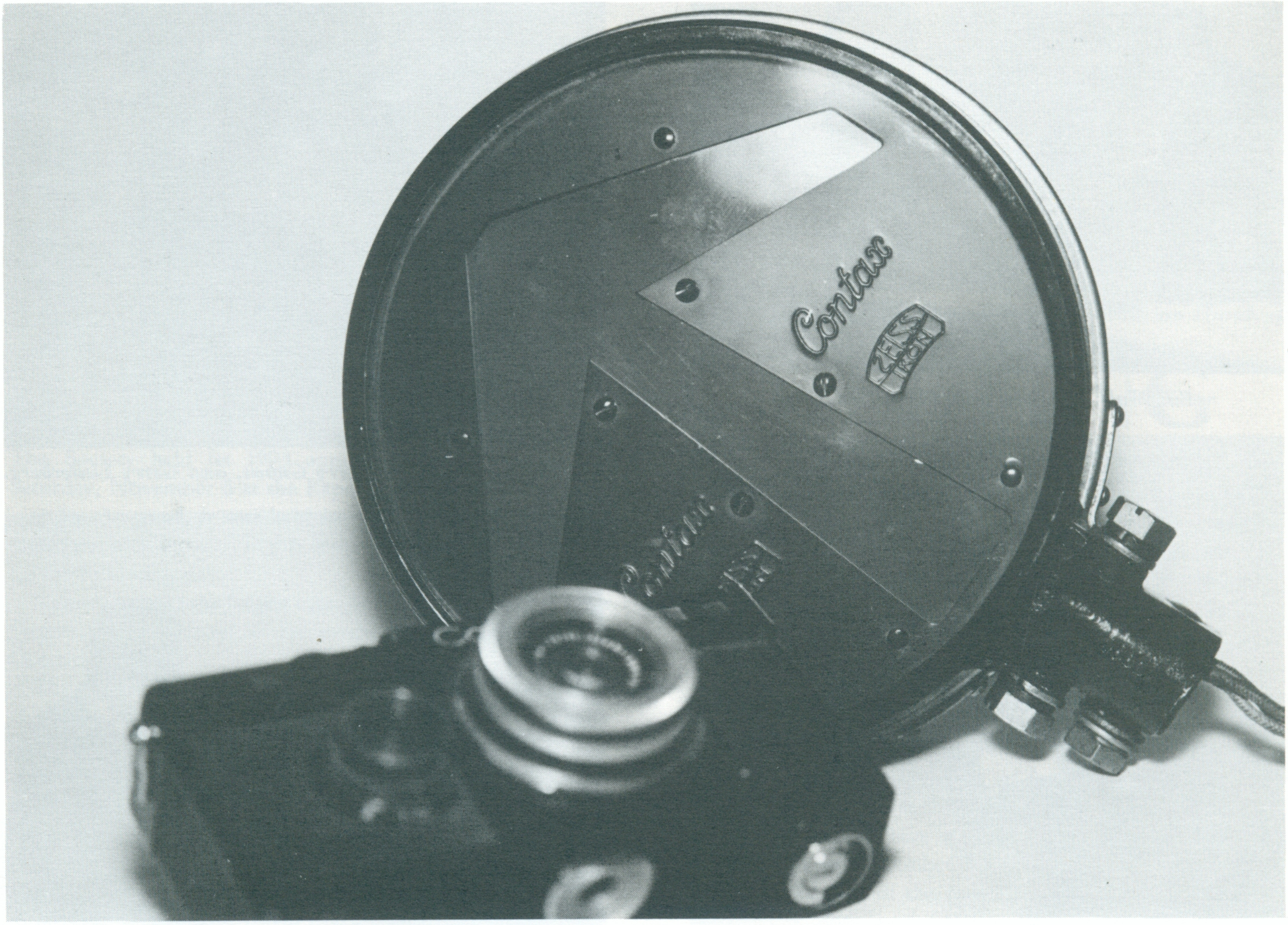
In addition to the Contax signal and the Contameter gauge, Zeiss Ikon produced a number of other automotive products. Among them were headlights (see Zeiss Historica Journal, Autumn, 1993, pp.15-20), blinkers, windshield-wiper motors, horn rings, number plate lights and stop lights.

Perhaps this article should carry the title, "Contax History, Part Zero." It covers a bit of Contax history which even precedes the events so ably described in Hans-Juergen Kuc's "Contax History, Part One" and "Contax History, Part Two."

REFERENCES:

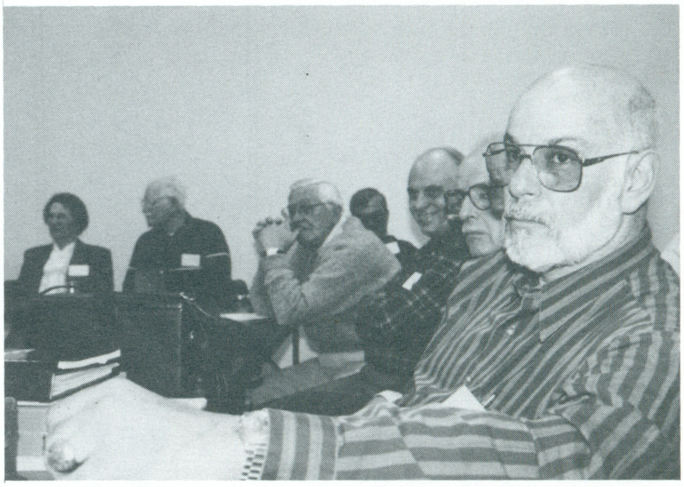
Die deutsche Automobilindustrie — eine Dokumentation von 1886 to 1979, second corrected and expanded edition of 1979. Deutsche Verlagsanstalt, ISBN 3-421-02284-4, H.C. Graf von Seherr-Thoss.

Orginal Contax directional signal from 1925 manufactured by Contessa-Nettel on display in the Horch museum in August Horch's villa in Zwickau, Saxony. Behind the villa is the former Horch factory. Carrying the name VEB Sachsenring, the factory produced Trabant automobiles under the former East German regime.



Later version of the Contax signal carries Zeiss Ikon logo.

Carl Ian Schwartz with his Contax.



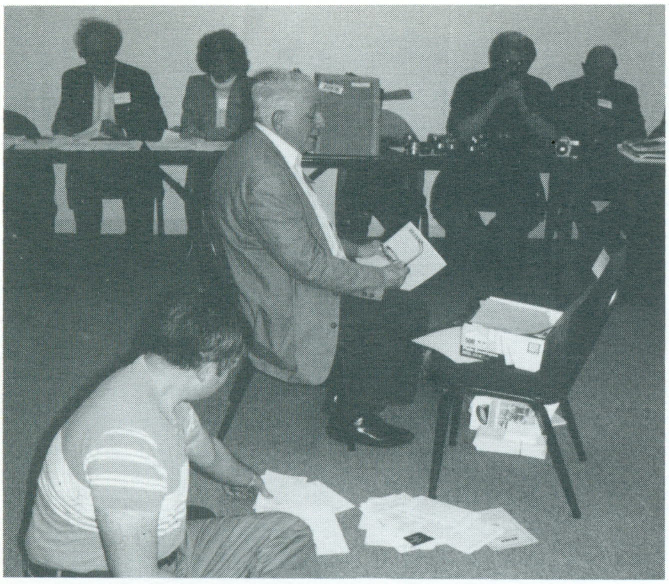
L to R: Evelyn and Maurice Zubatkin, Dr. Sergius Pechin, Marc James Small, James Stewart, Bill Stone, Dr. Allen Gold.

Bill Mair, left, and Nick Grossman.

L to R: Eugene Pohl, Larry Gubas, and Gerry Laderberg.

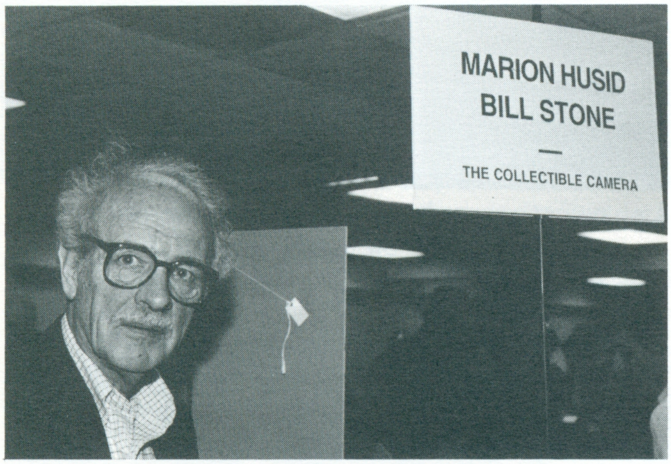
James Stewart shows his rare Agfacolor filter.

Maurice Zubatkin, left, with Marc James Small.



Larry Gubas sorts through Simon Nathan's documentation, with principal speaker in the background. Far background: Bill Stone, Marion Husid, Mark Chaney, Marvin Rogan.

President Charles Barringer, standing. At the table, left to right, Bill Mair, Larry Gubas, and George Helmke.



Editor Bill Stone at photographic show.

Mark Chaney, foreground, and editor Marion Husid.

1993 ANNUAL MEETING

The Society held its 1993 annual domestic meeting on Saturday, November 6 at the Expo Center in Fort Washington, Pa. As usual, it was held in conjunction with a major photographica show — in this case, the Delaware Valley show on the following day.

Attendance was the largest ever. Some thirty members were present, coming from as far away as Illinois, Ohio, and Ontario, Canada.

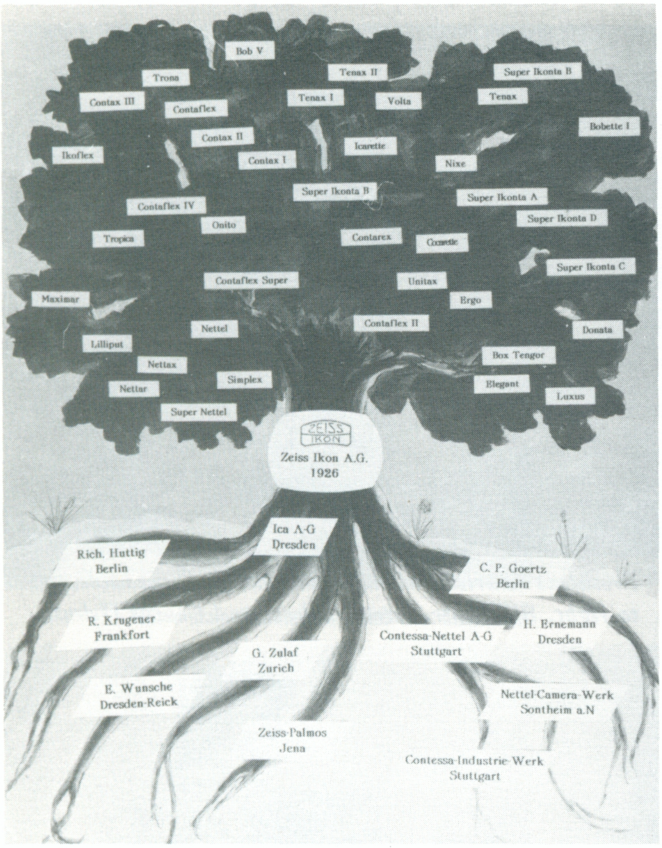
The morning was devoted to business and organizational matters. Larry Gubas, our archivist, reported that he was preparing a bibliography of the Society's archives. Ways to increase the Society's membership were discussed, and Carl Ian Schwartz was appointed to prepare and place some suitable advertising. It was decided that there should be no increase in annual dues for 1994.

The entire current slate of officers was reelected. Two new posts were created and filled. Marc James Small was elected Vice President, Annual Meetings. And the new office of European Liaison Officer will be assumed by Hans-Juergen Kuc.

The afternoon began with a "show and tell" session in which members displayed exotic pieces of equipment. Then came the principal speaker, Simon Nathan, who described some of his many experiences with Zeiss. As an inventor and developer of photographic equipment, he often looked to Zeiss to supply special optics for his needs. His talk was illustrated with many original documents, as well as examples of some of the lenses themselves.

A Zeiss Ikon promotional film from the mid-30s was played in a video version. It showed the design, features and manufacture of the Contax II and III. (This video, combined with a 1989 Zeiss film on the Carl Zeiss Foundation, will soon be made available to members.)

As reported elsewhere in this issue, a meeting of the Society will be held on September 3-4, 1994 in Hamburg, Germany. The site and date of the next meeting in the US are being arranged by Marc James Small, and will be announced as soon as possible. A reminder: all members are welcome at all meetings, whether held in Europe or the US.



Zeiss Ikon family tree — Fleetwood Museum version by Dorothy Schmidt. Products occupy the leaves and branches; original companies comprise the roots.

Zeiss Ikon cameras and parts exhibition with movie equipment below. On exhibition until July 1994.

ZEISS IKON AT THE FLEETWOOD

George E. Helmke, Plainfield, New Jersey

The Fleetwood Museum, North Plainfield New Jersey's Museum of Cameras and Images, does not possess a world-class collection of Zeiss Ikon cameras. Nonetheless, thanks to Zeiss Historica's secretary treasurer Maurice Zubatkin's recent gift of cameras (Contessa Nettel, Ernemann, and Ica), plus a few borrowed cameras, the museum has assembled an exhibition. Opened in February 1994, it will run for the next six months.

To emphasize the 1926 formation of Zeiss Ikon AG through the merger of Contessa Nettel, Ernemann, Ica and Goertz, associate curator Dorothy Schmidt has created a poster. Unlike the anniversary Zeiss Ikon poster of 1937, this tree has roots that represent the pre-Zeiss Ikon firms; the trunk becomes Zeiss Ikon; and stemming from the leaves and branches emerge the many Zeiss Ikon products.

Cameras from each of these makers and Zeiss Ikon cameras, exposure meters, accessories and advertising copy of the period fill several shelves of a cabinet. On the bottom shelf, one finds five Zeiss Ikon movie cameras and a 16mm movie projector, on loan from Leo Zappe, a prominent New Jersey movie equipment collector.

The Fleetwood Museum (The Matilda Fleetwood Museum of Art and Photographica of the Borough of North Plainfield) was established in 1985 to display the camera collection of the late Benjamin Fleetwood and oil paintings by his wife the late Matilda Fleetwood. Zeiss Historica member Edward K. Kaprelian, a friend of Mr. Fleetwood, catalogued the collection and designed the cabinets. Nicholas A. Ciampa organized the functioning and staffing of the museum.

Customarily, between three and four hundred cameras and accessories from a permanent collection of over one thousand cameras are on exhibition. Furthermore, increasing emphasis on images will become integrated with the museum's goals.

An image maker of great importance was Margaret Bourke-White whose photographs are now on view. Having grown up in nearby Middlesex, NJ, and a 1921 graduate of Plainfield High School, Bourke-White represents one of several New Jersey photographers whose work will appear at the Fleetwood in the future.

Museum Director Nicholas A. Ciampa and Curator George E. Helmke, both members of the Zeiss Historica Society, extend a cordial invitation to members, their friends and family, to visit the museum. Located within the Vermeule Community Center in North Plainfield, at 614 Greenbrook Road (at the corner of Clinton Avenue), the telephone number is (201) 756-7810. The Fleetwood is open Saturdays from 10 to 4 and Sundays from 1 to 4, except on major holiday weekends.

A view of the main museum room showing many of the museum's holdings. Above the central cabinet are portraits of Matilda and Benjamin Fleetwood.

The Fleetwood Museum in North Plainfield, NJ., a restored nineteenth century house of the Vermeule family plantation.

LICHTSTRAHLEN

HAMBURG MEETING

Our meeting in Germany, scheduled for September 3 and 4, 1994 will take place at the Baseler Hof, Esplanade 11, Hamburg. Hans-Juergen Kuc, liaison officer in Europe, has planned another most interesting and exciting two days.

Please write or fax him (see below) if you plan to attend. Information will enable Juergen to not only arrange for your hotel accommodations (some members may wish to arrive a day or so before the meeting and leave after the meeting day), but will provide for preparations, such as transportation, tours, food, etc. — a host of other details that depend upon "headcount".

Hans-Juergen Kuc
Segerfeld 12
22397 Hamburg, Germany
FAX: 011-49-40-608-3501

WHAT IS IT?

Can you help Australian member John Keesing identify this device? It is engraved "Winkel-Zeiss Goettingen" and "Photo 6x". The upper section appears to be for focussing, as it is engraved with distances from infinity to 10 (the units of distance are not marked, however). As shown here, the device is approximately 70mm tall. Outside diameter of the larger tube is approximately 22.5mm.

CONTAX CAMERA HAS NIKON LENS

I recently had the opportunity to briefly examine and photograph a Contax camera which I had never seen before: a Contax Preview camera. The unique device is made by Contax and Yashica in Japan and is used to take a single 24 x 36mm exposure on a sheet of Polaroid 667 film. It consists of a mirror reflex housing attached to a backplate which houses

a manually cocked vertical metal focal plane shutter with speeds of B and 1 to 1/1000 sec. The camera has a right angle finder.

It is marked "Made in Japan" and the Polaroid portion is marked "Made in the Netherlands". The camera has a tripod socket and connections for a neck strap. I thought that it was unusual that the camera carried the name "Contax", but was fitted for Nikon SLR lenses. The instruction book clearly states that the camera uses Carl Zeiss lenses. The conversion to the Nikon lens mount was very professional and almost looked like the conversion had been done at the factory. The camera is shown here with its Nikkor lens.

Frank Paca

Light Rays: Notes of Interest to Those Interested in Zeiss and Its History

LEIPZIG OLD-TIMER

A beautifully restored example of preWWII Zeiss Ikon craftsmanship is on display in the cinema section of Grassi Museum in Leipzig. (The Grassi is comprised of several museums, including the Museum for Arts and Crafts, the Ethnological Museum, and the Museum for Musical Instruments.) Standing over 6 feet high, the machine is a 35mm theatrical motion picture projector.

The arclamp projector is apparently of Ernemann design, since it is marked as an Ernemann VII, serial number B077307. But it carries several Zeiss Ikon markings, including a plate on an electric motor which reads "Zeiss Ikon, Dresden, Type 01/60, Number 0475." When seen in the summer of 1993, the machine carried no projection lens.

According to museum staffer Ralph Nuenthel who restored the projector, it was manufactured around 1940. By 1956, it was in use in a Leipzig theater, and was then moved to the Capitol, Leipzig's largest theater, where it served from 1956 to 1961. Later it was used for six or seven years to project outdoor movies in summertime in a Leipzig park.

REMEMBERING DR. JOACHIM KAEMMERER

May 25, 1927 — February 26, 1994

We met Dr. Kaemmerer in 1989 at our first Zeiss Historica meeting in Oberkochen. It was the beginning of a warm and sincere friendship. Apparently, he had agreed to represent Carl Zeiss Oberkochen as host for this meeting, as he did again at the meeting in 1992.

Besides the well-planned tours and side trips he arranged for us in the environs both times, he and his wife Marika (with children, relatives and friends to assist) welcomed us to their home on Beethovenstrasse for dinner. Tables were set, we were greeted with champagne and orange juice, there was food and drink galore, bratwurst (which Joachim grilled), and delicious cakes baked by Marika.

Having us to their home (instead of a hotel or restaurant) activated an energy level that evoked a special "gemuetlichkeit". Everyone enjoyed each other; the names we'd either written or read about became real. We had a memorable time, both times, because Marika's and Joachim's generosity and warmth radiated.

One of the side trips Joachim planned for us is etched in our minds forever. On Saturday, August 26, 1989 he brought our bus-filled group to Balthazar Neuman's last great Baroque church at Neresheim, and introduced us to Father Daniel, our guide. Father Daniel, who spoke several languages, asked Joachim what language he should use. Many of us were delighted to hear Joachim reply, "English."

Father Daniel shared with us his intimate knowledge of the architecture and iconography of the frescoes. He explained the symbolism of the mystery and presence of the Cross in life as a burden, and in death, as a resurrection.

For the surviving loved ones, left to remember Joachim Kaemmerer, especially his wife and children, the burden of their loss, that is, his immediate presence in their lives, is heavy, indeed. For Joachim, the Cross offered release and resurrection, according to Father Daniel.

We remember Dr. Joachim Kaemmerer with both sadness and joy. Sadness for his untimely death, and joy for the images that come to mind: his kind face, his gentle manner, his generosity, and his extra special effort toward our Zeiss Historica Society members. He was a very good man.

Marion Husid and Bill Stone

Dr.-Ing. Joachim Kaemmerer was born in Bad Frankenhausen, Thuringia. From November 1948 to December 1959, he studied and earned his degrees from the Technical University of Physics at Berlin-Charlottenburg.

After graduation, he joined Voigtlaender AG in Braunschweig, where he stayed until 1967. During that same year, Carl Zeiss Oberkochen engaged him as engineer in their photolaboratory. Seven years later he became Administrator of the Photolens Department.

In 1983, Dr. Kaemmerer became Director of Optical and Electric Systems, and held this position until his retirement in 1992.

WELCOME TO OUR NEW 1993 MEMBERS

Peter Abrahams, 1948 Mapleleaf Rd., Lake Oswego, OR 97034-6853. Phone: 503-636-2988. Telescopes, Binoculars, Microscopes, Optics & History.

Dr. Helga Beez, Honorary Member, Director, Optical Museum of Jena, Ernst Abbe Foundation, Carl Zeiss Platz 12, D-07743 Jena, Germany.

Walter Boerger, 1810 Wildwood Pl., West Linn, OR 97068. Phone: 503-636-0484. Cameras & History.

Charles A. Boyer, PO Box 8, 13731 Boswell Rd., Shirland, IL 61079. Phone: 815-629-2588. Postwar Ikonta & Contax Cameras.

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Sarah L. Colborn, 2110 Alexander Way, Pleasanton, CA 94588. Phone: 510-462-6238. Cameras & History.

Allen Conroy, 2328 Morrison Drive, Palmyra, NY 14522. Phone: 315-597-9833. Cameras.

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Thomas Givens 2671 Glengyle Dr., Vienna, VA 22181. Phone: 703-281-4107. WWII Binoculars.

Dr. Hansjoachim Hinkelmann, Head of the Department of Technical and Scientific Information, Director of the Carl Zeiss Optical Museum, c/o Carl Zeiss Optisches Museum, 73446 Oberkochen, Germany. **Honorary Member.**

James E. Issler, 60 Old Hill Rd., Westport, CT 06880. Phone: 203-661-2424. Fax: 203-222-8933.

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Zig Look, PO Box 23054, Honolulu, HI 96823. Telescopes, Rangefinders, Binoculars & History.

Dick Lubinsky, 2565 Grand Concourse, New York, NY 10468. Cameras & History.

William Mair, 25 Toynbee Trail, Scarborough, Ontario M1E 1E8, Canada. Cameras & History.

Joseph Miller, 4811 Catharpin Rd., Gainesville, VA 22065. Phone: 703-754-7598. Cameras & History.

Steve Nelson, 2087 Nobleshire Rd., Columbus, OH 43229. Microscopes & Binoculars.

Robert Oldendorf, 202 Pinewood Dr., Schenectady, NY 12303-5616. Phone: 518-356-3270. Cameras.

Shunsuke Otake, 1-246 Tutumishita, Okucho, Ichinomiya, Aichi, 491-02 Japan. Cameras & History.

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