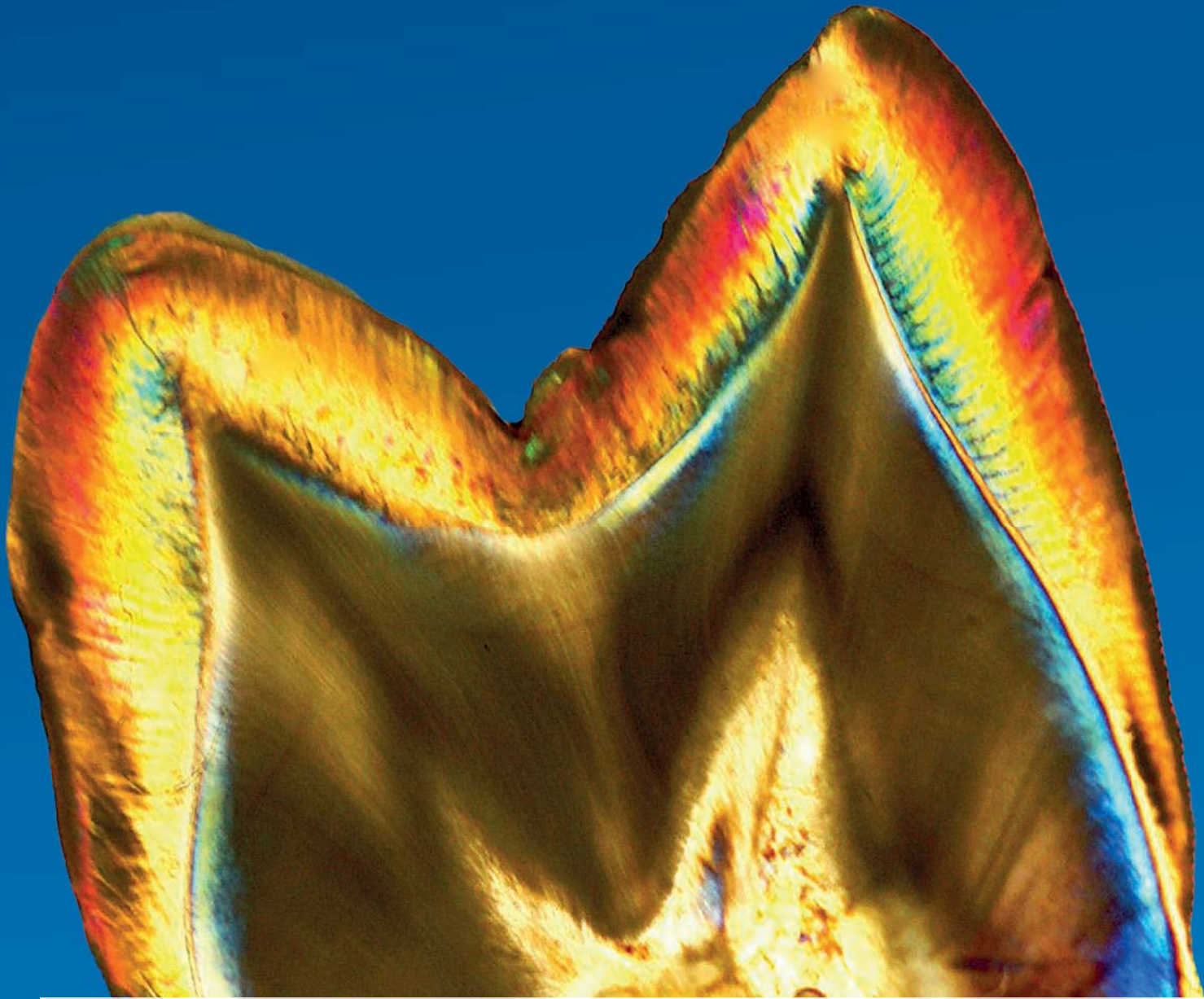


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DENTAVANTGART

VOLUME IV ISSUE 02 SUMMER 2014



INTERVIEW

PERFECTER
OF THE GOOD:
KURT
ZUBLER

DT. **ALEJANDRA SEQUEIRA** &
DR. **JORDI MANAUTA**

COLOR DROPS:
PROGRESSIVE
WAX-UP IN
COLORS

DR. **IVAN C. MOLINA** &
TPD. **ELADIO GONZALEZ** &
DR. **PASCAL MAGNE**

ULTRA CONSERVATIVE
ESTHETIC
REHABILITATION
USING VENEERS

DR. **JAVIER VASQUEZ**

A DIFFERENT
PERSPECTIVE IN
OCCLUSION

Zirkonzahn®

Human Zirconium Technology

100% PRETTAU® BRIDGE

MADE BY CAD/CAM

**Occlusally screw-retained maxillary
Prettau® restoration on gold-coloured
anodized titanium bases**

DENTAL TECHNICIANS:

DT. Tauber Evi - Maria,
Federico Presicci
(Dentallabor Steger, Brunico, Italy)

DENTIST:

Dr. Julie (Adamczyk) Elpers
(UNC School of Dentistry,
University of North Carolina, USA)



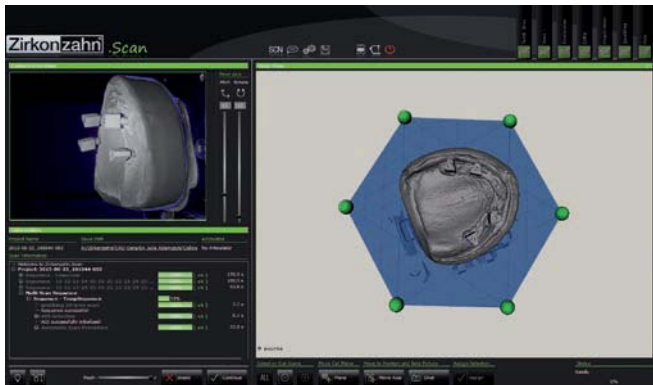
BASELINE SITUATION

The patient had previously received an implant-supported Prettau® Zirconia mandibular restoration, produced by our laboratory to the patient's complete satisfaction. She now requested a high-quality fixed implant-supported restoration for her maxilla as well.

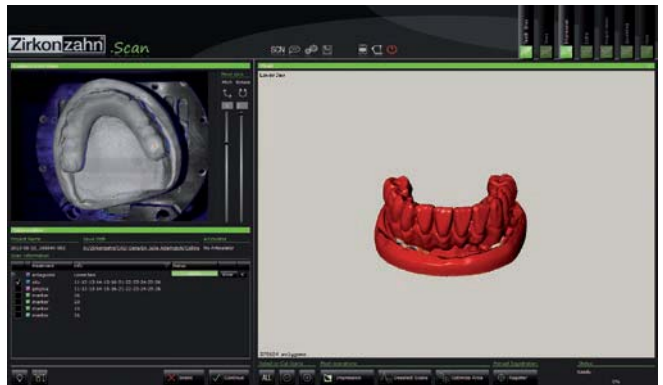
The upper and lower jaw were to be a perfect aesthetic match.

The implants were inserted at sites 16, 13, 23 and 26. The dentist provided our laboratory with photographs of the patient taken from different angles, articulated maxillary and mandibular master casts and a diagnostic model of the situation.

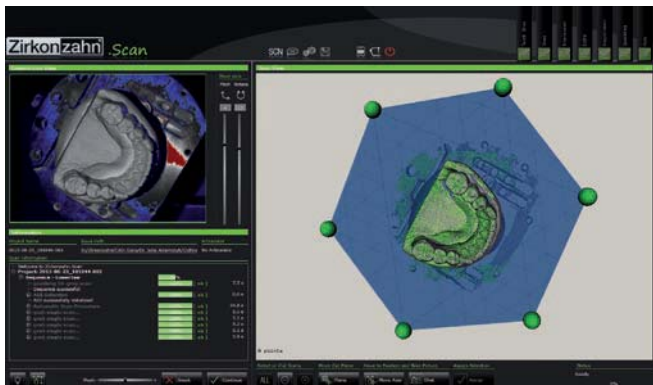
Prettau® Zirconia is the material of choice for this restoration and meets the patient's aesthetic and functional needs thanks to its high translucency and flexural strength.



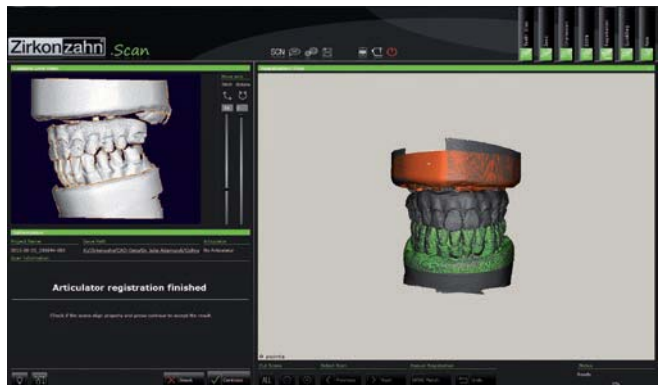
Upper model with implants and Zirkonzahn scanmarkers (titanium bases for AstraMue 20°).



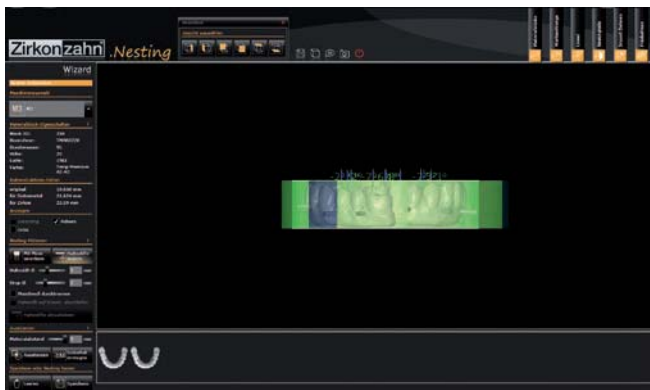
Upper model with present restoration.



Lower model (antagonist).



Following the above process, registration scanning was performed so that the models could virtually be brought into occlusion (the scanned versions of the upper and lower models were automatically adjusted to each other).



Then a bite-indexing scan was performed to align the virtual casts in occlusion (i.e. to match the survey scans of the maxilla and mandible).

As the casts had been positioned in the articulator on the basis of a face-bow registration, we also scanned the dentist's articulator complete with the casts. The S600 ARTI scanner is capable of scanning any articulator and transferring the data to the virtual articulator of the modelling software on a 1:1 basis.

By default, a resin prototype is manufactured to for the resin try-in to ensure the quality of the planned restoration. This makes it easier to execute the practitioner's instructions and facilitates any subsequent adjustments that may become necessary. The existing denture was used as a diagnostic model for the mandibular resin prototype in TEMP Basic. TEMP Basic is a flexible resin for restorations from single crowns to extended bridges and serves as a short-term provisional.

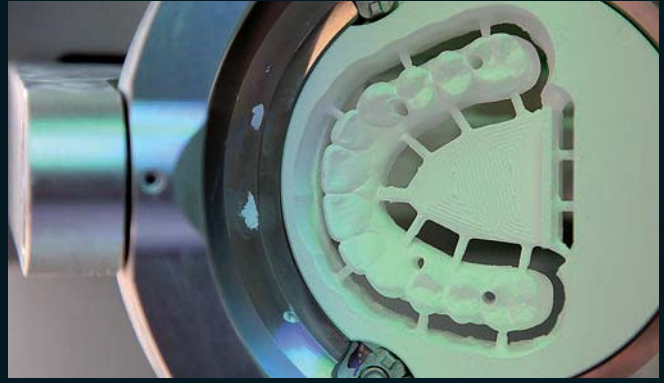
For aesthetic reasons, and taking into account the physiognomy of the patient, the Thalia denture teeth were selected teeth from the Heroes Collection tooth library and adapted to the specific situation. The Heroes Collection is a virtual, intelligent tooth library consisting of ten natural, aesthetically pleasing tooth sets, each perfectly suited for the respective tooth shapes.

Following the virtual set-up, the case was nested in the blank and tested for correct occlusion. The virtual articulator displays premature static and dynamic contacts and corrects them automatically. The framework was positioned in the blank, milled in TEMP Basic using the modular upgradeable M5 simultaneous milling unit with 5 + 1 axes, then finished and veneered with Zirkonzahn Gingiva Composite Fluid Tissue 4 (light) and 5 (medium). The Gingiva composites are high-viscosity light-curing veneering composites for building up gingiva analogues on resin frameworks. A conspicuous aspect of this case is that, at the request of the dentist, two TEMP Basic restorations were made and veneered. One of them was left in the mouth as a short-term aesthetic provisional, whilst the other was inspected for function and aesthetics and then sent back to the laboratory as a wax-up.



During the chairside try-in, minimal adjustments were made to the occlusion of the provisional denture. This situation was then used for reference at the laboratory. The model was scanned and matched one more time.

The changes were adopted for the definitive Prettau® Zirconia restoration and milled with the M5 unit.



To obtain maximum aesthetics, parts of the anterior and posterior surfaces were slightly reduced. This cut-back can be performed either manually or else virtually, in the modelling software – depending on the technician's preference. In this case it was created from the left to the right canine. It is important, however, to leave a functional incisal edge at full contour to obtain some degree of edge protection. By doing so, ceramic chipping can be eliminated almost entirely.



The structure was stained with Colour Liquids Prettau® Aquarell using the brush technique and sintered. For this purpose, Zirkozahn now offers the convenient Colour Liquid Prettau® Aquarell Pen Brush with its integrated Colour Liquid reservoir.

The structure was veneered in the gingival and cutback areas using Zirkonzahn ICE ceramics, followed by the first wash firing.

For fine-tuning, the sintered structure was stained with the new ICE Zirkon Stains 3D by Enrico Steger.

ICE Zirkon Stains 3D are three-dimensional stains with a special depth effect. By incorporating the stains directly into the glaze material applied to the structure, the stain and glaze firings can be consolidated in one step.



First gingiva and dentin wash firing.



The completed restoration.

The use of titanium bases can reduce stress within the zirconia structure, avoiding cracks and chipping. In this case, the titanium bases were anodized to a golden colour using Zirkonzahn's Titanium Spectral-Colouring Anodizer. This reduces the transparency of the zirconia, making the titanium less visible and reducing the grey value of the restoration.



The completed restoration was returned to the dentist for final delivery to the patient. The result of the work was greatly appreciated by all those involved.





The completed restauration in situ.



**DR. JULIE
(ADAMCZYK) ELPERS**

- Born and raised in Chicago (Illinois, USA)
- Bachelor of Science in Biochemistry, Notre Dame University, 2007
- Doctorate in Dentistry (DMD), Harvard School of Dental Medicine, 2011
- Master of Science in Prosthodontics, University of North Carolina Chapel Hill, 2014

Her primary clinical and research interests are centered around treatment of the edentulous maxilla, with particular interest in full-arch implant-supported reconstructions.



DT. TAUBER EVI - MARIA

- Born in Bressanone (South Tyrol), Italy
- A professionally trained Dental Technician, Landesberufsschule Baden (Vienna), Austria and professionally trained Orthodontic Assistant, University Clinic Innsbruck, Austria
- Since 2012 working as a Dental Technician at the dental laboratory and education centre Dentallabor Steger, Brunico

Zirkonzahn[®]

Human Zirconium Technology



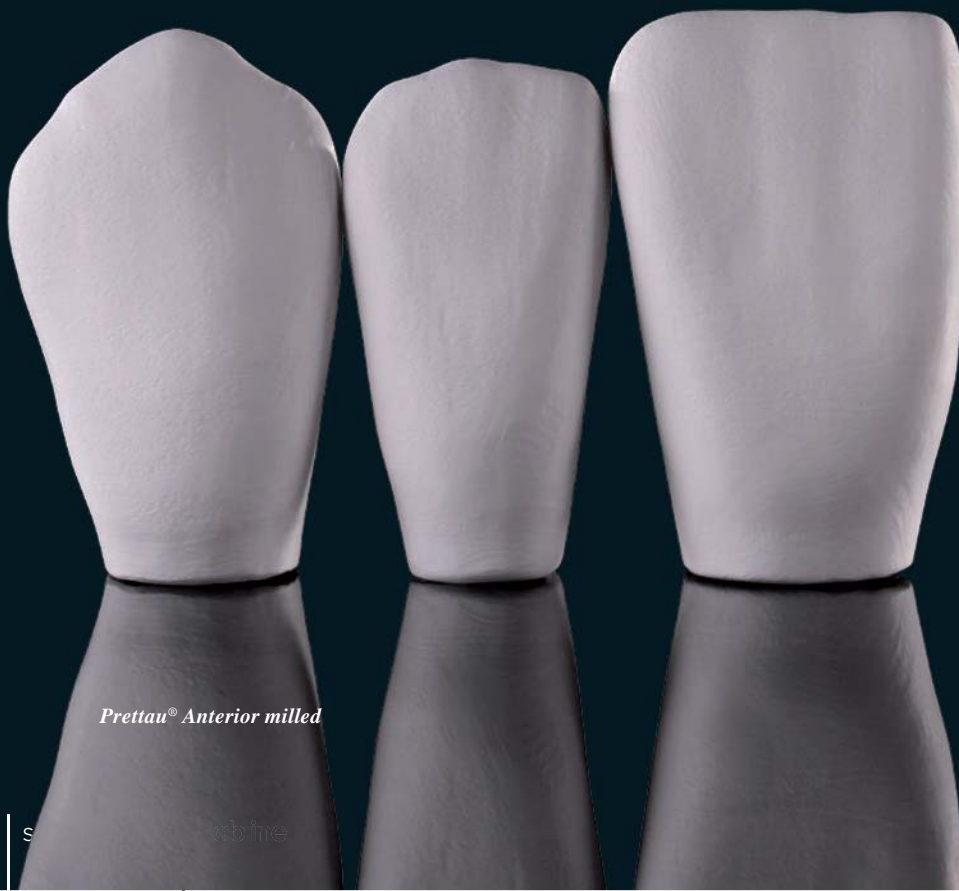
PRETTAU[®] ANTERIOR

WE HAVE LEARNT SOMETHING MORE

PRETTAU® ANTERIOR

OVERVIEW OF CHARACTERISTICS:

- *New zirconia - same translucency as lithium disilicate*
- *Particularly suited for the anterior tooth region*
- *> 600 MPa*
- *For single crowns, inlays, onlays, max. 3-unit bridges (fully anatomic or reduced)*
- *Fully biocompatible*
- *Blanks available in different heights*
- *Sintering temperature: 1450 °C*
- *Customisable with Colour Liquid Prettau® Anterior Aquarell (available from june), Ceramics ICE Zirkon Keramik as well as Stains ICE Zirkon Malfarben Prettau® and ICE Zirkon Malfarben 3D by Enrico Steger*



Prettau® Anterior milled



Prettau® Anterior coloured with



Prettau® Anterior sintered and customised with ICE Zirkon Stains 3D by Enrico Steger



Colour Liquid Prettau® Anterior Aquarell

Prettau® Anterior sintered

Zirkonzahn[®]

Human Zirconium Technology



The perfect anterior tooth aesthetics with Prettau[®] Anterior

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ZIRKONZAHN RAW-ABUTMENTS® PRECAST TITANIUM ABUTMENT BLANKS



The manufacture of precise and personalised titanium abutments is now particularly easy and fast, thanks to the new Raw-Abutments® which already include a precise, industrially prefabricated implant connection for different implant systems. The range of available implant systems is continuously being expanded. In combination with the Milling Unit M1 Abutment and the CAD/CAM Milling Burs Titan for different finishing stages, the blanks can be transformed into individual and perfectly fitting abutments in merely 20 minutes. Abutment geometries can be freely defined.

The Raw-Abutments® are free from any allergy-causing substances and therefore especially health-friendly. With the aid of the Titanium Spectral-Colouring Anodizer, the abutments can also be anodized in different colours (e.g. gold-coloured) and are therefore ideally suited as a primary construction for zirconia structures. With the special Raw-Abutment® Holder the blanks will in the future also be processible with the Milling Units M1 Wet Heavy, M4, M5 and M6!

For further information, please visit www.zirkonzahn.com



Milling Unit M1 Abutment



Milling Unit M1 Wet Heavy



Milling Unit M4 – ready 2014



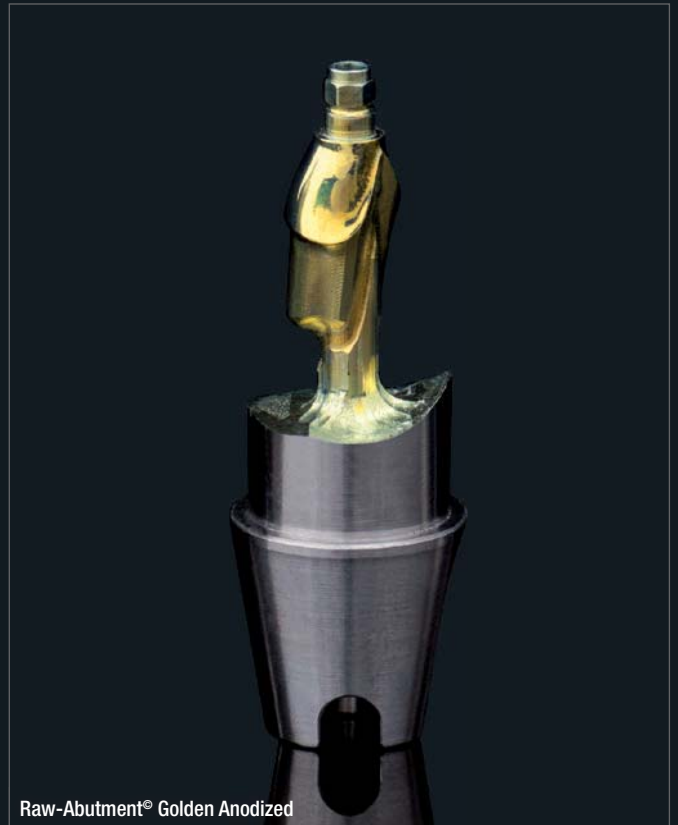
Milling Unit M5



Milling Unit M6 – ready 2014



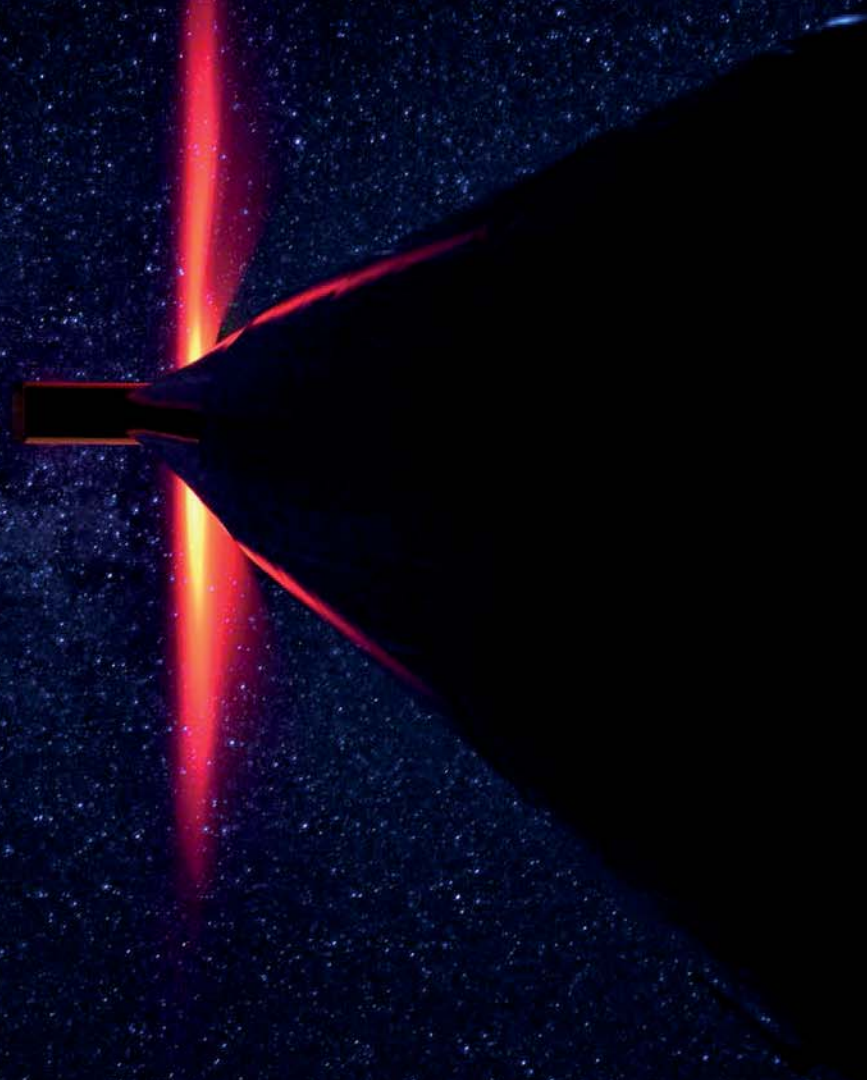
Raw-Abutment® Holder



Raw-Abutment® Golden Anodized



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