







# OSLO 7 OPTİK TASARIM YAZILIMI





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### OSLO 7 - Yeni Özellikler ve Güncellemeler

#### OSLO 7 - Güncel İlerlemeler

- STEP File Exporter geliştirildi.
- Zemax<sup>®</sup>/OpticStudio<sup>®</sup> importer geliştirildi.
- Code V<sup>®</sup> importer geliştirildi.
- Özellik Geliştirmeleri
  - Dik konik özelliği içeren asimetrik asferik lensler (OSLO Premium sürümünde mevcut)
  - Help > Check for Updates
  - Help > License
  - Cam katalogları güncellendi.
- OSLO 7 Yeni Özellikler
- CodeMeter kullanımı ile yeni lisanslama

#### OSLO 7 - Yeni Videolar

Web Sitesinde ve güncel kılavuzlarda yeni örnekler



# STEP Export Aracı Geliştirildi

- File  $\rightarrow$  Export Lens to CAD
  - Hem merkezi hem de merkezi olmayan sistemler için koniler, asferik lensler ve hemen hemen tüm lens türleri şimdi export edilebilmektedir.

| File type<br>● STEP ○ DXF ○  | IGES   |      |
|--|--|------|
| -Lens drawing style (DXF)<br>Meridional section<br>C End-on section<br>C Solid model | C Sagittal section<br>C Wire frame<br>C Solid model (all surfaces) |      |
| Lens drawing style (IGES<br>Meridional section<br>C End-on section                   | 6)<br>Sagittal section<br>Wire frame                               |      |
| Drawing option<br>C None<br>C No edges drawn   | C All surfaces C Cross sect  | ions |
| irst surface 0 L   | ast surface 0  |      |
|  |  |      |





### Ayna Sisteminden STEP Export ve STEP Dosyası Olarak OSLO'ya Import Edilmesi





# Zemax/OpticStudio Importer Geliştirildi

- File→Import Lens File→Zemax
  - Şimdi Zemax'ın tüm komutlarını import etmeye çalışacağız. Import aşamasındaki her hatayı bir sonraki açılan pencerede rapor edeceğiz. Eski importer olsa bilinmeyen bir hata ile ilk karşılaşmasında durması gerekecekti.

| File | Lens Evaluate     | Optimize | Tolerance | Source | Tools Window |
|------|-------------------|----------|-----------|--------|--------------|
|      | New Lens          |          | Ctrl+     | N      |              |
|      | Open Lens         |          | Ctrl+     | 0      |              |
|      | Save Lens         |          | Ctrl+     | -s     |              |
|      | Save Lens As      |          |           |        |              |
|      | Load Command      | File     |           |        |              |
|      | Lens Database     |          |           | >      |              |
|      | Import Lens File. |          |           | >      | GENII        |
|      | Export Lens to C/ | 4D       |           |        | SIGMA        |
|      | Open Database     |          | -         | -      | CODE V       |
|      | Print Text Windo  | w        |           |        | ZEMAX        |

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### Zemax/OpticStudio Importer Kullanımının Aşamaları

- Adım 1 Yüzey özelliği penceresini kapatın.
- Adım 2 File→Import Lens File→Zemax
- Adım 3 Hata

mesajları için metin

kutusuna bakınız.

• Adım 4 – Tüm ışınların

sistemden geçtiğine emin

olmak için grafik pencerelerine

göz atınız.

• Adım 5 – Apertürlerin

doğru yerleştirilmiş

olduğundan emin olunuz.

| ile→Zemax  |     |
|--|-----|
| 20 [Untitled lens] - OSLO Premium Early Access Build: 7.0.0.17016  |     |
| File Lens Evaluate Optimize Tolerance Source Tools Window Help   |     |
|  |     |
| III Surface Data □ 0 23 I I 1 1 1 0 0  | 83  |
| V 📲 📲 💷 Len Spe Rin Ape Wav Pxc Abr Mig Orif Tra Sop Raf Fan Spd Auf Var Olae Ne   | _   |
| Y IERS INNUT   | Â   |
| gen Setup Wavelength   Field Points   Variables Draw On Group Notes  |     |
| Lens: DEMO SHOWS APLANATIC SOLVE ZOOM 1 OF 1 EP1 0.819570 UNI mm<br>ER 0.750000  |     |
| Ent beam radius 0.750000 Field angle 5.7296e-05 Frimary wavin 0.550000 WVF_REF_SPH_POS Exit pupil<br>SRF RADIUS THICKNESS APERTURE RADIUS GLASS SPECIAL WAVINS 0.550000  |     |
| 052 0.00000 2.00000 2.00000-06 AIR WIT 0.000000 SRF 0.   |     |
| AST -2.000000 0.500000 1.0000000 A BK1 C   |     |
| 3 -3.829523 0.500000 1.400000 BK1 C AST A<br>AST A<br>SF 1   |     |
| 4 -0.52252 S 0.050000 P 1.400000 AIR C C -0.50000  |     |
|  |     |
| 7     -10.775\$10     0.500000     1.900000     BK1 C     AP     1.000000       9     P     21     300000     1.900000     BK1 C     3P     1.000000   |     |
| B    4.292631     O.050000     P     1.90000     AIK     CV     -0.664584       9     -17.098537     O.500000     BKL     TH     0.050000  |     |
| 10 -7.744113 S 0.050000 P 2.000000 AIR 44C 4.4C  |     |
| 11     -26.655631     0.500000     2.000000     BK1 C     mgF 31     1.000000       12     13.11707     5     2.000000     AR     r/r     -0.56112   |     |
| 13 150.930138 0.500000 2.000000 BK1 C 0.500000   |     |
| 14     -24.592738     1.000000     2.000000     AIR     MNOR command (marginal ray normal solve) not supported by OSLO       55     0.000000     2.668452     S     AIR     AP     1.400000  |     |
| Image: New York     Skp:     4:     O.383751   |     |
| TH 0.650000  |     |
|  |     |
| DEMO SHOWS APLANATIC SOLVE UNLIS: MM Gree st Annound Street Stree | ~   |
|  | > д |
|  |     |
|  |     |
|  |     |
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|  |     |



### Zemax/OpticStudio Importer Kullanımına İkinci Örnek

Adım 1 – Yüzey özelliği penceresini kapatın. 

#### • Adım 2 – File $\rightarrow$ Import Lens File $\rightarrow$ Zemax

🔞 [Untitled lens] - OSLO Premium Early Access Build: 7.0.0.17016

| File | Lens | Evaluate          | Optimize | Tolerance | Source | Tools | Window | Help |
|------|------|-------------------|----------|-----------|--------|-------|--------|------|
|      |      | 2 <b>- 2</b> 2 [] |          | en en en  |        |       |        |      |

| Gen   Setup   Wavelength   Field Points   Variables   Draw On   Group   Notes     Lens:   THREE   GLASS   APOCHROMAT   Zoom   1   of   1   Efil   100.000000     SRF   RADIUS   THICKNESS   APERTURE RADIUS   GLASS   SPECIAL   WV   WV   A04000     WV2   0.4889314   1.000000   A.978768   S   KZF56   WV   W1   1.000000     3   23.440925   2.000000   4.957207   S   FK51C   WV3   0.546000     WV4   1.000000   0.00000   0.000000   SV210000   SV210000   SV210000   SV210000     21.49934E03   1.000000   4.957207   S   FK51C   WV3   0.546000     WV4   1.000000   0.000000   0.000000   0.000000   SV3100000   WV4   1.000000     WV4   1.000000   WV4   0.000000   WV4   0.000000   WV4   1.000000     WV2   0.480000   WV4   0.000000   WV4   0.000000   WV4   0.000000     WV1 </th <th>TW 1*</th> <th>lace Data</th> | TW 1*   | lace Data   |
|---|---|---|
| THREE GLASS APOCHROMAT   UNITS: MM     FOCAL LENGTH = 100 NA = 0.05   DES: OSLO     2.02  | TW 1*<br>The set of the | ace Data       SEtup     Wavelength     Field Points     Variables     Draw On     Group       THREE GLASS APOCHROMAT     Zoom     1     of     1     Ef1     100       eam radius     S.000000     Field angle     S.7296e-05     Primary wavin       RADIUS     THICKNESS     APERTURE RADIUS     GLASS       0.000000     1.00000+10     1.000000     AS     F2     C       1.4934e+03     1.000000     4.978768     S     KZF56     C     2     S.000000     AS     F2     C       1.4934e+03     1.000000     4.978768     S     KZF56     C     C     C     C     -63.072432     98.827642     4.941385     AIR     O     O.000000     O.000000     S     O |

# CodeV Importer Geliştirildi

- File $\rightarrow$ Import Lens File $\rightarrow$ CodeV
  - Şimdi CodeV'nin tüm komutlarını import etmeye çalışacağız ve import aşamasındaki her hatayı bir sonraki açılan pencerede rapor edeceğiz.

| File | Lens Evaluate Optimize | Tolerance Sourc | e Tools Window |
|------|------------------------|-----------------|----------------|
|      | New Lens               | Ctrl+N          |                |
|      | Open Lens              | Ctrl+O          |                |
|      | Save Lens              | Ctrl+S          |                |
|      | Save Lens As           | E E             |                |
|      | Load Command File      |                 |                |
|      | Lens Database          | >               |                |
|      | Import Lens File       | >               | GENII          |
|      | Export Lens to CAD     | -               | SIGMA          |
|      | Open Database          |                 | CODE V         |
|      | Print Text Window      |                 | ZEMAX          |



### CodeV Importer Kullanımının Aşamaları

- Adım 1 Yüzey özelliği penceresini kapatın.
- Adım 2 File Import Lens File CodeV
- 🔜 🖬 🗃 🚔 📰 📬 🔛 🐠 🔛 🐏 🔛 Adım 3 – Hata . . . 111 1 mesajları için metin Gen Setup Wavelength Lens:Double Gauss - U.S. Patent 2,532 Zd RADTI OBJ 0.000000 kutusuna bakınız. 57.449765 V 8.74665 188,460067 V 0.298182 34.887272 12,424230 0.000000 3.776966 21.469203 15.107864 AST 0.00000 12.921199 Adım 4 – Tüm ışınların -27.034908 V 3.776966 0.000000 10.833928 9 -34.986743 V 0.298182 586,740491 V 10 6.858175 11 -63.115214 V 63.137622 IMS sistemden geçtiğine emin 0.000000 0.000000 V = 🔳 🏭 🕲 💥 🧱 📓 🖾 🛄 🌵 Double Gauss - U.S. Pa FOCAL LENGTH = 104.1 15.4

10 [Untitled lens] - OSLO Premium Early Access Build: 7.0.0.17016 File Lens Evaluate Optimize Tolerance Source Tools Window Help

| Variables     Draw Off     Group     Notes       1     of     1     eff     104.128543       14.000000     Primary wavin     0.656300       RTRE RADUS     GLASS     SPECTAL       782e+11     ATR | "LENS INPUT<br>SR# 0:<br>SN02       Double Gauss - U.S.<br>LID: Double Gauss -<br>EBR 25.000000       VNI mm<br>UNI | Patent 2,532<br>U.S. Patent 2<br>6300<br>MIN<br> | ,751<br>2,532<br>MAX | DAMPING<br>1.000000 | INCR<br>4.0000e-06 | VAL UE<br>0.017407 |   |
|--|---|--|----------------------|---------------------|--------------------|--------------------|---|
| utent 2,532 UNITS: MM  | IN GLA()<br>GLA AIR   |  |                      |                     |                    |                    |   |
|  | *UPDATE VARIABLES<br>VB SN CF TYP<br>V 2 2 - CV<br>END  | MIN  | MAX                  | DAMPING<br>1.000000 | INCR<br>4.0000e-06 | VALUE<br>0.005306  |   |
|  | *UPDATE VARIABLES<br>VB SN CF TYP<br>V 3 2 - TH<br>END<br>SRF 3:<br>RD 34.887272  | MIN  | MAX                  | DAMPING<br>1.000000 | INCR<br>0.002500   | VALUE<br>0.298182  |   |
|  | TH 12.424230<br>IN GLA)<br>GLA SK1<br>"UPDATE VARIABLES<br>VB SN CF TYP<br>V 4 3 - CV<br>END<br>SF 4:<br>TH 3.775966<br>IN GLA)<br>GLA F15<br>SRF 5:<br>SRF 5:<br>SRD 21.469207<br>TH 15.107864<br>IN GLA)<br>GLA AIR   | MIN  | MAX                  | DAMPING<br>1.000000 | INCR<br>4.0000e-06 | VALUE<br>0.028664  |   |
|  | VB SN CF TYP<br>VS 5 - CV<br>END  | MIN  | MAX                  | DAMPING<br>1.000000 | INCR<br>4.0000e-06 | VALUE<br>0.046578  |   |
|  | <   |  |                      |                     |                    |                    | > |

🖽 Len Spe Rin Ape Wav Pxc Abr Mrg Chf Tra Sop Ref Fan Spd Auf Var Ope II

TW 1\*

olmak için grafik pencerelerine göz atın.

Adım 5 – Apertürlerin 

#### doğru yerleştirilmiş

#### olduğundan emin olun.

# CodeV Importer Kullanımına İkinci Örnek

- Adım 1 Yüzey özelliği penceresini kapatın.
- Adım 2 File→Import Lens File→CodeV

| Lens Casegrain Ritchey-Chretien Logicasegrain Ritchey-Chretien Ritchey-Chretien Ritchey-Chretien Ritchey-Chretien  | III Surface Data  |  |
|---|---|--|
| STORED     STORED     STORED     STORED     STORED     Store       Con     Setup     Name     Store     S   | /   | 📲 🔳 Len Spe Rin Ape Wav Pxc Abr Mrg Chf Tra Sop Ref Fan Spd Auf Var Owe like   |
| Image: Setup Wavelength Field Points Variables Draw off Group Notes     Lens: Cassegrain Ritchey-Chretien Zoom 1 of 1 Efl 1.7521er03     Int beam ratio   0.602200     PRF RADIUS TUCKNESS APERTURE RADIUS CASS SPECIA     030 0.000000 1:00000e110 0.0000e105 0.0722er08     2 -300.00001 75.000000 AS REFLECT A     2 -300.00001 0.0000e110 0.01722er08     3 -55.22870 7.7.000000 1.6.002800 DS REFLECT A     1 -115.89340 5.000000 1.0000e13 0.0172er08     2 -300.00000 1.000000 1.00000e13 0.0172er08     1 -115.89340 5.000000 1.000000 1.00000e13 0.0172er08     1 -115.89340 5.000000 1.000000 1.000000 AS REFLECT A     1 -115.89340 5.000000 1.000000 1.000000 AS REFLECT A     1 -115.89340 5.000000 1.000000 1.000000 AS REFLECT A     1 -115.89340 5.000000 1.000000 AS REFLECT A     1 -115.89340 5.000000 1.000000 AS REFLECT A     1 -115.89340 5.000000 1.00000 AS REFLECT A     1 -115.89340 5.000000 1.000000 AS REFLECT A     1 -115.89340 5.000000 1.000000 AS REFLECT A     1 -115.99340 5.000000 1.000000 AS REFLECT A     1 -115.99340 5.000000 AS REFLECT A     1 -115.99340 7.000000 1.00000 AS REFLECT A     1 -115.99340 7.000000 1.00000 AS REFLECT A     1 -115.99340 7.00000 1.00000 AS REFLECT A     1 -115.99340 7.00000 1.000000 AS REFLECT A     1 -115.99340 7.  | X   | STORED GLASS UNKNOWN   |
| Less:   | <b>?</b>  | STORED GLASS UNKNOWN   |
| Int beam radius   0.60000 Primary wavin   0.632800     SK   FADDUS   FREAKER RADIUS   GLASS     SK   FADDUS   FREAKER RADIUS   GLASS     AT   | Gen Setup Wavelength Field Points Variables Draw Off Group Notes      | Reading C:\Users\Public\Documents\OSLO7 Premium Early Access\private/bin/glc/private<br>Writing C:\Users\Public\Documents\OSLO7 Premium Early Access\private/cdb/glass_private |
| Ser   ADJUS   THECKESS   APERTURE RADIUS   GLASS   SPECIAL     083   0.000000   1.04072e00   SS   SPECIAL   A     2   -55.229670   -75.000000   S   SFFLECT   A     2   -55.229670   7.500000   S   SFFLECT   A     2   -55.229670   7.500000   S   SFFLECT   A     2   -14.4982d+   5.000000   S   SFFLECT   A     2   -15.229670   7.500000   S   SFFLECT   A     2   -14.4982d+   5.000000   S   SFFLECT   A     2   -15.229670   7.500000   S   SFFLECT   A     2   -1000000   -0.04728   S   0.04028   O     2   -1000000   -0.04728   S   0.00000   A     2   -1000000   -100000   A   0.822800   A     3   0.00000   -100000   A   S   0.00000     3   0.00001   -100000   -100000   TH   0.00000  | Ent beam radius 75.000000 Field angle 0.600000 Primary wavln 0.632800 |  |
| 0.0000000   1.0000e10   1.0472e108   AIR   AIR     AST   -436.00000   S.00000   AIR   AIR   AIR     AST   -436.00000   AIR   AIR   AIR   AIR     AST   -436.00000   AIR   AIR   AIR   AIR     AST   -436.00000   AIR   AIR   AIR   AIR     AST   -436.00000   AIR   AIR   AIR   AIR     AIR   AIR   AIR   AIR   AIR   AIR     AIR   AIR   AIR   AIR   AIR   AIR   AIR     AIR   AIR   AIR   AIR   AIR   AIR   AIR     AIR   AIR   AIR   AIR   AIR   AIR   AIR     AIR   AIR   AIR   AIR   AIR   AIR   AIR   AIR     AIR   AIR   AIR   AIR   AIR   AIR   AIR   AIR     AIR   Cassegrain Ritchey-Chretien   UNITS: MIN   DES: OSLO   AIR   AIR   AIR     FOCAL LENGTH = 1752 NA = 0.04281   DES: OSLO<  | SRF RADIUS THICKNESS APERTURE RADIUS GLASS SPECIAL                    | *LENS_INPUT  |
| 2.3   -742.857200   -728.000000   22.500000   REFLECT   A     2.3   -77.500000   16.501850   SF11   C   | 0BJ 0.000000 1.0000e+10 1.0472e+08 AIR                                | 5NO2   |
| 3   100:23970   7:50000   15:5028570   7:50000     3   -155.228570   7:500000   17:632237   AIR   7:500000     3   0.000000   17:632237   AIR   0.00000   0.652800     3   0.000000   16:501850   S   0.00000   0.00000     3   0.000000   17:632237   AIR   0.00000   0.00000     3   0.000000   18:347856   0.00000   0.00000   0.00000     3   0.00000   18:347856   0.00000   0.00000   0.00000     3   0.00000   18:347856   0.00000   0.00000   0.00000     3   0.00000   18:50000   0.00000   0.00000   0.00000     9   0.00000   18:50000   0.00000   0.00000   0.00000     9   0.00000   10:50000   0.00000   0.00000   0.00000     9   0.00000   10:50000   0.00000   0.00000   0.00000     9   0.00000   0.00000   0.00000   0.00000   0.00000     9   0.000000   0.00000  | AST -742.857200 -260.000000 75.000000 AS REFLECT A                    | Cassegrain Ritchey-Chretien  |
| →118.498104   5.000000   17.832237   5   ATR     DIS   0.000000   -0.016738   18.347856   5     W11   Less Drawing*   0.632800     W11   Less Drawing*   0.632800     State   UNIT   mm     Cassegrain Ritchey-Chretien   UNITS: MM     FOCAL LENGTH = 1752   NA = 0.04281     DES: OSLO   TA ARCH     53.9   -0.045128     State   -0.045128     State   -0.045128     Gassegrain   -0.04281     DES: OSLO   TA ARCH     Table   -0.045128     State   <   | 3 -55.229670 7.500000 16.901850 5 5F11 C                              | EBR 75.000000  |
| 10:000000   -0.016718   18.347856   10:00000     10:000000   0.600000   0.600000     10:0000e10   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000   0.600000     10:0000010   0.600000 <td>4 -118.498104 5.000000 17.832237 5 AIR</td> <td>UNI mm<br/>UNI mm</td>  | 4 -118.498104 5.000000 17.832237 5 AIR                                | UNI mm<br>UNI mm   |
| W 1 - Lens Drawing*   Image: Consequence of the second o  | IMS 0.000000 -0.016718 18.347856 S                                    | WAVLNS 0.632800  |
| W1-Lens Drawing*   W     W & W & W & W & W & W & W & W & W & W &  | T   | ANG 0.600000   |
| Image 0 + + + + + + + + + + + + + + + + + +   | T UW 1 - Lens Drawing *   | E 23 RD  |
| Cassegrain Ritchey-Chretien<br>FOCAL LENGTH = 1752 NA = 0.04281   UNITS: MM<br>DES: OSLO   SRF 11:<br>Cassegrain Ritchey-Chretien<br>DES: OSLO     53.9   |   | TH 1.0000e+10<br>GLA AIR   |
| FOCAL LENGTH = 1752 NA = 0.04281   DES: OSLO     53.9   TM = -260.000000     53.9   Command CON not recognized ***     CC - 1.046192   SRF 2:     AP 75.000000   SRF 2:     SR 0.000000   SRF 2:     Clar REFLECT   Command CON not recognized ***     CC - 1.046192   SRF 2:     SR 0.000000   SRF 2:     SR 0.000000   SRF 2:     SR 0.000000   SRF 2:     SR 0.00000   SRF 3:     SR 0.118.498104   SRF 3:     SR 5:   SR 0     SR 5:   SR 0     SR 5:   SR 0     SR 5:   SR 5:     SR 0   S   | Cassegrain Ritchev-Chretien UNITS:                                    | MM SRF 1:<br>RD -742,857200  |
| 53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>5 | FOCAL LENGTH = $1752$ NA = 0.04281 DES: 0                             | TH -260.000000   |
| 53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>54.9<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.29<br>55.2  |   | GLA REFLECT  |
| 53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>53.9<br>54.9<br>55.00000<br>55.2296<br>50.02796<br>51.9<br>50.02079<br>50.02796<br>51.9<br>50.020796<br>51.9<br>50.020796<br>51.9<br>50.020796<br>51.9<br>50.020796<br>51.9<br>50.020796<br>51.9<br>50.020796<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9<br>51.9                     |   | ASI I<br>*** Command CON not recognized ***  |
| AP 75.00000<br>SRF 2:<br>RD -290.232796<br>TH 471.737084<br>IN GLA()<br>GLA REFLECT<br>**** Command CON not recognized ***<br>CC -2.915001<br>AP 22.500000<br>SRF 3:<br>RD -55.229670<br>TH 7.500000<br>IN GLA()<br>GLA SF11<br>SRF 4:<br>RD -118.498104<br>TH 5.000000<br>IN GLA()<br>GLA AIR<br>END 5   | 53.9  | CC -1.046192<br>SRF 2:   |
| RD   -290.232796     IN GLA()   GLA REFLECT     *** Command CON not recognized ***     CC   -2.945001     AP   22.500000     SRF 3:   RD     RD   -55.229670     TH   7.500000     IN GLA()   GLA REFLECT     ***   CC     ***   Command CON not recognized ***     CC   -7.945000     RD   -55.229670     TH   7.500000     IN GLA()   GLA SF11     SRF 4:   RD     RD   -118.498104     TH   5.000000     IN GLA()   GLA AIR     RD   -0.016718     GLA AIR   ELA AIR   |   | AP 75.000000<br>SRF 2:   |
| In GLA()     GLA REFLECT     "*** Command CON not recognized ***     CC -2.915001     AP 22.500000     SRF 3:     RD -55.229670     TH 7.500000     IN GLA()     GLA A SF11     SRF 4:     SR 5:     RD -118.498104     TH 5.000000     IN GLA()     GLA ASF11     SRF 4:     RD -118.498104     TH -0.016718     GLA AIR     END 5   |   | RD -290.232796   |
| Image: Constraint of the second sec   |   | IN GLA()   |
| CC -2.915001<br>AP 22.500000<br>SRF 3:<br>CD -55.229670<br>TD GLA()<br>GLA SF11<br>SRF 4:<br>RD -118.498104<br>TH 5.000000<br>IN GLA()<br>GLA AIR<br>SRF 5:<br>RD -<br>TH -0.016718<br>GLA AIR<br>SRF 5:  |   | *** Command CON not recognized ***   |
| SRF 3:     RD -55.229670     TH 7.500000     IN GLA()     GLA SF11     SRF 4:     RD -118.498104     TH 5.000000     IN GLA()     GLA AIR     SR 5:     TH -0.016718     GLA AIR     END 5  |   | CC -2.915001<br>AP 22.500000   |
| TH   7,500000     TH   7,500000     TH   GLA     SFF   118,498104     TH   TH     TH   S000000     TH   CLA     TH   ST     TH   ST     TH   ST     SF   ST     TH   ST     TH   ST     TH   ST     TH   ST     ST   ST     TH   ST     ST   ST     ST   ST     ST   ST   |   | SRF 3:<br>RD -55,229670  |
| GLA SF11<br>GRA SF1<br>RD -118.49104<br>TH SLAC<br>GLA AIR<br>SRF 5:<br>RD -1016718<br>GLA AIR<br>END 5   |   | TH 7.500000  |
| RD   -118.498104     TH   5.000000     IN GLA()   GLA AIR     SRF   5.     TH   -0.016718     GLA AIR   EAD     SN   5  |   | GLA SF11   |
| TH 5.000000<br>IN GLA/<br>GLA AIR<br>SRF 5:<br>RD   |   | L SKF 4:<br>RD -118.498104   |
| GLA AIR<br>SRF 55<br>RD<br>TH -0.016718<br>GLA AIR<br>END 5   |   | TH 5.000000<br>IN GLA()  |
| RD  |   | GLA AIR<br>SRF 5:  |
| GLA AIR<br>END 5  |   | RD<br>TH -0.016718   |
| ENV 5   |   | GLA AIR  |
|   |   | Env 5  |
|   |   |  |
|   |   |  |

### Yardım Menüsündeki Güncellemeler – Check for Updates

- Help $\rightarrow$ Check for Updates
  - Fixed veya network lisans tiplerini ve key serial kodunu gösterir.
  - Alt sekmeler: Lisans için Resolve, Refresh veya Upgrade seçenekleri içindir.

|                   | Conconcerno enterno enterno      |  | ~ |
|-------------------|----------------------------------|--|---|
| OSLO Help FI      |                                  |  |   |
| Tip of the Day    | License Information              |  |   |
| License           | List of License Key(s):          | License Details:   |   |
| Check for Updates | 2-2542464                        | Key Serial No: 2-2542464<br>This is a Lambda Research USB Key.<br>OSLO network license.                | ^ |
| About OSLO        |                                  | Network light license seats: 1<br>Network standard license seats: 1<br>Network remine license seats: 1 |   |
|                   |                                  | Temporary license expires on December 28, 2017.  |   |
|                   |                                  |  |   |
|                   |                                  |  |   |
|                   |                                  |  |   |
|                   |                                  |  | ~ |
|                   | Please select a license key from | the list above to upgrade or resolve.  |   |
|                   | Resolve Ref                      | Tash Ungrade   |   |
|                   |                                  |  |   |
| <b>NOU</b>        |                                  |  |   |
| tific Instruments |                                  |  |   |
| /.optonom.com.tr  |                                  | ок   |   |
| A CHERKEY         |                                  |  |   |



# Yardım Menüsündeki Güncellemeler Check for Updates - Resolve

- Help→Check for Updates—Resolve
  - Lisansla ilgili sorun gidermek için bu sekmeye tıklayın.



|               | 100 1 (3). | License Details:  |   |
|---------------|------------|---|---|
| -2542464      | 1          | Key Serial No: 2-2542464<br>This is a Lambda Research USB Key.<br>OSLO network license.<br>Network light license seats: 1<br>Network standard license seats: 1<br>Network premium license seats: 1<br>Temporary license expires on December 28, 2017. | · |
|               | Key se     | rial no. 2-2542464 is functioning correctly.  | Ŷ |
|               |            | UK  |   |
| ease select a | a          |   |   |



# Yardım Menüsündeki Güncellemeler Check for Updates - Refresh

- Help→Check for Updates—Refresh
  - USB key veya network bağlantısını kurduktan/kaldırdıktan sonra lisans bilgisini güncellemek için bu sekmeyi seçin.

| OSLO Help    |        | F1 |  |
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| Check for U  | pdates |    |  |
| About OSLC   | )      |    |  |
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| st of License Key(s):                     | License Details:  |   |
|---|---|---|
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| ease select a license key from<br>Resolve | the list above to upgrade or resolve.<br>resh Upgrade   | v |

# Yardım Menüsündeki Güncellemeler Check for Updates - Upgrade

- Help→Check for Updates—Upgrade
  - License Key(s) listesindeki lisans seçeneğini seçin, sonra var olan lisansta değişiklik yapılması ile ilgili seçeneklerin diğer sayfasını açmak için bu sekmeyi seçin.

| OSLO Help F1      |                                 |  |     |
|-------------------|---------------------------------|--|-----|
| Tip of the Day    | License Information             |  |     |
| License           | List of License Key(s):         | License Details:   |     |
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| About OSLO        |                                 | OSLO network license.<br>Network light license seats: 1  |     |
| About 0520        |                                 | Network standard incerse seats: 1<br>Network premium license seats: 1<br>Temporary license expires on December 28, 2017. |     |
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# Yardım Menüsündeki Güncellemeler Check for Updates – Upgrade Options

- Upgrade License OSLO lisansını güncellemek için bu sekmeyi seçiniz (OSLO versiyon değişikliği, kalıcı lisansa yükseltme vs)
  Bu sekme ile var olan lisanstan elde edilen context dosyasını içeren bir mail <u>license@lambdares.com</u> adresine gönderilir.
- Purchase Upgrade OSLO lisansını güncellemek için bu sekmeyi seçiniz (OSLO versiyon değişikliği, kalıcı lisansa yükseltme vs). – Bu sekme ile var olan lisanstan elde edilen context dosyasını içeren bir mail <u>sales@lambdares.com</u> adresine gönderilir.
- Send Receipt Bir lisans güncellemesinin aktive edildiğine dair doğrulama göndermek için bu sekme kullanılır. (Software key değişikliği için sıkça kullanılır). Bu sekme ile var olan lisanstan elde edilen context dosyasını içeren bir mail <u>license@lambdares.com</u> adresine gönderilir.





### Yardım Menüsündeki Güncellemeler – Check for Updates

- Help  $\rightarrow$  Check for Updates
  - Yeni versiyonun web sayfasında bulunup bulunmadığının kontrol edilmesini sağlar.

| Help |                   |    |
|------|-------------------|----|
|      | OSLO Help         | F1 |
|      | Tip of the Day    |    |
|      | License           | 1  |
|      | Check for Updates | -  |
|      | About OSLO        |    |
|      |                   |    |



### Güncellenen Cam Katalogları

- Hikari
- Hoya
- Ohara
- Schott
- Schott Radhard





### Lambda Research Web Sayfası & YouTube'da OSLO'nun Yeni Videoları

- OSLO SCP : Video, lens parametrelerini çıktı olarak elde etmek için basit bir SCP makro modelinin nasıl oluşturulacağını göstermektedir.
- OSLO CCL for Lens Output : Üç videodan birincisi, lens parametrelerini çıktı olarak elde etmek için basit bir CCL makro modelinin nasıl oluşturulacağını göstermektedir.
- OSLO CCL for Lens Output Intermediate : Üç videodan ikincisi, lens parametrelerini çıktı olarak elde etmek için orta düzeyde bir CCL makro modelinin nasıl oluşturulacağını göstermektedir.
- OSLO CCL for Lens Output Complex : Üç videodan üçüncüsü, lens parametrelerini çıktı olarak elde etmek için kompleks düzeyde CCL makro modelinin nasıl oluşturulacağını göstermektedir.
- OSLO CCL Spiral Graphic Example Writing to the Graphics Window : Grafik penceresine kaydetmek/aktarmak için CCL makro modelinin nasıl oluşturulacağına dair bir örnek gösterilmektedir.
- OSLO CCL Technical Example to Iterate through Field Points : Bir analiz sırasında alandaki noktalar aracılığıyla yapılan arındırmanın kullanışlı tekniği ile oluşturulan CCL makroya teknik bir örnektir.



# OSLO Örneklerin Bulunduğu Sayfalar & Güncel Kılavuzlar

- OSLO Kullanma Kılavuzu <u>http://www.lambdares.com/images/pdf/oslo-user-guide.pdf</u>
- OSLO Optics Reference <u>http://www.lambdares.com/images/pdf/oslo-</u>
- OSLO Examples Page <u>http://www.lambdares.com/oslo/oslo-examples</u>
  - 31 yeni örnek eklenmiştir.
- OSLO Installers -

http://www.lambdares.com/CustomerSupportCenter/index.php/oslo/earlyaccess

- OSLO7EA Premium Installer.exe
- OSLO7EA Light Installer.exe

