

# ARTS3633

DfcZygg]cbU``>UdUbYgY`6

HYfa "Hk c""##"&\$&%

GWcc<sup>v</sup>cZ<iaUb]Mg'UbX'@UbX'@Ub[iU[Yg'#']BGK'5fhgž8Yg][b/ZgN3]MVWFfY

# 7ci fgY<sup>·</sup>Cj Yfj ]Yk

# GHJZZ7cbHJWh78YHJ]`g

## 7cbj Ybcfg

| BUa Y   | 9a U]` | 5j U]`UV]`]m | @cWUh]cb | D∖cbY |
|---|--------|--------------|----------|-------|
| M a ]_c ' <ug'< td=""><td>\]achc</td><td></td><td></td><td></td></ug'<> | \]achc |              |          |       |
|   |        |              |          |       |
|   |        |              |          |       |

# 5ggYgga Ybh

### 5ggYgga YbhHUg\_g

| 5ggYgga YbhˈtJg_ | K Y][ \h | 8iY'8UHY   | GhiXYbhi@YUfb]b[<br>CihWcaYgʻ5ggYggYX |
|------------------|----------|--|---------------------------------------|
| K f]thYb'HYgh    | &) ı     | \$&#\$+#&\$&%`\$'`.'\$`DA</td><td>%ž`)</td></tr><tr><td>FYgYUfVX DfcYWi</td><td>)\$1</td><td>D`YUgY`gYY`UXX]h]cbU``XYhU]`g<br>VY`ck "</td><td>%ž&ž' ž(ž)</td></tr><tr><td>GdYWJU``DfcYWhi</td><td>&) ı</td><td>Bch5dd`]WUV`Y</td><td>%ž`'Ž'(</td></tr></tbody></table> |                                       |

### 5ggYgga Ybh8YHJ]`g

5ggYgga Ybh'% K f]HYb HYgh

GHJfh'XUHY. \*\$&#\$+#&\$&%\*\$&.%\$\*DA

@Yb[h\.', \$'a]bi hYg

#### 8YHJ]`g.

Ghi XYbhgʻWa dʻYhYʻUʻhYghifWU"ʻ%\ci flejbWi X]b[ʻg\cfhi UbXʻ`cb[YfʻUbgk Yfʻei Ygh]cbg"ʻGhi XYbhgʻfYWY]j YʻU a Uf\_ʻUbXʻWUbʻWabgi `hih\Yʻ`YWi fYf'ZofʻZ fh\YfʻZYXVUV<u>"</u>"

#### 5XX]h]cbU``XYHJ]`g.

Ghi XYbhgʻk ]``Wca d`YhYʻUʻa ]X!hYfa `]b!WUggʻhYghcZh\Y]f`\_bck `YX[YʻcZh\Y``YWhi fYʻWcbhYbhgʻUbXʻfYUX]b[g" : YYXVUW\_k]``VY`[]j Ybʻj ]Uʻbi a Yf]WU``[fUXYʻUbXʻcfU`Wca a Ybh'

Hi fb]h]b`gYh]b[.`H\]g`Ugg][ ba Ybh]g`gi Va ]hhYX`h\fci [ \`Hi fb]h]b`UbX`gh XYbhg`Xc`bchgYY`Hi fb]h]b g]a ]`Uf]hmifYdcfhg"

#### 5ggYgga Ybh& FYgYUfW Dfc YWh

GHUFHXUHY.KYY\_-

@Yb[h\.jUf]cig

#### 8YHJ]`g.

Gh XYbhgʻdfYdUfYʻZcfʻUbʻUVghfUWiUbXʻ\UbXci hgʻZcfʻ%sı ž'dfYgYbhUʻdUdYfʻZcfʻ&sı "fWU"%) a ]bi hYgŁžUbX k f]hYʻUʻdUdYfʻZcfʻ&sı "fWU"`&\$\$\$! {\L"`: YYXVUW\_j j]U`]bX]j ]Xi U``Wca a Ybhgžfi Vf]WžUbX`]b!WUgg X]gW gg]cb"H\]gʻ]gʻh\Y`Z]bU``UggYgga YbhHUg\_ʻZcfʻUhYbXUbWYʻdi fdcgYg"

#### 5XX]h]cbU``XYHJ]`g.

DfYgYbhUhjcb"]g"hc"VY"\Y"X"]b"K YY\_"- "cf"K YY\_%\$"

8iY`XUHY`Zcf`H\Y`fYgYUfW\`dUdYf`]g`cbY`kYY\_`UZhYf`]hg`dfYgYbHUh]cb""

Hi fb]h]b`gYh]b[.`H\]g`]g`bchU`Hi fb]h]b`Ugg][ ba Ybh

5ggYgga Ybh' . GdYWJU` Dfc YWh

GHUFHXUHY.KYY\_&

@Yb[h\.jUf]cig

8YHJ]`g.

Ghi XYbhgʻWa d`YhYʻj Uf]ci gʻUWhjj ]h]Ygʻk YY\_`mcfʻV]k YY\_`mcbʻh\Y]fʻck bʻW\c]WYʻUbXʻgi Va ]hUʻdcfhZc`]c ]bWi X]b[ ʻfYdcfhgʻUbX'ci fbUʻgʻ': YYXVUV\_j j]Uʻfi Vf]WUbX`]bX]j ]Xi Uʻ`Wa a Ybhg''

Hi fb]h]b`gYh]b[.`H\]g`Ugg][ ba Ybh]g`gi Va ]hYX`h\fci [ \`Hi fb]h]b`UbX`ghi XYbhg`Xc`bchgYY`Hi fb]h]b g]a ]`Uf]hmifYdcfhg"

### FYgci fWg

### DfYgWf]VYX F Ygci fWfg

f&\$\$- Ł

 $5\label{eq:constraint} 5\label{eq:constraint} 5\label{eq:constraint} 5\label{eq:constraint} 5\label{eq:constraint} 5\label{eq:constraint} 10\label{eq:constraint} 10\label{constraint} 10\label{eq:constraint} 10\label{eq:c$ 

### FYWca a YbXYX<sup>-</sup>FYgci fWYg

GYY 'H\Y 'Wci fgY 'A ccX`Y"

### 7ci fgY'9j U`i Uh]cb'UbX'8Yj Y`cda Ybh

H\Y'Wci fgYg`]g`dYf]cX]WU``mfYj ]Yk YX'UbX`ghi XYbhg' ZYYXVUW\_`]g`i gYX`hc`]a dfcj Y`]hg`WcbhYbhg`UbX UWnjj ]h]Yg"`: YYXVUW\_`]g`[ Uh\YfYX`Zfca `ghi XYbhg`i g]b[ `a m91 dYf]YbWY"`=i]g`YbWci fU[ YX`h\Uhighi XYbhg Wca d`YhY`h\Y]f`gi fj Ymg`VmUWWYgg]b[ `h\Y`dYfgcbU`]gYX`k YV``]b\_`j ]U`h\Y`A ccX`Y`Wci fgY`g]hY"

# Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

## Hi fb]h]b Gi Va ]gg]cb

Zmci YbWci bhYf'U'dfcV'Ya 'k \Yb'UhYa dhjb[ 'hc'gi Va ]hmci f'Ugg][ ba YbhN fci [ \ 'Hi fb]hjbžd'YUgY hY'Yd\cbY'9I hYfbU'`Gi ddcfhcb'-', ) '' ' '%cf'Ya U]`'h\Ya 'cb'YI hYfbU'hY'hgi ddcfh4 i bgk "YXi "Ui '"'Gi ddcfh \ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY\_XUmg'UbX'-.\$\$Ua '-') .\$\$da 'cb'k YY\_YbXg'fl \*) 'XUmg'U'mYUfŁ'' Zmci UfY'i bUV'Y'hc'gi Va ]hmci f'Ugg][ ba YbhXi Y'hc'U'ZJi `hk ]h\'Hi fb]hjb'mci 'a UmUdd`mZcf'Ub'YI hYbg]cbžVi hmci a i ghfYhU]b'mci f'hjW\_Yhbi a VYf'Zfca '9I hYfbU'`Gi ddcfhfU'cb[ 'k ]h\ 'Ubmch\Yf'fY'Yj UbhXcW a YbhgŁhc ]bWi XY'Ug'Yj ]XYbWY hc'gi ddcfhmci f'YI hYbg]cb'Udd`]WUh]cb'' Zmci 'Ya U]`'9I hYfbU'`Gi ddcfhimci 'k ]`` Ui hca UhjWU'`mfYWY]j Y'U'hjW\_Yhbi a VYfžVi h]Zmci 'hY`Yd\cbY'mci 'k ]``bYYX'hc'gdYWJZWU``mUg\_'Zcf'cbY" Hi fb]hjb'U`gc'dfcj ]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'gfUh'g'cb'Hk ]hYf"

; YbYfU``mž'UggYgga YbhHUg\_g`a i ghVY`gi Va ]HYX`Y`YWfcb]WU``mj ]U`Y]H\Yf`Hi fb]h]b`cf`U`A ccX`Y Ugg][ ba YbH'`=b`]bgHUbWfg`k \YfY`H\]g`]g`bchdcgg]V`Yž`]hk ]```VY`gHUHYX`cb`mci f`Wci fgY**'**g`A ccX`Y`g]HY`k ]H\ U`HYfbUh]j Y`gi Va ]gg]cb`XYHU]`g"

: cf`]bZcfa Uh]cb`cb`\ck `hc`gi Va ]hUgg][ ba Ybhg`cb`]bY`j ]U`A ccX`Y.`\hhdg.##gh XYbh'i bgk "YXi "Ui #\ck! gi Va ]hUgg][ ba Ybha ccX`Y

# 5WUXYa ]W<cbYghmUbX`D`U[ ]Uf]ga

D`U[]Uf]ga `]g`i g]b[ 'H\Y`k cfXg`cf`]XYUg`cZcH\Yfg`UbX`dfYgYbH]b[ 'H\Ya `Ug`mci f`ck b"`=h\Wb`HU\_Y`a Ubm Zcfa gžZīca `XY`]VYfUHY`W\YUH]b[ 'hc`UWV]XYbHU``mWcdm]b[ 'Zīca `U`gci fW'`k ]H\ci hUW\_bck `YX[ Ya YbH'

I BGK '[fci dg'd`U[]Uf]ga ']bhc'h\Y'Zc``ck ]b[ 'WUhY[cf]Yg.

i bXYfgHUbX\*mci f\*f][\hg\*UbX\*fYgdcbg]V]`]h]Yg\*Ug\*U\*gh XYbhUhI BGK