



# ARTS3462

5 fh]gh]WF YdfYgYbHh]cbg'cZ7 \]bU'UbX'hkY'8 ]UgdcfU

HYfa`Cby`#`&\$&%

7ci fgY`Cj Yfj ]Yk

GhJZZ'7cbhJWw'8YhJ]`g

7cbj Ybcfg

B Ua Y	9a U]	5j U]'UV]'m	@cWWhcb	D\cbY
K U\ ; i Ub`@a	k [ `]a 4 i bgk "YXi "Ui	VmUddc]bħa Ybhcb`m	A 6`&()	- ' , ) `%* , %

GWx cc``7cbhJWw`bZcfa Uh]cb

GWx cc``cZ<i a Ub]hYg`UbX`@Jb[ i U[ Yg

@cWWhcb. `GWx cc``C Z]Ww`ZA cfj Yb`6fck b`6i ]X]b[ ž@Yj Y``&ž&),

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D\cbY. Ž\*%&`-' , ) `%\* , %

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9a U]: [\U`4 i bgk "YXi "Ui](#)

7 ci fgY'8YHJ`g

7 fYX]hDc]bqg '\*`

Gi a a UfmicZh\Y'7 ci fgY

h`h]g`Wci fgYžmci `k ]`YI Ua ]bY`h\Y`]bYf`k ]bYX`fY`Uf]cbg\]dg`VYf`k`YYb`7`]\bU`UbX`h\Y`7`]\bYgY`X]UgdcfU  
Ug`YI`dfYggYX`]b`]\YfUf`fY`UbX`h\Y`Uf`g`"K` \UhUfY`h\Y`fYbg]cbg`UbX`Wcbj`Yf[`YbWg`h`UhXYZ]bY`7`]\bU`Ug`h\Y`  
]a`U[ ]bYX`\ca`Y`UbX`UbX`h\Y`c]`YfgYUg`X]Ugdcf]Wwca`a`i`b]h]Yg3`h`fUW]b[ `h\Y`gcW]c!\]gfcf]W]`fU`Y`Wc`f]Yg`  
h`UhXYj`Y`cdYX`i`b]ei`Y`m]b`HU]k`Ubž`<`cb[ `?`cb[ žG]b[ UdcfYž`UbX`A`U`Umg]Užmci` `k` ]`[ U]b`Ub`i`bXYfgfUbX]b[  
cZ\ck`h`YgY`UWwci`bYX`Zcf`Wca`dYh]b[ `gYbgYg`cZbU]cbU`žW`h`fU`UbX`dc`h]W]`]XYbh]Z]W]h]cb`UbX`  
UZZ]U]h]cb`UWcgg`h\Y`7`]\bYgY!gdYU\_]b[ `k`cfX`"H\UhUi`h`c`fg`UbX`Ui`h`i`fg`h`Uh`mci` `k` ]`X]gW`ggž]bW`i`XY`  
@]M`b[ d]b[ ž`<`i`[ \`@Y`?`i`c!\g]i`ž`?`i`c`DUc`?`i`bž`7`Ub`?`ccb!W]i`b[ ž`<`ci`<`g]Uc!\g]Ybž`5`bb`<`i` ]`UbX`HgU]  
A`]b[!]Ub[ ž`Ua`cb[ `ch\Yfg`"

H\Y`Wci fgY`]g`a`U]b`m]h]i`[ \h]b`7`]\bYgY`"

7 ci fgY`@YUfb]b[ `Ci hWca Yg

%`7`ca`dUfY`X]ZYfYbh`]\YfUfmiUbX`Uf]h]h]W]fUX]h]cbg`h`Uh`Uj`Y`XYj`Y`cdYX`]bXYdYbXYbhm]b]j`Uf]ci`g`  
`cW]Yg]UWcgg`h\Y`7`]\bYgY!gdYU\_]b[ `k`cfX`"  
&`7`cbgfi`W]U`W]h]W]`Z]Ua`Yk`cf`\_`h`c`h`ci`[ \h]`mX]gW`gg`h\Y`]ggi`Y`cZ`7`]\bUf]g]UbX`7`]\bYgYbYgg`  
`" `XYbh]Z]h\Y`X]ZYfYbW]g`]b[ `YbYfg`f]W]cbž`XfUa`Už`W]bYa`U`UbX`bi`UbW]X`j`Uf]U]h]cbg`f]b[ i`]gh]Wž`  
gcW]c!\]gfcf]W]ž`dc`h]W]`L`]b`Uf]h]h]W]d]cXi`W]cbg`"  
(`F`YgdcbX`fYgdYW]ž`m]fk`f]h]b`UbX`j`YfVU`L`]b`d]cXi`W]j`Y`UW]X]Ya`]WX]gW`gg]cb`"

HYUW]b[ `GhfUH[ ]Yg`

7`Ugg`XY`j`Yfmk`]`]bW]i`XY`Z]W]!h`!Z]W]`UbX`cb`]bY`UW]j`]h]Yg`"Mci` `k` ]`Yb[ U[ Y`]b`WcgY`fYUX]b[ `UbX`j`]Yk`]b[  
cZgY`YW]k`cf`g`cZ`Z]W]cbž`XfUa`U`UbX`W]bYa`U`h`YI`Ua`]bY`]ggi`Yg`cZ`fYdfYgYbhU]h]cb`UbX`fYdfYgYbhUV`]mž`  
]XYbh]miUbX`W`h`fU`dc`h]W]ž`cb[ ]b[ `UbX`VY`cb[ ]b[ ž`UWcgg`h\Y`7`]\bYgY!gdYU\_]b[ `k`cfX`"H\YgY`\_Ym]h]i`hg`  
k`]`VY`gY`YW]X`k`]h`Ub`Ym]`h`k`UfX`h\Y`Wca`d`YI`fY`Uf]cbg\]dg`VYf`k`YYb`h\YgY`X]Ugdcf]Wg]h]Yg`UbX`  
a`U]b`UbX`7`]\bU`"C`b`h`c`d`cZ`h`YgY`df]a`Ufmgci`fW]gž`X]gW`gg]cb`]b`YUW]k`YY`\_`k`]`VY`gi`dd`Ya`YbhX`Vm`  
gYW]cbXUfmi]h]i`hg`h`UhX]gW`gg`W`h`fU`h`Ycfnž`dc`h]W]g`cZ`Ub[ i`U[ Y`UbX`]XYbh]mi`h`Uh`Uj`Y`VY`b[ ]U]b[ ]b[  
]bW]YUg]b[ `]a`dcf]UbW]`]b`UW]X]Ya`]WX]gW]ci`fgY`cZ`Uh`"

## 5ggYgga Ybh

H\Y'i gY'cZY'YWfcb]WXYj ]W'g'fIUdhdgža cV]Y'd\cbYgž']!dUXgž'dU[ Yfgž'YhWE:]g'dfc\]V]hX'j]b'WUgg"

## 5ggYgga YbhHUg\_g

5ggYgga YbhHUg_	K Y]Y]h	8i Y'8UH	GhY'Y'@]b[ Ci hca Yg'5ggYggYX
A ccX'Y'8]gW'gg]cb'	( \$i		

W\UfUWf'g]b'hY'Z'a'kY'UFY'fYUX]b[žUbX'VY[ ]b'U'X]gW'gg]cb'Z'ca'hY'W\UfUWf'g'dc]bhcZ'hY'j ]Yk'hYm  
UfY'UXcd]b[ 'YhW

9UW'ghi'XYbh]g'fYei ]fYX'hc'gi Va ]h( 'A ccX'Y'Dcghg'UbX'UW'Ug'U'8 ]gW'gg]cb '@YUXYf'Uh'YUghcbW''Mci  
a Umbchgi Va ]hU'A ccX'Y'Dcghcb'hY'k'YY\_'mci 'UfY'UW]b[ 'Ug'8 ]gW'gg]cb '@YUXYf'

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

5ggYgga Ybh& . '9ggUmDfYdUfU]cb

8Yh]g.

Dfcj ]XY'U') \$\$!k cfX'YggUmici h]bY'UbX'V]V]c[ fUd\mk ]h'bc''Ygg'h.Ub'%'\$ ]h'a gž]bW' X]b[ 'Uh'YUgh' 'Vcc\_g  
cb'mci f'YggUm]cd]W3-6X]j ]Xi U'k f]h]b'Z'YXVUW\_'dfcj ]YX'VY'Zc'fY'Z]bU'YggUm'

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

5ggYgga Ybh' . '9ggUm

8Yh]g.

K f]h' U'fYgYUfW'YggUmcb'U'W'cgYb'hd]WcZUddfcI ]a Uh'm&ž\$\$\$k cfXg"3'6X]j ]Xi U'Z'YXVUW\_'dfcj ]YX"

Hi fb]h]b'gYh]b[ . 'H\]g'Ugg][ ba Ybh]g'gi Va ]h]X'h'fci [ \ 'Hi fb]h]b'UbX'ghi'XYbh]g'Xc'bchgYY'Hi fb]h]b  
g]a ]Uf]mifYdcf'g"

## 5 HbXUbW F Yei JfYa Ybhg

5 HbXUbW cZgYa JbUfg Jg a UbXUhc fm Jb H Jg Wci fgY 5 HbXUbW k J VY HU Yb UhHY VY [ Jbb]b [ cZYUWk WUgg Hi fb]b [ i d'hc WUgg a cfY H.Ub ) a ]bi Hrg UHY Jg Wcbg XYfYX Ub i bYI W gYX UVgYbW i bYI W gYX UVgYbW Zfca a cfY H.Ub %\$i cZgYa JbUfg k J fYgi h]b H Y Uk UFX U ZU [ fUXY 6YWli gY H Jg Jg U'gYa JbUfZ mci UFY YI dYWH X hc UWij Y mYb [ U[ Y k ]h Wc fY Wci fgY WcbhY bZ d Ufh W d UHY ]b WUgg X Jg W gg]cb Vm]ghY b]b [ UHY bhj Y mUbX fYgdc bX]b [ fYgdYWZ mhc mci f WUgga UHY g H Y gY k J YbUV Y mci hc UHU]b.

% 7 ca dUFY X JZYfYbh JY fUfm UbX Ufhgh WfhUX Jhcbg h Uh Uj Y XYj Y cdYX JbXYdYbXYbhm]b j Uf]ci g cWU Yg UWfcgg h Y 7 \ JbYgY!gdYU \_]b [ k cfX"

&" 7 cbgfi W U W Jh W ZfUa Yk cf \_hc h ci [ \ h z mX Jg W gg h Y Jggi Y cZ 7 \ JbUfg U bX 7 \ JbYgYbYgg" ' " X Ybh Zm h Y X JZYfYbW g ]b [ YbfYg f Z W Jcbz X fUa Uz W JbYa U U bX bi UbW X j Uf]U hcbg f]b [ i ]gh Wz gc W c! \ ]ghc f]W J z dc ]h W J L ]b Ufhgh WdfcXi W Jcbg"

(" F Ygdc bX fYgdYWZ mfk f]Hb UbX j YfVU L ]b dfcXi W J Y UWXYa JWX Jg W gg]cb"

## 7 ci fgY GWYXi Y

[J Jk WUgg ha YHUV Y](#)

Hja YHUV Y

8UH	HmdY	7cbHYbh
K YY_ % %) : YVfi Ufm! % - : YVfi Ufm	GYa JbUf	7 ci fgY b f c X i W J c b
K YY_ & . && : YVfi Ufm! & * : YVfi Ufm	GYa JbUf	F Ya Ya VYf]b [ UbX : cf [ Y H ]b [ : ]W Jcb . @ j i L ]b k i ' " " H Y 7 Ugg 7 ci bgY c f " f % + + L : ]W Jcb . @ i L ]b i U ' " " G W J f " f % + , L D Um G \ U M Y I ]b ' z @ i G \ c i W Y b [ ' UbX M U c A ]b [ X Y ' " " K \ U h ] Z = F Y U m k Y f Y 3 " f % + + L
K YY_ " . % A UFW ! ) A UFW	GYa JbUf	< ]ghc f]W J 5 a b Y g ]U ' D Um ; U c L ]b [ J U b ' " " H Y 6 i g ! G h c d " f % , ' L : ]a \$ % f Z W : W S f a X f Z W E g "

		: ]a . '9aaV ? W t 9aaV l a_ W ' 'fX]f' < ci <g]Uc!\g]Yb' ž%- -) Ł
K YY_) . %) 'A UfVX ! '%- A UfVX	GYa ]bUf	GcW]YHJ 'fB]gŁC fXYf  D`Um ? i c`DUc`? i b' ""H\Y`7cZ]b`]g`Hcc`6][ Zc`f`h\Y`<c`Y"" 'f%- , ( Ł  D`Um ? i c`DUc`? i b' ""Bc`DUf_]b[ `cb`c`XX 8Umj"" 'f%- , * Ł  : ]a . '3 4d]YZfW]Eg_ _ Wd6Sk fX]f' '9Xk UfX`MUb[ ' ž%- - %Ł  9ggUmDfYdUfU]cb`f%\$i ŁXi Y`Uh`h\Y`YbX`c`Z`h\Y k YY_ž: f]XUm%- 'A UfVX ' &\$&%ž) DA
K YY_* . '&&'A UfVX ! '&' A UfVX	F YUX]b[	A UbXUrcfm: `Yl ]'K YY_!' Bc`WUgg
K YY_+ . '&- 'A UfVX ! '& 5df]`	GYa ]bUf	=XYbh]fm  D`Um ; Uc`L ]b[ ]Ub' ""H\Y`C`h\Yf`G`c`fY"" f%- , * Ł  : ]a . 'Ea`Y`aXfZW7j [W 'fX]f' '5bb`<i ] ž%- - \$Ł
K YY_ , . :) '5df]'!`- '5df]`	GYa ]bUf	8]gd`UW]a Ybh  : ]a . 'H[hW>3_ agd 'fX]f' 'HgU]'A ]b[ !]'Ub[ ž%- - ( Ł  D`Um ? i c`DUc`? i b' ""8YgW]bXUbtg

## F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

5`fYei ]fYX`fYUX]b[ g`UbX`j ]Yk ]b[ `a UHf]U`g`fZ]a g`UbX`#cf`d`UmgL`UfY`Uj U]UV`Y`j ]U`A`ccX`Y`"Gh XYb]g`UfY`  
YI dYWYX`hc. %&`Uj Y`Wca d`YhYX`hY`fYUX]b[ `UbX`j ]Yk ]b[ `cZU`a UHf]U`Zcf`hY`k YY`VYZcfY`Wca ]b[ `hc`  
WUggz`UbX`&L`Vf]b[ `UfX`Wcd]Yg`cZhY`fYUX]b[ `a UHf]U`g`hc`WUgg`"6YW]i gY`mci `UfY`bchYI dYWYX`hc`  
di fWUgY`Ubmi]hI hg`Zcf`h]g`Wci fgYz`UbX`g]bW`hY`i gY`cZU`Y`YVfcb]WXYj ]Wg`]g`dfc`V]hYX`]b`WUggz`mci`  
a i ghdf]bh`UfX`Wcd]Yg`cZmci f`fYUX]b[ g`UbX`Vf]b[ `hYa` `hc`WUgg`Zcf`ci f`gYa ]bUf`X]gW`gg]cb"

F YWca a YbXYX`F Ygci fWg

Gh XYb]g`a ][ `hZ]bX`hY`Zc`ck ]b[ `cb`]bY`fYgci fW`i gYZ`Zcf`Wcb]gf] W]b[ `hY`V]V`]c[ fUd`mZcf`mci f`  
fYgYUfW`YggUm

[\fdg.# "cgi "YXi #a WwV\]c\[ fUd\Yg#](#)

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

H\]g`]g`U`bYk`Wci fgY`"Bc`gh XYbhZ`YXVUW`YI ]ghYX`]b`hY`k`f]h]b[ `cZh]g`Wci fgY`"



Gi Va ]gg]cb`cZ5ggYgga YbhiHUg\_g

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

≠mci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UHYa` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiHfci`[`\`Hi`fb]h]b`z`d`YUgY`  
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`)`"``"``%cf`Ya`Uj`h`Ya`cb`YI`HYfbU`HY`hgi`ddcfh4`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`cb`k`YY`YbXg`f1`\*)`XUmg`U`mY`Uf2`≠mci`  
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiXi`Y`hc`U`ZU`ihk`]h`Hi`fb]h]b`mci`a`UmUdd`mZc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`  
a`i`ghfYhU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`Ybhtg`hc`  
]bWi`XY`Ug`Yj`]XYbVW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb`"≠mci`Ya`Uj`9I`HYfbU`Gi`ddcfhmc`i`k`]`  
Ui`hca`U]WU`mifYW]j`Y`U`h]W`Yhbi`a`VYf`z`Vi`h]Zmci`HY`Yd`cbY`mci`k`]`bYYX`hc`gdYW]Z]WU`mUg`Zc`f`cbY`  
Hi`fb]h]b`U`gc`dfcj`]XYgi`dXUH`g`cb`h`Y]f`gmghYa`g`hU`h`g`cb`Hk`]hYf`"

;`YbYfU`mz`UggYgga`YbhiUg\_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`Ybhi`h`]bghU`bVW`g`k` \YfY`h`lg`]g`bchidcgg]V`Yz`]hk`]`VY`ghU`YX`cb`mci`f`Wci`fgY`g`A`ccX`Y`g]h`k`]h`  
U`HYfbU]h]`Y`gi`Va`]gg]cb`XYhU]g`"

:`cf]bZcfa`Uh]cb`cb`lck`hc`gi`Va`]hUgg][`ba`Ybhtg`cb]bY`j`]U`A`ccX`Y`.`hhdg`#gh`XYbhi`bgk`"YXi`"Ui`Ack`!  
gi`Va`]hUgg][`ba`Ybhta`ccX`Y`"

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

D`U[ ]Uf]ga `]g`i`g]b[ `h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[ `h`Y`a` `U`g`m`c`i`f`c`k`b`" `#`W`U`b`h`U`\_`Y`a` `U`b`m`  
Z`c`f`a`g`Z`Z`c`a` `X`Y`]V`Y`f`U`h`Y` `W`X`Y`U`h]b[ `h`c` `U`W`W`Y`X`Y`b`h`U` `m`i`W`c`d`m]b[ `Z`c`a` `U`g`c`i`f`W` `k` ]h`c`i`h`U`W`\_`b`c`k` `Y`X[ `Y`a` `Y`b`h`

I`B`G`K` `[`f`c`i`d`g`d`U[ ]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k` ]b[ `W`U`h`Y`[`c`f]Y`g.

- i bXYfgHUbX'mci f'f][ \hg'UbX'fYgdcbg]V']hYg'Ug'U'gh XYbhUhl BGK
-

## 5 WUXYa ]WbZcfa Uh]cb

: cf`YggYbh]U`gh XYbh]bZcfa Uh]cb`fY`Uh]b[ `tc.

- fYei Ygh]Zcf`YI H`bg]cb/
- `Uh`gi Va ]gg]cbg`[ i ]XY`]bYg/
- fYj ]Yk `cZa Uf\_g/
- I BGK `<YU`h`UbX`GUZY`midc`]WYg/
- YI Ua ]bUh]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfUh]cb`]b`hY`Yj YbhcZ]`bYgg`cf`a ]gUXj Ybh fY/
- gh XYbhYei ]mUbX`X]gUV`]m/
- UbX`c`hYf`YggYbh]U`UWUXYa ]W]bZcfa Uh]cbz`gYY