



ARTS2120

K f]hjb['Zcf'DYfZcfa UbVW

HYfa 'H\FYY'##'&\$&\$

7 ci fgY`Cj Yfj]Yk

GHJZZ`7 cbHJW`8YHJ]`g

7cbj Ybcfg

B Ua Y	9a Uj`	5j Uj`UVj]m	@WJhcb	D\cbY
H\Yfcb`GWa]Xh	h'gVWa]Xh i bgk "YXi "Ui	VmUddc]bha Ybh	K YVghYf`%%&	- ' ,) `` &%

GWcc``7cbHJW`bZcfa Uh]cb

GWcc``cZHY`5frg`UbX`A YX]U

Fcca ``%&ž@Yj Y`` žF cVYfhK YVghYf`6i]X]b[`f] %Ł

D\cbY. f\$&Ł- ' ,) `(,) *

9a Uj]: [gUa 4 i bgk "YXi "Ui](#)

K YVg]hY: [k k k "Ufng"i bgk "YXi "Ui #gUa](#)

H\Y`GWcc``cZHY`5frg`UbX`A YX]U`k ci `X``_Y`hc`F YgdYWw`m5W_bck`YX[Y`hY`HfUX]hcbU``7 i ghcX]Ubgž
hY`6YXY[U`fP`Ybg]b[hcb`WJa di gŁž; UX][U`f7]mUbX`5fhi`8Yg][b`7 Ua di gYgŁ`UbX`hY`B [i bbUk U`
dYcd`Y`f5i gLfU]Ub`8YZYbVW : cfW`5WUXYa m]b`7 UbVYffUŁcZHY`UbXg`k \YfY YUW`WJa di g`cZI`BGK`]g
`cWJhYX"

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`*`

Gi a a UfmcZh\Y'7ci fgY

K f]h]b[`dYfZcfa g" `#ibchcb`mXYgW]VYg`h\Y`k cfXž]hUW]j`Y`mifY!g\UdYg:]h`K f]h]b[`ghfi Wfi fYg`h\ci [\ž
ZY`]b[žYbWci bhYf`UbX`a Ya cfm`#`K f]h]b[`Zcf`DYfZcfa UbVWžmci `k`Yi d`cfY`Uj Uf]YfmcZh\YUhf]WU`UbX

5ggYgga Ybh

5hdYgYbhzk Y'd'Ub'hc'\Uj Y'U'gYa]!di V]Wg\Uf]b['cZk cf_!]b!dfc[fYgg'cZmci f'dYfZcfa UbW!k f]h]b[
 dfc YWg'Xi f]b['hY'`cb[Yf'`YWw fY'g'ch]b'K YY_`%\$. 'Hi YgXUnz%+ 'Bcj Ya VYf' - Ua !%&da "'C Vj]ci g'mh]g'k]`
 XYdYbX'cb'fYgf]W]cbg'cb'd\mg]WU' [U'hYf]b[ž'UbX'a UmVY'g\]ZYX'cb'`bY'Ug'bYW'ggUfm'

G\Uf]b[]g'cdh]cbU'žVi hU'hYbXUbW']g'fYei]fYX" 'D`YUgY'a U_Y'gi fY'hUhmci 'UFY'žYY"

A 000005 ggYgga Ybh 000000 w 0 JoG 0 g B00 0.00000 r 00000t0 00000TJ ET 00 r 0.0000 w 0 J000000 w E00 0.0000 r

5ggYgga YbhUg_	K Y][\h	8i Y'8UH	Gh XYbh@YUfb]b[Ci hW'a Yg'5ggYggYX
DfUW]W'dcfhZ`]c`	' \$i	%- #/%#&\$&\$ \$) . \$\$'DA	%
7 f]h]WU'`Ybei]fm'	(\$i	\$- #/%#&\$&\$ \$) . \$\$'DA	&
DYfZcfa UbW'k f]h]b['dfc YW'	' \$i	&+ #/%#&\$&\$ \$) . \$\$'DA	'

5ggYgga Ybh8YhU]`g

5ggYgga Ybh% 'DfUW]W'dcfhZ`]c`

GHUfhXUH.

8YhU]`g.

GY'YW]cb'cZ' GHUfhXUH.

8YHJ]g.

K f]h[`Zcf'dYfZcfa UbVW`XYj Y`cdYX`]b`k YY_g, !%\$žUg'd`UmgW]dž`a cbc`c[i Yž`mdYfhI hžgWcfYžYhW%\$
a]bi hYg`#%\$\$\$!%) \$\$`k cfXg": YYXVUW_j]U`Hi fb]h]b`Vca a Ybhg"

Hi fb]h]b`gYh]b[.`H\]g`Ugg][ba Ybh]g`gi Va]hYX`h\fc[[\`Hi fb]h]b`UbX`gh XYbhg`WJb`gYY`Hi fb]h]b`g]a]`Uf]m
fYdcfg"

	5ggYgga Ybh	7 f]hVW`Ybei]fmf%&) \$!%) \$\$'k cfXgL'Xi Y') da A cbXUmž - 'Bcj Ya VYf
K YY_%. %* 'Bcj Ya VYf! &\$ 'Bcj Ya VYf		' !\ci f`YWhi fY. 'g\Uf]b['dYfZcfa UbW 'dfc YWg' Ž ' !\ci f'k cf_g\cd'Zc f'fYZYW]cb'UbX'XYj Y`cda Ybh
	5ggYgga Ybh	DYfZcfa UbW 'k f]h]b['dfc YWhXi Y') da : f]XUmž &+ 'Bcj Ya VYf'fk YY_ '%%ž

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

D`YUgY`gYY`@[Ubr`Zcf`hY`]ghcZfYWca a YbXYX`hI hVcc_g`UbX`k`YY`_mfYUX]b[g"5`fYei`]fYX`fYUX]b[g`
Wb`VY`UW`ggYX`j`U`@[Ubr`fcb`A`ccX`Y`UbX`Xck`b`cU` X`b`V` _\bXY"

Gi Va]gg]cb`cZ5ggYgga YbhiHUg_g

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

Ʒmci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UH`Ya` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`h`fci`[`\`Hi`fb]h]b`z`d`Y`UgY`
HY`Yd`cb`Y`9I`HYfb`U`Gi`ddcfh`cb`-`,`)`"``"``%cf`Ya`Uj`h`Ya`icb`YI`HYfb`U`HY`hgi`ddcfh`4`i`bgk`"YXi`"Ui`"Gi`ddcfh`
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`icb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`icb`k`YY`YbXg`fI`*)`XUmg`U`mY`UfI`"Ʒmci`
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`Xi`Y`hc`U`Zi`h`k`]h`Hi`fb]h]b`mci`a`Um`Udd`m`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`
a`i`ghf`Y`h]b`mci`f`h]W`Y`hbi`a`VYf`Z`ca`9I`HYfb`U`Gi`ddcfh`f`U`cb[`k`]h`Ubmc`h`Y`f`f`Y`Yj`Ubh`Xc`W`a`Yb`hg`L`hc`
]b`Wi`XY`Ug`Yj`]XYb`V`hc`gi`ddcfh`mci`f`YI`HYbg]cb`Udd`]W`h]cb`"Ʒmci`Ya`Uj`9I`HYfb`U`Gi`ddcfh`mci`k`]`
Ui`hc`a`U`h]W`m`f`Y`W`j`Y`U`h]W`Y`hbi`a`VYf`z`Vi`h]Z`mci`HY`Yd`cb`Y`mci`k`]`b`Y`Y`X`hc`gd`Y`W`Z`W`m`Ug`_`Zc`f`cb`Y`"
Hi`fb]h]b`U`gc`d`fcj`]XYg`i`d`XU`h`g`cb`h`Y]f`gm`gh`Ya`ig`h`U`h`g`cb`Hk`]h`Y`f`"

;`Yb`Y`f`U`m`z`Ugg`Y`gga`Yb`hi`U`g`_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`m`j`]U`Y`]h`Y`f`Hi`fb]h]b`cf`U`A`cc`X`Y`
Ugg][`ba`Yb`h`i`h`]b`gh`U`b`W`g`k` \Y`f`Y`h`g`]g`b`ch`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`h`X`cb`mci`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`
U`h`Y`fb`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`c`fa`U`h]cb`cb`l`ck`hc`gi`Va`]h`Ugg][`ba`Yb`hg`cb`]b`Y`j`]U`A`cc`X`Y`.`h`h`d`g`#`gh`XYb`h`i`bgk`"YXi`"Ui`#`ck`!
gi`Va`]h`Ugg][`ba`Yb`h`a`cc`X`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]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wc'dmf][\hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5Ww'dhUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wm
- VY'Uk UfY'cZh'Y'ghUbxUfXg'cZVY\Uj]ci f'YI dYW'X'cZYj Yfmcby'j]b'h'Y'I BGK 'Wc a i b]m
- `cWJh'gYfj]Wg'UbX'j]bZcfa Uh]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZh'YgY'UfYUg'k]`VY'ZJa]]Uf'hc'mci ž'c'h'Yfg'k]`VY'bYk " "; U]b]b['U'gc`X'i bXYfghUbx]b['cZU`h'Y fY'UH'X'UgdYW'g'cZ9@G9'k]`Y'd'mci 'a U_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\hhd.##ji V'YWf'i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

5 WUXYa]W=Zcfa Uh]cb

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

- fYei Ygth]Zc`Yl H`bg]cb/
- `Uh`gi Va]gg]cbg`[i]XY`]bYg/