

ARTS2698

±hYfW`h fU`±hYfUWjcb

HYfa 'C bY''##'&\$%-

7ci fgY⁻Cj Yfj]Yk

'GhJZZ'7cbhJWh'8YhJ]`g'

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`] m	@cWUh]cb	D\cbY
5b]_ï < Uhcgg	U"\Uhcgg4 i bgk "YXi "Ui	H\i fgXUmg	A cfj Yb 6fcl	 \$&
		%da!' da	&&\$	-',),'(\$

'Hi hcfg'

B Ua Y	9a U]`	5j U]`UV]`]hm	(ar VIVIII) ch	D\cbY
FUmacbX; Uth	\U`4 i bgk "YXi "Ui	h'V"U"		

GWXcc`7cbHJWhi±bZcfa Uhjcb

GWkcc``cZ<iaUb]h]Yg'UbX'@Ub[iU[Yg

@c\\Ulrighthgaper: G\\\cc``C\Z]\\Y\Z\A\cfj\Yb`6fck\b'6i\]\X]b[\z'@\j\Y``&z\&),

CdYb]b['<ci fg. 'A cbXUm!': f]XUmž'-Ua '!') da

D\cbY. 'Ž*%'&'-',)'%*,%

: UI . Ž*%.&--' ,) , +\$)

9a U]`. <u>\U`4 i bgk "YXi "Ui</u>

7ci fgY 8YW] g

7 fYX]hDc]bhg**

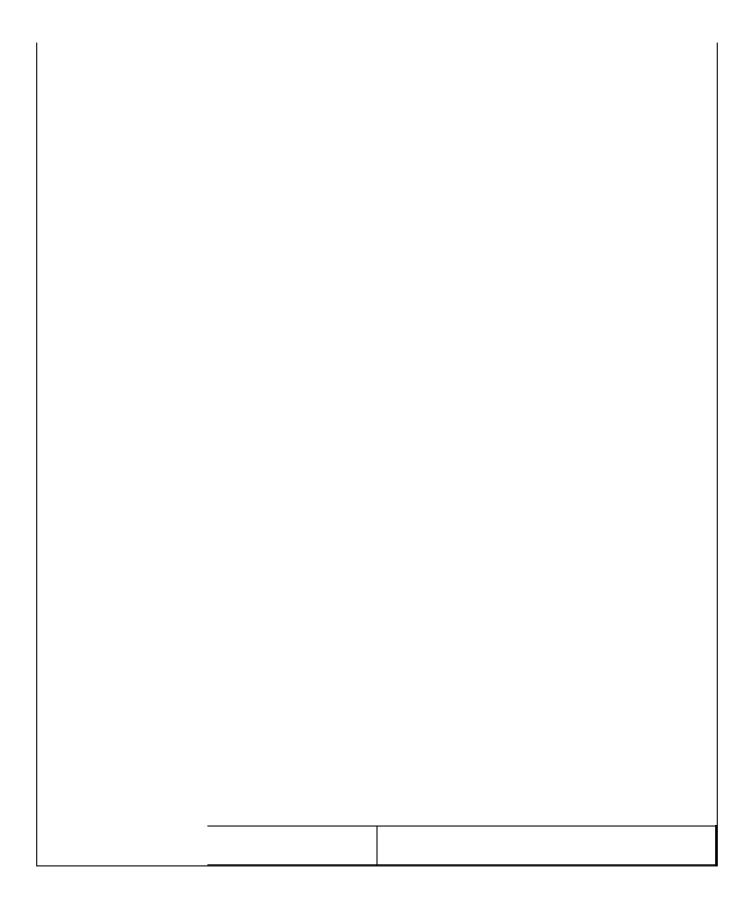
Giaa UfmcZh\Y 7ci fgY

Gi VYWn5fYU. >[Yg[ef[Ue

H\]g`Wci fgY`j]Yk g`]bhYfUW]cb`Ug`h\Y`a UbU[Ya YbhcZWca a i b]WUh]cbž]bWi X]b[`bY[ch]Uh]cbž'WcbZ]WiUbX dck Yf`fY`Uh]cbg"`=i]g`XYg][bYX`Zcf`ghi XYbhg`k]h\`Ub`]bhYfYghi]b`]bhYfW`hi fU``]bhYfUW]cbžgi W\Ug`Wca a i b]WUh]cb`Ua cb[`dYcd`Y`Zfca `X]ZYfYbh`Ub[i U[Yg`UbX`W`hi fYg`]b`j Ufm]b[`WcbhYI hg"`Mci `k]```Z]bX h\Y`Wci fgY`fY`Yj Ubhhc`a UbmZ]Y`Xg`cZghi Xmžck]b[`hc`h\Y`]bWfYUg]b[`d\Ybca Ybcb`cZ[`cVU`]gUh]cb`]b`U`` UgdYWfg`cZci f`dc`]h]WU`žYWcbca]WZdfcZYgg]cbU``UbX`gcW]U```]j Yg"``Mci `k]```YI d`cfY`h\Y`VUg]WWcbWYdfg`cZ `]b[i]gh]WfYU`]gUh]cbg`cZW``hi fYZ`Ug`k Y```Ug`Ub`i bXYfghUbX]b[`cZ\ck 'h\YgY`d`Umci h]b

Hi fb]h]b`gYh]b[.`H\]g`Ugg][ba Ybh]g`gi Va]hhYX`h\fci [\`Hi fb]h]b`UbX`ghi XYbhg`Xc`bchgYY`Hi fb]h]b g]a]`Uf]hmfYdcfhg"	1

5 m Yb)		
5 HM bXU cZ@YWh		fgY"'I bYI W gYX'UVgYbW'Zfca 'a cfY'h\Ub'&\$i
±b'``YWnif' hihcf]U`gʻl		nYbhž:YbUV`]b['mci 'hc'UhhU]b'7@C'&'UbX'7@C' "'±b hž:YbUV`]b['mci 'hc'UhhU]b'7@C'' 'UbX'7@C'("
7 ci fg		
J]Yk 'WUg		
H]a YHJV		
<u>8 UHY</u> K YY_`%`%		hYbh n]bhYfW`hifU`Wcaaib]WUh]cb3
: YVfi Ufm		
		• 6ck Yž'A Uffijb / 'A Ubbgž'W."% '7 i `h fYž
		Wcaaib]\WJrjcb\UbX\WcbhYlh • 7 fci W.Yf'7\'% K\m±bhYfW`h fU`
		7 ca a i b]WUIjcb3 fWca a i b]WUIjcb h\YcfmŁ
		AccX`Y`Zcf`]bglfiWf]cbg"
K YY_^&.^&) ^: A UfWX		f]Yg'cZ'W'`hi fY
A UIVW		• 7 fci WXYf'7 \'%) '7 i 'hi fY'UbX'j U'i Yg']b'=7
		• <i fy<="" td="" u'7\udhyf'%%h\ycf]yg'czw'hi=""></i>
		d'YhY'X]gW gg]cb'Zcfi a 'ei Ygh]cbg']b'A ccX'Y"
K YY_'' . ('A UfV A UfWX		i U[Y'UbX'Wi`hi fY
A OIVW		• 7fci WXYf`7\'%+'-'@Ub[i U[Y'UbX
		⇒bhYfWi`hi fU``7 ca a i b]WUh]cb`f@Ub[i U[Ygž
		XYbh mž XYc`c[mžGUd]f'K\cfZ
	sh`]bY'5Wf]j]lm	7 ca d YYY XigW ggicb Xiii a si Yghicbg ib A ccx Y
7 i `hi fY!q l dYW Y Z <u>I</u> V(U G%%WWUfW XVV£%	Y'A UfWX '! '%+K YY_	(7. i% % A
A UfWX		
		,



FYgci fWyg

DfYgWf]VYX F Ygci fWYg

6ck Yž < "ž'A Uffjbž'? "ž'UbX'A Ubbgž' < "'f&\$%(Ł"'7 ca a i b]\\U\floor\text{U\floor}\text{log'7 i `hi fYg. `A i hi U``i bXYfgh\UbX]b[`]b'U [`cVU``k cf`X" & \begin{cases} bX \cdot Y\circ fbY. '7 Ua Vf]X[Y I b] Yfg]\miDfYgg"

7 fci WXYfžG"A "`f&\$%+Ł'; `cVU``DYfgdYWfj Yg`cb`+bHYfW``h fU``7 ca a i b]WUfjcb"`F ci hYX[Y.`BYk `Mcf_"`GYYY6cc_"

<i UžN\i 'f&\$%(Ł'9I d`cf]b['=bhYfW' hi fU`'7 ca a i b]\WUh]cb"'\%gh'9X]h]cb"'F ci hYX[Y"'GYY'Y6cc_"</pre>

FYWca a YbXYX FYgci fWyg

GdYbWYf!CUhYmž'<"'UbX': fUb_`]bž'D'f&\$\$- Ł'+bhYfW'`hi fU`'+bhYfUWncb"'DU`[fUj Y"

>ci fbU`g

- #blYfbUljcbU``>ci fbU``cZ#blYfW`hi fU``FY`Uljcbg
- 7 i ffYbh=ggi Yg]b =bhYfW `h fU` DfU[a Uh]Wg

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

H\]g`Wci fgY`]g`Yj U`i UhYX`h\fci [\`h\Y`A m9I dYf]YbWY`gi fj YmUbX`h\fci [\`]b\Zcfa U``ZYYXVUW_"`H\Y`Wci fgY`]g fY[i`Uf`mi dXUhYX`]b`fYgdcbgY`hc`ghi XYbh'ZYYXVUW_"`H\]g`bYk 'j Yfg]cb`i gYg`]bbcj Uh]j Y`dfcYWiVUgYX UggYgga Ybhk\YfY`ghi XYbhg`WUb`k cf_`cb`h\Y]f`ck b`XUhU`UbX`Udd`mh\Ycf]Yg`]b`dfUWf\W'"

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

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 Ybhh\fci [\ 'Hi fb]hJbž'd`YUgY
hY`Yd\cbY'9| hYfbU``Gi ddcfhcb'-',) '' ' ' %cf'Ya U]`'h\Ya 'cb'Y! 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'mYUft'' \(\frac{1}{2}\)mci
UfY'i bUV`Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZUi 'hk]h\'Hi fb]hJb'mci 'a Um'Udd'mZcf'Ub'Y! hYbg]cbžVi hmci
a i ghfYhU]b'mci f'hJW_Yhbi a VYf'Zfca '9! hYfbU`'Gi ddcfhfU'cb['k]h\'Ubmch\Yf'fY'Yj UbhXcW a Ybhgt'hc
]bWi XY'Ug'Yj]XYbW'hc'gi ddcfhmci f'Y! hYbg]cb'Udd']\(\frac{1}{2}\)mci 'Ya U]`'9! hYfbU`'Gi ddcfhmci 'k]``

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

D`U[]Uf]ga i]gii g]b[ih\Yik cfXgicfi]XYUgicZch\YfgiUbXidfYgYbh]b[ih\Ya iUgimci fick b"i±iWUbihU_Yia Ubm Zcfa qžZfca iXYi]VYfUhYiW\YUh|b[ihciUVW]XYbhU`mWcdm]b[iZfca iUiqci fWYik]h\ci hiUW_bck iYX[Ya Ybh'i

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

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

⇒ Uddfcdf]UhY 'dUfUd\fUg]b[...7\Ub[]b['U'ZYk 'k cfXg'UbX'd\fUgYg'k \]'Y 'a cghmfYhJ]b]b['h\Y'cf][]bU` ghfi Wh fY 'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa Uh]cb'k]h\ci hUW_bck `YX[Ya Ybh'H\]g'U`gc Udd`]Yg']b'dfYgYbhUh]cbg'k \YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci hWfYX]hUbX'hc d]YW]b['hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk 'k \c`Yžk]h\ci hUddfcdf]UhY'fYZYfYbW]b["

7 c``i g]cb. 'k cf_]b['k]th 'cth Yfg'Vi hidUgg]b['cZZth Y 'k cf_'Ug'U'dYfgcb'g']bX]j]Xi U``k cf_"'7 c``i g]cb'U`gc]bWi XYg'dfcj]X]b['mci f'k cf_'thc'Ubcth Yf'ghi XYbh'VYZcfY'th Y'Xi Y'XUHYZcf'Zcf'th Y'di fdcgY'cZth Ya

- i bXYfglUbX`mci f`f][\hg`UbX`fYgdcbg]V]`]h]Yg`Ug`U`gh XYbh'Uhi BGK
- VY'Uk UfY'cZd`U[]Uf]ga ž'Wcdmf][\hzil BGK 'Gh XYbh7cXY'cZ7cbXi WhUbX'5WWdhUV`Y'I gY'cZ I BGK '= H'F Ygci fWfg'Dc`]Wh
- VY 'Uk UfY 'cZh\Y 'ghUbXUfXg 'cZVY\Uj]ci f'Yl dYWhYX 'cZYj YfmcbY ']b 'h\Y 'l BGK 'Wcaaib]hm
- `cWUHY 'gYfj]WYg'UbX `]bZcfa UH]cb'UVci hI BGK 'UbX'I BGK '@]VfUfm

5 WUXYa]W = b Zcfa Uh cb ·

: cf`YggYbhJU``gh XYbh`]bZcfa UhJcb`fY`UhJb['hc.

- fYei Yghg Zcf Yl hYbg]cb/
- `UhY`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk 'cZa Uf_g/
- I BGK '< YU`h\ 'UbX'GUZYhmidc`]M]Yg/
- YI Ua]bUhcb dfcWXi fYg/
- gdYWJU``Wcbg]XYfUljcb`]b`l\Y`Yj YbhcZ]``bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]lmUbX X]gUV]`]lm/
- UbX'ch\Yf'YggYbhJU`'UWUXYa]W]bZcfa UhJcbž'gYY

\htdg.#kkk\"Uffg"i bgk "YXi "Ui #WiffYbhghi XYbhg#UWUXYa]W]bZcfa Uh]cb#dfchcWc`g![i]XY`]bYg#

.

⇒a U[Y'7fYX]h

<u>| B9G7C."; `cVU``7]hnYbg\]d"9Xi_WUhcb"pGH5G< A 5; 5N=B9"\hdg.#fcc"[`#a U[Yg#*>BhYN"</u>

7F = 7CG

7F = 7CG Dfcj]XYf 7cXY. \$\$\$-,;