ARTS3483

DfcZYgg]cbU`: fYbWX`6

HYfa `Hk c``##`&$&%

7ci fgY˙Cj Yfj]Yk

5ggYgga Ybh

HfUj Y``UffUb[Ya Ybhg`a UXY`df]cf#UZ'hY`h'Y`di V`]WUh]cb`cZ'h\]g`Wci fgY`cj Yfj]Yk `UfY`bch`U`j U`]X fYUgcn`hc`fYei YghU`h`YfbUhY`UggYgga Ybh'

5ggYgga Ybh'HUg_g

5ggYgga Ybh'HUg_	K Y][\h	8i Y`8UhY	Ghi XYbh'@YUfb]b[Ci hWta Yg`5ggYggYX
@YUfb]b[`Dcfh]c`]c	&$ı	9j Yfm'Zc``ck]b[`A cbXUm VYŽcfY`%&'da "	%Ž&Ž' Ž(
C fU``dfYgYbhUh]cb	&)ı	K YY_'+ŽHi YgXUm'% #$+'UbX : f]XUm'%'* #$+#&$&%	&Ž'
@]ghYb]b[`HYgh	&$ı	' $#$+#&$&%'%$.$$`5A	%
:]bU``Yl Ua]bUh]cb	')ı	8i f]b[`h\Y`: cfa U` 9l Ua ]bUh]cb`dYf]cX`fH65±Ł	&Ž'

5ggYgga Ybh'8YhU]`g

5ggYgga Ybh'%`@YUfb]b[ `Dcfh]c`]c

GHUfh'XUhY. `Bch'5dd`]WUV`Y

@Yb[h\. `Zfca `&$`hc`' $a]bi hYg`dYf`k YY_

8YhU]`g.

Cb[c]b[`h\fci [ \ci h'h\Y`hYfa "Ghi XYbhg'k]``'Wcbgh]h\hY`U`VcXm'cZk cf_`X]fYWh\m`]b_YX`k ]h\`W`Ugg`UWh]j]h]Yg f]Zcfi a žfYUX]b[`Wca dfY\Ybg]cb'HUg_gžYW`UbX`YUfb'hc`fYZYWh]cb'h\Y]f`dfc[ fYgg`gc`Ug`hc`VYhhYf XYh\fa ]bY`UfYUg`h\UhfYei ]fY`a dfcj Ya Ybh'cf`Yl hYbg]cb"

: YYXVU_`k]``'VY`[ ]j Yb`]b` fi `Vf]gž'dYfgcbU`'Wca a Ybhg"

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

5ggYgga Ybh'&.'C fU``dfYgYbhUh]cb

GHUfh'XUhY.`Bch'5dd`]WUV`Y

@Yb[h\.`%$'hc`&$`a]bi hYg

8YhU]`g.

%$'hc`&$`a]bi hYg""`fci d`k cf_"Ghi XYbhg'k]``'[ ]j Y`U`g\cfh'Zcfa U``dfYgYbhUh]cb`cb`U`[ ]j Yb`hcd]W"H\Ymk]` VY`Ž]a YX`Zcf`UggYgga Ybh'di fdcgYg"') ı `cZhchU`a Uf_'k]``'fYWY]j Y`dYYf`Yj U`i Uh]cb"Ghi XYbhg'k ]``'VY Uk UfXYX`Ub`]bX]j]Xi U`a Uf_"

: YYXVUW ̱ˈk]``VYˈ[ ]j Yb ̖]b ̖fi Vf]Wg ̖Ž ̖dYfgcbU ̖Wca a Ybhg" Gh XYbhg ̖WUb ̖Wcbgi ̖hh\Y ̖ ̖YWh ̖fYf ̖Zcf ̖Z ̖fh\Yf ZYYXVUW ̱"

Hi fb]h ̖b ̖gYHh]b [ˈ. ̖ ̖H\]g ̖]gˈbchU ̖Hi fb]h ̖b ̖Ugg][ba Ybh

5]g'

K YY_`-.`&*`>i`m!`'$`>i`m	5ggYgga Ybh	Gi Va]hDcfh℔c`]c`+`]b`A ccX`Y`VYℤcfY`A cbXUm`%&`da "
		: YYXVUW_`Dcfh℔c`]c`k YY_g`(`hc`*"
		@]ghYb]b[`7ca dfY\Ybg]cb`HYgh`f&$ı  Ł]b`hi hcf]U`WUgg"
	Hcd]W	H\Y`jUf]ci g`℔cfa g`cZhfUj Y`
		F Ygh℔W]cb`UbX`WcbX]h]cbU`
K YY_`%$.`&`5i[ igh!`*`5i[igh	5ggYgga Ybh	Gi Va]hDcfh℔c`]c`,`]b`A ccX`Y`VYℤcfY`A cbXUm`%&`da "
	Hcd]W	; fUa m Uf`fYj]g]cbg"
		DfYdUfUh]cb`fcf`h\Y`Z]bU``YI Ua `f>S bWf[fWX[^WVW? a` e[Wgd >[`ZŁ
		7cbWi g]cb
	5ggYgga Ybh	Gi Va]hDcfh℔c`]c`-`]b`A ccX`Y`VYℤcfY`A cbXUm`%&`da "

Gi Va]gg]cb cƑ 5ggYgga Ybh HUg_g

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

=Zmci YbWci bh Yf U dfcV Ya k \Yb UhhYa dh]b[hc gi Va]hmci f Ugg][ba Ybh\fci [\ Hi fb]h]b bž d YUgY hY Yd\cbY 9I hYfbU Gi ddcfh]cb - ' ,) '' ' ' %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 Ybh Xi Y hc U ZUi h k]h \ Hi fb]h]b mci a UmUpp mžcf Ub YI hYbg]cbž Vi hmci a i ghfYhU]b mci f h\]W_Yhbi a VYf Zca 9I hYfbU Gi ddcfhfU]cb[k]h Ubmch\Yf fY Yj UbhXcW a YbhgŁ hc]bWi XY Ug Yj]XYbWW hc gi ddcfhmci f YI hYbg]cb Udd]WUh]cb" =Zmci Ya U] 9I hYfbU Gi ddcfhmci k]` Ui hca Uh]W mfYWj]j Y U h\W_Ybbi a VYfžVi h]Zmci hY Yd\cbY mci k ]` bYYX hc gdYW Z W U `mUg_ Zcf cbY" Hi fb]h]b U `gc dfcj]XYg i dXUhYg cb h\Y f gmgh Ya g gh Uhi g cb Hk]hhYf"

; YbYfU `mžUggYgga Ybh HUg_g a i ghVY gi Va ]hhYX Y YWfcb]W U `mj]U Y]h\Yf Hi fb]h]b cf U A ccX Y Ugg][ba Ybh "Đ]bghUbWg k \YfY h\]g]g bch dcgg]V Yž h]k]`` VY ghUhYXcb mci f WcifgY'g A ccX Y g]hY k]h U h\YfbUh]j Y gi Va]gg]cb XYhU]`g"

: cf]bZ cfa Uh]cb cb \ck hc gi Va]h Ugg][ba Ybhg cb]bY j]U A ccXY .\ndg.##gh XYbh]i bgk "YXi "Ui #ck ! gi Va]hUgg][ba Ybtma ccXY

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

D`U[ ]Uf]ga ]g i g]b[ h Y k cfXg cf ]XYUg cZ ch Yfg UbX dfYgYbh]b[ h Ya Ug mci f ck b" +hWUb hU_Y a Ubm Zcfa g# Zfca XY ]VYfUhY WXYUh]b[ b[ hc UWW]XYbhU`m Wcdm]b[Zfca U gci fWY k]h ci h UW_bck `YX[Ya Ybh"

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

- understand more of [the understanding])}]}gs as a as gue Benthat BGK
-

5WUXYa]W+bZcfa Uh]cb

: cf YggYbh]U` ghiXYbh ]bZcfa Uh]cb fY`Uh]b[hc.

- fYei Yghg Zcf Yl hYbg]cb/
- `UhY gi Va ]gg]cbg [i]XY`]bYg/
- fYj]Yk cZ a Uf_g/
- I BGK <YU`h UbX GUZYhm dc`]W]Yg/
- Yl Ua]bUh]cb dfcWYXi fYg/
- gdYW]U` Wcbg]XYfUh]cb ]b h\Y Yj Ybh cZ ]`bYgg cf a]gUXjYbhfY/
- ghi XYbh Yei]hm UbX X]gUV]`]hm/
- UbX ch\Yf YggYbh]U` UWUXYa]W]bZcfa Uh]cbž gYY

[\hdg.##kkk "Ufhmci bgk "YXi "Ui #WffYbhstghiXYbhg#UWUXYa]W]bZcfa Uh]cb#dfchcWc`g![i]XY]bYg#](#)