



L ZWh↑Z

>dl ; b ḥh'ḏchL ʾaʾḃ eVXi L ʾay gZ Hḥ

DVi] Vc 8gdY Z
^U4qp@C2-@ C@

8Zc\_Vb ḥ M J Z
4#-C2-@ C@

AV^C dgIV
WbqSz-2-@ C@

: j cXVc L Vihdc#F Vggh
@.-zsb^e-qpfs2-@ C@

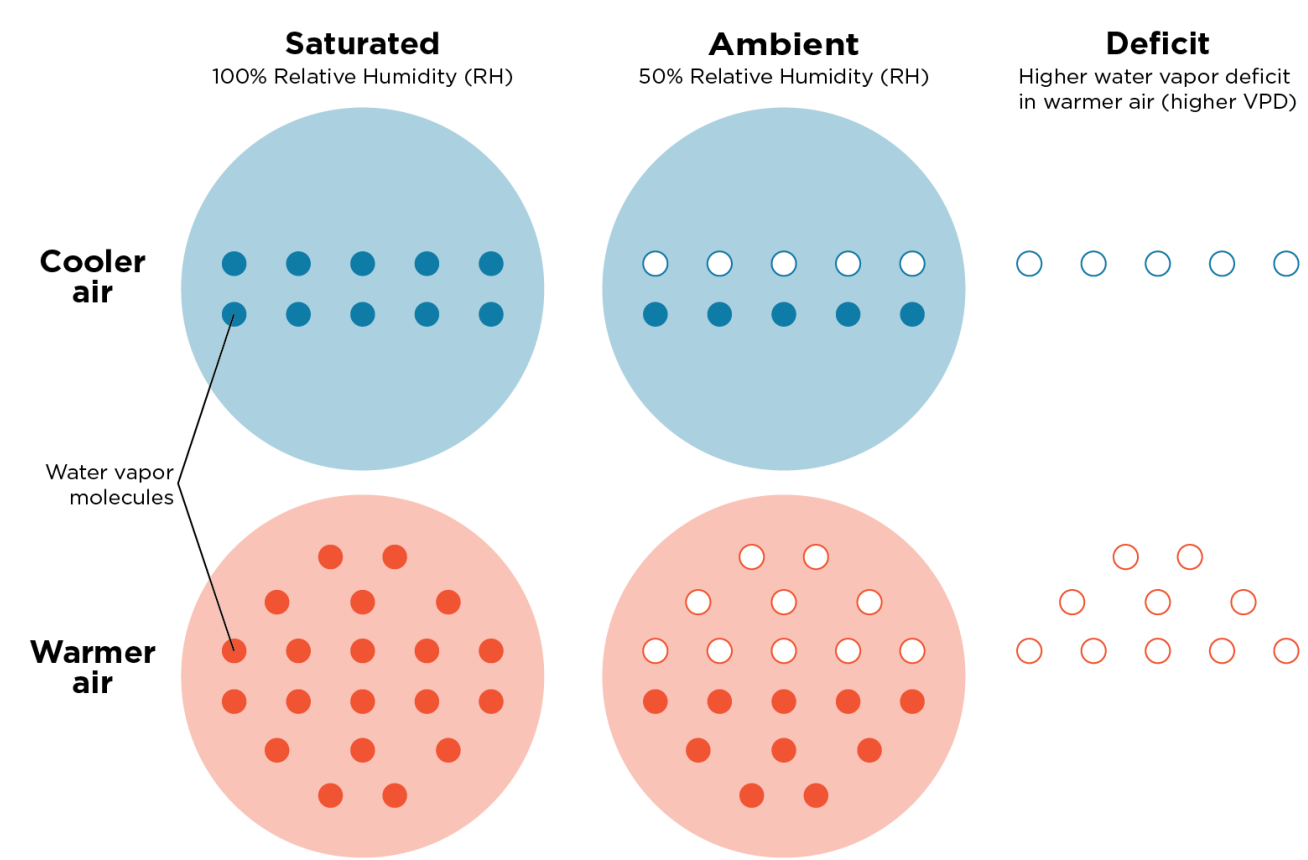
: 1 9'. &8 8&) #("l ] Z J c k Z g h n d [ 9 V a f d g c V i V c : Z \ d

L ] nL ʾay gZ h7gZ ḃ edgVci

: sHT^L%>L, BBY^L-BL%o NY-B ~", LHT^L%>p>" %>L>H^>..sHʾ>B', %>L nL">
, ~ 5pL%>T^L%>p>C L } >-ʾLQLB^%>o~ "pL LB %>Lk} s-BYHs-n

- ~ ḡ >L^ p>-nL: sHT^L%>L } s B>A, ~ Hs ʾH L s", "pL >"} , %>qL^L E pSḂp
L>H%>, >- s-B^L>%>o s- "L } ..L^>Y^L%>na, A> ʾ
▪ / L%>YB, ~, N9L nL">, ~) >-ʾ...>~" %>o~H%>as >^L HL%>, ʾLHs- "pL ... , BL%>o
▪ ḡ L>"p LQLB^%>ḡ} , yL N, } E sHT^L%>B>- B>Y%>o ^L%>as>, ʾ ʾ ʾ %>oL%> s-pY } >-%>o
>-H>-ḡ >%>o

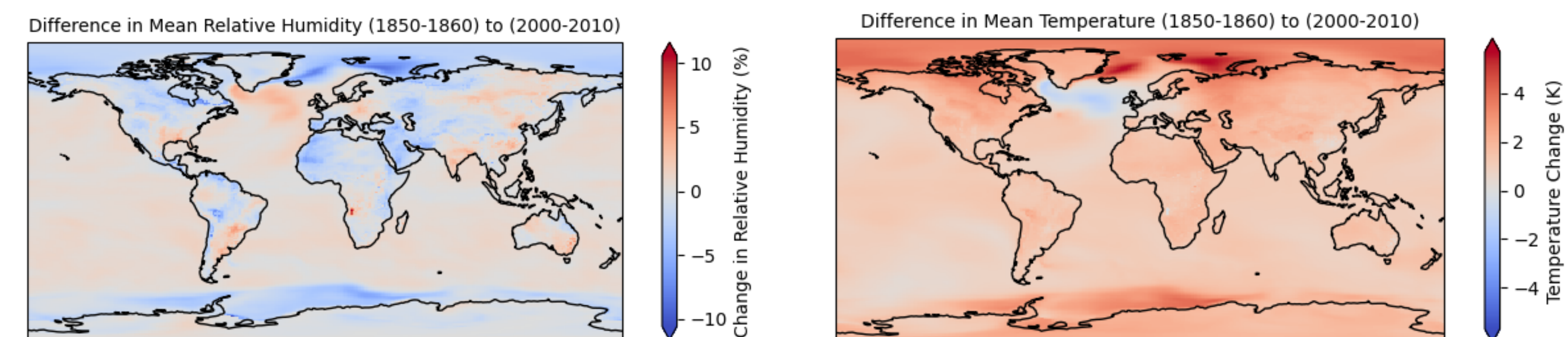
9>.., ^ / ^L%>oL / LTBs 9// ^L..L%>o~" %>oPL HQL^L-BL AL" ELL~ "pL E >L^ C>.., ^
..L%>o~" s- "pL >"} , %>qL^L >-H "pL } >ḡ ḡ Y } >}, Ḳ~", NE>L^ C>.., ^ "pL >"} ,
%>qL^L B>- p, H 5p%>B>- AL Y%>ḡH", ^L..L%>o~" p, E Hʾ...>~" %>o~L E sps->%>o NBL
>L> E pSḂp %>o~ s-HB>, ^, Npsnp E sHT^L Bp>-BL : L...>~", Y%>o HQL^L~" } >
Bps-L L>~s-n } , HL %>, >->ʾ;L p, E L } %>o~>-B>- >QLB^ 9//



: Vi V 8VX ` \gdj cY

- ~, Ḳ..LH) , HL "~L^B } ..>^%>o / ^, W B' / p>%>o ~) "/ ^ B LB, ~, N
} >-ʾ, N^pL } , %>o>H C>-BLHBḡ >L } , HL %>o
▪ ~, } } Ḳ-sʾ fl>^"p 3ʾ%>Lk } ) , HL ~ fl3) ..>~", N^) "/ >-H "pL %>dL BḡB
Bḡ >L %> Ḳ >, ~ } , HL Y%>ḡHs- "p%>o.., W B'

5 B>Bʾ >L 9// E L Y ḡ LH^ fl3) %>ḡḡ>^L n>Hs-n-L>~ %>o NBL ^L > C L pY } sH
sʾ >-H-L> %>o NBL >C L^>nL "L } ..L^>Y^L 5 B -T } "p>"pL H>"> E >%>oḡ} BL~" ʾ
B } ..L^L E L B } ..>LH "pL "E, C>^sAL%>AL" ELL~ "E, } L..L^s H%>o



1 snY^L ḡ Y } sHʾ >-H5L } ..L^>Y^L / QL^L-BL%>o

5pL^L >L "E, %>L..%> B>Bʾ >L "pL 9// Y%>o n^L > C L pY } sHʾ >-H>C L^>nL "L }
..L^>Y^L

~ >Bʾ >L "pL %>Y^>, ~ C>.., ^ ..L%>oL 39/ Y%>o n "pL ~ >Y%>o %>o >..Lʾ, ~
flḡY>, ~

SVP = 0.6112 exp (17.76 x T / T + 243.5)

~ >Bʾ >L "pL 9// >%>oPL HQL^L-BL AL" ELL~ ^L > C L pY } sHʾ >-H 39/

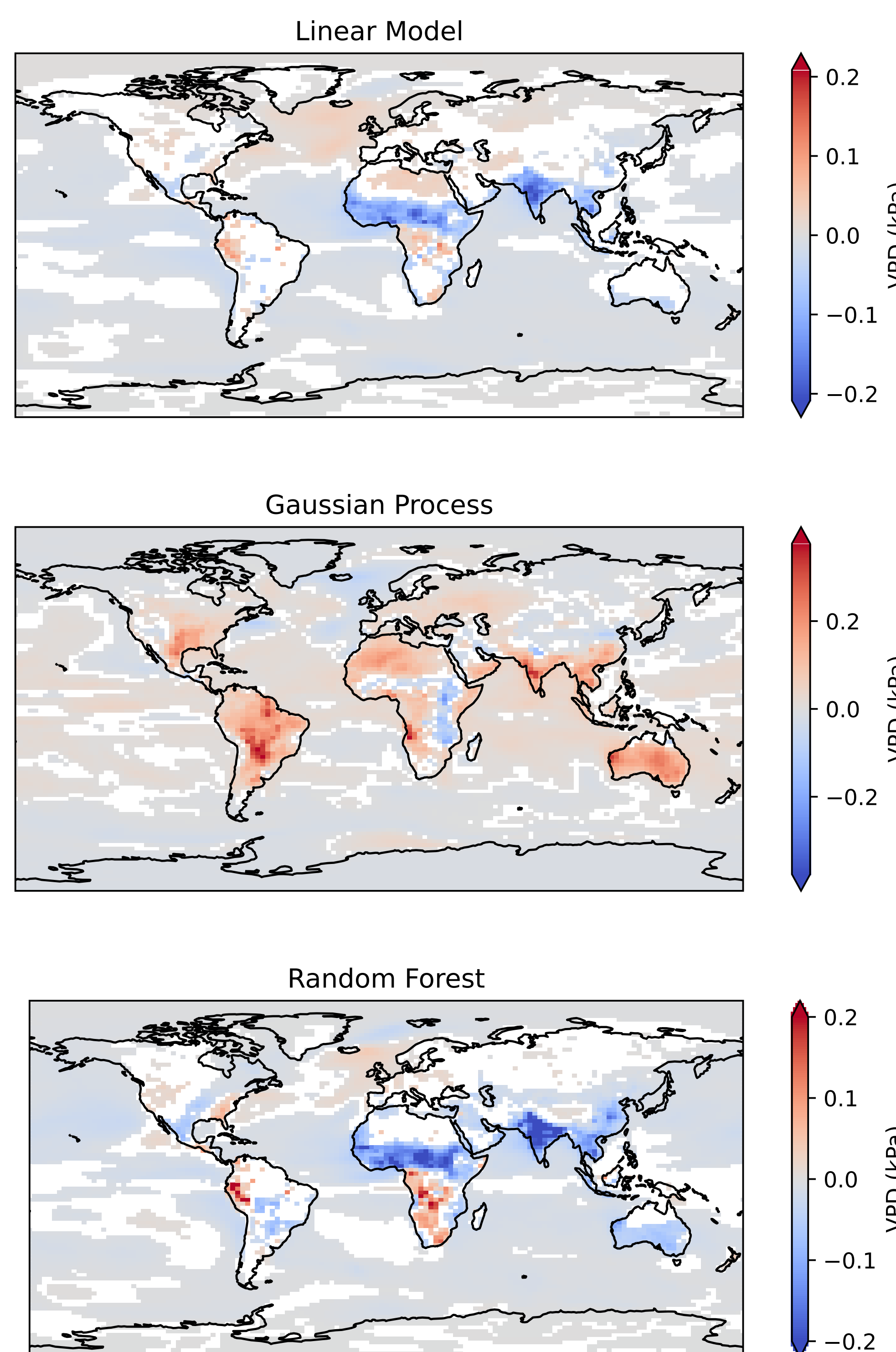
VPD = 1 - RH/100 x SVP

I ] Z C dYZahL Z J hZY

, Ḳ^ } , HL %>Y%>ḡH "pL L } %>o~>%>o N^ , Ḳ ~ Ḳ 4 3, 2 >-H.. ^ A>By B>A, ~ N, }
%>C L^> HQL^L~" Bḡ >L %>BL ~>^s %>o, } >yL ...LH B, ~%>o Nn, A> 9// Ḳ.., "pL
ʾL>^ : L N , E LH "pL >...>, >Bp, N^pL ḡ ḡ >L..L-Bp ...L^ ~", "L%>o, Ḳ
...LH B, ~%>o~ "pL Bḡ >L Bp>-nL %>BL ~>^s %>o. } , HL ^>L Bḡ >L Bp>-nL &ʾL
E L Y%>ḡH "pL N , E s-n } , HL %>o

- &S-L>^ ) , HL : L T" > s-L>^ } , HL ^, ...LH B' 9// N, } "pL n, A> } L>-
"L } ..L^>Y^L 5p%>ḡḡY^ A>%>o s-L } , HL ^, B } ..>L "pL ..L^N } >-BL, N, Ḳ^
} >Bps-L L>~s-n } , HL %>o
▪ Ḳ >Y%>o~ / ^, BL%>o L ..L^N } LH Hḡ L~%>o~> sʾ ḲHYB, ~, ~ "pL >L^, %>o
L } %>o~>%>o pL ~ T" >Ḳ / } , HL E sp >) >L^~ yL^L, ~, "pL H>">
▪ 2>-H, } Ḳ, ^L%>o: L Y%>ḡH "pL %>oḡ LH ḡ L~%>o~> sʾ ḲHYBLH H>"> >%>oPL
Ḳ >Y%>o~ / ^, BL%>o, T" >^>-H, } N^L%>o
▪ ~, ~C, Ḳ, ~> \* L Y^> \* L^E, ^y : L T" >^ \* \* &35) ^>s-LHs- ʾL>^ BpY~y%>o
Y%>o n 2L&7 >B C>, ~ N^~B, ~%>o

Ej gC dYZah FḡY Xi ḡch



1 snY^L ) , HL fl^, ^, } ..>^%>o~%>o

HZjh ʾahVcY : ḥXj ḥh'ḏc

5 B, } ..>L, Ḳ^ L } Ḳ >, ^ ..LH B, ~%>E L B>Bʾ >L "pL ^, ~, " } L>- %>oY>L L^, ^
2) 3fl ~, ḡ } >ḡ L s %>o> > ʾ \* 2) 3fls >-H n, A> ʾ \* 2) 3flg "pL~ B } ..>L
Y%>o n > E L snp^LH %>o } \* 2) 3fl 5pL%>o >L HLT~LHs- >%>L, E %>o

2) 3fls = ... 2) 3flg = ...

E pL^L xij = ... 5 "pL N , E s-n">AL E L B } ..>L "pL \* 2) 3fl ^L%>o~%>oNL>Bp, N, Ḳ^ } , HL %>o
Ḳ, A> \* 2) 3fl ^L..L%>o~" %>oPL n, A> >C L^>nL%>B, %>oPL fl>~"p E psl %>o> > %>o
B, ~BL^LH E sp HQL^L-BL%> s-HsḡY> ^Lns ~%>o

), HL 3.: > Ḳ, A> 5 ">
&S-L>^
~ \* \*
Ḳ /
2l

5>AL \* 2) 3fl ^L%>o~%>oNHQL^L~" Bḡ >L } , HL %>Y%>ḡH

5pL s-L>^ } , HL ..L^N } LH AL%>E pL~ B>Bʾ >~n "pL %>o> > n, A> >-H", ">
\* 2) 3fl 5p%>ḡḡH B>L%>o C L^>s-L>^ L >, ~ps.AL" ELL~n, A> L } %>o~>%>o~H
C>.., ^ ..L%>oL HLTBs

<j ij ḡ : ḡXi ḡc

Ḳḡ, ~> H>">, >->ʾ;L
5 N^~pL ḡ ḡ, C L, Ḳ^ ^L%>o~%>E L B>~ Ḳ ḡ L, "pL ^ C>^sAL%>E sps- "pL H>">%>o~",
s-B^L>%>o~BBY^>Bʾ Ḳ, ^L C>.., ^L E L B, ḲH, , y >^L C>.., ^>->as>, ~ E s-HHsLB
, ~ >-H, "pL ^ C>^sAL%>E p>" } snp~, " p>C L^>o~nL >-ḡ ḡ>B' >%>o// AYḡ B Ḳ Y H
%>o B, ~"sAY^L", n^L>L^>Bʾ>Bʾ
~ "pL ^>...>, >Bp E L B>~ "yL", ḡ .., C L "pL ^L> E, ^ Hḡ ...ḡ>, ~, N, Ḳ^ } , HL
B, ḲH AL", T-H E pL^L "LL%>o~H, "pL ^.., %>oAL j > } >AL ...>~" %>o~L ..L C>L~"
, ~ fl>~"p ~, } As-s-n, Ḳ^ 9// H>"> E sp "p%>oH"> E s >, E Y%>o, ...LH B' E pL^L
E sHT^L%>E s, BBY^ E sp n^L>L^>BBY^>Bʾ

"ḡ .., C L } L~" %>o ) , HL
5 s-B^L>%>o "pL >BBY^>Bʾ, N, Ḳ^ } , HL %>o~ p, E "pL ʾ>...ʾ", ...LH B' ~n E sHT^L%>o
E L B>~ N Bʾ%>o~ ...LH B' ~n 9//, ~ʾ, C L^>-H 5p%>ḡE, ḲH } >yL, Ḳ^ } , HL %>o
...LH B' , ~%>o, ^L N Bʾ%>ḡH, ~ "pL , B>, ~%>E pL^L E sHT^L%>B>- >Bʾ>ʾ ʾ, BBY^

HZ[ZḡcXZh

~ >Y%>o~B>..Lʾ, ~ LḡY>, ~
^ } L^ḡ-> ) L^L, ~, nB> 3 BLʾY Ḳ, %>oY, N) L^L, ~, nY ḡ-
) 5 2>-HL%>o~ 3LH>-
) Y %>o~L s-j YL-BL, Nc>.., ^ ..L%>oL HLTBs, ~ TL sn-s, ~>-H%>C L>Hs-A, ^L> N ^L%>dL B %>o%>o } %>o
s nL, %>oL-BL%>o
^>ʾ ʾ / pss.%>o
: p> %>o>.., ^ ..L%>oL HLTBs C.LH >-HE p>^ %>o~B --LB, ~, E sHT^L%>o
7-s ~, N^, ~BL^LH 3B~ %>o~ ..
2>, <, sS / 3L>-H- \* , E>By / ^> } ..ḡ> %>L^> : >%>o~ / >^ḡod
ḡ ḡ >LAL-Bp C ^ AL-Bp) >y N^H>^H sL-Bḡ >L .., W B, ~%>o
ḡ Ḳ->, N^H C>-BL%>o } , HL s-n fl>^"p 3ḡ%>o } %>o