

介紹

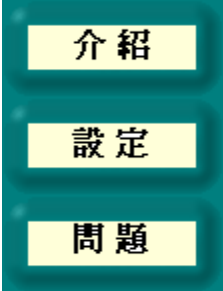
設定

問題

ELSA 3D REVELATOR

(3D $1p^2$)

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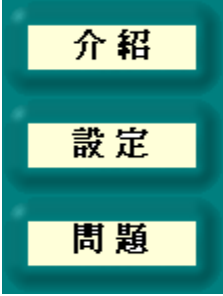


ELSA 3D1p2'3]©wæøæ¶²Ð

¡ã, 2' 3D¥ßÁé@ÄªGÅX°Êµ{||;Áý±z;Ë;ÛÁéÅçπT«xªÅ¶||;B''Í±zªºÁù²'³£¬à¥Hæ£|P''æ«x''ÓÆ[-Ý
'X¥G©Ò¡³»PMicrosoft Direct3D¬Û®eªº3D³nÁé;C|ã, 2'
¹;3D¹CÀ,ªº®ÄªGæx''ã¥OæH¿E½à;A|ý'í©ó3D¼Ö«¬¥HæÍ3D¥ßÁé·Pªº§e²{æ}·¥''ã»ùÈ;C

||¬º3DÀ³¥íµ{||;¥Hæ£|Pªºæè;||s''ú3D¹í§ÍÄã¥ÛÅX°Êµ{||;A'ELSA 3D1p2'
'³]©w'Áý±z¬º''Cæ@ºØÀ³¥íµ{||;ÛqæÍÅx|s³]©w;A''Í±zªº·
ELSA 3D1p2'³]©w'¥Ã»·«O«ù³''ÍæÆ;C
¡³''Ç®ÉÔ;A¬Y''ÇÀ³¥íµ{||;||³¹í§ÍÄã¥Ûù»~ªº±
¡ªp;A©Í¬OµLªk¹F''ìæT«xªÅ¶||;ªº®ÄªG;C³o¬O;]¬º³o''ÇD3D¹CÀ, ''Ãæ
£''Í¥ÍZ½w½Äº;A©Ò¥HµLªk''Í¥Í;ã, 2' 3D1p2'¡C''ì¥Ø«e¬ºæ;A§Ûµ²{µLªkæä
'©3D¥ßÁé®ÄªGªº¹CÀ, ¥u|³ Microsoft FlightSimulator 98;BMotoRacer (¡³æä'©MotoRacer2)
;BF22 Air Dominance Fighter¥HæÍ Falcon 4.0;C

·í±zºð;æD3Dªº¹CÀ, ®É;A½Ð±º°Ê'ELSA 3D1p2'³]©w'ææøæ¥ßÁé®ÄªGÅX°Êµ{||;Aµ{||;·|
¥ý;bÀ³¥íµ{||;³]©wªº, ê®Æ®wææ·j'M³o-
ÓD3D¹CÀ, ±M¥íªº³]©w;C|pªG''S|³§ä'';A«h½Ð±z, ùæj¹w³]ªººÑ¼Æ;Cæ@¥¹±z§â³]©wÀx|s;bÀ³
¥íµ{||;³]©wªº, ê®Æ®wææ;A±zÅH®É¥í¥H|b'
ELSA 3D1p2'³]©w'æUªºÄã¥Ûæº®e§@§ó§;C



3D1p2'203]©w

■ **DirectX 2020**

1/2D² · N±z² · n;w, ÉDirectX 6.0 ©Íšó·s²⁰²⁰ ©;Cš_ «h;A²u³ ' £ "Ñ²æ² 'Æ[-Y²⁰²¹ÍšÍ²~ à²¥
;1/2T²⁰²⁰Ä²Û;C

■ **šó·s^{3t2v}**

→²FAxšK|ä², 2;¥ßÁésÖ²ü²⁰²¹4vÁT©Ö²y² {°É±;šÍ;A±zÁ^{30É}¶q±N;Ä¹šó·s^{3t2v3}] ±o¶V²⁰²¹V;n;Cn³]©w;Ä¹šó·s^{3t2v};A²¥ý±N;Ä¹š, Ñ²R«x³]→°±z©Ö·Qn²⁰²⁰(;p;G640x480) ;C±µÜ;A; b±± "í²x²⁰²⁰Ä²Û²µ²®e;A±Nšó·s^{3t2v3}]→°3;°a²¥i±µ "ü- É;Cšó·s^{3t2v3}]b120Hz|Ü150Hz²š¶; , û→°2z·Q;C

■ **1/4W¥[·s²⁰²⁰3DÄ³¥Íµ{; ;i, é®Æ®w**

n¹4W¥[·s²⁰²⁰3DÄ³¥Íµ{; ;i, é®Æ®w¥i°ö;æ¥HxU²⁰²⁰"BÆ; ;G - ±Ö°É±z©Ö·Qn²⁰²⁰3DÄ³¥Íµ{; ;i;C
- |b¹CÄ, ±± "í²x³]©wšÖ^{3t}Ää;C¹w³]2023]©w-O±zÁä1/2L1/4Æ; r°í²⁰²⁰*Ää;C
- |p²G; »Yn; A "í²¥í²¥ "àÄä "Óšóší°Ñ¹4Æ; AÄý3D®Ä²G "àše²{3} "í²Æ;C
- «öF10Äx;s¥Ø«e²⁰²³]©w;C
·í±z²µU²µ@; , ¥ '¶} { 3D1p2'3]©w' ®É;A±z·|µo²{; }³µ@-
Ö·s²⁰²⁰3DÄ³¥Íµ{; ;i;µn;ý; bÄ³¥Íµ{; ;i, é®Æ®w²µ;C³o®É±z¥i¥Hšóší;1Ä³¥Íµ{; ;i;2023]©w;C

■ **Ñ°£3D¥ßÁé²⁰²⁰Ä²G**

|p²Gµ{; ;i;µ@¶}©|°ö;æ®É°N±Ö¥í¥ßÁé®Ä²G;A "°»ò±z¥i¥H "í²¥ÍšÖ^{3t}Ää "Ö, Ñ°£ ¥ßÁé®Ä²G(1w³)→°;GNum -);A;ý¥ßÁé®Ä²GÄX°Éµ{; ;i;µM²⁰²⁰ü«ù;³®Ä;A²æ£»Y "í²¥í "CPU¥HxÄ¹, 1¥ [3t¥d²⁰²³B²z¥ "à;Cn°ö;æµ@µ{; ;i;š¹¥p²æ¥í "í²¥ßÁé®Ä²G("Ö; ;p;GÄ³¥Íµ{; ;i "Ä²æ²ä ' ©¥ßÁé®Ä²G) ;A²¥²¶; |b¹CÄ, ¶}©|xš«e;A°w¹í²µ@ "è±; ;p©Í²µ→°1µ{; ;i;A±N { 3D1p2'3]©w'2020¥ßÁé®Ä²GÄX°Éµ{; ;i;Äö³-;C;ý¥ "M±ø¥ó→O;A±z¥²¶ "í²3/4U²µWz»; ©ú±N;13DÄ³¥Íµ{; ;i;¥ [x]¥Ø;ý²µ;C

■ **1CÄ, ±± "í²¥x**

1CÄ, ±± "í²¥x¥i¥H; |b¹CÄ, ;Í²µ«Ø²µ@šÖ^{3t}Ää(1w³)→°: Num*);C; |p²G; |³±;šÍ;A²¥~¥[2020šÖ^{3t}Ää· |³®Ä;Ö1CÄ, 2020šÖ^{3t}Ää·|µL®Ä;G

- F1/F2 °šC/1/4W¥[«e°YZÈ
- F3/F4 °šC/1/4W¥[«á°YZÈ

- F5/F6 2³/4¥X/2³/4¶i ¥Ø¥úµ¶¶Z
- F7/F8 °šC/1/4W¥[¥ßÁé®Ä²G²⁰²¹4e«x

- F9 ¶}±Ö/Äö³- Dyna-Z™
- F10 Äx;s¥Ø«e±Ö°É1CÄ, 2023]©w
- F11/F12 °šC/1/4W¥[»·²æ²⁰²⁰¥ßÁé®Ä²G

©Òì³"ïíí; b¥Ø«e¹í§íªºZÈ·|§e²{; b¹CÀ, ±±"î¥xªº±øª-¹í; C3DÀ³¥íµ{; ; ©Ò"ïííªºZ-
È(³q±`-O; b0"ì1x§¶;)ªí¥Ü/Æ[²³»Pª«Áé¶;ªº¶ZÄ÷; C±øª-¹íííÀ°§U" M©w¥BÁéÁX°Êµ{; ;ªº³ì"î¹B
§@¶ZÄ÷; CF1/F2¥HíF3/F4-O¥í©ó³]©wZ¶ZÄ÷ªº«eºYíí«áºY"î; A¥H²£
¥í, ù; ñªº²`«x·P"ü; C¹/²O³/4ä¹"î@É; A¥@©wnÁý©Òì³'ªº«³£; b; Ä¹ðªº; A; Ö©Òì³±
±"îª«¥óííÁª¥Ü«h¥£; b; í¹; C³; |ñ-O¥Ñ; í³, gÁçªº"ïííí"Ó§ó§í³o"ÇÈ; C-º¥F¥Wzªº²z¥Ñ; A§Ü-
ì-º³ì"üÁwªªº¹CÀ,³]©w¥F¹w³]È; C·íµM; A§Üí©Òì³ªº¹w³]È§; ¥í; b'Æ³³ 3D¹p²'³]©w'§ó§í; C

■ **¿í³/4Ü²M'·ªº¹/4Ö; ;**

¹í¥ª²'¥í¥k²'ªº'ªº«¹/²Ö³/4äÁª¥Ü·|³y; "¹CÀ, ¥ªÁªíí¥kÁªªºÁª¹/²t³Q"-ª±¹/4"; C³o"ÇÁª¹/²t·|
¶Á±¹/4; A(°Ñ; Ö¶í¶³]©wÁª); C³; |ñ-O"ïííZ¹/²w¹/²Ä°í; C³o¹/4È; Aª«Áé¶ZÄ÷»·¶W¹L³]©w¶ZÄ÷@É
'N¥£·|Áª¥Ü; bÁª¹/²t; C; P¹/4Èªº; A«e¥ªªºª«Áé(¥j; h¹/4Æ-º±±"îÁª¥Ü)¥], ù¥£©ö; èÁÑ; C

■ **¹/4v¹³¹/²w¹/²Ä³/4¹s"ú**

í³"¹C¹CÀ,ªºµ{; ;³]p@vÁx¹LDirect3D¥ª'©¥PÁª; Öª¹/²±µ; s"ú¹/4v¹³¹/²w¹/²Ä°í; C³q±`³o-O-º¥±«e
'ªºªª«Áé; Ó³]p; A"Ö; p©ïÁY; ; Áª¥Ü³/4¹; BÄª³t³/4¹; B±±"î¥xµ¥
; C-º¥F@ø°£; í¹@ÁªG; A¹/4v¹³¹/²w¹/²Ä°íªº; s"ú³]©w¥²¶·; b'Æ³³ 3D¹p²
'³]©w'§ó§í; C; |pªG; í³"Çª«Áé¥u; í³¥@°í²'·ú-Y"î; A, ÖµÜ±N¹/4Ö; í³]-ºÁù²'; C" S@íªºµ{§C·|
±Ö°É; A°ö; íæÁù²
'ªº¹/4v¹³¹/²w¹/²Ä°í; s"ú; C³o"ÇÁ, »sª«Áé" S; í³²`«xªº, è@Æ; A; |; í¹¥Á»·¥u§e²{; ; b; Ä¹ðªº±; C

■ **Enlarge Clipping Rectangle(ÁX¥j°Á°£°í)**

íªªGªÁ¶; ; ì«D°Á°£°íªº³; ¥Á(|p:ªù)¥£"£¥F; A³o¥í-à-O;]-ºClipping Rectangle (°Á°£°í)
¥Ó¥¥F; C¥ª»ò-OClipping Rectangle©O?º²³]±z-O; b¥ª@ªù¥'¶]ªº©Ð¶; ; ì(ªù«á; í³¥t¥@-
Ó©Ð¶;); C±qªù, ì±z¥u-à-Y"î²Á¥GÓ©Ð¶; ;ªº¥ª@³; ¥+; C¥ª@-è3Dªº¹CÀ,³q±`·|µe¥X²Á¥G-
Ó©Ð¶; ;ªº¥ªª§; AµM«á³]©wClipping Rectangle; C¥ô; íó¥£; b; í¹Rectangleªºª«Áé; A; b³o-
Ó"Ö¥; í-O«üªù@ø; A·³Q°Á±¹/4; A¥£·|Áª¥Ü¥X"Ó; C
¥HÁù²'ª`µø; A¹; íª³"ìClipping Rectangle¥ªÁª»P¥kÁªªº©Ð¶; ; |@ø¥ç; A³o-O;]-º"ª²'í³¥
£; Pªº³zµø·P; C; |pªG³oªº±
; §íµo¥í; A¥²¶·±Ö°É¶; í¶³]©w, ì¶; í¶³3D¥BÁé@ÁªG³]©w'¥Uªº"Enlarge Clipping
Rectangle"³]©w; C



°YAD

■ xF³W«B²º°{°Ê

Ãèxù²ºLCD§Ö²ùµo¥íx£³W«h²º¶}Ãö©ÍÀb¶i°Á°£²º±j²p;A³o-O!]-°¶}ÃöÃèxùx
 xÂ_³Q"ä¥L_Ë_m©µzδ²ºÃö«Y;C;ãº, 2i ¥BÁé@Ä²GÁX°Êµ{;i¹³ºº!]-°-
 µ@Ä¥d©Í¹CÄ, ·n±ì©T»Ù©ÍÁX°Êµ{;i²º¥»xÓÁÄ°Ö³y!²ºPC"t²í¿ù»~¬Ù·í±Ó·P;A!];¹;A;²p²Gµo¥í³
 oºº±;§Í;A½Ð;w_Ë³;·s²ºÁX°Êµ{;i;C;P@É;A¹CÄ, ·n±ì/¹CÄ, ±±"í³/4¹³]©w²²ºº·½ü_ß@É±Ó°Ê
 'i_¥²¶.³Q¶}±Ö;C

■ ¥k²'ºº¹i§iµL²k¥¿½TÄã¥Ü

±zxj·§¬O"Si³;w_ËDirectX 6.0©Í§ó·s²ºº²©¥»;C½Ð¥Ñ;ãº, 2i ©Ò'£"Ñ²ºWINNERware CD, ;i;w_Ë;C
 ;p²G¿ù»~¥u; b¬Y"Ç@ÉÓµo¥í(°Ò;p; b±z±Ó°Êx@²M³æ@É3Dxä'©x²Aº«o°±xí)
 ;A³o-O!]-°ÁX°Êµ{;i;µL²k°µ¥X¥¿½T²ºº½T»{;C¹³³ºº±;²p;A½Ð"í¥Í§Ö³tÄä(¹w³]-°:
 Num-)²ºÖö±¼§Ö²ù²º²º@Ä²G;C
 ¥í¬à;³"Ç²«Áé¥u;³x@²'¥í¥H¬Y"i;C¹³³ºº±;²p;Aµ{;i;xj·§¬O²½±µ;s"ú¼v¹³¹½w½Ä°i;C; b'¶i¶¥
 3D¥BÁé³]©w_ ;i;A_ÓµÜ±N;s"ú¼v¹³¹½w½Ä°í(Áé©w¼O; ;)³]©w¬°Áù²' ;C

Yn'ú Ö³o±i¥dª©Ê`à(Benchmark Performance);A|b'■ 3D¹p²´³]©w'¤
¤½ÐÄö³¬“¥ßÁé@ÄªGÅX°Êμ{;i“;C;|b¹CÄ,¹Lμ{¤¤;A¥ßÁé@ÄªG¥i¥H¥Ñ\$Ö³tÄä¨Ó±Ò°Ê/
Äö³¬;C¹½Ð°Ñ;Ô\$Ö³tÄäª³]©w;C

¥'¶}§Ö³tÄä²³]©w¶;C

±N, Ñ²R«x³]©w|b640x480;A“î²«¥ó¹F“î³|¤j²º¶Ç¿é®Ä²G;C³o¥i¥H¼W¥
[²`«x·P;Ð¥ßÁé®Ä²G¼e«x¶V¤j;A²`«x·P
´N¶V±j`P;CµM;Ó;A³oºØ®Ä²G±`³Q»{-º-ºO¤@ºØ¤zÂZ;C
|p²G±z-Ý“î`âÓ¼v¹³;A³o¥i`à-ºO¥ßÁé®Ä²G¼e«x³]±o¤Óº²;C
“î¥|¼Ð·Ç¥ßÁé®Ä²G¼e«x pºâ³¼¹“Ópºâ³¼A;X±z²º³]©w;C
¹CÀ,¤¤;A·î¹CÀ,±±“î¥x±Ò°Ê®É;A±z¤]¥i“î¥|F7/F8¥\`àÄä“Óšä´M±z²º³]“î²`«x;C
¹“î`à¥L²º, Ñ²R«x;A“âÈ·|®Ú³¼Ú640x480²ºÈ;Ú°Ê«ö¤ñ“Ò³]©w;C

¥'¶}¼D·Ç¥ßÅé@ÄªG¼e«xpªâ¾¹"Ópªâ±z-
Ó¶H³ì"íªª¥ßÅé¼e«x;A³o¬O@Ú¾Ú±zªª;Ã¹δ¶Ø¶ο¶í±zªª²´·ύ¶;¶Z"Ópªâ;C

!1¥Ø;ýÃä¥Û©Ò!³²µ{!;A"²²@Ó3D¥ßÁé@ÄªGπw_g\$!'"³]©w;A©Í·íÀ³¥íµ{!;°ð!æ@É;A"²²@-
Ó²³]©wπw_gÁx!s(¥íF10Áä)!b¹CÀ,±±"î¥x;C;¼¼Û¥ó!ó²@ÓÀ³¥íµ{!;A"ä¹íÀ³²³]©w-|
¥X²{!b¹;Û@Ø²²Uπè;C

«·s©R!W¥Ø«eÀ³µ{!·aºµnζý!WºÙ;C

SR°£¥Ø«eÀ³¥îμ{;i;ªºμnζý;WºÛ;C

¬°¥Ø¿ý¤¿ï"úªºÀ³¥íμ{;i;±Ò°É 3D¥ßÅé®ÄªG';C

ζĩ©w«á;AÄ³ŷÍμ{;±N·|“İŷİŷHαUαºŷβΛέ®ÄªG¼e«x;C

|b;ï"úªA³¶{;¡º§ó§i¶ßÅé®ÄªG¼e«x;C

¥'¶}¶i¶³]©w¶;C¥u;³·í¶i¶³]©w¹é»Ú'yzªZÉ½d³ò³Q"¶í¶@Éα~`à·|±o³|nªª@ÄªG;C
¹Á,Ö|UªØ³]©w"Ä¥Bª`·N@ÄªGªª§iÄÜ;C³|²z·Qªªæè;|;¬O!b¹CÀ,°ö!æ@É"¶í¶±Ö°Éªª¹CÀ,±
±"¶x§Ö³tÄä"Ö¹Á,Ö³o"Ç³]©w;C

3o-O3iπp¥i¥íªºZÈ;CZÈ-O3DÀ³¥íμ{;i-°πFÃýª«Ãé;³πT«xªÃ¶;ªº@ÄªG;Ó1²`«xªº´ú¶q;CZ-
È-O`iÆ[²³ªº¶ZÃ÷;A³q±`-É©ó0»P1π§¶;i;CnÆ[-ÝZÈ±o`i¥í±;§;A;b¹CÀ,±
±`i¥x,i¥í§Ö³tÄä§@¶}ÄöπÁ´«;C

3o-O³iπj¥i¥íªºZÈ;CZÈ-O3DÀ³¥íμ{;¡;¬ºπFÁýª«Áé;³πT«xªÁ¶;ªº@ÄªG;Ó¹;²`«xªº´ú¶q;CZ-
È-O`iÆ[²³ªº¶ZÁ÷;A³q±`¬É©ó0»P1π§¶;¡;CnÆ[-ÝZÈ±o`í¥í±;§;¡;A;B¹CÁ,±
±`í¥x,í¥í§Ö³tÁä§@¶}ÄöπÁ´«;C¥Ñ;ãº,²j©Ö-ãμoªº.Dyna-Z™;A¥H\$Y®É-
pºâ3DÀ³¥íμ{;¡;©Ö`í¥íªºZÈ;A;Ó¥BºÉºAªº½Ö¾ã²`«x·P;C´X¥G©Ö;³®É`è³£Á³±ÒºÊDyna-Z™!

~Y"Ç3DÀ³¥íµ{!;¥i`à·|i³æ@æp³;¥÷²º;Ã¹õÃã¥Üæ£¥;½T²º±;§!;CClearing ¼Ò!;·|`M©w³o`Ç°ï-
n!p!ó²M°£;C
Blit Clearing ¼Ò!;³q±`~O¥;½T²º;ï³¼Ü;C
¥u!³·í¹CÀ,`í¥Í½w½Ä°í@ÉBlit Clearing¼Ò!;æ~`àÃã¥Ü¥X®ÄªG;C!¹¼Ò!;»Ý-
n®Ú¾Ü3DÀ³¥íµ{!;²ºZ clearing È`Ó`M©w;C¥ó!óª«Ãéª²`«xæj©óZ clearing È³£·|³Q²M°£;C

Z clearing È»PZ½w½Ä°ÏClearing ¼Ö¡¡¤@_ ``ÏÏ¡¡C¥ó!óª«¥óªª²` «x¤j©óZ clearing È³£·|³Q²M°£
¡C

1i^{1/4}v^{131/2}w^{1/2}Ä°î(Âê©w^{1/4}Öi;)²ºis"úμ{SÇ;C³ÇÄ³¥íμ{|;¥iª¹/²±μis"ú|Ü^{1/4}v^{131/2}w^{1/2}Ä°î;A|Óα
£"í¥íDirect3Dαä
'©αPÄº;C-ºαFºμ"i³oº∅@ÄªG;AÄ³¥íμ{|;-º-S©wªº¹/4v¹³«ü©w^{1/4}v^{131/2}w^{1/2}Ä°î;A"Ä¥B¹í" Cα@-
Ó³sÄðªº¹|α,|s"ú³o¶|ô°|º;C-ºαF¥βÄé@ÄªG;A"âÖ^{1/4}v¹³³f-O¥-
|æÄ,»sªº;A|j|¹Ä³¥íμ{|;ªºÄXºÊμ{|;¥u~à©ñ±¹/4"âÖ^{1/4}v¹³ααªºα@Ó"ÓÄ,»s;C
Âê©w^{1/4}Öi;M©wÄ³¥íμ{|;Ä³,Ó|s"úβα@Ó^{1/4}v¹³;C"N³oº∅±;§î|Ö"¥;A±z¥i¥H¥íα@º|²
'·ú-Ý"i³o"ÇÄÜαÆ;C|j|¹«Ü@e©ö'N¥i;ẽÄÑ¥XÄ³¥íμ{|;-Oª¹/²±μis"ú^{1/4}v^{131/2}w^{1/2}Ä°î;C
μM|ÓiÄù²^{1/4}Öi;|Ó"¥;AÄXºÊμ{|;¥H-S@í§β³N,ÖμÜ¥h|s"ú"âÖ^{1/4}v¹³;C³·¥αÖ^{1/4}Æªº±;§î|b¶±αW·|
¥X²{²Hμμ|â;C^{1/4}v^{131/2}w^{1/2}Ä°î|s"úªº¹w³]-O¥u|³¥ª²';C

ÅX°Êμ{; ; "İ¶ÍClipping rectangle "ÓÃ, μe("Ò;p±q¶@® °aù"Ó-Ý©Đ¶;);C¹³³o⁰Ø±
;§Í;A¶u`à±q^aù¶i¶H¬Ý"j^{a03};¶Å¶~»ÝÃã¶Û;C¶i"£ °í°j^{a0}¶j¶p¬OClipping
rectangle¶Ñ" M©w;C; b¶BÃé¼Ö; ;¶U;A; í¶@°í²·ú¬Ý±o¶ñ¶t¶@°í²·ú§ó!h®É·|¶£"ó½Ö;C§Ú-
ì¶i¶HÃX¶jClipping rectangle^{a0}¼e«x"ÓÃx§K³o⁰Ø±;§Íμo¶í;C

$\pm z^{a_0} \tilde{A}^1 \delta^{a_0} \alpha_j \alpha_p (\forall H^{\wedge} | T^{-\circ 3} \alpha_i) ; C$

±z¿Ã¹õª³W®æ(³q±`¬04:3)¡C

±z^{ao}â²¶i^{ao}¶ZÂ÷;C^α@⁻ë¥§i^{ao}¶ZÂ÷-06.2^α½^αÀ;C¥i¥H½^αÐ±z^{aoa}B^αÁ°±z'ú¶q;C

p^oâ«á^o³ìπj¥i®eξÔ¥βÅé®Ã^aG¼e«x;C

3DÀ³¶{i;ª.ô@|»P|WªÙ;C

μ{ii^αμnζýiW^αÙiC±z¥i¥H¥δ·Nζi³/₄ÛiW^αÙiAμL¶·§ó§iμw^αÐ, j^αÀ³¥Íμ{iiCi¹iW^αÙ¥u¥Í©ó·■ 3D¹p²
^3]©w'ααiÓαw;C

±ÄÄË"íÿí²ºpºâ«áºº|â±m²`«x;C°ö|æ3DÀ³ÿíµ{|;ÿH±í±Ö°Ê²±¹CÀ,±±"í²O®É;AÿiÿH«öF7/
F8§Ö³tÄä"Ó·P"ü"âaj²ºµ£|P;C

αÁ'«3D¥βÁé®ÄªG±Ò°Ê/
Ãö³¬ªº§Ö³tÄä;C¥u¡³·í3DÀ³¥íμ{¡¡¶}©|°ö¡æ®ÉSY±Ò°Ê¥βÁé®ÄªGα~¡³®Ä;C

»Pα°«Ø^{α°}±θ^α→¹ĩα@° ĩĩĩ;AŞÖ^{3t}ÁäĩαÁ´«±± ĩĩx^{α°}¶}/Ãö;C·í±± ĩĩx±Ö°Ê®É;AF1 ĩĩF10^{α°}¶\ ĩĩÁäĩĩH^{1/2}Ö^{3/4}ã³hĩBÁé³]©w;G

- F1/F2 °§C/¼W¶[«e°YZÈ
- F3/F4 °§C/¼W¶[«á°YZÈ
- F5/F6 °§C/¼W¶[¶Ø¶ú^{α°}µ]¶Z
- F7/F8 °§C/¼W¶[¶BÁé®Á^αG^{1/4}e«x
- F9 ¶]±Ö/Ãö³→ Dyna-Z™
- F10 |s ĩĩ²{|b±Ö°Ê¹CÀ^{α°}¶Ø«e³]©w^α→^αA
- F11/F12°§C/¼W¶[«D^{1/2}u©Ê;] ĩĩÀ(non-linearity factor)

ĩĩ®É¶ô;ó3DÀ³¶ĩµ{; ĩĩĩĩ^{α°}ŞÖ^{3t}Áä;µL®Ä;C
Z±θ^α→¹ĩĩH^{α°}±θÁäĩU¶ô;óZ¶ZÁ÷(α^α±θ^α«x)^{α°}«Áé^{1/4}Æ¶Ø;C^α±θ¶V^α;A^α«Áé¶V»·;C

Â^`ú¿Ã¹õ3D¼v¹³ªº§Ö³tÄä;C¼v¹³¥HELSA3Dxx.BMPªº|WºÙÀx|s|b¥Ø«e3DÀ³¥Îμ{|;ªº¥Ø¿ý.Ì;Axx
¬OÄH¾÷²£¥¡ªº¼Æ|r;C

¡¹Àà´«¼È¡s¾¹³]©wÀ³¶íμ{¡¡-Ù¹í©ó¹q,£¿Ã¹ð³DªÅ¶¡¡;ì¡,m¡C·í¶¡-O¡«á®É¡A¾¼ãÓ3D
´º¶¶H-Ýº ¨Ó-O¡b¿Ã¹ðªº«á±¡C«eæè³]©w®É¡A¾¼ãÓ3D´º¶¶H-Ýº ¨Ó-O¡b¿Ã¹ðªº«e±¡C·í¾¼ãÓ
´º¶¶H-Ýº ¨Ó-O¡b¿Ã¹ðªº«á±®É¡A¿Ã¹ð´N¡n¹³-O³q©¹³D¶@-Éªºμ¡¶á¡C
¹í³ººØ®ÃªGªº.P¨ü¡]¶H¡Ó²§¡A±z»º§Ö¿Ë¨¥hÁéÀç¶¡\$a!

!ã, 2j 1i¼ö=ùªªÀ³¶íμ{;i ©Ö³]©wªª¹w³]È;C

$\mu\{; \text{H}; U; \text{P}^{\alpha_0} \text{e}; \pm \text{NZ} \dot{E}^1; \dot{A}^3 \text{''} \dot{u}^1 \dot{e}^{\alpha_0 2} \text{''} \ll x; \text{CZ} \dot{E}^3 \dot{I} \ll n^{\alpha_0} \rightarrow O \text{''} \hat{a} \dot{O} \text{e}; \text{P}^2 \text{''} \ll x^{\alpha_0 a} \ll \dot{A} \text{e} \dot{n} \text{''} \dot{a} \text{e} \dot{A}^2 \text{M}; \dot{I}; \text{C}$
 $\rightarrow \text{e} \text{F} n^2 \text{f} \text{e} \dot{I} \dot{S} \dot{o} \text{''} \dot{u}^1 \dot{e}^{\alpha_0 2} \text{''} \ll x \cdot \text{P} \text{''} \dot{u}; \text{A} \ll \text{D}^{1/2} \text{u} \odot \dot{E}; \dot{J} \text{''} \dot{A} \text{(non-linearity factor)} \rightarrow O^1 \dot{I} \rightarrow \dot{U}^1; \dot{A}^3 \alpha_0 \text{e} @ \emptyset x \text{e}; \text{C}$
 $0 \text{e} \text{N}^{\alpha_1} \mu \text{L} \text{e} \cdot x \text{e}; \text{A}^3 \text{q} \pm \text{''} \rightarrow O \dot{I} \odot \text{w}^{\alpha_0} \dot{E}; \text{C}; \text{p}^{\alpha} \text{G}^1 \dot{I}^2 \text{''} \ll x \cdot \text{P} \text{''} \dot{u} \text{e}; \rightarrow O \ll \dot{U}^{\alpha_0}; \cdot \text{N}; \text{A} \text{e}; \text{b}^1 \text{C} \dot{A}, \pm \pm \text{''} \dot{I} \text{e} \text{e} \text{e} \text{H} \text{F} 11 /$
 $\text{F} 12 \dot{A} \dot{a} \text{''} \dot{O}^{1/2} \dot{O}^{3/4} \dot{a}; \text{C}$

¥HκT«xªÅ¶;Åã¥Ûªºpªâ;Ã¹ö¬O¥H¬í¬º³|κjpªâ®É¶;³æ|ì!
³o½T«O°Éμε¨t|Cªº¹|κùÁ`¬O¥HκT«xªÅ¶;ªºκè;|;Åã¥Û;C¹í©T©wªº¹|κù(|p;G±±¨î¶);A§Öªù®Äª³·|
|bκ@©w®É¶;«áÃö³¬;C

ip^aG±zn±N©Òi^{3a0}¿Ã¹ö3D¥BÃé^{1/4v¹³}Àx|s|b|P¤@Ó¥Ø¿ý¤¤
;A^{1/2}Đ¿i^{3/4}Ûi¹ÃËμø@Ø;CμM«á¬°¿Ã¹ö3D¥BÃé^{1/4v¹³}¿i^{3/4}Û¤@¥Ø¿ý;C

¬°©Òì³²º;Ã¹ð³D¥ßÀé¼v¹³;î³¼Û¤@¥Ø¿ý;C¤@ÀH¾¼÷²f¥í²º¼Æ|r⁻Á¤P·|¨Ö¤|ÀÉ®×|WºÛ¤¤
;C!p²G¥Ø¿ý,ì¤w,ḡì³¤@!WºÛ-Û!P²ºÀÉ®×;A¤U¤@Ó,ûº²²º¼Æ|r·|¨Ã¤|!WºÛ¤¤¨Ã¥[¥HÀÉ¬d;C

