





Article

A Novel Investigation of Non-Periodic Snap *BVP* in the \mathbb{G} -Caputo Sense

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Supporting Information

Algorithm S1: MATLAB lines for Example 1.

```

1  format long;
2  syms vs. e;
3  alpha=0.43; beta = 0.66; vargamma=0.25; Δ=0.79;
4  tau_1=0.7; tau_2=2.1;
5  lambda_0=-12.5; lambda_1=4.3; lambda_2=5.6; lambda_3=13.82;
6  mathfrakTast=0.010257;
7  A_1= lambda_0/(1-lambda_0)*(lambda_1*lambda_2/...
8  ((1-lambda_1)*(1-lambda_2)*gamma(vargamma +1)...
9  *gamma(alpha +1)*gamma(beta +1))...
10 + lambda_1/((1-lambda_1)*gamma(alpha +1)...
11 *gamma(beta + vargamma+1)) + lambda_2/...
12 ((1-lambda_2)*gamma(vargamma +1)...
13 *gamma(alpha + beta +1))+1/(gamma(alpha+beta+vargamma+1)));
14 A_2= lambda_1/((1-lambda_1)*gamma(alpha +1))...
15 * (lambda_2/((1-lambda_2)*gamma(vargamma +1)*...
16 gamma(beta +1))+1/gamma(beta+vargamma+1));
17 A_3= lambda_2/((1-lambda_2)*gamma(vargamma +1)...
18 *gamma(alpha+beta +1));
19 A_4= lambda_1/((1-lambda_1)*gamma(alpha +1)*gamma(beta +1));
20 A_5= lambda_1/((1-lambda_1)*gamma(alpha +1));
21 G1=2^v; G2=v; G3=log(v); G4=sqrt(v);
22 ell=1/60;
23 t=tau_1;
24 column=1;
25 nn=1;
26 while t≤tau_2+0.08
27     MI(nn,column) = nn;
28     MI(nn,column+1) = t;
29     Delta = (abs(lambda_3)/(gamma(Δ+1)*abs(1-lambda_3))...
30     *(abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
31     +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
32     *gamma(vargamma+Δ +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
33     +abs(A_5)/(abs(1-lambda_0)*gamma(Δ +beta +vargamma +1))...
34     + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
35     *gamma(alpha+Δ+beta+vargamma +1)))*(eval(subs(G1, {v}, {t}))- ...
36     eval(subs(G1, {v}, {tau_1})))^(alpha+beta+vargamma+Δ)...
37     + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
38     *gamma(Δ +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
39     gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
40     +(abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
41     *gamma(beta+1)*gamma(vargamma+Δ +1))+(2*abs(lambda_1)+1)...
42     /(abs(1-lambda_1)*gamma(Δ+beta+vargamma +1)))...
43     * (eval(subs(G1, {v}, {t}))- ...
44     eval(subs(G1, {v}, {tau_1})))^(beta+vargamma+Δ)...
45     +(abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...
46     *gamma(vargamma +1)*gamma(Δ +1))+(2*abs(lambda_2)+1)...
47     /(abs(1-lambda_2)*gamma(vargamma+Δ +1)) )...
48     * (eval(subs(G1, {v}, {t}))- ...
49     eval(subs(G1, {v}, {tau_1})))^(vargamma+Δ)...
50     + (2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(Δ +1))...
51     * (eval(subs(G1, {v}, {t}))- ...

```

Algorithm S1: Cont.

```

52     eval(subs(G1, {v}, {tau_1})))^(Δ);
53     MI(nn,column+2)=Delta;
54     MI(nn,column+3)=ell*Delta;
55     MI(nn,column+4)=mathfrak{Tast*Delta/(1-ell*Delta);
56     t=t+0.08;
57     nn=nn+1;
58 end;
59 t=tau_1;
60 column=6;
61 nn=1;
62 while t≤tau_2+0.08
63     MI(nn,column) = nn;
64     MI(nn,column+1) = t;
65     Delta = (abs(lambda_3)/(gamma(Δ+1)*abs(1-lambda_3))...
66     * (abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
67     +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
68     *gamma(vargamma+Δ +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
69     +abs(A_5)/(abs(1-lambda_0)*gamma(Δ +beta +vargamma +1))...
70     + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
71     *gamma(alpha+Δ+beta+vargamma +1)))*(eval(subs(G2, {v}, {t}))- ...
72     eval(subs(G2, {v}, {tau_1})))^(alpha+beta+vargamma+Δ)...
73     + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
74     *gamma(Δ +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
75     gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
76     + (abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
77     *gamma(beta+1)*gamma(vargamma+Δ +1)))+(2*abs(lambda_1)+1)...
78     / (abs(1-lambda_1)*gamma(Δ+beta+vargamma +1)))...
79     * (eval(subs(G2, {v}, {t}))- ...
80     eval(subs(G2, {v}, {tau_1})))^(beta+vargamma+Δ)...
81     + (abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...
82     *gamma(vargamma +1)*gamma(Δ +1)))+(2*abs(lambda_2)+1)...
83     / (abs(1-lambda_2)*gamma(vargamma+Δ +1)) )...
84     * (eval(subs(G2, {v}, {t}))- ...
85     eval(subs(G2, {v}, {tau_1})))^(vargamma+Δ)...
86     + (2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(Δ +1))...
87     * (eval(subs(G2, {v}, {t}))- ...
88     eval(subs(G2, {v}, {tau_1})))^(Δ);
89     MI(nn,column+2)=Delta;
90     MI(nn,column+3)=ell*Delta;
91     MI(nn,column+4)=mathfrak{Tast*Delta/(1-ell*Delta);
92     t=t+0.08;
93     nn=nn+1;
94 end;
95 t=tau_1;
96 column=11;
97 nn=1;
98 while t≤tau_2+0.08
99     MI(nn,column) = nn;
100    MI(nn,column+1) = t;
101    Delta = (abs(lambda_3)/(gamma(Δ+1)*abs(1-lambda_3))...
102    * (abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
103    +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
104    *gamma(vargamma+Δ +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
105    +abs(A_5)/(abs(1-lambda_0)*gamma(Δ +beta +vargamma +1))...
106    + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
107    *gamma(alpha+Δ+beta+vargamma +1)))*(eval(subs(G3, {v}, {t}))- ...
108    eval(subs(G3, {v}, {tau_1})))^(alpha+beta+vargamma+Δ)...
109    + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
110    *gamma(Δ +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
111    gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
112    + (abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
113    *gamma(beta+1)*gamma(vargamma+Δ +1)))+(2*abs(lambda_1)+1)...
114    / (abs(1-lambda_1)*gamma(Δ+beta+vargamma +1)))...
115    * (eval(subs(G3, {v}, {t}))- ...
116    eval(subs(G3, {v}, {tau_1})))^(beta+vargamma+Δ)...
117    + (abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...

```

Algorithm S1: Cont.

```

118      *gamma(vargamma +1)*gamma(Δ +1))+ (2*abs(lambda_2)+1)...
119      / (abs(1-lambda_2)*gamma(vargamma+Δ +1)) )...
120      * (eval(subs(G3, {v}, {t}))- ...
121      eval(subs(G3, {v}, {tau_1})))^(vargamma+Δ)...
122      + (2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(Δ +1))...
123      * (eval(subs(G3, {v}, {t}))- ...
124      eval(subs(G3, {v}, {tau_1})))^(Δ);
125      MI(nn,column+2)=Delta;
126      MI(nn,column+3)=ell*Delta;
127      MI(nn,column+4)=mathfrakTast*Delta/(1-ell*Delta);
128      t=t+0.08;
129      nn=nn+1;
130  end;
131  t=tau_1;
132  column=16;
133  nn=1;
134  while t≤tau_2+0.08
135      MI(nn,column) = nn;
136      MI(nn,column+1) = t;
137      Delta = (abs(lambda_3)/(gamma(Δ+1)*abs(1-lambda_3))...
138      * (abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
139      +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
140      *gamma(vargamma+Δ +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
141      +abs(A_5)/(abs(1-lambda_0)*gamma(Δ +beta +vargamma +1))...
142      + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
143      *gamma(alpha+Δ+beta+vargamma +1)))* (eval(subs(G4, {v}, {t}))- ...
144      eval(subs(G4, {v}, {tau_1})))^(alpha+beta+vargamma+Δ)...
145      + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
146      *gamma(Δ +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
147      gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
148      + (abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
149      *gamma(beta+1)*gamma(vargamma+Δ +1)))+(2*abs(lambda_1)+1)...
150      / (abs(1-lambda_1)*gamma(Δ+beta+vargamma +1))...
151      * (eval(subs(G4, {v}, {t}))- ...
152      eval(subs(G4, {v}, {tau_1})))^(beta+vargamma+Δ)...
153      + (abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...
154      *gamma(vargamma +1)*gamma(Δ +1))+ (2*abs(lambda_2)+1)...
155      / (abs(1-lambda_2)*gamma(vargamma+Δ +1)) )...
156      * (eval(subs(G4, {v}, {t}))- ...
157      eval(subs(G4, {v}, {tau_1})))^(vargamma+Δ)...
158      + (2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(Δ +1))...
159      * (eval(subs(G4, {v}, {t}))- ...
160      eval(subs(G4, {v}, {tau_1})))^(Δ);
161      MI(nn,column+2)=Delta;
162      MI(nn,column+3)=ell*Delta;
163      MI(nn,column+4)=mathfrakTast*Delta/(1-ell*Delta);
164      t=t+0.08;
165      nn=nn+1;
166  end;

```

Algorithm S2: MATLAB lines for Example 2.

```

1  format long;
2  syms vs. e;
3  beta = 0.66; vargamma=0.25; Δ=0.79;
4  tau_1=0.7; tau_2=2.1;
5  lambda_0=-12.5; lambda_1=4.3; lambda_2=5.6; lambda_3=13.82;
6  mathfrakTast=0.010257;
7  G1=2^v; G2=v; G3=log(v); G4=sqrt(v);
8  ell=1/60;
9  hslash=6*v/70; mathfrakh=v;

```

Algorithm S2: Cont.

```

10  hslashstar=6/70*2.1;
11  varsigma=0.35;
12  varpi=0.1;
13  alpha=0.18;
14  A_1= lambda_0/(1-lambda_0)*(lambda_1*lambda_2/...
15  ((1-lambda_1)*(1-lambda_2)*gamma(vargamma +1)...
16  *gamma(alpha +1)*gamma(beta +1))...
17  + lambda_1/((1-lambda_1)*gamma(alpha +1)...
18  *gamma(beta + vargamma+1)) + lambda_2/...
19  ((1-lambda_2)*gamma(vargamma +1))...
20  *gamma(alpha + beta +1))+1/(gamma(alpha+beta+vargamma+1)));
21  A_2= lambda_1/((1-lambda_1)*gamma(alpha +1))...
22  * (lambda_2/((1-lambda_2)*gamma(vargamma +1)*...
23  gamma(beta +1))+1/gamma(beta+vargamma+1));
24  A_3= lambda_2/((1-lambda_2)*gamma(vargamma +1)...
25  *gamma(alpha+beta +1));
26  A_4= lambda_1/((1-lambda_1)*gamma(alpha +1)*gamma(beta +1));
27  A_5= lambda_1/((1-lambda_1)*gamma(alpha +1));
28  A_alpha(1, 1)=alpha;
29  A_alpha(1, 2)=A_1;
30  A_alpha(1, 3)=A_2;
31  A_alpha(1, 4)=A_3;
32  A_alpha(1, 5)=A_4;
33  A_alpha(1, 6)=A_5;
34  t=tau_1;
35  column=1;
36  nn=1;
37  while t<=tau_2+0.08
38      MI(nn,column) = nn;
39      MI(nn,column+1) = t;
40      Delta = (abs(lambda_3)/(gamma(Δ+1)*abs(1-lambda_3))...
41      *(abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
42      +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
43      *gamma(vargamma+Δ +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
44      +abs(A_5)/(abs(1-lambda_0)*gamma(Δ +beta +vargamma +1))...
45      + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
46      *gamma(alpha+Δ+beta+vargamma +1)))* (eval(subs(G2, {v}, {t}))- ...
47      eval(subs(G2, {v}, {tau_1})))^(alpha+beta+vargamma+Δ)...
48      + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
49      *gamma(Δ +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
50      gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
51      + (abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
52      *gamma(beta+1)*gamma(vargamma+Δ +1)))+(2*abs(lambda_1)+1)...
53      / (abs(1-lambda_1)*gamma(Δ+beta+vargamma +1))...
54      * (eval(subs(G2, {v}, {t}))- ...
55      eval(subs(G2, {v}, {tau_1})))^(beta+vargamma+Δ)...
56      + (abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...
57      *gamma(vargamma +1)*gamma(Δ +1)))+(2*abs(lambda_2)+1)...
58      / (abs(1-lambda_2)*gamma(vargamma+Δ +1)) )...
59      * (eval(subs(G2, {v}, {t}))- ...
60      eval(subs(G2, {v}, {tau_1})))^(vargamma+Δ)...
61      + (2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(Δ +1))...
62      * (eval(subs(G2, {v}, {t}))- ...
63      eval(subs(G2, {v}, {tau_1})))^(Δ);
64      MI(nn,column+2)=Delta;
65      MI(nn,column+3)=ell*Delta;
66      MI(nn,column+4)=mathfrakTast*Delta/(1-ell*Delta);
67      MI(nn,column+5)=hslashstar*Delta...
68      *eval(subs(mathfrakh, {v}, {varsigma}));
69      MI(nn,column+6)=varsigma/varpi;
70      t=t+0.08;
71      nn=nn+1;
72  end;

```

Algorithm S2: Cont.

```

73  alpha=0.49;
74  A_1= lambda_0/(1-lambda_0)*(lambda_1*lambda_2/...
75  ((1-lambda_1)*(1-lambda_2)*gamma(vargamma +1)...
76  *gamma(alpha +1)*gamma(beta +1))...
77  + lambda_1/((1-lambda_1)*gamma(alpha +1)...
78  *gamma(beta + vargamma+1)) + lambda_2/...
79  ((1-lambda_2)*gamma(vargamma +1)...
80  *gamma(alpha + beta +1))+1/(gamma(alpha+beta+vargamma+1)));
81  A_2= lambda_1/((1-lambda_1)*gamma(alpha +1))...
82  * (lambda_2/((1-lambda_2)*gamma(vargamma +1)*...
83  gamma(beta +1))+1/gamma(beta+vargamma+1));
84  A_3= lambda_2/((1-lambda_2)*gamma(vargamma +1)...
85  *gamma(alpha+beta +1));
86  A_4= lambda_1/((1-lambda_1)*gamma(alpha +1)*gamma(beta +1));
87  A_5= lambda_1/((1-lambda_1)*gamma(alpha +1));
88  A_alpha(2, 1)=alpha;
89  A_alpha(2, 2)=A_1;
90  A_alpha(2, 3)=A_2;
91  A_alpha(2, 4)=A_3;
92  A_alpha(2, 5)=A_4;
93  A_alpha(2, 6)=A_5;
94  t=tau_1;
95  column=8;
96  nn=1;
97  while t<=tau_2+0.08
98      MI(nn,column) = nn;
99      MI(nn,column+1) = t;
100     Delta = (abs(lambda_3)/(gamma(Δ+1)*abs(1-lambda_3))...
101     *(abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
102     +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
103     *gamma(vargamma+Δ +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
104     +abs(A_5)/(abs(1-lambda_0)*gamma(Δ +beta +vargamma +1))...
105     + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
106     *gamma(alpha+Δ+beta+vargamma +1)))*(eval(subs(G2, {v}, {t}))- ...
107     eval(subs(G2, {v}, {tau_1})))^(alpha+beta+vargamma+Δ)...
108     + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
109     *gamma(Δ +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
110     gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
111     + (abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
112     *gamma(beta+1)*gamma(vargamma+Δ +1))+(2*abs(lambda_1)+1)...
113     / (abs(1-lambda_1)*gamma(Δ+beta+vargamma +1))...
114     * (eval(subs(G2, {v}, {t}))- ...
115     eval(subs(G2, {v}, {tau_1})))^(beta+vargamma+Δ)...
116     + (abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...
117     *gamma(vargamma +1)*gamma(Δ +1))+(2*abs(lambda_2)+1)...
118     / (abs(1-lambda_2)*gamma(vargamma+Δ +1)) )...
119     * (eval(subs(G2, {v}, {t}))- ...
120     eval(subs(G2, {v}, {tau_1})))^(vargamma+Δ)...
121     + (2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(Δ +1))...
122     * (eval(subs(G2, {v}, {t}))- ...
123     eval(subs(G2, {v}, {tau_1})))^(Δ);
124     MI(nn,column+2)=Delta;
125     MI(nn,column+3)=ell*Delta;
126     MI(nn,column+4)=mathfrak{Tast*Delta/(1-ell*Delta);
127     MI(nn,column+5)=hslashstar*Delta...
128     *eval(subs(mathfrakh, {v}, {varsigma}));
129     MI(nn,column+6)=varsigma/varpi;
130
131     t=t+0.08;
132     nn=nn+1;
133 end;
134 alpha=0.92;
135 A_1= lambda_0/(1-lambda_0)*(lambda_1*lambda_2/...
136 ((1-lambda_1)*(1-lambda_2)*gamma(vargamma +1)...
137 *gamma(alpha +1)*gamma(beta +1))...
138 + lambda_1/((1-lambda_1)*gamma(alpha +1))...

```

Algorithm S2: Cont.

```

139 *gamma(beta + vargamma+1)) + lambda_2/...
140 ((1-lambda_2)*gamma(vargamma +1)...
141 *gamma(alpha + beta +1))+1/(gamma(alpha+beta+vargamma+1)));
142 A_2= lambda_1/( (1-lambda_1)*gamma(alpha +1))...
143 * (lambda_2/((1-lambda_2)*gamma(vargamma +1)*...
144 gamma(beta +1))+1/gamma(beta+vargamma+1));
145 A_3= lambda_2/((1-lambda_2)*gamma(vargamma +1)...
146 *gamma(alpha+beta +1));
147 A_4= lambda_1/((1-lambda_1)*gamma(alpha +1)*gamma(beta +1));
148 A_5= lambda_1/((1-lambda_1)*gamma(alpha +1));
149 A_alpha(3, 1)=alpha;
150 A_alpha(3, 2)=A_1;
151 A_alpha(3, 3)=A_2;
152 A_alpha(3, 4)=A_3;
153 A_alpha(3, 5)=A_4;
154 A_alpha(3, 6)=A_5;
155 t=tau_1;
156 column=15;
157 nn=1;
158 while t<=tau_2+0.08
159     MI(nn,column) = nn;
160     MI(nn,column+1) = t;
161     Delta = (abs(lambda_3)/(gamma(delta+1)*abs(1-lambda_3))...
162 * (abs(A_1)+abs(A_2)+abs(A_3)+1/gamma(alpha+beta+vargamma +1))...
163 +abs(lambda_2)/(abs((1-lambda_0)*(1-lambda_2))...
164 *gamma(vargamma+delta +1))*(abs(A_4)+1/gamma(alpha+beta+1))...
165 +abs(A_5)/(abs(1-lambda_0)*gamma(delta +beta +vargamma +1))...
166 + (2*abs(lambda_0)+1)/(abs(1-lambda_0)...
167 *gamma(alpha+delta+beta+vargamma +1)))* (eval(subs(G3, {v}, {t}))- ...
168 eval(subs(G3, {v}, {tau_1})))^(alpha+beta+vargamma+delta)...
169 + abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_1))...
170 *gamma(delta +1))*(abs(lambda_2)/(abs(1-lambda_2)*...
171 gamma(vargamma +1)*gamma(beta+1)) + 1/gamma(beta+vargamma +1))...
172 +(abs(lambda_2)/(abs((1-lambda_2)*(1-lambda_1))...
173 *gamma(beta+1)*gamma(vargamma+delta +1)))+(2*abs(lambda_1)+1)...
174 /(abs(1-lambda_1)*gamma(delta+beta+vargamma +1))...
175 * (eval(subs(G3, {v}, {t}))- ...
176 eval(subs(G3, {v}, {tau_1})))^(beta+vargamma+delta)...
177 +(abs(lambda_3)/(abs((1-lambda_3)*(1-lambda_2))...
178 *gamma(vargamma +1)*gamma(delta +1)))+(2*abs(lambda_2)+1)...
179 /(abs(1-lambda_2)*gamma(vargamma+delta +1)) )...
180 * (eval(subs(G3, {v}, {t}))- ...
181 eval(subs(G3, {v}, {tau_1})))^(vargamma+delta)...
182 +(2*abs(lambda_3) +1)/(abs(1-lambda_3)*gamma(delta +1))...
183 * (eval(subs(G3, {v}, {t}))- ...
184 eval(subs(G3, {v}, {tau_1})))^(delta);
185 MI(nn,column+2)=Delta;
186 MI(nn,column+3)=ell*Delta;
187 MI(nn,column+4)=mathfrak{Tast*Delta/(1-ell*Delta);
188 MI(nn,column+5)=hslashstar*Delta...
189 *eval(subs(mathfrakh, {v}, {varsigma}));
190 MI(nn,column+6)=varsigma/varpi;
191 t=t+0.08;
192 nn=nn+1;
193 end;

```
