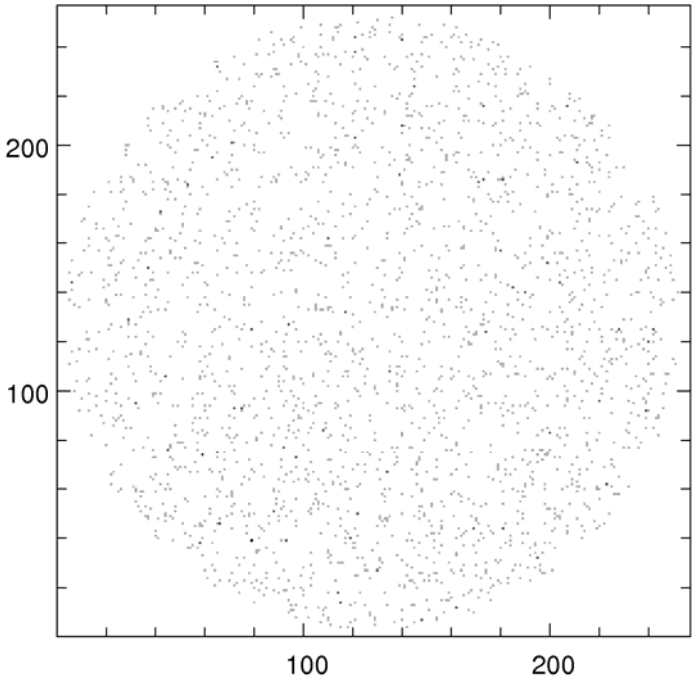
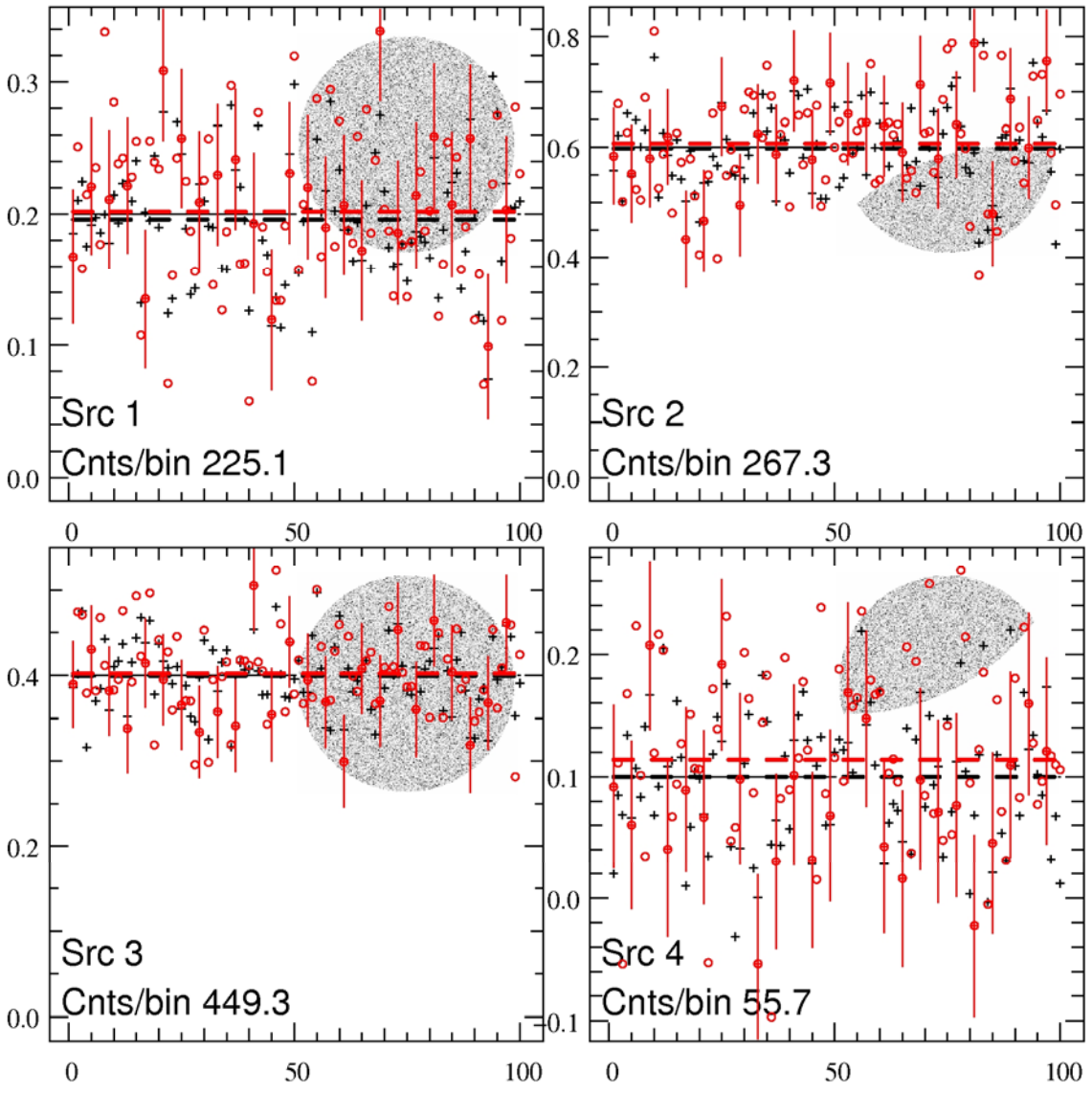
Light curve algorithm

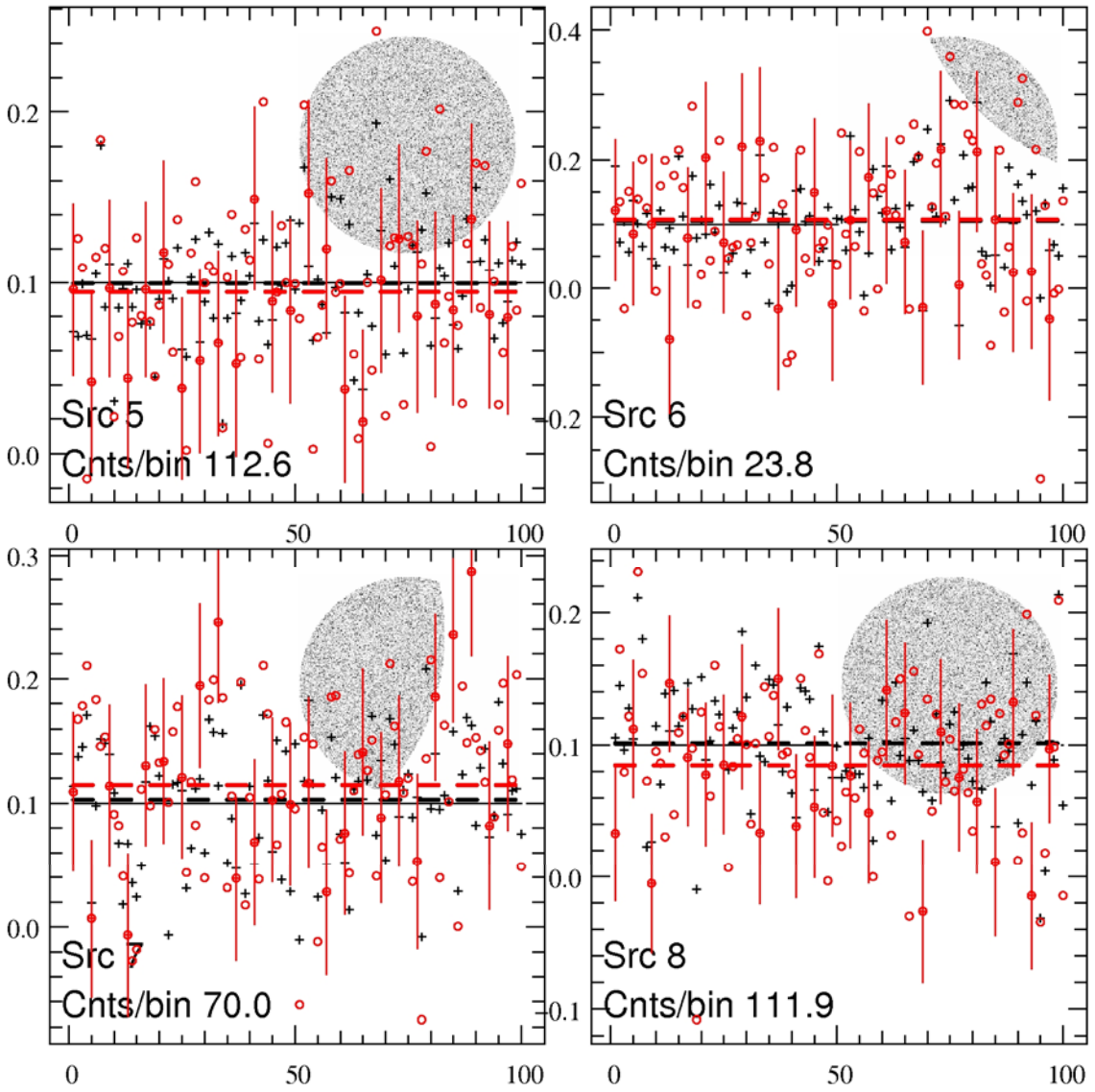
A numerical experiment

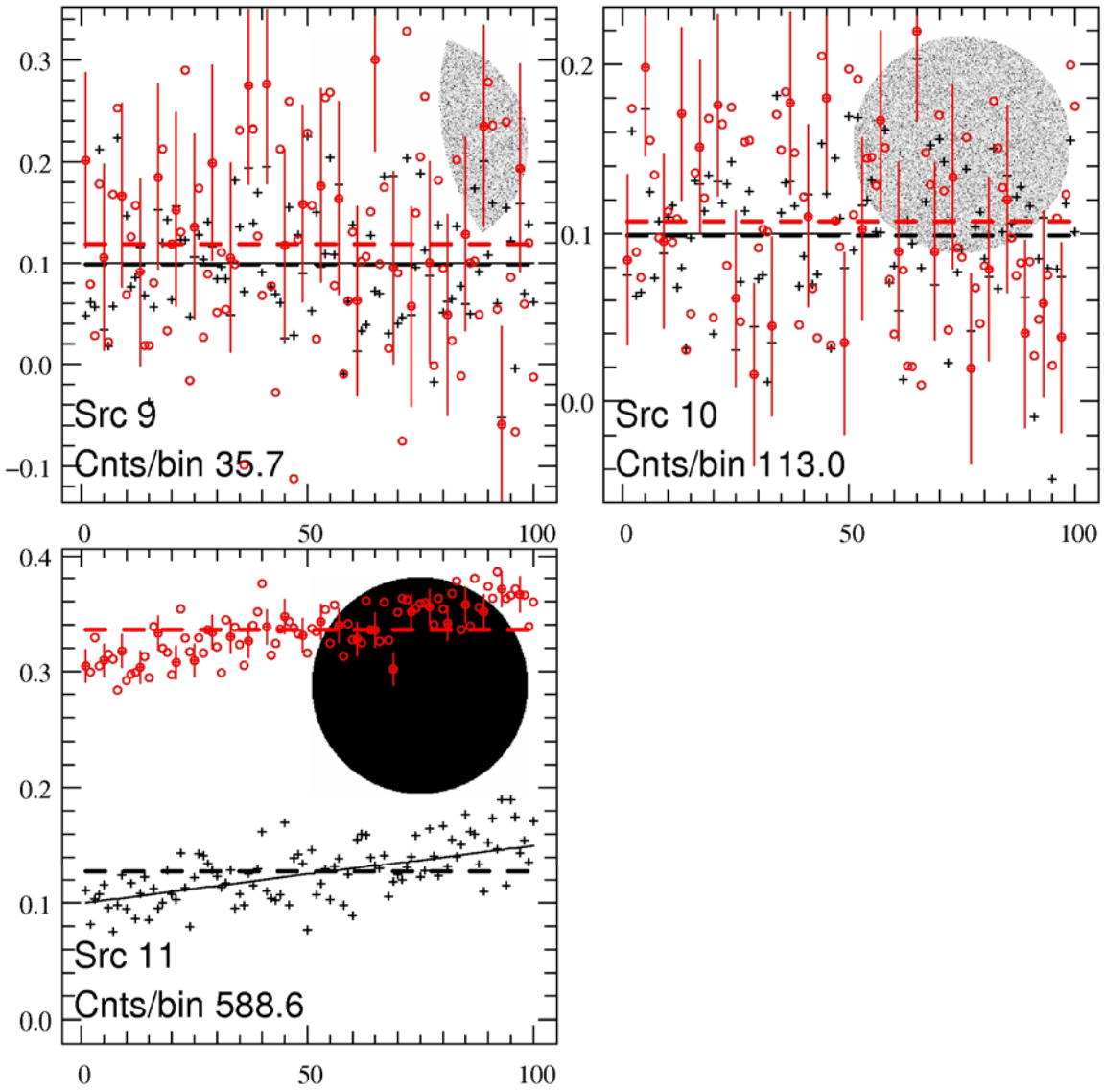
Next 6 slides:
Case with 10 sources + background in 100 time steps of 20 seconds
All sources are constant except the background that slowly rises by a factor 1.5
Red curves represent the basic single source approach by NL
Black curves represent the least square solution

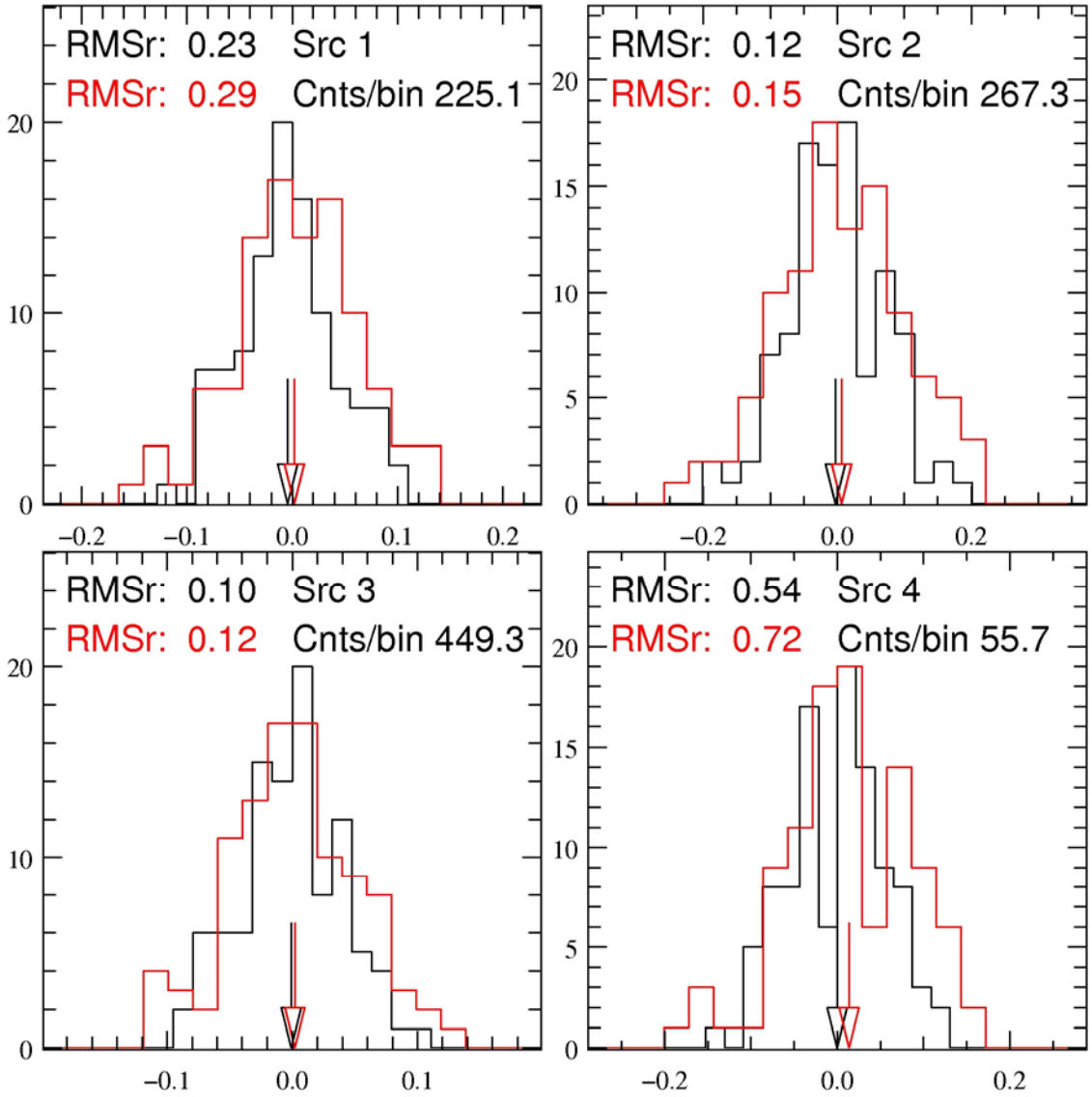


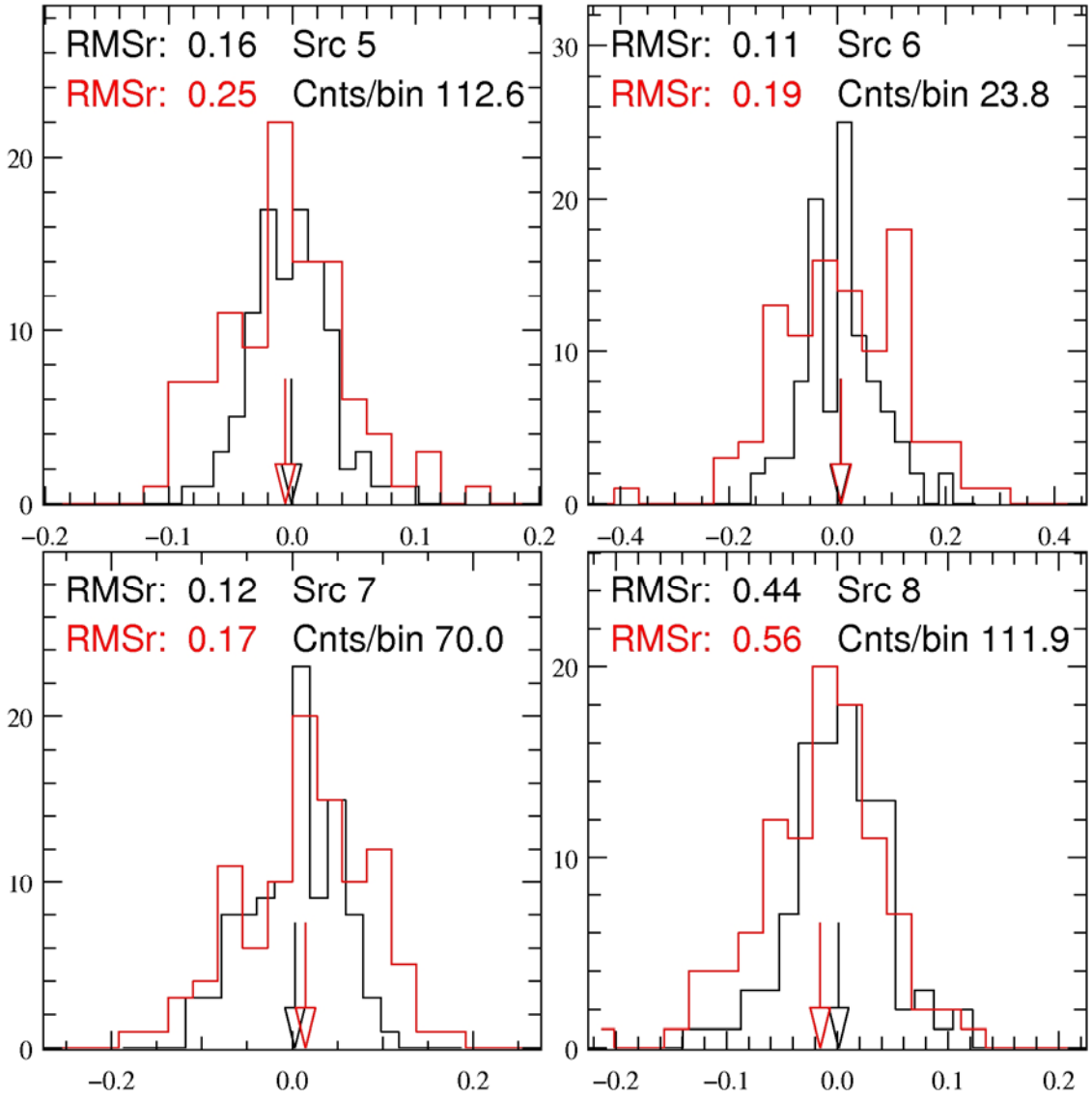
Shadowgram with 2366 counts from the last time step.

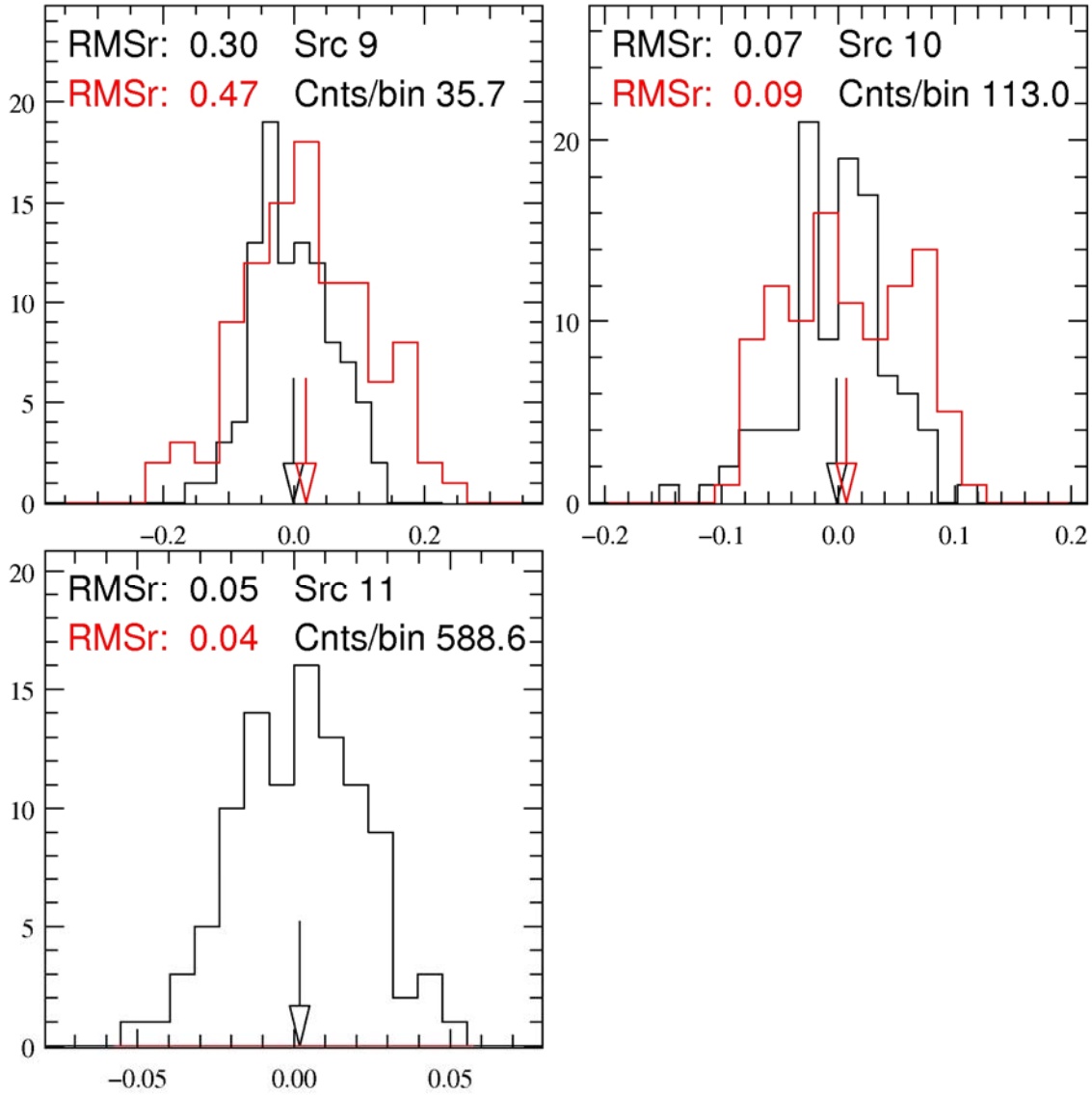

Src 1
Cnts/bin 225.1
Src 2
Cnts/bin 267.3
Src 3
Cnts/bin 449.3
Src 4
Cnts/bin 55.7
0
50
100
0.0
0.1
0.2
0.3
0.4
0.6
0.8
−0.1


Src 5
Cnts/bin 112.6
Src 6
Cnts/bin 23.8
Src 7
Cnts/bin 70.0
Src 8
Cnts/bin 111.9

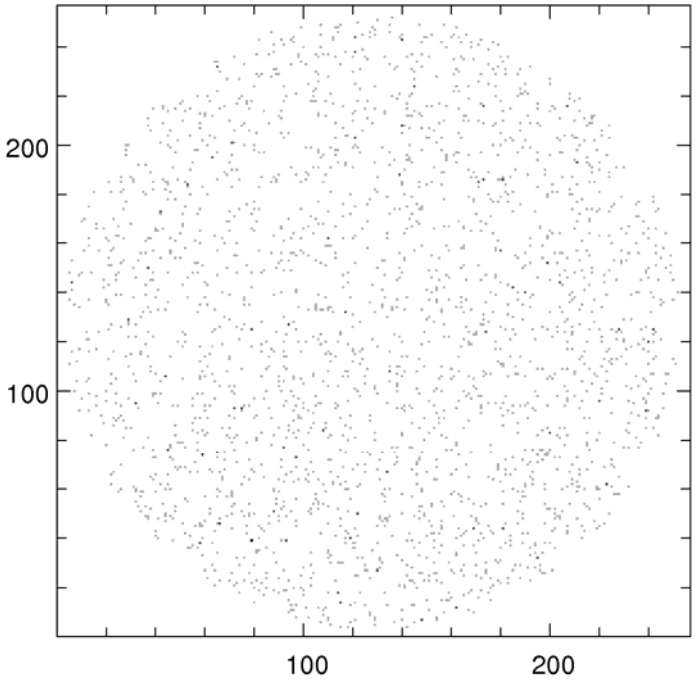

Src 9
Cnts/bin 35.7
Src 10
Cnts/bin 113.0
Src 11
Cnts/bin 588.6


RMSr: 0.23 Src 1
RMSr: 0.29 Cnts/bin 225.1
RMSr: 0.12 Src 2
RMSr: 0.15 Cnts/bin 267.3
RMSr: 0.10 Src 3
RMSr: 0.12 Cnts/bin 449.3
RMSr: 0.54 Src 4
RMSr: 0.72 Cnts/bin 55.7

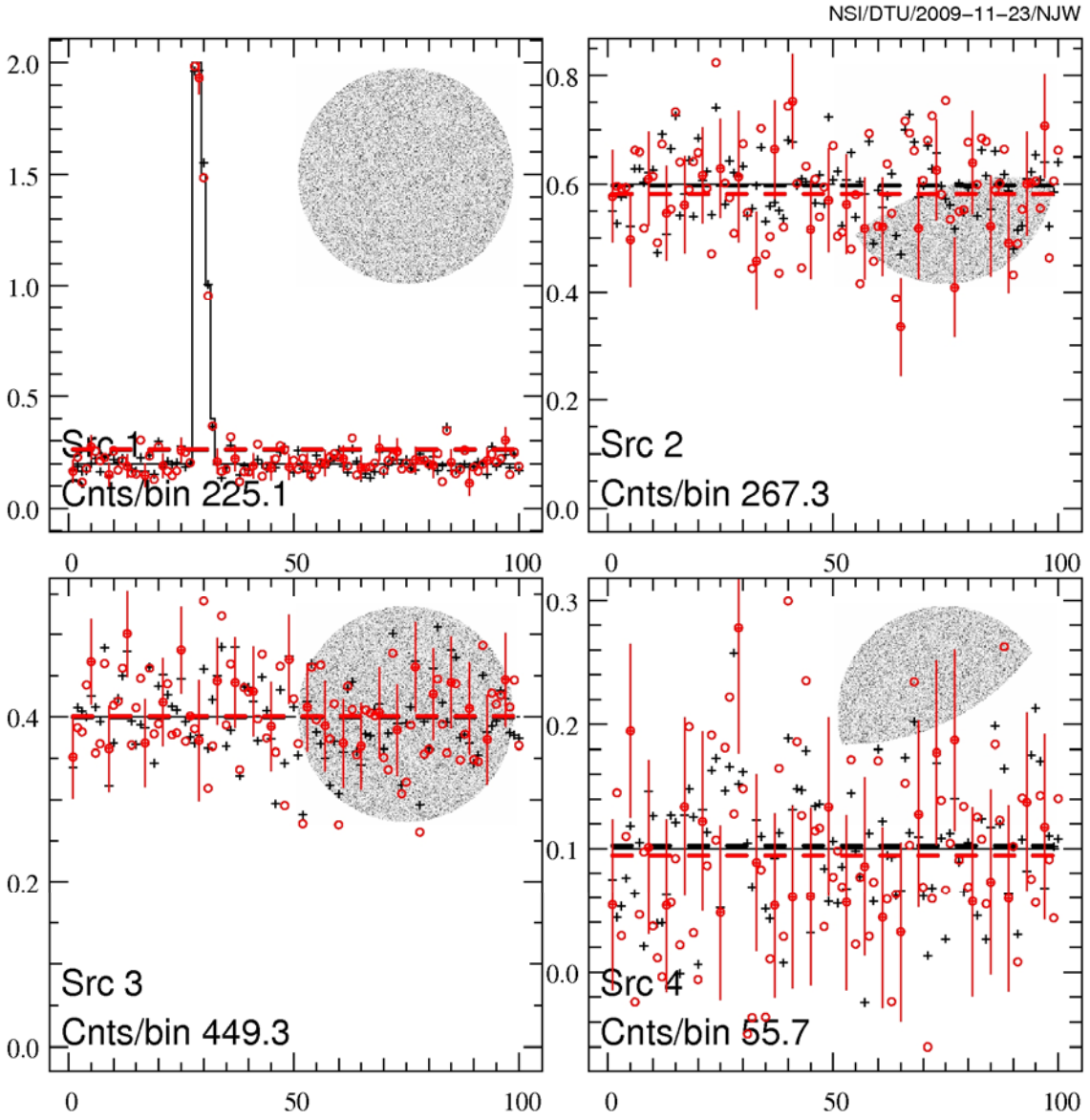

RMSr: 0.16 Src 5
RMSr: 0.25 Cnts/bin 112.6
RMSr: 0.11 Src 6
RMSr: 0.19 Cnts/bin 23.8
RMSr: 0.12 Src 7
RMSr: 0.17 Cnts/bin 70.0
RMSr: 0.44 Src 8
RMSr: 0.56 Cnts/bin 111.9

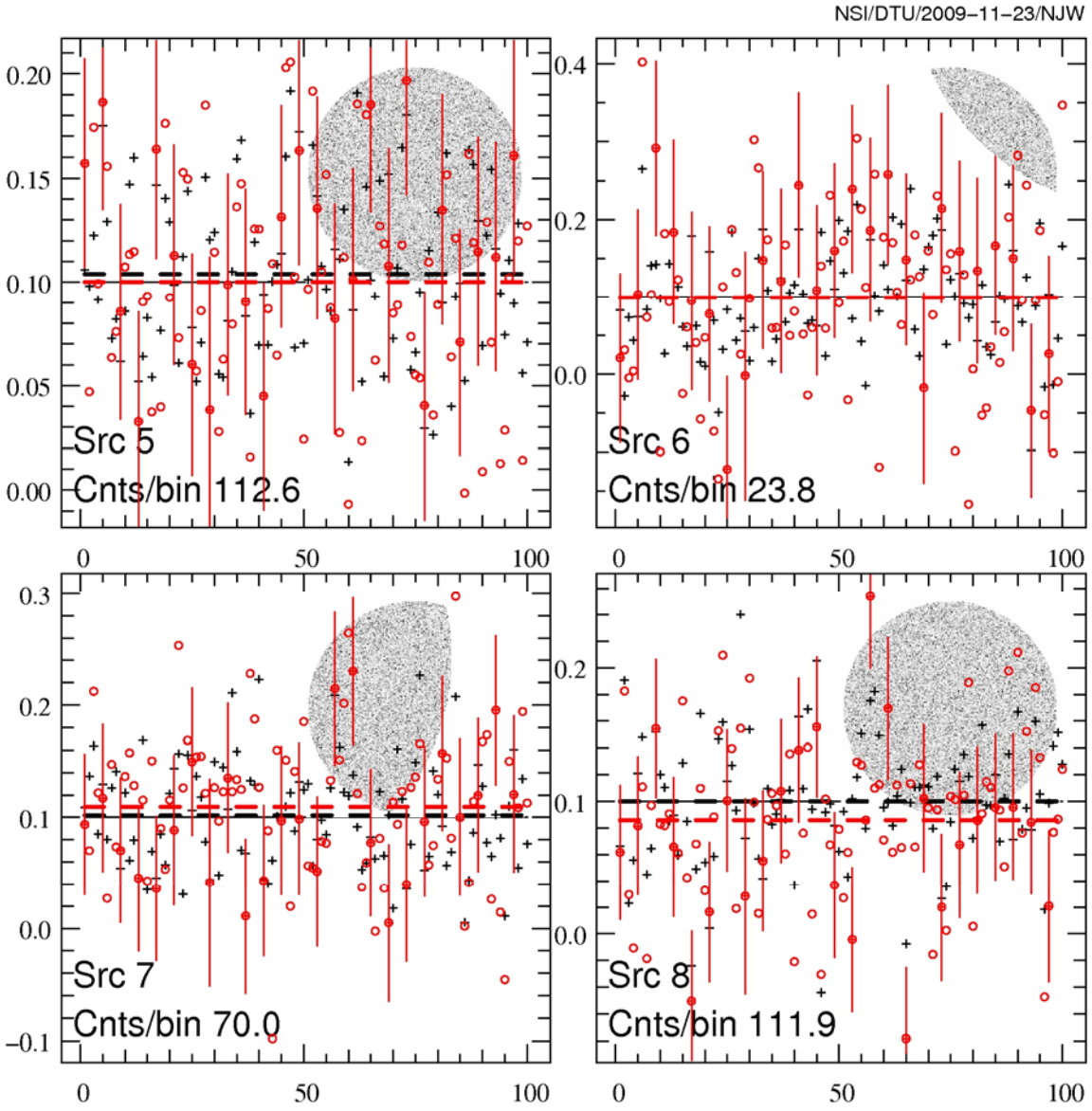

RMSr: 0.30 Src 9
RMSr: 0.47 Cnts/bin 35.7
RMSr: 0.07 Src 10
RMSr: 0.09 Cnts/bin 113.0
RMSr: 0.05 Src 11
RMSr: 0.04 Cnts/bin 588.6

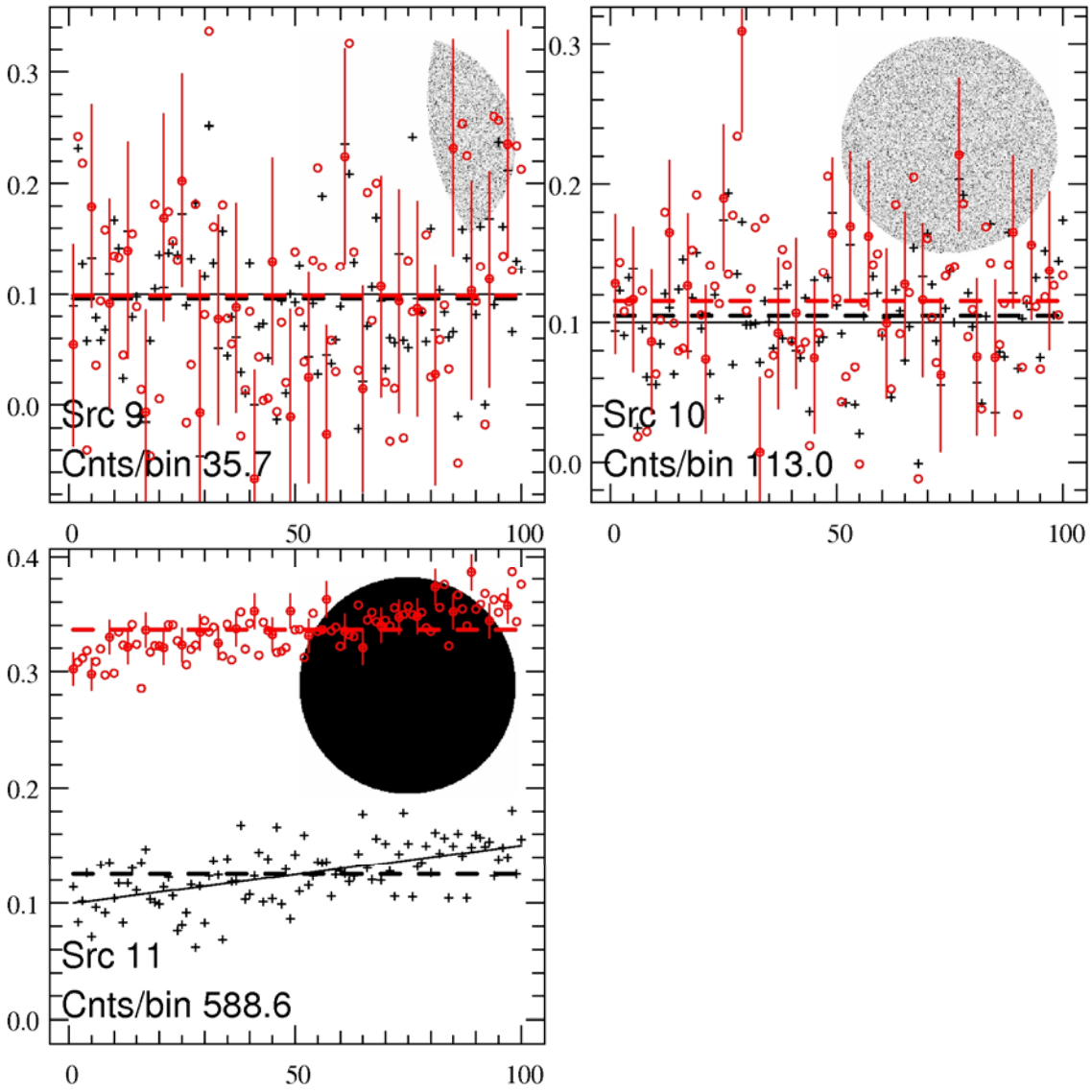
Next 6 slides:
Case with 10 sources + background in 100 time steps of 20 seconds
Source 1 is flaring, all other sources are constant except
the background that slowly rises by a factor 1.5
Red curves represent the basic single source approach by NL
Black curves represent the least square solution

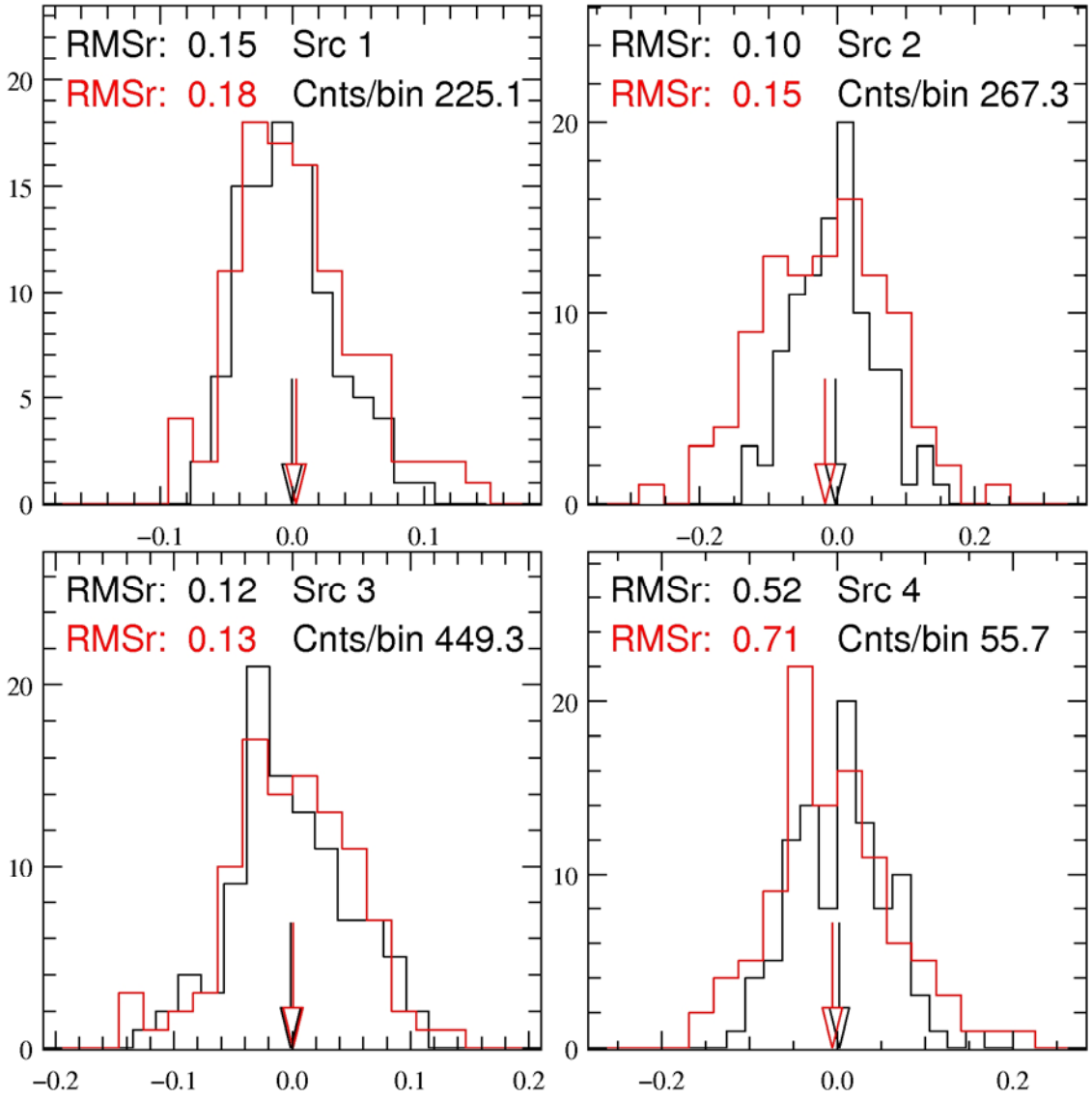


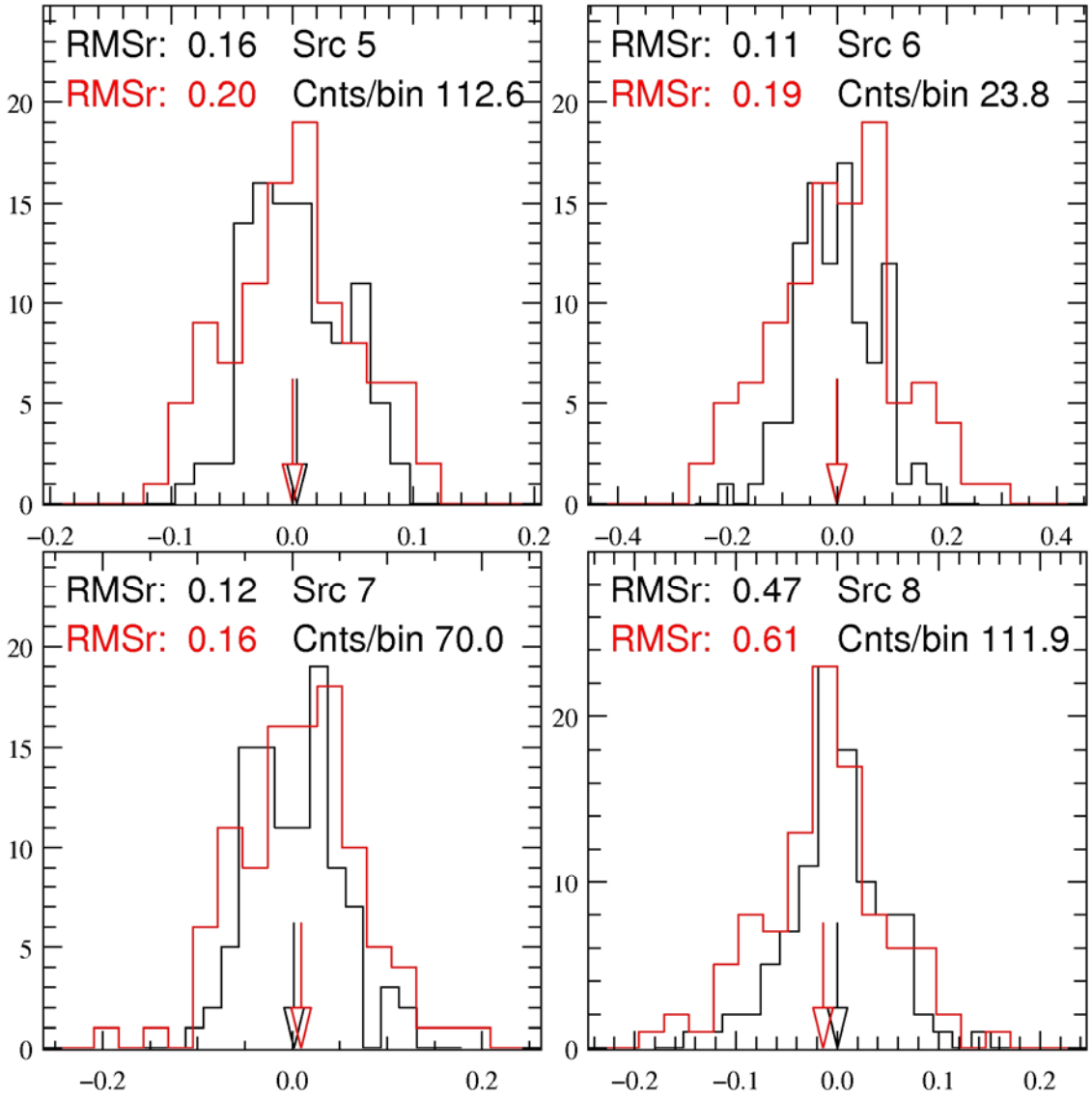
Shadowgram with 2366 counts from the last time step.

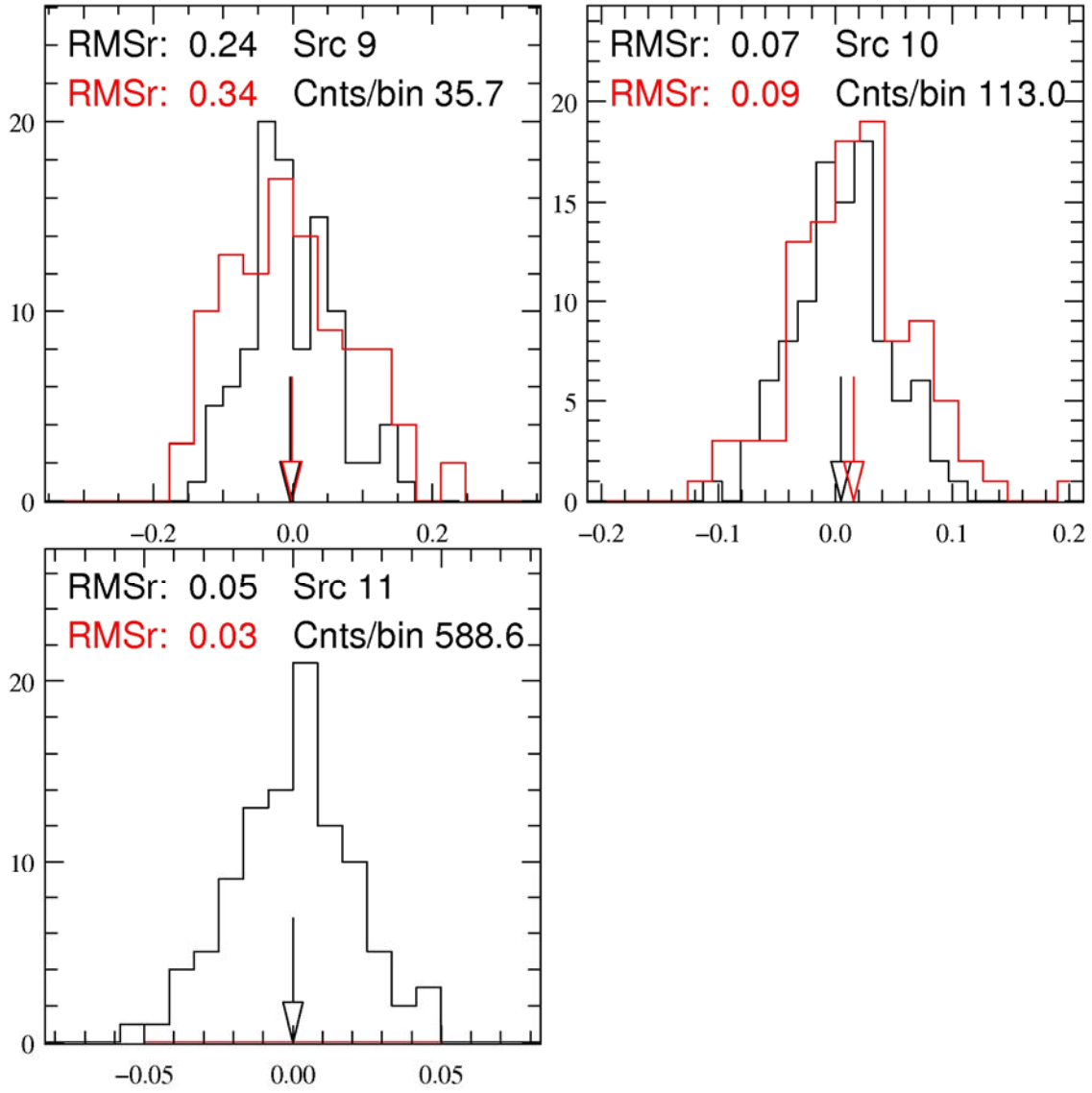

NSI/DTU/2009-11-23/NJW
Src 1
Cnts/bin 225.1
Src 2
Cnts/bin 267.3
Src 3
Cnts/bin 449.3
Src 4
Cnts/bin 55.7


NSI/DTU/2009-11-23/NJW
Src 5
Cnts/bin 112.6
Src 6
Cnts/bin 23.8
Src 7
Cnts/bin 70.0
Src 8
Cnts/bin 111.9


Src 9
Cnts/bin 35.7
Src 10
Cnts/bin 113.0
Src 11
Cnts/bin 588.6
0.0
0.1
0.2
0.3
0.4
0
50
100


RMSr: 0.15 Src 1
RMSr: 0.18 Cnts/bin 225.1
RMSr: 0.10 Src 2
RMSr: 0.15 Cnts/bin 267.3
RMSr: 0.12 Src 3
RMSr: 0.13 Cnts/bin 449.3
RMSr: 0.52 Src 4
RMSr: 0.71 Cnts/bin 55.7


RMSr: 0.16 Src 5
RMSr: 0.20 Cnts/bin 112.6
RMSr: 0.11 Src 6
RMSr: 0.19 Cnts/bin 23.8
RMSr: 0.12 Src 7
RMSr: 0.16 Cnts/bin 70.0
RMSr: 0.47 Src 8
RMSr: 0.61 Cnts/bin 111.9


RMSr: 0.24 Src 9
RMSr: 0.34 Cnts/bin 35.7
RMSr: 0.07 Src 10
RMSr: 0.09 Cnts/bin 113.0
RMSr: 0.05 Src 11
RMSr: 0.03 Cnts/bin 588.6