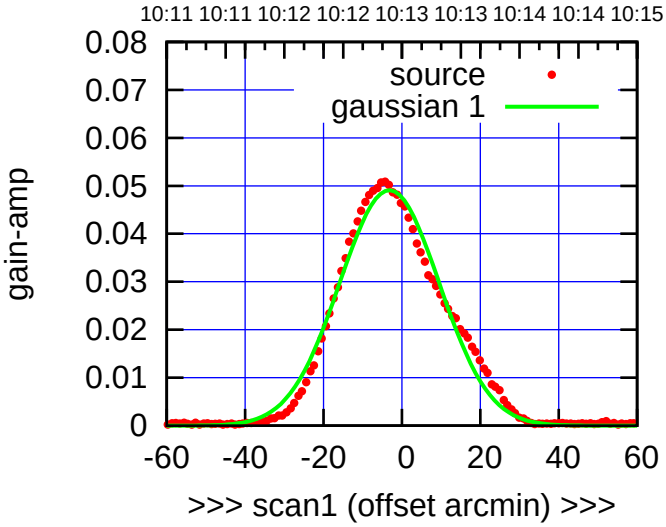
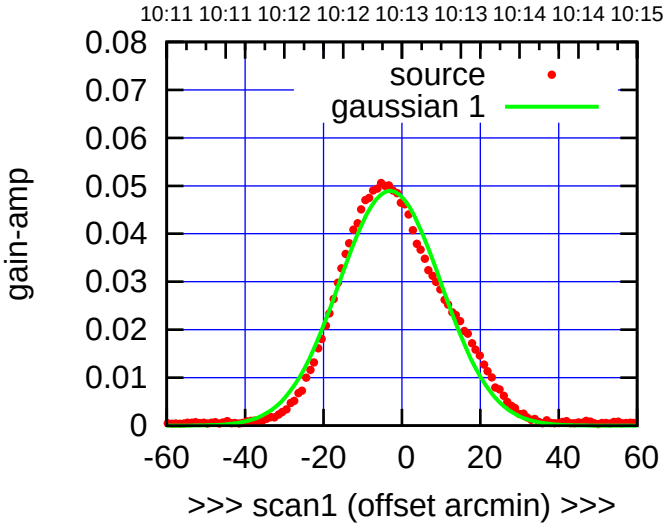
C00-130-AZ OFF= -3.2' (29.9')

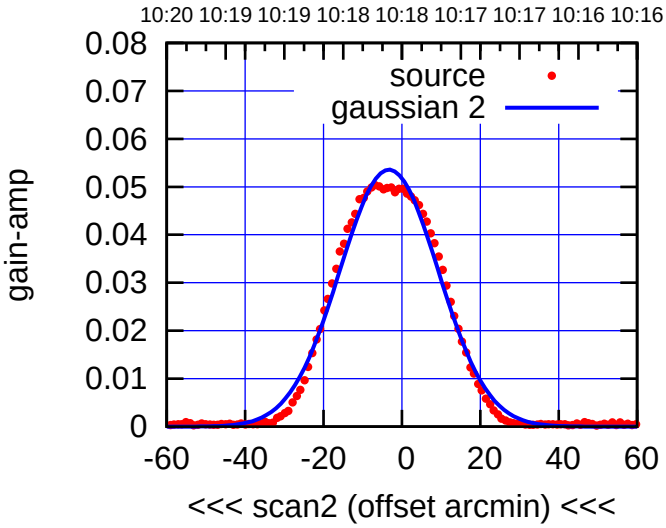


C00-175-AZ OFF= -3.0' (30.6')

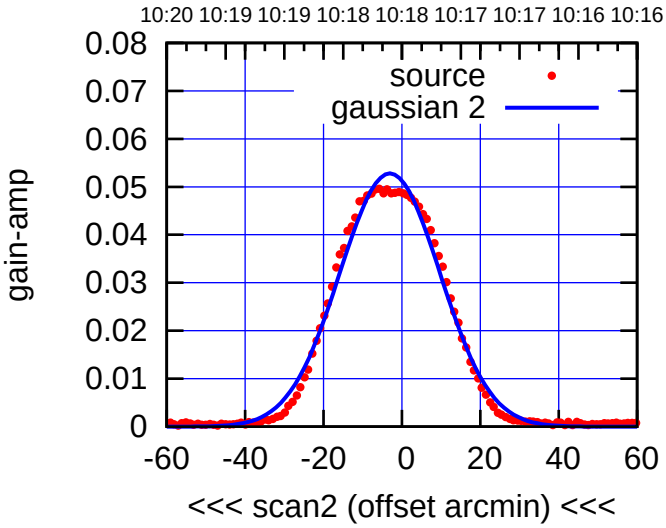


(+30'/m) 08Jun2017 10:13:00

C00-130-AZ OFF= -3.3' (29.6')

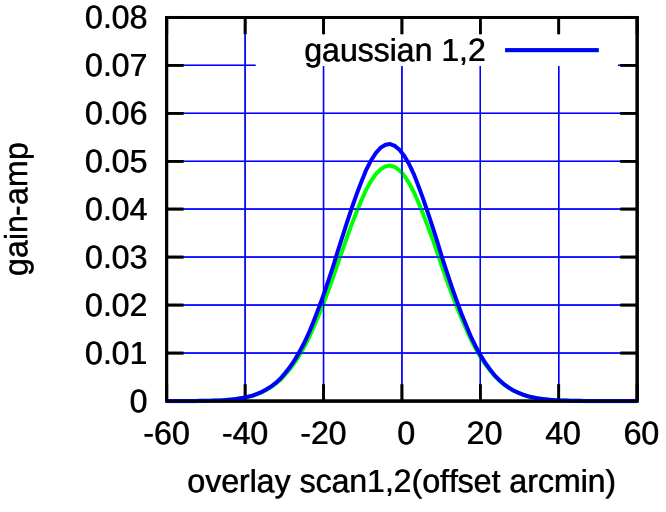


C00-175-AZ OFF= -3.1' (30.1')

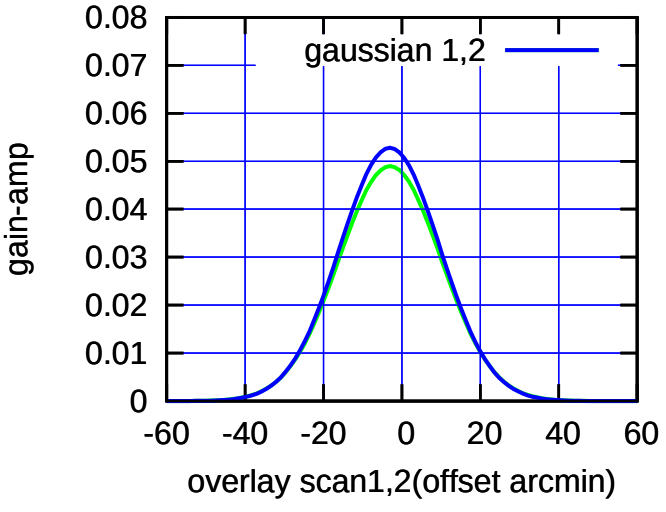


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.1'

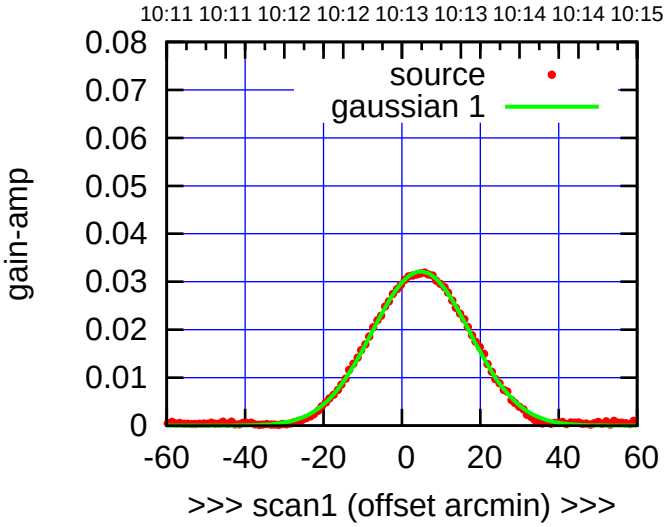


BACKLASH ERROR= 0.1'

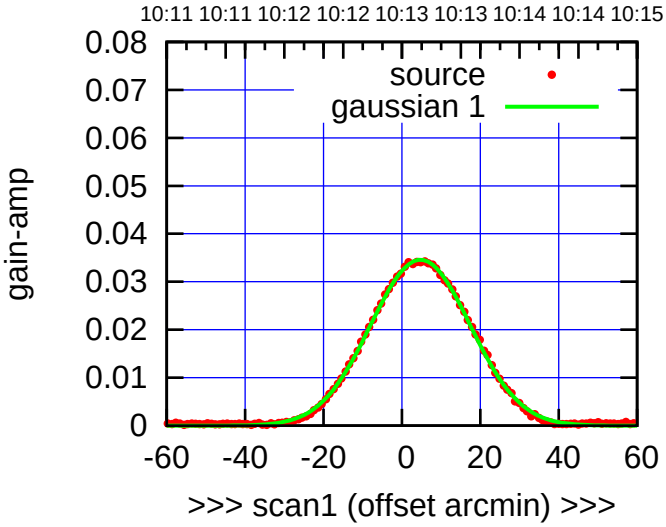


(1371 MHz.)

C01-130-AZ OFF= 4.8' (29.4')

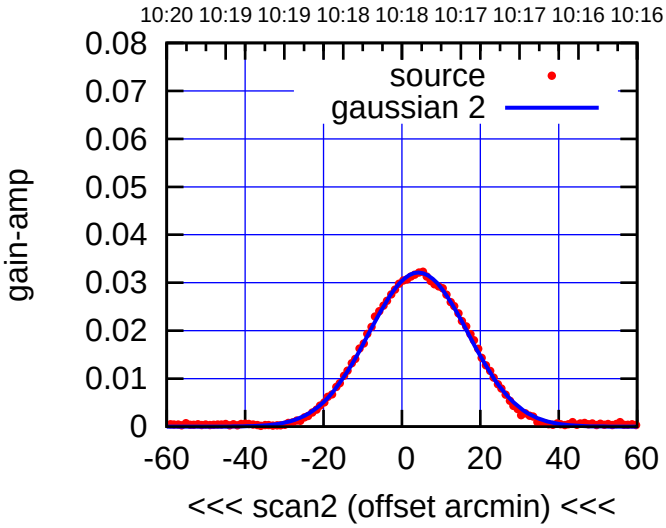


C01-175-AZ OFF= 4.7' (29.9')

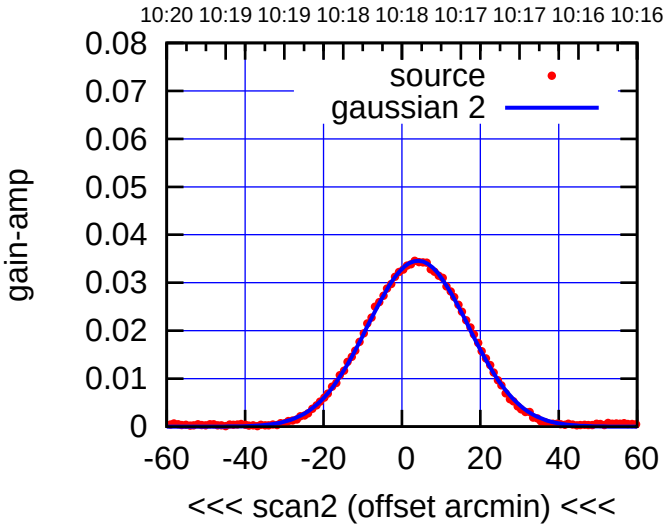


(+30'/m) 08Jun2017 10:13:00

C01-130-AZ OFF= 4.2' (29.8')

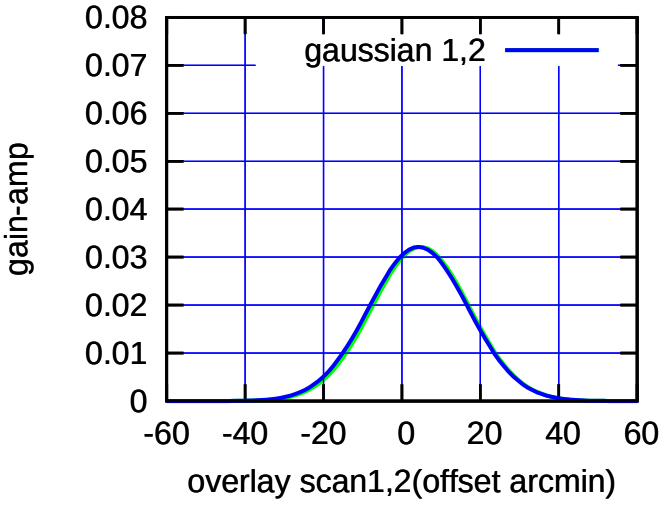


C01-175-AZ OFF= 4.1' (30.2')

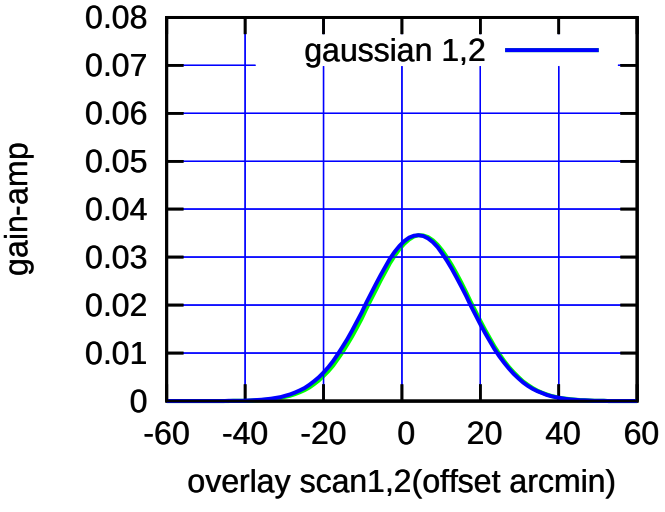


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.8'

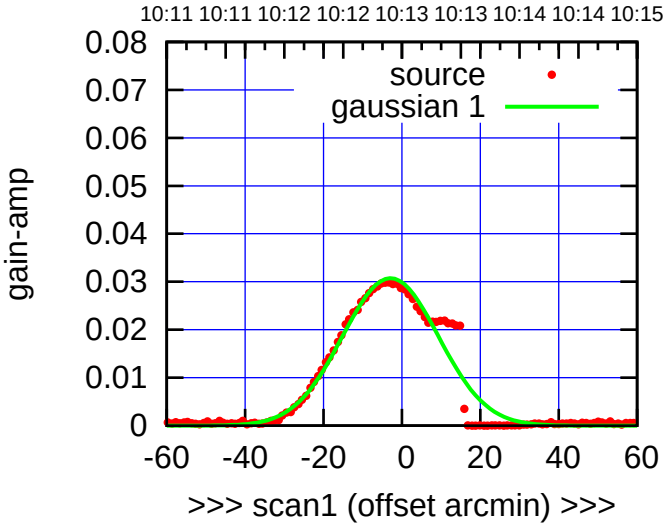


BACKLASH ERROR= 0.8'

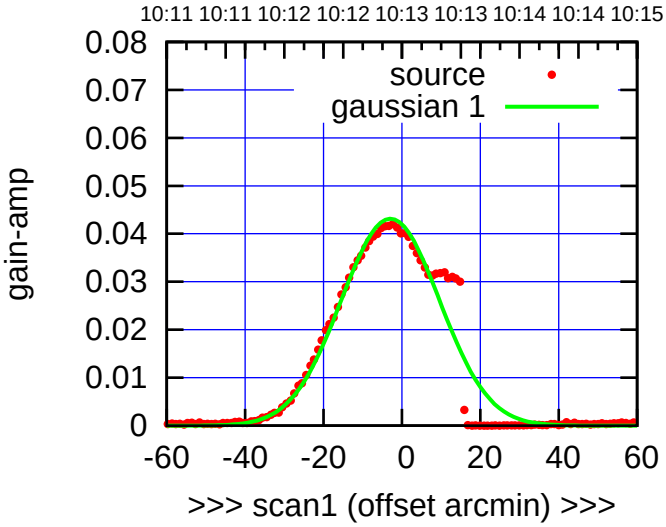


(1371 MHz.)

C02-130-AZ OFF= -2.9' (28.8')

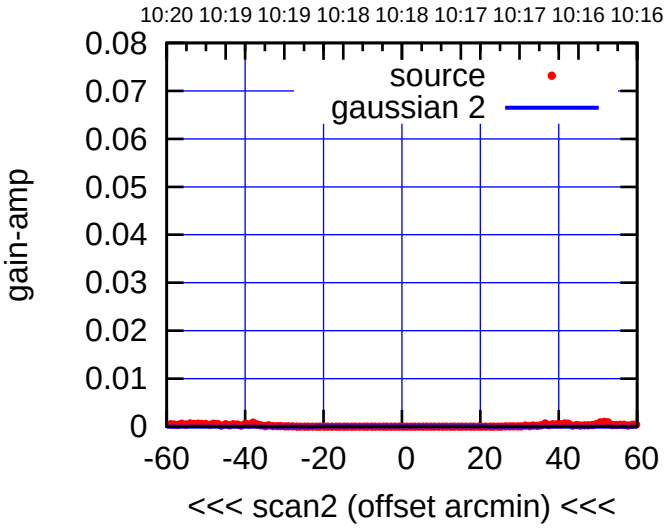


C02-175-AZ OFF= -2.9' (29.5')

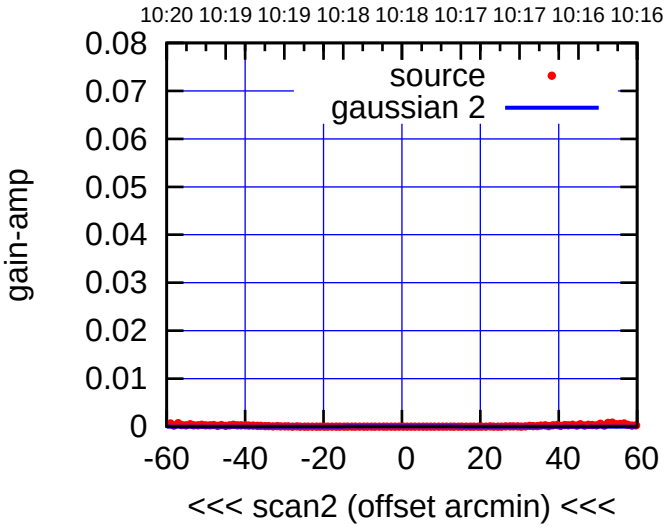


(+30'/m) 08Jun2017 10:13:00

C02-130-AZ OFF= 0.0' (42.4')

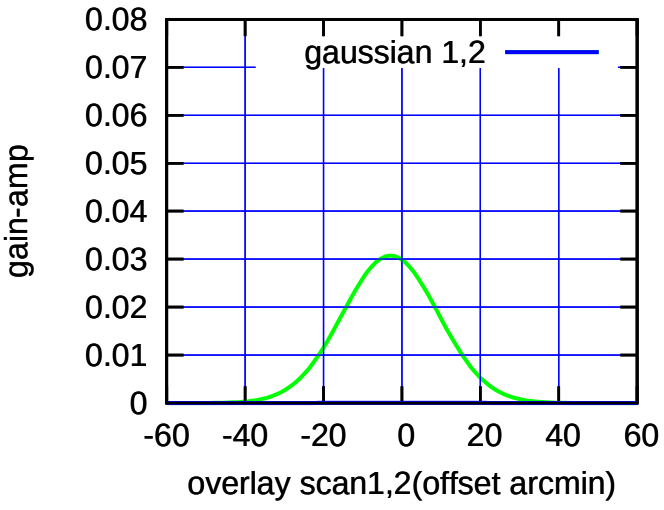


C02-175-AZ OFF= 0.0' (42.4')

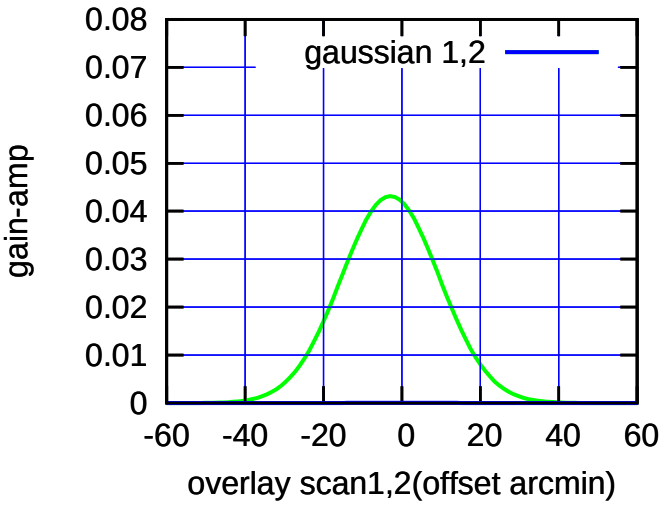


(-30'/m) 08Jun2017 10:18:00

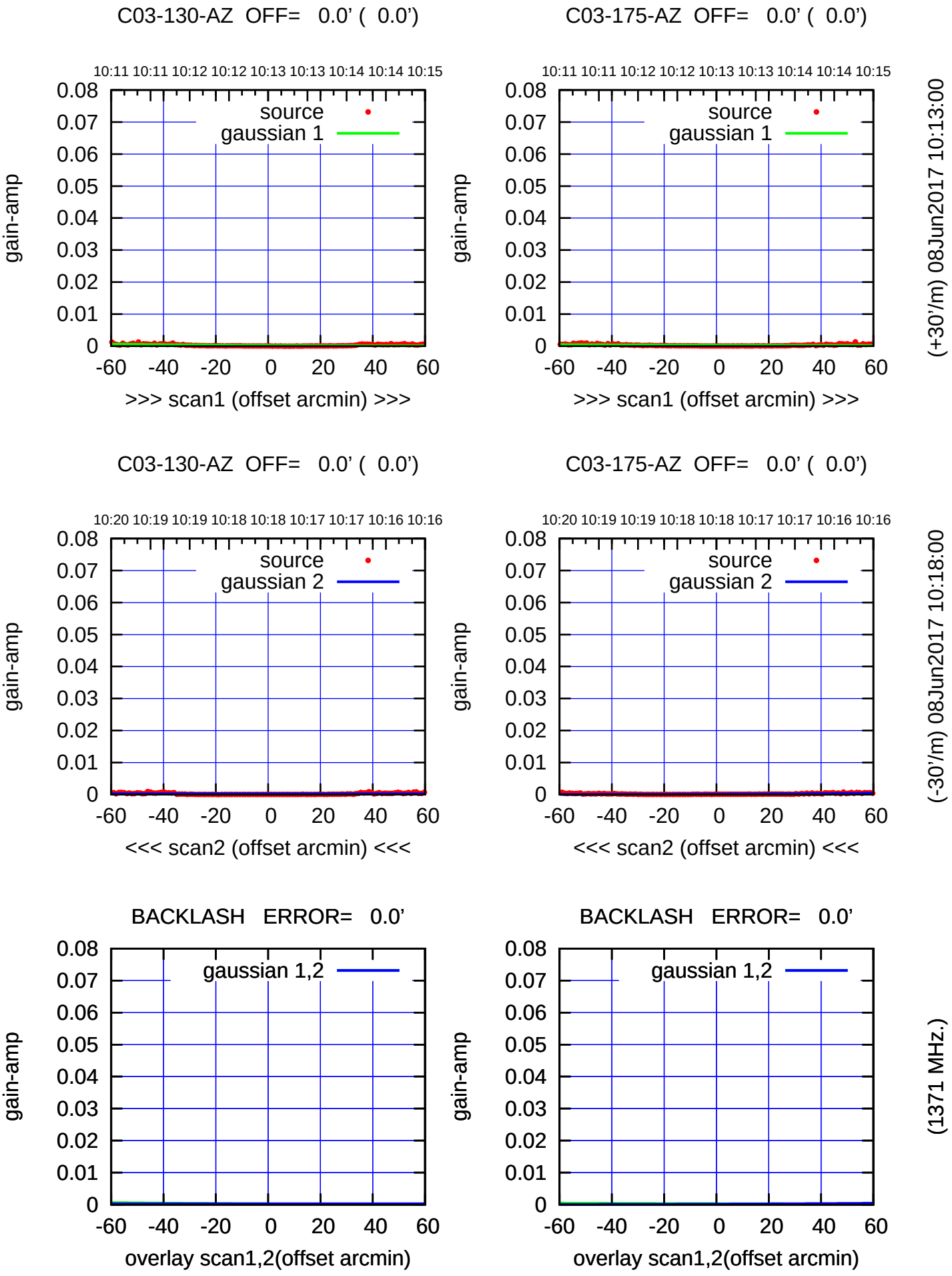
BACKLASH ERROR= 4.0'



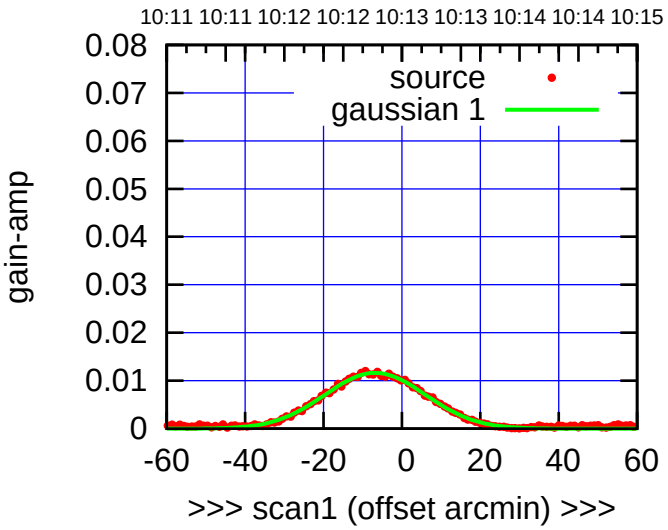
BACKLASH ERROR= 4.0'



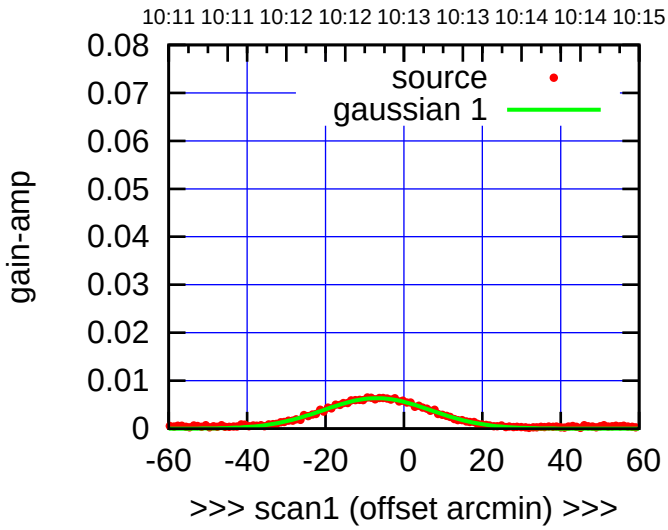
(1371 MHz.)


C03-130-AZ OFF= 0.0' (0.0')
C03-175-AZ OFF= 0.0' (0.0')
10:11 10:11 10:12 10:12 10:13 10:13 10:14 10:14 10:15
source
gaussian 1
gain-amp
>>> scan1 (offset arcmin) >>>
(+30'/m) 08Jun2017 10:13:00
C03-130-AZ OFF= 0.0' (0.0')
C03-175-AZ OFF= 0.0' (0.0')
10:20 10:19 10:19 10:18 10:18 10:17 10:17 10:16 10:16
source
gaussian 2
gain-amp
<<< scan2 (offset arcmin) <<<
(-30'/m) 08Jun2017 10:18:00
BACKLASH ERROR= 0.0'
BACKLASH ERROR= 0.0'
gaussian 1,2
gain-amp
overlay scan1,2(offset arcmin)
(1371 MHz.)

C04-130-AZ OFF= -6.8' (30.2')

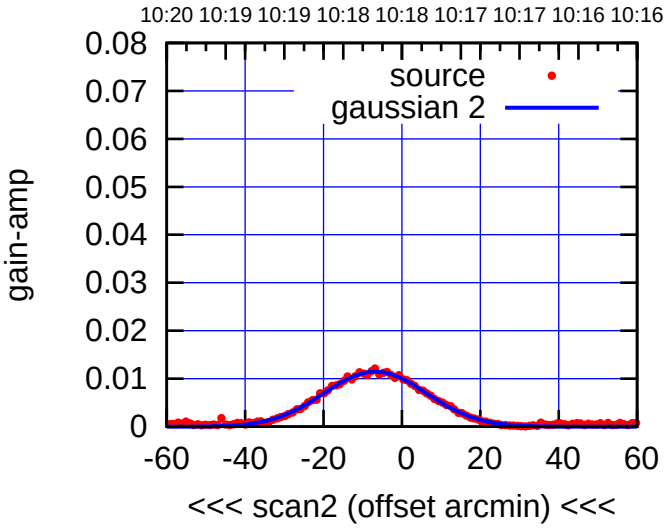


C04-175-AZ OFF= -6.9' (32.2')

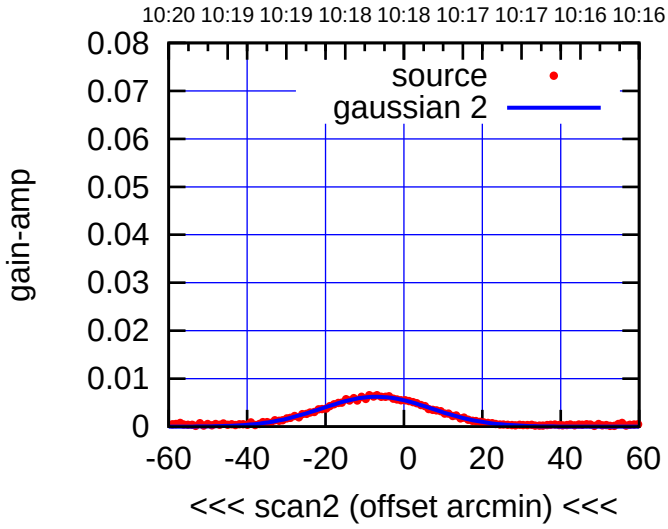


(+30'/m) 08Jun2017 10:13:00

C04-130-AZ OFF= -6.8' (30.8')

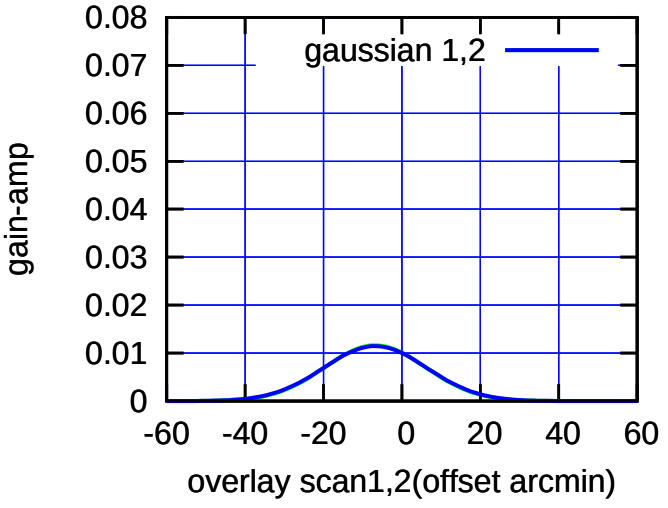


C04-175-AZ OFF= -7.0' (33.0')

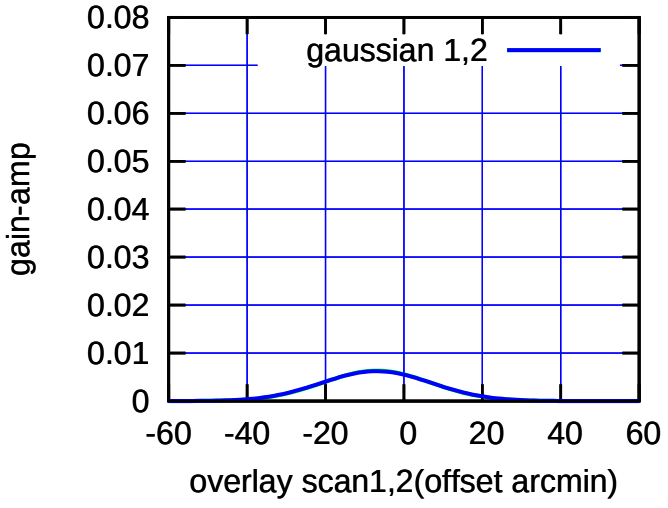


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.0'

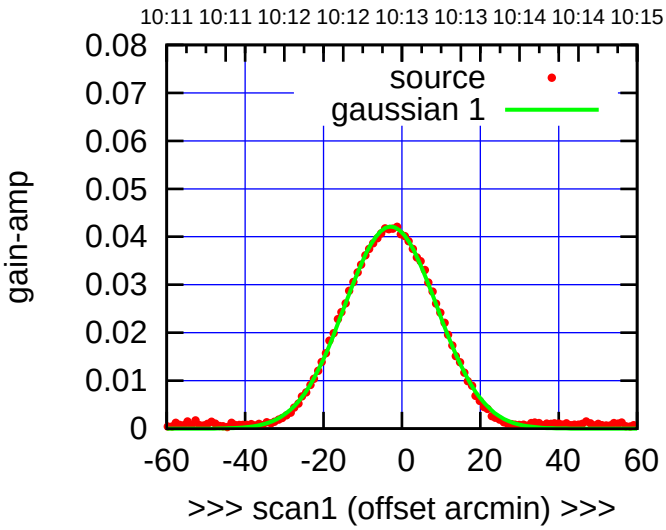


BACKLASH ERROR= 0.1'

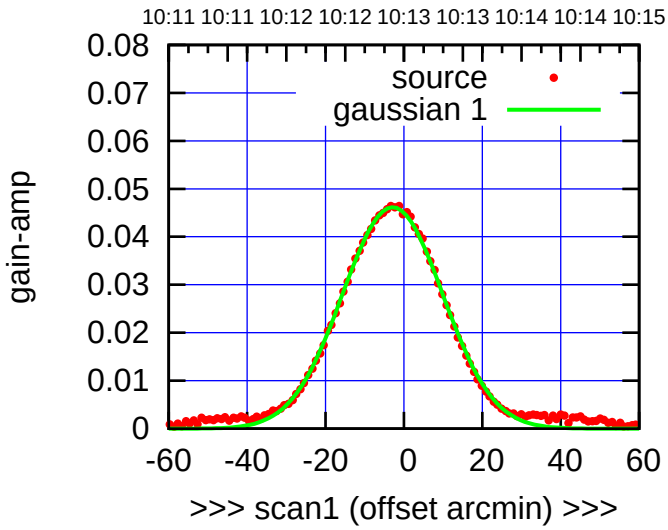


(1371 MHz.)

C05-130-AZ OFF= -2.9' (27.7')

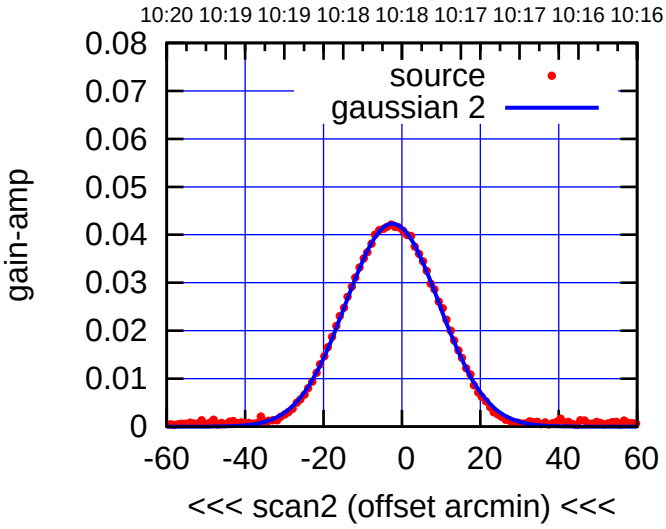


C05-175-AZ OFF= -2.9' (30.1')

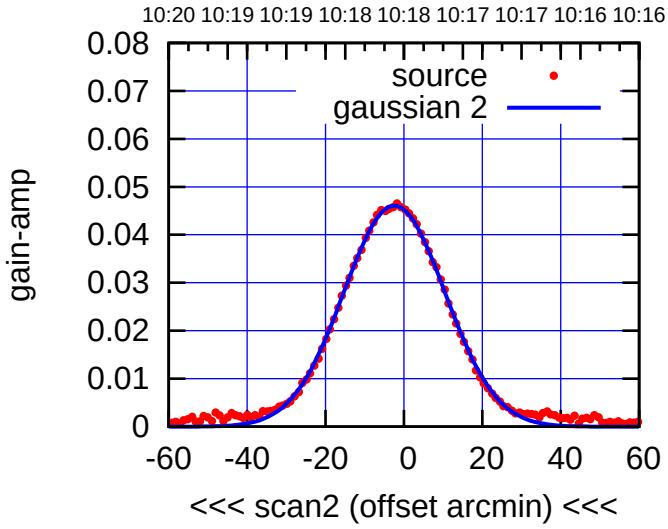


(+30'/m) 08Jun2017 10:13:00

C05-130-AZ OFF= -2.4' (28.0')

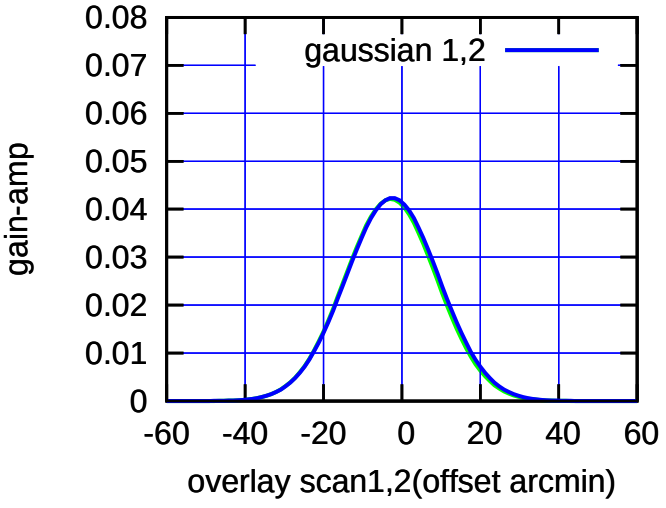


C05-175-AZ OFF= -2.4' (30.4')

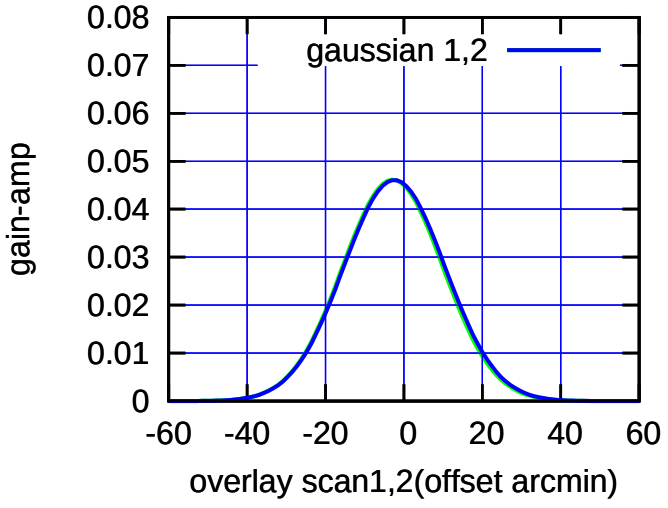


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.7'

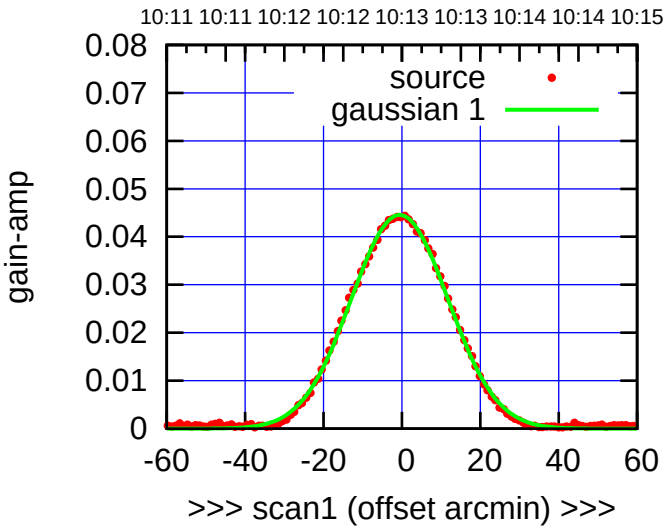


BACKLASH ERROR= 0.7'

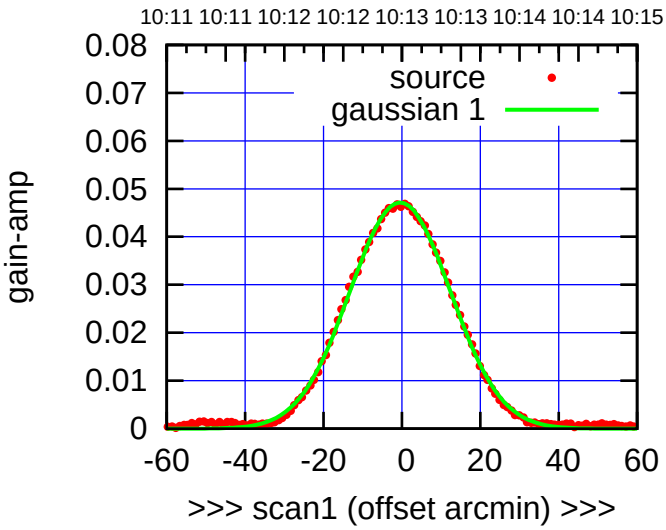


(1371 MHz.)

C06-130-AZ OFF= -0.6' (29.0')

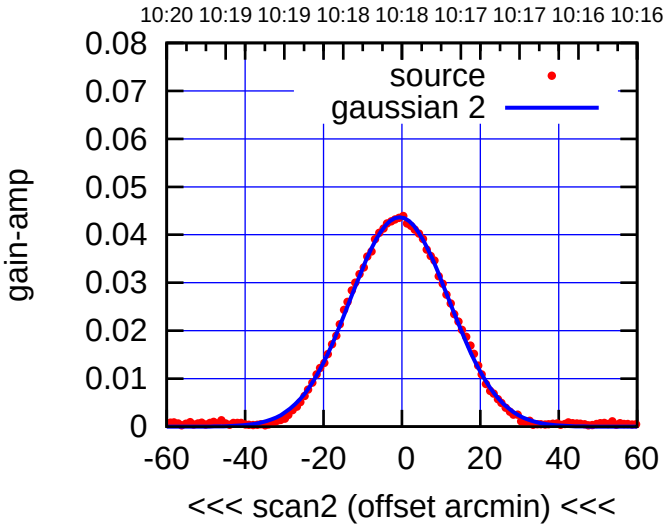


C06-175-AZ OFF= -0.4' (30.2')

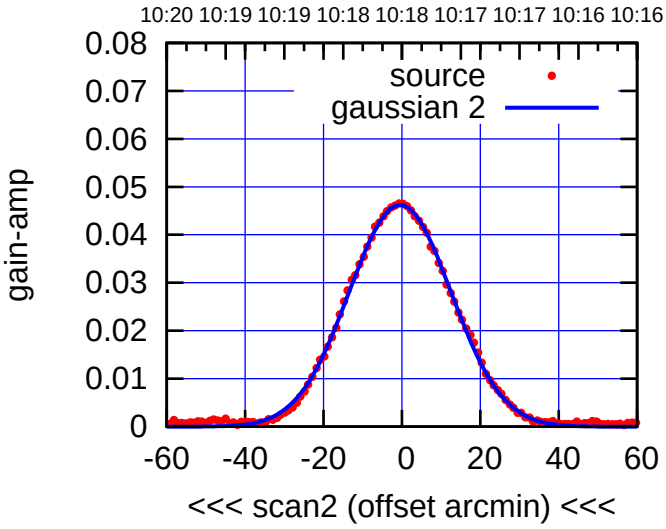


(+30'/m) 08Jun2017 10:13:00

C06-130-AZ OFF= -0.6' (29.6')

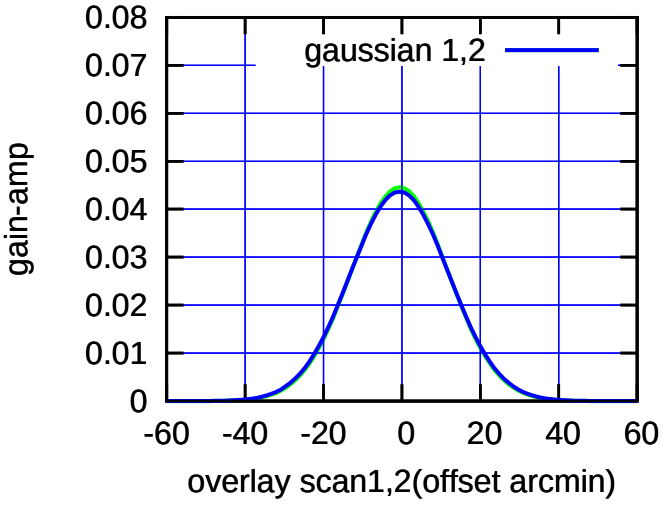


C06-175-AZ OFF= -0.5' (30.6')

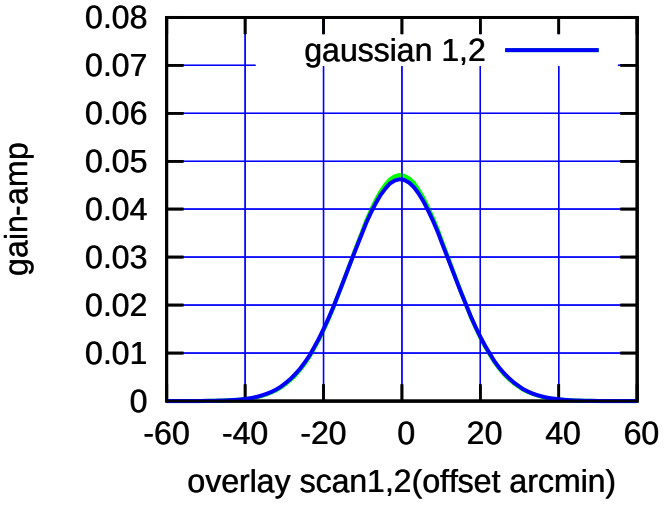


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.0'

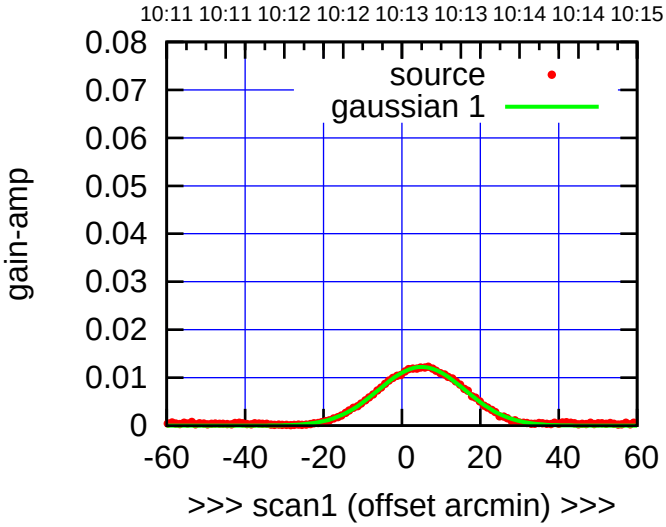


BACKLASH ERROR= 0.1'

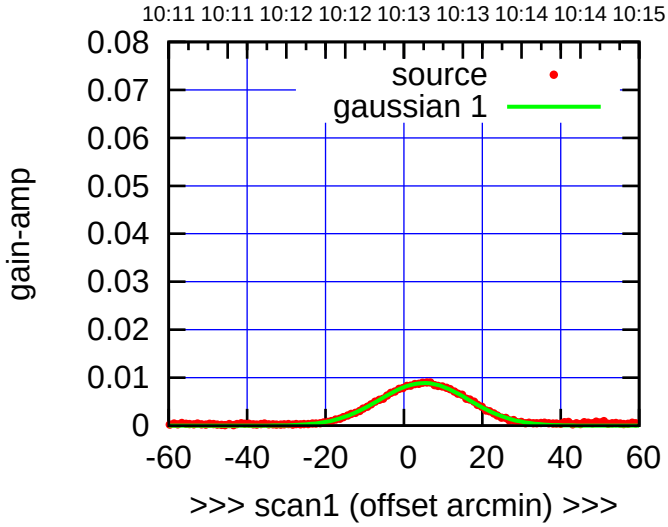


(1371 MHz.)

C08-130-AZ OFF= 5.0' (26.0')

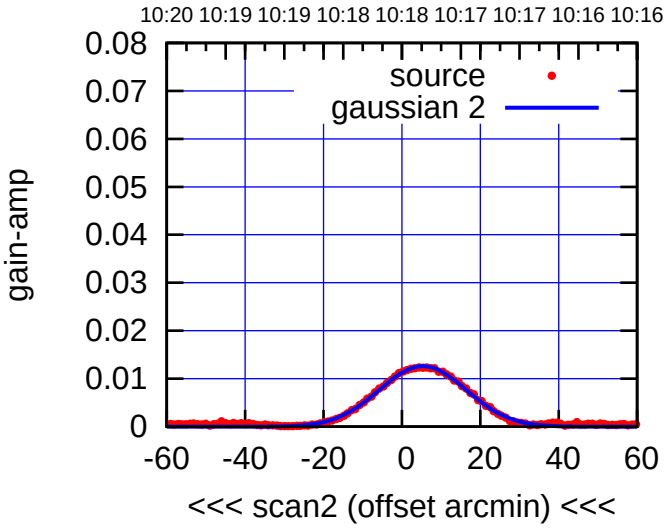


C08-175-AZ OFF= 5.1' (26.8')

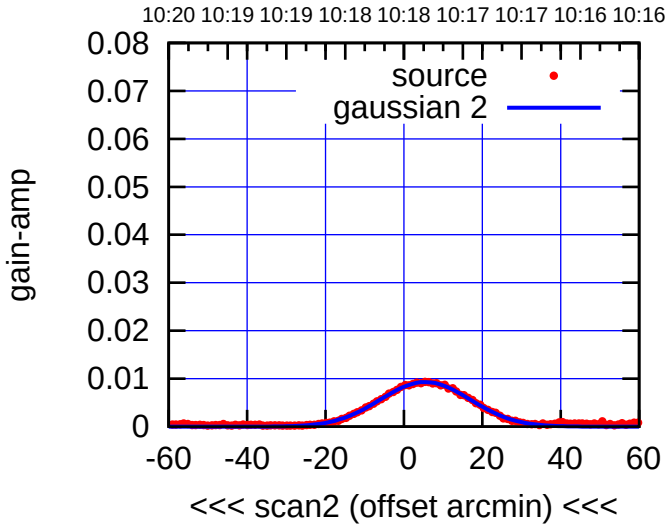


(+30'/m) 08Jun2017 10:13:00

C08-130-AZ OFF= 5.3' (26.2')

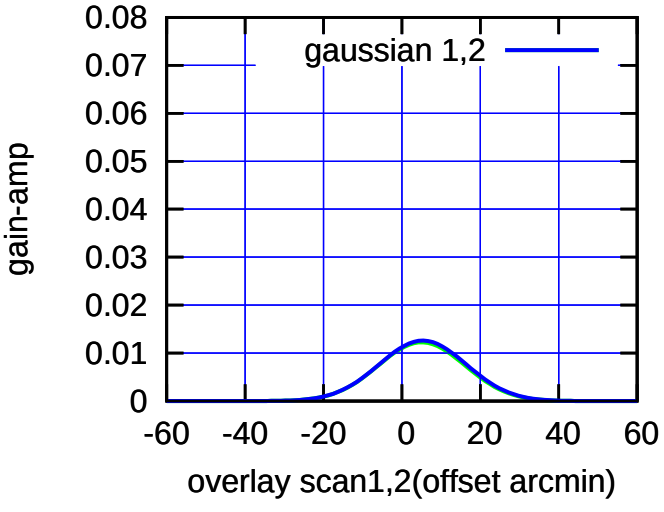


C08-175-AZ OFF= 5.4' (27.0')

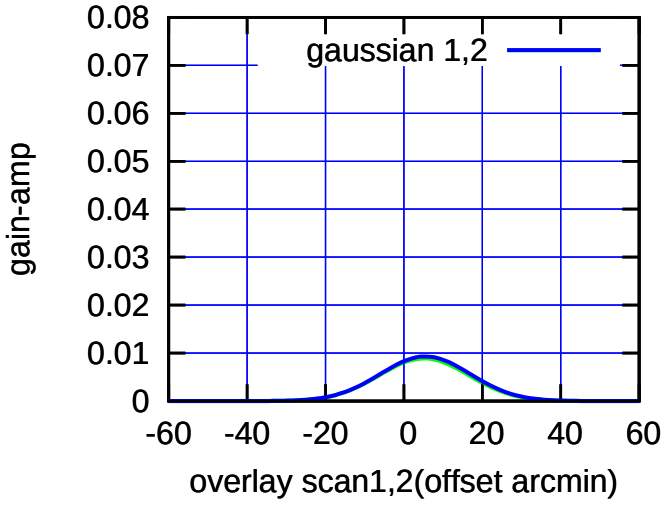


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.4'

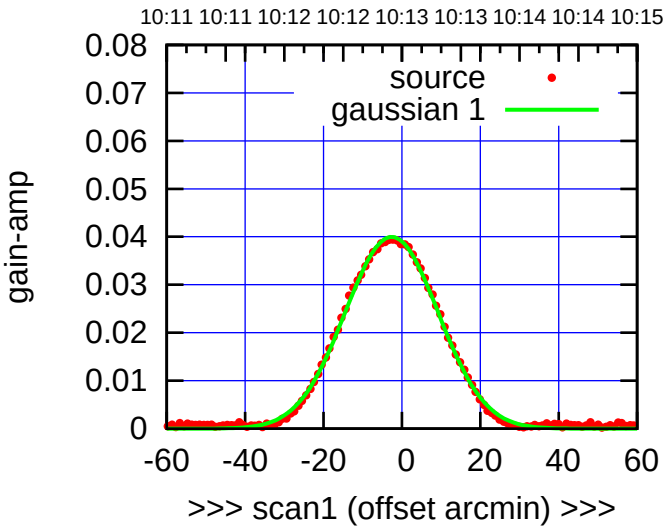


BACKLASH ERROR= 0.4'

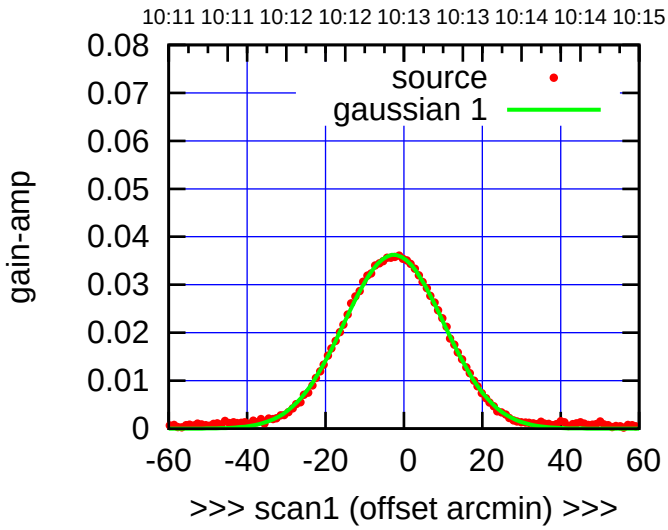


(1371 MHz.)

C09-130-AZ OFF= -2.6' (27.9')

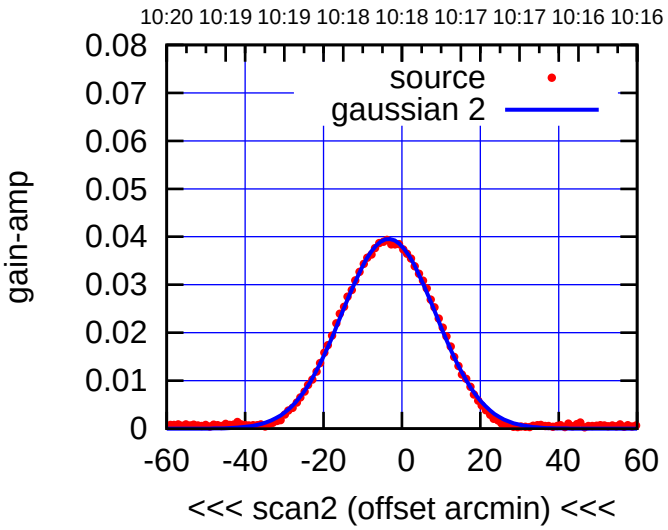


C09-175-AZ OFF= -2.6' (30.0')

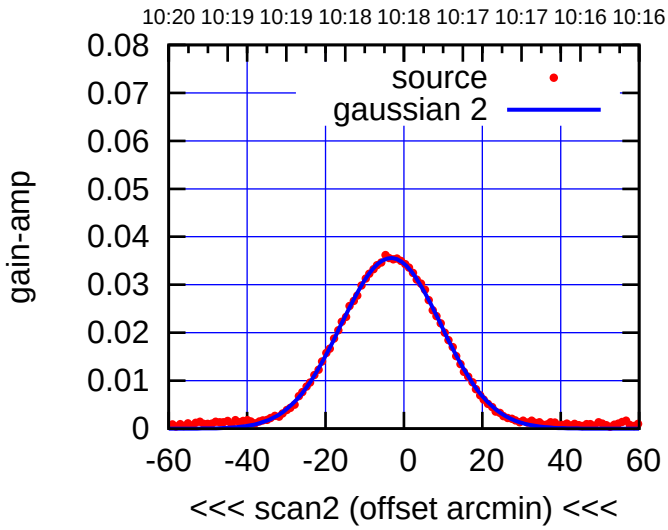


(+30'/m) 08Jun2017 10:13:00

C09-130-AZ OFF= -3.4' (28.2')

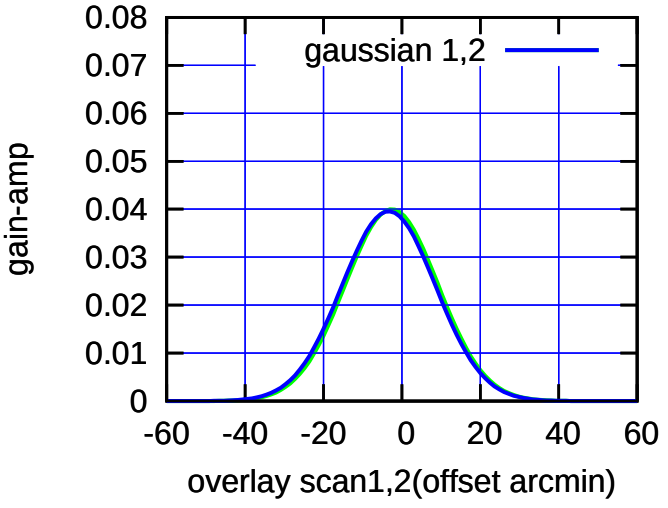


C09-175-AZ OFF= -3.3' (30.1')

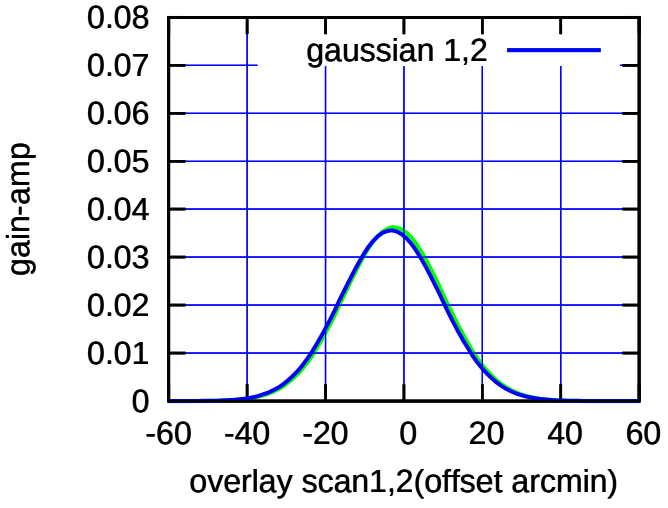


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 1.1'

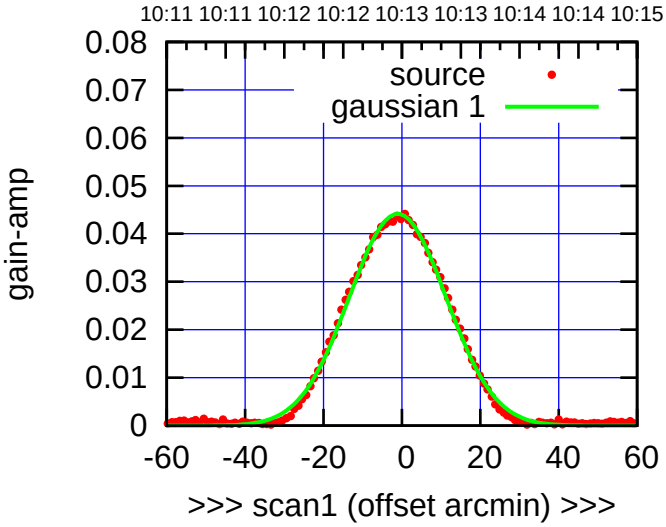


BACKLASH ERROR= 1.0'

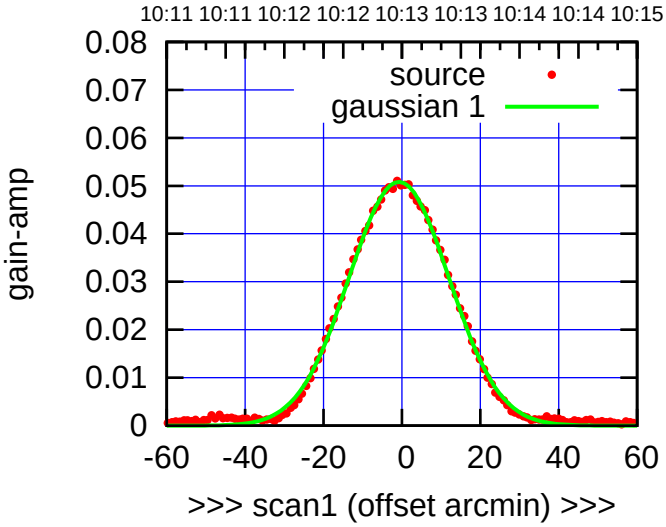


(1371 MHz.)

C10-130-AZ OFF= -1.1' (29.1')

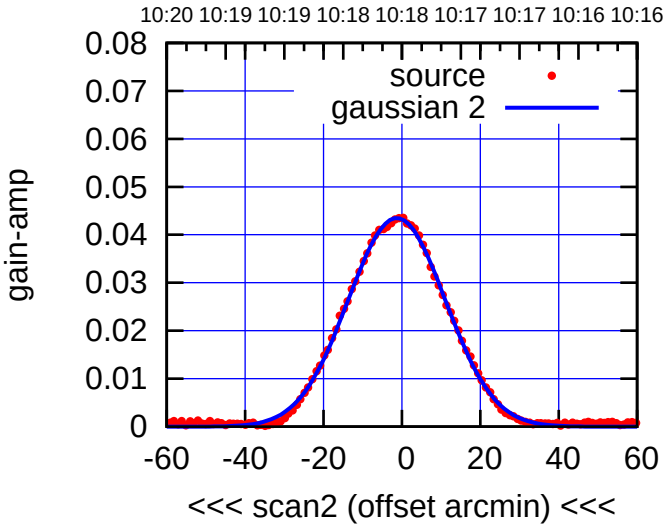


C10-175-AZ OFF= -0.8' (30.1')

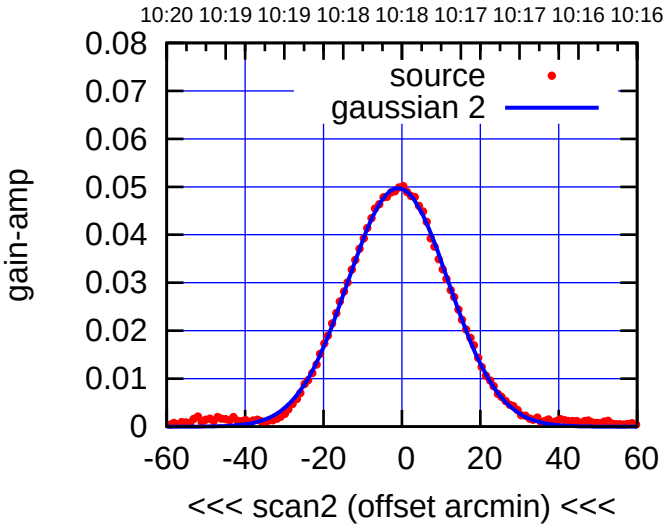


(+30'/m) 08Jun2017 10:13:00

C10-130-AZ OFF= -1.3' (29.2')

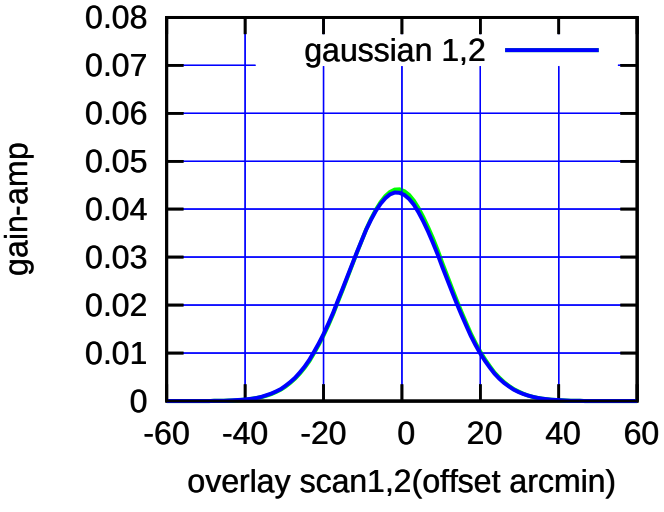


C10-175-AZ OFF= -1.0' (30.2')

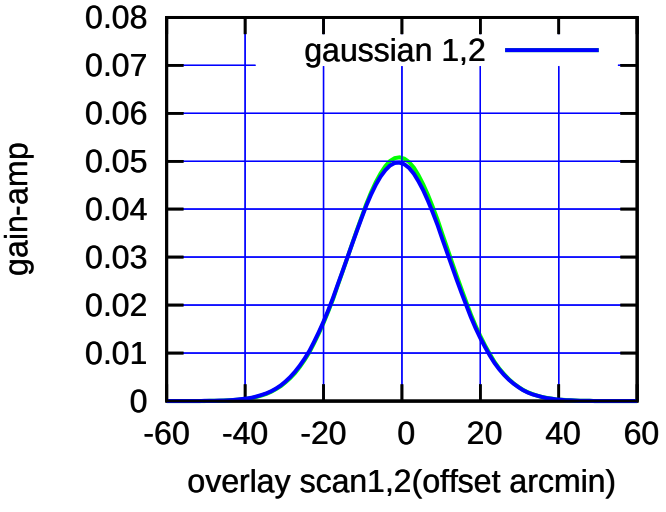


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.3'

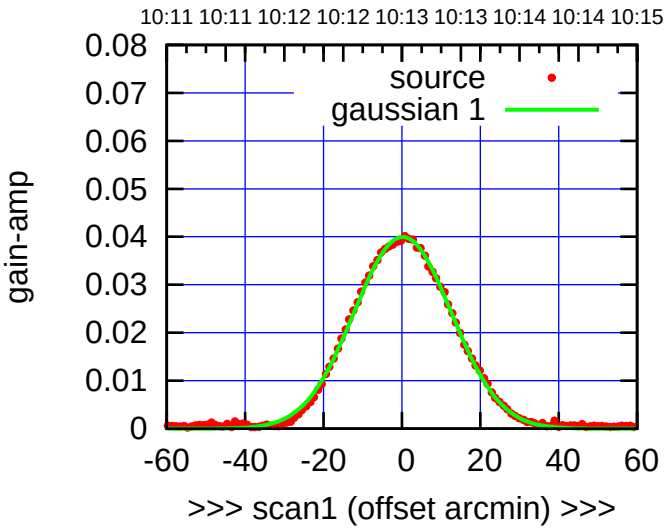


BACKLASH ERROR= 0.3'

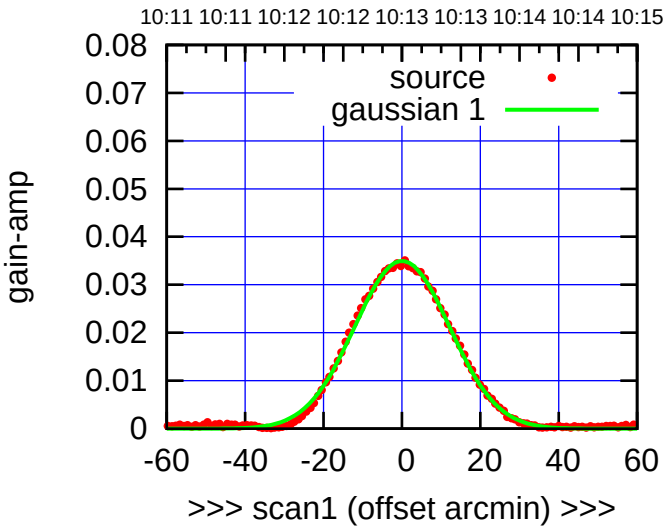


(1371 MHz.)

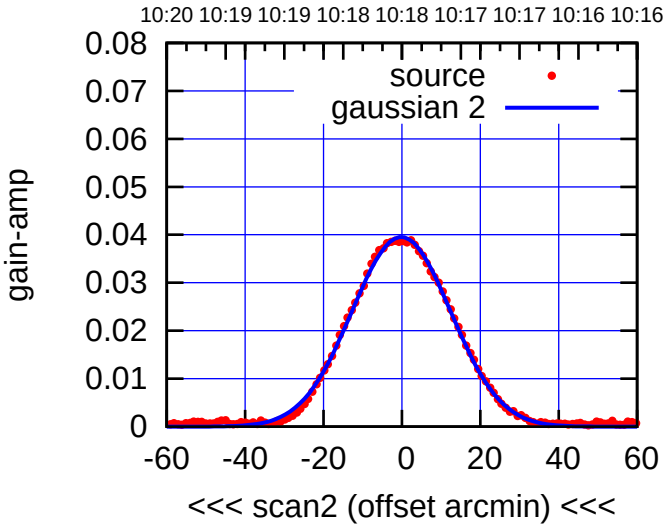
C11-130-AZ OFF= 0.2' (29.2')



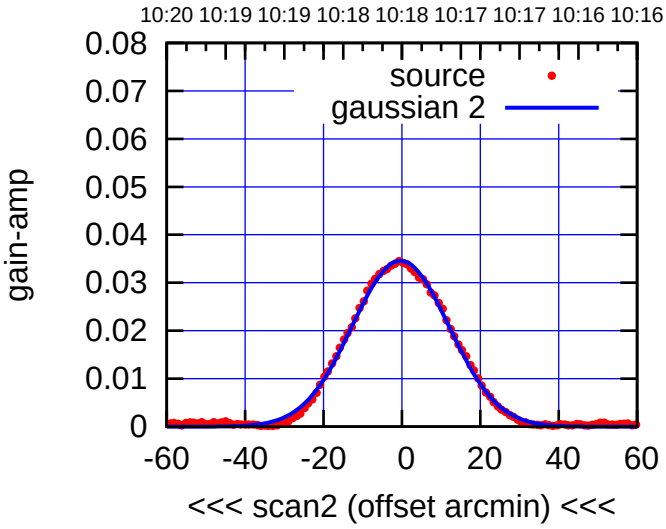
C11-175-AZ OFF= 0.0' (28.6')



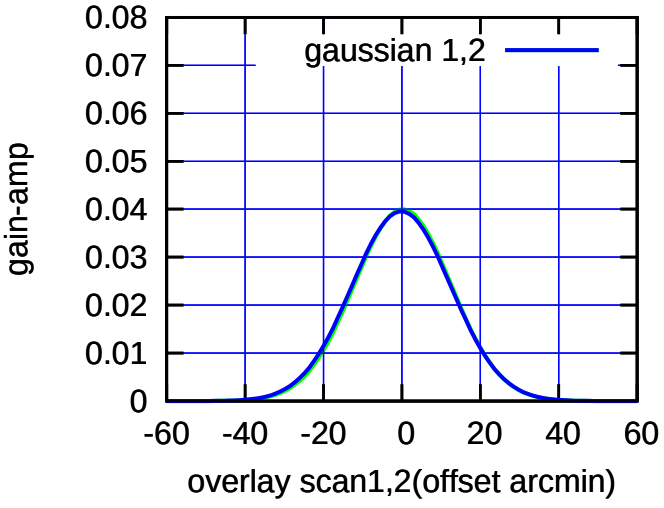
C11-130-AZ OFF= -0.2' (29.7')



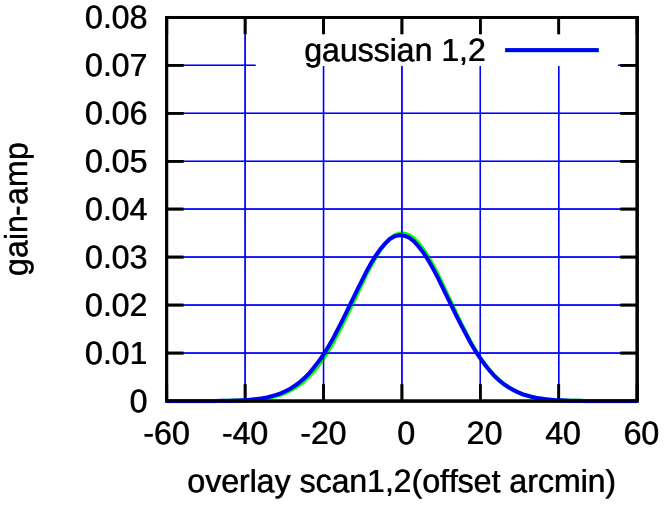
C11-175-AZ OFF= -0.4' (29.1')



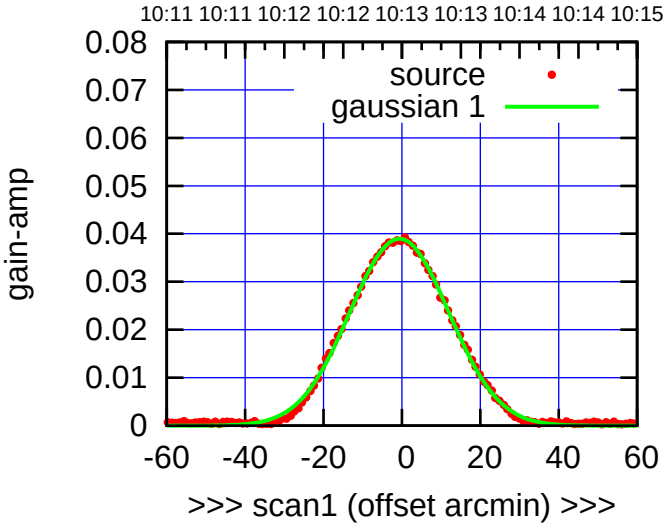
BACKLASH ERROR= 0.5'



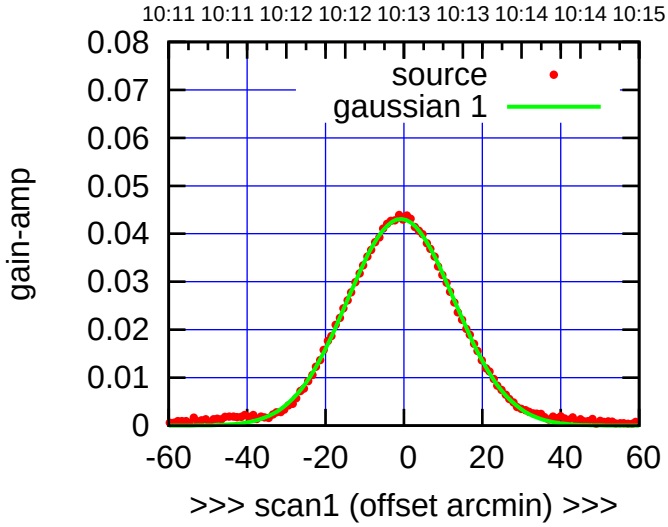
BACKLASH ERROR= 0.5'



C12-130-AZ OFF= -0.7' (29.8')

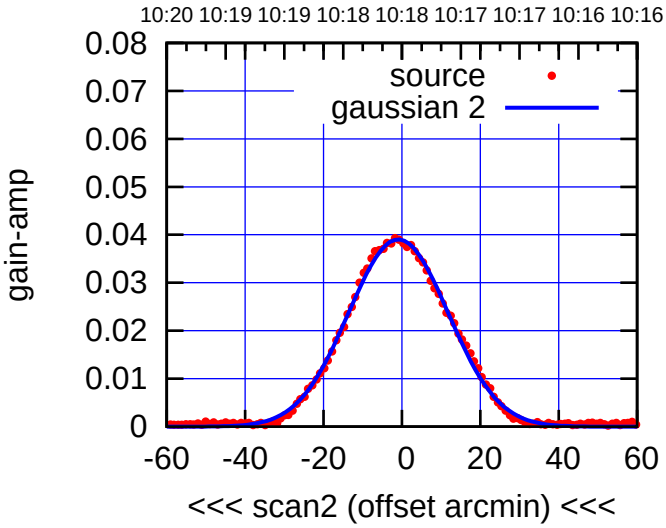


C12-175-AZ OFF= -0.8' (32.1')

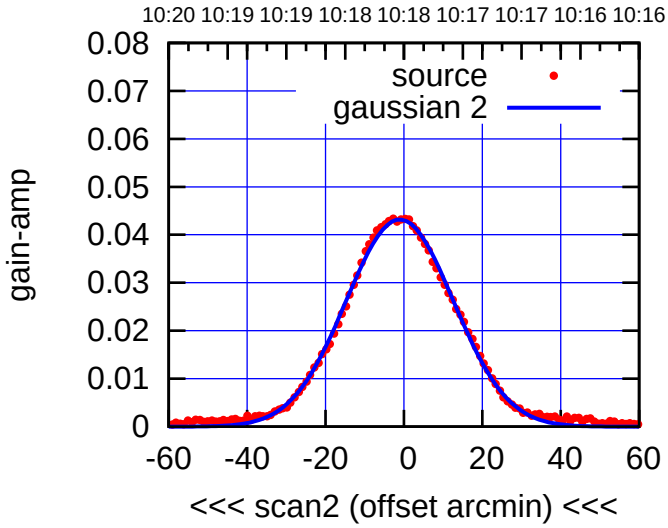


(+30'/m) 08Jun2017 10:13:00

C12-130-AZ OFF= -0.9' (30.0')

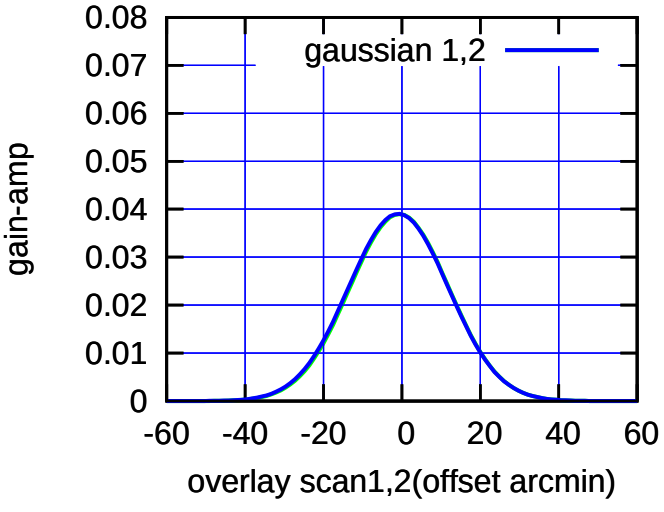


C12-175-AZ OFF= -1.1' (32.2')

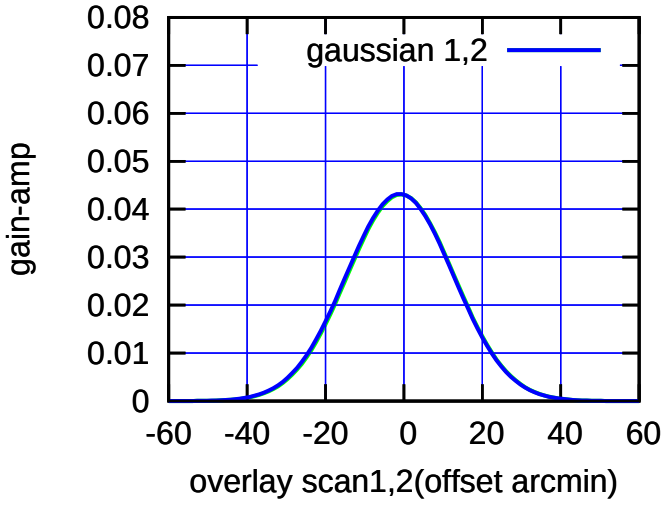


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.3'

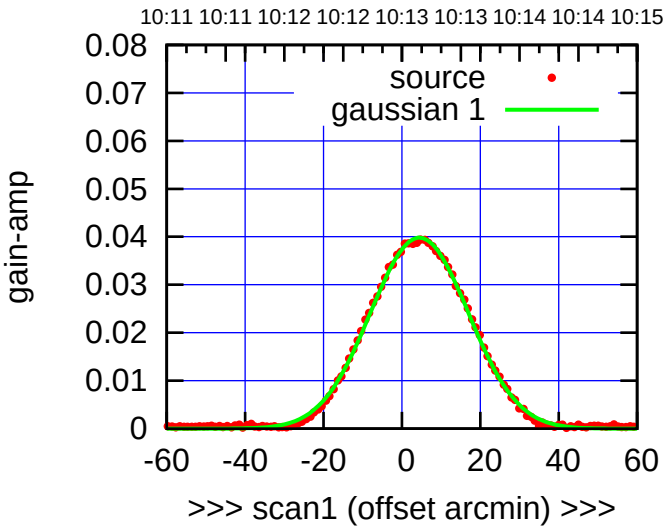


BACKLASH ERROR= 0.4'

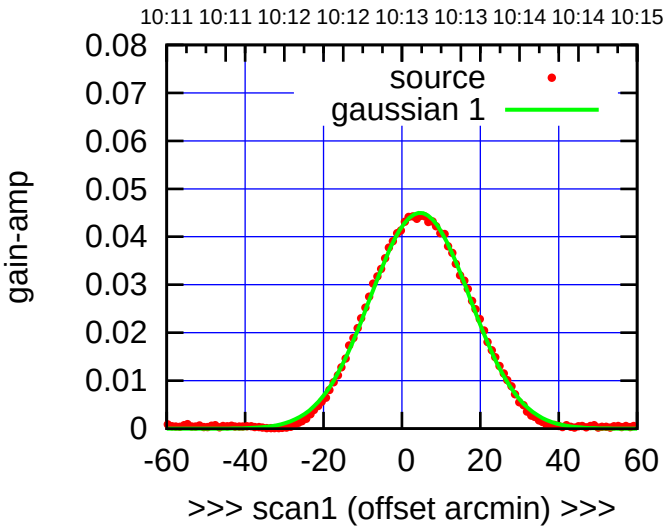


(1371 MHz.)

C13-130-AZ OFF= 4.5' (29.4')

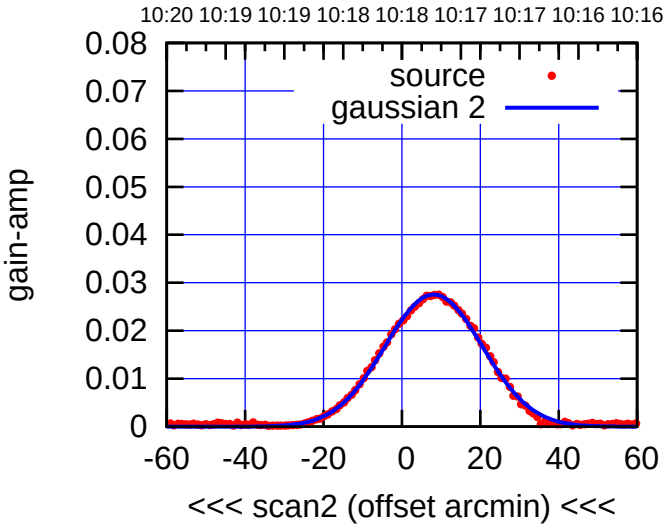


C13-175-AZ OFF= 4.6' (29.9')

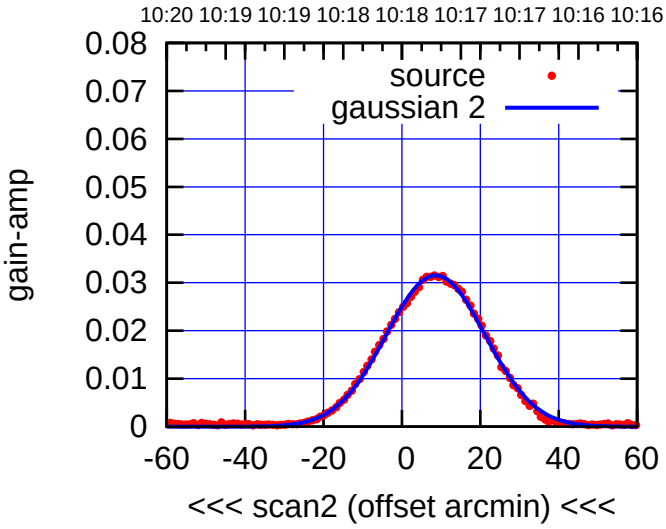


(+30'/m) 08Jun2017 10:13:00

C13-130-AZ OFF= 8.1' (29.3')

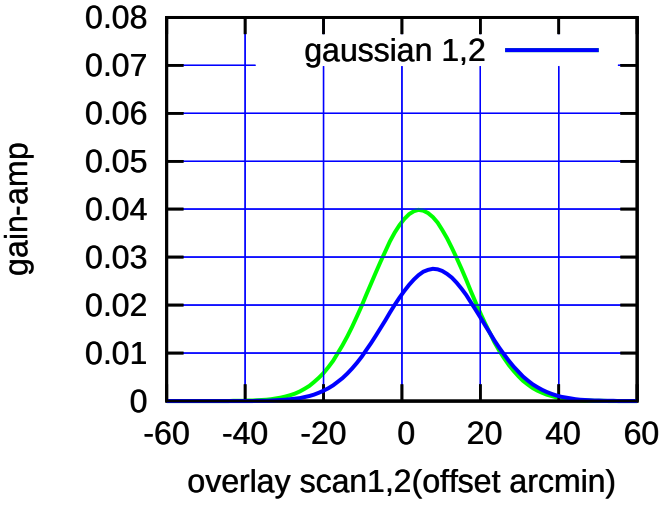


C13-175-AZ OFF= 8.6' (29.7')

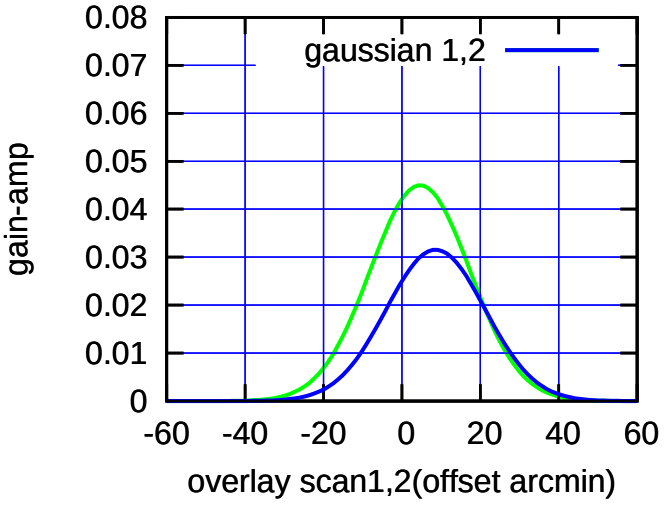


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 4.9'

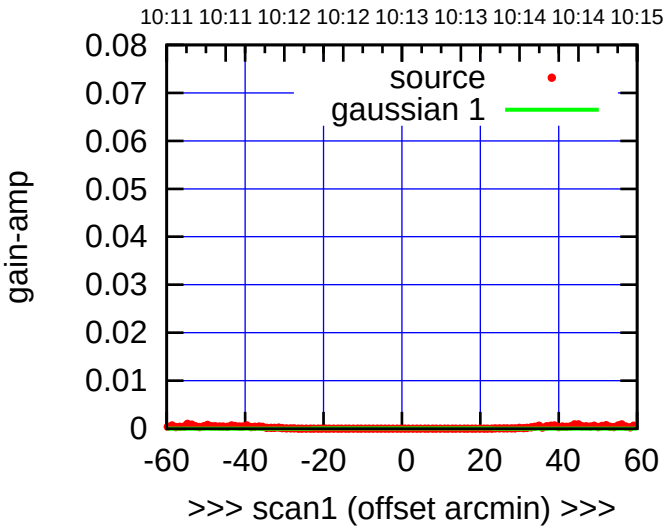


BACKLASH ERROR= 5.5'

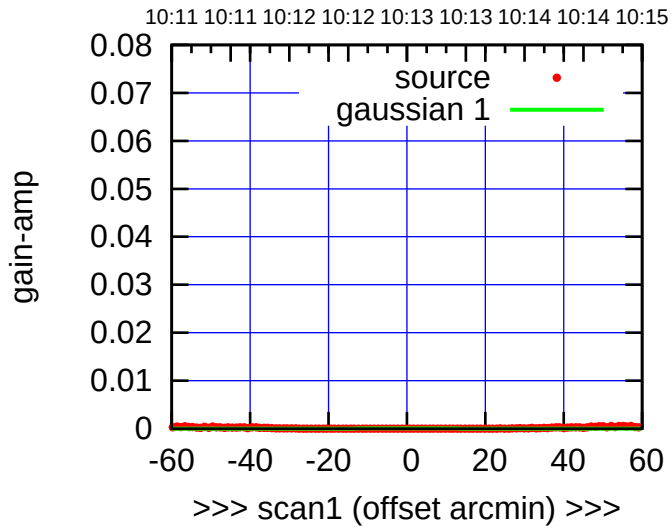


(1371 MHz.)

C14-130-AZ OFF= 0.0' (42.4')

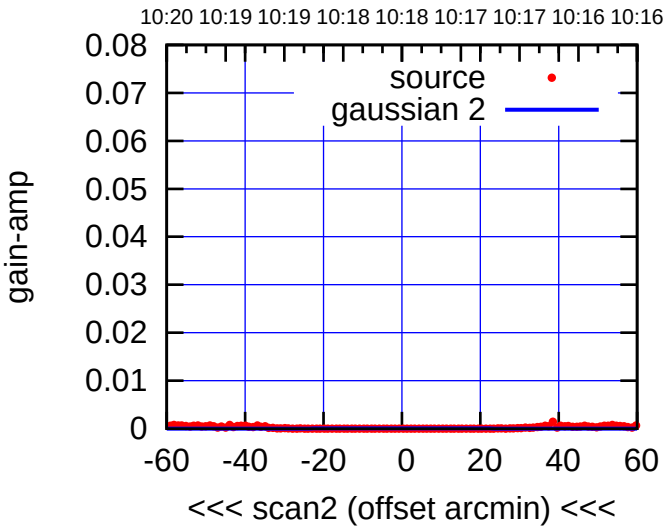


C14-175-AZ OFF= 0.0' (42.4')

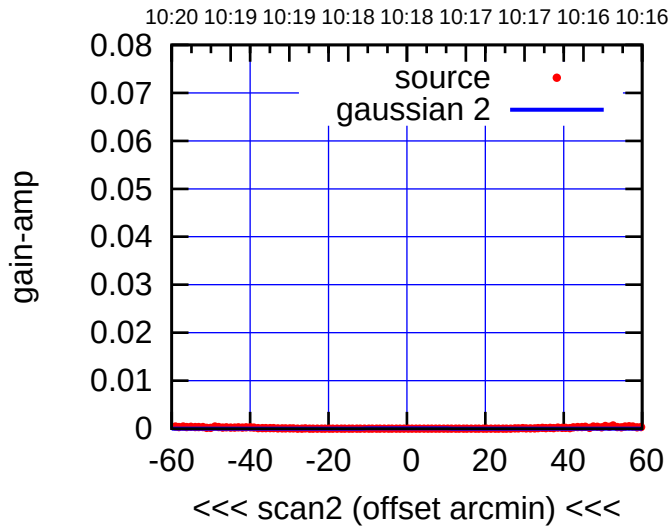


(+30'/m) 08Jun2017 10:13:00

C14-130-AZ OFF= 0.0' (42.4')

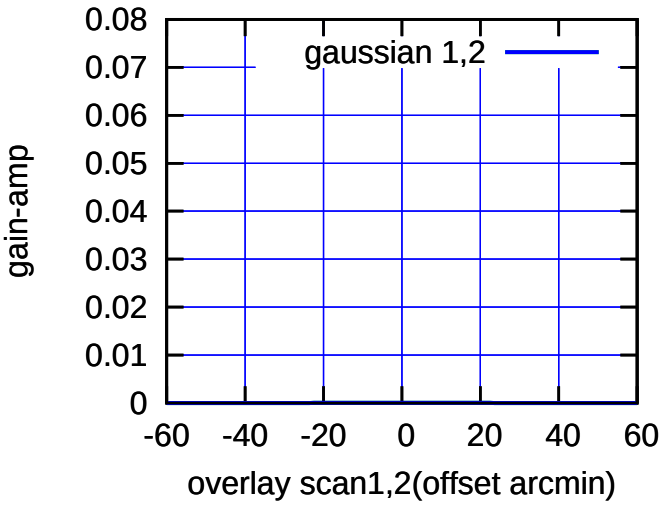


C14-175-AZ OFF= 0.0' (42.4')

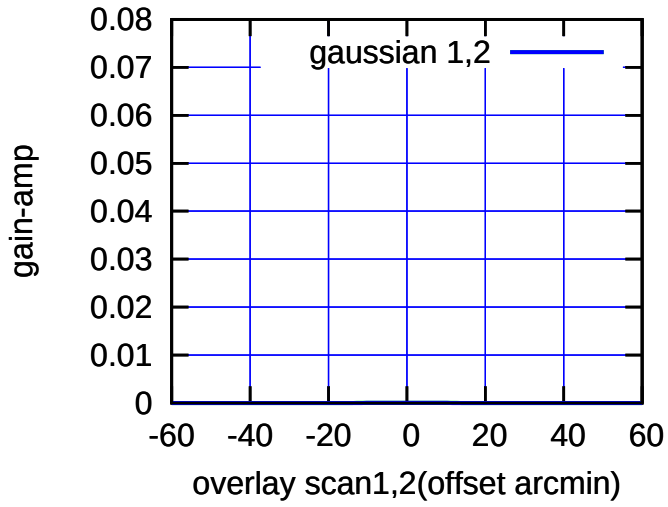


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.0'

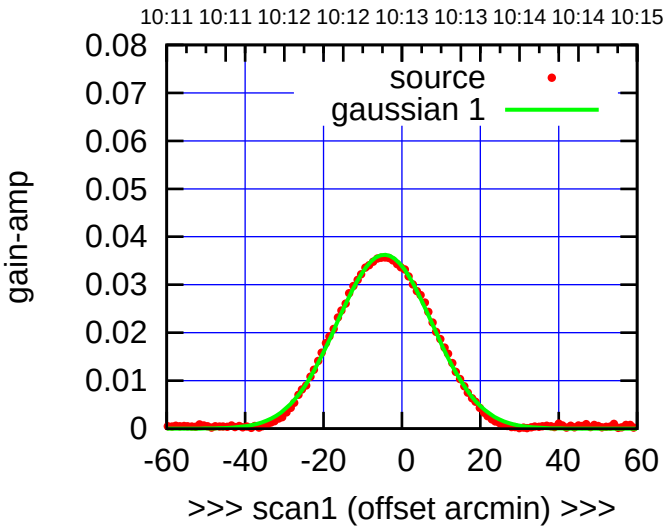


BACKLASH ERROR= 0.0'

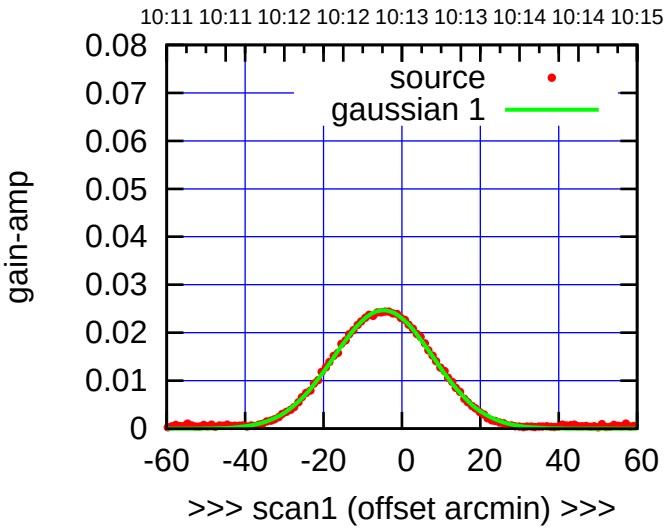


(1371 MHz.)

E02-130-AZ OFF= -4.5' (28.5')

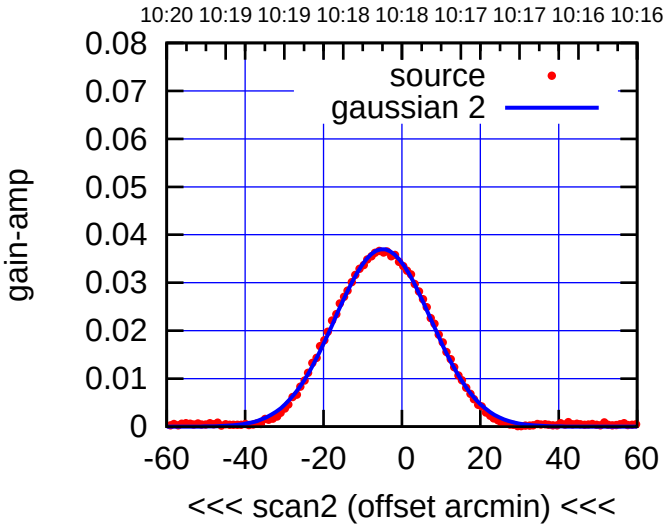


E02-175-AZ OFF= -4.7' (29.7')

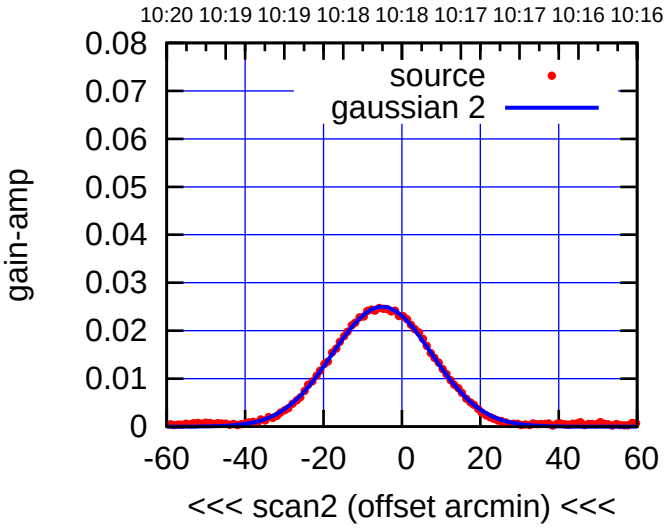


(+30'/m) 08Jun2017 10:13:00

E02-130-AZ OFF= -4.9' (28.8')

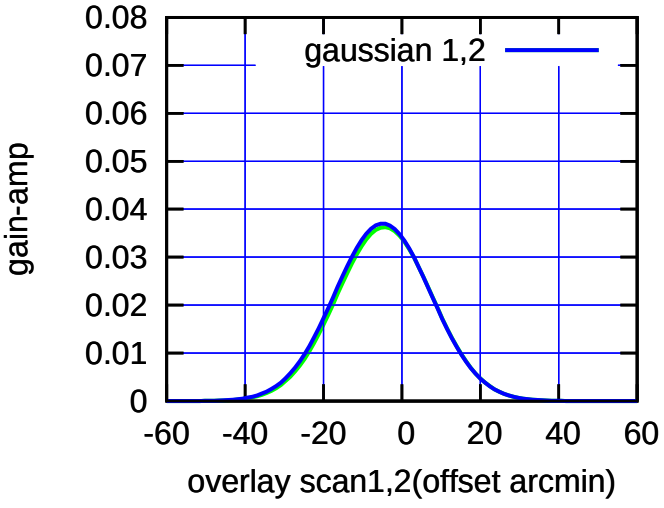


E02-175-AZ OFF= -5.1' (29.9')

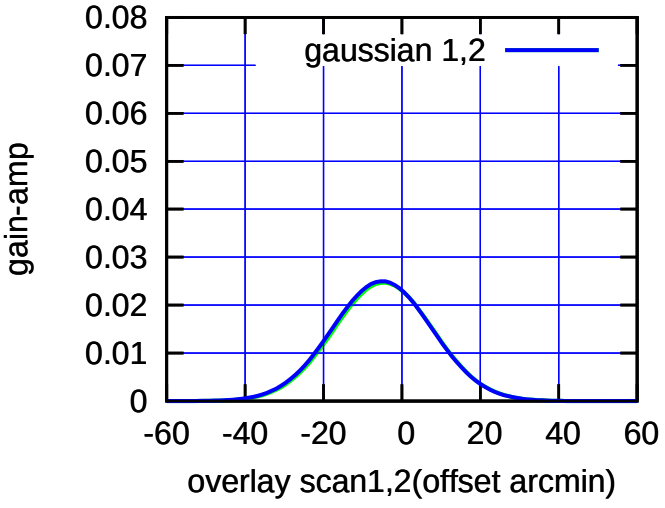


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.5'

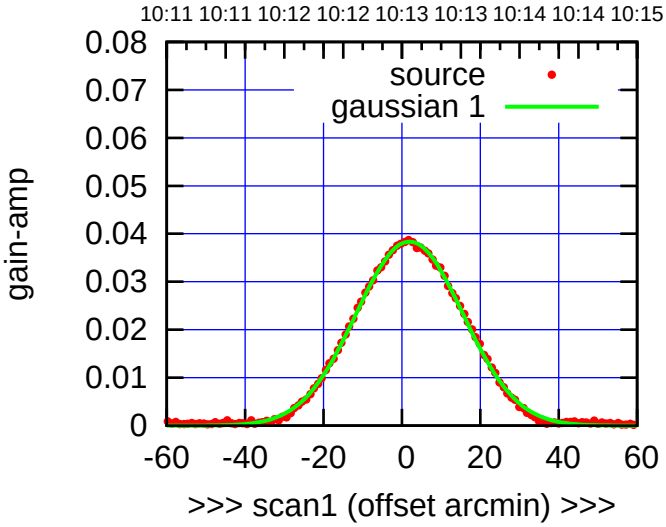


BACKLASH ERROR= 0.5'

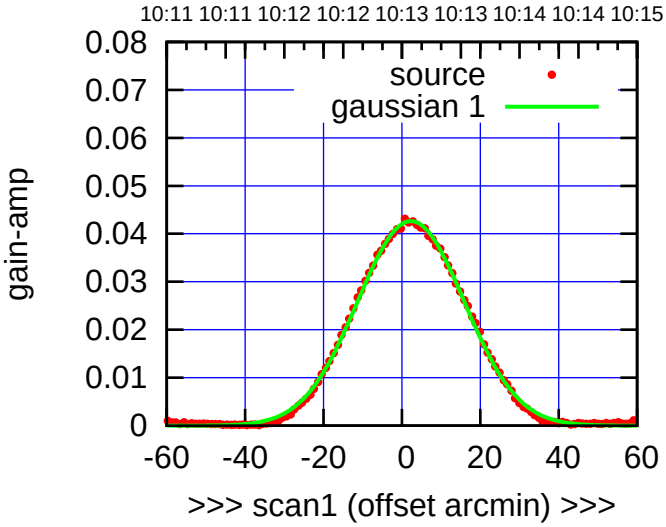


(1371 MHz.)

E03-130-AZ OFF= 1.9' (32.1')

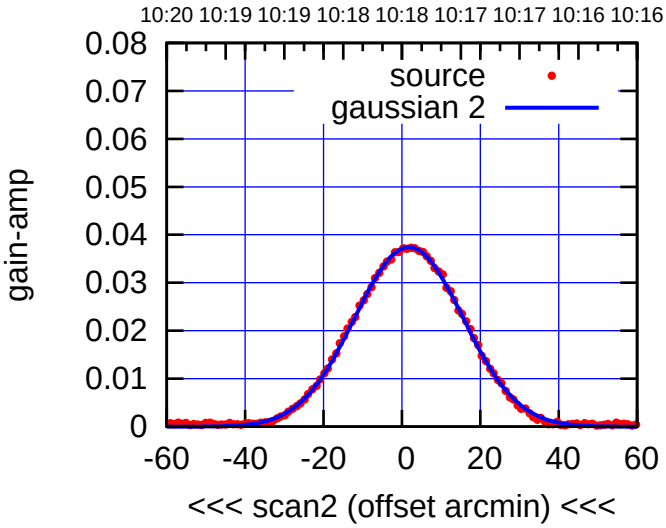


E03-175-AZ OFF= 2.3' (32.0')

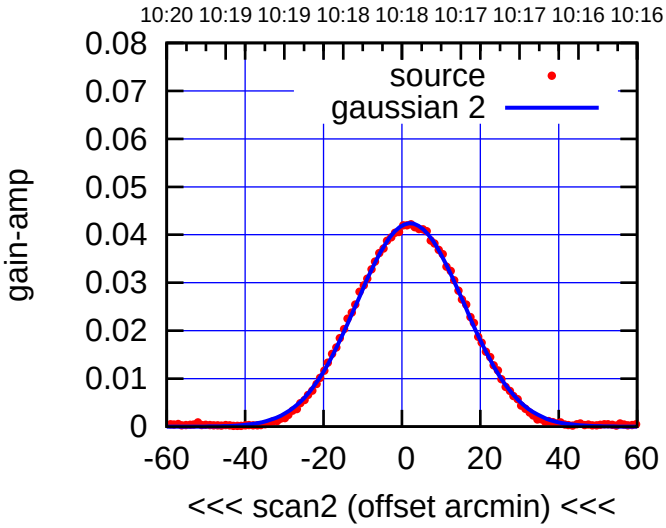


(+30'/m) 08Jun2017 10:13:00

E03-130-AZ OFF= 1.8' (32.6')

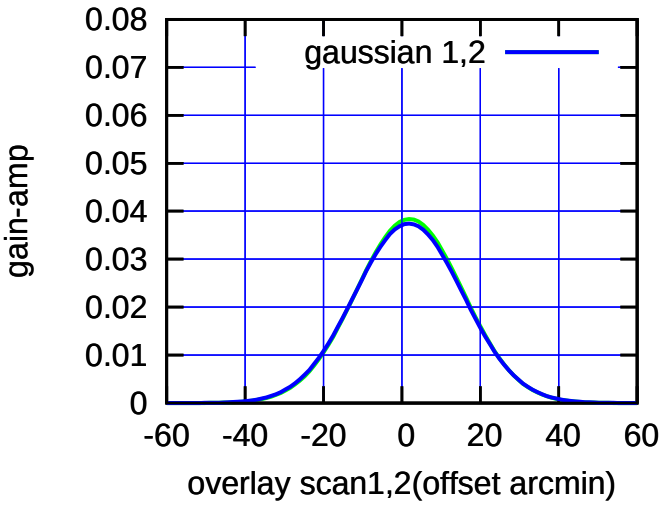


E03-175-AZ OFF= 2.1' (32.2')

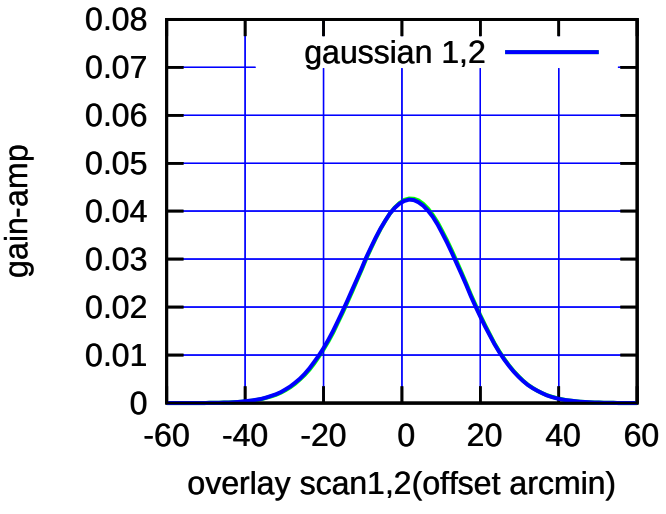


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.1'

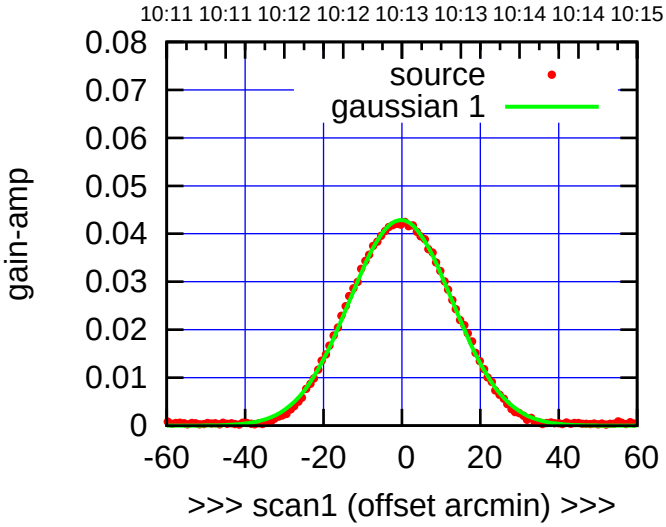


BACKLASH ERROR= 0.3'

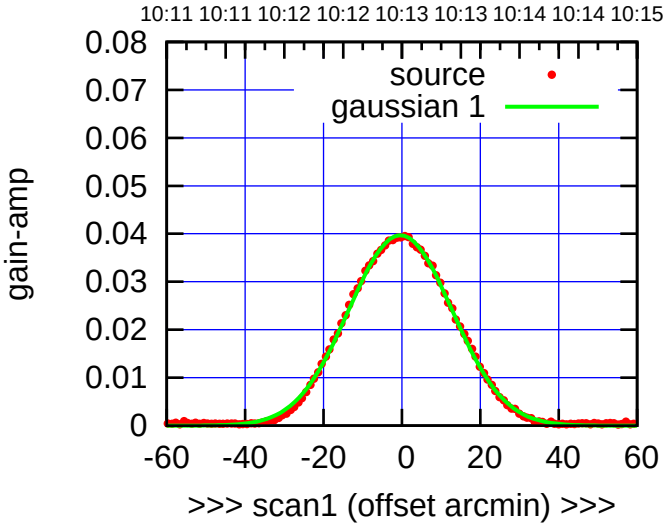


(1371 MHz.)

E04-130-AZ OFF= -0.3' (30.9')

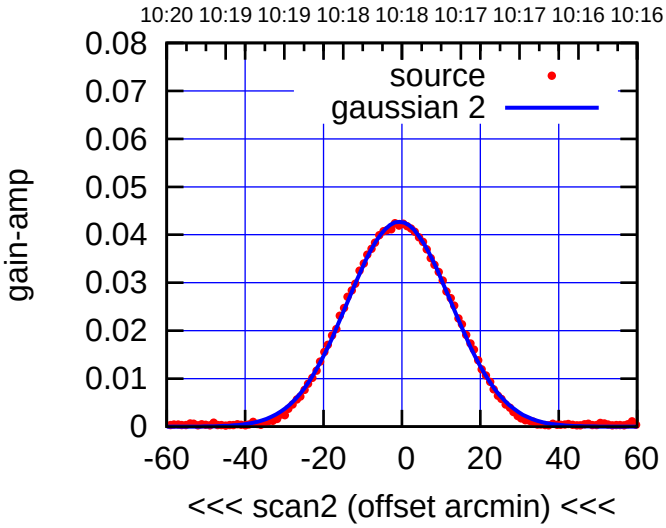


E04-175-AZ OFF= -0.4' (31.1')

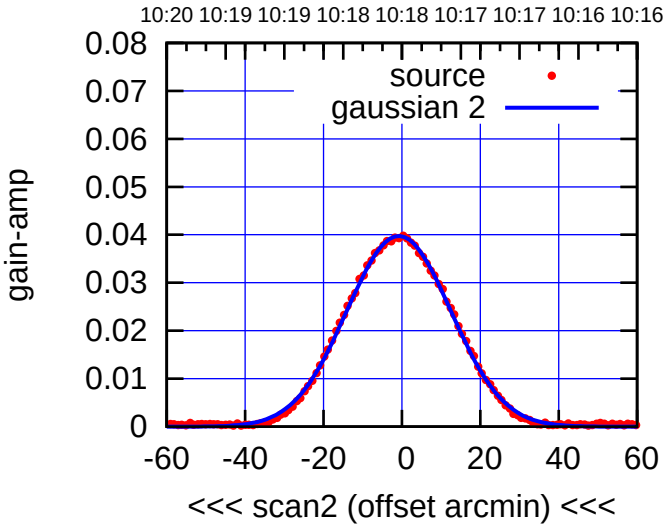


(+30'/m) 08Jun2017 10:13:00

E04-130-AZ OFF= -0.7' (31.2')

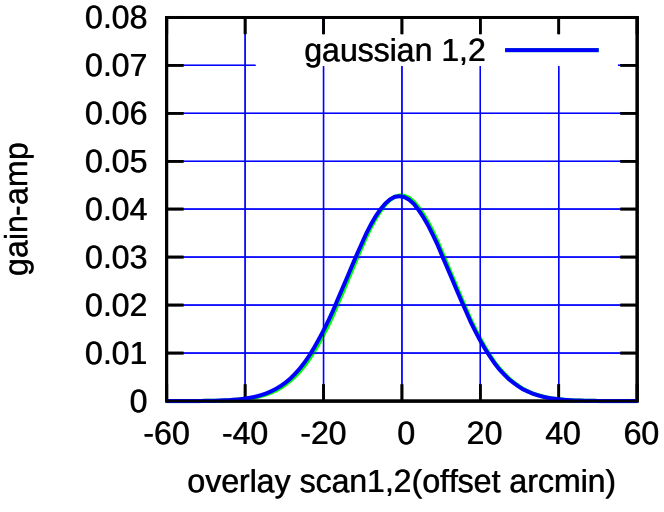


E04-175-AZ OFF= -0.8' (31.3')

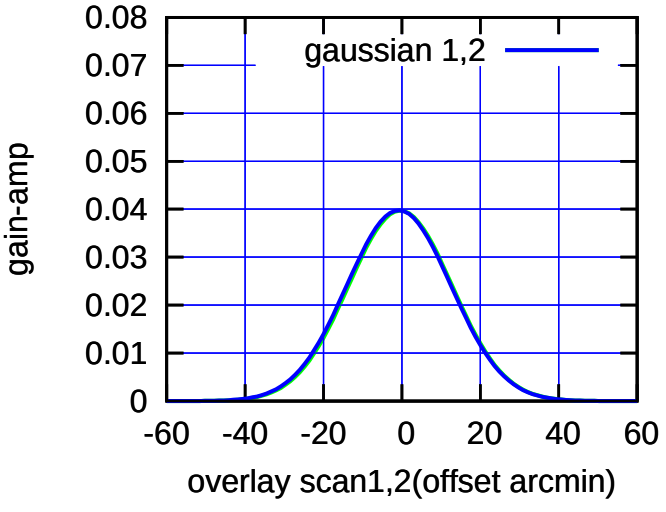


(-30'/m) 08Jun2017 10:18:00

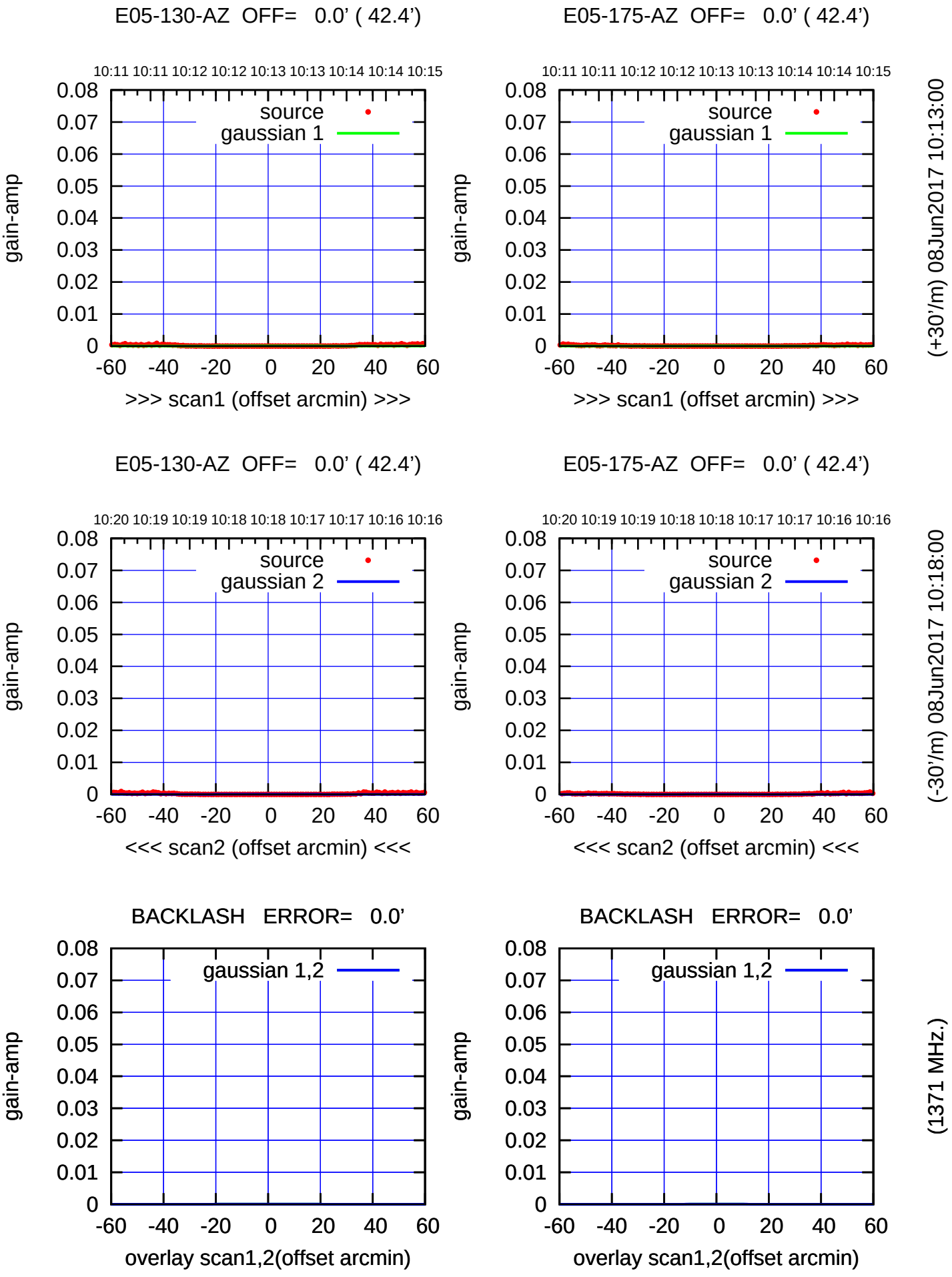
BACKLASH ERROR= 0.5'



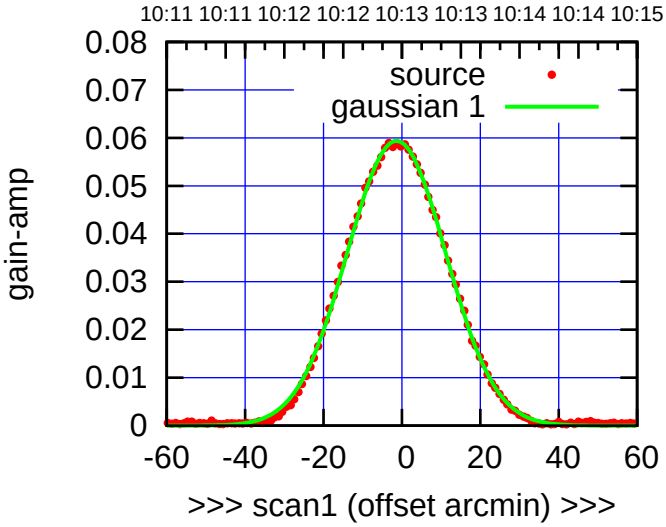
BACKLASH ERROR= 0.5'



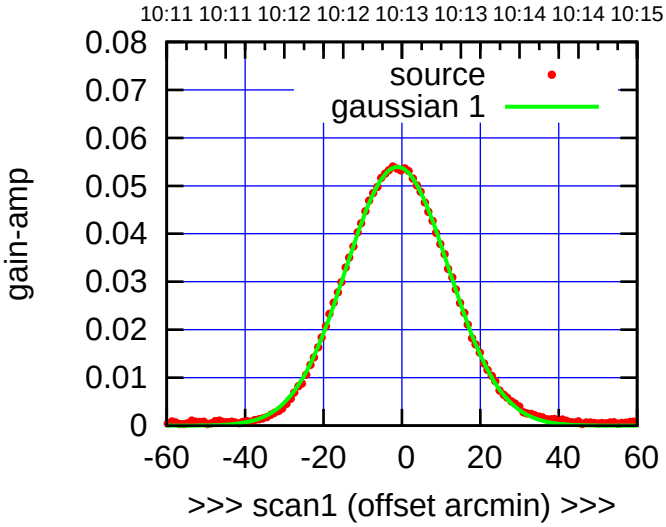
(1371 MHz.)


E05-130-AZ OFF= 0.0' (42.4')
10:11 10:11 10:12 10:12 10:13 10:13 10:14 10:14 10:15
source
gaussian 1
gain-amp
>>> scan1 (offset arcmin) >>>
E05-175-AZ OFF= 0.0' (42.4')
10:11 10:11 10:12 10:12 10:13 10:13 10:14 10:14 10:15
source
gaussian 1
gain-amp
>>> scan1 (offset arcmin) >>>
(+30'/m) 08Jun2017 10:13:00
E05-130-AZ OFF= 0.0' (42.4')
10:20 10:19 10:19 10:18 10:18 10:17 10:17 10:16 10:16
source
gaussian 2
gain-amp
<<< scan2 (offset arcmin) <<<
E05-175-AZ OFF= 0.0' (42.4')
10:20 10:19 10:19 10:18 10:18 10:17 10:17 10:16 10:16
source
gaussian 2
gain-amp
<<< scan2 (offset arcmin) <<<
(-30'/m) 08Jun2017 10:18:00
BACKLASH ERROR= 0.0'
gaussian 1,2
gain-amp
overlay scan1,2(offset arcmin)
BACKLASH ERROR= 0.0'
gaussian 1,2
gain-amp
overlay scan1,2(offset arcmin)
(1371 MHz.)

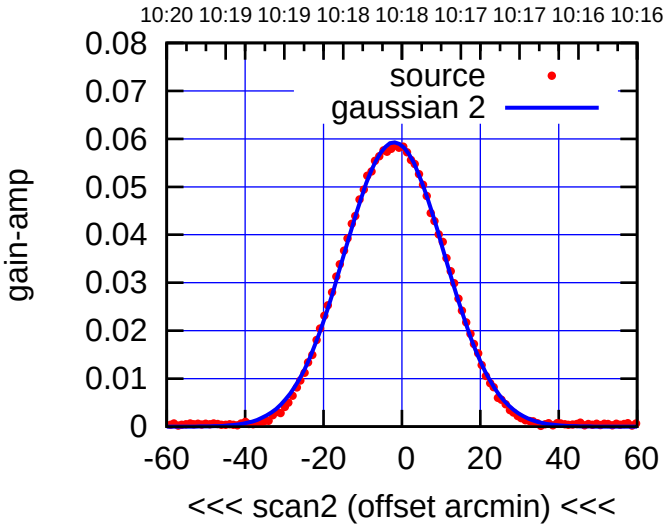
E06-130-AZ OFF= -1.4' (29.6')



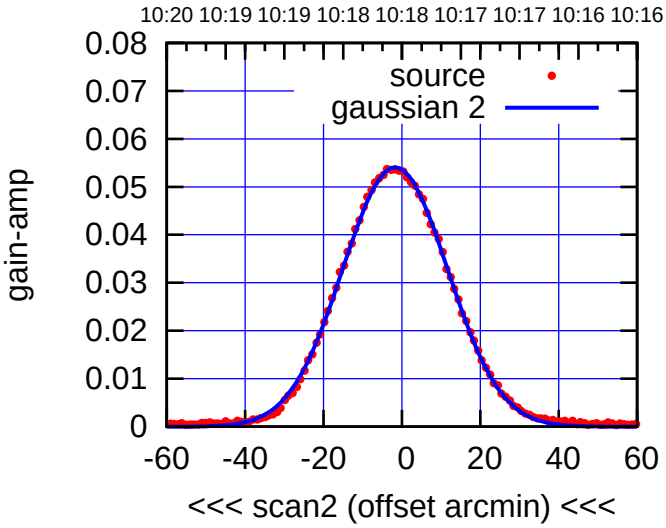
E06-175-AZ OFF= -1.2' (30.9')



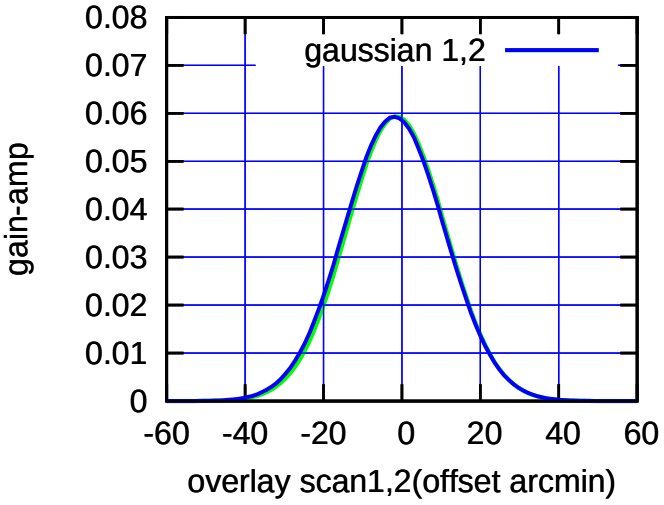
E06-130-AZ OFF= -2.0' (30.1')



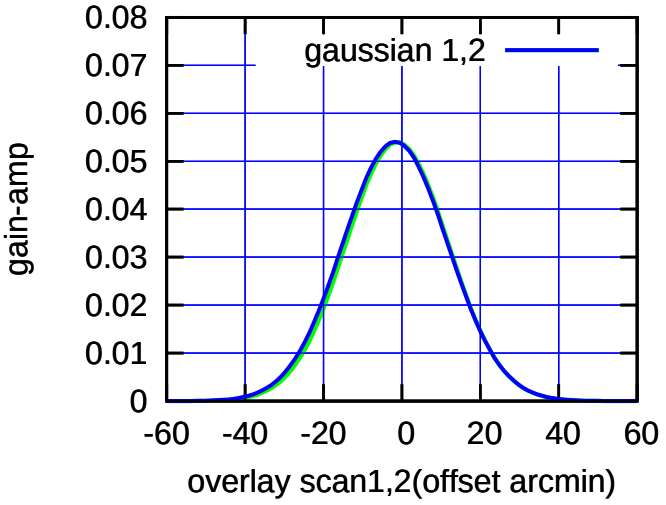
E06-175-AZ OFF= -1.7' (31.6')



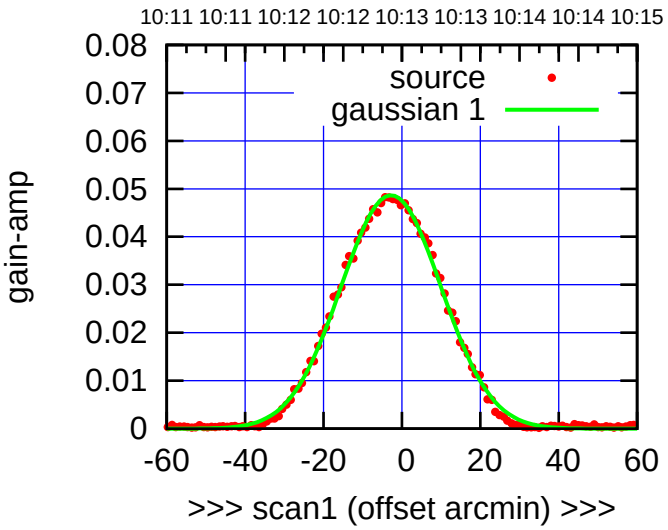
BACKLASH ERROR= 0.8'



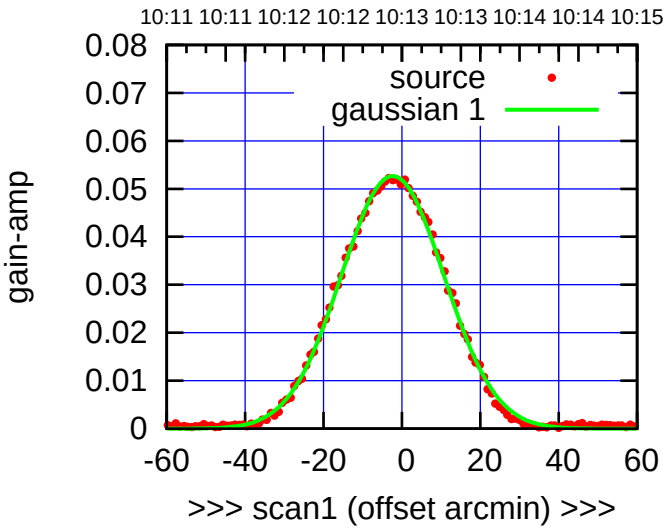
BACKLASH ERROR= 0.7'



S01-130-AZ OFF= -2.8' (30.1')

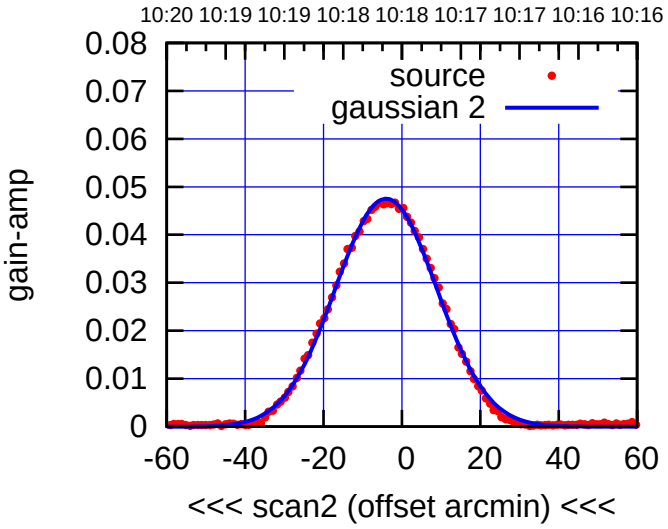


S01-175-AZ OFF= -2.4' (30.8')

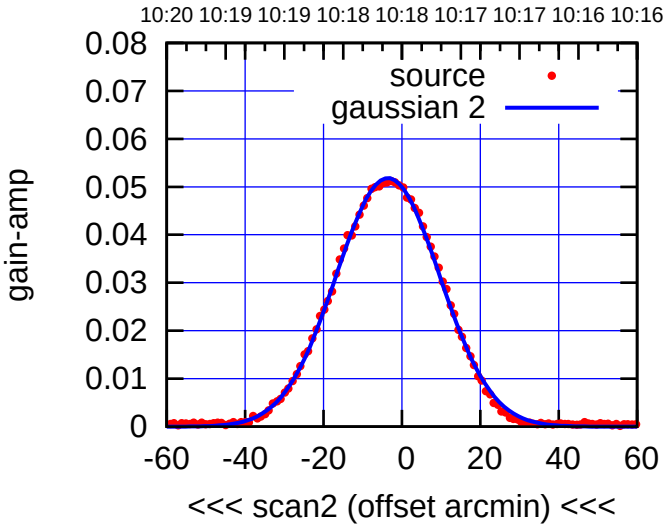


(+30'/m) 08Jun2017 10:13:00

S01-130-AZ OFF= -4.0' (30.4')

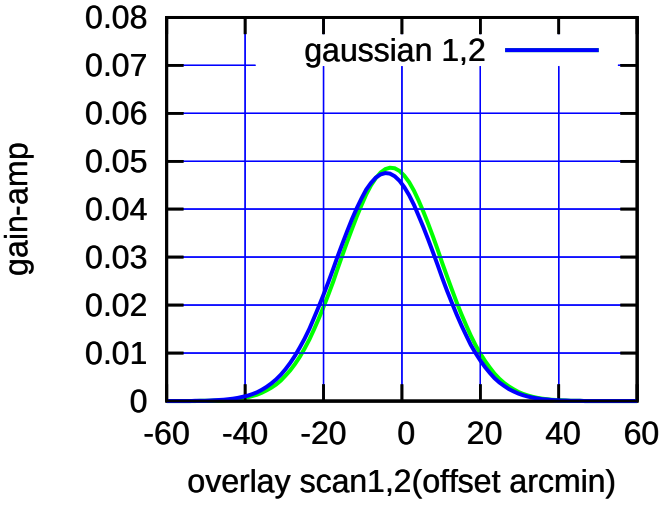


S01-175-AZ OFF= -3.6' (31.1')

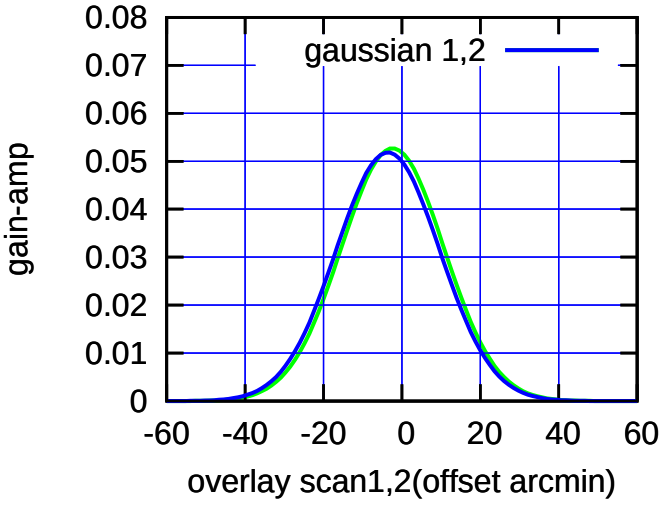


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 1.6'

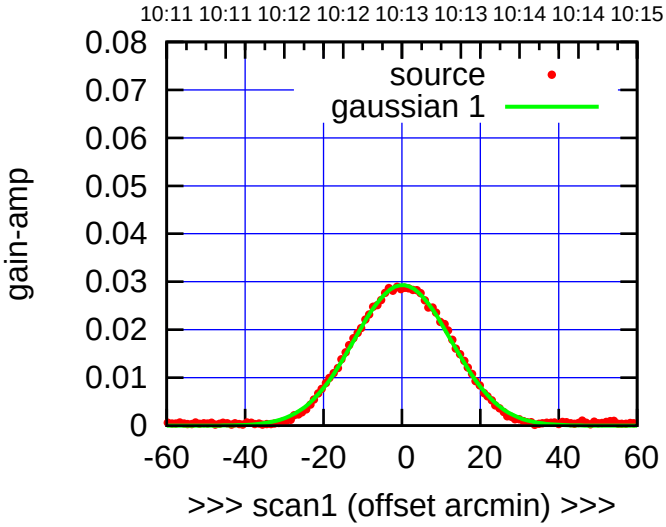


BACKLASH ERROR= 1.6'

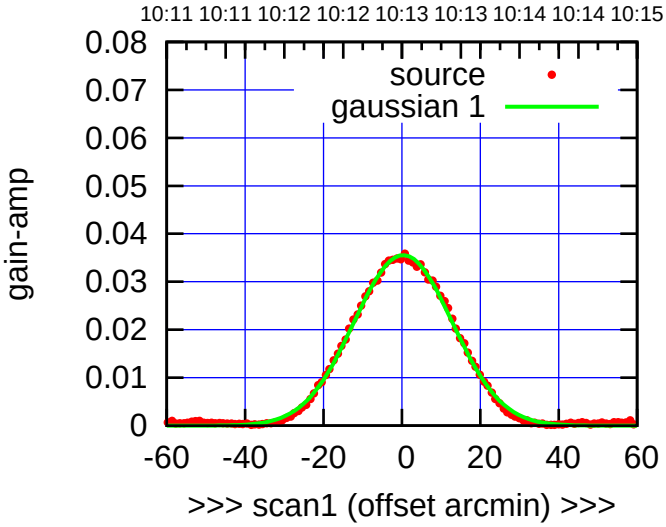


(1371 MHz.)

S02-130-AZ OFF= 0.1' (29.2')

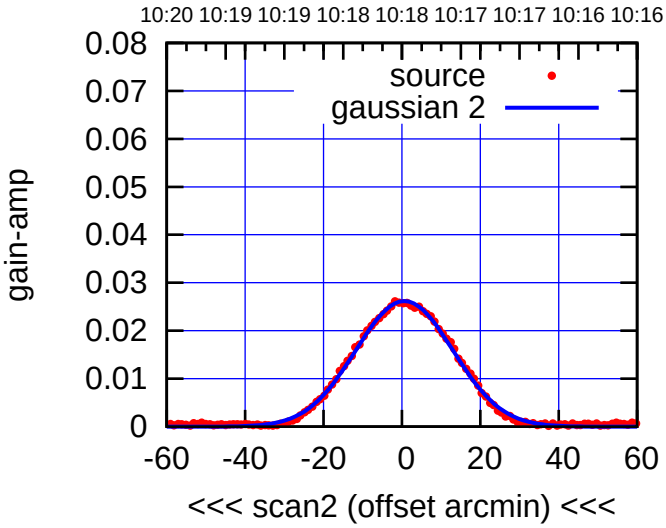


S02-175-AZ OFF= 0.3' (29.5')

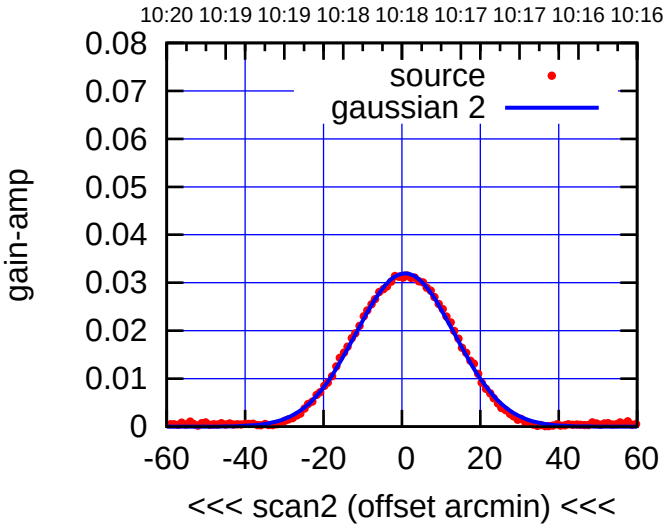


(+30'/m) 08Jun2017 10:13:00

S02-130-AZ OFF= 0.6' (29.2')

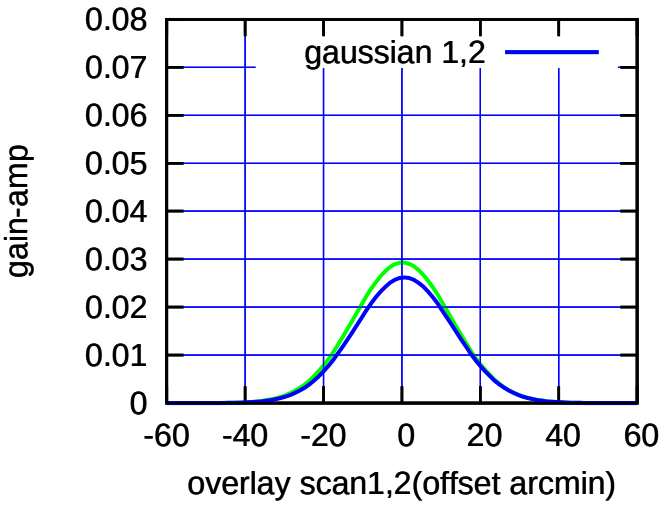


S02-175-AZ OFF= 0.8' (29.7')

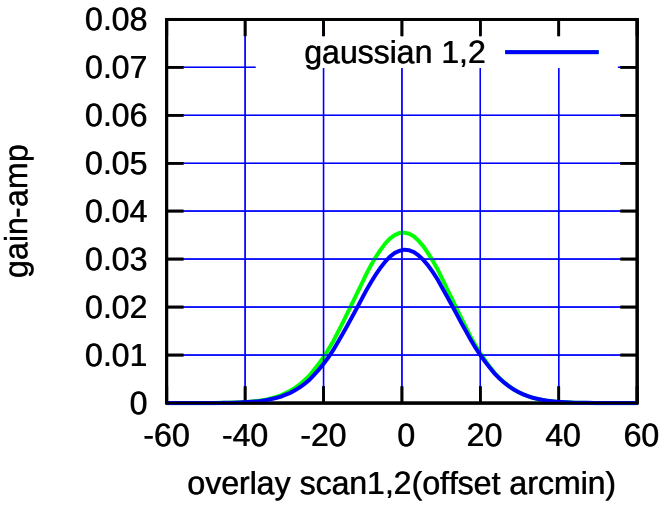


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.7'

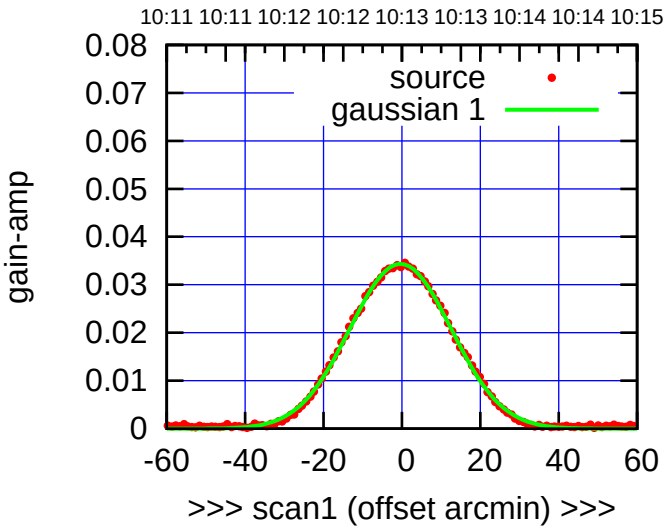


BACKLASH ERROR= 0.7'

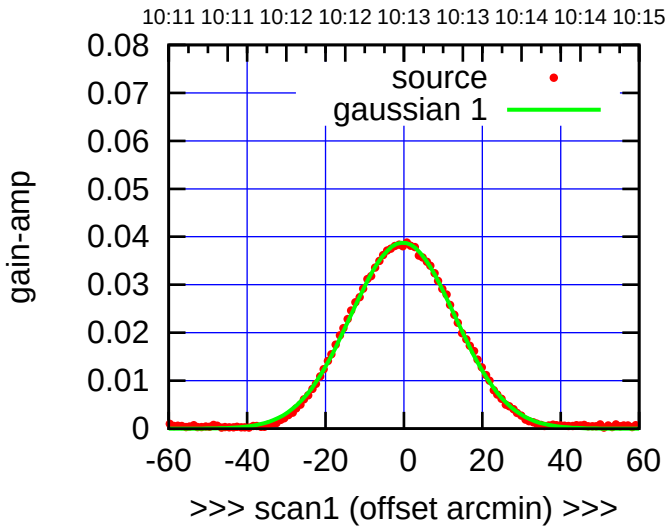


(1371 MHz.)

S03-130-AZ OFF= -0.4' (30.4')

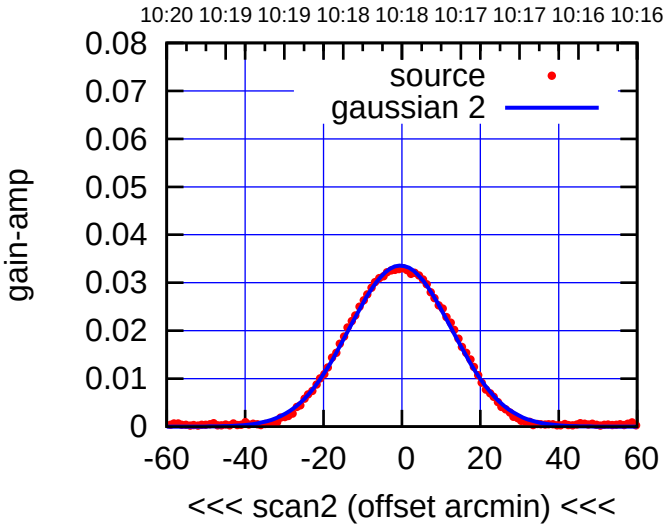


S03-175-AZ OFF= -0.3' (31.3')

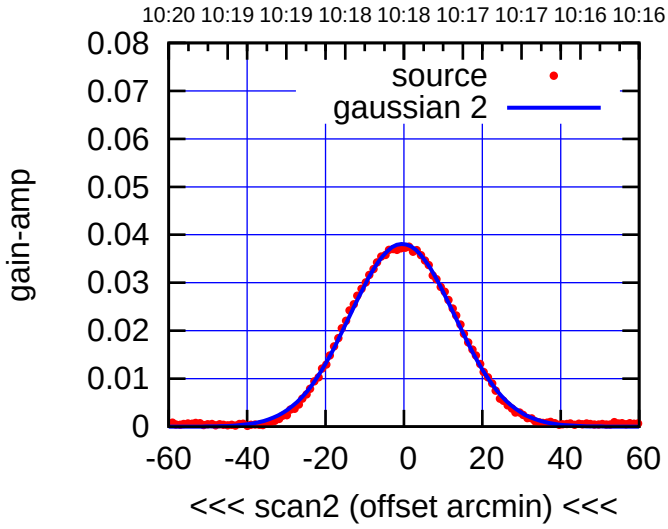


(+30'/m) 08Jun2017 10:13:00

S03-130-AZ OFF= -0.4' (30.8')

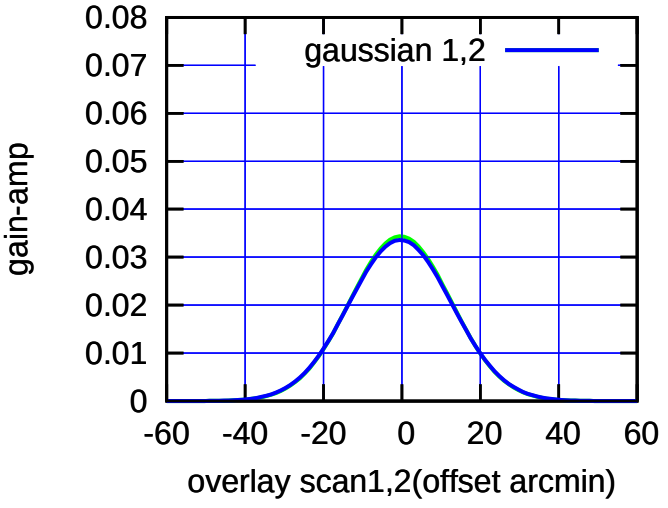


S03-175-AZ OFF= -0.4' (31.6')

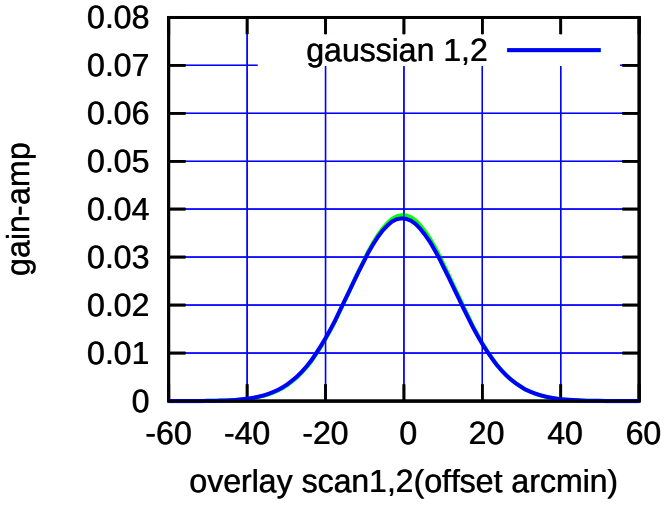


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.0'

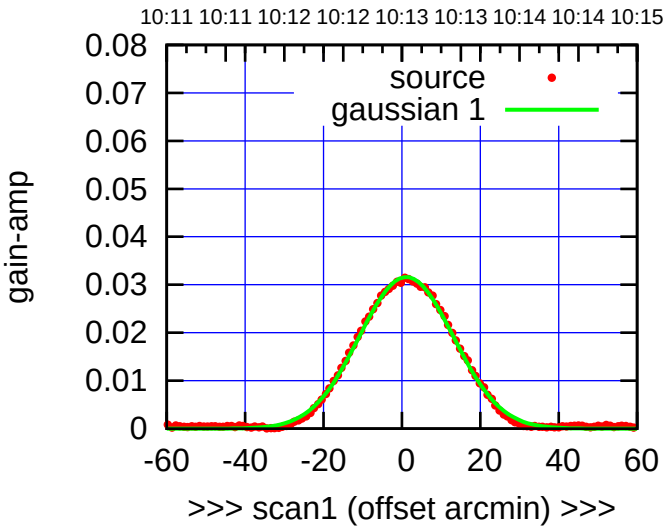


BACKLASH ERROR= 0.1'

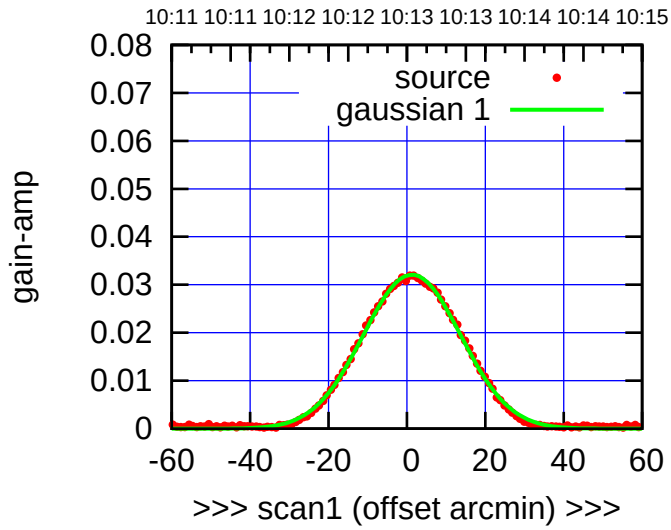


(1371 MHz.)

S04-130-AZ OFF= 1.1' (28.3')

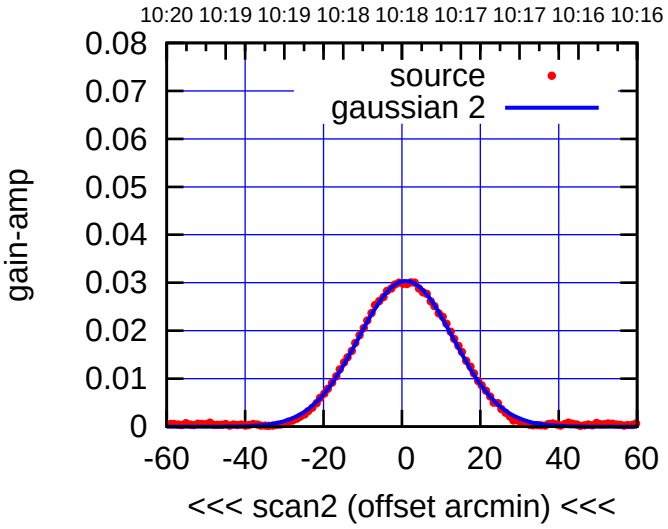


S04-175-AZ OFF= 1.3' (29.3')

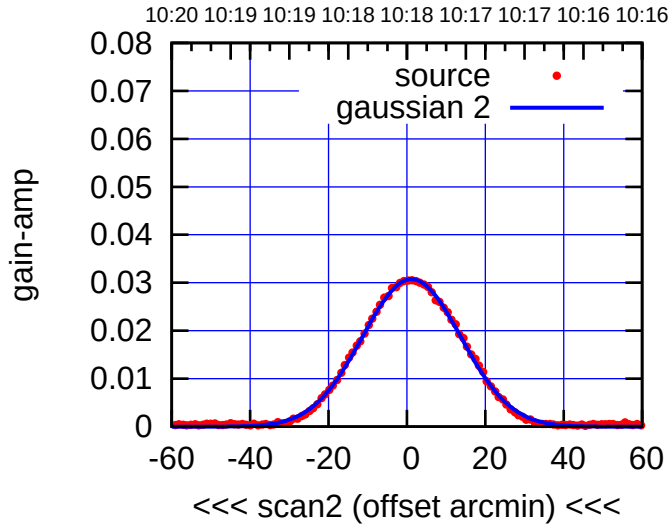


(+30'/m) 08Jun2017 10:13:00

S04-130-AZ OFF= 1.0' (28.5')

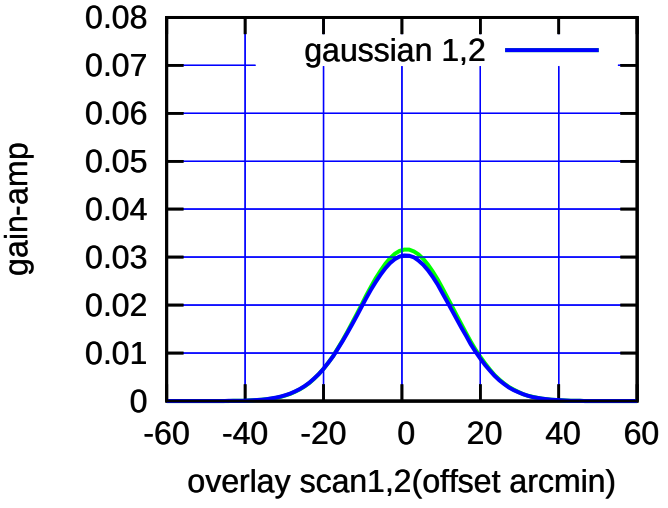


S04-175-AZ OFF= 1.2' (29.7')

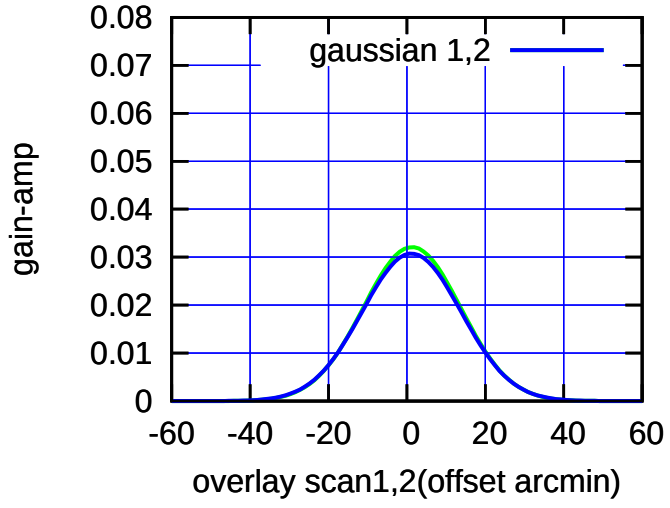


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.1'

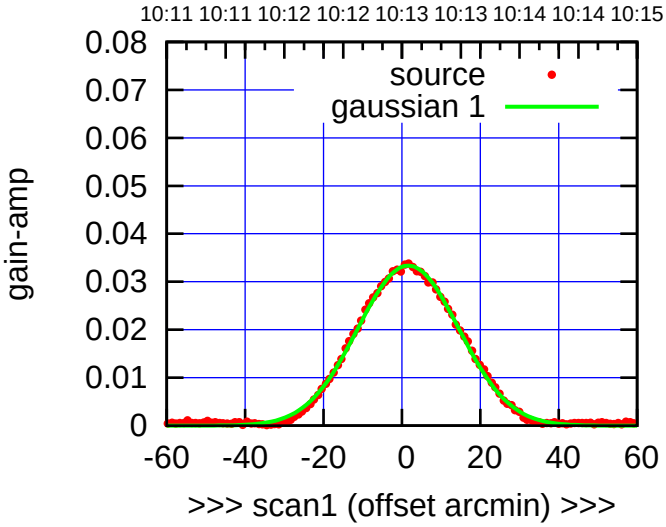


BACKLASH ERROR= 0.1'

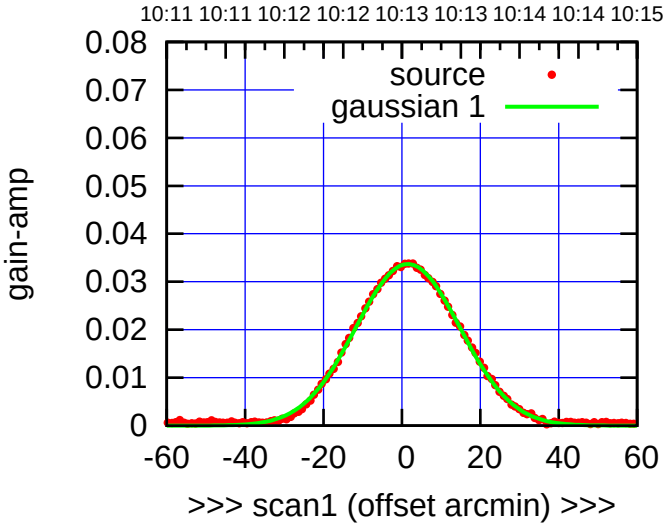


(1371 MHz.)

S06-130-AZ OFF= 1.6' (30.3')

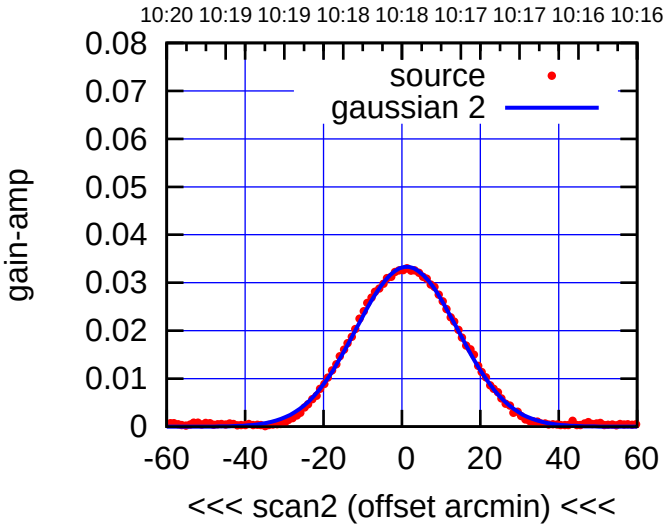


S06-175-AZ OFF= 1.5' (31.3')

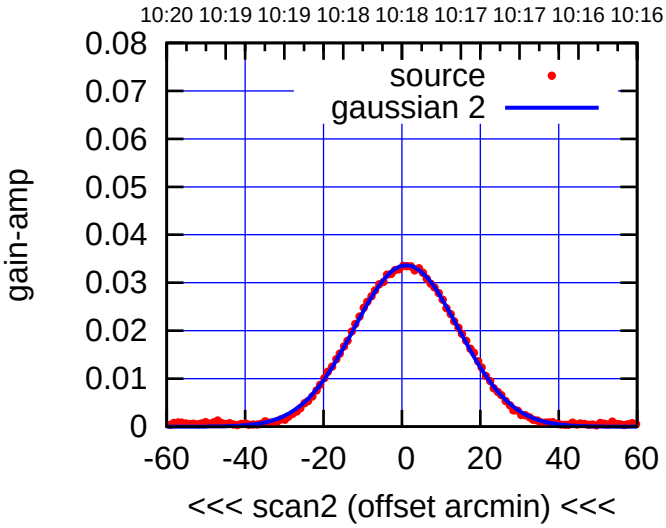


(+30'/m) 08Jun2017 10:13:00

S06-130-AZ OFF= 1.2' (30.7')

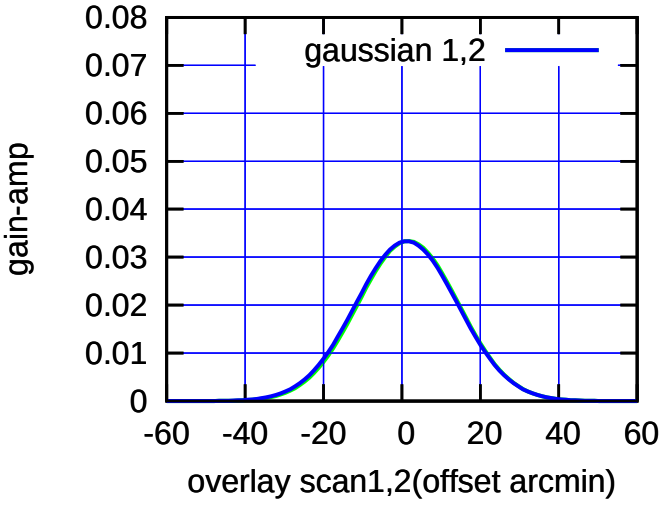


S06-175-AZ OFF= 1.1' (31.5')

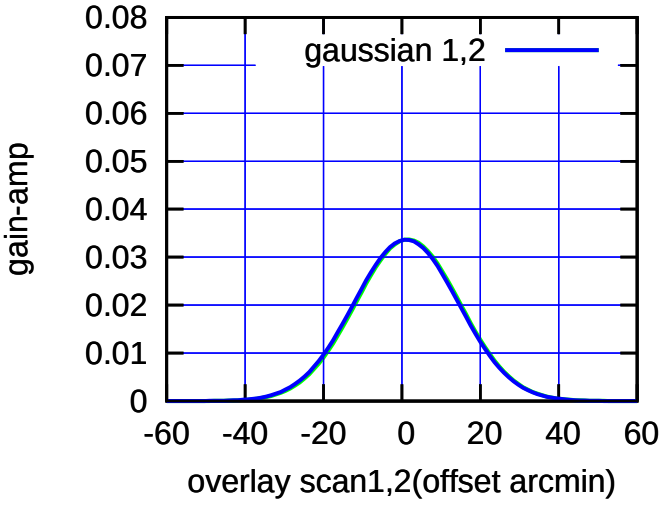


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.5'

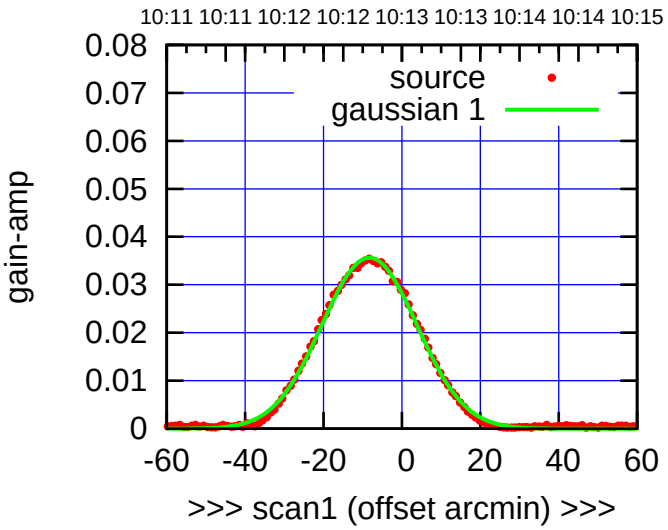


BACKLASH ERROR= 0.5'

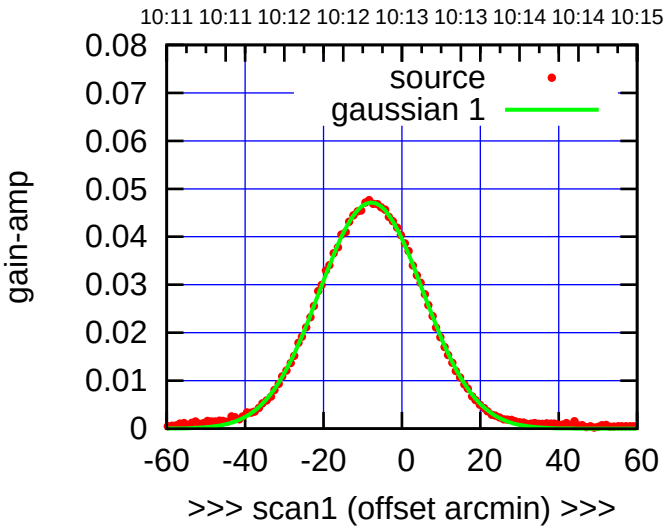


(1371 MHz.)

W01-130-AZ OFF= -8.3' (28.5')

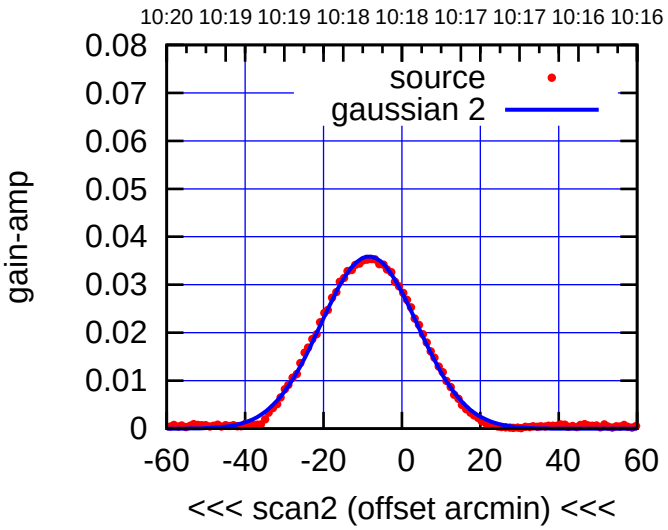


W01-175-AZ OFF= -7.8' (31.1')

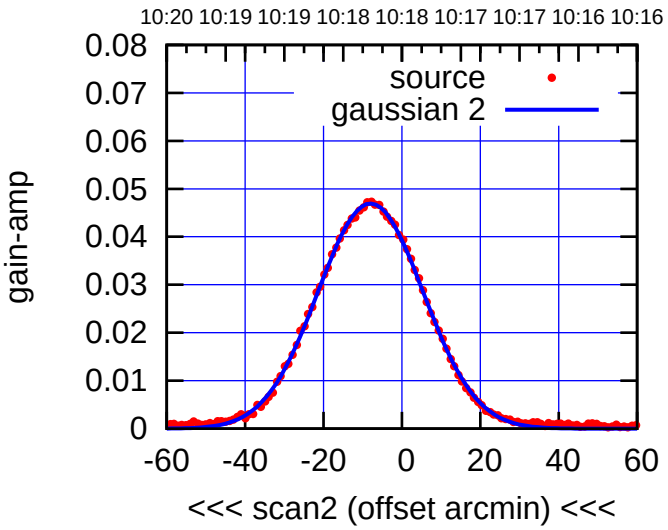


(+30'/m) 08Jun2017 10:13:00

W01-130-AZ OFF= -8.4' (29.0')

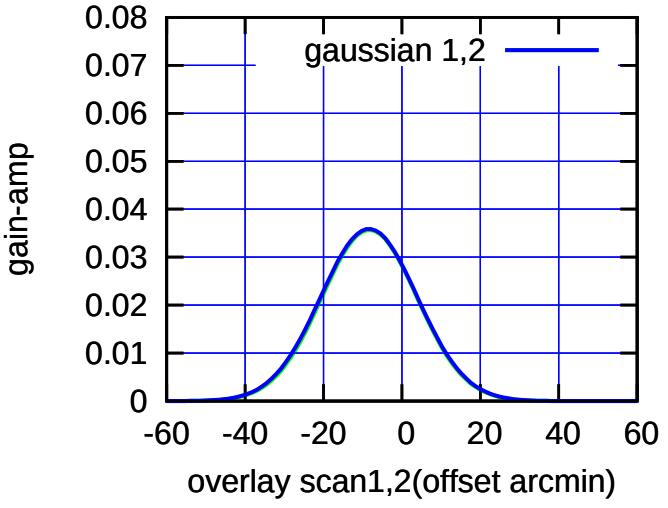


W01-175-AZ OFF= -8.0' (31.6')

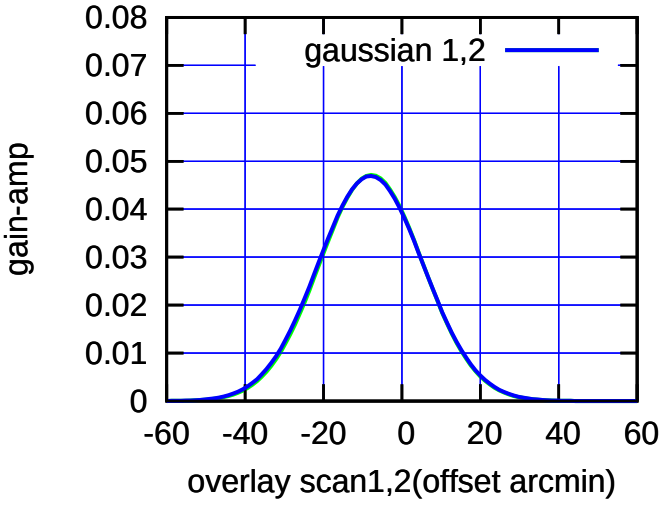


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.1'

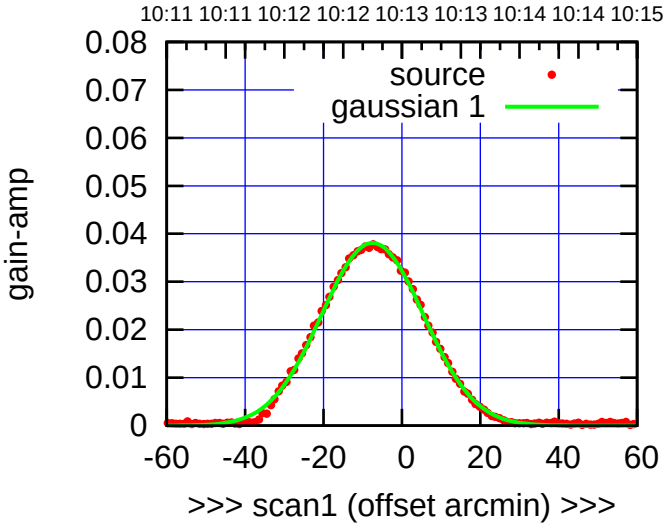


BACKLASH ERROR= 0.3'

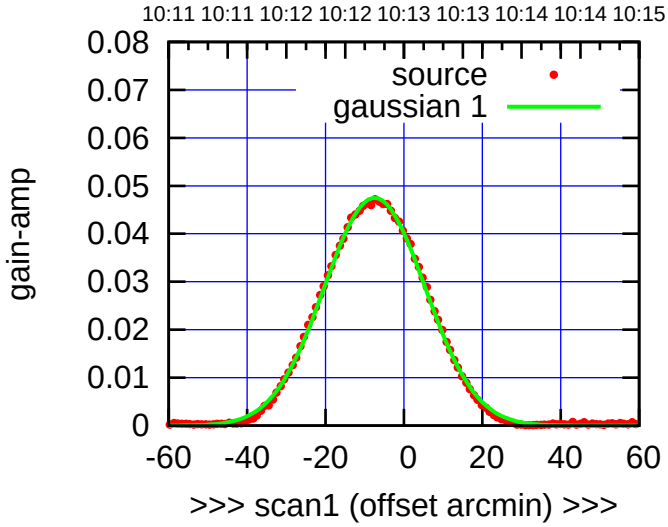


(1371 MHz.)

W02-130-AZ OFF= -7.5' (30.6')

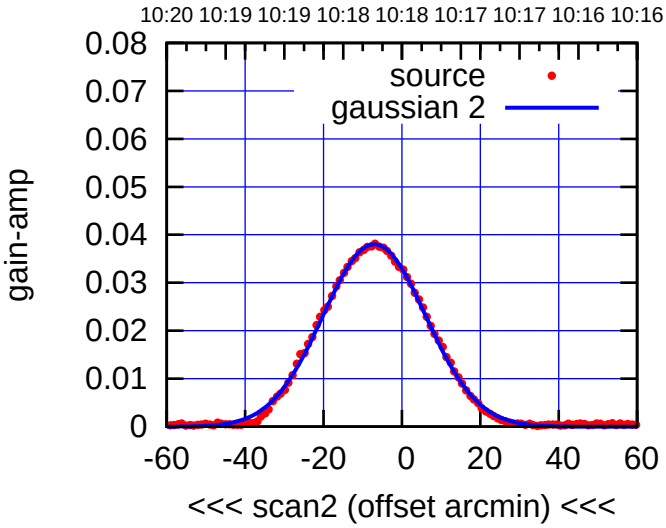


W02-175-AZ OFF= -7.5' (30.3')

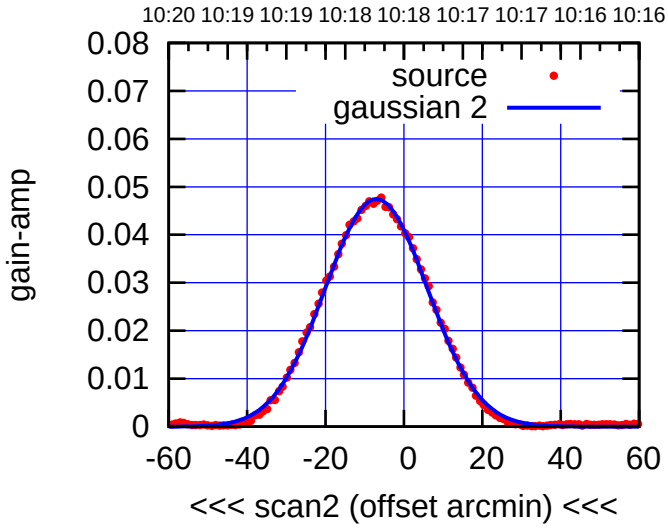


(+30'/m) 08Jun2017 10:13:00

W02-130-AZ OFF= -7.0' (30.9')

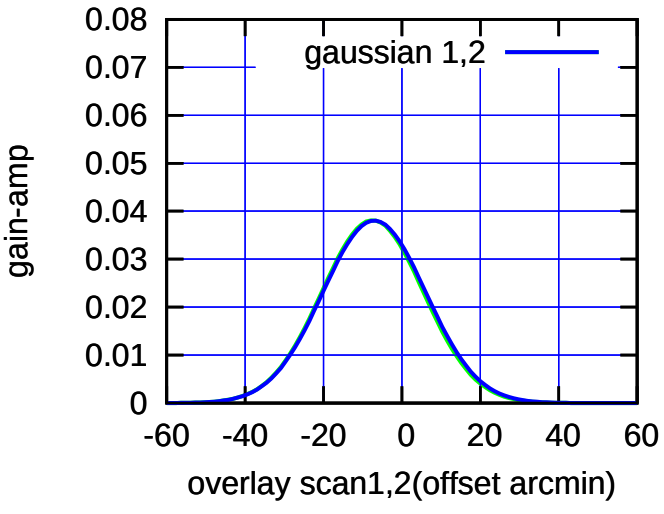


W02-175-AZ OFF= -7.0' (30.8')

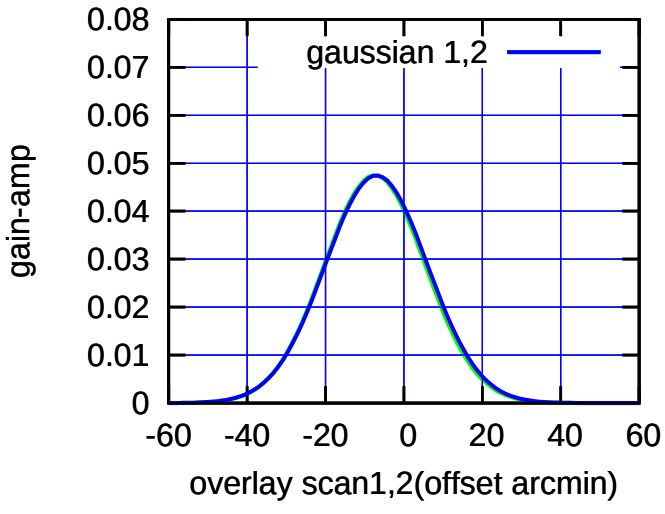


(-30'/m) 08Jun2017 10:18:00

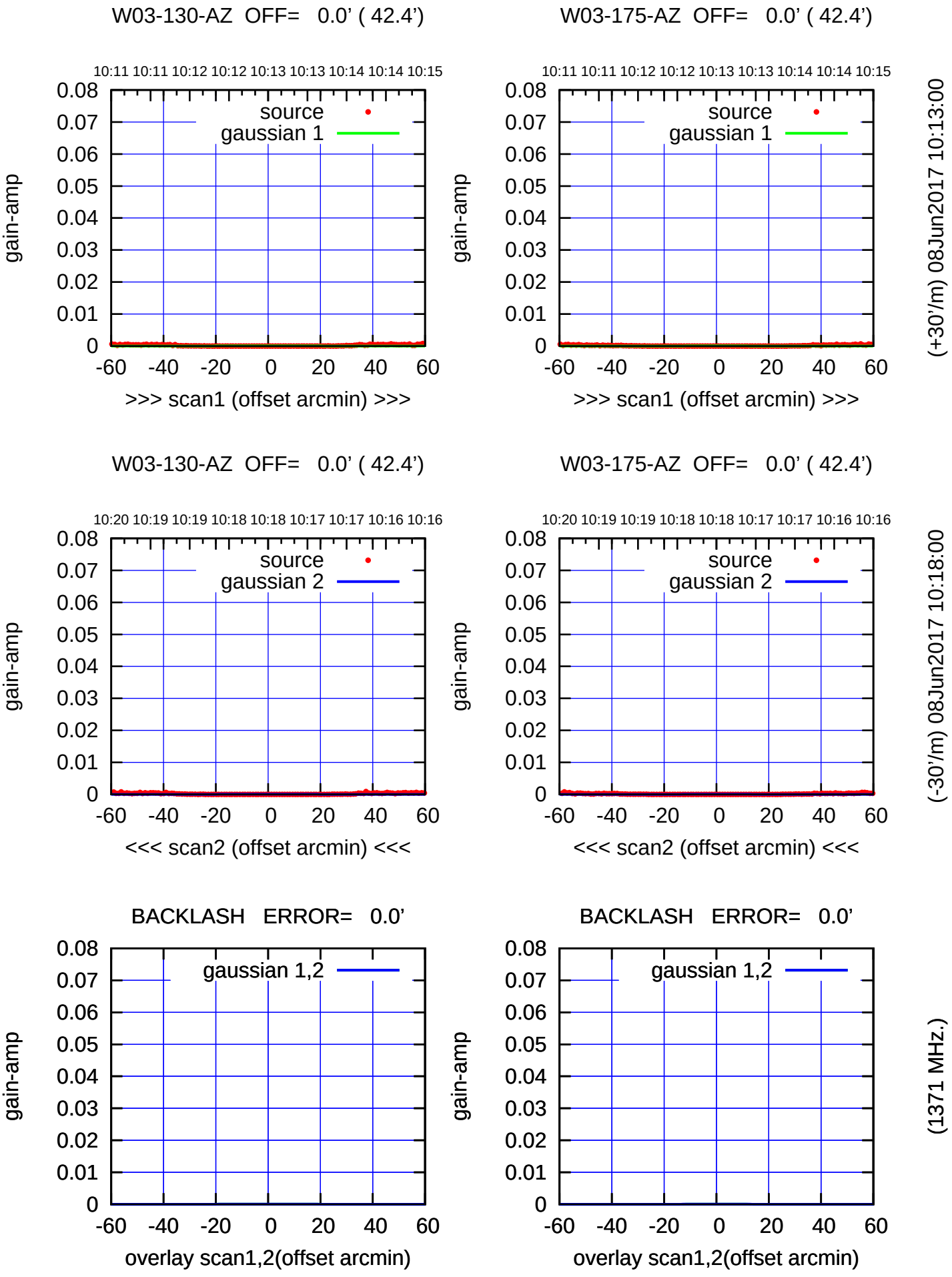
BACKLASH ERROR= 0.7'



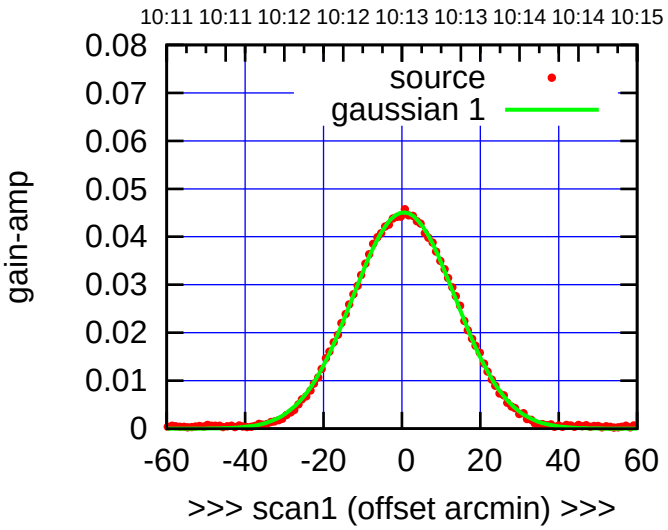
BACKLASH ERROR= 0.7'



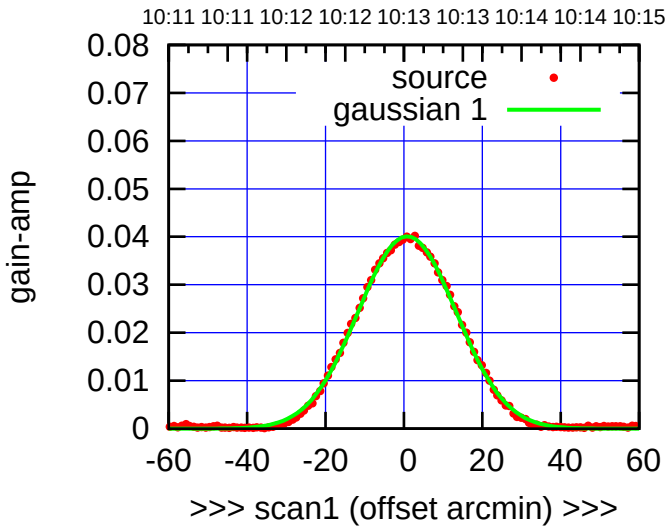
(1371 MHz.)


W03-130-AZ OFF= 0.0' (42.4')
W03-175-AZ OFF= 0.0' (42.4')
10:11 10:11 10:12 10:12 10:13 10:13 10:14 10:14 10:15
source
gaussian 1
gain-amp
>>> scan1 (offset arcmin) >>>
(+30'/m) 08Jun2017 10:13:00
W03-130-AZ OFF= 0.0' (42.4')
W03-175-AZ OFF= 0.0' (42.4')
10:20 10:19 10:19 10:18 10:18 10:17 10:17 10:16 10:16
source
gaussian 2
gain-amp
<<< scan2 (offset arcmin) <<<
(-30'/m) 08Jun2017 10:18:00
BACKLASH ERROR= 0.0'
BACKLASH ERROR= 0.0'
gaussian 1,2
gain-amp
overlay scan1,2(offset arcmin)
(1371 MHz.)

W04-130-AZ OFF= 0.5’ (30.8’)

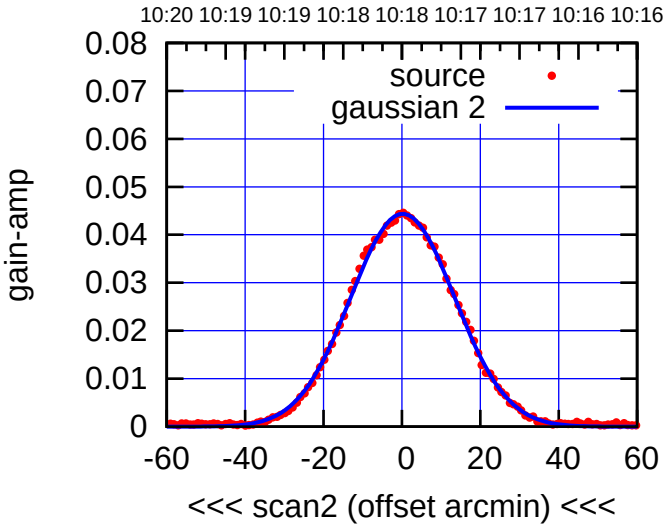


W04-175-AZ OFF= 0.8’ (29.5’)

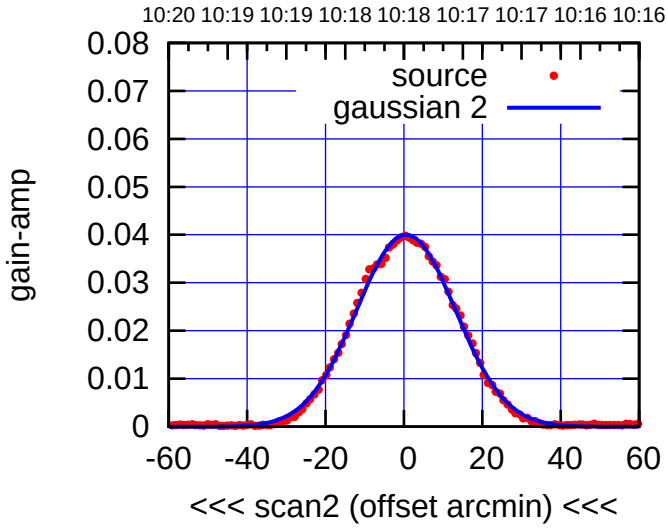


(+30’/m) 08Jun2017 10:13:00

W04-130-AZ OFF= 0.2’ (31.3’)

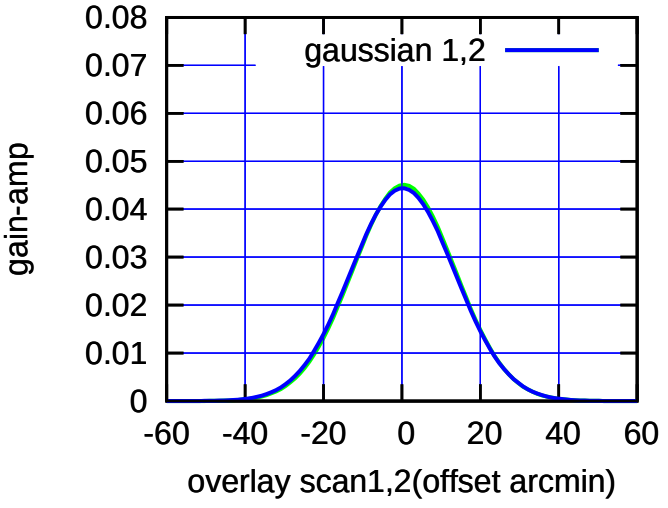


W04-175-AZ OFF= 0.5’ (29.8’)

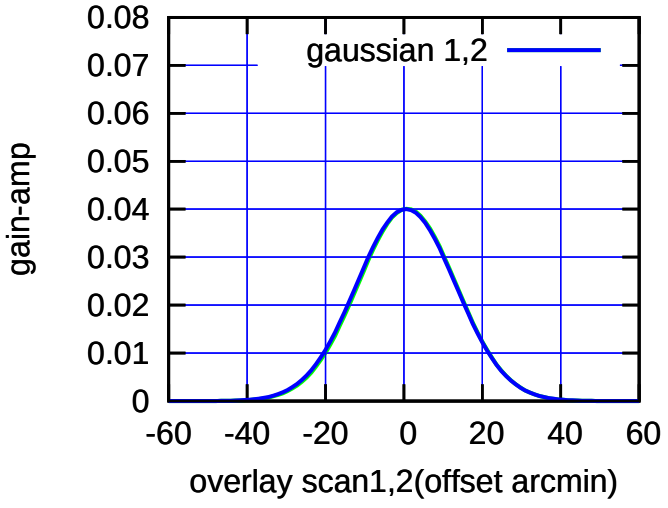


(-30’/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.4’

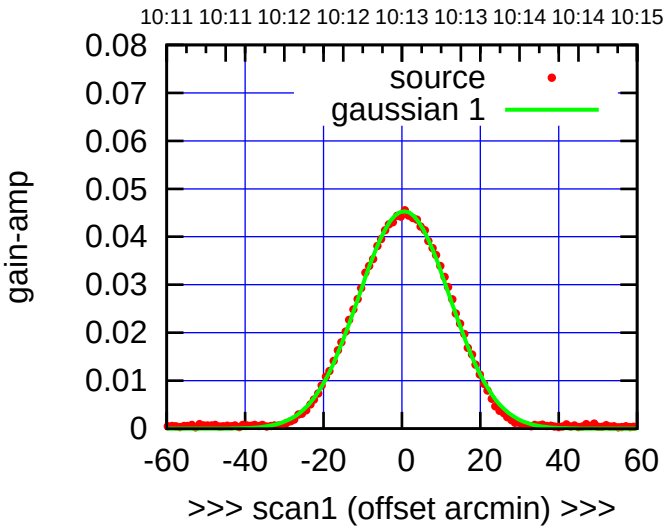


BACKLASH ERROR= 0.4’

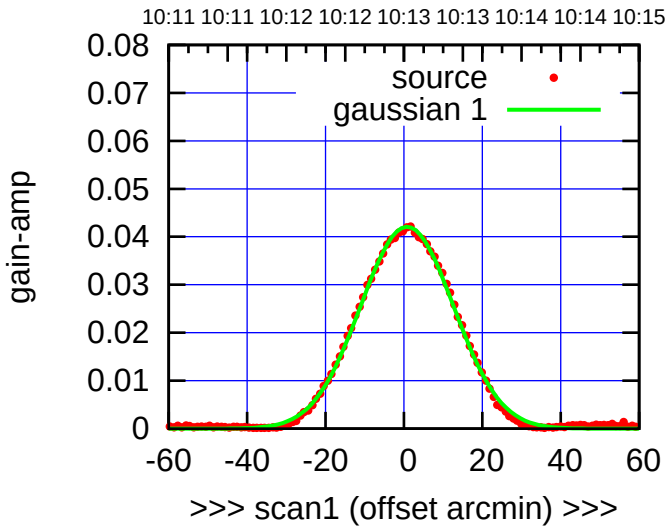


(1371 MHz.)

W05-130-AZ OFF= 0.6' (27.4')

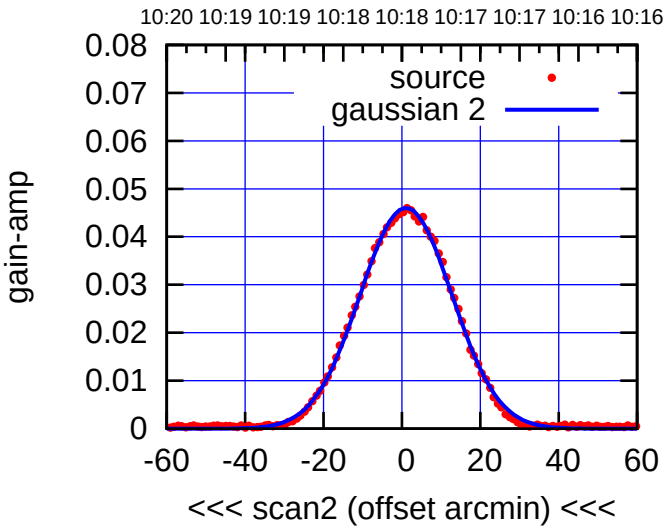


W05-175-AZ OFF= 0.8' (28.0')

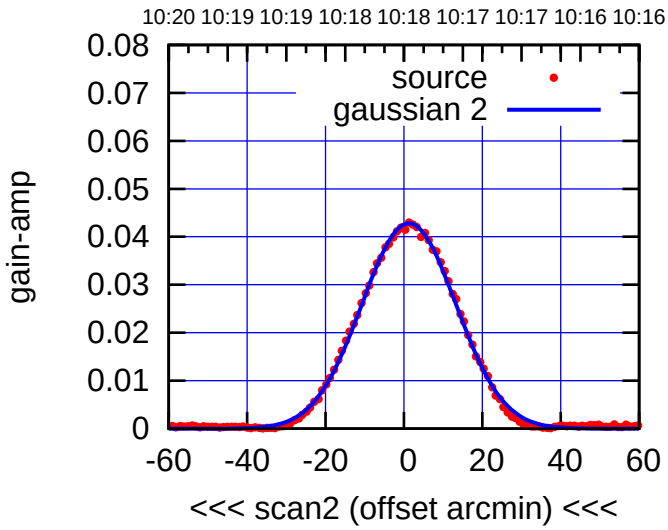


(+30'/m) 08Jun2017 10:13:00

W05-130-AZ OFF= 1.0' (27.6')

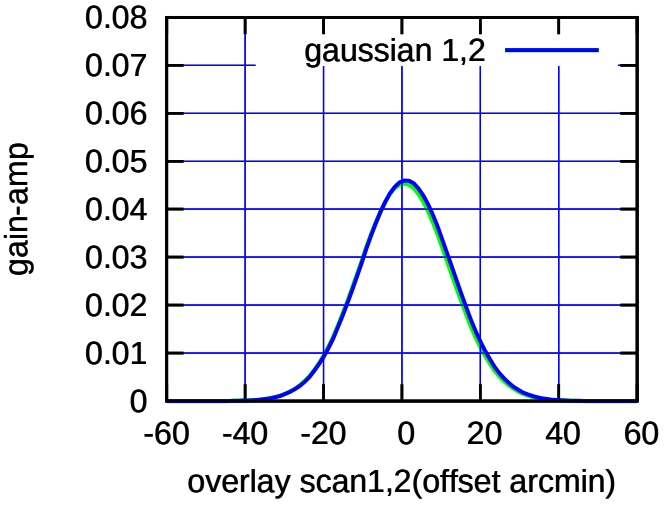


W05-175-AZ OFF= 1.3' (28.2')

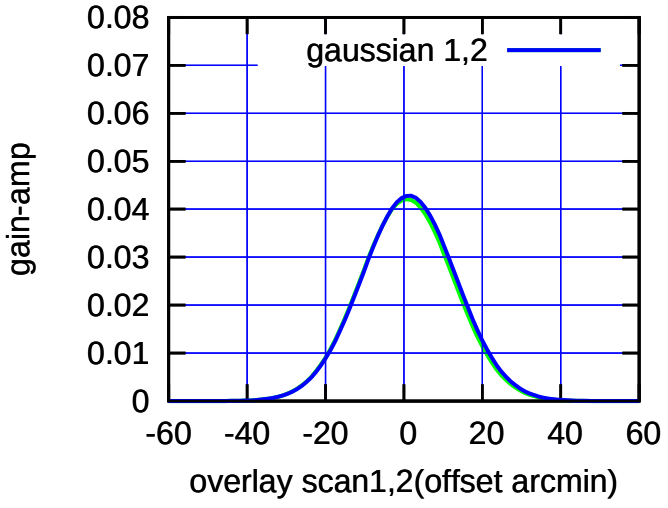


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.5'

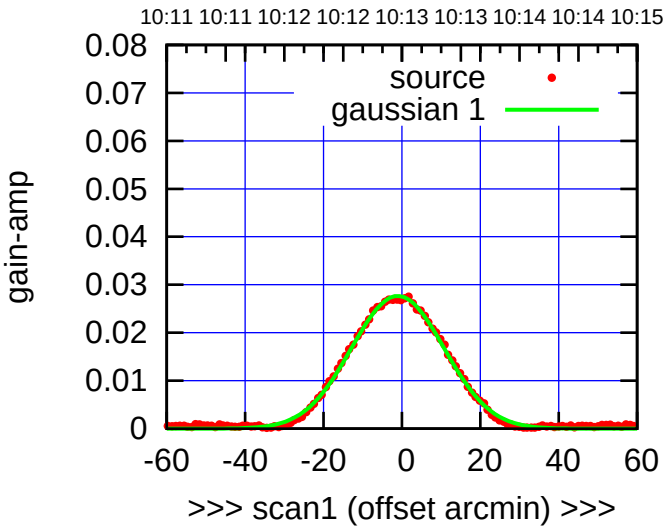


BACKLASH ERROR= 0.7'

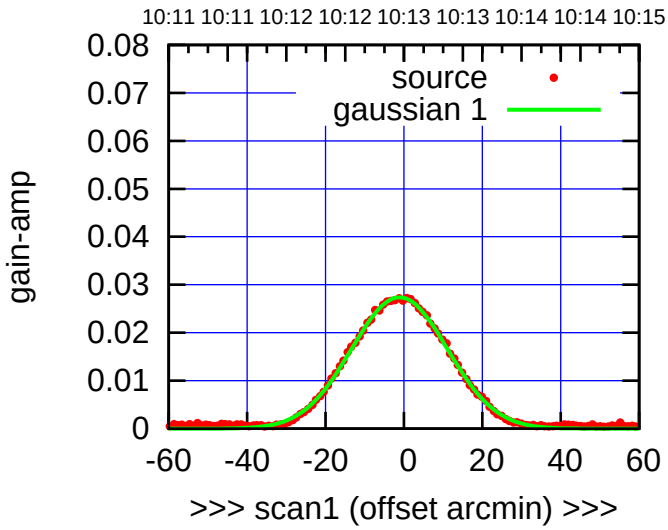


(1371 MHz.)

W06-130-AZ OFF= -1.1' (27.8')

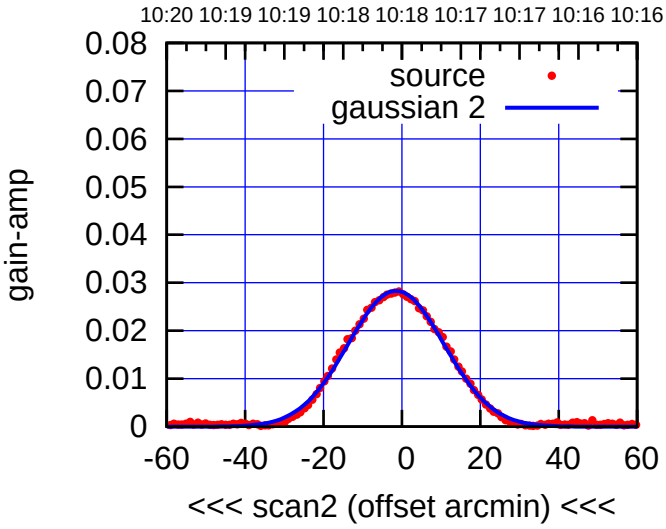


W06-175-AZ OFF= -1.1' (28.8')

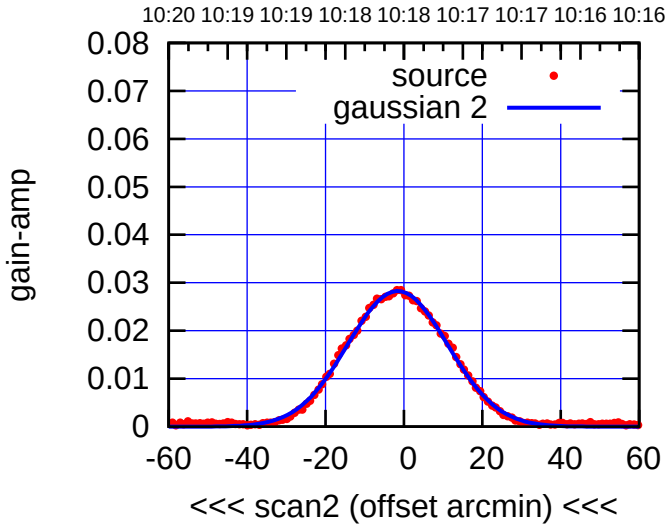


(+30'/m) 08Jun2017 10:13:00

W06-130-AZ OFF= -1.5' (28.8')

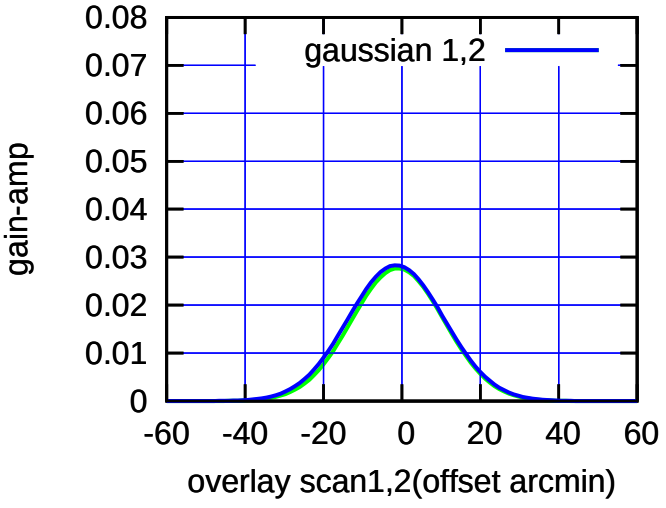


W06-175-AZ OFF= -1.6' (29.9')

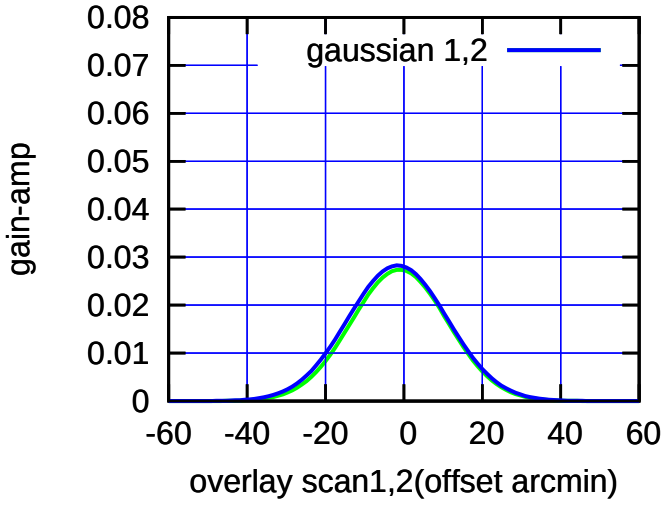


(-30'/m) 08Jun2017 10:18:00

BACKLASH ERROR= 0.5'



BACKLASH ERROR= 0.7'

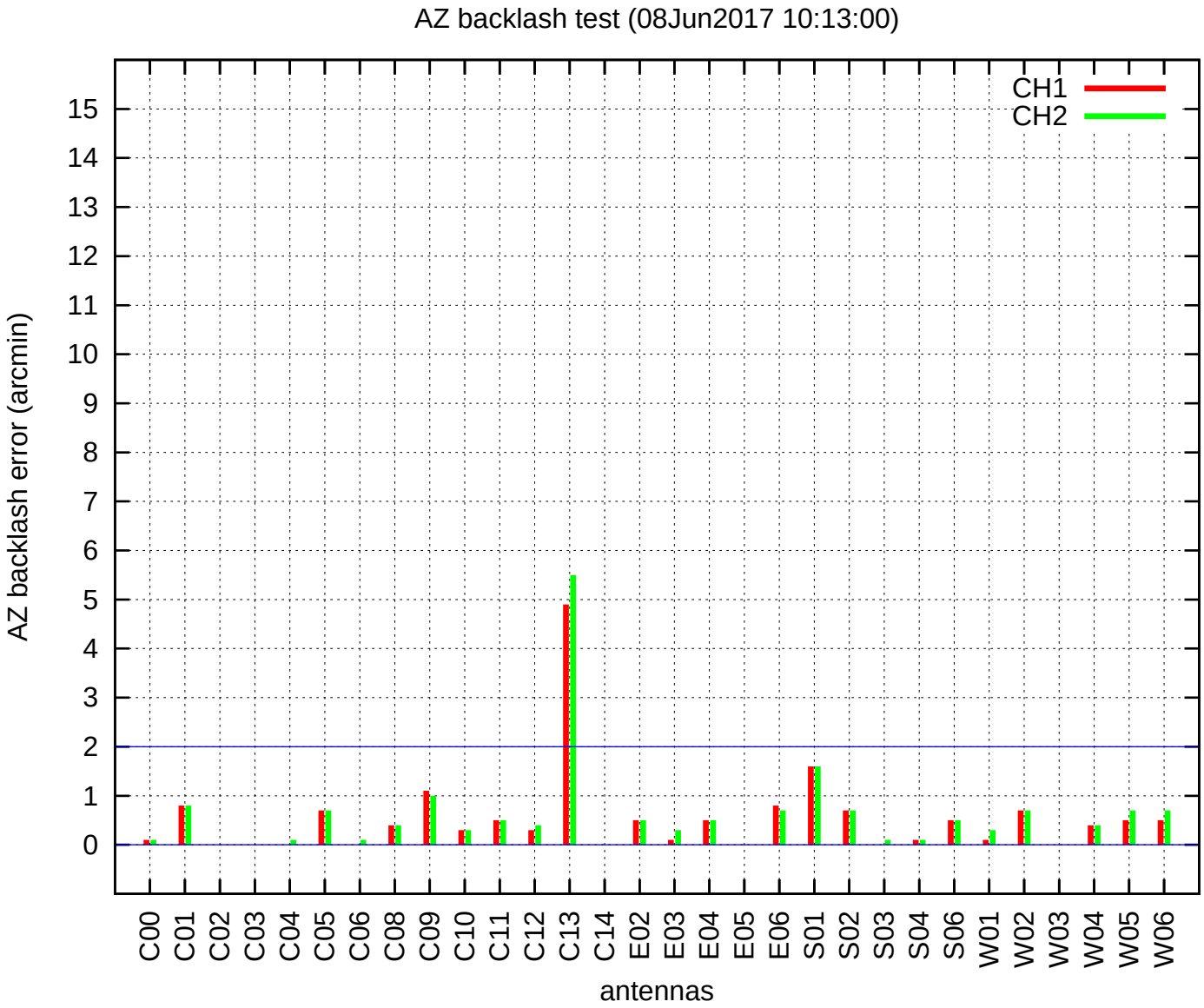


(1371 MHz.)

```
# backlash test   : 08Jun2017 10:13:00, 08Jun2017 10:18:00
# lta file        : /gsbifrdata1/08jun/test_snk_08jun2017.lta.1
# lta scan no(s)  : 2,3
# lta chan range  : [150,160]
# scan1 start time: 08Jun2017 10:11:00
# scan1 peak  time: 08Jun2017 10:13:00
# scan1 end   time: 08Jun2017 10:15:00
# scan2 start time: 08Jun2017 10:16:00
# scan2 peak  time: 08Jun2017 10:18:00
# scan2 end   time: 08Jun2017 10:20:00
# scan1 rate/speed: 30’/m
# scan2 rate/speed: -30’/m
# xrange posn     : [-60’:60’]
# yrange gain-amp : [0:0.08]
# frequency (MHz) : 1371
# axis            : AZ
# elevation(deg)  : 42.9
# antenna flag    : 1 - working, 0 - non working

C00-130-AZ OFF(scan1)=  -3.2   OFF(scan2)=  -3.3   ERROR=   0.1  FLAG= 1
C00-175-AZ OFF(scan1)=  -3.0   OFF(scan2)=  -3.1   ERROR=   0.1  FLAG= 1
C01-130-AZ OFF(scan1)=   4.8   OFF(scan2)=   4.2   ERROR=   0.8  FLAG= 1
C01-175-AZ OFF(scan1)=   4.7   OFF(scan2)=   4.1   ERROR=   0.8  FLAG= 1
C02-130-AZ OFF(scan1)=  -2.9   OFF(scan2)=   0.0   ERROR=   4.0  FLAG= 0
C02-175-AZ OFF(scan1)=  -2.9   OFF(scan2)=   0.0   ERROR=   4.0  FLAG= 0
C03-130-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
C03-175-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
C04-130-AZ OFF(scan1)=  -6.8   OFF(scan2)=  -6.8   ERROR=   0.0  FLAG= 1
C04-175-AZ OFF(scan1)=  -6.9   OFF(scan2)=  -7.0   ERROR=   0.1  FLAG= 1
C05-130-AZ OFF(scan1)=  -2.9   OFF(scan2)=  -2.4   ERROR=   0.7  FLAG= 1
C05-175-AZ OFF(scan1)=  -2.9   OFF(scan2)=  -2.4   ERROR=   0.7  FLAG= 1
C06-130-AZ OFF(scan1)=  -0.6   OFF(scan2)=  -0.6   ERROR=   0.0  FLAG= 1
C06-175-AZ OFF(scan1)=  -0.4   OFF(scan2)=  -0.5   ERROR=   0.1  FLAG= 1
C08-130-AZ OFF(scan1)=   5.0   OFF(scan2)=   5.3   ERROR=   0.4  FLAG= 1
C08-175-AZ OFF(scan1)=   5.1   OFF(scan2)=   5.4   ERROR=   0.4  FLAG= 1
C09-130-AZ OFF(scan1)=  -2.6   OFF(scan2)=  -3.4   ERROR=   1.1  FLAG= 1
C09-175-AZ OFF(scan1)=  -2.6   OFF(scan2)=  -3.3   ERROR=   1.0  FLAG= 1
C10-130-AZ OFF(scan1)=  -1.1   OFF(scan2)=  -1.3   ERROR=   0.3  FLAG= 1
C10-175-AZ OFF(scan1)=  -0.8   OFF(scan2)=  -1.0   ERROR=   0.3  FLAG= 1
C11-130-AZ OFF(scan1)=   0.2   OFF(scan2)=  -0.2   ERROR=   0.5  FLAG= 1
C11-175-AZ OFF(scan1)=   0.0   OFF(scan2)=  -0.4   ERROR=   0.5  FLAG= 1
C12-130-AZ OFF(scan1)=  -0.7   OFF(scan2)=  -0.9   ERROR=   0.3  FLAG= 1
C12-175-AZ OFF(scan1)=  -0.8   OFF(scan2)=  -1.1   ERROR=   0.4  FLAG= 1
C13-130-AZ OFF(scan1)=   4.5   OFF(scan2)=   8.1   ERROR=   4.9  FLAG= 1
C13-175-AZ OFF(scan1)=   4.6   OFF(scan2)=   8.6   ERROR=   5.5  FLAG= 1
C14-130-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
C14-175-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
E02-130-AZ OFF(scan1)=  -4.5   OFF(scan2)=  -4.9   ERROR=   0.5  FLAG= 1
E02-175-AZ OFF(scan1)=  -4.7   OFF(scan2)=  -5.1   ERROR=   0.5  FLAG= 1
E03-130-AZ OFF(scan1)=   1.9   OFF(scan2)=   1.8   ERROR=   0.1  FLAG= 1
E03-175-AZ OFF(scan1)=   2.3   OFF(scan2)=   2.1   ERROR=   0.3  FLAG= 1
E04-130-AZ OFF(scan1)=  -0.3   OFF(scan2)=  -0.7   ERROR=   0.5  FLAG= 1
E04-175-AZ OFF(scan1)=  -0.4   OFF(scan2)=  -0.8   ERROR=   0.5  FLAG= 1
E05-130-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
E05-175-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
E06-130-AZ OFF(scan1)=  -1.4   OFF(scan2)=  -2.0   ERROR=   0.8  FLAG= 1
E06-175-AZ OFF(scan1)=  -1.2   OFF(scan2)=  -1.7   ERROR=   0.7  FLAG= 1
S01-130-AZ OFF(scan1)=  -2.8   OFF(scan2)=  -4.0   ERROR=   1.6  FLAG= 1
S01-175-AZ OFF(scan1)=  -2.4   OFF(scan2)=  -3.6   ERROR=   1.6  FLAG= 1
S02-130-AZ OFF(scan1)=   0.1   OFF(scan2)=   0.6   ERROR=   0.7  FLAG= 1
S02-175-AZ OFF(scan1)=   0.3   OFF(scan2)=   0.8   ERROR=   0.7  FLAG= 1
S03-130-AZ OFF(scan1)=  -0.4   OFF(scan2)=  -0.4   ERROR=   0.0  FLAG= 1
S03-175-AZ OFF(scan1)=  -0.3   OFF(scan2)=  -0.4   ERROR=   0.1  FLAG= 1
S04-130-AZ OFF(scan1)=   1.1   OFF(scan2)=   1.0   ERROR=   0.1  FLAG= 1
S04-175-AZ OFF(scan1)=   1.3   OFF(scan2)=   1.2   ERROR=   0.1  FLAG= 1
S06-130-AZ OFF(scan1)=   1.6   OFF(scan2)=   1.2   ERROR=   0.5  FLAG= 1
S06-175-AZ OFF(scan1)=   1.5   OFF(scan2)=   1.1   ERROR=   0.5  FLAG= 1
```

```
W01-130-AZ OFF(scan1)=  -8.3   OFF(scan2)=  -8.4   ERROR=   0.1  FLAG= 1
W01-175-AZ OFF(scan1)=  -7.8   OFF(scan2)=  -8.0   ERROR=   0.3  FLAG= 1
W02-130-AZ OFF(scan1)=  -7.5   OFF(scan2)=  -7.0   ERROR=   0.7  FLAG= 1
W02-175-AZ OFF(scan1)=  -7.5   OFF(scan2)=  -7.0   ERROR=   0.7  FLAG= 1
W03-130-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
W03-175-AZ OFF(scan1)=   0.0   OFF(scan2)=   0.0   ERROR=   0.0  FLAG= 0
W04-130-AZ OFF(scan1)=   0.5   OFF(scan2)=   0.2   ERROR=   0.4  FLAG= 1
W04-175-AZ OFF(scan1)=   0.8   OFF(scan2)=   0.5   ERROR=   0.4  FLAG= 1
W05-130-AZ OFF(scan1)=   0.6   OFF(scan2)=   1.0   ERROR=   0.5  FLAG= 1
W05-175-AZ OFF(scan1)=   0.8   OFF(scan2)=   1.3   ERROR=   0.7  FLAG= 1
W06-130-AZ OFF(scan1)=  -1.1   OFF(scan2)=  -1.5   ERROR=   0.5  FLAG= 1
W06-175-AZ OFF(scan1)=  -1.1   OFF(scan2)=  -1.6   ERROR=   0.7  FLAG= 1
```


AZ backlash test (08Jun2017 10:13:00)
AZ backlash error (arcmin)
antennas
CH1
CH2
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
C00
C01
C02
C03
C04
C05
C06
C08
C09
C10
C11
C12
C13
C14
E02
E03
E04
E05
E06
S01
S02
S03
S04
S06
W01
W02
W03
W04
W05
W06