

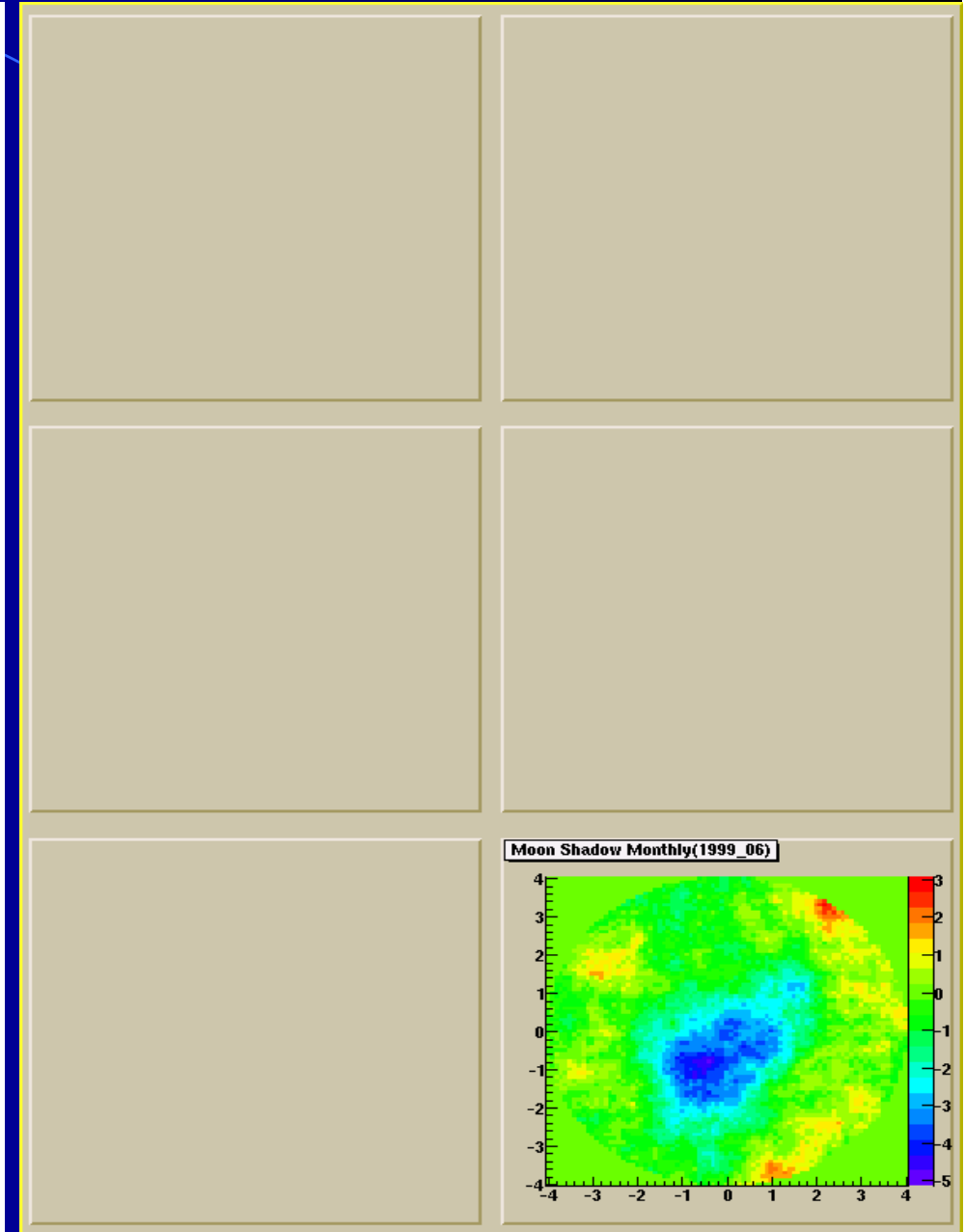
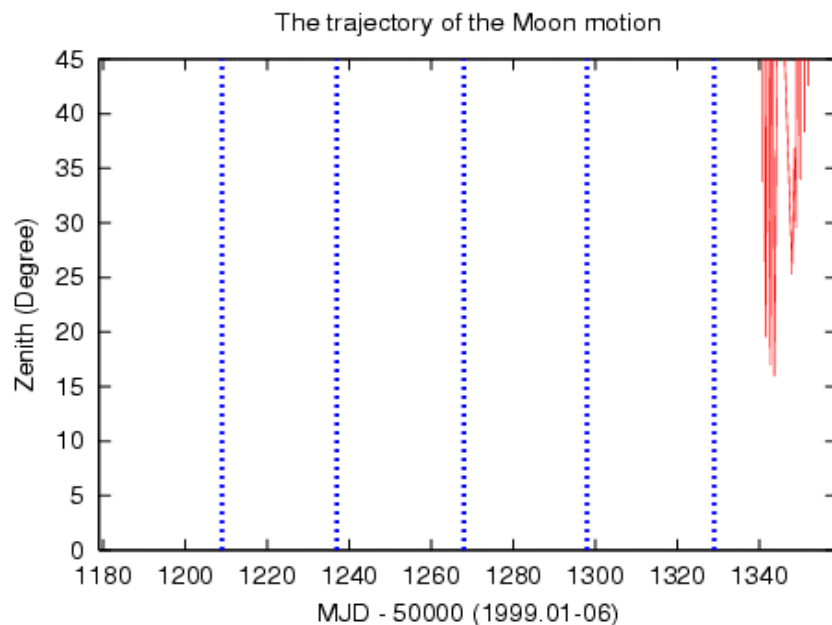
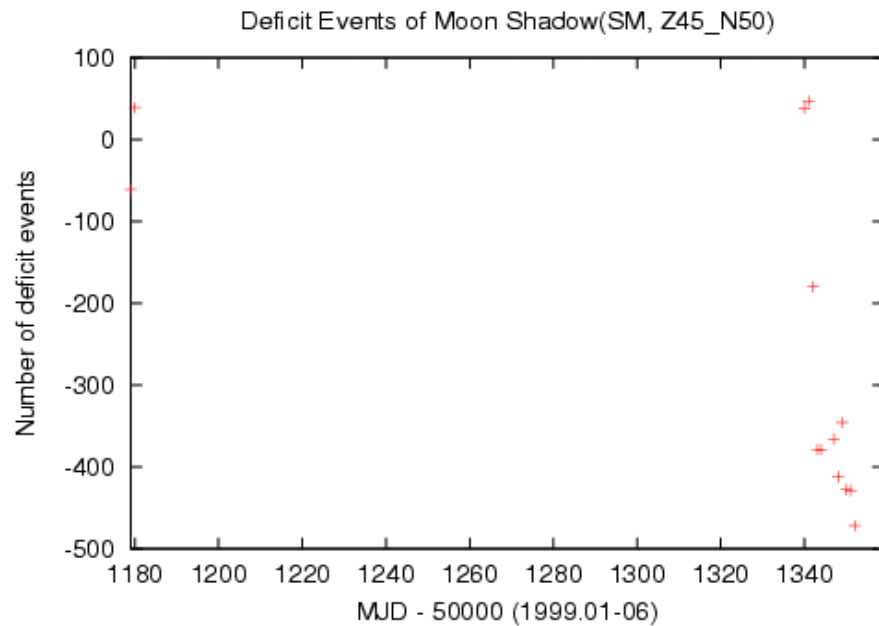
An update on the Moon shadow and the Sun shadow

- The monthly Moon shadow
- The Moon shadow by Andy's correction
- The yearly Sun Shadow
- The Sun shadow in IMF's sectors

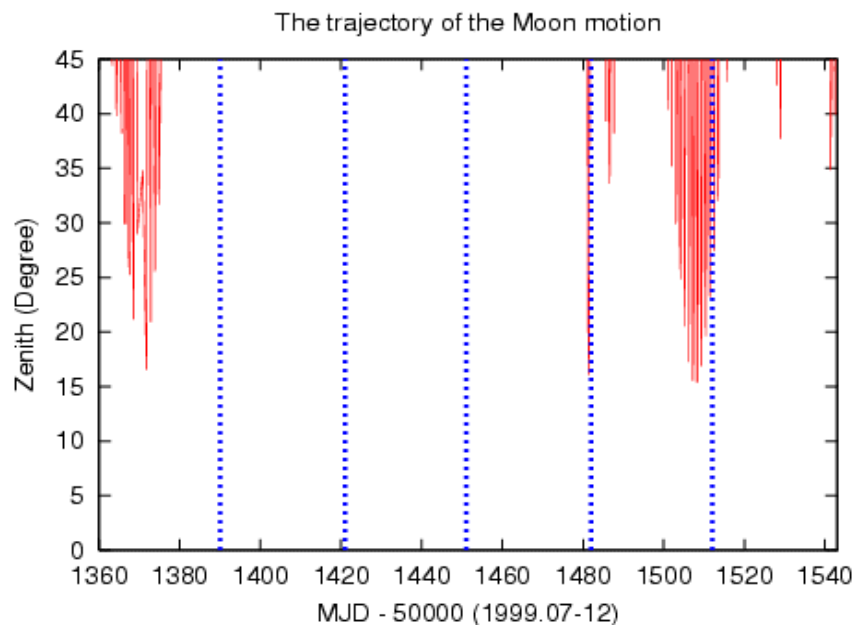
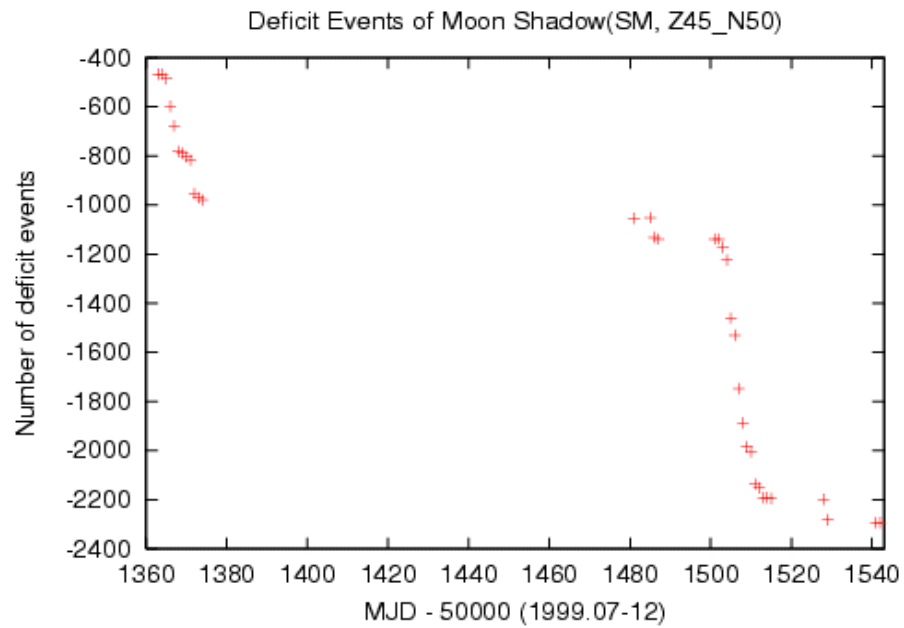


The monthly variation of the Moon shadow

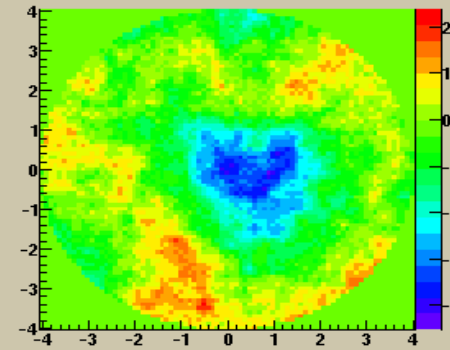
The monthly variation of the Moon shadow (1999.01-06)



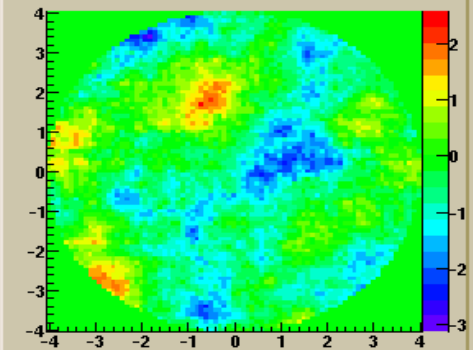
The monthly variation of the Moon shadow (1999.07-12)



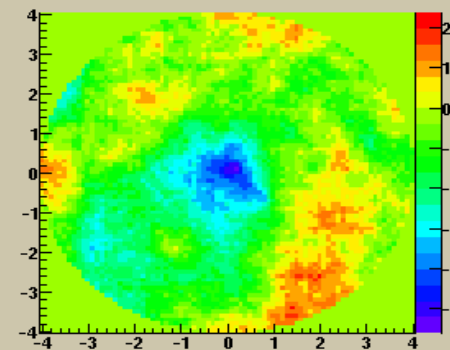
Moon Shadow Monthly(1999_07)



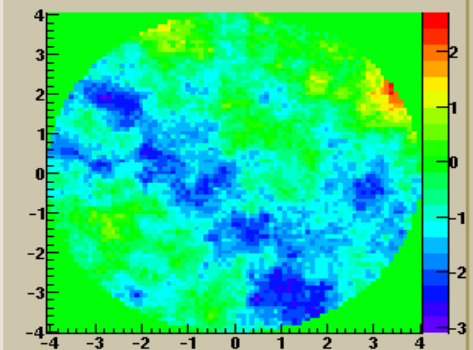
Moon Shadow Monthly(1999_10)



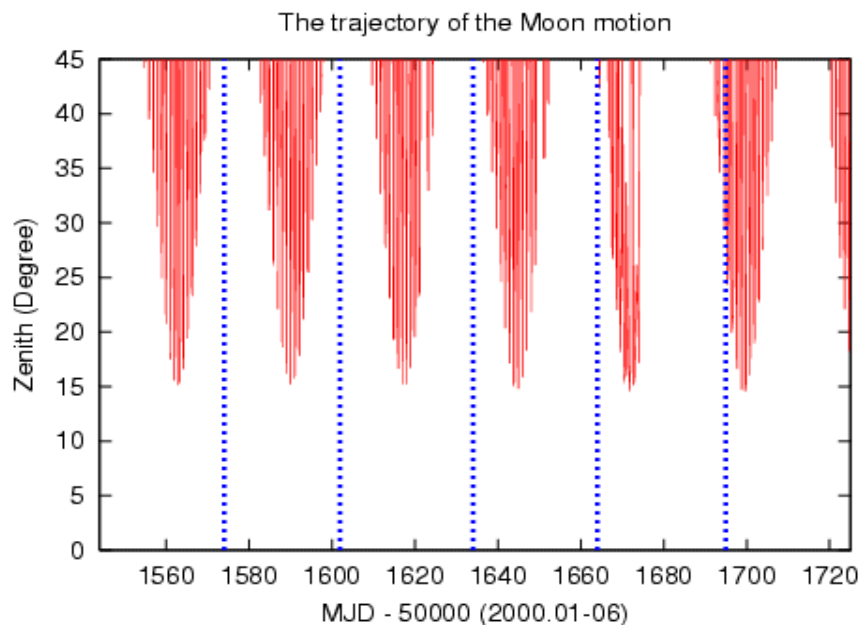
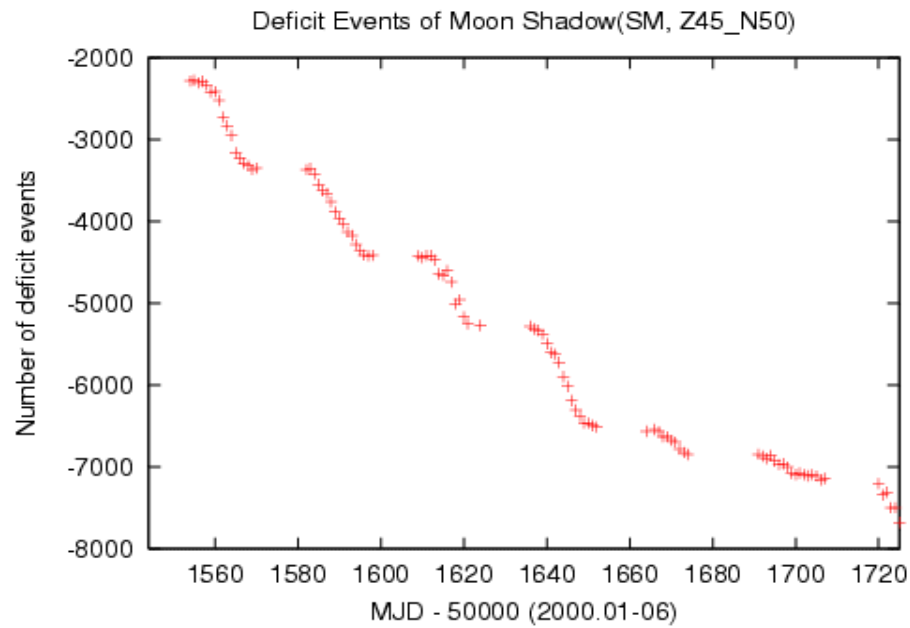
Moon Shadow Monthly(1999_11)



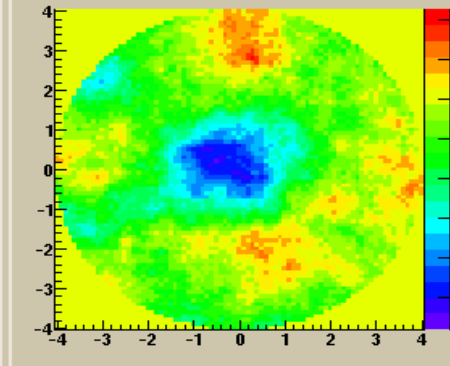
Moon Shadow Monthly(1999_12)



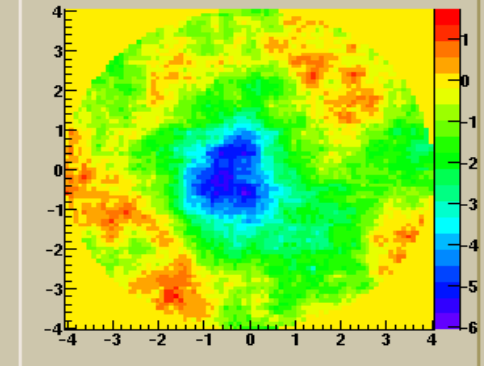
The monthly variation of The Moon shadow (2000.01-06)



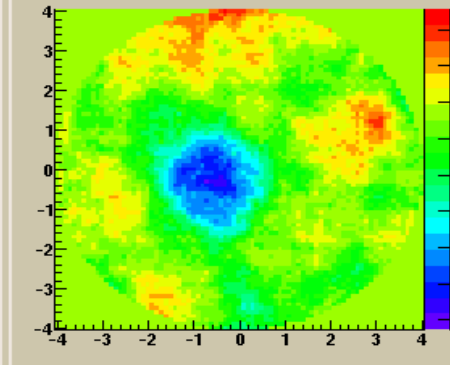
Moon Shadow Monthly(2000_01)



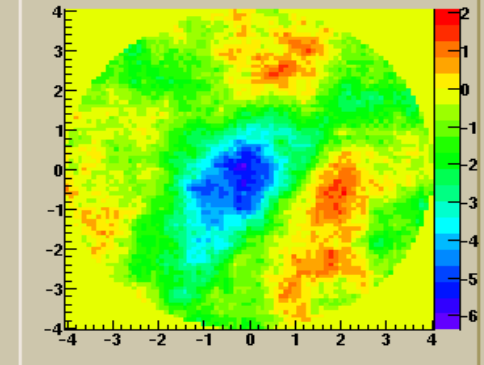
Moon Shadow Monthly(2000_02)



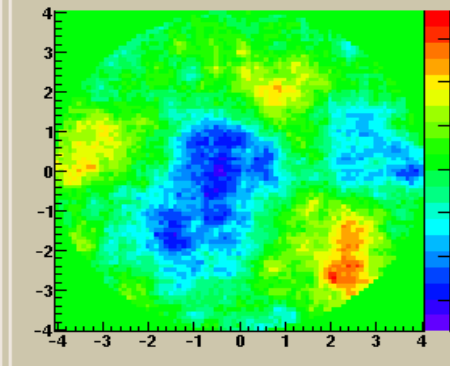
Moon Shadow Monthly(2000_03)



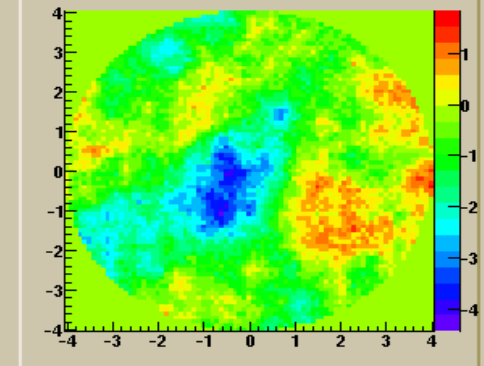
Moon Shadow Monthly(2000_04)



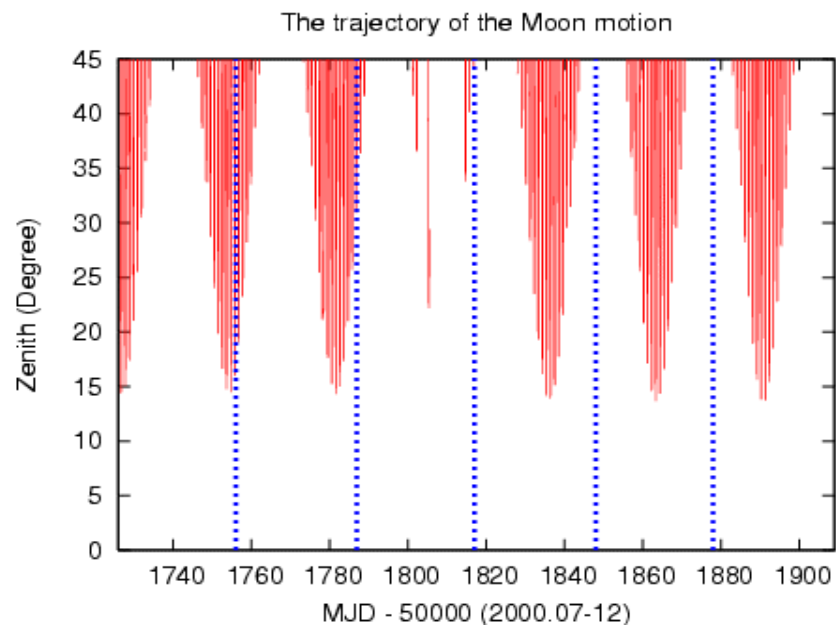
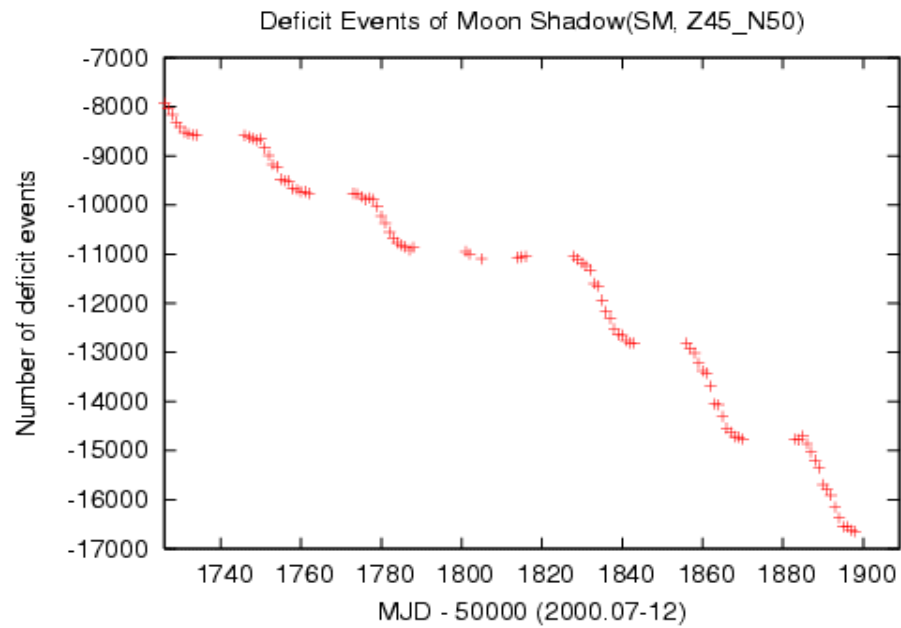
Moon Shadow Monthly(2000_05)



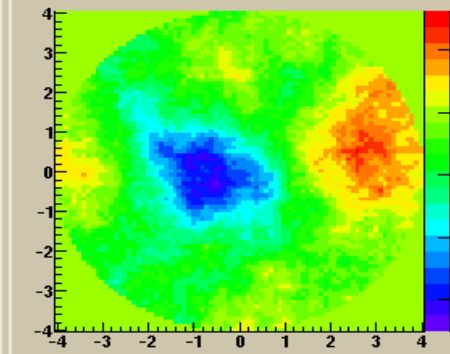
Moon Shadow Monthly(2000_06)



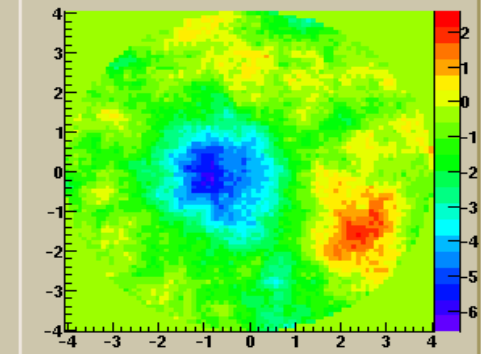
The monthly variation of The Moon shadow (2000.07-12)



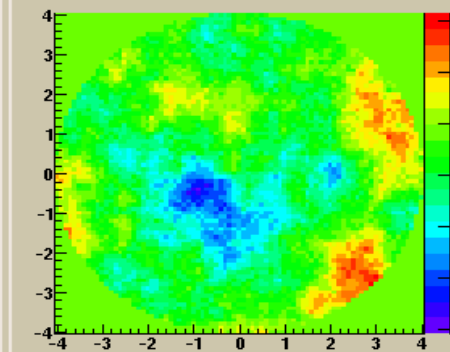
Moon Shadow Monthly(2000_07)



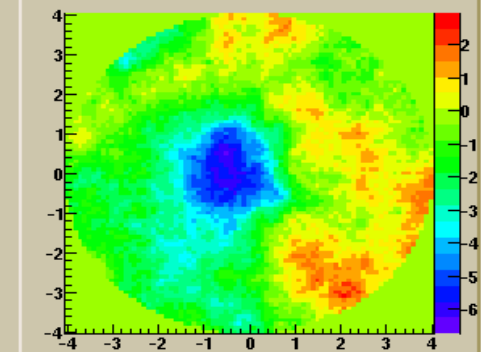
Moon Shadow Monthly(2000_08)



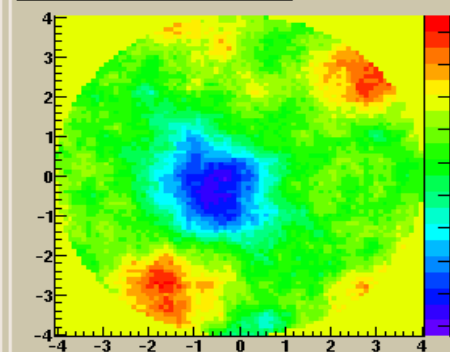
Moon Shadow Monthly(2000_09)



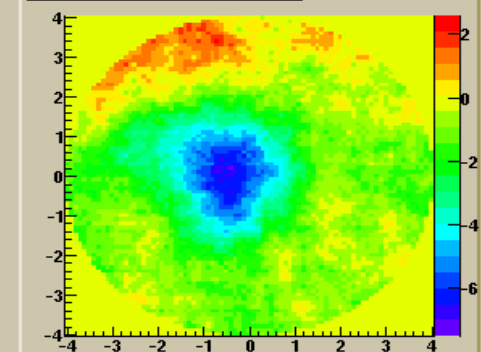
Moon Shadow Monthly(2000_10)



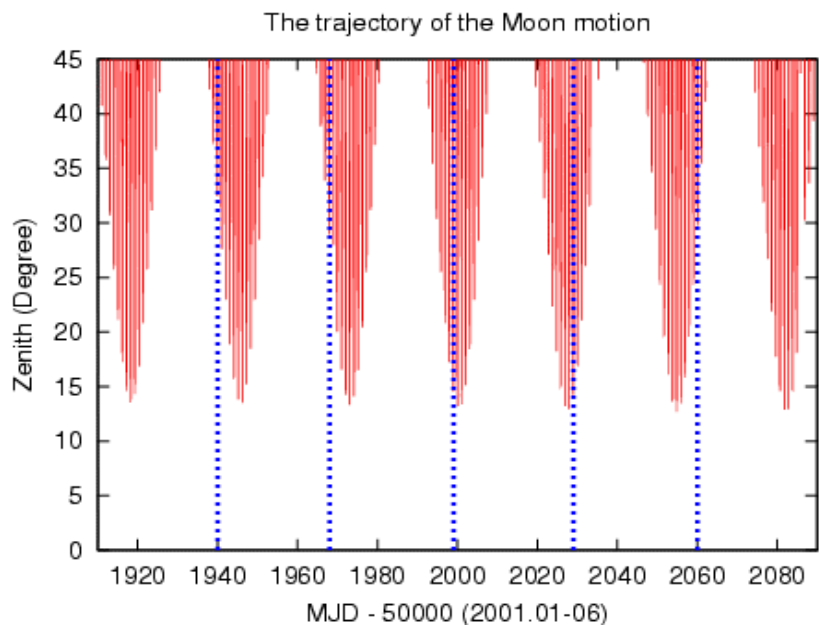
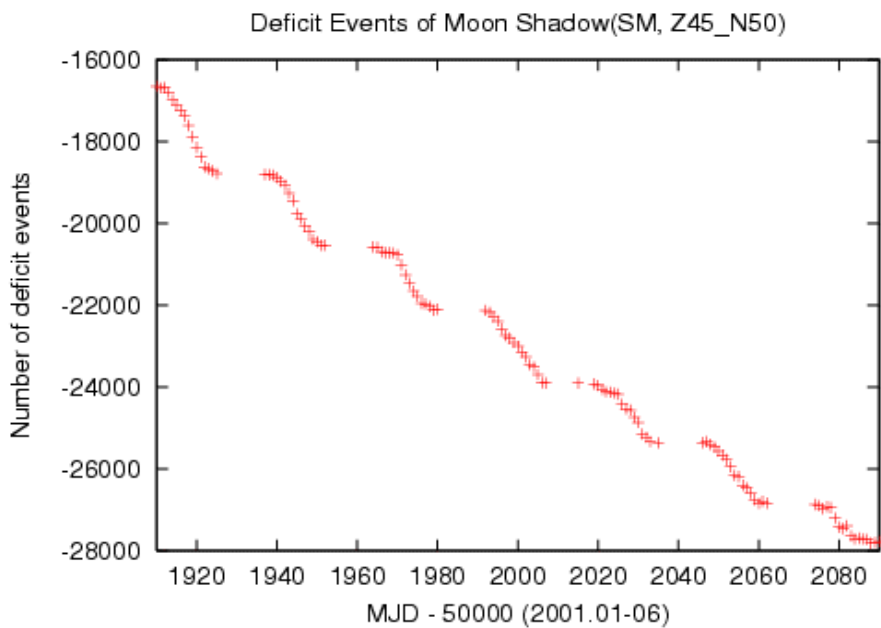
Moon Shadow Monthly(2000_11)



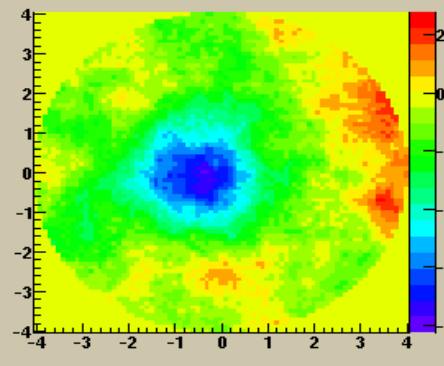
Moon Shadow Monthly(2000_12)



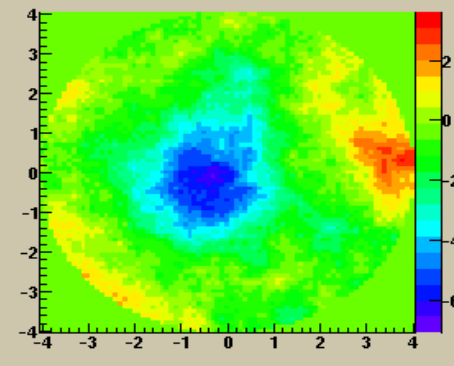
The monthly variation of the Moon shadow (2001.01-06)



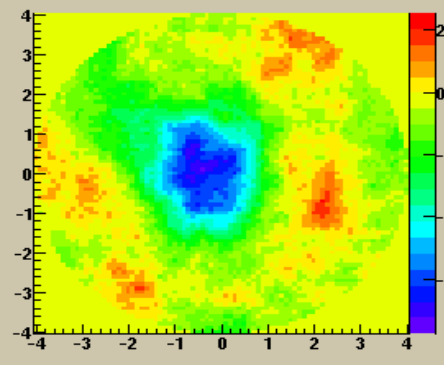
Moon Shadow Monthly(2001_01)



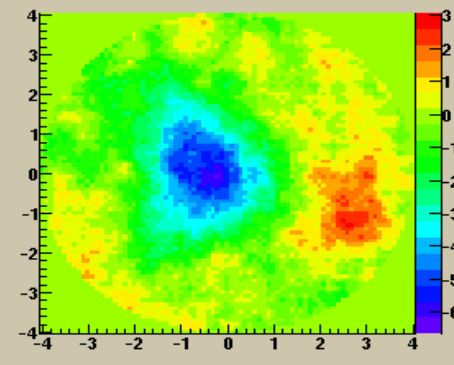
Moon Shadow Monthly(2001_02)



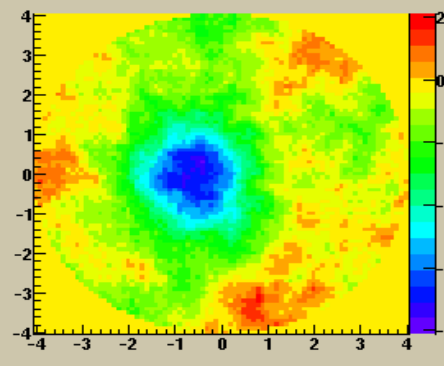
Moon Shadow Monthly(2001_03)



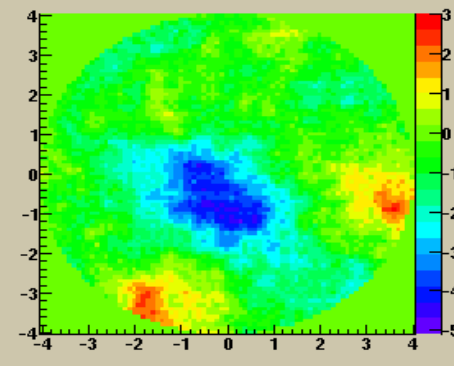
Moon Shadow Monthly(2001_04)



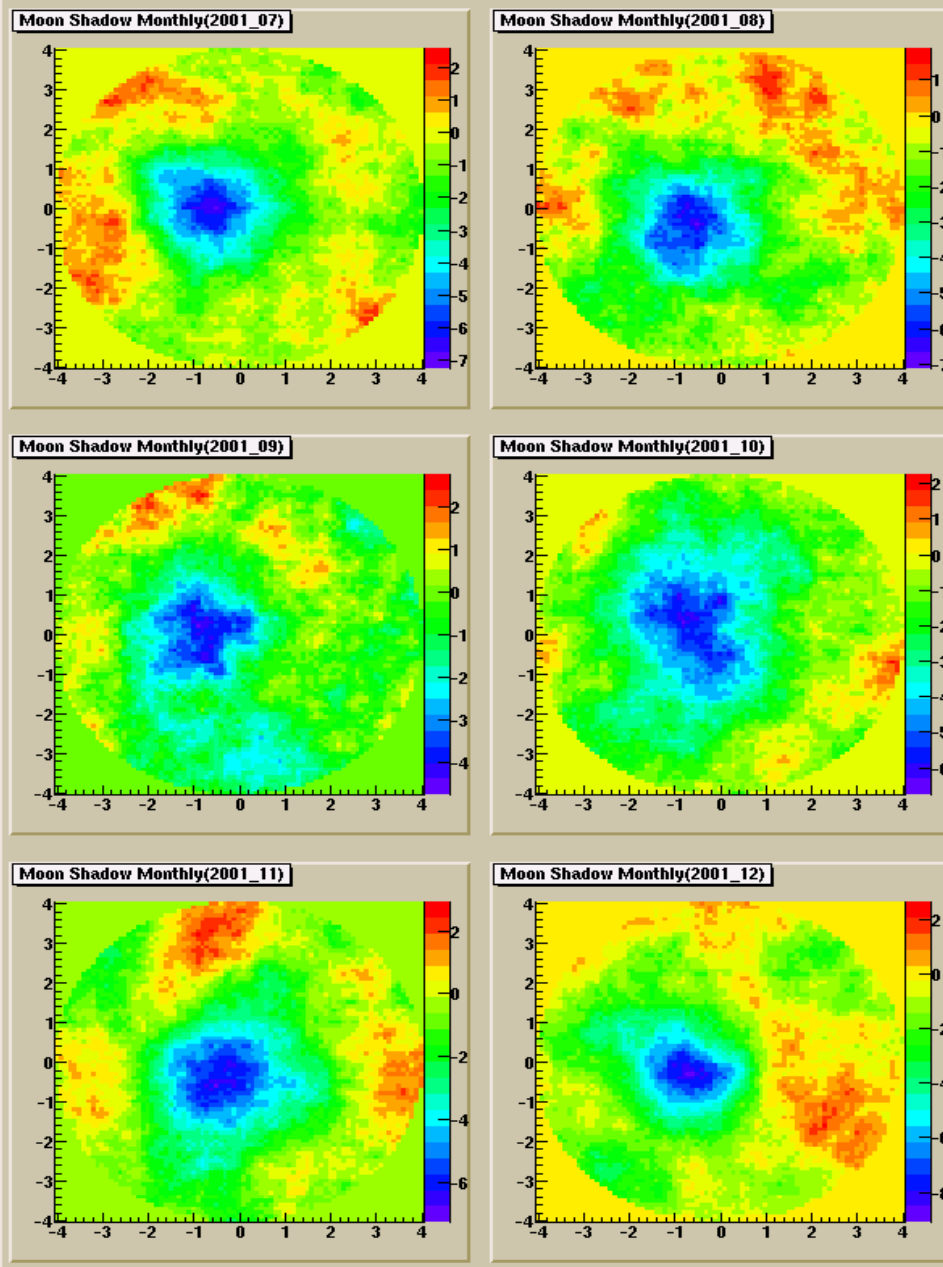
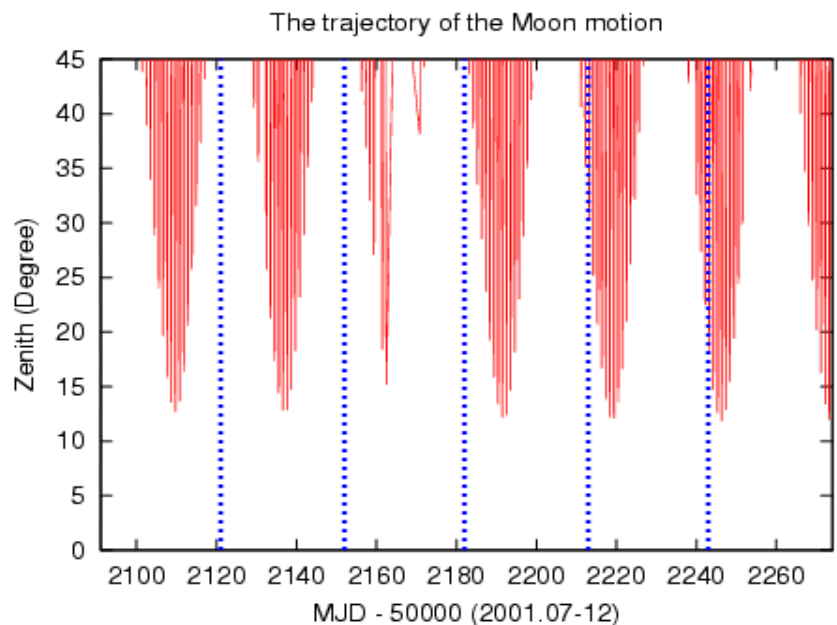
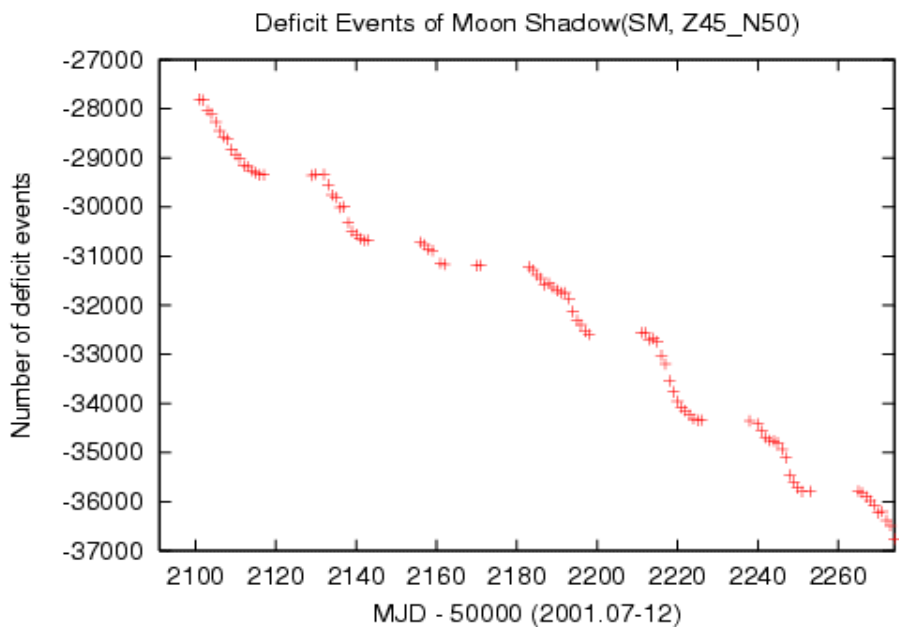
Moon Shadow Monthly(2001_05)



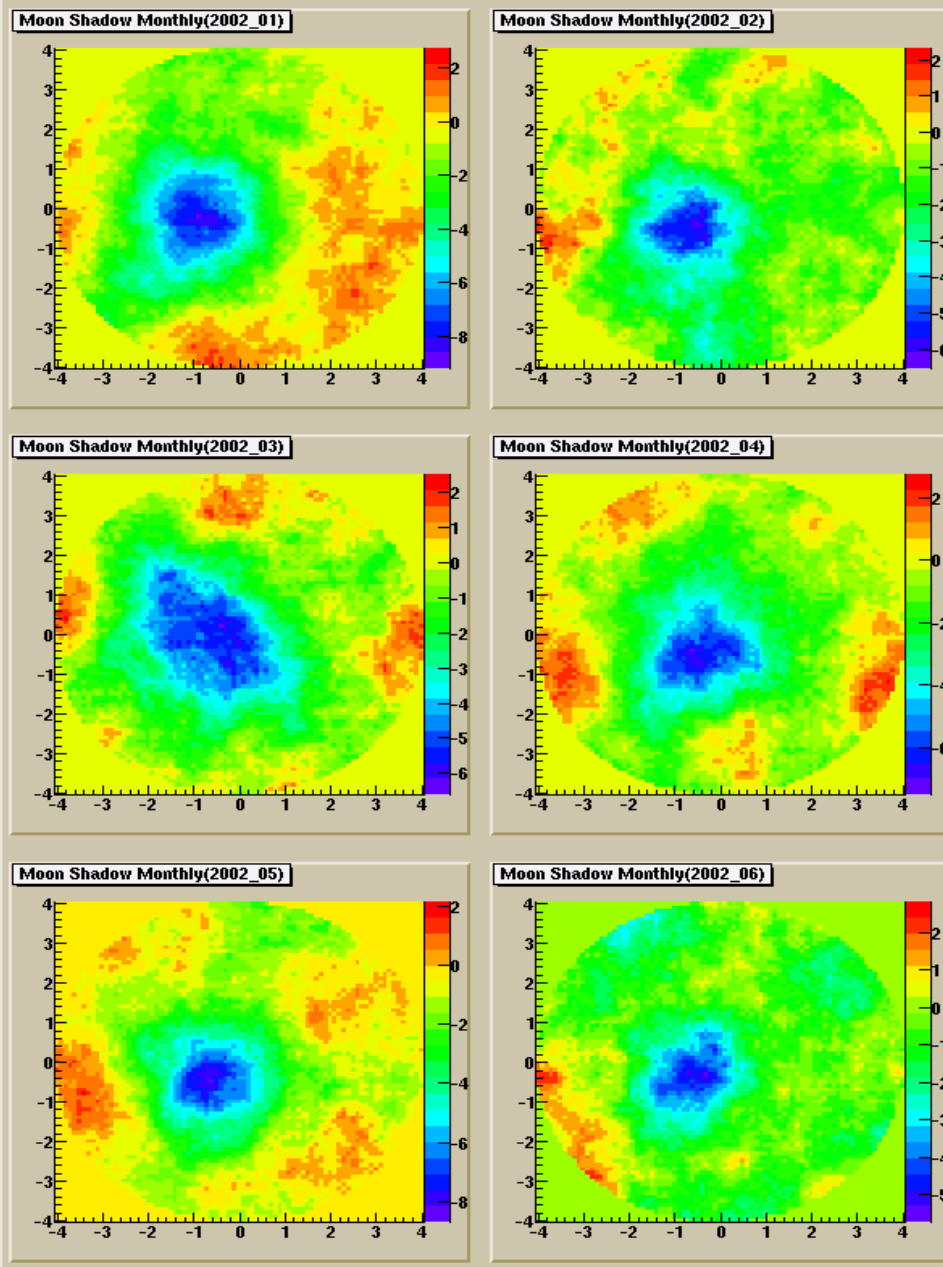
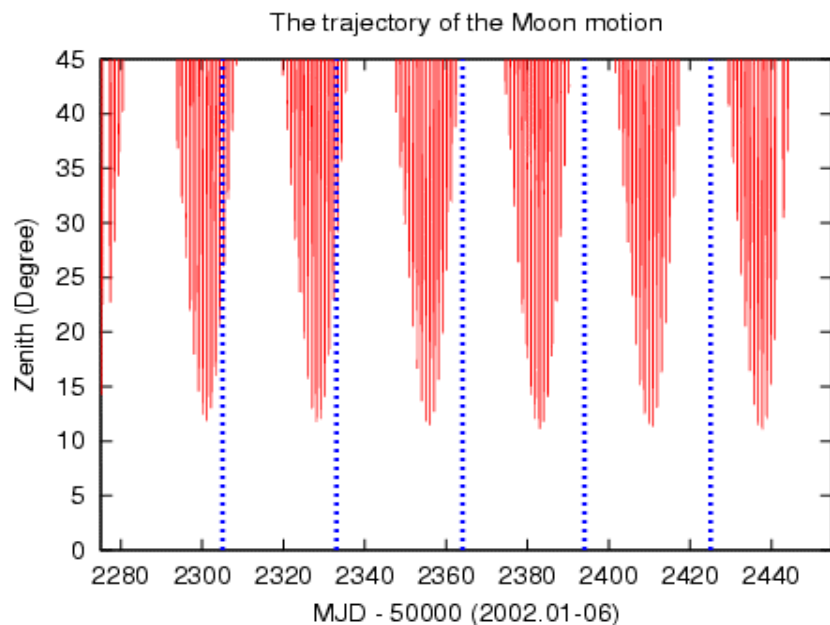
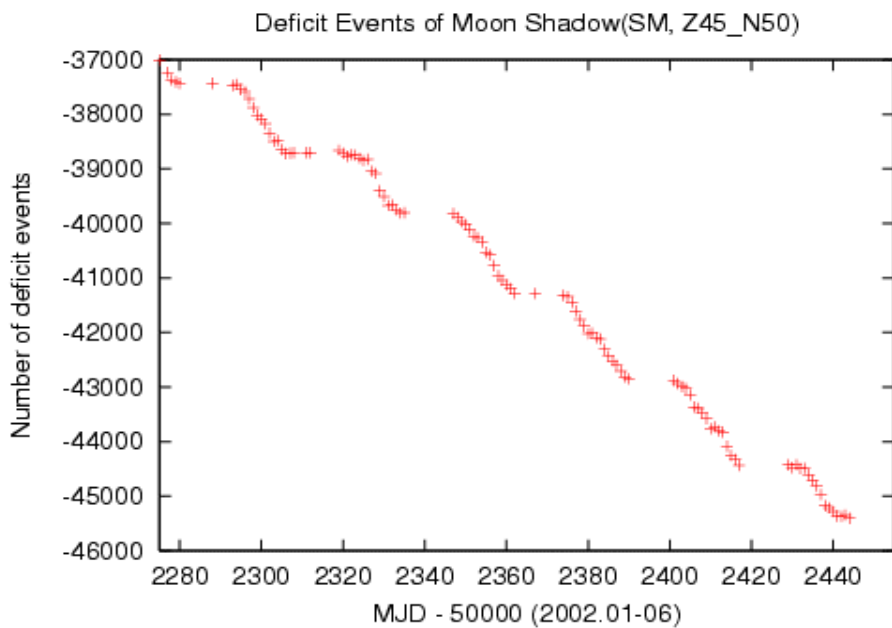
Moon Shadow Monthly(2001_06)



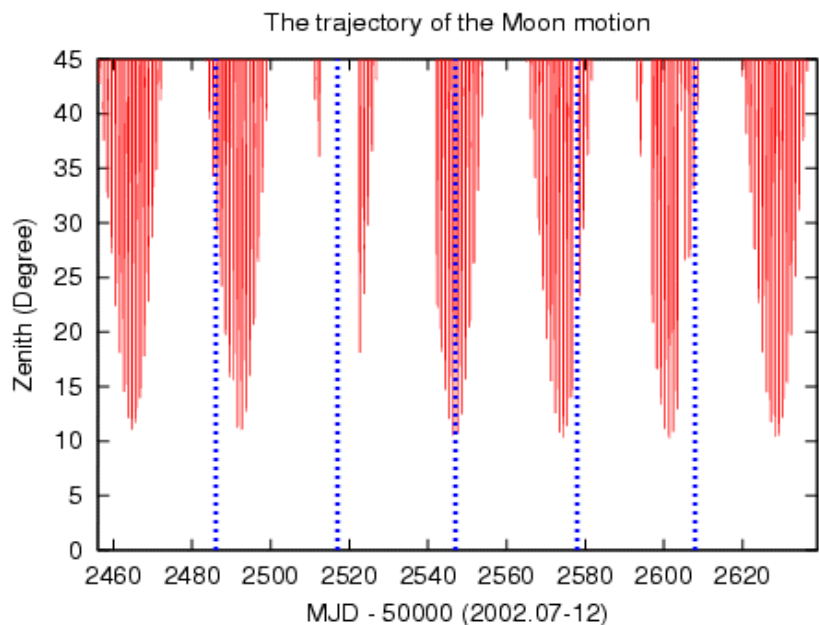
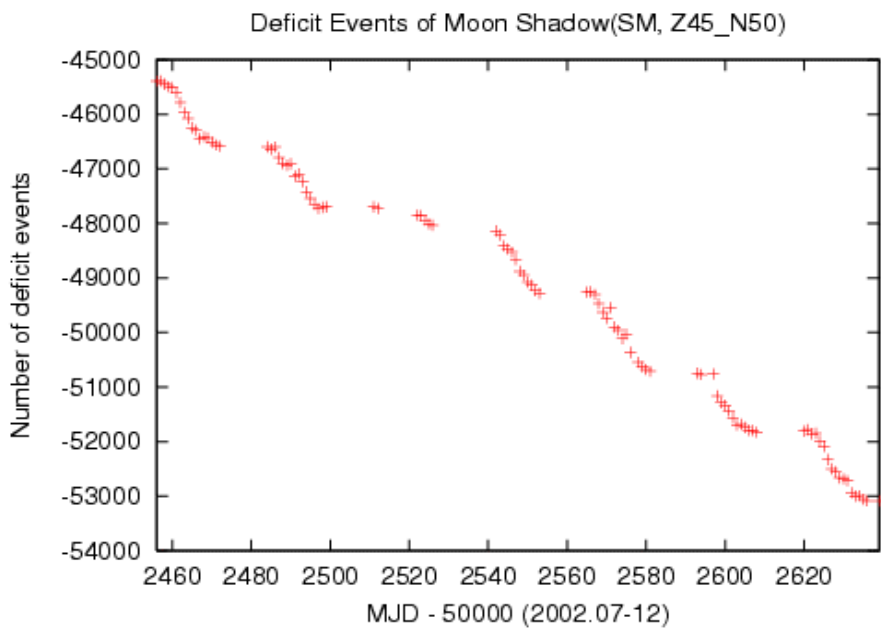
The monthly variation of the Moon shadow (2001.07-12)



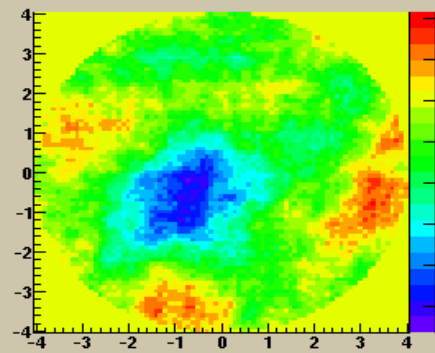
The monthly variation of the Moon shadow (2002.01-06)



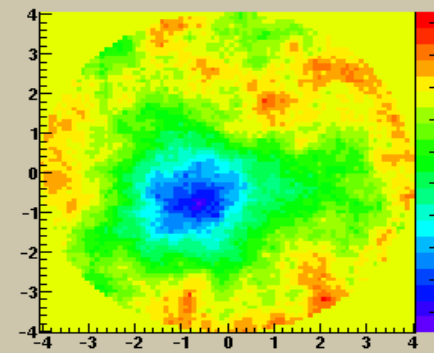
The monthly variation of the Moon shadow (2002.07-12)



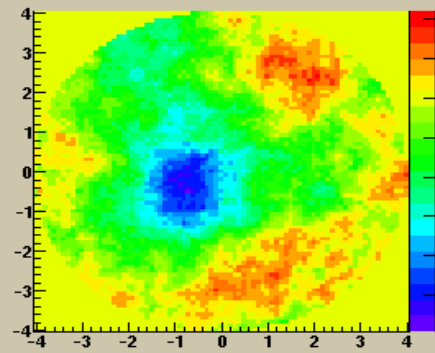
Moon Shadow Monthly(2002_07)



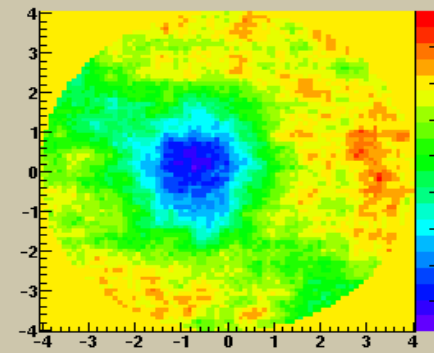
Moon Shadow Monthly(2002_08)



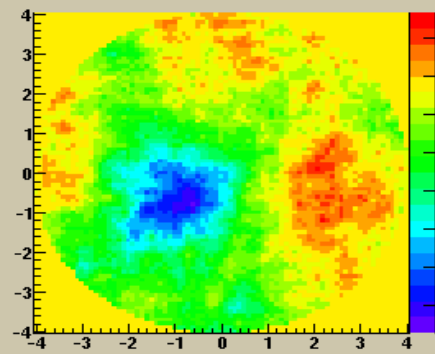
Moon Shadow Monthly(2002_09)



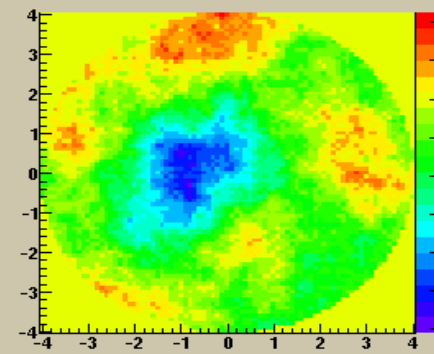
Moon Shadow Monthly(2002_10)



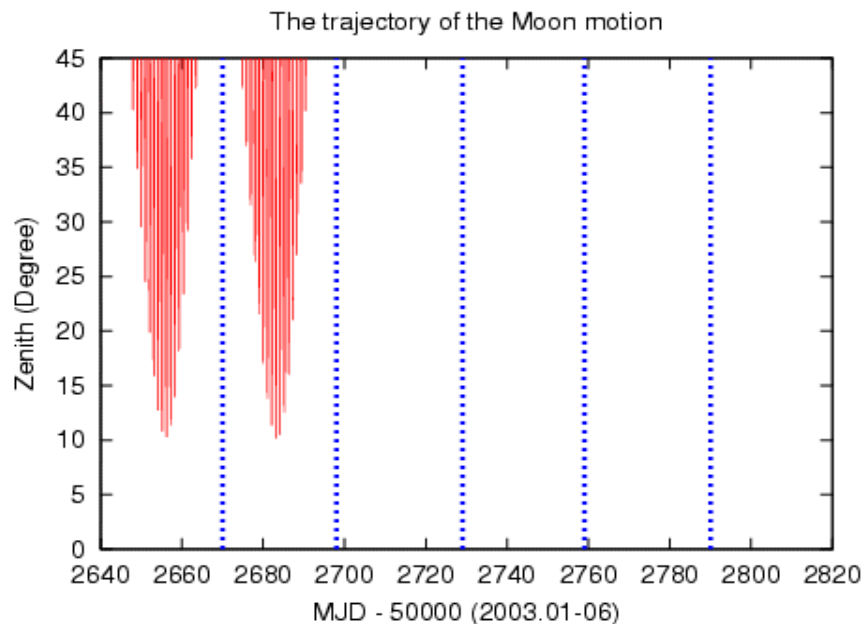
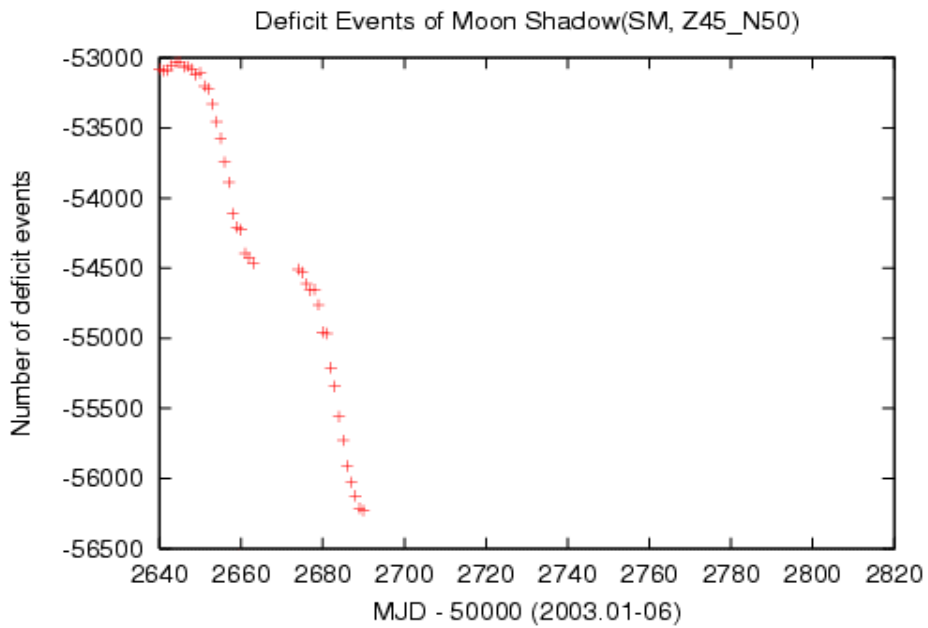
Moon Shadow Monthly(2002_11)



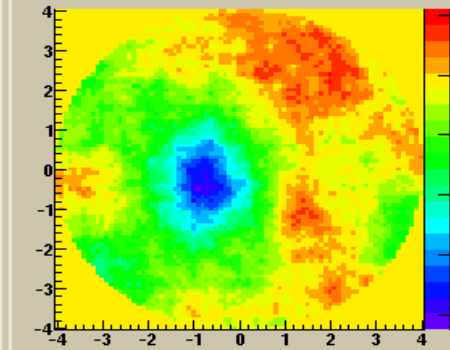
Moon Shadow Monthly(2002_12)



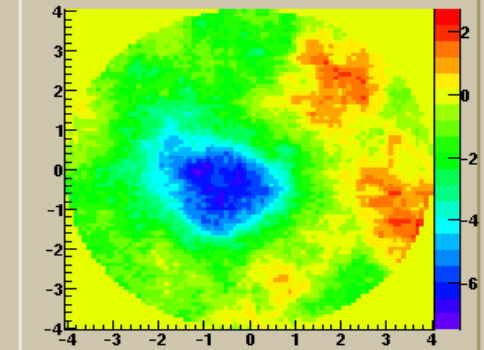
The monthly variation of the Moon shadow (2003.01-06)



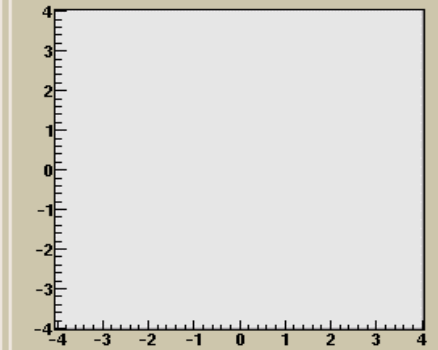
Moon Shadow Monthly(2003_01)



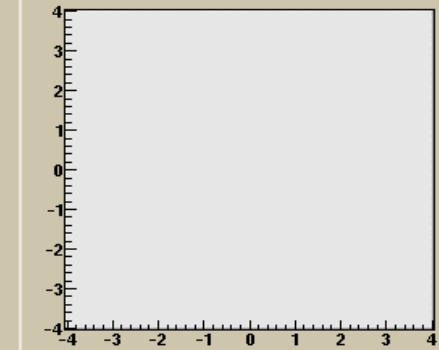
Moon Shadow Monthly(2003_02)



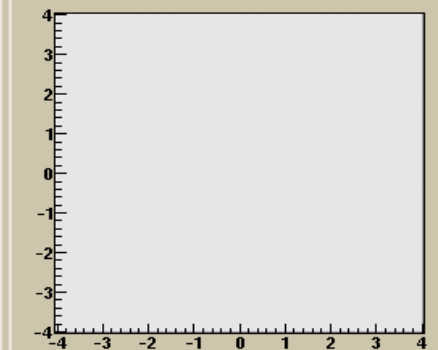
Moon Shadow Monthly(2003_03)



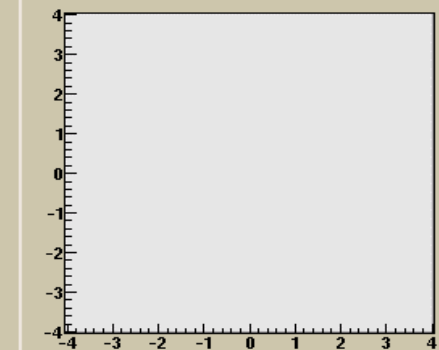
Moon Shadow Monthly(2003_04)



Moon Shadow Monthly(2003_05)

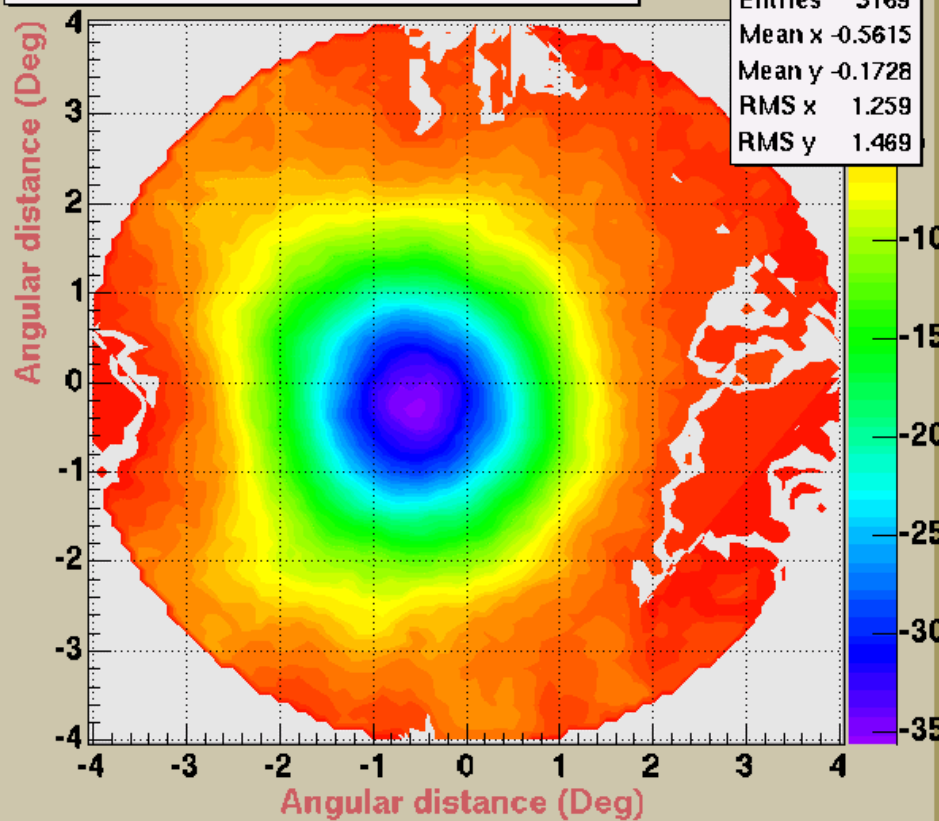


Moon Shadow Monthly(2003_06)

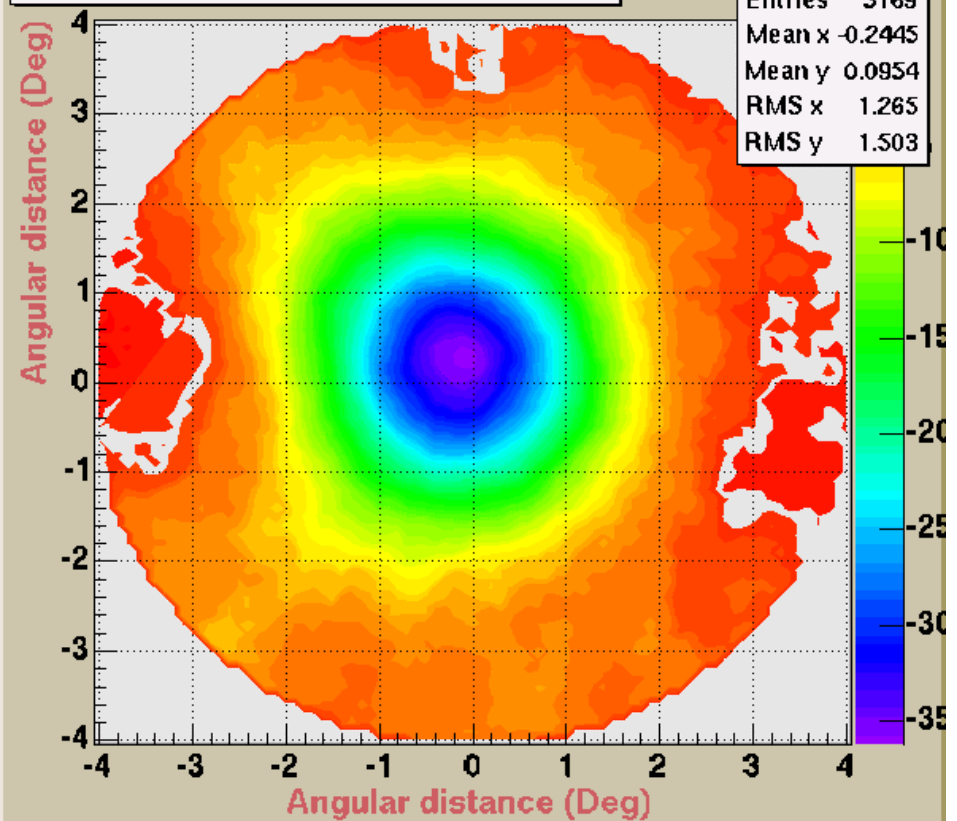


Comparison between with
and without Andy's zenith
align correction

Moon Shadow (No Andy's Correction, All)



Moon Shadow (Andy's Correction, All)



$$\langle x \rangle = -0.57 \pm 0.04(?)$$

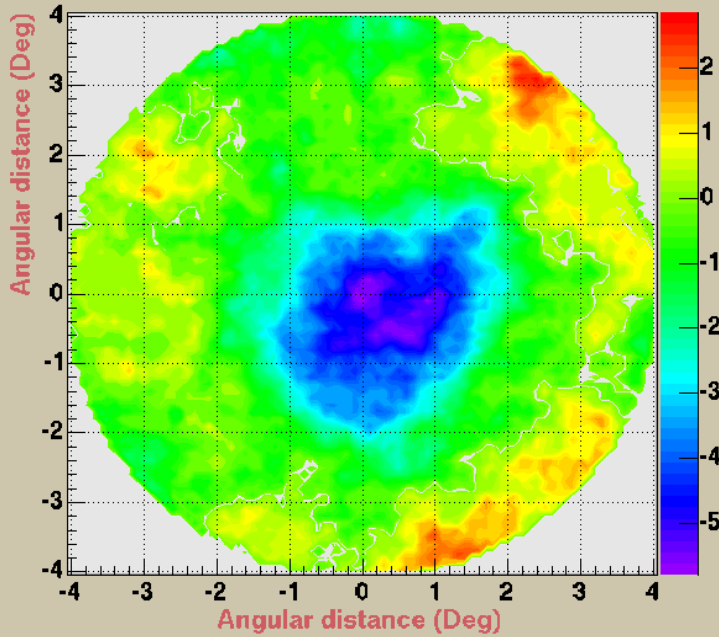
$$\langle y \rangle = -0.25 \pm 0.04(?)$$

$$\langle x \rangle = -0.16 \pm 0.04(?)$$

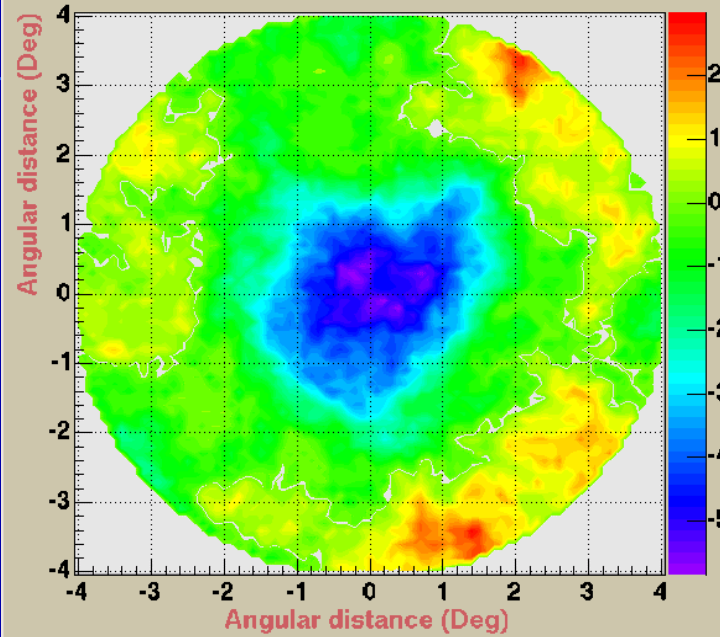
$$\langle y \rangle = 0.20 \pm 0.04(?)$$

Shift Distance = 0.6 deg

Moon Shadow (No correction)

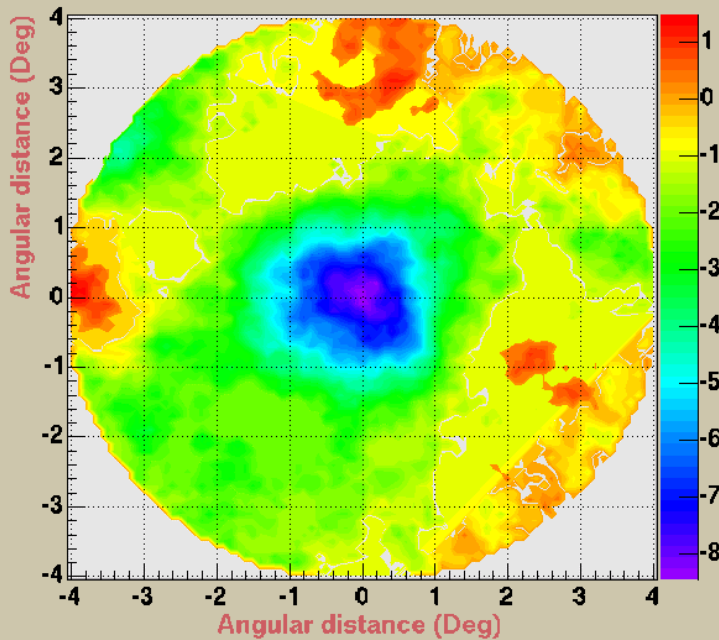


Moon Shadow (Andy's correction)

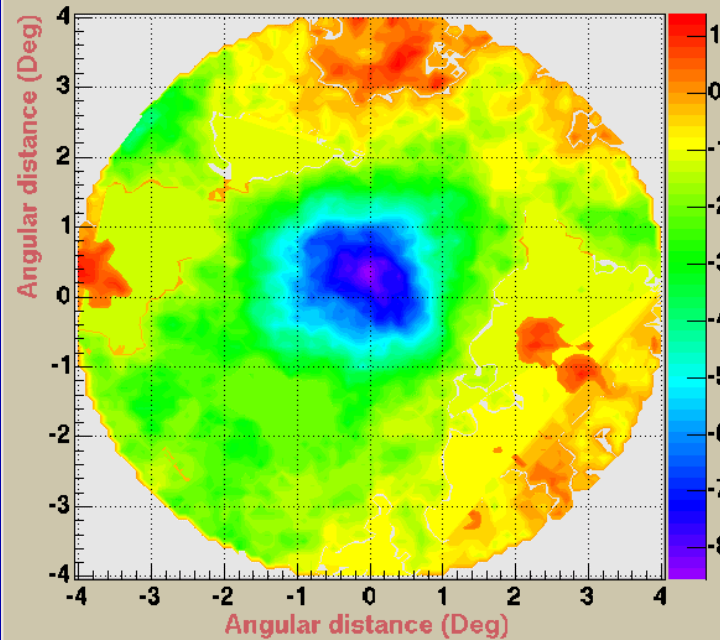


1340-1400

Moon Shadow (No correction)

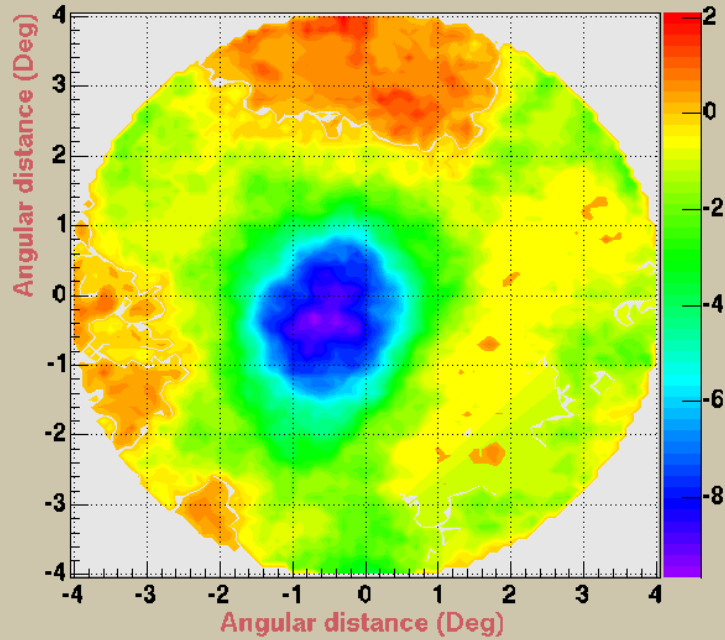


Moon Shadow (Andy's correction)

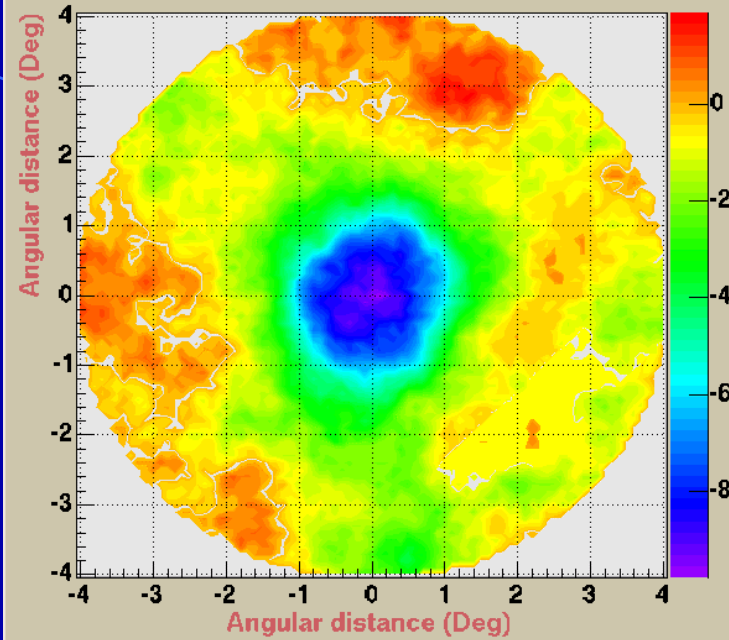


1401-1588

Moon Shadow (No correction)

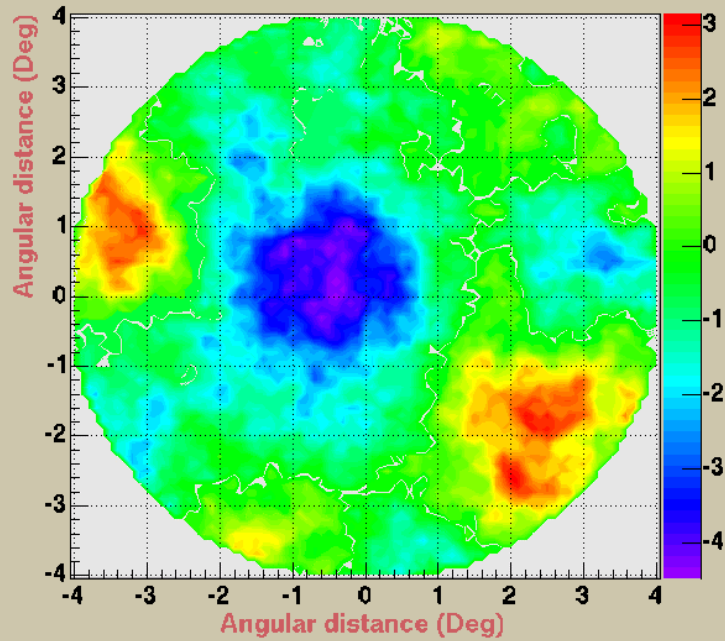


Moon Shadow (Andy's correction)

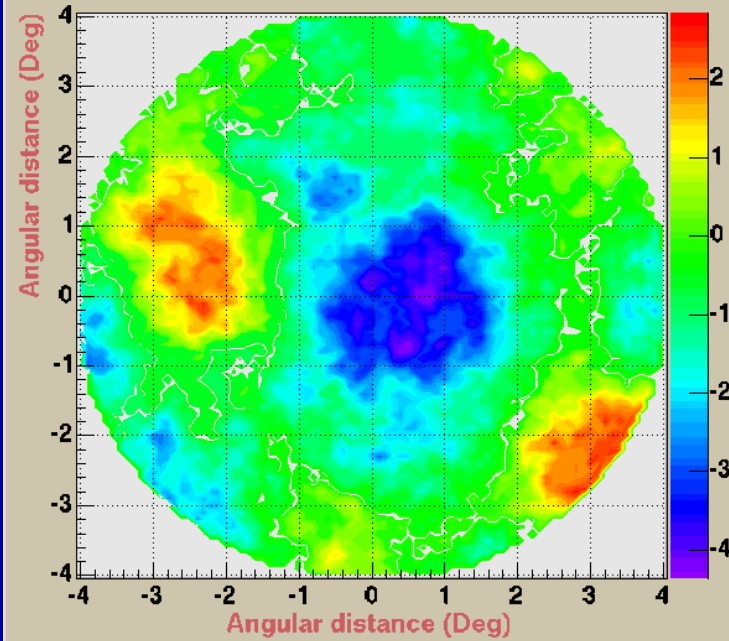


1589-1668

Moon Shadow (No correction)

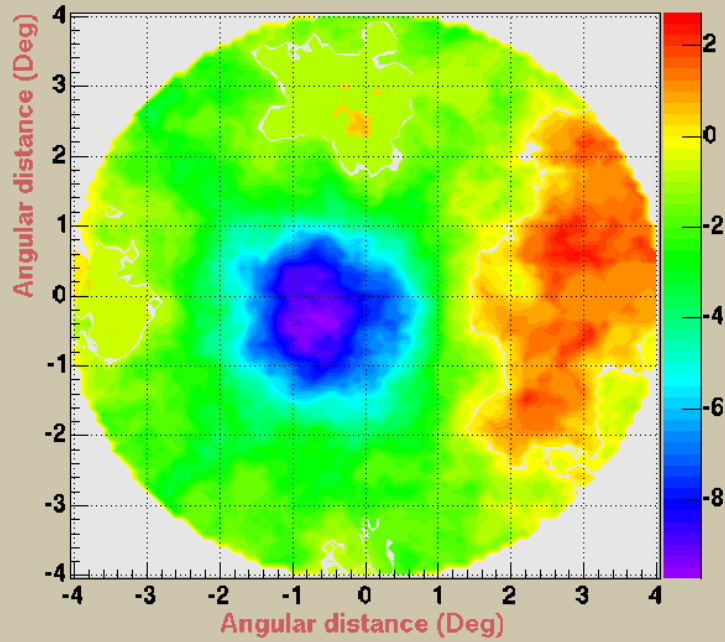


Moon Shadow (Andy's correction)

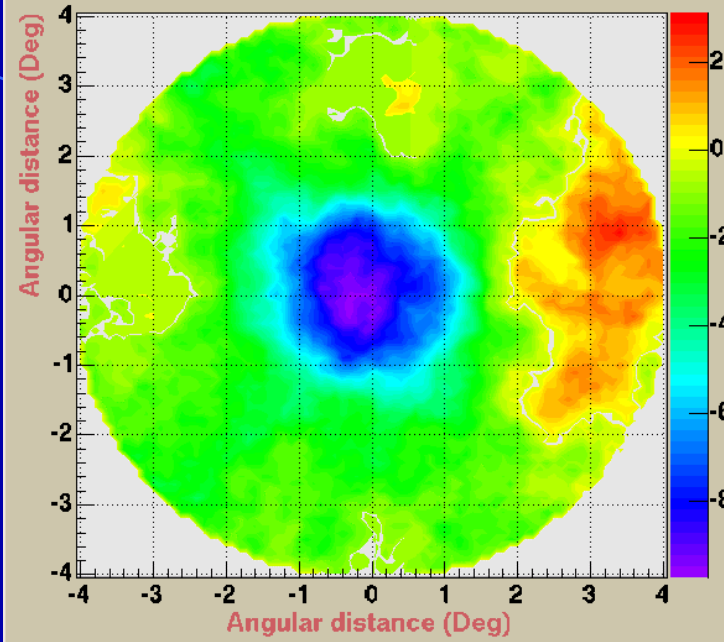


1669-1708

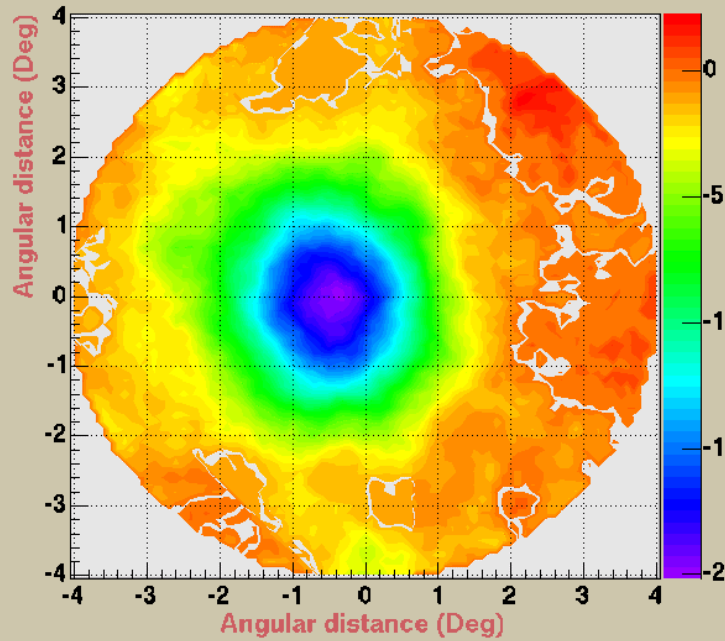
Moon Shadow (No correction)



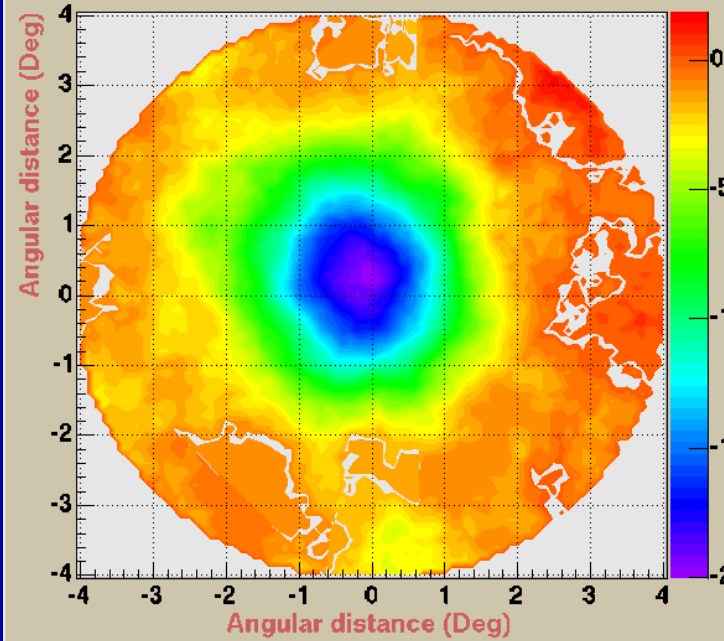
Moon Shadow (Andy's correction)



Moon Shadow (No correction)



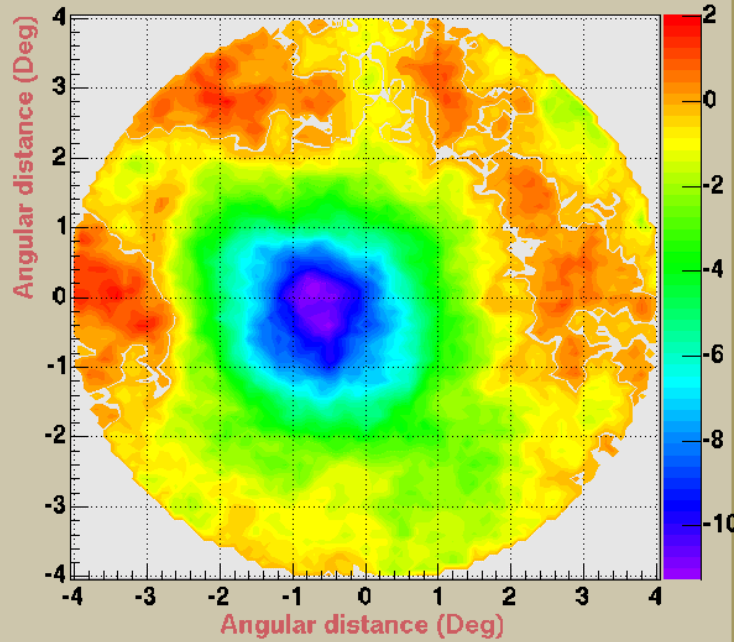
Moon Shadow (Andy's correction)



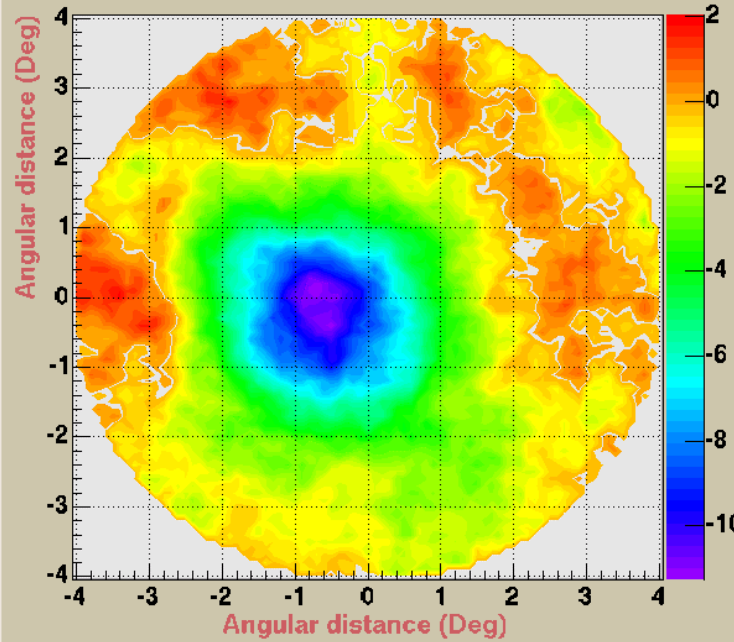
1709-1812

1813-2067

Moon Shadow (No correction)

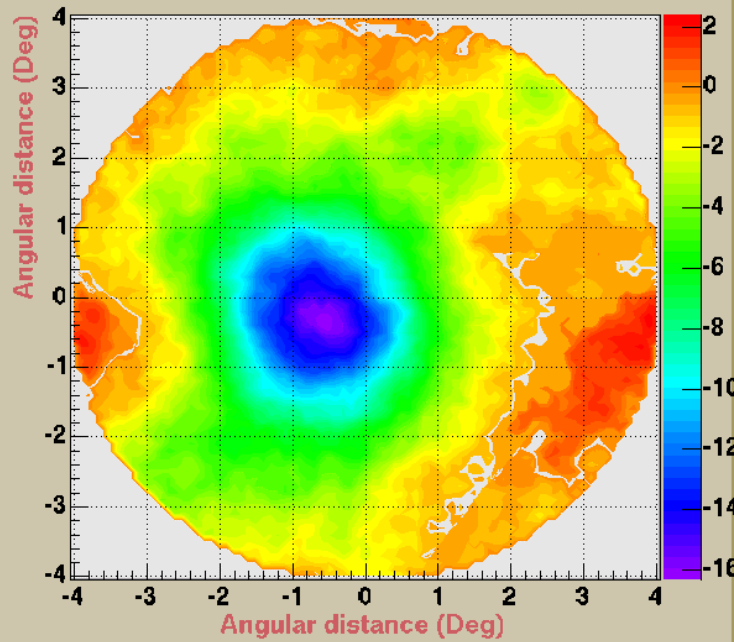


Moon Shadow (No correction)

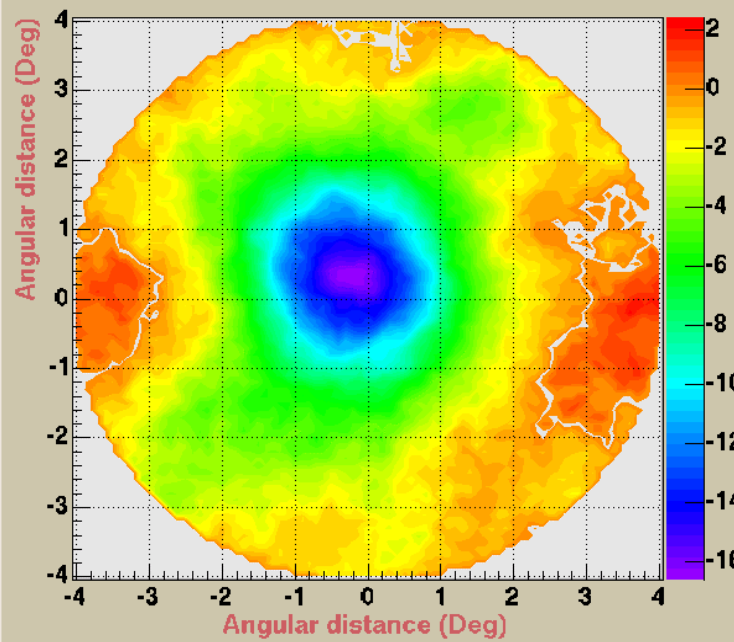


2068-2168

Moon Shadow (No correction)

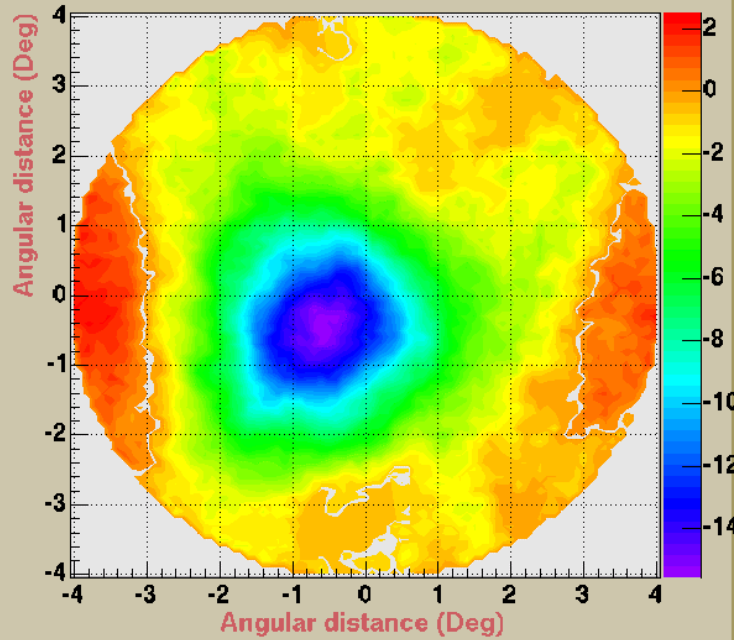


Moon Shadow (Andy's correction)

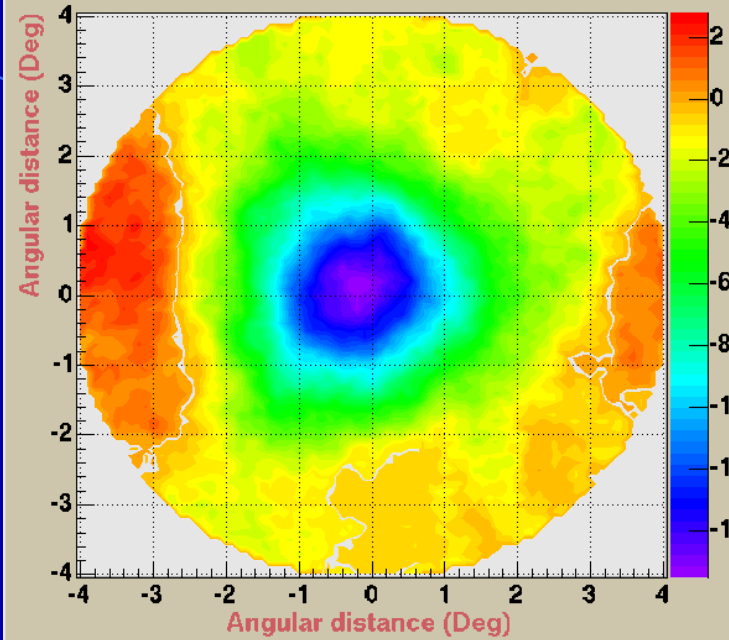


2169-2350

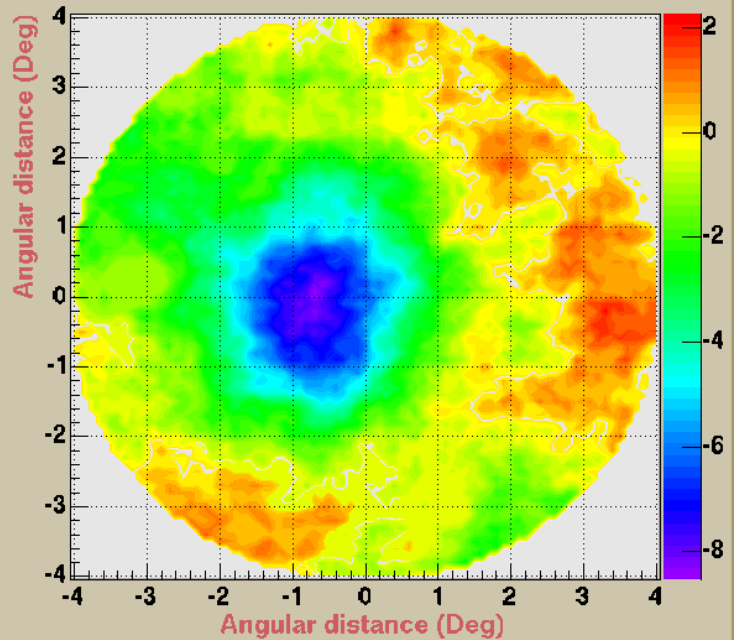
Moon Shadow (No correction)



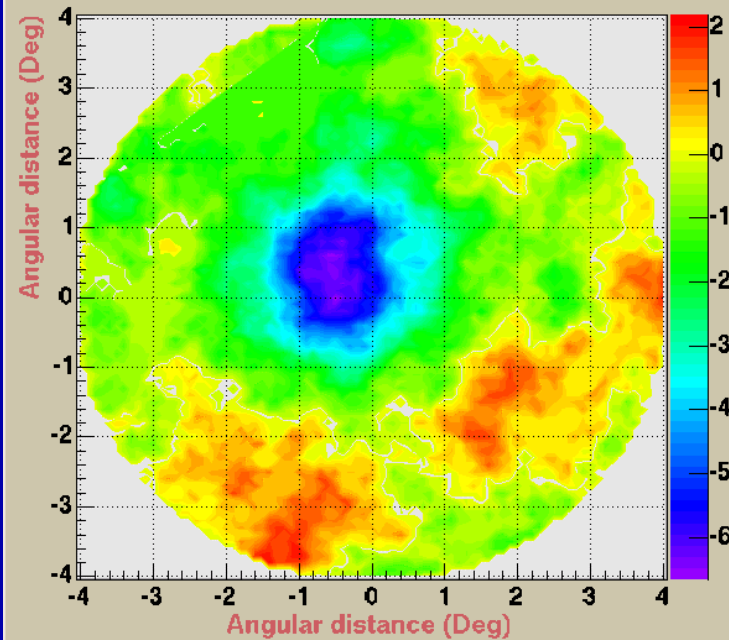
Moon Shadow (Andy's correction)



Moon Shadow (No correction)



Moon Shadow (Andy's correction)




2351-2540

2541-2591

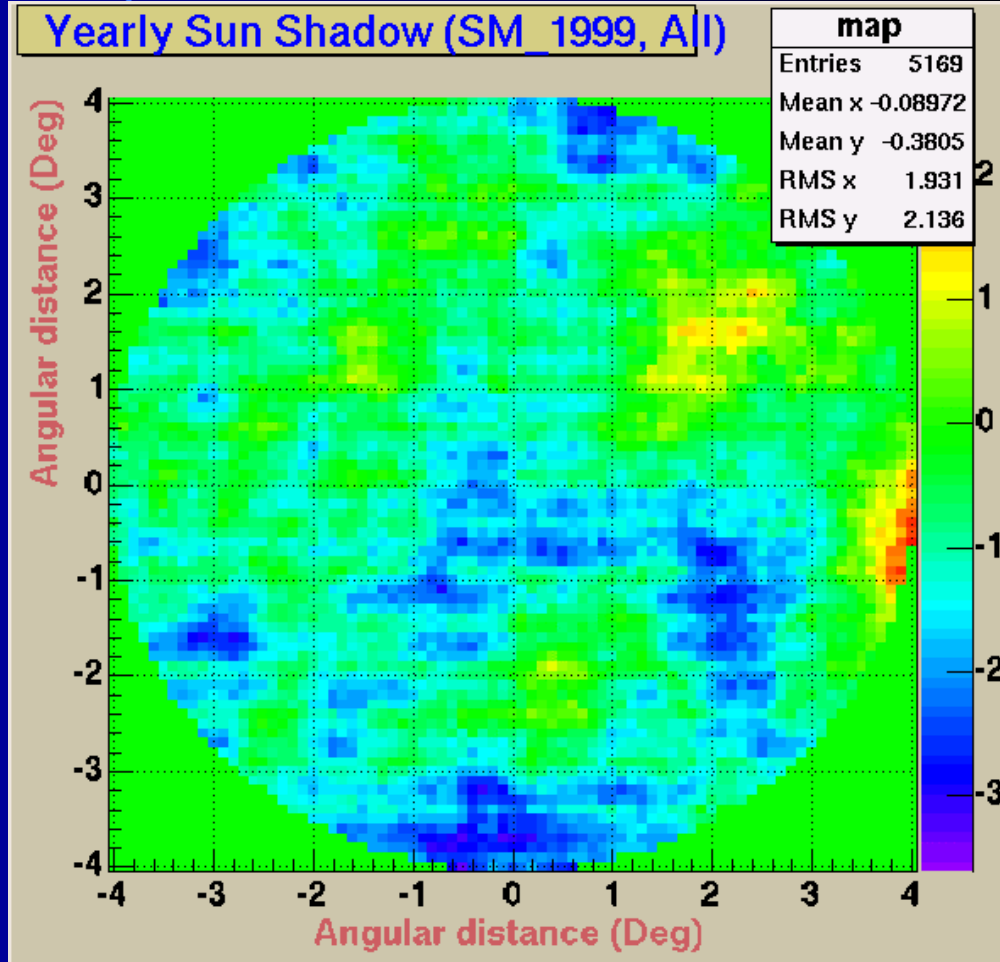
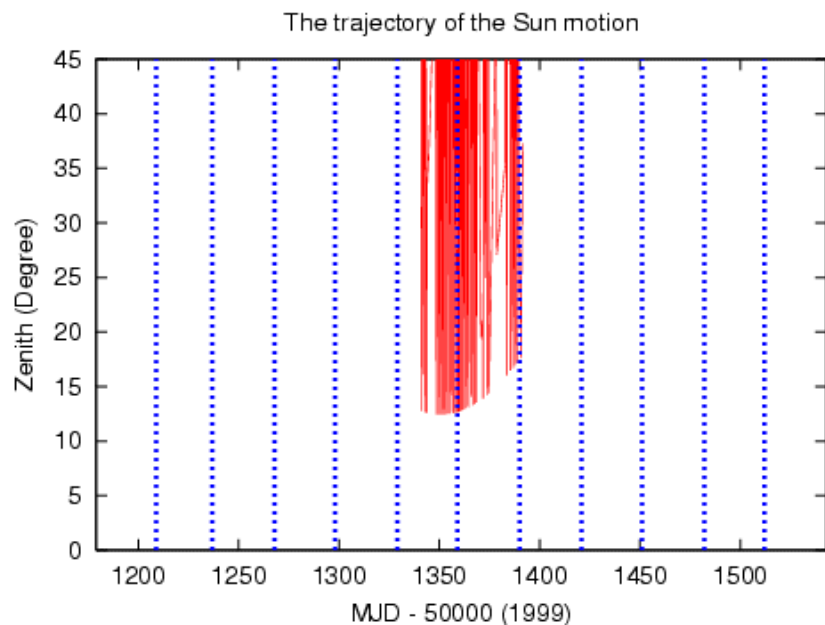
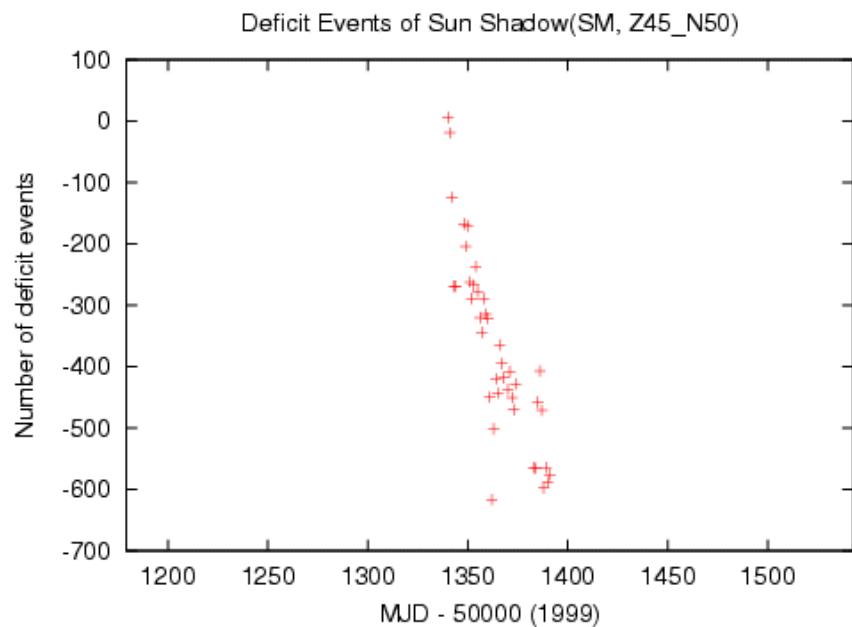
Preliminary Results

- System runs well.
- The accumulated deficit significance is about -36σ .
- The shift of the Moon shadow is large by zenith align correction.

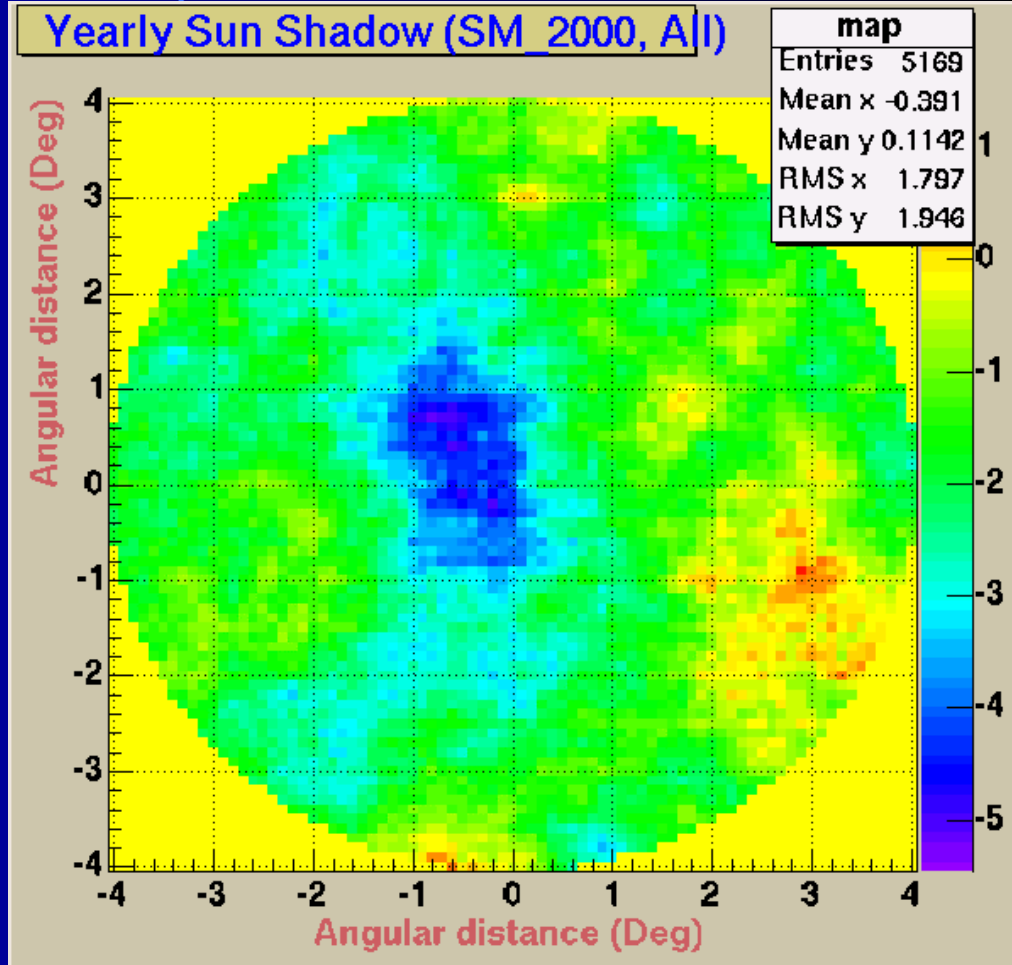
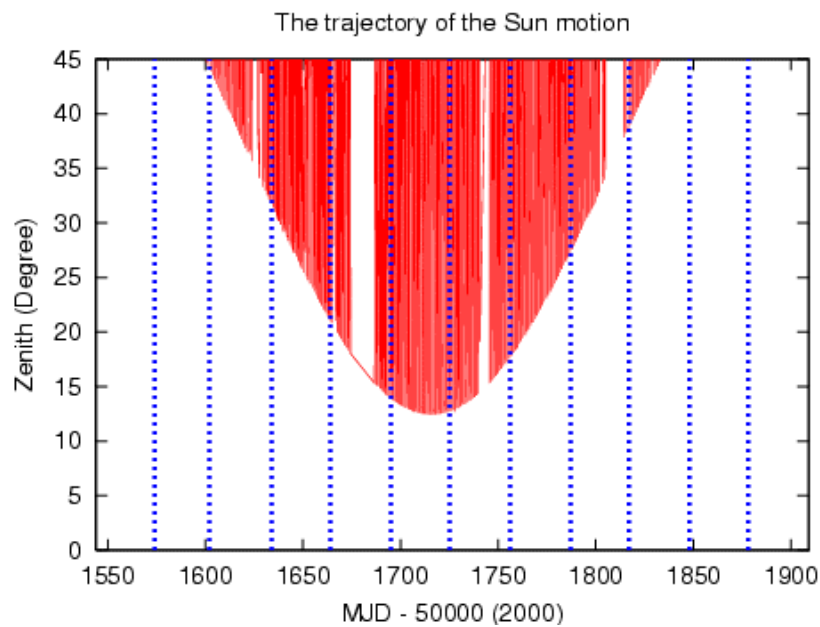
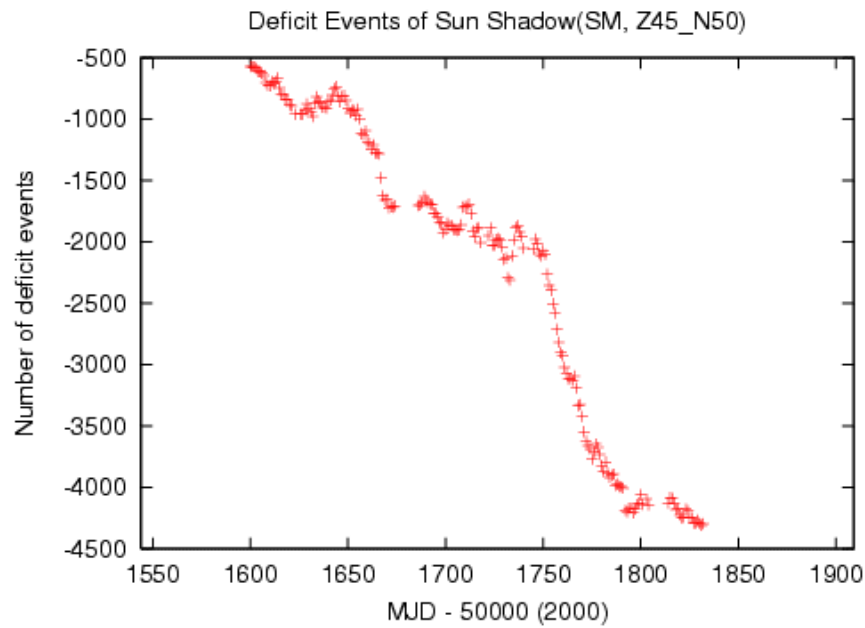


The yearly variation of the Sun shadow

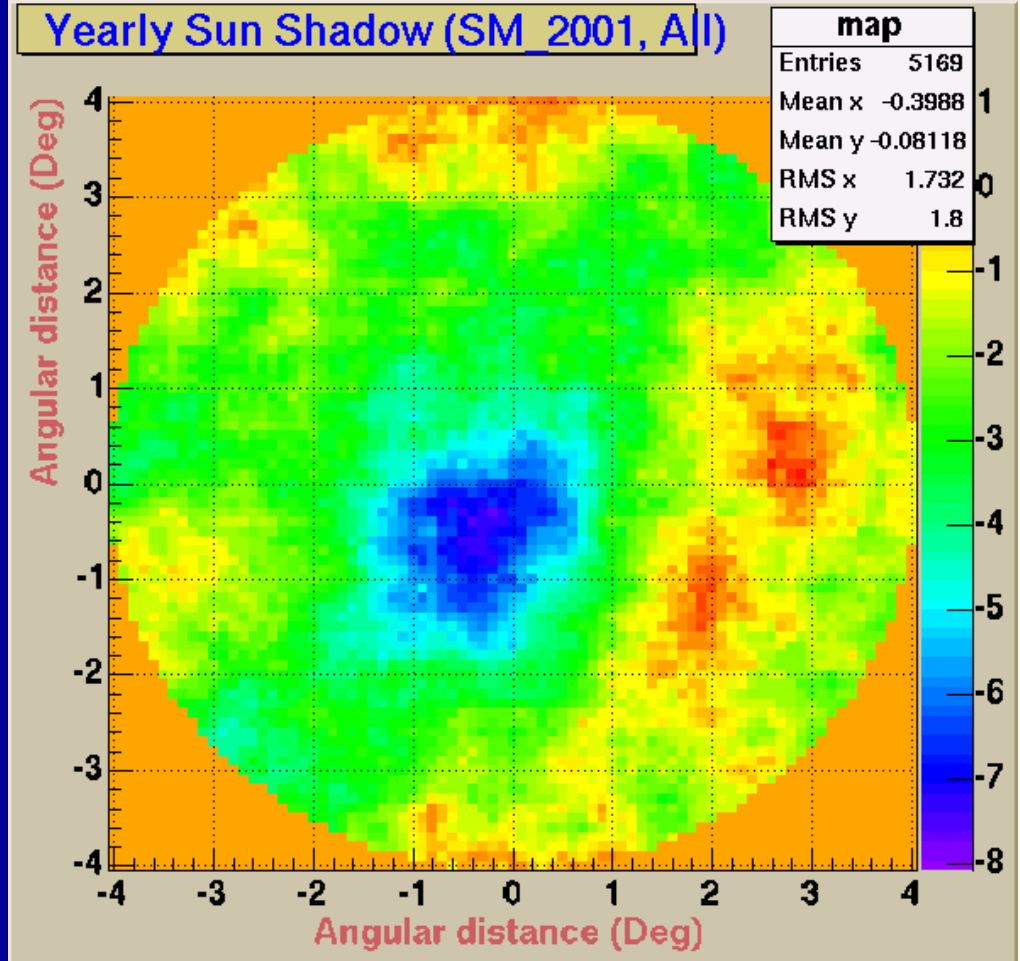
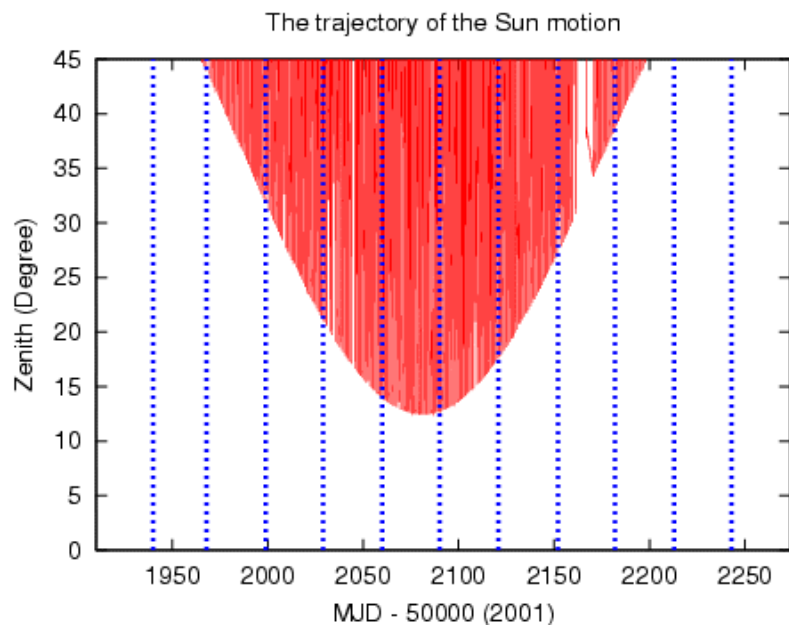
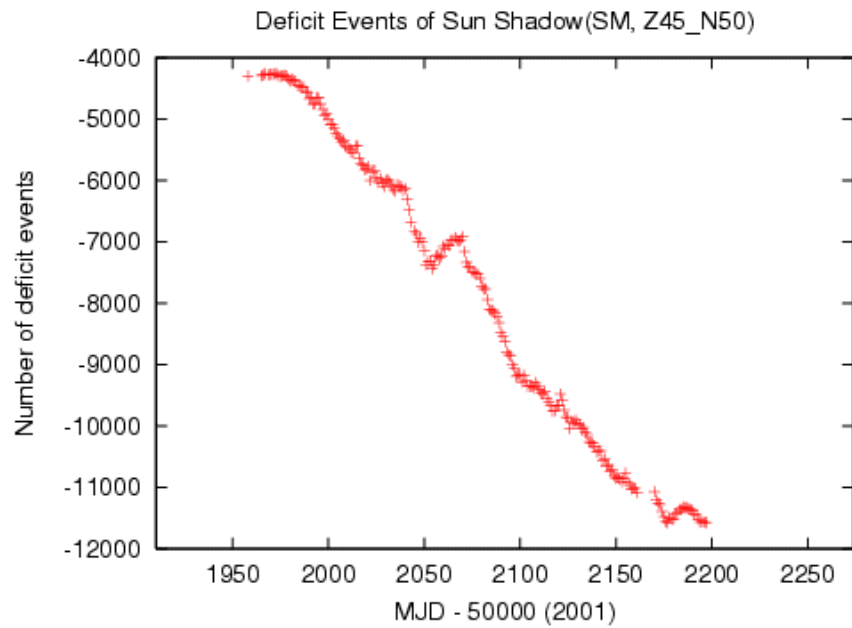
The yearly variation of the Sun shadow (1999)



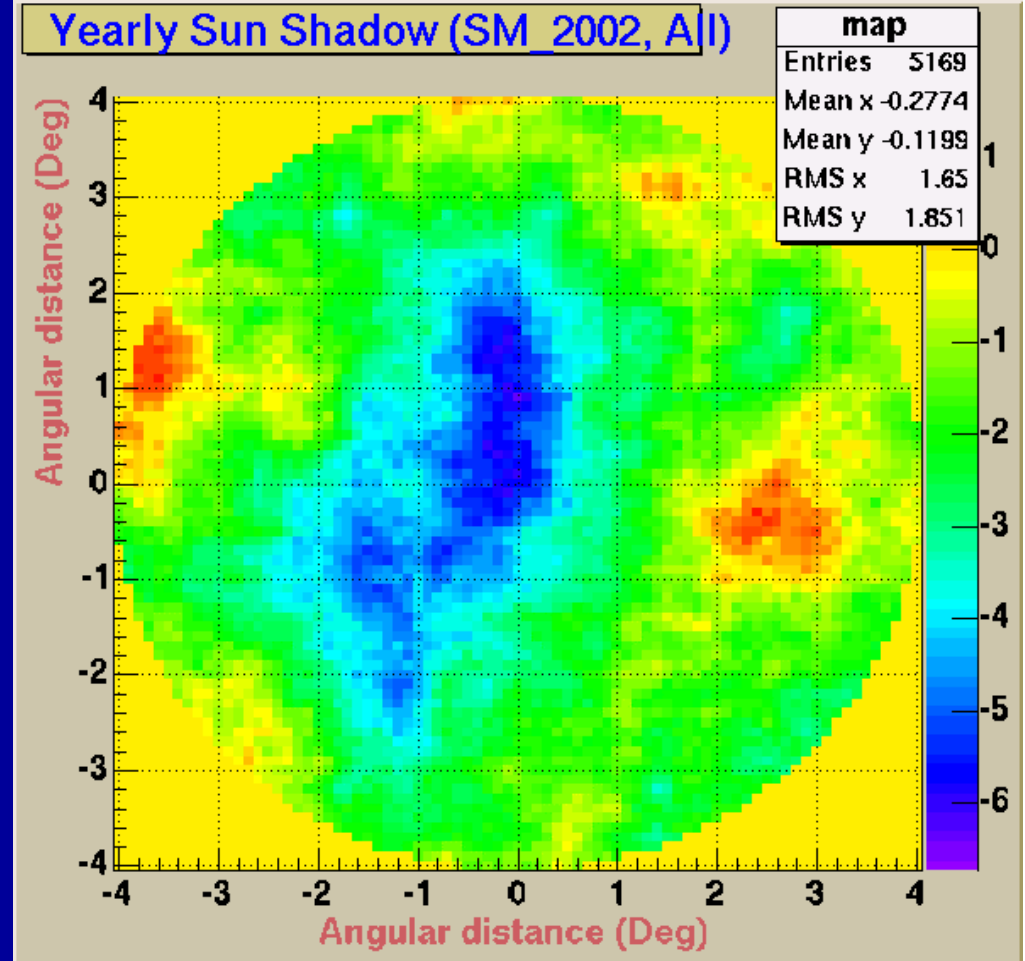
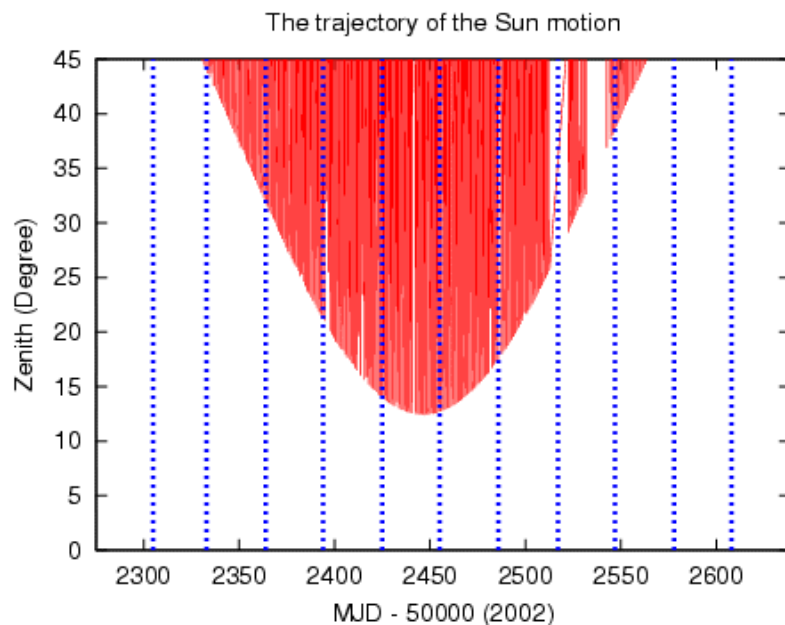
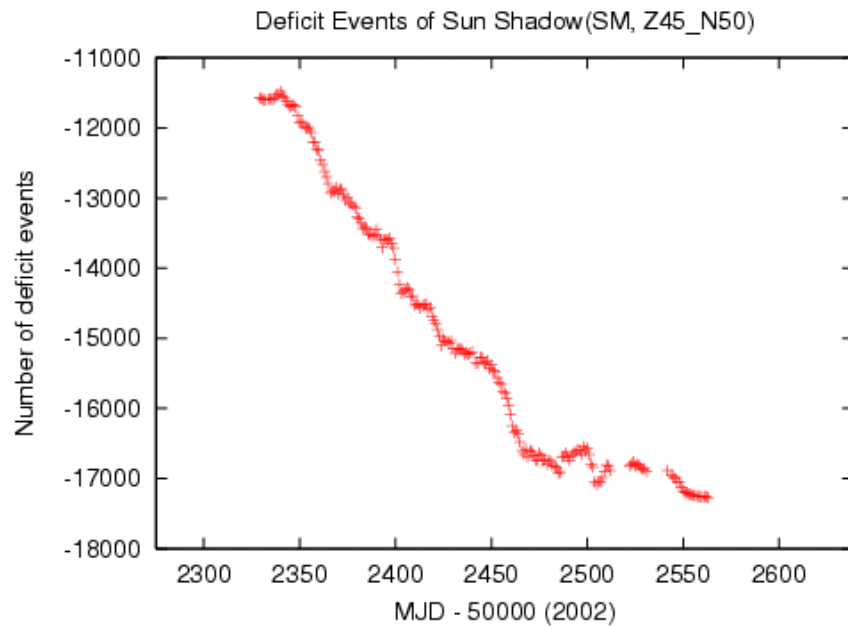
The yearly variation of the Sun shadow (2000)



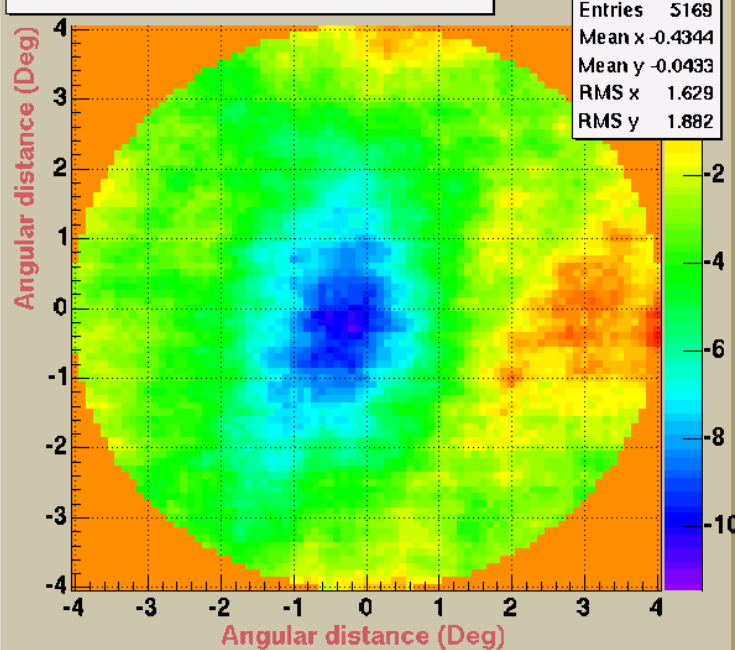
The yearly variation of the Sun shadow (2001)



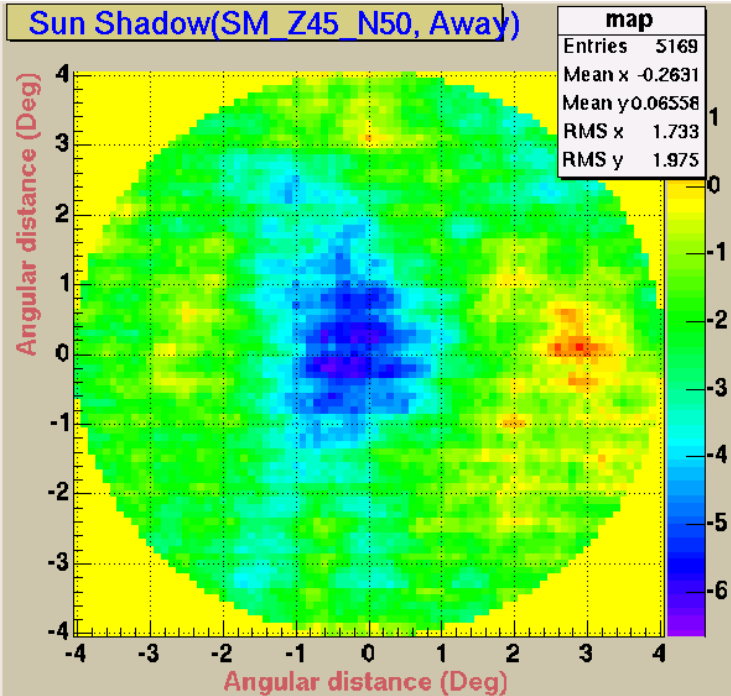
The yearly variation of the Sun shadow (2002)



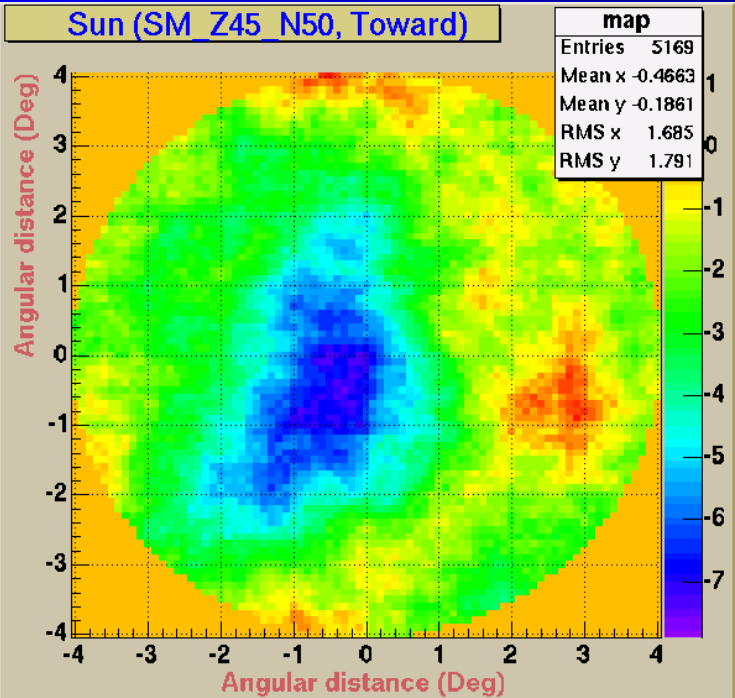
Sun Shadow (No Andy's Correction, All)



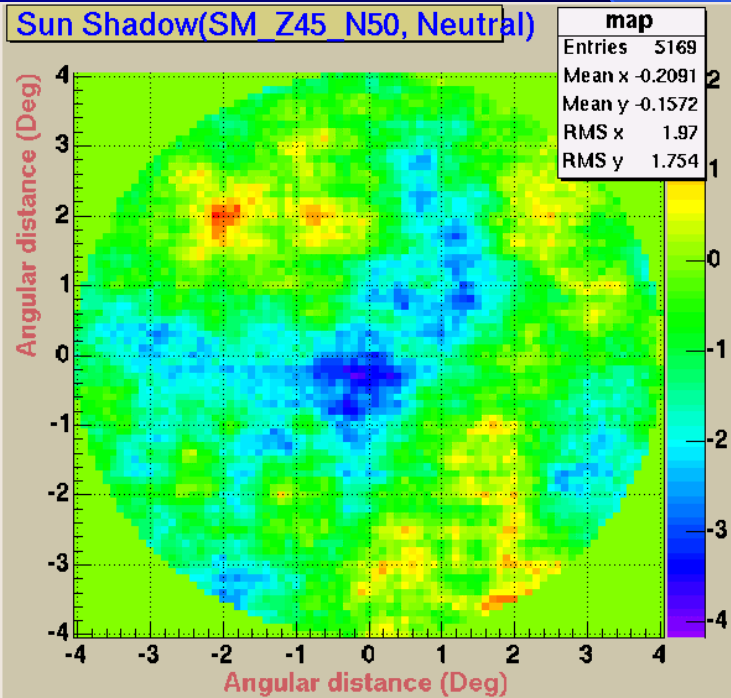
Sun Shadow(SM_Z45_N50_Away)



Sun (SM_Z45_N50_Toward)



Sun Shadow(SM_Z45_N50_Neutral)



Preliminary Results

- The accumulated deficit significance is about -11σ
- The shifts of the Sun shadow in IMF's sectors are consistent with the expected shifts.