



THEMIS

A deep probe into solar magnetism,
the solar system,
and quantum mechanics



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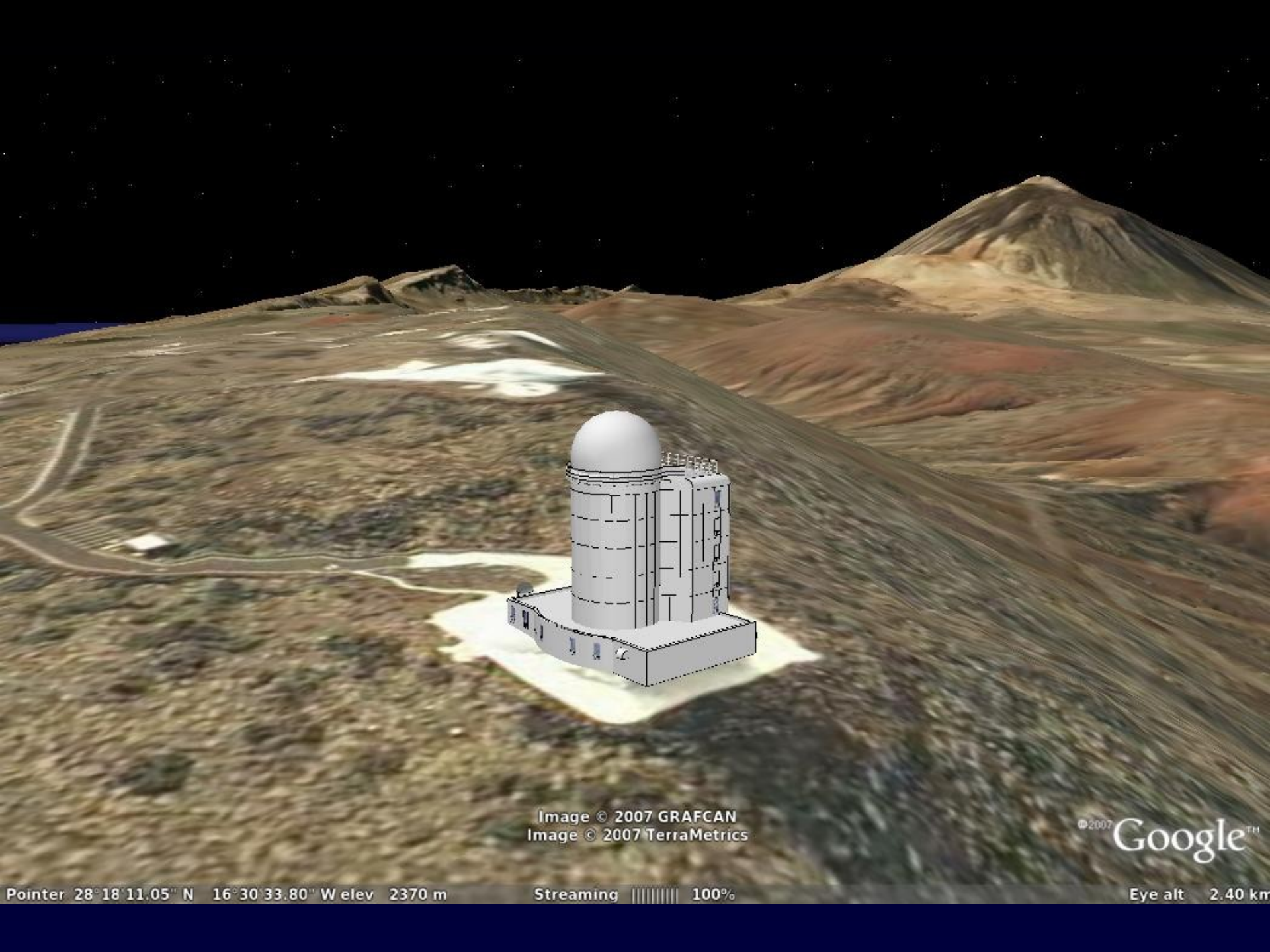


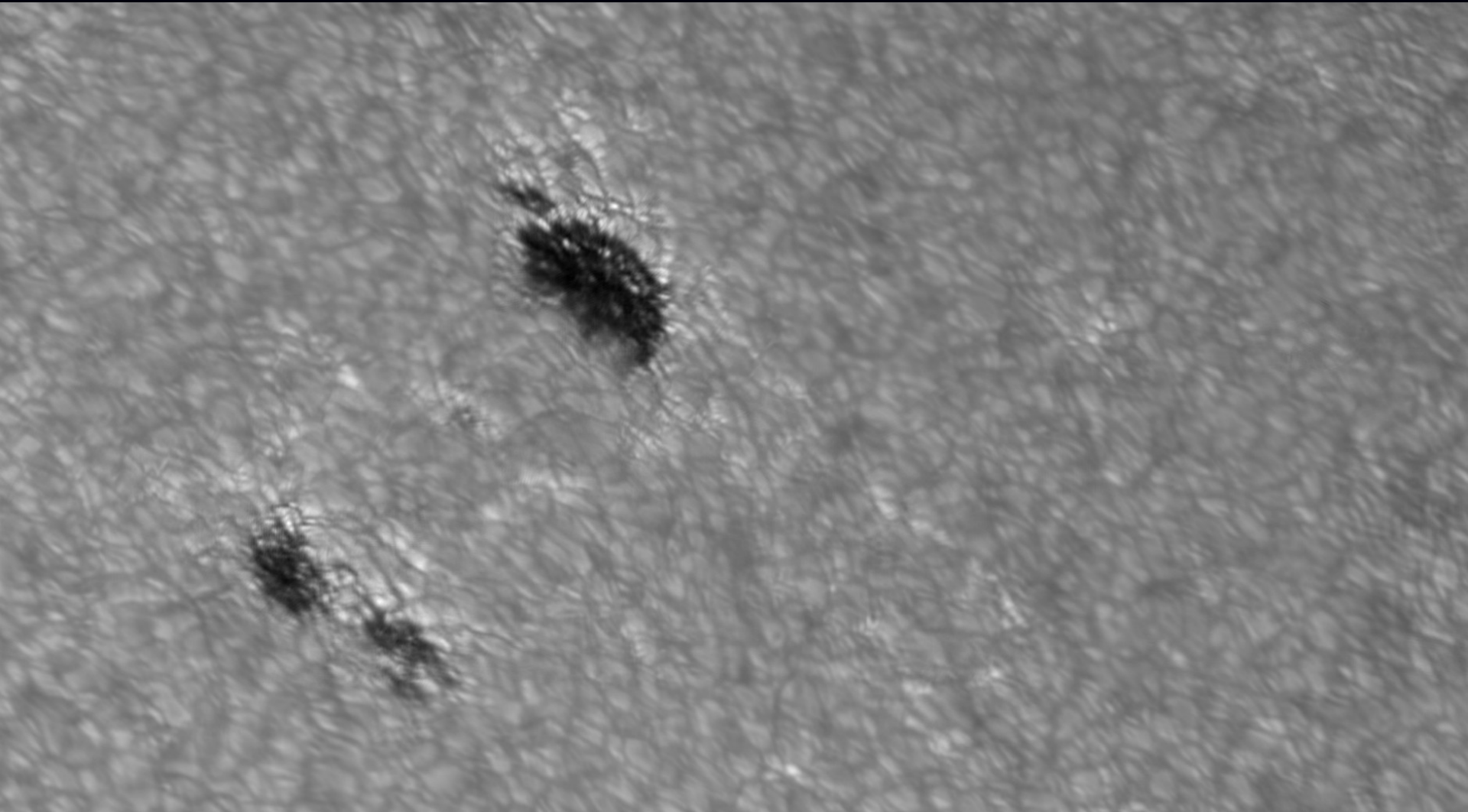
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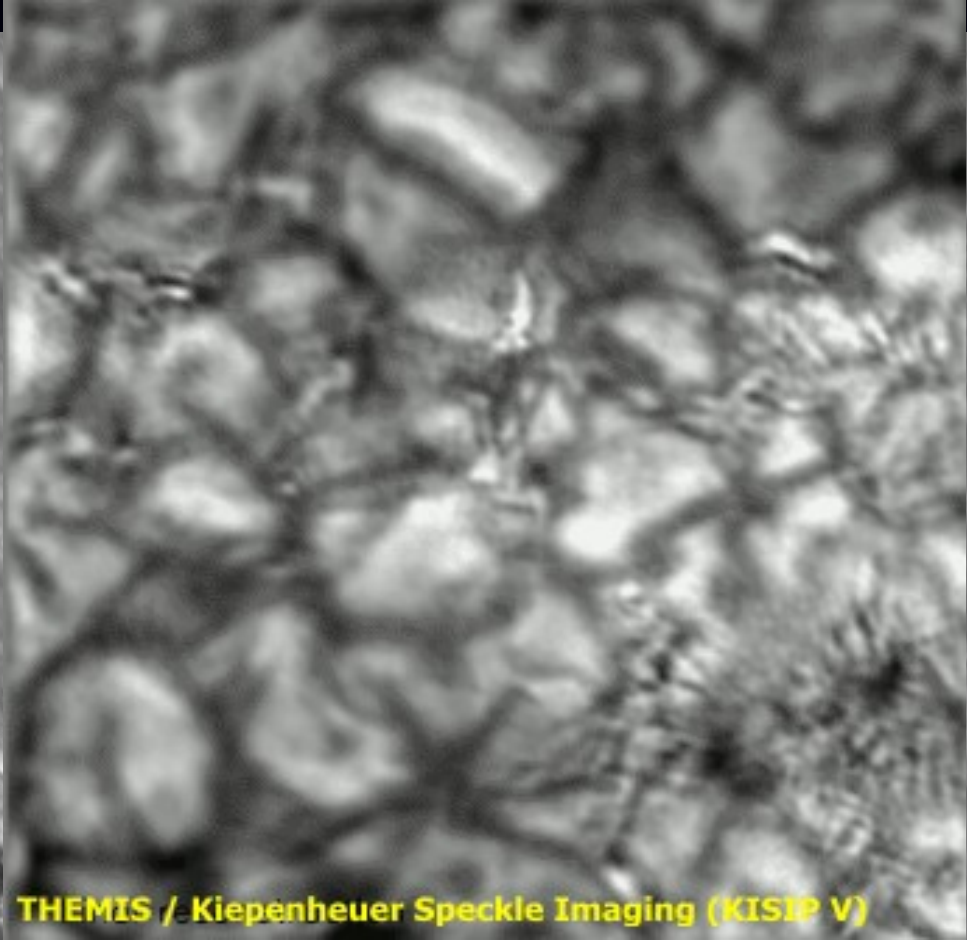
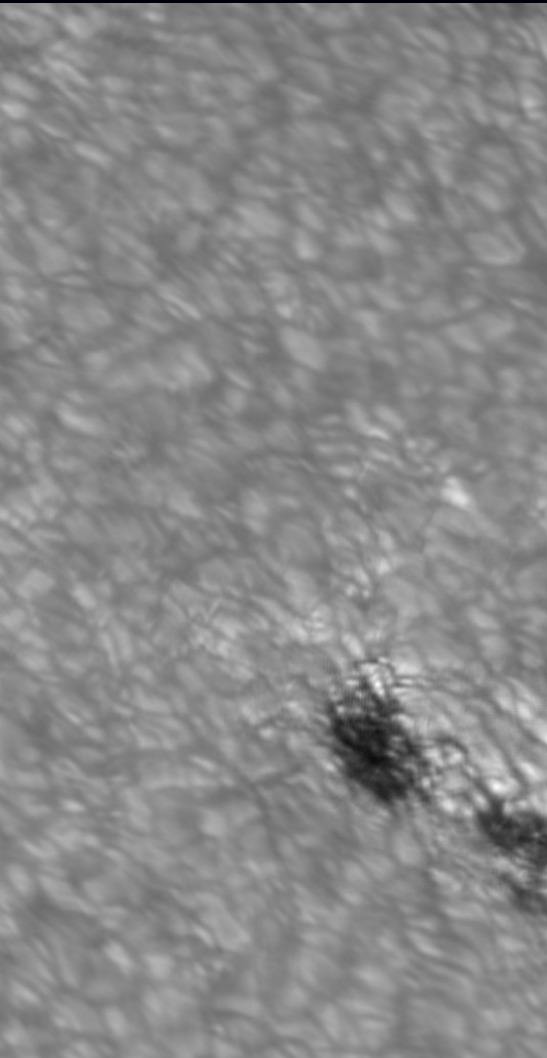
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Pointer 28° 18' 11.05" N 16° 30' 33.80" W elev 2370 m

Streaming  100%

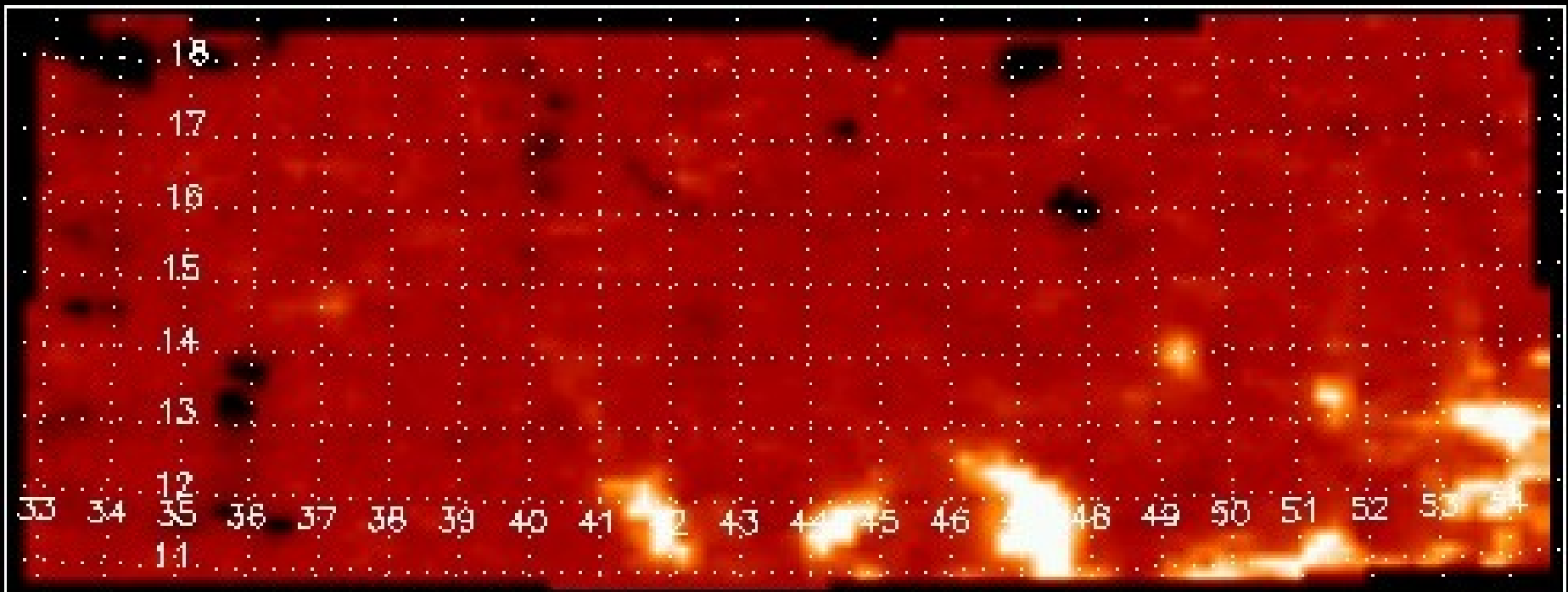
Eye alt 2.40 km





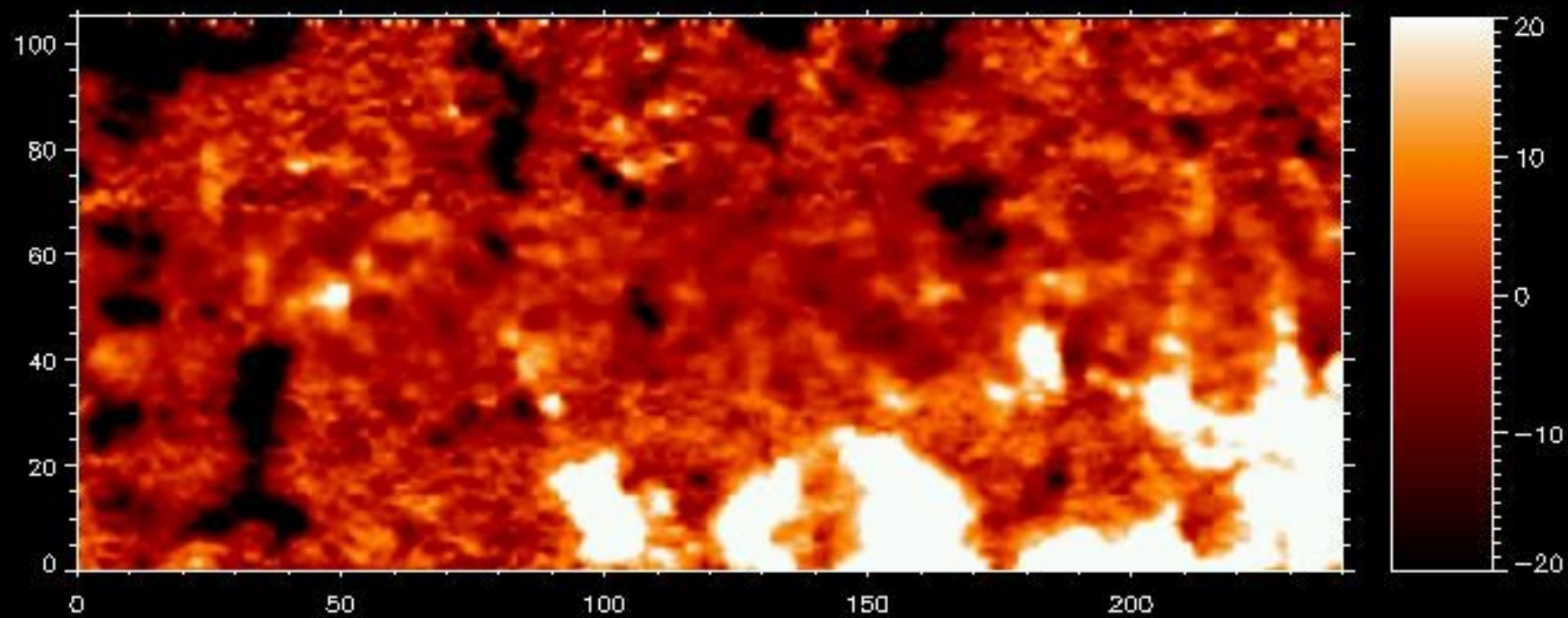
THEMIS / Kiepenheuer Speckle Imaging (KISIP V)

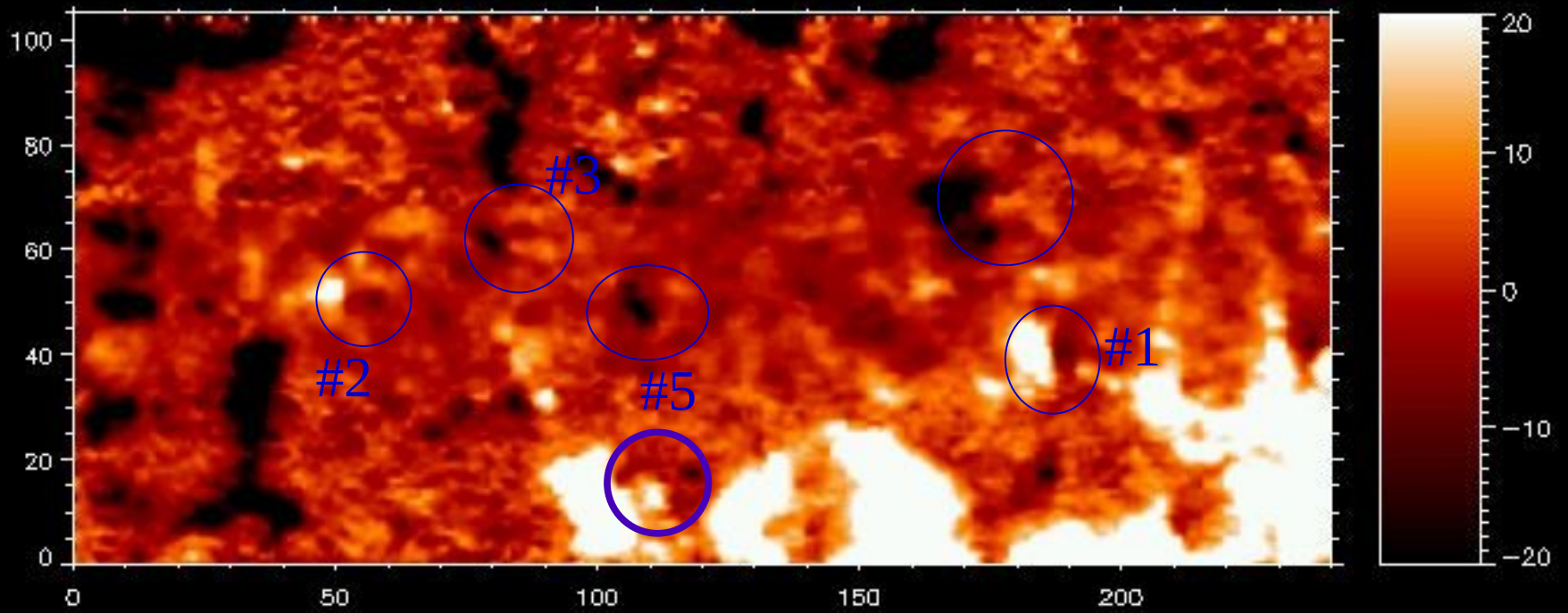
The topology of filament magnetic fields

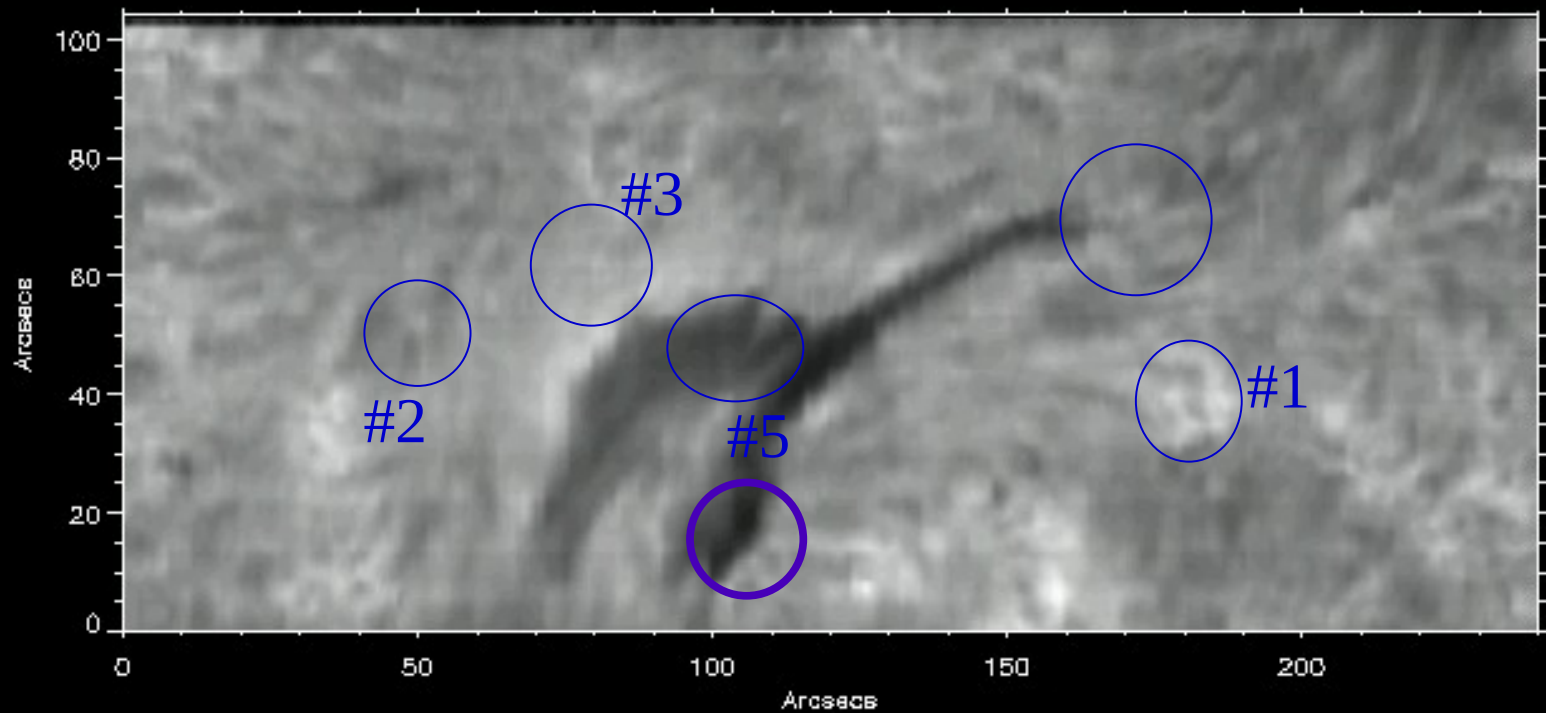


The topology of filament magnetic fields

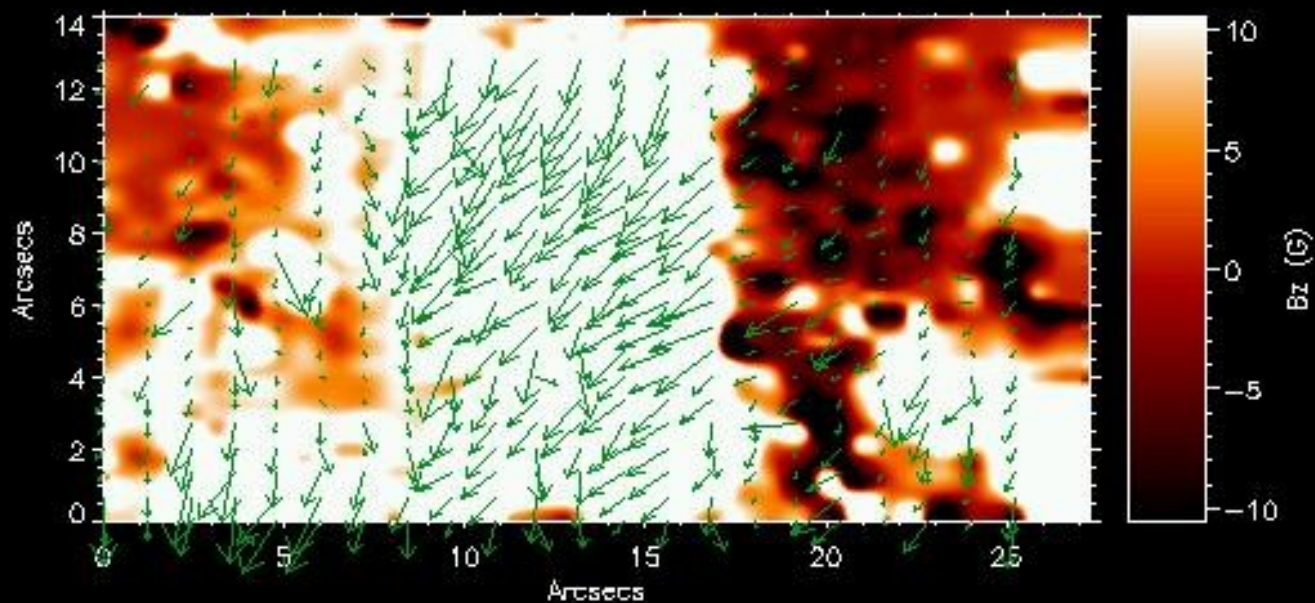
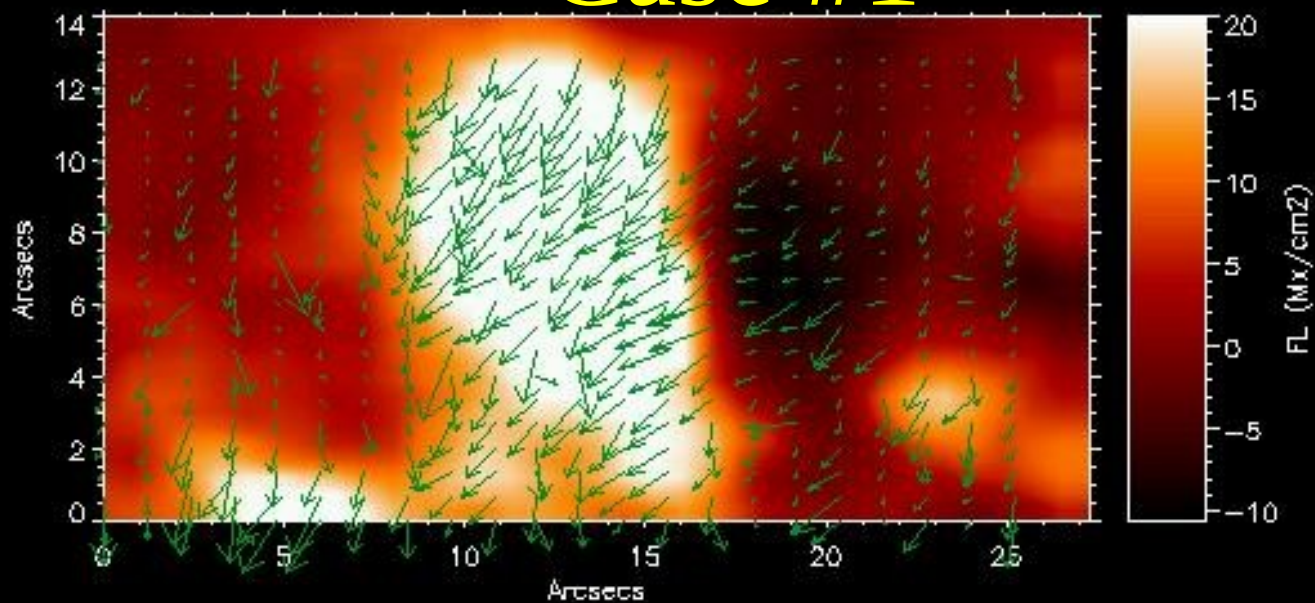




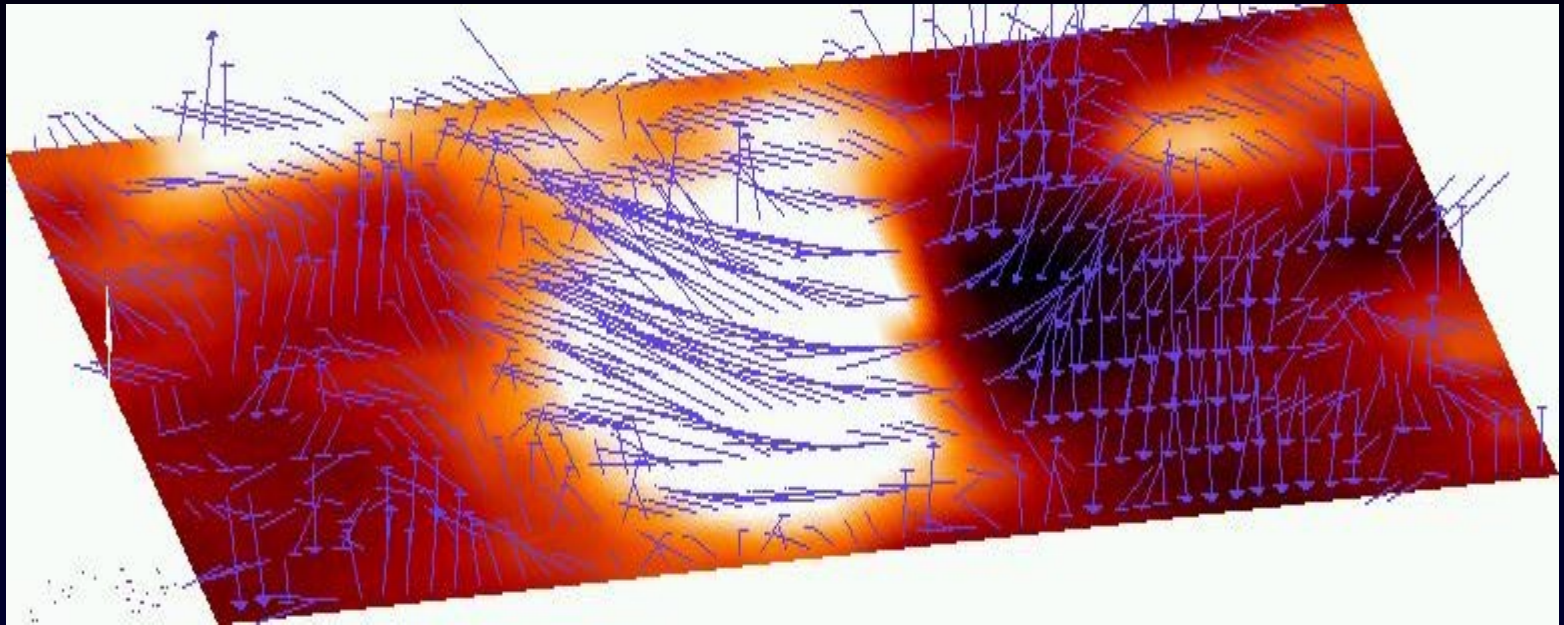


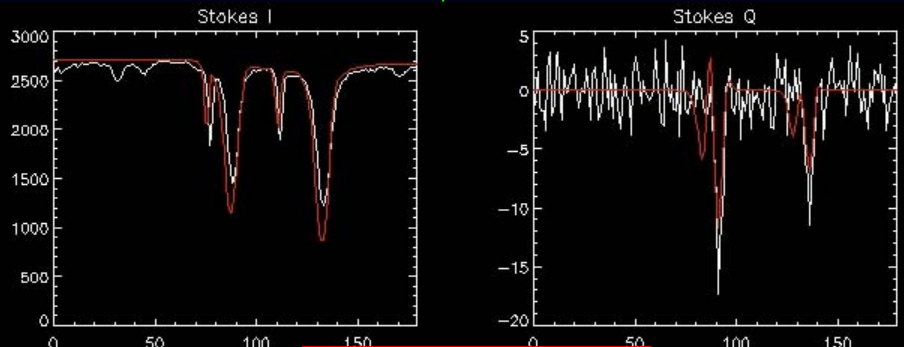
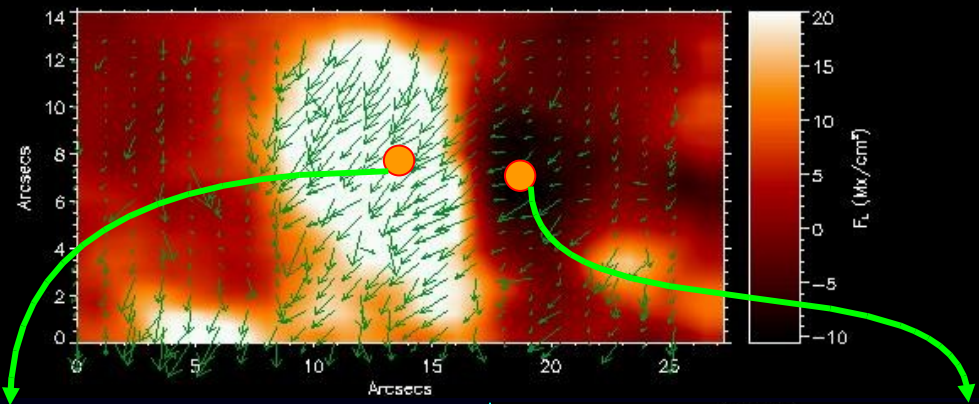


Case #1

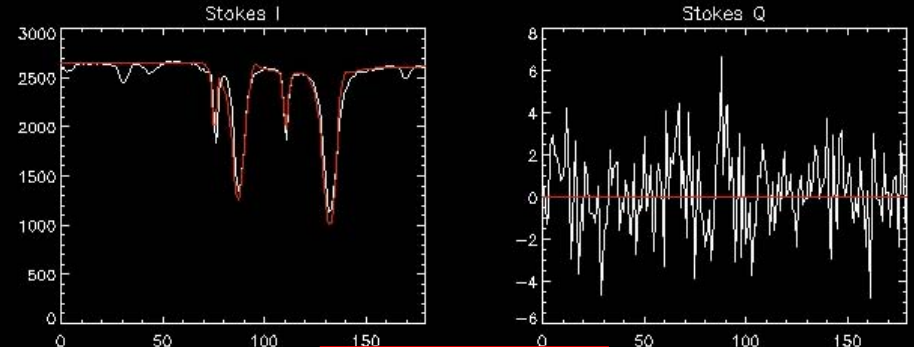
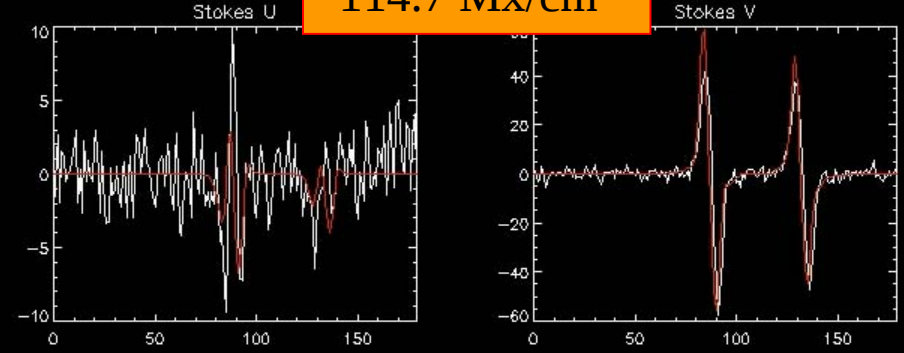


Case #1

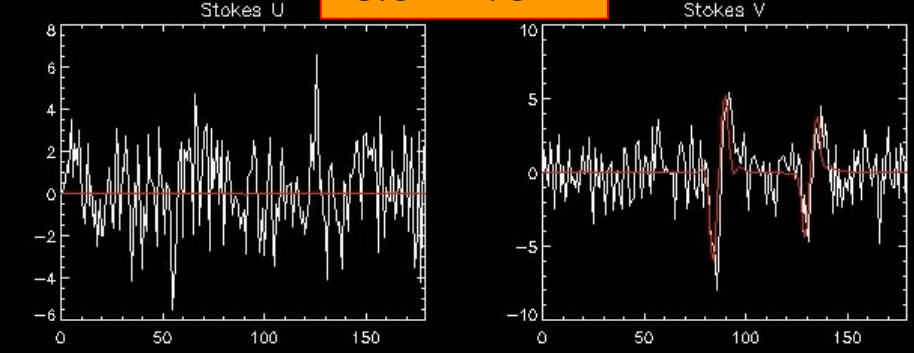




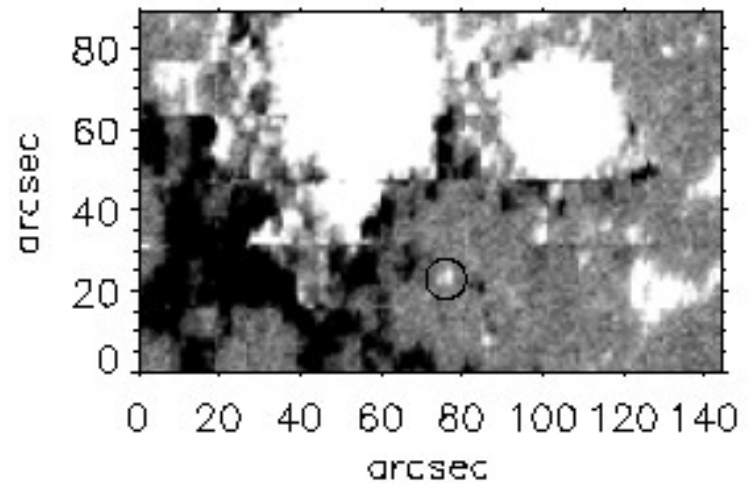
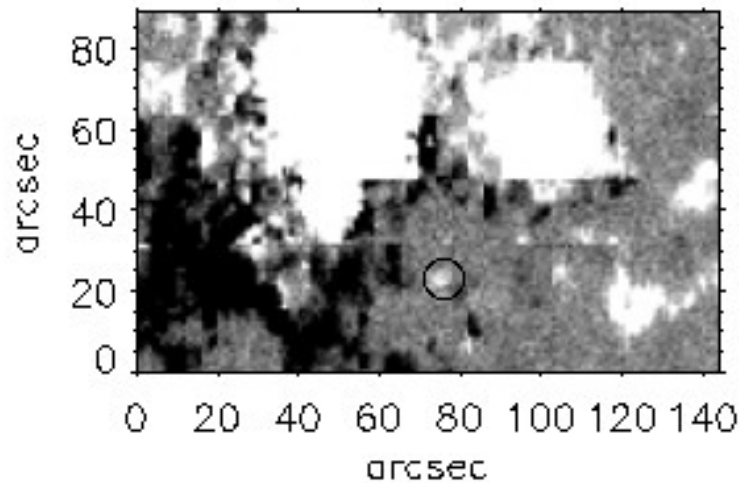
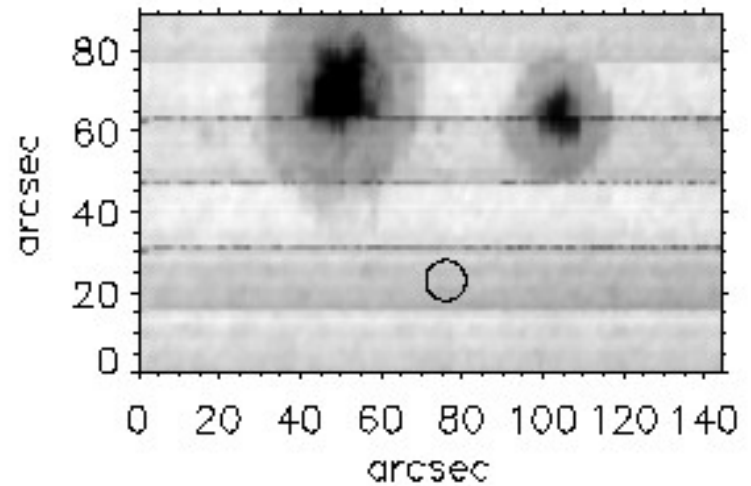
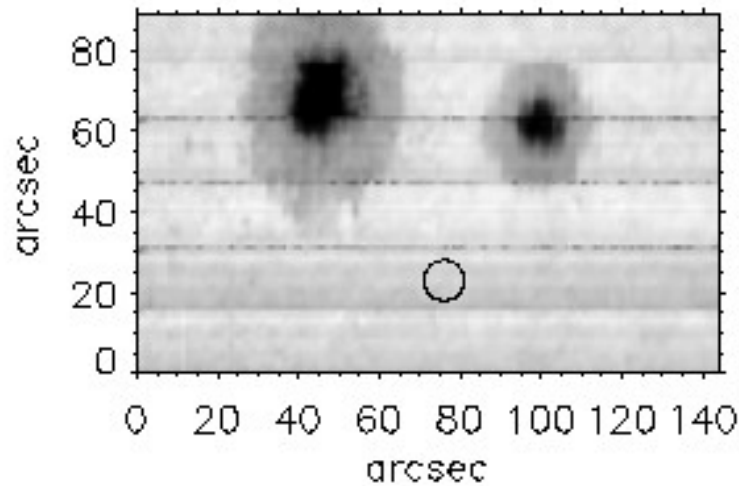
114.7 Mx/cm²

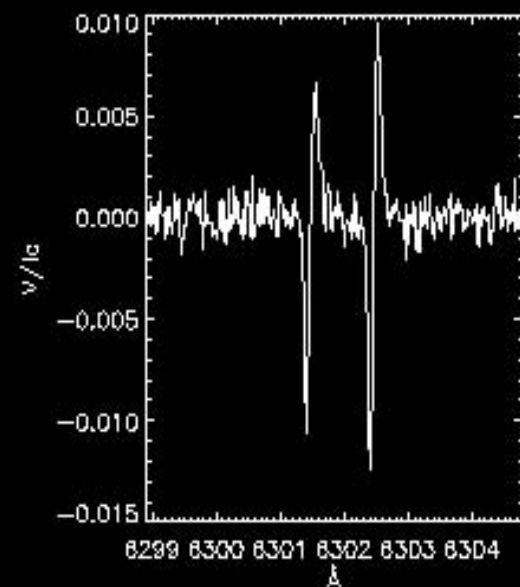
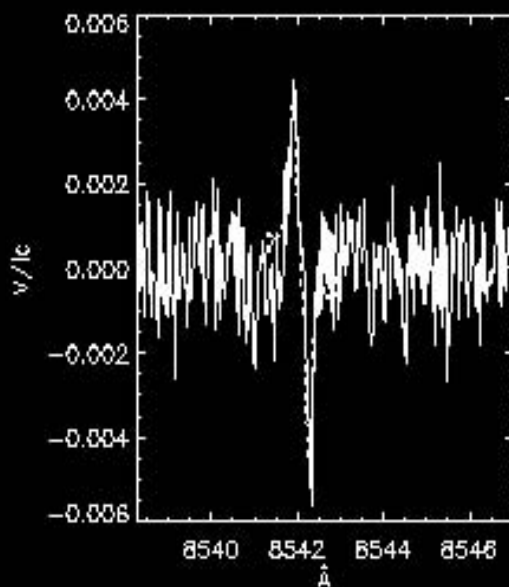
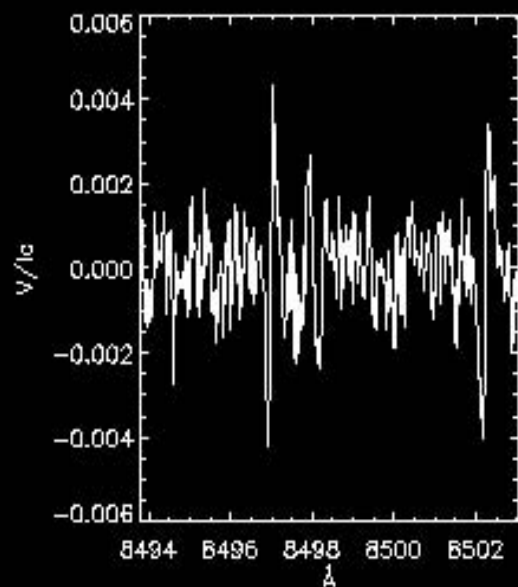
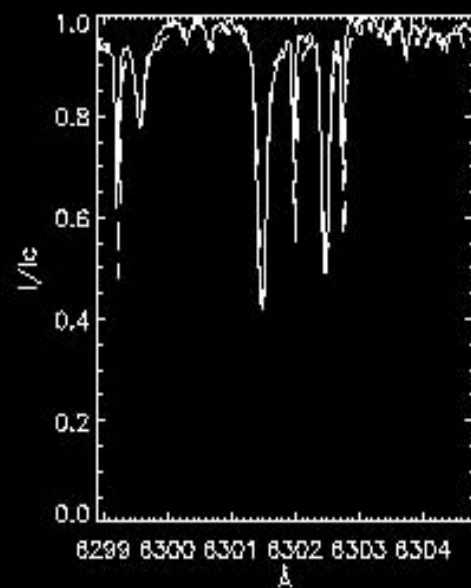
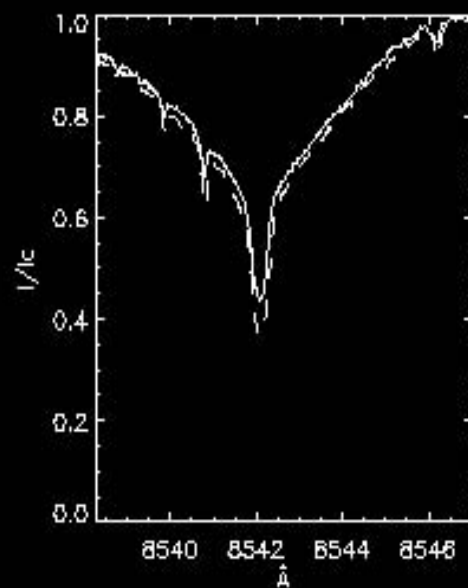
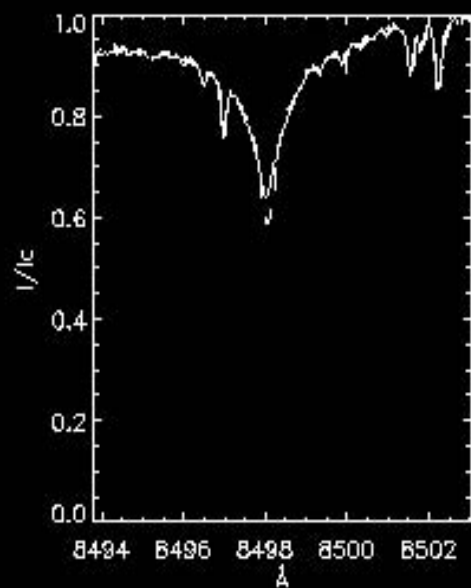


-8.8 Mx/cm²

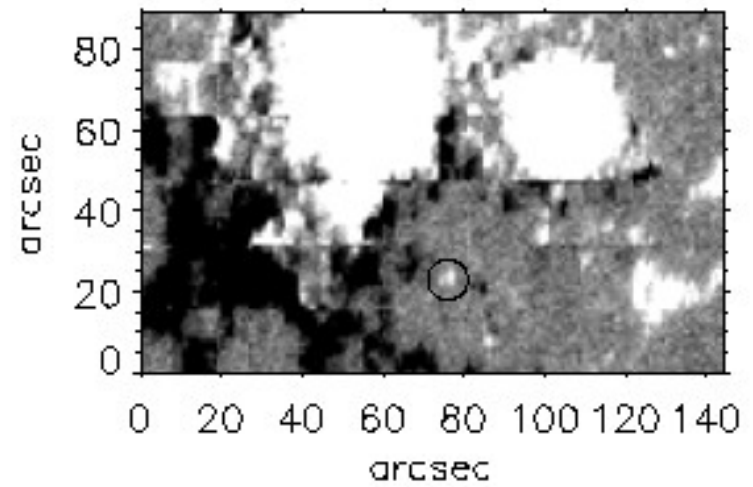
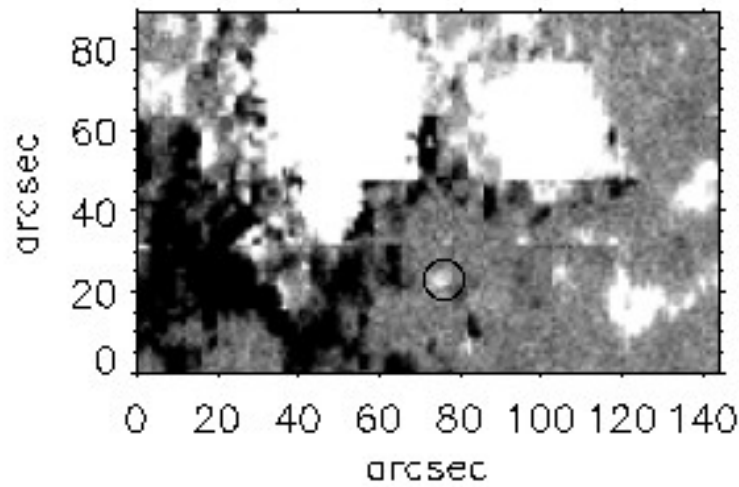
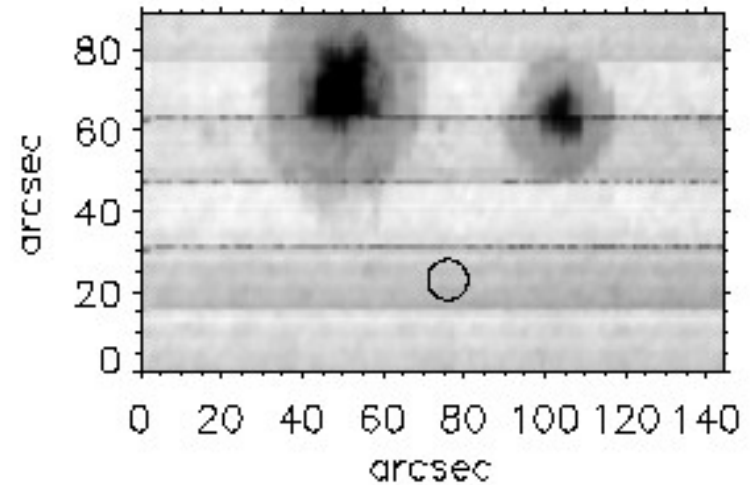
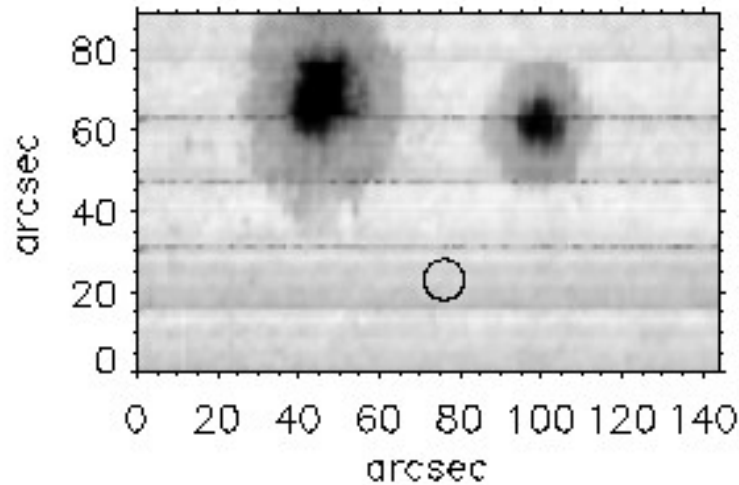


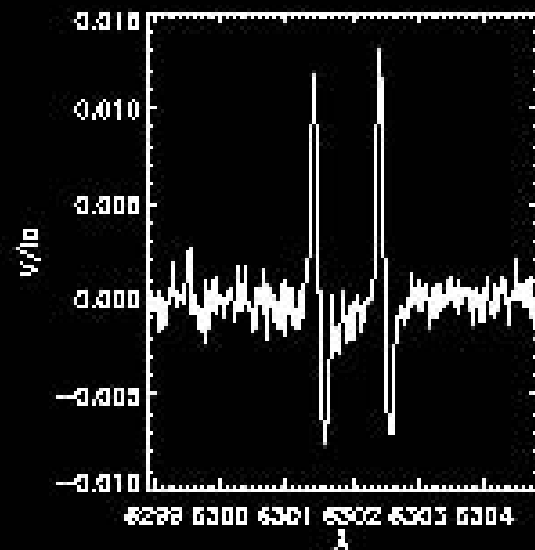
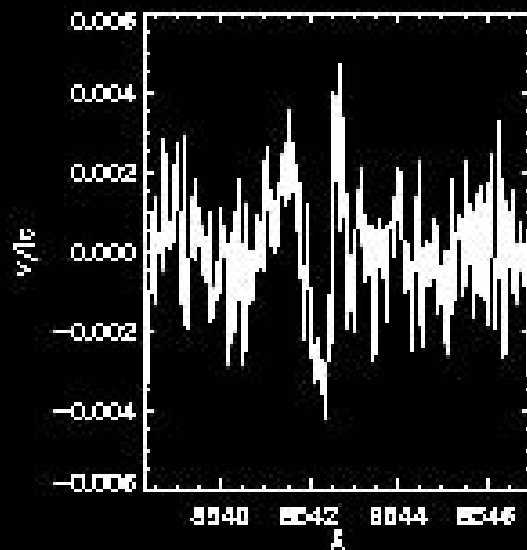
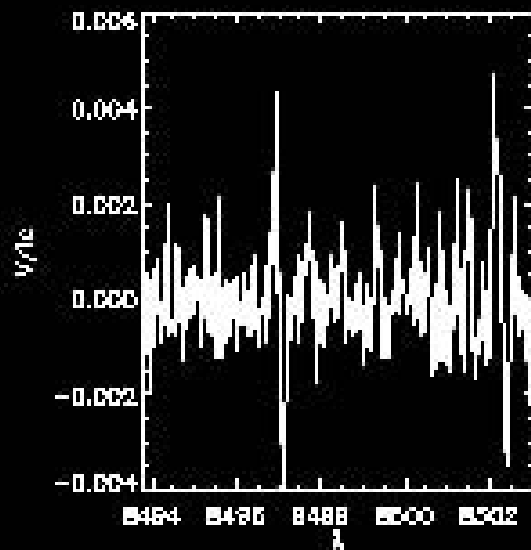
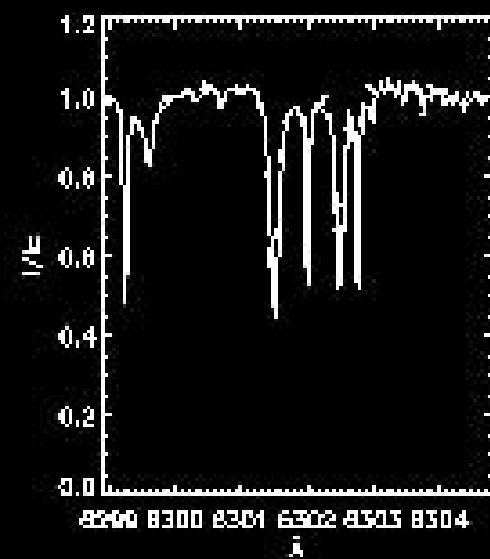
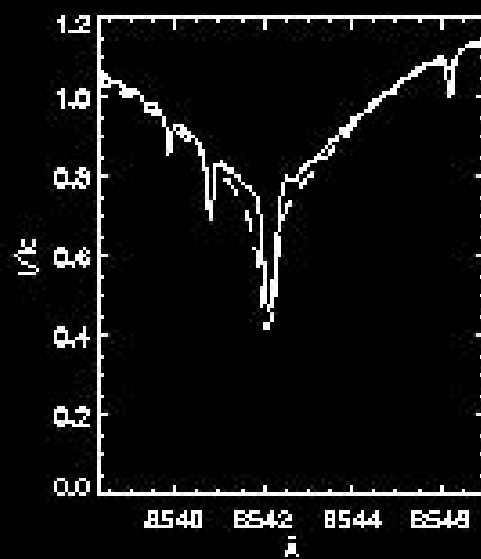
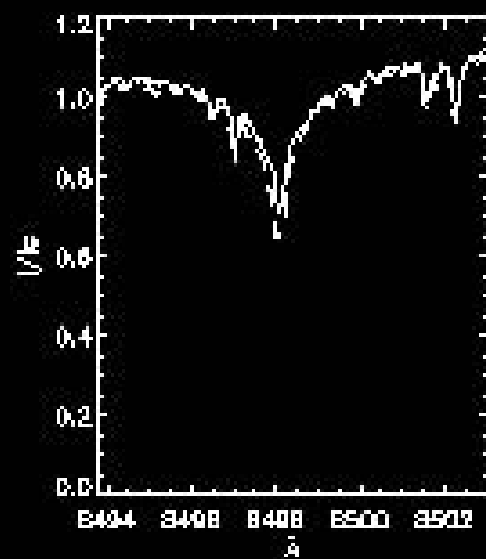
Ephemeral regions block at the chromosphere

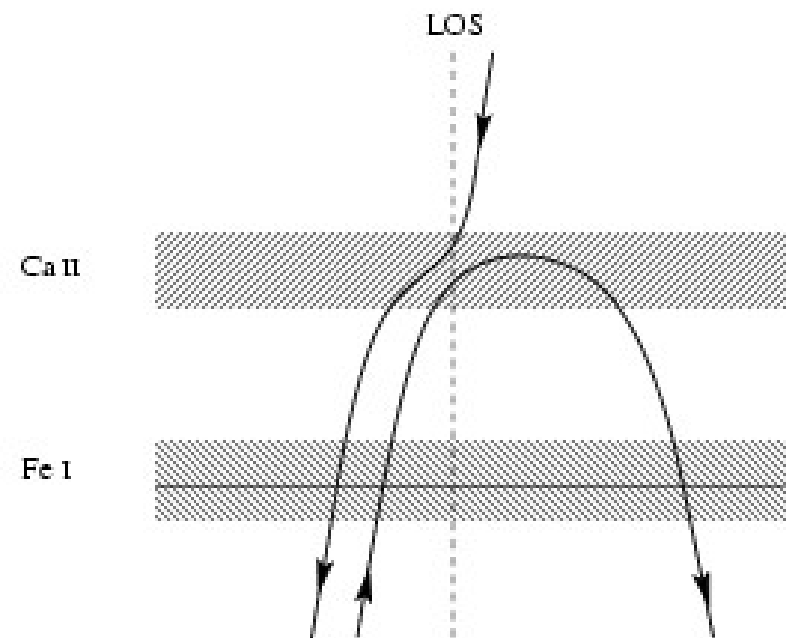
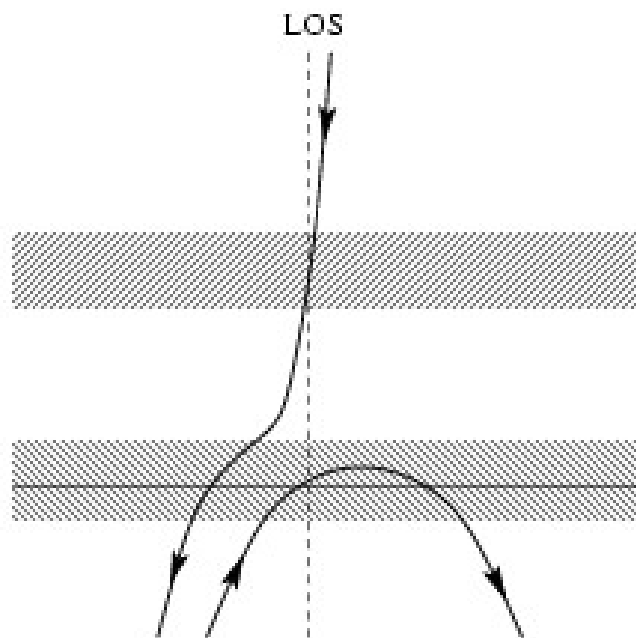
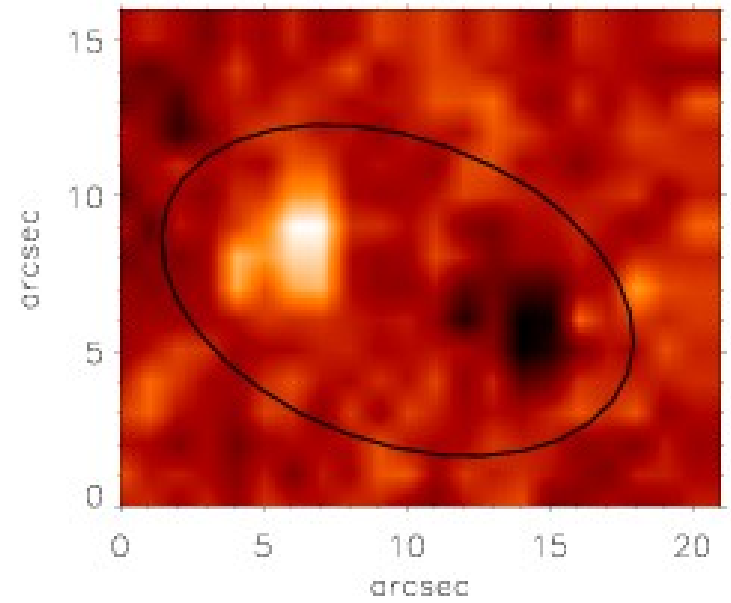
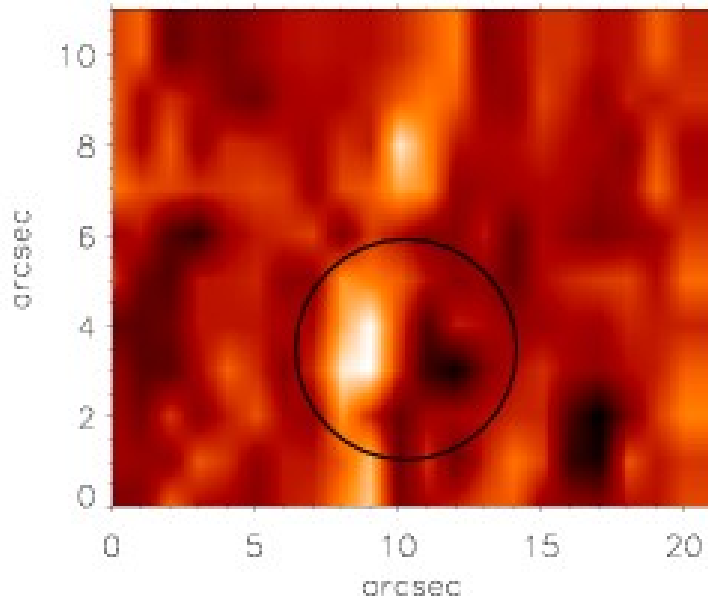


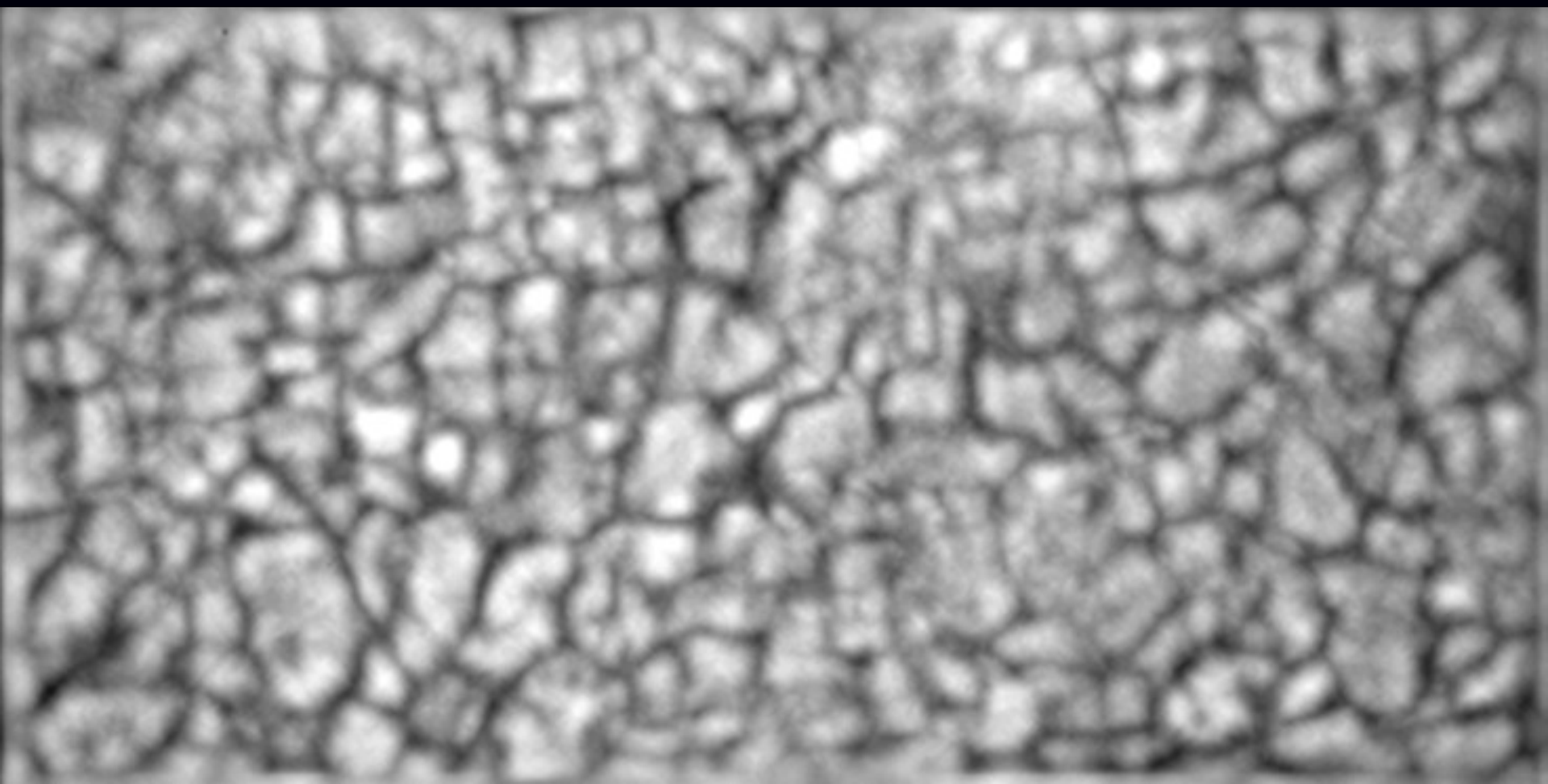


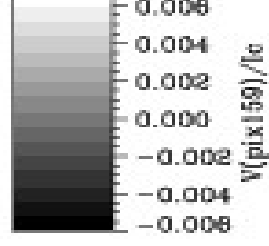
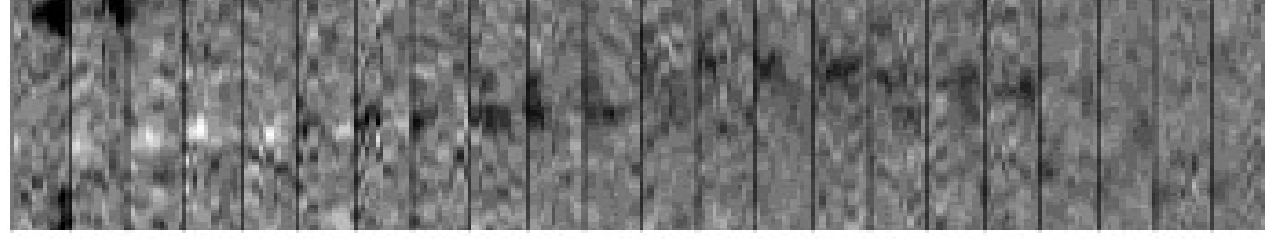
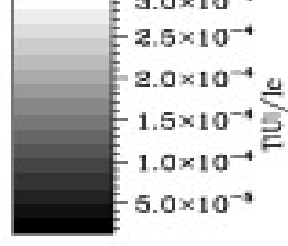
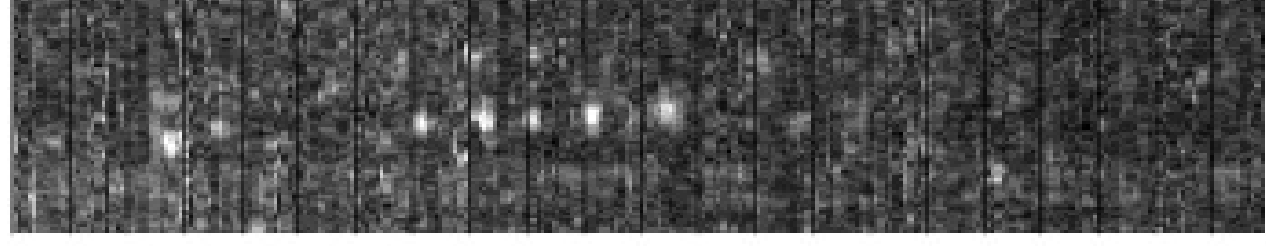
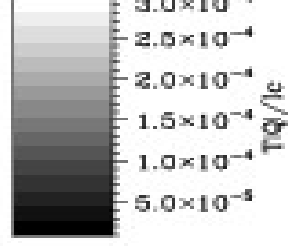
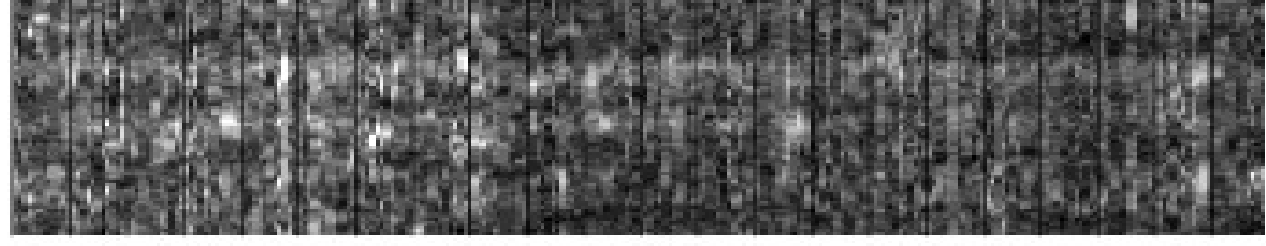
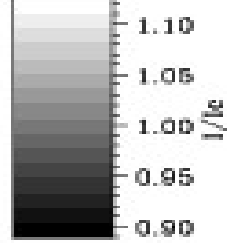
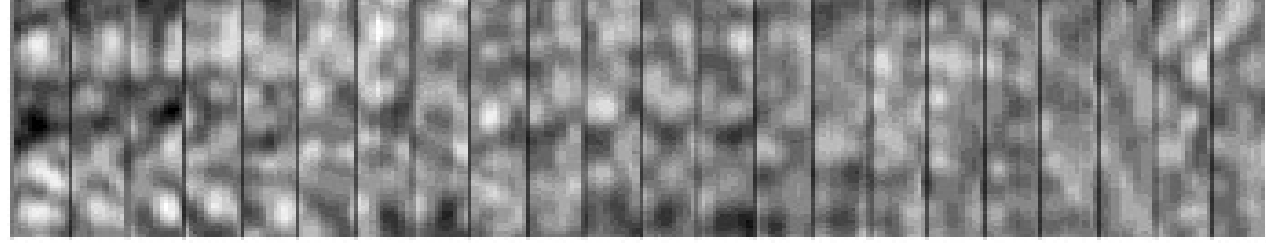
Ephemeral regions block at the chromosphere



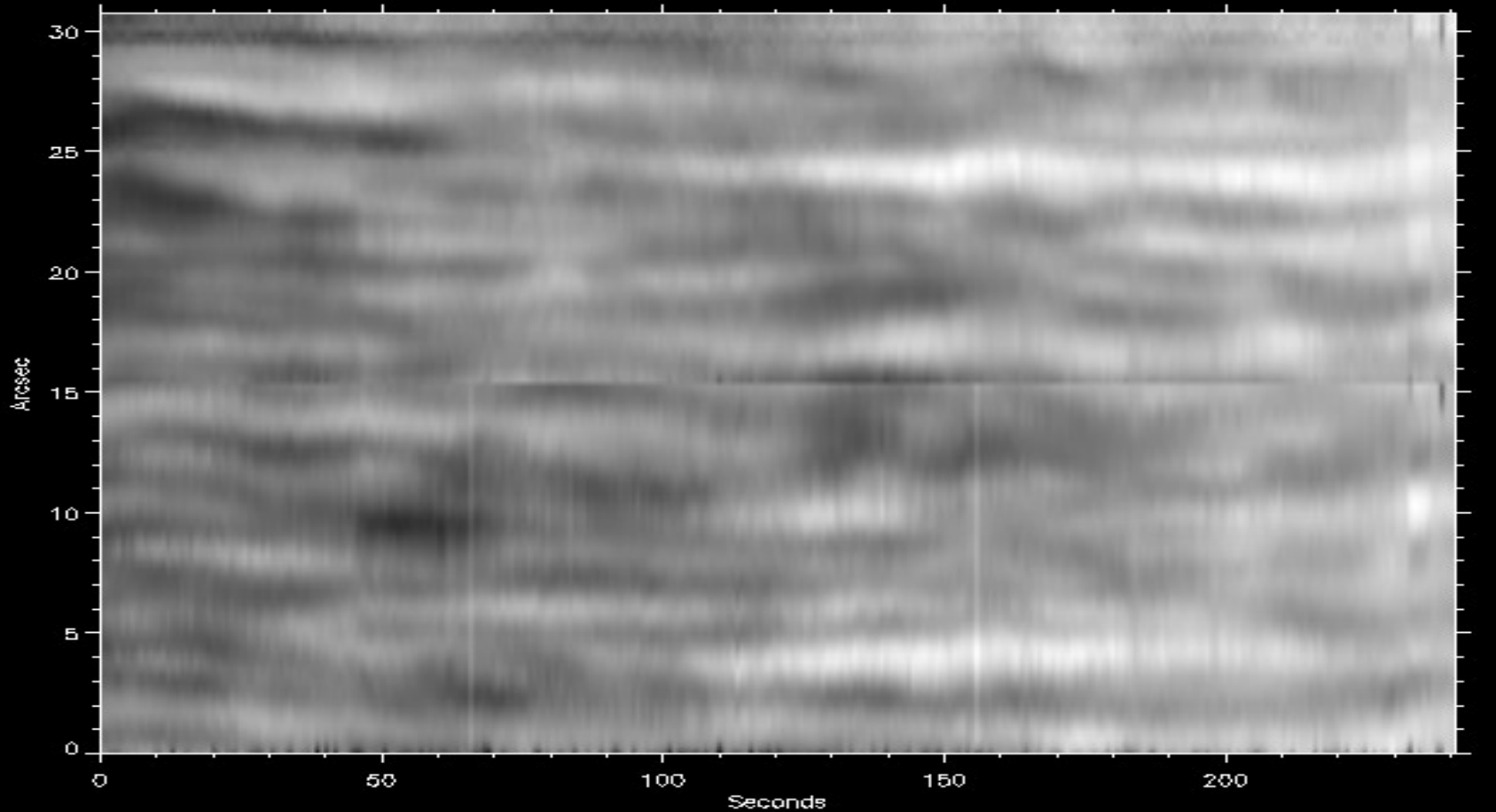






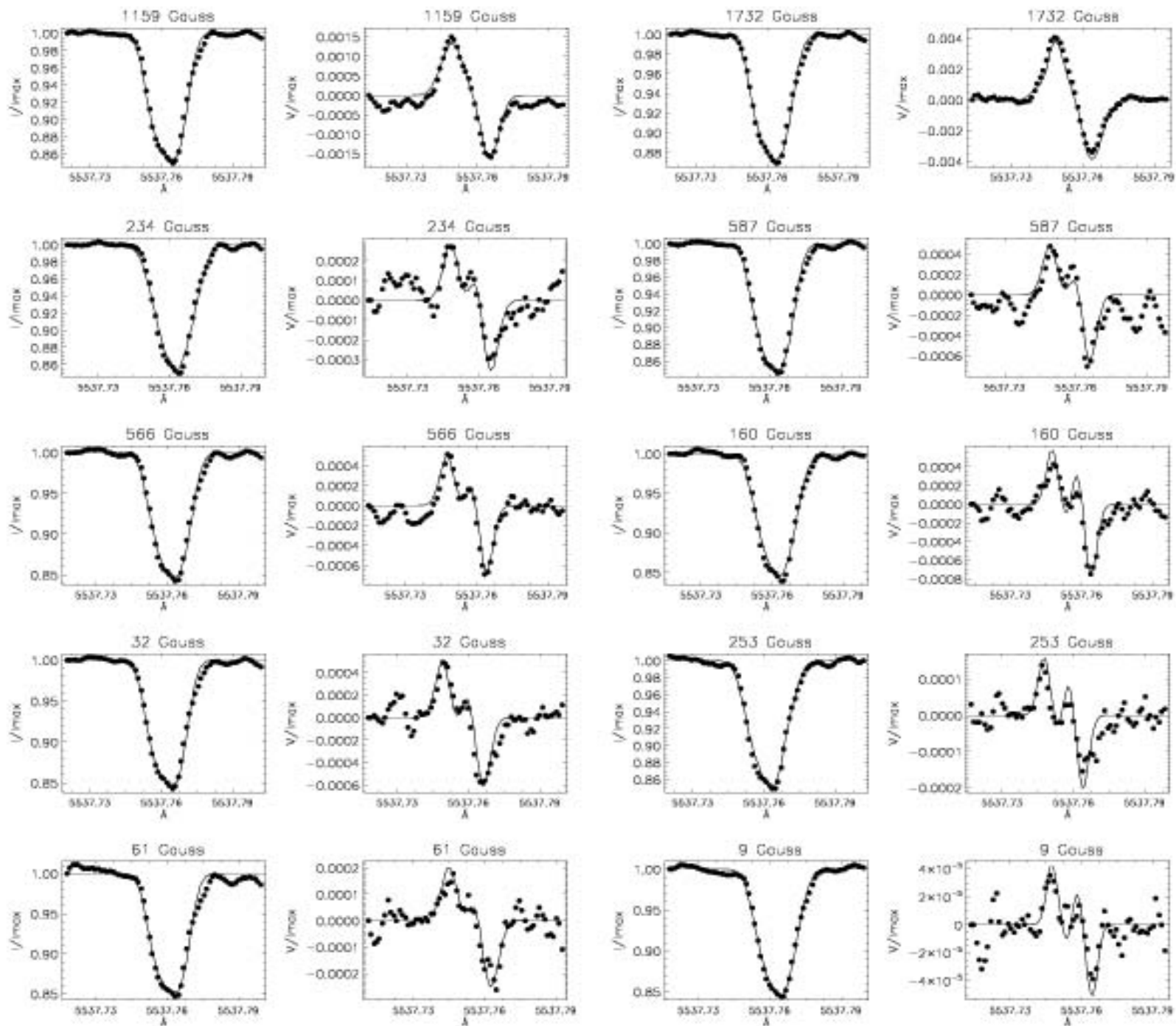


Mn lines with hyperfine structure

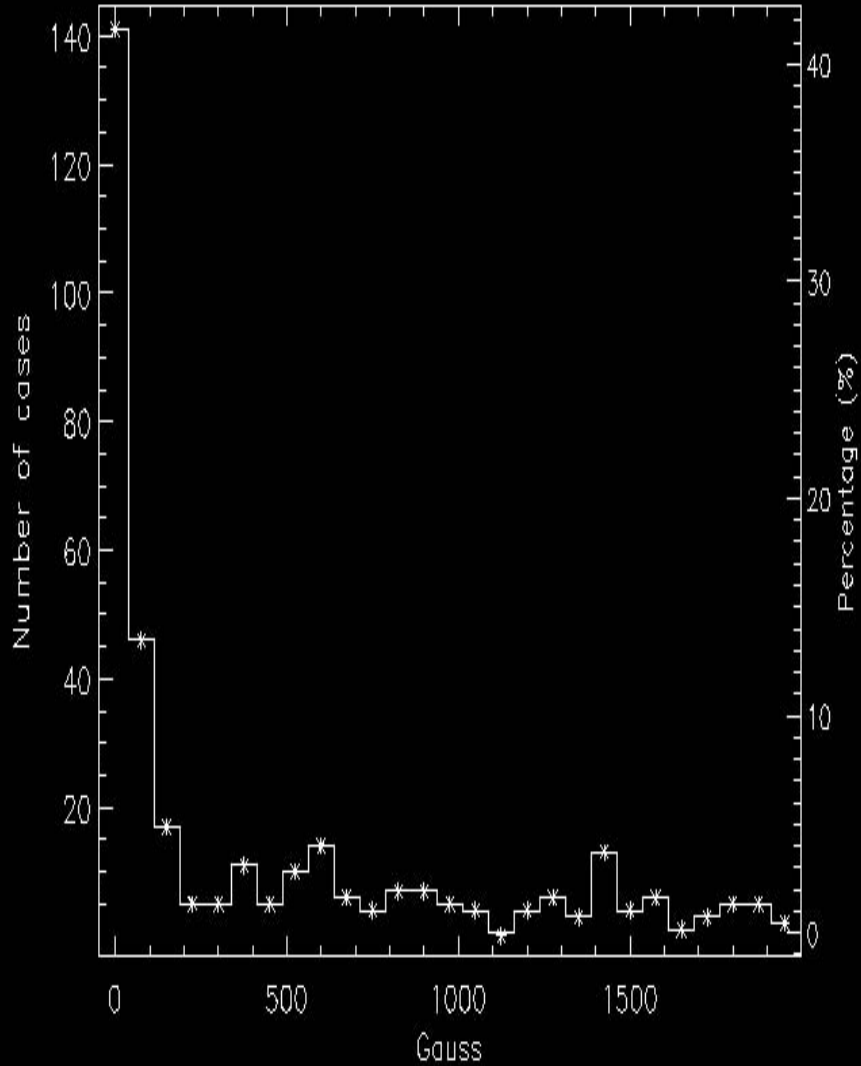


Ramírez Vélez & López Ariste (2007)

Arcsec

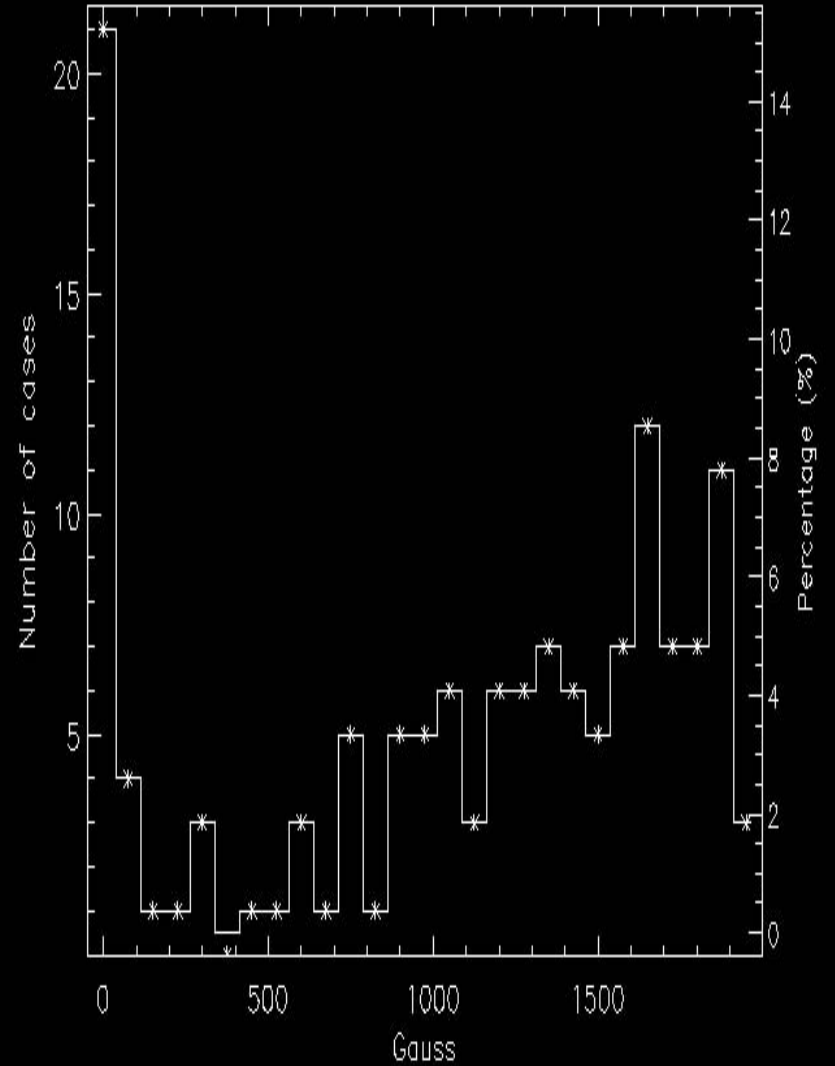


Intranetwork



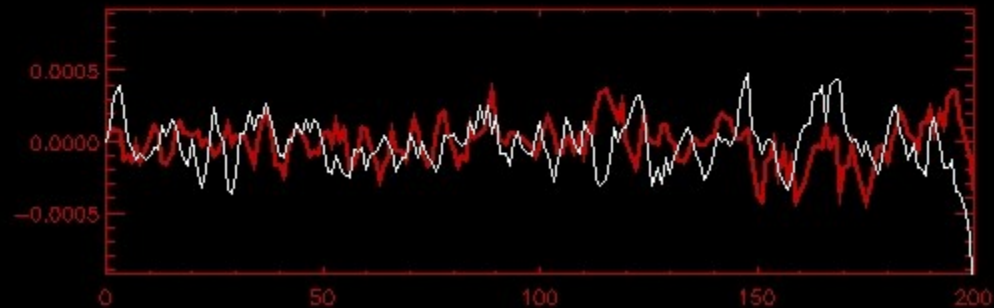
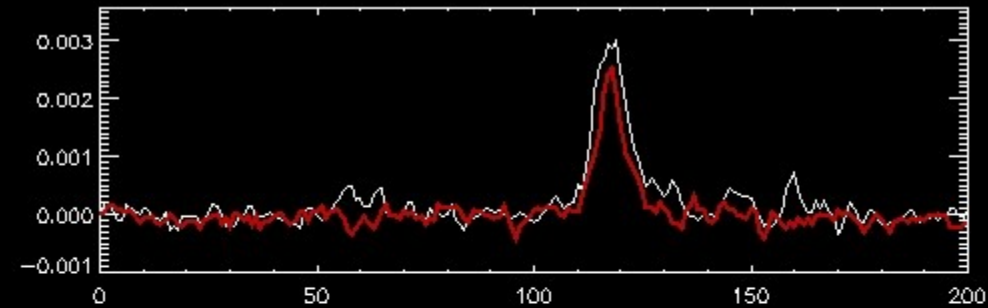
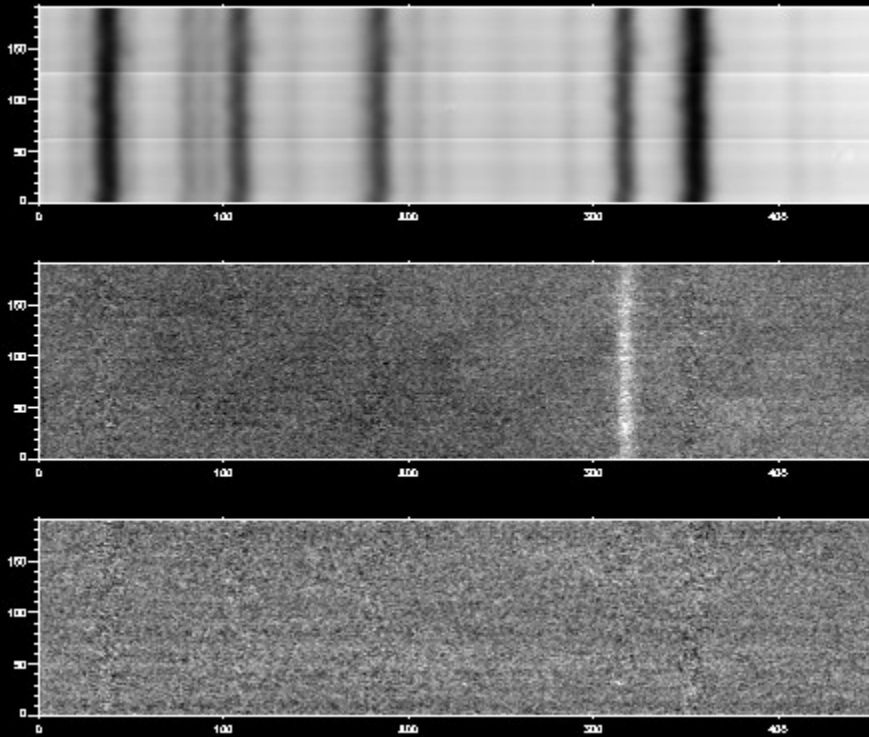
Number of inverted profiles: 339

Network



Number of inverted profiles: 138

The Sr I line polarization under Hanle and Zeeman effects

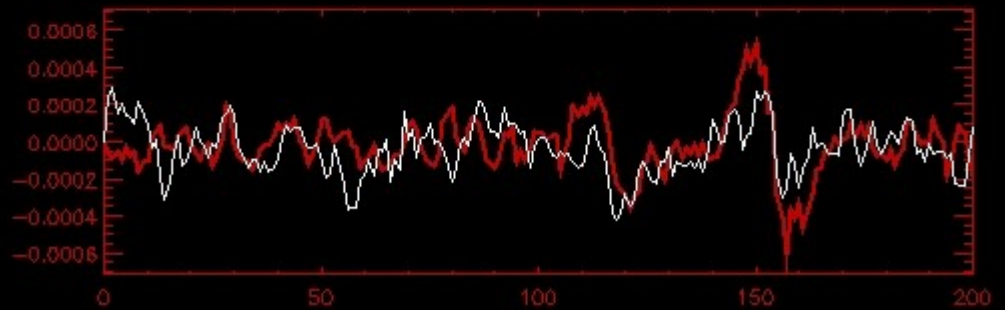
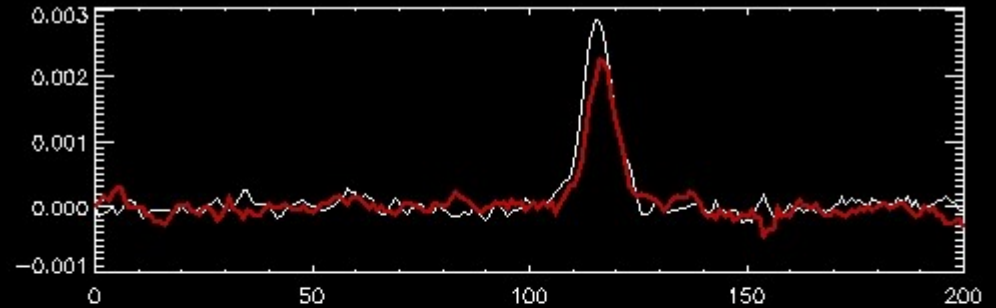
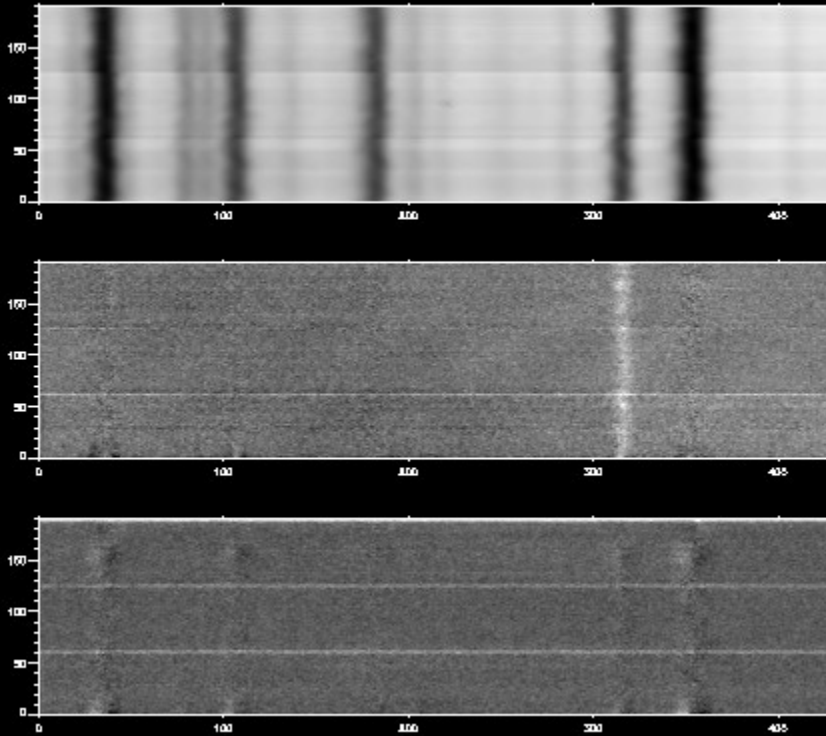


IG show a turbulent field more intense than G

$$\Delta Q = 9 \times 10^{-4}$$

$$A_Q = 3.5 \times 10^{-3} ; \quad \varepsilon = 2.6 \times 10^{-4}$$

The expected case: flux tubes



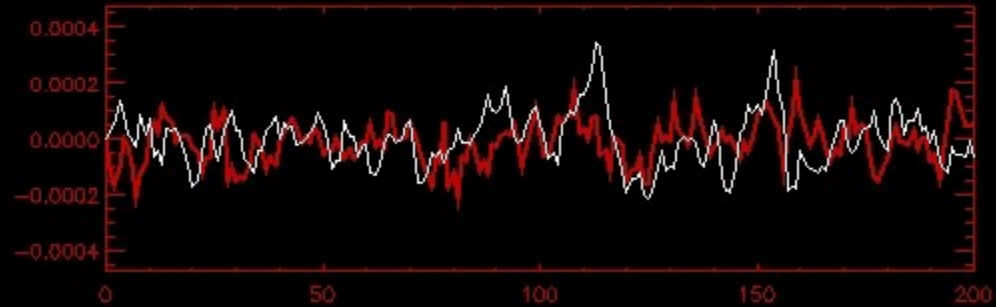
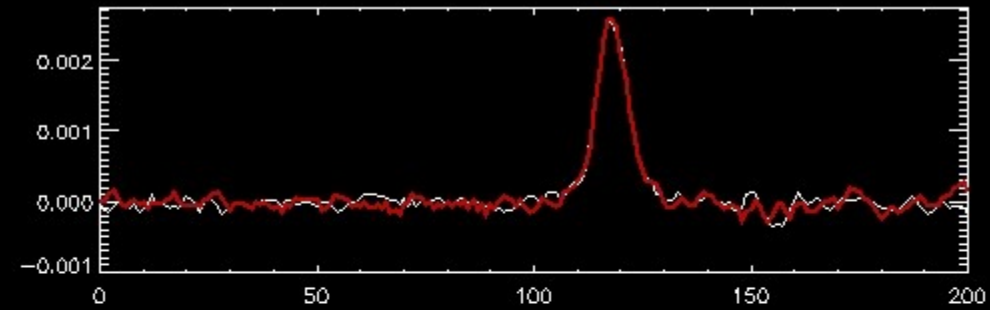
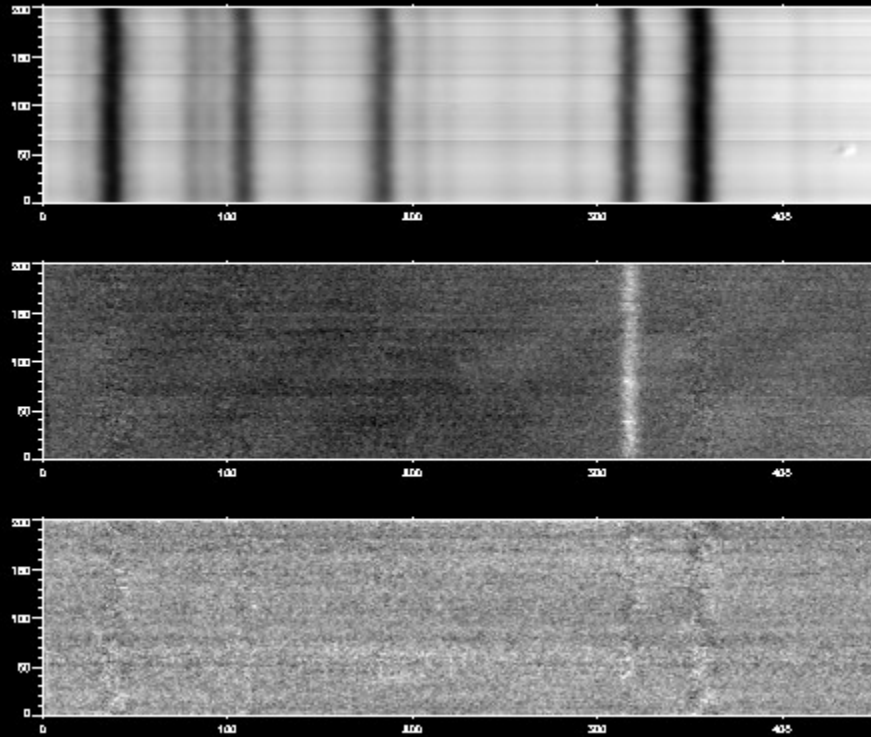
IG show a stronger turbulent field with strong net-flux tubes

$$\Delta Q = 4 \times 10^{-4}$$

$$A_Q = 3.0 \times 10^{-3} ; \quad \varepsilon = 1.6 \times 10^{-4}$$

$$A_V = 5 \times 10^{-4}$$

Global turbulent field

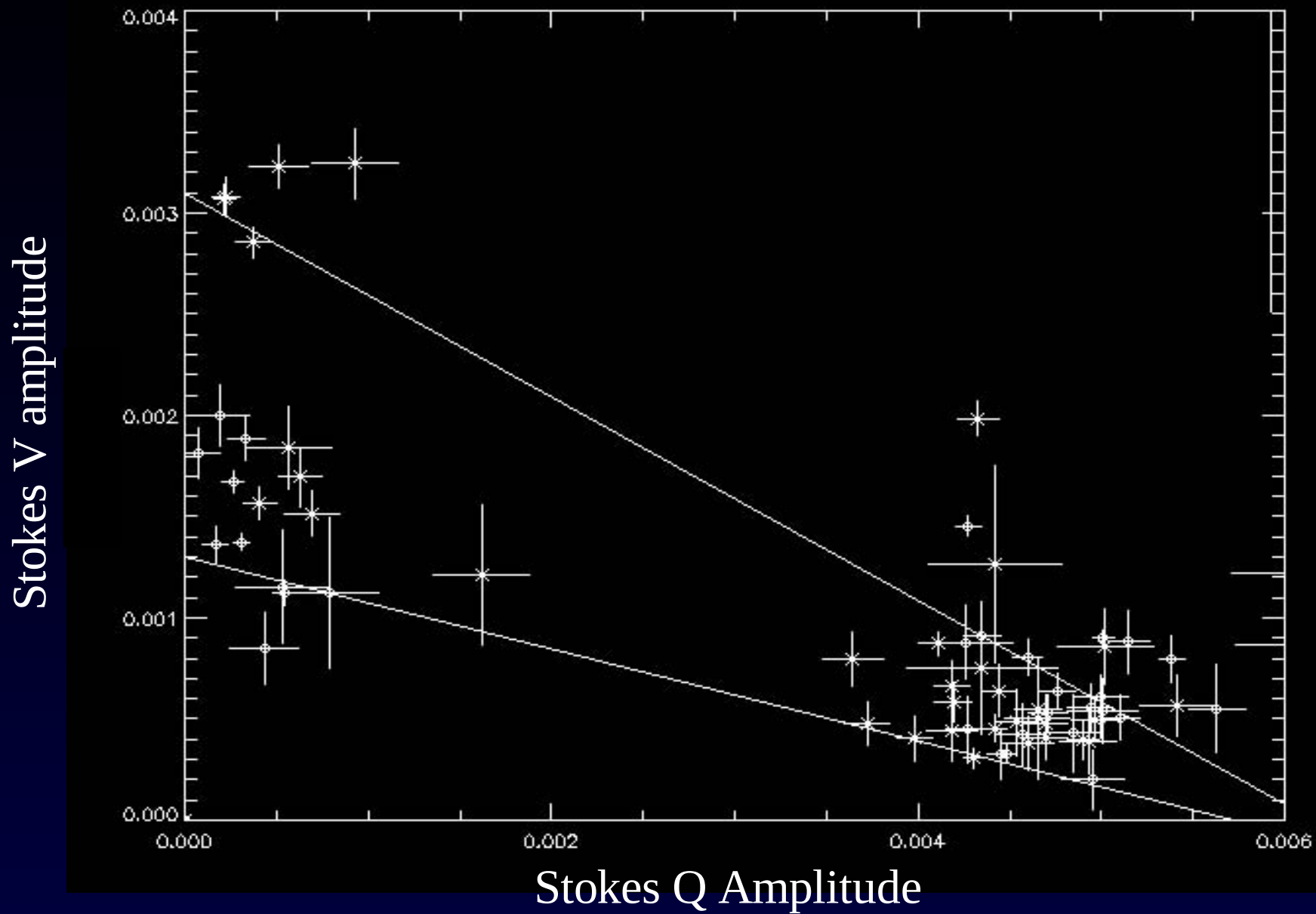


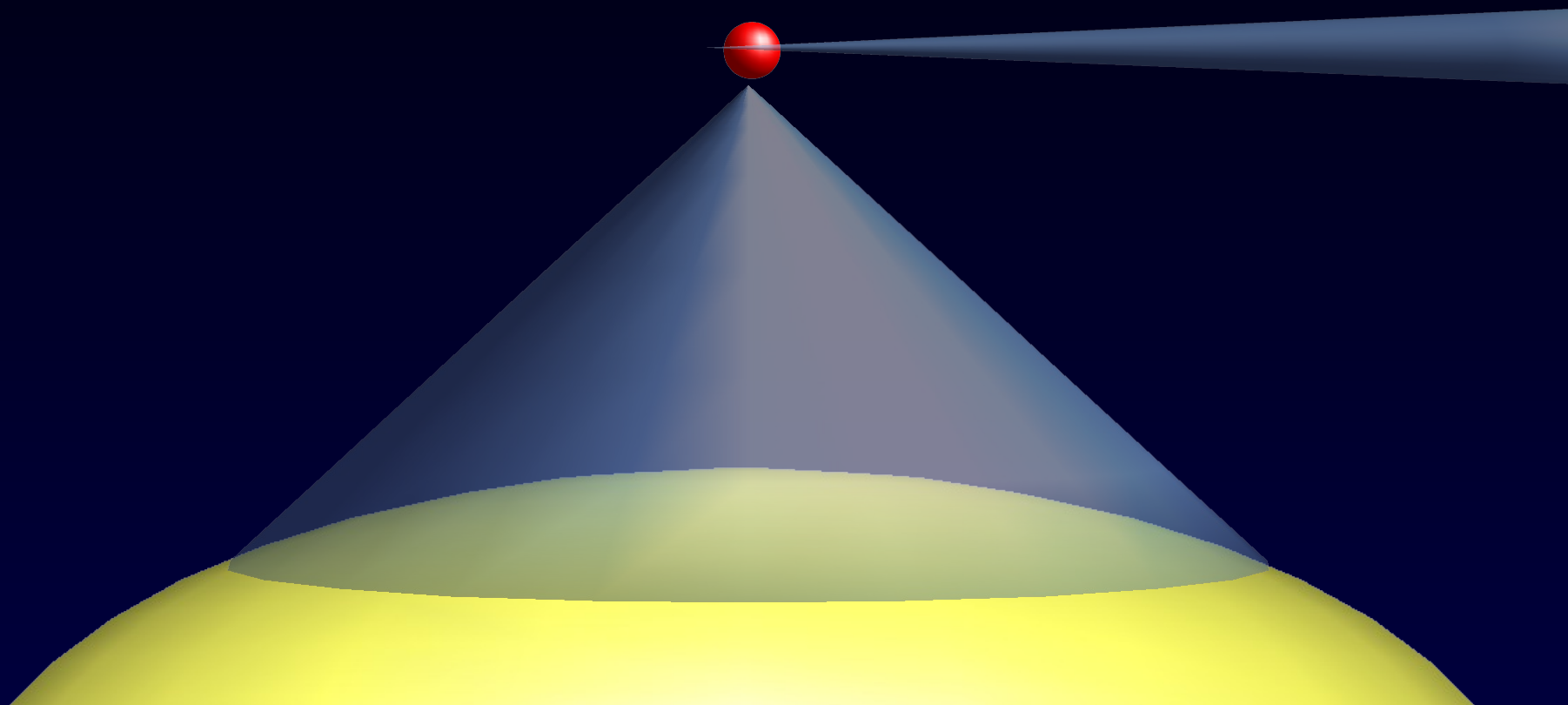
G and IG show a similar turbulent field with no clear net flux

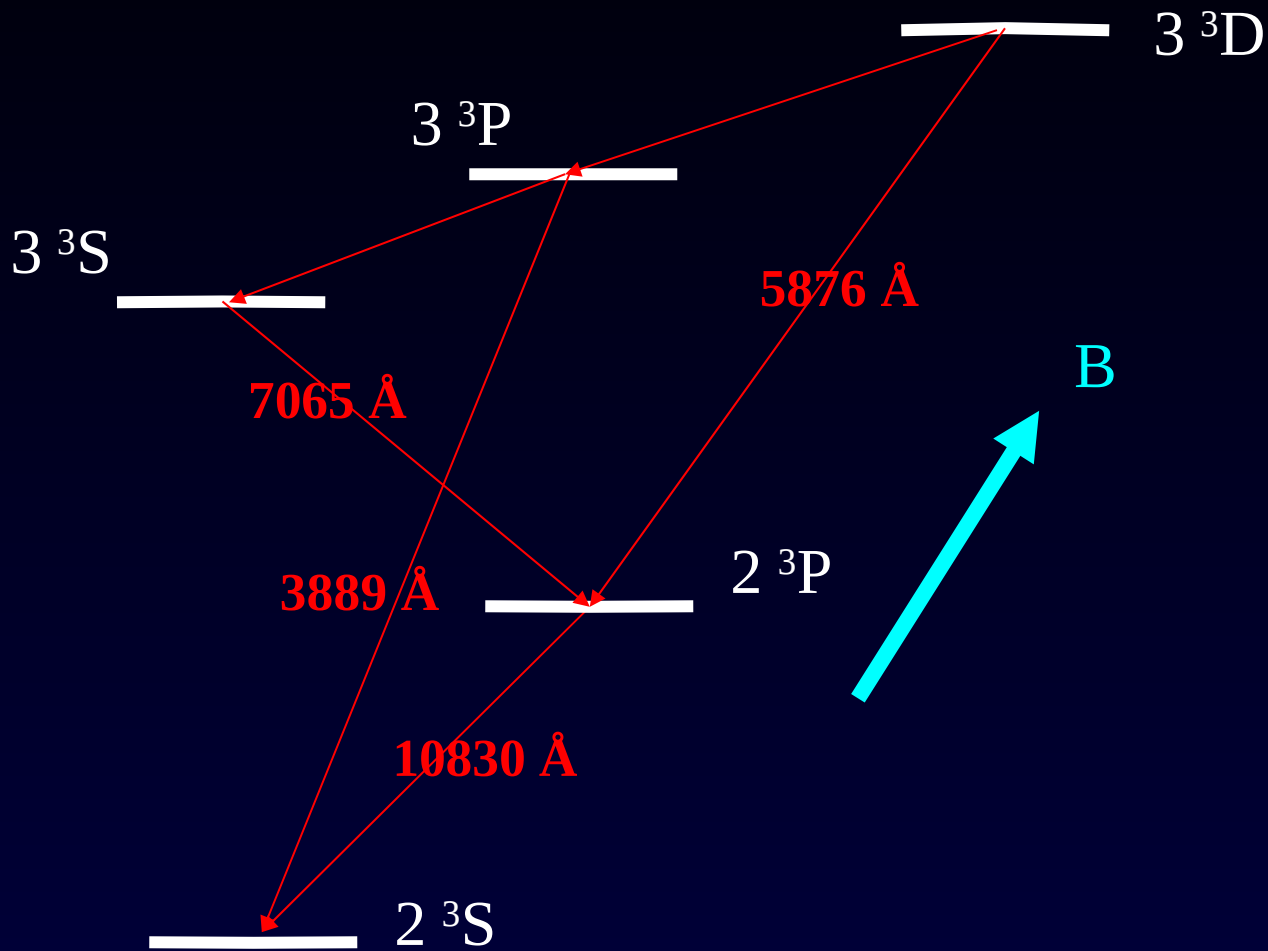
$$\Delta Q = 4 \times 10^{-5}$$

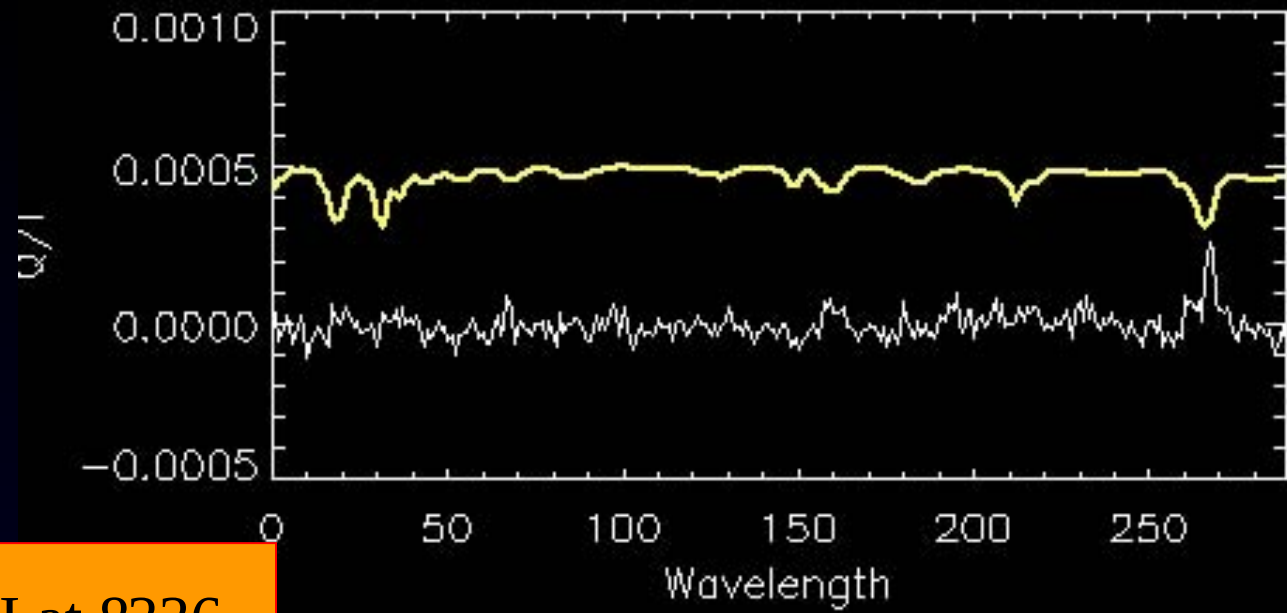
$$A_Q = 2.7 \times 10^{-3} ; \quad \varepsilon = 1.2 \times 10^{-4}$$

$$A_V < 2 \times 10^{-4}$$

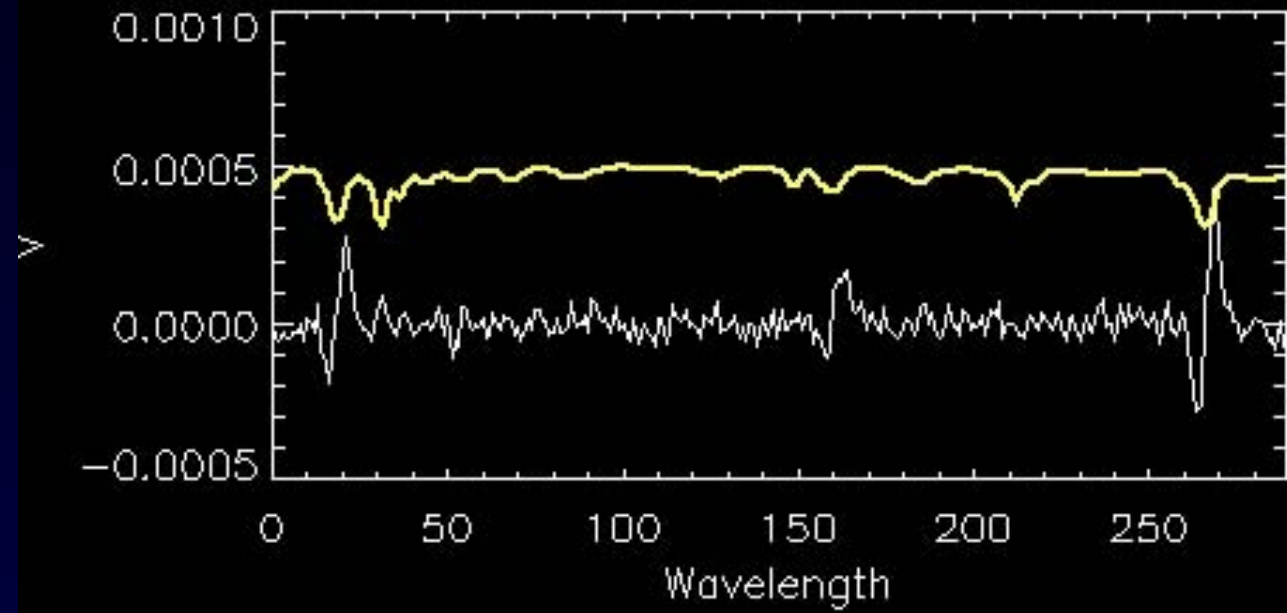




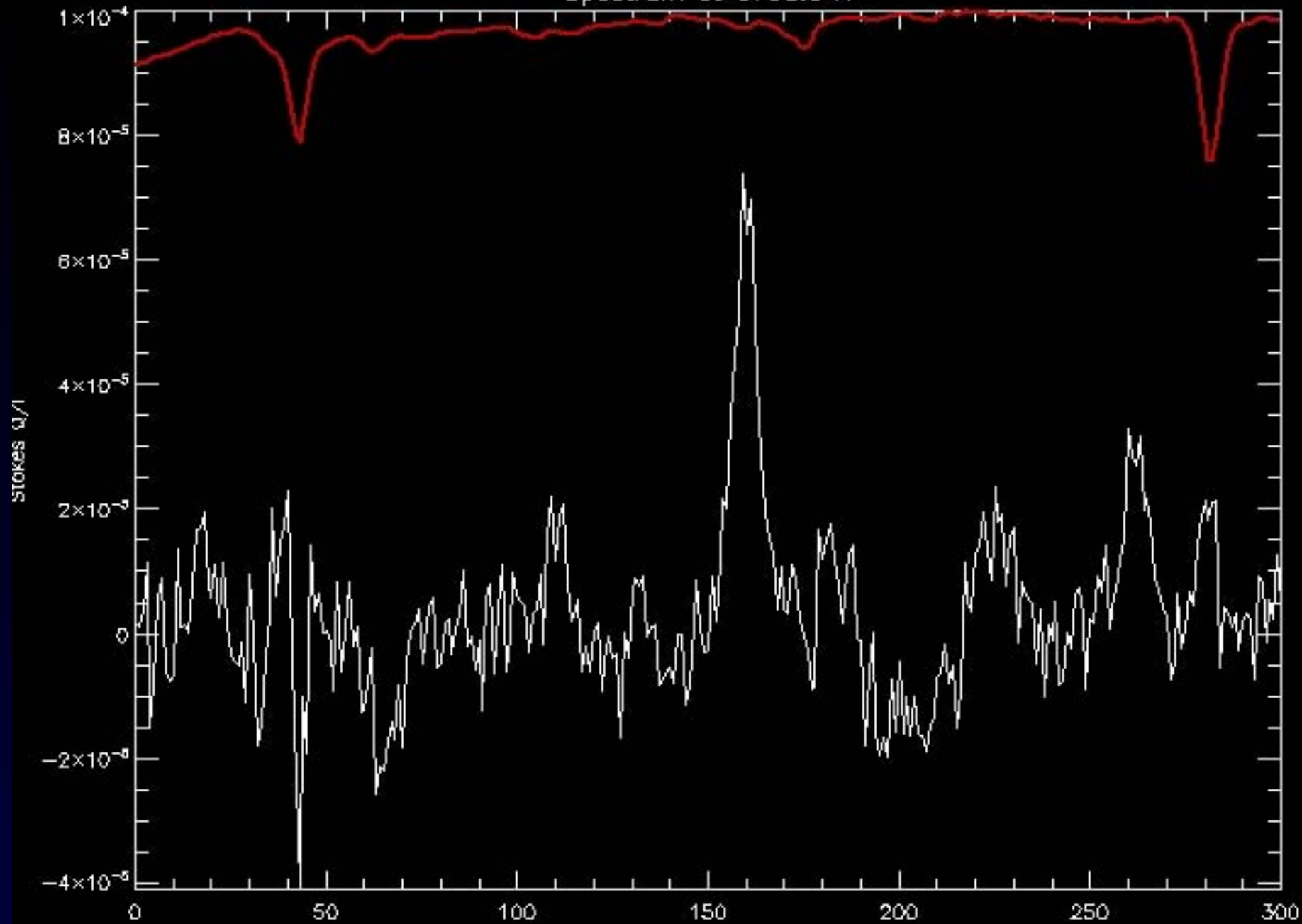




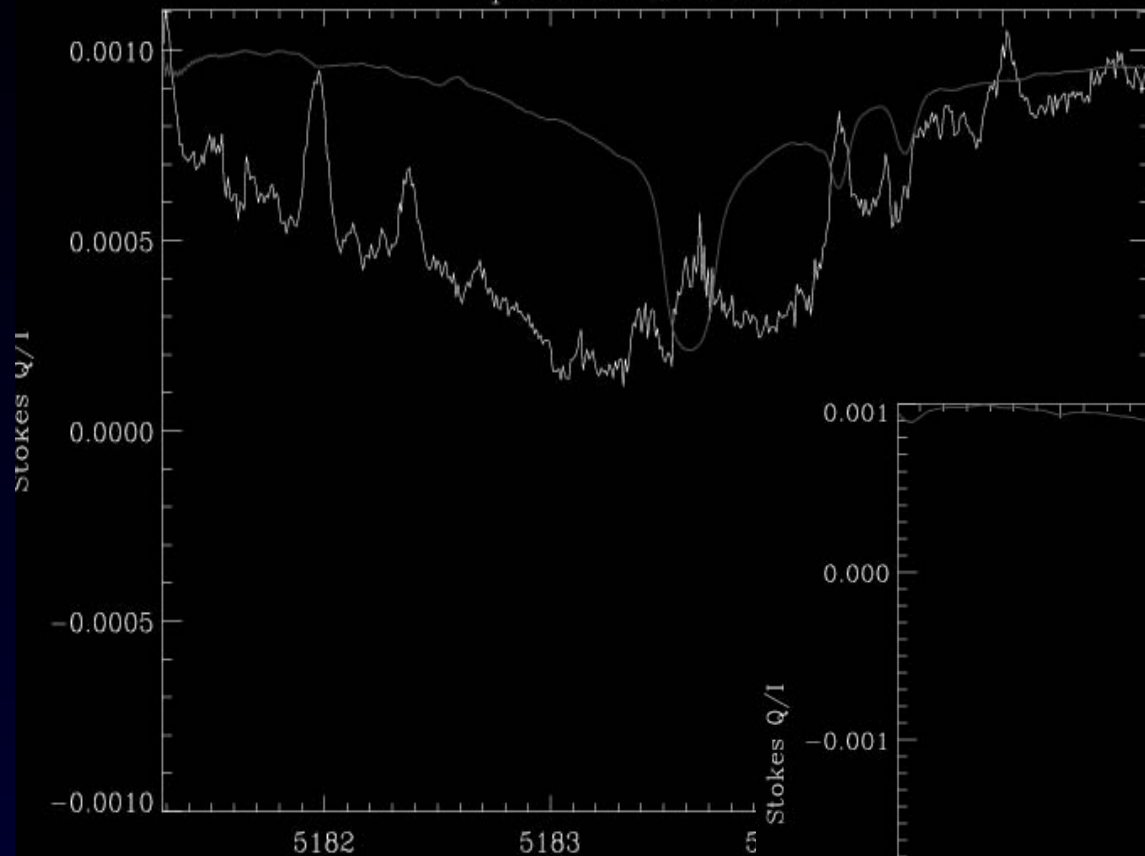
CI and Mg I at 8336



Spectrum at 6708.0 Å

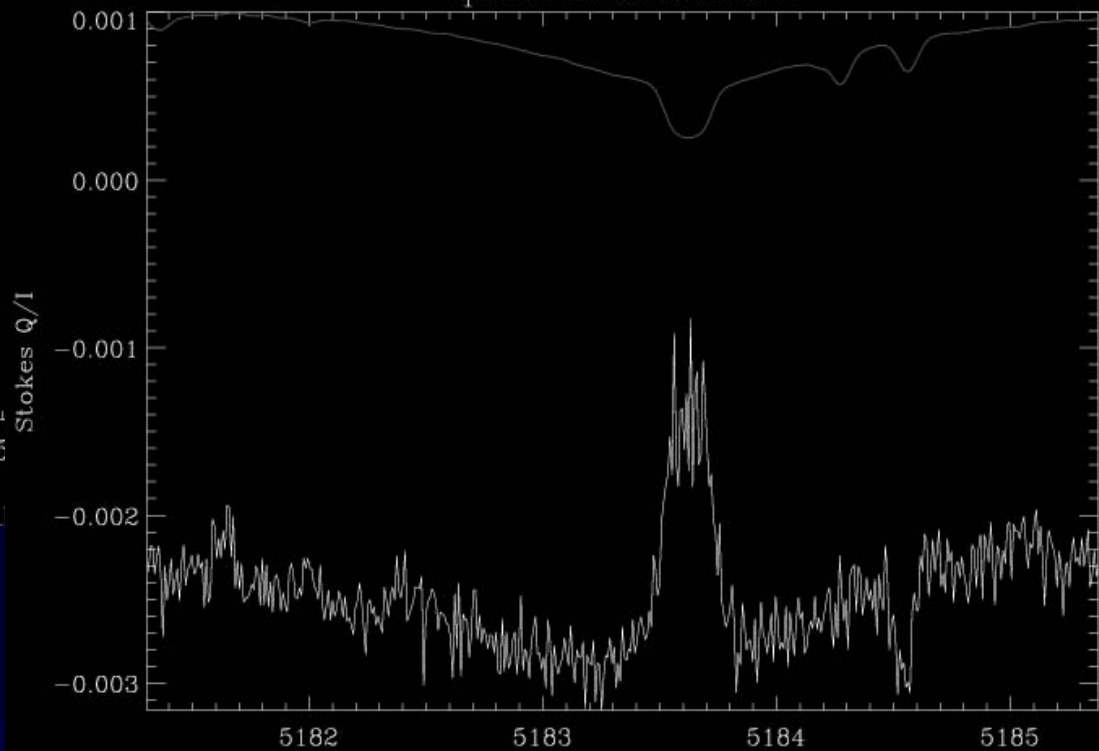


Spectrum at 5183.0 E

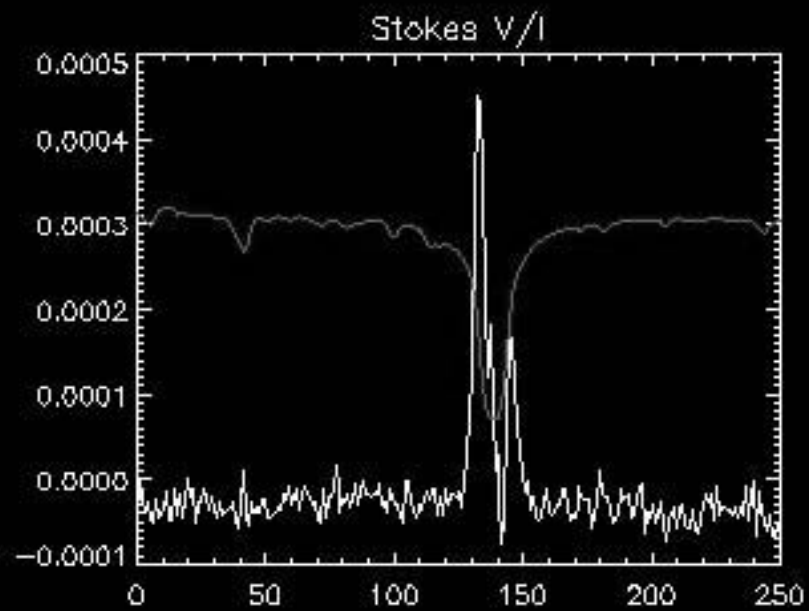
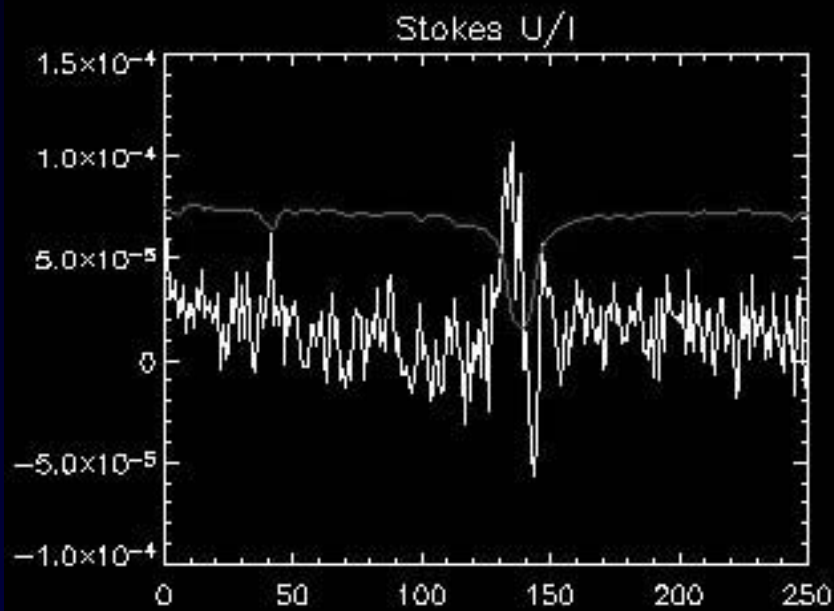
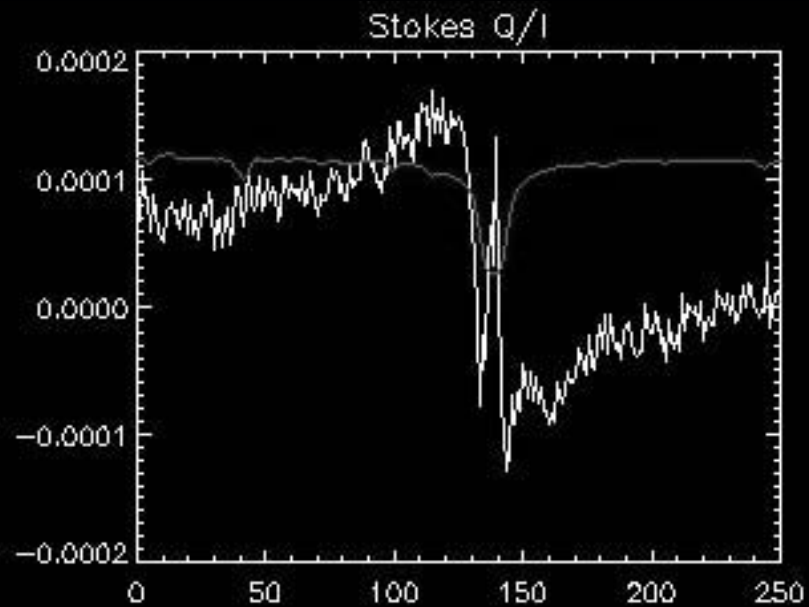
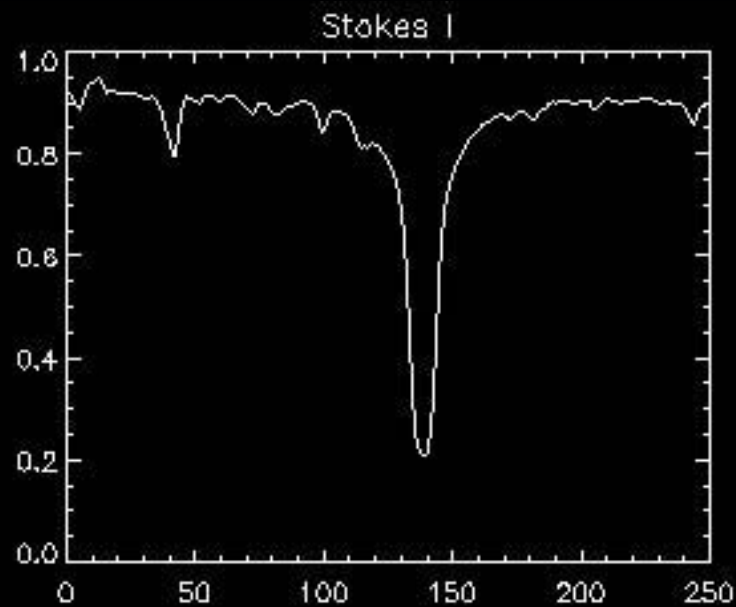


Sequence /datos3/arturo/Y2007/Rafa_June/t003

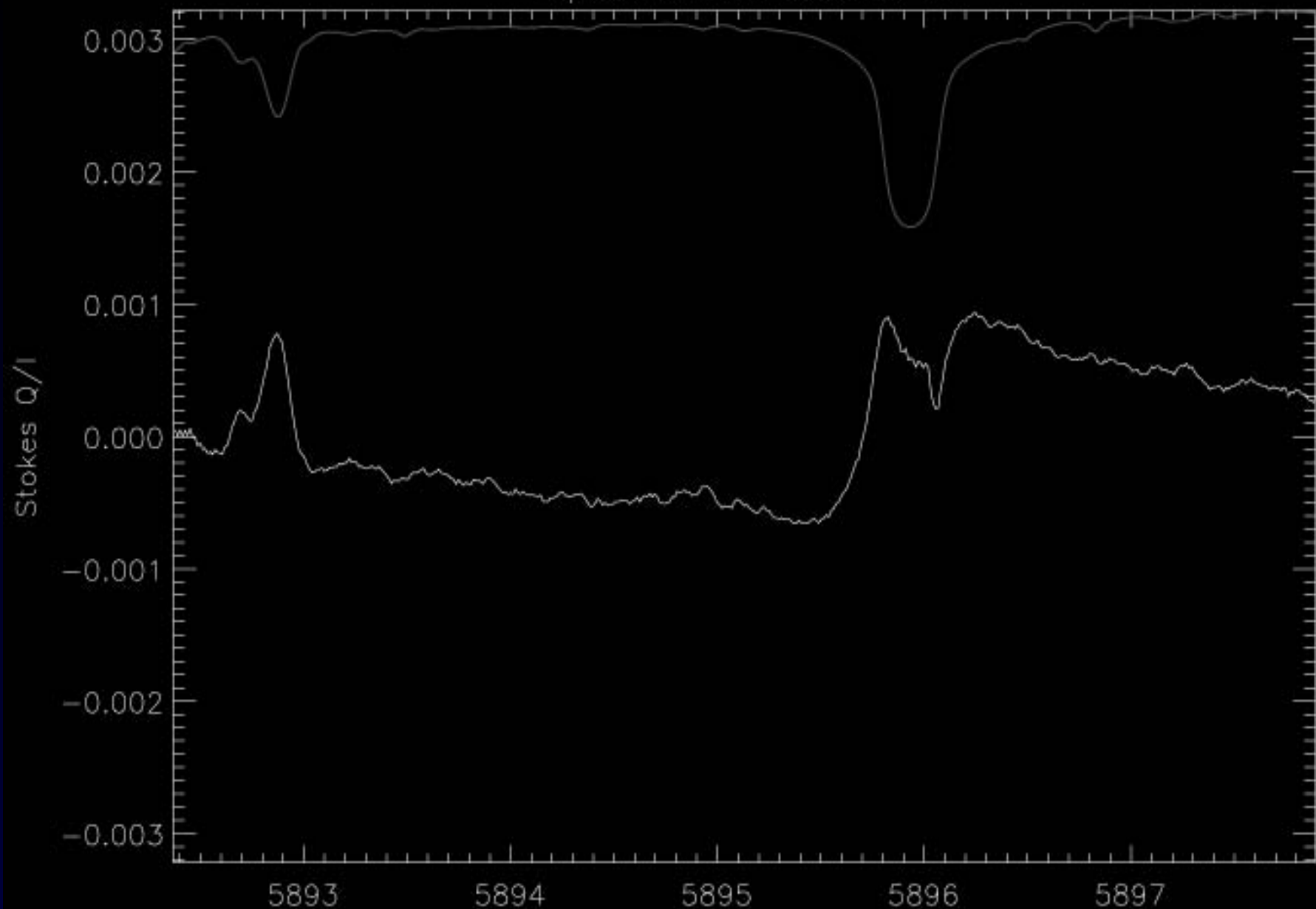
Spectrum at 5183.0 E

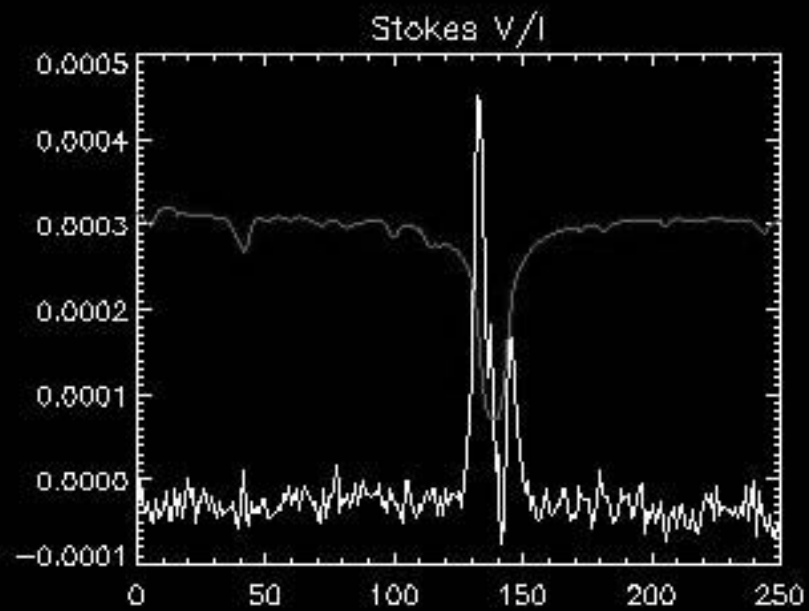
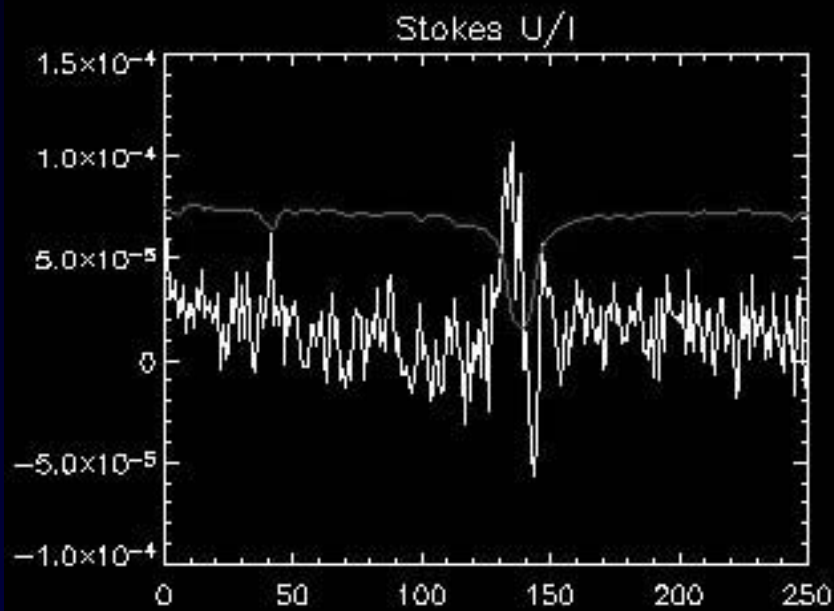
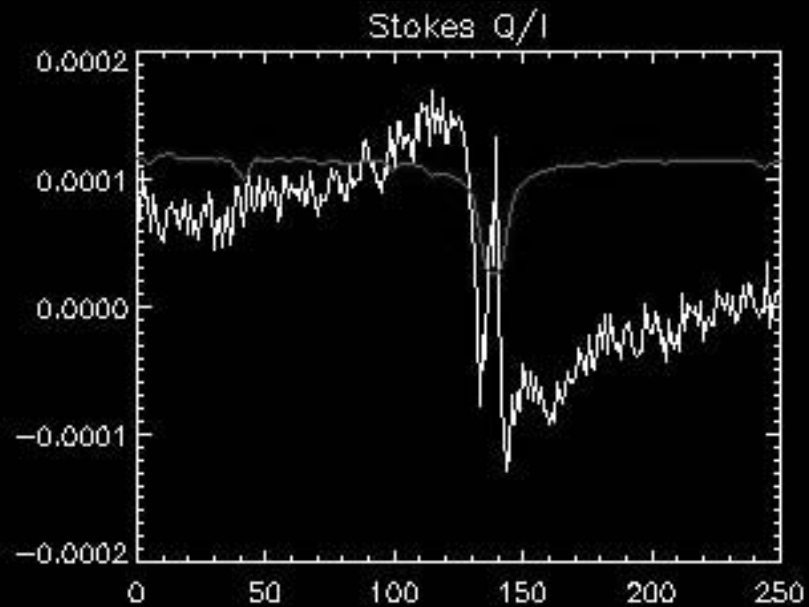
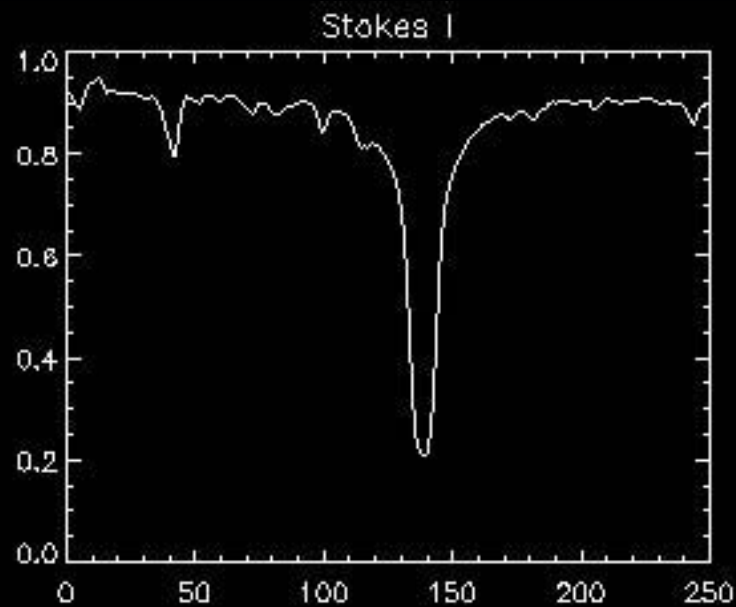


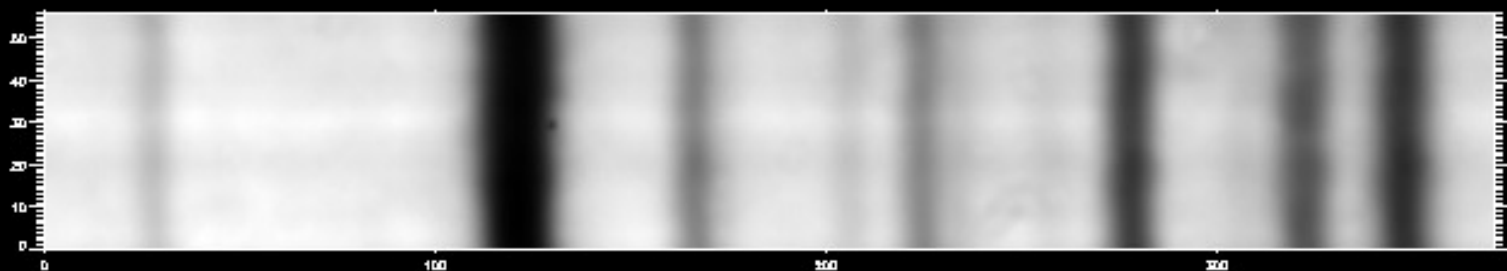
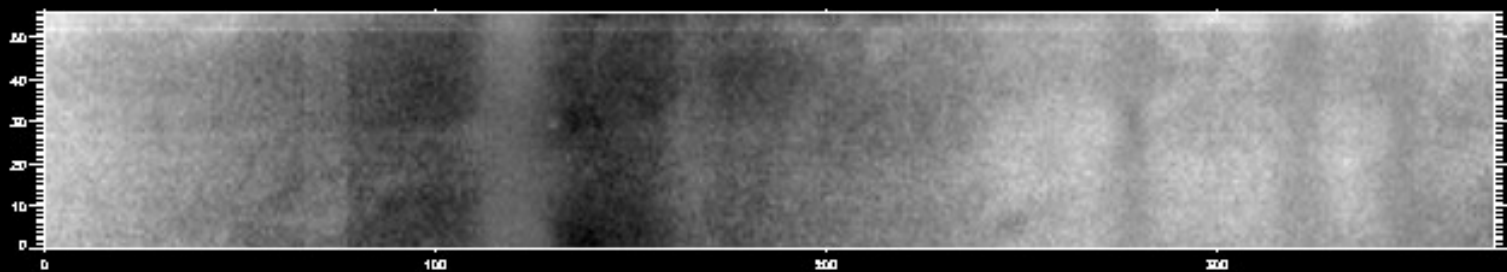
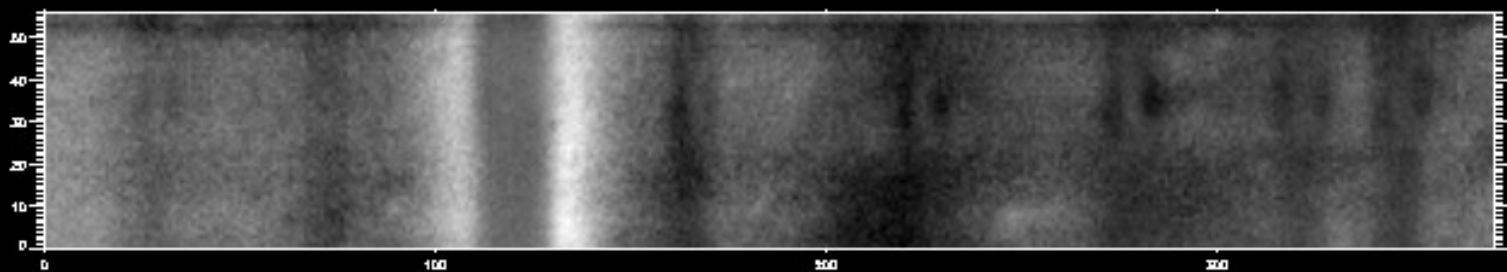
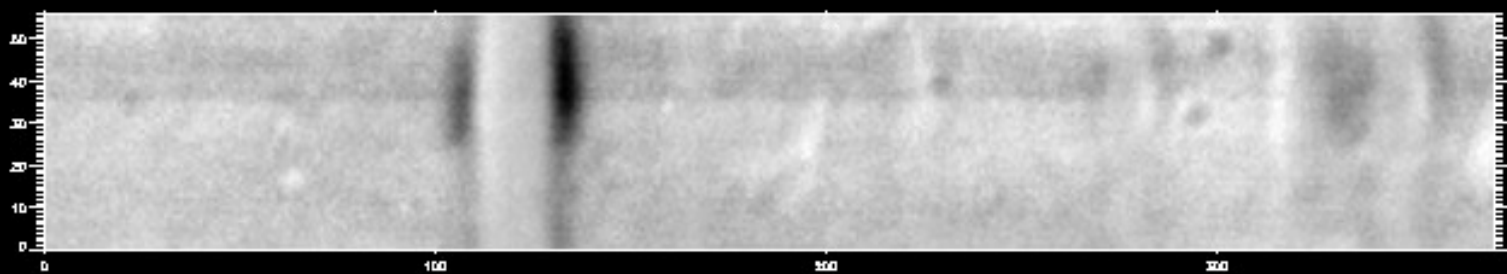
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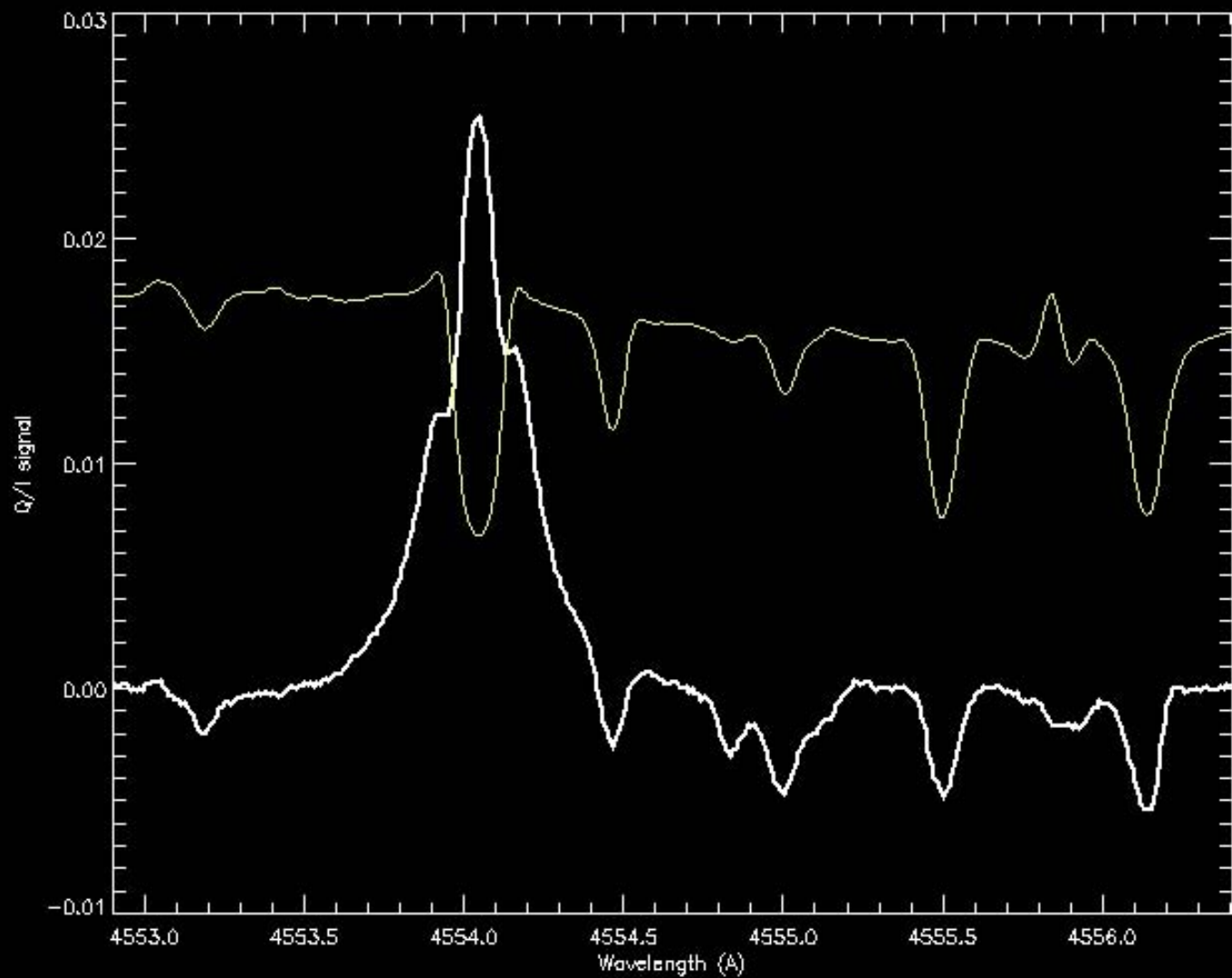


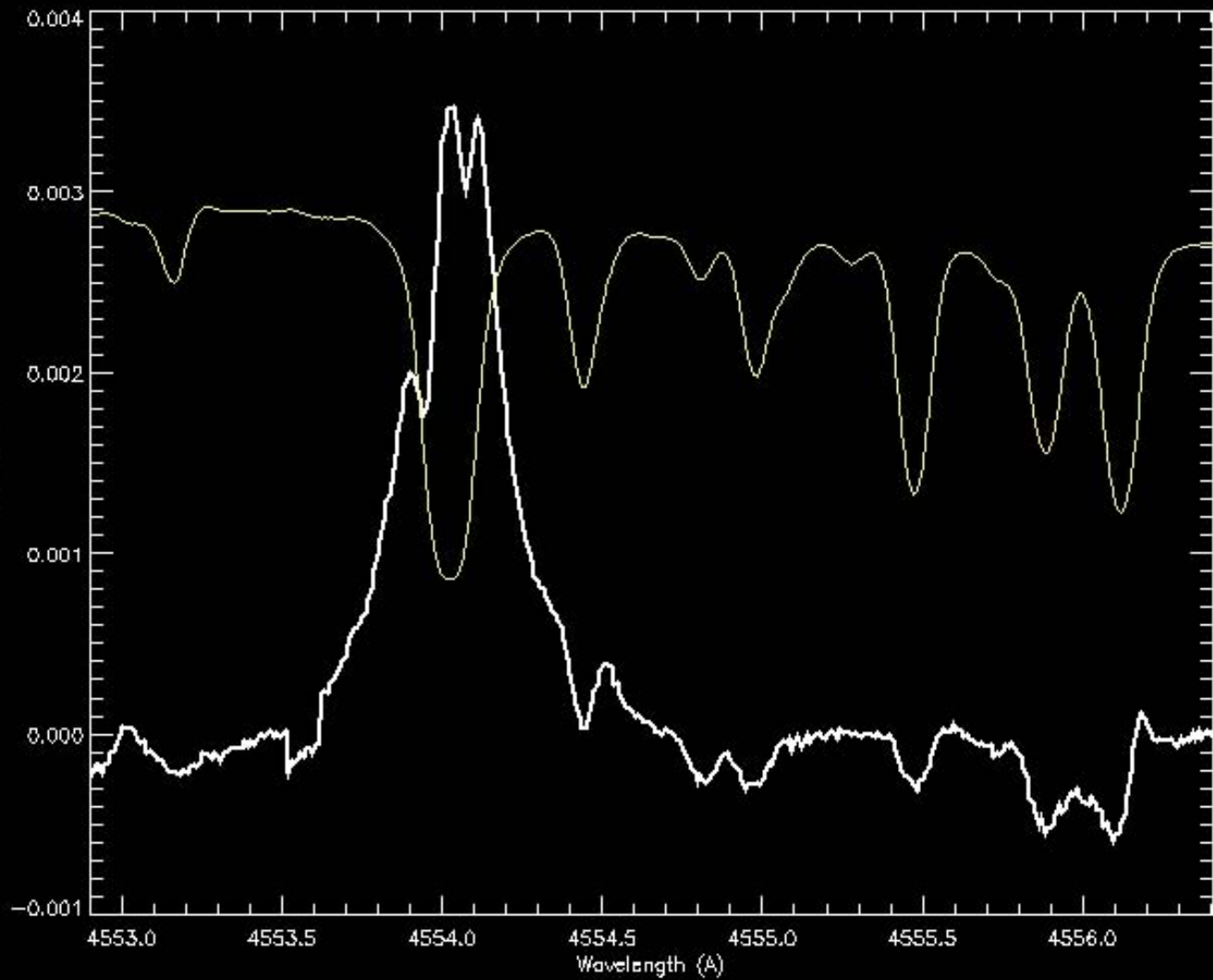
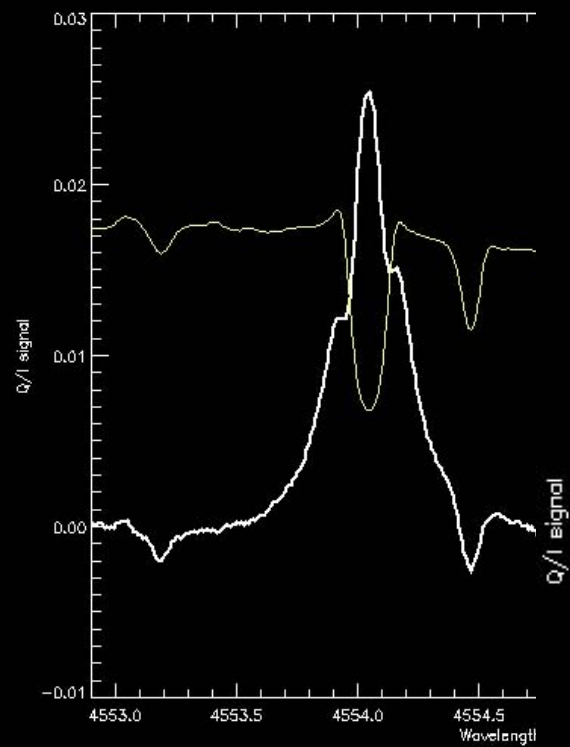
Spectrum at 5895.0 Å

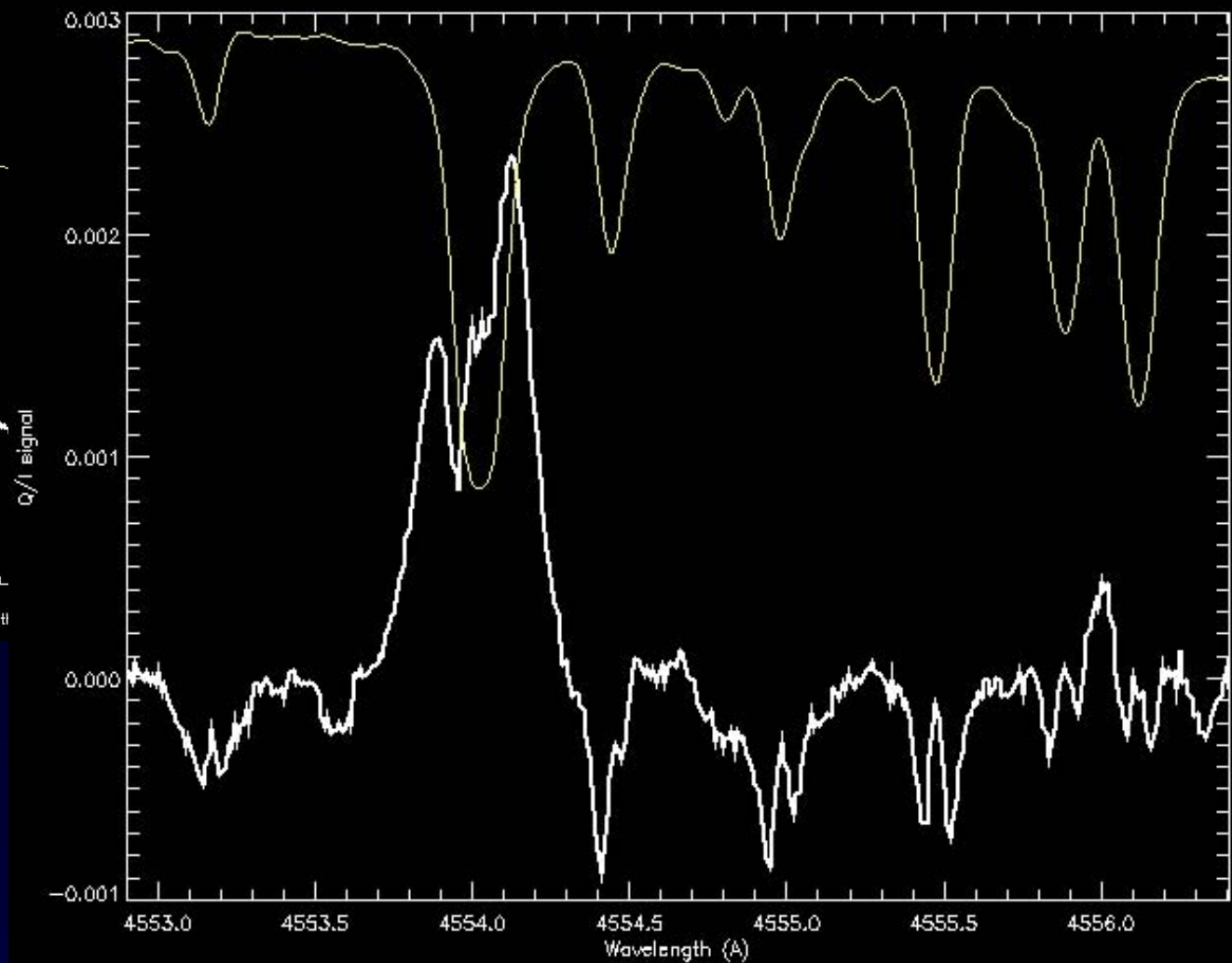
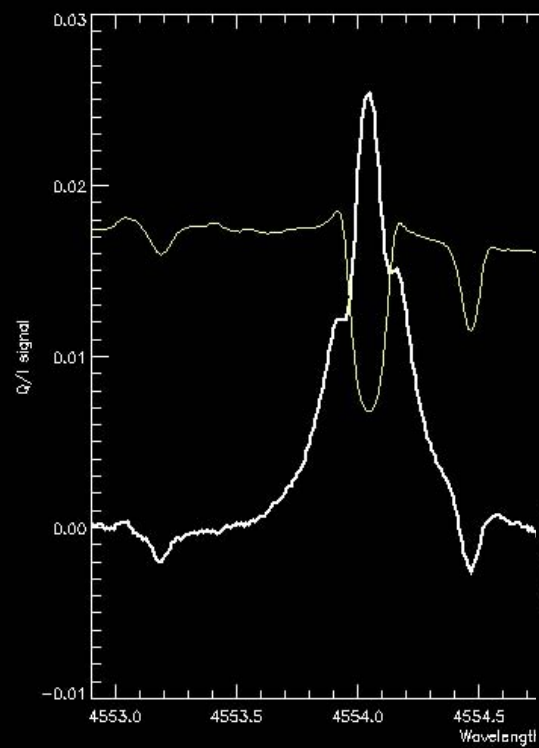


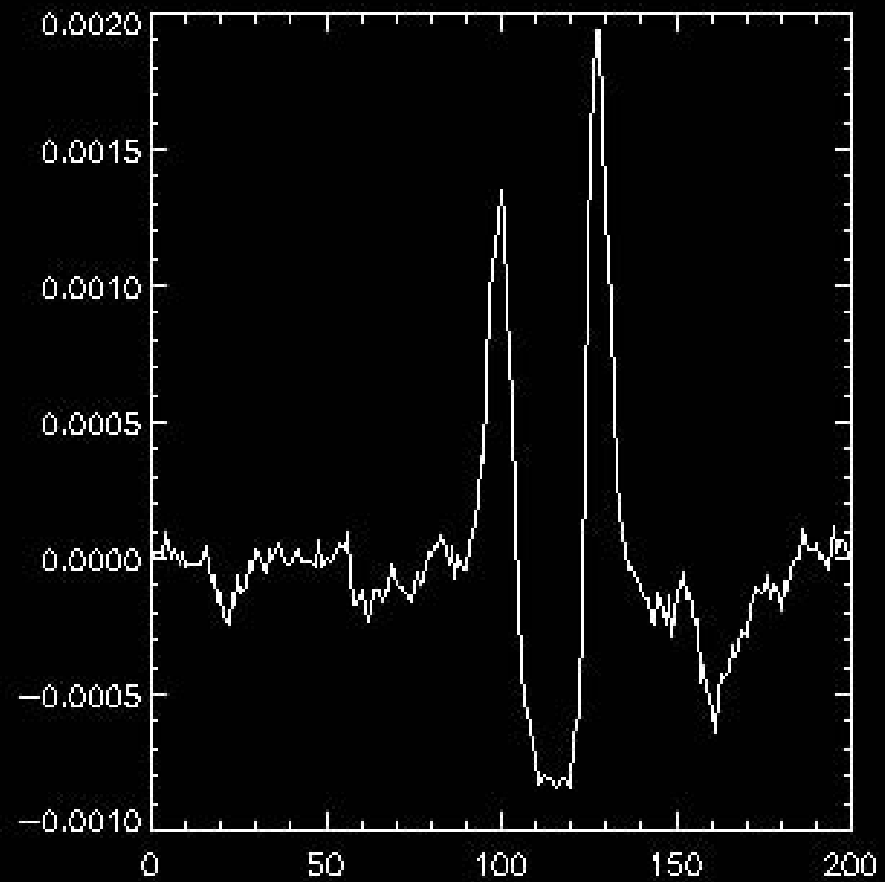
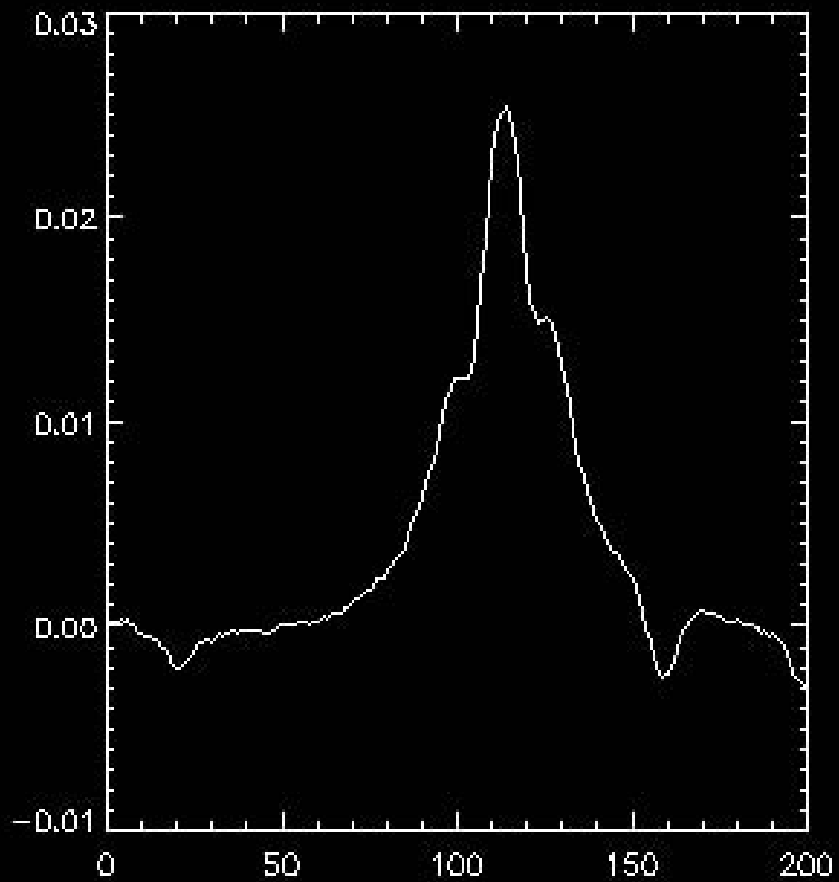


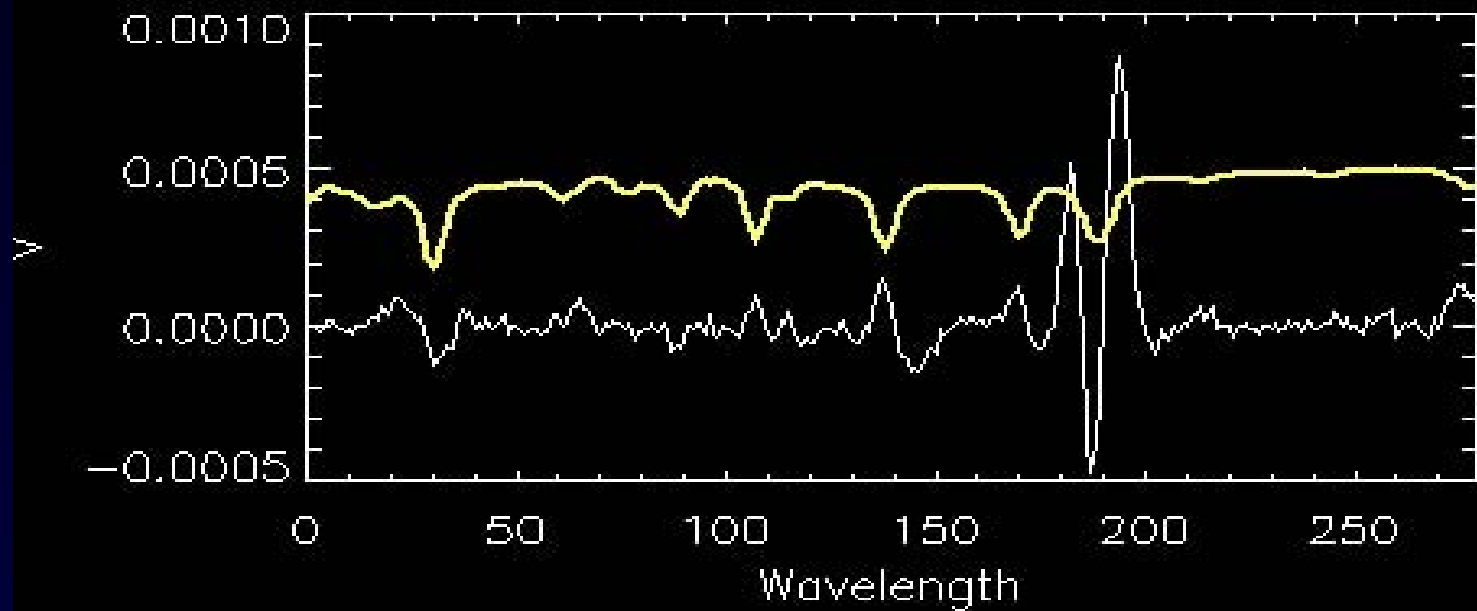
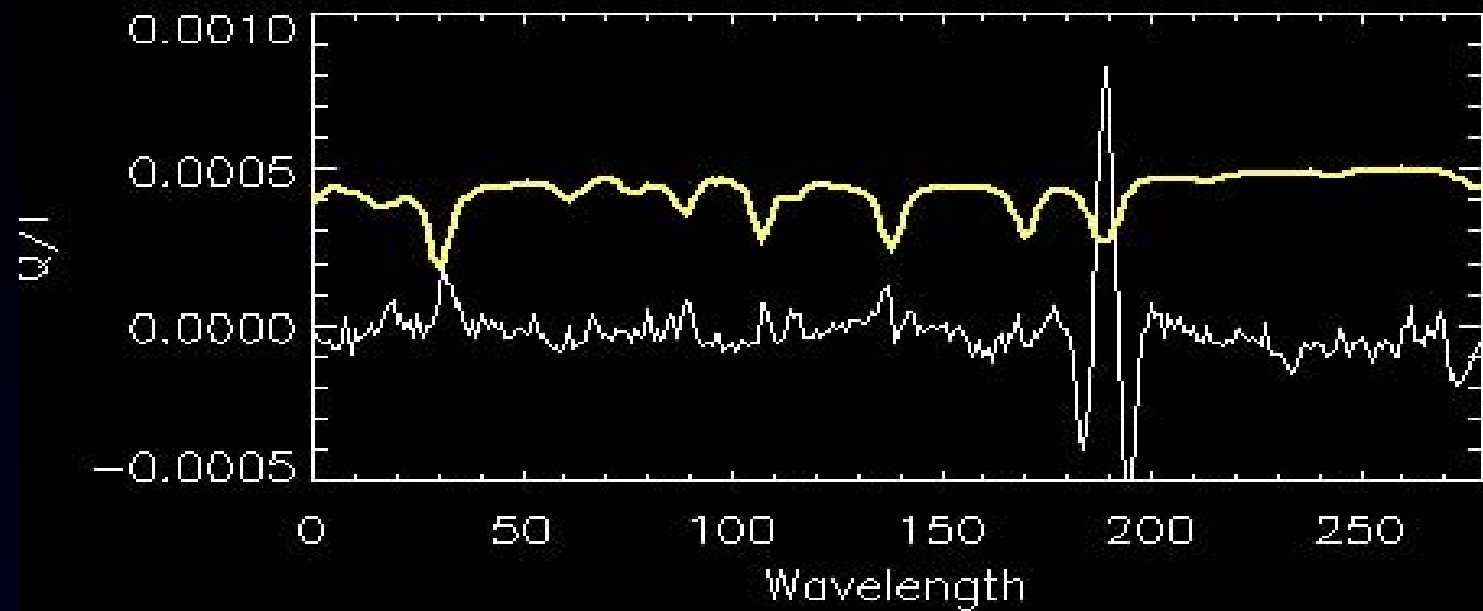




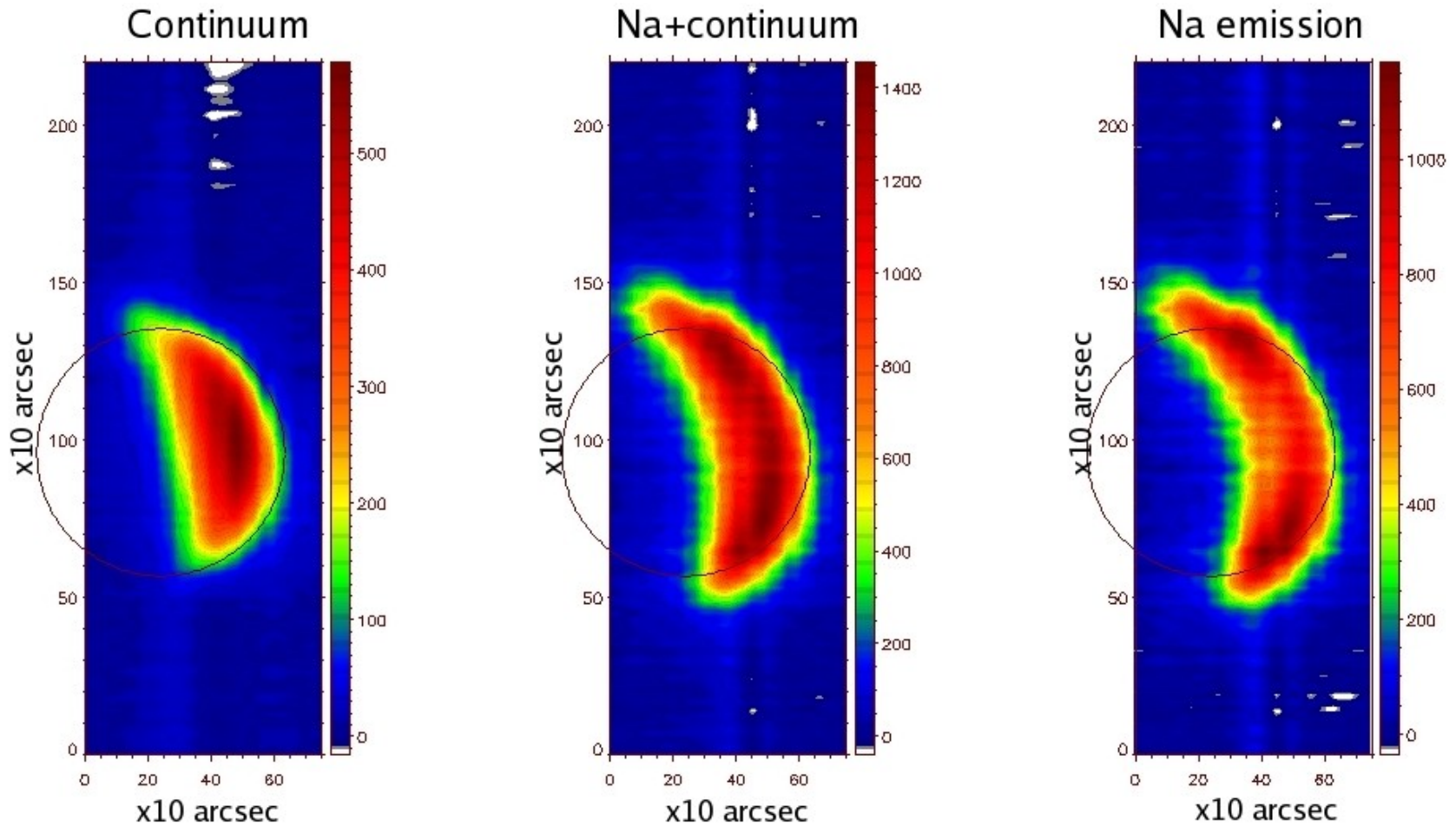




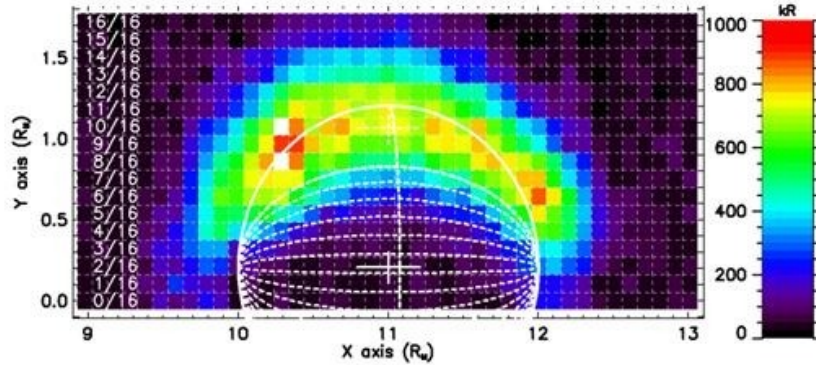




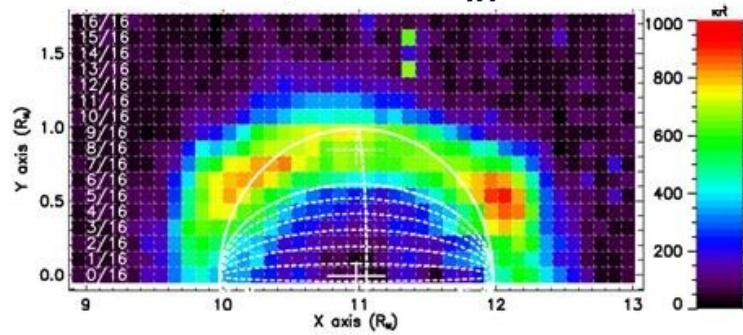
Mercury Na D₁ exosphere



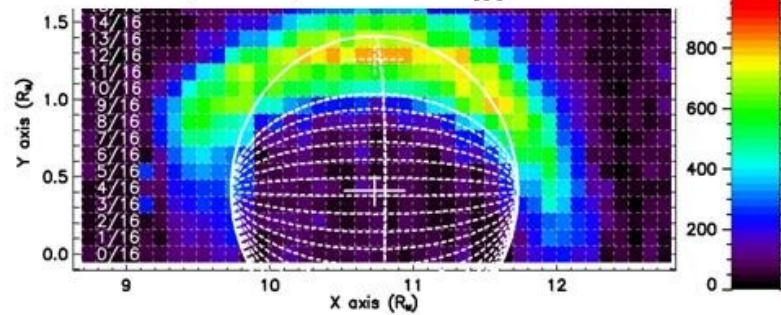
10/15/2007, 10:54, $\sigma = 1.8''$ $E_{\text{tot}} = 2.9 \times 10^5$ kR

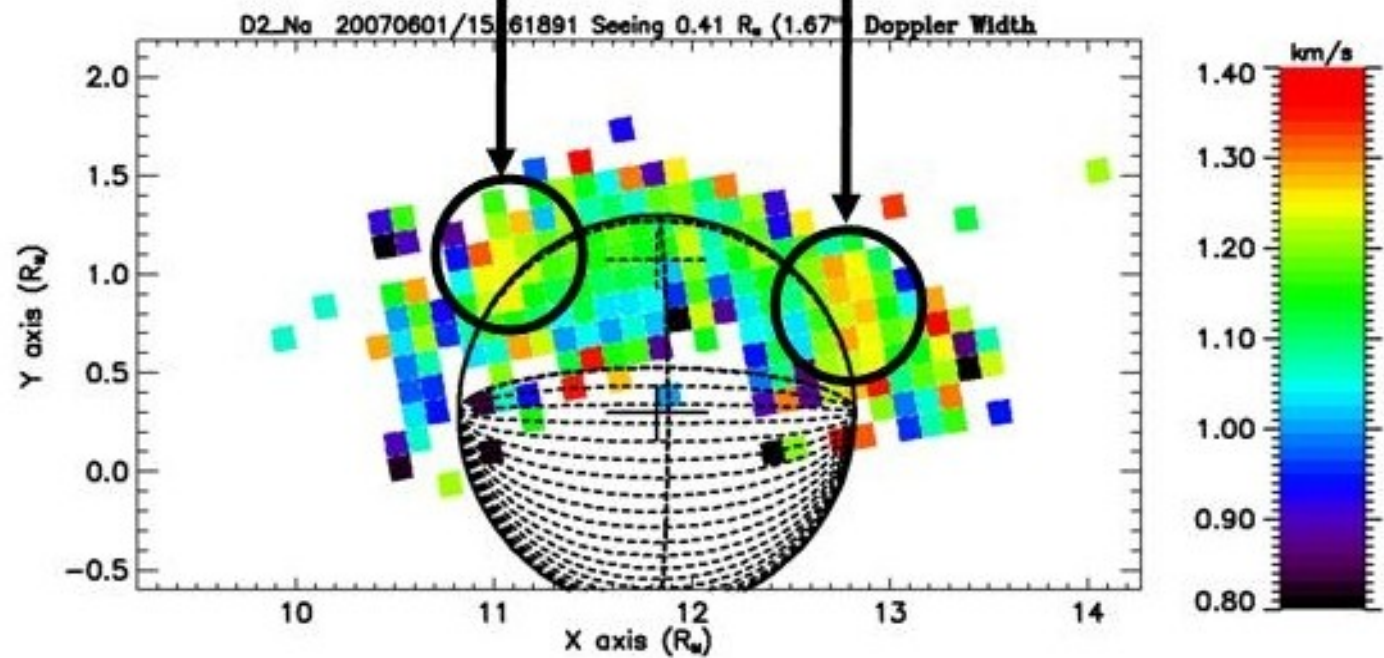
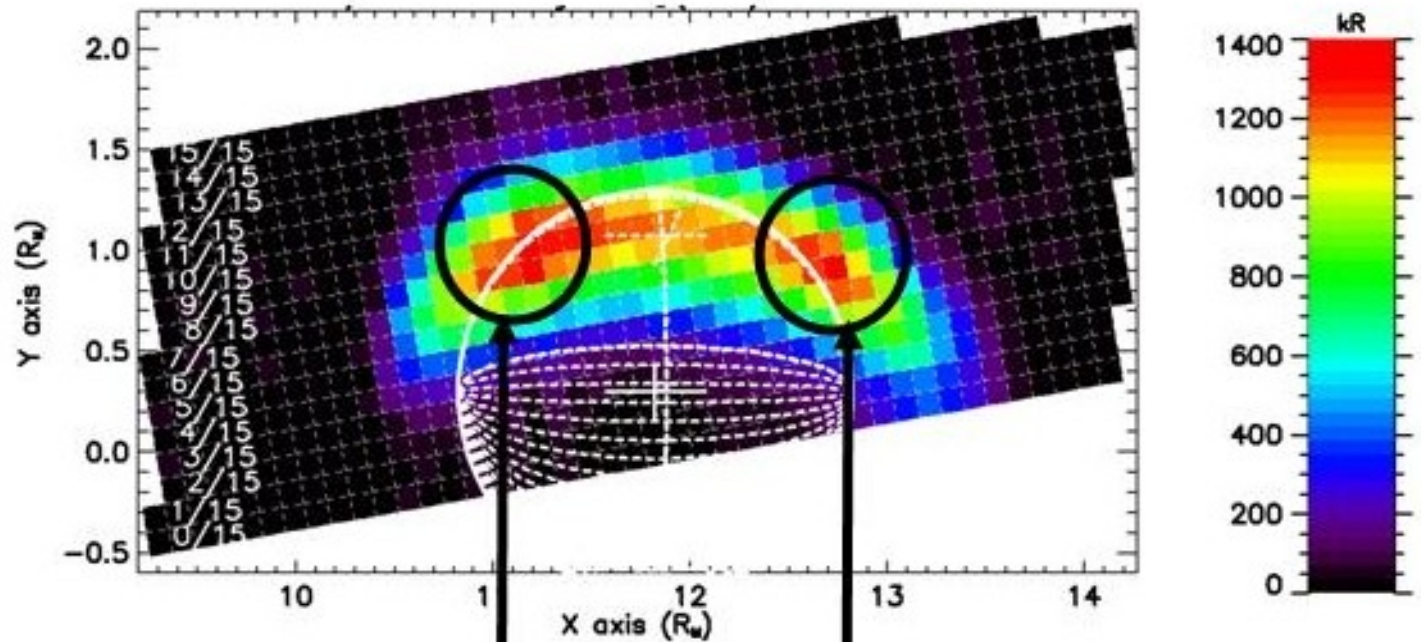


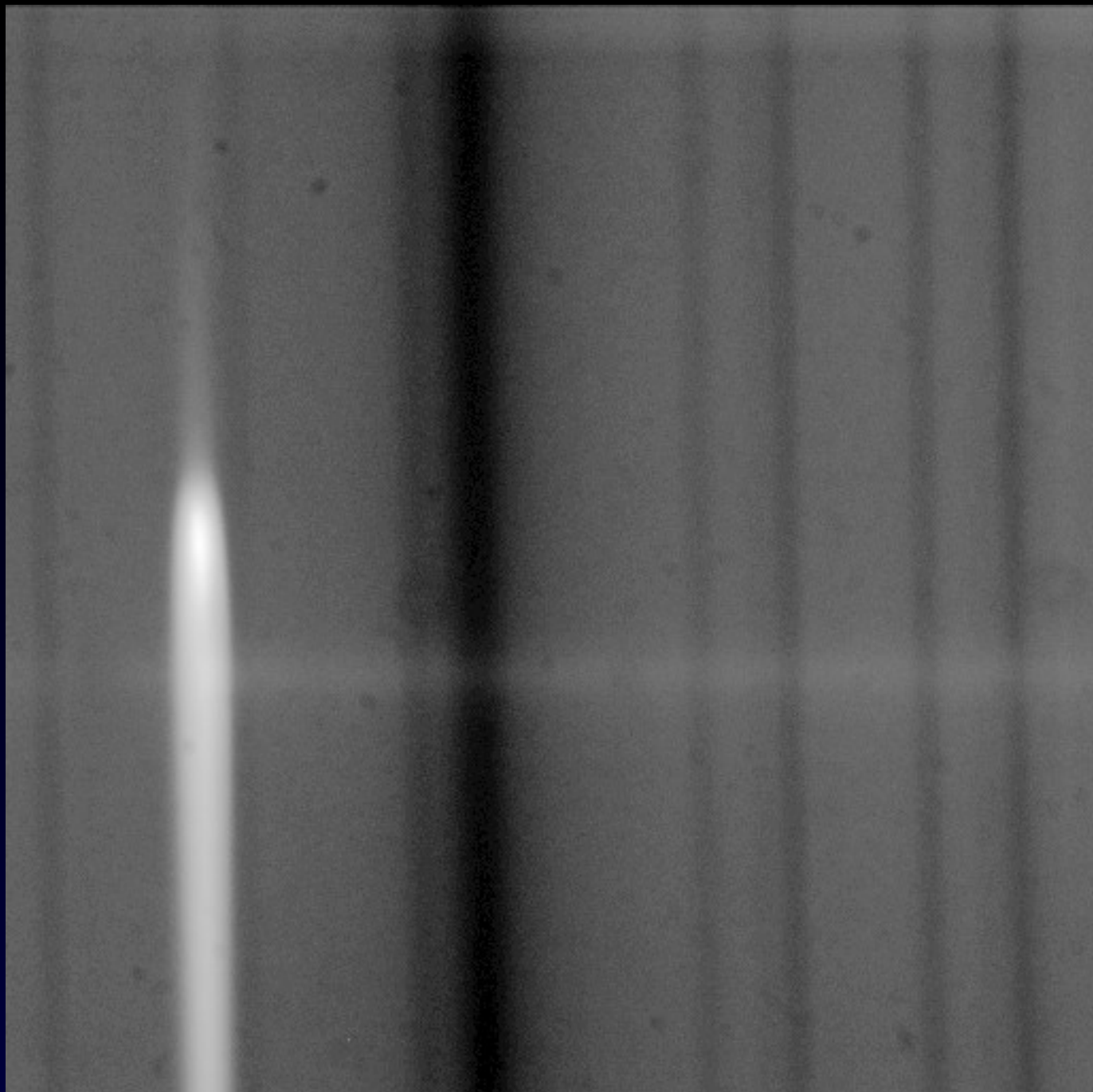
10/15/2007, 15:29, $\sigma = 1.7''$ $E_{\text{tot}} = 3.1 \times 10^5$ kR

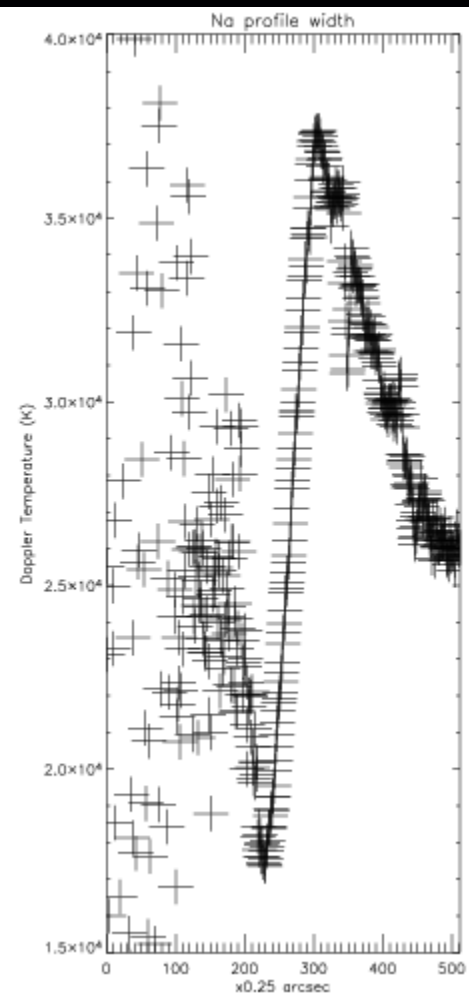
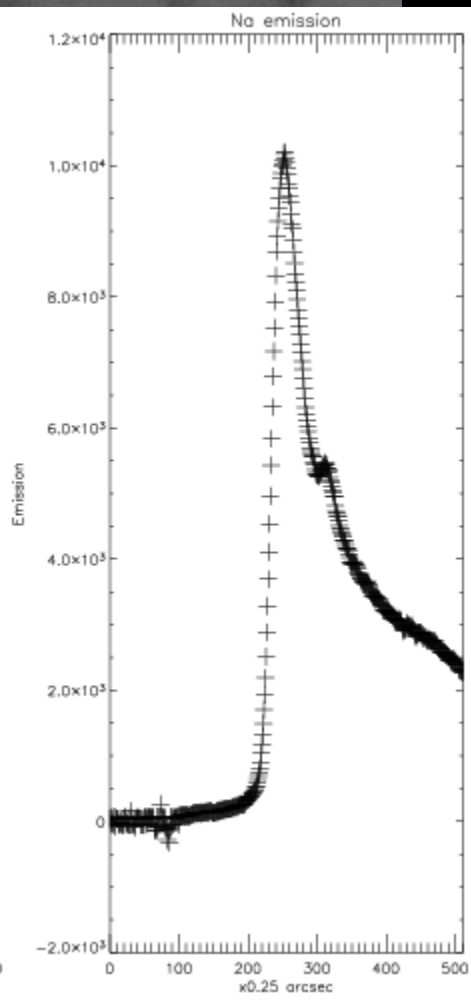
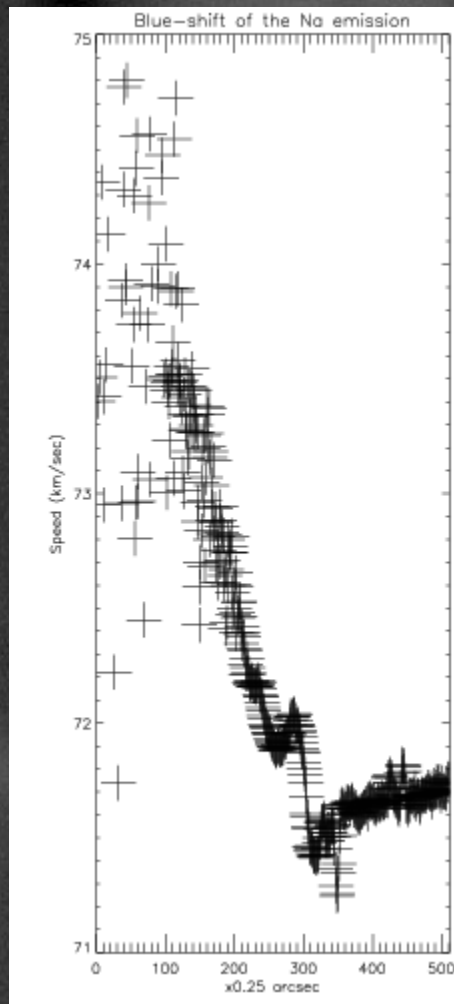


10/15/2007, 16:50, $\sigma = 2.0''$ $E_{\text{tot}} = 3.0 \times 10^5$ kR













Mean
Wavefront
@
500 nm

