

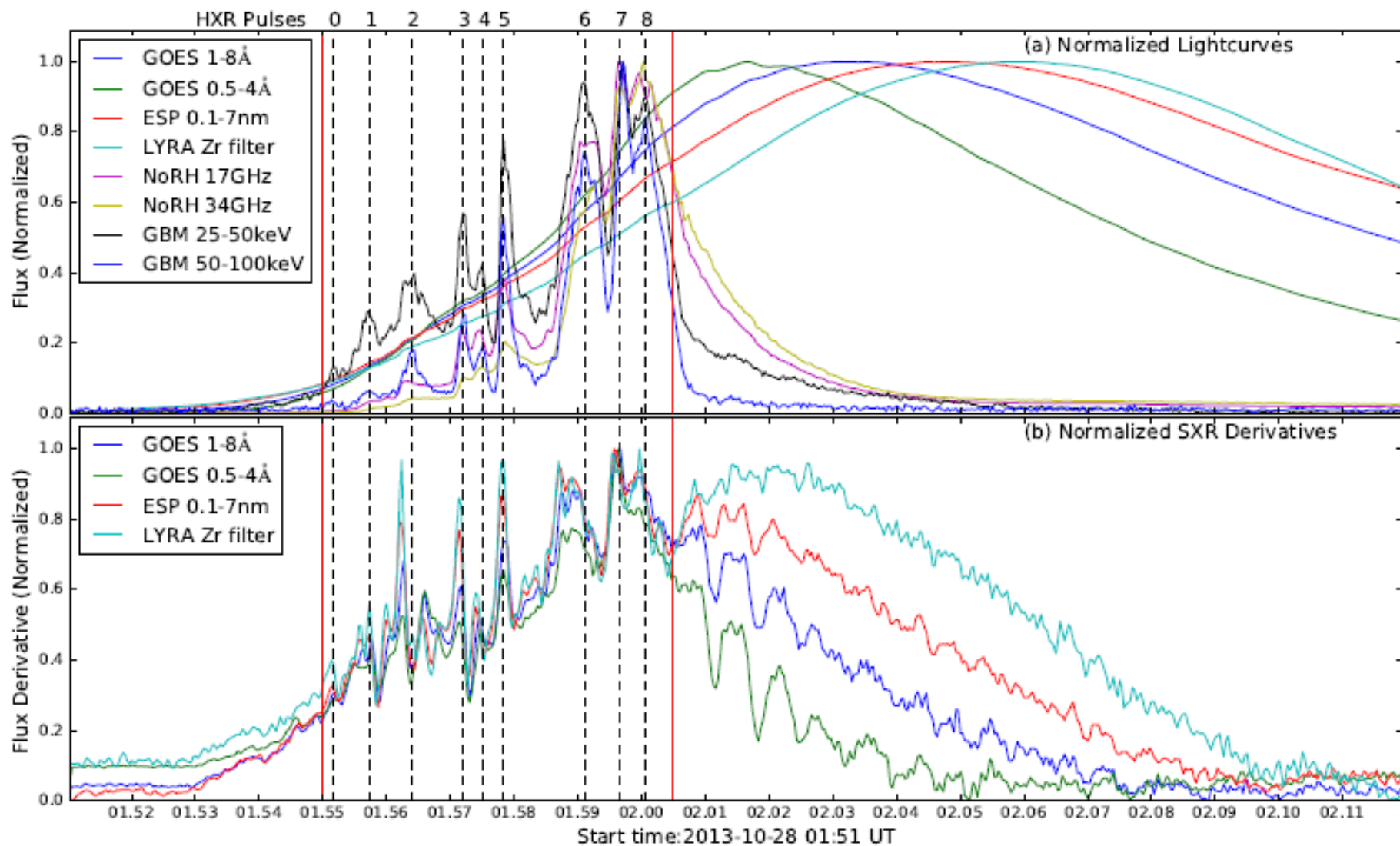


# Spatial Structure in 17 GHz NoRH Flare Observations

Stephen White

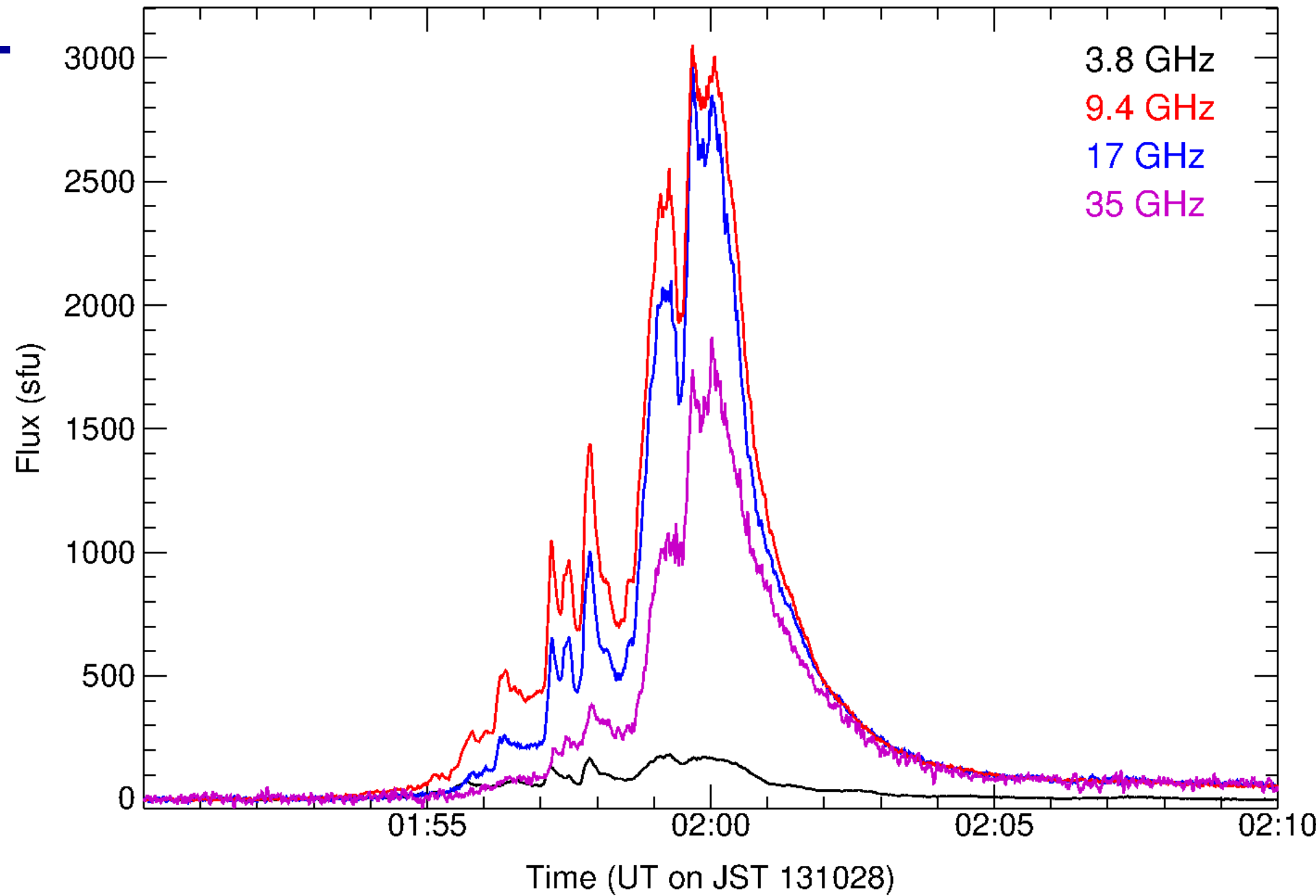
Space Vehicles Directorate  
Air Force Research Laboratory

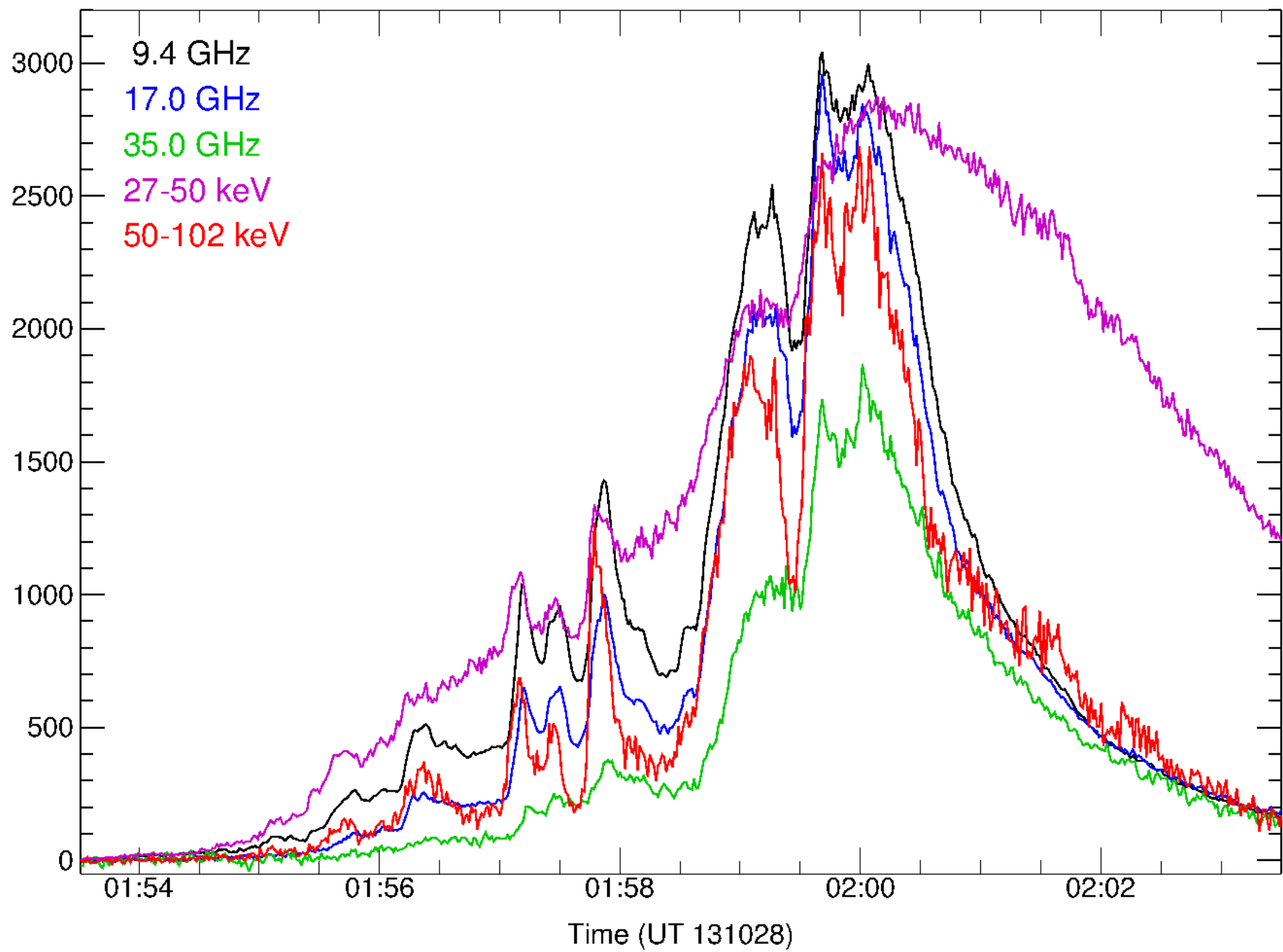
# Oscillations: 2013 Oct 28 flare



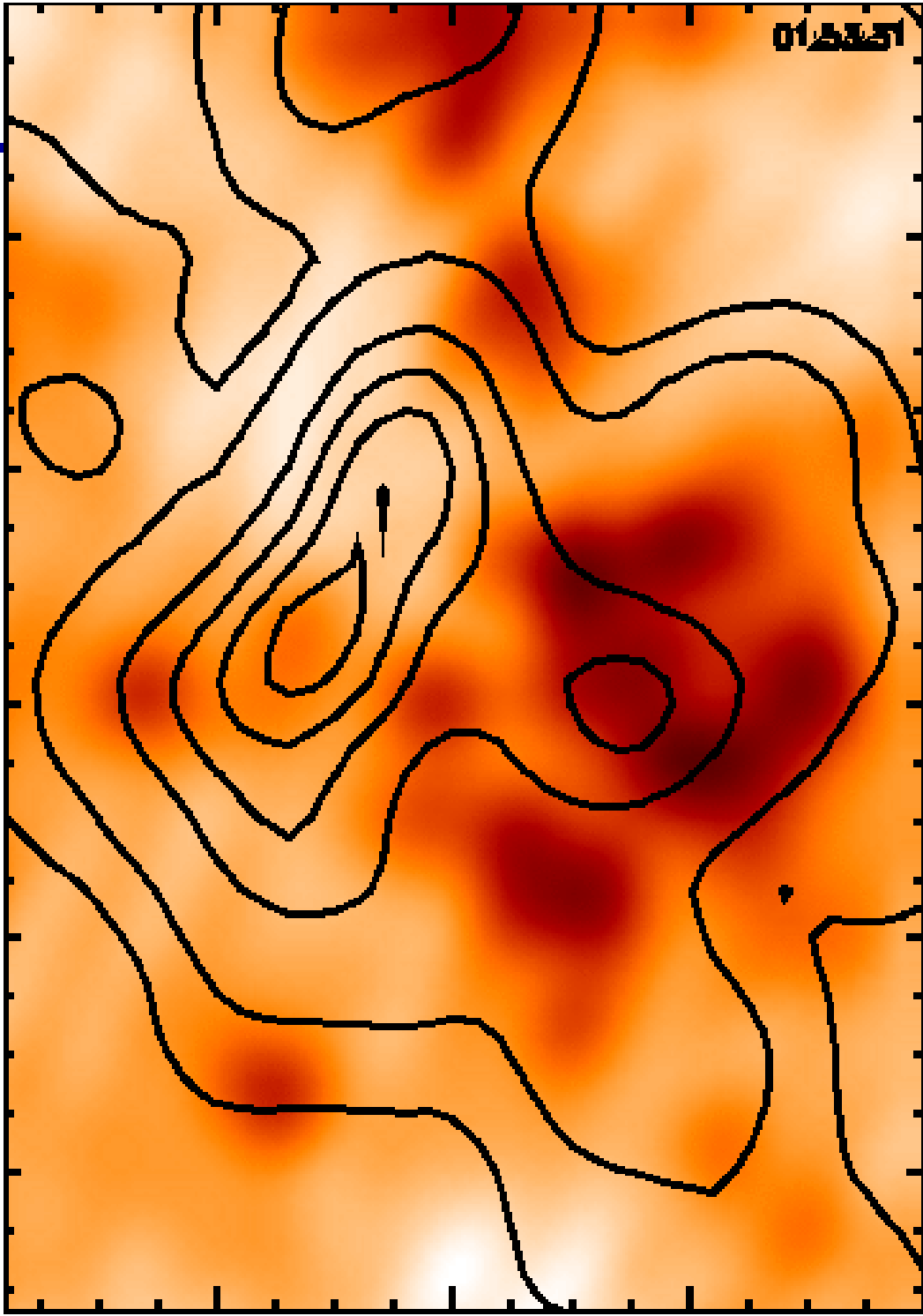
Hayes et al 2016

# NoRP radio flux



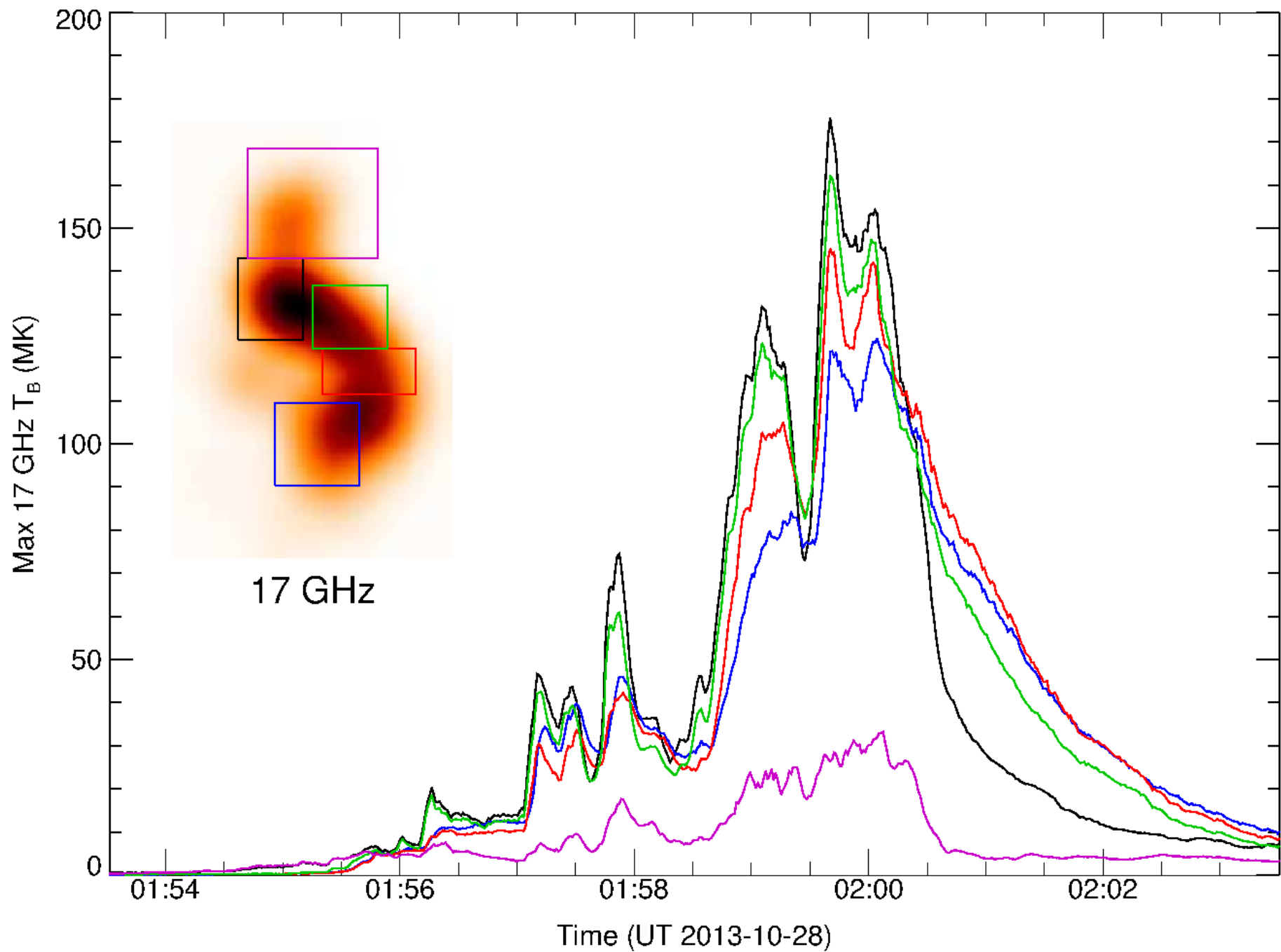


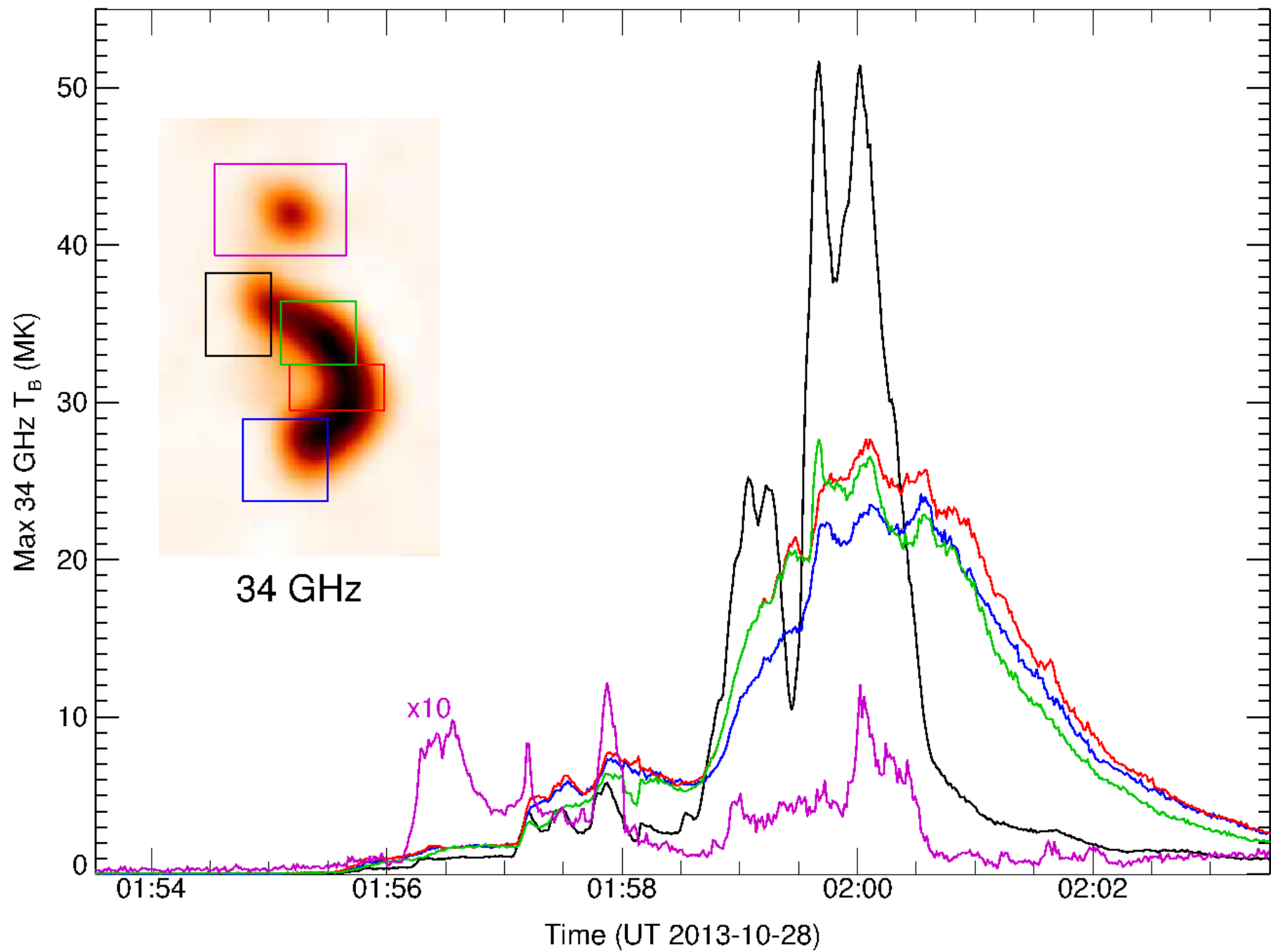
015351



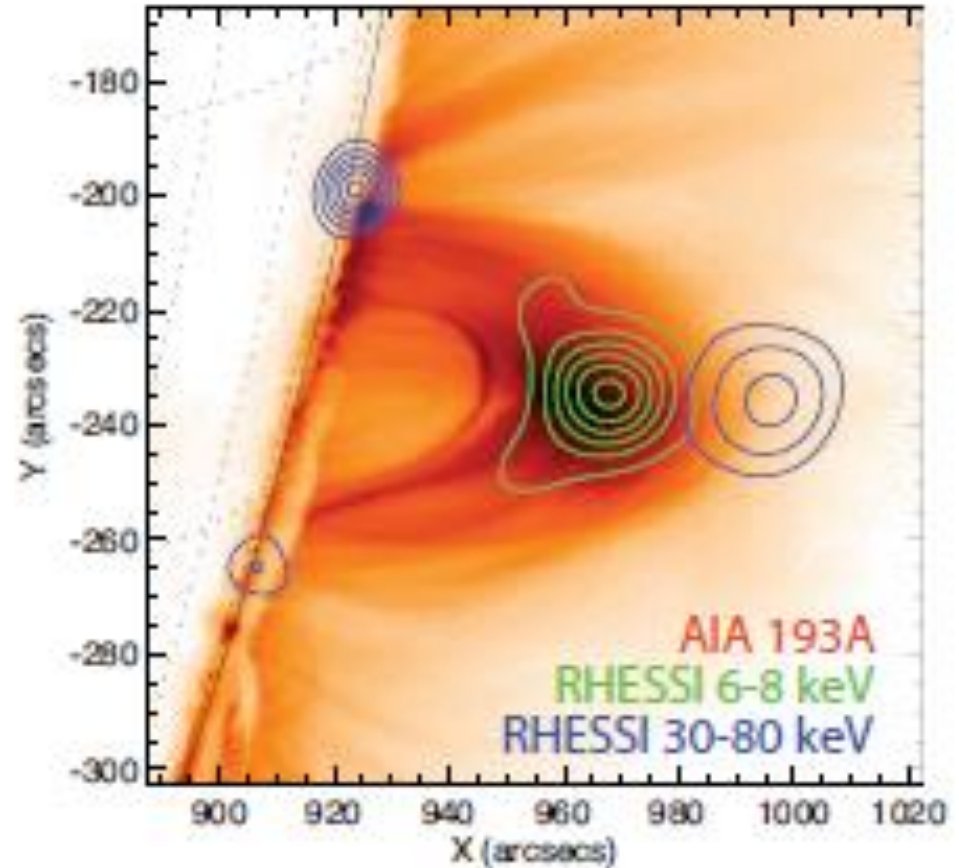
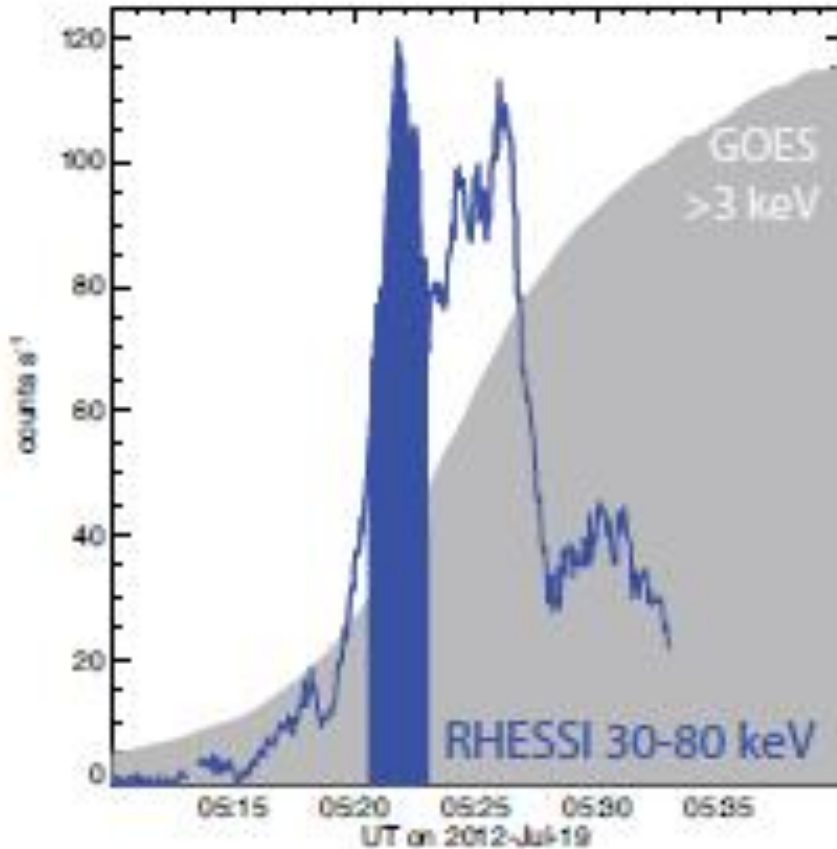
17 GHz contours  
on 34 GHz image

Resolution:  
12 arcsec at 17 GHz  
8 arcsec at 34 GHz





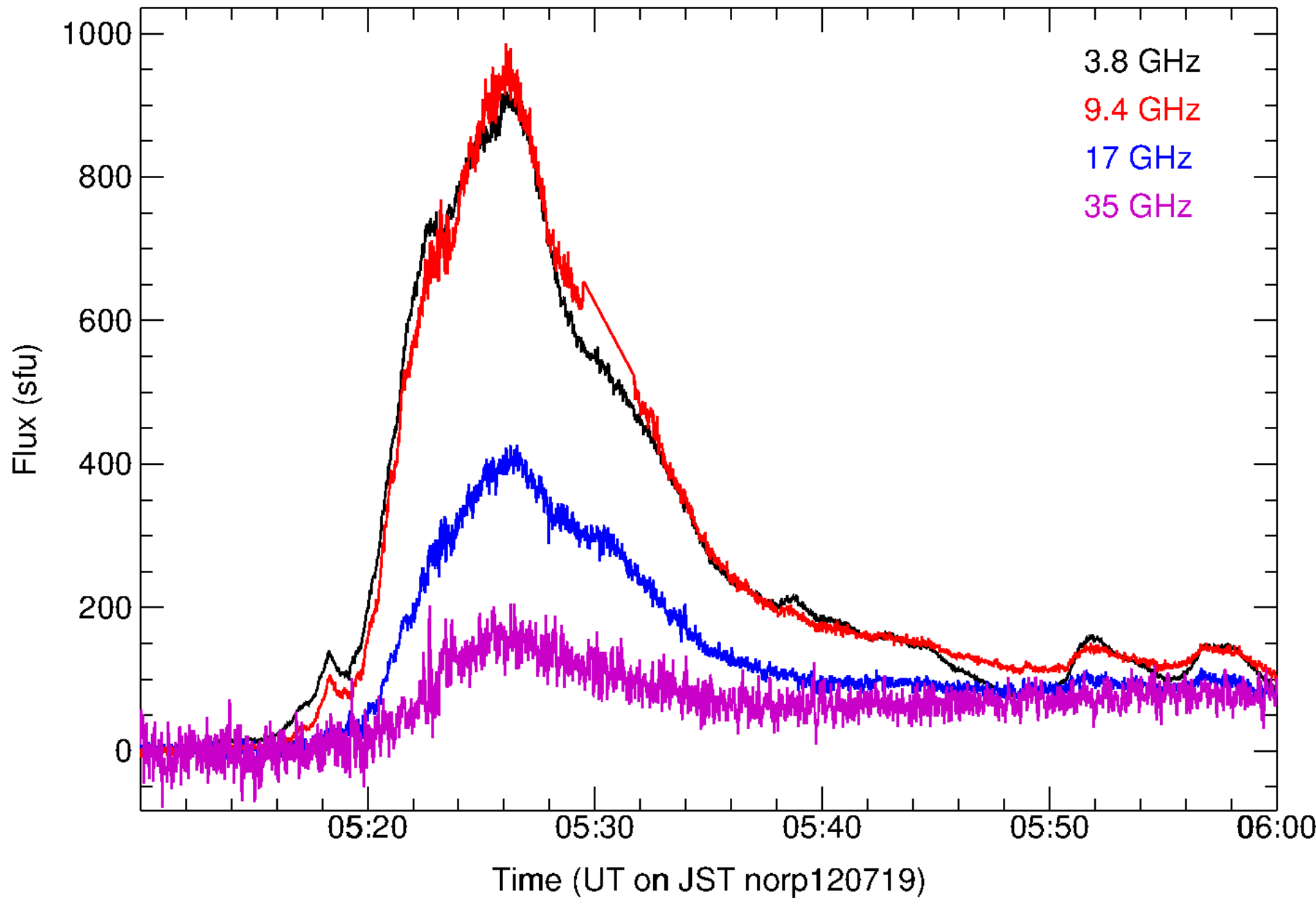
# Loop: 2012 July 19

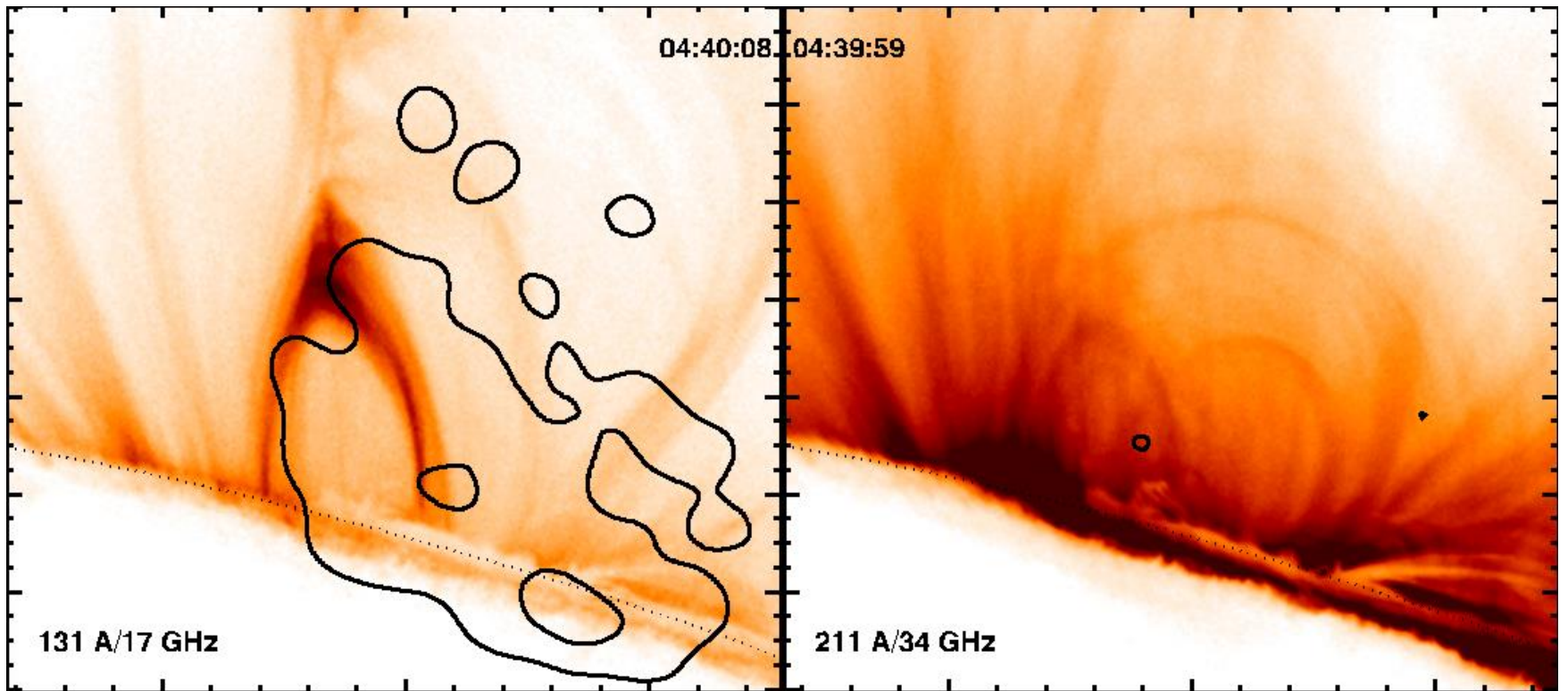


Krucker + Battaglia 2013  
Liu et al 2013

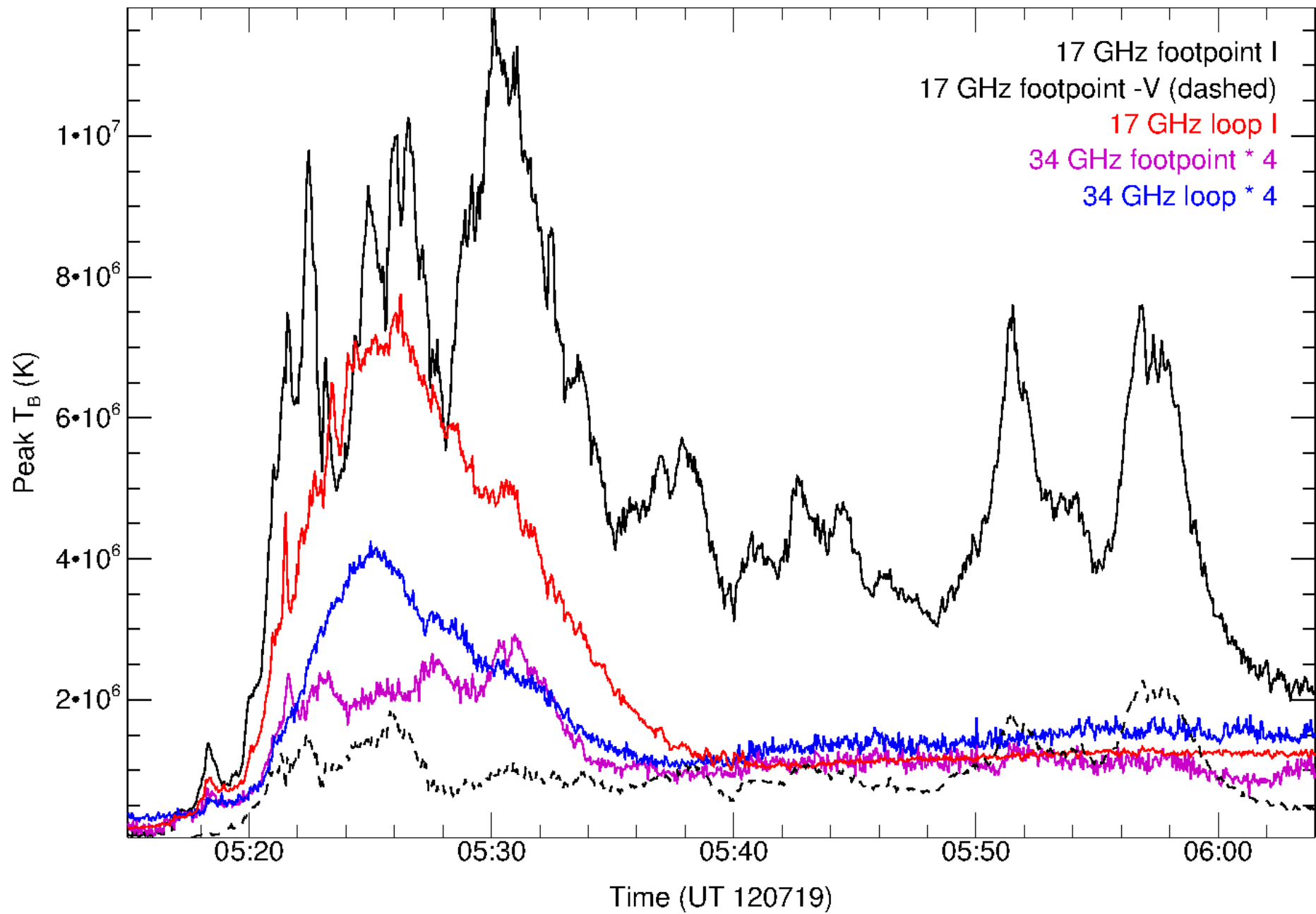


# NoRP radio flux

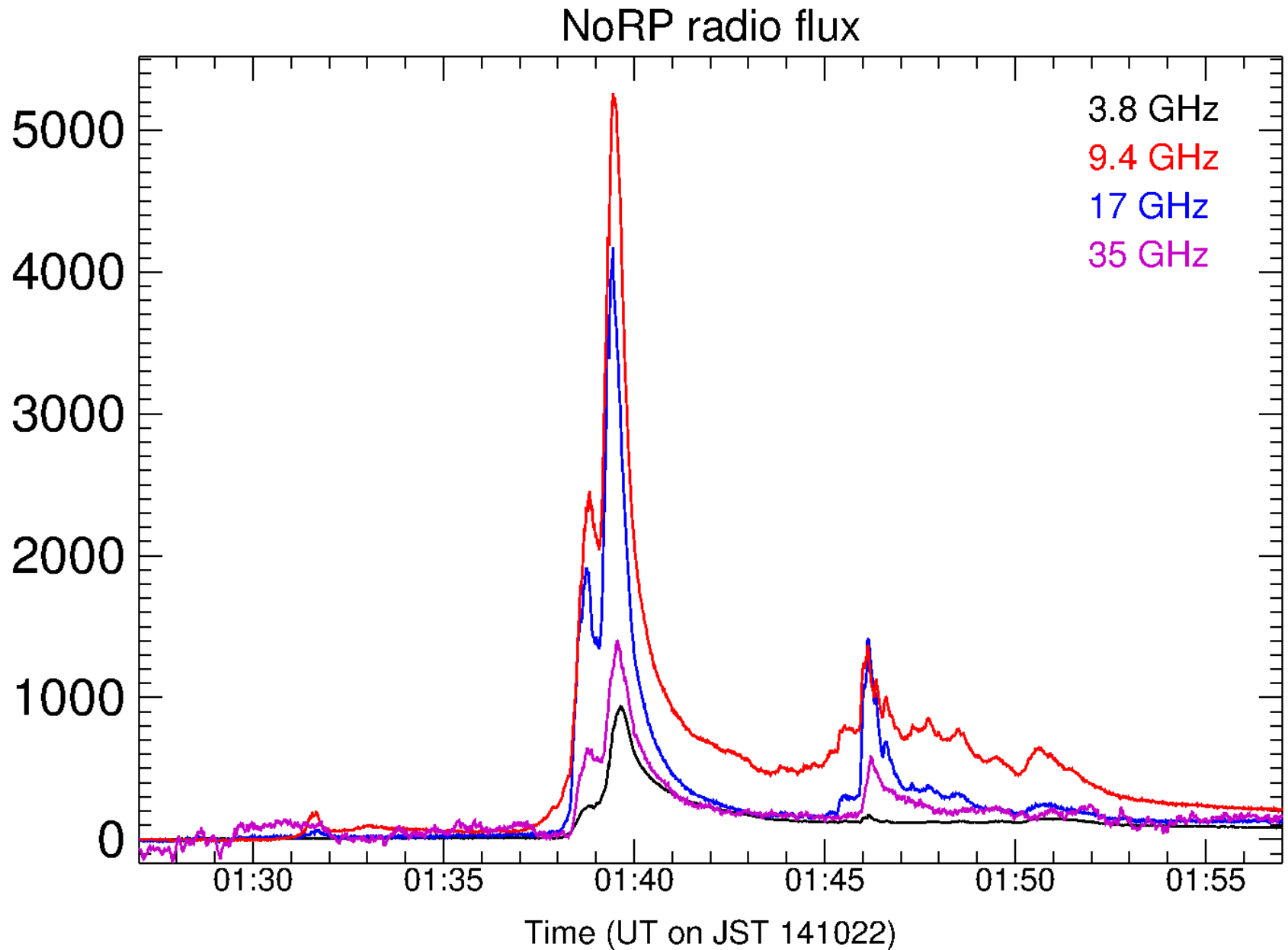




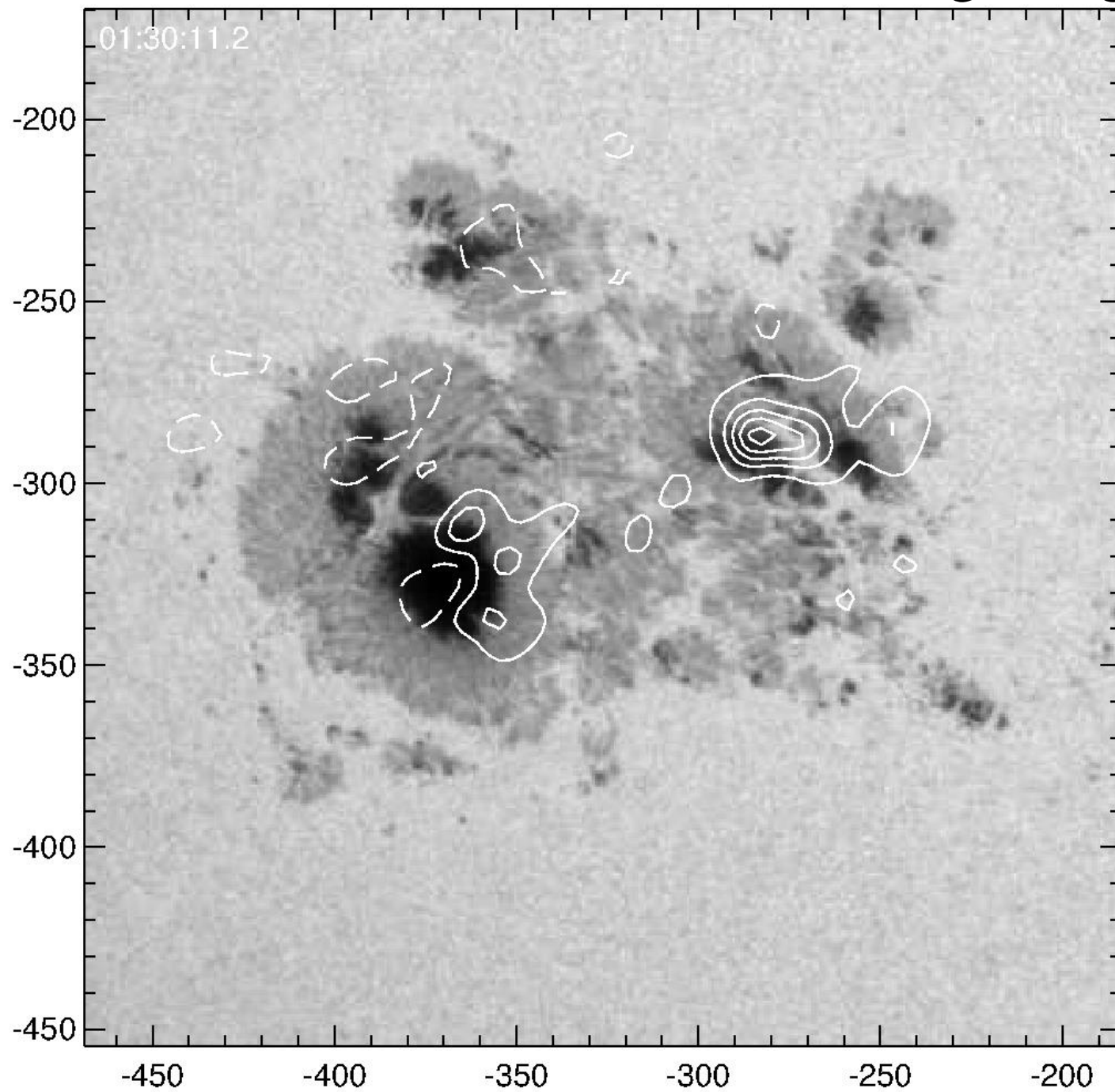
Movie: 17 GHz contours on AIA 131 (left) and 34 GHz contours on AIA 211 (right)



# Confined flares from 2014 Oct 22(Astrid)



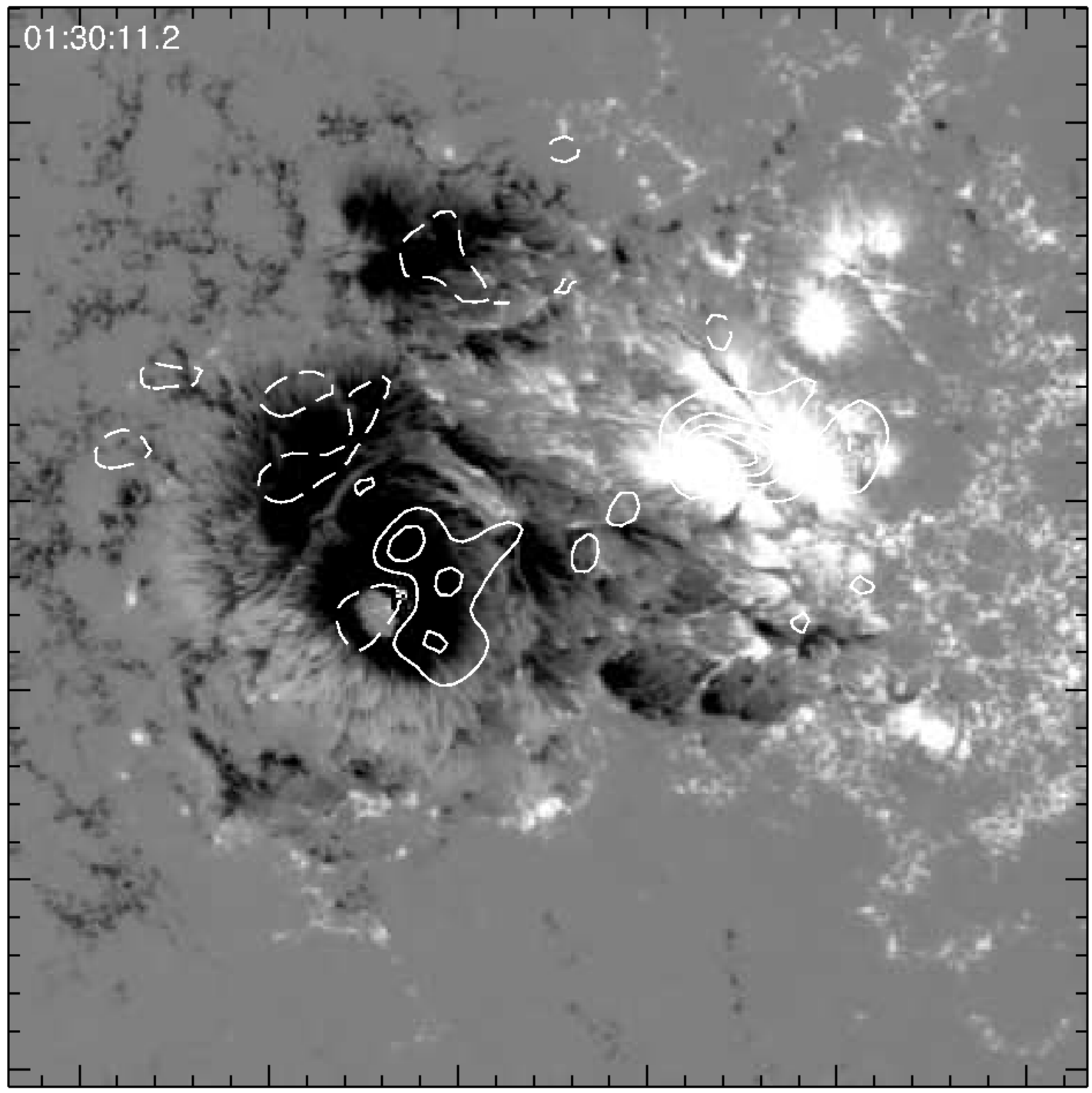
# Context: 17 GHz V contours on HMI magnetogram



01:30:11.2

-200  
-250  
-300  
-350  
-400  
-450

-450 -400 -350 -300 -250 -200





17 GHz/131A 01:38:46.2

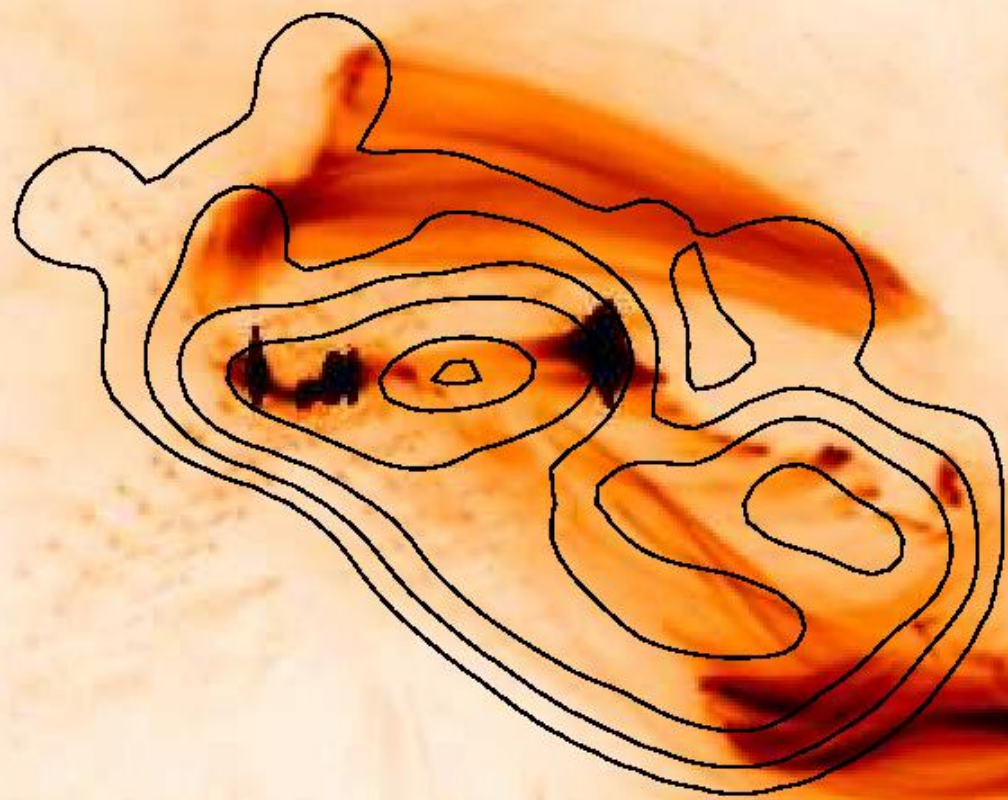
-200

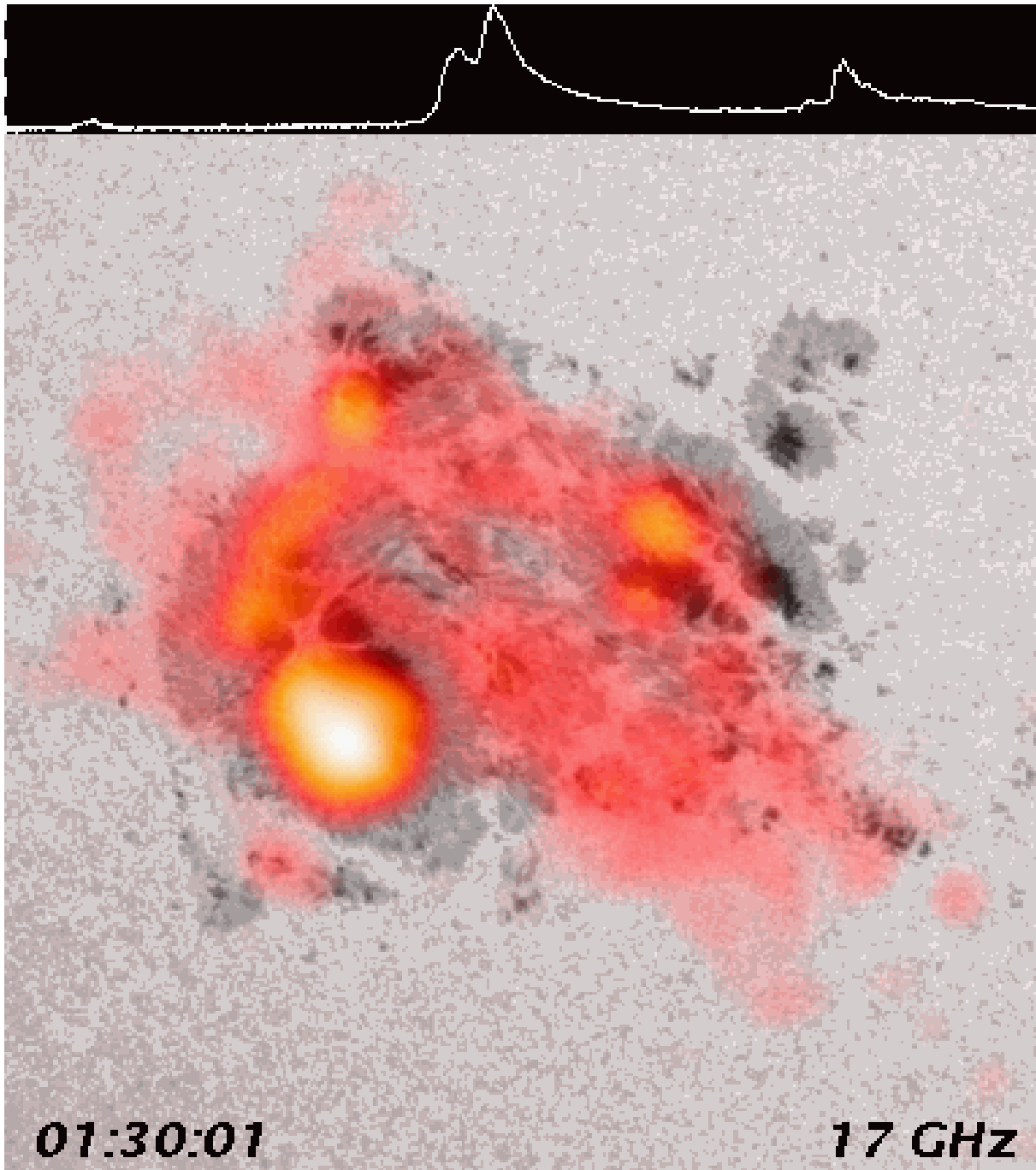
-250

-300

-350

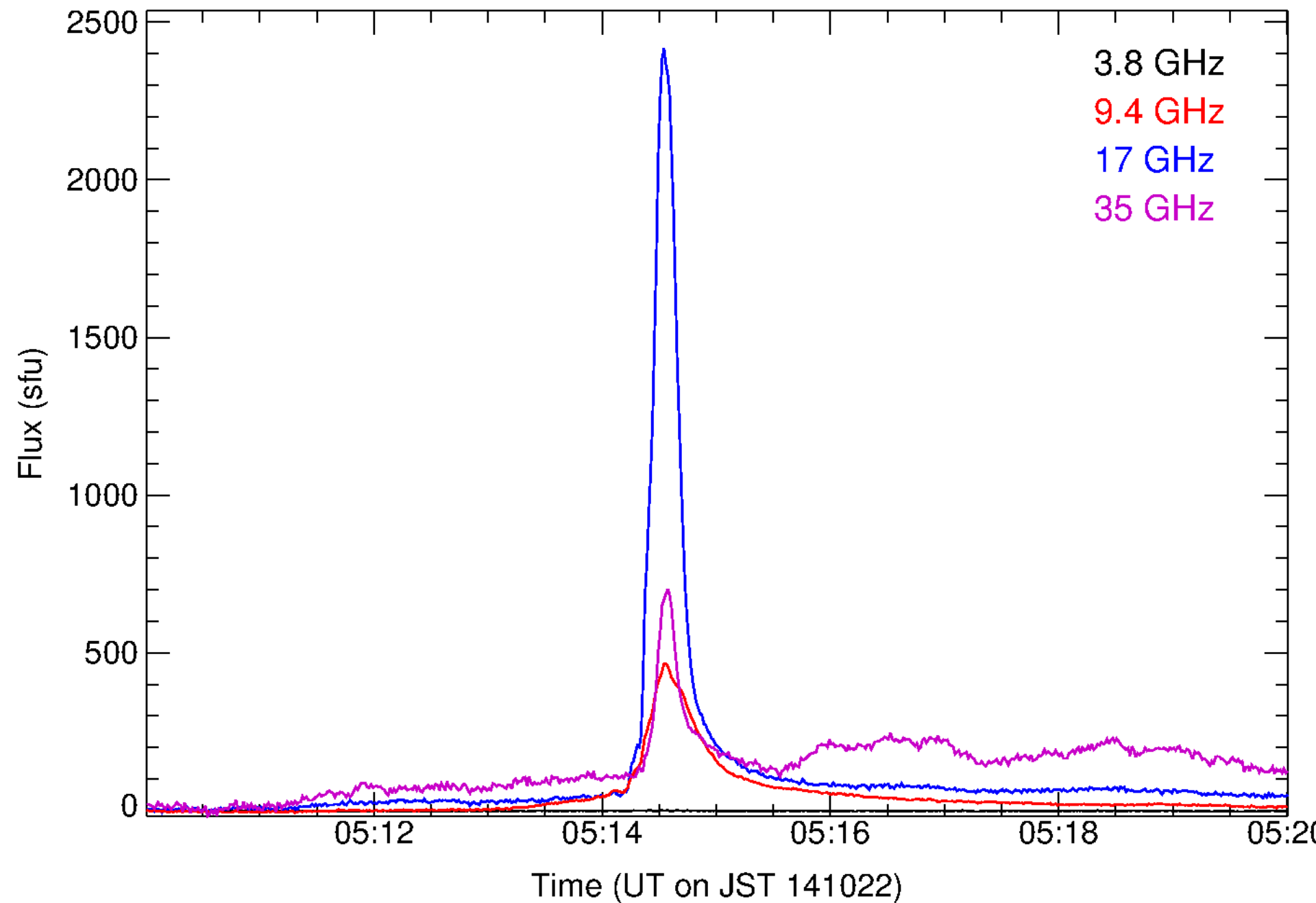
-400

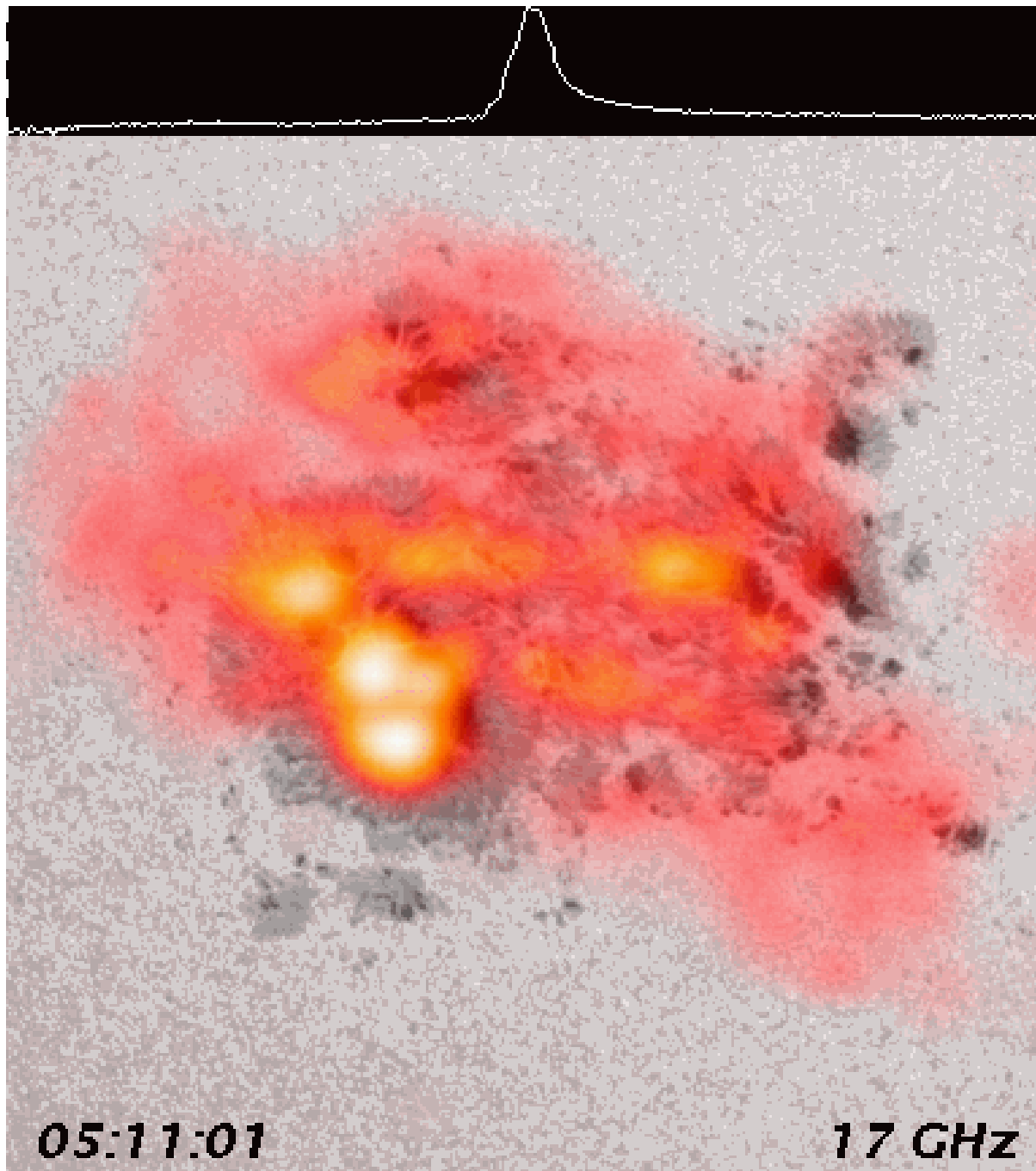




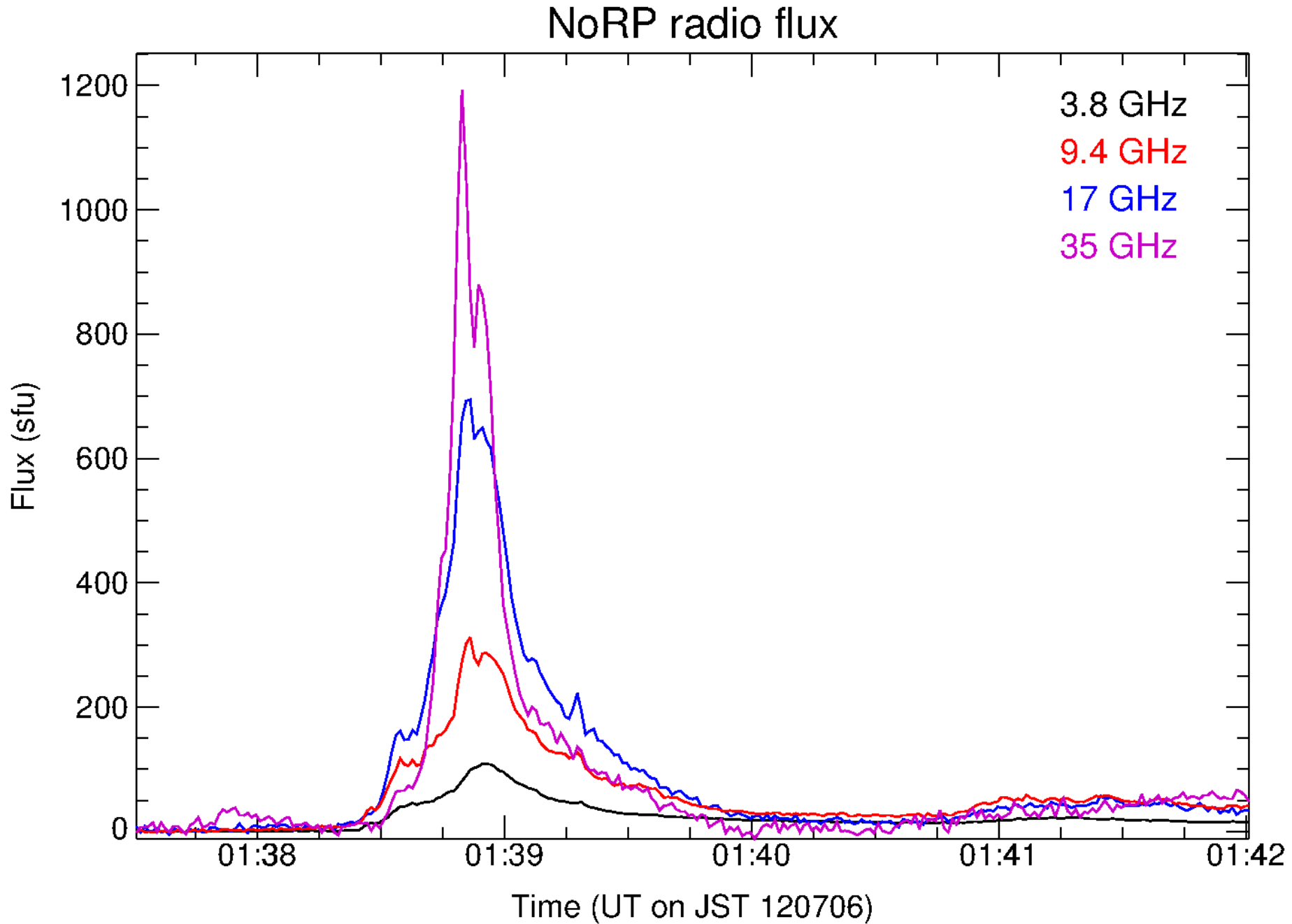


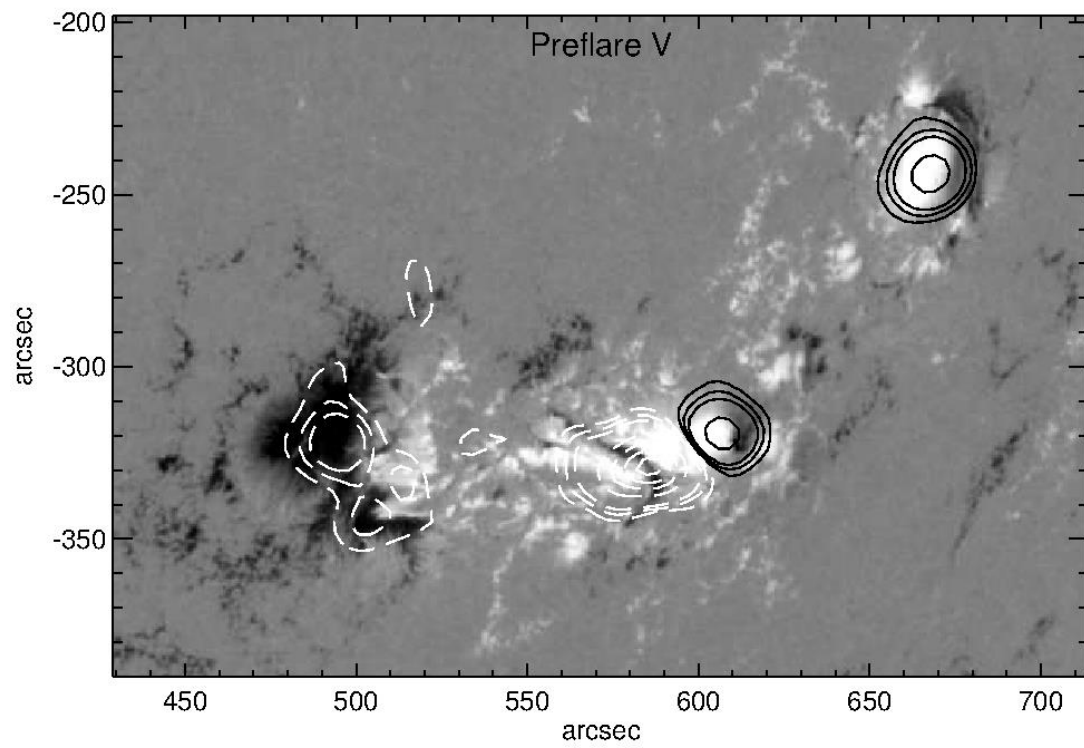
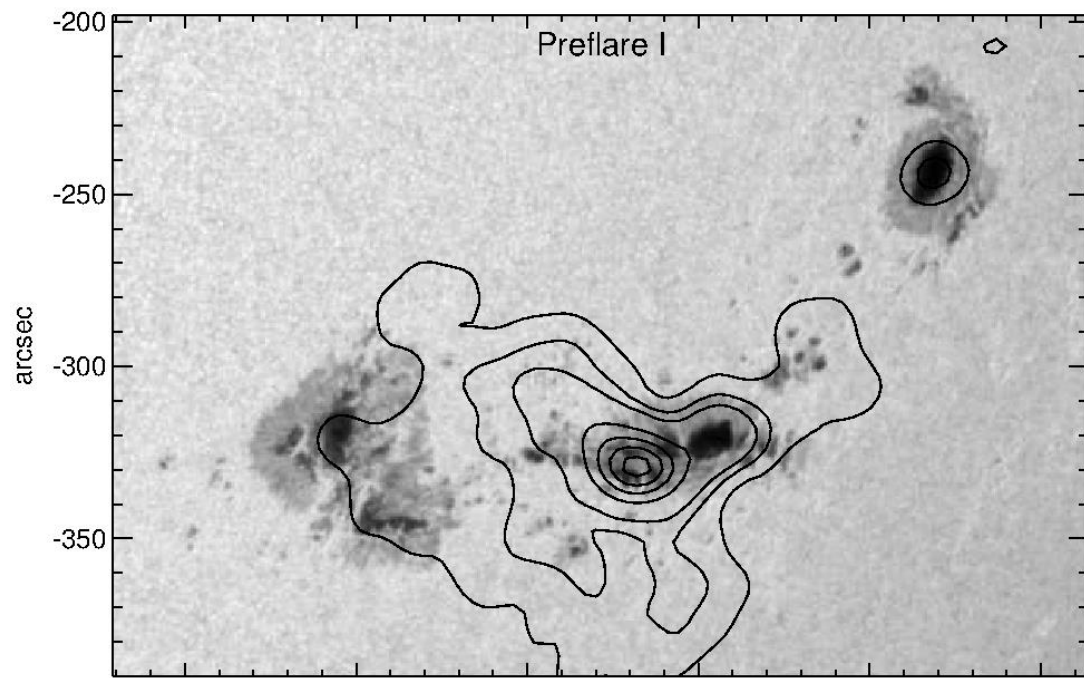
# NoRP radio flux

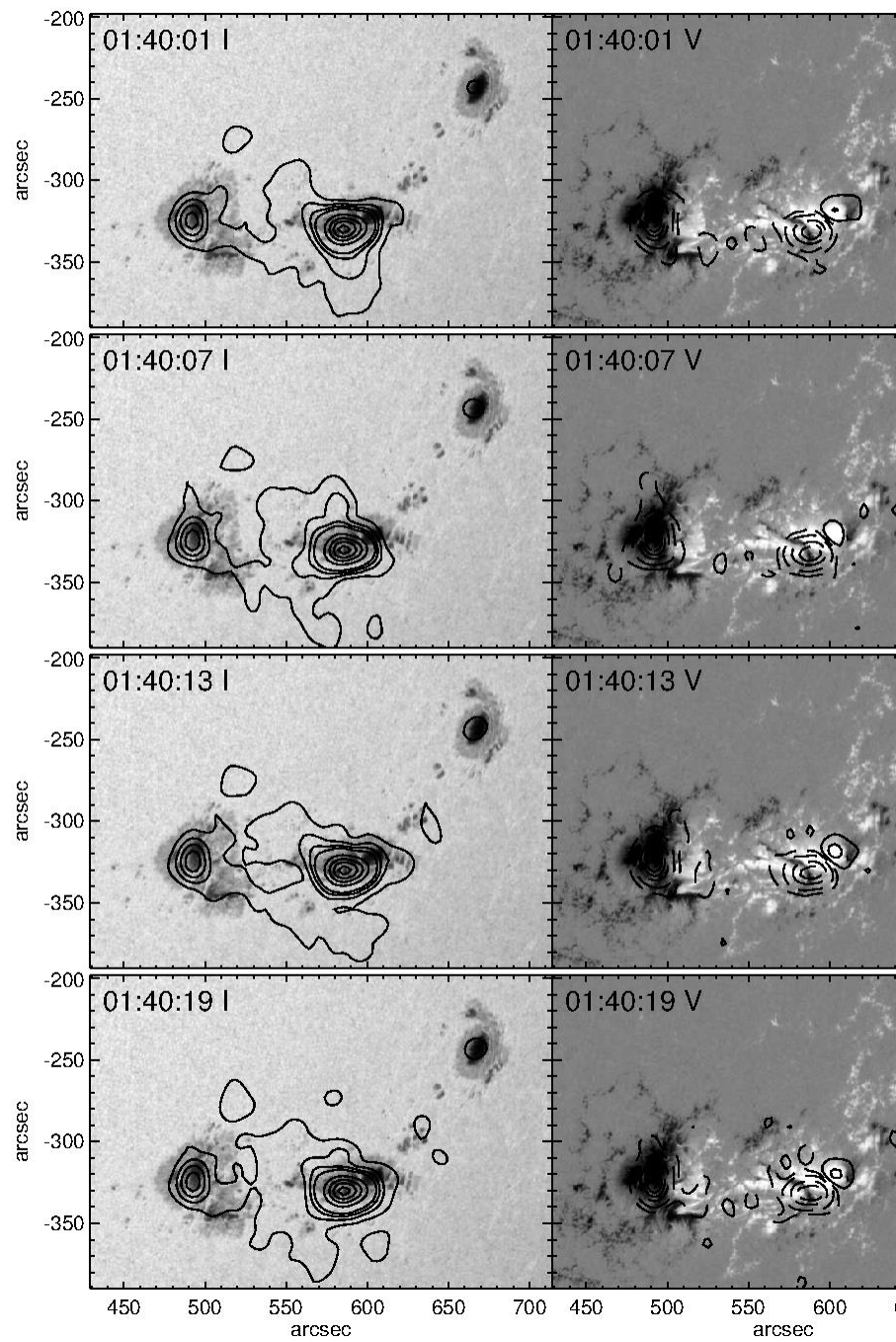
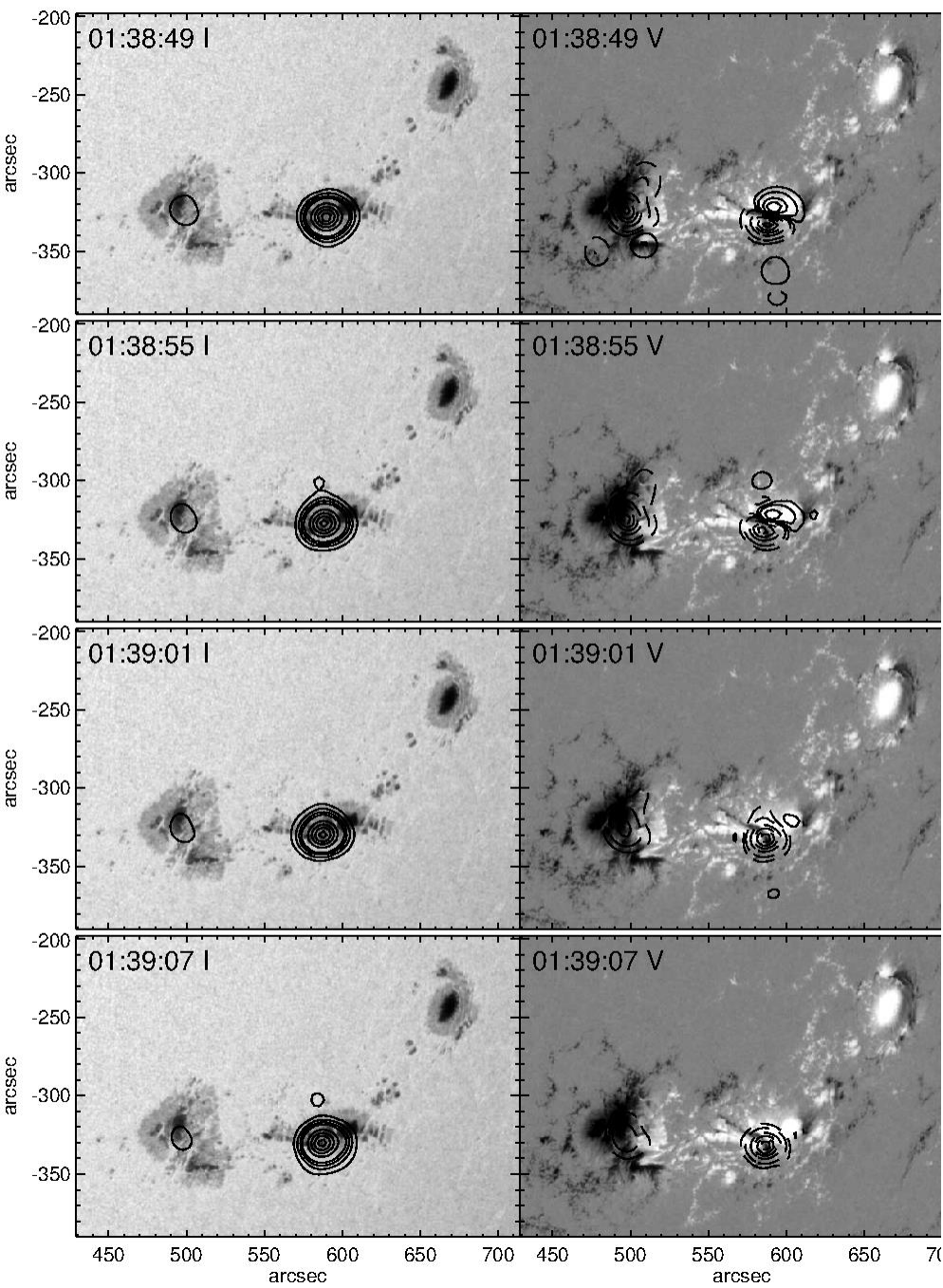


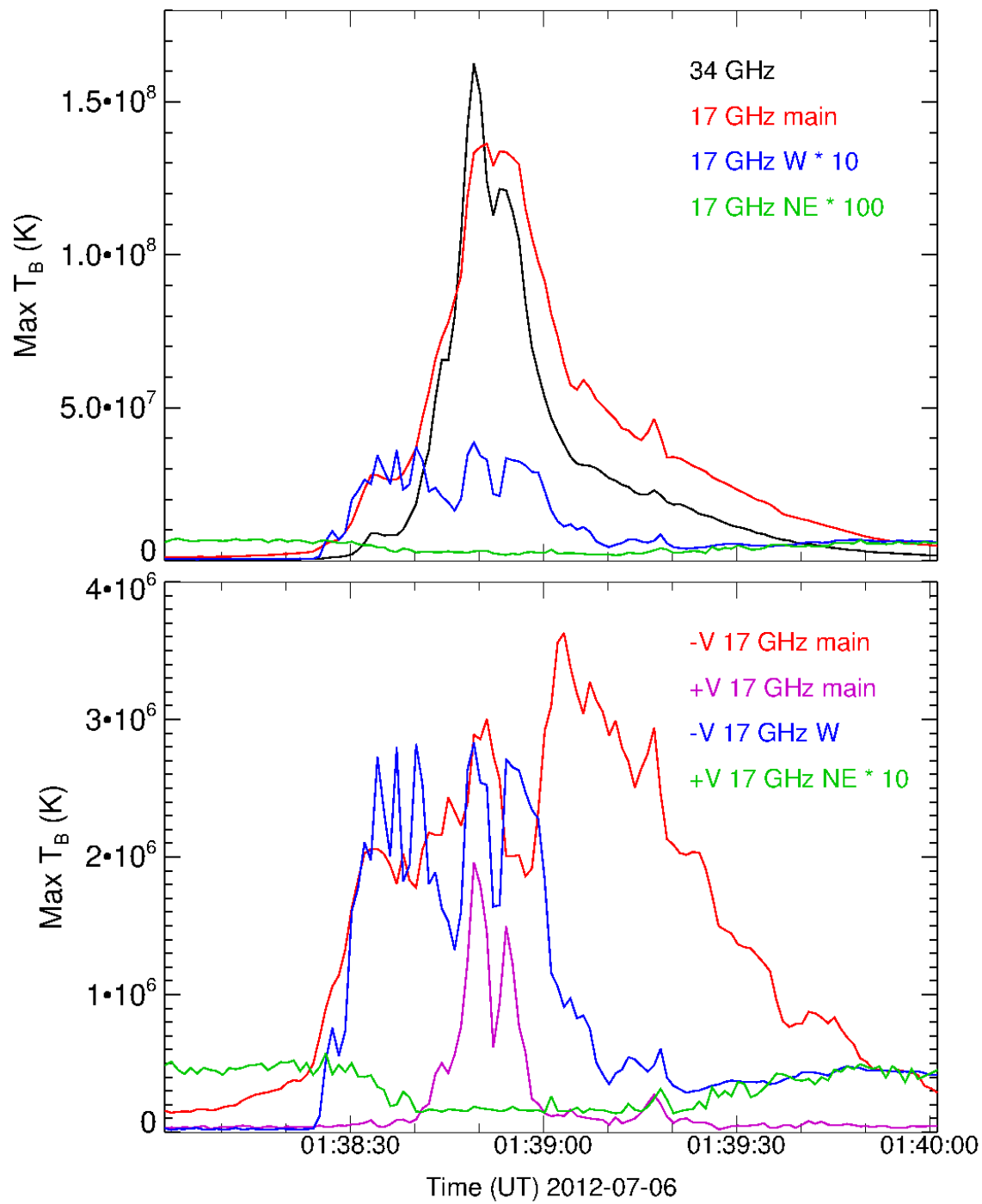


# Multiple compact sources: 2012 June 7

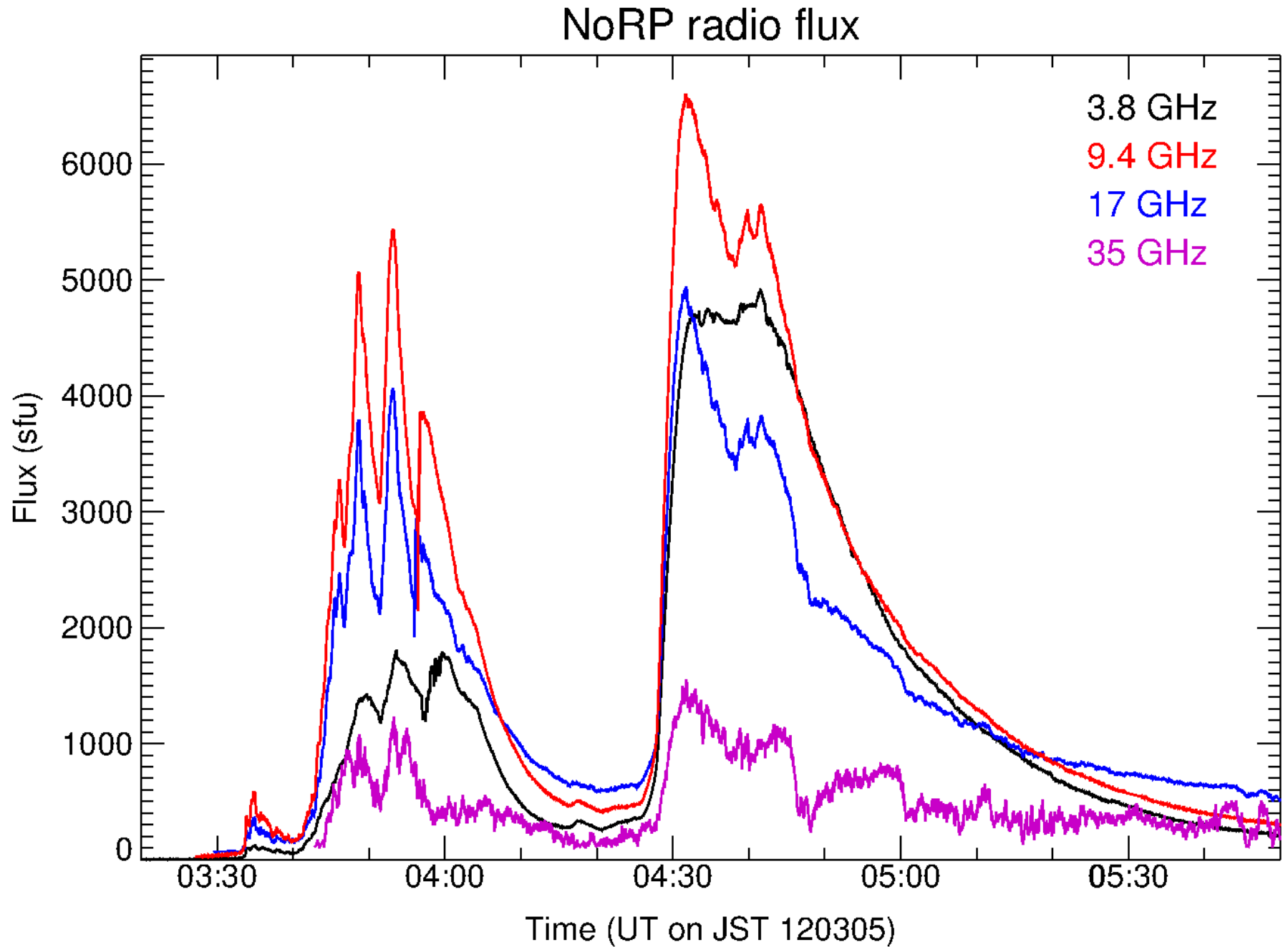


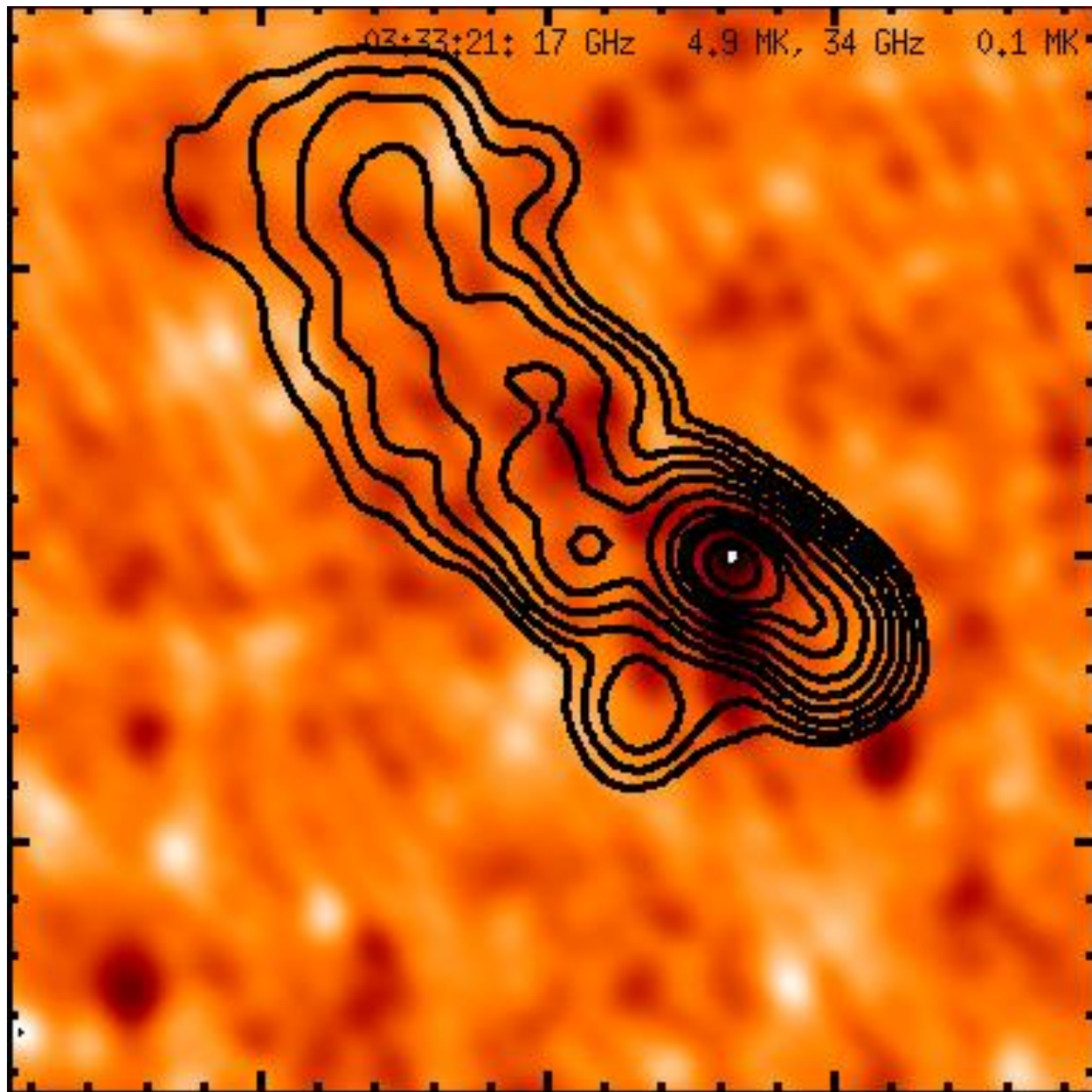






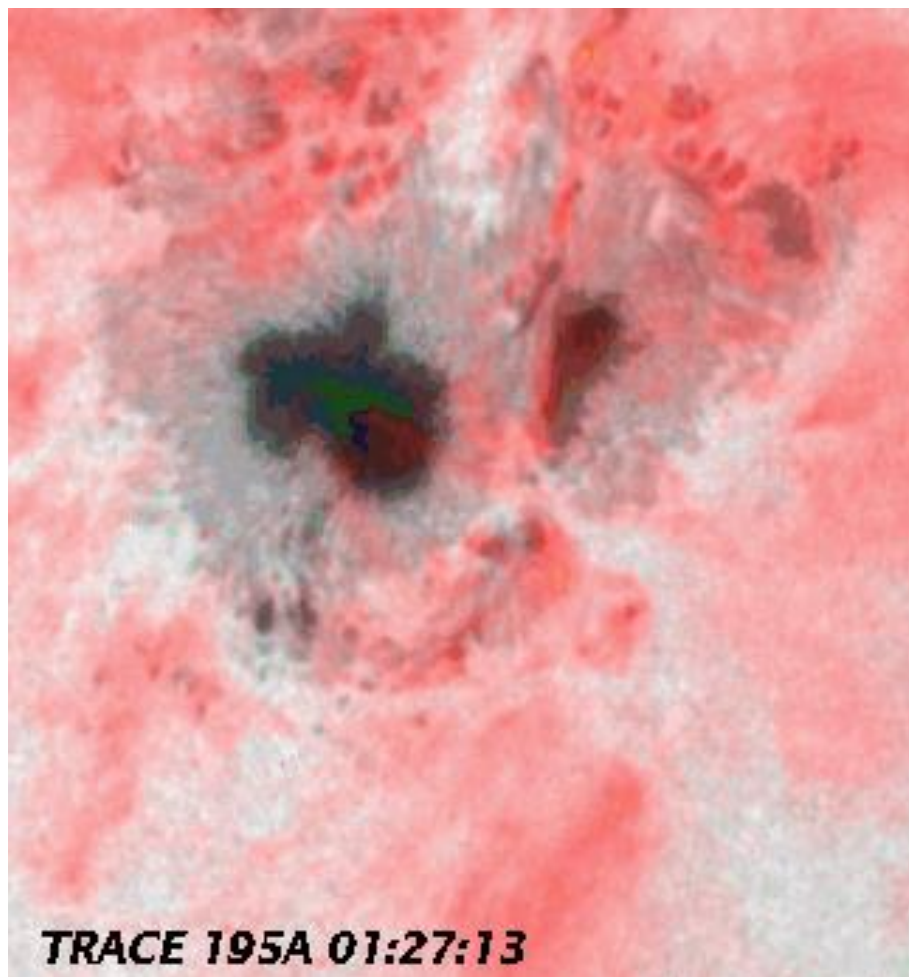
# Huge event: 2012 March 5



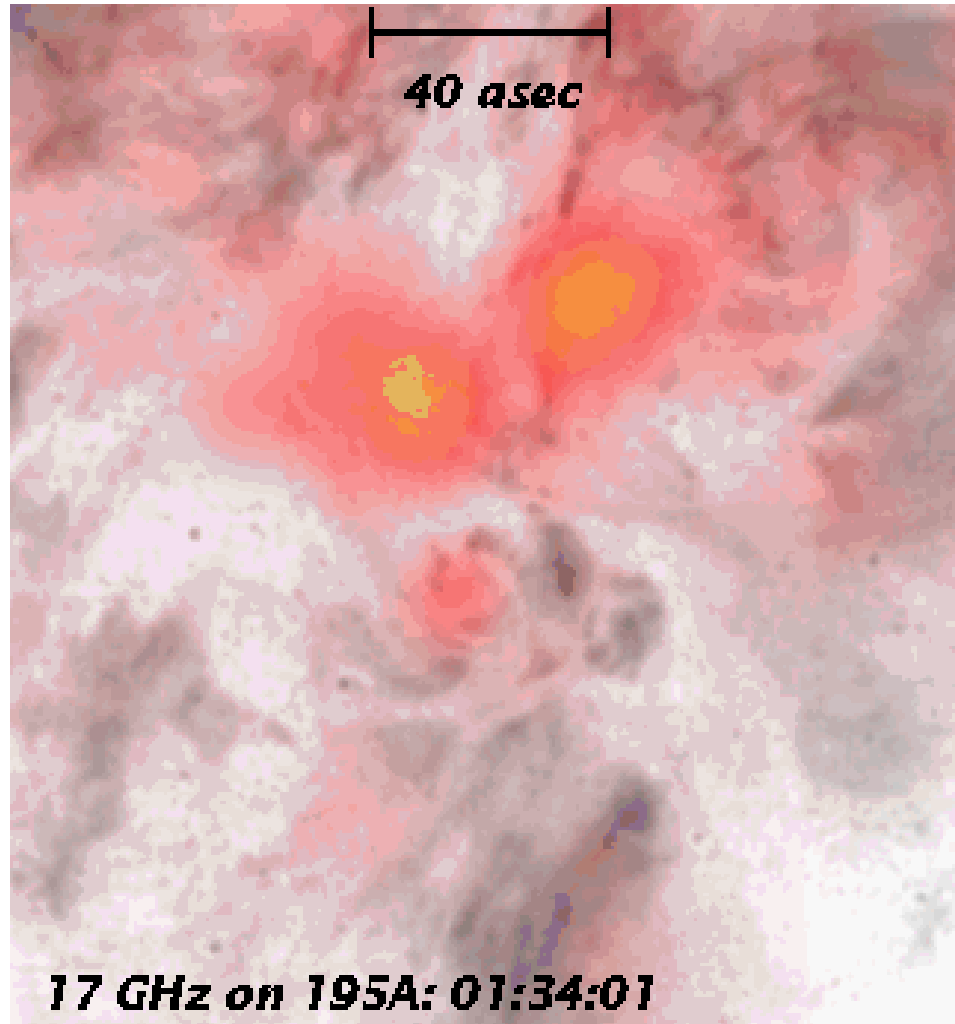




# TRACE FE XII emission



# 17 GHz images on TRACE FE XII emission



# Microwave emission from a CME event

