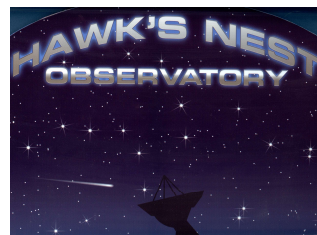


HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Date: 28 October 2021

Object: Sun

Observer: Unattended

Start - Time UT:	1528	Planetary K-index:	
Jupiter Altitude (deg):		Jupiter Azimuth (deg):	
Jupiter CML:		Jupiter Io Phase:	
Jupiter RA (hr/min):		Jupiter Dec (hr/min):	
Hour Angle (hr/min):		Polarization	
Sun Altitude (deg):	33.1	Sun Azimuth (deg):	153.9
Sun RA (hr/min):	14:05	Sun Dec (hr/min):	-12:40

End – Time UT:	1557		
Jupiter Altitude (deg):		Jupiter Azimuth (deg):	
Jupiter CML:		Jupiter Io Phase	
Hour Angle (hr/min):		Duration (min):	
Sun Altitude (deg):	35.1	Sun Azimuth (deg):	162.0
Max Frequency MHz	30*	Min Frequency MHz	15*
J/S Angular Separation		De:	

- * Range of Spectrograph

Observatory Configuration

Spectrograph Receiver	Antenna	Polarization	System Loss	Multicoupler	Multicoupler port	Calibrated
FSX-8S	TFD	RCP LCP	-8.35 dB -7.59 dB	#2 RCP #1 LCP	Port 1 +10dB Port 1 +10dB	Twice daily Twice daily
FSX-2	LWA	RCP/LCP manual select		N/A	N/A	N/A
SDRPlay RSP1A	TFD	RCP	-8.35 dB	#2 RCP	Port 2 +3dB	Twice daily
SDRPlay RSP2	TFD	LCP	-7.59 dB	#1 LCP	Port 2 +3dB	Twice daily
JOVE II HNRAO	Jove dipoles	Linear	-3.66 dB	#3 Linear	Port 4 +3 dB	Yes

Radio JOVE dipoles phased @ 32 degrees for 2020-2021 season

Typinski AN-TFD-24-4 array phased @ 35 degrees for 2020-2021 season

Four LWA antenna array phased @ 35 degrees and orientation for observation: 45 degrees

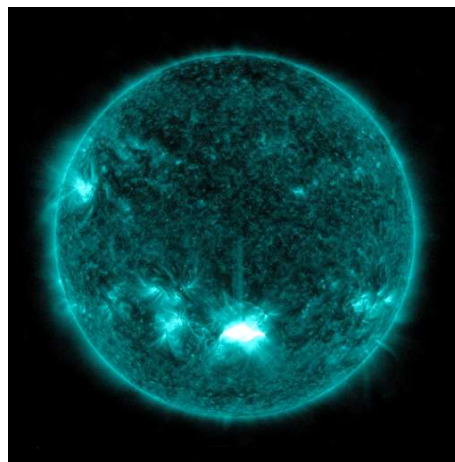
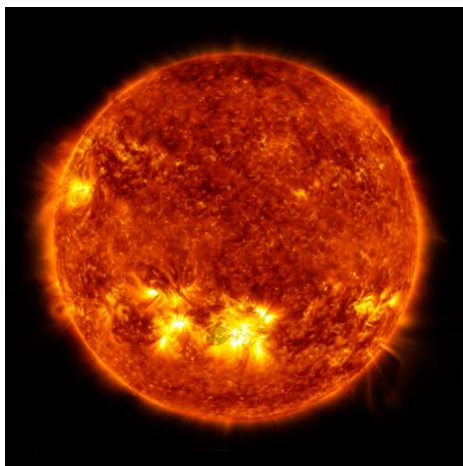
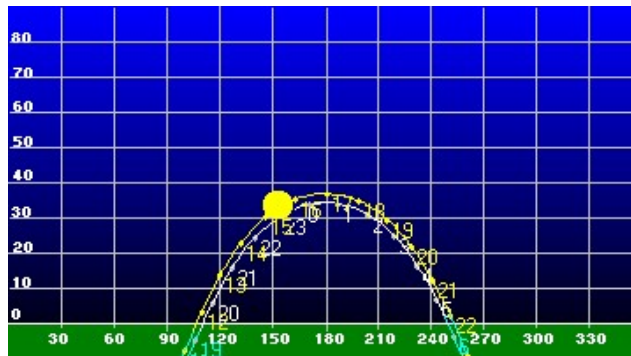
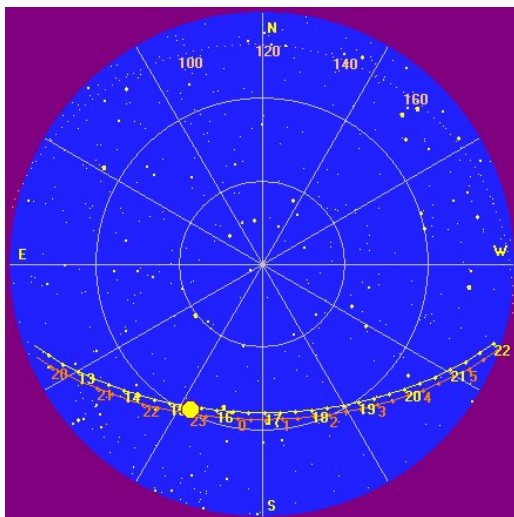
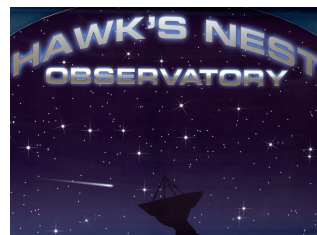
Radio Sky Spectrograph software version 2.9.31

Radio-SkyPipe software version 2.7.33 Radio-Jupiter Pro software version 3.8.2

Network Time Server GpsNtp-Pi, Reeve Engineering

All times are synced with a local GPS locked NTP server.

HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq

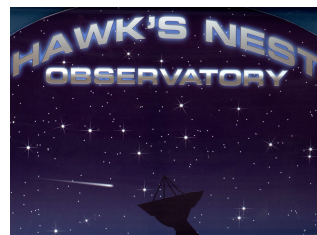


Credit: NASA/GSFC/SDO

The Sun emitted a significant solar flare peaking at 1535 UT on Oct. 28, 2021. NASA's Solar Dynamics Observatory, which watches the Sun constantly, captured an image of the event.

This flare is classified as an X1.0-class flare.

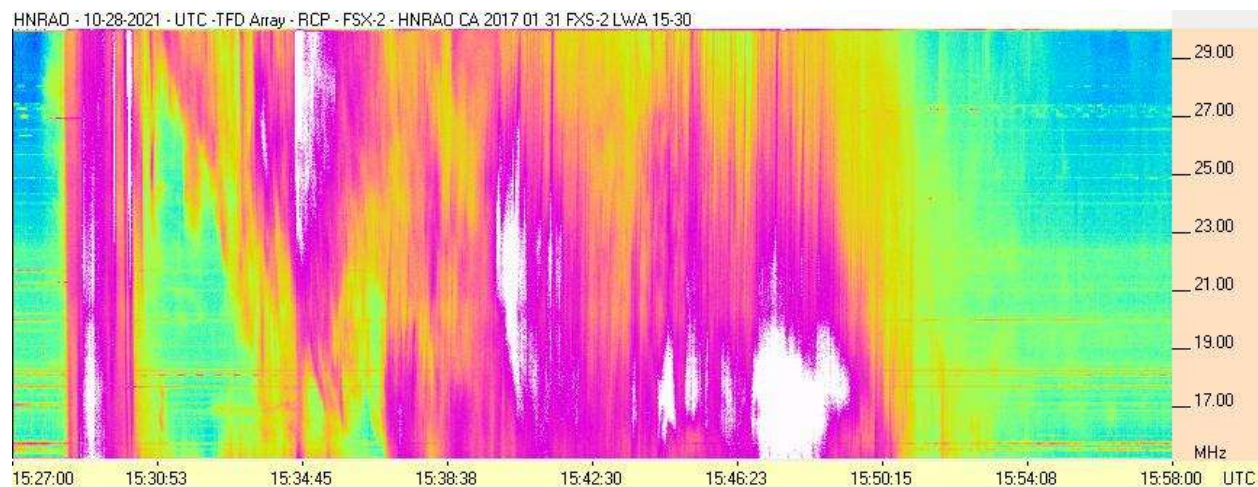
HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



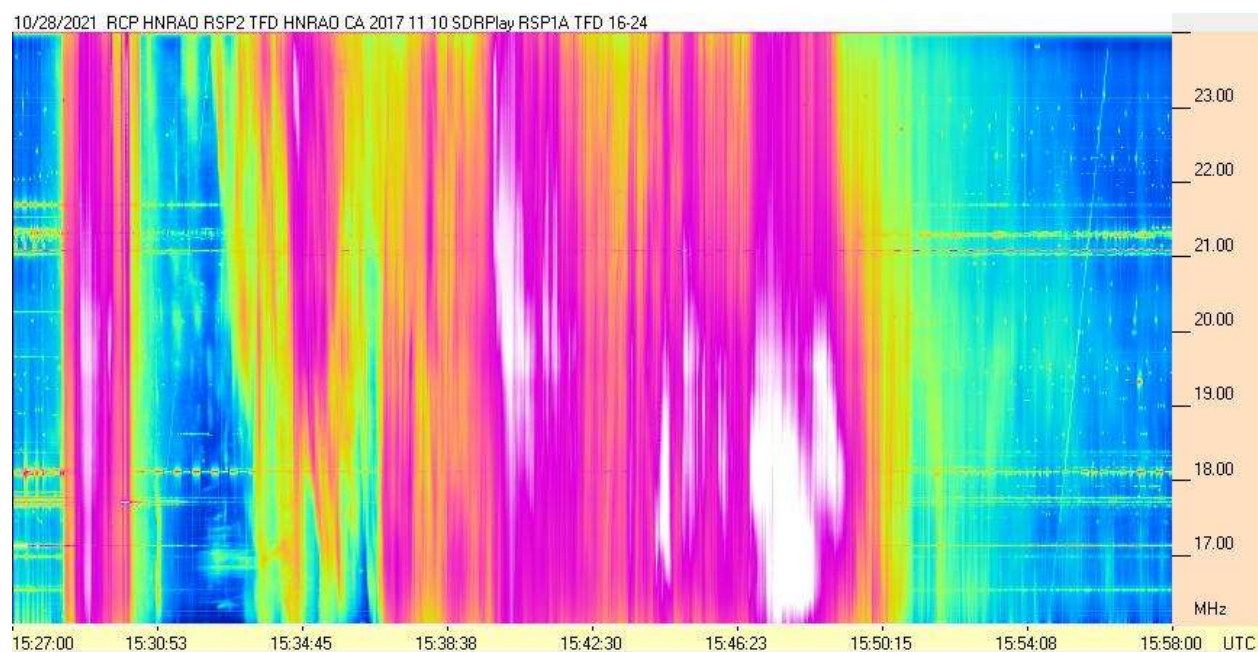
FSX-8S / TFD Array

No data. RSS 2.9.31 shut down prematurely even with schedule file. Cause unknown. Lost data for Oct 28-30, 2021

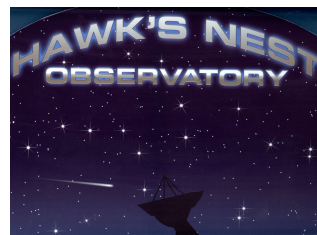
FSX-2 / LWA Array



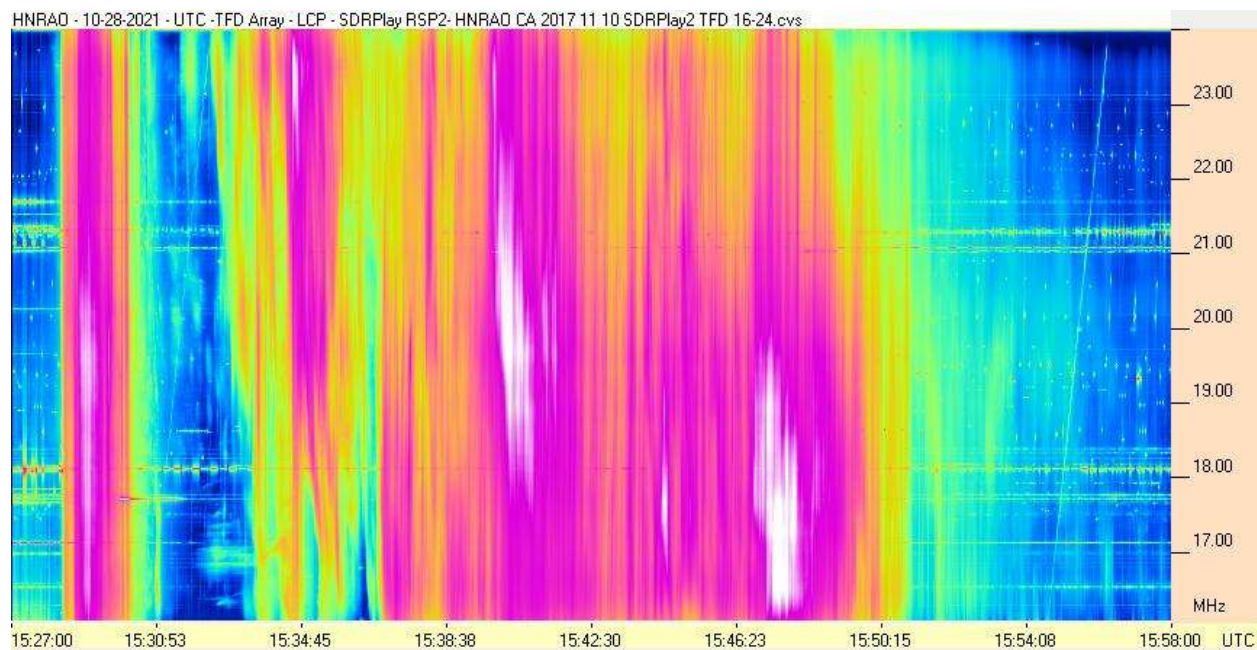
SDRPlay RSP1A – RCP / TFD Array



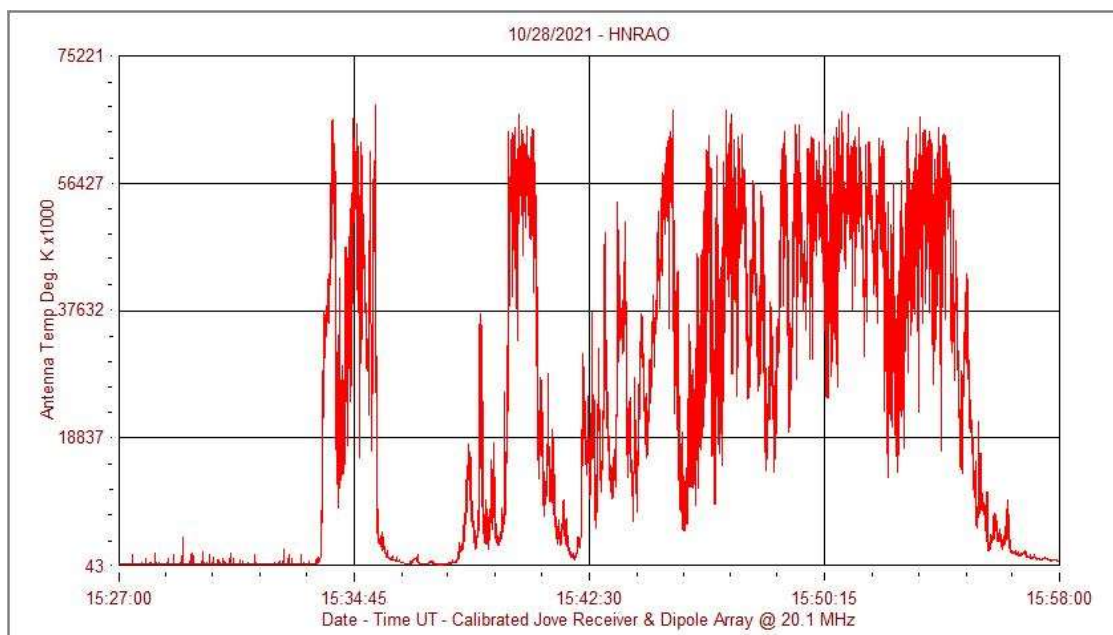
HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



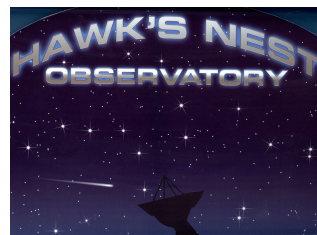
SDRPlay RSP2 – LCP / TFD Array



SkyPipe / JOVE dipoles



HNRAO Observing Log
40.673181 N – 80.437885 W
EN90sq



Calibration Trace showing SkyPipe had been calibrated at time of solar burst

