C RHESSI Flare Flag Inaccuracies

Below are light curves from RHESSI, Fermi GBM and GOES for M-class flares where RHESSI was not in eclipse or SAA but failed to flag the event as a flare. With the flares considered in this study, there were 1,519 cases where RHESSI had a clear view of a flare (not in eclipse or SAA) but failed to flag the event as a flare. This means that, if the RHESSI flare flags were used to determine a successful flare observation, 15% of all successful RHESSI observations would be excluded.

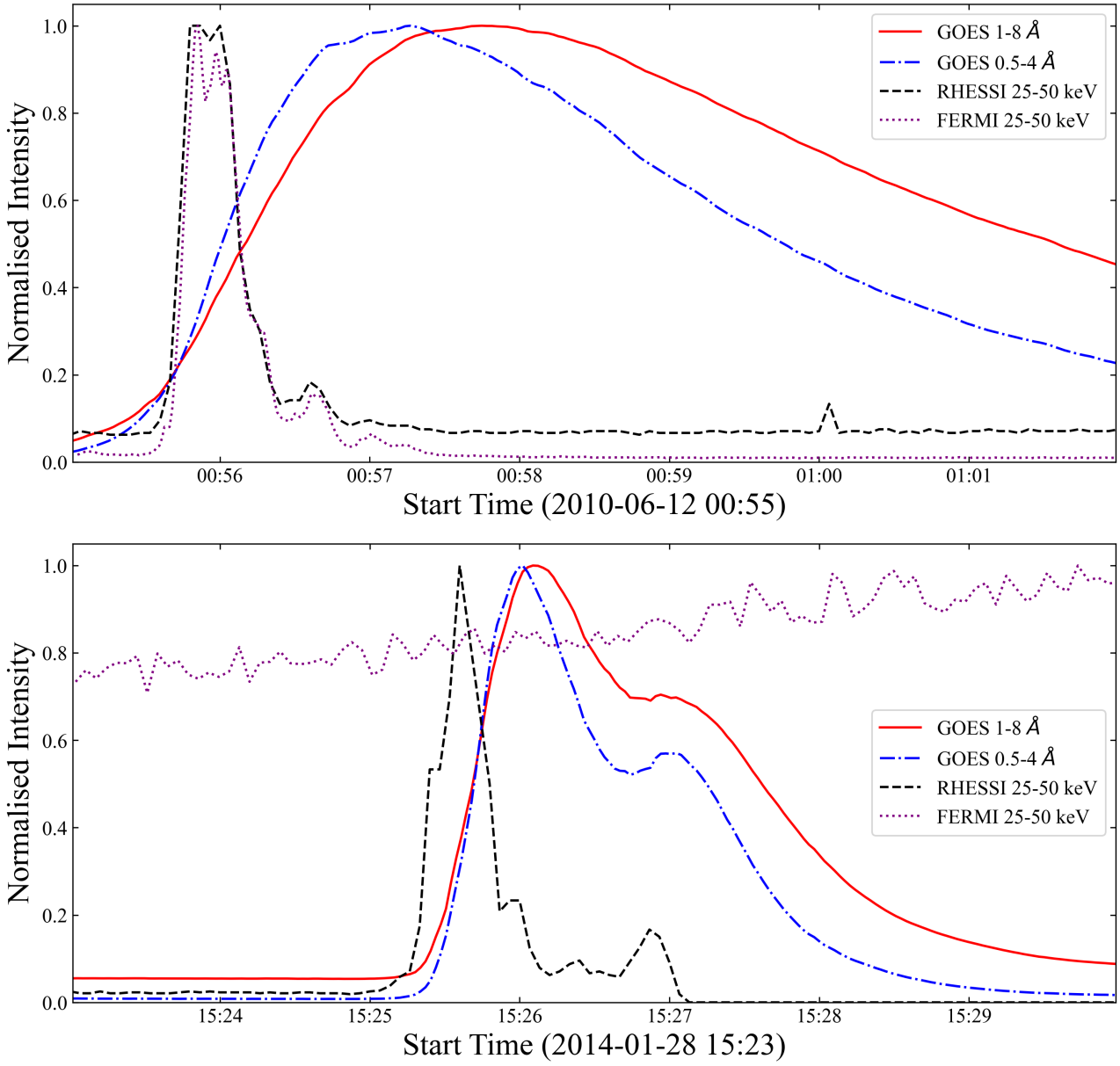

Figure 18: *(Top)* GOES, RHESSI and Fermi GBM light curves for M2.0 flare, SOL2010-06-12. Despite measuring a significant peak in hard X-Ray flux at 25-20 keV, this flare was not flagged as a flare by RHESSI. Fermi GBM observations made in the same energy band confirm the presence of a hard X-Ray peak. *(Bottom)* GOES, RHESSI and Fermi GBM light curves for M3.5 flare, SOL2014-01-28. Despite measuring a significant peak in hard X-Ray flux at 25-20 keV, this flare was not flagged as a flare by RHESSI. RHESSI data drops out at 15:27 as the instrument becomes occulted by the Earth. Fermi GBM was not observing the Sun during this flare, most likely as a result of eclipse due to the low variability in measurements.