Abstract:
Eruptions of magnetic structures are the most energetic events in the solar atmosphere converting magnetic energy into other forms. The sun becomes brighter when this energy takes the form of heat; but in another case the Sun becomes darker as the structure expands. Should the Sun become brighter or darker prior to the onset of its explosion, which is triggered when a certain critical condition has been reached? An observational answer to this question may help identify this critical condition, which has been discussed for decades in theoretic analysis as well as numerical models.