

색에서 빨간색으로 이동할수록 우주방사선의 영향을 많이 받은 것으로 알 수 있다.

2016. 9.26. 0. 0.	4,170.	64,536.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0. 5.	84,492.	64,536.	1,090.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.10.	89,419.	27,850.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.15.	85,365.	79,230.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.20.	81,404.	9,404.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.25.	77,544.	25,102.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.30.	72,254.	46,558.	1,088.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.35.	62,586.	64,853.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.40.	22,380.	80,789.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.45.	85,266.	74,423.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.50.	67,135.	96,752.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 0.55.	60,183.	38,308.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1. 0.	55,455.	19,712.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1. 5.	51,749.	1,051.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.10.	47,984.	17,587.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.15.	43,532.	36,101.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.20.	37,072.	54,913.	1,090.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.25.	21,686.	70,310.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.30.	38,578.	81,917.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.35.	62,738.	67,274.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.40.	71,771.	49,174.	1,090.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.45.	66,174.	30,495.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.50.	62,014.	12,105.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 1.55.	58,245.	6,527.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2. 0.	54,276.	25,159.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2. 5.	49,279.	43,733.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.10.	45,771.	62,077.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.15.	31,225.	70,594.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.20.	67,842.	76,876.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.25.	44,771.	59,566.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.30.	37,085.	41,170.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.35.	32,311.	22,587.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.40.	28,404.	0,965.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.45.	24,420.	14,665.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.50.	20,350.	30,241.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 2.55.	16,277.	51,659.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3. 0.	1,737.	69,667.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3. 5.	62,844.	62,187.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.10.	61,576.	69,970.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.15.	60,974.	52,006.	1,090.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.20.	42,959.	33,558.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.25.	34,879.	14,979.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.30.	34,886.	3,649.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.35.	30,989.	22,284.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.40.	26,234.	40,873.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.45.	18,430.	59,278.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.50.	56,134.	74,434.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 3.55.	53,101.	79,107.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4. 0.	49,974.	44,029.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4. 5.	14,045.	25,441.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.10.	5,042.	8,355.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.15.	1,279.	11,792.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.20.	97,132.	30,378.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.25.	91,577.	48,556.	1,090.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.30.	80,877.	71,605.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.35.	29,843.	81,801.	1,091.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.40.	47,711.	96,413.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.45.	26,305.	54,830.	1,090.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.50.	19,711.	38,413.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 4.55.	15,340.	17,852.	1,089.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 5. 0.	11,521.	7,772.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.
2016. 9.26. 5.05.	7,473.	19,409.	1,087.	4.098e+01.	4.573e+03.	0.000e+00.	0.000e+00.	4.098e+01.	0.000e+00.	9.955e+01.

1. 연
2. 월
3. 일
4. 시
5. 분
6. 경도(degree)
7. 위도(degree)
8. 고도[R_E]
9. 해당 시점 5분간 누적방사선량 [rad]
10. 위성 발사일로부터의 누적 방사선량 [rad]
11. 속박된 전자에 의한 5분간 누적방사선량 [rad]
12. 전자의 2차 효과에 의한 5분간 누적방사선량 [rad]
13. 속박된 양성자에 의한 5분간 누적 방사선량 [rad]
14. 우주선에 의한 누적 방사선량 [rad]
15. 주요부품의 내구도(기존의 기대수명을 대체, [%])

[]안은 각 변수의 단위

그림 2-79 우주방사선량 데이터베이스의 형식

그림 2-79는 시스템 내부에 저장되는 위성에 대한 우주방사선 정보를 저장하고 있는 파일의 형식이다. 위성 고에너지 입자 분석 시스템은 해당 시간에 대한 정보를 획득하여 파일을 로딩하고 각 위성별 정보를 화면에 표출한다.

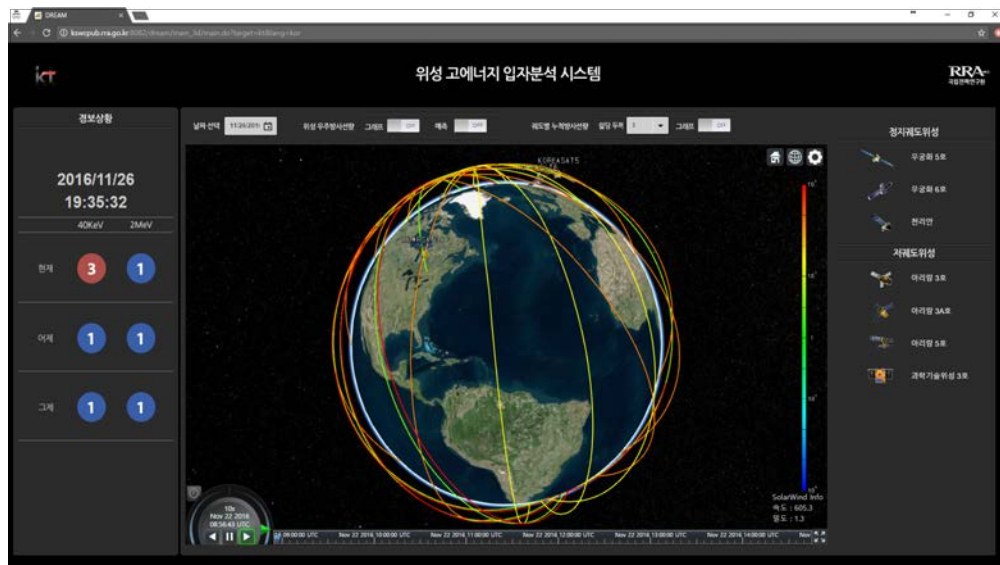


그림 2-80 3차원 공간상의 위성 궤도 누적방사선 표출