

# Solar Retinopathy Following the Eclipse of March 7, 1970: A Follow-Up\*

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In the last issue of this journal (Medical College of Virginia Quarterly 6: 3, 1970) Thomas W. Nooney, Joseph R. Svoboda, Florencio Ching and I reported two cases of binocular injury and one case of unilateral retinal burn of the fovea caused by watching the recent solar eclipse in the Richmond, Virginia area. Since reporting our local cases, a survey has been completed through other Virginia ophthalmologists of the occurrence of solar retinopathy throughout the state. Nine additional cases of ocular involvement were revealed in the survey and are reported here in table form. The cases are listed in order of probable severity.

Several persons who observed the eclipse without protection and reported to an ophthalmologist for fear of some eye damage showed no evidence of injury. The relatively low incidence of retinal burns following this event may be attributed to the efforts made by television, press and radio to inform the public of potential hazards and methods of eye-sight protection. Scientific research over several decades, aided by private organizations such as the National Society for the Prevention of Blindness and the Commission for the Visually Handicapped, has greatly increased understanding of and ability to predict eye damage by light.

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\* I am grateful to the many ophthalmologists throughout the State of Virginia who provided data for this report.

TABLE

Summary of ocular injuries resulting from watching the recent solar eclipse.

Patients Age/Sex/Race	Location at Time of Eclipse	Approximate Time of Observation (PM)	Approximate Duration of Observation	Ocular Findings	Eye used	Visual Fields	Visual Acuity	Protection used	Other findings	First seen by Ophthalmologist
14/F/W	Richmond	1:00	15-30 sec	OS foveal lesion with mild surrounding edema	OS	OS central scotoma (2°)	OS 20/200 (20/70 scan) OD 20/20	OS none OD closed	chromatopsia	3/12/70
14/F/W	Waynesboro	1:30-1:45	*	OS marked macular edema OD some edema	OU possibly	hazy vision (fields not done)	OS 20/100-1 OD 20/40	none ('looked through mirror')	none	3/11/70
20/M/*	Norfolk	*	3-4 times for 20-30 sec	macular edema cystic macular changes	OS	*	OS 20/80 -20/200	none	none	3/9/70
15/M/W	Altavista	from start to finish	intermittent total about 1/2 hr	yellow burns OU macula	OU	OU central scotoma (relative)	OD 20/50 OS 20/40	none	chromatopsia (steroid therapy)	3/10/70
26/F/W	Charlottesville	*	intermittent	OD foveal edema	OD	OD abscol. scotoma (3-4°)	OD 20/30 OS 20/20	looked through pinhole in cardboard	none	3/18/70
62/M/W	Roanoke	1:38	4-5 sec	OS foveal lesion 1/4-1/2 disc diameter	OS	OS black spot (4-5'')	OS 20/25 OD 20/20	none	chromatopsia	3/13/70
24/F/W	Danville	1:30	sufficient to get light burn of face	OS 'mottling' lesion below macula about 2x size of fovea	OS	hazy vision (fields not done)	OS 20/20 OD 20/15	none	none	3/12/70
22/M/W	Richmond	1:30	several sec	maybe mild macular edema for one day	OU	hazy vision (no field defects)	OU 20/20-	none	(steroid therapy)	3/8/70
62/M/W	Salem	Noon	3 sec	OS mild macular edema	OS	hazy vision	OU 20/20	none	none	4/3/70
28/F/W	Marion	2:00	2 min	OU 'burning of eyes'	OU	fields not done	OU 20/20	x-ray film	none	*
9/M/W	Arlington	1:30	several sec	none	*	fields not done	OU 20/20	used telescope with sun filter and 3 layers of exposed film	none	3/11/70
*/M/N	Newport News	*	*	none	*	hazy vision (fields not recorded)	*	none	none	3/10/70

\* Not Reported