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Title:	Measurement of Earth-Moon Distance by Parallax Method Using Digital Photography
Authors:	Khator, Kanha Ram (/jspui/browse?type=author&value=Khator%2C+Kanha+Ram)
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Abstract:	<p>It has always been an attractive and fascinating topic in physics, mathematics, and other disciplines of science to find distances; Whether be the distances between points, lines, curves, and surfaces, or the distances between places on earth and the distances to planets and stars, we humans throughout the history of science always remained fascinated to investigate length and distances. In the process of evolving methods to measure distances, today we have a lot of techniques which can efficiently measure any distance from a few micrometers or even less to the kilometers and light years. Today, in our daily life we have many critical applications of distance measuring techniques, the distance between two cities being the most common instance of it. In this work, we will be talking about a popular method of distance measurement called the parallax method, and we will use digital photography for the purpose. Parallax shift is the apparent shift or movement of an object against a distant background when viewed from two different positions. A relative motion between two observers and an object causes this while passing by from any object; one observes that it moves in the opposite direction. The speed by which the object moves depends on the distance from the observer. The more the distance from the observer is, the slower the object is. For a shift in observer's position, there is a lesser shift in farther object comparative to the nearer object. This property of the parallax phenomenon is useful to find distances to distant objects. The Phenomenon of parallax can be observed with digital photos. All we need to do for it is to click two shots of an object from two different positions with the same background. There will be a shift in the object in the direction in which the camera was moved from one place to another. To see this clearly we can overlay the two pictures overlapping the distant background, and by measuring the shift in the concerned object, we can calculate how far away it is.</p>
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