Introduction

The range measurement – resp. range calculation - of a space probe is based on a Round Trip Light Time measurement. The range calculation is presumably the reason for the observed anomaly.

The calculation of the distance assumes, the signal - after reaching the space probe - returns back to earth at the speed of light. This means, the signal leaves the antenna of the space probe at a somewhat higher velocity than the speed of light, because the space probe moves away from earth.

Since the speed of light can not exceed the value c the calculations using the RTLT formula lead to a slightly larger distance than expected.

Another type of calculation in which the velocity of light is not exceeding the value c Is described in this report. The calculated distances now are very similar to the values expected due to the observed anomaly.