

Data Analysis – reserve question

Marking scheme

Max 25 points

proper identification of star on both pictures,	1
marking the comet positions on the map	1
estimation of comet's coordinates with error	1
proper estimation of picture scale (°/cm)	1
estimation of error of scale	1
calculation of comet's elongation	
- using spherical triangle formula	2
- proper results of calculations	2
or	
for other methods of estimation of elongation (if value is in range 30°-50°)	2
computation of distance of comet from the Earth	
- using proper formula for triangle Sun-Earth-head of comet	2
- correct calculations	2
estimating the linear size of the comet's head	
- proper estimation of angular size of head with error	2
- calculation of linear size with error estimation	2
estimating the linear size of the comet's tail	
- estimation of angular size of tail with error	2
- using the triangle Earth-Head-end of tail	2
- correct calculations	2
estimation of the angular speed of comet	2