



# Computer modeling of motion of globular clusters in gravitational field

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# Target list:

- Choose technology for modeling.
- Choose technique.
- Determine all conditions
- Calculate

Chosen  
technology  
and methods  
for computer  
modelling

- C++
- Qt
- Forces modeling by Taylor Series



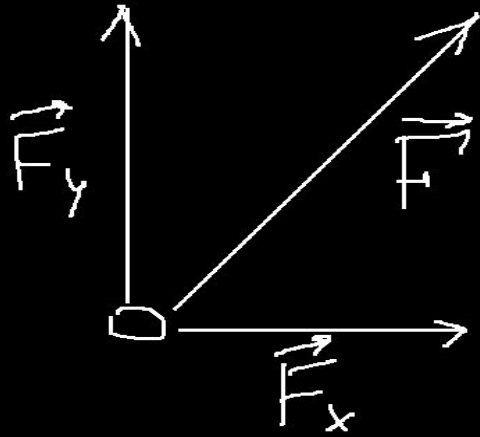




**GLOBULAR CLUSTER**



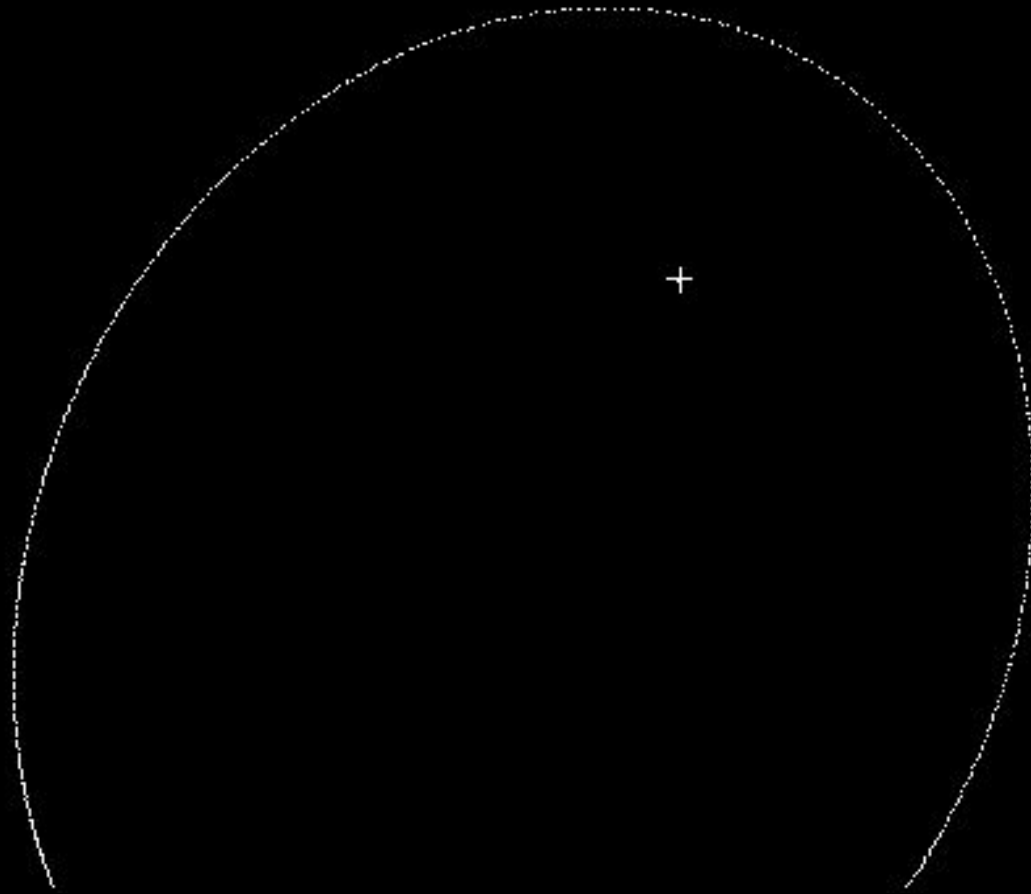
# Forces calculating



$$\vec{F} = F_x \vec{i}_x + F_y \vec{i}_y + F_z \vec{i}_z$$

$$f(x) = f(a) + f'(a)(x-a) + \frac{f''(a)}{2!}(x-a)^2$$

Result for one body





Additional  
conditions

- Dark Halo
- Galaxy core
- Galaxy disk
- Gas component

= GRAVITATIONAL FIELD



# CONCLUSIONS

- Program successful counted the mass center orbit and shows it moving by using the Taylor Series to calculate projections of gravitation force.
- C++ and Qt its a realy cross-platform tools and good approach to solve this task