==Positioning method and algorithm==

'''Aim : '''<span id="cke\_bm\_114S" style="display:none;"> </span><span style="display:none;"> </span>''Calculate CubeSat orientation and chose best <span style="font-weight:normal;">physical input for actuators.<span id="cke\_bm\_114E" style="display:none;"> </span></span>''<span style="display:none;"> </span>

Estimate an angular rotation:

\*<span style="font-weight:normal;">Euler angles </span>

\*<span style="font-weight:normal;">Gimbal angles</span>

\*<span style="font-weight:normal;">Quaternions</span>

Measuring the attitude:

\*<span style="font-weight:normal;">TRIAD Algorithm</span>

\*<span style="font-weight:normal;">Kalman Filter </span>

<span style="font-weight:normal;">[[File:Positioning\_method\_and\_algorithm\_ADCS.pdf]]</span>

==<span style="font-weight:normal;">Sensors</span>==

'''Aim :''' ''Collect useful data for attitude determination.''

\*Gyroscope

\*Gyrometer

\*Sun sensor

\*Star tracker

\*Horizon sensors

\*Magnetometer

\*Temperature sensors

[[File:Sensors\_ADCS.pdf]]

==Actuators==

'''Aim :''' ''Modify the CubeSat attitude with a compact design.''

\*Reaction wheel

\*Momentum wheel

\*Control momentum gyroscope

\*Magnetorquer

\*Permanent magnet

[[File:Actuators\_ADCS.pdf]]

==Electronic board==

'''Aim:''''' Get access to sensors and then perform attitude algorithm.''

\*Hardware

\*Software

[[File:Electronic\_board\_ADCS.pdf]]