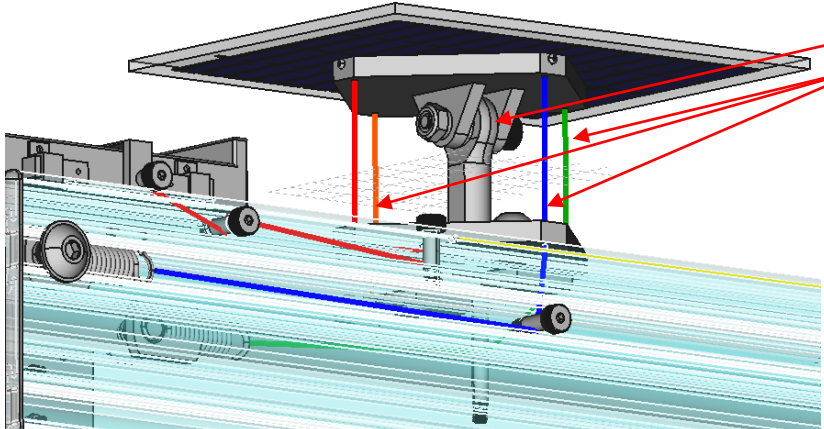
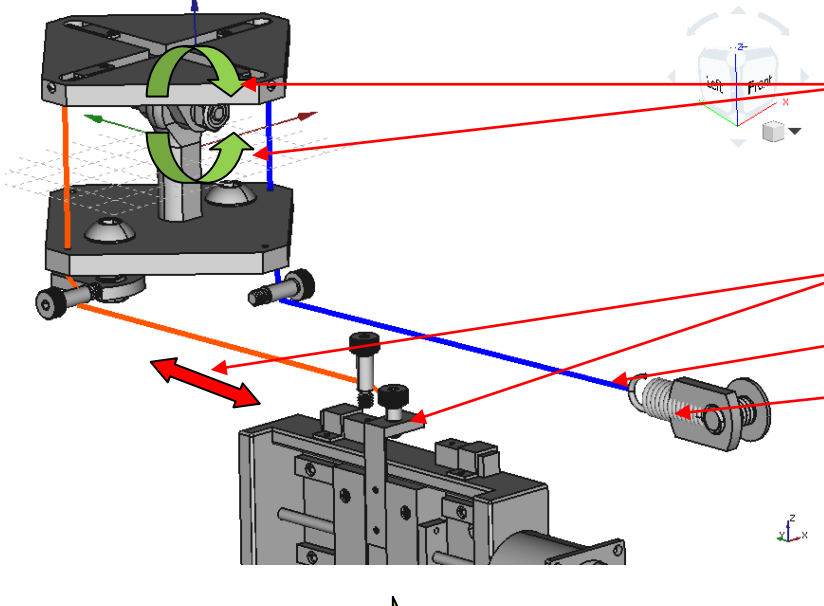
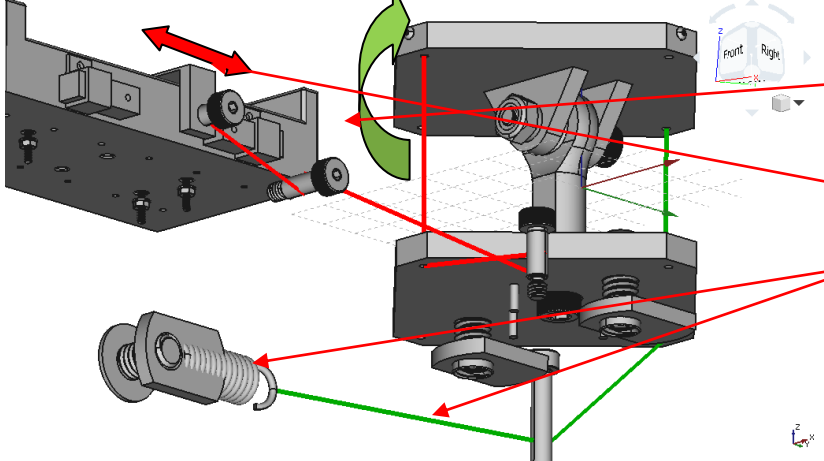
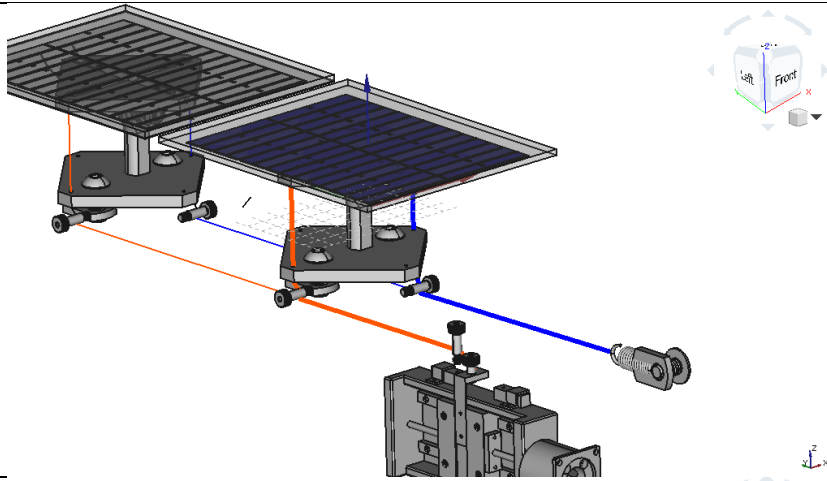


ITEM	IMAGE	DESCRIPTION
1		<p>BIOTENSEGRITY MODEL</p> <p>Stability of the solar panel base through:</p> <ul style="list-style-type: none"> • A compression Ball joint. • Four Wire rods in tension.
2		<p>DEGREE OF FREEDOM FOR DAYTIME MOVEMENT OF THE SUN.</p> <ul style="list-style-type: none"> • The ball joint has no limit in axial rotation to the ball axis, y-axis. This allows a wide degree of freedom to follow the daytime movement of the sun. • The motor moves the brown wire rod to rotate the ball joint on the y-axis. • The blue wire rod, attached to the traction spring, maintains the opposite tension to the brown wire rod attached to the motor. Achieving stability. • The Y axis of the drawing must be aligned with the meridian • The X axis of the drawing must be aligned with the parallel.
3		<p>DEGREE OF FREEDOM FOR PRECESSION MOVEMENT.</p> <ul style="list-style-type: none"> • The ball joint allows limited rotation in the X axes. Enough to follow the annual precession. • The motor moves the red wire rod to rotate the ball joint in the X axis. • The green wire rod, attached to the traction spring, maintains the opposite tension to the red wire rod attached to the motor. Achieving stability.

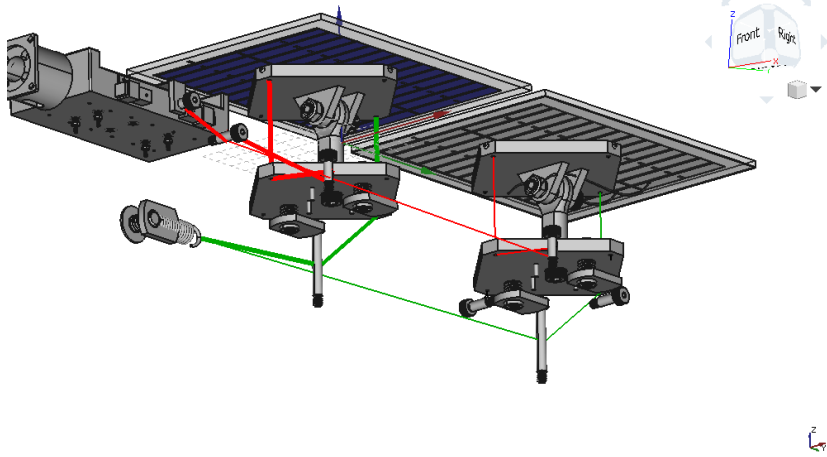
4



OPERATION OF THE PANEL RACK ON THE SAME RAIL FOR DAILY MOVEMENT.

- A single motor is attached to the brown wire rods to move all the solar panels in the same rack on the Y axis.
- A single spring is attached to the brown wire rods to keep all panels stable on the Y axis.

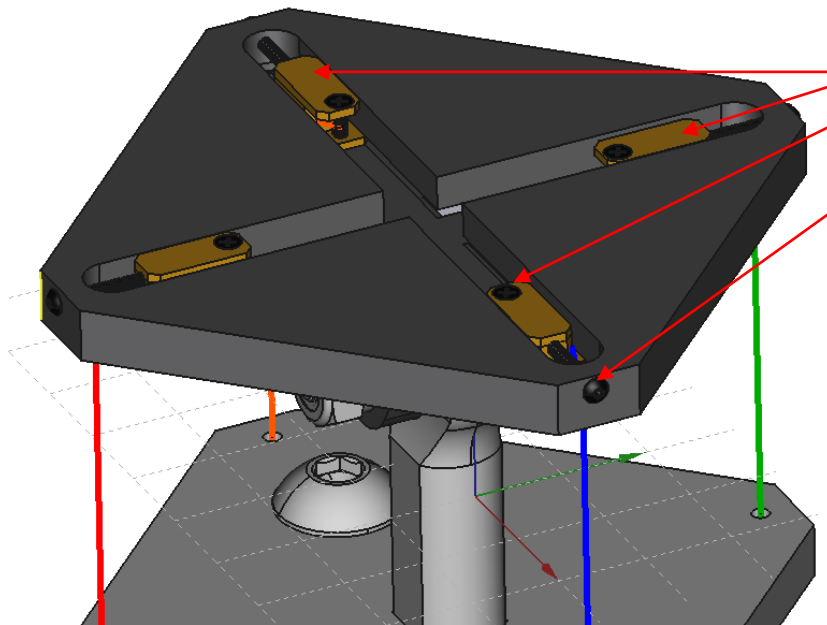
5



OPERATION OF THE PANEL RACK ON THE SAME RAIL FOR PRECESSION MOVEMENT.

- A single motor is attached to the red wire rods to move all the solar panels in the same rack on the X axis.
- A single spring is attached to the green wire rods to keep all panels stable on the X axis.

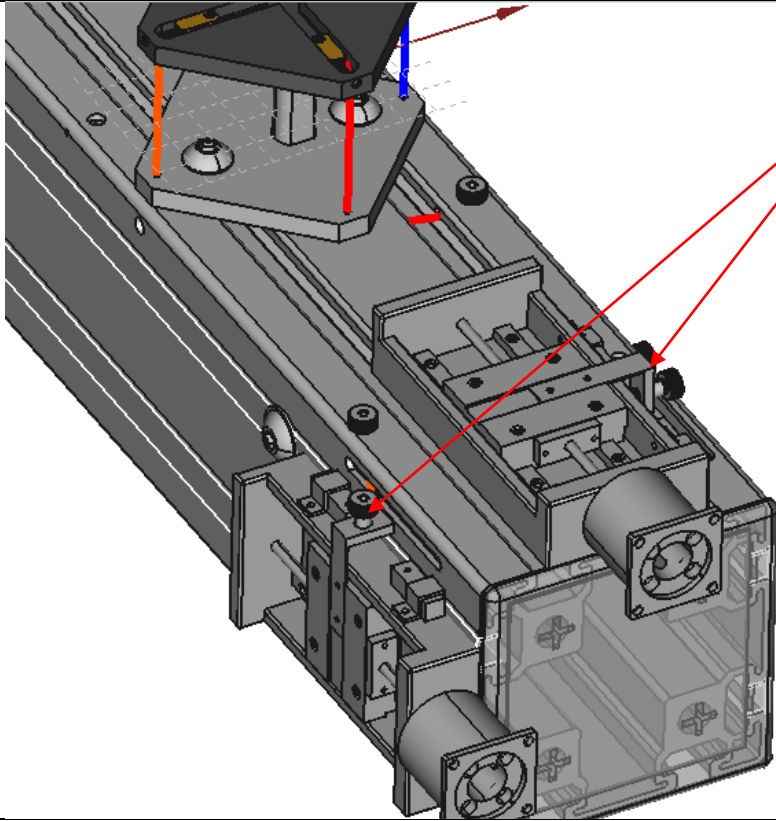
6



MECHANISM TO REGULATE THE TENSION OF THE WIRE ROD.

- Sliding block.
- Screw to hook the wire rod to the sliding block.
- Screw for fine adjustment of the tension of the wire rod.

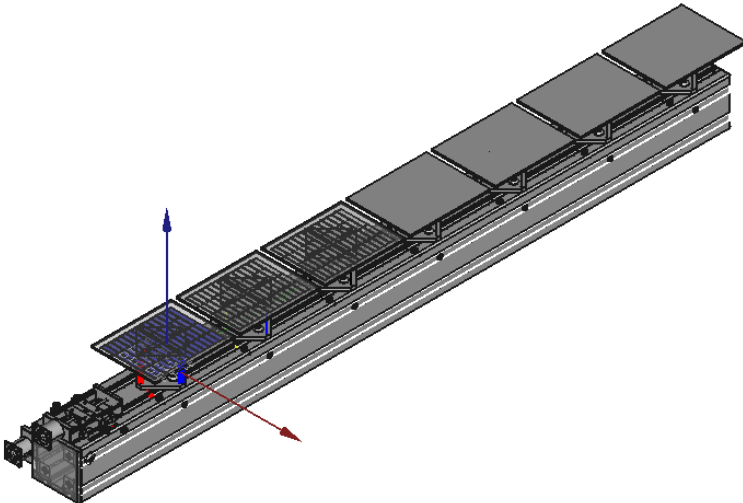
7



VIEW OF THE POSITION OF THE MOTORS AND THE ACTUATOR ARM.

- Actuator arms.

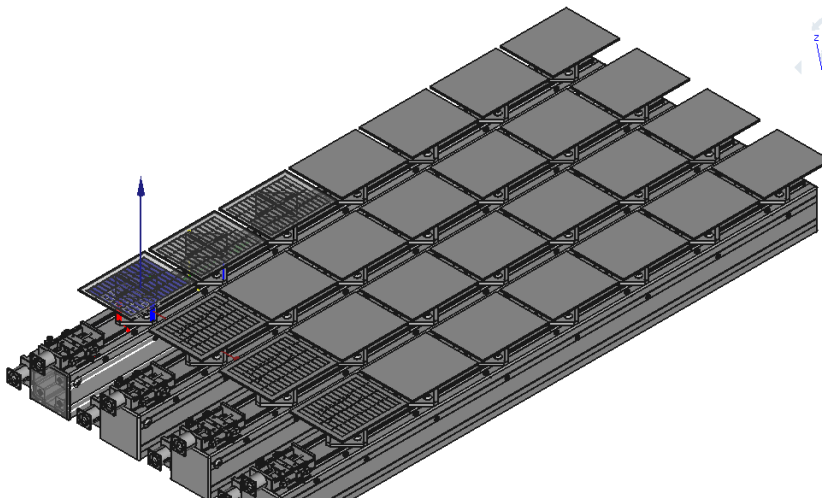
8



TYPICAL RACK.

- The number of panels in a rack is limited by the power of the motors.

9



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