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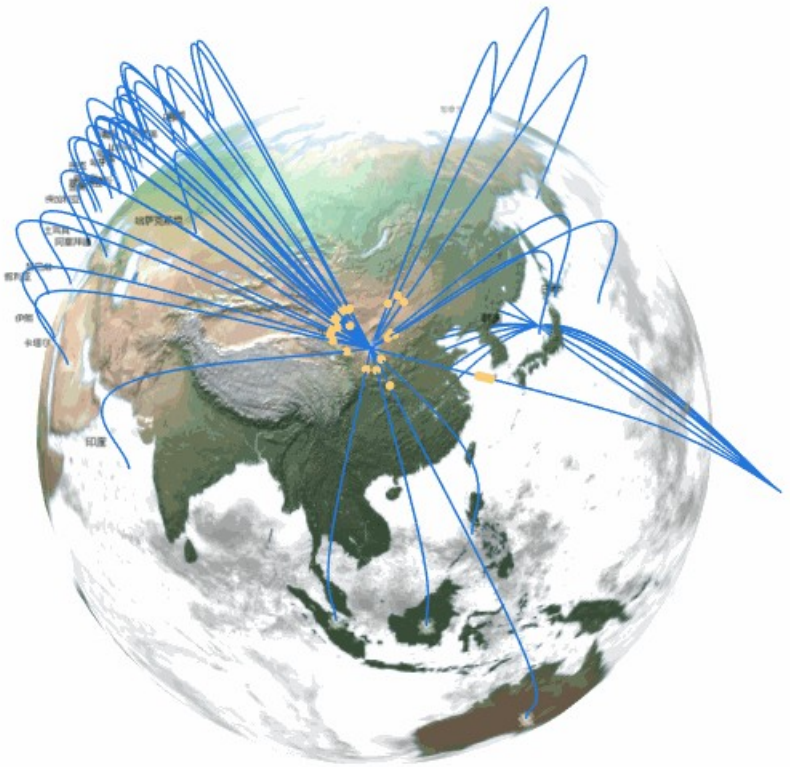
★柱状图

★饼图

★地球

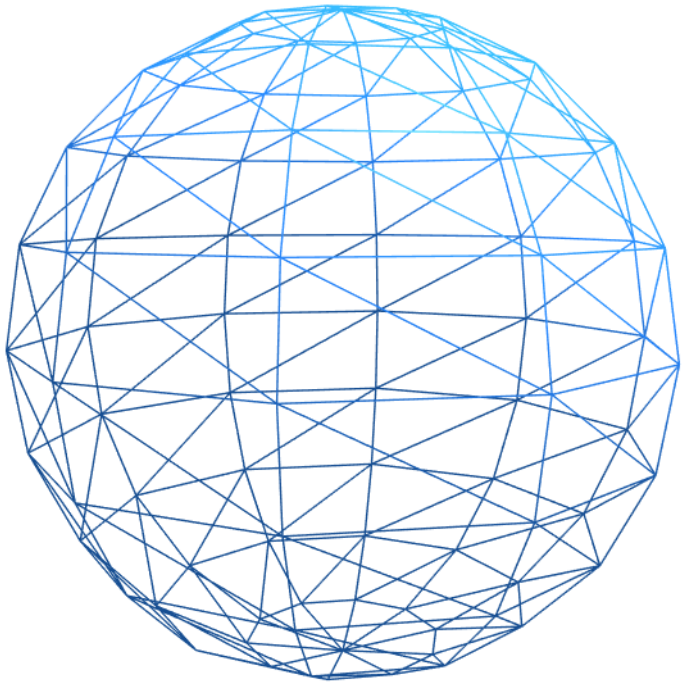
★力导向图

地球



- 球体几何对象
- 材质：地理情况图
- 坐标 + 连线 + 运动轨迹
- 渲染文字

球体



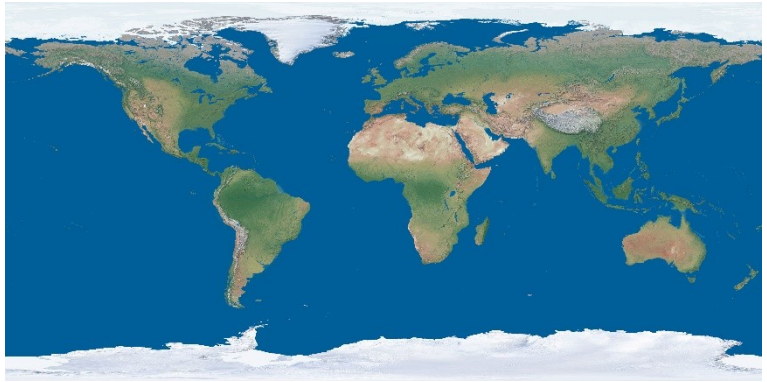
- **THREE.SphereGeometry(100,32, 32);**

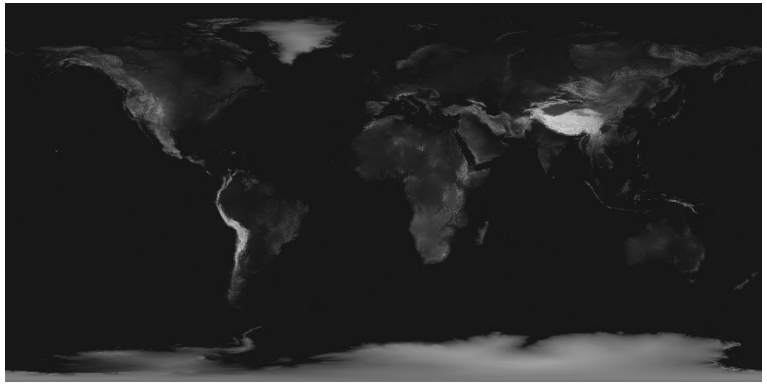
  radius : Float
  widthSegments : Integer
  heightSegments : Integer

https://threejs.org/docs/#api/en/geometries/SphereGeometry

地球材质

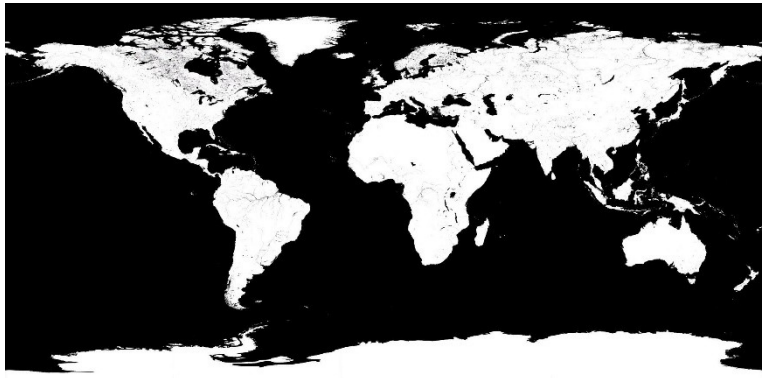
地形图





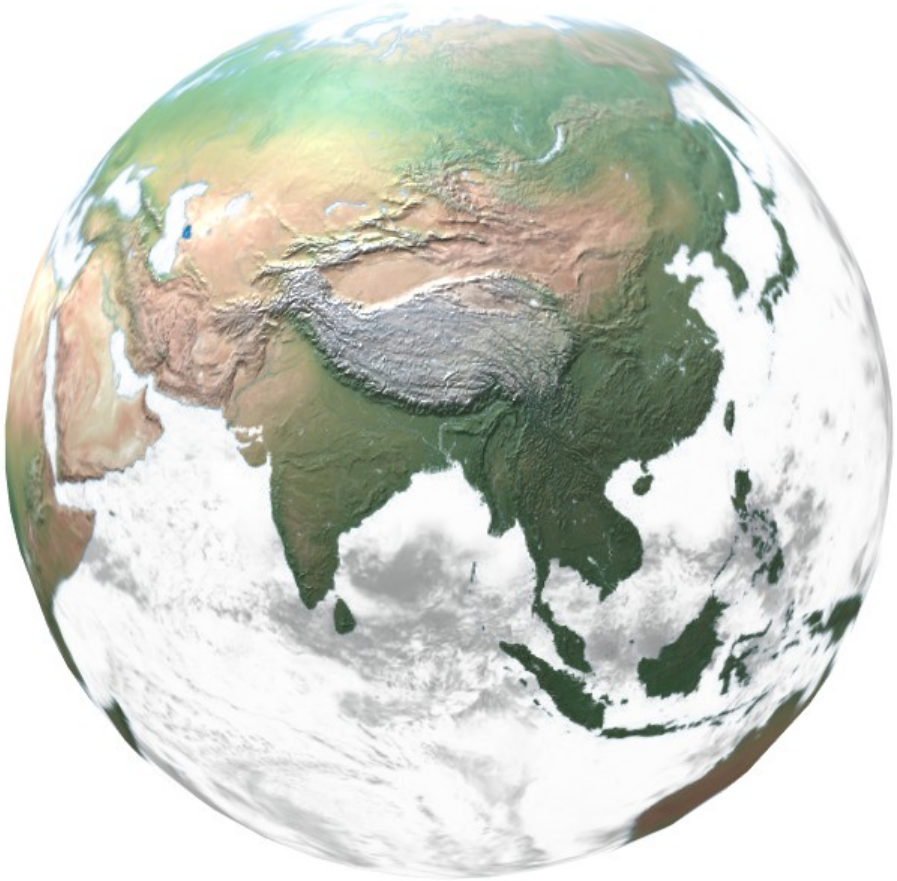
凹凸贴图

透明度贴图



大气层

地理地球



绘制曲线：获取定点

起始点

```
var positions = [];
positions.push(obj0.position);

var midVector =
obj0.position.clone().add(obj1.position.clone());
if(midVector.length () > radius*1.5){
    midVector.multiplyScalar(0.8);
}

positions.push(midVector);
positions.push(obj1.position);

var curve = new THREE.CatmullRomCurve3( positions );
```

中间点

结束点

绘制曲线

```
var curve = new THREE.CatmullRomCurve3( positions );
var points = curve.getPoints( 50 );
var geometry = new
THREE.BufferGeometry().setFromPoints( points );

var material = new THREE.LineBasicMaterial( { color :
0x2376DD } );
var curveObject = new THREE.Line( geometry, material );
scene.add(curveObject);
```

https://threejs.org/docs/#api/en/extras/curves/CatmullRomCurve3

运动点：几何对象

```
var pointGeometry = new THREE.SphereGeometry(1, 20, 20);
var pointMaterial = new THREE.MeshBasicMaterial({color:
0xFFCF71});
var pointMesh = new THREE.Mesh(pointGeometry,
pointMaterial);
```

点动画循环

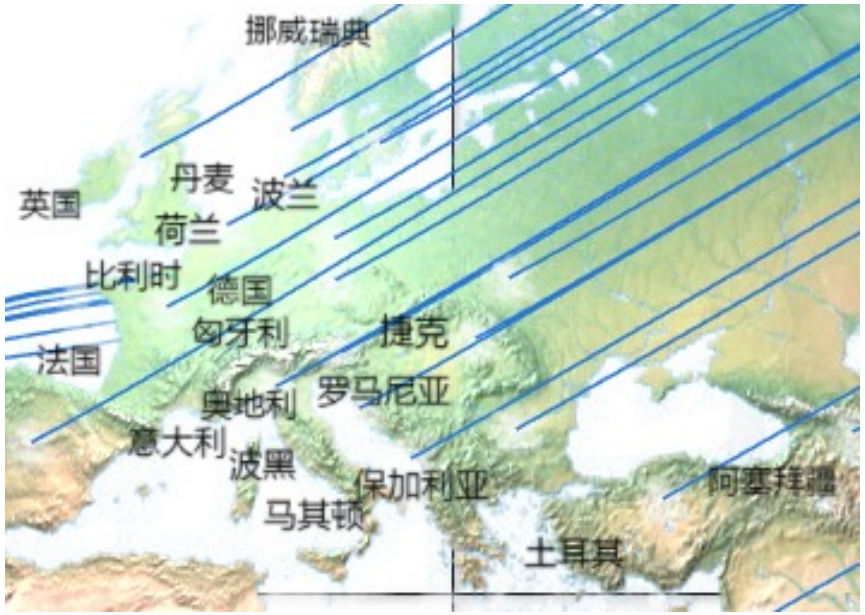
```
index = 0;
function pointAnimate() {
    index+=0.001;
    if(index>= 1) {
        index = 0;
    }
    pointMesh.position.copy(curve.getPointAt(index));
    requestAnimationFrame(pointAnimate);
}
pointAnimate();
```

THREE.CatmullRomCurve3

0-1

下一帧调用

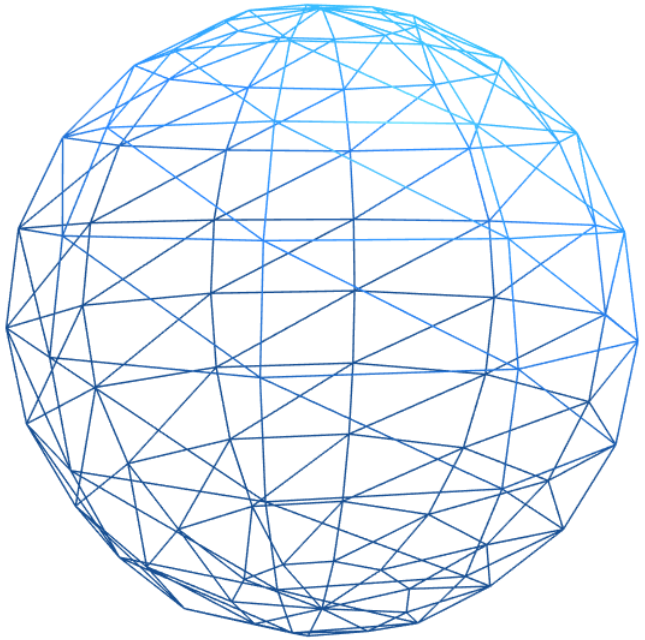
渲染文字



canvas 作为粒子 Sprite 纹理

context.font ：设置字体样式
content.fillText ：文本

地理地球



力导向图

见力导向图 .gif

- 几何体：点和边
- 自定义图数据结构
- 布局算法：物理引擎
- 拖拽控制器