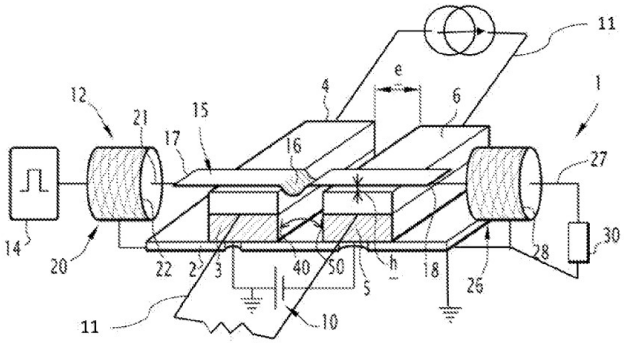
# SET-UP FOR ELECTROSTATIC DISCHARGE TRIGGER AND ASSOCIATED USAGE

## Technological advantages

**Improved electronic qualification and components characterization**

- Set-up well suited for the spectral analysis emitted from the discharge
- Improved measurement accuracy
- Synchronization between the electrostatic discharge and a time resolved spectral analyzer




**Invention schematic representation**

1) set-up for a controlled electrostatic discharge
2) horizontal carriers
3) 5) solar cells
4) 6) protective glass layer
10) tension generator
11) current generator
14) impulse generator
15) micro-strip electrode
16) electrode curvature for spike effect
20) supply line
26) return line

## Invention synthesis

The invention deals with a set-up for the trigger of an electrostatic discharge to create a controlled discharged between two elements by creating a potential difference. The potential difference alone is not sufficient to create a discharge. An electric impulse generator, between 100 and 4000V and for a 1 to 50ns duration, guarantees the proper discharge onset. A micro-strip electrode, with a curvature to create a spike effect, is located between the two elements. A supply and a return line (for example a coaxial cable) calibrated to the electrode impedance avoids impulse rebounds.

## Commercial benefits

- Protection of electric components and satellite electronic components. Protection of solar panels.
- Prevents uncontrolled electrostatic discharges, enhances a satellite lifespan.

## Potential applications

- Satellites :
  - electronic parts
  - solar panels

*Patented invention - under license.*



**For more information :**

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