Conceptual Space Reactor  
[Conceptual design for a 5 kWe space nuclear reactor power system - ScienceDirect](https://www.sciencedirect.com/science/article/pii/S1738573324001839)  
Conceptual design for a 5 kWe space nuclear reactor power system (2024) — Conceptual design for a nuclear reactor to generate about 5 kWe.  
  
[Conceptual Design of HP-STMCs Space Reactor Power System for 110 kWe - Astrophysics Data System](https://ui.adsabs.harvard.edu/abs/2004AIPC..699..658E/abstract)  
Conceptual design of HP-STMCs ​​Space Reactor Power System for 110 kWe  
  
summary:  
The conceptual designs for space nuclear power reactors aim to provide continuous, reliable power in space or on planetary surfaces (Moon, Mars) regardless of solar availability. For example, **Kilopower** is designed to produce 1-10 kW electrical power for multi-year missions using fission, with Stirling engine converters.

Other designs include:

* A 110 kWe space reactor (HP-STMCs) using heat pipe segmented thermoelectric modules.
* A 5 kWe reactor concept with analyses of heat pipe failure, mass, safety, etc.   
    
    
  ----------------------------------------------------------------------------------------