

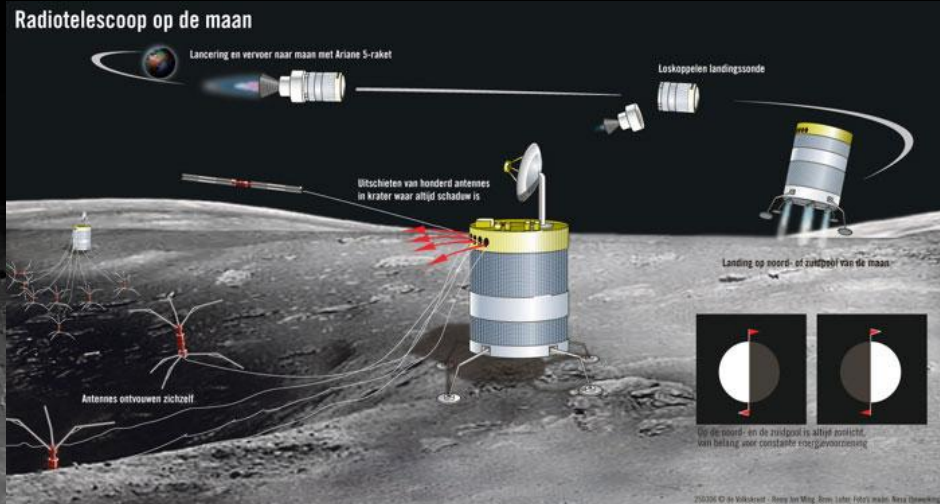
Diploma Work Offering Master's Degree 20p

In order to obtain images from a low frequency radio telescope, consisting of a large antenna array of dipole elements, all antenna signals are digitized by high-speed analogue-to-digital converters and correlated (multiplied) with each other.

This requires super computer processing power.

We want the successful candidate to help us build a correlator in software, based on the IBM Cell Broadband Engine found in the PS3, which we will use for this work.

At IRF in Uppsala we study fundamental physics, using space as our laboratory. Our expertises are in space plasma physics and electromagnetism. To this end we work with theory development; perform computer simulations and build our own space instrumentation that we fly on board satellites or operate from the ground.



We work in close collaboration with strong international partners to land a low-frequency radio telescope on the far side of the Moon before the end of the next decade.



Are you an excellent programmer who wants to hone your skills on bleeding edge hardware?

Are you interested in high performance, real time signal processing?

Do you like space and astrophysics and want to probe the dark ages of our universe; or hunt for extrasolar planets; or maybe, detect ultra high-energy cosmic neutrinos?



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