**Statement of Work**

**to Build a Lyot Filter for**

**the Kanzelhöhe Solar Observatory (KSO)**

HAO personnel will design and fabricate a Lyot filter for the Kanzelhöhe Solar Observatory (KSO) affiliated with the University of Graz. The filter will have a passband FWHM of 0.05 nm or less. It will have a central wavelength of 656.28 nm (H-alpha) that will be tunable over a range of ±0.15 nm from line center by changing the temperature of the filter via a temperature controller. The filter will be fed by the existing KSO H-alpha telescope (2000mm focal length, 100mm diameter objective lens). The crystal elements of the filter will have a diameter of 34 mm in order to accept the beam from this telescope over a field of view of ±1.1 Rsun. The Lyot filter will have 4 wide-fielded stages with pairs of calcite crystals 10.8, 5.4, 2.7 and 1.35 mm in thickness and will have a pre-filter to block unwanted orders from the filter.

KSO will provide:

* Detailed set of measurements/specifications of the existing H-alpha telescope to allow HAO to design the interface of the Lyot filter with the telescope.

HAO will provide:

* The design and assemblage of a Lyot filter built by altering an existing design, along with a new interface which will connect the filter to the KSO H-alpha telescope, based on the specifications provided by KSO
* A temperature controller to control the central wavelength of the filter
* Calibration of the filter wavelength with temperature
* A PDF copy of complete documentation about the operation of the filter, in English.

Shipping terms: Incoterms 2020 EXW

Travel - The cost of any airline tickets, lodging, train tickets and shipping will be paid by KSO. We estimate travel by 1 person for 1 week to install the filter upon completion, if possible. If travel is not possible, HAO will virtually coach KSO on the installation.

KSO will also pay for customs fees and VAT.

UCAR reserves the right to negotiate the terms at that time of award. The preferred agreement language is English.

An initial payment of 70% of the total will be made at the start of the project. A second payment of 15% will be made approximately 3 months after the project start upon the successful completion of the design review. The final payment of 15% will be made upon delivery of the filter.