

FIBRE Night 6 Results

DjB for the FIBRE team; June 3, 2001

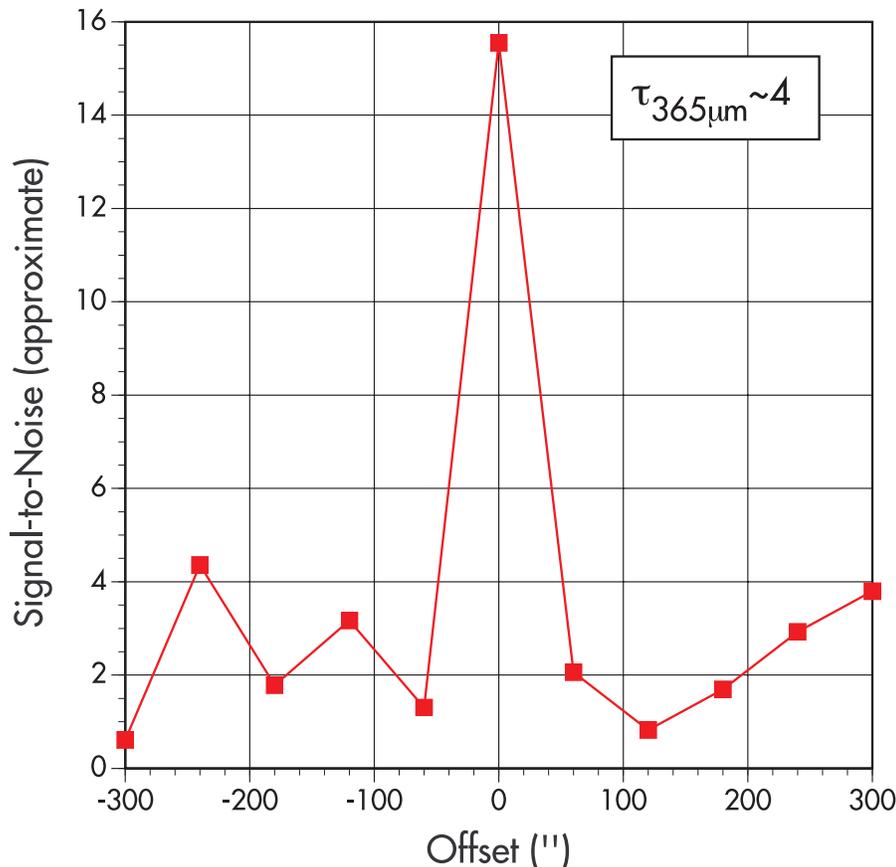
I'm sure you've all followed the last two updates on FIBRE. You know how much progress we have made. Having completed our final night of observing, there's only one more little thing to add.

FIBRE Achieves First Light!

Yes, we detected a celestial source. The Moon. While this is not as interesting an object as one might want, I believe we have a reliable detection which demonstrates that FIBRE works.

We positioned the telescope to look at the limb of the Moon. While chopping, we moved across the limb. We should only have detected a differential signal when on the limb. The signal appeared at the right location, with the expected width, value, and sign. (Actually, we only convinced ourselves of the appropriate sign of the data after a substantial amount of thought).

FIBRE Observation of the Moon Limb at $365\mu\text{m}$



This demonstrates that FIBRE can detect sources. Given the atmospheric transmission (1%), this is not unexpected. Our noise equivalent flux (NEF) was about $7,500 \text{ Kkm/s}/\sqrt{\text{Hz}}$. In good weather, this will drop to about $200 \text{ Kkm/s}/\sqrt{\text{Hz}}$. We ought to be able to get better than this; the coming months will see an effort to beat down the remaining problems.