

# Discussion: A Professional Optical Observatory in Bangladesh by Anushandhitshu Chokro Science Org.

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Dear All,

I thought I would start a discussion on a possible observatory with a 16 or 20 inch telescope in near future. This will involve some fundraising and logistical issues. But first we need to figure out the following:

1. What type of telescope are we opting for?
2. What kind of mount? - This can be as costly as the telescope.
3. Where do we put it? If the cost of the telescope + mount is high, should we look for a better place than just near Dhaka?
4. Once we figure out the total cost how do we go about raising the money?

Initially I see it strictly as an AC project which will be open to schools, colleges and universities.

## 1. The Telescope

Now, here are some thoughts for the telescope. MEADE was marketing a 20" Ritchey-Chrétien coma-free telescope for about \$20,000. It turned out that their telescope was not strictly Ritchey-Chretien (RC) and they were sued by other RC telescope making companies. I could not find any 20" on MEADE website, but they have some 16" so-called RC telescopes for about \$17,000.

This brought me to the site of RC Optical Systems:

(See the following link [http://www.buytelescopes.com/product\\_list.asp?t=6](http://www.buytelescopes.com/product_list.asp?t=6))

Their prices are 14.5" \$26,750

16" \$34,000

20" \$54,300

As we can see, the 20" is prohibitively expensive, unless we think there is a possibility to raise this amount!

## 2. The Mount

A good telescope is blind without a good tracking system. A simple design will be to incorporate an equatorial mount as seen in this following amateur observatory:

<http://www.threebuttes.com/Equipment.htm>

They have taken some spectacular photos from a dark Arizona sky with an Astrophysics 1200 GTO system priced at \$9,400 (no pier). Capacity 140 pound

At the same time, check the MEADE-MAX german Mount with Pier priced at \$30,000.

<http://telescopes.net/doc/2500/mftr/Meade/item/MAX-02>

Capacity: 400 pounds

The base weight of the RC telescope is 68 pounds, so the Astrophysics 1200 GTO will be able to handle the weight - however, we would need a pier which, I think, can be home-made...

This puts the price (without a CCD detector - more about that in the next mail) at \$34,000 + \$9,400 = \$43,400. About 30 Lakh Taka.

### 3. The Site

If we are going to spend 30 Lakh on the telescope, will it not make sense to get a really dark spot and less-humid area? We need a place with easy access from Dhaka, but we need to get some good images also! Please suggest.

The observatory might cost about additional 20 Lakh.

This brings the total to 50 Lakh, albeit with a smaller telescope than we initially thought.

### 4. Funding

A price tag of 50 lakh is high, especially if we are going at it alone. But, this is my impression that this money can be raised within Bangladesh if we can approach the right people. There are still some logistics need to be hammered out including the transport of the telescope from US to Bangladesh.

We would require a brochure - both in Bengali and English with the telescope picture and the observatory drawing and the names of a couple of sites. The science and educational objectives will be stated, e.g., variable star observations, looking for supernovae, gamma-ray burst optical follow-up, taking first good-quality astrophotos in Bangladesh, allowing academic institutions to use it as an educational tool, Master's and undergrad thesis, etc.